

STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY

Department of Natural Resources

1313 Sherman St., Room 215

Denver, Colorado 80203

Phone: (303) 866-3567

FAX: (303) 832-8106



April 11, 2012

P.J. Nichols
Northwest Aggregates, Inc.
2930 E. Hwy 40, Suite 4
Craig, CO
81625

John W. Hickenlooper
Governor

Mike King
Executive Director

Loretta E. Piñeda
Director

RE: Wand Pit, Permit No. M-2010-007, Reclamation Costs Update and Notice of Surety Increase SI-1

Dear Mr. Nichols:

In an effort to ensure the Financial Warranty for the above referenced site adequately reflects the actual current costs of fulfilling the requirements of the approved reclamation plan, the Colorado Division of Reclamation, Mining and Safety (Division) has updated the reclamation cost estimate (copy enclosed). ***Therefore, pursuant to Section 34-32.5-117(4) of the Colorado Land Reclamation Act, adequate Financial Warranty must be submitted to the Division within 60 days of the mailing date of this letter.*** The additional amount needs to be accepted prior to **Monday, June 11, 2012**. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

Staff calculations estimate the cost to reclaim the above referenced site to be \$23,800.00. This is an increase of \$6,500.00 over the \$17,300.00 currently held by the Division. This estimate is based on conditions observed during the March 28, 2012 inspection.

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 warranty. Any questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Barbara Coria.

If you require additional information, have questions or concerns, please contact me at the DRMS Grand Junction Field Office.

Northwest Aggregates, Inc.

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April 11, 2012

Sincerely,

A handwritten signature in blue ink, appearing to read "Dustin Czaplá", is written over the word "Sincerely,".

Dustin Czaplá

Environmental Protection Specialist

Department of Natural Resources

Division of Reclamation, Mining and Safety

101 South 3rd, Suite 301

Grand Junction, CO 81501

Phone: (970) 243-6299

Fax: (970) 241-1516

Cc:

Enc: Financial Warranty Cost Estimate

COST SUMMARY WORK

Task description: Reclamation Cost Review

Site: Wand Pit Permit Action: 2012 March Inspection Permit/Job#: M2010007

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 4/11/2012 County: Moffat Filename: M007-000
User: DMC

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Dewater pit	PUMPING	1	41.58	\$3,212.00
02a	Transport backfill material from stockpiles to pit slopes	LOADER	2	11.78	\$3,318.00
02b	Shape slopes to 3H:1V	DOZER	1	5.82	\$1,164.27
03a	Rip stockpile and processing areas	RIPPER	1	3.42	\$730.00
04a	Replace topsoil over stripped area	DOZER	1	7.56	\$1,510.67
05a	Revegetate disturbed areas	REVEGE	1	8.00	\$4,283.19
06a	Mobilize reclamation crew and equipment	MOBILIZE	1	2.57	\$3,429.20
<u>SUBTOTALS:</u>				80.73	\$17,647.33

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	\$356.48
Performance bond:	1.05	Total =	\$185.30
Job superintendent:	45.65	Total =	\$2,707.05
Profit:	10.00	Total =	\$1,764.73
		TOTAL O & P =	\$5,013.56
		CONTRACT AMOUNT (direct + O & P) =	\$22,660.89

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		\$1,133.04

CONTINGENCY: 0.00 Total = \$0.00

TOTAL INDIRECT COST = \$6,146.60

TOTAL BOND AMOUNT (direct + indirect) = \$23,800.00

PUMPING WORK

Task description: Dewater pitSite: Wand Pit Permit Action: 2012 March Inspection Permit/Job#: M2010007

PROJECT IDENTIFICATION

Task #: 01A State: Colorado Abbreviation: None
Date: 4/11/2012 County: Moffat Filename: M007-01a
User: DMCAgency or organization name: DRMS

HOURLY EQUIPMENT COST

	Description	Quantity
Make and Model:	Centrifugal pump - 200M, 10 in.	2
Attachment 1:	Suction pipe - 10 in. diam., 25 ft.	2
Attachment 2:	Discharge pipe - 10 in. D., 25 ft.	4
Labor Unit 1:	Pump operator	1

Horsepower: 70
Shift Basis: 1 per day
Weight: 1.95
(US Tons)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$22.94	NA
Operating Cost/Hour:	\$34.88	100
Operator Cost/Hour:	\$19.42	NA
Total Unit Cost/Hour:	\$77.24	

Total Fleet Cost/Hour: \$77.24

PUMPING QUANTITIES

Initial Pond Volume: 52.50 gallons Conversion factor: 325850.5800
Final Pond Volume: 17,107,155.45 gallons
Total Pond Inflow Surface Area: 16,000 Sq. ft. Unit inflow rate in gph/sq. ft.: 0.3516
Total Pond Inflow Volume per Hour: 5,625.60 gallonsSource of estimated volume: Site visit and mine maps

PUMPING TIME

Maximum Pump Capacity:	<u>200,000</u>	<u>gph/pump</u>
Estimated Suction Head:	<u>15</u>	<u>feet</u>
Estimated Discharge Head:	<u>0</u>	<u>feet</u>
Total Head:	<u>15</u>	<u>feet</u>
CPB Pump Capacity:	<u>180,000</u>	<u>gph/pump</u>
Site Altitude:	<u>6,200</u>	<u>feet</u>
Adjusted Pumping Capacity:	<u>360,000</u>	<u>gph</u>
Initial Unadjusted Pumping Time:	<u>47.52</u>	<u>hours</u>
Inflow during Initial Pumping:	<u>267,328</u>	<u>gallons</u>
Net Unadjusted Pumping Time:	<u>48.26</u>	<u>Hours</u>
Altitude Adjustment Factor:	<u>0.9400</u>	<u>(3% rule)</u>
Pump Efficiency Factor:	<u>0.9167</u>	<u>(55 min./hr.)</u>
Total Adjusted Pumping Time:	<u>41.59</u>	<u>hours</u>

JOB TIME AND COST

Total job time: 41.59 HoursUnit cost: \$0.000185 /GallonTotal job cost: \$3,212.00

WHEEL LOADER – LOAD AND CARRY WORKTask description: Transport backfill material from stockpiles to pit slopesSite: Wand Pit Permit Action: 2012 March Inspection Permit/Job#: M2010007**PROJECT IDENTIFICATION**

Task #: 02A State: Colorado Abbreviation: None
 Date: 4/11/2012 County: Moffat Filename: M007-02a
 User: DMC

Agency or organization name: DRMS**HOURLY EQUIPMENT COST**

Basic Machine: CAT 972H Horsepower: 287
 Attachment 1: ROPS Cab Shift Basis: 1 per day
 Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$36.70	NA
Operating Cost/Hour:	\$65.54	100
Operator Cost/Hour:	\$38.49	NA
Total Unit Cost/Hour:	\$140.73	
Total Fleet Cost/Hour:	\$281.46	

MATERIAL QUANTITIES

Initial volume: 7,407 CCY Swell factor: 1.115
 Loose volume: 8,259 LCY

Source of estimated volume: Approx. 1,000 lft. of HW, 20 ft. high at 2H:1V observed
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTIONLoader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.525 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Bank or broken material 0.04	0.040	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		0.000	minutes
Adjusted Basic Cycle Time:		0.525	minutes

Rolling Resistance – Road Conditions

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

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	200	0.00	5.00	5.00	0.1844	(Cat HB)
Return Route:	200	0.00	5.00	5.00	0.1664	(Cat HB)

Total Travel Time: 0.3508 minutes
 Total Cycle Time: 0.8758 minutes

Load Bucket Capacity

Rated Capacity: 5.60 LCY (heaped)
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
 Adjusted Capacity: 6.16 LCY

Job Condition Correction FactorsSite Altitude: 6200 feet

		Source
Altitude Adj:	<u>1.00</u>	(CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 422.00 LCY/Hour
 Adjusted Hourly Unit Production: 350.26 LCY/Hour
 Adjusted Hourly Fleet Production: 700.52 LCY/Hour

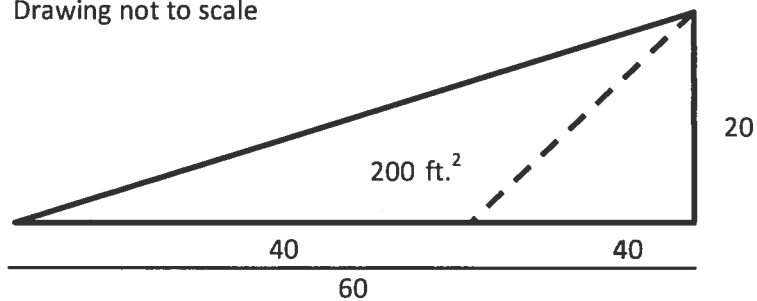
JOB TIME AND COST

Fleet size: 2 Loader(s) Total job time: 11.79 Hours
 Unit cost: \$0.402 /LCY Total job cost: \$3,318.00

Highwall reduction - backfill

Highwall Height (ft.)	20.00
Length of Highwall (lft.)	1000.00
- - - - Initial Slope	2.00 H:1V
— Desired Slope	3.00 H:1V
Volume of material to be moved (ft. ³)	200,000
Volume of material to be moved (yd. ³)	7,407

All dimensions measured in feet
Drawing not to scale



BULLDOZER WORKTask description: Shape slopes to 3H:1VSite: Wand PitPermit Action: 2012 March InspectionPermit/Job#: M2010007PROJECT IDENTIFICATIONTask #: 02B
Date: 4/11/2012
User: DMCState: Colorado
County: MoffatAbbreviation: None
Filename: M007-02bAgency or organization name: DRMSHOURLY EQUIPMENT COSTBasic Machine: Cat D8T - 8U
Horsepower: 310
Blade Type: Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$58.56</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$102.84</u>	<u>100</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$38.49</u>	<u>NA</u>

Total unit Cost/Hour: \$199.89
Total Fleet Cost/Hour: \$199.89MATERIAL QUANTITIESInitial Volume: 3,704
Swell factor: 1.115
Loose volume: 4,130 LCYSource of estimated volume: .5(7,407 cyd)
Source of estimated swell factor: Cat HandbookHOURLY PRODUCTIONAverage push distance: 50 feet
Unadjusted hourly production: 1,627.0 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 15 %
Average site altitude: 6,200 feetMaterial weight: 2,100 lbs/LCYWeight description: Earth - LoamJob Condition Correction Factor

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.200</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>

Visibility:	1.000	(AVG.)
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)

Net correction: 0.4358

Adjusted unit production: 709.05 LCY/hr

Adjusted fleet production: **709.05** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.282/LCY

Total job time: **5.82** Hours

Total job cost: **\$1,164.27**

BULLDOZER RIPPING WORK

Task description: Rip stockpile and processing areas

Site: Wand Pit Permit Action: 2012 March Inspection Permit/Job#: M2010007

PROJECT IDENTIFICATION

Task #: 03A State: Colorado Abbreviation: None
Date: 4/11/2012 County: Moffat Filename: M007-03a
User: DMC

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8U Horsepower: 310
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$65.28	NA
Operating Cost/Hour:	\$102.84	100
Ripper Operating Cost/Hour:	\$6.49	100
Operator Cost/Hour:	\$38.49	NA
Total Unit Cost/Hour:	\$213.10	
Total Fleet Cost/Hour:	\$213.10	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 2.00 acres Rip Depth (ft): 2.00 Volume: 6,453 BCY or CCY

Source of estimated quantity: Based on observed site disturbance

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.56 mph
Average Ripping Width: 7.08 degrees
Average Ripping Length: 100.00 feet
Average Dozer Speed: 88.00 feet
Average Maneuver Time: 0.25 feet
Production per unit area: 0.703 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.703 Acres/hr
Site Altitude: 6,200 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.58 Acres/hr
Adjusted Hourly Fleet Production: 0.58 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 3.43 Hours

Unit cost: \$364.994 Per acre Total job cost: \$730.00

BULLDOZER WORKTask description: Replace topsoil over stripped areaSite: Wand PitPermit Action: 2012 March InspectionPermit/Job#: M2010007**PROJECT IDENTIFICATION**Task #: 04A
Date: 4/11/2012
User: DMCState: Colorado
County: MoffatAbbreviation: None
Filename: M007-04aAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8U
Horsepower: 310
Blade Type: Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$58.56	NA
Operating Cost/Hour:	\$102.84	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.49	NA

Total unit Cost/Hour: \$199.89Total Fleet Cost/Hour: \$199.89**MATERIAL QUANTITIES**Initial Volume: 6,050
Swell factor: 1.000
Loose volume: 6,050 LCYSource of estimated volume: 5ac. @ avg. 9" depthSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feet
Unadjusted hourly production: 931.6 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %
Average site altitude: 6,200 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 800.52 LCY/hr

Adjusted fleet production: 800.52 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
 Unit cost: \$0.250/LCY

Total job time: 7.56 Hours
 Total job cost: \$1,510.67

REVEGETATION WORKTask description: Revegetate disturbed areasSite: Wand PitPermit Action: 2012 March InspectionPermit/Job#: M2010007PROJECT IDENTIFICATIONTask #: 05AState: ColoradoAbbreviation: NoneDate: 4/11/2012County: MoffatFilename: M007-05aUser: DMCAgency or organization name: DRMSFERTILIZING**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)	\$92.35
Total Tilling Cost/Acre	\$92.35

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Orchardgrass - Paiute	0.30	3.72	\$0.63
Smooth Brome - Lincoln	1.60	5.33	\$2.08
Intermediate Wheatgrass - Oahe	2.50	5.34	\$5.35
Pubescent Wheatgrass - Luna	2.25	4.65	\$4.93
Sainfoin - Remont	2.50	1.09	\$6.88
Totals Seed Mix	9.15	20.12	\$19.87

Application

Description	Cost /Acre
Drill seeding {DMG}	\$90.11
Total Seed Application Cost/Acre	\$90.11

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Herbicide - 2,4D @ 2.0 pt/ac	1.00	ACRE	\$2.40	\$2.40
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$164.00	\$328.00
Total Mulch Materials Cost/Acre				\$330.40

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Weed spray, truck, non-aquatic area, nox. [DMG]	\$60.19
Total Mulch Application Cost/Acre	\$126.08

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood, Narrowleaf	5	Tubling, 10 cu. in. container {(MEANS)}	\$1.45	\$2.40	\$7.25
Willow, Sandbar	5	Tubling, 10 cu. in. container {(MEANS)}	\$3.85	\$2.40	\$19.25
Totals Nursery Stock Cost / Acre					\$26.50

JOB TIME AND COST

No. of Acres: 5 Cost /Acre: \$685.31
 Estimated Failure Rate: 25% Cost /Acre*: \$685.31
 *Selected Replanting Work Items: TILLING, SEEDING, NURSERY,
MULCHING

 Initial Job Cost: \$3,426.55
 Reseeding Job Cost: \$856.64
 Total Job Cost: \$4,283.19
 Job Hours: 8.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilize reclamation crew and equipment**Site: **Wand Pit** Permit Action: **2012 March Inspection** Permit/Job#: **M2010007****PROJECT IDENTIFICATION**

Task #: **06A** State: **Colorado** Abbreviation: **None**
 Date: **4/11/2012** County: **Moffat** Filename: **M007-06a**
 User: **DMC**

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 972H	28.00	\$36.70	\$117.55	1	\$154.25	\$117.55	\$250.00
Cat D8T - 8U	53.70	\$65.28	\$125.45	1	\$190.73	\$125.45	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00
Centrifugal pump - 200M, 10 in.	1.95	\$7.66	\$88.67	1	\$96.33	\$88.67	\$250.00

Subtotals: **\$569.57** **\$420.34** **\$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	\$25.30	1	\$25.30	\$25.30

Subtotals: **\$25.30** **\$25.30**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>CRAIG</u>	
Total one-way travel distance:	<u>5.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$3,421.97</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$7.23</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

JOB TIME AND COST

Total job time:	<u>2.57</u>	Hours
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Total job cost:	<u>\$3,429.20</u>
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