COST SUMMARY WORK

Task description:	AM-1 Cost Estimate				
Site: Timnath Connell Pi	Permit Action: AM-1	Permit/Job#: M1999050			
PROJECT IDENTIF	<u>ICATION</u>				
Task #: 000 Date: 9/17/2024 User: JR2	State: Colorado County: Larimer	Abbreviation: None Filename: M050-000			
Agency or orga	nization name: DRMS				

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Demolition Demolition	DEMOLISH	1	10.00	\$5,352
002	Phase 1 - Backfill and Grade	SCRAPER1	1	228.50	\$5,332
002	Phase 1 - Liner Construction	NA NA	1	100.00	\$81,000
003	Phase 1 - Cover Clay Liner	SCRAPER1	1	37.05	\$91,996
004	Phase 1 - Cover Clay Ellier Phase 1 - Finish Backfill	SCRAPER1	1	6.52	\$16,185
			1		
006	Phase 1 - Revegetation of Affected Area	REVEGE	1	42.00	\$17,788
006a	Phase 1 - Reseed Reclamation areas	REVEGE	I	27.65	\$20,845
007	Phase 2 - Reseed Reclamation Area	REVEGE	1	15.00	\$11,346
008	Phase 3 - Backfill and Grade	SCRAPER1	1	117.34	\$291,322
009	Phase 3 - Finish Backfill	SCRAPER1	1	8.23	\$20,444
010	Phase 3 - Revegetation	REVEGE	1	14.00	\$5,929
011	Phase 3 - Reseed	REVEGE	1	3.00	\$2,111
012	Scarify Access and Haul Roads	RIPPER	1	3.89	\$1,346
013	Revegetation of Roads	REVEGE	1	3.50	\$1,482
014	Mob/Demob	MOBILIZE	1	5.12	\$13,515
		SUBTO	TALS:	621.8	\$1,147,972

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$23,189
Performance bond:	1.05	Total =	\$12,054
Job superintendent:	310.90	Total =	\$24,645

Profit: 10.00

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	\$500	Total =	\$500	
Engineering work and/or contract/bid preparation:	4.25	Total =	\$56,213	
Reclamation management and/or administration:	5.00	_	\$66 133	

CONTINGENCY: 3.00 Total = \$34,439

TOTAL INDIRECT COST = \$331,970

TOTAL BOND AMOUNT (direct + indirect) = \$1,479,942

DEMOLITION WORK

Task descript	ion: Demo	lition				
Site: Timnath Connell Pit		Permit Action: A	M-1	P	ermit/Job#: _	M1999050
PROJECT IDENT	<u>IFICATION</u>					
Task #: 001 Date: 9/25/2024 User: JR2		tate: Colorado unty: Larimer		Abbrevia Filen		-001
Agenc	y or organization nam	ne: DRMS				
<u>UNIT COSTS</u>				Location	n adjustment:	89.20 %
Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Cassion Removal	2', 18" diameter	USER PROVIDED ITEM	12.00	Ea	\$500.00	\$6,000.00
Job Hours:	10.00	Subtotal (unadjusted):	\$6,000.00	(adj	Total Cost justed for location):	\$5,352,00

SCRAPER TEAM WORK

Task description:	Phosa 1 - P	Backfill and Grad	a			
Site: Timnath Connell	-	Permit Action:		Peri	mit/Job#: <u>M1999</u>	9050
PROJECT IDENT	<u>CIFICATION</u>					
Task #: 002 Date: 9/25/20 User: JR2 Agency or o		State: Colorado unty: Larimer DRMS			viation: None ename: M050-0	002
HOURLY EQUIP	MENT_		COSTS	hift basis: 1 per d	<u>ay</u>	
	t Equipment -Loa -Dum ntenance –Motor (Graper: Cat 63 Dozer: Cat D8 d Area: NA p Area: Cat D8 Grader: CAT 16	T - 8SU T - 8SU			
Cost Breakdown:	Scraper Wor	rk Team Dozer	Support Equi Load Area	pment Dump Area	Maintenance Motor Grader	Equipment Water Truck
	-			-		
%Utilization-machine:	100	100	NA	100	50	5(
Ownership cost/hour:	\$442.19	\$173.32	NA NA	\$173.32	\$179.39	\$17.11
Operating cost/hour: %Utilization-ripper:	\$252.89	\$109.71 NA	NA NA	\$109.71 NA	\$59.82	\$18.40 NA
Ripper own. cost/hour:	NA NA	\$0.00	NA NA	\$0.00	NA \$0.00	\$0.00
Ripper op. cost/hour:	NA NA	\$0.00	NA NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$57.52	\$40.04	NA NA	\$40.04	\$56.70	\$0.00
Unit Subtotals:	\$752.60	\$323.07	NA NA	\$323.07	\$295.91	\$35.51
Number of Units:	2	1	0	φ323.07 1	\$293.91 1	φ33.31
Group Subtotals:	Work:	\$1,828.27	Support:	\$323.07	Maint:	\$331.42
Total work team cost			**			
Initial volume: Loose volume:	214,896 241,758	CCY LCY	Swell fact	tor: 1.125		

HOURLY PRODUCTION

Material weight: 2,650 lbs/LCY
Material description: Decomposed rock - 25% Rock, 75% Earth

Struck Volume:	24.00	LCY
Heaped Volume:	34.00	LCY
Average Volume	29.00	I CV

Scraper Bowl (volume) Basis:

Rated Payload:81,600 poundsAverage Volume:29.00LCYPayload Capacity:30.79 LCYAdjusted Capacity:29.00LCY

Source of estimated volume: Operator Estimate
Source of estimated swell factor: Cat Handbook

C_{λ}	cle	Time:

Scraper Loading Time: $\underline{0.80}$ Minutes Maneuver and Spread Time: $\underline{0.70}$ Minutes

Job Condition Correction: Site Altitude: 4830 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	5.00	3.00	8.00	783	0.92

Haul Time: **0.92** minutes

Return Route:

\$ Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	-5.00	3.00	-2.00	2920	0.31

Return Time: 0.31 minutes

Total Scraper team cycle time: 2.73 minutes

Adjusted for job conditions: 529.01 LCY/Hour Selected Number of Scrapers: 2 Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,058.02 LCY/Hour Adjusted multiple scraper team (fleet) hourly production: 1,058.02 LCY/Hour

Unadjusted unit production/hour: 637.36 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 228.50
 Hours

 Unit cost:
 \$2.347
 /LCY
 Total job cost:
 \$567,311

Payload Capacity: 30.79 LCY

SCRAPER TEAM WORK

Task description:	Phase 1 - C	Cover Clay Liner				
Site: Timnath Connell	Pit	Permit Action:	AM-1	Peri	nit/Job#: <u>M199</u>	9050
PROJECT IDEN	TIFICATION					
				411		
Task #: 004 Date: 9/25/20		State: Colorado unty: Larimer			viation: None ename: M050-	004
User: $\frac{9/23/20}{\text{JR2}}$	024	inty. <u>Larinici</u>				304
Agency or	organization name:	DRMS				
HOURLY EQUIP	PMENT_		COSTS	hift basis: <u>1 per d</u>	<u>ay</u>	
		Equipme	ent Description			
		craper: Cat 63				
			T - 8SU			
Suppo	ort Equipment -Load Dumi-		T - 8SU			
Road Ma	intenance – Motor (Grader: CAT 1	6M			
	-Water	Truck: Water	Tanker, 3,500 Gal			
Cost Breakdown:	Comomon Woo	uls Taam	Cummont Equi	nm ant	Maintananaa	Equipment
Cost Breakdown.	Scraper Wor	Dozer	Support Equipole Load Area	Dump Area	Maintenance Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	100	50	50
Ownership cost/hour:	\$442.19	\$173.32	NA	\$173.32	\$179.39	\$17.11
Operating cost/hour:	\$252.89	\$109.71	NA	\$109.71	\$59.82	\$18.40
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$57.52	\$40.04	NA	\$40.04	\$56.70	\$0.00
Unit Subtotals:	\$752.60	\$323.07	NA	\$323.07	\$295.91	\$35.51
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work:	\$1,828.27	Support:	\$323.07	Maint:	\$331.42
Total work team cost	t/hour: \$2,482.76					
MATERIAL QUA	ANTITIES					
Initial volume: Loose volume:	34,848 39,204	CCY LCY	Swell fac	tor: 1.125		
Sou	rce of estimated vo	Jume: Operator	r Estimate			
	of estimated swell f					
HOURLY PROD	<u>UCTION</u>					
			Scraper B	owl (volume) Basi	is:	
Material weight:	2,650 lbs/LCY		Struck	Volume: 24.00	L	CY
Material description:	Decomposed rock	k - 25% Rock,	Heaped	Volume: 34.00	L	CY
Datad Dania d	75% Earth		A	Volume: 20.00		CV
Rated Payload:	81,600 pounds		Average	Volume: 29.00	L	CY

LCY

Adjusted Capacity: 29.00

C_{λ}	cle	Time:

Scraper Loading Time: $\underline{0.80}$ Minutes Maneuver and Spread Time: $\underline{0.70}$ Minutes

Job Condition Correction: Site Altitude: 4830 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	5.00	3.00	8.00	783	0.92

Haul Time: **0.92** minutes

1,058.02

LCY/Hour

Return Route:

Seg #	Haul Distance (Ft)	Grade	Roll. Res	Total Res	Velocity (fpm)	Travel Time
		(%)	(%)	(%)		(min)
1	700.00	-5.00	3.00	-2.00	2920	0.31

Return Time: 0.31 minutes

Total Scraper team cycle time: 2.73 minutes

Adjusted for job conditions: 529.01 LCY/Hour Selected Number of Scrapers: 2 Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,058.02 LCY/Hour

Unadjusted unit production/hour: 637.36 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 37.05
 Hours

 Unit cost:
 \$2.347
 /LCY
 Total job cost:
 \$91,996

Adjusted multiple scraper team (fleet) hourly production:

Rated Payload: 81,600 pounds

Payload Capacity: 30.79 LCY

SCRAPER TEAM WORK

Task description:	Phase 1 - F	inish Ba	ckfill				
Site: Timnath Connell	Pit	Permi	t Action:	AM-1	Peri	mit/Job#: <u>M19</u>	99050
PROJECT IDEN	CIFICATION						
INGULOTIBLE							
Task #: 005			Colorado			viation: None	
Date: 9/25/20 User: JR2)24 Co	unty:	Larimer		Fil	ename: M050	-005
	organization name:	DRM	1S				
rigency or c	2.8						
HOURLY EQUIP	<u>PMENT</u>			COSTS	hift basis: 1 per d	<u>ay</u>	
			Equipme	ent Description			
		Scraper:	Cat 631				
		-Dozer:		T - 8SU			
Suppo	rt Equipment -Loa -Dum	a Area: p Area:	NA Cat D8	T - 8SU			
Road Ma	intenance –Motor		CAT 10				
	-Water	Truck:	Water	Γanker, 3,500 Gal			
Cost Breakdown:	Scraper Wo	rk Team		Support Equi	nment	Maintenance	e Equipment
Cost Breakdown.	Scraper	Do	zer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100		100	NA	100	50	50
Ownership cost/hour:	\$442.19	\$	3173.32	NA	\$173.32	\$179.39	\$17.11
Operating cost/hour:	\$252.89	\$	5109.71	NA	\$109.71	\$59.82	\$18.40
%Utilization-ripper:	NA		NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA		\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA		\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$57.52		\$40.04	NA	\$40.04	\$56.70	\$0.00
Unit Subtotals:	\$752.60	\$	323.07	NA	\$323.07	\$295.91	\$35.51
Number of Units:	2		1	0	1	1	1
Group Subtotals:	Work:	\$1,82	28.27	Support:	\$323.07	Maint:	\$331.42
Total work team cost	/hour: \$2,482.76						
MATERIAL QUA	<u>ANTITIES</u>						
Initial volume:	6,131		CCY	Swell fact	tor: 1.125		
Loose volume:	6,897		LCY				
Sou	rce of estimated vo	olume:		Estimate			
Source of	of estimated swell	factor: _	Cat Han	dbook			
HOURLY PROD	UCTION						
HOURETTROD				Sarapar R	owl (volumo) Ros	ic.	
36. 11. 15	2 (50 11 7 (3)				owl (volume) Basi		CV
Material weight: Material description:	2,650 lbs/LCY Decomposed roc	k - 25%	Rock		Volume: <u>24.00</u> Volume: <u>34.00</u>		LCY
material description.	75% Earth	K = 4J/0	NOCK,	псарец	volume. 54.00	1	JC 1

LCY

LCY

Average Volume: 29.00

Adjusted Capacity: 29.00

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7)	10	ρ΄	1 11	me:
\sim	<i>'</i> UI	•	111	m.

Scraper Loading Time: $\underline{0.80}$ Minutes Maneuver and Spread Time: $\underline{0.70}$ Minutes

Job Condition Correction: Site Altitude: 4830 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	5.00	3.00	8.00	783	0.92

Haul Time: **0.92** minutes

Return Route:

11000111111	o urce i					
Seg #	Haul Distance (Ft)	Grade	Roll. Res	Total Res	Velocity (fpm)	Travel Time
		(%)	(%)	(%)		(min)
1	700.00	-5.00	3.00	-2.00	2920	0.31

0.31 minutes Return Time: Total Scraper team cycle time: 2.73 minutes Adjusted for job conditions: 529.01 LCY/Hour Selected Number of Scrapers: 2 Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 1,058.02 Adjusted multiple scraper team (fleet) hourly production: 1,058.02 LCY/Hour

Unadjusted unit production/hour: 637.36 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

Fleet size:	1	_ Team(s)	Total job time:	6.52	Hours
Unit cost:	\$2.347	_ /LCY	Total job cost:	\$16,185	

REVEGETATION WORK

Timnath Connell Pit	Permit Action: AN	1 -1		Permit/Job	#: <u>M1999050</u>
ROJECT IDENTIFICA	<u>ATION</u>				
Task #: 006	ask #: 006 State: Colorado Abbreviation: N				
Date: 9/25/2024					M050-006
User: JR2	<u> </u>				
Agency or organiza	tion name: DRMS				
ERTILIZING					
aterials					
	Units /				
Description	Acre	Unit	Cos	st / Unit	Cost /Acre
			\$		\$
			Ψ		Ψ
			Tot	tal Fertilizer	
				Materials	
				Cost/Acre	\$0.00
Description					Cost /Acre
Description	Tot	al Fartilizar	Applicatio	on Cost/Agra	\$
Description	Tot	al Fertilizer	Applicatio	on Cost/Acre	\$
Description	Tot	al Fertilizer	Applicatio	on Cost/Acre	\$ \$0.00
Description LLING Description		al Fertilizer	Applicatio	on Cost/Acre	\$ \$0.00 Cost/Acre
Description LLING Description Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	al Fertilizer	Application	on Cost/Acre	\$ \$0.00 Cost /Acre \$117.61
Description LLING Description Disc harrowing, 6" deep (al Fertilizer	Application	on Cost/Acre	\$ \$0.00 Cost/Acre
Description LLING Description Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)			on Cost/Acre	\$ \$0.00 Cost /Acre \$117.61 \$338.80
Description LLING Description Disc harrowing, 6" deep (Weed control spraying (M	MEANS 32 91 13.23 6100)				\$ \$0.00 Cost /Acre \$117.61 \$338.80
Description LLING Description Disc harrowing, 6" deep (Weed control spraying (M	MEANS 32 91 13.23 6100)		Rate – PLS LBS /		\$ \$0.00 Cost /Acre \$117.61 \$338.80
Description LLING Description Disc harrowing, 6" deep (Weed control spraying (M	MEANS 32 91 13.23 6100)		Rate – PLS LBS / Acre	Seeds per SQ. FT	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41 Cost /Acre
Description Description Disc harrowing, 6" deep (Weed control spraying (M EEDING Seed Mix Blue Grama - Native	MEANS 32 91 13.23 6100) IEANS 31 31 16.13 3100)		Rate – PLS LBS /	Seeds per SQ. FT	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41 Cost /Acre \$21.33
Description Description Disc harrowing, 6" deep (Weed control spraying (M	MEANS 32 91 13.23 6100) IEANS 31 31 16.13 3100)		Rate – PLS LBS / Acre 1.00	Seeds per SQ. FT	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41 Cost /Acre

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
			\$	\$
Total Mulch Materials Cost/Acre				\$0.00

Application

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

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 24 Cost /Acre: \$741.16 Estimated Failure Rate: 0% Cost /Acre*: \$284.75

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$17,787.84

Reseeding Job Cost: \$0.00

Total Job Cost: \$17,788

Job Hours: 42.00

REVEGETATION WORK

Timnath Connell	th Connell Pit Permit Action: AM-1 Permit/Job#:				: <u>M1999050</u>		
ROJECT IDENT	TIFICATION						
Task #: 007		ate: Colo	orado		A1	bbreviation:	None
				M050-007			
User: JR2							
Agency or o	organization name:	DRMS					
ERTILIZING							
aterials							
Description			Units /	Unit	Co	st / Unit	Cost /Acre
Description			Acre	Cint			Cost /ileic
					\$		\$
					To	tal Fertilizer	
						Materials	
						Cost/Acre	\$0.00
Description							Cost /Acre
			Total	Fertilizer	Applicati	on Cost/Acre	
			Total	Fertilizer	Applicati	on Cost/Acre	\$
Description LLING			Total	Fertilizer	Applicati	on Cost/Acre	\$
Description LLING Description Disc harrowing, 6	" deep (MEANS 32		100)	Fertilizer	Applicati	on Cost/Acre	\$0.00 Cost /Acre \$117.61
Description LLING Description Disc harrowing, 6	" deep (MEANS 32 lying (MEANS 31 3		100)	Fertilizer	Applicati	on Cost/Acre	\$ \$0.00 Cost /Acre
Description LLING Description Disc harrowing, 6			100)				\$0.00 Cost /Acre \$117.61 \$338.80
Description LLING Description Disc harrowing, 6			100)			on Cost/Acre	\$0.00 Cost /Acre \$117.61
Description LLING Description Disc harrowing, 6			100)				\$0.00 Cost /Acre \$117.61 \$338.80
Description Description Disc harrowing, 6 Weed control spra			100)		Pate – PLS LBS /		\$0.00 Cost /Acre \$117.61 \$338.80
Description LLING Description Disc harrowing, 6 Weed control spra EEDING Seed Mix	lying (MEANS 31 3		100)		Rate – PLS LBS / Acre	ng Cost/Acre Seeds per SQ. FT	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41 Cost /Acre
Description LLING Description Disc harrowing, 6 Weed control spra	ive		100)		Pate – PLS LBS /	ng Cost/Acre Seeds per SQ.	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41
Description Description Disc harrowing, 6 Weed control spra EEDING Seed Mix Blue Grama - National Sections of the section of the sectio	ive		100)		Rate – PLS LBS / Acre 1.00	Seeds per SQ. FT	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41 Cost /Acre

Description

Cost /Acre

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

MULCHING and MISCELLANEOUS

Materials

Reveg Worksheet Cont'd

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Total Mulch Materials Cost/Acre				\$492.78

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$85.37
	Total Mulch Application Cost/Acre	\$85.37

NURSERY STOCK PLANTING

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

JOB TIME AND COST

 No. of Acres:
 8.6
 Cost /Acre:
 \$1,319.31

 Estimated Failure Rate:
 0%
 Cost /Acre*:
 \$284.75

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$11,346.07

Reseeding Job Cost: \$0.00

Total Job Cost: \$11,346

Job Hours: 15.00

Rated Payload: 81,600 pounds

Payload Capacity: 30.79 LCY

SCRAPER TEAM WORK

Task description:	Phase 3 - H	Backfill a	ınd Grad	e			
Site: Timnath Connell	Pit	Permi	t Action:	AM-1	Peri	mit/Job#: <u>M19</u> 9	99050
PROJECT IDEN	FIFICATION						
INOULOT IDENT							
Task #:008			Colorado			viation: None	
Date: 9/25/20	<u>)24</u> Co	unty:	Larimer		Fil	ename: M050	-008
User: JR2	organization name:	DPM	10				
Agency of G	ngamzanon name.	DKW	IO .				
HOURLY EQUIP	<u>PMENT</u>			COSTS	hift basis: 1 per d	<u>ay</u>	
			Equipme	ent Description			
	-8	Scraper:	Cat 631	lG			
		-Dozer:		T - 8SU			
Suppo	rt Equipment -Loa	d Area: p Area:	NA Cat D8	T - 8SU			
Road Ma	intenance –Motor		CAT 10				
-		Truck:		Гanker, 3,500 Gal			
Cost Breakdown:	Scraper Wo	rk Toom		Support Equi	nmant	Maintanance	e Equipment
Cost Dieakuowii.	Scraper Wo	Do	zer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100		100	NA	100	50	50
Ownership cost/hour:	\$442.19	\$	3173.32	NA	\$173.32	\$179.39	\$17.11
Operating cost/hour:	\$252.89	<u> </u>	5109.71	NA	\$109.71	\$59.82	\$18.40
%Utilization-ripper:	NA	-	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA		\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA		\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$57.52		\$40.04	NA	\$40.04	\$56.70	\$0.00
Unit Subtotals:	\$752.60	\$	323.07	NA	\$323.07	\$295.91	\$35.51
Number of Units:	2		1	0	1	1	1
Group Subtotals:	Work:	\$1,82	28.27	Support:	\$323.07	Maint:	\$331.42
Total work team cost	/hour: \$2,482.76						
MATERIAL QUA	<u> NTITIES</u>						
Initial volume:	110,352		CCY	Swell fact	tor: 1.125		
Loose volume:	124,146		LCY				
Sou	rce of estimated vo	olume: _	Operator	Estimate			
Source of	of estimated swell	factor: _	Cat Han	dbook			
HOURLY PROD	UCTION						
HOURETTROE				Scraper B	owl (volume) Basi	ic.	
3.4	0.650.11 / 637						CV
Material weight: Material description:	2,650 lbs/LCY Decomposed roc	k - 25%	Rock		Volume: <u>24.00</u> Volume: <u>34.00</u>		LCY
macriai description.	75% Earth	. 2J/0	roon,	Heaped	, 51ame. 57.00	1	201

LCY

LCY

Average Volume: 29.00

Adjusted Capacity: 29.00

Cycl	٦	T:	ma.
Cyc	le	11.	me.

Scraper Loading Time: $\underline{0.80}$ Minutes Maneuver and Spread Time: $\underline{0.70}$ Minutes

Job Condition Correction: Site Altitude: 4830 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	5.00	3.00	8.00	783	0.92

Haul Time: **0.92** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade	Roll. Res	Total Res	Velocity (fpm)	Travel Time
		(%)	(%)	(%)		(min)
1	700.00	-5.00	3.00	-2.00	2920	0.31

Return Time: 0.31 minutes

Total Scraper team cycle time: 2.73 minutes

Adjusted for job conditions: 529.01 LCY/Hour Selected Number of Scrapers: 2 Scraper(s)

Adjusted single scraper team (unit) hourly production: 1,058.02 LCY/Hour

Unadjusted unit production/hour: 637.36 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 117.34
 Hours

 Unit cost:
 \$2.347
 /LCY
 Total job cost:
 \$291,322

Adjusted multiple scraper team (fleet) hourly production:

1,058.02 LCY/Hour

Payload Capacity: 30.79 LCY

SCRAPER TEAM WORK

Task description:	Phase 3 - F	inish Backfill				
Site: _Timnath Connell	Pit	Permit Action:	AM-1	Peri	mit/Job#: <u>M1999</u>	9050
PROJECT IDENT	<u> </u>					
Task #: 009	S	State: Colorado		Abbre	viation: None	
Date: 9/25/20	024 Co	unty: Larimer		Fil	ename: M050-0	009
User: JR2						
Agency or o	organization name:	DRMS				
HOURLY EQUIP	PMENT		COSTS	hift basis: 1 per d	<u>ay</u>	
			ent Description			
		Scraper: Cat 631				
Suppo	rt Equipment -Loa		T - 8SU			
Бирро	* *		T - 8SU			
Road Ma	intenance –Motor					
	-Water	Truck: Water	Γanker, 3,500 Gal	•		
Cost Breakdown:	Scraper Wo	rk Team	Support Equip	oment	Maintenance	Fauinment
Cost Bi cando wii	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	100	50	50
Ownership cost/hour:	\$442.19	\$173.32	NA	\$173.32	\$179.39	\$17.11
Operating cost/hour:	\$252.89	\$109.71	NA	\$109.71	\$59.82	\$18.40
%Utilization-ripper:	NA	NA	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$57.52	\$40.04	NA	\$40.04	\$56.70	\$0.00
Unit Subtotals:	\$752.60	\$323.07	NA	\$323.07	\$295.91	\$35.51
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work:	\$1,828.27	Support:	\$323.07	Maint:	\$331.42
Total work team cost	/hour: <u>\$2,482.76</u>					
MATERIAL QUA	ANTITIES					
Initial volume: Loose volume:	7,744 8,712	CCY LCY	Swell fact	or: 1.125		
	rce of estimated vo of estimated swell		Estimate dbook			
HOURLY PROD	<u>UCTION</u>					
			Scraper Bo	owl (volume) Bas	is:	
Material weight: Material description:	2,650 lbs/LCY Decomposed roc	k - 25% Rock,	Struck Heaped	Volume: 24.00 Volume: 34.00		CY CY
Rated Payload:	75% Earth 81,600 pounds		Average	Volume: 29.00	LO	CY

LCY

Adjusted Capacity: 29.00

C_{λ}	cle	Time:

Job Condition Correction: Site Altitude: 4830 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg#	Haul Distance (Ft)	Grade (%)	Roll. Res	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	700.00	5.00	3.00	8.00	783	0.92

Haul Time: **0.92** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade	Roll. Res	Total Res	Velocity (fpm)	Travel Time
		(%)	(%)	(%)		(min)
1	700.00	-5.00	3.00	-2.00	2920	0.31

Return Time: _____ 0.31 ____ minutes 2.73 Total Scraper team cycle time: minutes 529.01 Adjusted for job conditions: LCY/Hour Selected Number of Scrapers: 2____ Scraper(s) Adjusted single scraper team (unit) hourly production: LCY/Hour 1,058.02 Adjusted multiple scraper team (fleet) hourly production: 1,058.02 LCY/Hour

Unadjusted unit production/hour: 637.36 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

 Fleet size:
 1
 Team(s)
 Total job time:
 8.23
 Hours

 Unit cost:
 \$2.347
 /LCY
 Total job cost:
 \$20,444

REVEGETATION WORK

Task description:	Phase 3 - Revegetation	1				
: Timnath Connell Pit	t Permit A	ction: AM-	1		Permit/Job#	: <u>M1999050</u>
PROJECT IDENTIF	<u>ICATION</u>					
Task #: 010	State: Colo	orado		Abl	oreviation:	None
Date: 9/25/2024						M050-010
User: JR2					_	
Agency or orga	nization name: DRMS					
FERTILIZING						
Materials						
Description		Units /	Unit	Cos	t / Unit	Cost /Acre
Description		Acre	Cint		· · · · · · · · · · · · · · · · · · ·	Costiller
				\$		\$
				Tot	al Fertilizer	
					Materials	
					Cost/Acre	\$0.00
		Total	l Fertilizer	Application	n Cost/Acre	\$ \$0.00
<u> </u>						
Description						Cost /Acre
Disc harrowing 6" de	eep (MEANS 32 91 13.23 6	100)				\$117.61
	g (MEANS 31 31 16.13 31)					\$338.80
			,	Fotal Tillin	g Cost/Acre	\$456.41
SEEDING						
				Rate –	G 7	G . / /:
Seed Mix				PLS	Seeds per SO	Cost /Acre
				LBS /	per SQ. FT	
				Acre		
						\$
		Totals	Seed Mix			\$
Application						
						Coat /A ama
Description						Cost /Acre

	\$
Total Seed Application Cost/Acre	\$

MULCHING and MISCELLANEOUS

Materials

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

Application

Description		Cost /Acre
		\$
Total I	Mulch Application Cost/Acre	\$0.00

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		Totals 1	Nursery Stoc	k Cost / Acre	\$0.00

JOB TIME AND COST

No. of Acres: 8 Cost /Acre: $\frac{\$741.16}{0\%}$ Estimated Failure Rate: $\frac{\$}{0\%}$ Cost /Acre*: $\frac{\$284.75}{10\%}$

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$5,929.28

Reseeding Job Cost: \$0.00

Total Job Cost: \$5,929

Job Hours: 14.00

REVEGETATION WORK

Timnath Connell Pit	Permit	Action: AM-1			Permit/Job	#: <u>M1999050</u>
OJECT IDENTIFICAT	<u>rion</u>					
Task #: 011	State: Co	olorado		Ah	breviation:	None
Date: 9/25/2024		arimer			Filename:	M050-011
User: JR2					_	
Agency or organization	on name: DRMS					
RTILIZING						
terials						
		Units /				
Description		Acre	Unit	Cos	st / Unit	Cost /Acre
				\$		\$
				•		Ф
				To	tal Fertilizer	
					Materials	
					Cost/Acre	\$0.00
Description						Cost /Acre
Description		Total I	Fertilizer	Applicatio	on Cost/Acre	
Description LLING		Total I	Fertilizer	Application	on Cost/Acre	\$
LLING		Total I	Fertilizer	Application	on Cost/Acre	\$
	IEANS 32 91 13.23		Fertilizer	Applicatio	on Cost/Acre	\$0.00
LLING Description		6100)	Fertilizer	Applicatio	on Cost/Acre	\$ \$0.00 Cost /Acre
LLING Description Disc harrowing, 6" deep (M		6100)			on Cost/Acre	\$ \$0.00 Cost /Acre \$117.61
LLING Description Disc harrowing, 6" deep (M		6100)				\$ \$0.00 Cost /Acre \$117.61 \$338.80
LLING Description Disc harrowing, 6" deep (M) Weed control spraying (ME)		6100)		Γotal Tillin		\$ \$0.00 Cost /Acre \$117.61 \$338.80
LLING Description Disc harrowing, 6" deep (M Weed control spraying (ME		6100)		Fotal Tillin		\$ \$0.00 Cost /Acre \$117.61 \$338.80
LLING Description Disc harrowing, 6" deep (M) Weed control spraying (ME)		6100)		Fotal Tillin Rate – PLS	ng Cost/Acre Seeds per SQ.	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41
LLING Description Disc harrowing, 6" deep (M Weed control spraying (ME		6100)		Rate – PLS LBS /	ng Cost/Acre	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41
LLING Description Disc harrowing, 6" deep (M Weed control spraying (ME		6100)		Rate – PLS LBS / Acre	ng Cost/Acre Seeds per SQ.	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41
LLING Description Disc harrowing, 6" deep (M Weed control spraying (ME EDING Seed Mix	EANS 31 31 16.13 3	6100)		Rate – PLS LBS /	Seeds per SQ. FT	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41 Cost /Acre
Description Disc harrowing, 6" deep (M) Weed control spraying (ME) EDING Seed Mix Blue Grama - Native Intermediate Wheatgrass - I	EANS 31 31 16.13 3	6100)		Rate – PLS LBS / Acre 1.00	Seeds per SQ. FT	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41 Cost /Acre \$21.33 \$23.66
LLING Description Disc harrowing, 6" deep (M Weed control spraying (ME EDING Seed Mix Blue Grama - Native	EANS 31 31 16.13 3	6100)		Rate – PLS LBS / Acre 1.00 5.00	Seeds per SQ. FT 16.32 10.67	\$0.00 Cost /Acre \$117.61 \$338.80 \$456.41 Cost /Acre

Description

Cost /Acre

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

MULCHING and MISCELLANEOUS

Materials

Description Live A CMEAN (2012)	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	1.00	TON	\$492.78	\$492.78
Total Mulch Materials Cost/Acre				\$492.78

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$85.37
	Total Mulch Application Cost/Acre	\$85.37

NURSERY STOCK PLANTING

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

JOB TIME AND COST

 No. of Acres:
 1.6
 Cost /Acre:
 \$1,319.31

 Estimated Failure Rate:
 0%
 Cost /Acre*:
 \$284.75

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$2,110.90

Reseeding Job Cost: \$0.00

Total Job Cost: \$2,111

Job Hours: 3.00

BULLDOZER RIPPING WORK

	Task description:	: Scarify	Access and Haul Roa	ds			
Site:	Timnath Con	nell Pit	Permit Action: _	AM-1	Perm	it/Job#: <u> </u>	M1999050
	PROJECT ID	ENTIFICATION					
	Task #: 012		State: Colorado		Abbrevi		Ione
			County: <u>Larimer</u>		File	name: N	1050-012
	User: JR	2					
	Agency	or organization nam	ne: DRMS				
	HOURLY EQ	UIPMENT COST	<u>r</u>				
	Basic		T - 8SU	_	Horsepower:	310)
	Ripper Att	tachment: 1-Shan	k Ripper	_	Shift Basis:		day
					Data Source:	(CRC	<u>(i</u>
	Cost Breakdown	<u>:</u>		1			
		O	Τ		Utilization %		
		Ownership Cost/I	Hour:	\$173.32 \$109.71	NA 100		
	Ripp	er Ownership Cost/I		\$13.69	NA		
		per Operating Cost/I		\$9.24	100		
		Operator Cost/I		\$40.04	NA		
		Total Unit Cost/I	Hour:	\$346.00			
		Total Fleet Cost/I	Hour: \$346	.00			
	MATERIAL (DUANTITIES	Sele	cted estimating	method: Area		
	Alternate Method		Sele	eted estimating	metrod. Tred		
		<u>us.</u>	D 1 W 1	37.4	D.C.V.	37.4	
smic: Area:	NA 2.00	acres	-	NA 2.00	BCY Volume: 6,45	NA	BCY 01
iica.	2.00					,3	Beron
			ed quantity: Operato	or Estimate			
	HOURLY PRO	<u>ODUCTION</u>					
	Seismic:						
		Seis	mic Velocity:	NA	feet/second		
	Area:						
			ipping Depth:	3.71	feet/pass		
			ipping Width:	5.56	feet/pass		
			pping Length:	250.00	feet/pass		
			Dozer Speed:	88.00 0.25	feet/minute minutes/pas		
		_	per unit area:	0.619	acres/hour	30	
	Job Condition Co						
		nadjusted Hourly Un	it Production:	0.619	Acres/hr		
		·	Site Altitude:	4,830	feet		
			Altitude Adj:	1.00	(CAT HB)		
		Jo	ob Efficiency:	0.83	(1 shift/day	·)	
			et Correction:	0.83	multiplier		
		Adjusted Ho	urly Unit Production:	0.51	Acres/hr		
			rly Fleet Production:	0.51	Acres/hr		
	JOB TIME AN	ND COST					
	Fleet size:	1 G	rader(s)	Total job time	e: 3.8 9)	Hours
	Unit cost:	\$672.986 P	er acre	Total job cos	t: \$1,3 4	16	
	Omi cost:	φυ/2.980 P	er acre	Total Job Cos	ı. \$1,3 2	tU	

REVEGETATION WORK

Timnath Conneil Pit	hth Connell Pit Permit Action: AM-1 Permit/Job#:					#: <u>M1999050</u>
ROJECT IDENTIFICAT	<u>ION</u>					
Task #: 013						None
Date: 9/25/2024 County: Larimer Filename: N User: JR2						M050-013
Agency or organization	on name: DRMS	3				
CRTILIZING						
aterials						
Description		Units / Acre	Unit	Cos	st / Unit	Cost /Acre
				\$		\$
					tal Fertilizer Materials	
					Cost/Acre	\$0.00
LLING		Total	Fermizer	Аррисацо	on Cost/Acre	\$0.00
Description						Cost /Acre
Disc harrowing, 6" deep (MI	EANS 32 91 13.23	3 6100)				\$117.61
Weed control spraying (ME.	ANS 31 31 16.13	3100)				\$338.80
				Fotal Tillir	ng Cost/Acre	0.47
	-				ig Costificit	\$456.41
EEDING						\$456.41
CEDING Seed Mix				Rate – PLS LBS /	Seeds per SQ. FT	Cost /Acre
Seed Mix				Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
	ush			Rate – PLS LBS /	Seeds per SQ.	
Seed Mix Blue Grama - Native	ush			Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre \$21.33

Description

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
			\$	\$
Total Mulch Materials Cost/Acre				\$0.00

Application

Acre	Description
	Total Mulch Application Cost/Agra
	Total Mulch Application Cost/Acre

NURSERY STOCK PLANTING

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

JOB TIME AND COST

 No. of Acres:
 2
 Cost /Acre:
 \$741.16

 Estimated Failure Rate:
 0%
 Cost /Acre*:
 \$284.75

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$1,482.32

Reseeding Job Cost: \$0.00

Total Job Cost: \$1,482

Job Hours: 3.50

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: Mo	ob/Demob			
e: Timnath Connell Pit	Permi	t Action: AM-1	Permit/Jo	bb#: <u>M1999050</u>
PROJECT IDENTIFICAT	<u>ION</u>			
Task #: 014 Date: 9/25/2024 User: JR2	-	Colorado Larimer	Abbreviation: Filename:	None M050-014
Agency or organizatio	n name: DRM	S		
EQUIPMENT TRANSPOR	T RIG COST			
			Shift basis: Cost Data Source:	1 per day CRG Data
Truck Tractor Desc	eription: GEN		AY TRUCK TRACTOR, 6X4, 400 HP (2ND HALF, 2006)	DIESEL POWERED
Truck Trailer Desc	eription:		G GOOSENECK, DROP DEC AILER (25T, 50T, AND 100T	•
Cost Breakdown:				
Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons	
Ownership Cost/Hour:	\$10.44	\$22.18	\$23.94	

\$54.55

\$22.52

\$23.53

\$122.78

\$55.65

\$22.52

\$23.53

\$125.64

NON ROADABLE EQUIPMENT:

Total Unit Cost/Hour:

Operating Cost/Hour:

Operator Cost/Hour:

Helper Cost/Hour:

\$26.48

\$22.52

\$0.00

\$59.44

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
	(TONS)		t		fleet		
Drill/Broadcast	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
Seeder with							
Tractor							
Power Mulcher	6.00	\$27.21	\$59.44	1	\$86.65	\$59.44	\$250.00
(Bowie LD-90)							
Cat D8T - 8SU	53.08	\$187.85	\$125.64	2	\$626.98	\$251.28	\$250.00
CAT 16M	28.73	\$179.39	\$122.78	1	\$302.17	\$122.78	\$250.00
Cat 631G	52.50	\$442.19	\$125.64	2	\$1,135.66	\$251.28	\$250.00

Subtotals: \$2,251.92 \$744.22 \$1,250.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 3,500 Gal.	\$53.90	1	\$53.90	\$53.90
Light Duty Pickup, 4x4, 1 T.	\$24.60	1	\$24.60	\$24.60
Crew				

Subtotals:	\$78.50	\$78.50

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

FORT COLLINS
miles
50.00
mph

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	0.18	0.18
Return Time (Hours):	0.18	0.18
Loading Time (Hours):	1.10	NA
Unloading Time (Hours):	1.10	NA
Subtotals:	2.56	0.36

JOB TIME AND COST

Total job time:	5.12	Hours
Total job cost:	\$13.515	