



COLORADO

**Division of Reclamation,
Mining and Safety**

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

August 9, 2016

Mr. Mike Langston
Langston Concrete, Inc.
902 South Union Street
Florence, CO 81226

**Re: Project, Permit No. M-1992-051;
Technical Revision (TR-01) Approval**

Dear Mr. Langston:

On August 9, 2016 the Division of Reclamation, Mining and Safety approved the Technical Revision application submitted to the Division on October 26, 2015, addressing the following:

Clarify Maximum Allowed Disturbed Area and Provide Permit Boundary Map

The terms of the Technical Revision No. 1 approved by the Division are hereby incorporated into Permit No. M-1992-051 such that no more than 50 acres may be affected at one time (including the currently "plated" 19.7 acres identified as "Stockpile Area" on the submitted TR-01 map). All other conditions and requirements of Permit No. M-1992-051 remain in full force and effect.

The Division has reviewed the submitted clarifications for impacts to the financial warranty. The Division's \$39,860 reclamation cost estimate (see enclosed summary) resulting from the submitted clarifications was based on a maximum allowed disturbed area of 50 acres (which is approximately 6.5 acres greater than the current disturbance). As such, the Division considers the \$38,100.00 performance bond currently held to be adequate for 43.5 acres of disturbance.

If you have any questions or need further information, please contact me at (303)866-3567 x8169.

Sincerely,

Timothy A. Cazier, P.E.
Environmental Protection Specialist

Enclosure

ec: Wally Erickson, DRMS
DRMS file



COST SUMMARY WORK

Task description: Reclamation Cost Summary

Site: Florence Sand & Gravel Pit

Permit Action: TR-01

Permit/Job#: M1992051

PROJECT IDENTIFICATION

Task #: T10

State: Colorado

Abbreviation: None

Date: 8/9/2016

County: Fremont

Filename: M051-T10

User: TC1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
T11	Backfill/Push Down Highwalls	DOZER	1	21.84	\$3,497.00
T12	Rough Grading/Plating	DOZER	1	59.16	\$10,052.00
T13	Overlot "Finish" Grading	GRADER	1	23.34	\$3,892.00
T14	Concrete Structure Demolition	DEMOLISH	1	16.00	\$9,449.75
T15	Mob/Demob Equipment	MOBILIZE	1	2.60	\$2,635.00
<u>SUBTOTALS:</u>				122.94	\$29,526

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$596.43

Performance bond: 1.05

Total = \$310.02

Job superintendent: 61.47

Total = \$4,578.29

Profit: 10.00

Total = \$2,952.60

TOTAL O & P = \$8,437.34

CONTRACT AMOUNT (direct + O & P) = \$37,963.34

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 0.00

Total = 0.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 5.00

\$1,898.17

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$10,335.51

TOTAL BOND AMOUNT (direct + indirect) = \$39,861.51

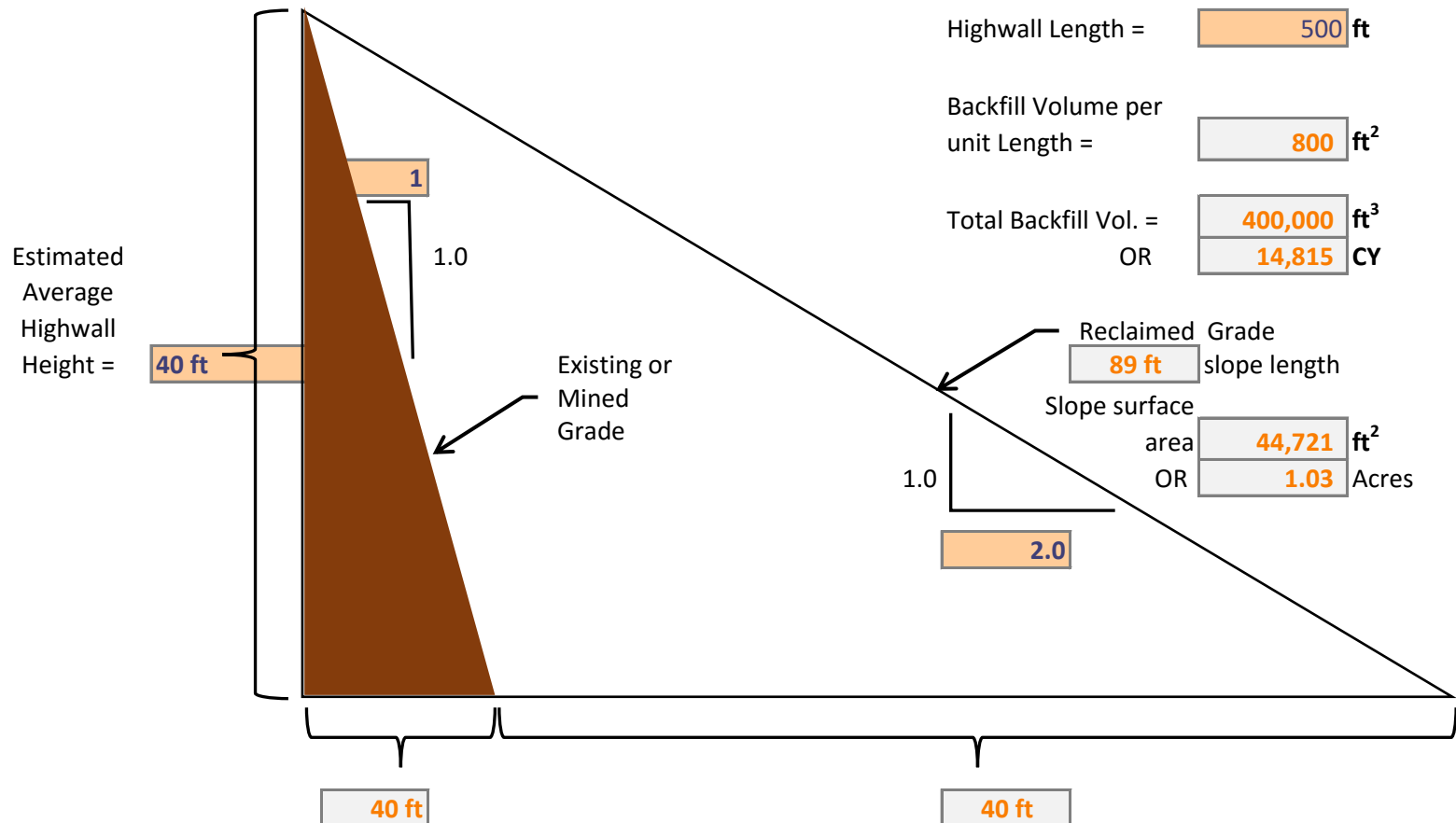
Task # T11 500-Ft Highwall Backfill Volume Estimate

PROJECT: Florence Sand & Gravel Pit
PERMIT No.: M-1992-051
HIGHWALL LOCATION: Active Pit

LEGEND

Input

Result



HIGHWALL BACKFILL VOLUME ESTIMATE

BULLDOZER WORKTask description: **Backfill/Push Down Highwalls**Site: **Florence Sand & Gravel Pit**Permit Action: **TR-01**Permit/Job#: **M1992051****PROJECT IDENTIFICATION**Task #: **T11**State: **Colorado**Abbreviation: **None**Date: **8/9/2016**County: **Fremont**Filename: **M051-T11**User: **TC1**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8U**Horsepower: **305**Blade Type: **Universal**Attachment: **NA**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$52.86	NA
Operating Cost/Hour:	\$68.35	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.89	NA

Total unit Cost/Hour: **\$160.10**Total Fleet Cost/Hour: **\$160.10****MATERIAL QUANTITIES**Initial Volume: **14,815**Swell factor: **1.125**Loose volume: **16,667 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**Unadjusted hourly production: **931.6 LCY/hr**Materials consistency description: **Consolidated stockpile 1.0**Average push gradient: **-25 %**Average site altitude: **5,250 feet**Material weight: **2,650 lbs/LCY**Weight description: **Decomposed rock - 25% Rock, 75% Earth****Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.516	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8191

Adjusted unit production: 763.07 LCY/hr

Adjusted fleet production: **763.07** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.210/LCY

Total job time: **21.84** Hours

Total job cost: **\$3,497**

BULLDOZER WORKTask description: **Rough Grading/Plating**Site: **Florence Sand & Gravel Pit**Permit Action: TR-01Permit/Job#: M1992051**PROJECT IDENTIFICATION**Task #: T12State: ColoradoAbbreviation: NoneDate: 8/9/2016County: FremontFilename: M051-T12User: TC1Agency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8UHorsepower: 305Blade Type: UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$52.86</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$68.35</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$8.40</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$1.41</u>	<u>25</u>
Operator Cost/Hour:	<u>\$38.89</u>	<u>NA</u>

Total unit Cost/Hour: \$169.91Total Fleet Cost/Hour: **\$169.91****MATERIAL QUANTITIES**Initial Volume: 24,442Swell factor: 1.125Loose volume: **27,497 LCY**Source of estimated volume: (30.3ac)(43560sf/ac)(0.5'D) / 27 = 24,442 CYSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 65 feetUnadjusted hourly production: 1,344.1 LCY/hrMaterials consistency description: Dry, non-cohesive 0.8Average push gradient: 0 %Average site altitude: 5,240 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>0.800</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>
Visibility:	<u>1.000</u>	<u>(AVG.)</u>

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3458

Adjusted unit production: 464.79 LCY/hr

Adjusted fleet production: **464.79** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.366/LCY

Total job time: **59.16** Hours

Total job cost: **\$10,052**

MOTOR GRADER WORK

Task description: Overlot "Finish" Grading

Site: Florence Sand & Gravel Pit

Permit Action: TR-01

Permit/Job#: M1992051

PROJECT IDENTIFICATION

Task #: T13

State: Colorado

Abbreviation: None

Date: 8/9/2016

County: Fremont

Filename: M051-T13

User: TC1

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 16M

Horsepower: 297

Ripper Attachment: _____

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	<u>\$79.03</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$51.88</u>	<u>75</u>
Ripper Ownership Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$0.00</u>	
Operator Cost/Hour:	<u>\$35.83</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$166.73</u>	
Total Fleet Cost/Hour:	<u>\$166.73</u>	

MATERIAL QUANTITIES

Total Area to be graded or ripped: 30.30 acres

Source of estimated acreage: July 2016 Survey Map & TR-01

HOURLY PRODUCTION

Average Grader Speed:	<u>1.50</u>	<u>mph</u>
Selected Application:	<u>Finish grading</u>	<u>(0-2.5 mph) - 1.5</u>
Selected Blade Angle:	<u>30</u>	<u>degrees</u>
Effective Blade Length:	<u>13.90</u>	<u>feet</u>
Width of blade overlap per pass:	<u>2.00</u>	<u>feet</u>
Net grading or ripping width per pass:	<u>11.90</u>	<u>feet</u>
Unadjusted Hourly Unit Production:	<u>2.1636</u>	<u>acres/hour</u>

Job Condition Correction Factors

Site Altitude: 5200 feet

		Source
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.80</u>	<u>(1sh/d, adv.)</u>
Net Correction:	<u>0.8000</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 1.7309 acres/Hour

Adjusted Hourly Fleet Production: **1.7309** acres/Hour

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **23.34** Hours

Unit cost: \$96.33 per acre Total job cost: **\$3,892**

DEMOLITION WORK

Task description: Concrete Structure Demolition

Site: Florence Sand & Gravel Pit

Permit Action: TR-01

Permit/Job#: M1992051

PROJECT IDENTIFICATION

Task #: T14

State: Colorado

Abbreviation: None

Date: 8/9/2016

County: Fremont

Filename: M051-T14

User: TC1

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 91.50 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
4"-8" & Oversize Bin Walls	75x55x13	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 50 ft. push	2,320.00	SF	\$2.34	\$5,421.84
4"-8" & Oversize Bin Floors (no rebar)	30.67x32 & 19.17x18.75	Demo. and on-site disposal in existing pit, 6 in. thick - Max. 50 ft. push	1,338.00	SF	\$1.06	\$1,423.63
Ramp Walls	36x34x17	Demo. and on-site disposal in excavated pit, 12 in. thick - Max. 50 ft. push	1,490.00	SF	\$2.34	\$3,482.13

Job Hours: 16.00

Subtotal
(unadjusted): \$10,327.60

Total Cost
(adjusted for location): \$9,449.75

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/Demob Equipment**Site: **Florence Sand & Gravel Pit**Permit Action: **TR-01**Permit/Job#: **M1992051****PROJECT IDENTIFICATION**Task #: **T15**
Date: **8/9/2016**
User: **TC1**State: **Colorado**
County: **Fremont**Abbreviation: **None**
Filename: **M051-T15**Agency or organization name: **DRMS****EQUIPMENT TRANSPORT RIG COST**Shift basis: **1 per day**
Cost Data Source: **CRG Data**Truck Tractor Description: **GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)**Truck Trailer Description: **GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT
TRAILER (25T, 50T, AND 100T)****Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D8T - 8U	48.33	\$62.67	\$117.55	1	\$180.22	\$117.55	\$250.00
CAT 16M	28.73	\$68.86	\$117.55	1	\$186.41	\$117.55	\$250.00
Cat 320D LRR 9'- 6" Stick	23.70	\$31.50	\$88.67	1	\$120.17	\$88.67	\$250.00
Subtotals:					\$486.80	\$323.77	\$750.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Subtotals:			\$0.00	\$0.00

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>CAÑON CITY</u>	
Total one-way travel distance:	<u>10.00</u>	miles
Average Travel Speed:	<u>25.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$2,635.26</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$0.00</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>0.40</u>	<u>0.40</u>
Return Time (Hours):	<u>0.40</u>	<u>0.40</u>
Loading Time (Hours):	<u>0.25</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.25</u>	<u>NA</u>
Subtotals:	<u>1.30</u>	<u>0.80</u>

JOB TIME AND COST

Total job time: 2.60 Hours

Total job cost: \$2,635