

**Government Estimate
of
Reasonable Modification Costs**

Lake Pontchartrain, LA and Vicinity, HLP,
London Avenue Outfall Canal, Parallel Protection,
Mirabeau Avenue to Leon C. Simon Blvd. Floodwall,
Orleans Parish, LA

DACW29-94-C-0079

CIN 05: Close Gaps to Elevation 11.5 on West Side of Canal
and Sta. 109+53 to Sta. 108+37
Definitization of UCO-01

Original
JE

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS
FOOT OF PRYTANIA STREET
NEW ORLEANS, LOUISIANA

COMMANDER: Kenneth H. Clow, Colonel, CE

DATE OF ESTIMATE: 14 August 1995

ESTIMATOR: Donna Urban

**FOR OFFICIAL
USE ONLY**

REASONABLE CONTRACT ESTIMATE WORKSHEET

PROJECT: Contract No. DACW29-94-C-0079, Lake Pontchartrain, Louisiana and Vicinity,
High Level Plan, London Ave. Outfall Canal, Parallel Protection,
Mirabeau Avenue to Leon C. Simon Blvd. Floodwall, Orleans Parish, LA

SUBJECT: Emergency Flood Closures - Close Gaps to Elevation 11.5 on West Side of Canal
and Sta. 109+53 to Sta. 108+37, Definitization of UCO-01

Plan of Operations

This modification provides for the installation and removal of emergency closures on the west side of the canal in the vicinity of Robert E. Lee Blvd. and from sta. 109+53 to sta. 108+37 due to Hurricane Erin.

Commencing on July 31, 1995, the following work was performed in preparation of Hurricane Erin.

INSTALLATION

- Pulled up new sheet piles in the vicinity of WB/L Sta. 119+65± up to Elev. +11.5' from Elev. +5.75' (7/31/95)
- Pulled up 6 pieces of new sheet pile between WB/L Stas. 108+93 and 108+82 to an elevation of +11.5' from Elev. +5.75' (7/31/95)
- Knocked down the existing concrete cap from between WB/L Stas. 108+10 and 108+45 because these piles were already cut at Elev. +6.75'. (7/31/95)
- Pulled up 22 pieces of CZ-101 x 21'-9" pile, up to Elev. +11.5', between WB/L Stas. 108+40 and 108+82. (8/1/95)
- Attached 1-3"x3" angle iron with rubber seal to W. Monolith #134 (WB/L Sta. 108+95) with anchor bolts (12" O.C.) (8/1/95)
- Drove 2 pieces of CZ-101x 21'-9" piles between existing piles and new piles to make closure at WB/L Sta. 108+40. (8/1/95)
- Partially welded 1 - 3"x3" angle iron to sheet piles at WB/L Sta. 109+63. (8/1/95)
- Pulled up 15 pieces of CZ-101 x 21'-9" between W. Monoliths #134 and #136 to approximate Elev. +11.0'. (8/1/95)

Plan of Operations (Continued)

INSTALLATION (Continued)

- Completed closure between new I-Wall and old concrete cap in vicinity of WB/L Sta. 119+65±. (8/1/95)
- Sandbagged on protected side of closure at WB/L Sta. 119+65± to Elev. +6.5'. (8/1/95)
- Welded up holes in sheet pile that were previously cut out for resteel installation. (8/1/95)
- Welded sheet piles to angle irons at closure tie-ins. (8/1/95)
- Installed 2 - 3" angle irons with rubber seals (1 at 109+24 and 1 at 109+53). (8/2/95)
- Welded 100% angle iron to sheet pile at WB/L Sta. 108+95. (8/2/95)
- Pulled up 15 pieces of CZ-101 piles to Elev. +11.5' between WB/L Sta. 109+24 to 109+53. (8/2/95)
- Placed visqueen and sandbags at all tie-ins. (8/2/95)

REMOVAL

Commencing on August 4, 1995, the following work was performed after being directed by the Area Engineer to remove the gap closure:

- Removed the breach closures between WB/L stas. 108+40 and 109+53. (8/4/95)
- Removed 1 foot of backfilled material from protected side of sheet piles between WB/L stas. 108+40 and 108+95 and 109+24 and 109+53. (8/4/95)
- Redrove 46 pieces of CZ-101 x 21'-9" pile to a top Elev. +5.75' from +11.5'. (8/4/95)
- Removed sandbags and visqueen from WB/L Stas. 109+53, 109+24, 108+95 and 108+40±. (8/4/95)
- Removed plugs to cover resteel holes in sheet piles. (8/4/95)
- Replaced all resteel and rewelded #6 rebars to the tops of sheet piles for west monoliths #132, #133 and #135 for cathodic protection. (8/7/95)

Plan of Operations (Continued)

REMOVAL (Continued)

- Reshot correct elevations for permanent sheet piles that were redriven to final grade of +5.75', between WB/L stas. 108+40 to 109+53. (8/8/95)

Labor & Equipment

When preparing the Government estimate, it was determined that in some instances the labor hours exceeded the equipment hours. In these instances, the difference in the hours between the labor and equipment was expended filling sandbags.

Remaining Work

- In the vicinity of sta. 119+65, welds and angle irons will be removed, and sheet piles will be redriven to Elev. +5.75'

Reasonable Contract Estimate

Project: DACW29-94-C-0079, CIN 05

Description: Close Gaps to Elev. 11.5 on West Side of Canal and Sta. 109+53 to Sta. 108+37

| Worksheet no. | Description | Estimated Quantity | Unit | Unit Price | Estimated Amount |
|---------------|--|--------------------|------|-------------|--------------------|
| 1 | Emergency Flood Protection | 1 | LS | \$15,915.11 | \$15,915.11 |
| 2 | Redrive piling, remove welds and angle iron at Sta. 119+65 | 1 | LS | \$917.50 | \$917.50 |
| 3 | FOOH | 3 | DAY | \$925.28 | \$2,775.84 |
| Total: | | | | | \$19,608.45 |

Donna M. Urban
 DONNA M. URBAN
 CIVIL ENGINEERING TECHNICIAN

Estimator: DMU *DMU* Date: *8/23/95*
 Checker: JM *JM* Date:

Reasonable Contract Estimate - Detail Summary Sheet:

Prime Contractor

Project:
 DACW29-94-C-0079, CIN 05
 Close Gaps to Elev. 11.5 on West Side of Canal and Sta. 109+53 to Sta. 108+37

| Bid Item | | Qty | Unit | Equip | Mob & Demob | Labor | Mat'ls | Supply | Sub Total | Dist 19.96% | Total Cost | Unit Cost | Amount |
|---|--|--------|------|------------|-------------|------------|------------|----------|-------------|-------------|-------------|-------------|-------------|
| Designation | | | | | | | | | | | | | |
| Emergency Flood Protection | | 1 | LS | \$3,595.53 | | \$7,753.18 | \$1,260.78 | \$657.50 | \$13,266.99 | \$2,648.12 | \$15,915.11 | \$15,915.11 | \$15,915.11 |
| Redrive piling, remove welds and angle iron at Sta. 119 | | 1 | LS | \$392.42 | | \$372.42 | | | \$764.84 | \$152.66 | \$917.50 | \$917.50 | \$917.50 |
| FOOH | | 3 | DAY | | | | | | \$771.32 | \$153.96 | \$925.28 | \$925.28 | \$2,775.84 |
| Overhead | | 10.00% | | | | | | | | | | | |
| Profit | | 7.98% | | | | | | | | | | | |
| Bond | | 1.00% | | | | | | | | | | | |
| Total: | | 19.96% | | | | | | | | | | | |
| Totals | | | | \$3,987.95 | | \$8,125.60 | \$1,260.78 | \$657.50 | \$14,803.15 | \$2,954.74 | \$17,757.89 | | \$19,608.45 |

Reasonable Contract Estimate Worksheet - Equipment and Labor

Project:

DACW29-94-C-0079, CIN 05

Close Gaps to Elev. 11.5 on West Side of Canal and Sta. 109+53 to Sta. 10

| Unit of Equipment | No. | Hours | Rate | Amount |
|--|--------------|--------------|-------------------|------------------|
| Mantis 3612 Crane (Rented)(\$6,540/month) | 1 | 24 | 37.16 | 891.84 |
| Komatsu 200 Backhoe | 1 | 30 | 34.87 | 1,046.10 |
| MKT Geotechnical V-5 Vibratory Hammer w/power pack | 1 | 17 | 26.94 | 457.98 |
| Case 580C loader/backhoe | 1 | 22 | 10.93 | 240.46 |
| Tractor/Trailer (Lowboy), 35 ton, 2 axle | 1 | 8 | 4.55 | 36.40 |
| Multi Quip 170 amp Welder | 1 | 25.5 | 1.56 | 39.78 |
| Komatsu D37P Dozer | 1 | 13 | 16.25 | 211.25 |
| Blade for Komatsu D37P | 1 | 13 | 2.19 | 28.47 |
| Truck, International, 50,000 GVW, 3 axle, 240 hp | 1 | 8.4 | 25.37 | 101.48 |
| Koehring 535 Crane | 1 | 4 | 35.11 | 140.45 |
| Standby | | | | |
| Case 580C loader/backhoe | 1 | 2 | 2.93 | 5.86 |
| Komatsu D37P Dozer | 1 | 2 | 3.90 | 7.80 |
| Koehring 535 - | 1 | 16 | 14.47 | |
| <i>Operating Costs</i> | | 24 | 24.30 | |
| <i>Mantis</i> | | 25.5 | 1.45 | |
| <i>Welder</i> | | | | |
| Subtotal: | | | | 3,207.87 |
| Mobilization and Demobilization: | | | | |
| Small Tools: | | | | 387.66 |
| Total Equipment Cost: | | | | 3,595.53 |
| Labor | No. | Hours | Rate | Amount |
| Carpenter Foreman | 1 | 29 | 22.92 | 664.81 |
| PEO Dozer & Backhoe (KOMATSU) | 1 | 26 | 20.46 | 531.95 |
| Truck Driver | 1 | 8 | 15.95 | 127.60 |
| PEO Crane | 1 | 30 | 23.20 | 696.00 |
| PEO Crane (Overtime) | 1 | 3 | 34.80 | 104.40 |
| Cement Finisher | 1 | 12 | 21.61 | 259.26 |
| Cement Finisher (Overtime) | 1 | 2.5 | 32.41 | 81.03 |
| Laborer | 1 | 24 | 15.95 | 382.80 |
| Laborer | 1 | 26 | 11.60 | 301.60 |
| Laborer | 1 | 20 | 11.60 | 232.00 |
| Laborer (Overtime) | 2 | 2.5 | 17.00 | 85.00 |
| Laborer | 1 | 22 | 10.93 | 240.53 |
| Laborer (Overtime) | 1 | 1.5 | 16.40 | 24.60 |
| Laborer | 1 | 31 | 11.60 | 359.60 |
| Laborer (Overtime) | 1 | 0.5 | 16.40 | 8.20 |
| Carpenter | 2 | 28 | 21.47 | 1,202.57 |
| Carpenter (Overtime) | 2 | 5.5 | 32.20 | 354.20 |
| PEO Backhoe (CASE 580C) | 1 | 26 | 15.04 | 390.95 |
| PEO Backhoe (Overtime) | 1 | 3.5 | 22.55 | 78.93 |
| Carpenter | 1 | 26 | 21.47 | 558.34 |
| Carpenter (Overtime) | 1 | 5.5 | 32.22 | 177.21 |
| Cement Finisher | 1 | 14 | 21.61 | 302.47 |
| Cement Finisher (Overtime) | 1 | 1 | 32.41 | 32.41 |
| Iron Worker Foreman | 1 | 6 | 36.25 | 217.50 |
| Iron Worker | 2 | 6 | 22.87 | 274.40 |
| PEO Pile Driver | 1 | 2 | 21.47 | 42.95 |
| Laborer | 1 | 2 | 10.93 | 21.87 |
| Total Labor Cost: | | | | 7,753.18 |
| Total equipment and labor: | | | | 11,348.71 |
| Remarks: | Date: | 14 Aug 95 | Estimator: | DMU |
| | | | Checker: | JM |

DACW29-94-C-0079, CIN 05
 LABOR & EQUIPMENT HOURS

LABOR

| | 7/31/95 | 8/1/95 | 8/2/95 | 8/3/95 | 8/4/95 | 8/7/95 | 8/8/95 | TOTAL HOURS |
|-------------------------------------|---------|--------|--------|--------|--------|--------|--------|-------------|
| Supt.(Tassin) (SALARIED) | 4 | 11 | 11 | 2 | 6 | 4 | 2 | 40 |
| CQC (Justice) (SALARIED) | 4 | 9 | 5.5 | 2 | 6 | 0 | 2 | 28.5 |
| Carp. Foreman (Verdun) | 0 | 11 | 7 | 2 | 6 | 3 | 0 | 29 |
| Operator (Backhoe, Dozer) (Comeaux) | 4 | 8 | 0 | 0 | 6 | 6 | 2 | 26 |
| Truck Driver (Harper) | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 8 |
| Operator (Crane) (Leonard) | 4 | 8 | 7 | 2 | 6 | 3 | 0 | 30 |
| Cement Finisher (Lee) | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 12 |
| Labor (8.00) (Jackson) | 4 | 8 | 0 | 2 | 6 | 6 | 0 | 26 |
| Labor (11.00) (Thorne) | 4 | 8 | 4 | 2 | 6 | 0 | 0 | 24 |
| Labor (8.00) (Dillon) | 4 | 8 | 0 | 2 | 6 | 0 | 0 | 20 |
| Carpenter (Brown) | 4 | 8 | 8 | 2 | 6 | 0 | 0 | 28 |
| Carpenter (Turgeau) | 4 | 8 | 8 | 2 | 6 | 0 | 0 | 28 |
| Labor (7.54) (Thompson) | 4 | 8 | 8 | 2 | 0 | 0 | 0 | 22 |
| Labor (7.54) (Bailey) | 4 | 8 | 8 | 2 | 6 | 3 | 0 | 31 |
| Operator (Backhoe) (Audibert) | 4 | 8 | 8 | 0 | 6 | 0 | 0 | 26 |
| Cement Finisher (Jones) | 4 | 8 | 0 | 2 | 0 | 0 | 0 | 14 |
| Carpenter (Delaune) | 4 | 8 | 8 | 0 | 6 | 0 | 0 | 26 |
| Ironworker Foreman (J. Dunnam) | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 6 |
| Iron Worker (C. Dunnam) | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 6 |
| Iron Worker (M. Dunnam) | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 6 |
| Pile Driver (Thibodaux) | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Labor (7.54) (Rodi) | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Operator (Crane) (Audibert) | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |

OVERTIME

| | 7/31/95 | 8/1/95 | TOTAL HOURS |
|-------------------------------|---------|--------|-------------|
| Operator (Crane) (Leonard) | 3 | 0 | 3 |
| Cement Finisher (Lee) | 2.5 | 0 | 2.5 |
| Labor (8.00) (Jackson) | 2.5 | 0 | 2.5 |
| Labor (8.00) (Dillon) | 2.5 | 0 | 2.5 |
| Carpenter (Brown) | 2.5 | 3 | 5.5 |
| Carpenter (Turgeau) | 2.5 | 3 | 5.5 |
| Labor (7.54) (Thompson) | 0.5 | 1 | 1.5 |
| Labor (7.54) (Bailey) | 0.5 | 0 | 0.5 |
| Operator (Backhoe) (Audibert) | 1 | 2.5 | 3.5 |
| Cement Finisher (Jones) | 1 | 0 | 1 |
| Carpenter (Delaune) | 2.5 | 3 | 5.5 |

EQUIPMENT

| | 7/31/95 | 8/1/95 | 8/2/95 | 8/3/95 | 8/4/95 | 8/7/95 | 8/8/95 | TOTAL | STANDBY |
|--|---------|--------|--------|--------|--------|--------|--------|-------|---------|
| Mantis 3612 Crane (Rented) | 4 | 8 | 5 | 0 | 6 | 1 | 0 | 24 | 0 |
| Komatsu 200 Backhoe (#1) | 4 | 8 | 6 | 2 | 5 | 2 | 2 | 29 | 0 |
| MKT V-5 Vibratory Hammer w/ Power Pack | 4 | 4 | 3 | 0 | 6 | 0 | 0 | 17 | 0 |
| Case 580C Loader/Backhoe | 2 | 4 | 8 | 2 | 5 | 1 | 0 | 22 | 2 |
| Komatsu D37P Dozer | 2 | 4 | 4 | 0 | 3 | 0 | 0 | 13 | 2 |
| Tractor/Trailer (Lowboy) | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 8 | 0 |
| Multi-Quip 170 amp Welder | 4 | 10.5 | 11 | 0 | 0 | 0 | 0 | 25.5 | 0 |
| Komatsu 200 Backhoe (#2) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |

Reasonable Contract Estimate Worksheet - Material and Supplies

Project:
 DACW29-94-C-0079, CIN 05
 Close Gaps to Elev. 11.5 on West Side of Canal and Sta. 109+53 to Sta. 108+37

| Material | Unit | Quantity | Price | Amount |
|---|--------------|-----------------------|-------------------|-----------------|
| Sandbags | EA | 500 | 0.23 | 115.00 |
| Sand (Mason) | CY | 25 | 20.00 | 500.00 |
| Visqueen (20' X 100') | ROLL | 1 | 57.00 | 57.00 |
| CZ-101 x 21'-9" sheetpiling (2 pcs) | SF | 157 157 | 5.80 | 455.18 |
| Anchor Bolts | EA | 50 | 0.59 | 29.50 |
| Sales Tax | | | 9.00% | 104.10 |
| Total | | | | 1,260.78 |
| Supplies | Unit | Quantity | Price | Amount |
| Sam Lloyd Welding Service (invoiced for 10 hrs) | LS | 1 | 357.50 | 357.50 |
| Angle Iron, 60 LF, 3"x3"x1/4"; 25# Welding Rods; 20' 3-Bulb Waterstop; Sinkoflex (15 pcs) | LS | 1 | 300.00 | 300.00 |
| Total Supplies Cost | | | | 657.50 |
| Total Material and Supplies: | | | | 1,918.28 |
| Remarks: | Date: | 14 Aug 95 | Estimator: | DMU |
| | | | Checker: | JM |

910.00

612.10

145.50

1257.19

243.15

Reasonable Contract Estimate Worksheet - Equipment and Labor

Project:

DACW29-94-C-0079, CIN 05

Close Gaps to Elev. 11.5 on West Side of Canal and Sta. 109+53 to Sta. 108+37

| Unit of Equipment | No. | Hours | Rate | Amount |
|--|--------------|-----------------------|-------------------|---------------|
| Redrive pilings, remove welds & angle irons | | | | |
| MKT Geotechnical V-5 Vibratory Hammer w/power pack | 1 | 2 | 26.94 | 53.88 |
| Multi Quip 170 amp Welder | 1 | 4 | 1.56 | 6.24 |
| Truck, International, 50,000 GVW, 3 axle, 240 hp | 1 | 8 | 25.37 | 202.96 |
| Tractor/Trailer (Lowboy), 35 ton, 2 axle | 1 | 8 | 4.55 | 36.40 |
| Mantis 3612 Crane (Rented)(\$6,540/month) | 1 | 2 | 37.16 | 74.32 |
| <i>Case 580C</i> | | <i>4</i> | | |
| <i>Loehring 535 Crane</i> | | <i>2</i> | | |
| Subtotal: | | | | 373.80 |
| Mobilization and Demobilization: | | | | |
| Small Tools: | 5.00% | of labor: | | 18.62 |
| Total Equipment Cost: | | | | 392.42 |
| Labor | No. | Hours | Rate | Amount |
| Foreman - <i>Carp.</i> | 1 | 4 | 16.00 | 64.00 |
| Iron Worker <i>PEO Digger + Backhoe</i> | 1 | 2 <i>4</i> | 22.87 | 91.47 |
| PEO Pile Driver <i>PEO Crane</i> | 1 | 2 | 21.47 | 42.95 |
| Laborer | 1 | 8 <i>4</i> | 11.60 | 46.40 |
| Truck Driver | 1 | 4 <i>8</i> | 15.95 | 127.60 |
| <i>Carpenter</i> | <i>1</i> | <i>2</i> | | |
| <i>Laborer</i> | <i>1</i> | <i>8</i> | | |
| Total Labor Cost: | | | | 372.42 |
| Total equipment and labor: | | | | 764.84 |
| Remarks: | | Date: | Estimator: | DMU |
| | | 14 Aug 95 | Checker: | JM |

DACW29-94-C-0079, CIN 05
 LABOR & EQUIPMENT HOURS
 Item #2, Redrive Pilings, remove welds and angle iron at Sta. 119+65

LABOR

| | TOTAL HOURS |
|---------------------------|----------------|
| Foreman-Carp | 4 |
| Ironworker-Operator | 2 4 |
| Piledriver Operator Crane | 2 |
| Laborer | 8 4 |
| Truck Driver | 4 8 |
| Carp. Laborer | 2 8 |

EQUIPMENT

| | TOTAL HOURS |
|--|----------------|
| Truck | 4 8 |
| Tractor/Trailer (Lowboy) | 4 8 |
| MKT V-5 Vibratory Hammer w/ Power Pack | 1 2 |
| Multi-Quip 170 amp Welder | 4 |
| Crane (Mantis) | 2 |
| Case 580 | 4 |
| Koehring 535 Crane | 2 |

DISTRIBUTED COST

Field Office Overhead

| Occupation | Designation | No. | Day | Rate (Day) | Amount |
|---|------------------|-----|--------|------------|-----------------|
| | Superintendent | 1 | 1 | 200.00 | \$200.00 |
| | QC Manager | 1 | 1 | 160.00 | \$160.00 |
| | Draftsman | | | | |
| | Rodman, Chainman | | | | |
| | Clerk | | | | |
| | Timekeeper | | | | |
| | Mechanic | | | | |
| | Truck Driver | | | | |
| | Guards, Janitor | 1 | 1 | 60.00 | \$60.00 |
| | Foreman | | | | |
| | | | | | \$420.00 |
| Comp. & Lia. Ins., Soc. Sec. & State Ins. | | | 45.00% | | \$189.00 |
| Subtotal: | | | | | \$609.00 |
| Plant | | | | | |
| Rate includes rental operating supplies, field repairs | Automobile | | | | |
| | Truck, stake | | | | |
| | Truck, pickup | 2 | 1 | 20.00 | \$40.00 |
| | Skiffboat | | | | |
| | Deck Barge | | | | |
| | Crew Boat | | | | |
| Subtotal: | | | | | \$40.00 |
| Miscellaneous | | | | | |
| Field office expenses: office, first aid, and safety supplies: communications electricity, fuel ice | | | | 1 day | \$50.00 |
| Maintenance, insurance on buildings | | | | | |
| Travel, living expenses, services | | | | | |
| Power to operate pumps and for job lights | | | | | |
| Interest on operating capital | | | | | |
| Env. Prot. \$12.32 X 1 Hr/Day | | | 1 | 12.32 | \$12.32 |
| Subtotal: | | | | | \$62.32 |
| Facilities | | | | | |
| Offices, warehouses, shops, or hosp. facilities | | | | | |
| Radio Telephones | | | | | \$40.00 |
| Port-O-Let | | | | | \$20.00 |
| Subtotal: | | | | | \$60.00 |
| Field Office Overhead: | | | | | \$771.32 |

Wage Rate Calculations

Project:

DACW29-94-C-0079, CIN 05

Close Gaps to Elev. 11.5 on West Side of Canal and Sta. 109+53 to Sta. 108+37

Location:

Operational Shifts:

Estimator: DMU

Checker: JM

| Craft Description (a) | Basic hourly rate (b) | Overtime | | Sub total (b + d) (e) | Taxes & Ins | | Sub total (e + g) (h) | Fringe Benefits (i) | Travel or Subsist (j) | Total Cost (h + i + j) (k) |
|--------------------------|--------------------------|--------------------|---------------------|-----------------------------|-----------------|---------------------|-----------------------------|------------------------|--------------------------|----------------------------------|
| | | Mult of (b) (c) | Amt. (b x c) (d) | | % of (e) (f) | Amt. (e x f) (g) | | | | |
| Carpenter Foreman | 15.81 | | | 15.81 | 0.45 | 7.11 | 22.92 | | | 22.92 |
| PEO Dozer & Backhoe | 14.11 | | | 14.11 | 0.45 | 6.35 | 20.46 | | | 20.46 |
| Truck Driver | 11.00 | | | 11.00 | 0.45 | 4.95 | 15.95 | | | 15.95 |
| PEO Crane | 16.00 | | | 16.00 | 0.45 | 7.20 | 23.20 | | | 23.20 |
| Cement Finisher | 14.90 | | | 14.90 | 0.45 | 6.71 | 21.61 | | | 21.61 |
| Laborer | 11.00 | | | 11.00 | 0.45 | 4.95 | 15.95 | | | 15.95 |
| Laborer | 8.00 | | | 8.00 | 0.45 | 3.60 | 11.60 | | | 11.60 |
| Laborer | 7.54 | | | 7.54 | 0.45 | 3.39 | 10.93 | | | 10.93 |
| Carpenter | 14.81 | | | 14.81 | 0.45 | 6.66 | 21.47 | | | 21.47 |
| PEO Backhoe | 10.37 | | | 10.37 | 0.45 | 4.67 | 15.04 | | | 15.04 |
| Iron Worker Foreman | 25.00 | | | 25.00 | 0.45 | 11.25 | 36.25 | | | 36.25 |
| Iron Worker | 15.77 | | | 15.77 | 0.45 | 7.10 | 22.87 | | | 22.87 |
| PEO Pile Driver | 14.81 | | | 14.81 | 0.45 | 6.66 | 21.47 | | | 21.47 |

ENG FORM 4715(E)
APR 67

Equipment Rate Calculations

Project:

DACW29-94-C-0079, CIN 05

Close Gaps to Elev. 11.5 on West Side of Canal and Sta. 109+53 to Sta. 108+37

Location:

Operational Shifts:

Estimator:

DMU

Checker:

JM

| Equipment Description | Unit No. | Year New | Hourly Rate (2-1) | Owner Expense (2-1) | Standby Rate (2-1) | Key No. (3-1) | Age Adj Factor (3-1) | Age Adj Factor (3-2) | Equip Life (App D) | Shift (3-3) | DEP (2-2) | FCCM (2-2) | Adj Owner Expense | Adj Hourly Rate | Adj Standby Rate |
|--|----------|----------|----------------------|------------------------|-----------------------|------------------|-------------------------|-------------------------|-----------------------|----------------|--------------|---------------|-------------------|-----------------|------------------|
| Komatsu 200 Backhoe | H25KM003 | | 34.87 | 18.36 | 11.02 | H25 | 1 | 1 | 8,000 | 1.00 | 14.69 | 3.67 | 18.36 | 34.87 | 11.02 |
| MKT Geotechnical V-5 Vibratory Hammer w/power pack | P30MK001 | | 26.94 | 10.95 | 6.52 | P30 | 1 | 1 | 6,000 | 1.00 | 7.61 | 1.79 | 10.95 | 26.94 | 6.52 |
| Case 580C loader/backhoe | L50CS002 | | 10.93 | 4.71 | 2.93 | L50 | 1 | 1 | 10,000 | 1.00 | 3.57 | 1.14 | 4.71 | 10.93 | 2.93 |
| Tractor/Trailer (Lowboy), 35 ton, 2 axle | T45XX013 | | 4.55 | 2.53 | 1.62 | T45 | 1 | 1 | 10,000 | 1.00 | 1.83 | 0.70 | 2.53 | 4.55 | 1.62 |
| Multi Quip 170 amp Welder | W35H0002 | | 1.56 | 0.19 | 0.12 | W35 | 1 | 1 | 8,000 | 1.00 | 0.15 | 0.04 | 0.19 | 1.56 | 0.12 |
| Komatsu D37P Dozer | T15KM002 | | 16.25 | 6.32 | 3.9 | T15 | 1 | 1 | 10,000 | 1.00 | 4.84 | 1.48 | 6.32 | 16.25 | 3.90 |
| Blade for Komatsu D37P | T10KM002 | | 2.19 | 1.20 | 0.73 | T10 | 1 | 1 | 10,000 | 1.00 | 0.94 | 0.26 | 1.20 | 2.19 | 0.73 |
| Truck, International, 50,000 GVW, 3 axle, 240 hp | T50 | | 25.37 | 9.12 | 5.44 | T50 | 1 | 1 | 8,000 | 1.00 | 7.36 | 1.76 | 9.12 | 25.37 | 5.44 |
| Koehring 535 Crane | C85N0009 | | 40.36 | 22.81 | 14.47 | C85 | 0.77 | 0.78 | 15,000 | 1.00 | 16.69 | 6.12 | 17.56 | 35.11 | 11.29 |

Profit Factor
Prime Contractor

Project: DACW29-94-C-0079, CIN 05

Estimator: DMU

Description: Close Gaps to Elev. 11.5 on West Side of Canal and Sta. 109+53 to Sta. 108+3

Checker: JM

| Factor | Rate | Weight (0.03-0.012) | Value |
|--------------------------------|------|------------------------|--------------|
| 1. Degree of Risk | 20 | 0.050 | 1.00% |
| 2. Relative Difficulty of Work | 15 | 0.075 | 1.13% |
| 3. Size of Job | 15 | 0.120 | 1.80% |
| 4. Period of Performance | 15 | 0.030 | 0.45% |
| 5. Contractor's Investment | 5 | 0.075 | 0.38% |
| 6. Assistance by Government | 5 | 0.120 | 0.60% |
| 7. Subcontracting | 25 | 0.105 | 2.63% |
| Profit Factor: | | | 7.98% |

Reasons for Weights Assigned

1. Low Risk; post price
2. Average
3. Less than \$100,000.00
4. No additional time required
5. Average
6. No assistance
7. Subcontracting (20%)