

October 9, 2024

Jason Burkey Oldcastle SW Group, Inc. dba United Companies of Mesa County 2273 River Road Grand Junction, CO 81502

RE: 15 Road Gravel Pit, Permit No. M-2002-11, Reclamation Cost Estimate

Dear Mr. Burkey:

This reclamation cost update was in response to the site inspection conducted on September 24, 2024. 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 reviewed in 2021 and with the last surety increase in 2014. Below is a table summarizing input values that have been updated based on site conditions. 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.

General Assumptions:

- TR—5 in 2014 provides Exhibit L Worst Case Scenario Bonding
- Lake 2 released
- Lake 1 mostly reclaimed but wetlands benches not installed. Need TR or have to drain and backfill/reveg to meet current Rec Plan
- Lake 3 Slopes nearly vertical, grade everything to 3H: 1V and Decompact flat areas prior to reveg.
- Lake 3 partially mined out assumed 2H: 1V. Drain then grade out slopes and reveg. Decompact adjacent stockpile area.
- Utility line will bisect Lake 3 and 3

Potential Revisions/ Updates:

- Request that you update Exhibit L to reflect current conditions.
- Utilization of manure and fertilizer. Are both necessary, have you done soil testing to indicate a need? Potentially omit unless needed. Also manure is super expensive, cheaper soil amendments are available.





- Lake 1 does not match the approved reclamation plan but appears reclaimed. Do a TR to make as built match site conditions.
- Wetlands are broadcast seed but mulch applications. If you can mulch, you can also drill seed. If too soft to drill seed it can't be crimp in straw. Revise to make methods match.
- Maps indicate where the main overburden pile is adjacent to Lake 1 but its unclear where the other various overburden piles are located. Similarly where are the various stockpiles of topsoil located. Will help more accurately calculate haul distances.
- User provided bonding cost need updated for inflation:
 - Truck scale \$ 4000.
 - Office building with foundation \$7000
 - Storage building \$300
 - Fuel Storage: \$ 1000.

Summary of inputs used in attached reclamation cost estimate.

Task	Form Used	Description
01a	Pumping	Drain lake prior to grading – Lake 1 9'D x 29.1 ac = 11535123 CF (Exhibit L-1) 30,000 sq. ft. inflow (20'H x 1500LF adjacent to river)
01b	Truck	Transport Overburden and Placement for wetland shelf – Lake 1 11.51 ac x 9 ft = 167,125 CY (Exhibit L-1)
01c	Ripper	Rip Compacted Areas – Lake 1 Estimated 5 ac around lake
01d	Truck	Transport Topsoil and Placement – Lake 1 11.51 ac @ 8" = 12,380 CY wetlands 8.4 ac @ 8" = 9,035 CY around lake 21,415 CY topsoil (Exhibit L-1)
01e	Reveg	Reveg Wetland – Lake 1 11.51 ac
01f	Reveg	Reveg Dry Rangeland – Lake 1 8.4 ac
		Lake 2 released – No tasks

03a	Pumping	Drain lake prior to grading - Lake 3 12'D x 27ac = 324 ac/ft (actual site conditions) 24,000 sq. ft. inflow (20'H x 1200LF adjacent to river)
03b	Dozer	Establish 3H: 1V Slopes – Lake 3 4,325 LF of 1H: 1V @25'H cut/fill = 16,019 CY
03b2	Truck	Transport backfill volume for grading 675 LF of 1H: 1V @25'H backfill = 10,000 CY
03c	Ripper	Rip compacted areas – Lake 3 Scale area ~10ac
03d	Truck	Transport Topsoil and Placement – Lake 3 ~5,000 LF x50'W = 5.74 ac wetlands, @ 8"= 6,174 CY (actual site conditions) 10 ac @ 8" = 10,775 CY Scale area (actual site conditions) 16,949 CY
03e	Reveg	Reveg Wetland – Lake 3 5.74 ac
03f	Reveg	Reveg Dry Rangeland – Lake 3 10ac ac
04a	Pumping	Drain lake prior to grading - Lake 4 12'D x 25ac = 300 ac/ft (actual site conditions) 30,000 sq. ft. inflow (20'H x 1500LF adjacent to river)
04b	Dozer	Establish 3H: 1V Slopes – Lake 4 5,007LF of 2H: 1V @20'H cut/fill =9,272 CY (Exhibit L-2)
04c	Ripper	Rip compacted areas – Lake 4 Stockpile area ~15 ac
04d	Truck	Transport Topsoil and Placement – Lake 4 ~5,007 LF x 50'W = 5.75 ac wetlands, @8"= 6,181 CY (Exhibit L-2) 15 ac @ 8" = 16,113 CY Stockpile area (actual site conditions) Total 22,294 CY

04e	Reveg	Reveg Wetland – Lake 4 5.75 ac
04f	Reveg	Reveg Dry Rangeland – Lake 4 15 ac
05a	Demo	Structure Removal
10a	Mob	Initial Mobilization
10b	Mob	Secondary Mobilization

Per policy I wanted to send this out for review. The last Exhibit L – Reclamation Cost Estimate TR-5 was submitted din 2014. A revised Exhibit L will aid in the accuracy of this estimate. Please look it over and let me know if there are errors or concerns. As noted you may also wish to revise your reclamation plan. If no response is received by **Monday**, **December 9**, **2024** then I'll issue a surety increase. This will be a total required bond amount of \$ 5,494,936, which is <u>an increase of \$4,640,158</u> over the \$584,778 currently held.

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

Sincerely,

Amy Geldell

Amy Yeldell Environmental Protection Specialist

Ec: Travis Marshall, Senior EPS, Grand Junction DRMS

COST SUMMARY WORK

Task description:		Post inspection	update					
Site:	15 Road Gravel Pit		P	Permit Action: 2024-09		Permit/Jol	o#: <u>M2002114</u>	
<u>P</u>]	ROJECT Task #: Date: User:	IDENTIFIC ACY 10/9/2024 ACY	CATION State: County:	Colorado Mesa		Abbreviation: Filename:	None M114-ACY	

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task		Form	Fleet	Task	a
Iash	Description	Used	Size	Hours	Cost
01a	Lake 1 - Drain for grading banks	PUMPING	1	608.85	\$32,787
01b	Lake 1 - Transport Overburden for Backfilling &	TRUCK1	1	280.57	\$417,810
	Placement				
01c	Lake 1 - Rip Compacted Areas	RIPPER	2	4.28	\$2,959
01d	Lake 1 - Transport Topsoil & Placement	TRUCK1	1	35.95	\$53,530
01e	Lake 1 - Revegetate Wetland Areas	REVEGE	1	14.00	\$730,398
01f	Lake 1 - Revegetate Dry Rangeland	REVEGE	1	13.00	\$529,649
03a	Lake 3 - Drain lake for grading banks	PUMPING	1	399.17	\$21,496
03b	Lake 3 - Establishing 3H: 1V highwalls	DOZER	1	46.85	\$15,135
03b2	Lake 3 - Transport Overburden for Backfilling &	TRUCK1	1	19.05	\$28,375
	Placement				
03c	Lake 3 - Rip Compacted Areas	RIPPER	2	8.56	\$5,918
03d	Lake 3 - Transport Topsoil & Placement	TRUCK1	1	32.29	\$48,093
03e	Lake 3 - Revegetate Wetland Areas	REVEGE	1	7.00	\$364,247
03f	Lake 3 - Revegetate Dry Rangeland	REVEGE	1	16.00	\$630,534
04a	Lake 4 - Drain for grading banks	PUMPING] 1	371.16	\$19,987
04b	Lake 4 - Establishing 3H: 1V highwalls	DOZER	1	25.05	\$8,092
04c	Lake 4 - Rip Compacted Areas	RIPPER	2	12.84	\$8,878
04d	Lake 4 - Transport Topsoil & Placement	TRUCK1	1	42.48	\$63,259
04e	Lake 4 - Revegetate Wetland Areas	REVEGE	1	7.00	\$364,882
04f	Lake 4 - Revegetate Dry Rangeland	REVEGE	1	23.00	\$945,801
05a	Structure Removal	DEMOLISH	1	8.00	\$4,143
10a	Initial Mobilization	MOBILIZE	1	2.90	\$8,462
10b	Secondary Mobilization	MOBILIZE	1	2.90	\$1,611
		<u>SUBTO</u>	TALS:	1980.9	\$4,306,046

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	
Performance bond:	1.05	
Job superintendent:	300.00	
Profit:	10.00	
		TOTAL
		CONTRACT AMOUNT (direct +

Total =	\$86,982
Total =	\$45,213
Total =	\$23,781
Total =	\$430,605
TAL O & $P =$	\$586,581
ect + O & P) =	\$4,892,627

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500
Engineering work and/or contract/bid preparation:	4.25	Total =	\$207,937
Reclamation management and/or administration:	5.41	-	\$264,691
CONTINGENCY:	3.00	Total =	\$129,181
			· · · ·

TOTAL INDIRECT COST = \$1,188,890

TOTAL BOND AMOUNT (direct + indirect) = ____\$5,494,936

PUMPING WORK

Task description:	Lake 1 - Drain for gradin	g banks		
e: 15 Road Gravel Pit	Permit Actio	n: <u>2024-09</u>	Permit/Job#:	M2002114
PROJECT IDENTIF	ICATION			
Task #: 01A Date: 10/9/2024 User: ACY	County: Colorad	do	Abbreviation: Filename:	None M114-01a
Agency or organ	nization name: DRMS			
HOURLY EQUIPME	ENT COST			
	Description		Ouantity	
Make and Model:	Submersible pump - 460v, 6	ó in.	2	
Attachment 1:	Suction hose - 6 in. diam., 2	25 ft.	2	
Attachment 2:	Discharge hose - 6 in. D., 25	5 ft.	4	
Labor Unit 1:	Pump operator		1	
Horsepower:	60			
Shift Basis: 1	ber day			
Weight:	<u>0.45</u>			
	5 TOIIS)			
Cost Breakdown:		Litilization %		
Ownership Cost/	Hour: \$18.06	NA		
Operating Cost/I	Hour: \$7.56	100	-	
Operator Cost/I	Hour: \$28.23	NA	-	
Total Unit Cost/I	Hour: \$53.85		-	
Total Elect Cost/	Hour: \$53.85			
	TIFS			
	<u>11L0</u>			
Initial Pond Vol	ume: $11,535,123.00$		Conversion factor:	7.4805
Final Pond Vol	ume: 86,288,487.60	gallons		
Total Pond Inflow Su	race 30,000	Sa ft	Unit inflow rate in	0 1758
Total Pond Inflow Vol	lume	Sq. II.	gpii/sq. it	0.1758
per H	Hour: 5,274.00	gallons		
Source	of actimated volume: 0'D v	$20.1_{20} = 11525122$ ($TE (E_{v}hihit I = 1)$	
	$\frac{9 \text{ D x}}{2}$	<u>29.1 ac - 11555125 C</u>	<u>F (EXHIOIL L-1)</u>	
PUMPING TIME				
Max	timum Pump Capacity:	130,000	gph/pump	
E	stimated Suction Head:	5	feet	
Estin	nated Discharge Head:	25	feet	
	Total Head:	30	feet	
	Site Altitude:	125,300	gpn/pump	
		т,т/б		
۸ dius	ted Pumping Capacity:	246 600	anh	
Initial Una	liusted Pumping Time:	349.91	hours	
Inflow	during Initial Pumping:	1,845.440	gallons	
Net Unac	djusted Pumping Time:	357.40	Hours	
Altitu	ide Adjustment Factor:	1.0000	(3% rule)	
P	ump Efficiency Factor:	0.9167	(55 min./hr.)	
Total Ac	ljusted Pumping Time:	327.63	hours	
JOB TIME AND CO	<u>ST</u>			
		Total job	o time: 327.63	Hours
Unit cost \$0.00	0200 /Gallon	Total io	b cost: \$17 643	
φ0.00		i otal joi	φ17,013	

TRUCK/LOADER TEAM WORK

Task description:	Lake 1 -	Transport Ove	rburden for Back	xfilling & Placem	ent		
Site: 15 Road Gravel I	Pit	Permit Acti	on: <u>2024-09</u>		Permit/Job#: <u>M</u>	2002114	
PROJECT IDEN	TIFICATION						
Task #: 01B		State: Color	rado	۸h	braviation. No	ne	
Date: $10/9/2$	024	County: Mesa	ado	At	Filename: M1	14-01b	
User: ACY		·					
Agency or	organization nan	ne: DRMS					
HOURLY EQUI	PMENT COST	<u>r</u>		Shift bas	sis: <u>1 per day</u>		
			Equipment Descri	iption			
Т	ruck Loader Tea	m -Truck: Cat	t 740				
Suppo	ort Equipment -I	-Loader: CA	T 980H D8T - 8SU				
Suppo	-Du	imp Area: Cat	t D8T - 8SU				
Road Maintenance – Motor Grader: NA							
	-Wa	ter Truck: NA	L				
Cost Breakdown:	Truck/Loa	ader Team	Support]	Equipment	Maintenan	ce Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck	
%Utilization-machine:	100	100	15	100	NA	NA	
Ownership cost/hour:	\$108.25	\$69.00	\$173.32	\$173.32	NA	NA	
Operating cost/hour:	\$79.54	\$60.57	\$16.46	\$109.71	NA	NA	
%Utilization-riper:	NA	0	20	NA	NA	NA	
Ripper own. cost/hour:	NA	\$0.00	\$14.53	\$0.00	NA	NA	
Ripper op. cost/hour:	NA	\$0.00	\$1.59	\$0.00	NA	NA	
Operator cost/hour:	\$24.82	\$56.84	\$40.04	\$40.04	NA	NA	
Unit Subtotals:	\$212.61	\$186.41	\$231.40	\$323.07	NA	NA	
Group Subtotals:	2 Work:	¢611.62	l Support:	\$977.54	U Moint:	0 00	
Group Subiotais:	work:	\$011.05	Support:	\$877.34	Maint:	\$0.00	
Total work team cos	t/hour: <u>\$1,489.</u>	17					
MATERIAL OU	ANTITIES						
Initial volume:	167 125	CCV		factor: 1,000			
Loose volume:	<u>167,125</u> 167,1 2	25 LCY	swen	1actor. <u>1.000</u>			
Sou	urce of estimated	volume: 11.5	$1 \text{ ac } \mathbf{x} \ 9 \text{ ft} = 167 1$	25 CY (Exhibit I	-1)		
Source	of estimated swe	ell factor: Cat I	Handbook		1)		
	Material Purcha	ase Cost: \$0.0	0				
	Тс	otal Cost: \$0.0	0				
HOURLY PRO	DUCTION						
Truck Capacity:							
Truck Payload (weig	<u>(ht) Basis:</u>		Downd-/I CV				
Material w Descri	ption: 2,700	nd clay - Loose	Pounds/LCY				
Rated Pay	yload: <u>87,000</u>	<u> </u>	Pounds				
Payload Cap	acity: 32.22		LCY				

	31.40					
Average Volume:	27.80					
Adjusted Volume:	31.40	LCY				
Final	Truck Volume	Based on Number of	f Loader Passes:	31.50	LCY	
Loading Tool Capacity						
			Buck	ket Size Class: <u>N</u>	A	_
Rated Capacity:	7.500	LCY (heaped)				_
Bucket Fill Factor:	1.050	Moist loam or s	andy clay (100%	- 110%) 1.050		_
Adjusted Capacity:	7.875	LCY				
Job Condition Corrections:	<u>_</u>	Si	te Altitude (ft.):	<u>4470</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				
Loading Tool Cycle Time:	Number	of Loading Tool Pas	sses Required to	Fill Truck:	4 1	basses
Excavators and Front Shove	<u>ls:</u>					
Machine Cycle Time v	s. Job Condition	n Rating: NA				
Machine Cycle Time v Selected Value v	s. Job Condition within this Basic	n Rating: <u>NA</u> c Rating: <u>NA</u>				
Machine Cycle Time v Selected Value v Track Loaders –	s. Job Condition within this Basic Material Descri	n Rating: <u>NA</u> c Rating: <u>NA</u> ption:				
Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.):	s. Job Condition within this Basic Material Descri	n Rating: <u>NA</u> c Rating: <u>NA</u> ption:				
Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA	s. Job Condition within this Basic Material Descri Material Ma	n Rating: <u>NA</u> c Rating: <u>NA</u> ption:		 Dump: 0.100)	
Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u>	s. Job Condition within this Basic Material Descri	n Rating: <u>NA</u> c Rating: <u>NA</u> ption:		 Dump:0.100)	
Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders –	s. Job Condition within this Basic Material Descri Unadjusted Bas	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: aneuver: <u>NA</u> sic Loader Cycle Tir	ne (load, dump, 1	 Dump:0.100 maneuver):0) .550 minu	utes
Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors	s. Job Condition within this Basic Material Descri Ma Unadjusted Bas	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: aneuver: <u>NA</u> sic Loader Cycle Tir	ne (load, dump, 1	Dump:0.100 maneuver):0 Factor (min.)) .550 minu Source	utes
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Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile:	s. Job Condition within this Basic Material Descri Ma Unadjusted Bas Mixed materia Conveyor or d	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: <u>NA</u> aneuver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig	ne (load, dump, 1	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000) .550 mint Source (Cat HB) (Cat HB)	ites
Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership:	s. Job Condition within this Basic Material Descri — — — — — — — — — — — — — — — — — — —	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: <u></u> aneuver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig nership of trucks and	ne (load, dump, 1 h and up 0.00 loaders -0.04	Dump: 0.100 maneuver): 0. Factor (min.) 0.020 0.000 -0.040) .550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)	ites
Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders – Cycle Time Factors Material: Stockpile: Truck Ownership: Operation:	s. Job Condition within this Basic Material Descri Material Descri Mixed materia Conveyor or d Common own Constant oper Nominal targe	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: <u></u> aneuver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig nership of trucks and ation -0.04	ne (load, dump, 1 h and up 0.00 loaders -0.04	Dump: 0.100 maneuver): 0. Factor (min.) 0.020 0.000 -0.040 -0.040 0.000) <u>Source</u> (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB)	utes
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Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time	s. Job Condition within this Basic Material Descri — Ma Unadjusted Basic Mixed materia Conveyor or d Common own Constant oper Nominal targe	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: <u>NA</u> aneuver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig hership of trucks and cation -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T Minutes	ne (load, dump, r h and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time: 'ime per Truck:	Dump: 0.100 maneuver): 0. Factor (min.) 0.020 0.000 -0.040 0.000 -0.040 0.000 -0.060 0.490 1.570 for site altitude:) .550 minutes (Cat HB) (Cat HB)	ites Minute
Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time Truck Load Time	s. Job Condition within this Basic Material Descri Ma Unadjusted Bas Mixed materia Conveyor or d Common own Constant oper Nominal targe :0.60 :0.60	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: <u>NA</u> aneuver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig hership of trucks and cation -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T Minutes Minutes	ne (load, dump, r h and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time: 'ime per Truck: Adjusted Adjusted	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570 for site altitude: for site altitude:) <u>Source</u> (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) 0.600 1.570	utes Minute
Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: <u>NA</u> Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Cycle Time: Truck Exchange Time Truck Load Time ck Maneuver and Dump Time	s. Job Condition within this Basic Material Descri Unadjusted Bas Mixed materia Conveyor or d Common own Constant oper Nominal targe	n Rating: <u>NA</u> c Rating: <u>NA</u> aption: <u>NA</u> aneuver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig hership of trucks and cation -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T Minutes Minutes Minutes	ne (load, dump, 1 h and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time: 'ime per Truck: Adjusted Adjusted Adjusted	Dump: 0.100 maneuver): 0. Factor (min.) 0.020 0.000 -0.040 -0.040 0.000 -0.060 0.490 1.570 for site altitude: for site altitude: for site altitude:) .550 minu Source (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) 0.600 1.570 1.000	utes
Machine Cycle Time v Selected Value v Track Loaders – Cycle Time Elements (min.): Load: NA Wheel and Track Loaders - Cycle Time Factors Material: Stockpile: Truck Ownership: Operation: Dump Target: Truck Exchange Time Truck Load Time ck Maneuver and Dump Time	s. Job Condition within this Basic Material Descri Ma Unadjusted Bas Mixed materia Conveyor or d Common own Constant oper Nominal targe : 0.60 : 1.570 : 1.00	n Rating: <u>NA</u> c Rating: <u>NA</u> ption: <u>NA</u> aneuver: <u>NA</u> sic Loader Cycle Tir al 0.02 dozer piled 10 ft. hig hership of trucks and cation -0.04 et 0.00 Net Cycle Tin Adjusted Load Net Load T Minutes Minutes Minutes Minutes	ne (load, dump, r h and up 0.00 loaders -0.04 ne Adjustment: er Cycle Time: ime per Truck: Adjusted Adjusted Adjusted	Dump: 0.100 maneuver): 0 Factor (min.) 0.020 0.000 0.000 -0.040 0.000 -0.040 0.000 -0.060 0.490 1.570 1.570 for site altitude:) .550 minutes (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) (Cat HB) 0.600 1.570 1.000	utes

Haul Rou	ite:							
Seg #	Haul (Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time	
1	1350.	00	0.00	8.00	8.00	1123	(min) 1.324	
					Haul Time:	1.324	minutes	
Return Re	oute:							
Seg #	Haul (Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)	
1	1350.	00	0.00	8.00	8.00	2155	0.773	
				Total Tru	Return Time: ock Cycle Time:	0.773 5.267	minute	es es
Loading Too Produ	ol unit uction	870.97	LCY/Hour		Adjusted for j	ob efficiency:	722.90	LCY/Hour
Truck Unit Produ	uction	358.84	LCY/Hour		Adjusted for j	ob efficiency:	297.84	LCY/Hour
Optimal No. of Tr	rucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
		Adjuste Adjusted sing Adjusted multip	Adjusted hourly truch Adjusted single truck/loade adjusted multiple truck/loade		Son: 595 Son: 595 Son: 595	.67 LCY .67 LCY .67 LCY	//Hour //Hour //Hour	
JOB TI	ME AN	ND COST						
Fleet	size: _	1	Team(s)	-	Total job time:	280.5	5 7 Ho	ours
Unit	cost:	\$2.500	/LCY		Total job cost:	\$417,8	310	

BULLDOZER RIPPING WORK

Site	: 15 Road Grav	el Pit Per	mit Action:	2024-09	P	ermit/Job#:	M20021	14
	PROJECT ID	ENTIFICATION						
	Task #: 010	C State:	Colorado		Abb	reviation:	None	
	Date: 10/	9/2024 County:	Mesa			Filename:	M114-01	с
	User: AC	Y						
	Agency	or organization name:	RMS					
	HOURLY EO	UIPMENT COST						
	Basic	Machine: Cat D&T & SU			Horsenowar		310	
	Ripper Att	achment: 3-Shank Ripper			Shift Basis:	1 r	ber dav	
	Tupper Tub				Data Source:	(CRG)	
	Cost Breakdown:					. <u> </u>		
	COSt Dicardown.				Utilization %			
		Ownership Cost/Hour:		\$173.32	NA			
		Operating Cost/Hour:		\$109.71	100	_		
	Rippe	er Ownership Cost/Hour:		\$14.53	NA	_		
	Ripp	ber Operating Cost/Hour:		\$7.95	100	=		
		Operator Cost/Hour:		\$40.04	NA	_		
		Total Unit Cost/Hour:		\$345.55				
		Total Fleet Cost/Hour:	\$691	.09				
	MATERIAL Q	UANTITIES	Sele	cted estimating	method: Are	a		
	Alternate Method	le•			,			
	Anternate Method	<u>13.</u>			DOUL			
ismic:	NA	Ban	k Volume [.]	ΝΔ	BCY		ΝΔ	
1	5.00	Dim	Domth (ft)	2.00	Uolumou	16 122	117	DCV or C
Area:	5.00	acres Rip	Depth (ft):	2.00	Volume:	16,133		BCY or C
Area:	5.00	acres Rip I Source of estimated quantit	Depth (ft):	2.00 stimates adjacen	Volume:	16,133		BCY or C
Area:	5.00 HOURLY PRO	acres Rip D Source of estimated quantit	Depth (ft):	2.00 stimates adjacen	Volume:	16,133		BCY or C
Area:	5.00 HOURLY PRO	acres Rip 1 Source of estimated quantit	Depth (ft):	2.00 stimates adjacen	Volume:	16,133		BCY or (
Area:	5.00 HOURLY PRO	acres Rip 1 Source of estimated quantit DDUCTION Seismic Velo	Depth (ft):	2.00 stimates adjacen	Volume:	16,133		BCY or C
Area:	5.00 HOURLY PRO	acres Rip 1 Source of estimated quantit DDUCTION Seismic Velo	Country:	2.00 stimates adjacen	Volume:	16,133		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area:	acres Rip I Source of estimated quantit DDUCTION Seismic Velo	Depth (ft):	NA	Volume: nt areas 5 ac feet/sec	16,133		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area:	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping Do Average Ripping W	city:	<u>2.00</u> stimates adjacer <u>NA</u> <u>2.56</u> 7.08	Volume:	16,133		BCY or C
Area:	5.00 HOURLY PRO Seismic: <u>Area:</u>	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping Do Average Ripping W Average Ripping Lei	city:	NA 2.56 7.08 100.00	Volume: nt areas 5 ac feet/sec feet/pa: feet/pa: feet/pa: feet/pa:	16,133 cond		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area:	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping Do Average Ripping Ler Average Ripping Ler Average Ripping Ler Average Dozer Sp	city: pepth: city: epth: idth: ngth: peed:	NA 2.56 7.08 100.00 88.00	Volume: nt areas 5 ac feet/sec feet/pa: feet/pa: feet/pa: feet/pa: feet/pa: feet/pa:	16,133 cond ss ss ss nute		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area:	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping Do Average Ripping Ler Average Ripping Ler Average Dozer Sp Average Maneuver T	city: pepth: city: epth: idth: peed: ime:	NA 2.56 7.08 100.00 88.00 0.25	Volume: nt areas 5 ac feet/sec feet/pa: feet/pa: feet/pa: feet/mi feet/mi	cond ss ss nute s/pass		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area:	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping De Average Ripping Ler Average Dozer Sp Average Maneuver T Production per unit	city: pepth: idth: ngth: rime: area:	NA 2.56 7.08 100.00 88.00 0.25 0.703	Volume: nt areas 5 ac feet/sec feet/pa: feet/pa: feet/pa: feet/mi feet/mi minute acres/h	2000 2000 2000 2000 2000 2000 2000 200		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping Do Average Ripping Len Average Ripping Len Average Dozer Sp Average Maneuver T Production per unit a	city:	NA 2.56 7.08 100.00 88.00 0.25 0.703	Volume: nt areas 5 ac feet/sec feet/pa: feet/pa: feet/pa: feet/mi feet/mi acres/h	2000 cond ss ss ss nute s/pass our		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping Do Average Ripping W Average Ripping Ler Average Maneuver T Production per unit a prrection Factors adjusted Hourly Unit Product	Depth (ft):	NA 2.56 7.08 100.00 88.00 0.25 0.703	Volume:	16,133 cond ss ss ss nute s/pass our		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping Do Average Ripping W Average Ripping Len Average Dozer Sp Average Maneuver T Production per unit a prrection Factors adjusted Hourly Unit Produc	Depth (ft):	NA 2.56 7.08 100.00 88.00 0.25 0.703	Volume: nt areas 5 ac feet/sec feet/pa: feet/pa: feet/pa: feet/pa: feet/mi acres/h Acres/f	2000 cond 55 55 55 55 55 55 55 57 57 57 57 57 57		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping Do Average Ripping W Average Ripping Ler Average Maneuver T Production per unit is prection Factors adjusted Hourly Unit Produc Site Altit	Depth (ft):	NA 2.56 7.08 100.00 88.00 0.25 0.703 4,470 1.00	Volume:	iond ss ss ss nute s/pass our nr		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping Do Average Ripping W Average Ripping Ler Average Maneuver T Production per unit i orrection Factors adjusted Hourly Unit Produc Site Altitude Lob Efficie	Depth (ft):	NA 2.56 7.08 100.00 88.00 0.25 0.703 4,470 1.00 0.83	Volume:	16,133 cond ss ss ss nute s/pass our ur HB) (day)		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping De Average Ripping W Average Ripping Ler Average Dozer Sp Average Maneuver T Production per unit i prrection Factors adjusted Hourly Unit Produc Site Altitude Job Efficie Net Correc	city: city:	NA 2.56 7.08 100.00 88.00 0.25 0.703 4,470 1.00 0.83 0.83	Volume:	iond ss ss ss nute s/pass our ir HB) /day) ier		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping Do Average Ripping W Average Ripping Ler Average Maneuver T Production per unit i prection Factors adjusted Hourly Unit Produc Site Altitude Job Efficie Net Correc	Depth (ft):	NA 2.56 7.08 100.00 88.00 0.25 0.703 4,470 1.00 0.83 0.83	Volume:	iond ss ss ss nute s/pass our ur HB) /day) ier		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping De Average Ripping Ler Average Ripping Ler Average Maneuver T Production per unit a <u>orrection Factors</u> adjusted Hourly Unit Produc Site Altit Altitude Job Efficie Net Correc Adjusted Hourly Unit	city:	NA 2.00 stimates adjacen NA 2.56 7.08 100.00 88.00 0.25 0.703 4,470 1.00 0.83 0.83 0.58	Volume:	16,133 cond ss ss ss nute s/pass our nr HB) /day) ier		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping De Average Ripping W Average Ripping Ler Average Dozer Sp Average Maneuver T Production per unit i prection Factors adjusted Hourly Unit Produc Site Altitude Job Efficie Net Correc Adjusted Hourly Unit	city: y:Staff es city: epth: idth: ngth: peed: rime: tion: tion: Adj: production: Production:	NA 2.56 7.08 100.00 88.00 0.25 0.703 4,470 1.00 0.83 0.58 1.17	Volume:	16,133 cond ss ss ss nute s/pass our nr HB) /day) ier		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co Un	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping De Average Ripping Ler Average Ripping Ler Average Maneuver T Production per unit i orrection Factors adjusted Hourly Unit Produc Site Altit Altitude Job Efficie Net Correc Adjusted Hourly Unit Adjusted Hourly Unit	city: city: city: city: epth: idth: ngth: ngth: rime: tion: tion: Adj: Production: Production:	NA 2.56 7.08 100.00 88.00 0.25 0.703 4,470 1.00 0.83 0.83 0.58 1.17	Volume:	16,133 cond ss ss ss nute s/pass our nr HB) /day) ier		BCY or C
Area:	5.00 HOURLY PRO Seismic: Area: Job Condition Co Un JOB TIME AN Fleet size:	acres Rip I Source of estimated quantit DDUCTION Seismic Velo Average Ripping De Average Ripping W Average Ripping Ler Average Dozer Sp Average Maneuver T Production per unit i orrection Factors adjusted Hourly Unit Produc Site Altit Altitude Job Efficie Net Correc Adjusted Hourly Unit Adjusted Hourly Unit Adjusted Hourly Unit Ste Altit Adjusted Hourly Unit Adjusted Hourly Unit Adjusted Hourly Fleet	city:	NA 2.56 7.08 100.00 88.00 0.25 0.703 4,470 1.00 0.83 0.58 1.17 Total job tim	Volume:	16,133 cond ss ss ss nute s/pass our nr HB) /day) ier 4.28	Ho	BCY or C

TRUCK/LOADER TEAM WORK

Task description:	Lake 1 -	Transport Tops	soil & Placement			
Site: 15 Road Gravel	Pit	Permit Action	on: 2024-09		Permit/Job#: <u>M</u>	2002114
PROJECT IDEN	TIFICATION					
Task #: 01D		State: Colora	ado	Ab	breviation: Nor	ne
Date: 10/9/2	024 0	County: Mesa			Filename: M1	14-01d
User: <u>ACY</u>						
Agency or	organization nam	e: DRMS				
HOURLY EQUI	PMENT COST			Shift bas	is: <u>1 per day</u>	
]	Equipment Descri	ption		
Т	ruck Loader Tear	n -Truck: Cat	740	•		
Supp	ort Equipment -I	-Loader: CA	<u>T 980H</u> D8T - 8SU			
Supp	-Du	mp Area: Cat	D8T - 8SU			
Road M	aintenance – Moto	or Grader: NA				
	-Wat	er Truck: NA				
Cost Breakdown:	Truck/Loa	der Team	Support I	Equipment	Maintenan	ce Equipment
<u>cost breakdown</u> .	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	15	100	NA	NA
Ownership cost/hour:	\$108.25	\$69.00	\$173.32	\$173.32	NA	NA
Operating cost/hour:	\$79.54	\$60.57	\$16.46	\$109.71	NA	NA
%Utilization-riper:	NA	0	20	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$14.53	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$1.59	\$0.00	NA	NA
Operator cost/hour:	\$24.82	\$56.84	\$40.04	\$40.04	NA	NA
Number of Units:	\$212.01	\$180.41	\$251.40	\$323.07		NA 0
Group Subtotals:	Work:	\$611.63	Support:	\$877.54	U Maint:	\$0.00
Group Subtotais.	work.	-	Support.	\$677.34	Want.	\$0.00
Total work team cos	st/hour: <u>\$1,489.1</u>	7				
MATERIAL QU	ANTITIES					
Initial volume:	21,412	CCY	Swell	factor: 1.000		
Loose volume:	21,412	2 LCY				
So	urce of estimated	volume: 11.5	1 around 8.4 ac @	8"D		
Source	of estimated swel	ll factor: Cat H	Handbook			
	Material Purcha	se Cost: $\frac{$0.00}{$0.00}$)			
	10		0			
HOURLY PRO	DUCTION					
Truck Capacity:	100					
Truck Payload (weig Material w	<u>gnt) Basis:</u> Jeight: 2 700		Pounds/I CV			
Descr	iption: Sand an	d clay - Loose				
Rated Pa	yload: 87,000	¥	Pounds			
Payload Cap	pacity: <u>32.22</u>		LCY			

<u> Fruck Travel (Haul & Return</u>) Time:	- Road Condition:	Soft, rutted dirt, n	o maintenance or w	ater, 4" tire	_
Maneuver and Dump Time:	1.00	Minutes	Adjusted	for site altitude:	1.000	Minutes
Truck Load Time:	1.570	Minutes	Adjusted	for site altitude:	1.570	Minutes
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.600	Minutes
<u> Fruck Cycle Time:</u>						
		Net Load 7	ime per Truck:	1.570	minutes	
		Adjusted Load	er Cycle Time:	0.490	minutes	
I Jan	0	Net Cycle Tir	ne Adjustment:	-0.060	minutes	
Dump Target:	Nominal targe	et 0.00		0.000	(Cat HB)	
Oneration	Constant oper	ation -0.04	1040018 -0.04	-0.040	(Cat HB)	
Stockpile:	Conveyor or d	lozer piled 10 ft. hig	1000000000000000000000000000000000000	0.000	(Cat HB)	_
Material:	Mixed materia	al 0.02	h	0.020	(Cat HB)	_
Cycle Time Factors				Factor (min.)	Source	
Wheel and Track Loaders -	Unadjusted Bas	sic Loader Cycle Ti	me (load, dump, r	maneuver): 0.	550 minu	utes
Load: NA	M	aneuver: NA		Dump: 0.100		
Cycle Time Elements (min.):						
Track Loaders –	Material Descri	ption:				
Selected Value v	vithin this Basic	Rating: NA				
Machine Cycle Time vs	. Job Condition	Rating: NA				
Excavators and Front Shovel	<u>s:</u>					
Loading Tool Cycle Time:	Number	of Loading Tool Pa	sses Required to	Fill Truck:	4 1	basses
Net Correction:	0.830	0.830				
Job Efficiency:	0.830	0.830	(CAT HE	5)		
Altitude Adj:	1.000	1.000	(CAT HE	<u>3)</u>		
	Truck	Loader	Source			
Job Condition Corrections:		S	ite Altitude (ft.):	<u>4470</u> feet		
rajusica Capacity.	1.013					
Adjusted Capacity:	1.050	Moist loam or s	sandy clay (100%)	- 110%) 1.050		-
Rated Capacity:	7.500	LCY (heaped)				_
			Bucl	ket Size Class: <u>N</u>	A	_
Loading Tool Capacity						
Final	Truck Volume	Based on Number o	f Loader Passes:	31.50	LCY	
Adjusted Volume:	31.40	LCY				
Average Volume	27.80	CY				
neapeu volume.	1141/					
	Adjusted Volume:	Adjusted Volume: 31.40 I Final Truck Volume coading Tool Capacity: 7.500 Bucket Fill Factor: 1.050 Adjusted Capacity: 7.875 Ob Condition Corrections: adjusted Capacity: 7.875 ob Condition Corrections: 0.830 Altitude Adj: 1.000 Job Efficiency: 0.830 Vet Correction: 0.830 Loading Tool Cycle Time: Number Excavators and Front Shovels: Number Machine Cycle Time vs. Job Condition Selected Value within this Basic Track Loaders – Material Description: Track Loaders – Material Description: Load: NA Material: Wheel and Track Loaders - Unadjusted Bas Cycle Time Factors Material: Material: Mixed material Stockpile: Conveyor or dot Truck Ownership: Common own Operation: Constant oper Dump Target: Nominal targe Fruck Cycle Time: 1.00 Truck Load Time: 1.00 Truck Load Time: 1.00	Adjusted Volume: 31.40 LCY Final Truck Volume Based on Number o coading Tool Capacity Rated Capacity: 7.500 LCY (heaped) Bucket Fill Factor: 1.050 Moist loam or standing to adjusted Capacity: 7.875 bucket Fill Factor: 7.875 LCY ob Condition Corrections: S Truck Loader Altitude Adj: 1.000 1.000 Job Efficiency: 0.830 0.830 Number of Loading Tool Pa Excavators and Front Shovels: Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Track Loaders – Material Description:	Adjusted Volume: 31.40 LCY Final Truck Volume Based on Number of Loader Passes: Journal Struck Volume Based on Number of Loader Passes: Source Rated Capacity: 7.500 LCY (heaped) Bucket Fill Factor: 1.050 Moist loam or sandy clay (100% Adjusted Capacity: 7.875 LCY ob Condition Corrections: Site Altitude (ft.): : Altitude Adj: 1.000 1.000 Job Efficiency: 0.830 0.830 Loading Tool Cycle Time: Number of Loading Tool Passes Required to Excavators and Front Shovels: Nachine Cycle Time vs. Job Condition Rating: NA Machine Cycle Time vs. Job Condition Rating: NA NA Selected Value within this Basic Rating: NA NA Ycle Time Elements (min.): Load: NA Maneuver: NA Vycle Time Elements (min.): Conveyor or dozer piled 10 ft. high and up 0.00 Truck Rowership: Commo ownership of trucks and loaders -0.04 Operation -0.04 Operation: Constant operation -0.04 Operation: Net Load Time per Truck: Rateval daylosted Loader Cycle Time:	Adjusted Volume: 31.40 LCY Final Truck Volume Based on Number of Loader Passes: 31.50 coading Tool Capacity Bucket Size Class: N Rated Capacity: 7.500 LCY (heaped) Bucket Fill Factor: 1.050 Moist loam or sandy clay (100% - 110%) 1.050 Adjusted Capacity: 7.875 LCY Site Altitude (ft.): 4470 feet Condition Corrections: Site Altitude (ft.): 4470 feet Addition Corrections: Job Efficiency: 0.830 0.830 Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: Excavators and Front Shovels: Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA Selected Value within this Basic Rating: NA System Mareiral Doscription: 0.100 Cycle Time Elements (min.): Load: NA Mareiral 0.02 0.020 Stockpille: Conveyor or dozer piled 10 ft. high and up 0.00	Adjusted Volume: 31.40 LCY Final Track Volume Based on Number of Loader Passes: 31.50 LCY oading Tool Capacity Bucket Size Class: NA Bucket Fill Factor: 1.050 Moist loam or sandy clay (100% - 110%) 1.050 Adjusted Capacity: 7.575 LCY ab Condition Corrections: Site Altitude (ft.): 4470 feet Attinude Adj. 1.000 1.000 Adjusted Capacity: 0.830 0.830 Job Efficiency: 0.830 0.830 Job Efficiency: 0.830 0.830 Vectorrection: 0.830 0.830 Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 4 Executors and Front Shovels: Machine Cycle Time vs. Job Condition Rating: NA Selected Value within this Basic Rating: NA

F	Haul Rou	ite:							
	Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel Time	
		(Ft)			(%)	(%)	(fpm)	(min)	
	1	1350.	.00	0.00	8.00	8.00	1123	1.324	
						Haul Time:	1.324	minutes	
-	Return R	oute:		-					
	Seg #	Haul	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
		(Ft)			(%)	(%)	(fpm)	(min)	
	1	1350.	.00	0.00	8.00	8.00	2155	0.773	
						Return Time:	0.773	minute	S
					Total Tru	ck Cycle Time:	5.267	minute	s
L	oading To	ol unit							
-	Prod	uction	870.97	LCY/Hour		Adjusted for j	ob efficiency:	722.90	LCY/Hour
Truck	Unit Prod	uction							
			358.84	LCY/Hour		Adjusted for j	ob efficiency:	297.84	LCY/Hour
Optima	al No. of T	rucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
				Adjuste	ed hourly true	k team production	on: 595	.67 LCY	/Hour
				Adjusted sing	le truck/loade	er team production	on: 595	.67 LCY	/Hour
				Adjusted multip	le truck/loade	er team production	on: 595	.67 LCY	//Hour
	<u>JOB TI</u>	ME AN	ND COST						
	Fleet	size:	1	Team(s)	ŗ	Total job time:	35.9	5 Ho	ours
	Unit	cost:	\$2.500	/LCY		Total job cost:	\$53,5.	30	

REVEGETATION WORK

Task description:		CTaskDescriptio	n				
Site:	CSite		Per	mit Action:	CJobAction	Permit/Job	o#: <u>CPermitID</u>
<u>P</u>]	ROJECT	IDENTIFIC	CATION				
	Task #: Data:	01E 10/0/2024	State:	CState		Abbreviation:	CAbbreviation
	User:	ACY	County.	ccounty			Critenanie
	Age	ency or organiz	zation name: <u>CA</u>	gencyName			

FERTILIZING

Materials Units / Cost / Unit Cost /Acre Description Unit Acre Manure, delivery (average cost), per ton 20.00 \$2,961.16 \$59,223.11 ton Sodium nitrate, 16-0-0 750.00 \$1.36 \$1,019.70 pound **Total Fertilizer** Materials \$60,242.81 Cost/Acre

Application

Description		Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)		\$77.10
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$43.12
	Total Fertilizer Application Cost/Acre	\$120.23

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	1.00	39.03	\$29.08
Orchardgrass - Potomac	0.50	6.20	\$2.19
Elk Sedge	0.10	0.23	\$50.41
Slender Wheatgrass - Native	3.00	10.95	\$21.19
Western Wheatgrass - Arriba	0.10	0.25	\$0.90
Sweetvetch, Utah or Northern	0.50	0.23	\$44.76
Red Top	1.00	114.55	\$10.47
Reedgrass, Canadian (or Blue Joint)	0.20	20.57	\$82.51
Reedgrass, Northern - Native	0.50	51.42	\$79.91

Saltgrass, Inland	1.00	13.86	\$49.84
Snowberry, Western	1.00	1.72	\$74.63
Sumac, Skunkbrush	0.40	0.19	\$18.05
Timothy, Alpine - Native	1.00	29.84	\$39.18
Basin Wildrye - Trailhead	1.50	6.10	\$19.52
Greasewood, Black	1.00	140.45	\$39.07
Totals Seed Mix	12.80	435.59	\$561.72

Application

Description		Cost /Acre
Broadcast seeding [DMG]		\$272.56
	Total Seed Application Cost/Acre	\$272.56

MULCHING and MISCELLANEOUS

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.13	\$4.13
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Total Mulch Materials Cost/Acre				\$496.91

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$85.37
Power mulcher (MEANS 32 91 13.16 0350)		\$157.25
Weed spray, truck, aquatic area, annuals [DMG]		\$31.79
	Total Mulch Application Cost/Acre	\$274.42

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood, Plains	22	Container, 2 gallon (MEANS)	\$43.99	\$2.40	\$967.78
Totals Nursery Stock Cost / Acre					\$967.78

	No. of Acres:	11.51	Cost /Acre:	\$63,054.04
Estimate	ed Failure Rate:	15%	Cost /Acre*:	\$2,691.00
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,NURSERY,MULC	
_	-	HING		
Initial Job Cost:	\$725,752.00			
Reseeding Job Cost:	\$4,646.01			
Total Job Cost:	\$730,398			
Job Hours:	14.00			

REVEGETATION WORK

Tas	sk descrip	tion:	Lake 1 - Reveget	ate Dry Rar	ngeland			
Site: 15 Road Gravel Pit		Permit Action: 2024-09		Permi	Permit/Job#: M2002114			
<u>PR(</u>	OJECT 1	IDENTIFIC	ATION					
	Task #:	01F	State:	Colorado		Abbreviatio	on: None	
	Date:	10/9/2024	County:	Mesa		Filenan	ne: M114-01f	
	User:	ACY						
	Age	ency or organiz	zation name: DR	MS				

FERTILIZING

Materials Units / Cost / Unit Cost /Acre Description Unit Acre Manure, delivery (average cost), per ton 20.00 \$2,961.16 \$59,223.11 ton Sodium nitrate, 16-0-0 750.00 \$1.36 \$1,019.70 pound **Total Fertilizer** Materials \$60,242.81 Cost/Acre

Application

Description		Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)		\$77.10
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$43.12
	Total Fertilizer Application Cost/Acre	\$120.23

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$456.41

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	2.50	298.44	\$32.52
Sandberg Bluegrass - VNS	2.00	42.47	\$28.89
Galleta	2.50	9.13	\$138.59
Globemallow, Scarlet (or copper)	0.50	5.66	\$92.78
Winter Fat	0.25	0.64	\$11.68
Yarrow, Western	0.50	30.40	\$24.12
Kochia, Forage (Prostrate)	0.25	35.11	\$5.20

Totals Seed Mix	8.50	421.84	\$333.79

Application

Description		Cost /Acre
Drill Seeding (DRMS Survey Cost)		\$236.64
	Total Seed Application Cost/Acre	\$236.64

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.13	\$4.13
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Total Mulch Materials Cost/Acre				\$496.91

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Weed spray, truck, non-aquatic areas, ann. [DMG]	\$27.19
Total Mulch Application Cost/A	cre \$269.82

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
	\$0.00				

	No. of Acres:	8.4	Cost /Acres	\$62,156.61	
Estimate	ed Failure Rate:	50%	Cost /Acre*	\$1,793.57	
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,MULCHING		
Initial Job Cost:	\$522,115.52				
Reseeding Job Cost:	\$7,532.99				
Total Job Cost:	\$529,649				
Job Hours:	13.00				

Task description:	Lake 3 - Drain lake fo	r grading banks		
te: 15 Road Gravel Pit	Permit A	ction: 2024-09	Permit/Job#:	M2002114
PROJECT IDENTIF	ICATION			
Task #: 03A Date: 10/9/2024 User: ACY	State: <u>Col</u> County: <u>Me</u>	orado sa	Abbreviation: Filename:	None M114-03a
Agency or organ	nization name: DRMS			
HOURLY EQUIPME	<u>ENT COST</u>			
	Description		Quantity	
Make and Model:	Submersible pump - 460)v, 6 in.	2	
Attachment 1:	Suction hose - 6 in. dian	n., 25 ft.	2	
Labor Unit 1:	Pump operator	., 25 II.	4	
Horsepower:	60			
Shift Basis: 1 p	ber day			
Weight:	0.45			
(US	S Tons)			
Cost Breakdown:		Litilization %		
Ownershin Cost/F	Hour: \$18.06	NA		
Operating Cost/H	Hour: \$7.56	100	_	
Operator Cost/H	Hour: \$28.23	NA	_	
Total Unit Cost/H	Hour: \$53.85			
Total Fleet Cost/	Hour: \$53.85			
PUMPING QUANTI	<u>ries</u>			
Initial Pond Volu	ume: 324.00		Conversion factor:	325850.5800
Final Pond Volu	ume: 105,575,587.	92 gallons		
Total Pond Inflow Sur	rface	G C	Unit inflow rate in	0.1750
F Total Pond Inflow Vol	Area: 24,000	Sq. ft.	gph/sq. ft.:	0.1758
per H	Iour: <u>4,219.20</u>	gallons		
Source of	of estimated volume: 12	'D x 27ac = 324 ac/ft		
PUMPING TIME				
Max	imum Pump Capacity:	130,000	anh/numn	
Es	stimated Suction Head:	5	feet	
Estir	nated Discharge Head:	25	feet	
	Total Head:	30	feet	
	CPB Pump Capacity:	123,300	gph/pump	
	Site Altitude:	4,470	feet	
مدينام ٨	ted Pumping Canacity	246 600	anh	
	1. , 1 D . TT.	/29.12	hours	
Initial Unac	Ijusted Pumping Time:	720.12		
Initial Unac Inflow c	Justed Pumping Time:	1,806,344	gallons	
Inflat Unac Inflow o Net Unac	Justed Pumping Time: Juring Initial Pumping: Ijusted Pumping Time:	<u> </u>	gallons Hours	
Initial Unac Inflow o Net Unac Altitu	Justed Pumping Time: luring Initial Pumping: ljusted Pumping Time: ide Adjustment Factor:	1,806,344 435.45 1.0000	gallons Hours (3% rule)	
Initial Unac Inflow o Net Unac Altitu Pu Total Ac	Justed Pumping Time: luring Initial Pumping: ljusted Pumping Time: ide Adjustment Factor: ump Efficiency Factor: liusted Pumping Time:	1,806,344 435.45 1.0000 0.9167 399.18	gallons Hours (3% rule) (55 min./hr.)	
Initial Unac Inflow o Net Unac Altitu Pu Total Ac	Justed Pumping Time: luring Initial Pumping: ljusted Pumping Time: ide Adjustment Factor: ump Efficiency Factor: ljusted Pumping Time:	1,806,344 435.45 1.0000 0.9167 399.18	gallons Hours (3% rule) (55 min./hr.) hours	
Initial Unac Inflow o Net Unac Altitu Pu Total Ac JOB TIME AND COS	Justed Pumping Time: luring Initial Pumping: ljusted Pumping Time: ide Adjustment Factor: ump Efficiency Factor: ljusted Pumping Time: ST	1,806,344 435.45 1.0000 0.9167 399.18 Total job	gallons Hours (3% rule) (55 min./hr.) hours b time:399.18	Hours
Initial Unac Inflow o Net Unac Altitu Pt Total Ac JOB TIME AND COS	Justed Pumping Time: luring Initial Pumping: ljusted Pumping Time: ude Adjustment Factor: ump Efficiency Factor: ljusted Pumping Time: ST 0200 /Gallon	1,806,344 435.45 1.0000 0.9167 399.18 Total job	gallons Hours (3% rule) (55 min./hr.) hours b time: 399.18	Hours

PUMPING WORK

BULLDOZER WORK

Task description: L	ake 3 - Establishing 3H: 1	V highwalls		
15 Road Gravel Pit	Permit Action:	2024-09	Permit/Job#:	M2002114
PROJECT IDENTIFICA	TION			
Task #: 03B	State: Colorado		Abbreviation.	None
Date: $10/9/2024$	County: Mesa		Filename:	M114-03b
User: ACY			-	
Agency or organizati	on name: DRMS			
HOURLY EQUIPMENT	COST			
Basic Machine:Cat D81	- 8SU			
Horsepower: 310				
Blade Type: Semi-U	niversal			
Attachment: <u>NA</u>				
Shift Basis: 1 per da	у			
Data Source: (CRG)				
Cost Breakdown:		1		
a () a	±	Utilization %		
Ownership Cost/Hour:	\$173.32	NA		
Operating Cost/Hour:	\$109.71	100 NTA		
Ripper own. Cost/Hour:	\$0.00	NA 0		
Operator Cost/Hour:	\$0.00	U		
Operator Cost/Hour:	\$40.04	NA		
Total unit Cost/Hour: \$3	23.07			
Total Fleet Cost/Hour: \$3	23.07			
MATERIAL QUANTITI	ES			
Initial Volume: 16 010				
Swell factor: 1 180				
L oose volume: 18 902 L	CY			
Loose volume. <u>10,702</u> L				
Source of estimated volume:	4,325 LF of 1H: 1V (@25'H cut/fill		
Source of estimated swell fact	or: Cat Handbook			
HOURLY PRODUCTION	N			
Average push distance:	75 feet			
Unadjusted hourly production	: 1,017.1 LCY/hr			
Materials consistency descript	ion: Compacted fill or o	embankment 0.9		
-			_	
Average push gradient: 09	%			
Average site altitude:4,4	400 feet			
Material weight: 2.6	500 lbs/LCY			
<u> </u>				
Weight description: <u>Cl</u>	ay and gravel - Wet			
Job Condition Correction Fact	<u>or</u>	Source		
Operator Skill	0.750	(AVG.)		
	0.000			
Dozing mathed	0.900	(CAT HB))		
Dozing method	0.900 1.000	(CAT HB)) (GEN.)		

Job efficience	cy: 0.830	(1 SHIFT/DAY)
Spoil pi	le: 0.800	(FND-RF)
Push gradie	nt: 1.000	(CAT HB)
Altitud	le: 1.000	(CAT HB)
Material Weig	ht: 0.885	(CAT HB)
Blade typ	be: 1.000	(PAT)
Net correction	on: 0.3967	
Adjusted unit production:	403.48 LCY/hr	
Adjusted fleet production:	403.48 LCY/hr	

Fleet size:	1 Dozer(s)
Unit cost:	\$0.801/LCY

Total job time:	46.85 Hours
Total job cost:	\$15,135

TRUCK/LOADER TEAM WORK

Site: 15 Road Gravel	Pit	Permit Act	ion: <u>2024-09</u>		Permit/Job#: <u>M</u>	2002114
PROJECT IDEN	TIFICATION					
Task #: 03B2		State: Color	ado	Ab	breviation: <u>No</u>	ne
Date: $10/9/2$	2024 0	County: Mesa			Filename: M1	14-03b2
User: <u>ACY</u>						
Agency or	organization nam	ne: DRMS				
HOURLY EOUI	PMENT COST	1		Shift bas	is: 1 per day	
		-	Fauipment Descri	intion	<u> </u>	
Т	ruck Loader Tea	m -Truck: Ca	t 740			
		-Loader: CA	AT 980H			
Supp	ort Equipment -L Du-	oad Area: Ca	t D8T - 8SU t D8T - 8SU			
Road M	aintenance – Moto	or Grader: NA	<u>A 1001 050</u>			
	-Wat	ter Truck: NA	1			
Cost Proskdown	Tmult/Log	dar Taam	Support	Equipment	Mointonon	a Equipment
Cost breakdown;	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
0/ Litilization machine	100	100	15	1 100	NI A	NI A
%Utilization-machine:	\$108.25	\$69.00	\$173.32	\$173.32	NA NA	NA NA
Operating cost/hour:	\$79.54	\$60.57	\$16.46	\$109.71	NA	NA
%Utilization-riper:	NA	0	20	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$14.53	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$1.59	\$0.00	NA	NA
Operator cost/hour:	\$24.82	\$56.84	\$40.04	\$40.04	NA	NA
Unit Subtotals:	\$212.61	\$186.41	\$231.40	\$323.07	NA	NA
Number of Units:	2	1	1	2	0	
Group Subtotals:	Work:	\$611.63	Support:	\$877.54	Maint:	\$0.00
Total work team cos	st/hour: <u>\$1,489.1</u>	7				
MATEDIAL OU	ANTITIES					
MATERIAL QU	ANIIIES					
Initial volume:	10,000		Y Swell	factor: <u>1.135</u>		
Loose volume.						
Source	of estimated swe	volume: 675	LF of 1H: 1V @2: Handbook	5'H backfill = 10,	000 CY	
Source	Material Purcha	ase Cost: $\$0.0$	0			
	То	tal Cost: \$0.0	0			
	DICTION					
<u>nuukli pru</u>						
Truck Capacity:	abt) Design					
Material w	veight: 2.700		Pounds/LCY	7		
Descr	iption: Sand ar	nd clay - Loose				
Rated Pa	yload: <u>87,000</u>		Pounds			
Payload Cap	pacity: <u>32.22</u>		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 7	Fruck Volume	Based on Number of	Loader Passes:	31.50	LCY	
Loading Tool Capacity						
			Buch	ket Size Class:	NA	_
Rated Capacity:	7.500	LCY (heaped)	1 1 (1000)	1100() 1.050		-
Bucket Fill Factor:	1.050	Moist loam or s	andy clay (100%	- 110%) 1.050		-
Adjusted Capacity:	7.875	LCY				
Job Condition Corrections:		Si	te Altitude (ft.):	<u>4470</u> feet		
	Truck	Loader	Source			
Altitude Adj:	1.000	1.000	(CAT HE	B)		
Job Efficiency:	0.830	0.830	(CAT HE	3)		
Net Correction:	0.830	0.830				
Loading Tool Cycle Time:	Numbe	r of Loading Tool Pas	sses Required to	Fill Truck:	p	basses
Excavators and Front Shovel	<u>s:</u>					
Machine Cycle Time vs	. Job Conditio	n Rating: <u>NA</u>				
Track Loadors	Matarial Docor	intion:				
Cycle Time Flements (min):	viatorial Desci	iption.				
Load: NA	Ν	laneuver: NA		Dump = 0.10	0	
	-					
Wheel and Track Loaders -	Unadjusted Ba	asic Loader Cycle Tin	ne (load, dump, r	maneuver):	0.550 minu	ites
Cycle Time Factors				Factor (min.)	Source	_
Material:	Mixed materi	ial 0.02		0.020	(Cat HB)	_
Stockpile:	Conveyor or	dozer piled 10 ft. hig	n and up 0.00	0.000	(Cat HB)	_
Truck Ownership:	Common ow	nership of trucks and	loaders -0.04	-0.040	(Cat HB)	_
Operation:	Constant ope	ration -0.04		-0.040	(Cat HB)	_
Dump Target:	Nominal targ	et 0.00		0.000	(Cat HB)	_
		Net Cycle Tim	e Adjustment:	-0.060	minutes	
		Adjusted Loade	er Cycle Time:	0.490	minutes	
		Net Load T	me per Truck:	1.570	minutes	
Truck Cycle Time:						
Truck Exchange Time:	0.60	Minutes	Adjusted	for site altitude:	0.600	Minute
Truck Load Time:	1.570	Minutes	Adjusted	for site altitude:	1.570	Minute
ck Maneuver and Dump Time:	1.00	Minutes	Adjusted	for site altitude:	1.000	Minute
Truck Travel (Haul & Return) penetration 8.0) Time:	Road Condition: <u>S</u>	oft, rutted dirt, n	o maintenance or	water, 4" tire	

H	Haul Rout	e:							
S	Seg #	Haul I (Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)	
1		1350.0	00	0.00	8.00	8.00	1123	1.324	
						Haul Time:	1.324	minutes	
R	Return Ro	ute:		1					
S	Seg #	Haul I	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
		(Ft)			(%)	(%)	(fpm)	Time (min)	
1		1350.0	00	0.00	8.00	8.00	2155	0.773	
						Return Time:	0.773	minute	s
					Total Tru	ck Cycle Time:	5.267	minute	s
Loa	ding Tool	l unit							
	Produ	ction	870.97	LCY/Hour		Adjusted for j	ob efficiency:	722.90	LCY/Hour
Truck U	nit Produ	ction					-		
		_	358.84	LCY/Hour		Adjusted for j	ob efficiency:	297.84	LCY/Hour
Optimal 1	No. of Tru	ucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
				Adjuste	d hourly truc	k team production	on: 595.	67 LCY	/Hour
				Adjusted sing	Adjusted single truck/loader team production: 595.67 LCY/H			/Hour	
				Adjusted multip	le truck/loade	er team production	on: 595 .	.67 LCY	/Hour
<u>1</u>	IOB TIN	1E AN	D COST						
	Fleet s	ize:	1	Team(s)	r	Total job time:	19.05	5 Но	ours
	Unit c	ost:	\$2.500	/LCY		Total job cost:	\$28,37	75	

BULLDOZER RIPPING WORK

Site			A A A A A	_		
	: 15 Road Grav	el Pit Permit Acti	on: <u>2024-09</u>	Permit	/Job#: <u>M2002114</u>	
	PROJECT IDI	ENTIFICATION				
	Task #: 030	C State: Color	ado	Abbrevia	tion: None	
	Date: 10/	9/2024 County: Mesa		Filen	ame: M114-03c	
	User: <u>AC</u>	Y				
	Agency	or organization name: DRMS				
	HOURLY EOI	UPMENT COST				
	Durin			TT.	210	
	Bipper Att	achment: 3-Shank Ripper		Shift Basis:		-
	Ripper Au			Data Source:	(CRG)	-
	Cost Preskdown				()	-
	Cost Breakdown:		ĺ	Utilization %		
		Ownership Cost/Hour:	\$173.32	NA		
		Operating Cost/Hour:	\$109.71	100		
	Rippe	er Ownership Cost/Hour:	\$14.53	NA		
	Ripp	er Operating Cost/Hour:	\$7.95	100		
		Operator Cost/Hour:	\$40.04	NA		
		Total Unit Cost/Hour:	\$345.55			
		Total Fleet Cost/Hour:	\$691.09			
	MATERIAL O	DUANTITIES	Selected estimating	method Area		
	Alternata Mathad		beleeted estimating			
	Alternate Method	. <u>s.</u>				
eismic:	NA	Bank Volum	ne: <u>NA</u>	BCY	NA	
Area:	10.00	acres R1p Depth (f	t): <u>2.00</u>	Volume: $32,26$	BC BC	CY or C
		Source of estimated quantity: St	aff estimates adjace	nt aroas 10 ac		
			uii estimates aujaces	int aleas 10 ac		-
	HOURLY PRO	DUCTION		in areas 10 ac		
	HOURLY PRO	DUCTION	an ostiniaos aujaco.			-
	HOURLY PRO	<u>DDUCTION</u> Seismic Velocity:	NA	feet/second		
	HOURLY PRO	DDUCTION Seismic Velocity:	NA	feet/second		
	HOURLY PRO Seismic: <u>Area:</u>	DDUCTION Seismic Velocity:	NA	feet/second		
	HOURLY PRO Seismic: Area:	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width:	NA 2.56 7.08	feet/second		
	HOURLY PRO Seismic: Area:	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length:	<u>NA</u> 2.56 7.08 100.00	feet/second feet/pass feet/pass feet/pass feet/pass		
	HOURLY PRO Seismic: Area:	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed:	NA 2.56 7.08 100.00 88.00	feet/second feet/pass feet/pass feet/pass feet/pass feet/pass feet/minute		-
	HOURLY PRO Seismic: Area:	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time:	NA 2.56 7.08 100.00 88.00 0.25	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass		
	HOURLY PRO Seismic: Area:	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area:	NA 2.56 7.08 100.00 88.00 0.25 0.703	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour		
	HOURLY PRO Seismic: Area: Job Condition Co	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: <u>rrection Factors</u>	NA 2.56 7.08 100.00 88.00 0.25 0.703	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour		
	HOURLY PRO Seismic: Area: Job Condition Co	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Ripping Length: Average Ripping Length: Average Maneuver Time: Production per unit area: rrection Factors adjusted Hourly Unit Production:	NA 2.56 7.08 100.00 88.00 0.25 0.703	feet/pass feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour		
	HOURLY PRO Seismic: Area: Job Condition Co Un	DDUCTION Seismic Velocity:	NA <u>2.56</u> 7.08 100.00 <u>88.00</u> 0.25 0.703 0.703	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr		
	HOURLY PRO Seismic: Area: Job Condition Co Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: Trection Factors adjusted Hourly Unit Production: Site Altitude:	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet		
	HOURLY PRO Seismic: Area: Job Condition Co Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Ripping Length: Average Ripping Length: Average Maneuver Time: Production per unit area: rrection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj:	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00 0.82	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (Labift(dar))		
	HOURLY PRO Seismic: Area: Job Condition Co Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Ripping Length: Average Maneuver Time: Production per unit area: rrection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction:	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00 0.83 0.83 0.83	feet/second feet/pass feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier		
	HOURLY PRO Seismic: Area: Job Condition Co Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: Trection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction:	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00 0.83 0.83	feet/second feet/pass feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier		
	HOURLY PRO Seismic: Area: Job Condition Co Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rrection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Product	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00 0.83 0.83 ion: 0.58	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier Acres/hr	;	
	HOURLY PRO Seismic: Area: Job Condition Co Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Ripping Length: Average Maneuver Time: Production per unit area: rrection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Product Adjusted Hourly Unit Product	NA 2.56 7.08 100.00 88.00 0.25 0.703 4,470 1.00 0.83 0.83 0.58	feet/second feet/pass feet		
	HOURLY PRO Seismic: Area: Job Condition Co Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: Trection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Product Adjusted Hourly Unit Product Adjusted Hourly Unit Product DCOST	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00 0.83 0.83 ion: 0.58 ion: 1.17	feet/second feet/pass feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier Acres/hr Acres/hr		
	HOURLY PRO Seismic: Area: Job Condition Co Un Signature Fleet size:	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: prection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Product Adjusted Hourly Unit Product Adjusted Hourly Unit Product In D COST 2 Grader(s)	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00 0.83 0.83 ion: 0.58 ion: 1.17 Total job tim	feet/second feet/pass feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier Acres/hr Acres/hr Scres/hr Acres/hr Acres/hr Acres/hr	Hours	

TRUCK/LOADER TEAM WORK

Task description:	Lake 3 -	Transport Tops	soil & Placement						
Site: 15 Road Gravel	Site: 15 Road Gravel Pit Permit Action: 2024-09 Permit/Job#: M2002114								
PROJECT IDEN	TIFICATION								
Task #: 03D		State: Color	ado	Ab	breviation: No	one			
Date: 10/9/2	Date: 10/9/2024 County: Mesa Filename: M114-03d								
User: <u>ACY</u>									
Agency or	organization nar	ne: DRMS							
μοιφί ν εοιμ	DMENT COST	P		Shift had	ia 1 man day				
HUUKLI EQUI	FWIENT COST	<u>L</u>		Shint bas	is: <u>1 per day</u>				
r	Fruck Londor Too	m Truck: Cot	Equipment Descri	ption					
	THUCK LOADET TEA	-Loader: CA	T 980H						
Supp	ort Equipment -L	Load Area: Cat	: D8T - 8SU						
	-Dı	amp Area: Cat	: D8T - 8SU						
Road M	aintenance – Mot	or Grader: NA	L						
	- w a	ter Truck: NA	L						
Cost Breakdown:	Truck/Loa	ader Team	Support I	Equipment	Maintenar	nce Equipment			
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck			
%Utilization-machine:	100	100	15	100	NA	NA			
Ownership cost/hour:	\$108.25	\$69.00	\$173.32	\$173.32	NA	NA			
Operating cost/hour:	\$79.54	\$60.57	\$16.46	\$109.71	NA	NA			
%Utilization-riper:	NA	0	20	NA	NA	NA			
Ripper own. cost/hour:	NA	\$0.00	\$14.53	\$0.00	NA	NA			
Ripper op. cost/hour:	NA	\$0.00	\$1.59	\$0.00	NA	NA			
Operator cost/hour:	\$24.82	\$56.84	\$40.04	\$40.04	NA	NA			
Unit Subtotals:	\$212.61	\$186.41	\$231.40	\$323.07	NA	NA			
Number of Units:	2	1	1	2	0	0			
Group Subtotals:	Work:	\$611.63	Support:	\$877.54	Maint:	\$0.00			
Total work team co	st/hour: <u>\$1,489.</u>	17							
MATERIAL QU	ANTITIES								
Initial volume	: 16.949	CCY	Swell	factor: 1.135					
Loose volume	: 19,23	7 LCY	7						
So	urce of estimated	volume: Staff	festimates						
Source	of estimated swe	ell factor: Cat I	Handbook						
	Material Purch	ase Cost: \$0.0	0						
	То	otal Cost: <u>\$0.0</u>	0						
HOURLY PRO	DUCTION								
<u>Truck Capacity:</u>									
Truck Payload (wei	<u>ght) Basis:</u>		_						
Material v	veight: 2,700	nd alay I acco	Pounds/LCY						
Desci Rated Pa	$\frac{190011}{1000} = \frac{5000}{1000}$	nu ciay - Loose	Pounds						
Payload Ca	pacity: 32.22		LCY						
-									

<u>Truck Cycle Time:</u> Truck Exchange T Truck Load T Ick Maneuver and Dump T	Vime: 0.60 Vime: 1.570 Vime: 1.00	Minutes Minutes Minutes	Adjusted Adjusted	for site altitude: for site altitude:	1.570 1.000	Minutes Minutes
<u>Truck Cycle Time:</u> Truck Exchange T Truck Load T	Sime: 0.60 Sime: 1.570	Minutes	Adjusted	for site altitude:	1.570	Minutes
<u>Truck Cycle Time:</u> Truck Exchange T	`ime: 0.60	Minutes				
Truck Cycle Time:		Minutos	Adjusted	for site altitude:	0.600	Minutes
		Net Load	Time per Truck:	1.570	minutes	
		Adjusted Lo	ader Cycle Time:	0.490	minutes	
		Net Cycle 7	Time Adjustment:	-0.060	minutes	
Uperation Operation	n: Constant of et: Nominal ta	rget 0 00		-0.040	(Cat HB)	_
Truck Ownersh	ip: Common or	wnership of trucks a	nd loaders -0.04	-0.040	(Cat HB)	_
Stockpi	le: Conveyor c	or dozer piled 10 ft. h	high and up 0.00	0.000	(Cat HB)	_
<u>Materi</u>	al: Mixed mate	erial 0.02		0.020	(Cat HB)	_
Wheel and Track Load Cycle Time Factor	ers - Unadjusted I	Basic Loader Cycle	Гіте (load, dump, r	naneuver): <u>0</u> Factor (min.)	.550 minu	utes
Load: NA		Maneuver: NA		Dump: 0.100)	
Cycle Time Elements (m	in.):					
Track Loade	rs – Material Des	cription:				
Selected Va	lue within this Ba	asic Rating: <u>NA</u>				
Machine Cycle Tir	ne vs. Job Condit	ion Rating: <u>NA</u>				
Excavators and Front Sh	ovels:					
Loading Tool Cycle Ti	me: Numt	per of Loading Tool	Passes Required to 1	Fill Truck:	4 1	basses
Net Correction:	0.830	0.830				
Job Efficiency:	0.830	0.830	(CAT HB	3)		
Altitude Adj:	1.000	1.000	(CAT HB	5)		
	Truck	Loader	Source			
Job Condition Correcti	ons:		Site Altitude (ft.): 4	<u>1470</u> feet		
Adjusted Capacity	7.875					
Bucket Fill Facto	r: <u>1.050</u>	Moist loam o	or sandy clay (100%)	- 110%) 1.050		_
Rated Capacity	7.500	LCY (heaped	l)			_
			Buck	ket Size Class: N	A	
Loading Tool Capacity						
F	inal Truck Volun	ne Based on Number	of Loader Passes.	31.50	LCY	
	31.40	LCY				
Adjusted Volume	27.80	LCY				
Average Volume Adjusted Volume	31.40	LCY				
Heaped Volume: Average Volume: Adjusted Volume:	21.10					

Haul Rou	ite:							
Seg #	Haul I	Distance	Grade (%)	Roll. Res (9)	Total Res	Velocity (frm)	Travel Time	
	(Ft)			(%)	(%)	(Ipili)	(min)	
1	1350.	00	0.00	8.00	8.00	1123	1.324	
Deferre D	4				Haul Time:	1.324	minutes	
Seg #	ute:	Distance	$\mathbf{Crade}(0')$	Doll Dos	Total Das	Valaaity	Travel	
Seg #	(Ft)	Distance	Grade (%)	(%)	(%)	(fpm)	Time (min)	
1	1350.	00	0.00	8.00	8.00	2155	0.773	
				Total Tru	Return Time: ck Cycle Time:	0.773 5.267	minute	es es
Loading Too	ol unit					4 07 1		
Produ Travala Urait David	uction	870.97	LCY/Hour		Adjusted for j	ob efficiency:	722.90	LCY/Hour
		358.84	LCY/Hour		Adjusted for j	ob efficiency:	297.84	LCY/Hour
Optimal No. of Tr	rucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
			Adjuste	d hourly true	k team production	on: 595	.67 LCY	/Hour
			Adjusted sing	le truck/loade	er team production	on: 595	.67 LCY	//Hour
			Adjusted multip	le truck/loade	er team production	on: 595	.67 LCY	//Hour
JOB TI	ME AN	D COST						
Fleet	size:	1	Team(s)	r	Fotal job time:	32.2	9 Ho	ours
Unit	cost: _	\$2.500	/LCY		Total job cost:	\$48,0	93	

REVEGETATION WORK

Task description:		Lake 3 - Reveget	ate Wetland	Areas			
Site: 15 Road Gravel Pit		Permit Action: 2024-		2024-09	Permit/Job#: M2002114		
<u>PI</u>	ROJECT	IDENTIFIC	ATION				
	Task #:	03E	State:	Colorado		Abbreviation:	None
	Date:	10/9/2024	County:	Mesa		Filename:	M114-03e
	User:	ACY					
	Age	ency or organiz	zation name: DR	MS			

FERTILIZING

Materials Units / Cost / Unit Cost /Acre Description Unit Acre Manure, delivery (average cost), per ton 20.00 \$2,961.16 \$59,223.11 ton Sodium nitrate, 16-0-0 750.00 \$1.36 \$1,019.70 pound **Total Fertilizer** Materials \$60,242.81 Cost/Acre

Application

Description		Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)		\$77.10
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$43.12
	Total Fertilizer Application Cost/Acre	\$120.23

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	1.00	39.03	\$29.08
Orchardgrass - Potomac	0.50	6.20	\$2.19
Elk Sedge	0.10	0.23	\$50.41
Slender Wheatgrass - Native	3.00	10.95	\$21.19
Western Wheatgrass - Arriba	0.10	0.25	\$0.90
Sweetvetch, Utah or Northern	0.50	0.23	\$44.76
Red Top	1.00	114.55	\$10.47
Reedgrass, Canadian (or Blue Joint)	0.20	20.57	\$82.51
Reedgrass, Northern - Native	0.50	51.42	\$79.91

Saltgrass, Inland	1.00	13.86	\$49.84
Snowberry, Western	1.00	1.72	\$74.63
Sumac, Skunkbrush	0.40	0.19	\$18.05
Timothy, Alpine - Native	1.00	29.84	\$39.18
Basin Wildrye - Trailhead	1.50	6.10	\$19.52
Greasewood, Black	1.00	140.45	\$39.07
Totals Seed Mix	12.80	435.59	\$561.72

Application

Description		Cost /Acre
Broadcast seeding [DMG]		\$272.56
	Total Seed Application Cost/Acre	\$272.56

MULCHING and MISCELLANEOUS

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.13	\$4.13
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Total Mulch Materials Cost/Acre				\$496.91

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$85.37
Power mulcher (MEANS 32 91 13.16 0350)		\$157.25
Weed spray, truck, aquatic area, annuals [DMG]		\$31.79
	Total Mulch Application Cost/Acre	\$274.42

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood, Plains	S 22 Container, 2 gallon (MEANS)		\$43.99	\$2.40	\$967.78
	\$967.78				

	No. of Acres:	5.74	Cost /Acre:	\$63,054.04
Estimate	ed Failure Rate:	15%	Cost /Acre*:	\$2,691.00
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,NURSERY,MULC	
-	-	HING		
Initial Job Cost:	\$361,930.19			
Reseeding Job Cost:	\$2,316.95			
Total Job Cost:	\$364,247			
Job Hours:	7.00			

REVEGETATION WORK

Task description:		Lake 3 - Revegetate Dry I	Rangeland		
Site: 15 Road Gravel Pit		Permit Action: _2024-09		Permit/Job#: <u>M2002114</u>	
PROJECT	<u> IDENTIFIC</u>	ATION			
Task #:	03F	State: Colorad	0	Abbreviation:	None
Date:	10/9/2024	County: Mesa		Filename:	M114-03f
User:	ACY				
Ag	gency or organi	zation name: DRMS			

FERTILIZING

Materials Units / Cost / Unit Cost /Acre Description Unit Acre Manure, delivery (average cost), per ton 20.00 \$2,961.16 \$59,223.11 ton Sodium nitrate, 16-0-0 750.00 \$1.36 \$1,019.70 pound **Total Fertilizer** Materials \$60,242.81 Cost/Acre

Application

Description		Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)		\$77.10
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$43.12
	Total Fertilizer Application Cost/Acre	\$120.23

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$456.41

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	2.50	298.44	\$32.52
Sandberg Bluegrass - VNS	2.00	42.47	\$28.89
Galleta	2.50	9.13	\$138.59
Globemallow, Scarlet (or copper)	0.50	5.66	\$92.78
Winter Fat	0.25	0.64	\$11.68
Yarrow, Western	0.50	30.40	\$24.12
Kochia, Forage (Prostrate)	0.25	35.11	\$5.20

Totals Seed Mix 8.50 421.84 \$333.79	Totals Seed Mix	8.50	421.84	\$333.79	
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Application

Description		Cost /Acre
Drill Seeding (DRMS Survey Cost)		\$236.64
	Total Seed Application Cost/Acre	\$236.64

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.13	\$4.13
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Total Mulch Materials Cost/Acre				\$496.91

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Weed spray, truck, non-aquatic areas, ann. [DMG]	\$27.19
Total Mulch Application Cost/A	cre \$269.82

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

Estimate	No. of Acres: ed Failure Rate:	10 50%	Cost /Acre: Cost /Acre*:	\$62,156.61 \$1,793.57
*Selected Replantin	ng Work Items:	TILLING,SEEDIN	G,MULCHING	
Initial Job Cost:	<u>\$621,566.10</u> \$8,967.85			

Reseeding Job Cost:	\$8,967.85
Total Job Cost:	\$630,534
Job Hours:	16.00

PUMPING WORK

Task description:	Lake 4 - Drain fo	or grading b	anks		
e: 15 Road Gravel Pit	Per	mit Action:	2024-09	Permit/Job#:	M2002114
PROJECT IDENTIF	ICATION				
Task #: 04A Date: 10/9/2024 User: ACY	State: County:	Colorado Mesa		Abbreviation: Filename:	None M114-04a
Agency or organ	nization name: DF	RMS			
HOURLY EQUIPME	ENT COST				
	Description			Quantity	
Make and Model:	Submersible pump	o - 460v, 6 in	•	2	
Attachment 1:	Suction hose - 6 in	i. diam., 25 f	t.	2	
Attachment 2: Labor Unit 1:	Pump operator	o in. D., 25 π.	•	4	
Horsepower: Shift Basis: 1 p Weight: (US	60 ber day 0.45 S Tons)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/I	Hour: \$18.0	06	NA		
Operating Cost/H	Hour: $\$/.5$	16 12	100 NA		
Total Unit Cost/	Hour: 528	25 85	NA		
	455. 	05			
Total Fleet Cost/	Hour: \$53.	.85			
PUMPING QUANTI.	<u>1165</u>			~	
Initial Pond Volu Final Pond Volu	ume: 300	0.00 174.00		Conversion factor:	325850.5800
Total Pond Inflow Su	unie. <u>97,755</u> , rface	,1/4.00	_ ganons	Unit inflow rate in	
A A A A A A A A A A A A A A A A A A A	Area: 30,0	000	Sq. ft.	gph/sq. ft.:	0.1758
Total Pond Inflow Vol per H	lume Iour: 5,27	4.00	gallons		
Source	of estimated volume:	12'D x 2	5ac = 300 ac/ft (actual)	site conditions)	
PUMPING TIME					
			120,000	1 . /	
Max	atimum Pump Capacit	ty:	130,000	_ gpn/pump feet	
Estir	nated Discharge Hea	nd:	25	_ feet	
	Total Hea	ıd:	30	feet	
	CPB Pump Capacit	ty:	123,300	gph/pump	
	Site Altitud	le:	4,470	feet	
Adius	ted Pumping Capacit	tv.	246 600	onh	
Initial Unac	ljusted Pumping Tim	ne:	396.41	hours	
Inflow c	luring Initial Pumpin	ıg:	2,090,676	gallons	
Net Unac	ljusted Pumping Tim	ne:	404.89	Hours	
Altitu	Ide Adjustment Facto	or:	1.0000	(3% rule)	
Pi Total Ad	liusted Pumping Tim	л: ne:	371.16	_ (33 mm./nr.) hours	
IOR TIME AND COM	ST				
505 HVIE AND COM	<u> </u>		Total job tin	ne: 371.16	Hours
Unit cost: \$0.00	0200 /Gallon		Total job co	st: \$19,987	

BULLDOZER WORK

rusk uesemption.	Lake 4 - Establis	ning SH: IV	nignwalls		
: 15 Road Gravel Pit	Perm	nit Action:	2024-09	Permit/Job#:	M2002114
PROJECT IDENTIF	ICATION				
Task #· 04B	State:	Colorado		Abbreviation.	None
Date: $10/9/2024$	County:	Mesa		Filename:	M114-04b
User: ACY		112004		-	
Agency or orga	nization name: DR	MS			
HOURLY EQUIPME	ENT COST				
Basic Machine: Cat	t D8T - 8SU				
Horsepower: <u>310</u>	0				
Blade Type: Ser	mi-Universal				
Attachment: NA	A				
Shift Basis: <u>I p</u>	per day				
Data Source: (CI	KG)				
Cost Breakdown:		1			
		* 4 = -	<u>Utilization %</u>		
Ownership Cost/Hour:		\$173.32	NA		
Operating Cost/Hour:		\$109.71	100		
Ripper own. Cost/Hour:		\$0.00	NA		
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour:		\$40.04	NA		
Total Fleet Cost/Hour:	\$323.07 \$323.07				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT	<u>\$323.07</u> <u>\$323.07</u> <u>FITIES</u>				
I otal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 9,27 Swell factor: 1.09	5 323.07 \$323.07 FITIES 72 90				
Total unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1	\$323.07 \$323.07 FITIES 72 90 106 LCY				
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volume	<u>\$323.07</u> <u>\$323.07</u> <u>\$323.07</u> <u>\$106</u> LCY time: 5,007LF c 2)	 	 20'H cut/fill =9,272 C'	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel	\$323.07 \$323.07 FITIES 72 90 106 LCY ime: 5,007LF c 2) Il factor: Cat Handle	 of 2H: 1V @ pook	 20'H cut/fill =9,272 C'	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu: Source of estimated swel HOURLY PRODUCT 100	\$323.07 \$323.07 EITHES 72 90 106 LCY ume: 5,007LF c 2) Il factor: 2) Cat Handle TION	 of 2H: 1V @ pook	 20'H cut/fill =9,272 C'	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance:	<u>\$323.07</u> <u>\$323.07</u> <u>\$323.07</u> <u>\$106 LCY</u> me: 5,007LF c <u>2)</u> Il factor: <u>2)</u> Il factor: <u>Cat Handl</u> <u>TION</u> 75 feet	 of 2H: 1V @ pook	20'H cut/fill =9,272 C	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product	$ \frac{5323.07}{\$323.07} $ <u>FITIES</u> 72 72 72 70 106 LCY time: 5,007LF c 2) 11 factor: 2) Cat Handl <u>TION</u> rection: 75 feet 1,017.1 LCY		 20'H cut/fill =9,272 C'	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency dest	$\begin{array}{r} \underline{5323.07} \\ \hline \underline{\$323.07} \\ \hline \underline{\$323.07} \\ \hline \underline{\$111ES} \\ \hline 72 \\ \hline 75 \\ \hline$	 of 2H: 1V @ pook (/hr cted fill or er	 20'H cut/fill =9,272 C' nbankment 0.9	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency destance	\$323.07 \$323.07 FITIES 72 90 106 LCY me: 5,007LF c 2) II factor: 2) Cat Handle TION action: 1,017.1 LCY scription: Compace	 of 2H: 1V @ book //hr cted fill or er	 20'H cut/fill =9,272 C' mbankment 0.9	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANI Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency dest Average push gradient: Average site altitude:	$\frac{5323.07}{$323.07}$ <u>FITIES</u> $\frac{72}{200}$ 106 LCY 106 LCY 106 LCY 107 		 20'H cut/fill =9,272 C' mbankment 0.9	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency dest Average site altitude: Material weight:	$\frac{5323.07}{$323.07}$ FITIES 72 72 70 106 LCY 72 72 72 75 72 72 72 72 72 72 72 72 72 72 72 72 72	 of 2H: 1V @ pook //hr cted fill or er	20'H cut/fill =9,272 C'	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUAN1 Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel HOURLY PRODUC' Average push distance: Unadjusted hourly produce Materials consistency des Average site altitude: Material weight: Weight description:	$\frac{5323.07}{$323.07}$ FITIES $\frac{72}{200}$ IO6 LCY $\frac{2)}{106}$ IC9 $\frac{2)}{106}$ IC9 $\frac{2)}{106}$ IC9 $\frac{2)}{106}$ IC9 $\frac{2}{2}$ II factor: $\frac{75 \text{ feet}}{1,017.1 \text{ LCY}}$ Scription: $2,600 \text{ lbs/LCY}$ IC1 and gravel - V	 of 2H: 1V @ pook //hr cted fill or er Vet	 20'H cut/fill =9,272 C' mbankment 0.9	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANI Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel HOURLY PRODUCT Average push distance: Unadjusted hourly product Materials consistency des Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction	$\frac{5323.07}{\$323.07}$ $\overline{\text{ITTIES}}$ $\frac{72}{200}$ 106 LCY $\operatorname{ime:} 5,007 \text{ LF of } 2)$ $11 \text{ factor:} \underline{2}$ $11 \text{ factor:} \underline{2}$ $11 \text{ factor:} \underline{75 \text{ feet}}$ $1,017.1 \text{ LCY}$ $1,017.1 \text{ LCY}$ $\frac{0 \%}{4,400 \text{ feet}}$ $2,600 \text{ lbs/LCY}$ $\underline{10 \text{ Clay and gravel - V}}$	 of 2H: 1V @ pook Z/hr cted fill or er Vet	 20'H cut/fill =9,272 C' mbankment 0.9	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANI Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel HOURLY PRODUC' Average push distance: Unadjusted hourly product Materials consistency dest Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator	\$323.07 \$323.07 FITIES 72 90 106 LCY ame: 5,007LF c 2) Il factor: Cat Handle TION action: 75 feet 1,017.1 LCY scription: Compace 0% 4,400 feet 2,600 lbs/LCY Clay and gravel - V 1 Factor Skill: 0.7		20'H cut/fill =9,272 C' 	Y (Exhibit L-	
Iotal unit Cost/Hour: Total Fleet Cost/Hour: MATERIAL QUANT Initial Volume: 9,27 Swell factor: 1.09 Loose volume: 10,1 Source of estimated volu Source of estimated swel HOURLY PRODUC* Average push distance: Unadjusted hourly product Materials consistency dest Average push gradient: Average site altitude: Material weight: Weight description: Job Condition Correction Operator Material consist	$\begin{array}{c c} \underline{5323.07} \\ \hline \\ $		20'H cut/fill =9,272 C 	Y (Exhibit L-	

Task # 04B

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.885	(CAT HB)
Blade type:	1.000	(PAT)
Net correction:	0.3967	
Adjusted unit production: 40)3.48 LCY/hr	
Adjusted fleet production: 40	03.48 LCY/hr	

Fleet size:	1 Dozer(s)
Unit cost:	\$0.801/LCY

Total job time:	25.05 Hours
Total job cost:	\$8,092

BULLDOZER RIPPING WORK

Site	15 Dood Com	al D:t	tion: 2024.00	D!+/T	N2002114
	: 15 Road Grav	el Pit Permit Ac	tion: <u>2024-09</u>	Permit/Jo	00#: <u>M2002114</u>
	PROJECT IDI	<u>ENTIFICATION</u>			
	Task #: 040	C State: Cold	orado	Abbreviatio	n: None
	Date: 10/	9/2024 County: Mes	a	Filenam	e: M114-04c
	User: AC	Y			
	Agency	or organization name: DRMS			
	HOURLY EO	UIPMENT COST			
	Durin			TT.	210
	Basic I Dinnen Atte	viachine: Cat D81 - 850		Horsepower:	310 1 man day
	Kipper Au	achiment. <u>3-Shank Kipper</u>		Data Source:	(CRG)
	~ ~				(CRO)
	Cost Breakdown:				
		Ownership Cost/Hours	\$172.22	Utilization %	
		Operating Cost/Hour:	\$175.52	<u> </u>	
	Rippe	er Ownership Cost/Hour:	\$14.53	NA	
	Ripp	per Operating Cost/Hour:	\$7.95	100	
	11	Operator Cost/Hour:	\$40.04	NA	
		Total Unit Cost/Hour:	\$345.55		
		Total Elect Cost/Hour	\$601.00		
			\$071.07		
	<u>MATERIAL Q</u>	<u>)UANTITIES</u>	Selected estimating	g method: Area	
	Alternate Method	<u>ls:</u>			
eismic:	NA	Bank Volu	me: NA	BCY	NA
Area:	15.00	acres Rip Depth	(ft): 2.00	Volume: 48,400	BCY or C
		Source of estimated quantity: S	Staff estimates adjace	nt areas 15 ac	
		DUCTION			
	<u>HUUKLI PKU</u>	<u>DDUCTION</u>			
	<u>Seismic:</u>	DDUCTION			
	Seismic:	DDUCTION Seismic Velocity:	NA	feet/second	
	Seismic:	DDUCTION Seismic Velocity:	NA	feet/second	
	<u>Seismic:</u> <u>Area:</u>	DDUCTION Seismic Velocity:	NA2.56	feet/second	
	<u>Seismic:</u> <u>Area:</u>	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width:	NA 2.56 7.08	feet/second feet/pass feet/pass	
	<u>Seismic:</u> <u>Area:</u>	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length:	NA 2.56 7.08 100.00	feet/second feet/pass feet/pass feet/pass feet/pass	
	<u>Seismic:</u> <u>Area:</u>	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed:	NA 2.56 7.08 100.00 88.00	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute	
	<u>Seismic:</u> <u>Area:</u>	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time:	NA 2.56 7.08 100.00 88.00 0.25	feet/second feet/pass feet/pass feet/pass feet/minute minutes/pass	
	<u>Seismic:</u> <u>Area:</u>	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area:	NA 2.56 7.08 100.00 88.00 0.25 0.703	feet/second feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour	
	<u>Seismic:</u> <u>Area:</u> Job Condition Co	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: <u>rrection Factors</u>	NA 2.56 7.08 100.00 88.00 0.25 0.703	feet/second feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour	
	<u>Seismic:</u> <u>Area:</u> Job Condition Co	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: <u>rrection Factors</u> adjusted Hourly Unit Production:	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703	feet/second feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr	
	<u>Seismic:</u> <u>Area:</u> Job Condition Co	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: <u>Prection Factors</u> adjusted Hourly Unit Production:	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4.470	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet	
	<u>Seismic:</u> <u>Area:</u> <u>Job Condition Co</u> Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: <u>rrection Factors</u> adjusted Hourly Unit Production: Site Altitude: Altitude Adi:	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB)	
	Seismic: Area: Job Condition Co	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Ripping Length: Average Maneuver Time: Production per unit area: rrection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency:	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00 0.83	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day)	
	<u>Seismic:</u> <u>Area:</u> <u>Job Condition Co</u> Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rrection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction:	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00 0.83 0.83	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier	
	<u>Seismic:</u> <u>Area:</u> <u>Job Condition Co</u> Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: orrection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction:	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00 0.83 0.83 0.58	feet/second feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass feet/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier	
	Seismic: Area: Job Condition Co Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: <u>rrection Factors</u> adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Produc	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 0.703 4,470 1.00 0.83 0.83 ction: 0.58 ction: 0.58	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier Acres/hr Acres/hr	
	Seismic: Area: Job Condition Co Un	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rrection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Production:	NA 2.56 7.08 100.00 88.00 0.25 0.703 4,470 1.00 0.83 0.83 ction: 0.58 ction: 1.17	feet/second feet/pass feet	
	HOUKLITPK Seismic: Area: Job Condition Co Un JOB TIME AN	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: Trection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Productor	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 0.703 4,470 1.00 0.83 0.83 ction: 0.58 ction: 1.17	feet/second feet/pass feet/pass feet/pass feet/pass feet/minute minutes/pass acres/hour Acres/hr feet (CAT HB) (1 shift/day) multiplier Acres/hr Acres/hr	
	HOUKLITPK Seismic: Area: Job Condition Co Un JOB TIME AN Fleet size:	DDUCTION Seismic Velocity: Average Ripping Depth: Average Ripping Depth: Average Ripping Uength: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: orrection Factors adjusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Product Disted Hourly Fleet Product DCOST 2 Grader(s)	NA 2.56 7.08 100.00 88.00 0.25 0.703 0.703 4,470 1.00 0.83 0.83 2tion: 0.58 2tion: 1.17 Total job tim	feet/second feet/pass fee	Hours

TRUCK/LOADER TEAM WORK

Task description:	Lake 4 -	Transport Tops	soil & Placement			
Site: 15 Road Gravel P	it	Permit Acti	on: 2024-09]	Permit/Job#: <u>M</u> 2	2002114
PROJECT IDENT	TIFICATION					
Task #: 04D Date: 10/9/20 User: ACY	24 C	State: <u>Colora</u> County: <u>Mesa</u>	ado	Ab	breviation: <u>No</u> Filename: <u>M1</u>	ne 14-04d
Agency or o	rganization nam	e: DRMS				
HOURLY EQUIP	MENT COST			Shift bas	is: 1 per day	
			Equipment Descri	ption		
Tr	uck Loader Tear	n -Truck: Cat	740	ption		
		-Loader: CA	Т 980Н			
Suppor	rt Equipment -Lo	bad Area: Cat	D8T - 8SU			
Road Mat	ntenance – Moto	r Grader: NA	D81 - 850			
	-Wat	er Truck: NA	- -			
Cost Breakdown:	Truck/Loa	der Team	Support l	Equipment	Maintenan	ce Equipment
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	15	100	NA	NA
Ownership cost/hour:	\$108.25	\$69.00	\$173.32	\$173.32	NA	NA
Operating cost/hour:	\$79.54	\$60.57	\$16.46	\$109.71	NA	NA
%Utilization-riper:	NA	0	20	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$14.53	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	\$1.59	\$0.00	NA	NA
Operator cost/hour:	\$24.82	\$56.84	\$40.04	\$40.04	NA	NA
Unit Subtotals:	\$212.61	\$186.41	\$231.40	\$323.07	NA	NA
Number of Units:	2	1	1	2	0	0
Group Subtotals:	Work:	\$611.63	Support:	\$877.54	Maint:	\$0.00
Total work team cost	/hour: <u>\$1,489.1</u>	7				
<u>MATERIAL QUA</u>	<u>NTITIES</u>					
Initial volume: Loose volume:	22,294 25,30 4	CCY LCY	Swell	factor: <u>1.135</u>		
Sou	ce of estimated	volume: Staff	estimates and Ex	hibit L		
Source of	of estimated swel	l factor: Cat I	Handbook			
	Material Purcha	se Cost: \$0.00	0			
	101	al Cost: <u>\$0.00</u>	0			
HOURLY PROI	DUCTION					
<u>Truck Capacity:</u>						
Truck Payload (weight	nt) Basis:		Downd- / CV			
Material we Descrir	eight: $2,700$	d clav - Loose	Pounds/LCY			
Rated Pay	load: 87,000	Loose	Pounds			
Payload Capa	acity: 32.22					

ck Maneuver and Dump Ti	me: 1.00)	Minutes	Adjusted	for site altitude:	1.000	Minute
Truck Load T	me: 1.57	0	Minutes	Adjusted	for site altitude:	1.570	Minute
Truck Exchange T	me: 0.60)	Minutes	Adjusted	for site altitude:	0.600	Minute
<u>Truck Cycle Time:</u>							
			Net Load	me per truck:	1.570	ininutes	
			Adjusted Loa	der Cycle Time:	0.490	_ minutes	
			Net Cycle Ti	me Adjustment:	-0.060	minutes	
Dump Targe	et: Nominal	arget ().00		0.000	(Cat HB)	
Operatio	n: Constant	operati	on -0.04		-0.040	(Cat HB)	_
Truck Ownershi	p: Common	owners	ship of trucks an	d loaders -0.04	-0.040	(Cat HB)	
Stocknil	e: Convevoi	or doz	zer piled 10 ft. hi	gh and up 0.00	0.020	(Cat HB)	_
Cycle Time Facto Materia	rs 1: Mixed m	terial (0.02		$\frac{\text{Factor (min.)}}{0.020}$	(Cat HB)	
Wheel and Track Loade	rs - Unadjusted	l Basic	Loader Cycle T	ime (load, dump, 1	maneuver): 0	.550 min	ites
Load: NA		Mane	euver: NA		Dump: 0.100)	
Cycle Time Elements (mi	n.):						
Track Loader	s – Material De	escripti	on:				
Selected Val	ue within this I	basic R	aung: <u>NA</u>				
Machine Cycle Tim	e vs. Job Cond	ition R	ating: <u>NA</u>				
Excavators and Front She	overs:						
Encounty in the second	nui nui		Luaunig 1001 P	asses required to	1 ⁻ 111 11UCK.	<u> </u>	145585
Loading Tool Cycle Ti-		abor of	Loading Teel D	assas Dequired to	Fill Truck	4	000000
Net Correction:	0.830		0.830				
Job Efficiency:	0.830		0.830	(CAT HE	3)		
Altitude Adj:	<u>1.000</u>		1.000	(CAT HE	3)		
	 Truck		Loader	Source			
Job Condition Correction	ons:		S	Site Altitude (ft.):	447 <u>0</u> feet		
Adjusted Capacity	: 7.875		LCY				
Bucket Fill Factor	: 1.050		Moist loam or	sandy clay (100%	- 110%) 1.050		-
Rated Capacity	: 7.500		LCY (heaped)				_
				Buc	ket Size Class: N	A	
Loading Tool Capacity							
Fi	nal Truck Volu	ıme Ba	sed on Number	of Loader Passes:	31.50	LCY	
J							
Adjusted Volume:	31.40	- LC	Ϋ́Υ				
Average Volume	27.80	IC	Ϋ́				
Heaped volume:	51.40		, Y				

Haul Rout	te:							
Seg #	Haul D (Ft)	Distance	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)	
1	1350.0	0	0.00	8.00	8.00	1123	1.324	
					Haul Time:	1.324	minutes	
Return Ro	ute:							
Seg #	Haul D	Distance	Grade (%)	Roll. Res	Total Res	Velocity	Travel	
	(Ft)			(%)	(%)	(fpm)	Time (min)	
1	1350.0	0	0.00	8.00	8.00	2155	0.773	
				Total Tru	Return Time: ck Cycle Time:	0.773 5.267	minute	es es
Loading Too	lunit							
Produ	ction _	870.97	LCY/Hour		Adjusted for j	ob efficiency:	722.90	LCY/Hour
Truck Unit Produ	ction	358.84	LCY/Hour		Adjusted for j	ob efficiency:	297.84	LCY/Hour
Optimal No. of Tr	ucks:	2	Truck(s)		Selected Num	ber of Trucks:	2	Truck(s)
			Adjuste	d hourly true	k team production	on: 595.	.67 LCY	//Hour
			Adjusted sing	le truck/loade	er team production	on: 595.	.67 LCY	/Hour
			Adjusted multip	le truck/loade	er team production	on: 595.	.67 LCY	//Hour
JOB TIN	AE AN	D COST						
Fleet s	size:	1	Team(s)	r	Fotal job time:	42.48	8 Ho	ours
Unit c	cost:	\$2.500	/LCY		Total job cost:	\$63,25	59	

REVEGETATION WORK

D
Permit/Job#: M2002114
Abbreviation: None
Filename: M114-04e

FERTILIZING

Materials Units / Cost / Unit Cost /Acre Description Unit Acre Manure, delivery (average cost), per ton 20.00 \$2,961.16 \$59,223.11 ton Sodium nitrate, 16-0-0 750.00 \$1.36 \$1,019.70 pound **Total Fertilizer** Materials \$60,242.81 Cost/Acre

Application

Description		Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)		\$77.10
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$43.12
	Total Fertilizer Application Cost/Acre	\$120.23

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Total Tilling Cost/Acre	\$117.61

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	1.00	39.03	\$29.08
Orchardgrass - Potomac	0.50	6.20	\$2.19
Elk Sedge	0.10	0.23	\$50.41
Slender Wheatgrass - Native	3.00	10.95	\$21.19
Western Wheatgrass - Arriba	0.10	0.25	\$0.90
Sweetvetch, Utah or Northern	0.50	0.23	\$44.76
Red Top	1.00	114.55	\$10.47
Reedgrass, Canadian (or Blue Joint)	0.20	20.57	\$82.51
Reedgrass, Northern - Native	0.50	51.42	\$79.91

Saltgrass, Inland	1.00	13.86	\$49.84
Snowberry, Western	1.00	1.72	\$74.63
Sumac, Skunkbrush	0.40	0.19	\$18.05
Timothy, Alpine - Native	1.00	29.84	\$39.18
Basin Wildrye - Trailhead	1.50	6.10	\$19.52
Greasewood, Black	1.00	140.45	\$39.07
Totals Seed Mix	12.80	435.59	\$561.72

Application

Description		Cost /Acre
Broadcast seeding [DMG]		\$272.56
	Total Seed Application Cost/Acre	\$272.56

MULCHING and MISCELLANEOUS

Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.13	\$4.13
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Total Mulch Materials Cost/Acre				\$496.91

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$85.37
Power mulcher (MEANS 32 91 13.16 0350)		\$157.25
Weed spray, truck, aquatic area, annuals [DMG]		\$31.79
	Total Mulch Application Cost/Acre	\$274.42

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood, Plains	22	Container, 2 gallon (MEANS)	\$43.99	\$2.40	\$967.78
Totals Nursery Stock Cost / Acre \$967.78				\$967.78	

	No. of Acres:	5.75	Cost /Acre:	\$63,054.04
Estimate	ed Failure Rate:	15%	Cost /Acre*:	\$2,691.00
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,NURSERY,MULC	
		HING		
Initial Job Cost:	\$362,560.73			
Reseeding Job Cost:	\$2,320.99			
Total Job Cost:	\$364,882			
Job Hours:	7.00			

REVEGETATION WORK

Task descri	ption:	Lake 4 - Revegetate Dry Rar	igeland		
Site: 15 Road	Gravel Pit	Permit Action:	2024-09	Permit/Job	o#: <u>M2002114</u>
PROJECT	IDENTIFIC	ATION			
Task #:	04F	State: Colorado		Abbreviation:	None
Date:	10/9/2024	County: Mesa		Filename:	M114-04f
User:	ACY	·			
Ag	ency or organiz	zation name: DRMS			

FERTILIZING

Materials Units / Cost / Unit Cost /Acre Description Unit Acre Manure, delivery (average cost), per ton 20.00 \$2,961.16 \$59,223.11 ton Sodium nitrate, 16-0-0 750.00 \$1.36 \$1,019.70 pound **Total Fertilizer** Materials \$60,242.81 Cost/Acre

Application

Description		Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)		\$77.10
Tractor towed spreader (MEANS 32 01 90.13 0120)		\$43.12
	Total Fertilizer Application Cost/Acre	\$120.23

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$456.41

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Sand Dropseed	2.50	298.44	\$32.52
Sandberg Bluegrass - VNS	2.00	42.47	\$28.89
Galleta	2.50	9.13	\$138.59
Globemallow, Scarlet (or copper)	0.50	5.66	\$92.78
Winter Fat	0.25	0.64	\$11.68
Yarrow, Western	0.50	30.40	\$24.12
Kochia, Forage (Prostrate)	0.25	35.11	\$5.20

Totals Seed Mix 8.50 421.84 \$333.79
--

Application

Description		Cost /Acre
Drill Seeding (DRMS Survey Cost)		\$236.64
	Total Seed Application Cost/Acre	\$236.64

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.13	\$4.13
Straw, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Total Mulch Materials Cost/Acre				\$496.91

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$85.37
Power mulcher (MEANS 32 91 13.16 0350)	\$157.25
Weed spray, truck, non-aquatic areas, ann. [DMG]	\$27.19
Total Mulch Appli	ication Cost/Acre \$269.82

NURSERY STOCK PLANTING

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

	No. of Acres:	15	Cost /Acre:	\$62,156.61
Estimate	ed Failure Rate:	50%	Cost /Acre*:	\$1,793.57
*Selected Replanti	ng Work Items:	TILLING,SEEDIN	G,MULCHING	
Initial Job Cost:	\$932,349.15			
Reseeding Job Cost:	\$13,451.78			
Total Job Cost:	\$945,801			
Job Hours:	23.00			

DEMOLITION WORK

7	Task description:	Structure R	emoval			
Site:	15 Road Gravel Pit		Permit Action:	2024-09	Permit/.	Job#: <u>M2002114</u>
PROJE	CT IDENTIFICATION	N				
Task #: Date: User:	05A 10/9/2024 ACY	State: County:	Colorado Mesa		Abbreviation: Filename:	None M114-05a
	Agency or organizat	tion name:	DRMS			

Location adjustment: 95.50 %

UNIT COSTS

Structure or Item **Demolition Menu** Unit **Total Cost** Dimensions Quantity Unit Description Selection Cost Scale 24' x 28' Loading and 2 mile haul, 25.00 CY \$528.75 \$21.15 no salvage - Machine loading Bldg. (SN) demo./on-site Office 24' x 28' x 8' 5,376.00 CF \$0.26 \$1,371.96 disposal in excavated pit - Max. 200 ft. push Office Foundation 24' x 28' x 6" Demo. and on-site 672.00 SF \$1.24 \$833.08 disposal in excavated pit, 6 in. thick - Max. 200 ft. push Hauling only, per mile, \$10.14 Scale 24' x 28' 30.00 MI \$304.24 12-18 CY truck - 30 mph average speed Storage Building 30' x 60' **USER PROVIDED** 300.00 \$1.00 \$300.00 -ITEM USER PROVIDED 1,000.00 \$1.00 \$1,000.00 Fuel Storage --ITEM

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	8.00	(unadjusted):	\$4,338.03	location):	\$4,142.82

EQUIPMENT MOBILIZATION/DEMOBILIZATION

• 15 Dood Croyol	 D;+	Dermit	Action: 2024	00		Dermit/Joh#: M	2002114
15 Koau Graver	rn	Fermit	Action. <u>2024</u>	-09	1		2002114
PROJECT IDEN	TIFICATI	<u>ON</u>					
Task #: 10A		State: Co	olorado		Abbre	eviation: None	
Date: $10/9/$	2024	County: Mo	esa		Fi	lename: M114	-10a
User. <u>ACT</u>							
Agency or	organization	n name: DRMS					
EQUIPMENT TH	RANSPOR'	T RIG COST					
					Shift ba	sis: 1 per da	v
				C	ost Data Sou	ce: CRG Da	ta
T 1. 7		· · · · · · · · · · · · · · · · · · ·					DOWEDED
Iruck	ractor Desci	ription: GENE	RIC ON-HIGH	WAY IKU	CK IRACIC	$\mathcal{O}\mathbf{K}, \mathbf{6X4}, \mathbf{DIESEL}$	POWERED,
T 1	T 'I D	·		400 HP	(ZND HALF,	2000)	DMENT
Truck	Trailer Desci	ription: G	ENERIC FOLD	DING GOO	SENECK, DR	OP DECK EQU	IPMENT
				I KAILEK (251, 501, AP	ND 1001)	
Cost Breakdown:							
Available Rig Ca	oacities	0-25 Tons	26-50 Tons	51+	Tons		
Ownership (Cost/Hour:	\$10.44	\$22.18	\$2	3.94		
Operating (Cost/Hour:	\$26.48	\$54.55	\$5	5.65		
Operator (Cost/Hour:	\$22.52	\$22.52	\$2	2.52		
Helper (Cost/Hour:	\$0.00	\$23.53	\$2	3.53		
Total Unit C	Cost/Hour:	\$59.44	\$122.78	\$12	25.64		
			÷	+			
NON ROADABL	E EQUIPN	<u>MENT:</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	0.45	\$8.79	\$59.44	1	\$68.23	\$59.44	\$250.00
Cat D8T - 8SU	53.08	\$187.85	\$125.64	3	\$940.47	\$376.92	\$250.00
Cat 740	36.49	\$108.25	\$122.78	1	\$231.03	\$122.78	\$250.00
CAT 980H	33.12	\$69.00	\$122.78	2	\$383.56	\$245.56	\$500.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
Power Mulcher	6.00	\$27.21	\$59.44	1	\$86.65	\$59.44	\$250.00
(Bowie LD-90)							

Subtotals: **\$1,810.40** \$923.58

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$52.83	2	\$105.66	\$105.66
Flatbed Truck, 6x4, 45K GVW	\$110.00	1	\$110.00	\$110.00
		Subtotals:	\$215.66	\$215.66

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or '	Fown within project area region:	GRAND JUNCTION	
	Total one-way travel distance:	12.50	miles
	Average Travel Speed:	55.00	mph
Total No	n-Roadable Mob/Demob Cost *	\$8,363.52	
Tota	l Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$98.03	

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.23	0.23
Return Time (Hours):	0.23	0.23
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.45	0.45

Total job time:	2.91	Hours
Total job cost: _	\$8,462	

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Sec	ondary Mobilizat	tion				
15 Road Grav	el Pit	Permit	Action: <u>2024</u>	-09		Permit/Job#	: <u>M2002114</u>
PROJECT IDE	NTIFICATI	ON					
Task #: 10E	3	State: Co	olorado		Abbre	eviation:	None
Date: 10/2	9/2024	County: M	esa		Fi	ilename:	M114-10b
User: <u>AC</u>	Y						
Agency of	or organization	n name: DRMS					
EQUIPMENT 1	RANSPOR	<u>T RIG COST</u>					
					Shift ba	sis: 1	per dav
				(Cost Data Sou	rce: CR	RG Data
Truck	Tractor Desc	ription: GENE	PIC ON HIGH	WAV TRI			IESEL POWERED
THUCK	The for Dese	Inpuoli. OENE		400 HP	(2ND HALF.	2006)	IESEL I OWERED,
Trucl	k Trailer Desc	ription: G	ENERIC FOLI	DING GOO	SENECK, DI	ROP DECK	EQUIPMENT
		1	,	TRAILER	(25T, 50T, AI	ND 100T)	
Soat Draalsdorra							
Jost Bleakdowii.							
Available Rig Ca	apacities	0-25 Tons	26-50 Tons	51+	Tons		
Ownership	Cost/Hour:	\$10.44	\$22.18	\$2	<u>3.94</u>		
Operating	Cost/Hour:	\$20.40	\$34.33 \$22.52		2.52		
Helper	Cost/Hour:	\$0.00	\$23.52	\$2	3 53		
Total Unit	Cost/Hour:	\$59.44	\$122.78	\$1	25.64		
		+ • • • • •	+				
NON ROADAB	LE EOUIPN	MENT:					
						Detrem T	
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Cost/br/ f	DOI Permit
Description	Unit	Cost/hr/ unit	Cost/hr/uni	Size	Cost/hr/		
Duill/Dura 1 ((10NS)	\$41.02	t	1	fleet	¢50.44	¢250.00
Drill/Broadcast	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
Tractor							
Power Mulcher	6.00	\$27.21	\$59.44	1	\$86.65	\$59.44	\$250.00
(Bowie LD-90)	0.00	*=**=*	+2/		+ 30.00		<i>q</i>- <i>c</i> 0.000
		·		~			<u></u>
				Subtotals:	\$187.11	\$118	.88 \$500.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$52.83	2	\$105.66	\$105.66
Flatbed Truck, 6x4, 45K GVW	\$110.00	1	\$110.00	\$110.00
		Subtotals:	\$215.66	\$215.66

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	GRAND JUNCTION	
Total one-way travel distance:	12.50	miles
Average Travel Speed:	55.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$1,513.31	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$98.03	_

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.23	0.23
Return Time (Hours):	0.23	0.23
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.45	0.45

JOB TIME AND COST

Total job time: 2.91 Hours

Total job cost: ______\$1,611_____