

Appendix 4

Flood Mitigation Analysis Support Data – Cost Estimates

Area	Residential		Commercial	Cost (2012 Dollars)
	Approximate Number of Structures For Floodproofing	approximate Number of Structures for Buyout	Approximate Number of Structures for Floodproofing	
CC24a	45	20	1	\$ 1,070,000
DC5a	5	10		\$ 350,000
DC5aa	0	15		\$ 450,000
DC4a	100	60		\$ 2,800,000
DC4aa	0	200		\$ 6,000,000
DW11a	0	0	20	\$ 400,000
DW10a	0	0	25	\$ 500,000
DW15a	5	30		\$ 950,000
EFK8a	5	0		\$ 50,000
EFK9a	35	20		\$ 950,000
EFK30a	5	17	1	\$ 580,000
EFK30aa	5	5	1	\$ 220,000
EFK5a	5	10		\$ 350,000
EFK5aa	0	25		\$ 750,000
EFK4a	100	60		\$ 2,800,000
EFK4aa	0	170		\$ 5,100,000
FR45a	3	3		\$ 120,000
FR22a	0	0	2	\$ 40,000
FR17a	35	45		\$ 1,700,000
FR18a	10	45		\$ 2,800,000
HC42a	50	15	0	\$ 950,000
HC41a	300	80		\$ 5,400,000
HC40a	95	10		\$ 1,250,000
HC38a	150	0		\$ 1,500,000
HC37a	10	20		\$ 700,000
HC36a	20	2	2	\$ 300,000
HC34a	17	1	2	\$ 240,000
HC33a	40	60		\$ 2,200,000
HC32a	20	20	4	\$ 880,000
HC31a	0	0	7	\$ 140,000
HC30a	5	20	1	\$ 670,000
SB26a	65	0	7	\$ 790,000
SB27a	25	5		\$ 400,000

* estimate based on structure value of \$200,000 instead of \$100,000

CONCEPTUAL OPINIONS OF PROBABLE COST

Area	Levee Construction Cost
4	\$ 3,011,100
5	\$ 1,647,800
7	\$ 551,200
10	\$ 4,124,300
11	\$ 639,000
14	\$ 1,100,000
16	\$ 6,900,000
17	\$ 1,500,000
18	\$ 2,942,300
21	\$ 1,100,000
22	\$ 2,500,000
24	\$ 1,014,000
25	\$ 1,363,500
26	\$ 349,800
28	\$ 507,600
30	\$ 2,300,000
34	\$ 900,000
36	\$ 1,300,000
37	\$ 1,800,000
38	\$ 4,300,000
39	\$ 600,000
40	\$ 1,600,000
41	\$ 1,900,000
45	\$ 1,400,000

Notes:

1. Estimates reported are conceptual in nature and based on limited design information. Estimates should be considered very approximate. Actual costs may vary significantly from the estimates.
2. Estimates do not include the costs of professional services, land acquisition, permitting, or environmental mitigation which may be significant.

Opinion of Probable Cost

Area 4

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 50,000	\$ 50,000
2	Topsoil Removal	5,400	CY	\$ 5	\$ 27,000
3	Place and Compact Fill	13,200	CY	\$ 12	\$ 158,400
4	Topsoil Placement	5,400	CY	\$ 5	\$ 27,000
5	Finish Grading	32,000	SY	\$ 2	\$ 64,000
6	Seeding and Restoration	32,000	SY	\$ 3	\$ 96,000
7	Erosion and Sediment Control	1	LS	\$ 50,000	\$ 50,000
8	Concrete Floodwall - 3-ft High	350	LF	\$ 520	\$ 182,000
9	Concrete Floodwall - 4-ft High	1,380	LF	\$ 600	\$ 828,000
10	Interior Drainage	1	LS	\$ 200,000	\$ 200,000
11	Roadway Closures	1	LS	\$ 150,000	\$ 150,000
12	Mobilization/Demobilization & Project Administration	1	LS	\$ 175,000	\$ 175,000
13					
14	Construction Contingencies (50%)	1	LS	\$ 1,003,700	\$ 1,003,700

Estimated Cost

\$ 3,011,100

Notes and Assumptions

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- Gen. Estimated Costs have been rounded.
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- Gen. This estimate does not include any cost for land acquisition, temporary construction easements,



Opinion of Probable Cost

Area 5

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 75,000	\$ 75,000
2	Topsoil Removal	4,700	CY	\$ 5	\$ 23,500
3	Place and Compact Fill	9,000	CY	\$ 12	\$ 108,000
4	Topsoil Placement	4,700	CY	\$ 5	\$ 23,500
5	Finish Grading	28,500	SY	\$ 2	\$ 57,000
6	Seeding and Restoration	28,500	SY	\$ 3	\$ 85,500
7	Erosion and Sediment Control	1	LS	\$ 40,000	\$ 40,000
8	Concrete Floodwall	685	LF	\$ 600	\$ 411,000
9	Interior Drainage	1	LS	\$ 150,000	\$ 150,000
10	Mobilization/Demobilization & Project Administration	1	LS	\$ 125,000	\$ 125,000
11					
12	Construction Contingencies (50%)	1	LS	\$ 549,300	\$ 549,300

Estimated Cost

\$ 1,647,800

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Opinion of Probable Cost

Area 7

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
Levee Segment 1					
1	Demolition	1	LS	\$ 10,000	\$ 10,000
2	Topsoil Removal	110	CY	\$ 5	\$ 600
3	Place and Compact Fill	560	CY	\$ 12	\$ 6,700
4	Fill Material	560	CY	\$ 15	\$ 8,400
5	Topsoil Placement	110	CY	\$ 5	\$ 600
6	Finish Grading	670	SY	\$ 2	\$ 1,300
7	Seeding and Restoration	670	SY	\$ 3	\$ 2,000
8					
9	Levee Segment 2				
10	Demolition	1	LS	\$ 15,000	\$ 15,000
11	Topsoil Removal	530	CY	\$ 5	\$ 2,700
12	Place and Compact Fill	4,100	CY	\$ 12	\$ 49,200
13	Fill Material	4,100	CY	\$ 15	\$ 61,500
14	Topsoil Placement	530	CY	\$ 5	\$ 2,700
15	Finish Grading	3,300	SY	\$ 2	\$ 6,600
16	Seeding and Restoration	3,300	SY	\$ 3	\$ 9,900
17					
18	Miscellaneous				
20	Interior Drainage	1	LS	\$ 150,000	\$ 150,000
19	Erosion and Sediment Control	1	LS	\$ 10,000	\$ 10,000
21	Mobilization/Demobilization & Project Administration	1	LS	\$ 50,000	\$ 50,000
22	Construction Contingencies (50%)	1	LS	\$ 164,000	\$ 164,000

Estimated Cost

\$ 551,200

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Opinion of Probable Cost

Area 10

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 30,000	\$ 30,000
2	Topsoil Removal	17,500	CY	\$ 5	\$ 87,500
3	Place and Compact Fill	96,000	CY	\$ 12	\$ 1,152,000
4	Topsoil Placement	17,500	CY	\$ 5	\$ 87,500
5	Finish Grading	103,500	SY	\$ 2	\$ 207,000
6	Seeding and Restoration	103,500	SY	\$ 3	\$ 310,500
7	Erosion and Sediment Control	1	LS	\$ 75,000	\$ 75,000
8	Interior Drainage	1	LS	\$ 300,000	\$ 300,000
9	Roadway Closure	1	LS	\$ 250,000	\$ 250,000
10	Mobilization/Demobilization & Project Administration	1	LS	\$ 250,000	\$ 250,000
11					
12	Construction Contingencies (50%)	1	LS	\$ 1,374,800	\$ 1,374,800

Estimated Cost

\$ 4,124,300

Notes and Assumptions

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Opinion of Probable Cost

Area 11

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 15,000	\$ 15,000
2	Topsoil Removal	500	CY	\$ 5	\$ 2,500
3	Place and Compact Fill	500	CY	\$ 12	\$ 6,000
4	Topsoil Placement	500	CY	\$ 5	\$ 2,500
5	Finish Grading	3,000	SY	\$ 2	\$ 6,000
6	Seeding and Restoration	3,000	SY	\$ 3	\$ 9,000
7	Erosion and Sediment Control	1	LS	\$ 10,000	\$ 10,000
8	Concrete Floodwall	250	LF	\$ 500	\$ 125,000
9	Interior Drainage	1	LS	\$ 150,000	\$ 150,000
10	Roadway Closure	1	LS	\$ 50,000	\$ 50,000
11	Mobilization/Demobilization & Project Administration	1	LS	\$ 50,000	\$ 50,000
12					
13	Construction Contingencies (50%)	1	LS	\$ 213,000	\$ 213,000

Estimated Cost

\$ 639,000

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Opinion of Probable Cost

Area 14

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 25,000	\$ 25,000
2	Topsoil Removal	3,500	CY	\$ 5	\$ 17,500
3	Place and Compact Fill	22,000	CY	\$ 12	\$ 264,000
4	Topsoil Placement	3,500	CY	\$ 5	\$ 17,500
5	Finish Grading	21,000	SY	\$ 2	\$ 42,000
6	Seeding and Restoration	21,000	SY	\$ 3	\$ 63,000
7	Erosion and Sediment Control	1	LS	\$ 25,000	\$ 25,000
8	Interior Drainage	1	LS	\$ 200,000	\$ 200,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 75,000	\$ 75,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 364,500	\$ 364,500

Estimated Cost

\$ 1,093,500

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Opinion of Probable Cost

Area 16

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 100,000	\$ 100,000
2	Topsoil Removal	12,000	CY	\$ 5	\$ 60,000
3	Place and Compact Fill	58,000	CY	\$ 12	\$ 696,000
4	Topsoil Placement	12,000	CY	\$ 5	\$ 60,000
5	Finish Grading	69,000	SY	\$ 2	\$ 138,000
6	Seeding and Restoration	69,000	SY	\$ 3	\$ 207,000
7	Erosion and Sediment Control	1	LS	\$ 100,000	\$ 100,000
8	Concrete Floodwall	2,100	LF	\$ 1,000	\$ 2,100,000
9	Railroad Closures	1	LS	\$ 500,000	\$ 500,000
10	Interior Drainage	1	LS	\$ 300,000	\$ 300,000
11	Mobilization/Demobilization & Project Administration	1	LS	\$ 300,000	\$ 300,000
12					
13	Construction Contingencies (50%)	1	LS	\$ 2,280,500	\$ 2,280,500

Estimated Cost

\$ 6,841,500

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Opinion of Probable Cost

Area 17

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 50,000	\$ 50,000
2	Topsoil Removal	4,000	CY	\$ 5	\$ 20,000
3	Place and Compact Fill	29,000	CY	\$ 12	\$ 348,000
4	Topsoil Placement	4,000	CY	\$ 5	\$ 20,000
5	Finish Grading	25,000	SY	\$ 2	\$ 50,000
6	Seeding and Restoration	25,000	SY	\$ 3	\$ 75,000
7	Erosion and Sediment Control	1	LS	\$ 100,000	\$ 100,000
8	Interior Drainage	1	LS	\$ 200,000	\$ 200,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 100,000	\$ 100,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 481,500	\$ 481,500

Estimated Cost

\$ 1,444,500

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Opinion of Probable Cost

Area 18

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 50,000	\$ 50,000
2	Topsoil Removal	3,900	CY	\$ 5	\$ 19,500
3	Place and Compact Fill	20,000	CY	\$ 12	\$ 240,000
4	Topsoil Placement	3,900	CY	\$ 5	\$ 19,500
5	Finish Grading	23,000	SY	\$ 2	\$ 46,000
6	Seeding and Restoration	23,000	SY	\$ 3	\$ 69,000
7	Erosion and Sediment Control	1	LS	\$ 30,000	\$ 30,000
8	Concrete Floodwall - 4-ft High	175	LF	\$ 600	\$ 105,000
9	Concrete Floodwall - 8-ft High	825	LF	\$ 1,100	\$ 907,500
10	Interior Drainage	1	LS	\$ 200,000	\$ 200,000
11	Roadway Closures	1	LS	\$ 100,000	\$ 100,000
12	Mobilization/Demobilization & Project Administration	1	LS	\$ 175,000	\$ 175,000
13					
14	Construction Contingencies (50%)	1	LS	\$ 980,800	\$ 980,800

Estimated Cost

\$ 2,942,300

Notes and Assumptions

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Opinion of Probable Cost

Area 21

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 50,000	\$ 50,000
2	Topsoil Removal	4,000	CY	\$ 5	\$ 20,000
3	Place and Compact Fill	11,000	CY	\$ 12	\$ 132,000
4	Topsoil Placement	4,000	CY	\$ 5	\$ 20,000
5	Finish Grading	24,000	SY	\$ 2	\$ 48,000
6	Seeding and Restoration	24,000	SY	\$ 3	\$ 72,000
7	Erosion and Sediment Control	1	LS	\$ 50,000	\$ 50,000
8	Interior Drainage	1	LS	\$ 200,000	\$ 200,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 75,000	\$ 75,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 333,500	\$ 333,500

Estimated Cost

\$ 1,000,500

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Opinion of Probable Cost

Area 22

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 100,000	\$ 100,000
2	Topsoil Removal	3,000	CY	\$ 5	\$ 15,000
3	Place and Compact Fill	20,000	CY	\$ 12	\$ 240,000
4	Topsoil Placement	3,000	CY	\$ 5	\$ 15,000
5	Finish Grading	17,500	SY	\$ 2	\$ 35,000
6	Seeding and Restoration	17,500	SY	\$ 3	\$ 52,500
7	Erosion and Sediment Control	1	LS	\$ 50,000	\$ 50,000
8	Concrete Floodwall	650	LF	\$ 1,000	\$ 650,000
9	Interior Drainage	1	LS	\$ 300,000	\$ 300,000
10	Mobilization/Demobilization & Project Administration	1	LS	\$ 150,000	\$ 150,000
11					
12	Construction Contingencies (50%)	1	LS	\$ 803,800	\$ 803,800

Estimated Cost

\$ 2,411,300

Notes and Assumptions

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Opinion of Probable Cost

Area 24

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 25,000	\$ 25,000
2	Topsoil Removal	3,500	CY	\$ 5	\$ 17,500
3	Place and Compact Fill	10,500	CY	\$ 12	\$ 126,000
4	Topsoil Placement	3,500	CY	\$ 5	\$ 17,500
5	Finish Grading	19,000	SY	\$ 2	\$ 38,000
6	Seeding and Restoration	19,000	SY	\$ 3	\$ 57,000
7	Erosion and Sediment Control	1	LS	\$ 20,000	\$ 20,000
8	Interior Drainage	1	LS	\$ 200,000	\$ 200,000
9	Roadway Closure	1	LS	\$ 100,000	\$ 100,000
10	Mobilization/Demobilization & Project Administration	1	LS	\$ 75,000	\$ 75,000
11					
12	Construction Contingencies (50%)	1	LS	\$ 338,000	\$ 338,000

Estimated Cost

\$ 1,014,000

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Opinion of Probable Cost

Area 25

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 25,000	\$ 25,000
2	Topsoil Removal	5,000	CY	\$ 5	\$ 25,000
3	Place and Compact Fill	22,000	CY	\$ 12	\$ 264,000
4	Topsoil Placement	5,000	CY	\$ 5	\$ 25,000
5	Finish Grading	30,000	SY	\$ 2	\$ 60,000
6	Seeding and Restoration	30,000	SY	\$ 3	\$ 90,000
7	Erosion and Sediment Control	1	LS	\$ 20,000	\$ 20,000
8	Interior Drainage	1	LS	\$ 300,000	\$ 300,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 100,000	\$ 100,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 454,500	\$ 454,500

Estimated Cost

\$ 1,363,500

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Opinion of Probable Cost

Area 26

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
Levee Segment 1					
1	Demolition	1	LS	\$ 5,000	\$ 5,000
2	Topsoil Removal	120	CY	\$ 5	\$ 600
3	Place and Compact Fill	540	CY	\$ 12	\$ 6,500
4	Fill Material	540	CY	\$ 15	\$ 8,100
5	Topsoil Placement	120	CY	\$ 5	\$ 600
6	Finish Grading	720	SY	\$ 2	\$ 1,400
7	Seeding and Restoration	720	SY	\$ 3	\$ 2,200
8					
9	Levee Segment 2				
10	Demolition	1	LS	\$ 3,000	\$ 3,000
11	Topsoil Removal	120	CY	\$ 5	\$ 600
12	Place and Compact Fill	540	CY	\$ 12	\$ 6,500
13	Fill Material	540	CY	\$ 15	\$ 8,100
14	Topsoil Placement	120	CY	\$ 5	\$ 600
15	Finish Grading	720	SY	\$ 2	\$ 1,400
16	Seeding and Restoration	720	SY	\$ 3	\$ 2,200
17					
18	Miscellaneous				
19	Interior Drainage	1	LS	\$ 150,000	\$ 150,000
20	Backflow Prevention	1	LS	\$ 10,000	\$ 10,000
21	Erosion and Sediment Control	1	LS	\$ 7,000	\$ 7,000
22	Mobilization/Demobilization & Project Administration	1	LS	\$ 32,000	\$ 32,000
23	Construction Contingencies (50%)	1	LS	\$ 104,000	\$ 104,000

Estimated Cost

\$ 349,800

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Opinion of Probable Cost

Area 28

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 20,000	\$ 20,000
2	Topsoil Removal	1,100	CY	\$ 5	\$ 5,500
3	Place and Compact Fill	1,200	CY	\$ 12	\$ 14,400
4	Topsoil Placement	1,100	CY	\$ 5	\$ 5,500
5	Finish Grading	6,600	SY	\$ 2	\$ 13,200
6	Seeding and Restoration	6,600	SY	\$ 3	\$ 19,800
7	Erosion and Sediment Control	1	LS	\$ 10,000	\$ 10,000
8	Interior Drainage	1	LS	\$ 200,000	\$ 200,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 50,000	\$ 50,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 169,200	\$ 169,200

Estimated Cost

\$ 507,600

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Opinion of Probable Cost

Area 30

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 50,000	\$ 50,000
7	Concrete Floodwall	1,530	LF	\$ 700	\$ 1,071,000
8	Erosion and Sediment Control	1	LS	\$ 25,000	\$ 25,000
9	Interior Drainage	1	LS	\$ 200,000	\$ 200,000
10	Mobilization/Demobilization & Project Administration	1	LS	\$ 150,000	\$ 150,000
11					
12	Construction Contingencies (50%)	1	LS	\$ 748,000	\$ 748,000

Estimated Cost

\$ 2,244,000

Notes and Assumptions

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- Gen. This estimate does not include any cost for land acquisition, temporary construction easements,



Opinion of Probable Cost

Area 34

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 50,000	\$ 50,000
2	Topsoil Removal	1,600	CY	\$ 5	\$ 8,000
3	Place and Compact Fill	2,500	CY	\$ 12	\$ 30,000
4	Topsoil Placement	1,600	CY	\$ 5	\$ 8,000
5	Finish Grading	10,000	SY	\$ 2	\$ 20,000
6	Seeding and Restoration	10,000	SY	\$ 3	\$ 30,000
7	Erosion and Sediment Control	1	LS	\$ 30,000	\$ 30,000
8	Interior Drainage	1	LS	\$ 300,000	\$ 300,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 75,000	\$ 75,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 275,500	\$ 275,500

Estimated Cost

\$ 826,500

Notes and Assumptions

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Opinion of Probable Cost

Area 36

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 150,000	\$ 150,000
2	Topsoil Removal	1,000	CY	\$ 5	\$ 5,000
3	Place and Compact Fill	4,000	CY	\$ 12	\$ 48,000
4	Topsoil Placement	2,000	CY	\$ 5	\$ 10,000
5	Finish Grading	12,000	SY	\$ 2	\$ 24,000
6	Seeding and Restoration	12,000	SY	\$ 3	\$ 36,000
7	Concrete Floodwall	260	LF	\$ 600	\$ 156,000
8	Erosion and Sediment Control	1	LS	\$ 30,000	\$ 30,000
9	Interior Drainage	1	LS	\$ 300,000	\$ 300,000
10	Mobilization/Demobilization & Project Administration	1	LS	\$ 100,000	\$ 100,000
11					
12	Construction Contingencies (50%)	1	LS	\$ 429,500	\$ 429,500

Estimated Cost

\$ 1,288,500

Notes and Assumptions

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Opinion of Probable Cost

Area 37

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 100,000	\$ 100,000
2	Topsoil Removal	5,000	CY	\$ 5	\$ 25,000
3	Place and Compact Fill	14,000	CY	\$ 12	\$ 168,000
4	Topsoil Placement	5,000	CY	\$ 5	\$ 25,000
5	Finish Grading	31,000	SY	\$ 2	\$ 62,000
6	Seeding and Restoration	31,000	SY	\$ 3	\$ 93,000
7	Erosion and Sediment Control	1	LS	\$ 75,000	\$ 75,000
8	Interior Drainage	1	LS	\$ 500,000	\$ 500,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 125,000	\$ 125,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 586,500	\$ 586,500

Estimated Cost

\$ 1,759,500

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Opinion of Probable Cost

Area 38

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 150,000	\$ 150,000
2	Topsoil Removal	4,600	CY	\$ 5	\$ 23,000
3	Place and Compact Fill	17,000	CY	\$ 12	\$ 204,000
4	Topsoil Placement	4,600	CY	\$ 5	\$ 23,000
5	Finish Grading	28,000	SY	\$ 2	\$ 56,000
6	Seeding and Restoration	28,000	SY	\$ 3	\$ 84,000
7	Concrete Floodwall	1,700	LF	\$ 700	\$ 1,190,000
8	Asphalt Replacement	1	LS	\$ 250,000	\$ 250,000
9	Erosion and Sediment Control	1	LS	\$ 75,000	\$ 75,000
10	Interior Drainage	1	LS	\$ 500,000	\$ 500,000
11	Mobilization/Demobilization & Project Administration	1	LS	\$ 250,000	\$ 250,000
12					
13	Construction Contingencies (50%)	1	LS	\$ 1,402,500	\$ 1,402,500

Estimated Cost

\$ 4,207,500

Notes and Assumptions

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Opinion of Probable Cost

Area 39

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 25,000	\$ 25,000
2	Topsoil Removal	2,000	CY	\$ 5	\$ 10,000
3	Place and Compact Fill	1,500	CY	\$ 12	\$ 18,000
4	Topsoil Placement	2,000	CY	\$ 5	\$ 10,000
5	Finish Grading	11,000	SY	\$ 2	\$ 22,000
6	Seeding and Restoration	11,000	SY	\$ 3	\$ 33,000
7	Erosion and Sediment Control	1	LS	\$ 30,000	\$ 30,000
8	Interior Drainage	1	LS	\$ 200,000	\$ 200,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 50,000	\$ 50,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 199,000	\$ 199,000

Estimated Cost

\$ 597,000

Notes and Assumptions

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Opinion of Probable Cost

Area 40

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 100,000	\$ 100,000
2	Topsoil Removal	4,000	CY	\$ 5	\$ 20,000
3	Place and Compact Fill	8,000	CY	\$ 12	\$ 96,000
4	Topsoil Placement	4,000	CY	\$ 5	\$ 20,000
5	Finish Grading	24,000	SY	\$ 2	\$ 48,000
6	Seeding and Restoration	24,000	SY	\$ 3	\$ 72,000
7	Erosion and Sediment Control	1	LS	\$ 50,000	\$ 50,000
8	Interior Drainage	1	LS	\$ 500,000	\$ 500,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 100,000	\$ 100,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 503,000	\$ 503,000

Estimated Cost

\$ 1,509,000

Notes and Assumptions

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Opinion of Probable Cost

Area 41

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 50,000	\$ 50,000
2	Topsoil Removal	8,500	CY	\$ 5	\$ 42,500
3	Place and Compact Fill	10,500	CY	\$ 12	\$ 126,000
4	Topsoil Placement	8,500	CY	\$ 5	\$ 42,500
5	Finish Grading	50,000	SY	\$ 2	\$ 100,000
6	Seeding and Restoration	50,000	SY	\$ 3	\$ 150,000
7	Erosion and Sediment Control	1	LS	\$ 100,000	\$ 100,000
8	Interior Drainage	1	LS	\$ 500,000	\$ 500,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 125,000	\$ 125,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 618,000	\$ 618,000

Estimated Cost

\$ 1,854,000

Notes and Assumptions

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Opinion of Probable Cost

Area 45

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Demolition	1	LS	\$ 50,000	\$ 50,000
2	Topsoil Removal	4,000	CY	\$ 5	\$ 20,000
3	Place and Compact Fill	33,000	CY	\$ 12	\$ 396,000
4	Topsoil Placement	4,000	CY	\$ 5	\$ 20,000
5	Finish Grading	24,400	SY	\$ 2	\$ 48,800
6	Seeding and Restoration	24,400	SY	\$ 3	\$ 73,200
7	Erosion and Sediment Control	1	LS	\$ 25,000	\$ 25,000
8	Interior Drainage	1	LS	\$ 200,000	\$ 200,000
9	Mobilization/Demobilization & Project Administration	1	LS	\$ 100,000	\$ 100,000
10					
11	Construction Contingencies (50%)	1	LS	\$ 466,500	\$ 466,500

Estimated Cost

\$ 1,399,500

Notes and Assumptions

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Opinion of Probable Cost

Area 26

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
Levee Segment 1					
1	Demolition	1	LS	\$ 5,000	\$ 5,000
2	Topsoil Removal	120	CY	\$ 5	\$ 600
3	Place and Compact Fill	540	CY	\$ 12	\$ 6,500
4	Fill Material	540	CY	\$ 15	\$ 8,100
5	Topsoil Placement	120	CY	\$ 5	\$ 600
6	Finish Grading	720	SY	\$ 2	\$ 1,400
7	Seeding and Restoration	720	SY	\$ 3	\$ 2,200
8					
Levee Segment 2					
10	Demolition	1	LS	\$ 3,000	\$ 3,000
11	Topsoil Removal	120	CY	\$ 5	\$ 600
12	Place and Compact Fill	540	CY	\$ 12	\$ 6,500
13	Fill Material	540	CY	\$ 15	\$ 8,100
14	Topsoil Placement	120	CY	\$ 5	\$ 600
15	Finish Grading	720	SY	\$ 2	\$ 1,400
16	Seeding and Restoration	720	SY	\$ 3	\$ 2,200
17					
Miscellaneous					
19	Interior Drainage	1	LS	\$ 150,000	\$ 150,000
20	Backflow Prevention	1	LS	\$ 10,000	\$ 10,000
21	Erosion and Sediment Control	1	LS	\$ 7,000	\$ 7,000
22	Mobilization/Demobilization & Project Administration	1	LS	\$ 32,000	\$ 32,000
23	Construction Contingencies (50%)	1	LS	\$ 104,000	\$ 104,000

Estimated Cost

\$ 349,800

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Opinion of Probable Cost

Area 40 and 41

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Relocation of Existing Utilities	1	LS	\$ 100,000	\$ 100,000
2	Tree Removal	60	AC	\$ 15,000	\$ 900,000
3	Topsoil Removal	122,000	CY	\$ 5	\$ 610,000
4	Mass Excavation	993,000	CY	\$ 5	\$ 4,965,000
5	Topsoil Placement	122,000	CY	\$ 5	\$ 610,000
6	Finish Grading	731,000	SY	\$ 2	\$ 1,462,000
7	Seeding and Restoration	731,000	SY	\$ 2	\$ 1,462,000
8	Erosion and Sediment Control	1	LS	\$ 100,000	\$ 100,000
9	Roadway Closures	1	LS	\$ 50,000	\$ 50,000
10					
11	Mobilization/Demobilization & Project Administration	1	LS	\$ 820,000	\$ 820,000
12					
13	Construction Contingencies (50%)	1	LS	\$ 5,540,000	\$ 5,540,000

Estimated Cost

\$ 16,619,000

Notes and Assumptions

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Opinion of Probable Cost

Area 26

Channel improvement

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
1	Relocation of Existing Utilities	1	LS	\$ 100,000	\$ 100,000
2	Tree Removal	9	AC	\$ 15,000	\$ 135,000
3	Topsoil Removal	10,000	CY	\$ 5	\$ 50,000
4	Mass Excavation	44,000	CY	\$ 5	\$ 220,000
5	Topsoil Placement	10,000	CY	\$ 5	\$ 50,000
6	Finish Grading	58,000	SY	\$ 2	\$ 116,000
7	Seeding and Restoration	58,000	SY	\$ 2	\$ 116,000
8	Erosion and Sediment Control	1	LS	\$ 30,000	\$ 30,000
9	Roadway Closures	1	LS	\$ 70,000	\$ 70,000
10					
11	Mobilization/Demobilization & Project Administration	1	LS	\$ 90,000	\$ 90,000
12					
13	Construction Contingencies (50%)	1	LS	\$ 489,000	\$ 489,000

Estimated Cost

\$ 1,466,000

Notes and Assumptions

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Opinion of Probable Cost

Area 7

Line	Description	Estimated Quantities	Units	Unit Price	Estimated Cost (Rounded)
Levee Segment 1					
1	Demolition	1	LS	\$ 10,000	\$ 10,000
2	Topsoil Removal	110	CY	\$ 5	\$ 600
3	Place and Compact Fill	560	CY	\$ 12	\$ 6,700
4	Fill Material	560	CY	\$ 15	\$ 8,400
5	Topsoil Placement	110	CY	\$ 5	\$ 600
6	Finish Grading	670	SY	\$ 2	\$ 1,300
7	Seeding and Restoration	670	SY	\$ 3	\$ 2,000
8					
Levee Segment 2					
10	Demolition	1	LS	\$ 15,000	\$ 15,000
11	Topsoil Removal	530	CY	\$ 5	\$ 2,700
12	Place and Compact Fill	4,100	CY	\$ 12	\$ 49,200
13	Fill Material	4,100	CY	\$ 15	\$ 61,500
14	Topsoil Placement	530	CY	\$ 5	\$ 2,700
15	Finish Grading	3,300	SY	\$ 2	\$ 6,600
16	Seeding and Restoration	3,300	SY	\$ 3	\$ 9,900
17					
Miscellaneous					
20	Interior Drainage	1	LS	\$ 150,000	\$ 150,000
19	Erosion and Sediment Control	1	LS	\$ 10,000	\$ 10,000
21	Mobilization/Demobilization & Project Administration	1	LS	\$ 50,000	\$ 50,000
22	Construction Contingencies (50%)	1	LS	\$ 164,000	\$ 164,000

Estimated Cost

\$ 551,200

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