

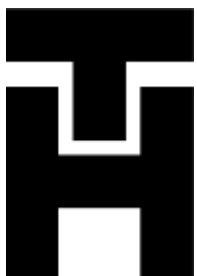
**DRAINAGE STUDY**  
**PHASE 2 – ALTERNATIVE IMPROVEMENTS**  
**CRYSTAL LAKE**  
**ALTERNATIVE 4C IMPROVEMENTS**

FOR:  
**LAKWOOD – PIRATELAND SWASH**  
HORRY COUNTY, SC

**OPINIONS OF PROBABLE**  
**CONSTRUCTION COSTS**

**J-23453.0001**

Prepared by:



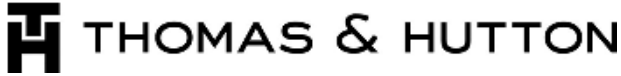
**THOMAS & HUTTON**

Savannah, GA | Charleston, SC | Myrtle Beach, SC | Brunswick, GA | Wilmington, NC

## OPINION OF PROBABLE CONSTRUCTION COST

PROJECT : **Lakewood-Pirateland Swash Drainage Study**  
 LOCATION : Horry County  
 ESTIMATOR : RPK  
 Alternative : **4C - Option 1A.1 - Dredge - New Disposal Site**

DATE PREPARED : 8/6/13	REVISED:
<b>BASIS FOR ESTIMATE</b>	
	(Master plan)
X	(Preliminary design)
	(Final design)
	(Other)



### OPINION OF PROBABLE CONSTRUCTION COST

Since the Engineer has no control over the cost of labor, materials, equipment, over the Contractor's methods of determining prices, or over competitive bidding or market conditions, the Opinions of Probable Construction Costs provided for herein are made on the basis of his experience and qualifications. These opinions represent his best judgment as a design professional familiar with the construction industry. However, the Engineer cannot and does not guarantee that proposals, bids, or the construction cost will not vary from Opinions of Probable Construction Costs prepared by him.

ITEM	DESCRIPTION	NUMBER OF UNITS	UNIT MEASURE	COST	
				PER UNIT	TOTAL COST
1	Mobilization	1	LS	\$ 20,000.00	\$ 20,000
2	Layout	1	LS	\$ 2,000.00	\$ 2,000
3	Testing	1	LS	\$ 10,000.00	\$ 10,000
4	Silt Fence	4,900	LF	\$ 3.00	\$ 14,700
5	Construction Entrance	2	EA	\$ 2,300.00	\$ 4,600
6	Clearing and Grubbing	23.0	AC	\$ 7,000.00	\$ 161,000
7	Excavation and Berm Construction	90,000	CY	\$ 4.00	\$ 360,000
8	Grading	32,500	SY	\$ 0.30	\$ 9,750
9	Outfall Structure and Discharge Pipe	1	EA	\$ 7,500.00	\$ 7,500
10	Influent Line - 18" HDPE	400	LF	\$ 25.00	\$ 10,000
11	Outfall Ditch - Improvement	700	LF	\$ 10.00	\$ 7,000
12	Grassing	32,500	SY	\$ 0.30	\$ 9,750
Dredging					
13	Dredge Mobilization/Demobilization	1	LS	\$ 75,000.00	\$ 75,000
14	Selective Lake Dredging	350,000	CY	\$ 4.50	\$ 1,575,000
Lake Restoration					
15	Grading	16,000	SY	\$ 0.30	\$ 4,800
16	Grassing	16,000	SY	\$ 0.30	\$ 4,800
SUBTOTAL:					\$ 2,275,900
Contingency (15%):					\$ 341,385
TOTAL:					\$ 2,617,285
<b>SAY:</b>					<b>\$ 2,618,000</b>

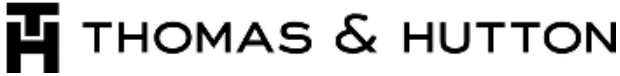
### Notes:

1. No landscaping or irrigation costs included.
2. No soft costs included such as Engineering, Surveying, Permitting, Legal, Land Acquisition, etc.
3. No mitigation (wetland) fees included.
4. No property cost (drainage easement, temporary const. easements, right-of way, etc.) included

## OPINION OF PROBABLE CONSTRUCTION COST

PROJECT : **Lakewood-Pirateland Swash Drainage Study**  
 LOCATION : Horry County  
 ESTIMATOR : RPK  
 Alternative : **4C - Option 1A.2 - Dredge - Exist. Disposal Site**

DATE PREPARED : 8/6/13	REVISED:
<b>BASIS FOR ESTIMATE</b>	
	(Master plan)
X	(Preliminary design)
	(Final design)
	(Other)



**OPINION OF PROBABLE CONSTRUCTION COST**

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ITEM	DESCRIPTION	NUMBER OF UNITS	UNIT MEASURE	COST	
				PER UNIT	TOTAL COST
1	Mobilization	1	LS	\$ 20,000.00	\$ 20,000
2	Layout	1	LS	\$ 2,000.00	\$ 2,000
3	Testing	1	LS	\$ 7,500.00	\$ 7,500
4	Silt Fence	3,700	LF	\$ 3.00	\$ 11,100
5	Construction Entrance	2	EA	\$ 2,300.00	\$ 4,600
6	Excavation and Berm Construction	65,000	CY	\$ 4.00	\$ 260,000
7	Grading	23,111	SY	\$ 0.30	\$ 6,933
8	Outfall Structure and Discharge Pipe	1	EA	\$ 7,500.00	\$ 7,500
9	Influent Line - 18" HDPE	1,200	LF	\$ 25.00	\$ 30,000
10	Outfall Ditch - Improvement	1,600	LF	\$ 10.00	\$ 16,000
11	Grassing	23,111	SY	\$ 0.30	\$ 6,933
Dredging					
12	Dredge Mobilization/Demobilization	1	LS	\$ 75,000.00	\$ 75,000
13	Selective Lake Dredging	350,000	CY	\$ 4.50	\$ 1,575,000
Lake Restoration					
14	Grading	16,000	SY	\$ 0.30	\$ 4,800
15	Grassing	16,000	SY	\$ 0.30	\$ 4,800
				SUBTOTAL:	\$ 2,032,167
				Contingency (15%):	\$ 304,825
				TOTAL:	\$ 2,336,992
				<b>SAY:</b>	<b>\$ 2,337,000</b>

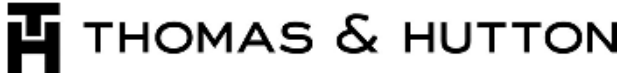
**Notes:**

1. No landscaping or irrigation costs included.
2. No soft costs included such as Engineering, Surveying, Permitting, Legal, Land Acquisition, etc.
3. No mitigation (wetland) fees included.
4. No property cost (drainage easement, temporary const. easements, right-of way, etc.) included

## OPINION OF PROBABLE CONSTRUCTION COST

PROJECT : **Lakewood-Pirateland Swash Drainage Study**  
 LOCATION : Horry County  
 ESTIMATOR : RPK  
 Alternative : **4C - Option 1B.1 - Excavate - New Stockpile Site**

DATE PREPARED : 8/6/13	REVISED:
<b>BASIS FOR ESTIMATE</b>	
	(Master plan)
X	(Preliminary design)
	(Final design)
	(Other)



### OPINION OF PROBABLE CONSTRUCTION COST

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ITEM	DESCRIPTION	NUMBER OF UNITS	UNIT MEASURE	COST	
				PER UNIT	TOTAL COST
1	Mobilization	1	LS	\$ 5,000.00	\$ 5,000
2	Layout	1	LS	\$ 2,000.00	\$ 2,000
3	Testing	1	LS	\$ 5,000.00	\$ 5,000
4	Clearing and Grubbing	13.8	AC	\$ 7,000.00	\$ 96,519
5	Silt Fence	2,940	LF	\$ 3.00	\$ 8,820
6	Grading	66,736	SY	\$ 0.30	\$ 20,021
7	Grassing	66,736	SY	\$ 0.30	\$ 20,021
Excavation					
8	Mobilization / Demobilization	1	LS	\$ 40,000.00	\$ 40,000
9	Water Management	4	MN	\$ 25,000.00	\$ 100,000
10	Selective Lake Excavation	350,000	CY	\$ 4.00	\$ 1,400,000
Lake Restoration					
11	Grading	16,000	SY	\$ 0.30	\$ 4,800
12	Grassing	16,000	SY	\$ 0.30	\$ 4,800
SUBTOTAL:					\$ 1,706,981
Contingency (15%):					\$ 256,047
TOTAL:					\$ 1,963,028
<b>SAY:</b>					<b>\$ 1,964,000</b>

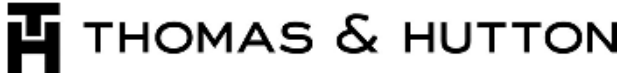
#### Notes:

1. No landscaping or irrigation costs included.
2. No soft costs included such as Engineering, Surveying, Permitting, Legal, Land Acquisition, etc.
3. No mitigation (wetland) fees included.
4. No property cost (drainage easement, temporary const. easements, right-of way, etc.) included

## OPINION OF PROBABLE CONSTRUCTION COST

PROJECT : **Lakewood-Pirateland Swash Drainage Study**  
 LOCATION : Horry County  
 ESTIMATOR : RPK  
 Alternative : **4C - Option 1B.2 - Excavate - Exist. Stockpile Site**

DATE PREPARED : 8/6/13	REVISED:
<b>BASIS FOR ESTIMATE</b>	
	(Master plan)
X	(Preliminary design)
	(Final design)
	(Other)



### OPINION OF PROBABLE CONSTRUCTION COST

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ITEM	DESCRIPTION	NUMBER OF UNITS	UNIT MEASURE	COST	
				PER UNIT	TOTAL COST
1	Mobilization	1	LS	\$ 5,000.00	\$ 5,000
2	Layout	1	LS	\$ 2,000.00	\$ 2,000
3	Testing	1	LS	\$ 5,000.00	\$ 5,000
4	Silt Fence	3,100	LF	\$ 3.00	\$ 9,300
5	Temporary Haul Road	1,000	LF	\$ 10.00	\$ 10,000
6	Grading	72,600	SY	\$ 0.30	\$ 21,780
7	Grassing	72,600	SY	\$ 0.30	\$ 21,780
Excavation					
8	Mobilization / Demobilization	1	LS	\$ 40,000.00	\$ 40,000
9	Water Management	4	MN	\$ 25,000.00	\$ 100,000
10	Selective Lake Excavation	350,000	CY	\$ 4.50	\$ 1,575,000
Lake Restoration					
11	Grading	16,000	SY	\$ 0.30	\$ 4,800
12	Grassing	16,000	SY	\$ 0.30	\$ 4,800
SUBTOTAL:					\$ 1,759,460
Contingency (15%):					\$ 263,919
TOTAL:					\$ 2,023,379
<b>SAY:</b>					<b>\$ 2,024,000</b>

### Notes:

1. No landscaping or irrigation costs included.
2. No soft costs included such as Engineering, Surveying, Permitting, Legal, Land Acquisition, etc.
3. No mitigation (wetland) fees included.
4. No property cost (drainage easement, temporary const. easements, right-of way, etc.) included

## OPINION OF PROBABLE CONSTRUCTION COST

PROJECT : **Lakewood-Pirateland Swash Drainage Study**  
 LOCATION : Horry County  
 ESTIMATOR : RPK  
 Alternative : **4C - Option 2A - Partial Dredge/Fill**

DATE PREPARED : 8/6/13	REVISED:
<b>BASIS FOR ESTIMATE</b>	
	(Master plan)
X	(Preliminary design)
	(Final design)
	(Other)



### OPINION OF PROBABLE CONSTRUCTION COST

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ITEM	DESCRIPTION	NUMBER OF UNITS	UNIT MEASURE	COST	
				PER UNIT	TOTAL COST
Dredging					
1	Layout	1	LS	\$ 2,000.00	\$ 2,000
2	Testing	1	LS	\$ 5,000.00	\$ 5,000
3	Clear and Grub Banks	2.4	AC	\$ 7,000.00	\$ 16,800
4	Dredge Mobilization/Demobilization	1	LS	\$ 75,000.00	\$ 75,000
5	Selective Lake Dredging	250,000	CY	\$ 4.50	\$ 1,125,000
Lake Restoration					
6	Grading	73,511	SY	\$ 0.30	\$ 22,053
7	Grassing	73,511	SY	\$ 0.30	\$ 22,053
8	Miscellaneous Drainage	1	LS	\$ 20,000.00	\$ 20,000
SUBTOTAL:					\$ 1,267,906
Contingency (15%):					\$ 190,186
TOTAL:					\$ 1,458,092
<b>SAY:</b>					<b>\$ 1,459,000</b>

### Notes:

1. No landscaping or irrigation costs included.
2. No soft costs included such as Engineering, Surveying, Permitting, Legal, Land Acquisition, etc.
3. No mitigation (wetland) fees included.
4. No property cost (drainage easement, temporary const. easements, right-of way, etc.) included

## OPINION OF PROBABLE CONSTRUCTION COST

PROJECT : **Lakewood-Pirateland Swash Drainage Study**  
 LOCATION : Horry County  
 ESTIMATOR : RPK  
 Alternative : **4C - Option 2B - Partial Excavate/Fill**

DATE PREPARED : 8/6/13	REVISED:
<b>BASIS FOR ESTIMATE</b>	
	(Master plan)
X	(Preliminary design)
	(Final design)
	(Other)



**OPINION OF PROBABLE CONSTRUCTION COST**

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ITEM	DESCRIPTION	NUMBER OF UNITS	UNIT MEASURE	COST	
				PER UNIT	TOTAL COST
Excavation					
1	Layout	1	LS	\$ 2,000.00	\$ 2,000
2	Testing	1	LS	\$ 5,000.00	\$ 5,000
3	Clear and Grub Banks	2.4	AC	\$ 7,000.00	\$ 16,800
4	Mobilization/Demobilization	1	LS	\$ 40,000.00	\$ 40,000
5	Selective Lake Excavation	250,000	CY	\$ 3.50	\$ 875,000
Lake Restoration					
6	Grading	73,511	SY	\$ 0.30	\$ 22,053
7	Grassing	73,511	SY	\$ 0.30	\$ 22,053
8	Miscellaneous Drainage	1	LS	\$ 20,000.00	\$ 20,000
SUBTOTAL:					\$ 982,906
Contingency (15%):					\$ 147,436
TOTAL:					\$ 1,130,342
<b>SAY:</b>					<b>\$ 1,131,000</b>

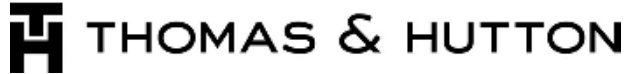
**Notes:**

1. No landscaping or irrigation costs included.
2. No soft costs included such as Engineering, Surveying, Permitting, Legal, Land Acquisition, etc.
3. No mitigation (wetland) fees included.
4. No property cost (drainage easement, temporary const. easements, right-of way, etc.) included

## OPINION OF PROBABLE CONSTRUCTION COST

PROJECT : **Lakewood-Pirateland Swash Drainage Study**  
 LOCATION : Horry County  
 ESTIMATOR : RPK  
 Alternative : **4C - Off-site Improvements**

DATE PREPARED : 8/6/13	REVISED:
<b>BASIS FOR ESTIMATE</b>	
	(Master plan)
X	(Preliminary design)
	(Final design)
	(Other)



**OPINION OF PROBABLE CONSTRUCTION COST**

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ITEM	DESCRIPTION	NUMBER OF UNITS	UNIT MEASURE	COST	
				PER UNIT	TOTAL COST
1	Mobilization	1	LS	\$ 20,000.00	\$ 20,000
2	Layout	1	LS	\$ 2,000.00	\$ 2,000
3	Testing	1	LS	\$ 5,000.00	\$ 5,000
4	Silt Fence	200	LF	\$ 3.00	\$ 600
5	Rock Ceck Dam	10	EA	\$ 500.00	\$ 5,000
6	Constrcution Entrance	2	EA	\$ 2,300.00	\$ 4,600
7	Tree Protection	1,640	LF	\$ 3.50	\$ 5,740
8	Water Management	1	LS	\$ 10,000.00	\$ 10,000
Demolition					
9	Clearing and Grubbing	3.25	AC	\$ 7,000.00	\$ 22,750
10	Demo. Exist. Flash Board Riser	1	EA	\$ 1,500.00	\$ 1,500
11	Demo. Exist. 30" RCP	66	LF	\$ 10.00	\$ 660
12	Demo. Exist. 36" RCP	98	LF	\$ 10.00	\$ 980
13	Demo. Exist. (2) 8'x8' CBC	20	LF	\$ 100.00	\$ 2,000
14	Demo. Exist. 60" CMP	80	LF	\$ 25.00	\$ 2,000
15	Remove and Dispose Existing Pavement	426	SY	\$ 3.50	\$ 1,491
Construction					
16	Channel Excavation	7,600	CY	\$ 8.00	\$ 60,800
17	Channel Fill - Compacted in Lifts	2,400	CY	\$ 4.00	\$ 9,600
18	Grading	15,730	SY	\$ 1.00	\$ 15,730
19	48" RCP	650	LF	\$ 150.00	\$ 97,500
20	Headwall - (3) 48" RCP	4	EA	\$ 5,000.00	\$ 20,000