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

June 1, 2020

Ms. Jodi Schreiber
Fremont Paving and Redi Mix, Inc.
839 MacKenzie Avenue
Canon City, CO 81212

RE: Division's Financial Warranty Cost Estimates for TR-06, Pueblo East Pit (M2000-041)

Dear Ms. Schreiber,

On February 3, 2020, the Division of Reclamation, Mining and Safety (Division) received a request for Technical Revision (TR-06) to extend Phase II mining into Phase III and decrease the size of Phase III to be north of the 100-year floodplain at the Pueblo East Pit, Permit No. M-2000-041. As part of the TR-06 the financial warranty for the extending Phase II was calculated.

A copy of the pit's estimate is attached for your review. The Division will allow 14 days to review and comment on the bond estimate prior to issuing a surety increase notice for the Pueblo East Pit. Once the surety increase is issued by the Division, the Operator will have 60 days to provide the additional financial warranty.

If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at **303-866-3567 x8114**, or by email at patrick.lennberg@state.co.us.

Sincerely,

Patrick Lennberg
Environmental Protection Specialist

cc: Jared Ebert, DRMS

ec: Jodi Schreiber, Fremont Paving & Redi-Mix, jodi@arycorp.com

COST SUMMARY WORK

Task description: **Cost Summary TR-06**

Site: **Pueblo East Pit** Permit Action: TR-06 Phase 2B and 2C Permit/Job#: M2000041

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 6/1/2020 County: Pueblo Filename: M041-000
User: JPL

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Backfill Open Water (ave 4 acres 13 feet deep)	SCRAPER1	1	31.30	$73,951
002	Spread Topsoil 4-inches over 84 acres	SCRAPER1	1	16.82	$39,752
003	Revegetation of 84 acres	REVEGE	1	40.00	$103,342
			SUBTOTALS:	**88.12**	**$217,045**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	0.00	Total =	$0
Performance bond:	0.00	Total =	$0
Job superintendent:	40.00	Total =	$2,776
Profit:	0.00	Total =	$0
		TOTAL O & P =	$2,776
		CONTRACT AMOUNT (direct + O & P) =	$219,821

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$0	Total =	$0
Engineering work and/or contract/bid preparation:	0.00	Total =	$0
Reclamation management and/or administration:	5.00		$10,991
CONTINGENCY:	0.00	Total =	$0

TOTAL INDIRECT COST = $13,767

TOTAL BOND AMOUNT (direct + indirect) = $230,812

SCRAPER TEAM WORK

Task description: **Backfill Open Water (ave 4 acres 13 feet deep)**

Site: **Evans #2 Pit** Permit Action: TR-06 Phase 2B and 2C Permit/Job#: M2000041

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 5/29/2020 County: Pueblo Filename: M041-001
User: JPL

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 657G
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 3,500 Gal.

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	50	NA	50	75	50
Ownership cost/hour:	$186.09	$103.86	NA	$103.86	$64.10	$13.51
Operating cost/hour:	$221.44	$41.13	NA	$41.13	$42.13	$14.47
%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:	$45.80	$39.98	NA	$39.98	$45.39	$0.00
Unit Subtotals:	$453.32	$184.97	NA	$184.97	$151.61	$27.98
Number of Units:	4	1	0	1	1	1
Group Subtotals:	Work:	$1,998.25	Support:	$184.97	Maint:	$179.59

Total work team cost/hour: **$2,362.81**

MATERIAL QUANTITIES

Initial volume: 83,900 CCY Swell factor: 1.125
Loose volume: **94,388** LCY

Source of estimated volume: Calculation to backfill 4 acre open water 13 ft
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Material weight: 2,650 lbs/LCY
Material description: Decomposed rock - 25% Rock, 75% Earth
Rated Payload: 104,000 pounds

Scraper Bowl (volume) Basis:

Struck Volume: 32.00 LCY
Heaped Volume: 44.00 LCY
Average Volume: 38.00 LCY

Payload Capacity: 39.25 LCY Adjusted Capacity: **38.00** LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 4500 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	600.00	0.00	3.00	3.00	2883	0.55

Haul Time: **0.55** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	0.00	3.00	3.00	2958	0.36

Return Time: **0.36** minutes

Total Scraper team cycle time: **2.51** minutes
Adjusted for job conditions: 753.94 LCY/Hour
Selected Number of Scrapers: 4 Scraper(s)
Adjusted single scraper team (unit) hourly production: 3,015.78 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **3,015.78** LCY/Hour

Unadjusted unit production/hour: 908.37 LCY/Hour
Optimal Number of Scrapers per push dozer: ____

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **31.30** Hours

Unit cost: $0.783 /LCY Total job cost: **$73,951**

SCRAPER TEAM WORK

Task description: **Spread Topsoil 4-inches over 84 acres**

Site: **Evans #2 Pit** Permit Action: TR-06 Phase 2B and 2C Permit/Job#: M2000041

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 6/1/2020 County: Pueblo Filename: M041-002
User: JPL

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 657G
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 3,500 Gal.

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	50	NA	50	75	50
Ownership cost/hour:	$186.09	$103.86	NA	$103.86	$64.10	$13.51
Operating cost/hour:	$221.44	$41.13	NA	$41.13	$42.13	$14.47
%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:	$45.80	$39.98	NA	$39.98	$45.39	$0.00
Unit Subtotals:	$453.32	$184.97	NA	$184.97	$151.61	$27.98
Number of Units:	4	1	0	1	1	1
Group Subtotals:	Work:	$1,998.25	Support:	$184.97	Maint:	$179.59

Total work team cost/hour: **$2,362.81**

MATERIAL QUANTITIES

Initial volume: 45,100 CCY Swell factor: 1.125
Loose volume: **50,738** LCY

Source of estimated volume: Calculation to 4 inches over 84 acres
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Material weight: 2,650 lbs/LCY
Material description: Decomposed rock - 25% Rock, 75% Earth
Rated Payload: 104,000 pounds

Scraper Bowl (volume) Basis:

Struck Volume: 32.00 LCY
Heaped Volume: 44.00 LCY
Average Volume: 38.00 LCY

Payload Capacity: 39.25 LCY Adjusted Capacity: **38.00** LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 4500 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	600.00	0.00	3.00	3.00	2883	0.55

Haul Time: **0.55** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	0.00	3.00	3.00	2958	0.36

Return Time: **0.36** minutes

Total Scraper team cycle time: **2.51** minutes
Adjusted for job conditions: 753.94 LCY/Hour
Selected Number of Scrapers: 4 Scraper(s)
Adjusted single scraper team (unit) hourly production: 3,015.78 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **3,015.78** LCY/Hour

Unadjusted unit production/hour: 908.37 LCY/Hour
Optimal Number of Scrapers per push dozer: ____

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **16.82** Hours

Unit cost: $0.783 /LCY Total job cost: **$39,752**

REVEGETATION WORK

Task description: **Revegetation of 84 acres**

Site: **Evans #2 Pit** Permit Action: TR-06 Phase 2B and 2C Permit/Job#: M2000041

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 6/1/2020 County: Pueblo Filename: M041-003
User: JPL

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
5-10-10, 5-10-15, 6-12-12	40.00	pound	$0.21	$8.20
			Total Fertilizer Materials Cost/Acre	**$8.20**

Application

Description	Cost /Acre
Truck whirlwind spreader (MEANS 32 01 90.13 0140)	$14.81
Total Fertilizer Application Cost/Acre	**$14.81**

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	$101.93
Total Tilling Cost/Acre	**$101.93**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.30	11.71	$8.54
Sand Dropseed	0.10	11.94	$0.98
Sideoats Grama - Butte	2.70	8.86	$24.30
White Sweet Clover	0.70	4.18	$2.89
Western Wheatgrass - Native	4.80	12.12	$28.80
Saltbush, Four Wing	0.50	0.69	$6.25
Totals Seed Mix	9.10	49.50	**$71.76**

Application

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

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$295.00	$590.00
Total Mulch Materials Cost/Acre				**$590.00**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$70.17
Power mulcher (MEANS 32 91 13.16 0350)	$95.83
Total Mulch Application Cost/Acre	**$166.00**

NURSERY STOCK PLANTING

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

JOB TIME AND COST

No. of Acres: 84
Estimated Failure Rate: 15%
*Selected Replanting Work Items: SEEDING

Cost /Acre: $1,184.70
Cost /Acre*: $303.76

Initial Job Cost: **$99,514.80**
Reseeding Job Cost: **$3,827.38**
Total Job Cost: **$103,342**
Job Hours: **40.00**