

December 27, 2023

Russell A. Larsen Grand Junction Pipe & Supply Co. 556 Struthers Ave. Grand Junction, CO 81501-2826

### Re: Soaring Eagle Gravel Pit - File No. M-1999-025 Grand Junction Pipe & Supply Co. Surety Increase (SI-1) Post Inspection Bond Increase

Dear Russell A. Larsen:

On December 27, 2023 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$583,210.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of \$340,722.00.

Please see the November 7, 2023 inspection report for details regarding why this surety increase is required.

The Division ordered amendment of the current Financial Warranty, or submittal of a new Financial Warranty reflecting the increase, within 60 days from the date of this letter (December 27, 2023).

Please make arrangements with Sara M. Stevenson-Benn at the Division's Denver office for submittal of the financial warranty. Any other questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Sara M. Stevenson-Benn by telephone at (303) 866-3567 (8148), or by email at Sara.stevenson-benn@state.co.us.

The Permittee for this site may be scheduled for a Formal Board Hearing for possible revocation of the permit after February 25, 2024, if the amount of any increased Financial Warranty has not been provided.

Bond Held:	\$242,488.00
Prior Liability:	\$242,488.00
Change in Liability:	\$340,722.00
Revised Liability:	\$583,210.00
Prior Permit Acreage:	112.00

Physical Address: 1313 Sherman Street, Room 215, Denver, CO 80203 P 303.866.3567 F 303.832.8106 Mailing Address: DRMS Room 215, 1001 E 62nd Ave, Denver, CO 80216 https://drms.colorado.gov/ Jared S. Polis, Governor | Dan Gibbs, Executive Director | Michael A. Cunningham, Acting Director



Change in Permit Acreage:	0.00
Revised Permit Acreage:	112.00
Prior Affected Acreage:	112.00
Change in Affected Acreage:	0.00
Revised Affected Acreage:	112.00

If you have any questions, please contact me by telephone at (303) 866-3567 x 8183, or by email at Amy.yeldell@state.co.us.

Sincerely,

Amy Geldell

Amy C. Yeldell Environmental Protection Specialist

cc: Jon Mueller

M-GR-04

## COST SUMMARY WORK

Т	ask descrip	otion:	Post Inspect	ion Update 11-7	-2023		
Site:	Soaring I	Eagle Gravel	Pit	Permit Action:	2023	Permit/Jol	b#: <u>M1999025</u>
<u>PF</u>		IDENTIFIC	CATION				
	Task #:	ACY	Sta	te: Colorado		Abbreviation:	None
	Date:	11/20/2023	Coun	ty: Mesa		Filename:	M025
	User:	ACY					
	Age	ency or organiz	zation name:	DRMS			

## TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Description Dewater 55 ac pit	Used PUMPING	Size	1,037.03	\$23,043
01a 02a	Excavate outlets structure	DOZER	2	2.22	\$2,042
02b	Excavate inlet structure	DOZER	2	2.22	\$2,042
03a	Provide 3,080 CY of 2 ft D50 Riprap	NA	5	16.00	\$0
03b	Place riprap on outlet structure	EXCAVATE	1	17.40	\$2,919
03c	Place riprap on inlet structure	EXCAVATE	1	17.40	\$2,919
04a	Reduce highwalls to 3H: 1V	DOZER	2	14.49	\$13,337
04b	Create wetlands bench	DOZER	2	158.00	\$145,453
05a	Rip compacted areas prior to topsoil replacement	RIPPER	1	34.52	\$16,170
06a	Haul topsoil to slopes	TRUCK1	1	45.82	\$49,280
06b	Spread topsoil on pit slopes	DOZER	2	9.25	\$8,157
06c	Haul topsoil to facilities areas	TRUCK1	1	47.41	\$50,994
06d	Spread topsoil on facilities areas	DOZER	2	10.09	\$8,899
07a	Reveg disturbed areas	REVEGE	1	60.00	\$112,833
08a	Install wetlands exclusion fencing	SITEMAINTENANCE	1	80.00	\$8,800
10a	Initial mobilization	MOBILIZE	1	2.57	\$8,706
10b	Secondary mobilization	MOBILIZE	1	2.57	\$1,565
		<u>SUBTO</u>	DTALS:	1556.99	\$457,159

## **INDIRECT COSTS**

### OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$9,235
Performance bond:	1.05	Total =	\$4,800
Job superintendent:	260.00	Total =	\$16,921
Profit:	10.00	Total =	\$45,716
		TOTAL O & P =	\$76,671
		CONTRACT AMOUNT (direct + O & P) = $\frac{1}{2}$	\$533,830

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$0	Total =	\$0
Engineering work and/or contract/bid preparation:	4.25	Total =	\$22,688
Reclamation management and/or administration:	5.00		\$26,692
CONTINGENCY:	0.00	Total =	\$0

TOTAL INDIRECT COST =	\$126,051	

TOTAL BOND AMOUNT (direct + indirect) = \_\_\_\_\$583,210

### PUMPING WORK

Task description:	Dewa	ter 55 ac pit			
e: Soaring Eagle Grave	l Pit	Permit Action	n: <u>2023</u>	Permit/Job#:	M1999025
PROJECT IDENTIF	ICATIO	<u>N</u>			
Task #:       01A         Date:       11/20/2023         User:       ACY	3	State: <u>Colorad</u> County: <u>Mesa</u>	0	Abbreviation: Filename:	None M025-01a
Agency or orga	nization n	ame: DRMS			
HOURLY EQUIPMI	ENT CO	ST			
Make and Model:	Descrip Subme	otion rsible pump - 460v, 8	in.	Quantity 1	
Attachment 1:	-	hose - 6 in. diam., 2		2	
Attachment 2:		rge hose - 6 in. D., 25	ft.	4	
Labor Unit 1:	Pump of	operator		0	
Weight:(U	95 per day 0.70 S Tons)				
Cost Breakdown:			Utilization %		
Ownership Cost/	Hour:	\$18.10	NA		
Operating Cost/	Hour:	\$4.12	100		
Operator Cost/		\$0.00	NA		
Total Unit Cost/	Hour:	\$22.22	_		
Total Fleet Cost	/Hour:	\$22.22			
<u>PUMPING QUANTI</u>	TIES				
Initial Pond Vol		550.00		Conversion factor:	325850.5800
Final Pond Vol		179,217,819.00	gallons		
Total Pond Inflow Su	rface		0	Unit inflow rate in	
	Area:	28,000	Sq. ft.	gph/sq. ft.:	0.1758
Total Pond Inflow Vo per H	lume Hour:	4,922.40	gallons		
		·	ganons ne 2800'L x 10'H rive	r side nit slone	
PUMPING TIME	or estimat	eu volume. <u>Assum</u>			
		a .		• /	
		mp Capacity:	170,000	anh/numn	
Estimated Suction Head:		Justian Hands		gph/pump	
			15	feet	
		charge Head:	15 20	feet feet	
	mated Dis	charge Head: Total Head:	15 20 35	feet feet feet	
	mated Dis CPB Pu	charge Head:	15 20	feet feet	
Esti	mated Dis CPB Pu	charge Head: Total Head: mp Capacity: Site Altitude:	15 20 35 163,200 4,490	feet feet feet gph/pump feet	
Esti: Adjus	mated Dis CPB Pu sted Pump	charge Head: Total Head: mp Capacity: Site Altitude: ing Capacity:	15 20 35 163,200 4,490 163,200	feet feet gph/pump feet gph	
Esti: Adjus Initial Una	mated Dis CPB Pu sted Pump djusted Pt	charge Head: Total Head: mp Capacity: Site Altitude: ing Capacity: upping Time:	15 20 35 163,200 4,490 163,200 1,098.15	feet feet gph/pump feet gph hours	
Esti Adjus Initial Una Inflow	mated Dis CPB Pu sted Pump djusted Pu during Ini	charge Head: Total Head: mp Capacity: Site Altitude: ing Capacity: imping Time: tial Pumping:	15 20 35 163,200 4,490 163,200 1,098.15 5,405,526	feet feet gph/pump feet gph hours gallons	
Esti Adjus Initial Una Inflow Net Una	mated Dis CPB Pu sted Pump djusted Pu during Ini djusted Pu	charge Head: Total Head: mp Capacity: Site Altitude: ing Capacity: imping Time: tial Pumping: imping Time:	$ \begin{array}{r} 15\\20\\35\\163,200\\4,490\\\hline 163,200\\1,098.15\\\hline 5,405,526\\1,131.27\\\hline \end{array} $	feet feet feet gph/pump feet gph hours gallons Hours	
Esti Adjus Initial Una Inflow Net Una Altitu	mated Dis CPB Pu sted Pump djusted Pu during Ini djusted Pu ude Adjus	charge Head: Total Head: mp Capacity: Site Altitude: ing Capacity: imping Time: tial Pumping:	15 20 35 163,200 4,490 163,200 1,098.15 5,405,526	feet feet gph/pump feet gph hours gallons	
Esti: Adjus Initial Una Inflow Net Una Altiti P	mated Dis CPB Pu sted Pump djusted Pu during Ini djusted Pu ude Adjus 'ump Effic	charge Head: Total Head: mp Capacity: Site Altitude: ing Capacity: imping Time: tial Pumping: imping Time: tment Factor:	$ \begin{array}{r} 15\\20\\35\\163,200\\4,490\\\hline 163,200\\1,098.15\\5,405,526\\1,131.27\\1.0000\\\hline \end{array} $	feet feet feet gph/pump feet gph hours gallons Hours (3% rule)	
Esti: Adjus Initial Una Inflow Net Una Altiti P	mated Dis CPB Pu sted Pump djusted Pu during Ini djusted Pu ude Adjus Pump Effic djusted Pu	charge Head:	$ \begin{array}{r} 15\\20\\35\\163,200\\4,490\\\hline 163,200\\1,098.15\\\hline 5,405,526\\1,131.27\\1.0000\\0.9167\\\hline \end{array} $	feet feet feet gph/pump feet gph hours gallons Hours (3% rule) (55 min./hr.) hours	Hours

# BULLDOZER WORK

Task description:	Excavate o	outlets structure			
Soaring Eagle Grave	l Pit	Permit Action:	2023	Permit/Job#:	M1999025
PROJECT IDENTIF	TICATION				
Task #: 02A		State: Colorado		Abbreviation:	None
Date: $\frac{0211}{11/20/2023}$		unty: Mesa		Filename:	M025-02a
User: ACY					
Agency or orga	nization name:	DRMS			
HOURLY EQUIPMI	ENT COST				
Basic Machine: Ca	tt D9T - 9SU				
Horsepower: 40					
• 1	mi-Universal				
	shank ripper				
	per day RG)				
<u></u>	KU)				
Cost Breakdown:					
		¢220 = -	<u>Utilization %</u>		
Ownership Cost/Hour:		\$238.76	NA		
Operating Cost/Hour: Ripper own. Cost/Hour:		\$162.29 \$18.32	100 NA		
		<u>\$18.52</u> \$0.90	10		
A DIDELON COST/HOIIT					
Ripper op. Cost/Hour: Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT	\$460.30 <b>\$920.61</b>	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume:2,55	<b>\$920.61</b> <b>FITIES</b> 55	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18	<b>\$920.61</b> <b>FITIES</b> 55	\$40.04	NA		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu	\$920.61 FITIES 55 80 15 LCY Ime: Ou	tlet details in perm			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01	\$920.61 <u>FITIES</u> 55 80 15 LCY Ime: Ou				
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: <u>MATERIAL QUAN</u> Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu	\$920.61 <u>FITIES</u> 55 30 15 LCY Ime: <u>Ou</u> Il factor: <u>Cat</u>	tlet details in perm			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu Source of estimated swel	\$920.61 <u>FITIES</u> 55 30 15 LCY Ime: <u>Ou</u> Il factor: <u>Cat</u>	tlet details in perm t Handbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu Source of estimated swel HOURLY PRODUCC	\$920.61 <u>FITIES</u> 55 30 15 LCY 11 factor: Ou 11 factor: Cat <u>TION</u> 50 fea	tlet details in perm t Handbook			
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance:	\$920.61           FITIES           55           30           15 LCY           ume:         Ou           11 factor:         Cat           TION           action:         50 fea	tlet details in perm t Handbook	 it (TR-2 estimate)		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient:	\$920.61 <u>FITIES</u> 55 30 15 LCY ume: Ou 11 factor: Cat TION 50 fea 15 ction: 2,110 escription: Cat 0 %	tlet details in perm t Handbook et 0.5 LCY/hr	 it (TR-2 estimate)		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude:	\$920.61 FITIES 55 30 15 LCY 11 factor: Ou 11 factor: Cat TION 50 fea 15 ctor: 2,110 escription: O 0 % 4,490 feet	tlet details in perm t Handbook et 0.5 LCY/hr Compacted fill or e	 it (TR-2 estimate)		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight:	\$920.61         ITTIES         55         30         15 LCY         ume:       Ou         11 factor:       Cat         II factor:       50 fea         action:       2,110         escription:       0	et .5 LCY/hr Compacted fill or e	 it (TR-2 estimate)		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description:	\$920.61         FITTIES         55         30         15 LCY         ume:       Ou         11 factor:       Cat         TION         action:       2,110         escription:       C         0 %       4,490 feet         2,400 lbs/L0       Clay and gray	et .5 LCY/hr Compacted fill or e	it (TR-2 estimate)		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	\$920.61         FITTIES         55         30         15 LCY         ume:       Ou         11 factor:       Cat         TION         action:       2,110         escription:       C        0 %	et CY avel - Dry	it (TR-2 estimate) it (TR-2 estimate) mbankment 0.9 Source		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUCC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator	\$920.61           ITTIES           55           30           15 LCY           ume:         Ou           11 factor:         Cat           TION           action:         50 feat           action:         2,110           escription:         0	et D.5 LCY/hr Compacted fill or e CY avel - Dry 0.750	it (TR-2 estimate) it (TR-2 estimate) mbankment 0.9 <u>Source</u> (AVG.)		
Operator Cost/Hour: Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 2,55 Swell factor: 1.18 Loose volume: 3,01 Source of estimated volu Source of estimated volu Source of estimated swel HOURLY PRODUC Average push distance: Unadjusted hourly produ Materials consistency de Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	\$920.61         FITTIES         55         30         15 LCY         ume:       Ou         11 factor:       Cat         TION         action:       50 fea         action:       2,110         escription:       0	et CY avel - Dry	it (TR-2 estimate) it (TR-2 estimate) mbankment 0.9 Source		

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3220	
Adjusted unit production: 6	79.58 LCY/hr	
Adjusted fleet production: 1	359.16 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.677/LCY

Total job time:	<b>2.22</b> Hours
Total job cost:	\$2,042

## BULLDOZER WORK

BROJECT IDENTIFICATION     Permit Action: 2023	
DDA IF OT IDENTIFICATION	Permit/Job#: <u>M1999025</u>
PROJECT IDENTIFICATION	
Task #:02BState:ColoradoDate:11/20/2023County:MesaUser:ACY	Abbreviation: None Filename: M025-02b
Agency or organization name: DRMS	
HOURLY EQUIPMENT COST	
Basic Machine: Cat D9T - 9SU	
Horsepower: 405	
Blade Type:     Semi-Universal       Attachment:     3-shank ripper	
Shift Basis: 1 per day	
Data Source: (CRG)	
Cost Breakdown: Utilization	on %
Ownership Cost/Hour: \$238.76 NA	
Operating Cost/Hour: \$162.29 100	
Ripper own. Cost/Hour: \$18.32 NA	<u> </u>
Ripper op. Cost/Hour:         \$0.90         10	
Operator Cost/Hour: \$40.04 NA	<u> </u>
MATERIAL QUANTITIES Initial Volume: 2,555	
Swell factor: 1.180	
Source of estimated volume: Outlet details in permit (TR-2 estimated Source of estimated swell factor: Cat Handbook	e)
HOURLY PRODUCTION	
Average push distance:   50 feet	
Unadjusted hourly production: 2,110.5 LCY/hr	
Materials consistency description: Compacted fill or embankment 0.9	
Average push gradient:0 %Average site altitude:4,490 feet	
Average site altitude:   4,490 feet	
Average site altitude:       4,490 feet         Material weight:       2,400 lbs/LCY         Weight description:       Clay and gravel - Dry         Job Condition Correction Factor       Set	ource
Average site altitude:       4,490 feet         Material weight:       2,400 lbs/LCY         Weight description:       Clay and gravel - Dry         Job Condition Correction Factor       Second	AVG.)
Average site altitude:       4,490 feet         Material weight:       2,400 lbs/LCY         Weight description:       Clay and gravel - Dry         Job Condition Correction Factor       Set         Operator Skill:       0.750       (A         Material consistency:       0.900       (CA	

Task # 02B

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3220	
Adjusted unit production: 6	79.58 LCY/hr	
Adjusted fleet production: 1		

Fleet size:	2 Dozer(s)
Unit cost:	\$0.677/LCY

Total job time:	<b>2.22</b> Hours
Total job cost:	\$2,042

### HYDRAULIC EXCAVATOR WORK

Task description:	Place riprap on out	let structure		
: <u>Soaring Eagle Grave</u>	el Pit Permit	Action: 2023	Permit/Job#	: M1999025
PROJECT IDENTI	FICATION			
Task #:       03B         Date:       11/20/202         User:       ACY		Colorado Aesa	Abbreviation: Filename:	None M025-03b
Agency or orga	anization name: <u>DRM</u>	S		
HOURLY EQUIPM	<u>ENT COST</u>			
Basic Machine: Attachment 1:	Cat 320D L 9'-6" Stic ROPS Cab	v	Shift Basis: 1	148 21.55 per day CRG)
Cost Breakdown:				
Ownership Cost. Operating Cost. Operator Cost. Total Unit Cost.	/Hour: \$50.01 /Hour: \$46.87	Utilization % NA 100 NA	-	
Total Fleet Cost	<u> </u>			
Loose volume:	1,540 1,540	CCY Swell facto LCY Outlet structure design (TR		
Source of e	stimated swell factor:	Cat Handbook		
	-	sic Job Condition Descripti		
Load Bucket Capacity		ition within Basic Descripti Cycle Time Val	on: SEVERE	minutes
			Bucket Size Class: <u>M</u>	ledium
Rated Capacit Bucket Fill Facto Adjusted Capacit	or: 0.450	LCY (heaped) Rock - Poorly blasted (40% LCY	6 - 50%) 0.450	
Job Condition Correctio	n Factors	Site	Altitude: <u>4490</u> feet	
		oduction: 88.49	LCY/Hour LCY/Hour LCY/Hour	
JOB TIME AND CO	<u>ST</u>			
Fleet size:	1 Excavator	Total job time:	17.40	Hours
Unit cost: \$1	.895 /LCY	Total job cost:	\$2,919	

### HYDRAULIC EXCAVATOR WORK

Task description:	Place rip	rap on inlet str	ucture		
: <u>Soaring Eagle Grav</u>	el Pit	Permit Acti	on: 2023	Permi	t/Job#: <u>M1999025</u>
PROJECT IDENTI	<b>FICATION</b>				
Task #:       03C         Date:       11/20/202         User:       ACY	23 0	State: <u>Color</u> County: <u>Mesa</u>		Abbrevia Filen	
Agency or org	ganization nam	e: DRMS			
HOURLY EQUIPM	IENT COST	•			
Basic Machine: Attachment 1:	Cat 320D L ROPS Cab	2 9'-6" Stick		Horsepower: Weight (MT): Shift Basis: Data Source:	148 21.55 1 per day (CRG)
Cost Breakdown:			1		
Ownership Cos Operating Cos Operator Cos Total Unit Cos	t/Hour: t/Hour:	\$70.85 \$50.01 \$46.87 \$167.73	Utilization % NA 100 NA	_	
Total Fleet Cos	st/Hour:	\$167.73			
	1,540 1,540 e of estimated		et structure design (TI		
	estimated swel	Il factor: Cat	Handbook		
HOURLY PRODUC	(load bucket, s	Basic J	mp bucket, swing emp ob Condition Descript within Basic Descript Cycle Time Va	tion: <u>SEVERE</u> tion: <u>SEVERE</u>	minutes
Load Bucket Capacity			Cycle Thile V	ilde. <u>0.590</u>	minutes
			- /	Bucket Size Class	: Medium
Rated Capaci Bucket Fill Fact Adjusted Capaci	or: 0.4		(heaped) k - Poorly blasted (409	% - 50%) 0.450	
Job Condition Correction	on Factors		Site	Altitude: <u>4490</u> feet	
	Adjusted Hou	(CA	tion: <u>106.62</u> tion: <u>88.49</u>	LCY/Hour LCY/Hour LCY/Hour	
JOB TIME AND CO	<u>DST</u>				
Fleet size:	1	Excavator	Total job time:	17.40	Hours
Unit cost: \$	1.895 /L	.CY	Total job cost:	\$2,919	

# BULLDOZER WORK

Task description			0	ls to 3H: 1V			
Soaring Eagl	e Grave	el Pit	Per	mit Action:	2023	Permit/Job#:	M1999025
PROJECT ID	ENTI	FICATIO	N				
Task #: 04	А		State:	Colorado		Abbreviation:	None
	/20/202	3	County:	Mesa		Filename:	M025-04a
	CY						
Agenc	v or org	anization n	ame: DI	RMS			
HOURLY EQ	UIPM	ENT CO	<u>ST</u>				
Basic Machir	ne: <u>Ca</u>	at D9T - 98	SU				
Horsepowe							
Blade Typ		emi-Univer					
Attachmen		shank ripp	er				
Shift Bas		per day					
Data Source	xe: (C	CRG)					
Cost Breakdowr	<u>ı</u> :						
					Utilization %		
Ownership Co				\$238.76	NA		
Operating Cos				\$162.29	100		
Ripper own. Co				\$18.32	NA		
Ripper op. Co		-		\$0.90	10		
Operator Co	st/Hour:			\$40.04	NA		
MATERIAL							
Initial Volume		167					
Initial Volume Swell factor	e: <u>17,</u> r: <u>1.1</u>	167 80					
Initial Volume	e: <u>17,</u> r: <u>1.1</u>	167					
Initial Volume Swell factor	$ \begin{array}{c}                                     $	167 80 <b>257</b> LCY	Staff esti	  mates			
Initial Volume Swell factor Loose volume	$\begin{array}{c} :: & 17, \\ :: & 1.1 \\ :: & 20, \\ ated voluments \end{array}$	167 80 <b>257</b> LCY ume:	Staff esti Cat Hanc				
Initial Volume Swell factor Loose volume Source of estima Source of estima	$\begin{array}{c} \begin{array}{c} & 17, \\ \hline & 1.1 \\ \hline \\ \end{array} \\ \begin{array}{c} \hline & 20, \\ \hline \\ \end{array} \\ \begin{array}{c} \begin{array}{c} \\ \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \\ \\ \end{array} $	167 80 <b>257</b> LCY ume: ell factor:					
Initial Volume Swell factor Loose volume Source of estima Source of estima	17,       1.1       1.1       20,       ated volu       ated swe       ODUC	167 80 <b>257</b> LCY ume: ell factor:	Cat Hand				
Initial Volume Swell factor Loose volume Source of estima Source of estima <b>HOURLY PR</b> Average push di	2: <u>17</u> , :: <u>1.1</u> :: <b>20</b> , ated volu- ated sween <b>ODUC</b> stance:	167 80 <b>257</b> LCY ume: ell factor:	Cat Hand	lbook			
Initial Volume Swell factor Loose volume Source of estima Source of estima	2: <u>17</u> , :: <u>1.1</u> :: <b>20</b> , ated volu- ated sween <b>ODUC</b> stance:	167 80 <b>257</b> LCY ume: ell factor:	Cat Hand	lbook			
Initial Volume Swell factor Loose volume Source of estima Source of estima <b>HOURLY PR</b> Average push di	::         17,           ::         1.1           ::         20,           ated volu         ated swee           ODUC         stance:           :ly produ	167 80 <b>257</b> LCY ume: ell factor: <b>CTION</b> uction:	Cat Hand 70 feet 1,633.5 LC	lbook Y/hr	  mbankment 0.9		
Initial Volume Swell factor Loose volume Source of estima Source of estima <b>HOURLY PR</b> Average push di Unadjusted hour Materials consis Average push gr	<ul> <li><u>17</u>,</li> <li><u>11</u></li> <li><u>20</u>,</li> <li>ated voluated sweet</li> <li><u>0DUC</u></li> <li>stance:</li> <li>stance:</li> <li>y product</li> <li>tency determine</li> <li>radient:</li> </ul>	167 80 <b>257</b> LCY ume: ell factor: <b>CTION</b> uction:	Cat Hanc 70 feet 1,633.5 LC Compa	lbook Y/hr	 mbankment 0.9		
Initial Volume Swell factor Loose volume Source of estima Source of estima <b>HOURLY PR</b> Average push di Unadjusted hour Materials consis	<ul> <li><u>17</u>,</li> <li><u>11</u></li> <li><u>20</u>,</li> <li>ated voluated sweet</li> <li><u>0DUC</u></li> <li>stance:</li> <li>stance:</li> <li>y product</li> <li>tency determine</li> <li>radient:</li> </ul>	167     80 <b>257</b> LCY     ume:     ell factor: <b>CTION</b> uction:     escription:	Cat Hanc 70 feet 1,633.5 LC Compa	lbook Y/hr	  mbankment 0.9		
Initial Volume Swell factor Loose volume Source of estima Source of estima <b>HOURLY PR</b> Average push di Unadjusted hour Materials consis Average push gr	<ul> <li>17,</li> <li>1.1</li> <li>20,</li> <li>ated voluated sweet</li> <li>ODUC</li> <li>stance:</li> <li>ly production</li> <li>tency detency deten</li></ul>	167         80 <b>257</b> LCY         ume:         ell factor: <b>2TION</b> uction:	Cat Hanc 70 feet 1,633.5 LC Compa	lbook Y/hr	  mbankment 0.9		
Initial Volume Swell factor Loose volume Source of estima Source of estima <b>HOURLY PR</b> Average push di Unadjusted hour Materials consis Average push gr Average site alti	<ul> <li><u>17</u>,</li> <li><u>1.1</u></li> <li><u>20</u>,</li> <li>ated voluated swee</li> <li><u>ODUC</u></li> <li>stance:</li> <li>ty production</li> <li>tency definition</li> <li>tency definition</li> <li>tude:</li> </ul>	167         80 <b>257</b> LCY         ume:         ell factor: <b>CTION</b> uction:	Cat Hanc 70 feet 1,633.5 LC _Compa eet	lbook Y/hr acted fill or en	  mbankment 0.9		
Initial Volume Swell factor Loose volume Source of estima Source of estima <b>HOURLY PR</b> Average push di Unadjusted hour Materials consis Average push gr Average site alti Material weight Weight descript	<ul> <li><u>17</u>,</li> <li><u>1.1</u></li> <li><u>20</u>,</li> <li>atted voluated sweet</li> <li><u>ODUC</u></li> <li>stance:</li> <li>ty product</li> <li>tency determined</li> <li>radient:</li> <li>tude:</li> <li>toon:</li> <li>orrectio</li> </ul>	167         80 <b>257</b> LCY         ume:         ell factor: <b>CTION</b> uction:         -15 %         4,490 ft         2,400 lt         Clay ar         on Factor	Cat Hand 70 feet 1,633.5 LC Compa eet bs/LCY ad gravel -	lbook Y/hr acted fill or en	Source		
Initial Volume Swell factor Loose volume Source of estima Source of estima <b>HOURLY PR</b> Average push di Unadjusted hour Materials consis Average push gr Average site alti Material weight Weight descripti	<ul> <li><u>17</u>,</li> <li><u>1.1</u></li> <li><u>20</u>,</li> <li>ated voluated swee</li> <li><u>ODUC</u></li> <li>stance:</li> <li>ty production</li> <li>tency definition</li> <li>tude:</li> <li>tude:</li> <li>ton:</li> <li><u>Orrection</u></li> </ul>	167 80 <b>257</b> LCY ume: ell factor: <b>CTION</b> uction: 	Cat Hand 70 feet 1,633.5 LC Compa eet bs/LCY nd gravel -	Ibook Y/hr acted fill or en Dry .750	Source (AVG.)	)	
Initial Volume Swell factor Loose volume Source of estima Source of estima <b>HOURLY PR</b> Average push di Unadjusted hour Materials consis Average push gr Average site alti Material weight Weight descripti	17,     1.1     1.1     20,     ated volu     ated volu     ated swee     ODUC     stance:     ty produ     tency de     radient:     tude:     fon:     Orrectio     Dperaton     al consis	167 80 257 LCY ume: ell factor: CTION uction: -15 % -15 % -4,490 ff 2,400 ll Clay ar n Factor r Skill: stency:	Cat Hand 70 feet 1,633.5 LC Compa eet bs/LCY nd gravel - 0 0	Ibook Y/hr acted fill or en Dry .750 .900	Source (AVG.) (CAT HE	) 3))	
Initial Volume Swell factor Loose volume Source of estima Source of estima <b>HOURLY PR</b> Average push di Unadjusted hour Materials consis Average push gr Average site alti Material weight Weight descripti	17, 1.1 20, ated volu ated volu ated swee ODUC stance: 'ly produ tency de radient: tude: 	167 80 257 LCY ume: ell factor: CTION uction: -15 % -15 % -4,490 ff 2,400 ll Clay ar n Factor r Skill: stency:	Cat Hand 70 feet 1,633.5 LC Compa eet bs/LCY ad gravel - 0 0 1	Ibook Y/hr acted fill or en Dry .750	Source (AVG.)	) 3))	

Task # 04A

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.4280	
Adjusted unit production: 69	9.14 LCY/hr	
Adjusted fleet production: 13	98.28 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.658/LCY

Total job time:	14.49 Hours
Total job cost:	\$13,337

## BULLDOZER WORK

Task description:	Cre	ate wetlands	bench			
Soaring Eagle G	Fravel Pit	Per	mit Action:	2023	Permit/Job#:	M1999025
PROJECT IDEN	NTIFICATI	<u>ION</u>				
Task #:         04B           Date:         11/20           User:         ACY	0/2023	State: County:	Colorado Mesa		Abbreviation: Filename:	None M025-04b
Agency of	r organizatior	n name: DF	RMS			
HOURLY EQUI	PMENT C	<u>OST</u>				
Basic Machine:	Cat D9T -	9SU				
Horsepower: Blade Type:	405 Semi-Univ	versal				
Attachment:	3-shank rij					
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown:						
<u>Con Breakdown</u> .				Utilization %		
Ownership Cost/H	Iour:		\$238.76	NA		
Operating Cost/H			\$162.29	100		
Ripper own. Cost/H			\$18.32	NA		
Ripper op. Cost/H			\$0.90	10		
Operator Cost/H	Iour:		\$40.04	NA		
MATERIAL QU Initial Volume:	77,440	<u>5</u>				
Swell factor: Loose volume:	1.180 91,379 LCY	7				
Source of estimated		12 ac @ 4	10"			
Source of estimated						
HOURLY PROI	DUCTION					
Average push dista	nce:	175 feet				
Unadjusted hourly	production:	805.3 LCY/	'hr			
Materials consisten	cy description	n: Compa	cted fill or e	mbankment 0.9		
Average push gradi Average site altitud		) feet				
Material weight:	2,400	0 lbs/LCY				
Weight description:	Clay	and gravel -	Dry			
Job Condition Corr				Source		
	erator Skill:		750	(AVG.)		
	onsistency:		900	(CAT HB))		
Dozi	no moothoodu	1				
	ng method: Visibility:		000 000	(GEN.) (AVG.)		

Task # 04B

(1 SHIFT/DAY)
(1 5111 1/2111)
(FND-SF)
(CAT HB)
(CAT HB)
(CAT HB)
(PAT)
-

Fleet size:	2 Dozer(s)
Unit cost:	\$1.592/LCY

Total job time:	158.00 Hours
Total job cost:	\$145,453

## BULLDOZER RIPPING WORK

	Task description:	Rip compacted areas prio	r to topsoil replace	ement		
Site	: <u>Soaring Eagle</u>	e Gravel Pit Permit Action	n: _2023	Permit/Jo	ob#: <u>M19</u>	999025
	PROJECT ID	ENTIFICATION				
	Task #: 05.	A State: Colorad	lo	Abbreviatio	n: None	
		/20/2023 County: Mesa		Filenam		5-05a
	User: AC					
	Agency	or organization name: DRMS				
	HOURLY EQ	UIPMENT COST				
	Basic	Machine: Cat D9T - 9SU		Horsepower:	405	
	Ripper Att	achment: 3-Shank Ripper		Shift Basis:	1 per day	
				Data Source:	(CRG)	
	Cost Breakdown	-				
				Utilization %		
		Ownership Cost/Hour:		NA		
	D.	Operating Cost/Hour:	\$162.29	100		
		er Ownership Cost/Hour: per Operating Cost/Hour:	\$18.32 \$8.98	<u>NA</u> 100		
	Кірј	Operator Cost/Hour:	\$40.04	 NA		
		Total Unit Cost/Hour:	\$468.39			
		Total Fleet Cost/Hour: \$	468.39			
	MATERIAL (	<u>DUANTITIES</u> S	Selected estimating	method: Area		
	Alternate Method	<u>ls:</u>				
Seismic:	NA	Bank Volume	: NA	BCY	NA	
Area:	24.00	acres Rip Depth (ft)		Volume: 77,440	1171	BCY or CCY
		Source of estimated quantity: Staf				
	HOURLY PR	<u>obochon</u>				
	<u>Seismic:</u>		NT A			
		Seismic Velocity:	NA	feet/second		
	Area:					
		Average Ripping Depth:	2.00	feet/pass		
		Average Ripping Width:	7.67	feet/pass		
		Average Ripping Length: Average Dozer Speed:	200.00 88.00	feet/pass feet/minute		
		Average Maneuver Time:	0.25	reet/minute minutes/pass		
		Production per unit area:	0.838	acres/hour		
	Job Condition Co					
		adjusted Hourly Unit Production:	0.838	Acres/hr		
	UI					
		Site Altitude:	4,490	feet		
		Altitude Adj:	1.00	(CAT HB)		
		Job Efficiency: Net Correction:	0.83	(1 shift/day) multiplier		
		Adjusted Hourly Unit Productio		Acres/hr		
		Adjusted Hourly Fleet Production	on: <b>0.70</b>	Acres/hr		
	JOB TIME AN	ND COST				
	Fleet size:	1 Grader(s)	Total job time	e: <u>34.52</u>		Hours
	Unit cost:	\$673.769 Per acre	Total job cos	t: <b>\$16,170</b>		

## TRUCK/LOADER TEAM WORK

Site: Soaring Eagle Gr	avel Pit	Darmit A	action: 2023		Permit/Job#: M	1000025
She: Soaring Lagie Gr	aver Pit	Permit A	2025	·	Perimi/JOD#: <u>N</u>	1999025
PROJECT IDEN	TIFICATION					
Task #: 06A		State: Co	lorado	Ab	breviation: <u>No</u>	
Date: 11/20/2	2023	County: Me	esa		Filename: MC	25-06a
User: <u>ACY</u>						
Agency or	organization nar	ne: DRMS				
HOURLY EQUIE	PMENT COST	<u> </u>		Shift bas	is: <u>1 per day</u>	
			Equipment Descr	iption		
Ti	ruck Loader Tea		Cat 730			
	·		CAT 972H			
Suppo	rt Equipment -L Dı-Dı		Cat D9T - 9SU NA			
Road Ma	untenance – Mot		NA			
	-Wa	ter Truck:	NA			
Cost Breakdown:	Truck/Lo	ader Team	Support	Equipment	Maintanan	ce Equipment
Cost Dreakuown.	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	10	00 20	NA	NA	NA
Ownership cost/hour:	\$108.06	\$57.7		NA	NA	N/ N/
Operating cost/hour:	\$71.88	\$56.2		NA	NA	N/
%Utilization-riper:	NA	+• ••	0 NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.0	00 \$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.0	00 \$0.00	NA	NA	NA
Operator cost/hour:	\$24.82	\$35.9	97 \$40.04	NA	NA	NA
Unit Subtotals:	\$204.76	\$149.9	98 \$311.25	NA	NA	NA
Number of Units:	3		1 1	0	0	
Group Subtotals:	Work:	\$764.26	Support:	\$311.25	Maint:	\$0.00
Total work team cost	t/hour: <u>\$1,075.</u>	51				
MATERIAL OU	ANTITIES					
MATERIAL QUA						
Initial volume:				factor: 1.215		
Loose volume:	25,15		CY			
	rce of estimated		vivision of Reclamati at Handbook	on, Mining & Safe	ety	
Source	Material Purch		0.00			
			0.00			
	οποτιονι					
HOURLY PRO	DUCTION					
<u>Truck Capacity:</u>	ha) Desite					
<u>Truck Payload (weig</u> Material w			Pounds/LCY	7		
Descri		vil				
Rated Pay			Pounds			
Payload Cap	acity: 38.75		LCY			

m) Time:	Road Condition: I	Rutted dirt, little	maintenance, no wat	er, 2" tire	
		Aujusted		1.000	- winutes
	_	5			Minute: Minute:
		e e			-
0.60	Minutes	A dinated	for site altitude.	0.600	Minute
	Net Load T	ime per Truck:	0.990	minutes	
			0.445	minutes	
	Net Cycle Tin	• -	-0.080	minutes	_
			0.000	(Cat HB)	_
			-0.040	(Cat HB)	_
•			-0.040		_
		h and up $0.00$		````	
Material 3/4"	to 6" diameter 0.00				_
- Unadjusted Bas	sic Loader Cycle Tir	ne (load, dump, r			ites
	anouvor: NA		Dump: 0.100		
):					
- Material Descri	ption:				
_				1	
: Number	of Loading Tool Pa	sses Required to	Fill Truck	3 г	asses
0.830	0.830				
0.830	0.830	(CAT HB	3)		
	0.	A 14:4-1 (Cr. )	1400 fr at		
6.160	LCY				
1.100		t mixtures (100	-120%) 1.100		_
5.600	LCY (heaped)	Bucl	ket Size Class: <u>N</u>	Α	_
ll Truck Volume	Based on Number of	Loader Passes:	18.48	LCY	
	LCY LCY				
	19.60         22.10         al Truck Volume         5.600         1.100         6.160         s:         Truck         1.000         0.830         0.830         0.830         •         Number         els:         vs. Job Condition         • within this Basic         - Material Descrit         ):            Material 3/4"         Conveyor or c         Constant oper	19.60LCY22.10LCYal Truck Volume Based on Number of $5.600$ LCY (heaped)1.100Other - rock/dir6.160LCYs:SiTruckLoader1.0001.0000.8300.8300.8300.830els:Number of Loading Tool Paseels:Number of Loading Tool Pasevs. Job Condition Rating:NA- Material Description:	19.60       LCY         22.10       LCY         al Truck Volume Based on Number of Loader Passes:         Buc         5.600       LCY (heaped)         1.100       Other - rock/dirt mixtures (100         6.160       LCY         Site Altitude (ft.): :         Truck       Loader       Source         1.000       1.000       (CAT HE         0.830       0.830       (CAT HE         within this Basic Rating:       NA	19.60         LCY           22.10         LCY           al Truck Volume Based on Number of Loader Passes:         18.48           Bucket Size Class:         N.           5.600         LCY (heaped)           1.100         Other - rock/dirt mixtures           6.160         LCY           s:         Site Altitude (ft.): 4490 feet           Truck         Loader           1.000         (CAT HB)           0.830         0.830           0.830         0.830           i:         Number of Loading Tool Passes Required to Fill Truck:	19.60         LCY           22.10         LCY           al Truck Volume Based on Number of Loader Passes:         18.48         LCY           Bucket Size Class:         NA           5.600         LCY (heaped)           1.100         Other - rock/dirt mixtures         (100-120%) 1.100           6.160         LCY           s:         Site Altitude (ft.): 4490 feet           Truck         Loader         Source           1.000         1.000         (CAT HB)           0.830         0.830         (CAT HB)           0.430         NA         (CAT HB)           -Material Description:

Haul Route								
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel Time	
	(Ft)			(%)	(%)	(fpm)	(min)	
1	2000.	00	0.00	5.00	5.00	1427	1.524	
					Haul Time:	1.524	minutes	
Return Ro	ute:							
Seg #		Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	2000.	00	0.00	5.00	5.00	2646	0.915	
					Return Time:	0.915	minute	S
				Total Tru	ck Cycle Time:	5.029	minute	S
Loading Tool	unit							
Produc	ction	697.36	LCY/Hour		Adjusted for j	ob efficiency:	578.81	LCY/Hour
Truck Unit Produc	ction	220.40			A 1. / 1.C	1 66 .	102.00	
	=	220.48	LCY/Hour		Adjusted for j	ob efficiency:	183.00	LCY/Hour
Optimal No. of Tru	icks:	3	Truck(s)		Selected Num	ber of Trucks:	3	Truck(s)
			Adjuste	d hourly truc	k team production	on: 549	.00 LCY	/Hour
					er team production			/Hour
			Adjusted multip	le truck/loade	er team production	on: 549	.00 LCY	/Hour
JOB TIM	1E AN	D COST						
Fleet s	ize:	1	Team(s)	]	Fotal job time:	45.82	<b>2</b> Ho	ours
Unit c	ost:	\$1.959	/LCY	,	Total job cost:	\$49,2	80	

# BULLDOZER WORK

Task description: Spread topsoil on	pit slopes			
Soaring Eagle Gravel Pit Perm	it Action:	2023	Permit/Job#:	M1999025
PROJECT IDENTIFICATION				
Task #: 06B State:	Colorado		Abbreviation:	None
Date: 11/20/2023 County:	Mesa		Filename:	M025-06b
User: ACY				
Agency or organization name:	MS			
HOURLY EQUIPMENT COST				
Basic Machine: Cat D9T - 9SU				
Horsepower: 405				
Blade Type: <u>Semi-Universal</u>		_		
Attachment: NA Shift Basis: 1 per day		_		
Shift Basis:1 per dayData Source:(CRG)				
Cost Breakdown:	1	<b>TT</b> 111 1 0/		
Our parchin Cost/Hour	\$238.76	<u>Utilization %</u> NA		
Ownership Cost/Hour: Operating Cost/Hour:	\$238.76	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	10		
Operator Cost/Hour:	\$40.04	NA		
•				
Total unit Cost/Hour: \$441.09				
Total Fleet Cost/Hour: \$882.17				
MATERIAL QUANTITIES				
Initial Volume: 25,155				
Swell factor: 1.000	_			
Loose volume: <b>25,155</b> LCY	_			
Source of estimated volume: <u>Transporte</u> Source of estimated swell factor: Cat Handb	1 1			
Source of estimated swen factor. <u>Cat Handb</u>	ed volume			
HOURLY PRODUCTION				
Average push distance: _50 feet	ook			
	ook			
Average push distance:50 feetUnadjusted hourly production:2,110.5 LCY	ook			
Average push distance:       50 feet         Unadjusted hourly production:       2,110.5 LCY         Materials consistency description:       Loose st	oook //hr			
Average push distance:       50 feet         Unadjusted hourly production:       2,110.5 LCY         Materials consistency description:       Loose st         Average push gradient:       0 %	oook //hr			
Average push distance:       50 feet         Unadjusted hourly production:       2,110.5 LCY         Materials consistency description:       Loose st	oook //hr			
Average push distance:       50 feet         Unadjusted hourly production:       2,110.5 LCY         Materials consistency description:       Loose st         Average push gradient:       0 %	oook //hr			
Average push distance:       50 feet         Unadjusted hourly production:       2,110.5 LCY         Materials consistency description:       Loose st         Average push gradient:       0 %         Average site altitude:       4,490 feet	oook //hr			
Average push distance:       50 feet         Unadjusted hourly production:       2,110.5 LCY         Materials consistency description:       Loose st         Average push gradient:       0 %         Average site altitude:       4,490 feet         Material weight:       1,600 lbs/LCY	oook //hr			
Average push distance:       50 feet         Unadjusted hourly production:       2,110.5 LCY         Materials consistency description:       Loose st         Average push gradient:       0 %         Average site altitude:       4,490 feet         Material weight:       1,600 lbs/LCY         Weight description:       Top Soil         Job Condition Correction Factor       0,7	oook //hr ockpile 1.2	(AVG.)		
Average push distance:       50 feet         Unadjusted hourly production:       2,110.5 LCY         Materials consistency description:       Loose st         Average push gradient:       0 %         Average site altitude:       4,490 feet         Material weight:       1,600 lbs/LCY         Weight description:       Top Soil         Job Condition Correction Factor       0,7         Material consistency:       1,2	oook //hr ockpile 1.2	(AVG.) (CAT HB)		
Average push distance:       50 feet         Unadjusted hourly production:       2,110.5 LCY         Materials consistency description:       Loose st         Average push gradient:       0 %         Average site altitude:       4,490 feet         Material weight:       1,600 lbs/LCY         Weight description:       Top Soil         Job Condition Correction Factor       0,7	oook //hr ockpile 1.2 	(AVG.)		

Task # 06B

Job efficient	cy: 0.830	(1 SHIFT/DAY)
Spoil pi	le: 0.600	(FND-SF)
Push gradie	nt: 1.000	(CAT HB)
Altitud	le: 1.000	(CAT HB)
Material Weig	ht: 1.438	(CAT HB)
Blade typ	pe: 1.000	(PAT)
Net correction	on: 0.6445	
Adjusted unit production:	1,360.22 LCY/hr	
Adjusted fleet production:	2720.44 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.324/LCY

Total job time:	<b>9.25</b> Hours
Total job cost:	\$8,157

## TRUCK/LOADER TEAM WORK

Task description:	Haul top	soil to faci	lities	areas			<u> </u>
Site: Soaring Eagle G	avel Pit	Permit	t Actio	on: <u>2023</u>		Permit/Job#: <u>M</u>	1999025
	TIFICATION						
PROJECT IDEN	<u>IIFICATION</u>	~	~ .				
Task #: 06C Date: 11/20/	2023		Colora Mesa	ado	Ab	breviation: No: Filename: M0	ne 025-06c
User: ACY	2023 (	County: <u>N</u>	viesa			Filename. <u>Wo</u>	125-000
	organization nam	ne: DRM	S				
Agency of			.0				
HOURLY EQUI	PMENT COST	-			Shift bas	sis: <u>1 per day</u>	
				Equipment Descri	ption		
T	ruck Loader Tear			730 Г 972Н			
Suppo	ort Equipment -Lo	-Loader: oad Area:		D9T - 9SU			
	-Du	mp Area:	NA				
Road Ma	intenance – Moto		NA				
	-wat	ter Truck:	NA				
Cost Breakdown:	Truck/Loa	der Team		Support I	Equipment	Maintenan	ce Equipment
	Truck	Loader		Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100		100	20	NA	NA	NA
Ownership cost/hour:	\$108.06	\$57	7.78	\$238.76	NA	NA	NA
Operating cost/hour:	\$71.88	\$50	6.23	\$32.46	NA	NA	Nz
%Utilization-riper:	NA		0	NA	NA	NA	Nz
Ripper own. cost/hour:	NA		0.00	\$0.00	NA	NA	NA
Ripper op. cost/hour:	NA		0.00	\$0.00	NA	NA	N/
Operator cost/hour:	\$24.82		5.97	\$40.04	NA	NA	N/
Unit Subtotals: Number of Units:	\$204.76	\$149		\$311.25	NA	NA	NA
Group Subtotals:	3 Work:	\$764.26	1	Support:	0	0 Maint:	\$0.00
Group Subtotals.	work.	\$704.20		Support.	\$311.23	Maint.	\$0.00
Total work team cos	t/hour: <u>\$1,075.5</u>	51					
MATERIAL QUA	ANTITIES						
			COV	0 11	factory 1015		
Initial volume: Loose volume:	<u>22,587</u> <b>27,44</b> 3		CCY LCY		factor: <u>1.215</u>		
	rce of estimated				m Mining & Sof		
	of estimated swel			sion of Reclamation Handbook	on, Mining & Sale	ety	
	Material Purcha		\$0.00				
	То	tal Cost:	\$0.00	)			
	ΠΙΟΤΙΛΝ						
HOURLY PRO	DUCTION						
Truck Capacity:	ht) Davia						
Truck Payload (weig Material w				Pounds/LCY			
Descri	ption: Top So	il					
Rated Pay				Pounds			
Payload Cap	acity: <u>38.75</u>			LCY			

Struck Volume: Heaped Volume:	17.10 L	CY				
neaded volume:		CY				
Average Volume:		CY				
Adjusted Volume:		CY				
Final	Truck Volume B	Based on Number of	Loader Passes:	18.48	LCY	
Loading Tool Capacity						
			Buck	ket Size Class: N	IA	
Rated Capacity:	5.600	LCY (heaped)				-
Bucket Fill Factor:	1.100	Other - rock/dir	t mixtures (100	-120%) 1.100		
Adjusted Capacity:	6.160	LCY	(			
Job Condition Corrections:	•	Si	te Altitude (ft.):	1/190 feet		
<u>300 Condition Corrections</u>	<u> </u>	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE			
Job Efficiency:	0.830	0.830	(CAT HE	<i></i>		
Job Efficiency.	0.850	0.850		)		
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	Number (	of Loading Tool Pas	ses Required to	Fill Truck	3 p	asses
Excavators and Front Shove		J Loading 10011 as	sses Required to		p	45505
Machine Cycle Time v Selected Value v	vs. Job Condition within this Basic					
Track Loaders –	Material Descrip	tion:				
Cycle Time Elements (min.):	:					
Load: NA	Ma	neuver: NA		Dump: 0.100	<b>`</b>	
					)	
Wheel and Track Loaders -	· Unadjusted Basi	ic Loader Cycle Tin	ne (load, dump, 1	naneuver): 0	). <u>.525</u> minu	tes
Cycle Time Factors	-	_	ne (load, dump, 1	naneuver):0 Factor (min.)	0.525 minu Source	tes
Cycle Time Factors Material:	Material 3/4" to	o 6" diameter 0.00		maneuver):0 Factor (min.) 0.000	0.525 minu Source (Cat HB)	tes 
Cycle Time Factors Material: Stockpile:	Material 3/4" to Conveyor or do	o 6" diameter 0.00 ozer piled 10 ft. hig	n and up 0.00	maneuver):0 Factor (min.) 0.000 0.000	.525 minu Source (Cat HB) (Cat HB)	tes - -
Cycle Time Factors Material: Stockpile: Truck Ownership:	Material 3/4" to Conveyor or do Common owne	o 6" diameter 0.00 ozer piled 10 ft. high orship of trucks and	n and up 0.00	maneuver):0 Factor (min.) 0.000 0.000 -0.040	.525minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)	tes 
Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material 3/4" to Conveyor or do Common owne Constant opera	o 6" diameter 0.00 ozer piled 10 ft. high ership of trucks and tion -0.04	n and up 0.00	maneuver): 0 Factor (min.) 0.000 0.000 -0.040 -0.040	0.525minuSource(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)	tes - - - -
Cycle Time Factors Material: Stockpile: Truck Ownership:	Material 3/4" to Conveyor or do Common owne	o 6" diameter 0.00 ozer piled 10 ft. higl orship of trucks and tion -0.04 0.00	n and up 0.00 loaders -0.04	maneuver):0 Factor (min.) 0.000 0.000 -0.040 -0.040 0.000	Source(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)	tes    
Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material 3/4" to Conveyor or do Common owne Constant opera	o 6" diameter 0.00 ozer piled 10 ft. hig ership of trucks and tion -0.04 0.00 Net Cycle Tim	n and up 0.00 loaders -0.04 ne Adjustment:	maneuver): 0 Factor (min.) 0.000 0.000 -0.040 -0.040 0.000 -0.080	Source(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)minutes	tes - - - -
Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material 3/4" to Conveyor or do Common owne Constant opera	o 6" diameter 0.00 ozer piled 10 ft. hig ership of trucks and tion -0.04 0.00 Net Cycle Tim Adjusted Loade	n and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time:	maneuver): 0 Factor (min.) 0.000 0.000 -0.040 0.000 -0.040 0.000 0.000 0.080 0.445	.525     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       minutes     minutes	tes - - - -
Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material 3/4" to Conveyor or do Common owne Constant opera	o 6" diameter 0.00 ozer piled 10 ft. hig ership of trucks and tion -0.04 0.00 Net Cycle Tim Adjusted Loade	n and up 0.00 loaders -0.04 ne Adjustment:	maneuver): 0 Factor (min.) 0.000 0.000 -0.040 -0.040 0.000 -0.080	Source(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)(Cat HB)minutes	tes - - - -
Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	Material 3/4" to Conveyor or do Common owne Constant opera	o 6" diameter 0.00 ozer piled 10 ft. hig ership of trucks and tion -0.04 0.00 Net Cycle Tim Adjusted Loade	n and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time:	maneuver): 0 Factor (min.) 0.000 0.000 -0.040 0.000 -0.040 0.000 0.000 0.080 0.445	.525     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       minutes     minutes	tes - - - -
Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	Material 3/4" to Conveyor or do Common owne Constant opera Nominal target	o 6" diameter 0.00 ozer piled 10 ft. hig ership of trucks and tion -0.04 0.00 Net Cycle Tim Adjusted Loade	n and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time: ime per Truck:	maneuver): 0 Factor (min.) 0.000 0.000 -0.040 0.000 -0.040 0.000 0.000 0.080 0.445	.525     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       minutes     minutes	-
Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target:	Material 3/4" to Conveyor or do Common owne Constant opera Nominal target	o 6" diameter 0.00 ozer piled 10 ft. higl ership of trucks and tion -0.04 0.00 Net Cycle Tim Adjusted Loade Net Load Ti	n and up 0.00 loaders -0.04 e Adjustment: er Cycle Time: ime per Truck: Adjusted	maneuver):0 Factor (min.) 0.000 0.000 -0.040 0.000 -0.080 0.445 0.990	.525     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     minutes       minutes     minutes       minutes     minutes	- - - - Minute
Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: <u>Truck Cycle Time:</u> Truck Exchange Time	Material 3/4" to Conveyor or do Common owne Constant opera Nominal target	o 6" diameter 0.00 ozer piled 10 ft. hig ership of trucks and tion -0.04 0.00 Net Cycle Tim Adjusted Loade Net Load Ti Minutes	n and up 0.00 loaders -0.04 ee Adjustment: er Cycle Time: ime per Truck: Adjusted Adjusted	maneuver):0 Factor (min.) 0.000 0.000 -0.040 -0.040 0.000 -0.080 0.445 0.990 for site altitude:	0.525 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) minutes minutes minutes 0.600	tes Minute Minute Minute
Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: <b>Truck Cycle Time:</b> Truck Exchange Time Truck Load Time	Material 3/4" to Conveyor or do Common owne Constant opera Nominal target	o 6" diameter 0.00 ozer piled 10 ft. higl ership of trucks and tion -0.04 0.00 Net Cycle Tim Adjusted Loade Net Load Ti Minutes Minutes Minutes	n and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time: ime per Truck: Adjusted Adjusted Adjusted	maneuver):0 Factor (min.) 0.000 0.000 -0.040 -0.040 0.000 -0.080 0.445 0.990 for site altitude: for site altitude:	.525     minu       Source     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       (Cat HB)     (Cat HB)       0.600     0.990       1.000     1.000	Minute Minute

Haul Rou	te:							
Seg #	Haul D (Ft)	vistance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)	
1	1200.0	0	0.00	5.00	5.00	1427	0.963	
					Haul Time:	0.963	minutes	
Return Ro	oute:				=			
Seg #	Haul D	istance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1200.0	0	0.00	5.00	5.00	2646	0.613	
					Return Time:	0.613	minutes	
				Total Tru	ck Cycle Time:	4.166	minutes	
Loading Too Produ		697.36	LCY/Hour		Adjusted for j	ob efficiency:	578.81	LCY/Hour
Truck Unit Produ	uction	266.15	LCY/Hour		Adjusted for j	ob efficiency:	220.91	_ LCY/Hour
Optimal No. of Tr	rucks:	3	Truck(s)		Selected Num	per of Trucks:	3	Truck(s)
			Adjuste	d hourly truc	k team production	on: <u>662</u> .	.72 LCY/H	Iour
					er team production			
			Adjusted multip	le truck/loade	er team production	on: 578.	.81 LCY/H	Iour
JOB TIN	ME ANI	D COST						
Fleet	size:	1	Team(s)	r	Fotal job time:	47.4	l Hour	rs
Unit	cost:	\$1.858	/LCY		Total job cost:	\$50,99	94	

# BULLDOZER WORK

Task description:			-		reas			
Soaring Eagle G	ravel Pi	t	Perr	nit Action:	2023		Permit/Job#:	M1999025
PROJECT IDEN	TIFIC	ATION						
Task #: 06D			State:	Colorado			Abbreviation:	None
Date: $11/20/$	2023	C	ounty:	Mesa			Filename:	M025-06d
User: ACY			5					
Agency or	organiza	ation nam	e: DR	MS				
HOURLY EQUI	PMEN	Г COST						
Basic Machine:	Cat D	9T - 9SU						
Horsepower:	405							
Blade Type:		Universal						
Attachment:	NA	-						
Shift Basis:	1 per c							
Data Source:	(CRG)	)						
Cost Breakdown:								
					1	Utilization %		
Ownership Cost/He				\$238.76		NA		
Operating Cost/H				\$162.29		100		
Ripper own. Cost/H				\$0.00		NA		
Ripper op. Cost/H	our:			\$0.00		10		
Operator Cost/H	our:			\$40.04		NA		
Operator Cost/H		3441 09		\$40.04		NA		
Operator Cost/He Total unit Cost/Hou	r: §	6441.09 6882.17		\$40.04		NA		
Operator Cost/H	r: §	6441.09 6882.17		\$40.04		NA		
Operator Cost/He Total unit Cost/Hou	r: <u>\$</u> .ır: <b>\$</b>	882.17		\$40.04		NA		
Operator Cost/Hour Total unit Cost/Hour Total Fleet Cost/Hou MATERIAL QU	r: <u>\$</u> 1r: <b>\$</b> ANTIT	882.17		\$40.04		NA		
Operator Cost/He Total unit Cost/Hou Total Fleet Cost/Hou <u>MATERIAL QU</u> Initial Volume:	r: <u>\$</u> ur: <u>\$</u> ANTIT 27,443	882.17		\$40.04		NA		
Operator Cost/He Total unit Cost/Heu Total Fleet Cost/Heu <u>MATERIAL QU</u> Initial Volume: Swell factor:	r: <u>\$</u> 117: <b>\$</b> <b>ANTIT</b> 27,443 1.000	882.17 TES		\$40.04		NA		
Operator Cost/He Total unit Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume:	r: <u></u> ur: <u></u> <b>ANTIT</b> 27,443 1.000 <b>27,443</b>	882.17 IES LCY				NA		
Operator Cost/He Total unit Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated	r: <u></u> ur: <u></u> <u> 4</u> <u> 27,443</u> <u> 1.000</u> <u> 27,443</u> volume:	<b>IES</b>		 ed volume		NA		
Operator Cost/He Total unit Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume:	r: <u></u> ur: <u></u> <u> 4</u> <u> 27,443</u> <u> 1.000</u> <u> 27,443</u> volume:	<b>IES</b> LCY	ransport at Handl	 ed volume		NA		
Operator Cost/He Total unit Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated	r:	2882.17 TES LCY ctor:		 ed volume		NA		
Operator Cost/He Total unit Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated	r:	2882.17 TES LCY ctor:		 ed volume		NA		
Operator Cost/He Total unit Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distan	r:	E882.17 IES LCY ctor: <u>T</u> C DN 50 f	at Handl	 ed volume		NA		
Operator Cost/He Total unit Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD	r:	E882.17 IES LCY ctor: <u>T</u> C DN 50 f	at Handl	ed volume book		NA		
Operator Cost/He Total unit Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distan	r: <u></u> ar: <u></u> <u>27,443</u> <u>1.000</u> <u>27,443</u> volume: swell fa <u>UCTIC</u> ce: roductic	$\frac{1ES}{LCY}$ $\frac{T}{Ctor: C}$ $\frac{7}{C}$	eet	ed volume book		NA		
Operator Cost/He Total unit Cost/Heu Total Fleet Cost/Heu MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distan Unadjusted hourly p Materials consistence	r:	$\frac{1ES}{LCY}$ $\frac{T}{Ctor: C}$ $\frac{50 \text{ f}}{2,1}$ $\frac{50 \text{ f}}{2,1}$ $\frac{50 \text{ f}}{2,1}$	eet	 ed volume book		NA		
Operator Cost/He Total unit Cost/Heu Total Fleet Cost/Heu MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distan Unadjusted hourly p Materials consistence Average push gradie	r: ar: <u>ANTIT</u> <u>27,443</u> <u>1.000</u> <b>27,443</b> volume: swell fa <u>PUCTIC</u> ce: roductic y description	$\frac{1ES}{LCY}$ $\frac{T}{Ctor: C}$ $\frac{7}{C}$	eet lo.5 LCY	 ed volume book		NA		
Operator Cost/He Total unit Cost/Heu Total Fleet Cost/Heu MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distan Unadjusted hourly p Materials consistence	r:	IES         LCY	eet lo.5 LCY Loose s	 ed volume book		NA		
Operator Cost/He Total unit Cost/Heu Total Fleet Cost/Heu Total Fleet Cost/Heu MATERIAL QU. Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distan Unadjusted hourly p Materials consistence Average push gradie Average site altitude	$r:$ $\frac{9}{4}$ $ar:$ $\frac{9}{4}$ $27,443$ $1.000$ $27,443$ $volume:$ $volume:$ swell fa $volume:$ $volume:$ $swell fa$ $volume:$	$\begin{array}{c} \textbf{IES} \\ \hline \textbf{IES} \\ \hline \textbf{LCY} \\ \hline \textbf{ctor:}  \underline{\textbf{C}} \\ \hline \textbf{ON} \\ \hline \textbf{on:}  \underline{50 \text{ f}} \\ \hline \textbf{on:}  \underline{2,1} \\ \hline \textbf{ption:}  \underline{-} \\ \hline \textbf{0, \%} \\ \hline \textbf{i,490 feet} \end{array}$	eet lo.5 LCY Loose s	 ed volume book				
Operator Cost/He Total unit Cost/Heu Total Fleet Cost/Heu Total Fleet Cost/Heu Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated HOURLY PROD Average push distan Unadjusted hourly p Materials consistence Average push gradie Average site altitude Material weight: Weight description:	r: $\frac{9}{4}$ $\underline{27,443}$ 1.000 $\underline{27,443}$ volume: $\underline{37,443}$ volume:         swell fa $\underline{0000}$ $\underline{0000}$ $\underline{1000}$ $\underline{0000}$ $\underline{1000}$ $\underline{0000}$ $\underline{1000}$ $\underline{0000}$ $\underline{1000}$ $\underline{0000}$ $\underline{1000}$ $\underline{0000}$ $\underline{1000}$ <t< td=""><td>IES         LCY         ctor:       T         ctor:       C         DN         state       50 f         pn:       2,1         ption:          0 %          I,600 lbs/l       Fop Soil</td><td>eet lo.5 LCY Loose s</td><td> ed volume book</td><td></td><td></td><td></td><td></td></t<>	IES         LCY         ctor:       T         ctor:       C         DN         state       50 f         pn:       2,1         ption:          0 %          I,600 lbs/l       Fop Soil	eet lo.5 LCY Loose s	 ed volume book				
Operator Cost/He Total unit Cost/Hou Total Fleet Cost/Hou MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated MOURLY PROD Average push distan Unadjusted hourly p Materials consistence Average push gradie Average site altitude Material weight: Weight description: Job Condition Corre	r: $\_$ ar: $\_$ <b>ANTIT</b> 27,443 1.000 <b>27,443</b> volume: swell fa <b>UCTIC</b> ce: roduction y description ent: $\_$ $\_$ $\_$ $\_$ $\_$ $\_$ $\_$ $\_$	IES         LCY         ctor:       T         CON         DN         ption:       2,1         ption:       -         0 %       -         I,600 lbs/l       -         Cop Soil       -         ctor       -	eet 10.5 LCY Loose s	ed volume book		Source		
Operator Cost/He Total unit Cost/Heu Total Fleet Cost/Heu MATERIAL QU Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated Mourly PROD Average push distan Unadjusted hourly p Materials consistence Average push gradic Average site altitude Material weight: Weight description: Job Condition Corre Open	r: $4$ ANTIT 27,443 1.000 27,443 volume: swell fa volume: swell fa UCTIC ce: roduction y description ent: $4$ -1 ction Fa rator Ski	<b>IES</b> LCY         ctor: <u>T</u> ctor: <u>C</u> <b>DN</b> ption:       _1,490 feet         1,600 lbs/l         Cop Soil         ctor         ll:	eet 10.5 LCY Loose s	<pre></pre>		<u>Source</u> (AVG.)		
Operator Cost/He Total unit Cost/Heu Total Fleet Cost/Heu MATERIAL QU/ Initial Volume: Swell factor: Loose volume: Source of estimated Source of estimated Source of estimated Mourly PROD Average push distan Unadjusted hourly p Materials consistence Average push gradie Average site altitude Material weight: Weight description: Job Condition Corre Oper Material co	r: $4$ ANTIT 27,443 1.000 27,443 volume: swell fa volume: swell fa UCTIC ce: roduction y description ent: $4$ -1 ction Fa rator Ski	IES         LCY	eet 10.5 LCY Loose s	ed volume book Y/hr tockpile 1.2		Source		

Task # 06D

Job efficient	cy: 0.830	(1 SHIFT/DAY)
Spoil pi	le: 0.600	(FND-SF)
Push gradie	nt: 1.000	(CAT HB)
Altitud	le: 1.000	(CAT HB)
Material Weig	ht: 1.438	(CAT HB)
Blade typ	be: 1.000	(PAT)
Net correction	on: 0.6445	
Adjusted unit production:	1,360.22 LCY/hr	
Adjusted fleet production:	2720.44 LCY/hr	

Fleet size:	2 Dozer(s)
Unit cost:	\$0.324/LCY

Total job time:	10.09 Hours
Total job cost:	\$8,899

## **REVEGETATION WORK**

Tasl	Task description:		g disturbed areas			
Site: S	oaring Eagle G	Fravel Pit	Permit Action:	2023	Permit/Jol	o#: M1999025
<u>PRO</u>	JECT IDEN	<u> TIFICATIO</u>	<u>N</u>			
Т	Гask #: 07А		State: Colorado		Abbreviation:	None
	Date: 11/20	)/2023	County: Mesa		Filename:	M025-07a
	User: ACY					

## **FERTILIZING**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Potassium nitrate, 13-46-0	100.00	pound	\$0.68	\$68.00
			Total Fertilizer Materials	
			Cost/Acre	\$68.00

#### **Application**

Description		Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$41.82
	Total Fertilizer Application Cost/Acre	\$41.82

## **TILLING**

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

### **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.30	11.71	\$8.54
Canada Wildrye	5.50	14.52	\$59.62
Reed Canarygrass - VNS	1.66	19.28	\$8.22
Saltbush, Four Wing	4.00	5.51	\$50.00
Sumac, Skunkbrush	4.00	1.87	\$84.00
Totals Seed Mix	15.46	52.89	\$210.38

### Application

Description Cost /Acre
------------------------

Broadcast seeding [DMG]		\$267.22
	Total Seed Application Cost/Acre	\$267.22

### **MULCHING and MISCELLANEOUS**

#### Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$429.79	\$859.57
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	\$35.09	\$35.09
Total Mulch Materials Cost/Acre				\$894.66

#### Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$74.46
Power mulcher (MEANS 32 91 13.16 0350)		\$147.67
Weed spray, hand, aquatic area, nox. [DMG]		\$183.16
	Total Mulch Application Cost/Acre	\$405.29

### NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Willow, Sandbar	31	Tubling, 10 cu. in. container {(MEANS)	\$2.14	\$0.00	\$66.34
		T-4-1-	N 64		¢(( ))
	k Cost / Acre	\$66.34			

	No. of Acres:	42	Cost /Acre:	\$2,066.53
Estimate	ed Failure Rate:	30%	Cost /Acre*:	\$2,066.53
*Selected Replanti	ng Work Items:	FERTILIZING,TII	LLING,SEEDING,NU	
-	-	RSERY,MULCHI	NG	
Initial Job Cost:	\$86,794.26			
Reseeding Job Cost:	\$26,038.28			

Reseeding Job Cost:	\$26,038.28
Total Job Cost:	\$112,833
Job Hours:	60.00

### SITE MAINTENANCE

Т	Task description:	Install wetlands exclusion fe	ncing		
Site:	Soaring Eagle Gravel	Pit Permit Action:	2023	Permit/J	lob#: <u>M1999025</u>
<u>PROJEC</u>	CT IDENTIFICATI	<u>ON</u>			
Task #: Date: User:	11/20/2023	State:ColoradoCounty:Mesa		Abbreviation: Filename:	None M025-08a
	Agency or organi	zation name: DRMS			
UNIT CO	<u>DSTS</u>				

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Install Wetlands	80.00	Fencing, barbed wire, - 3	5,000.00	LF	\$1.76	\$8,800.00
Fencing		strand				

Job Hours: 80.00

Total Cost: \$8,800.00

## EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Init	ial mobilization					
te: Soaring Eagle (	Gravel Pit	Permit	Action: 2023			Permit/Job#: <u>M</u>	1999025
<u>PROJECT IDEN</u>	TIFICATI	<u>ON</u>					
Task #: 10A		State: Co	olorado		۸bbr	eviation: None	
	0/2023		esa			ilename: M025	
User: ACY		County. <u>M</u>	588		T	nename. <u>Wi023</u>	-10a
Agency or	organization	name: DRMS					
EQUIPMENT TH	RANSPOR'	T RIG COST					
					Shift ba	usis: 1 per da	<b>X</b> 7
					Cost Data Sou		
					Cosi Dala Sou		la
Truck	Tractor Desc	ription: GENE	RIC ON-HIGH			OR, 6X4, DIESEI	L POWERED,
<b>T</b> 1	<b>T</b> '1 D				(2ND HALF,		
Truck	Trailer Desc	ription: G				ROP DECK EQU	IPMENT
				RAILER	(25T, 50T, A)	ND 1001)	
Cost Breakdown:							
Available Rig Ca	pacities	0-25 Tons	26-50 Tons	51-	+ Tons		
Ownership (	Cost/Hour:	\$20.26	\$36.04	\$4	47.05		
Operating (	Cost/Hour:	\$39.51	\$76.08	\$	82.85		
Operator (	Cost/Hour:	\$22.52	\$22.52	\$2	22.52		
	Cost/Hour:	\$0.00	\$23.53	\$2	23.53		
Total Unit (	Cost/Hour:	\$82.29	\$158.17	\$1	75.95		
				I			
NON ROADABL	<u>E EQUIPN.</u>	<u>/IENT:</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
1	(TONS)		t		fleet		
Submersible pump - 460v, 8 in.	0.70	\$15.28	\$82.29	1	\$97.57	\$82.29	\$250.00
Cat D9T - 9SU	66.13	\$257.08	\$175.95	2	\$866.06	\$351.90	\$250.00
Cat 320D L 9'-6"	23.70	\$70.85	\$82.29	1	\$153.14	\$82.29	\$250.00
Stick							
CAT 972H	28.00	\$57.78	\$158.17	1	\$215.95	\$158.17	\$250.00
Cat 730	25.19	\$108.06	\$82.29	3	\$571.05	\$246.87	\$250.00
Drill/Broadcast	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Seeder with							
Tractor	6.00	\$25.04	<b>#02.20</b>	1	¢100.00	¢02.20	<b>\$250.00</b>
Power Mulcher (Bowie LD-90)	6.00	\$25.94	\$82.29	1	\$108.23	\$82.29	\$250.00

Subtotals: **\$2,101.02 \$1,086.10 \$1,750.00** 

### **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 4x2, 30K GVW	\$92.68	1	\$92.68	\$92.68
Light Duty Pickup, 4x4, 3/4 T.	\$116.86	2	\$233.72	\$233.72

Mobilization Worksheet Cont <sup>*</sup> d	1	ask # 10A		Page 2 o
		Subtotals:	\$326.40	\$326.40
EQUIPMENT HAUL DISTAN	CE and Time			
Nearest Major City	or Town within	project area region:	GRAND JUNCTI	ON
		way travel distance:	5.00	miles
		erage Travel Speed:	35.00	mph
	<b>'*</b> two round	Mob/Demob Cost * l trips with haul rig:	\$8,612.65	
]		lob/Demob Cost ** nd trip, no haul rig:	\$93.26	
Transportation Cycle Time:				
	Non-			
	Roadable	Roadable		
	Equipment	Equipment		
Haul Time (Hours):	0.14	0.14		
Return Time (Hours):	0.14	0.14		
Loading Time (Hours):	0.50	NA		
Unloading Time (Hours):	0.50	NA		
Subtotals:	1.29	0.29		

Total job time:	2.57	Hours
Total job cost:	\$8,706	

Mobilization Worksheet Cont'd

## EQUIPMENT MOBILIZATION/DEMOBILIZATION

Та	sk descrip	otion: Se	econdary mobiliza	tion				
e:	Soaring H	Eagle Gravel Pit	Permit	Action: 2023			Permit/Job#: <u>N</u>	/1999025
<u>PR</u>	<b>OJECT</b>	<b>IDENTIFICA</b>	<u>TION</u>					
	Task #:	10B	State: C	olorado		Abbre	eviation: Non	e
	Date:	11/20/2023		lesa				5-10b
	User:	ACY	_ ·					
	Age	ency or organizati	on name: DRMS	5				
EQ	UIPME	NT TRANSPO	RT RIG COST					
						Shift ba	sis: 1 per d	av
					(	Cost Data Sou		
	,		CENI					
		Fruck Tractor Des	scription: GENE	ERIC ON-HIGH		(2ND HALF,		L POWERED,
		Truck Trailer De	corintion:	ENERIC FOLD			(	IIDMENIT
		THUCK THATTEL DE	scription. C			(25T, 50T, A)	•	
					KAILEK	(251, 501, A)	ND 1001)	
Cos	t Breakdo	wn:						
A	vailable <b>F</b>	Rig Capacities	0-25 Tons	26-50 Tons	51-	+ Tons		
		ership Cost/Hour:	\$20.26	\$36.04		47.05		
		ating Cost/Hour:	\$39.51	\$76.08	\$8	82.85		
		erator Cost/Hour:	\$22.52	\$22.52	\$2	22.52		
	Ĥ	lelper Cost/Hour:	\$0.00	\$23.53	\$2	23.53		
	Total	Unit Cost/Hour:	\$82.29	\$158.17	\$1	75.95		
NO	N ROAI	DABLE EQUI	<u>PMENT:</u>					
М	achine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
	escription	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
	r	(TONS)		t		fleet		
		(IONS)			1		¢92.20	
Dr	rill/Broadca		\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
	rill/Broadca eder with		\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Se Tr	eder with actor	ast 25.00						
Se Tr Po	eder with	er 6.00	\$6.73 \$25.94	\$82.29 \$82.29	1	\$89.02	\$82.29	\$250.00

Subtotals: **\$197.25 \$164.58 \$500.00** 

## **ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$116.86	2	\$233.72	\$233.72
		Subtotals:	\$233.72	\$233.72

## **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance:	GRAND JUNCTION 5.00	miles
Average Travel Speed:	35.00	mph
Total Non-Roadable Mob/Demob Cost *	\$1,497.88	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$66.78	

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

### JOB TIME AND COST

Total job time: 2.57 Hours

Total job cost: \_\_\_\_\_\_\$1,565



November 20, 2023

Jim Doody Grand Junction Pipe & Supply Co. 556 Struthers Ave Grand Junction, CO 81501

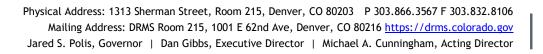
### RE: Soaring Eagle Gravel Pit, Permit No. M-1999-025, Proposed Surety Increase SI-1

Dear Mr. Doody:

This reclamation cost update was in response to the site inspection conducted on November 7, 2023. It is Division policy to periodically update its costs to ensure that the Financial Warranty adequately, reflects the actual current cost of fulfilling the requirements of the approved reclamation plan.

The bond was last recalculated in 2018. Below is a table summarizing input values that have been updated. This table does not account for price changes resulting from inflation or other RS Means cost changes. Bond calculations are based on a combination of field observations and worst case scenario based on the approved reclamation plan.

Task	Form Used	Description	
	-	Scale is mobile, no demo required	
01a	Pumping	Dewater Pit for Grading Pit is approx. 55 ac @ 10ft Prev. 35 ac @ 11ft	
02a	Dozer	Excavate Outlet structure - No changes	
02b	Dozer	Excavate Inlet Structure – No changes	
03a	-	Riprap for structures - No changes	
03b	Excavator	Place riprap on Outlet Structure - No changes	





03c	Excavator	Place riprap on Inlet Structure - No changes
04a	Dozer	Highwall reduction grade to 3H: 1V = 17,167 BCY 20'H x 3000LF @ Vert cut/fill = 16,667 CCY + 500 CY of pond bottom berm grading Prev. 64,000 CCY with scraper backfilled
04b	Dozer	Create wetland bench. Flatten out areas adjacent to pond approx. 12 ac with 48" of grading. = 77,440 CY Prev. 14,444 CCY with scraper
05a	Ripper	Rip compacted areas 24 ac Prev. 31 ac
06a	Truck	Haul Topsoil Pit slopes and wetland areas 22 ac @ 7" = 20,704 CCY, Avg 2,000 LF haul Prev. 1943 CY (2 ac) w scraper
06b	Dozer	Spread Topsoil Pit slopes and wetland areas 22 ac @ 7" = 25,155 LCY 50 ft push 0%
06c	Truck	Haul Topsoil facilities and road areas 24 ac @ 7" = 22,587 CCY, Avg 1200 LF Prev. 27,929 (29 ac) w scraper
06d	Dozer	Spread Topsoil facilities and road areas 24 ac @ 7" = 27,443 LCY 50 ft push 0%
07a	Reveg	Reveg 42 acres Prev. 32 ac
08a	Site Maintenance	Install Wetlands Exclusion Fencing
10a	Mob	Update equipment used
10b	Mob	Update equipment used

Per policy I wanted to send this out for review prior to issuance. Please look it over and let me know if there are errors or concerns. If no response is received by **Monday, January** 

**22, 2024** then I'll issue SI-1 as is. SI-1 will result in a total required bond amount of **\$583,211**, which is an increase of <u>\$340,723</u> over the \$242,488 currently held.

Sincerely,

Amy Geldell

*Amy Yeldell* Environmental Protection Specialist

Ec: Travis Marshall, Senior EPS, Grand Junction DRMS