

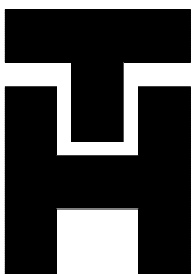
**DRAINAGE STUDY**  
**PHASE 2 – ALTERNATIVE IMPROVEMENTS**

FOR:  
**LAKWOOD – PIRATELAND SWASH**  
Horry County, SC

**OPINIONS OF PROBABLE  
CONSTRUCTION COST**

**SEPTEMBER 18, 2012**

**J-23453.404**



Prepared by:

**THOMAS & HUTTON**

## OPINION OF PROBABLE CONSTRUCTION COST

PROJECT : **Lakewood-Pirateland Swash Drainage Study**  
 LOCATION : Horry County  
 ESTIMATOR : EAK / RPK  
 ALTERNATIVE: 1A - Hwy 17 Culvert Impr. and Channel Impr.

DATE PREPARED : 9/11/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 10,000.00	\$ 10,000
2	Layout	1	LS	\$ 4,000.00	\$ 4,000
3	Testing	1	LS	\$ 10,000.00	\$ 10,000
4	Maintenance of Traffic	1	LS	\$ 25,000.00	\$ 25,000
5	Clearing and Grubbing	3.2	AC	\$ 6,000.00	\$ 19,200
6	Removal and Disposal of Exist Asphalt	446	SY	\$ 8.00	\$ 3,572
7	Silt Fence	200	LF	\$ 4.00	\$ 800
8	Construction Entrance	2	EA	\$ 2,300.00	\$ 4,600
9	Water Management	1	LS	\$ 15,000.00	\$ 15,000
10	Groundwater Control	1	MO	\$ 25,000.00	\$ 25,000
11	Excavation, Haul and Dispose	13,233	CY	\$ 20.00	\$ 264,656
12	5'x10' CBC	110	LF	\$ 1,500.00	\$ 165,000
13	Demo and Replace 12" Sewer Force Main	100	LF	\$ 120.00	\$ 12,000
14	Demo and Replace 8" Water Main	100	LF	\$ 80.00	\$ 8,000
15	Concrete Headwall w/ Rip Rap	2	EA	\$ 20,000.00	\$ 40,000
16	Misc. Rip-Rap w/ filter cloth	722	SY	\$ 30.00	\$ 21,667
17	Full Depth Hot Mix Asphalt	179	TON	\$ 100.00	\$ 17,858
18	Guard Rail	100	LF	\$ 50.00	\$ 5,000
19	Grading	15,488	SY	\$ 2.00	\$ 30,976
20	Grassing	15,488	SY	\$ 5.00	\$ 77,440
				SUBTOTAL:	\$ 651,352
				Contingency (25%):	\$ 162,838
				TOTAL:	\$ 814,189
				<b>SAY:</b>	<b>\$ 815,000</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 : EAK / RPK  
 ALTERNATIVE: 1B - Hwy 17 Culvert Improvements (7'x7'CBC)

DATE PREPARED : 8/22/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 5,000.00	\$ 5,000
2	Layout	1	LS	\$ 2,000.00	\$ 2,000
3	Testing	1	LS	\$ 5,000.00	\$ 5,000
4	Maintenance of Traffic	1	LS	\$ 25,000.00	\$ 25,000
5	Clearing and Grubbing	0.4	AC	\$ 6,000.00	\$ 2,400
6	Removal and Disposal of Exist Asphalt	267	SY	\$ 8.00	\$ 2,133
7	Silt Fence	200	LF	\$ 4.00	\$ 800
8	Construction Entrance	1	EA	\$ 2,300.00	\$ 2,300
9	Water Management	1	LS	\$ 5,000.00	\$ 5,000
10	Groundwater Control	1	MO	\$ 25,000.00	\$ 25,000
11	Excavation, Haul and Dispose	1,070	CY	\$ 20.00	\$ 21,400
12	7'x7' CBC	110	LF	\$ 1,200.00	\$ 132,000
13	Demo and Replace 12" Sewer Force Main	100	LF	\$ 120.00	\$ 12,000
14	Demo and Replace 8" Water Main	100	LF	\$ 80.00	\$ 8,000
15	Concrete Headwall w/ Rip Rap	2	EA	\$ 20,000.00	\$ 40,000
16	Full Depth Hot Mix Asphalt	107	TON	\$ 100.00	\$ 10,667
17	Guard Rail	100	LF	\$ 50.00	\$ 5,000
18	Grading	1,750	SY	\$ 2.00	\$ 3,500
19	Grassing	1,750	SY	\$ 5.00	\$ 8,750
				SUBTOTAL:	\$ 303,700
				Contingency (25%):	\$ 75,925
				TOTAL:	\$ 379,625
				<b>SAY:</b>	<b>\$ 380,000</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 : EAK / RPK  
 ALTERNATIVE: 1B - Hwy 17 Culvert Improvements (42" RCP)

DATE PREPARED : 8/22/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 5,000.00	\$ 5,000
2	Layout	1	LS	\$ 2,000.00	\$ 2,000
3	Testing	1	LS	\$ 5,000.00	\$ 5,000
4	Maintenance of Traffic	1	LS	\$ 25,000.00	\$ 25,000
5	Clearing and Grubbing	0.4	AC	\$ 6,000.00	\$ 2,400
6	Removal and Disposal of Exist Asphalt	267	SY	\$ 8.00	\$ 2,133
7	Silt Fence	200	LF	\$ 4.00	\$ 800
8	Construction Entrance	1	EA	\$ 2,300.00	\$ 2,300
9	Water Management	1	LS	\$ 5,000.00	\$ 5,000
10	Groundwater Control	1	MO	\$ 25,000.00	\$ 25,000
11	Excavation, Haul and Dispose	500	CY	\$ 20.00	\$ 10,000
12	42" RCP	110	LF	\$ 100.00	\$ 11,000
13	Demo and Replace 12" Sewer Force Main	100	LF	\$ 120.00	\$ 12,000
14	Demo and Replace 8" Water Main	100	LF	\$ 80.00	\$ 8,000
15	Concrete Headwall w/ Rip Rap	2	EA	\$ 15,000.00	\$ 30,000
16	Full Depth Hot Mix Asphalt	107	TON	\$ 100.00	\$ 10,667
17	Guard Rail	100	LF	\$ 50.00	\$ 5,000
18	Grading	1,750	SY	\$ 2.00	\$ 3,500
19	Grassing	1,750	SY	\$ 5.00	\$ 8,750
				SUBTOTAL:	\$ 161,300
				Contingency (25%):	\$ 40,325
				TOTAL:	\$ 201,625
				<b>SAY:</b>	<b>\$ 202,000</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 : EAK / RPK  
 ALTERNATIVE: 2A - Detention Pond at Catherine Drive

DATE PREPARED : 8/1/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 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	1.5	AC	\$ 9,000.00	\$ 13,500
5	Silt Fence	500	LF	\$ 4.00	\$ 2,000
6	Construction Entrance	1	EA	\$ 2,300.00	\$ 2,300
7	Groundwater Control	1	MO	\$ 25,000.00	\$ 25,000
8	Excavation, Haul and Dispose	19,800	CY	\$ 20.00	\$ 396,000
9	Concrete Catch Basin	1	EA	\$ 3,300.00	\$ 3,300
10	42" RCP	50	LF	\$ 100.00	\$ 5,000
11	Concrete Control Structure	1	EA	\$ 3,300.00	\$ 3,300
12	48" RCP	75	LF	\$ 120.00	\$ 9,000
13	Misc. Rip-Rap w/ filter cloth	45	SY	\$ 30.00	\$ 1,350
14	Grading	5,500	SY	\$ 2.00	\$ 11,000
15	Grassing	5,500	SY	\$ 5.00	\$ 27,500
16	Fencing	1,000	LF	\$ 25.00	\$ 25,000
				SUBTOTAL:	\$ 536,250
				Contingency (25%):	\$ 134,063
				TOTAL:	\$ 670,313
				<b>SAY:</b>	<b>\$ 671,000</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 : EAK / RPK  
 ALTERNATIVE: 2B - Detention Pond at Catherine Drive

DATE PREPARED : 8/1/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 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	1.5	AC	\$ 9,000.00	\$ 13,500
5	Silt Fence	500	LF	\$ 4.00	\$ 2,000
6	Construction Entrance	1	EA	\$ 2,300.00	\$ 2,300
7	Groundwater Control	1	MO	\$ 25,000.00	\$ 25,000
8	Excavation, Haul and Dispose	19,400	CY	\$ 20.00	\$ 388,000
9	60" RCP	720	LF	\$ 125.00	\$ 90,000
10	Misc. Rip-Rap w/ filter cloth	112	SY	\$ 30.00	\$ 3,360
11	Grading	5,500	SY	\$ 2.00	\$ 11,000
12	Grassing	5,500	SY	\$ 5.00	\$ 27,500
13	Fencing	1,000	LF	\$ 25.00	\$ 25,000
14	Fill Existing Outfall	1	EA	\$ 7,500.00	\$ 7,500
				SUBTOTAL:	\$ 599,660
				Contingency (25%):	\$ 149,915
				TOTAL:	\$ 749,575
				<b>SAY:</b>	<b>\$ 750,000</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 : EAK / RPK  
 ALTERNATIVE: 2C - Detention Pond at Catherine Drive

DATE PREPARED : 8/1/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 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	1.5	AC	\$ 9,000.00	\$ 13,500
5	Silt Fence	500	LF	\$ 4.00	\$ 2,000
6	Construction Entrance	1	EA	\$ 2,300.00	\$ 2,300
7	Groundwater Control	1	MO	\$ 10,000.00	\$ 10,000
8	Excavation, Haul and Dispose	16,100	CY	\$ 20.00	\$ 322,000
9	18" RCP	65	LF	\$ 40.00	\$ 2,600
10	Misc. Rip-Rap w/ filter cloth	150	SY	\$ 30.00	\$ 4,500
11	Grading	5,500	SY	\$ 2.00	\$ 11,000
12	Grassing	5,500	SY	\$ 5.00	\$ 27,500
13	Fencing	1,000	LF	\$ 25.00	\$ 25,000
				SUBTOTAL:	\$ 432,400
				Contingency (25%):	\$ 108,100
				TOTAL:	\$ 540,500
				<b>SAY:</b>	<b>\$ 541,000</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 : EAK / RPK  
 ALTERNATIVE: 3 - Detention Pond at Lakeview Drive

DATE PREPARED : 8/1/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 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	8.1	AC	\$ 6,000.00	\$ 48,300
5	Silt Fence	5,000	LF	\$ 4.00	\$ 20,000
6	Construction Entrance	2	EA	\$ 2,300.00	\$ 4,600
7	Groundwater Control	2	MO	\$ 25,000.00	\$ 50,000
8	Excavation, Haul and Dispose	110,000	CY	\$ 20.00	\$ 2,200,000
9	Control Structure	1	EA	\$ 25,000.00	\$ 25,000
10	Misc. Rip-Rap w/ filter cloth	650	SY	\$ 30.00	\$ 19,500
11	Grading	22,990	SY	\$ 2.00	\$ 45,980
12	Grassing	22,990	SY	\$ 5.00	\$ 114,950
13	Fencing	4,500	LF	\$ 25.00	\$ 112,500
				SUBTOTAL:	\$ 2,652,830
				Contingency (25%):	\$ 663,208
				TOTAL:	\$ 3,316,038
				<b>SAY:</b>	<b>\$ 3,317,000</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 : EAK / RPK  
 ALTERNATIVE: 4A - Chrystal Lake Improvements



DATE PREPARED : 8/1/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 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	0.2	AC	\$ 9,000.00	\$ 1,800
5	Silt Fence	600	LF	\$ 4.00	\$ 2,400
6	Construction Entrance	1	EA	\$ 2,300.00	\$ 2,300
7	Tree Protection	100	LF	\$ 3.35	\$ 335
8	Water Management	1	LS	\$ 5,000.00	\$ 5,000
9	Excavation, Haul and Dispose	1,200	CY	\$ 20.00	\$ 24,000
10	Misc. Rip-Rap w/ filter cloth	670	SY	\$ 30.00	\$ 20,100
11	Grading	500	SY	\$ 2.00	\$ 1,000
12	Grassing	200	SY	\$ 5.00	\$ 1,000
12	Replace asphalt sidewalk	115	SY	\$ 22.00	\$ 2,530
13	Wooden Boardwalk	270	SF	\$ 12.00	\$ 3,240
				SUBTOTAL:	\$ 75,705
				Contingency (25%):	\$ 18,926
				TOTAL:	\$ 94,631
				<b>SAY:</b>	<b>\$ 95,000</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 : EAK / RPK  
 Alternative : **4B - Crystal Lake Modification**

DATE PREPARED : 8/1/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 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	40	LF	\$ 4.00	\$ 160
5	Clearing and Grubbing	0.1	AC	\$ 9,000.00	\$ 900
6	Construction Entrance	2	EA	\$ 2,300.00	\$ 4,600
7	Tree Protection	100	LF	\$ 3.35	\$ 335
8	Water Management	1	LS	\$ 5,000.00	\$ 5,000
9	Remove Flash Board Riser	1	EA	\$ 1,500.00	\$ 1,500
10	Misc. Excavation and Grading (Lake)	200	CY	\$ 25.00	\$ 5,000
11	48" RCP	210	LF	\$ 330.00	\$ 69,300
12	Abandon 60" CMP	1	EA	\$ 1,000.00	\$ 1,000
13	Misc. Rip-Rap w/ filter cloth	270	SY	\$ 30.00	\$ 8,100
14	Grading	400	SY	\$ 2.00	\$ 800
15	Grassing	400	SY	\$ 5.00	\$ 2,000
15	Asphalt sidewalk	115	SY	\$ 22.00	\$ 2,530
16	Selective Lake Dredging	UNK	SY	UNKNOWN	UNKNOWN
				SUBTOTAL:	\$ 113,225
				Contingency (25%):	\$ 28,306
				TOTAL:	\$ 141,531
				<b>SAY:</b>	<b>\$ 142,000</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 : EAK / RPK  
 Alternative : **4C - Crystal Lake Modification**

DATE PREPARED : 8/1/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	200	LF	\$ 4.00	\$ 800
5	Construction Entrance	2	EA	\$ 2,300.00	\$ 4,600
6	Tree Protection	200	LF	\$ 3.35	\$ 670
7	Water Management	1	LS	\$ 10,000.00	\$ 10,000
8	Clearing and Grubbing	0.5	AC	\$ 9,000.00	\$ 4,500
9	Demo. Exist. Flash Board Riser	1	EA	\$ 1,500.00	\$ 1,500
10	Demo. Exist. 30" RCP	80	LF	\$ 10.00	\$ 800
11	Demo. Exist. 36" RCP	100	LF	\$ 10.00	\$ 1,000
12	Demo. Exist. (2) 8'x8' CBC	30	LF	\$ 100.00	\$ 3,000
13	Demo. Exist. 60" CMP	80	LF	\$ 25.00	\$ 2,000
14	Remove and Dispose Existing Pavement	250	SY	\$ 3.50	\$ 875
15	Improve Exist. Channel	1,500	LF	\$ 100.00	\$ 150,000
16	(3) 8'x6' CBC	120	LF	\$ 2,500.00	\$ 300,000
17	60" RCP	180	LF	\$ 125.00	\$ 22,500
18	Full Depth Hot Mix Asphalt	66	TON	\$ 100.00	\$ 6,600
19	Misc. Excavation and Grading (Lake)	500	CY	\$ 25.00	\$ 12,500
20	Selective Lake Dredging	UNK	SY	UNKNOWN	UNKNOWN
				SUBTOTAL:	\$ 533,345
				Contingency (25%):	\$ 133,336
				TOTAL:	\$ 666,681
				<b>SAY:</b>	<b>\$ 667,000</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 : EAK / RPK  
 ALTERNATIVE: 5 - Detention Ponds at Seagate Village

DATE PREPARED : 8/1/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 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	16.4	AC	\$ 2,000.00	\$ 32,800
5	Silt Fence	600	LF	\$ 4.00	\$ 2,400
6	Construction Entrance	2	EA	\$ 2,300.00	\$ 4,600
7	Groundwater Control	2	MO	\$ 25,000.00	\$ 50,000
8	Excavation, Haul and Dispose	165,200	CY	\$ 20.00	\$ 3,304,000
9	Demo and Replace Existing 8" Water Main	200	LF	\$ 78.00	\$ 15,600
10	Demo and Replace Exist. Sewer MH	3	EA	\$ 2,800.00	\$ 8,400
11	Sewer MH	3	EA	\$ 2,000.00	\$ 6,000
12	Demo and Replace Gravity Sewer	910	LF	\$ 80.00	\$ 72,800
13	Control Structure	2	EA	\$ 25,000.00	\$ 50,000
14	Misc. Rip-Rap w/ filter cloth	500	SY	\$ 30.00	\$ 15,000
15	Grading	49,000	SY	\$ 2.00	\$ 98,000
16	Grassing	49,000	SY	\$ 5.00	\$ 245,000
SUBTOTAL:					\$ 3,916,600
Contingency (25%):					\$ 979,150
TOTAL:					\$ 4,895,750
<b>SAY:</b>					<b>\$ 4,896,000</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 : EAK / RPK  
 ALTERNATIVE: 7 - Stratmill Court Drainage Diversion



DATE PREPARED : 8/1/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 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	0.3	AC	\$ 9,000.00	\$ 2,250
5	Silt Fence	200	LF	\$ 4.00	\$ 800
6	Construction Entrance	1	EA	\$ 2,300.00	\$ 2,300
7	Removal and Disposal of Exist Asphalt	370	SY	\$ 8.00	\$ 2,960
8	Demo and Replace Exist. 18" CPP w/ RCP	80	LF	\$ 45.00	\$ 3,600
9	Demo and Replace Exist. 30" CPP w/ RCP	430	LF	\$ 65.00	\$ 27,950
10	Demo and Replace Exist. CB / MH	5	EA	\$ 2,800.00	\$ 14,000
11	Full Depth Hot Mix Asphalt	148	TON	\$ 100.00	\$ 14,800
12	36" RCP	260	LF	\$ 85.00	\$ 22,100
13	Flap Gate	1	EA	\$ 4,000.00	\$ 4,000
14	Misc. Rip-Rap w/ filter cloth	30	SY	\$ 30.00	\$ 900
15	Grading	1,450	SY	\$ 2.00	\$ 2,900
16	Grassing	1,450	SY	\$ 5.00	\$ 7,250
				SUBTOTAL:	\$ 117,810
				Contingency (25%):	\$ 29,453
				TOTAL:	\$ 147,263
				<b>SAY:</b>	<b>\$ 148,000</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 : EAK / RPK  
 ALTERNATIVE: 8 - Stratmill Court Flood Protection System Imp.

DATE PREPARED : 8/1/12	REVISED:
<b>BASIS FOR ESTIMATE</b>	
x	(Master plan)
	(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	\$ 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	0.4	AC	\$ 9,000.00	\$ 3,600
5	Silt Fence	1,400	LF	\$ 4.00	\$ 5,600
6	Construction Entrance	1	EA	\$ 2,300.00	\$ 2,300
7	Berm	640	LF	\$ 40.00	\$ 25,600
8	Improve Exist. Berm	800	LF	\$ 20.00	\$ 16,000
9	Grading	3,200	SY	\$ 2.00	\$ 6,400
10	Grassing	3,200	SY	\$ 5.00	\$ 16,000
				SUBTOTAL:	\$ 87,500
				Contingency (25%):	\$ 21,875
				TOTAL:	\$ 109,375
				<b>SAY:</b>	<b>\$ 110,000</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