

## Design Option 1

Line Item	Cost	% of Total Cost
<b>Engineering</b>		
Detailed Engineering including drawings	\$37,800.00	8.2%
Material and construction specifications	\$8,000.00	1.7%
<i>Subtotal</i>	<b>\$45,800.00</b>	<b>9.9%</b>
<b>Permits</b>		
Prepare and submit permits	\$6,400.00	1.4%
DNR Permit Fee	\$500.00	0.1%
Army Corp of Engineers Permit Fee	\$2,000.00	0.4%
<i>Subtotal</i>	<b>\$8,900.00</b>	<b>1.9%</b>
<b>Construction</b>		
140 linear ft of new sheet pile wall with tiebacks (27 ft from top of wall to river bottom)	\$210,000.00	45.5%
Provide, transport and place 5140 cubic yds of fill	\$100,000.00	21.6%
25 ft x 10 ft floating dock with ramp	\$15,000.00	3.2%
Landscaping allowance includes: 2600 sq. ft. of stoned walkway 4" thick and fabric Tress, shrubs and evergreens approx 6000 sq ft of new grass 5 park benches with an anchoring system 3 picnic tables with an anchoring system	\$15,000.00	3.2%
Extend outfall to new wall	\$5,000.00	1.1%
Construction Contingency	\$30,000.00	6.5%
<i>Subtotal</i>	<b>\$375,000.00</b>	<b>81.2%</b>
<b>Project Management</b>	<b>\$12,800.00</b>	<b>2.8%</b>
<b>Construction Inspection</b>	<b>\$12,000.00</b>	<b>2.6%</b>
<b>Enviromental Inspection</b>	<b>\$7,500.00</b>	<b>1.6%</b>
<b>Total Cost</b>	<b>\$462,000.00</b>	<b>100.0%</b>

## Cost Estimate Assumptions for Option 1

1. The detailed engineering estimate includes the following
  - a. 2 in river soil borings for the design of the sheet pile wall at \$15,000
  - b. Design of sheet pile wall at 40 hours
  - c. Design of wall tie back system at 40 hours
  - d. Preparation of detailed drawings at 80 hours
  - e. Preparation of specifications at 80 hours
  - f. Misc. engineering oversight at 20 hours
  - g. Assume \$100/hr for engineer and \$60/hr for drawings
2. The construction estimate includes the following
  - a. As listed in the spreadsheet
3. The permitting estimate includes the following
  - a. Filling out of permits at 40 hrs
  - b. Oversight of permit process at 8 hrs
  - c. Meetings at 16 hrs
4. The Construction Management estimate includes the following
  - a. 50 hrs for project management at \$120/hr
  - b. Bid review and award at 20 hours
  - c. Project closeout at 20 hrs engineering and 40 hrs for drawings
5. The Construction Inspection estimate includes the following
  - a. 120 hrs of field oversight at \$100/hr
6. The Environmental Inspection estimate includes the following
  - a. 75 hrs for environmental inspection to verify compliance at \$100/hr
7. The estimate is 2006 dollars.

## Design Option 2

Line Item	Cost	% of Total Cost
<b>Engineering</b>		
Detailed Engineering including drawings	\$16,000.00	6.3%
Material and construction specifications	\$8,000.00	3.1%
<i>Subtotal</i>	<b>\$24,000.00</b>	<b>9.4%</b>
<b>Permits</b>		
Prepare and submit permits	\$6,400.00	2.5%
DNR Permit Fee	\$500.00	0.2%
Army Corp of Engineers Permit Fee	\$2,000.00	0.8%
<i>Subtotal</i>	<b>\$8,900.00</b>	<b>3.5%</b>
<b>Construction</b>		
Piling	\$30,000.00	11.8%
2655 sq ft of grating and support beams	\$70,000.00	27.5%
Provide and install 200 ft of trash barrier to piles (Assume that sheeting is 8 ft high)	\$30,000.00	11.8%
Provide and place 400 cubic yards of rip-rap	\$20,000.00	7.8%
25 ft x 10 ft floating dock with ramp	\$15,000.00	5.9%
Landscaping allowance includes: Tress, shrubs and evergreens 3 park benches with an anchoring system 1 picnic table with an anchoring system	\$5,000.00	2.0%
Construction Contingency	\$20,000.00	7.8%
<i>Subtotal</i>	<b>\$190,000.00</b>	<b>74.6%</b>
<b>Project Management</b>	<b>\$12,400.00</b>	<b>4.9%</b>
<b>Construction Inspection</b>	<b>\$12,000.00</b>	<b>4.7%</b>
<b>Enviromental Inspection</b>	<b>\$7,500.00</b>	<b>2.9%</b>
<b>Total Cost</b>	<b>\$254,800.00</b>	<b>100.0%</b>

## **Cost Estimate Assumptions for Option 2**

1. The detailed engineering estimate includes the following
  - a. Design of piles and walkway system at 60 hours
  - b. Preparation of detailed drawings at 80 hours
  - c. Preparation of specifications at 80 hours
  - d. Misc. engineering oversight at 20 hours
  - e. Assume \$100/hr for engineer and \$60/hr for drawings
2. The permitting estimate includes the following
  - a. Filling out of permits at 40 hrs
  - b. Oversight of permit process at 8 hrs
  - c. Meetings at 16 hrs
3. The construction estimate includes the following
  - a. As listed in the spreadsheet
4. The Construction Management estimate includes the following
  - a. 50 hrs for project management at \$120/hr
  - b. Bid review and award at 20 hours
  - c. Project closeout at 20 engineering and 40 for drawings
5. The Construction Inspection estimate includes the following
  - a. 120 hrs of field oversight at \$100/hr
6. The Environmental Inspection estimate includes the following
  - a. 75 hrs for environmental inspection to verify compliance at \$100/hr
7. The estimate is 2006 dollars.

## Design Option 3

Line Item	Cost	% of Total Cost
<b>Engineering</b>		
Detailed Engineering including drawings	\$16,000.00	5.9%
Material and Construction Specifications	\$8,000.00	3.0%
<i>Subtotal</i>	<b>\$24,000.00</b>	<b>8.9%</b>
<b>Permits</b>		
Prepare and submit permits	\$6,400.00	2.4%
DNR Permit Fee	\$500.00	0.2%
Army Corp of Engineers Permit Fee	\$2,000.00	0.7%
<i>Subtotal</i>	<b>\$8,900.00</b>	<b>3.3%</b>
<b>Construction</b>		
Install piling	\$50,000.00	18.5%
3944 sq ft of grating and support beams	\$40,000.00	14.8%
Provide and install 140 ft of trash barrier to piles (Assume that sheeting is 8 ft high)	\$30,000.00	11.1%
Provide and install one aeration pump	\$5,000.00	1.9%
25 ft x 10 ft floating dock and ramp	\$15,000.00	5.6%
Backfill for plantings	\$6,000.00	2.2%
Floating island material/fish habitat and installation	\$30,000.00	11.1%
Landscaping allowance includes: Tress, shrubs and evergreens Water Plantings 3 park benches with an anchoring system 1 picnic table with an anchoring system	\$15,000.00	5.6%
Construction Contingency	\$14,000.00	5.2%
<i>Subtotal</i>	<b>\$205,000.00</b>	<b>76.0%</b>
<b>Project Management</b>	<b>\$12,400.00</b>	<b>4.6%</b>
<b>Construction Inspection</b>	<b>\$12,000.00</b>	<b>4.4%</b>
<b>Enviromental Inspection</b>	<b>\$7,500.00</b>	<b>2.8%</b>
<b>Total Cost</b>	<b>\$269,800.00</b>	<b>100.0%</b>

### **Cost Estimate Assumptions for Option 3**

1. The detailed engineering estimate includes the following
  - a. Design of piles and deck system at 60 hours
  - b. Preparation of detailed drawings at 80 hours
  - c. Preparation of specifications at 80 hours
  - d. Misc. engineering oversight at 20 hours
  - e. Assume \$100/hr for engineer and \$60/hr for drawings
2. The permitting estimate includes the following
  - a. Filling out of permits at 40 hrs
  - b. Oversight of permit process at 8 hrs
  - c. Meetings at 16 hrs
3. The construction estimate includes the following
  - a. As listed in the spreadsheet
4. The Construction Management estimate includes the following
  - a. 50 hrs for project management at \$120/hr
  - b. Bid review and award at 20 hours
  - c. Project closeout at 20 engineering and 40 for drawings
5. The Construction Inspection estimate includes the following
  - a. 120 hrs of field oversight at \$100/hr
6. The Environmental Inspection estimate includes the following
  - a. 75 hrs for environmental inspection to verify compliance at \$100/hr
7. The estimate is 2006 dollars.