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

MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Pikeview Quarry	**MINE/PROSPECTING ID#:** M-1977-211	**MINERAL:** Limestone (general), granite gneiss and do	**COUNTY:** El Paso
INSPECTION TYPE: Surety-Related Inspection	**WEATHER:** Clear	**INSP. DATE:** November 22, 2024	**INSP. TIME:** 10:00
OPERATOR: Riverbend Industries Inc.	**OPERATOR REPRESENTATIVE:** Jerry Schnabel	**TYPE OF OPERATION:** 112c - Construction Regular Operation	
REASON FOR INSPECTION: Surety Related	**BOND CALCULATION TYPE:** Complete Bond	**BOND AMOUNT:** $6,805,607.00	
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None	
INSPECTOR(S): Hunter Ridley	**INSPECTOR'S SIGNATURE:** Hunter Ridley	**SIGNATURE DATE:** December 3, 2024	

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS---------------------------------- N	**(FN) FINANCIAL WARRANTY-------- Y**	**(RD) ROADS------------------ Y**
(HB) HYDROLOGIC BALANCE------------ Y	**(BG) BACKFILL & GRADING---------- Y**	**(EX) EXPLOSIVES--------- N**
(PW) PROCESSING WASTE/TAILING---- N	**(SF) PROCESSING FACILITIES------- N**	**(TS) TOPSOIL---------------- Y**
(MP) GENL MINE PLAN COMPLIANCE- N	**(FW) FISH & WILDLIFE---------------- Y**	**(RV) REVEGETATION---- Y**
(SM) SIGNS AND MARKERS---------------- Y	**(SP) STORM WATER MGT PLAN---- N**	**(RS) RECL PLAN/COMP-- Y**
(ES) OVERBURDEN/DEV. WASTE--------- N	**(SC) EROSION/SEDIMENTATION--- Y**	**(ST) STIPULATIONS------- N**
(AT) ACID OR TOXIC MATERIALS------- N	**(OD) OFF-SITE DAMAGE---------------N**	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

OBSERVATIONS

This inspection was conducted by Hunter Ridley with the Division of Reclamation, Mining and Safety (Division) as part of the continuing planned monthly inspections to observe the backfill placement for the final reclamation of the Pikeview Quarry. As backfill placement has ceased, monthly inspections have continued to observe final grading and revegetation efforts. Jerry Schnabel (representing the Permittee, Riverbend Industries Inc.) and Stantec representative Paul Kos and Michaela Swain were present for the inspection. David Deitemeyer with the City of Colorado Springs and U.S. Forest Service (USFS) representative Cullen Lapointe were also present at the inspection. The Division plans to conduct one further inspection in December of 2024 to see the completion of all earthwork and material moving at the site. Only after completion of these tasks will the Division move to quarterly inspections.

On October 10, 2024 the Division received a submission for Surety Reduction 4 (SR-4). This reduction request is for tasks related to earthwork, topsoil placement, and rip rap placement. The Division is currently in the process of reviewing the materials submitted. This inspection was conducted for the SR4 release request as required by Rule 4.17.2. The observations of this inspection will determine what reclamation bonding tasks will be released with the approval of SR4. The Division will then recalculate the required financial warranty amount for the Pikeview Quarry. The updated estimate has been attached to this report for review by the Operator. The estimate will also be sent to the Forest Service for review, as the Division holds a joint bond with the USFS for specific reclamation tasks on USFS land at Pikeview.

The Maintenance Shop has been removed from the site. The outbuilding and Office building still remain. Therefore, the Division will release bonding tasks required for the demolition of the maintenance shop and retain costs associated with demolition of the Office and Outbuilding. The Division awaits a letter from the City which states that the Office building may remain in final reclamation. The Division will also release bonding tasks associated with drilling, blasting, and hauling of blasted materials, as these tasks have been fully completed at the site.

The mine sign, which included all required information pursuant to Rule 3.1.12, was located at the site's access road (Photo 1).

Records: The placement of backfill material and subsequent compaction testing has ceased at Pikeview Quarry. In total, compaction testing occurred on backfill material from March of 2022 to July of 2024. A reduction in frequency of geotechnical report submission was approved by the Division in TR-25. This reduces reporting frequency from monthly to quarterly. The next report will be due in February 2025 and include observation data from October 2024 to December 2024.

Leica prism system data continues to be collected onsite and monitored by Riverbend Industries. As site personal leave the quarry through the winter months, Pikeview staff will be able assessing this data remotely. Prism data continues to support the conclusion that slope stability is being achieved on the buttress as the bottom of the buttress remains in place and the top of the buttress continues to settle into the slope, as expected. Any recorded slope movements are on the magnitude of 0.1 ft. Occasionally, fog, other inclement weather conditions, or interaction with animals will produce incorrect readings for the prism data. These have historically been recorded on the site's geotechnical reports and will continue to be reported in the same manner. However, a trigger level for notification to the Division of movement +/-0.35 feet has been set for any movements not attributed to errors with weather or animals. This notification trigger has been in place since Stantec began submitting monthly geotechnical reports in October of 2020.

Prism data will ultimately aid the Division in its decision to approve or deny the eventual final release of the Pikeview Quarry permit.

Backfilling and Grading: All major earthwork is complete at the site. However, the Division will be retaining a portion of the bond which addresses earthwork to serve as liability in case of any minor slumps or erosional work that may be needed throughout final reclamation. A portion of the cost for moving rip rap material, topsoil, and placing matting will also be retained to account for work still to be completed in the South Quarry borrow area and the remaining drainage channel tie in areas.

The quarry south borrow area is currently acting as the storage area for rip rap material and is also the site of continued rip rap creation used to complete drainage channels on site. Currently the only remaining channels in need of rip rap are the tie in areas near the Dragon's Back, Lower Borrow, and Upper North channel. Once all rip rap material has been removed and placed, the site will reduce the size of the bench by backfilling, topsoiling, and seeding up to the first bench of this slope (Photo 2). A large rock outcrop will remain in this benched area to enhance the natural look of the slope face, similar to how the large rock and Kiewit Cliffs have been left on the buttress slope.

Ponding which was visible at the Leia prism level bench during the last inspection has been regraded to promote proper drainage (Photo 8). The area was no longer ponding water at the time of this inspection.

Roads: The site continues its work in obliterating all roads on Forest Service property, as requested by the Forest Service. A grading task will remain in place with the Division to cover these costs and to cover the cost of rebuilding and re-obliterating these roads, should maintenance work need to be completed on any of the onsite drainages while still in final reclamation.

Current landowner, the City of Colorado Springs, has plans to construct a series of trails in 2025 which will predominantly traverse the open space on the eastern portion of the permit boundary, and will also traverse a small section of the eastern most edge of Pikeview's affected area boundary. Once these trails are in place, the Division will need to receive and approve a Technical Revision to update the site's reclamation plan map. A small, graveled parking lot will be constructed adjacent to the main office building in support of these trails and in support of Pikeview's recreation post mining land use.

Fish and Wildlife: No negative impact on wildlife was observed. A Bighorn ram was spotted on the upper levels of the buttress.

Revegetation & Topsoil: As per Rule 3.1.10, the Division can only consider release on revegetated areas where 'a diverse, effective, and long-lasting vegetative cover that is capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizer, and is at least equal in extent of cover to the natural vegetation of the surrounding area' has been established. At this time, the Division is unable to make this determination and will not be able to make such determination until the vegetation at Pikeview has had more time to establish, mature, and be exposed to all seasonal elements. Therefore, the Division will be retaining all bonding tasks associated with revegetation at the site.

Areas which remain on site to be topsoiled and seeded include the south quarry area and the lower culvert area. Depending on how much excess matting material is available, these areas may receive matting instead of the usual seeding method. Therefore, the Division will be retaining costs associated with the remaining acres to be topsoiled and seeded along with a 10% - 15% maintenance cost to replace any matting, mulching, or topsoil across the site if necessary.

Continued vegetation growth was observed across the main buttress portion of the site, though this has slowed as we progress into the winter months (Photos 5, 4 and 9). However, all matted areas show continued signs of stability in supporting grasses and shrubs. Revegetation efforts continue to be monitored by staff who say that tree growth is doing well, though it remains to be seen how the shrubs on site will fare long term. Weeds previously treated at the site include a List A noxious weed species, Myrtle spurge along with common knapweed, thistle, toadflax, and mullein. Treatment of such species should be high priority after the winter months. A bonding task has been retained for use in weed treatment on site.

Irrigation tanks are located on the lower buttress bench (Photo 5). These are still planned to be removed, but this has not yet been completed at the site. No additional irrigation tanks are planned to be added anywhere onsite.

Hydrologic Balance & Sediment Control: Coconut matting onsite, both recently placed and originally placed, are holding up to stormwater and general erosion well. A sizable snowstorm passed through the area in the weeks prior to this inspection. Site representatives stated that rip rap and matting held up well to these conditions. Further natural testing of the drainage channel design will occur when the spring brings heavier rain and snow melt events.

Pikeview has continued to work with the City and the USFS to address concerns of erosion and overtopping at the site's southernmost drainage channel. The channel bend in this area has been reinforced with two rock walls. One wall has been dry stacked along the edge of the channel and the other has been trenched in at the channel's outermost edge (Photos 3 and 6). The trenched in layer has been dug down into a consolidated clay layer, with the intention of effectively cutting off hydraulic flow to between the Upper South Channel and the drainage area to the south (Photo 7), which will prevent stormwater from flowing outside of its planned channel. These changes to the channel design are in addition to the channel design approved by the Division under TR24. Once Pikeview has determined that these design additions are effective and to remain permanent, the Division will need to receive and approve and updated design for the Upper South Channel via a Technical Revision submission.

All surface water drainage channels have been constructed to their final configurations on site as per the approved design. All channels except a few small tie-in areas, as discussed above, have been placed with rip rap. The most recently placed rip rap area in the main North Channel was inspected by the Division and site representatives on foot (Photos 11 and 12). Rip rap was well placed, sturdy, and was constructed accurately to design configurations approved by the Division. With the completion of channel excavation and a majority of the channel rip rap placement, the Division will be releasing bonding tasks associated with such work. The only exception will be for the drainage channel areas which cross USFS property, as the USFS has requested that the Division maintain costs associated with these channels to cover any maintenance costs which may be associated with the enhanced reclamation design of the Upper South Channel as discussed previously. These costs include excavation of the channel and placement of gravel and rip rap if necessary.

The large culvert area at the eastern end of the site continues to allow water to flow through the buttress slope underdrain as designed. This water was observed to be flowing consistently and is now connected with a small creek at the edge of the permit and flowing into the adjacent open space. The western slope in this culvert area still requires some grading and lay back efforts to reduce the slope grade (Photo 10).

The guzzler system for the 'sheep pond' area has not yet been installed on the upper slope area. Pikeview representatives have stated that CPW would be visiting within the next week to work towards completion of this task.

Post Inspection Meeting: No problems or possible violations were observed during the inspection. Items of importance discussed during the site meeting and items which will need to be followed up on are summarized below:

- Future reduction of monthly inspection frequency to begin when only monitoring of revegetation efforts remain and as approved by the Division
- Address any concerns with the drainage channels, especially the Upper South Channel, into the Spring 2025 season
- Continue to monitor and address invasive species and weed removal across the site during the appropriate seasons

Photographs taken during the inspection have been included below. Responses to this inspection report should be directed to: Hunter Ridley at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 720-868-7757 or via email at hunter.ridley@state.co.us

PHOTOGRAPHS

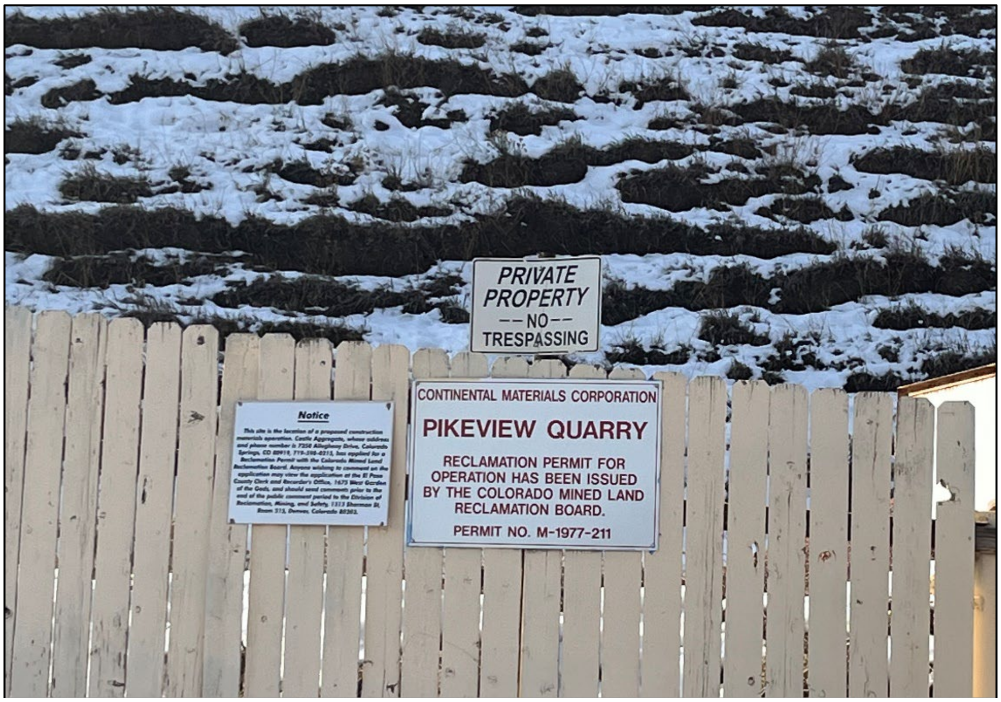

Photo 1: The mine sign was posted with all required information at the entrance to the mine.

Photo 2: View of the south quarry area, rip rap is currently being removed for use on the remaining drainage channel tie-in areas.

Photo 3: View of the Upper South Channel on USFS property. The rock wall is complete in this area.

Photo 4: View northeast of the revegetating buttress slope, the south quarry area is also visible, where active rip rap creation is occurring.

Photo 5: View north of the revegetating buttress slope.

Photo 6: View west of the rock wall installed into the Upper South Channel at the request of the City and the USFS.

Photo 7: view south of the drainage area that has been protected from drainage by the installation of the rock wall on the Upper South Channel.

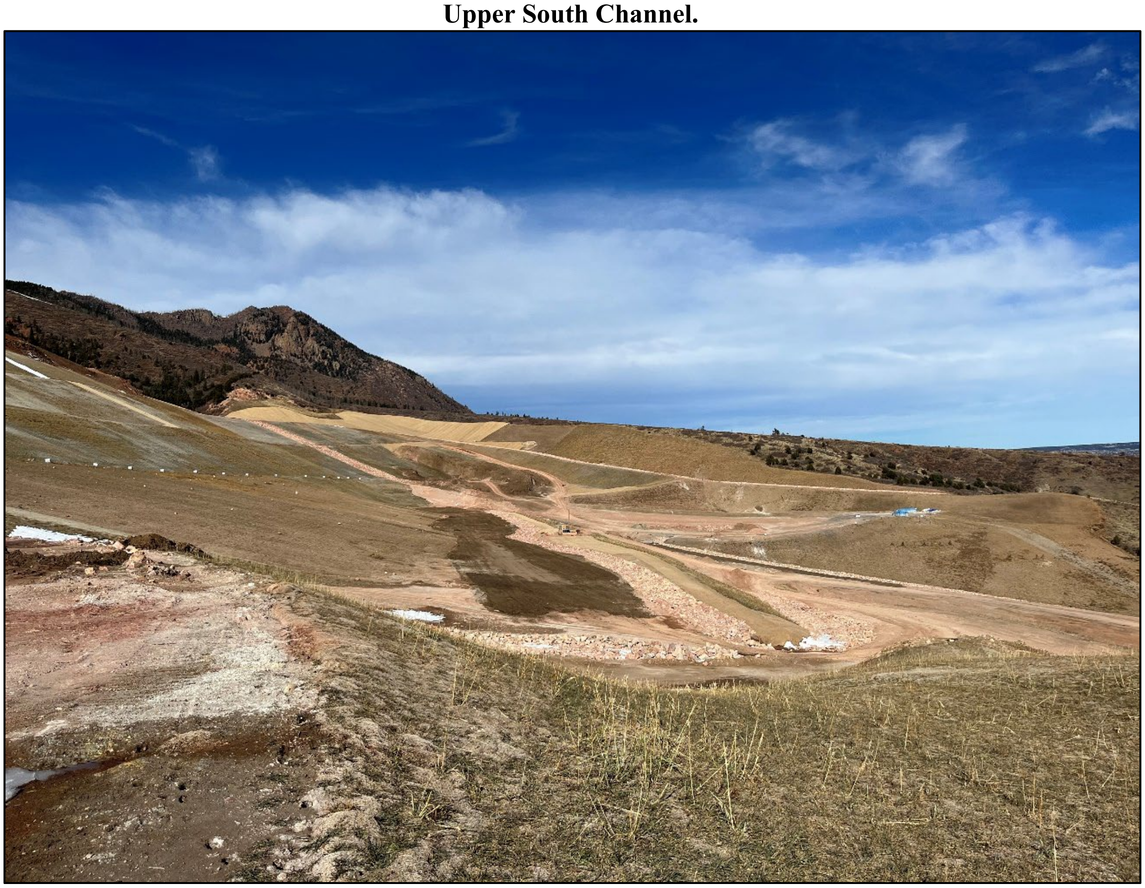

Photo 8: View north of the regraded buttress level above the Leica prism station, this addressed ponding noted in the previous inspection.

Photo 9: View south of matted slopes at the eastern edge of the buttress.

Photo 10: View south of the eastern edge of the buttress area. The culvert which connects to the slope's underdrain daylights here.

Photo 11: View east of the end of the Main North Channel and into the City of Colorado Springs Open Space area. The area to remain as a graveled lot next to the office building is also visible.

Photo 12: View northwest from inside the rip rap lined main north channel.

Inspection Contact Address
Jerry Schnabel
Riverbend Industries Inc.
425 South Financial Place , Suite 3100
Chicago, IL 60605

COST SUMMARY WORK

Task description: **SR4 Update**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 10/10/2024 County: El Paso Filename: M211-000
User: HR1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
4010	Demo Maintenance Shop, Office & Outbuilding	DEMOLISH	1	40.00	$11,327
4CH0	Construct riprap ditches	POSTMINING	1	203.60	$67,352
4E20	Load/Haul/Dump Lower Borrow Area Material	TRUCK1	1	104.31	$107,239
4EP0	Install erosion control blankets on steep slopes	REVEGE	1	100.00	$134,310
4EP1	Apply Mulch on flatter slopes	REVEGE	1	90.00	$18,423
4GF0	Revegetate 32.18 USFS acres (excl. trees & mulch)	REVEGE	1	90.00	$174,239
4GP0	Reveg. 106.92 private acres (excl. trees & mulch)	REVEGE	1	300.00	$501,069
4M00	MOB / DEMOB	MOBILIZE	1	13.00	$28,167
4RD1	Obliterate 5,000 ft of road	GRADER	1	2.64	$494
4RD2	Load/Haul/Dump 2500 tons of gravel for rip rap (main.)	TRUCK1	1	0.54	$4,256
4SP0	Private area to be planted w/ shrubs	REVEGE	1	40.00	$61,898
4TF0	USFS area to be planted w/ trees & watered sep.	REVEGE	1	20.00	$5,498
4TP0	Private area to be planted w/ trees watered sep	REVEGE	1	25.00	$8,944
4TS1	Place topsoil in USFS area from various stockpiles	TRUCK1	1	13.25	$16,862
4TS2	Place topsoil in private area from various stockpiles	TRUCK1	1	16.99	$28,851
4TW0	Purchase water for trees (maintenance)	NA	1	20.00	$8,290
4TW1	Water trees on USFS land	SITEMAINTENANCE	1	100.00	$2,400
4TW2	Water trees on private land	SITEMAINTENANCE	1	100.00	$2,924
4WC1	Weed Control	NA	1	40.00	$18,600
			SUBTOTALS:	**1319.33**	**$1,201,143**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$24,263
Performance bond:	1.05	Total =	$12,612
Job superintendent:	3,107.96	Total =	$246,368
Profit:	10.00	Total =	$120,114
		TOTAL O & P =	$403,357
		CONTRACT AMOUNT (direct + O & P) =	$1,604,500

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$500	Total =	$500
Engineering work and/or contract/bid preparation:	4.25	Total =	$68,191
Reclamation management and/or administration:	5.00		$80,225
CONTINGENCY:	3.00	Total =	$36,034
		TOTAL INDIRECT COST =	$588,308
		TOTAL BOND AMOUNT (direct + indirect) =	**$1,789,451**

DEMOLITION WORK

Task description: **Demo Maintenance Shop, Office & Outbuilding**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4010 State: Colorado Abbreviation: None
Date: 11/25/2024 County: El Paso Filename: 4010
User: HR1

Agency or organization name: DRMS

UNIT COSTS **Location adjustment: 93.10 %**

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Office	9' x 42' x 72'	Bldg. (SC) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	27,216.00	CF	$0.30	$8,151.19
Office Floor	0.33' x 42' x 72'	Demo. and on-site disposal in existing pit, 4 in. thick - Max. 200 ft. push	3,024.00	SF	$0.79	$2,395.61
Office Outbuilding	9' x 15' x 37'	Bldg. (SN) demo./on-site disposal in existing pit or cut - Max. 200 ft. push	4,995.00	CF	$0.24	$1,179.82
Office Outbuilding Floor	0.33' x 15' x 37'	Demo. and on-site disposal in existing pit, 4 in. thick - Max. 200 ft. push	555.00	SF	$0.79	$439.67

Job Hours: **40.00** **Subtotal (unadjusted)**: **$12,166.29** **Total Cost (adjusted for location)**: **$11,326.82**

Post-Mining Drainage Channel Construction (Ditches)

Task description: **Construct riprap ditches**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4CH0 State: Colorado Abbreviation: None
Date: 10/24/2024 County: El Paso Filename: 4CH0
User: HR1

Agency or organization name: DRMS

Channel	Length (ft)	Depth (ft)	Width (bottom) (ft)	Side Slopes (XH:1V)	Width (top) (ft)	Excavated Vol./LF (CY)	Excavated Vol. (total) (CY)
Upper South Channel	2,034	2.00	10.00	2.00	18.00	1.0370	2,109
C4 Channel	600	2.30	10.00	2.00	19.20	1.2437	746
Totals:	2,634						2,856

Riprap	Riprap Thickness (2xD50) (ft)	Perimeter, P (ft)	Area for Geotextile (excl. anchor trenches) (sf)	Riprap Vol. (CY)
	0.00	18.94	38,533	0
	1.00	20.29	12,172	451
Totals:			50,704	451

Materials Needed:

Geotextile (SY incl. 15% wastage): 6,479
Riprap (CY): 451
Excavation (CY): 2,856

Costs:

	Geotextile (SY):		Riprap (CY):		Excavation (CY):	
Material Costs:		$3.30		$34.50		$0.00
Labor Cost:		$0.32		$14.65		$2.84
Equipment Cost:		$0.00		$15.10		$2.39
Means Reference	31 32 1916 1510		31 37 1310 0100		31 23 1642 0310	

Totals:

Geotextile (SY): $23,453.51
Riprap (CY): $28,963.78
Excavation (CY): $14,934.56

Hours:

Geotextile (SY): 87.50 SY/HR 74.04
Riprap (CY): 7.75 CY/HR 58.17
Excavation (CY): 71.39

40.00 CY/HR

Total Post-Mining Channel Reconstruction hours:	**203.60**	Hours
Total Post-Mining Channel Reconstruction Cost:	**$67,352**	

TRUCK/LOADER TEAM WORK

Task description: **Load/Haul/Dump Lower Borrow Area Material**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4E20 State: Colorado Abbreviation: None
Date: 10/10/2024 County: El Paso Filename: M211-4E20
User: HR1

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 980H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	25	25
Ownership cost/hour:	$108.25	$69.00	NA	NA	$69.16	$51.70
Operating cost/hour:	$79.54	$60.57	NA	NA	$13.69	$12.56
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	NA	NA	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	NA	NA	$0.00	$0.00
Operator cost/hour:	$24.82	$56.84	NA	NA	$56.70	$0.00
Unit Subtotals:	$212.61	$186.41	NA	NA	$139.54	$64.26
Number of Units:	3	1	0	0	1	1
Group Subtotals:	Work: $824.24		Support: $0.00		Maint: $203.80	

Total work team cost/hour: **$1,028.04**

MATERIAL QUANTITIES

Initial volume: 46,500 CCY Swell factor: 1.250
Loose volume: **58,125** LCY

Source of estimated volume: SR3 Resp Tbl D-2w/25%swell; Haul dist google, maint 10%
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: 2,650 Pounds/LCY
Description: Decomposed rock - 25% Rock, 75% Earth
Rated Payload: 87,000 Pounds
Payload Capacity: 32.83 LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **30.94** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	0.825	Blasted rock - avg. blasted (75 - 90%) 0.825
Adjusted Capacity:	**6.188**	LCY

Job Condition Corrections: Site Altitude (ft.): 7200 feet

	Truck	Loader	Source
Altitude Adj:	0.960	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	**0.797**	**0.830**	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 5 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): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Bank or broken material 0.04	0.040	(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:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**2.140**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.625	Minutes
Truck Load Time:	2.140	Minutes	Adjusted for site altitude:	2.140	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.042	Minutes

Truck Travel (Haul & Return) 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	2000.00	12.00	3.00	15.00	634	3.226

Haul Time: **3.226** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	-12.00	3.00	-9.00	3706	0.580

Return Time: **0.580** minutes
Total Truck Cycle Time: **7.613** minutes

Loading Tool unit Production: 671.34 LCY/Hour — Adjusted for job efficiency: 557.21 LCY/Hour

Truck Unit Production: 243.84 LCY/Hour — Adjusted for job efficiency: 202.38 LCY/Hour

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

Adjusted hourly truck team production: 607.15 LCY/Hour
Adjusted single truck/loader team production: 557.21 LCY/Hour
Adjusted multiple truck/loader team production: **557.21** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) — Total job time: **104.31** Hours

Unit cost: $1.845 /LCY — Total job cost: **$107,239**

REVEGETATION WORK

Task description: **Install erosion control blankets on steep slopes**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4EP0 State: Colorado Abbreviation: None
Date: 10/16/2024 County: El Paso Filename: 4EP0
User: HR1

Agency 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
	$
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**
Polyprop. mesh, staples Material (MEANS 31 25 14.16 0200)	1.00	ACRE	$5,517.60	$5,517.60
Total Mulch Materials Cost/Acre				**$5,517.60**

Application

Description	**Cost /Acre**
Polypropylene Mesh, 100 SY per Roll, 4' wide, Stapled (no material) (MEANS)	$3,436.40
Total Mulch Application Cost/Acre	**$3,436.40**

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: 15

Estimated Failure Rate: 0%

*Selected Replanting Work Items: NONE

Cost /Acre: $8,954.00

Cost /Acre*: $0.00

Initial Job Cost: **$134,310.00**

Reseeding Job Cost: **$0.00**

Total Job Cost: **$134,310**

Job Hours: **100.00**

REVEGETATION WORK

Task description: **Apply Mulch on flatter slopes**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4EP1 State: Colorado Abbreviation: None
Date: 10/16/2024 County: El Paso Filename: 4EP1
User: HR1

Agency 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
	$
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
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$492.78	$985.56
Total Mulch Materials Cost/Acre				**$985.56**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$85.37
Power mulcher (MEANS 32 91 13.16 0350)	$157.25
Total Mulch Application Cost/Acre	**$242.63**

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: 15

Estimated Failure Rate: 0%

*Selected Replanting Work Items: NONE

Cost /Acre: $1,228.19

Cost /Acre*: $0.00

Initial Job Cost: **$18,422.85**

Reseeding Job Cost: **$0.00**

Total Job Cost: **$18,423**

Job Hours: **90.00**

REVEGETATION WORK

Task description: **Revegetate 32.18 USFS acres (excl. trees & mulch)**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4GF0 State: Colorado Abbreviation: None
Date: 10/10/2024 County: El Paso Filename: 4GF0
User: HR1

Agency 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**
Chisel plowing {DMG}	$102.41
Total Tilling Cost/Acre	**$102.41**

SEEDING

Seed Mix	**Rate – PLS LBS / Acre**	**Seeds per SQ. FT**	**Cost /Acre**
Arizona Fescue - Redondo	1.60	18.37	$24.10
Blue Grama - Native	0.20	3.26	$4.27
Indian Ricegrass - Native	3.00	9.71	$51.88
Canada Wildrye	6.80	17.95	$69.56
Little Bluestem - Native	1.60	9.55	$24.63
Nodding Brome	1.00	2.49	$21.48
Sideoats Grama - Vaughn	1.40	4.60	$34.43
Bottlebrush Squirreltail	4.60	20.28	$116.86
Rocky Mountain Fescue	0.40	6.43	$4.31
Slender Wheatgrass - San Luis	5.40	19.71	$32.60

Thickspike Wheatgrass - Critana	4.60	16.26	$37.48
Needle and Thread	3.80	10.03	$309.43
Needlegrass, Green - Lodorm	1.40	5.82	$12.10
Parry's Oatgrass	4.80	9.92	$123.50
Sunflower (or daisy), Oxe-eye	15.80	44.04	$628.26
Totals Seed Mix	56.40	198.41	**$1,494.88**

Application

Description	**Cost /Acre**
Hydro seeding (MEANS 32 92 19.14 0200)	$1,359.07
Total Seed Application Cost/Acre	**$1,359.07**

MULCHING and MISCELLANEOUS

Materials

Description	**Units / Acre**	**Unit**	**Cost / Unit**	**Cost /Acre**
Tackifier, >=10 acres {Materials Only}	1.00	ACRE	$1,459.26	$1,459.26
Total Mulch Materials Cost/Acre				**$1,459.26**

Application

Description	**Cost /Acre**
	$
Total Mulch Application Cost/Acre	**$0.00**

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: 32.18
Estimated Failure Rate: 35%
*Selected Replanting Work Items: SEEDING

Cost /Acre: $4,415.62
Cost /Acre*: $2,853.95

Initial Job Cost: **$142,094.65**
Reseeding Job Cost: **$32,144.04**
Total Job Cost: **$174,239**
Job Hours: **90.00**

REVEGETATION WORK

Task description: **Reveg. 106.92 private acres (excl. trees & mulch)**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4GP0 State: Colorado Abbreviation: None
Date: 10/10/2024 County: El Paso Filename: 4GP0
User: HR1

Agency 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
Chisel plowing {DMG}	$102.41
Total Tilling Cost/Acre	**$102.41**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Hachita	1.00	16.32	$28.65
Crested Wheatgrass - Ephraim	2.00	9.18	$10.98
Little Bluestem - Native	2.00	11.94	$30.78
Sideoats Grama - El Reno	4.00	13.13	$97.70
Russian Wildrye - Bozoisky	4.00	16.07	$44.30
Intermediate Wheatgrass - Oahe	8.00	17.08	$37.17
Alfalfa - Ranger (inoculated)	2.00	9.64	$7.74
Pubescent Wheatgrass - Greenleaf	8.00	16.53	$38.07
Mahogany, Mountain	4.00	5.42	$403.79
Western Wheatgrass - Arriba	8.00	20.20	$72.27

Rabbitbrush, Rubber	2.00	29.80	$166.80
Needlegrass, Green - Lodorm	2.00	8.31	$17.29
Totals Seed Mix	47.00	173.62	**$955.54**

Application

Description	Cost /Acre
Hydro seeding (MEANS 32 92 19.14 0200)	$1,359.07
Total Seed Application Cost/Acre	**$1,359.07**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Tackifier, >=10 acres {Materials Only}	1.00	ACRE	$1,459.26	$1,459.26
Total Mulch Materials Cost/Acre				**$1,459.26**

Application

Description	Cost /Acre
	$
Total Mulch Application Cost/Acre	**$0.00**

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: 106.92

Estimated Failure Rate: 35%

*Selected Replanting Work Items: SEEDING

Cost /Acre: $3,876.28

Cost /Acre*: $2,314.61

Initial Job Cost: **$414,451.86**

Reseeding Job Cost: **$86,617.34**

Total Job Cost: **$501,069**

Job Hours: **300.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **MOB / DEMOB**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4M00 State: Colorado Abbreviation: None
Date: 10/24/2024 County: El Paso Filename: 4M00
User: HR1

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:	$10.44	$22.18	$23.94
Operating Cost/Hour:	$26.48	$54.55	$55.65
Operator Cost/Hour:	$22.52	$22.52	$22.52
Helper Cost/Hour:	$0.00	$23.53	$23.53
Total Unit Cost/Hour:	$59.44	$122.78	$125.64

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 D9T - 9SU	60.01	$253.16	$125.64	2	$757.60	$251.28	$250.00
Cat 365C L 13'-7" Stick	77.56	$244.29	$125.64	1	$369.93	$125.64	$250.00
CAT 980H	33.12	$69.00	$122.78	1	$191.78	$122.78	$250.00
Power Mulcher (Bowie LD-90)	6.00	$27.21	$59.44	1	$86.65	$59.44	$250.00
CAT 12M	16.01	$69.16	$59.44	1	$128.60	$59.44	$250.00
Hydroseeder with Tractor	28.00	$45.21	$122.78	1	$167.99	$122.78	$250.00
Cat 740	36.49	$108.25	$122.78	1	$231.03	$122.78	$250.00
				Subtotals:	**$1,933.58**	**$864.14**	**$1,750.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	$13.77	2	$27.54	$27.54
Water Tanker, 5,000 Gal.	$101.92	1	$101.92	$101.92
		Subtotals:	**$129.46**	**$129.46**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	COLORADO SPRINGS	
Total one-way travel distance:	10.00	miles
Average Travel Speed:	40.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$28,101.82	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$64.73	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.25	0.25
Return Time (Hours):	0.25	0.25
Loading Time (Hours):	3.00	NA
Unloading Time (Hours):	3.00	NA
Subtotals:	6.50	0.50

JOB TIME AND COST

Total job time: **13.00** Hours

Total job cost: **$28,167**

MOTOR GRADER WORK

Task description: **Obliterate 5,000 ft of road**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #:	4RD1	State:	Colorado	Abbreviation:	None
Date:	11/25/2024	County:	El Paso	Filename:	4RD1
User:	HR1				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine:	CAT 12M	Horsepower:	158
Ripper Attachment:	Multi-Shank Ripper	Shift Basis:	1 per day
		Data Source:	(CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$69.16	NA
Operating Cost/Hour:	$54.74	100
Ripper Ownership Cost/Hour:	$3.06	NA
Ripper Operating Cost/Hour:	$2.73	100
Operator Cost/Hour:	$57.29	NA
Total Unit Cost/Hour:	$186.98	

Total Fleet Cost/Hour: **$186.98**

MATERIAL QUANTITIES

Total Area to be graded or ripped: 4.00 acres

Source of estimated acreage: ~5,000 ft of 35-ft wide road

HOURLY PRODUCTION

Average Grader Speed:	1.75	mph
Selected Application:	Ditch building/cleaning (0-3 mph) - 1.75	
Selected Blade Angle:	30	degrees
Effective Blade Length:	10.40	feet
Width of blade overlap per pass:	2.00	feet
Net grading or ripping width per pass:	8.40	feet
Unadjusted Hourly Unit Production:	1.7818	acres/hour

Job Condition Correction Factors

Site Altitude: 7200 feet

		Source
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.85	(1sh/d, mod.)
Net Correction:	0.8500	multiplier

Adjusted Hourly Unit Production:	1.5145	acres/Hour
Adjusted Hourly Fleet Production:	**1.5145**	acres/Hour

JOB TIME AND COST

Fleet size:	1	Grader(s)	Total job time:	**2.64**	Hours
Unit cost:	$123.46	per acre	Total job cost:	**$494**	

TRUCK/LOADER TEAM WORK

Task description: **Load/Haul/Dump 2500 tons of gravel for rip rap (main.)**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4RD2 State: Colorado Abbreviation: None
Date: 10/24/2024 County: El Paso Filename: 4RD2
User: HR1

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 980H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	100	25
Ownership cost/hour:	$108.25	$69.00	NA	NA	$69.16	$51.70
Operating cost/hour:	$79.54	$60.57	NA	NA	$54.74	$12.56
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	NA	NA	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	NA	NA	$0.00	$0.00
Operator cost/hour:	$24.82	$56.84	NA	NA	$56.70	$0.00
Unit Subtotals:	$212.61	$186.41	NA	NA	$180.60	$64.26
Number of Units:	3	1	0	0	1	1
Group Subtotals:	Work: $824.24		Support: $0.00		Maint: $244.86	

Total work team cost/hour: **$1,069.10**

MATERIAL QUANTITIES

Initial volume: 300 CCY Swell factor: 1.000
Loose volume: **300** LCY

Source of estimated volume: 2500T @ $15- p L-2; Haul distance Wksht#3, 15% maint.
Source of estimated swell factor: Cat Handbook
Material Purchase Cost: $18.75
Total Cost: $5,625.00

HOURLY PRODUCTION

Truck Capacity:

Truck Payload (weight) Basis:

Material weight: 2,550 Pounds/LCY
Description: Gravel - Dry
Rated Payload: 87,000 Pounds
Payload Capacity: 34.12 LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **26.25** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	0.875	Loose material - 1/2" to 3/4" (85 - 90%) 0.875
Adjusted Capacity:	**6.563**	LCY

Job Condition Corrections: Site Altitude (ft.): 7200 feet

	Truck	Loader	Source
Altitude Adj:	0.960	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	**0.797**	**0.830**	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 4 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): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Bank or broken material 0.04	0.040	(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:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**1.630**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.625	Minutes
Truck Load Time:	1.630	Minutes	Adjusted for site altitude:	1.630	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.042	Minutes

Truck Travel (Haul & Return) 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	2000.00	12.00	3.00	15.00	634	3.226

Haul Time: **3.226** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	-12.00	3.00	-9.00	3706	0.580

Return Time: **0.580** minutes
Total Truck Cycle Time: **7.103** minutes

Loading Tool unit Production 698.45 LCY/Hour — Adjusted for job efficiency: 579.71 LCY/Hour

Truck Unit Production 221.75 LCY/Hour — Adjusted for job efficiency: 184.05 LCY/Hour

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

Adjusted hourly truck team production: 552.15 LCY/Hour
Adjusted single truck/loader team production: 552.15 LCY/Hour
Adjusted multiple truck/loader team production: **552.15** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) — Total job time: **0.54** Hours

Unit cost: $1.936 /LCY — Total job cost: **$6,206**

REVEGETATION WORK

Task description: **Private area to be planted w/ shrubs**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4SP0 State: Colorado Abbreviation: None
Date: 10/10/2024 County: El Paso Filename: M211-4SP0
User: HR1

Agency 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
	$
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**
			$	$
Total Mulch Materials Cost/Acre				**$0.00**

Application

Description	**Cost /Acre**
	$
Total Mulch Application Cost/Acre	**$0.00**

NURSERY STOCK PLANTING

Common Name	**No / Acre**	**Type and Size**	**Planting Cost**	**Fertilizer Pellet Cost**	**Cost /Acre**
Mahogany, Mountain	168	Tubling, 3 cu. in. container (MEANS)	$1.28	$0.00	$215.04
Oak, Gambel's	168	Tubling, 3 cu. in. container (MEANS)	$1.28	$0.00	$215.04
Rose, Wood's	200	Tubling, 3 cu. in. container (MEANS)	$1.28	$0.00	$256.00
Totals Nursery Stock Cost / Acre					**$686.08**

JOB TIME AND COST

No. of Acres: 69.4
Estimated Failure Rate: 30%
*Selected Replanting Work Items: NURSERY

Cost /Acre: $686.08
Cost /Acre*: $686.08

Initial Job Cost: **$47,613.95**
Reseeding Job Cost: **$14,284.19**
Total Job Cost: **$61,898**
Job Hours: **40.00**

REVEGETATION WORK

Task description: **USFS area to be planted w/ trees & watered sep.**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4TF0 State: Colorado Abbreviation: None
Date: 10/10/2024 County: El Paso Filename: M211-4TF0
User: HR1

Agency 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
	$
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
			$	$
Total Mulch Materials Cost/Acre				**$0.00**

Application

Description	Cost /Acre
	$
Total Mulch Application Cost/Acre	**$0.00**

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Fir, Douglas	22	Bare root seedling, 11-16 inch ht. (MEANS)	$2.74	$0.00	$60.28
Pine, Lodgepole	21	Bare root seedling, 11-16 inch ht. (MEANS)	$2.74	$0.00	$57.54
Totals Nursery Stock Cost / Acre					**$117.82**

JOB TIME AND COST

No. of Acres: 32.18 Cost /Acre: $117.82
Estimated Failure Rate: 45% Cost /Acre*: $117.82
*Selected Replanting Work Items: NURSERY

Initial Job Cost: **$3,791.45**
Reseeding Job Cost: **$1,706.15**
Total Job Cost: **$5,498**
Job Hours: **20.00**

REVEGETATION WORK

Task description: **Private area to be planted w/ trees watered sep**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4TP0 State: Colorado Abbreviation: None
Date: 10/10/2024 County: El Paso Filename: M211-4TP0
User: HR1

Agency 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
	$
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
			$	$
Total Mulch Materials Cost/Acre				**$0.00**

Application

Description	Cost /Acre
	$
Total Mulch Application Cost/Acre	**$0.00**

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Juniper, Rocky Mountain	30	Bare root seedling, 11-16 inch ht. (MEANS)	$2.74	$0.00	$82.20
Pine, Pinyon	30	Bare root seedling, 11-16 inch ht. (MEANS)	$2.74	$0.00	$82.20
Totals Nursery Stock Cost / Acre					**$164.40**

JOB TIME AND COST

No. of Acres: 37.52 Cost /Acre: $164.40
Estimated Failure Rate: 45% Cost /Acre*: $164.40
*Selected Replanting Work Items: NURSERY

Initial Job Cost: **$6,168.29**
Reseeding Job Cost: **$2,775.73**
Total Job Cost: **$8,944**
Job Hours: **25.00**

TRUCK/LOADER TEAM WORK

Task description: **Place topsoil in USFS area from various stockpiles**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4TS1 State: Colorado Abbreviation: None
Date: 10/10/2024 County: El Paso Filename: M211-4TS1
User: HR1

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 980H
Support Equipment -Load Area:	NA
-Dump Area:	Cat D9T - 9SU
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	100	25	25
Ownership cost/hour:	$108.25	$69.00	NA	$253.16	$69.16	$51.70
Operating cost/hour:	$79.54	$60.57	NA	$164.35	$13.69	$12.56
%Utilization-riper:	NA	0	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:	$24.82	$56.84	NA	$40.04	$56.70	$0.00
Unit Subtotals:	$212.61	$186.41	NA	$457.55	$139.54	$64.26
Number of Units:	2	1	0	1	1	1
Group Subtotals:	Work: $611.63		Support: $457.55		Maint: $203.80	

Total work team cost/hour: **$1,272.98**

MATERIAL QUANTITIES

Initial volume: 7,500 CCY Swell factor: 1.000
Loose volume: **7,500** LCY

Source of estimated volume: 6 in over 19.31 Ac; Haul distance from Google Earth
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: 1,600 Pounds/LCY
Description: Top Soil
Rated Payload: 87,000 Pounds
Payload Capacity: 54.38 LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **24.75** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	**8.250**	LCY

Job Condition Corrections: Site Altitude (ft.): 7200 feet

	Truck	Loader	Source
Altitude Adj:	0.960	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	**0.797**	**0.830**	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 3 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): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Bank or broken material 0.04	0.040	(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:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**1.120**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.625	Minutes
Truck Load Time:	1.120	Minutes	Adjusted for site altitude:	1.120	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.042	Minutes

Truck Travel (Haul & Return) 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	1200.00	5.00	3.00	8.00	1123	1.190

Haul Time: **1.190** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	-5.00	3.00	-2.00	3706	0.377

Return Time: **0.377** minutes
Total Truck Cycle Time: **4.354** minutes

Loading Tool unit Production: 851.00 LCY/Hour — Adjusted for job efficiency: 706.33 LCY/Hour

Truck Unit Production: 341.09 LCY/Hour — Adjusted for job efficiency: 283.11 LCY/Hour

Optimal No. of Trucks: 2 Truck(s) — Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 566.21 LCY/Hour
Adjusted single truck/loader team production: 566.21 LCY/Hour
Adjusted multiple truck/loader team production: **566.21** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) — Total job time: **13.25** Hours

Unit cost: $2.248 /LCY — Total job cost: **$16,862**

TRUCK/LOADER TEAM WORK

Task description: **Place topsoil in private area from various stockpiles**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4TS2 State: Colorado Abbreviation: None
Date: 11/25/2024 County: El Paso Filename: 4TS2
User: HR1

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 740
-Loader:	CAT 980H
Support Equipment -Load Area:	NA
-Dump Area:	Cat D9T - 9SU
Road Maintenance –Motor Grader:	CAT 12M
-Water Truck:	Water Tanker, 5,000 Gal.

Cost Breakdown:	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	100	25	25
Ownership cost/hour:	$108.25	$69.00	NA	$253.16	$69.16	$51.70
Operating cost/hour:	$79.54	$60.57	NA	$164.35	$13.69	$12.56
%Utilization-riper:	NA	0	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:	$24.82	$56.84	NA	$40.04	$56.70	$0.00
Unit Subtotals:	$212.61	$186.41	NA	$457.55	$139.54	$64.26
Number of Units:	4	1	0	1	1	1
Group Subtotals:	Work:	$1,036.85	Support:	$457.55	Maint:	$203.80

Total work team cost/hour: **$1,698.20**

MATERIAL QUANTITIES

Initial volume: 12,000 CCY Swell factor: 1.000
Loose volume: **12,000** LCY

Source of estimated volume: 6 in over 118 Ac; Haul distance from Google Earth, maint. %
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: 1,600 Pounds/LCY
Description: Top Soil
Rated Payload: 87,000 Pounds
Payload Capacity: 54.38 LCY

Truck Bed (volume) Basis:

Struck Volume:	24.20	LCY
Heaped Volume:	31.40	LCY
Average Volume:	27.80	LCY
Adjusted Volume:	31.40	LCY

Final Truck Volume Based on Number of Loader Passes: **24.75** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	7.500	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	**8.250**	LCY

Job Condition Corrections: Site Altitude (ft.): 7200 feet

	Truck	Loader	Source
Altitude Adj:	0.960	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	**0.797**	**0.830**	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 3 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): 0.550 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Bank or broken material 0.04	0.040	(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:	-0.040	minutes
	Adjusted Loader Cycle Time:	**0.510**	minutes
	Net Load Time per Truck:	**1.120**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.625	Minutes
Truck Load Time:	1.120	Minutes	Adjusted for site altitude:	1.120	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.042	Minutes

Truck Travel (Haul & Return) 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	2000.00	10.00	3.00	13.00	708	2.888

Haul Time: **2.888** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	-10.00	3.00	-7.00	3706	0.580

Return Time: **0.580** minutes
Total Truck Cycle Time: **6.255** minutes

Loading Tool unit Production: 851.00 LCY/Hour — Adjusted for job efficiency: 706.33 LCY/Hour
Truck Unit Production: 237.42 LCY/Hour — Adjusted for job efficiency: 197.06 LCY/Hour

Optimal No. of Trucks: 4 Truck(s) — Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 788.24 LCY/Hour
Adjusted single truck/loader team production: 706.33 LCY/Hour
Adjusted multiple truck/loader team production: **706.33** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) — Total job time: **16.99** Hours

Unit cost: $2.404 /LCY — Total job cost: **$28,851**

SITE MAINTENANCE

Task description: **Water trees on private land**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4TW2 State: Colorado Abbreviation: None
Date: 10/10/2024 County: El Paso Filename: M211-4TW2
User: HR1

Agency or organization name: DRMS

UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Transport water to site	20.00	Water Tanker, 5,000 Gal.	12.00	EA	$130.15	$1,561.80
Small rig to transport water to seedlings	80.00	Light Duty Pickup, 4x4, 3/4 T.	25.00	EA	$42.00	$1,050.00

Job Hours: **100.00** **Total Cost**: **$2,611.80**

SITE MAINTENANCE

Task description: **Water trees on USFS land**

Site: **Pikeview Quarry** Permit Action: SR4 Permit/Job#: M1977211

PROJECT IDENTIFICATION

Task #: 4TW1 State: Colorado Abbreviation: None
Date: 10/10/2024 County: El Paso Filename: M211-4TW1
User: HR1

Agency or organization name: DRMS

UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Transport water to site	20.00	Water Tanker, 5,000 Gal.	10.00	EA	$130.15	$1,301.50
Small rig to transport water to seedlings	80.00	Light Duty Pickup, 4x4, 3/4 T.	20.00	EA	$42.00	$840.00

Job Hours: **100.00** **Total Cost**: **$2,141.50**