



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

1313 Sherman Street, Room 215
Denver, CO 80203

August 26, 2019

Russell Larsen/ Jim Doody
Kilgore Companies LLC dba Elam Construction
556 Struthers Ave
Grand Junction, CO 81501

RE: Orchard Grove Industrial Pit, Permit No. M-1990-094, Technical Revision (TR-2) Approval

Dear Mr. Larsen/Doody:

On August 26, 2019 the Division of Reclamation, Mining and Safety (Division) approved the Technical Revision request (TR-2) submitted on June 19, 2019, addressing the following:

Revise mining and reclamation plans;

- All 34 ac disturbed at once, while mining 6 ac pond max.
- No pond upon final reclamation, 16 ac of graveled area and 18 ac to be revegetated for final reclamation.
- 30,000 cy of imported inert fill on site for pond backfill.
- Apply topsoil to 3+ inches over 18 ac, on site 1500 cy, import deficit (County only has compost not topsoil- alternative is 2" @ \$20 cy)
- Planting of cottonwoods every 40 ft. along Redlands Pkwy (about 33 trees).

The terms of the TR-2 approved by the Division are hereby incorporated into Permit No. M-1990-094. All other conditions and requirements of the permit remain in full force and effect.

The estimated liability amount of \$362,519 exceeds the \$ 52,600 Financial Warranty currently held for this site. **If you have not already done so, please submit additional bond in the amount of \$ 309,919.** Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted. The revision will not be final until the bond is approved 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 303-866-3567 Ext 8183 or via email at amy.yeldell@state.co.us



M-1990-094

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8/26/19

Sincerely,

A handwritten signature in blue ink that reads "Amy Yeldell". The signature is written in a cursive, flowing style.

Amy Yeldell

Environmental Protection Specialist

Cc: Travis Marshall, Senior EPS, Grand Junction DRMS

COST SUMMARY WORK

Task description: TR-2 Update

Site: Orchard Grove Industrial Pit

Permit Action: TR-2

Permit/Job#: M1990094

PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 8/26/2019

County: Mesa

Filename: M094-ACY

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Debris handling and structural removal	DEMOLISH	1	8.00	\$1,473
02a	Backfill Pond	TRUCK1	1	60.67	\$72,285
03a	Rip 18 ac to be reveg	RIPPER	1	27.49	\$6,734
04a	Haul imported topsoil	TRUCK1	1	50.92	\$178,279
05a	Revegetation of 18 ac	REVEGE	1	24.00	\$34,005
05b	Cottonwood Planting	REVEGE	1	24.00	\$3,809
06a	Initial Mobilization to site	MOBILIZE	1	2.66	\$3,823
06b	Secondary Mobilization to site	MOBILIZE	1	2.66	\$1,450
<u>SUBTOTALS:</u>				200.4	\$301,858

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$6,098

Performance bond: 1.05

Total = \$3,170

Job superintendent: 50.00

Total = \$3,470

Profit: 10.00

Total = \$30,186

TOTAL O & P = \$42,922

CONTRACT AMOUNT (direct + O & P) = \$344,780

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 0.00

Total = \$0

Reclamation management and/or administration: 5.00

\$17,239

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$60,661

TOTAL BOND AMOUNT (direct + indirect) = \$362,519

DEMOLITION WORK

Task description: Debris handling and structural removal

Site: Orchard Grove Industrial Pit

Permit Action: TR-2

Permit/Job#: M1990094

PROJECT IDENTIFICATION

Task #: 01A

State: Colorado

Abbreviation: None

Date: 8/26/2019

County: Mesa

Filename: M094-01a

User: ACY

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 95.50 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Scale House: offsite disposal	10' x 10' x 10'	Bldg. (SN) demo./off-site disposal in approved landfill - Max. 15 mile haul	1,000.00	CF	\$0.35	\$350.00
Small steel debris: offsite disposal	20	Loading and 5 mile haul, salvage allowed - Steel frame structures	20.00	CY	\$10.55	\$211.00
Scale ramps, concrete, onsite disposal	20 cu.yd.	Push demolished materials/rubble/debris into pit - Max. 200 ft. push	20.00	CY	\$1.62	\$32.36
Scale, demo and offsite disposal	10' x 50' x 5'	Loading and 5 mile haul, salvage allowed - Steel frame structures	90.00	CY	\$10.55	\$949.50

Job Hours: 8.00

Subtotal
(unadjusted): \$1,542.86

Total Cost
(adjusted for location): \$1,473.43

TRUCK/LOADER TEAM WORKTask description: **Backfill Pond**Site: **Orchard Grove Industrial Pit**Permit Action: **TR-2**Permit/Job#: **M1990094****PROJECT IDENTIFICATION**Task #: **02A**State: **Colorado**Abbreviation: **None**Date: **8/26/2019**County: **Mesa**Filename: **M094-02a**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

Equipment Description	
Truck Loader Team -Truck:	Generic 15-18 cy, 6x4
-Loader:	CAT 972H
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
% Utilization-machine:	100	100	NA	50	NA	NA
Ownership cost/hour:	\$28.38	\$46.54	NA	\$103.86	NA	NA
Operating cost/hour:	\$55.36	\$55.81	NA	\$41.13	NA	NA
% Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Operator cost/hour:	\$24.79	\$35.93	NA	\$39.98	NA	NA
Unit Subtotals:	\$108.53	\$138.28	NA	\$184.97	NA	NA
Number of Units:	8	1	0	1	0	0
Group Subtotals:	Work: \$1,006.52		Support: \$184.97		Maint: \$0.00	

Total work team cost/hour: **\$1,191.49****MATERIAL QUANTITIES**Initial volume: **30,000**

CCY

Swell factor: **1.165**Loose volume: **34,950**

LCY

Source of estimated volume: **Imported backfill material 30,000 cy max**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **2,900**

Pounds/LCY

Description: **Decomposed rock - 50% Rock, 50% Earth**Rated Payload: **63,980**

Pounds

Payload Capacity: **22.06**

LCY

Truck Bed (volume) Basis:

Struck Volume:	15.00	LCY
Heaped Volume:	18.00	LCY
Average Volume:	16.50	LCY
Adjusted Volume:	18.00	LCY

Final Truck Volume Based on Number of Loader Passes: 12.32 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.600	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	6.160	LCY

Job Condition Corrections:

Site Altitude (ft.): 4530 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 2 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.525 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.465	minutes
Net Load Time per Truck:		0.565	minutes

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	0.565	Minutes	Adjusted for site altitude:	0.565	Minutes
Truck Maneuver and Dump Time:	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes

Truck Travel (Haul & Return) Time:
penetration 8.0

Road Condition: Soft, rutted dirt, no maintenance or water, 4" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	0.00	8.00	8.00	1131	0.558

Haul Time: **0.558** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	0.00	8.00	8.00	1931	0.326

Return Time: **0.326** minutesTotal Truck Cycle Time: **2.849** minutes

Loading Tool unit

Production 694.08 LCY/Hour Adjusted for job efficiency: 576.09 LCY/Hour
Truck Unit Production 259.46 LCY/Hour Adjusted for job efficiency: 215.35 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 8 Truck(s)

Adjusted hourly truck team production: 1,722.81 LCY/Hour
Adjusted single truck/loader team production: 576.09 LCY/Hour
Adjusted multiple truck/loader team production: **576.09** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **60.67** HoursUnit cost: \$2.068 /LCY Total job cost: **\$72,285**

BULLDOZER RIPPING WORK

Task description: Rip 18 ac to be reveg

Site: Orchard Grove Industrial Pit

Permit Action: Tr-2

Permit/Job#: M1990094

PROJECT IDENTIFICATION

Task #: 03A

State: Colorado

Abbreviation: None

Date: 8/26/2019

County: Mesa

Filename: M094-03a

User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU
Ripper Attachment: 3-Shank Ripper

Horsepower: 310

Shift Basis: 1 per day

Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$103.86	NA
Operating Cost/Hour:	\$82.26	100
Ripper Ownership Cost/Hour:	\$10.43	NA
Ripper Operating Cost/Hour:	\$8.38	100
Operator Cost/Hour:	\$39.98	NA
Total Unit Cost/Hour:	\$244.91	
Total Fleet Cost/Hour:	\$244.91	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 18.00 acres Rip Depth (ft): 2.00 Volume: 58,080 BCY or CCY

Source of estimated quantity: Reclamation plan

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.56 feet/pass
Average Ripping Width: 7.08 feet/pass
Average Ripping Length: 250.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.789 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.789 Acres/hr
Site Altitude: 4,530 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.65 Acres/hr

Adjusted Hourly Fleet Production: **0.65** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **27.49** Hours

Unit cost: \$374.092 Per acre Total job cost: **\$6,734**

TRUCK/LOADER TEAM WORKTask description: **Haul imported topsoil**Site: **Orchard Grove Industrial Pit**Permit Action: **TR-2**Permit/Job#: **M1990094****PROJECT IDENTIFICATION**Task #: **04A**State: **Colorado**Abbreviation: **None**Date: **8/26/2019**County: **Mesa**Filename: **M094-04a**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

	Equipment Description
Truck Loader Team -Truck:	Generic 15-18 cy, 6x4
-Loader:	CAT 972H
Support Equipment -Load Area:	NA
-Dump Area:	Cat D8T - 8SU
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	50	NA	NA
Ownership cost/hour:	\$28.38	\$46.54	NA	\$103.86	NA	NA
Operating cost/hour:	\$55.36	\$55.81	NA	\$41.13	NA	NA
%Utilization-ripper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	\$0.00	NA	NA
Operator cost/hour:	\$24.79	\$35.93	NA	\$39.98	NA	NA
Unit Subtotals:	\$108.53	\$138.28	NA	\$184.97	NA	NA
Number of Units:	8	1	0	1	0	0
Group Subtotals:	Work: \$1,006.52		Support: \$184.97		Maint: \$0.00	

Total work team cost/hour: **\$1,191.49****MATERIAL QUANTITIES**Initial volume: **4,840**

CCY

Swell factor: **1.215**Loose volume: **5,881**

LCY

Source of estimated volume: **2" Compost over 16 ac to make 3+ inch of topsoil**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$20.00**Total Cost: **\$117,612.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **1,600**

Pounds/LCY

Description: **Top Soil**Rated Payload: **63,980**

Pounds

Payload Capacity: **39.99**

LCY

Truck Bed (volume) Basis:

Struck Volume:	15.00	LCY
Heaped Volume:	18.00	LCY
Average Volume:	16.50	LCY
Adjusted Volume:	18.00	LCY

Final Truck Volume Based on Number of Loader Passes: 12.32 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.600	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	6.160	LCY

Job Condition Corrections:

Site Altitude (ft.): 4530 feet

	Truck	Loader	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 2 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.525 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(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:		-0.060	minutes
Adjusted Loader Cycle Time:		0.465	minutes
Net Load Time per Truck:		0.565	minutes

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.500	Minutes
Truck Load Time:	0.565	Minutes	Adjusted for site altitude:	0.565	Minutes
Truck Maneuver and Dump Time:	0.90	Minutes	Adjusted for site altitude:	0.900	Minutes

Truck Travel (Haul & Return) Time:
penetration 1.2

Road Condition: Very hard, smooth, asphalt or concrete, no tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	59664.00	0.00	1.20	1.20	2952	20.363

Haul Time: **20.363** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	59664.00	0.00	1.20	1.20	2963	20.170

Return Time: **20.170** minutesTotal Truck Cycle Time: **42.498** minutes

Loading Tool unit

Production 694.08 LCY/Hour Adjusted for job efficiency: 576.09 LCY/Hour
Truck Unit Production 17.39 LCY/Hour Adjusted for job efficiency: 14.44 LCY/Hour

Optimal No. of Trucks: 40 Truck(s) Selected Number of Trucks: 8 Truck(s)

Adjusted hourly truck team production: 115.49 LCY/Hour
Adjusted single truck/loader team production: 115.49 LCY/Hour
Adjusted multiple truck/loader team production: **115.49** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **50.92** Hours

Unit cost: \$10.316 /LCY Total job cost: **\$178,279**

REVEGETATION WORKTask description: Revegetation of 18 acSite: Orchard Grove Industrial PitPermit Action: TR-2Permit/Job#: M1990094**PROJECT IDENTIFICATION**Task #: 05AState: ColoradoAbbreviation: NoneDate: 8/26/2019County: MesaFilename: M094-05aUser: ACYAgency or organization name: DRMS**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)	\$101.93
Subsoil scarification, (MEANS 32 91 13.23 3100)	\$195.58
Total Tilling Cost/Acre	\$297.51

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.60	23.42	\$17.09
Ryegrass, Annual/Gulf	10.00	43.62	\$16.50
Yellow Sweet Clover - Madrid	1.40	8.36	\$3.96
Tall Wheatgrass - Jose	11.00	19.95	\$37.13
Totals Seed Mix	23.00	95.34	\$74.67

Application

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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
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.74	\$2.74
Total Mulch Materials Cost/Acre				\$592.74

Application

Application	
Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$70.17
Power mulcher (MEANS 32 91 13.16 0350)	\$95.83
Weed spray, truck, non-aquatic area, nox. [DMG]	\$71.50
Total Mulch Application Cost/Acre	\$237.50

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:	18	Cost /Acre:	\$1,434.42
Estimated Failure Rate:	40%	Cost /Acre*:	\$1,136.91
*Selected Replanting Work Items:	SEEDING,MULCHING		
Initial Job Cost:	\$25,819.56		
Reseeding Job Cost:	\$8,185.75		
Total Job Cost:	\$34,005		
Job Hours:	24.00		

REVEGETATION WORKTask description: Cottonwood PlantingSite: Orchard Grove Industrial PitPermit Action: TR-2Permit/Job#: M1990094**PROJECT IDENTIFICATION**Task #: 05BState: ColoradoAbbreviation: NoneDate: 8/26/2019County: MesaFilename: M094-05bUser: ACYAgency or organization name: DRMS**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)	\$101.93
Subsoiling, heavy, 18" depth {DMG}	\$213.22
Total Tilling Cost/Acre	\$315.15

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.60	23.42	\$17.09
Ryegrass, Annual/Gulf	10.00	43.62	\$16.50
Yellow Sweet Clover - Madrid	1.40	8.36	\$3.96
Tall Wheatgrass - Jose	11.00	19.95	\$37.13
Totals Seed Mix	23.00	95.34	\$74.67

Application

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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
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$295.00	\$590.00
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.74	\$2.74
Total Mulch Materials Cost/Acre				\$592.74

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$70.17
Power mulcher (MEANS 32 91 13.16 0350)	\$95.83
Weed spray, truck, non-aquatic area, nox. [DMG]	\$71.50
Total Mulch Application Cost/Acre	\$237.50

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Cottonwood, Plains	33	Container, 5 gallon (MEANS)	\$51.02	\$2.40	\$1,683.66
Totals Nursery Stock Cost / Acre					\$1,683.66

JOB TIME AND COST

No. of Acres:	1	Cost /Acre:	\$3,135.72
Estimated Failure Rate:	40%	Cost /Acre*:	\$1,683.66
*Selected Replanting Work Items:	NURSERY		
Initial Job Cost:	\$3,135.72		
Reseeding Job Cost:	\$673.46		
Total Job Cost:	\$3,809		
Job Hours:	24.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial Mobilization to site**Site: **Orchard Grove Industrial Pit**Permit Action: **TR-2**Permit/Job#: **M1990094****PROJECT IDENTIFICATION**

Task #: **06A** State: **Colorado** Abbreviation: **None**
 Date: **8/26/2019** County: **Mesa** Filename: **M094-06a**
 User: **ACY**

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:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

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 - 8SU	53.08	\$114.29	\$141.54	1	\$255.83	\$141.54	\$250.00
CAT 972H	28.00	\$46.54	\$123.81	1	\$170.35	\$123.81	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$9.74	\$67.39	1	\$77.13	\$67.39	\$250.00
Subtotals:					\$588.85	\$400.13	\$1,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 15-18 cy, 6x4	\$108.53	8	\$868.24	\$868.24
Light Duty Pickup, 4x4, 1 T. Crew	\$77.33	1	\$77.33	\$77.33
Subtotals:			\$945.57	\$945.57

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	GRAND JUNCTION, CO	
Total one-way travel distance:	5.00	miles
Average Travel Speed:	30.00	mph
Total Non-Roadable Mob/Demob Cost *	\$3,507.36	
** two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	\$315.19	
** one round trip, no haul rig:		

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.17	0.17
Return Time (Hours):	0.17	0.17
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.33	0.33

JOB TIME AND COST

Total job time:	2.67	Hours
Total job cost:	\$3,823	

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Secondary Mobilization to siteSite: Orchard Grove Industrial PitPermit Action: TR-2Permit/Job#: M1990094**PROJECT IDENTIFICATION**

Task #: 06B State: Colorado Abbreviation: None
 Date: 8/26/2019 County: Mesa Filename: M094-06b
 User: ACY

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:	\$17.20	\$29.63	\$38.69
Operating Cost/Hour:	\$26.56	\$47.02	\$55.69
Operator Cost/Hour:	\$23.63	\$23.63	\$23.63
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$67.39	\$123.81	\$141.54

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
Drill/Broadcast Seeder with Tractor	25.00	\$18.15	\$67.39	1	\$85.54	\$67.39	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$9.74	\$67.39	1	\$77.13	\$67.39	\$250.00
Subtotals:					\$162.67	\$134.78	\$500.00

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	\$77.33	1	\$77.33	\$77.33
Subtotals:			\$77.33	\$77.33

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	GRAND JUNCTION, CO	
Total one-way travel distance:	5.00	miles
Average Travel Speed:	30.00	mph
Total Non-Roadable Mob/Demob Cost *	\$1,424.49	
** two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	\$25.78	
** one round trip, no haul rig:		

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.17	0.17
Return Time (Hours):	0.17	0.17
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.33	0.33

JOB TIME AND COST

Total job time:	2.67	Hours
Total job cost:	\$1,450	