## COST SUMMARY WORK

Task description:		TR4						
Site:	Bunn Ra	nch Pit	P	ermit Action:	TR4 2021	Permit/Jol	o#: M1980131	
<u>P</u> ]	ROJECT Task #:	IDENTIFIC	ATION State:	Colorado		Abbreviation:	None	
	Date: User:	4/27/2021 RAR	County:			Filename:	M131-002	
	Age	ency or organiz	zation name: D	RMS				

#### TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01A	Removal of on site structures	DEMOLISH	1	32.00	\$8,642
02a	Dewater Pond 5 33 Acres	PUMPING	1	506.57	\$53,231
03a	Reduce all slopes to 3H:1V or flatter	DOZER	2	15.07	\$9,830
05a	Transport topsoil from stockpiles	LOADER	2	117.83	\$36,483
05b	Distribute topsoil	DOZER	2	38.84	\$25,328
06a	Reveg disturbed areas	REVEGE	1	75.00	\$97,616
07A	Initial mobilization of reclamation crew and equipment	MOBILIZE	1	2.11	\$6,353
		<u>SUBTC</u>	DTALS:	787.42	\$237,483

# **INDIRECT COSTS**

#### **OVERHEAD AND PROFIT:**

Liability insurance:	2.02	Total =	\$4,797
Performance bond:	1.05	Total =	\$2,494
Job superintendent:	393.71	Total =	\$27,383
Profit:	10.00	Total =	\$23,748
		TOTAL O & P =	\$58,422
		CONTRACT AMOUNT (direct + O & P) = $($	\$295,905

#### LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): Engineering work and/or contract/bid preparation:	\$500 7.22	Total = Total =	\$500 \$21,364
Reclamation management and/or administration:	5.30	10001 -	\$15,683
CONTINGENCY:	0.00	Total =	\$0
	TOTAL IN	DIRECT COST =	\$95,969
TOTAL BO	\$333,452		

# **DEMOLITION WORK**

	Task description:      Bunn Ranch Pit		Removal of o	nsite structu	res			
Site:			Pe	ermit Action:	TR4	P	ermit/Job#:	M1980131
Ī	PROJEC	<u>T IDENTIFIC</u>	CATION					
	Task #	01a	State:	Colorado		Abbreviation:	None	
	Date:	4/26/2021	County:	Moffat		Filename:	M131-01A	1
	User:	RAR						

#### UNIT COSTS Location adjustment: 95.50 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Office building	50'L x 30'W x 10'H	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 5 mile haul	15,000.00	CF	\$0.30	\$4,485.00
Scale house	20'L x 20'W x 10'H	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 5 mile haul	4,000.00	CF	\$0.30	\$1,196.00
Scale	60'L x 10'W	Loading and 5 mile haul, salvage allowed - Steel frame structures	22.00	СҮ	\$10.65	\$234.30
Cement footers	3 structures	Demo. and on-site disposal in existing pit, 1.5 ft. x 2 ft Max. 200 ft. push	380.00	LF	\$5.10	\$1,938.00
Shop	20'1*20'W'10'H	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 5 mile haul	4,000.00	CF	\$0.30	\$1,196.00

				<b>Total Cost</b>	
		Subtotal		(adjusted for	
Job Hours:	32.00	(unadjusted):	\$9,049.30	location):	\$8,642.08

#### PUMPING WORK

Task description:	Dewater Pond 5	5: 33 Acres				
e: Bunn Ranch Pit	Pe	ermit Action:	TR4		Permit/Job#:	M1980131
PROJECT IDENTIFI	<b>ICATION</b>					
Task #: 02a	State:	Colorado		Abbre	viation: N	lone
Date: 4/26/2021		Moffat				`R4
User: RAR						
Agency or organ	nization name:	RMS				
HOURLY EQUIPME	<u>ENT COST</u>					
	Description			1	Quantity	
Make and Model:	Submersible pum	p - 460v, 8 in	•		3	
Attachment 1:	Suction hose - 6 in				3	
Attachment 2:	Discharge hose - 0	6 in. D., 25 ft			6	
Labor Unit 1:	Pump operator				1	<u> </u>
Horsepower:	95					
	per day					
<u> </u>	0.70					
	S Tons)					
Cost Breakdown:		1	Utilization %			
Ownership Cost/I	Hour: \$34.2	29	NA			
Operating Cost/I			100 NA			
	Hour: \$27.6	68	100 NA			
Operating Cost/I Operator Cost/I	Hour: \$27.6 Hour: \$105.	68 .08				
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Fleet Cost/	Hour: \$27.6 Hour: \$105. /Hour: \$105	68 .08				
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Fleet Cost/I PUMPING QUANTIT	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b>	58 08 5.08		Conversio	on factor:	325850 580
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Fleet Cost/I <b>PUMPING QUANTIT</b> Initial Pond Vol	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> lume: 660	58 08 5.08 0.00	NA	Conversio	on factor:	325850.5800
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Fleet Cost/I <b>PUMPING QUANTIT</b> Initial Pond Vol Final Pond Vol	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> lume: 660 lume: <b>215,061</b>	58 08 5.08 0.00		Conversio Unit inflo		325850.5800
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Fleet Cost/I <b>PUMPING QUANTIT</b> Initial Pond Vol Final Pond Vol Total Pond Inflow Su	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> lume: 660 lume: <b>215,061</b>	58 08 5.08 0.00 1, <b>382.80</b>	NA	Unit inflo		<u>325850.5800</u> 0.1758
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Fleet Cost/I <b>PUMPING QUANTIT</b> Initial Pond Vol Final Pond Vol Total Pond Inflow Su	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> lume: 660 lume: 215,061 urface Area: 845,	58 08 5.08 0.00 1, <b>382.80</b>	NA gallons Sq. ft.	Unit inflo	w rate in	325850.5800 0.1758
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Fleet Cost/I Total Fleet Cost/I Initial Pond Vol Final Pond Vol Total Pond Inflow Su	Hour: \$27.6 Hour: \$105. /Hour: \$105 /Hour: \$105 <b>FIES</b> /ume: 660 lume: 660 lume: 215,061 /face Area: 845, /lume	58 08 5.08 0.00 1 <b>,382.80</b> ,870	NA	Unit inflo	w rate in	
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Fleet Cost/I Total Fleet Cost/I Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H	Hour: \$27.6 Hour: \$105. /Hour: \$105 /Hour: \$105 <b>FIES</b> /ume: 660 lume: 660 lume: 215,061 /face Area: 845, /lume	58 08 5.08 5.08 0.00 1,382.80 ,870 03.95	NA gallons Sq. ft.	Unit inflo gl	ow rate in ph/sq. ft.:	
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Fleet Cost/I Total Fleet Cost/I Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> lume: 660 lume: 215,061 urface Area: 845, lume Hour: 148,70	58 08 5.08 5.08 0.00 1,382.80 ,870 03.95	NA gallons Sq. ft. gallons	Unit inflo gl	ow rate in ph/sq. ft.:	
Operating Cost/H Operator Cost/H Total Unit Cost/H Total Fleet Cost/H Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H Source of PUMPING TIME	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b><u>TIES</u></b> lume: 660 lume: 215,061 urface Area: 845, lume Hour: 148,70 of estimated volume:	58       08       5.08       0.00       1,382.80       ,870       03.95       Operator.	NA gallons Sq. ft. gallons Surface Area D	Unit inflo gr RMS google ea	w rate in ph/sq. ft.:	
Operating Cost/H Operator Cost/H Total Unit Cost/H Total Fleet Cost/H Total Fleet Cost/H Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H Source C PUMPING TIME Max	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> lume: 660 lume: 215,061 urface Area: 845, lume Hour: 148,70	58 08 5.08 5.08 0.00 1,382.80 ,870 03.95 Operator. ty:	NA gallons Sq. ft. gallons	Unit inflo gl	w rate in ph/sq. ft.:	
Operating Cost/H Operator Cost/H Total Unit Cost/H Total Unit Cost/H Total Fleet Cost/H Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H Source of PUMPING TIME Max Es	Hour:       \$27.6         Hour:       \$105.         /Hour:       \$105         /Hour:       \$105         /Hour:       \$105         Imme:       660         ume:       215,061         urface       845,         Jume       148,70         of estimated volume:       148,70         timum Pump Capacit       148,70	58 08 5.08 5.08 5.08 0.00 1,382.80 03.95 Operator. ty: ty: 	NA gallons Sq. ft. gallons Surface Area D 170,000 5 0	Unit inflo gr <u>RMS google ea</u> gph/pum	w rate in ph/sq. ft.:	
Operating Cost/H Operator Cost/H Total Unit Cost/H Total Unit Cost/H Total Fleet Cost/H Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H Source of PUMPING TIME Max Es	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b><u>FIES</u></b> lume: 660 lume: 215,061 urface Area: 845, dume Hour: 148,70 of estimated volume: stimated Suction Hea nated Discharge Hea Total Hea	58 08 5.08 5.08 0.00 1,382.80 3,870 03.95 Operator. ty: ty: ty: ty: ty: ty: ty: ty: ty: ty:	NA gallons Sq. ft. gallons Surface Area D 170,000 5 0 5	Unit inflo gr RMS google ea gph/pum feet feet feet	pw rate in ph/sq. ft.: arth	
Operating Cost/H Operator Cost/H Total Unit Cost/H Total Unit Cost/H Total Fleet Cost/H Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H Source of PUMPING TIME Max Es	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> lume: 660 lume: 215,061 urface Area: 845, lume Hour: 148,70 of estimated volume: stimum Pump Capacit stimated Suction Hea nated Discharge Hea Total Hea CPB Pump Capacit	58 08 5.08 5.08 0.00 1,382.80 3,870 03.95 Operator. ty: ty: ad: ty:	NA gallons Sq. ft. gallons Surface Area D 170,000 5 0 5 168,000	Unit inflo gl RMS google ea gph/pum feet feet feet gph/pum	pw rate in ph/sq. ft.: arth	
Operating Cost/H Operator Cost/H Total Unit Cost/H Total Unit Cost/H Total Fleet Cost/H Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H Source of PUMPING TIME Max Es	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b><u>FIES</u></b> lume: 660 lume: 215,061 urface Area: 845, dume Hour: 148,70 of estimated volume: stimated Suction Hea nated Discharge Hea Total Hea	58 08 5.08 5.08 0.00 1,382.80 3,870 03.95 Operator. ty: ty: ad: ty:	NA gallons Sq. ft. gallons Surface Area D 170,000 5 0 5	Unit inflo gr RMS google ea gph/pum feet feet feet	pw rate in ph/sq. ft.: arth	
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Unit Cost/I Total Fleet Cost <b>PUMPING QUANTIT</b> Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per I Source o <b>PUMPING TIME</b> Max Estin	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> /ume: 660 /ume: 215,061 /ume Hour: 148,7/ of estimated volume: //of estimated volume: //of estimated volume: //of estimated Suction Hea nated Discharge Hea Total Hea CPB Pump Capacit //of Site Altitud	58       08       5.08       5.08       0.00 <b>,382.80</b> ,870       03.95       Operator.       ty:       ad:       ad:       ty:       id:       id:       id:       id:       id:       id:	NA gallons Sq. ft. gallons Surface Area D 170,000 5 0 5 168,000 6,200	Unit inflo gl RMS google ea gph/pum feet feet feet gph/pum feet	pw rate in ph/sq. ft.: arth	
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Unit Cost/I Total Fleet Cost <b>PUMPING QUANTIT</b> Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per I Source o <b>PUMPING TIME</b> Max Estin	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> lume: 660 lume: 215,061 urface Area: 845, lume Hour: 148,7/ of estimated volume: timum Pump Capacit stimated Suction Hea nated Discharge Hea Total Hea CPB Pump Capacit Site Altitud	58       08       5.08       5.08       0.00 <b>,382.80</b> ,870       03.95       Operator.       ty:       ad:       ty:       id:	NA gallons Sq. ft. gallons Surface Area D 170,000 5 0 5 168,000 6,200 504,000	Unit inflo gl RMS google ea gph/pum feet feet feet gph/pum feet gph	pw rate in ph/sq. ft.: arth	
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Unit Cost/I Total Fleet Cost <b>PUMPING QUANTIT</b> Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H Source o <b>PUMPING TIME</b> Max Estin Adjust Initial Unad	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> lume: 660 lume: 215,061 urface Area: 845, lume Hour: 148,70 of estimated volume: stimum Pump Capacit stimated Suction Hea nated Discharge Hea Total Hea CPB Pump Capacit Site Altitud ted Pumping Capacit	58       08       5.08       5.08       0.00       1,382.80       ,870       03.95       Operator.       ty:       ad:       ty:       id:	NA gallons Sq. ft. gallons Surface Area D 170,000 5 0 5 168,000 6,200 504,000 426.71	Unit inflo gr RMS google ea gph/pum feet feet feet gph/pum feet gph hours	pw rate in ph/sq. ft.: arth	
Operating Cost/I Operator Cost/I Total Unit Cost/I Total Unit Cost/I Total Fleet Cost <b>PUMPING QUANTIT</b> Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H Source o <b>PUMPING TIME</b> Max Ess Estin Adjust Initial Unad Inflow d	Hour: \$27.6 Hour: \$105. Hour: \$105 Hour: \$105 FIES ume: 660 ume: 215,061 urface Area: 845, ume Hour: 148,70 of estimated volume: timum Pump Capacit stimated Suction Hea nated Discharge Hea Total Hea CPB Pump Capacit Site Altitud ted Pumping Capacit diusted Pumping Tim furing Initial Pumpin	58       08       5.08       5.08       5.08       0.00       1,382.80       ,870       03.95       Operator.       ty:       ad:       ad:       id:       <	NA gallons Sq. ft. gallons Surface Area D 170,000 5 0 5 168,000 6,200 504,000 426.71 63,453,326	Unit inflo gl RMS google ea gph/pum feet feet feet gph/pum feet gph	pw rate in ph/sq. ft.: arth	
Operating Cost/H Operator Cost/H Total Unit Cost/H Total Unit Cost/H Total Fleet Cost PUMPING QUANTIT Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H Source C PUMPING TIME Max Ess Estin Adjust Initial Unad Inflow d Net Unad	Hour: \$27.6 Hour: \$105. /Hour: \$105 <b>FIES</b> lume: 660 lume: 215,061 urface Area: 845, lume Hour: 148,70 of estimated volume: stimum Pump Capacit stimated Suction Hea nated Discharge Hea Total Hea CPB Pump Capacit Site Altitud ted Pumping Capacit	58       08       5.08       5.08       5.08       0.00       1,382.80       ,870       03.95       Operator.       ty:       ad:       ad:       id:       <	NA gallons Sq. ft. gallons Surface Area D 170,000 5 0 5 168,000 6,200 504,000 426.71	Unit inflo gr RMS google ea gph/pum feet feet gph/pum feet gph/pum feet gph hours gallons	w rate in ph/sq. ft.: arth	
Operating Cost/H Operator Cost/H Total Unit Cost/H Total Unit Cost/H Total Fleet Cost PUMPING QUANTIT Initial Pond Vol Final Pond Vol Total Pond Inflow Su Total Pond Inflow Vo per H Source C PUMPING TIME Max Ess Estin Adjust Initial Unad Inflow d Net Unad Altitu	Hour: \$27.6 Hour: \$105. Hour: \$105. Hour: \$105 FIES ume: 660 ume: 215,061 urface Area: 845, ume Hour: 148,70 of estimated volume: timum Pump Capacit stimated Suction Hea nated Discharge Hea Total Hea CPB Pump Capacit Site Altitud ted Pumping Capacit giusted Pumping Tim luring Initial Pumpin	58       08       5.08       5.08       5.08       0.00       1,382.80       ,870       03.95	NA gallons Sq. ft. gallons Surface Area D 170,000 5 0 5 168,000 6,200 504,000 426.71 63,453,326 552.61	Unit inflo gr RMS google ea gph/pum feet feet gph/pum feet gph/pum feet gph hours gallons Hours	pw rate in ph/sq. ft.:	

# JOB TIME AND COST

Unit cost: \$0.000191 /Gallon

 Total job time:
 506.58
 Hours

 Total job cost:
 \$53,231

#### BULLDOZER WORK

Bunn Ranch Pit		Permit Action:	TR4 2021	Permit/Job#: M198013	
<b>PROJECT IDENTIF</b>	<b>ICATION</b>	I			
Task #: $03A$ Date: $4/28/2021$ User: RAR		State: <u>Colorado</u> County: <u>Moffat</u>		Abbreviation: Filename:	None TR4
Agency or orga	nization nai	me: DRMS			
HOURLY EQUIPME	ENT COS	Г			
	t D9T - 9SI	_			
Horsepower: 40					
	mi-Univers	al			
Attachment: NA	ł				
Shift Basis: 1 p	oer day				
<b>_</b>	RG)				
Cost Breakdown:					
LUSI DICANUUWII.			Utilization %		
Ownership Cost/Hour:		\$156.88	NA		
Operating Cost/Hour:		\$127.87	100		
Ripper own.					
Cost/Hour:		\$0.00	NA		
Ripper op. Cost/Hour:		\$0.00	0		
Operator Cost/Hour:		\$41.30	NA		
operator costribut.		ψ1.50	NA		
Total unit Cost/Hour:	\$326.04				
Total Fleet Cost/Hour:	\$652.09				
MATERIAL QUANT	ITIES				
Initial Volume: 16,6	570				
Swell factor: 1.06					
	670 LCY				
	JIO LC I				
Source of estimated vol		Operator			
Source of estimated swe	ell	Cat Handbook			
factor:	_				
HOURLY PRODUCT	<u>FION</u>				
Average push distance:	50	) feet			
Unadjusted hourly production:		110.5 LCY/hr			
Materials consistency description:		Compacted fill or en	nbankment 0.9		
	0 %				
Average push	0 /0				
Average push gradient: Average site altitude:	6,200 fe	et			
gradient:					

ob Condition Correctio	n Factor		Source
Operato	r Skill:	0.750	(AVG.)
Material consi	stency:	0.900	(CAT HB))
Dozing n	nethod:	1.000	(GEN.)
Vis	sibility:	1.000	(AVG.)
Job effi	ciency:	0.830	(1 SHIFT/DAY)
Spo	oil pile:	0.700	(FND-MF)
Push gr	adient:	1.000	(CAT HB)
А	ltitude:	1.000	(CAT HB)
Material V	Weight:	0.708	(CAT HB)
Blac	le type:	1.000	(PAT)
Net corr	rection:	0.2777	
Adjusted unit production:	586	.09 LCY/hr	
Adjusted fleet	117	<b>2.18</b> LCY/hr	

1172.18 LCY/hr

# JOB TIME AND COST

production:

Fleet size:	2 Dozer(s)
Unit cost:	\$0.556/LCY

Total job time:	15.07 Hours
Total job cost:	\$9,830

April 2021

# WHEEL LOADER - LOAD AND CARRY WORK

Bunn Ranch Pit		Perm	nit Action:	TR4 2021		Permit/Jo	ob#: <u>M198013</u>
PROJECT IDENTIF	TICAT	ION					
Task #: 05A		State:	Colorado		٨bl	previation:	None
Date: $\frac{0.05 \text{ A}}{4/26/2021}$	1		Moffat			Filename:	TR4
User: RAR	1	County	Wionat			i incliante.	1104
Agency or orga	anizatio	n name: DRN	ИS				
HOURLY EQUIPMI					11		215
Basic Machine:		<u>7 980H high lift</u> PS Cab			Horsepower: Shift Basis:	1	315
Attachment 1:	KOP	's Cab			Data Source:		per day
					Data Source:	(	CRG)
Cost Breakdown:							
				Utilization %			
Ownership Cost		\$55.34		NA			
Operating Cost		\$58.76		90			
Operator Cost		\$40.71		NA	_		
Total Unit Cost	/Hour:	\$154.80	)				
	t/Uour	\$309.6	51				
Total Fleet Cos	viioui.		,,				
Total Fleet Cos	u/HOul	\$309.0	)1				
			<u>)</u>				
MATERIAL QUANT	<u>FITIE</u>	<u>S</u>			1 0 1 5		
MATERIAL QUANT	<b>FITIE</b> 99,589	<u>S</u>	CCY	Swell fact	or: <u>1.215</u>		
MATERIAL QUANT	<b>FITIE</b> 99,589	<u>S</u>		Swell fact	or: <u>1.215</u>		
MATERIAL QUANT Initial volume: Loose volume:	<u>FITIE</u> 99,589	<u>S</u>	CCY LCY	Swell fact : 75 acre with 12		osoil	
MATERIAL QUANT Initial volume: Loose volume: Source	<b>FITIE</b> 99,589 of estin	<u>S</u> 121,001	CCY LCY	: 75 acre with 12		osoil	
MATERIAL QUANT Initial volume: Loose volume: Source	<b>FITIE</b> 99,589 of estin	<b>S</b> <b>121,001</b> nated volume:	CCY LCY Operator	: 75 acre with 12		osoil	
MATERIAL QUANT Initial volume: Loose volume: Source	<b>FITIE</b> 99,589 of estin stimate	<u>S</u> 121,001 nated volume: d swell factor:	CCY LCY Operator	: 75 acre with 12		osoil	
MATERIAL QUANT Initial volume: Loose volume: Source Source of es	<b>FITIE</b> 99,589 of estin stimate	<u>S</u> 121,001 mated volume: d swell factor:	CCY LCY Operator Cat Hand	: 75 acre with 12	2 inches of top		minutes
MATERIAL QUANT Initial volume: Loose volume: Source Source of es HOURLY PRODUC	99,589 of estin stimate	<u>S</u> 121,001 mated volume: d swell factor:	CCY LCY Operator Cat Hand	: 75 acre with 12 lbook Cycle Time (load	2 inches of top I, dump, neuver):	0.550	
MATERIAL QUANT Initial volume: Loose volume: Source Source of es HOURLY PRODUC Loader Cycle Time: Cycle Time Fact	Of estinate TION	S 121,001 nated volume: d swell factor: Unadjus	CCY LCY Operator Cat Hand ted Basic O	: 75 acre with 12 lbook Cycle Time (load mat	2 inches of top 1, dump, neuver): Fact	0.550 or (min.)	Source
MATERIAL QUANT Initial volume: Loose volume: Source Source of es HOURLY PRODUC' Loader Cycle Time: Cycle Time Fact Mater	<b>PITIE</b> 99,589         of estin         stimate <b>TION</b> tors         rial:	S 121,001 nated volume: d swell factor: Unadjus No adjustment -	CCY LCY Operator Cat Hand ted Basic C factor not	: 75 acre with 12 lbook Cycle Time (load mat applicable 0.00	2 inches of top 1, dump, neuver): Fact	0.550	
MATERIAL QUANT Initial volume: Loose volume: Source Source of es HOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp	<b>PITIE</b> 99,589         of estin         stimate <b>TION</b> tors         rial:         pile:	<u>S</u> <u>121,001</u> nated volume: d swell factor: Unadjus <u>No adjustment -</u> Conveyor or doz 0.00	CCY LCY Operator Cat Hand ted Basic C factor not zer piled 10	: 75 acre with 1 book Cycle Time (load mat applicable 0.00 ) ft. high and up	2 inches of top 1, dump, neuver): Fact	0.550 or (min.)	Source
MATERIAL QUANT Initial volume: Loose volume: Source Source of es HOURLY PRODUC' Loader Cycle Time: Cycle Time Fact Mater	<b>PITIE</b> 99,589         of estin         stimate <b>TION</b> tors         tial:         pile:         hip:	<u>S</u> 121,001 nated volume: d swell factor: Unadjus No adjustment - Conveyor or doz	CCY LCY Operator Cat Hand ted Basic C factor not zer piled 10	: 75 acre with 1 book Cycle Time (load mat applicable 0.00 ) ft. high and up	2 inches of top 1, dump, neuver): Fact	0.550 or (min.) ).000	Source (Cat HB)
MATERIAL QUANT Initial volume: Loose volume: Source Source of es HOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp	<b>PITIE</b> 99,589         of estin         stimate <b>TION</b> tors         rial:         pile:         hip:	<u>S</u> 121,001 nated volume: d swell factor: Unadjus No adjustment - Conveyor or doz 0.00 Common owner	CCY LCY Operator Cat Hand ted Basic O factor not zer piled 10 ship of true	: 75 acre with 1 book Cycle Time (load mat applicable 0.00 ) ft. high and up	2 inches of top 1, dump, neuver): Fact	0.550 or (min.) ).000 ).000	Source (Cat HB) (Cat HB)
MATERIAL QUANT Initial volume: Loose volume: Source Source of es HOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp	<b>FITIE</b> 99,589         of estin         stimate <b>TION</b> tors         rial:         pile:         hip:         ion:	<u>S</u> 121,001 nated volume: d swell factor: Unadjus <u>No adjustment -</u> Conveyor or doz 0.00 Common owner 0.04	CCY LCY Operator Cat Hand ted Basic O factor not zer piled 10 ship of true ion -0.04 0.00	: 75 acre with 12 lbook Cycle Time (load mar applicable 0.00 ) ft. high and up cks and loaders -	2 inches of top 1, dump, neuver): Fact 0 - -	0.550 or (min.) ).000 ).000 0.040	Source (Cat HB) (Cat HB) (Cat HB)
MATERIAL QUANT Initial volume: Loose volume: Source Source of es HOURLY PRODUC Loader Cycle Time: Cycle Time Fact Mater Stockp Truck Ownersl Operati	<b>FITIE</b> 99,589         of estin         stimate <b>TION</b> tors         rial:         pile:         hip:         ion:	<u>S</u> <u>121,001</u> nated volume: d swell factor: Unadjus <u>No adjustment -</u> Conveyor or doz 0.00 Common owner 0.04 Constant operati	CCY LCY Operator Cat Hand ted Basic C factor not zer piled 10 ship of true ion -0.04 0.00 Net Cyc	: 75 acre with 1 book Cycle Time (load mat applicable 0.00 ) ft. high and up	2 inches of top 1, dump, neuver): Fact 0 0 0 0 0 0 0 0 0 0 0 0 0	0.550 or (min.) 0.000 0.000 0.040 0.040	Source (Cat HB) (Cat HB) (Cat HB) (Cat HB)

<u>Rolling Resistance – Road Conditions</u>

Haul:	Rutted dirt, little maintenance, no water, 2" tire penetration 5.0
Return:	Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	100	0.00	5.00	5.00	0.0884	(Cat HB)
Return Route:	100	0.00	5.00	5.00	0.0799	(Cat HB)
			Total T	ravel Time:	0.1683	minutes

	0.2000	
Total Cycle Time:	0.6383	minutes

## Load Bucket Capacity

Rated Capacity:	7.50	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - uniform aggregates to 1/8" (95-100%) 0.975
Adjusted Capacity:	7.31	LCY

# Job Condition Correction Factors

Site Altitude: 6200 feet

		Source		
Altitude Adj:	1.00	(CAT HB)		
Job Efficiency:	0.83	(1 shift/day)		
Net Correction:	0.83	multiplier	_	
Unac	ljusted Hourly Uni	it Production:	687.33	LCY/Hour
Ac	ljusted Hourly Uni	it Production:	570.48	LCY/Hour
Ad	justed Hourly Flee	et Production:	1,140.97	LCY/Hour

## JOB TIME AND COST

Fleet size:	2	Loader(s)	Total job time:	117.83	Hours
Unit cost:	\$0.271	/LCY	Total job cost:	\$36,483	

Bunn Ranch Pit	TR4 Cost 1 BULLDOZI			April 2021
Task description:	Distribute topsoil			
ite: Bunn Ranch Pit	Permit Action:	TR4 2021	Permit/Jol	o#: <u>M1980131</u>
PROJECT IDENTIFICA	TION			
Task #: 05B	State: Colorado		Abbreviation:	None
Date: 4/26/2021	County: Moffat		Filename:	TR4
User: RAR			· · · · · · ·	
Agency or organiza	tion name: DRMS			
HOURLY EQUIPMENT	COST			
	9T - 9SU			
Horsepower: 405		-		
	Jniversal	-		
Attachment: NA		=		
Shift Basis: 1 per d	ay	-		
Data Source: (CRG)		-		
Cost Breakdown:				
		Utilization %		
Ownership Cost/Hour:	\$156.88	NA		
Operating Cost/Hour:	\$127.87	100		
Ripper own. Cost/Hour:	\$0.00	NA		
Ripper op. Cost/Hour:	\$0.00	0		
Operator Cost/Hour:	\$41.30	NA		
Total unit Cost/Hour: \$	326.04			
	<b>652.09</b>			
<u>MATERIAL QUANTITI</u>	ES			
Initial Volume: 99,589				
Swell factor: 1.000				
Loose volume: <b>99,589</b>	LCY			
Source of estimated volume	: Transported volume			
Source of estimated volume	Cat Handbook			
factor:				
HOURLY PRODUCTIO	Ν			
	100 feet			
Average push distance:	1,243.2 LCY/hr			
Unadjusted hourly production:	1,243.2 LU I/III			
-	T			
	Loosa stoalmula 1/2			
Materials consistency description:	Loose stockpile 1.2			
description:				

gradient: Average site altitude:	6,200 feet	
Material weight:	1,600 lbs/LCY	_
Weight description:	Top Soil	

Bunn Ranch Pit	TR4 Cost E	stimate
Job Condition Correction Factor		Source
Operator Skill:	0.900	(AB.AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.0312

Adjusted unit production:	1,281.99 LCY/hr		
Adjusted fleet production:	2563.98 LCY/hr		

## JOB TIME AND COST

Fleet size:	2 Dozer(s)	
Unit cost:	\$0.254/LCY	-

Total job time:	38.84 Hours	
Total job cost:	\$25,328	

#### TR4 Cost Estimate REVEGETATION WORK

Тε	ask descrip	otion:	Reveg disturbed	areas			
Site:	Bunn Ra	nch Pit	Pe	rmit Action:	TR4 2021	Permit/Jo	b#: <u>M1980131</u>
<u>PR</u>	OJECT	IDENTIFIC	CATION State:	Colorado		Abbreviation:	None
	Date:	4/26/2021	County:	Moffat		Filename:	TR4
	User:	RAR					
	-		zation name:	RMS			

# **FERTILIZING**

## Materials

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

## Application

De	escription	Cost /Acre
		\$
	Total Fartilizer Application Cost/Acra	<b>\$0.00</b>
	Total Fertilizer Application Cost/Acre	\$0.00

# TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$107.16
Total Tilling Cost/Acre	\$107.16

## **SEEDING**

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alfalfa - Common	0.80	3.86	\$2.04
Orchardgrass - Paiute	0.60	7.44	\$2.45
Smooth Brome - Lincoln	7.80	25.96	\$25.94
Timothy, Alpine - Native	0.15	4.48	\$3.64
Totals Seed Mix	9.35	41.74	\$34.06

April 2021

## Application

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

## **MULCHING and MISCELLANEOUS**

#### Materials

	Units /			
Description	Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.92	\$2.92
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$301.00	\$602.00
Total Mulch Materials Cost/Acre				\$604.92

#### Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$70.17
Power mulcher (MEANS 32 91 13.16 0350)		\$101.93
Weed spray, truck, aquatic area, nox. [DMG]		\$62.72
	Total Mulch Application Cost/Acre	\$234.82

# NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood,	3	Bare root seedling, 11-16 inch ht.	\$2.25	\$0.00	\$6.75
Narrowleaf		(MEANS)			
		Totals	Nursery Stoc	k Cost / Acre	\$6.75

## JOB TIME AND COST

	No. of Acres:	75	Cost /Ac	cre: \$1,219.71
Estimate	ed Failure Rate:	30%	Cost /Acr	e*: \$272.81
*Selected Replanti	ng Work Items:	SEEDING,NURS	SERY	
Initial Job Cost:	\$91,478.25			
Reseeding Job Cost:	\$6,138.23			
Total Job Cost:	\$97,616			
Job Hours:	75.00			

## EQUIPMENT MOBILIZATION/DEMOBILIZATION

				crew and equipment	······································	M1000121
e: Bunn Rancl	a Pit	Pe	ermit Action: TR4	2021 Pe	rmit/Job#:	M1980131
PROJECT ID	DENTIFICATI	[ <u>ON</u>				
Task #: 0	)7A	State:	Colorado	Abbrevia	ation: N	lone
Date: 4	4/28/2021	County:	Moffat	Filer	name: M	1131-07A
User: F	RAR					
				Shift basis Cost Data Source	: CRC	er day 3 Data
Tn	uck Tractor Desc	ription: GI	ENERIC ON-HIGH		: <u>CRC</u> , 6X4, DIE	3 Data
	uck Tractor Desc uck Trailer Desc	·		Cost Data Source WAY TRUCK TRACTOR	: <u>CRC</u> , 6X4, DIE 06)	3 Data SEL POWERED,
		·	GENERIC FOLD	Cost Data Source WAY TRUCK TRACTOR 400 HP (2ND HALF, 20	: CRC , 6X4, DIE 06) P DECK E	<u>3 Data</u> SEL POWERED,
	uck Trailer Desc	·	GENERIC FOLD	Cost Data Source WAY TRUCK TRACTOR 400 HP (2ND HALF, 20 ING GOOSENECK, DRO	: CRC , 6X4, DIE 06) P DECK E	3 Data SEL POWERED,

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

#### **NON ROADABLE EQUIPMENT:**

Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ unit	Cost/hr/unit	Size	Cost/hr/	Cost/hr/ fleet	Cost/ fleet
	(TONS)				fleet		
Cat D9T - 9SU	66.13	\$172.47	\$141.54	2	\$628.02	\$283.08	\$500.00
CAT 990H	83.34	\$111.11	\$141.54	2	\$505.30	\$283.08	\$500.00
Submersible pump	0.70	\$10.98	\$67.39	1	\$78.37	\$67.39	\$250.00
- 460v, 8 in.							
Drill/Broadcast	25.00	\$6.72	\$67.39	1	\$74.11	\$67.39	\$250.00
Seeder with							
Tractor							
Power Mulcher	6.00	\$11.19	\$67.39	1	\$78.58	\$67.39	\$250.00
(Bowie LD-90)							

Subtotals: \$1,364.38 \$768.33 \$1,750.00

## **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	\$49.16	1	\$49.16	\$49.16
		Subtotals:	\$49.16	\$49.16

# **EQUIPMENT HAUL DISTANCE and Time**

Nearest Major City or Town within project area region: Total one-way travel distance: Average Travel Speed:	CRAIG 1.00 35.00	miles mph
Total Non-Roadable Mob/Demob Cost *	\$6,350.63	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$2.81	

Transportation Cycle Time:

	Non- Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.03	0.03
Return Time (Hours):	0.03	0.03
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.06	0.06

# JOB TIME AND COST

Total job time: 2.11 Hours

Total job cost: **\$6,353**