January 19, 2016

John Raftopoulos Rancho Greco Partnership 351 School St Craig, CO 81625-3045



COLORADO Division of Reclamation, Mining and Safety Department of Natural Resources

1313 Sherman Street, Room 215 Denver, CO 80203

RE: Vermillion Creek Borrow Area, File No.M-2015-027, Construction Material Limited Impact (110) Operation Reclamation Permit Application Decision Letter – Financial and Performance Warranty Request

Dear Mr. Raftopoulos:

On January 19, 2016, the Division of Reclamation, Mining and Safety (Division) approved the above noted permit application.

The amount of financial warranty set by the Division for this operation is an amount of (\$29,206.00). A financial warranty of the entire amount, as well as a performance warranty, must be submitted to the Division before a Reclamation Permit may be issued. Please select a type of financial warranty from those detailed in Rule 4.3. Once a financial warranty type is selected, please download the applicable financial warranty and performance warranty forms from the Division's website http://mining.state.co.us/Mineral%20Forms.htm. You may also contact the the Division to have copies of your selected warranty forms mailed to you.

Please make arrangements with Barbara Coria at the Division of Reclamation, Mining and Safety Denver Office, phone no. 303.866.3567, ext. 8148 for submittal of the financial and performance warranties. Any questions regarding completion, execution and/or submittal of financial and/or performance warranty forms should also be directed to Barbara Coria.

PLEASE NOTE THAT RECLAMATION OPERATIONS MAY NOT COMMENCE UNTIL A PERMIT HAS BEEN ISSUED BY THE DIVISION <u>AFTER</u> RECEIPT OF THE FINANCIAL AND PERFORMANCE WARRANTIES. A PERMIT WILL NOT BE ISSUED UNTIL THE ADEQUACY OF BOTH THE FINANCIAL WARRANTY AND PERFORMANCE WARRANTY ARE VERIFIED BY THE DIVISION.

If you require additional information, or have questions or concerns, please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 970-254-8511 or via email at amy.yeldell@state.co.us

Sincerely,

Amy Yeldell

Environmental Protection Specialist Department of Natural Resources Division of Reclamation, Mining and Safety



John Raftopoulos January 19, 2016 Page 2

Phone: (970) 254-8511 Fax: (970) 241-1516

Ec: Financial Warranty Calculations

Cc: Russ Means, Senior EPS / Field Office Supervisor, Grand Junction DRMS Steve Baker, 3B Enterprises, Inc., Permitting Consultant Jennifer Mailo, Little Snake River Field Office BLM

COST SUMMARY WORK

Vermil	lion Creek Bor	row Pe	ermit Action:			
te: Area				2015 App	Permit/Job	#: M2015027
PROJEC	<u>r identific</u>	CATION				
<u>PROJEC'</u> Task #		CATION State:	Colorado		Abbreviation:	None
	: 000	State:	Colorado Moffat		Abbreviation: Filename:	None M027-000

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Bridge Removal-Demo and Disposal	DEMOLISH	1	8.00	\$3,291.44
02a	Grading HW in Phase 1	DOZER	1	2.79	\$612.00
03a	Placing topsoil in Phase 1	DOZER	1	2.93	\$613.00
04a	Phase 1 reveg	REVEGE	1	4.00	\$1,886.00
04b	Phase 1 remove silt fence	REVEGE	1	2.00	\$655.00
05a	Excavate new creek channel	EXCAVATE	1	4.54	\$433.00
06a	Backfill existing channel and grade Phase 2	DOZER	1	1.23	\$267.00
07a	Placing topsoil in Phase 2.95	DOZER	1	3.33	\$723.00
08a	Phase 2 reveg	REVEGE	1	8.00	\$4,122.00
08b	Phase 2 remove silt fence	REVEGE	1	3.00	\$1,027.00
09a	Initial Mob of reclamation crew and equipment	MOBILIZE	1	7.67	\$5,721.00
10a	Secondary mob of reclamation crew and equipment	MOBILIZE] 1	7.67	\$2,722.00
		TALS:	55.16	\$22,072	

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02		Total =	\$445.85
Performance bond:	1.05		Total =	\$231.76
Job superintendent:	27.58		Total =	\$2,072.91
Profit:	10.00		Total =	\$2,207.20
			TOTAL O & $P =$	\$4,957.72
	CONT	RACT AMOUNT	(direct + O & P) =	\$27,029.72
LEGAL - ENGINEERING - PRO	DJECT MANAGEMENT	:		
Financial warranty processi	ng (legal/related costs):	500.00	Total =	500.00
Engineering work and/or c	ontract/bid preparation:	0.00	Total =	\$0.00
Reclamation managemen	t and/or administration:	6.20	-	\$1,675.84
	CONTINGENCY:	0.00	Total =	\$0.00
		TOTAL IN	DIRECT COST =	\$7,133.56
	TOTAL BO	ND AMOUNT (di	irect + indirect) =	\$29,205.56

DEMOLITION WORK

1	Task description:	Bridge Rem	ioval-Demo and	Disposal		
Site:	Vermillion Creek Borrov Area	v	Permit Action:	2015 App	Permit/.	Job#: <u>M2015027</u>
<u>PROJE</u>	CT IDENTIFICATION	[
Task #:	: 01A	State:	Colorado		Abbreviation:	None
Date:	: 12/10/2015	County:	Moffat		Filename:	M027-01a
User:	ACY					
	Agency or organizati	on name:	DRMS			

UNIT COSTS

Location adjustment: 95.50 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Retaining wall around bridge Demo	2x 40'L x 10'H	Wall, concrete, demolition only, average reinforcing - 24 in. thick	400.00	SF	\$7.23	\$2,893.60
Steel Disposal	15"W X 25'L X1'H	Loading and 5 mile haul, salvage allowed - Steel frame structures	13.89	CY	\$9.48	\$131.68
Inert Material Disposal	1,767 cu.ft.	Push demolished materials/rubble/debris into pit - Max. 50 ft. push	65.00	CY	\$0.25	\$16.25
Busting concrete in steel bridge	15'W x 25'L	Floor, concrete, demolition only, average reinforcing - 4 in. thick	375.00	SF	\$1.08	\$405.00

				Total Cost	
		Subtotal		(adjusted for	
Job Hours:	8.00	(unadjusted):	\$3,446.53	location):	\$3,291.44

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BULLDOZER WORK

Task description:	Gradin	ng HW in I	Phase 1			
Vermillion Creel	k Borrow	Perr	nit Action:	2015 App	Permit/Job#	: M2015027
PROJECT IDEN	TIFICATIO	N				
Task #: 02A			Colorado		Abbreviation:	None
Date: 12/10/	/2015	County:	Moffat		Filename:	M027-02a
User: ACY		•				
Agency or	organization na	ame: DR	MS			
HOURLY EQUI	PMENT COS	<u>5T</u>				
Basic Machine:	Cat D8T - 8S	U				
Horsepower:	310					
Blade Type:	Semi-Univers					
Attachment:	3-shank rippe	er				
Shift Basis:	1 per day					
Data Source:	(CRG)					
Cost Breakdown:				i.		
				Utilization 9	<u>%</u>	
Ownership Cost/H		\$69.05		NA		
Operating Cost/H		\$108.22		100		
Ripper op. Cost/H Operator Cost/H		\$3.73		50		
Operator Cost/H	our:	\$38.01		NA		
Total unit Cost/Hour	r: \$219.00)				
Total Fleet Cost/Hor	ur: \$219.00)				
MATERIAL OU. Initial Volume: Swell factor: Loose volume:	1,389 1.230 1,708 LCY					
Source of estimated Source of estimated		300' L av Cat Handl		0.5:1 going to 3:1 mc	ostly cut & fill	
HOURLY PROD	UCTION					
Average push distan	ce: 1	00 feet				
Unadjusted hourly p		52.6 LCY/	hr			
Materials consistence	y description:	Compac	cted fill or e	mbankment 0.9		
Average push gradie						
Average site altitude	e:5,430 fe	eet				
Material weight:	2,100 lb	os/LCY				
Weight description:	Earth -	Loam				
Job Condition Corre				Sourc		
	rator Skill:		750	(AVG	and the second	
Material co			900	(CAT H		
	g method:	the second	100	(50% S		
	Visibility:	1.0	000	(AVG	i.)	

0.830	(1 SHIFT/DAY)
0.800	(FND-RF)
1.329	(CAT HB)
1.000	(CAT HB)
1.095	(CAT HB)
1.000	(PAT)
0.7175	()
	0.800 1.329 1.000 1.095 1.000

Adjusted unit production:	611.74 LCY/hr	
Adjusted fleet production:	611.74 LCY/hr	

1 Dozer(s)	
\$0.358/LCY	
	1 Dozer(s) \$0.358/LCY

Total job time:	2.79 Hours	
Total job cost:	\$612	

Highwall reduction - cut and fill

Phase 1 HW grading		
Highwall Height (ft.)	20.0	
Length of Highwall (Ift.)	300	
Initial Slope	0.5	H:1V
Desired Slope	3	H:1V
Volume of material to be moved (ft. ³)	37,500	
Volume of material to be moved (yd. ³)	1,389	

All dimensions measured in feet Drawing not to scale



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BULLDOZER WORK

Vermillion Creek	Borrow	Permit Action:	2015 Are-	The contract of the	10010000
Area			2015 App	Permit/Job#:	M2015027
PROJECT IDENT	IFICATION	I			
Task #: 03A		State: Colorado		Abbreviation:	None
Date: 12/10/2	015	County: Moffat		Filename:	M027-03a
User: ACY					
Agency or or	rganization na	ne: DRMS			
HOURLY EQUIP	MENT COS	<u>r</u>			
Basic Machine:	Cat D8T - 8SU	J			
A	310				
	Semi-Universa	1			
	NA				
	1 per day				
Data Source:	(CRG)				
Cost Breakdown:					
			Utilization %		
Ownership Cost/Hou		\$62.67	NA	100.00	
Operating Cost/Hou		\$108.22	100		
Ripper op. Cost/Hou		\$0.00	30		
Operator Cost/Hou	ır:	\$38.01	NA		
otal unit Cost/Hour:	\$208.90				
otal unit Cost/Hour: Total Fleet Cost/Hour	\$208.90 : \$208.90				
	and the second se				
Cotal Fleet Cost/Hour	\$208.90				
otal Fleet Cost/Hour	: \$208.90				
Otal Fleet Cost/Hour MATERIAL QUA Initial Volume: <u>1</u>	: \$208.90 NTITIES ,089				
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1	: \$208.90 NTITIES ,089 .000				
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1	: \$208.90 NTITIES ,089				
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Source of estimated volume: 1	: \$208.90 <u>NTITIES</u> ,089 .000 ,089 LCY olume:	6" of soil placed over	1.35 ac		
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1	: \$208.90 <u>NTITIES</u> ,089 .000 ,089 LCY olume:	6" of soil placed over Cat Handbook	1.35 ac		
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Source of estimated volume: 1	: \$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor:		1.35 ac		
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Gource of estimated volume: 1 </td <td>: \$208.90 <u>NTITIES</u> ,089 .000 ,089 LCY olume: well factor:</td> <td>Cat Handbook</td> <td>1.35 ac</td> <td></td> <td></td>	: \$208.90 <u>NTITIES</u> ,089 .000 ,089 LCY olume: well factor:	Cat Handbook	1.35 ac		
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Cource of estimated structure 1 Cource of estimated stru	: \$208.90 <u>NTITIES</u> ,089 .000 ,089 LCY olume: well factor: <u>JCTION</u> e:10	Cat Handbook 0 feet	1.35 ac		
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Cource of estimated volume: 1 Source of estimated swell 1 Cource of estimated swell 1 Average push distance 1 Juadjusted hourly product 1	\$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor: UCTION e: 10 oduction: 85	Cat Handbook 0 feet 2.6 LCY/hr			
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Cource of estimated structure 1 Cource of estimated stru	\$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor: UCTION e: 10 oduction: 85	Cat Handbook 0 feet			
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Cource of estimated volume: 1 Source of estimated swell 1 Cource of estimated swell 1 Average push distance 1 Juadjusted hourly product 1	\$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor: UCTION e: 10 duction: 85 description:	Cat Handbook 0 feet 2.6 LCY/hr			
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Source of estimated volume: 1 Source of estimated swell 1 Autor of estimated swell 1 Average push distance 1 Materials consistency 1	\$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor: UCTION e: 10 duction: 85 description:	Cat Handbook 0 feet 2.6 LCY/hr Loose stockpile 1.2			
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Source of estimated volume: 1 Source of estimated volume: 1 Source of estimated system 1 Average push distance 1 Average push distance 1 Materials consistency 1 Average push gradient 1	: \$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor: UCTION e: duction: description: t:15 %	Cat Handbook 0 feet 2.6 LCY/hr Loose stockpile 1.2			
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Cource of estimated volume: 1 Autorial sconsistency 1 Average push gradient 1 Average site altitude: 1	\$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor: Well factor: UCTION e: 10 oduction: 85 description: t: 15 %	Cat Handbook 0 feet 2.6 LCY/hr Loose stockpile 1.2 t /LCY			
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Cource of estimated volume: 1 Auterials consistency 1 Average push gradient 1 Average site altitude: 1 Auterial weight: 1 Veight description: 1	\$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor: Well factor: UCTION e: 10 oduction: 85 description: t: 15 %	Cat Handbook 0 feet 2.6 LCY/hr Loose stockpile 1.2 t /LCY			
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Cource of estimated volume: 1 Average push distance 1 Average push gradient 1 Average site altitude: 1 Aterial weight: 1 Veight description: 1 Ob Condition Correct 1	\$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor: Well factor: 0 OCTION e: 10 oduction: 85 description: t: 15 %	Cat Handbook 0 feet 2.6 LCY/hr Loose stockpile 1.2 t /LCY oam			
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Cource of estimated volume: 1 Cource of estimated volume: 1 Cource of estimated system 1 Average push distance 1 Average push gradient 1 Average site altitude: 1 Average site altitude: 1 Veight description: 1 Operation 1	\$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor: well factor: DCTION e: 10 oduction: 85 description: t: 15 %	Cat Handbook 0 feet 2.6 LCY/hr Loose stockpile 1.2 t /LCY oam 0.750	<u>Source</u> (AVG.)		
Total Fleet Cost/Hour MATERIAL QUA Initial Volume: 1 Swell factor: 1 Loose volume: 1 Cource of estimated volume: 1 Cource of estimated volume: 1 Cource of estimated system 1 Average push distance 1 Average push gradient 1 Verage site altitude: 1 Aterial weight: 1 Veight description: 1 Operation 1 Material cons 1	\$208.90 NTITIES ,089 .000 ,089 LCY olume: well factor: well factor: DCTION e: 10 oduction: 85 description: t: 15 %	Cat Handbook 0 feet 2.6 LCY/hr Loose stockpile 1.2 t /LCY oam			

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Task # 03A

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.666	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production:	371.56 LCY/hr	
Adjusted fleet production:	371.56 LCY/hr	

JOB TIME AND COST

Fleet size:	1 Dozer(s)
Unit cost:	\$0.562/LCY

Total job time:2.93 HoursTotal job cost:\$613

REVEGETATION WORK

:	Vermillio Area	on Creek Borro	w Pe	rmit Action:	2015 App	Permit/Jo	o#: M2015027
<u>P</u>]	ROJECT Task #:	IDENTIFICA 04A	TION State:	Colorado		Abbreviation:	Nore
	Date:	12/10/2015	County:	Moffat			None M027-04a
	Date:		county.	monut		I nename.	11027-044

FERTILIZING

Materials

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

Application

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

TILLING

Description		Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)		\$98.01
	Total Tilling Cost/Acre	\$98.01

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	1.00	39.03	\$22.81
Western Wheatgrass - Rosanna	1.00	2.53	\$3.51
Globemallow, Scarlet (or copper)	0.50	5.66	\$70.24
Winter Fat	1.00	2.55	\$32.69
Basin Wildrye - Trailhead	2.00	8.13	\$13.10
Totals Seed Mix	5.50	57.89	\$142.35

Application

Description		Cost /Acre
Drill seeding (DRMS Cost Data)		\$88.20
	Total Seed Application Cost/Acre	\$88.20

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$1.53	\$1.53
Total Mulch Materials Cost/Acre				\$531.53

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$65.89
Power mulcher (MEANS 32 91 13.16 0250)		\$86.68
Weed spray, truck, non-aquatic areas, ann. [DMG]		\$22.36
	Total Mulch Application Cost/Acre	\$174.93

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		То	tals Nursery Stoc	ek Cost / Acre	\$0.00

No. of Acres:	1.35	Cost /Acre:	\$1,035.02
Estimated Failure Rate:	35%	Cost /Acre*:	\$1,035.02
*Selected Replanting Work Items:	TILLING, SEEDIN	G,MULCHING	
Tainial Tab Cases 41 207 20			

\$1,397.28
\$489.05
\$1,886
4.00

Page 1 of 2

REVEGETATION WORK

Г	ask descrip	otion:	Phase 1 remove	silt fence			
Site:	Vermillio Area	on Creek Borr	ow Per	rmit Action:	2015 App	Permit/Jol	b#: <u>M2015027</u>
<u>P</u>]	ROJECT	IDENTIFIC	ATION				
	Task #:	04B	State:	Colorado		Abbreviation:	None
	Date:	1/13/2016	County:	Moffat		Filename:	M027-04b
	User:	ACY					
	Age	ency or organiz	ation name: DF	RMS			

FERTILIZING

Materials

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

Application

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

TILLING

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

Description	Cost /Acre

	\$
Total Seed Application Cost/Acre	\$0.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Silt fence, ideal cond. (MEANS 31 25 14.16 1000)	1,090.00	LINEAR FOOT	\$0.60	\$654.00
Total Mulch Materials Cost/Acre				\$654.00

Application

Description		Cost /Acre
Silt fence, ideal cond. (MEANS 31 25 14.16 1000)		\$0.60
	Total Mulch Application Cost/Acre	\$0.60

NURSERY STOCK PLANTING

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

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	0%	Cost /Acre: Cost /Acre*:	
Initial Job Cost: Reseeding Job Cost:				
Total Job Cost: Job Hours:	\$655			

HYDRAULIC EXCAVATOR WORK

Task description:	Excavate new cr	eek channel			
Vermillion Creek Bo	Per Per	mit Action:	2015 Арр	Permit/Job	#: M2015027
PROJECT IDENTI	FICATION				
Task #: 05A Date: 12/10/201 User: ACY	5 State: County:	Colorado Moffat		Abbreviation Filename	
Agency or orga	anization name:	RMS			
HOURLY EQUIPM	ENT COST				
Basic Machine: Attachment 1:	Cat 319D L 8'-10" ROPS Cab	Stick	Wei S	rsepower: ght (MT): hift Basis: ta Source:	125 19.55 l per day (CRG)
Cost Breakdown:					
Ownership Cost			Utilization % NA		
Operating Cost			100 NA		
Operator Cost Total Unit Cost			NA		
Total Fleet Cos					
Source	854 of estimated volume: estimated swell factor: CTION	and the second se			
Excavator Cycle Time (load bucket, swing loa	-		-	
	Secondary Job Co		Condition Description: (in Basic Description:		
	Secondary Job Co	manuon witi	Cycle Time Value:		minutes
Load Bucket Capacity			_		
Rated Capacit Bucket Fill Facto		_ LCY (he Other - n	aped)	ucket Size Class:	Medium
Adjusted Capacit	ty: 1.16	_ LCY			
Job Condition Correctio	n Factors			itude: <u>5430</u> feet	
Altitude Adj: Job Efficiency: Net Correction:	0.92 0.83 0.76	Source (CAT HI (1 shift/da multiplier	B) ay)		
	 adjusted Hourly Unit	-		LCY/Hour	
	Adjusted Hourly Unit Adjusted Hourly Fleet	Production:	187.65	LCY/Hour LCY/Hour	
JOB TIME AND CO	•	Trouuctioll;	107.00		
Fleet size:	1 Excavat	or T	otal job time:	4.55	Hours
Unit cost: \$0	.508 /LCY		Total job cost:	\$433	

Trench Volume

Excavate new creek channel		
Top Width of Trench (ft.)	20.0	
Top Bottom of Trench (ft.)	10.0	
Length of Highwall (Ift.)	250	Length of the original channel path
Trench Height (ft.)	5.0	within the permitted boundary
Total volume of material to be moved (ft. ³)	18,750	
Total Volume of material to be moved (yd. ³)	694	



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All dimensions measured in feet Drawing not to scale

BULLDOZER WORK

PROJECT IDENTIFICATION Task #: 06A State: Colorado Abbreviation: None Date: 12/10/2015 County: Moffat M027-06a Were: Accy Ageney or organization name: DRMS HOURLY EOUIPMENT COST Basic Machine: Cat D8T - 8SU	Vermillion Creek Area	Dollow	-	mit Action:	2015 App	Permit/Job#:	M2015027
Date: 12/10/2015 County: Moffat Filename: M027-06a User: ACY Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D8T - 8SU Horspower: 310 Attachment: 3-shank ripper Shift Basis: 1 per day Data Source: (CRG) Cost Breakdown: 0000 NA 0000 Ownership Cost/Hour: \$69.05 NA 0000 Operating Cost/Hour: \$108.22 100 100 Ripper op. Cost/Hour: \$217.51 30 00 Operator Cost/Hour: \$217.51 Stot State 1000 Lose volume: 750 CX 30 0 Swell factor: 1.000 Cat Handbook 1000 1000 1000 Lose volume: 750 LCY See atached Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Average push distance: 1.07.1 LCY/hr 1017.1 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average site altitude: 5.430 feet <t< th=""><th>PROJECT IDEN</th><th>TIFICATIO</th><th>N</th><th></th><th></th><th></th><th></th></t<>	PROJECT IDEN	TIFICATIO	N				
Date: 12/10/2015 County: Moffat Filename: M027-06a User: ACY Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D8T - 8SU Horsepower: 310 Blade Type: Semi-Universal Attachment: 3-shank ripper Sisti Basis: 1 per day Data Source: (CRG) 100 Source: 100 Cost Breakdown: 0 900 NA Source: 100 Ownership Cost/Hour: \$59.05 NA Source: 100 Source: 100 Operator Cost/Hour: \$108.22 100 NA Source Sot/Hour: \$217.51 Source of cast/Hour: \$217.51 Total unit Cost/Hour: \$217.51 Source of estimated volume: See atached Source of estimated swell factor: Cat Handbook MAY 1.000 Loss volume: 750 LCY Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Average push distance: 75 feet	Task #: 06A		State:	Colorado		Abbreviation.	None
User: ACY Agency or organization name: DRMS HOURLY EQUIPMENT COST Basic Machine: Cat D&T - 8SU Horsepower: 310 Blade Type: Semi-Universal Attachment: 3-shank ripper Shift Basis: 1 per day Data Source: (CRG) Cost Breakdown: Ownership Cost/Hour: \$69.05 NA Operator Cost/Hour: \$108.22 100 Ripper op. Cost/Hour: \$2.24 30 Operator Cost/Hour: \$217.51 Total unit Cost/Hour: \$217.51 Total Fleet Cost/Hour: \$217.51 Total Fleet Cost/Hour: \$217.51 Total Fleet Cost/Hour: \$217.51 Total Fleet Cost/Hour: \$217.51 MATERIAL OUANTITIES Initial Volume: 750 Swell factor: 1.000 Loose volume: 750 LCY Source of estimated swell factor: Cat Handbook HOURLY PRODUCTION Average push distance: 75 feet Unadjusted hourly production: 1.017.1 LCY/hr Materials consistency description: Partly consolidated stockpile 1.1 Average push gradient: 0% Average site altitude: 5.430 feet Material weight: 2.100 lbs/LCY Weight description: Earth - Loam Iob Condition Correction Factor Operator Skill: 0.750 (AVG.) Material consistency: 1.100 (CAT HB)		2015				,	
HOURLY EQUIPMENT COST Basic Machine: Cat D8T - 8SU Horsepower: 310 Blade Type: Semi-Universal Attachment: 3-shank ripper Shift Basis: 1 per day Data Source: (CRG) Cost Breakdown: 100 Ownership Cost/Hour: \$69.05 NA Operator Cost/Hour: \$108.22 100 Ripper op. Cost/Hour: \$22.44 30 Operator Cost/Hour: \$217.51 Total unit Cost/Hour: Total unit Cost/Hour: \$217.51 NA Operator Cost/Hour: \$217.51 Source of estimated swell factor: Source of estimated solume: See atached Source of estimated swell factor: Source of estimated swell factor: 1.017.1 LCY/hr Materials consistency description: Materials consistency description: Partly consolidated stockpile 1.1 Average site altitude: Average site altitude: 5.430 feet Material weigh: 2.100 lbs/LCY Weight description: Earth - Loam Source Source Iob Condition Correction Factor Source Source <t< td=""><td>User: ACY</td><td></td><td>2</td><td></td><td></td><td></td><td></td></t<>	User: ACY		2				
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Operator Skill:0.750(AVG.)Material consistency:1.100(CAT HB)	Weight description:	Earth - 1	Loam				
Operator Skill:0.750(AVG.)Material consistency:1.100(CAT HB)	Job Condition Correc	ction Factor			Source		
Material consistency: 1.100 (CAT HB)			0.	750			
			1.	100			
	Dozine	g method:			(GEN.)		
		Visibility:	1.	000	(AVG.)		

Task # 06A

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:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5998

Adjusted unit production:610.06 LCY/hrAdjusted fleet production:610.06 LCY/hr

JOB TIME AND COST

Fleet size:1 Dozer(s)Unit cost:\$0.357/LCY

Total job time:1.23 HoursTotal job cost:\$267

Trench Volume

Backfill excavated channel path		
Top Width of Trench (ft.)	20.0	
Top Bottom of Trench (ft.)	10.0	
Length of Highwall (Ift.)	270	Length of the original channel path
Trench Height (ft.)	5.0	within the permitted boundary
Total volume of material to be moved (ft. ³)	20,250	
Total Volume of material to be moved (yd. ³)	750	



All dimensions measured in feet Drawing not to scale

Task # 07A

BULLDOZER WORK

-	Vermillion Creel Area	k Borrow	Per	mit Action:	2015 App	Permit/Job#:	M2015027
<u>P</u>	ROJECT IDEN	TIFICAT	ION				
	Task #: 07A		State:	Colorado		Abbreviation:	None
	Date: $\frac{07A}{12/10}$	2015	County:	Moffat		Filename:	M027-07a
	User: ACY	2015	county.	Withit		Thename.	M027-07a
	Agency or	organizatio	n name:	RMS			
H	OURLY EQUI	PMENT C	COST				
	Basic Machine:	Cat D8T -	- 8SU				
	Horsepower:	310	000				
	Blade Type:	Semi-Uni	versal				
	Attachment:	3-shank ri)		
	Shift Basis:	1 per day	PPCI				
	Data Source:	(CRG)					
C	ost Breakdown:						
	Jat Dicakuuwii.				Utilization %		
C	Ownership Cost/Ho	our	\$69.05		NA		
	Operating Cost/Ho		\$108.22		100		
	Ripper op. Cost/Ho		\$108.22		30		
	Operator Cost/He	our:	\$38.01		NA		
То	otal unit Cost/Hour	: \$21	7.51				
	otal Fleet Cost/Hou						
M	ATERIAL QUA	ANTITIE	<u>S</u>				
			<u>S</u>				
	Initial Volume:	2,381	<u>S</u>				
]	Initial Volume: Swell factor:	2,381 1.000					
]	Initial Volume: Swell factor:	2,381					
]	Initial Volume: Swell factor:	2,381 1.000 2,381 LCY		placed over	2.95 ac		
I So	Initial Volume:	2,381 1.000 2,381 LCY volume:	6" of soil		2.95 ac		
I So So	Initial Volume: Swell factor: Loose volume: purce of estimated purce of estimated	2,381 1.000 2,381 LCY volume: swell factor	6" of soil		2.95 ac		
I So So	Initial Volume: Swell factor: Loose volume: purce of estimated	2,381 1.000 2,381 LCY volume: swell factor	6" of soil		2.95 ac		
So So H	Initial Volume: Swell factor: Loose volume: purce of estimated purce of estimated	2,381 1.000 2,381 LCY volume: swell factor	6" of soil		2.95 ac		
I So So <u>H</u> (Initial Volume: Swell factor: Loose volume: ource of estimated ource of estimated OURLY PROD verage push distance	2,381 1.000 2,381 LCY volume: swell factor UCTION ce:	6" of soil Cat Hand	book	2.95 ac		
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I So So H Ur Ma Av Av	Initial Volume: Swell factor: Loose volume: ource of estimated ource of estimated OURLY PROD verage push distan- nadjusted hourly p aterials consistenc verage push gradie	2,381 1.000 2,381 LCY volume: swell factor UCTION ce: roduction: y description ent: 0 % 5,43		book Y/hr	·		
I So So Hu Av Ur Ma Av Av Ma	Initial Volume: Swell factor: Loose volume: ource of estimated ource of estimated OURLY PROD verage push distan- nadjusted hourly p aterials consistenc verage push gradie verage site altitude aterial weight:	2,381 1.000 2,381 LCY volume: swell factor UCTION ce: roduction: y descriptio ent: 0 % 5,43 2,10	6" of soil Cat Hand 70 feet 1,093.7 LC on: Loose s 0 feet	book Y/hr	·		
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I So So H Ur Ma Av Av Ma W	Initial Volume: Swell factor: Loose volume: ource of estimated ource of estimated OURLY PROD verage push distan- nadjusted hourly p aterials consistenc verage push gradie verage site altitude aterial weight: eight description: <u>b Condition Corre</u> Oper	2,381 1.000 2,381 LCY volume: swell factor UCTION ce: roduction: y description ent: 0% 5,43 2,10 Eart ction Factor ator Skill:	6" of soil Cat Hand 70 feet 1,093.7 LC on: Loose s 0 feet 0 lbs/LCY h - Loam	book Y/hr stockpile 1.2	<u>Source</u> (AVG.)		
I So So H Ur Ma Av Av Ma W	Initial Volume: Swell factor: Loose volume: ource of estimated ource of estimated OURLY PROD verage push distan- nadjusted hourly p aterials consistenc verage push gradie verage site altitude aterial weight: eight description: <u>b Condition Corre</u> Oper Material co	2,381 1.000 2,381 LCY volume: swell factor UCTION ce: roduction: y description ent: 0 % 5,43 2,10 Eart ction Factor ator Skill: nsistency:	6" of soil Cat Hand 70 feet 1,093.7 LC on: Loose s 0 feet 0 lbs/LCY h - Loam	book Y/hr stockpile 1.2	Source (AVG.) (CAT HB		
I So So Hu Ur Ma Av Av Ma Wo	Initial Volume: Swell factor: Loose volume: ource of estimated ource of estimated OURLY PROD verage push distan- nadjusted hourly p aterials consistenc verage push gradie verage site altitude aterial weight: eight description: <u>b Condition Corre</u> Oper Material co Dozin	2,381 1.000 2,381 LCY volume: swell factor UCTION ce: roduction: y description ent: 0% 5,43 2,10 Eart ction Factor ator Skill:		book Y/hr stockpile 1.2	<u>Source</u> (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:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Adjusted unit production:	715.72 LCY/hr	
Adjusted fleet production:	715.72 LCY/hr	

Fleet size:	1 Dozer(s)
Unit cost:	\$0.304/LCY

Total job time:	3.33 Hours	
Total job cost:	\$723	

Page 1 of 2

REVEGETATION WORK

vermili	on Creek Bor	row Pe	ermit Action:			
Area				2015 App	Permit/Jol	o#: M2015027
	IDENTIFIC	CATION				
Task #:	08A	State:	Colorado		Abbreviation:	None
Date:	1/13/2016	County:	Moffat		Filename:	M027-08a
Duto.	ACY					

FERTILIZING

Materials

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

Application

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

<u>TILLING</u>

Description		Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)		\$98.01
	Total Tilling Cost/Acre	\$98.01

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	1.00	39.03	\$22.81
Western Wheatgrass - Rosanna	1.00	2.53	\$3.51
Globemallow, Scarlet (or copper)	0.50	5.66	\$70.24
Winter Fat	1.00	2.55	\$32.69
Basin Wildrye - Trailhead	2.00	8.13	\$13.10
Totals Seed Mix	5.50	57.89	\$142.35

Application

Description		Cost /Acre
Drill seeding (DRMS Cost Data)		\$88.20
	Total Seed Application Cost/Acre	\$88.20

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$265.00	\$530.00
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	1.00	ACRE	\$1.53	\$1.53
Total Mulch Materials Cost/Acre				\$531.53

Application

Description		Cost /Acre
Crimping, with tractor {DMG survey data}		\$65.89
Power mulcher (MEANS 32 91 13.16 0250)		\$86.68
Weed spray, truck, non-aquatic areas, ann. [DMG]		\$22.36
	Total Mulch Application Cost/Acre	\$174.93

NURSERY STOCK PLANTING

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

	No. of Acres: ed Failure Rate: ng Work Items:	2.95 35% TILLING,SEEDIN	Cost /Acre	re: \$1,035.02 e*: \$1,035.02
Initial Job Cost: Reseeding Job Cost: Total Job Cost: Job Hours:	\$1,068.66 \$4,122			

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REVEGETATION WORK

Vermillio	on Creek Bori	row Pe	ermit Action:			
e: Area				2015 App	Permit/Jol	b#: <u>M2015027</u>
Task #: Date:	<u>IDENTIFIC</u> 08B 1/13/2016	CATION State:	Colorado Moffat		Abbreviation:	None

FERTILIZING

Materials

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

Application

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

TILLING

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

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			\$
Totals Seed Mix	0.00	0.00	\$0.00

Application

I	Description	Cost /Acre

	\$
Total Seed Application Cost/Acre	\$0.00

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Silt fence, ideal cond. (MEANS 31 25 14.16 1000)	1,710.00	LINEAR FOOT	\$0.60	\$1,026.00
Total Mulch Materials Cost/Acre				\$1,026.00

Application

Description		Cost /Acre
Silt fence, ideal cond. (MEANS 31 25 14.16 1000)		\$0.60
	Total Mulch Application Cost/Acre	\$0.60

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
		To	tals Nursery Stoc	:k Cost / Acre	\$0.00

Estimate *Selected Replanti	No. of Acres: ed Failure Rate: ng Work Items:	_	Cost /Acre: Cost /Acre*:	
Initial Job Cost:	\$1,026.60			
Reseeding Job Cost:	\$0.00			
Total Job Cost:	\$1,027			
Job Hours:	3.00			

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EQUIPMENT MOBILIZATION/DEMOBILIZATION

Vermillion Cree	ek Borrow	Perm	it Action:				
Area			_20	15 App		Permit/Job#: <u>M</u>	2015027
ROJECT IDEN	TIFICATI	<u>ON</u>					
	0/2015		Colorado Moffat			eviation: <u>None</u> ilename: <u>M027</u>	7-09a
User: ACY							
Agency or	organization	name: DRM	IS				
QUIPMENT TH	ANGDOD	T DIC COST					
<u>QUIFMENT IF</u>	ANGIUK	<u>1 NIG COST</u>			G1 16 1		
					Shift ba Cost Data Sou		
Truck	Fractor Desc	ription: GEN	ERIC ON-HI		UCK TRACTO P (2ND HALF,	DR, 6X4, DIESEI	L POWERED,
Truck	Trailer Desc	ription [.]	GENERIC FO		· ·	ROP DECK EQU	IPMENT
		-pitolii			R (25T, 50T, Al	~	
ost Breakdown:					· · · · ·		
			1				
Available Rig Car		0-25 Tons	26-50 To		+ Tons		
Ownership C		\$16.63	\$18.37		\$22.33		
Operating C		\$44.38	\$46.13		\$50.07		
Operator C		\$27.66	\$27.66		\$27.66		
	Cost/Hour:	\$0.00	\$25.39	the second se	\$25.39		
Total Unit C	Cost/Hour:	\$88.67	\$117.55	\$	125.45		
ON ROADABL	<u>E EQUIPN</u>	<u>AENT:</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	Unit	Cost/hr/ uni			Cost/hr/	Cost/hr/ fleet	Cost/ fleet
	(TONS)		t		fleet		
	`						****
Cat D8T - 8SU	47.71	\$62.67	\$117.55	1	\$180.22	\$117.55	\$250.00

Cal D01 - 000		\$02.07	ψΠ1.55	1 1	φ100.22	ψII7.55	ψ230.00
Cat 319D L 8'-10"	21.50	\$23.33	\$88.67	1	\$112.00	\$88.67	\$250.00
Stick							
Drill/Broadcast	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00
Seeder with							
Tractor							
Power Mulcher	6.00	\$7.03	\$88.67	1	\$95.70	\$88.67	\$250.00
(Reinco M90)							

Subtotals: \$516.18 \$383.56 \$1,000.00

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	\$48.06	1	\$48.06	\$48.06
		Subtotals:	\$48.06	\$48.06

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	CRAIG, CO	
Total one-way travel distance:	78.00	miles
Average Travel Speed:	55.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$5,584.35	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$136.32	

Transportation Cycle Time:

	Non-	1
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	1.42	1.42
Return Time (Hours):	1.42	1.42
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	3.84	2.84

JOB TIME AND COST

Total job time: 7.67 Hours

Total job cost: \$5,721

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EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description:	Sec	ondary mob of r	eclamation cre	w and equ	ipment		
Vermillion Cr te: Area	eek Borrow	Permit	Action:2015	Арр		Permit/Job#: N	12015027
PROJECT IDE	NTIFICATI	<u>ON</u>					
Task #: 104 Date: 12/ User: AC	10/2015		olorado offat			eviation: <u>None</u> ilename: <u>M02</u>	e 7-10a
Agency	or organization	name: DRMS				and the second	
EQUIPMENT 1	RANSPOR	Г RIG COST					
	c Tractor Desc k Trailer Desc		ENERIC FOLI	WAY TRU 400 HP DING GOC	(2ND HALF,	rce: CRG D DR, 6X4, DIESE 2006) ROP DECK EQU	ataL POWERED,
Cost Breakdown:							
Available Rig C	apacities	0-25 Tons	26-50 Tons	51-	- Tons		
Ownership	Cost/Hour:	\$16.63	\$18.37	\$2	22.33		
Operating	Cost/Hour:	\$44.38	\$46.13	\$5	50.07		
Operator	Cost/Hour:	\$27.66	\$27.66	\$2	27.66		
	Cost/Hour:	\$0.00	\$25.39	\$2	25.39		
Total Unit	Cost/Hour:	\$88.67	\$117.55	\$1	25.45		
NON ROADAB	<u>LE EQUIPN</u>	<u>IENT:</u>					
Machine	Weight/	Owner ship	Haul Rig	Fleet	Haul Trip	Return Trip	DOT Permit
Description	TTal	Carthadania	Carthering	0.	0.11	Cost/hr/ fleet	Cost/ fleet

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	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00
Seeder with							
Tractor							
Power Mulcher	6.00	\$7.03	\$88.67	1	\$95.70	\$88.67	\$250.00
(Reinco M90)							
				Subtotals:	\$223.96	\$177.34	\$500.00
				Duototuin.	<i>q</i>=20000		40000

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	\$48.06	1	\$48.06	\$48.06
		Subtotals:	\$48.06	\$48.06

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EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	CRAIG, CO	
Total one-way travel distance:	78.00	miles
Average Travel Speed:	55.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	\$2,586.15	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	\$136.32	

Transportation Cycle Time:

	Non-	
	Roadable	Roadable
	Equipment	Equipment
Haul Time (Hours):	1.42	1.42
Return Time (Hours):	1.42	1.42
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	3.84	2.84

JOB TIME AND COST

Total job time: 7.67 Hours

Total job cost: \$2,722