

December 28, 2020

Ms. Diana Furman GCC Rio Grande, Inc. 3372 Lime Road Pueblo, CO 81004

RE: Division's Financial Warranty Cost Estimate for the Pueblo Cement Plant and Limestone Quarry (M2002-004)

Dear Ms. Furman,

On November 10, 2020 the Division performed an inspection as part of the Division's Routine Monitoring Program of the Pueblo Cement Plant and Limestone Quarry. As part of the inspection the financial warranty for the permit was calculated. The Division used observations made during the inspection, correspondence with the operator, and details provided in various technical revisions and Amendment 1 during the cost estimate calculations.

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

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

Sincerely,

Patrick Lennberg

Environmental Protection Specialist

cc: Jared Ebert, DRMS

Diana Furman, GCC, Inc., dfurman@gcc.com ec:



COST SUMMARY WORK

Task description: Cost Summary

Pueblo Cement Plant and Permit Action:
Site: Limestone Quarry

PROJECT IDENTIFICATION

Permit Action: 2020 Inspection Permit/Job#: M2002004

Task #:000State:ColoradoAbbreviation:NoneDate:12/10/2020County:PuebloFilename:M004-000

User: JPL

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

| Task | | Form | Fleet | Task | |
|------|--|----------|-------|---------|-------------|
| Task | Description | Used | Size | Hours | Cost |
| 001 | Conveyor Belt Demo | DEMOLISH | 1 | 200.00 | \$281,318 |
| 002 | Grade Highwall to 4:1 | DOZER | 2 | 204.55 | \$142,383 |
| 003 | Arroyo Restoration | SCRAPER1 | 3 | 372.88 | \$1,069,702 |
| 004 | Arroyo Topsoil Placement | SCRAPER1 | 3 | 18.38 | \$52,728 |
| 005 | Rip Haul Roads and Conveyor Area | RIPPER | 2 | 40.05 | \$28,089 |
| 005a | Haul Road Conveyor Area Topsoil Placement | SCRAPER1 | 3 | 33.99 | \$97,509 |
| 006 | Pit Area Overburden/Topsoil Placement | SCRAPER1 | 3 | 21.58 | \$61,918 |
| 007 | Weed Management | REVEGE | 1 | 24.00 | \$37,016 |
| 008 | Revegetation Arroyo 27 ac and Affected Area 71 | REVEGE | 1 | 200.00 | \$152,745 |
| | ac | | | | |
| 009 | Mobilization/Demobilization | MOBILIZE | 1 | 9.12 | \$32,968 |
| 010 | Lube Truck | MISCTRUK | 1 | 100.00 | \$8,561 |
| 011 | Fuel Truck | MISCTRUK | 1 | 100.00 | \$8,419 |
| 012 | Construction Management Truck | MISCTRUK | 1 | 100.00 | \$8,603 |
| | | SUBTO | TALS: | 1424.55 | \$1,981,959 |

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02 Total = \$40,036 Performance bond: 1.05 Total = \$20,811 Job superintendent: 666.07 Total = \$46,325 Total = \$198,196 Profit: 10.00

TOTAL O & P = $\frac{$305,367}{$305,367}$

CONTRACT AMOUNT (direct + O & P) = $\sqrt{\$2,287,326}$

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Engineering work and/or contract/bid preparation: Reclamation management and/or administration: 5.00 Total = \$137,240

\$114,366

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$557,473

TOTAL BOND AMOUNT (direct + indirect) = \$2,539,432

DEMOLITION WORK

| | Task description | Co: | nveyor Belt Demo | | | | |
|--------------------|------------------------------|-----------------|--------------------------------|-----------------------------|----------------------|--------------|-------------------------|
| Site: | Pueblo Cemer Limestone Qu | | Permit Action: | 2020 Inspection | <u>n</u> Po | ermit/Job#: | M2002004 |
| PROJE | ECT IDENTIF | <u>ICATION</u> | | | | | |
| Task Dat Use | te: 12/10/2020 |) | State: Colorado County: Pueblo | | Abbreviati Filena | | 4-001 |
| | Agency | or organization | name: DRMS | | | | |
| <u>UNIT C</u> | | or organization | name: DRMS | | Location | n adjustmen | nt: 88.00 % |
| Strue | | Dimensions | Demolition Me Selection | enu Quant | | unit Cost | nt: 88.00 % Total Cost |
| D | OSTS cture or Item | | Demolition Me Selection | Quantition, 1,065,6 xisting | ity Unit | Unit | |

BULLDOZER WORK

| Task description: | Grade Highw | all to 4:1 | | | |
|---|---|-------------------------|----------------------------|-------------------------|--------------------|
| Pueblo Cement Pla te: Limestone Quarry | | Permit Action: | 2020 Inspection | Permit/Job | #: <u>M2002004</u> |
| PROJECT IDENTI | FICATION | | | | |
| Task #: 002 Date: 12/10/20 User: JPL | State | - | | Abbreviation: Filename: | None M004-002 |
| Agency or org | ganization name: | DRMS | | | |
| HOURLY EQUIPM | ENT COST | | | | |
| Basic Machine: Horsepower: Blade Type: Attachment: Shift Basis: | Cat D9T - 9SU 405 Semi-Universal 3-shank ripper I per day | | | | |
| | (CRG) | | <u> </u> | | |
| Cost Breakdown: Ownership Cost/Hou: Operating Cost/Hou: | | \$156.88 \$127.87 | Utilization % NA 100 | | |
| Ripper own Cost/Hou | n. | \$15.59 | NA | | |
| Ripper op. Cost/Hou | | \$7.67 | 75 | | |
| Operator Cost/Hou | r: | \$40.04 | NA | | |
| Swell factor: 1. | 79,059 430 56,054 LCY olume: HW 14 Cat Ha | J.670' long 29' andbook | height | | |
| Materials consistency | description: Roc | k, well ripped o | r blasted 0.8 | | |
| Average push gradient: Average site altitude: | -15 % 5,100 feet | | | | |
| Material weight: | 3,300 lbs/LCY | <u>-</u> | | | |
| Weight description: | | ock 75% Dools | 25% Forth | <u> </u> | |
| | Decomposed ro | UK - 13% KUCK | | | |
| Job Condition Correction | on ractor | | <u>Source</u> | | |

| Operator Skill: | 0.750 | (AVG.) |
|-----------------------|-------|---------------|
| Material consistency: | 0.800 | (CAT HB) |
| Dozing method: | 1.200 | (SLOT) |
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 1.000 | (DOZ-OC) |
| Push gradient: | 1.329 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 0.697 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.5536

Adjusted unit production:

625.90 LCY/hr

Adjusted fleet production:

1251.8 LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)

Unit cost: \$0.556/LCY

Total job time: 204.55 Hours

Total job cost: \$142,383

SCRAPER TEAM WORK

| Task description: | Arroyo R | estoratio | n | | | | | |
|---|---------------------------------------|-----------|----------------------|------------------|--------------------------------|--------------|-----------------|------------|
| Pueblo Cement P Limestone Quart | | Perm | it Action: | 2020 Inspecti | on P | Permit/Job#: | M20020 |)04 |
| PROJECT IDENT | <u>IFICATION</u> | | | | | | | |
| Task #: 003 Date: 12/10/ User: JPL | | | Colorado Pueblo | | | | one 1004-003 | |
| Agency or o | organization name | : DRM | IS | | | | | _ |
| HOURLY EQUIP | MENT_ | | | COSTS | Shift basis: 1 per | <u>day</u> | | |
| | | | Equipme | nt Description | | | | _ |
| | -; | Scraper: | | G w/push-pull | | | | _ |
| Suppor | rt Equipment -Loa | -Dozer: | NA NA | | | | | _ |
| Зиррог | | np Area: | NA | | | | | _ |
| Road Mai | ntenance -Motor | Grader: | CAT 14 | | | | | _ |
| | -Wate | r Truck: | Water 7 | Tanker, 10,000 G | ial. | | | _ |
| Cost Breakdown: | Scraper Wo | rk Team | | Support Equi | ipment | Mainte | enance Eq | uipment |
| | Scraper | Doz | er | Load Area | Dump Area | Motor Gra | | ater Truck |
| %Utilization-machine: | 100 | | NA | NA | NA | | 50 | 50 |
| Ownership cost/hour: | \$181.30 | | NA | NA | NA | \$65 | .89 | \$73.77 |
| Operating cost/hour: | \$203.87 | | NA | NA | NA | \$29 | .48 | \$54.50 |
| %Utilization-ripper: | NA | | NA | NA | NA | | 0 | NA |
| Ripper own. cost/hour: | NA | | NA | NA | NA | \$4 | .83 | \$0.00 |
| Ripper op. cost/hour: | NA | | NA | NA | NA | \$0 | 0.00 | \$0.00 |
| Operator cost/hour: | \$47.07 | | NA | NA | NA | \$46 | .87 | \$0.00 |
| Unit Subtotals: | \$432.24 | | NA | NA | NA | \$147 | .07 | \$128.26 |
| Number of Units: | 6 | | 0 | 0 | 0 | | 1 | 1 |
| Group Subtotals: | Work: | \$2,59 | 3.44 | Support: | \$0.00 | Mai | int: | \$275.33 |
| Total work team cost/ | | | | | | | | |
| Initial volume: | 883,710 | | CCY | Swell fact | tor: 1.125 | | | |
| Loose volume: | 994,174 | | LCY | | | | | |
| | rce of estimated wif estimated swell | | Table L- Cat Hand | | | | | _ _ |
| HOURLY PRODU | <u>ICTION</u> | | | g ~~ | | | | |
| | | | | • | Bowl (volume) Ba | | | |
| Material weight: Material description: | 2,650 lbs/LCY Decomposed ro 75% Earth | ck - 25% | Rock, | | Volume: 24.00 Volume: 34.00 | | LCY LCY | |
| Rated Payload: | 81.600 pounds | | | Average | Volume: 29.00 | | _ LCY | |

| Payload | d Capacity: | 30. | .79 LCY | • | | Adjusted Capa | city: | 29.00 | LCY |
|--|--|--------|---------|---------------------------------|---|---|------------------------------------|--------------------------------|---|
| | | | | | | | | | |
| Cycle Tin | ne: | | | | | | | | |
| | Loading Tin er and Sprea | | me: | | | 00 Minutes 60 Minutes | | | |
| Job Condi | ition Correct | tion: | | | | | | Site A | ltitude: 5100 feet |
| | | | | aper | Push Dozer | Sour | | | |
| | Altitude Ad | | | 000 | NA | (CAT I | | | |
| Jo | ob Efficienc | y: | 0.8 | 330 | NA | (CAT I | HB) | | |
| | | | | | | | | | |
| N | et Correctio | n: | 0.0 | 330 | NA | | | | |
| | | n: | 0.8 | 330 | NA | | | | |
| Travel Tir | me: | | | 1 | NA bilized, surfaced, | watered, mainta | ined 2. | <u>0</u> | |
| <u>Fravel Tir</u> F | <u>me:</u> Road Condit | | | <u> </u> | | watered, mainta | ined 2. | <u>0</u> | |
| <u>Fravel Tir</u> F | <u>me:</u> Road Condit | ion: | Hard, s | <u> </u> | | watered, mainta | ined 2. | _ | Travel Time |
| <u>Fravel Tir</u> F Haul Rout | <u>me:</u> Road Condit te: | ion: | Hard, s | mooth, sta | bilized, surfaced, | | | ocity | Travel Time (min) |
| <u>Fravel Tir</u> F Haul Rout | <u>me:</u> Road Condit te: | ion: | Hard, s | mooth, sta | bilized, surfaced, | Total Res | Velo | ocity n) | |
| Fravel Tir F Haul Rout Seg# | me: Road Condit te: Haul Dis | ion: | Hard, s | Grade | bilized, surfaced, Roll. Res (%) | Total Res | Velo (fpn 1477 | ocity n) | (min) |
| Travel Tir F Haul Rour Seg # | me: Road Condit te: Haul Dis | ion: | Hard, s | Grade | bilized, surfaced, Roll. Res (%) | Total Res (%) 6.00 | Velo (fpn 1477 | ocity 1) | (min) 1.09 |
| Fravel Tin F Haul Rout Seg # 1 Return Ro | me: Road Condit te: Haul Dis | ion: | Hard, s | Grade | bilized, surfaced, Roll. Res (%) | Total Res (%) 6.00 | Velo (fpn 1477 | ocity n) 7 1.09 | (min) 1.09 minutes Travel Time |
| Fravel Tir F Haul Rour Seg # | me: Road Condit te: Haul Dis 1500.00 | ion: | Hard, s | Grade (%) 4.00 | bilized, surfaced, Roll. Res (%) 2.00 | Total Res (%) 6.00 Haul Time | Velo (fpn 1477 | 1.09 | (min) 1.09 minutes |
| Fravel Tin F Haul Rout Seg # 1 Return Ro | me: Road Condit te: Haul Dis 1500.00 | ion: | Hard, s | Grade (%) 4.00 | Roll. Res (%) 2.00 Roll. Res | Total Res (%) 6.00 Haul Time | Velo | 1.09 | (min) 1.09 minutes Travel Time |
| Fravel Tir F Haul Rout Seg # 1 Return Ro Seg # | me: Road Condit te: Haul Dis 1500.00 Dute: Haul Dis | ion: | Hard, s | Grade (%) 4.00 Grade (%) | Roll. Res (%) 2.00 Roll. Res (%) | Total Res (%) 6.00 Haul Time Total Res (%) | Velo (fpn 1477 | 1.09 | minutes Travel Time (min) |
| Fravel Tin Faul Rout Seg # 1 Return Ro Seg # | me: Road Condit te: Haul Dis 1500.00 Dute: Haul Dis | ion: | Hard, s | Grade (%) 4.00 Grade (%) | Roll. Res (%) 2.00 Roll. Res (%) 2.00 | Total Res (%) 6.00 Haul Time Total Res (%) -2.00 | Velo (fpn 1477) : Velo (fpn 2977) | 1.09 | minutes Travel Time (min) 0.56 |
| Fravel Tir F Haul Rout Seg # 1 Return Ro Seg # | me: Road Condit te: Haul Dis 1500.00 Dute: Haul Dis | ion: | Hard, s | Grade (%) 4.00 Grade (%) | Bilized, surfaced, Roll. Res (%) 2.00 Roll. Res (%) 2.00 Total Scraper | Total Res (%) 6.00 Haul Time Total Res (%) -2.00 Return Time | Velo (fpn 1477): Velo (fpn 2977): | 1.09 0.56 | minutes Travel Time (min) 0.56 minutes |
| Fravel Tir F Haul Rout Seg # 1 Return Ro Seg # | me: Road Condit te: Haul Dis 1500.00 Dute: Haul Dis | ion: | Hard, s | Grade (%) 4.00 Grade (%) | Roll. Res (%) 2.00 Roll. Res (%) 2.00 Total Scraper Adjusted for | Total Res (%) 6.00 Haul Time Total Res (%) -2.00 Return Time team cycle time: | Velo (fpn 1477) | 1.09 1.09 0.56 3.25 888.74 | minutes Travel Time (min) 0.56 minutes minutes |
| Fravel Tir F Haul Rout Seg # 1 Return Ro Seg # | me: Road Condit te: Haul Dis 1500.00 Dute: Haul Dis | stance | Hard, s | Grade (%) 4.00 Grade (%) -4.00 | Roll. Res (%) 2.00 Roll. Res (%) 2.00 Total Scraper Adjusted for | Total Res (%) 6.00 Haul Time Total Res (%) -2.00 Return Time team cycle time: or job conditions: nber of Scrapers: | Velo (fpn 1477) | 1.09 1.09 0.56 3.25 888.74 | minutes Travel Time (min) 0.56 minutes LCY/Hour |

| rajusted mattiple scraper (| icam (nect) n | ourly produc |
|--|---------------|--------------|
| 3 | 1,070.77 | LCY/Hour |
| Optimal Number of Scrapers per push dozer: | | = |
| | | |

JOB TIME AND COST

Unit cost: \$1.076 /LCY Total job cost: \$1,069,702

SCRAPER TEAM WORK

| Task description: | Arroyo T | opsoil Pla | acement | | | | | |
|---|---|------------|----------------------|------------------|--------------------------------|-------------|--------------|------------|
| Pueblo Cement F Limestone Quart | | Perm | it Action: | 2020 Inspecti | on P | ermit/Job#: | M20020 | 04 |
| PROJECT IDENI | <u> TIFICATION</u> | | | | | | | |
| Task #: 004 | : | State: (| Colorado | | Abbre | viation: No | one | |
| Date: 12/11/ | | | Pueblo | | | | 004-004 | |
| User: JPL | | | | | | | | |
| Agency or o | organization name | : DRM | IS | | | | | |
| HOURLY EQUIP | MENT_ | | | COSTS | Shift basis: 1 per | <u>day</u> | | |
| | | | Equipme | nt Description | | | | |
| | | Scraper: | | G w/push-pull | | | | - |
| Commo | | -Dozer: | NA | | | | | - |
| Suppor | rt Equipment -Loa | nd Area: | NA NA | | | | | - |
| Road Mai | intenance – Motor | | CAT 14 | lM | | | | = |
| | -Water | r Truck: | Water 7 | Tanker, 10,000 G | al. | | | · - |
| Cost Breakdown: | Scraper Wo | rk Team | | Support Equi | ipment | Mainte | nance Equ | ipment |
| | Scraper | Doz | er | Load Area | Dump Area | Motor Grad | | ater Truck |
| %Utilization-machine: | 100 | | NA | NA | NA | | 50 | 50 |
| Ownership cost/hour: | \$181.30 | | NA | NA | NA | \$65. | | \$73.77 |
| Operating cost/hour: | \$203.87 | | NA | NA | NA | \$29. | | \$54.50 |
| %Utilization-ripper: | NA | | NA | NA | NA | | 0 | NA |
| Ripper own. cost/hour: | NA | | NA | NA | NA | \$4. | 83 | \$0.00 |
| Ripper op. cost/hour: | NA | | NA | NA | NA | \$0. | 00 | \$0.00 |
| Operator cost/hour: | \$47.07 | | NA | NA | NA | \$46. | 87 | \$0.00 |
| Unit Subtotals: | \$432.24 | | NA | NA | NA | \$147. | 07 | \$128.26 |
| Number of Units: | 6 | | 0 | 0 | 0 | | 1 | 1 |
| Group Subtotals: | Work: | \$2,59 | 3.44 | Support: | \$0.00 | Mai | nt: | \$275.33 |
| Total work team cost/ | | | | | | | | |
| Initial volume: | 43,560 | | CCY | Swell fact | tor: 1.125 | | | |
| Loose volume: | 49,005 | | LCY | | | | | |
| | rce of estimated vo of estimated swell | _ | Table L- Cat Hand | | | | | |
| HOURLY PRODU | JCTION | | | | | | | |
| | | | | Scraper B | owl (volume) Ba | sis: | | |
| Material weight: Material description: | 2,650 lbs/LCY Decomposed roo 75% Earth | ck - 25% | Rock, | | Volume: 24.00 Volume: 34.00 | | - LCY LCY | |
| Rated Payload: | | | | Average | Volume: 29.00 | | LCY | |

| Payloa | d Capacity: 30 |).79 LCY | · | | Adjusted Capac | city: 2 9 | 0.00 | LCY |
|----------------------------|---------------------------------|-----------|--------------|-------------------|--------------------|------------------|----------|-------------------|
| Cycle Tir | ne: | | | | | | | |
| | Loading Time: | | | | .00 Minutes | | | |
| | er and Spread Tition Correction | | | <u>0</u> | 0.60 Minutes | | Site Al | titude: 5100 feet |
| oo cona | | | aper | Push Dozer | Source | re | Site in | 11440. 2100 1001 |
| | Altitude Adj: | | 000 | NA | (CAT H | | | |
| J | ob Efficiency: | | 330 | NA | (CAT H | | | |
| N | let Correction: | 0.8 | 330 | NA | | | | |
| Travel Ti I Haul Rou | Road Condition: | Hard, s | mooth, stab | oilized, surfaced | , watered, maintai | ned 2.0 | | |
| Seg# | Haul Distan | ce (Ft) | Grade | Roll. Res | Total Res | Velocit | y | Travel Time |
| 1 | 1500.00 | | (%) | (%) | (%) | (fpm) | | (min) |
| 1 | 1500.00 | | 4.00 | 2.00 | 6.00 | 1477 | | 1.09 |
| | | | | | Haul Time: | 1 | .09 | minutes |
| Return Ro | | | | | | | | T |
| Seg# | Haul Distan | ce (Ft) | Grade (%) | Roll. Res | Total Res (%) | Velocit (fpm) | ·y | Travel Time (min) |
| 1 | 1500.00 | | -4.00 | 2.00 | -2.00 | 2972 | | 0.56 |
| | | | | | Return Time: | 0. | .56 | minutes |
| | | | | Total Scraper | team cycle time: | 3 | 3.25 | minutes |
| | | | | | or job conditions: | 88 | 38.74 | LCY/Hour |
| | | | | | mber of Scrapers: | | 2 | Scraper(s) |
| | | | | | ourly production: | | 88.74 | LCY/Hour |
| | Adj | usted mu | itiple scrap | er team (fleet) h | ourly production: | 2,6 | 666.22 | LCY/Hour |
| Optima | Unadjusted I Number of Scr | | | | LCY/Hour | | | |
| JOB TI | ME AND COS | <u>ST</u> | | | | | | |
| Flee | t size: | 3 | Team(s) | To | otal job time: | 18 | .38 | Hours |

Unit cost: \$1.076 /LCY Total job cost: \$52,728

SCRAPER TEAM WORK

| Task description: | Haul Roa | d Conveyor Aı | ea Topsoil Placen | nent | | |
|-------------------------------------|-------------------------|-------------------------------|---------------------|--------------------|--|--------------|
| Pueblo Cement P Limestone Quarr | | Permit Acti | on: 2020 Inspect | ion F | Permit/Job#: <u>M</u> 2 | 2002004 |
| PROJECT IDENT | <u>IFICATION</u> | | | | | |
| Task #: 005A Date: 12/11/ User: JPL | | State: Colora unty: Pueblo | | | viation: None months and Mode months and Mode months are months and months are months and months are months and months are months ar | -005a |
| Agency or o | rganization name | DRMS | | | | |
| HOURLY EQUIP | MENT_ | | COST | Shift basis: 1 per | day | |
| | | Equip | ment Description | | | |
| | | - | 637G w/push-pull | | | |
| Suppor | t Equipment -Loa | -Dozer: NA d Area: NA | | | | |
| Suppor | | p Area: NA | | | | |
| Road Mai | ntenance -Motor | Grader: CA | Γ 14M | | | |
| | -Water | Truck: Wat | er Tanker, 10,000 (| Gal. | | |
| Cost Breakdown: | Scraper Wo | rk Team | Support Equ | ipment | Maintenan | ce Equipment |
| | Scraper | Dozer | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | NA | . NA | NA | 50 | 50 |
| Ownership cost/hour: | \$181.30 | NA | NA | NA | \$65.89 | \$73.77 |
| Operating cost/hour: | \$203.87 | NA | NA | NA | \$29.48 | \$54.50 |
| % Utilization-ripper: | NA | NA | NA | NA | 0 | NA |
| Ripper own. cost/hour: | NA | NA | NA | NA | \$4.83 | \$0.00 |
| Ripper op. cost/hour: | NA | NA | . NA | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$47.07 | NA | NA | NA | \$46.87 | \$0.00 |
| Unit Subtotals: | \$432.24 | NA | NA | NA | \$147.07 | \$128.26 |
| Number of Units: | 6 | C | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$2,593.44 | Support: | \$0.00 | Maint: | \$275.33 |
| Total work team cost/ | hour: \$2,868.77 | | | | | |
| MATERIAL QUA | <u>NTITIES</u> | | | | | |
| Initial volume: | 94,514 | CCY | Swell fac | etor: 1.125 | | |
| Loose volume: | 106,328 | LCY | | | | |
| | ce of estimated vo | | ction Map, topsoil | 1' | | |
| Source o | f estimated swell | factor: Cat F | Iandbook | | | |
| HOURLY PRODU | <u>ICTION</u> | | | | | |
| | | | Scraper I | Bowl (volume) Ba | sis: | |
| Material weight: | 2,650 lbs/LCY | | Struck | Volume: 24.00 | I | .CY |
| Material description: | Decomposed roo | ck - 25% Rock, | | Volume: 34.00 | | .CY |
| Rated Payload: | 75% Earth | | | Volume: 29.00 | т | CV |

Payload Capacity: 30.79 LCY Adjusted Capacity: 29.00 LCY Cycle Time: Scraper Loading Time: 1.00 Minutes Maneuver and Spread Time: 0.60 Minutes Job Condition Correction: Site Altitude: 5100 feet Push Dozer Scraper Source Altitude Adj: 1.000 (CAT HB) NA Job Efficiency: 0.830 NA (CAT HB) Net Correction: 0.830 NA Travel Time: Road Condition: Hard, smooth, stabilized, surfaced, watered, maintained 2.0 Haul Route: Travel Time Seg# Haul Distance (Ft) Grade Roll. Res **Total Res** Velocity (min) (%)(%)(%) (fpm) 1477 1000.00 4.00 2.00 6.00 0.76 Haul Time: 0.76 minutes Return Route: Travel Time **Haul Distance (Ft)** Grade Roll. Res **Total Res** Velocity Seg# (min) (%)(%)(%)(fpm) 1000.00 0.41 -4.002.00 -2.002972 Return Time: minutes 0.41 Total Scraper team cycle time: 2.77 minutes Adjusted for job conditions: 1,042.74 LCY/Hour Selected Number of Scrapers: Scraper(s) 2 Adjusted single scraper team (unit) hourly production: 1,042.74 LCY/Hour

Adjusted multiple scraper team (fleet) hourly production: 3,128.23 LCY/Hour Unadjusted unit production/hour: 1,256.32 LCY/Hour Optimal Number of Scrapers per push dozer:

JOB TIME AND COST

| Fleet size: | 3 | Team(s) | Total job time: | 33.99 | Hours |
|-------------|---------|---------|-----------------|----------|-------|
| Unit cost: | \$0.917 | /LCY | Total job cost: | \$97,509 | |

BULLDOZER RIPPING WORK

| Duoblo Comon | | | | | |
|---|--|--|---|---|-----------|
| Site: Limestone Qu | at Plant and Permit Action | n: 2020 Inspec | ction | Permit/Job#: | M2002004 |
| | | 2020 Hisper | ction | remmi/joo#. | W12002004 |
| PROJECT IDE | NTIFICATION | | | | |
| Task #: 005 | | O | Abb | reviation: N | one |
| | 11/2020 County: Pueblo | |] | Filename: M | 004-005 |
| User: JPL | | | | | |
| Agency (| or organization name: DRMS | | | | |
| | IPMENT COST | | | | |
| ' | Machine: Cat D9T - 9SU | | Horsepower: | 405 | |
| Ripper Atta | | | Shift Basis: | 1 per d | |
| Ripper Atta | 5-Shank Ripper | | Data Source: | (CRC | |
| G . B . 1.1 | | | Butu Bource. | (CRC | ·/ |
| Cost Breakdown: | | | II.:1: | | |
| | Ownership Cost/Hour: | \$156.88 | Utilization % NA | | |
| | Operating Cost/Hour: | \$127.87 | 100 | _ | |
| Rinner | r Ownership Cost/Hour: | \$15.59 | NA | - | |
| | er Operating Cost/Hour: | \$10.23 | 100 | _ | |
| тарр | Operator Cost/Hour: | \$40.04 | NA | _ | |
| | Total Unit Cost/Hour: | \$350.60 | 1,12 | - | |
| | | 4000.00 | = | | |
| MATERIAL QU | | ected estimating | g method: Area | a | |
| Alternate Methods | <u>:</u> | | | | |
| mic: NA | Bank Volume | | BCY | | NA |
| rea: 58.60 | acres Rip Depth (ft) |): 1.00 | Volume: | 94,541 | BCY or |
| | Source of estimated quantity: Oper | ator Supplied M | Iap from Inspecti | on | |
| HOURLY PRO | Source of estimated quantity: Oper DUCTION Seismic Velocity: | ator Supplied M | Map from Inspecti | | |
| HOURLY PRO | DUCTION | | | | |
| HOURLY PRO | Seismic Velocity: Average Ripping Depth: | NA 2.63 | feet/sec | cond | |
| HOURLY PRO | Seismic Velocity: Average Ripping Depth: Average Ripping Width: | NA 2.63 7.67 | feet/sec | cond ss ss | |
| HOURLY PRO | Seismic Velocity: Average Ripping Depth: Average Ripping Width: Average Ripping Length: | NA 2.63 7.67 400.00 | feet/sec feet/pa: feet/pa: feet/pa: | cond ss ss ss | |
| HOURLY PRO | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: | NA 2.63 7.67 400.00 88.00 | feet/sec feet/pa: feet/pa: feet/pa: feet/mi | cond ss ss ss nute | |
| HOURLY PRO | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: | NA 2.63 7.67 400.00 88.00 0.25 | feet/sec feet/pa: feet/pa: feet/pa: feet/mi minute: | cond ss ss ss nute s/pass | |
| HOURLY PROSeismic: Area: | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: | NA 2.63 7.67 400.00 88.00 | feet/sec feet/pa: feet/pa: feet/pa: feet/mi | cond ss ss ss nute s/pass | |
| HOURLY PROSeismic: Area: Job Condition Corr | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: | NA 2.63 7.67 400.00 88.00 0.25 0.881 | feet/sec feet/pa: feet/pa: feet/pa: feet/mi minute: acres/h | cond ss ss ss nute s/pass our | |
| HOURLY PROSeismic: Area: Job Condition Corr | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rection Factors djusted Hourly Unit Production: | NA 2.63 7.67 400.00 88.00 0.25 0.881 | feet/sec feet/par feet/par feet/par feet/mi minuter acres/h | cond ss ss ss nute s/pass our | |
| HOURLY PROSeismic: Area: Job Condition Corr | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rection Factors djusted Hourly Unit Production: Site Altitude: | NA 2.63 7.67 400.00 88.00 0.25 0.881 0.881 5,100 | feet/sec feet/par feet/par feet/mi minuter acres/h Acres/l | cond ss ss ss nute s/pass our | |
| HOURLY PROSeismic: Area: Job Condition Corr | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rection Factors djusted Hourly Unit Production: Site Altitude: Altitude Adj: | NA 2.63 7.67 400.00 88.00 0.25 0.881 0.881 5,100 1.00 | feet/sec feet/par feet/par feet/par feet/mi minute acres/h Acres/l feet (CAT I | cond ss ss ss nute s/pass our HB) | |
| HOURLY PROSeismic: Area: Job Condition Corr | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rection Factors djusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: | NA 2.63 7.67 400.00 88.00 0.25 0.881 0.881 5,100 1.00 0.83 | feet/sec feet/pa: feet/pa: feet/pa: feet/mi minute: acres/h Acres/I feet (CAT I (1 shift) | cond ss ss ss ss nute s/pass our HB) /day) | |
| HOURLY PROSeismic: Area: Job Condition Corr | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rection Factors djusted Hourly Unit Production: Site Altitude: Altitude Adj: | NA 2.63 7.67 400.00 88.00 0.25 0.881 0.881 5,100 1.00 | feet/sec feet/par feet/par feet/par feet/mi minute acres/h Acres/l feet (CAT I | cond ss ss ss ss nute s/pass our HB) /day) | |
| HOURLY PROSeismic: Area: Job Condition Corr | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rection Factors djusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Production: | NA 2.63 7.67 400.00 88.00 0.25 0.881 5,100 1.00 0.83 0.83 0.83 | feet/sec feet/pa: feet/pa: feet/pa: feet/mi minute: acres/h Acres/l feet (CAT I (1 shift multipl Acres/hr | cond ss ss ss ss nute s/pass our HB) /day) | |
| HOURLY PRO Seismic: Area: Job Condition Corr Unac | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rection Factors djusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Production: Adjusted Hourly Unit Production: | NA 2.63 7.67 400.00 88.00 0.25 0.881 5,100 1.00 0.83 0.83 0.83 | feet/sec feet/par feet/par feet/par feet/mi minuter acres/h Acres/l feet (CAT I (1 shift multipl | cond ss ss ss ss nute s/pass our HB) /day) | |
| HOURLY PROSeismic: Area: Job Condition Corr | Average Ripping Depth: Average Ripping Width: Average Ripping Length: Average Ripping Length: Average Dozer Speed: Average Maneuver Time: Production per unit area: rection Factors djusted Hourly Unit Production: Site Altitude: Altitude Adj: Job Efficiency: Net Correction: Adjusted Hourly Unit Production: Adjusted Hourly Unit Production: | NA 2.63 7.67 400.00 88.00 0.25 0.881 5,100 1.00 0.83 0.83 0.83 | feet/sec feet/pa: feet/pa: feet/pa: feet/mi minute: acres/h Acres/l feet (CAT I (1 shift multipl Acres/hr | cond ss ss ss ss nute s/pass our HB) /day) | |

Unit cost: \$479.341 Per acre Total job cost: \$28,089

SCRAPER TEAM WORK

| Task description: | Pit Area (| Overburden/Top | soil Placement | | | |
|------------------------------------|-------------------------|--------------------------|-------------------|--------------------|--------------------------|--------------|
| Pueblo Cement P Limestone Quarr | | Permit Actio | n: _2020 Inspecti | on P | Permit/Job#: <u>M2</u> | 2002004 |
| PROJECT IDENT | <u>IFICATION</u> | | | | | |
| Task #: 006 Date: 12/11/ User: JPL | | State: Colorad Pueblo | О | | viation: None mane: M004 | -006 |
| Agency or o | rganization name | DRMS | | | | |
| HOURLY EQUIP | MENT_ | | COSTS | Shift basis: 1 per | <u>day</u> | |
| | | Equipn | nent Description | | | |
| | | • | 37G w/push-pull | | | |
| Suppor | t Equipment -Loa | -Dozer: NA d Area: NA | | | | |
| Бирроі | | p Area: NA | | | | |
| Road Mai | ntenance – Motor | | | ~ . | | |
| | -Water | Truck: Water | Tanker, 10,000 C | ial. | | |
| Cost Breakdown: | Scraper Wor | rk Team | Support Equ | ipment | Maintenand | ce Equipment |
| | Scraper | Dozer | Load Area | Dump Area | Motor Grader | Water Truck |
| %Utilization-machine: | 100 | NA | NA | NA | 50 | 50 |
| Ownership cost/hour: | \$181.30 | NA | NA | NA | \$65.89 | \$73.77 |
| Operating cost/hour: | \$203.87 | NA | NA | NA | \$29.48 | \$54.50 |
| %Utilization-ripper: | NA | NA | NA | NA | 0 | NA |
| Ripper own. cost/hour: | NA | NA | NA | NA | \$4.83 | \$0.00 |
| Ripper op. cost/hour: | NA | NA | NA | NA | \$0.00 | \$0.00 |
| Operator cost/hour: | \$47.07 | NA | NA | NA | \$46.87 | \$0.00 |
| Unit Subtotals: | \$432.24 | NA | NA | NA | \$147.07 | \$128.26 |
| Number of Units: | 6 | 0 | 0 | 0 | 1 | 1 |
| Group Subtotals: | Work: | \$2,593.44 | Support: | \$0.00 | Maint: | \$275.33 |
| Total work team cost/ | hour: \$2,868.77 | | | | | |
| MATERIAL QUA | NTITIES | | | | | |
| Initial volume: | 60,016 | CCY | Swell fac | tor: 1.125 | | |
| Loose volume: | 67,518 | LCY | | | | |
| Sour | ce of estimated vo | olume: Table I | 1 AM-01, Inspec | ction Map, 2'OB- | +1'TS | |
| Source o | f estimated swell | | ndbook | * : | | |
| HOURLY PRODU | <u>ICTION</u> | | | | | |
| | | | Scraper E | Bowl (volume) Ba | sis: | |
| Material weight: | 2,650 lbs/LCY | | Struck | Volume: 24.00 | I | .CY |
| Material description: | Decomposed roo | ck - 25% Rock, | Heaped | Volume: 34.00 | I | .CY |
| Rated Payload: | 75% Earth | | Avarosa | Volume: 29.00 | т | CV |

JOB TIME AND COST

Fleet size: 3 Team(s)

Unit cost: \$0.917 /LCY

| Payload | d Capacity: 30 |).79 LCY | 7 | | Adjusted Capac | eity: 29 | .00 | LCY |
|--|--|-------------------------------------|--|---|---|---|-------------------------------------|--|
| | <u>ne:</u> Loading Time: er and Spread Ti | ime: | | | . <u>.00</u> Minutes .60 Minutes | | | |
| | ition Correction: | | | <u></u> | | | Site Alt | itude: 5100 feet |
| | | = | aper | Push Dozer | Sourc | 'e | | |
| | Altitude Adj: | | 000 | NA | (CAT H | | | |
| Jo | ob Efficiency: | | 830 | NA | (CAT H | | | |
| N | let Correction: | 0.5 | 830 | NA | | | | |
| | L | 0.0 | 050 | 11/1 | | | | |
| ravel Tir | | | | | | | | |
| | | TTand a | | المحمولين المستانيا | | 0.01 | | |
| r | Road Condition: | Hard, s | smooth, sta | bilized, surfaced. | , watered, maintai | ned 2.0 | | |
| Iaul Rout | te: | | | | | | | (D) 1 (D) |
| | | | Grade | Roll. Res | Total Res | Velocit | y | Travel Time |
| Iaul Rout Seg# | te: Haul Distan | | Grade (%) | Roll. Res | Total Res | Velocit (fpm) | y | (min) |
| Iaul Rout | te: | | Grade | Roll. Res | Total Res (%) 6.00 | Velocit (fpm) 1477 | | (min) 0.76 |
| Haul Rout Seg# | te: Haul Distan | | Grade (%) | Roll. Res | Total Res | Velocit (fpm) 1477 | y 76 | (min) |
| Haul Rout Seg # | te: Haul Distant | | Grade (%) | Roll. Res | Total Res (%) 6.00 | Velocit (fpm) 1477 | | (min) 0.76 |
| Haul Rout Seg # | te: Haul Distant | ce (Ft) | Grade (%) | Roll. Res | Total Res (%) 6.00 | Velocit (fpm) 1477 0. Velocit | 76 | (min) 0.76 |
| Seg # | te: Haul Distance 1000.00 | ce (Ft) | Grade (%) 4.00 | Roll. Res (%) 2.00 | Total Res (%) 6.00 Haul Time: | Velocit (fpm) 1477 | 76 | (min) 0.76 minutes Travel Time |
| Haul Rout Seg # 1 Return Ro Seg # | te: Haul Distant 1000.00 | ce (Ft) | Grade (%) 4.00 | Roll. Res (%) 2.00 | Total Res (%) 6.00 Haul Time: Total Res (%) | Velocit (fpm) 1477 0. Velocit (fpm) 2972 | 76 | minutes Travel Time (min) |
| Seg # 1 Return Roseg # | te: Haul Distant 1000.00 | ce (Ft) | Grade (%) 4.00 | Roll. Res (%) 2.00 Roll. Res (%) 2.00 Total Scraper | Total Res (%) 6.00 Haul Time: Total Res (%) -2.00 Return Time: team cycle time: | Velocit (fpm) 1477 0. Velocit (fpm) 2972 0. | 76 y 41 | (min) 0.76 minutes Travel Time (min) 0.41 minutes minutes |
| Seg # 1 eturn Ro Seg # | te: Haul Distant 1000.00 | ce (Ft) | Grade (%) 4.00 | Roll. Res (%) 2.00 Roll. Res (%) 2.00 Total Scraper Adjusted for | Total Res (%) 6.00 Haul Time: Total Res (%) -2.00 Return Time: team cycle time: or job conditions: | Velocit (fpm) 1477 0. Velocit (fpm) 2972 0. | 76 y 41 2.77 42.74 | minutes Travel Time (min) 0.41 minutes minutes LCY/Hour |
| Seg # 1 Return Roseg # | Haul Distant 1000.00 Dute: Haul Distant 1000.00 | ce (Ft) | Grade (%) 4.00 Grade (%) -4.00 | Roll. Res (%) 2.00 Roll. Res (%) 2.00 Total Scraper Adjusted for Selected Nur | Total Res (%) 6.00 Haul Time: Total Res (%) -2.00 Return Time: team cycle time: or job conditions: mber of Scrapers: | Velocit (fpm) 1477 0. Velocit (fpm) 2972 0. 21,0 | 76 y 41 2.77 42.74 2 | minutes Travel Time (min) 0.41 minutes minutes LCY/Hour Scraper(s) |
| Seg # 1 Return Roseg # | te: Haul Distance 1000.00 Dute: Haul Distance 1000.00 | ce (Ft) | Grade (%) 4.00 Grade (%) -4.00 | Roll. Res (%) 2.00 Roll. Res (%) 2.00 Total Scraper Adjusted for Selected Number team (unit) here | Total Res (%) 6.00 Haul Time: Total Res (%) -2.00 Return Time: team cycle time: or job conditions: mber of Scrapers: ourly production: | Velocit (fpm) 1477 0. Velocit (fpm) 2972 0. 2, 1,0 | 76 y 41 2.77 42.74 2 42.74 | minutes Travel Time (min) 0.41 minutes minutes LCY/Hour Scraper(s) LCY/Hour |
| Haul Rout Seg # 1 Return Ro Seg # | te: Haul Distance 1000.00 Dute: Haul Distance 1000.00 | ce (Ft) | Grade (%) 4.00 Grade (%) -4.00 | Roll. Res (%) 2.00 Roll. Res (%) 2.00 Total Scraper Adjusted for Selected Number team (unit) here | Total Res (%) 6.00 Haul Time: Total Res (%) -2.00 Return Time: team cycle time: or job conditions: mber of Scrapers: | Velocit (fpm) 1477 0. Velocit (fpm) 2972 0. 2, 1,0 | 76 y 41 2.77 42.74 2 | minutes Travel Time (min) 0.41 minutes minutes LCY/Hour Scraper(s) |
| Aul Rour Seg # 1 Return Ro Seg # | te: Haul Distance 1000.00 Dute: Haul Distance 1000.00 | ce (Ft) ce (Ft) adjusted usted mu | Grade (%) 4.00 Grade (%) -4.00 single scraphtiple scraphuction/hou | Roll. Res (%) 2.00 Roll. Res (%) 2.00 Total Scraper Adjusted for Selected Number team (unit) here team (fleet) here: 1,256.32 | Total Res (%) 6.00 Haul Time: Total Res (%) -2.00 Return Time: team cycle time: or job conditions: mber of Scrapers: ourly production: | Velocit (fpm) 1477 0. Velocit (fpm) 2972 0. 2, 1,0 | 76 y 41 2.77 42.74 2 42.74 | minutes Travel Time (min) 0.41 minutes minutes LCY/Hour Scraper(s) LCY/Hour |

Total job time: 21.58 Hours

Total job cost: **\$61,918**

REVEGETATION WORK

| Task description: | Weed Managen | nent | | | | |
|---------------------------------------|--------------------|--------------------|------------------|--------------------------------|--|-------------------|
| Pueblo Cement Pla Limestone Quarry | nt and Pe | ermit Action: | 2020 Inspec | tion | Permit/Job# | : <u>M2002004</u> |
| PROJECT IDENTIE | FICATION | | | | | |
| Task #: 007 Date: 12/11/20 User: JPL | State: County: | Colorado Pueblo | | Ab | | None M004-007 |
| Agency or org | anization name:D | RMS | | | | |
| <u>FERTILIZING</u> | | | | | | |
| Materials | | | | | | |
| Description | | Un Ac | its / re Unit | Cos | st / Unit | Cost /Acre |
| | | | | \$ | | \$ |
| | | | | Tot | tal Fertilizer Materials Cost/Acre | \$0.00 |
| Application Description | | | | | | Cost /Acre |
| Description | | | | | | \$ |
| | | | Total Fertili | zer Applicatio | on Cost/Acre | \$0.00 |
| TILLING | | | | | | |
| Description | | | | | | Cost /Acre |
| Weed control spraying | ng (MEANS 31 31 16 | 5.13 3100) | | | | \$193.60 |
| | | | | Total Tillin | ng Cost/Acre | \$193.60 |
| <u>SEEDING</u> | | | | | | |
| Seed Mix | | | | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
| | | | | | | \$ |
| | | Т | otals Seed M | ix 0.00 | 0.00 | \$0.00 |
| Application | | | | | | I |
| Description | | | | | | Cost /Acre |

| Ī | | \$ |
|---|----------------------------------|--------|
| | | |
| | 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 |
|-------------|----------------------------------|---------------|------------------|---------------------------|------------|
| | | | | | \$ |
| | | | | | |
| | Totals Nursery Stock Cost / Acre | | | \$0.00 | |

JOB TIME AND COST

No. of Acres: 191.2 Cost /Acre: \$193.60 Estimated Failure Rate: 0% Cost /Acre*: \$0.00

*Selected Replanting Work Items: NONE

Initial Job Cost: \$37,016.32

Reseeding Job Cost: \$0.00

Total Job Cost: Job Hours: \$24.00

REVEGETATION WORK

Task description: Revegetation Arroyo 27 ac and Affected Area 71 ac

Pueblo Cement Plant and Permit Action:

Site: Limestone Quarry 2020 Inspection Permit/Job#: M2002004

PROJECT IDENTIFICATION

Task #:008State:ColoradoAbbreviation:NoneDate:12/11/2020County:PuebloFilename:M004-008

User: JPL

Agency or organization name: DRMS

FERTILIZING

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---------------------------|-----------------|-------|-------------------------------|------------|
| 5-10-10, 5-10-15, 6-12-12 | 100.00 | pound | \$0.21 | \$20.50 |
| | | | Total Fertilizer Materials | |
| | | | Cost/Acre | \$20.50 |

Application

| Description Tractor towed spreader (MEANS 32 01 90.13 0120) | | Cost /Acre \$37.03 |
|---|--|-----------------------|
| Tractor towed spreader (MEANS 32 01 90.13 0120) | Total Fertilizer Application Cost/Acre | \$37.03 \$37.03 |

TILLING

| Description | Cost /Acre |
|--|------------|
| Disc harrowing, 6" deep (MEANS 32 91 13.23 6100) | \$107.16 |
| Weed control spraying (MEANS 31 31 16.13 3100) | \$193.60 |
| | |
| Total Tilling Cost/Acre | \$300.76 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|------------------------------|--------------------------------|------------------------|------------|
| Switchgrass - Blackwell | 1.00 | 8.93 | \$11.50 |
| Blue Grama - Native | 1.00 | 16.32 | \$13.73 |
| Buffalograss - Native/Plains | 2.00 | 1.93 | \$24.13 |
| Sand Dropseed | 0.25 | 29.84 | \$2.44 |
| Little Bluestem - Native | 1.00 | 5.97 | \$13.57 |
| Sideoats Grama - Vaughn | 3.00 | 9.85 | \$25.13 |
| Western Wheatgrass - Native | 2.00 | 5.05 | \$12.00 |
| Prairie Junegrass | 0.25 | 13.29 | \$6.50 |

\$232.00

| | Totals Seed Mix | 10.50 | 91.18 | \$108.99 |
|----------------------------------|-----------------|-------|-------|------------|
| Application | | | | |
| Description | | | | Cost /Acre |
| Drill Seeding (DRMS Survey Cost) | | | | \$232.00 |

Total Seed Application Cost/Acre

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|---|-----------------|------|-------------|------------|
| Hay, delivered {MEANS 31 25 14.16 1200} | 2.00 | TON | \$301.00 | \$602.00 |
| | | | | |
| Total Mulch Materials Cost/Acre | | | | \$602.00 |

Application

| Description | | Cost /Acre |
|--|--|------------|
| Crimping, with tractor {DMG survey data} | | \$70.17 |
| Power mulcher (MEANS 32 91 13.16 0350) | | \$101.93 |
| | | |
| | Total Mulch Application Cost/Acre | \$172.10 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|-------------|--------------|---------------|------------------|---------------------------|------------|
| | | | | | \$ |
| | | | | | |
| | | Totals | Nursery Stoc | ek Cost / Acre | \$0.00 |

JOB TIME AND COST

No. of Acres: 98 Cost /Acre: \$1,473.38
Estimated Failure Rate: 25% Cost /Acre*: \$340.99

*Selected Replanting Work Items: SEEDING

Initial Job Cost: \$144,391.24

Reseeding Job Cost: \$8,354.26

Total Job Hours: \$152,745

200.00

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: Mobilization/Demobilization

Pueblo Cement Plant and Permit Action:

Site: Limestone Quarry 2020 Inspection Permit/Job#: M2002004

PROJECT IDENTIFICATION

Task #:009State:ColoradoAbbreviation:NoneDate:12/11/2020County:PuebloFilename:M004-009

User: JPL

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 | Weight/ | Owner ship | Haul Rig | Fleet | Haul Trip | Return Trip | DOT Permit |
|------------------|---------|---------------|-------------|-------|------------|----------------|-------------|
| Description | Unit | Cost/hr/ unit | Cost/hr/uni | Size | Cost/hr/ | Cost/hr/ fleet | Cost/ fleet |
| | (TONS) | | t | | fleet | | |
| Cat D9T - 9SU | 66.13 | \$172.47 | \$141.54 | 2 | \$628.02 | \$283.08 | \$500.00 |
| CAT 14M | 23.57 | \$70.72 | \$67.39 | 1 | \$138.11 | \$67.39 | \$250.00 |
| Cat 637G w/push- | 59.59 | \$181.30 | \$141.54 | 6 | \$1,937.04 | \$849.24 | \$1,000.00 |
| pull | | | | | | | |
| Water Tanker, | 41.10 | \$73.77 | \$123.81 | 1 | \$197.58 | \$123.81 | \$250.00 |
| 10,000 Gal. | | | | | | | |
| Drill/Broadcast | 25.00 | \$6.72 | \$67.39 | 2 | \$148.22 | \$134.78 | \$250.00 |
| Seeder with | | | | | | | |
| Tractor | | | | | | | |
| Power Mulcher | 6.00 | \$11.19 | \$67.39 | 1 | \$78.58 | \$67.39 | \$250.00 |
| (Bowie LD-90) | | | | | | | |

Subtotals: \$3,127.55 \$1,525.69 \$2,500.00

ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|--------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Light Duty Pickup, 4x4, 3/4 T. | \$13.23 | 1 | \$13.23 | \$13.23 |

Subtotals: \$13.23 \$13.23

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:

Total one-way travel distance:

Average Travel Speed:

PUEBLO

miles

55.00

mph

Total Non-Roadable Mob/Demob Cost *
 '* two round trips with haul rig:
 Total Roadable Mob/Demob Cost **
 ** one round trip, no haul rig:

\$4.81

Transportation Cycle Time:

| | Non- | |
|-------------------------|-----------|-----------|
| | Roadable | Roadable |
| | Equipment | Equipment |
| Haul Time (Hours): | 0.18 | 0.18 |
| Return Time (Hours): | 0.18 | 0.18 |
| Loading Time (Hours): | 2.10 | NA |
| Unloading Time (Hours): | 2.10 | NA |
| Subtotals: | 4.56 | 0.36 |
| | | |

JOB TIME AND COST

Total job cost: 9.13 Hours

Total job cost: \$32,968

MISCELLANEOUS TRUCK WORK

| Task description: | Lube Truck | | | |
|---|--------------------------------|--------------------|----------------------------|---------------------|
| Pueblo Cement Plant : Limestone Quarry | and Permit Action | 1: 2020 Inspection | Permit/Jol | o#: <u>M2002004</u> |
| PROJECT IDENTIFIC | <u>CATION</u> | | | |
| Task #: 010 Date: 12/11/2020 User: JPL | State: Colorado County: Pueblo |) | Abbreviation: Filename: | None M004-010 |
| Agency or organ | ization name: DRMS | | | |
| HOURLY EQUIPMEN | NT COST | | | |
| Make and Model: Attachment 1: Attachment 2: | Attachment 1: | | Horsepow Shift Ba | sis: 1 per day |
| Labor Unit 1: Labor Unit 2: | Fuel/Lube Truck Driver | | | (US Tons) |
| Cost Breakdown: | | | | |
| | | Utilization % | | |
| Ownership Cost/H | | NA | | |
| Operating Cost/H | | 100 | | |
| Operator Cost/F | | NA | | |
| Total Unit Cost/F | Hour: \$85.61 | | | |
| Total Fleet Cost/ | Hour: \$85.61 | | | |
| IOB TIME AND CO | <u>ost</u> | | | |
| Fleet size: 1 | Truck(s) | Total job time: | 100.00 | Hours |
| Unit cost: \$85. | .61 /Hour | Total job cost: | \$8,561 | |

MISCELLANEOUS TRUCK WORK

| Task description: | Fuel | Truck | | | |
|--|-----------------------------|--|-------------------------|------------------------------|---------------------|
| Pueblo Cement P Limestone Quarr | | Permit Actio | n: 2020 Inspection | Permit/Jol | b#: <u>M2002004</u> |
| PROJECT IDENT | <u> IFICATIO</u> | <u>DN</u> | | | |
| Task #: 011 Date: 12/11/ User: JPL | 2020 | State: Colorad Pueblo | do | Abbreviation: Filename: | None M004-011 |
| Agency or o | organization | name: DRMS | | | |
| HOURLY EQUIP | MENT CO | <u>ST</u> | | | |
| Make and Moc Attachment Attachment Labor Unit Labor Unit | t 1: t 2: t 1: Fuel/I | Tanker, 6x4, 210 HP Lube Truck Driver | | Horsepow Shift Ba Weig | sis: 1 per day |
| Cost Breakdown: | | | | | |
| Ownership C Operating C Operator C Total Unit C | ost/Hour: _ | \$14.71 \$30.58 \$38.91 \$84.19 | Utilization % NA 100 NA | | |
| Total Fleet C | _ | \$84.19 | _ | | |
| JOB TIME AND | COST | | | | |
| Fleet size: | 1 | Truck(s) | Total job time: | 100.00 | Hours |
| Unit cost: | \$84.19 | /Hour | Total job cost: | \$8,419 | |

MISCELLANEOUS TRUCK WORK

| 7 | Task description: | Construction Managemen | ntTruck | | |
|------------|---|---|-------------------------|------------------------------|---------------------|
| Site: | Pueblo Cement Plant a Limestone Quarry | Permit Actio | n: 2020 Inspection | Permit/Jol | b#: <u>M2002004</u> |
| <u>P</u>] | ROJECT IDENTIFIC | <u>ATION</u> | | | |
| | Task #: 012 Date: 12/16/2020 User: JPL Agency or organiz | State: Colorad County: Pueblo zation name: DRMS | <u>o</u> | Abbreviation: Filename: | None M004-012 |
| <u>H</u> | OURLY EQUIPMEN | T COST | | | |
| | Attachment 1: | Light Duty Pickup, 4x4, 3/4 Foreman | Т. | Horsepow Shift Ba Weig | sis: 1 per day |
| <u>C</u> | ost Breakdown: | | | | |
| T/ | Ownership Cost/Ho Operating Cost/Ho Operator Cost/Ho Total Unit Cost/Ho Total Fleet Cost/Ho | our: \$8.39 our: \$72.80 our: \$86.03 our: \$86.03 | Utilization % NA 100 NA | | |
| <u> 1(</u> | | | m . 1 . 1 | 100.00 | 11 |
| | Fleet size: 1 | Truck(s) | Total job time: | 100.00 | Hours |
| | Unit cost: \$86.0 | /Hour | Total job cost: | \$8,603 | |