

**Revised 35% Design Construction Cost Estimate**

**New Savannah Bluff Dam Fish Passage Facility  
Richmond County, Georgia**

**December 3, 2002**

**Submitted To:**

**Mobile District, USACE  
109 St. Joseph Street  
Mobile, Alabama 36602**

**Submitted By:**



**BTG Inc. Delta Engineering Technology Division  
1501 Merchants Way  
Niceville, Florida 32578  
(850) 897-5380**

Todd Koski  
Cost Estimator

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December 3,2002

Mobile District, USACE  
Attn: Mr. Bill Griffin:  
109 St. Joseph Street  
Mobile, Alabama 36602

SUBJECT: New Savannah Bluff Dam Fish Passage Facility,  
Richmond County, Georgia

Dear Mr. Griffin:

We are pleased to submit the attached Phase II Feasibility Study (35% design) estimate for the New Savannah Bluff Dam Fish Passage Facility project.

1. The enclosed estimate reflects our best cost evaluation for the current construction bidding climate. Our estimate is based on the assumption of open competitive bidding by the parties involved. This estimate does not include furnishings, professional fees, equipment, abatement of hazardous materials, municipal impact fees, utility tap fees, or any items not specifically identified in the itemized report.
2. Existing conditions and dimensional information were derived from the drawings, specifications, design analysis, and other technical information dated November 2002.
3. This estimate is based on a mid-point of construction of July 2004. Prices will increase at a rate tied to inflation if this date changes. This estimate also assumes a project duration of eight months. Contractor expenses may change if the project duration is changed.
4. This estimate is based on the information available at this time. The final costs of the project will depend on the actual labor and material costs, competitive market conditions, final project scope, implementation schedule, and other variable factors at the time of award. As a result, the final project costs most likely will vary from the estimate. Because of this, project feasibility and funding availability should be carefully reviewed prior to making specific financial decisions, to help ensure proper project evaluation, choices, and adequate funding.
5. The estimate is based on the assumption that all access will be across the lake from the Georgia Park site.
6. Per our discussions with Mr. Ron Grady at Framatome ANP, we have allowed fifteen working days to make the final stone adjustments in the channel.

7. Estimated quantities are based on the Material Quantity Estimate supplied by Framatome. These quantities have been validated with our own quantity take-off calculations. The estimate reflects minor modifications to the provided Material Quantities Estimate as noted on the attached copy of the quantities shown in the backup documentation.

BTG appreciates the opportunity to provide this estimating service. If you have any questions about this estimate, please give me a call at (850) 897-5380.

Sincerely,

Todd Koski  
Cost Estimator

**COST ESTIMATE SUBMITTAL**  
**CHECKLIST**

**COST ESTIMATE SUBMITTAL CHECKLIST**

**Project:** Savannah Bluff Dam Fish Passage Facility  
**Location:** Savannah Bluff Dam, Richmond County, Georgia  
**A-E Name:** Framatome ANP DE&S, Inc.

## **[X] Construction Cost Estimate**

**Check Type of Estimate Program:**     **Military**  
   **Civil**  
   **HTRW**  
   **Other (specify)** \_\_\_\_\_

**Check Level of Estimate: Military:**     **Programming Effort**  
   **Project Definition**  
   **Initial**         **Final**  
   **Concept**  
   **Interim**  
   **Final**  
   **Ready-To-Advertise**  
   **Change Order**  
   **Other (specify)**

**Civil:**     **Reconnaissance**  
                   **DM/Baseline**  
                   **Plans and Specs**  
                   **Other (35% Design)**

**HTRW:**     **Level of Design** \_\_\_\_\_

**Other:**     **Level of Design** \_\_\_\_\_

**Type of Cost Estimate:**                     **Manual (pencil)**  
   **PACES**  
   **MCACES GOLD**  
   **Excel Spreadsheet**  
   **Other (specify)** \_\_\_\_\_

**Estimate Hierarchy:**                     **Normal Work Breakdown Structure (WBS)**  
   **Full Work Breakdown Structure (WBS)**  
   **Partial Work Breakdown Structure (WBS)**  
   **Special (Separate Handout)**

**Note:** The RTA cost estimate that is submitted to the Government shall be accompanied by a letter of transmittal which includes the following statement: “To

the best of my knowledge the confidential nature of this estimate has been maintained”

AF Form 1178 (AF Projects Only)

1.44MB 3-1/2” Diskettes containing a electronic copy of the PROJECT DATABASE, and a separate Diskette of the Labor Rates Database. These databases shall be “SAVE TO COMPRESSED” DO NOT CHANGE ANY OTHER DATABASES.

Supporting Data:

Quantity Survey Documentation

Quantity Derivations

Current Price Quotations

HAG Data Sheet

Annotated Comments, as appropriate

# **HAG DATA SHEET**

# **HAG DATA INPUT SHEET**

(Estimate Must Be Prepared Using the Work Breakdown Structure to the Fourth Level)

**PROJECT NAME:** Savannah Bluff Dam Fish Passage Facility

**PROJECTLOCATION:** Savannah Bluff Dam, Richmond County, Georgia

**PROJECT NUMBER:** \_\_\_\_\_ (Not Required from A-E)  
(Use last 9 digits of Solicitation Number, including Hyphens)

**SERVICE:** (circle one) 1. Army 2. Air Force 3. Navy **4. Civil** 5. Other

**PROGRAM YEAR:** FY 02

**POC:** \_\_\_\_\_ (Not Required from A-E)

**PREPARED BY:** (circle one) **1. A-E** 2. In-House

**ESTIMATE TYPE:** \_\_\_\_\_ (Not Required from A-E)

**PROJECT DESCRIPTION:**

The scope of this project consists of construction of a new fish passage facility (fish ladder) using the "horseshoe" configuration based on the Phase II Feasibility documents dated November 2002.

**A-E or COST CONSULTANT (Company Name):** BTG Inc. Applied Engineering Solutions

**PROGRAMMED AMOUNT:** \_\_\_\_\_ (Not Required from A-E)

**CATEGORY CODE:** \_\_\_\_\_ (Not Required from A-E)



Mon 02 Dec 2002  
Eff. Date 12/03/02

U.S. Army Corps of Engineers  
PROJECT SLD32F: Savannah Bluff Fish Bypass Sys - Savannah Bluff Lock & Dam  
Savannah Lock & Dam, Fish Ladder Final Draft

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Savannah Bluff Fish Bypass Sys  
Savannah Bluff Lock & Dam  
Richmond County, GA  
Phase II Feasibility Study  
(35% Design)

Designed By: Framatome ANP DE&S  
Estimated By: JRW & TK

Prepared By: Titan Systems Corporation  
Applied Engineering Solutions

Preparation Date: 12/03/02  
Effective Date of Pricing: 12/03/02  
Est Construction Time: 240 Days

Sales Tax: 7.00%

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PROJECT NOTES

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This revised estimate incorporates the latest changes to the fish ladder preliminary designs and uses a 3 percent slope for the fish ladders. The estimate is based on the drawings and specifications dated November 2002.

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\*\* PROJECT OWNER SUMMARY - Contract (Rounded to 100's) \*\*

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SUMMARY PAGE 1

	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
09 Horseshoe Fish Ladder			2,725,500	130,800	714,100	205,300	3,775,700	

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	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST	
-----									
09	Horseshoe Fish Ladder								
09.06	Fish Facilities at Dams	1.00	EA	2,725,500	130,800	714,100	205,300	3,775,700	3775732
TOTAL Horseshoe Fish Ladder				2,725,500	130,800	714,100	205,300	3,775,700	

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\*\* PROJECT OWNER SUMMARY - Sub-Feat (Rounded to 100's) \*\*

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	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST
09 Horseshoe Fish Ladder								
09.06 Fish Facilities at Dams								
09.06.44 Fishways and Ladders	1.00	EA	2,725,500	130,800	714,100	205,300	3,775,700	3775732
TOTAL Fish Facilities at Dams	1.00	EA	2,725,500	130,800	714,100	205,300	3,775,700	3775732
TOTAL Horseshoe Fish Ladder			2,725,500	130,800	714,100	205,300	3,775,700	

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\*\* PROJECT OWNER SUMMARY - Element (Rounded to 100's) \*\*

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	QUANTITY	UOM	CONTRACT	ESCALATN	CONTINGN	SIOH	TOTAL COST	UNIT COST	
-----									
09	Horseshoe Fish Ladder								
09.06	Fish Facilities at Dams								
09.06.44	Fishways and Ladders								
09.06.44.02	Excavation, Riprap and Sitework	1.00	EA	1,498,500	71,900	392,600	112,900	2,075,900	2075857
09.06.44.03	Concrete Structures	2.00	EA	1,227,100	58,900	321,500	92,400	1,699,900	849937.45
	TOTAL Fishways and Ladders	1.00	EA	2,725,500	130,800	714,100	205,300	3,775,700	3775732
	TOTAL Fish Facilities at Dams	1.00	EA	2,725,500	130,800	714,100	205,300	3,775,700	3775732
	TOTAL Horseshoe Fish Ladder			2,725,500	130,800	714,100	205,300	3,775,700	

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\*\* PROJECT INDIRECT SUMMARY - Contract (Rounded to 100's) \*\*

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	QUANTITY	UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND/INS	TOTAL COST	UNIT COST
09 Horseshoe Fish Ladder			2,102,600	233,200	70,100	245,400	74,200	2,725,500	



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	QUANTITY	UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND/INS	TOTAL COST	UNIT COST
09 Horseshoe Fish Ladder									
09.06 Fish Facilities at Dams	1.00	EA	2,102,600	233,200	70,100	245,400	74,200	2,725,500	2725506
TOTAL Horseshoe Fish Ladder			2,102,600	233,200	70,100	245,400	74,200	2,725,500	

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\*\* PROJECT INDIRECT SUMMARY - Sub-Feat (Rounded to 100's) \*\*

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	QUANTITY	UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND/INS	TOTAL COST	UNIT COST
09 Horseshoe Fish Ladder									
09.06 Fish Facilities at Dams									
09.06.44 Fishways and Ladders	1.00	EA	2,102,600	233,200	70,100	245,400	74,200	2,725,500	2725506
TOTAL Fish Facilities at Dams	1.00	EA	2,102,600	233,200	70,100	245,400	74,200	2,725,500	2725506
TOTAL Horseshoe Fish Ladder			2,102,600	233,200	70,100	245,400	74,200	2,725,500	

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\*\* PROJECT INDIRECT SUMMARY - Element (Rounded to 100's) \*\*

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	QUANTITY	UOM	DIRECT	OVERHEAD	HOME OFC	PROFIT	BOND/INS	TOTAL COST	UNIT COST	
-----										
09	Horseshoe Fish Ladder									
09.06	Fish Facilities at Dams									
09.06.44	Fishways and Ladders									
09.06.44.02	Excavation, Riprap and Sitework	1.00	EA	1,156,000	128,200	38,500	134,900	40,800	1,498,500	1498454
09.06.44.03	Concrete Structures	2.00	EA	946,600	105,000	31,500	110,500	33,400	1,227,100	613526.10
	TOTAL Fishways and Ladders	1.00	EA	2,102,600	233,200	70,100	245,400	74,200	2,725,500	2725506
	TOTAL Fish Facilities at Dams	1.00	EA	2,102,600	233,200	70,100	245,400	74,200	2,725,500	2725506
	TOTAL Horseshoe Fish Ladder			2,102,600	233,200	70,100	245,400	74,200	2,725,500	

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	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09 Horseshoe Fish Ladder			33,300	741,000	571,300	760,700	29,600	2,102,600	

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		QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
-----										
09	Horseshoe Fish Ladder									
09.06	Fish Facilities at Dams	1.00	EA	33,300	741,000	571,300	760,700	29,600	2,102,600	2102616
	TOTAL Horseshoe Fish Ladder			33,300	741,000	571,300	760,700	29,600	2,102,600	

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\*\* PROJECT DIRECT SUMMARY - Sub-Feat (Rounded to 100's) \*\*

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	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09 Horseshoe Fish Ladder									
09.06 Fish Facilities at Dams									
09.06.44 Fishways and Ladders	1.00	EA	33,300	741,000	571,300	760,700	29,600	2,102,600	2102616
TOTAL Fish Facilities at Dams	1.00	EA	33,300	741,000	571,300	760,700	29,600	2,102,600	2102616
TOTAL Horseshoe Fish Ladder			33,300	741,000	571,300	760,700	29,600	2,102,600	

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	QUANTITY	UOM	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST	
-----										
09	Horseshoe Fish Ladder									
09.06	Fish Facilities at Dams									
09.06.44	Fishways and Ladders									
09.06.44.02	Excavation, Riprap and Sitework	1.00	EA	14,200	323,900	396,100	406,400	29,600	1,156,000	1155996
09.06.44.03	Concrete Structures	2.00	EA	19,200	417,200	175,200	354,300	0	946,600	473310.16
	TOTAL Fishways and Ladders	1.00	EA	33,300	741,000	571,300	760,700	29,600	2,102,600	2102616
	TOTAL Fish Facilities at Dams	1.00	EA	33,300	741,000	571,300	760,700	29,600	2,102,600	2102616
	TOTAL Horseshoe Fish Ladder			33,300	741,000	571,300	760,700	29,600	2,102,600	

0.01. Prime Marine Contractor		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
0.01. Prime Marine Contractor												
0.01. 0. Overhead Items - AA												
M CIV	<01500 1101 >	Field Office Trailer	8.00	MOS	N/A	0.00	0.00	0.00	294.25	0.00	294.25	294.25
						0.00	0	0	2,354	0	2,354	294.25
USR	<01500 1102 >	Fencing @ Storage Area	700.00	LF	N/A	0.00	0.50	0.00	3.21	0.00	3.71	3.71
						0.00	350	0	2,247	0	2,597	3.71
USR	<01500 1103 >	Office Supplies	8.00	MON	N/A	0.00	0.00	0.00	133.75	0.00	133.75	133.75
						0.00	0	0	1,070	0	1,070	133.75
USR	<01700 0001 >	Contract Closeout	1.00	MON	N/A	0.00	1200.00	100.00	214.00	0.00	1514.00	1514.00
						0.00	1,200	100	214	0	1,514	1514.00
MIL	<01710 1111 >	Debris Removal & Disposal	400.00	CSF	ULABB	11.25	0.22	4.65	1.87	0.00	6.56	6.56
						11.25	89	1,860	15	749	2,625	6.56
USR	<01710 1112 >	Continuous Cleanup	8.00	MON	N/A	0.00	300.00	50.00	0.00	0.00	350.00	350.00
						0.00	2,400	400	0	0	2,800	350.00
USR	<01710 2112 >	Final Job Clean-Up	1.00	LS	N/A	0.00	1200.00	100.00	214.00	0.00	1514.00	1514.00
						0.00	1,200	100	214	0	1,514	1514.00
M MIL	<01910 1201 >	General Superintendent (P.M.)	8.00	MON	N/A	0.00	5300.00	0.00	0.00	0.00	5300.00	5300.00
						0.00	42,400	0	0	0	42,400	5300.00
M MIL	<01910 1202 >	Civil Superintendent (P.M.)	8.00	MON	N/A	0.00	5000.00	0.00	0.00	0.00	5000.00	5000.00
						0.00	40,000	0	0	0	40,000	5000.00
M MIL	<01910 3105 >	Timekeeper	8.00	MON	N/A	0.00	1200.00	0.00	0.00	0.00	1200.00	1200.00
						0.00	9,600	0	0	0	9,600	1200.00
M MIL	<01910 4207 >	Chief Planning Engineer	2.00	MON	N/A	0.00	4200.00	0.00	0.00	0.00	4200.00	4200.00
						0.00	8,400	0	0	0	8,400	4200.00
M MIL	<01910 4208 >	Quality Control Engineer	8.00	MON	N/A	0.00	4200.00	0.00	0.00	0.00	4200.00	4200.00
						0.00	33,600	0	0	0	33,600	4200.00
M MIL	<01910 4209 >	Project Engineer	2.00	MON	N/A	0.00	4700.00	0.00	0.00	0.00	4700.00	4700.00
						0.00	9,400	0	0	0	9,400	4700.00
M MIL	<01910 5101 >	Chief Purchasing Agent	1.00	MON	N/A	0.00	3900.00	0.00	0.00	0.00	3900.00	3900.00
						0.00	3,900	0	0	0	3,900	3900.00
USR	<01913 1001 >	Temporary Power	8.00	MON	N/A	0.00	0.00	0.00	428.00	0.00	428.00	428.00
						0.00	0	0	3,424	0	3,424	428.00
USR	<01913 2001 >	Temporary Water	8.00	MON	N/A	0.00	0.00	0.00	235.40	0.00	235.40	235.40
						0.00	0	0	1,883	0	1,883	235.40



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 DETAILED ESTIMATE

U.S. Army Corps of Engineers  
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 Savannah Lock & Dam, Fish Ladder Final Draft  
 Project Distributed Costs

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 DETAIL PAGE 2

0.01. Prime Marine Contractor			QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
USR	<01913 3001 >	Temporary Sanitary (2ea @ \$40ea) Portable Toilets	8.00	MON	N/A	0.00	0	0.00	0	107.00	0.00	107.00	107.00
USR	<01913 4001 >	Temporary Telephone	8.00	MON	N/A	0.00	0	0.00	0	481.50	0.00	481.50	481.50
USR	<01500 1102 >	Project Sign(s)	1.00	EA	N/A	0.00	0	40.00	0	321.00	0.00	361.00	361.00
USR	<01660 1001 >	Testing Adjusting & Balancing	1.00	LS	N/A	0.00	0	2000.00	0	535.00	0.00	2535.00	2535.00
USR	<01921 6301 >	Maintain Haul Routes	1.00	LS	N/A	0.00	0	1000.00	300.00	214.00	0.00	1514.00	1514.00
USR	<01921 5200 >	Travel Expense ( 1 Trip Per MON)	8.00	EA	N/A	0.00	0	0.00	0	321.00	0.00	321.00	321.00
USR	<01922 3001 >	Insurance	1.00	LS	N/A	0.00	0	0.00	0	2354.00	0.00	2354.00	2354.00
USR	<01932 1001 >	Mob and De- Mob Offices	1.00	LS	N/A	0.00	0	3000.00	800.00	214.00	0.00	4014.00	4014.00
USR	<01941 3121 >	Storage/Tool Trailer (\$100/MON)	8.00	MON	N/A	0.00	0	0.00	0	107.00	0.00	107.00	107.00
M MIL	<01910 4301 >	Surveyor	8.00	MON	N/A	0.00	0	3000.00	0	0.00	0.00	3000.00	3000.00
USR	<01040 1001 >	Schedule Updates (\$400/MON)	8.00	MON	N/A	0.00	0	375.00	0	26.75	0.00	401.75	401.75
MIL	<	TRK,HWY,4X2,F150,1/2T,4900 GVW 4X2 1/2-TON PICK-UP, 4900 GVW	1600.00	HR	T50FO001	1.00	0	0.00	0	6.07	0.00	6.07	6.07
MIL	<	TRK,HWY,4X2,F250,3/4T,8600 GVW 4X2 3/4-TON PICK-UP, 8600 GVW	1600.00	HR	T50FO003	1.00	0	0.00	0	6.41	0.00	6.41	6.41
TOTAL Overhead Items - AA			8.00	MO			89	187,350	21,693	24,139	0	233,182	29147.77

09.06. Fish Facilities at Dams		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
09. Horseshoe Fish Ladder												
09.06.44.02. Excavation, Riprap and Sitework												
TOTAL Mobilization and Demobilization		1.00	EA			80	9,600	8,000	2,000	12,000	31,600	31600.00
L	USR AA <02225 2155 > Koehring 1166, 4 CY, By Hour	240.00	HR	XXQHL	1.00	3.00 720	68.43 16,423	135.15 32,437	0.00 0	15.00 3,600	218.58 52,460	218.58 218.58
L	USR AA <02225 1436 > 2.5 CY, Clamshell	200.00	HR	UOEHW	0.86	3.50 700	82.12 16,424	62.19 12,439	0.00 0	12.00 2,400	156.32 31,263	156.32 156.32
L	USR AA <02226 2304 > Scraper, Std. 15 CY, 621 W/D8 By Hour	160.00	HR	CODSB	1.00	1.67 267	42.08 6,733	91.25 14,599	0.00 0	12.00 1,920	145.33 23,253	145.33 145.33
MIL	AA <02221 2303 > Trench, Hand Exc, Medium Clay 2'-6' Dp, Piled Only	800.00	CY	ULABA	0.75	1.67 1,333	34.88 27,907	0.27 218	0.00 0	0.00 0	35.16 28,124	35.16 35.16
L	USR AA <02225 4144 > D6 By Hour	120.00	HR	XXQNC	1.00	1.75 210	43.29 5,195	42.30 5,076	0.00 0	12.00 1,440	97.59 11,711	97.59 97.59
L	USR AA <02225 2506 > 910, 1.25 CY, By Hour	480.00	HR	CODLB	1.00	1.50 720	36.80 17,662	27.96 13,423	0.00 0	8.00 3,840	72.76 34,925	72.76 72.76
AF	AA <02221 6004 > Stockpile	58000	CY	CODTE	90.00	0.01 806	0.36 20,926	0.47 27,260	0.00 0	0.00 0	0.83 48,186	0.83 0.83
L	USR AA <02225 2505 > 973, 3.75 CY, By Hour	220.00	HR	CODL1	1.00	1.00 220	25.88 5,694	50.00 11,001	0.00 0	0.00 0	75.88 16,695	75.88 75.88
L	AF AA <02225 3202 > Loading to Barge Rate)	58000	CY	COEID	22.22	0.05 2,091	0.98 45,452	1.46 67,969	0.00 0	0.00 0	2.44 141,549	2.44 2.44
	<*Mod* 3305 > For Each Additional 1 Mile Haul					519	11,272	16,856				
L	AF AA <02225 3204 > Hauling 12 LCY 12 Mile	58000	CY	COEID	24.99	0.04 2,320	0.87 50,431	1.30 75,417	0.00 0	0.00 0	2.17 125,848	2.17 2.17
MIL	AA < > WORKBOAT,TRKABLE,25.25'X14'X4.5'	440.00	HR	M10MZ013	1.00	0.00 0	0.00 0	15.22 6,697	0.00 0	0.00 0	15.22 6,697	15.22 15.22
L	MIL AA < > WORK BARGE-S,MED DUTY,60'X16'X5'	440.00	HR	M10MZ009	1.00	0.00 0	0.00 0	5.18 2,281	0.00 0	10.00 4,400	15.18 6,681	15.18 15.18
MIL	AA <06111 8501 > Blocking to Wood,2x4-2x8 So Pine Yellow Pine	600.00	BF	ACARC	25.00	0.05 30	1.05 629	0.05 28	0.43 255	0.00 0	1.52 912	1.52 1.52
DLT	AA <06132 1003 > Heavy Timber Beams	6000.00	BF	ACARS	125.00	0.04 240	0.85 5,089	0.27 1,598	0.79 4,751	0.00 0	1.91 11,438	1.91 1.91
MIL	AA <06311 1001 > Creosote Treat, Dosage to 8 #/CF Preservative Treated Lumber	6.60	MBF	N/A	0.00	0.00 0	0.00 0	0.00 0	113.46 749	0.00 0	113.46 749	113.46 113.46

09.06. Fish Facilities at Dams		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
MIL AA <06132 2001 >	Hvy Deck - 6x10 So Yel Pine Mill Frame Struc,Hvy Timber Cons	4000.00	BF	ACARD	137.50	66	1,370	63	16,050	0	17,483	4.37
MIL AA <06720 8003 >	3/8 X 6 Lag Bolts	600.00	EA	ACARA	7.50	100	2,097	39	1,090	0	3,227	5.38
MIL AA <02102 1103 >	Clear and Grub Med Trees to 10"D (25cm) Dia, Cut and Chip	4.00	ACR	COMCA	0.08	320	6,962	4,347	0	0	11,308	2827.05
AF AA <02102 1108 >	Clearing - Medium Brush W/O Grub	4.00	ACR	COMCE	3.50	10	229	204	0	0	433	108.32
MIL AA <02102 1201 >	Machine Load Spoils, 2 Mi Haul (3.2Km) Haul to Dump	200.00	CY	COETF	5.38	149	3,340	1,821	0	0	5,162	25.81
MIL AA <02221 1801 >	Trench, Chain Trencher, Lt Soil 1' Wide x 4' Deep	7.00	CY	COBBB	43.00	0	5	2	0	0	7	0.99
MIL AA <02221 5001 >	Backfill Trenches by Hand Without Compaction	7.00	CY	ULABA	1.63	5	113	1	0	0	114	16.23
L MIL AA <02540 1001 >	Erosion Control Netting, 4' Wide Jute Mesh, 100 SY (83.6M2)	711.00	SY	ULABF	312.50	8	166	71	555	0	793	1.12
L MIL AA <02712 2101 >	3'(.9M)H 12 Ga Galv Stl Fence 2" x 4" Mesh, Posts at 5'	1600.00	LF	ULABF	37.50	149	3,121	1,340	1,167	0	5,629	3.52
L USR AA <02261 1001 >	Rip Rap, 3/8 CY to 1/4 CY Pcs Random, Dumped from Truck	11700	TN	COETT	52.65	1,166	25,174	54,183	231,602	0	310,958	26.58
USR AA <02225 1444 >	Placing Boulders Final Adjustmt 50 Ton Motor Crane Assume 20 Cy/Hr	2880.00	CY	ZAAAE	41.00	288	6,481	29,900	0	0	36,381	12.63
M MIL AA <02261 1005 >	Weir Stones 5' & 4' Random, Dumped from Truck	3327.00	TN	COETF	32.00	416	9,334	5,089	99,677	0	114,099	34.30
M MIL AA <05503 1002 >	Anchor Ring @ Boulders 3/8" Dia Rod w/2" Dia Ring	500.00	EA	ACARA	3.13	200	4,195	78	8,132	0	12,405	24.81
L MIL AA <05502 1023 >	1" Dia x 12"L Wedge Anchor Expansion Bolt w/Nut & Washer	500.00	EA	ACARA	2.50	250	5,243	97	4,631	0	9,972	19.94
CIV AA <02535 1019 >	Geotextile Fabric, 150 Mil Thick Non-Woven Polypropylene	12844	SY	ULABJ	112.50	343	7,191	338	24,272	0	31,801	2.48
MIL AA <02810 1001 >	Mechanical Seeding, 50#/MSY	169.40	CSY	ULABE	193.75	1	23	1	1,405	0	1,429	8.44

09.06. Fish Facilities at Dams		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
L	USR AA <02830 2005 > Large Power Mulcher, Oat Straw, 1" Deep	3.50	ACR	COELC	1.52	1.32 5	34.03 119	6.34 22	1087.55 3,806	0.00 0	1127.92 3,948	1127.92
DLX	AA <02830 8002 > Watering By Truck	152.46	MSF	COFWI	87.12	0.02 3	0.45 69	0.43 65	0.00 0	0.00 0	0.88 134	0.88
AF	AA <02810 3001 > Sod In Place Level On Prepared Subgrade, by Hand	21.78	MSF	CODEK	1.13	5.33 116	116.03 2,527	14.83 323	174.41 3,799	0.00 0	305.26 6,649	305.26
DLX	AA <02830 8002 > Watering By Truck	21.78	MSF	COFWI	87.12	0.02 0	0.45 10	0.43 9	0.00 0	0.00 0	0.88 19	0.88
MIL	AA <02830 2003 > Mulch, Wood Chips	600.00	SF	ULABA	242.25	0.01 3	0.11 65	0.00 0	1.07 641	0.00 0	1.18 707	1.18
L	MIL AA <02830 7011 > Guying Trees, 2" to 4" Diameter	48.00	EA	ULABF	5.63	0.62 30	13.01 624	5.58 268	6.78 326	0.00 0	25.37 1,218	25.37
L	MIL AA <02830 7012 > Guying Trees, 6" to 8" Diameter	24.00	EA	ULABF	1.00	3.50 84	73.16 1,756	31.41 754	13.57 326	0.00 0	118.13 2,835	118.13
L	MIL AA <02830 7015 > Trees, 7' to 8' High	72.00	EA	ULABF	1.25	2.80 202	58.52 4,214	25.13 1,809	16.28 1,172	0.00 0	99.93 7,195	99.93
TOTAL Excavation, Riprap and Sitework		1.00	EA			14,172	323,865	396,126	406,406	29,600	1,155,996	1155996
09.06.44.03. Concrete Structures												
L	MIL AA <02520 2121 > CIP Concrete Headwall 30 Degree Skewed Wingwall	150.00	LF	ALABM	0.06	100.00 15,000	2096.01 314,401	62.35 9,353	906.83 136,025	0.00 0	3065.19 459,779	3065.19
M	CIV AA <05651 1209 > 84" x 96" Gates Self Contained Incl AB & Grout Per Quote from Whipps 11/22/02	8.00	EA	SIWSE	0.06	56.00 448	1606.08 12,849	502.60 4,021	6525.93 52,207	0.00 0	8634.61 69,077	8634.61
B	CIV AA <05651 1211 > 84" Long Stop Log Sets Self Contained Incl AB & Grout Per Quote Per Whipps Inc 11/21/02	1.00	EA	SIWSE	0.11	31.99 32	917.55 918	287.13 287	12203.35 12,203	0.00 0	13408.03 13,408	13408.03
MIL	AA <05521 1003 > 2"D(51mm)Welded Pipe Hdrl,2-Rail 3'H (.92M)w/Shop Paint,Stair Mtd	230.00	LF	SIWSC	31.88	0.13 29	3.59 826	0.21 47	26.38 6,067	0.00 0	30.17 6,940	30.17
M	MIL AA <15939 1001 > Portable Gate Operator Reversible Per Quote Whipps 11/22/02	1.00	EA	MSHMD	1.25	2.00 2	45.23 45	0.87 1	3390.83 3,391	0.00 0	3436.93 3,437	3436.93
MIL	AA <02411 1004 > Shoring for 40'(13M) Exc, 38 PSF Steel Sheeting, Pull and Salvage	100.00	TON	CPIDV	0.88	9.14 914	205.96 20,596	182.13 18,213	729.92 72,992	0.00 0	1118.01 111,801	1118.01

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09.06. Fish Facilities at Dams			QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
B MIL AA <	>	PUMP,CENTRF,DW,10"D,3410GPM/60'H	400.00	HR	P60GF005	1.00	0	0	3,667	5,136	0	8,803	22.01
3 AA <	>	Outside Equip. Op. Heavy	320.00	HR	X-EQOPRHVY	1.00	320	8,896	0	0	0	8,896	27.80
USR AA <	>	Outside Equip. Op. Heavy	80.00	HR	X-EQOPRHVY	1.00	80	2,264	0	0	0	2,264	28.30
MIL AA <	>	Outside Oiler	32.00	HR	X-EQOPROIL	1.00	32	634	0	0	0	634	19.80
MIL AA <	>	Outside Equip. Oper Light	1280.00	HR	X-EQOPRLT	1.00	1,280	33,536	0	0	0	33,536	26.20
UPB AA <	>	FLOATING CRANE, 350T, 140FT BOOM 140ft Boom	320.00	HR	XX0XX003	1.00	0	0	120,627	0	0	120,627	376.96
USR AA <	>	FLOATING BOOM & SILT CURTAIN	320.00	HR	XMIXX999	1.00	0	0	502	0	0	502	1.57
MIL AA <	>	GENERATOR, 250 KW, 240/480V,SKID	320.00	HR	G10CA005	1.00	0	0	5,002	0	0	5,002	15.63
MIL AA <02712 3101 >		8'H Galvanized Fencing	1400.00	LF	ULABN	11.96	468	9,941	5,057	29,603	0	44,601	31.86
MIL AA <02244 1001 >		Soil Poisoning	1608.00	SF	ULABA	562.50	4	75	1	120	0	196	0.12
MIL AA <02245 1002 >		Trm & Shpe f/Slab on Grd by Hand Finish Grade	1608.00	SF	ULABA	75.38	27	558	4	0	0	562	0.35
MIL AA <03110 4013 >		Strt Edge Metal Formwork,8" High (10 cm)H,w/Stakes,10'L,100 Uses	48.00	LF	ACARI	60.00	3	54	1	3	0	58	1.22
MIL AA <03210 1003 >		Gr 60 Resteel,Ftgs & Slabs,#3-#6	3.22	TON	SIWRC	0.31	41	952	11	1,750	0	2,713	843.50
MIL AA <03251 1009 >		Rubberized Asph Exp Jnt,1/2"x 1" Poured,Hot Applied Fuel Resist	168.00	LF	ULABA	56.25	4	78	1	84	0	163	0.97
MIL AA <03251 5014 >		24 Ga Galv Stl Keyed Jnt, 7-1/2" (18.8 cm) Cold Expan or Ctrl Jnt	168.00	LF	ACARC	23.75	9	185	8	89	0	283	1.68
B MIL AA <03311 1166 >		Pour Slab on Gr,>= 6", Conc Pump >= (15 cm) Place 3000 PSI Conc	40.00	CY	ALABI	41.25	8	166	89	2,279	0	2,534	63.34
MIL AA <03311 4105 >		Conc Floor Finishes, Stl Trowel	1608.00	SF	ACMAC	68.75	26	491	38	0	0	529	0.33

LABOR ID: GA0602

EQUIP ID: RG0395

Currency in DOLLARS

CREW ID: GA0602

UPB ID: SAM95A

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09.06. Fish Facilities at Dams		QUANTY	UOM	CREW ID	OUTPUT	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER	TOTAL COST	UNIT COST
MIL AA <03311 5001 >	Floor Hardener, Metallic, Lt Duty 0.3 #/SF	1608.00	SF	ACMAC	106.25	17	318	25	258	0	601	0.37
MIL AA <07111 5002 >	6 Mil Polyethylene Vapor Barrier	17.00	CSF	ACARA	4.63	5	96	2	58	0	156	9.18
MIL AA <02411 1003 >	Shoring for 25'(8M) Exc, 38 PSF Steel Sheeting, Pull and Salvage	42.53	TON	CPIDV	0.83	412	9,289	8,215	32,014	0	49,518	1164.45
TOTAL Concrete Structures		2.00	EA			19,159	417,167	175,172	354,281	0	946,620	473310.16
TOTAL Horseshoe Fish Ladder						33,331	741,032	571,298	760,686	29,600	2,102,616	
TOTAL Savannah Bluff Fish Bypass Sys		1.00	EA			33,331	741,032	571,298	760,686	29,600	2,102,616	2102616

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 \*\* LABOR BACKUP \*\*

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-----										**** TOTAL ****		-----
SRC LABOR ID	DESCRIPTION	BASE	OVERTM	TXS/INS	FRNG	TRVL	RATE	UOM	UPDATE	DEFAULT	HOURS	
-----												
MIL B-CARPNTER	Carpenters	14.00	0.0%	38.0%	1.55	0.00	20.87	HR	06/20/02	19.84	5853	
MIL B-CEMTFINR	Cement Finishers	11.34	5.0%	60.0%	0.00	0.00	19.05	HR	06/20/02	13.98	1293	
MIL B-EQOPRCRN	Eq Oper, Crane/Shovl	14.07	0.0%	60.0%	3.80	0.00	26.31	HR	06/20/02	21.20	565	
MIL B-EQOPRLT	Eq Oper, Light	14.07	0.0%	29.0%	3.80	0.00	21.95	HR	06/20/02	17.02	120	
MIL B-EQOPRMED	Eq Oper, Medium	13.80	0.0%	60.0%	3.80	0.00	25.88	HR	06/20/02	17.15	2139	
MIL B-EQOPROIL	Eq Oper, Oilers	11.84	0.0%	60.0%	3.80	0.00	22.74	HR	06/20/02	11.00	399	
MIL B-LABORER	Laborer (Semi-Skilled)	11.00	5.0%	60.0%	2.35	0.00	20.83	HR	06/20/02	12.86	11298	
MIL B-PILEDRVR	Pile Drivers	14.00	0.0%	50.0%	1.55	0.00	22.55	HR	06/20/02	23.05	829	
MIL B-RODMAN	Rodmen (reinforcing)	14.28	0.0%	61.0%	0.00	0.00	22.99	HR	06/20/02	17.95	1291	
MIL B-SHTMTLWK	Sheet Metal Workers	16.85	0.0%	20.8%	3.79	0.00	24.14	HR	06/20/02	24.14	2	
MIL B-STRSTEEL	Struct Stl Workers	15.00	0.0%	63.0%	5.25	0.00	29.70	HR	06/20/02	24.06	372	
MIL B-TRKDVRHV	Truck Drivers, Heavy	15.00	0.0%	29.0%	2.38	0.00	21.73	HR	06/20/02	10.49	5074	
MIL X-EQOPRHVY	Outside Equip. Op. Heavy	15.00	0.0%	60.0%	3.80	0.00	27.80	HR	06/20/02	19.19	710	
MIL X-EQOPRLT	Outside Equip. Oper Light	14.00	0.0%	60.0%	3.80	0.00	26.20	HR	06/20/02	17.05	1280	
MIL X-EQOPRMED	Outside Equip. Op. Medium	14.00	0.0%	60.0%	3.80	0.00	26.20	HR	06/20/02	17.43	373	
MIL X-EQOPROIL	Outside Oiler	10.00	0.0%	60.0%	3.80	0.00	19.80	HR	06/20/02	13.49	279	
MIL X-LABORER	Outside Laborer (Semi-Skilled)	11.00	5.0%	60.0%	2.35	0.00	20.83	HR	06/20/02	11.84	572	
MIL X-TRKDVRHV	Outside Truck Dr. Heavy	14.00	0.0%	29.0%	2.38	0.00	20.44	HR	06/20/02	19.19	889	

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SRC	ID.NO.	EQUIPMENT DESCRIPTION	DEPR	FCCM	FUEL	FOG	TR WR	TR REP	EQ REP	TOTAL RATE	** TOTAL HOURS **
UPB	B20CI006	B-CHIPPER, 16" DIA LOG, TRLR-MTD	1.38	0.32	2.16	0.51	0.03		1.39	5.80 HR	53
MIL	B20VE001	B-CHIPPER, 6" DIA LOG, TRLR-MTD	1.63	0.47	7.30	1.91	0.04	0.00	1.58	12.93 HR	2
MIL	B25ES030	BKT,CLAM, 4.00CY, HVYDTY/SQ NOSE	3.72	1.18					2.75	7.65 HR	70
MIL	C55SC006	CONC PUMP,117CY/HR, 92'BM,W/TRCK	30.96	8.14	12.24	2.81	0.79	0.10	31.44	86.47 HR	1
UPB	C65WC002	CONC VIBRATOR, 2.50D, EL,HI-FREQ	0.31	0.05	0.11	0.18			0.82	1.47 HR	2
MIL	C75GV002	CRANE,HYD,S/P,RT,4WD,20T/70'BOOM	11.02	4.88	2.87	0.71	1.14	0.14	9.09	29.84 HR	320
UPB	C85AM010	CR,ME,CWLR,LIFTING, 85T/160'BOOM	35.91	19.51	3.05	0.55			31.32	90.33 HR	166
MIL	C85NO002	CRANE,DRAG/CLAM, 1.25CY/ 50'BOOM	20.56	8.83	3.46	0.96			17.93	51.74 HR	233
MIL	G10CA005	GENERATOR, 250 KW, 240/480V,SKID	2.65	0.84	8.61	1.69			1.83	15.63 HR	390
UPB	G10HO004	GENERATOR, 5.5 KW, 120/240V,PORT	0.24	0.06	0.81	0.16			0.14	1.41 HR	1
UPB	H25BA005	HYD EXCAV, CRWLR, 4.50 CY BKT	46.69	17.41	13.21	2.38			55.28	134.98 HR	240
MIL	L10BS002	MULTI-APPLICATION RAKE, 12.5W 9T	1.84	0.52		0.30			1.88	4.54 HR	2
MIL	L10BU002	LANDCLR,ROTRY CUTTR10.5'W,2-12"H	0.86	0.24		1.50			0.88	3.48 HR	2
UPB	L35CA004	LDR,FE, CRWLR, 1.50 CY	8.81	3.06	2.03	0.63			13.44	27.96 HR	480
UPB	L35CA007	LDR,FE, CRWLR, 3.75 CY	23.51	8.16	5.32	1.66			35.89	74.54 HR	53
UPB	L40CA006	LDR,FE, WH, 4.50 CY, ARTIC, 966E	17.21	6.98	5.05	1.74	4.20	0.52	14.31	50.00 HR	220
UPB	L40CA008	LDR,FE, WH, 7.00 CY, ARTIC, 988B	31.88	12.67	8.78	2.16	7.06	0.87	23.26	86.67 HR	222
UPB	L50CA003	LDR,BH,WH, 1.38CY FE BKT, 30"DIP	5.62	2.21	1.80	0.47	0.48	0.06	5.29	15.93 HR	161
MIL	M10MZ009	WORK BARGE-S,MED DUTY,60'X16'X5'	2.75	0.79					1.65	5.18 HR	440
MIL	M10MZ013	WORKBOAT,TRKABLE,25.25'X14'X4.5'	4.15	1.55	4.91	1.53			3.08	15.22 HR	440
MIL	M10SM011	LAUNCH,20.25',TRANSPORTR,3500#	2.36	0.88	14.74	3.87			2.00	23.85 HR	70
UPB	P30MK003	PILE HAMMER,VIB,116T FORCE DRIVE	21.37	6.28	8.19	2.15			28.92	66.91 HR	166
UPB	P55GR004	PUMP,SUBM, 6"D,1950GPM/40'HD, EL	1.05	0.40	4.59	1.69			0.72	8.46 HR	1
MIL	P60GF005	PUMP,CENTRF,DW,10"D,3410GPM/60'H	2.38	0.75	2.70	0.84	0.04	0.00	2.46	9.17 HR	400
UPB	R10CA011	RIPPER, 1-SHANK BEAM,HYD, D-8	3.25	0.92		0.10			3.33	7.60 HR	1
UPB	R10CA013	RIPPER, SHANKS EACH, D-8	0.28	0.08					0.29	0.66 HR	1
UPB	S15CA001	SCRAPER,SELF, 14-20CY, 24T, PS	29.91	10.01	7.08	1.86	6.56	0.81	20.56	76.78 HR	160
UPB	T10CA010	BLADE, ANGLE, HYDR, D-6	1.73	0.60		0.08			1.58	3.98 HR	766
MIL	T10CA011	WINCH, (ADD CABLE), D-6	2.24	0.78		0.08			2.05	5.15 HR	1
UPB	T10CA017	BLADE, UNIVERSAL, HYDR, D-8	3.17	1.10		0.13			2.90	7.30 HR	28
MIL	T15CA008	DOZER,CWLR, D-6D,PS	9.14	3.49	3.55	1.05			13.35	30.59 HR	1
UPB	T15CA010	DOZER,CWLR, D-6H,PS	11.58	4.42	4.18	1.23			16.90	38.32 HR	764
MIL	T15CA015	DOZER,CWLR, D-8L,PS	27.07	9.39	8.49	1.95			30.89	77.79 HR	28
MIL	T25JD002	TRACTOR,WH,FARM, 60-65HP, 2WD	1.95	0.54	1.50	0.34	0.37	0.05	1.41	6.16 HR	2
UPB	T30VE003	TRENCH,CHN, 60"DP,6-18"W,BH&BLD	4.17	1.23	1.26	0.29	0.25	0.03	4.10	11.33 HR	0
UPB	T40XX003	HYDR CRANE 8.0T,W/ 85'BOOM	5.44	1.55		0.25			4.69	11.92 HR	117
UPB	T40XX008	REAR DUMP BODY, 8.0CY	1.20	0.34		0.09			0.91	2.54 HR	141
UPB	T40XX010	REAR DUMP BODY, 12.0CY	1.23	0.35		0.09			0.93	2.61 HR	4931
MIL	T40XX016	FLATBED, 8'x 16.0'	0.34	0.10					0.22	0.65 HR	117
UPB	T40XX033	WATER TANK, 3000 GAL	1.65	0.47					1.07	3.18 HR	2
UPB	T45XX003	TRLR,BOTTM DUMP,30CY,30T	3.02	1.04		0.40	0.65	0.08	2.17	7.36 HR	222
MIL	T50FO001	TRK,HWY, 4,900GVW,4X2, 1/2T-PKUP	1.54	0.44	2.06	0.47	0.19	0.02	1.34	6.07 HR	1600
UPB	T50FO003	TRK,HWY, 8,600GVW,4X2, 3/4T-PKUP	1.70	0.49	2.06	0.47	0.19	0.02	1.48	6.41 HR	1646
UPB	T50FO004	TRK,HWY, 8,800GVW,4X4, 3/4T-PKUP	2.06	0.59	2.41	0.55	0.23	0.03	1.78	7.64 HR	1
MIL	T50KE003	TRK,HWY, 46,000 GVW, 6X4, 3 AXLE	9.59	2.76	8.01	1.84	0.44	0.05	7.20	29.89 HR	5413
UPB	T55EU001	TRK,OFF-HWY,R-DUMP, 14-19CY, 25T	15.96	5.03	4.00	1.14	3.26	0.41	10.10	39.90 HR	667
UPB	W35XX002	WELDER, 200 AMP, W/1 AXLE TRLR	0.50	0.18	3.56	0.70	0.03	0.00	0.46	5.44 HR	7
UPB	XMIXX010	MISC. POWER TOOLS	2.17	0.76	0.60	0.27			2.60	6.40 HR	776
UPB	XMIXX020	SMALL TOOLS	0.50	0.22	0.16	0.07			0.63	1.57 HR	4277
USR	XMIXX999	FLOATING SILT BOOM & CURTAIN	1.50	0.07						1.57 HR	390
UPB	XX0XX003	FLOATING CRANE, 350T, 140FT BOOM	125.85	44.89	35.51	15.50			155.20	376.96 HR	390



Mon 02 Dec 2002  
Eff. Date 12/03/02

U.S. Army Corps of Engineers  
PROJECT SLD32F: Savannah Bluff Fish Bypass Sys - Savannah Bluff Lock & Dam  
Savannah Lock & Dam, Fish Ladder Final Draft

TIME 10:23:24  
SETTINGS PAGE 1

-----  
\*\* PROJECT SETTINGS \*\*  
-----

ESTIMATE TYPE : A-Crews with Auto Reprice

SALES TAX : 7.00%

DATE OF ESCALATION SCHEDULE : 12/03/02

PROJECT DIRECT COST COLUMNS

Col Type	H	L	E	M	U
Rep Width	8	9	9	9	8
Title	MANHRS	LABOR	EQUIPMNT	MATERIAL	OTHER

PROJECT INDIRECT COST COLUMNS

Col Type	O	U	P	B	X
Rep Width	12	12	12	12	0
Title	OVERHEAD	HOME OFC	PROFIT	BOND/INS	(Unused)

PROJECT OWNER COST COLUMNS

Col Type	E	C	U	X	X
Rep Width	12	12	12	0	0
Title	ESCALATN	CONTINGN	SIOH	(Unused)	(Unused)

PROJECT BREAKDOWN

PROJECT ID	Length	Trail Sep	Level Title	2nd View Order
Level 1 ID :	2	.	Contract	1
Level 2 ID :	2	.	Feature	2
Level 3 ID :	2	.	Sub-Feat	3
Level 4 ID :	2	.	Element	0
Level 5 ID :	2	.	Level 5	0
Level 6 ID :	2	.	Level 6	0

Owner Cost Level : 0

\*\* PROJECT SETTINGS \*\*

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2ND VIEW COLUMNS

Quantity Column Width : 10

Col Type	X	X	X	X	X
Rep Width	0	0	0	0	0
Title	(Unused)	(Unused)	(Unused)	(Unused)	(Unused)

Shadow	X	X	X	X	X
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DETAIL REPORT FORMATTING

PAGE OPTIONS           Page Break Levels : 2  
                          Table of Contents Levels : 4

0 1 2 3 4 5 6 7

ROW OPTIONS            Print Titles at Levels : Y N N Y N N  
                          Print Totals at Levels : Y N N Y N N  
                          Print Notes at Levels : Y Y Y Y Y Y Y  
                          Print Unit Cost Row : Y  
                          Print Page Footer : Y  
                          Show Cost Codes : Y

COLUMNS OPTIONS       Print Crew Id : Y  
                          Crew Output : Y  
                          Unit Cost : Y

UPB TITLES            No. of Levels to Print : 0  
                          Bracket Titles With : N N  
                          Include titles Notes : N

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U.S. Army Corps of Engineers  
PROJECT SLD32F: Savannah Bluff Fish Bypass Sys - Savannah Bluff Lock & Dam  
Savannah Lock & Dam, Fish Ladder Final Draft

TIME 10:23:24  
SETTINGS PAGE 3

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\*\* PROJECT SETTINGS \*\*  
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OTHER REPORT FORMATTING

COLUMN TITLES FOR SUMMARY REPORTS

Column 1 OVERHEAD : OVERHEAD  
Column 2 HOME OFC : HOME OFC  
Column 3 PROFIT : PROFIT  
Column 4 BOND/INS : BONDS & INSURANCE  
Column 5 (Unused) : (Unused)

Column 1 ESCALATN : ESCALATION  
Column 2 CONTINGN : CONTINGENCY  
Column 3 SIOH : SUPERVISION, INSPECTION AND OVERHEAD  
Column 4 (Unused) :  
Column 5 (Unused) :

STANDARD COLUMN WIDTHS

SUMMARY FEATURES

Quantity Columns : 10      Round Totals Column : H-Hundreds  
Total cost Columns : 12      Contingency Notes : No  
Unit Cost Columns : 10      Show Project Totals : No

SPECIAL REPORT FORMATTING OPTIONS

First Alternate ID : (None)  
Show Markup at Level : 0  
Display Indirect/Owner Markup as : B - Percent of Total  
CSI Sort at Level : (None)

Mon 02 Dec 2002  
Eff. Date 12/03/02

U.S. Army Corps of Engineers  
PROJECT SLD32F: Savannah Bluff Fish Bypass Sys - Savannah Bluff Lock & Dam  
Savannah Lock & Dam, Fish Ladder Final Draft

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SETTINGS PAGE 4

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\*\* PROJECT SETTINGS \*\*  
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REPORT SELECTION

Project Settings : Y Profit Guidelines : N  
Contractor Settings : Y  
Link Listing : N Measurement Units : U.S.

REPORT FORMAT TYPE FOR LEVEL (S)

Direct Indirect Owner 0 1 2 3 4 5 6

Detail : Y  
Project : Y Y Y Y N N  
Contractor : N N N N N N N N  
Division : N N N N N N N N  
System : N N N N N N N N  
2nd View : N  
  
Crew : N Y N N N N N N  
Labor : Y  
Equipment : Y  
Prime Labor Cost Level : N

Mon 02 Dec 2002  
Eff. Date 12/03/02

U.S. Army Corps of Engineers  
PROJECT SLD32F: Savannah Bluff Fish Bypass Sys - Savannah Bluff Lock & Dam  
Savannah Lock & Dam, Fish Ladder Final Draft

TIME 10:23:24  
SETTINGS PAGE 5

\*\* OWNER, OVERTIME, AND ADJUSTMENTS SETTINGS \*\*

		AMOUNT	PERCENT	*ESCALATN DATE*		*ESCALATN INDEX*	
				BEGIN	END	BEGIN	END
-----							
Project Information Record							
ESCALATION	C		4.80	11/02	07/04	515.150	539.880
CONTINGENCY	P		25.00				
SUPERVISION, INSPECTION AND OVERHEAD	P		5.75				

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PROJECT SLD32F: Savannah Bluff Fish Bypass Sys - Savannah Bluff Lock & Dam  
Savannah Lock & Dam, Fish Ladder Final Draft

TIME 10:23:24  
SETTINGS PAGE 6

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\*\* CONTRACTOR SETTINGS \*\*  
-----

AMOUNT PCT PCT S RISK DIFF SIZE PERIOD INVEST ASSIST SUBCON  
-----

AA Prime Marine Contractor

OVERHEAD	C									
HOME OFC	P									
PROFIT	P									3.00
BONDS & INSURANCE	P									10.20
										2.80

Mon 02 Dec 2002  
Eff. Date 12/03/02  
ERROR REPORT

U.S. Army Corps of Engineers  
PROJECT SLD32F: Savannah Bluff Fish Bypass Sys - Savannah Bluff Lock & Dam  
Savannah Lock & Dam, Fish Ladder Final Draft

TIME 10:23:24  
ERROR PAGE 1

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No errors detected...

\* \* \* END OF ERROR REPORT \* \* \*

**VI Cost Estimate**

**A. Material Quantity Estimate**

Listed below is an estimate of major quantities necessary to construct the NSBL&D Fish Bypass System:

Item	Description	Units	Quantity
<b>A</b>	<b>Site Prep &amp; Temporary Works</b>		
	Access Roads — SEE OVERHEAD — HOW MANY AS	LM	TBD
	Barge Unloading Facility — 1 EA SIDE —	LS	1 ✓
	Temporary Cofferdams		
	Filter Fabric	SY	2100
	Riprap	CY	710
	Earthwork	CY	35000
	Utilities	LS	1 ✓
	Construction Power	LS	1 ✓
	Water Control — PUMP —	LS	1 ✓
	Site Laydown Area — IN EXIST.	LS	1 ✓
	Temporary Fencing 700'	LF	1400 ✓
	Erosion Control 1600 LF	LS	1 ✓
<b>B</b>	<b>Civil Works</b>		
<b>B.1</b>	<b>Earth Work &amp; Drainage</b>		
	Clearing & Grubbing	Acre	4 ✓
	Earthwork		
	Excavation	CY	53000
	Disposal	CY	58000 ✓
	Filter Fabric 12,844 SY —	See	11000
	Riprap	CY	7400
	Boulders	EA	500
	Rough Grading	Acre	4
	Fine Grading — SEE PLAN	Acre	4
	Canal Access Concrete Paving 1300 SF —	CY	56
<b>B.2</b>	<b>Headwater Structure</b>		
	Sheet Piling	EA	5250
	Concrete	CY	450
	Reinforcing	Ton	15
	Miscellaneous Steel		
	Handrail	LF	230 ✓
	Grating	Ton	1
	Miscellaneous Steel Embeds WITH GATES →	Ton	1
	Slide Gates w/Operators	EA	8
	Stop Logs	EA	1
<b>B.3</b>	<b>General</b>		
	Landscaping LS BELOW —	LS	1 ✓
	Fencing	LF	1400 ✓
	Access — VIA BARGE	LF	TBD
<b>C</b>	<b>Electrical Works</b>	N/A	LS
<b>D</b>	<b>Mechanical Works</b>	N/A	NA



TM



# FAX COVER SHEET

DATE 11/25/02

TOTAL PAGES 2

TO Mr. James Walters

FROM Wayne Ewing  
RINKER MATERIALS - DOGWOOD  
5868 COLUMBIA ROAD  
GROVETOWN, GA 30813

PHONE 850-897-5380

PHONE (706) 541-0187

FAX 850-897-5388

FAX (706) 541-9161

REMARKS:

Mr. Walters,

Conversion factor for both

Type T and armor is about the

same at 1.5 tons / cubic yrd.

Please call if you have any questions

Thank you

Wayne Ewing

# Rinker

MATERIALS™

Southern Aggregates  
5868 Columbia Road  
Grovetown, GA 30813

### Quote Sheet

Customer Name: Titan Corp. Date: 11/25/02  
Telephone: 850-897-5380 Contact: Mr. James Walters  
Job Name: New Savannah Bluff/Gish Ladder Job No.           
P.O. No.          County Job In: Richmond County

Approximate Quantity	Material Description	FOB Plant	FOB Delivered Tandem	FOB Delivered Trailer
<u>11,200T</u>	<u>GA DOT - Typo I Rip Pop</u>	<u># 12.50/ft</u>		<u># 18.50/ft</u> ✓
<u>208 pcs</u>	<u>4' Dia ± Armor</u>	<u># 16.00/ft</u>		<u># 28.00/ft</u> ✓
<u>312 pcs</u>	<u>5' Dia ± Armor Stone</u>	<u># 16.00/ft</u>		<u># 28.00/ft</u> ✓

Above Prices Do Not Include Applicable Sales Tax (es).

Approximate Date For Job to Begin: \_\_\_\_\_

Comments: \_\_\_\_\_

Wayne Ewing  
Wayne Ewing  
Division Sales Manager  
706-541-0187



P.O. Box 2508 • Augusta, Georgia 30903-2508 • (706) 724-0860 • FAX (706) 724-0340

DATE: November 22, 2002

TO: James Walters  
TITAN CORPORATION  
FAX# 850-897-5388

RE: Savannah Bluff Dam

We are pleased to quote the following prices for the described material(s) F.O.B. to the above job site during normal operating hours, Monday through Friday.

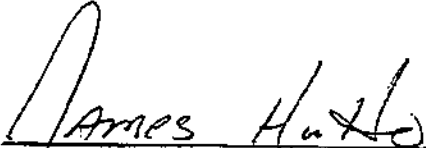
<u>DESCRIPTION</u>	<u>PSI</u>	<u>PRICE PER CUBIC YARD</u>
Mix No. 3000	3000	\$53.25
Mix No. 4000	4000	\$56.75

TERMS: \$1.00 per cubic yard discount for payment by the 10<sup>th</sup> prox. of the month following delivery, net 30 days. Prices do not include sales tax. Prices are firm through April 2004.

SPECIAL REQUIREMENTS:

THANK YOU FOR THIS OPPORTUNITY OF QUOTING.

BY:

  
James Hutto, Sales Manager

4343 Shallowford Road  
Suite H2  
Marietta, GA 30062  
don@southernwater.com

Southern Water Technologies

# Fax

To: Mr. James Walters	From: Don Shoaf
CO: Titan Corporation	Pages: 3
Fax: 850-897-5388	Date: 11/22/2002
Re: Savannah Bluff Lock & Dam	CC:

Urgent     For Review     Please Comment     Please Reply     Please Recycle

James,

Thank you for your patience in regard to the above from Whipps, Inc. The following is the budget quote that you requested for the Corps of Engineering project. This includes eight series 806 slide gates with manual operators, eight stop log grooves or tracks and one set of stop logs, and the portable operator. I guess the thought on item 2 was that there would probably only be a need to close one channel at a time with the stop logs, thus only one set of logs and frames/grooves for each of the eight channels. If this does not meet with your requirements, please let me know and we'll put together a price for the additional 7 sets.

Thanks again, and feel free to call me with any additional questions.

# BUDGET PROPOSAL

## Whipps, inc.

P.O. Box 1058 • 370 South Athol Rd.  
Athol, Massachusetts 01331  
Phone: (978) 249-7924  
Fax: (978) 249-3072

November 21, 2002

### PLEASE REPLY TO:

Southern Water Technologies, Inc.  
4343 Shallowford Road  
Bldg. H, Suite 2  
Marietta, GA 30062 USA  
Voice: 770-993-4392  
Fax: 770-998-2430

*Titan Corporation*  
1501 Merchants Way  
Niceville, FL 32578  
Attn: James Walters

Subject: New Savannah Bluff Lock & Dam  
Augusta, GA  
Proposal: Whipps No. 2463

Gentleman:

We are pleased to offer the following proposal for the Slide Gates and Stop Logs on the project referenced above. The equipment we propose to supply is as follows:

#### Item # 1

Eight (8) 84" x 96" Series 806

The Embedded Aluminum Slide Gate will have the following features: aluminum (alloy 6061-T6) construction; UHMW seat/seals; and neoprene seal on the invert of the opening. The frame is designed to be embedded in concrete. The actuator will be a yoke mounted manual operator with a type 304 SS operating stem and clear plastic stem cover.

Estimated Shipping Weight = 699# each

Estimated Price Each = \$6,099.00

Price for (8) Eight = \$48,792.00

#### Item # 2.

One (1) 84" x 96" Series 509

Assembly will consist of the following

Eight (8) Stop Logs,	84" wide x 12" high
Eight (8) Stop Log Groove,	84" wide x 144" high
One (1) Lifter	84" wide

Stop Logs: Extruded Alum. Logs will be 12" high each. Manufactured from 6061-T6 Alum. A specially shaped urethane seal will be attached to the bottom and ends of the log to reduce leakage.

Grooves: Fabricated from Aluminum shapes, embedded frame design. The invert of the frame will be a fabricated channel shape manufactured in 6061-T6 Alum, designed to form a seal surface for the bottom log.

Lifter: The lifting device will come complete with suitable connecting points for crane operation and will be capable of securing and releasing the logs with the use of a lanyard.

Estimated Price for one (1) Complete Assy: \$11,405.00

WATER CONTROL GATES & EQUIPMENT

Whipps, Inc. Proposal # 2463

**Item # 3.****One (1) Drill- Type Portable Operator**

The Operator will be a heavy duty electric drill with double pole trigger, reversing switch for full power in forward or reverse. The hold down trigger switch shuts off unit when released. The P-O will be tripod mounted portable electric drill, 115 volt single phase power source. The PO will have factory set, quick release, automatic overload release clutch.

Estimated Price for one (1) Complete Assy:      \$3,169.00

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This proposal represents our best interpretation of the project plans. Any subsequent revisions may result in a price change.

**DURATION:** Our price is held firm for 60 days from the Proposal date. Please contact our local representative for updated pricing after 60 days.

**TERMS:** Payment terms are net 30 days with no retainer allowance. Interest will be charged on amounts past due at 1-1/2% per month.

**TAXES:** Tax and/or Use Taxes are not included in this proposal and should not be included in any subsequent purchase order.

**DELIVERIES:** The standard delivery of submittal drawings is 4-5 weeks after receipt of written purchase order. The aluminum slide gates and stop logs will ship 12-14 weeks after receipt of approved submittal drawings. We will make every possible effort to coordinate our engineering and manufacturing schedule with your construction schedule. Please contact our local representative for expedited or extended delivery dates.

**FREIGHT:** The price quoted is F.O.B. our factory in Athol, MA with freight allowed to job site. Partial shipments may be provided upon request for an additional charge. Price includes shipment via common carrier with box trailer. Open top truck shipment may be provided upon request for an additional charge. Price does not include unloading at job site.

Please let us know if we can be of further service.

Sincerely,

*Fred Perry*

Fred Perry  
Regional Sales Manager  
Whipps, Inc.

**VOLUME DISCOUNT DISCLAIMER:** The prices shown reflect a volume discount for the total number of gates quoted. Please call if you need to order fewer than the number shown above and we will send a revised proposal.

TABLE A-1, QUARTERLY COST INDEXES BY CWBS FEATURE CODE  
Base Year 1967 = 100

CWBS - FEATURE CODES	Wt %	1Q02		2Q02*		3Q02*		4Q02*		1Q03*		2Q03*		3Q03*		4Q03*	
		2001 (Oct - Dec)	2002 (Jan - Mar)	2002 (Jan - Mar)	2002 (Apr - Jun)	2002 (Jul - Sep)	2002 (Oct - Dec)	2003 (Jan - Mar)	2003 (Apr - Jun)	2003 (Jul - Sep)	2002 (Oct - Dec)	2003 (Jan - Mar)	2003 (Apr - Jun)	2003 (Jul - Sep)			
02 RELOCATIONS	5%	520.18	525.38	528.94	532.49	535.49	539.14	542.79	546.45	535.49	539.14	542.79	546.45				
03 RESERVOIRS	5%	578.44	581.45	585.39	589.33	593.34	597.39	601.44	605.48	593.34	597.39	601.44	605.48				
04 DAMS	15%	509.60	515.82	519.32	522.81	525.47	529.05	532.63	536.22	525.47	529.05	532.63	536.22				
05 LOCKS	2%	500.87	507.09	510.53	513.96	516.55	520.07	523.59	527.11	516.55	520.07	523.59	527.11				
06 FISH & WILDLIFE FACILITIES	5%	499.61	505.69	509.11	512.54	515.15	518.66	522.17	525.69	515.15	518.66	522.17	525.69				
07 POWER PLANT	10%	483.76	490.92	494.25	497.57	499.79	503.20	506.60	510.01	499.79	503.20	506.60	510.01				
08 ROADS, RAILROADS & BRIDGES	10%	520.18	525.38	528.94	532.49	535.49	539.14	542.79	546.45	535.49	539.14	542.79	546.45				
09 CHANNELS & CANALS	3%	543.03	548.64	552.36	556.07	559.16	562.97	566.78	570.60	559.16	562.97	566.78	570.60				
10 BREAKWATER & SEAWALLS	5%	539.17	547.26	550.97	554.67	557.12	560.91	564.71	568.51	557.12	560.91	564.71	568.51				
11 LEVEES & FLOODWALLS	5%	523.55	530.87	534.46	538.06	540.56	544.25	547.93	551.62	540.56	544.25	547.93	551.62				
12 NAVIGATION PORTS & HARBORS	10%	491.52	516.72	520.22	523.72	521.56	525.12	528.68	532.23	521.56	525.12	528.68	532.23				
13 PUMPING PLANT	5%	476.24	483.29	486.57	489.84	492.02	495.37	498.73	502.08	492.02	495.37	498.73	502.08				
14 RECREATION FACILITIES	5%	476.24	483.29	486.57	489.84	492.02	495.37	498.73	502.08	492.02	495.37	498.73	502.08				
15 FLOODWAY CONTROL & DIVERSION STRUCTURE	2%	499.61	505.69	509.11	512.54	515.15	518.66	522.17	525.69	515.15	518.66	522.17	525.69				
16 BANK STABILIZATION	2%	519.26	525.07	528.63	532.19	535.02	538.67	542.32	545.97	535.02	538.67	542.32	545.97				
17 BEACH REPLENISHMENT	2%	550.29	556.00	559.76	563.53	566.65	570.51	574.38	578.24	566.65	570.51	574.38	578.24				
18 CULTURAL RESOURCE PRESERVATION	2%	476.24	483.29	486.57	489.84	492.02	495.37	498.73	502.08	492.02	495.37	498.73	502.08				
19 BUILDINGS, GROUNDS & UTILITIES	5%	476.24	483.29	486.57	489.84	492.02	495.37	498.73	502.08	492.02	495.37	498.73	502.08				
20 PERMANENT OPERATING EQUIPMENT	2%	476.24	483.29	486.57	489.84	492.02	495.37	498.73	502.08	492.02	495.37	498.73	502.08				
COMPOSITE INDEX (WEIGHTED AVERAGE)	100%	507.21	515.37	518.86	522.35	524.51	528.09	531.67	535.24	524.51	528.09	531.67	535.24				

Note: FY\* indicates data developed based on OMB projections.

[1st QTR = 2 OCT THRU 31 DEC/1 JAN] [2nd QTR = 2 JAN THRU 31 MAR/1 APR] [3rd QTR = 2 APR THRU 30 JUN/1 JUL] [4th QTR = 2 JUL THRU 30 SEPT/1 OCT]

TABLE A-1, QUARTERLY COST INDEXES BY CWBS FEATURE CODE  
Base Year 1967 = 100

CWBS - FEATURE CODES	Wt %	2003		2004		2004		2004		2005		2005		2005			
		1Q04*	2Q04*	3Q04*	4Q04*	1Q05*	2Q05*	3Q05*	4Q05*	1Q05*	2Q05*	3Q05*	4Q05*				
		(Oct - Dec)	(Jan - Mar)	(Apr - Jun)	(Jul - Sep)	(Oct - Dec)	(Jan - Mar)	(Apr - Jun)	(Jul - Sep)	(Oct - Dec)	(Jan - Mar)	(Apr - Jun)	(Jul - Sep)	(Oct - Dec)	(Jan - Mar)	(Apr - Jun)	(Jul - Sep)
02 RELOCATIONS	5%	549.95	553.70	557.45	561.20	564.80	568.65	572.50	576.35	572.50	576.35	572.50	576.35	572.50	576.35	572.50	576.35
03 RESERVOIRS	5%	609.36	613.52	617.67	621.83	625.82	630.08	634.35	638.62	634.35	638.62	634.35	638.62	634.35	638.62	634.35	638.62
04 DAMS	15%	539.66	543.34	547.02	550.70	554.23	558.01	561.79	565.56	561.79	565.56	561.79	565.56	561.79	565.56	561.79	565.56
05 LOCKS	2%	530.49	534.11	537.73	541.35	544.82	548.53	552.25	555.96	552.25	555.96	552.25	555.96	552.25	555.96	552.25	555.96
06 FISH & WILDLIFE FACILITIES	5%	529.06	532.67	536.27	539.88	543.34	547.05	550.75	554.46	550.75	554.46	550.75	554.46	550.75	554.46	550.75	554.46
07 POWER PLANT	10%	513.28	516.78	520.28	523.78	527.14	530.73	534.33	537.92	534.33	537.92	534.33	537.92	534.33	537.92	534.33	537.92
08 ROADS, RAILROADS & BRIDGES	10%	549.95	553.70	557.45	561.20	564.80	568.65	572.50	576.35	572.50	576.35	572.50	576.35	572.50	576.35	572.50	576.35
09 CHANNELS & CANALS	3%	574.25	578.17	582.09	586.00	589.76	593.78	597.80	601.82	597.80	601.82	597.80	601.82	597.80	601.82	597.80	601.82
10 BREAKWATER & SEAWALLS	5%	572.16	576.06	579.96	583.86	587.61	591.61	595.62	599.63	595.62	599.63	595.62	599.63	595.62	599.63	595.62	599.63
11 LEVEES & FLOODWALLS	5%	555.16	558.94	562.73	566.51	570.15	574.03	577.92	581.81	577.92	581.81	577.92	581.81	577.92	581.81	577.92	581.81
12 NAVIGATION PORTS & HARBORS	10%	535.64	539.30	542.95	546.60	550.11	553.86	557.61	561.36	557.61	561.36	557.61	561.36	557.61	561.36	557.61	561.36
13 PUMPING PLANT	5%	505.30	508.75	512.19	515.64	518.95	522.49	526.02	529.56	526.02	529.56	526.02	529.56	526.02	529.56	526.02	529.56
14 RECREATION FACILITIES	5%	505.30	508.75	512.19	515.64	518.95	522.49	526.02	529.56	526.02	529.56	526.02	529.56	526.02	529.56	526.02	529.56
15 FLOODWAY CONTROL & DIVERSION STRUCTURE	2%	529.06	532.67	536.27	539.88	543.34	547.05	550.75	554.46	550.75	554.46	550.75	554.46	550.75	554.46	550.75	554.46
16 BANK STABILIZATION	2%	549.47	553.22	556.96	560.71	564.31	568.15	572.00	575.85	572.00	575.85	572.00	575.85	572.00	575.85	572.00	575.85
17 BEACH REPLENISHMENT	2%	581.95	585.92	589.88	593.85	597.66	601.74	605.81	609.89	605.81	609.89	605.81	609.89	605.81	609.89	605.81	609.89
18 CULTURAL RESOURCE PRESERVATION	2%	505.30	508.75	512.19	515.64	518.95	522.49	526.02	529.56	526.02	529.56	526.02	529.56	526.02	529.56	526.02	529.56
19 BUILDINGS, GROUNDS & UTILITIES	5%	505.30	508.75	512.19	515.64	518.95	522.49	526.02	529.56	526.02	529.56	526.02	529.56	526.02	529.56	526.02	529.56
20 PERMANENT OPERATING EQUIPMENT	2%	505.30	508.75	512.19	515.64	518.95	522.49	526.02	529.56	526.02	529.56	526.02	529.56	526.02	529.56	526.02	529.56
COMPOSITE INDEX (WEIGHTED AVERAGE)	100%	538.68	542.35	546.02	549.69	553.22	556.99	560.76	564.54	560.76	564.54	560.76	564.54	560.76	564.54	560.76	564.54

Note: FY\* indicates data developed based on OMB projections.

[ 1st QTR = 2 OCT THRU 31 DEC | 1 JAN ] [ 2nd QTR = 2 JAN THRU 31 MAR | 1 APR ] [ 3rd QTR = 2 APR THRU 30 JUN | 1 JUL ] [ 4th QTR = 2 JUL THRU 30 SEPT | 1 OCT ]