

# Wood River Authorized Level Project Cost Estimate

Preliminary Design Phase

Prepared for



Prepared by



**June 17, 2015**

## 1. Cost Estimate

### Total Cost

Based primarily of previous bid line items from over a dozen local contractors, preliminary construction cost estimates have been developed for each of the recommended bid packages. For cost estimating purposes, a higher contingency of 10%-20% was applied toward cost line items that experienced higher fluctuations in the previous bid line items. These estimates are preliminary, and represent a planning level estimate. The total construction cost at this time is \$25,797,693.

The Amec Foster Wheeler estimate is inclusive of cost items that are not included in the USACE estimate. A cost of \$1,584,638 is anticipated for conveyance systems to the proposed pump stations, which is not included in the USACE estimate of \$10,294,900. Additionally, a total of \$6,793,992 is included in the Amec Foster Wheeler estimate that represents costs associated with land/easements/rights of way, wetland mitigation, any unforeseen cultural/archeological impacts, and relief wells in areas of hazardous waste were not accounted for in the USACE estimate. This total of \$6,793,992 is not included in the work-in-kind limit of \$12,932,000. The Amec Foster Wheeler estimate, less the necessary conveyance systems (\$1,584,638) and the \$6,793,992 not applied to the work-in-kind limit, results in a cost of \$17,419,063 versus the USACE estimated cost of \$10,294,900.

To date, the USACE has not provided a cost for review and oversight of the improvements included in the recommended plan. A revised version of this report will be issued when those costs become available.

### Development of Bid Packages

Amec Foster Wheeler has reviewed the USACE decision segments and has determined that three construction bid packages will appropriately subdivide the decision segments. By splitting the work into three bid packages, the FPD Council has the ability to cancel any one bid package if the remaining bid package(s) approach the work-in-kind credit contribution limit of \$12,932,000. While there is nothing stopping the FPD Council from constructing improvements in excess of \$12,932,000, the USACE will require Section 408 approval for any work over and above the \$12,932,000 limit, whereas any work done as work-in-kind, as agreed upon in the final IDR, which is still in development, does not require Section 408 approval. The three bid packages have been named Bid Package 08, 09, and 10, a continuation of the numbering from Amec Foster Wheeler's Certification Design. The packages were divided by pump station, and tributary relief wells. The resultant bid packages are as follows:

- ▶ Bid Package 08 is comprised of four USACE decision segments and spans from Levee Station 123+75 to 455+50. This package includes the construction of a new pump station, between Stations 430+65 and 455+50, and 40 relief wells, 23 of which are tributary to existing a/an existing pump station(s). *Bid Package 08 has an estimated construction cost of \$9,559,292.*
- ▶ Bid Package 09 is comprised of two USACE decision segments and spans from Levee Station 493+35 to 480+15. This package includes the construction of a new pump station, between Stations 455+50 and 450+15, and 18 relief wells, 3 of which are tributary to existing a/an existing pump station(s). *Bid Package 09 has an estimated construction cost of \$4,776,688.*
- ▶ Bid Package 10 is comprised of seven USACE decision segments and spans from Levee Station 530+50 to 630+30. This package includes the construction of a new pump station, at Station 530+50, and 36 tributary relief wells. This package is the only one to also include seepage berm and fill areas. Two seepage berms, 5 feet thick and 100 wide, are to be constructed between Stations 608+85 and 613+70 & 627+00 and 630+30, for a total of 815 linear feet of berm. In addition, 1,010 linear feet of fill is to be added to landside depressions between Stations 613+70 and 623+80. *Bid Package 09 has an estimated construction cost of \$11,461,714.*

## Appendix 1 – Preliminary Cost Estimate

## Wood River Quantities & Cost Summary

Item #	Cost Item	Unit	Unit Cost	Contingency	Quantity	Total
1	Clear & Grub - Light Vegetation	AC	\$ 3,840.00	20%	10	46,080
2	Cultural / Archeological (Unforeseen) Impacts Cost	LS	\$ 350,000.00	20%	1	420,000
3	Dewatering (5 to 15 feet)	LF	\$ 350.00	20%	12,700	5,334,000
4	Fill Material (Random Fill)	CY	\$ 15.00	5%	3,889	61,252
5	Manhole - Complete (48-Inch Diameter)	EA	\$ 3,500.00	5%	19	69,825
6	Manhole - Complete (60-Inch Diameter)	EA	\$ 3,750.00	5%	28	111,563
7	Mobilization (% varies)	LS	\$ 1,199,000.00	10%	1	1,318,900
8	Piezometer (Above Grade)	EA	\$ 10,000.00	5%	29	304,500
9	Piezometer (At Grade)	EA	\$ 10,000.00	5%	11	115,500
10	Pipe - 12-Inch HDPE Pipe	LF	\$ 60.00	5%	2,100	132,300
11	Pipe - 24-Inch HDPE Pipe	LF	\$ 70.00	5%	1,500	110,250
12	Pipe - 36-Inch HDPE Pipe	LF	\$ 100.00	5%	1,500	157,500
13	Pipe - 48-Inch HDPE Pipe	LF	\$ 120.00	10%	7,600	1,003,200
14	Pump Station - (REACH 430+65 TO 455+50) [10,500 GPM]	LS	\$ 1,000,000.00	20%	1	1,200,000
15	Pump Station - (REACH 455+50 TO 480+15) [11,000 GPM]	LS	\$ 1,000,000.00	20%	1	1,200,000
16	Pump Station - (REACH 530+50 TO 530+50) [9,000 GPM]	LS	\$ 950,000.00	20%	1	1,140,000
17	Relief Well - Existing - Abandon	EA	\$ 4,000.00	5%	5	21,000
18	Relief Well - New - Hazardous Waste Premium	EA	\$ 74,340.00	20%	24	2,140,992
19	Relief Well - New - Type "D"	VF	\$ 575.00	5%	2,400	1,449,000
20	Relief Well - New - Type "T"	VF	\$ 600.00	5%	7,100	4,473,000
21	ROW Acquisition - Uniform Federal Relocation Costs	AC	\$ 30,000.00	20%	72	2,574,000
22	Seeding	AC	\$ 2,000.00	20%	14	33,600
23	Seepage Berm Material	CY	\$ 20.00	20%	15,093	362,232
24	Utility Relocation - Miscellaneous Additional Relocation Costs	LS	\$ 300,000.00	20%	1	360,000
25	Wetland Mitigation	AC	\$ 35,000.00	20%	40	1,659,000
26	Sub-Total					\$ 25,797,693
27	Construction Estimate					\$ 25,797,693

## Bid Package #08

Item #	Cost Item	Unit	Unit Cost	Contingency	Quantity	Total
3	Dewatering (5 to 15 feet)	LF	\$ 350.00	20%	2,500	\$ 1,050,000
8	Piezometer (Above Grade)	EA	\$ 10,000.00	5%	9	\$ 94,500
5	Manhole - Complete (48-Inch Diameter)	EA	\$ 3,500.00	5%	7	\$ 25,725
6	Manhole - Complete (60-Inch Diameter)	EA	\$ 3,750.00	5%	2	\$ 7,875
7	Mobilization (% varies)	LS	\$ 454,000.00	10%	1	\$ 499,400
9	Piezometer (At Grade)	EA	\$ 10,000.00	5%	1	\$ 10,500
10	Pipe - 12-Inch HDPE Pipe	LF	\$ 60.00	5%	800	\$ 50,400
11	Pipe - 24-Inch HDPE Pipe	LF	\$ 70.00	5%	600	\$ 44,100
12	Pipe - 36-Inch HDPE Pipe	LF	\$ 100.00	5%	600	\$ 63,000
13	Pipe - 48-Inch HDPE Pipe	LF	\$ 120.00	10%	500	\$ 66,000
14	Pump Station - (REACH 430+65 TO 455+50) [10,500 GPM]	LS	\$ 1,000,000.00	20%	1	\$ 1,200,000
17	Relief Well - Existing - Abandon	EA	\$ 4,000.00	5%	5	\$ 21,000
18	Relief Well - New - Hazardous Waste Premium	EA	\$ 74,340.00	20%	24	\$ 2,140,992
19	Relief Well - New - Type "D"	VF	\$ 575.00	5%	2,400	\$ 1,449,000
20	Relief Well - New - Type "T"	VF	\$ 600.00	5%	1,700	\$ 1,071,000
21	ROW Acquisition - Uniform Federal Relocation Costs	AC	\$ 30,000.00	20%	20	\$ 702,000
22	Seeding	AC	\$ 2,000.00	20%	2	\$ 4,800
24	Utility Relocation - Miscellaneous Additional Relocation Costs	LS	\$ 150,000.00	20%	1	\$ 180,000
25	Wetland Mitigation	AC	\$ 35,000.00	20%	20	\$ 819,000
2	Cultural / Archeological (Unforeseen) Impacts Cost	LS	\$ 50,000.00	20%	1	\$ 60,000
26	Sub-Total					\$ 9,559,292
27	Construction Estimate					\$ 9,559,292

## Bid Package #09

Item #	Cost Item	Unit	Unit Cost	Contingency	Quantity	Total
3	Dewatering (5 to 15 feet)	LF	\$ 350.00	20%	2,700	\$ 1,134,000
8	Piezometer (Above Grade)	EA	\$ 10,000.00	5%	6	\$ 63,000
5	Manhole - Complete (48-Inch Diameter)	EA	\$ 3,500.00	5%	7	\$ 25,725
6	Manhole - Complete (60-Inch Diameter)	EA	\$ 3,750.00	5%	3	\$ 11,813
7	Mobilization (% varies)	LS	\$ 235,000.00	10%	1	\$ 258,500
9	Piezometer (At Grade)	EA	\$ 10,000.00	5%	3	\$ 31,500
10	Pipe - 12-Inch HDPE Pipe	LF	\$ 60.00	5%	800	\$ 50,400
11	Pipe - 24-Inch HDPE Pipe	LF	\$ 70.00	5%	700	\$ 51,450
12	Pipe - 36-Inch HDPE Pipe	LF	\$ 100.00	5%	700	\$ 73,500
13	Pipe - 48-Inch HDPE Pipe	LF	\$ 120.00	10%	500	\$ 66,000
15	Pump Station - (REACH 455+50 TO 480+15) [11,000 GPM]	LS	\$ 1,000,000.00	20%	1	\$ 1,200,000
20	Relief Well - New - Type "T"	VF	\$ 600.00	5%	1,800	\$ 1,134,000
21	ROW Acquisition - Uniform Federal Relocation Costs	AC	\$ 30,000.00	20%	12	\$ 432,000
22	Seeding	AC	\$ 2,000.00	20%	2	\$ 4,800
24	Utility Relocation - Miscellaneous Additional Relocation Costs	LS	\$ 50,000.00	20%	1	\$ 60,000
2	Cultural / Archeological (Unforeseen) Impacts Cost	LS	\$ 150,000.00	20%	1	\$ 180,000
26	Sub-Total					\$ 4,776,688
27	Construction Estimate					\$ 4,776,688

## Bid Package #10

Item #	Cost Item	Unit	Unit Cost	Contingency	Quantity	Total
1	Clear & Grub - Light Vegetation	AC	\$ 3,840.00	20%	10	\$ 46,080
3	Dewatering (5 to 15 feet)	LF	\$ 350.00	20%	7,500	\$ 3,150,000
4	Fill Material (Random Fill)	CY	\$ 15.00	5%	3,889	\$ 61,252
8	Piezometer (Above Grade)	EA	\$ 10,000.00	5%	14	\$ 147,000
5	Manhole - Complete (48-Inch Diameter)	EA	\$ 3,500.00	5%	5	\$ 18,375
6	Manhole - Complete (60-Inch Diameter)	EA	\$ 3,750.00	5%	23	\$ 91,875
7	Mobilization (% varies)	LS	\$ 510,000.00	10%	1	\$ 561,000
9	Piezometer (At Grade)	EA	\$ 10,000.00	5%	7	\$ 73,500
10	Pipe - 12-Inch HDPE Pipe	LF	\$ 60.00	5%	500	\$ 31,500
11	Pipe - 24-Inch HDPE Pipe	LF	\$ 70.00	5%	200	\$ 14,700
12	Pipe - 36-Inch HDPE Pipe	LF	\$ 100.00	5%	200	\$ 21,000
13	Pipe - 48-Inch HDPE Pipe	LF	\$ 120.00	10%	6,600	\$ 871,200
16	Pump Station - (REACH 530+50 TO 530+50) [9,000 GPM]	LS	\$ 950,000.00	20%	1	\$ 1,140,000
20	Relief Well - New - Type "T"	VF	\$ 600.00	5%	3,600	\$ 2,268,000
21	ROW Acquisition - Uniform Federal Relocation Costs	AC	\$ 30,000.00	20%	40	\$ 1,440,000
22	Seeding	AC	\$ 2,000.00	20%	10	\$ 24,000
23	Seepage Berm Material	CY	\$ 20.00	20%	15,093	\$ 362,232
24	Utility Relocation - Miscellaneous Additional Relocation Costs	LS	\$ 100,000.00	20%	1	\$ 120,000
25	Wetland Mitigation	AC	\$ 35,000.00	20%	20	\$ 840,000
2	Cultural / Archeological (Unforeseen) Impacts Cost	LS	\$ 150,000.00	20%	1	\$ 180,000
26	Sub-Total					\$ 11,461,714
27	Construction Estimate					\$ 11,461,714