



EXHIBIT A-2

**ENGINEER'S OPINION OF PROBABLE TOTAL
CONSTRUCTION COSTS**

SUB DISTRICT HB WATER MAIN EXTENSION PROJECT TOTAL

Corridor	Engineer's Cost Opinion	If
Blange Road	\$ 625,246.00	2790
Enzweiler Road	\$ 295,675.00	1431
Gunkel Road	\$ 538,220.00	2758
Oneonta Road (KY 1566)	\$ 1,546,270.00	7795
Upper Lick Branch	\$ 828,200.00	3614
Pond Creek Road (KY 1936)	\$ 351,330.00	1754
Poplar Thicket	\$ 913,110.00	5000
Total	\$ 5,098,051.00	25142
Rifle Range Road	\$ 1,945,627.56	9952
	\$ 7,043,678.56	35094



SUB DISTRICT HB - Blange Road					Engineer's Cost Opinion	
Item No.	Description	Unit of Measure	Estimated Quantity	Unit Cost Total	Total Cost	
1	6.01 CLASS 50 DUCTILE IRON PIPE (8-inch) – w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	1853	\$170.00	\$315,010.00	
2	6.02.B CLASS 50 DUCTILE IRON PIPE (8-inch) – Restrained Joint, w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	721	\$200.00	\$144,200.00	
3	6.05 CLASS 200 S.D.R. 9 HDPE PIPE (2-inch) – w/all fittings, bends, excavation, labor, equipment, bedding, backfill, disinfection, pressure testing, restoration of non-paved areas, tracing wire etc.	LF	216	\$75.00	\$16,200.00	
4	7.01 CONNECT TO EXISTING MAIN/TIE-IN (8-inch Main)	EA	1	\$3,000.00	\$3,000.00	
5	8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	6	\$7,400.00	\$44,400.00	
6	9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8-inch)	EA	7	\$2,650.00	\$18,550.00	
7	10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4" THRU 2") (Service line materials provided by NKWD)	EA	8	\$2,800.00	\$22,400.00	
8	11.01 CONCRETE ENCASEMENT	LF	103	\$100.00	\$10,300.00	
9	11.04 PLUG AND BLOCK (2-inch)	EA	1	\$500.00	\$500.00	
10	11.04 PLUG AND BLOCK (8-inch)	EA	1	\$800.00	\$800.00	
11	11.06 DUCTILE IRON ANCHORING TEE AND BLOCK (8-inch x 8-inch x 6-inch)	EA	6	\$700.00	\$4,200.00	
12	11.11 TEST TAP	EA	3	\$2,200.00	\$6,600.00	
13	12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	376	\$50.00	\$18,800.00	
14	12.07 ASPHALTIC CONCRETE DRIVEWAY (match existing)	SY	98	\$120.00	\$11,760.00	
15	12.10 CONCRETE DRIVEWAY (match existing)	SY	31	\$146.00	\$4,526.00	
16	12.14 BEST MANAGEMENT PRACTICE	LS	1	\$4,000.00	\$4,000.00	
17	12.15 CLASS III CHANNEL LINING	SY	30	\$75.00	\$2,250.00	
TOTAL				\$625,246.00		

SUB DISTRICT HB - Enzweiler Road				Engineer's Cost Opinion	
Item No.	Description	Unit of Measure	Estimated Quantity	Unit Cost Total	Total Cost
1	6.02.B CLASS 50 DUCTILE IRON PIPE (8-inch) – Restrained Joint, w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	196	\$200.00	\$39,200.00
2	6.03 C-900, C-909 Poly Vinyl Chloride (PVC)(8-inch) – w/all Fittings, Bends, Blocking, Extensions, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	1195	\$140.00	\$167,300.00
3	6.03.B C-900, Poly Vinyl Chloride (PVC)(8-inch) – Restrained Joint w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	40	\$175.00	\$7,000.00
4	6.04 CASING PIPE (16-inch)	LF	136	\$350.00	\$47,425.00
5	7.01 CONNECT TO EXISTING MAIN/TIE-IN(8-inch Main)	EA	1	\$3,000.00	\$3,000.00
6	8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	2	\$7,400.00	\$14,800.00
7	9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8-inch)	EA	1	\$2,650.00	\$2,650.00
8	10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4" THRU 2") (Service line materials provided by NKWD)	EA	2	\$2,800.00	\$5,600.00
9	11.04 PLUG AND BLOCK (8-inch)	EA	1	\$800.00	\$800.00
10	11.06 DUCTILE IRON ANCHORING TEE AND BLOCK (8-inch x 8-inch x 6-inch)	EA	2	\$700.00	\$1,400.00
11	11.06 DUCTILE IRON ANCHORING TEE AND BLOCK (8-inch x 8-inch x 8-inch)	EA	1	\$800.00	\$800.00
12	12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	29	\$50.00	\$1,450.00
13	12.13 GRAVEL DRIVEWAY (match existing)	SY	25	\$50.00	\$1,250.00
14	12.14 BEST MANAGEMENT PRACTICE	LS	1	\$3,000.00	\$3,000.00
TOTAL				\$295,675.00	

SUB DISTRICT HB - Gunkel Road				Engineer's Cost Opinion	
Item No.	Description	Unit of Measure	Estimated Quantity	Unit Cost Total	Total Cost
1	6.01 CLASS 50 DUCTILE IRON PIPE (8-inch) – w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	1255	\$170.00	\$213,350.00
2	6.02.B CLASS 50 DUCTILE IRON PIPE (8-inch) – Restrained Joint, w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	80	\$200.00	\$16,000.00
3	6.03 C-900, C-909 Poly Vinyl Chloride (PVC)(8-inch) – w/all Fittings, Bends, Blocking, Extensions, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	1343	\$140.00	\$188,020.00
4	6.03.B C-900, Poly Vinyl Chloride (PVC)(8-inch) – Restrained Joint w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	80	\$175.00	\$14,000.00
4	7.01 CONNECT TO EXISTING MAIN/TIE-IN(8-inch Main)	EA	1	\$3,000.00	\$3,000.00
5	8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	4	\$7,400.00	\$29,600.00
6	9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8-inch)	EA	4	\$2,650.00	\$10,600.00
7	10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4" THRU 2") (Service line materials provided by NKWD)	EA	1	\$2,800.00	\$2,800.00
8	11.01 CONCRETE ENCASEMENT	LF	58	\$100.00	\$5,800.00
9	11.04 PLUG AND BLOCK (8-inch)	EA	1	\$800.00	\$800.00
10	11.05 AIR RELEASE VALVE (ARV and service line materials provided by NKWD)	EA	2	\$2,300.00	\$4,600.00
11	11.06 DUCTILE IRON ANCHORING TEE AND BLOCK (8-inch x 8-inch x 6-inch)	EA	4	\$700.00	\$2,800.00
12	11.11 TEST TAP	EA	2	\$2,200.00	\$4,400.00
13	12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	708	\$50.00	\$35,400.00
14	12.13 GRAVEL DRIVEWAY (match existing)	SY	61	\$50.00	\$3,050.00
15	12.14 BEST MANAGEMENT PRACTICE	LS	1	\$4,000.00	\$4,000.00
TOTAL				\$538,220.00	

SUB DISTRICT HB - Oneonta Road (KY 1566)				Engineer's Cost Opinion	
Item No.	Description	Unit of Measure	Estimated Quantity	Unit Cost Total	Total Cost
1	6.01 CLASS 50 DUCTILE IRON PIPE (8-inch) – w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	7181	\$170.00	\$1,220,770.00
2	6.02.B CLASS 50 DUCTILE IRON PIPE (8-inch) – Restrained Joint, w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	614	\$200.00	\$122,800.00
3	7.01 CONNECT TO EXISTING MAIN/TIE-IN (8-inch Main)	EA	1	\$3,000.00	\$3,000.00
4	8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	10	\$7,400.00	\$74,000.00
5	9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8-inch)	EA	11	\$2,650.00	\$29,150.00
6	10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4" THRU 2") (Service line materials provided by NKWD)	EA	8	\$2,800.00	\$22,400.00
7	11.01 CONCRETE ENCASEMENT	LF	152	\$100.00	\$15,200.00
8	11.04 PLUG AND BLOCK (8-inch)	EA	1	\$800.00	\$800.00
9	11.05 AIR RELEASE VALVE (ARV and service line materials provided by NKWD)	EA	3	\$2,300.00	\$6,900.00
10	11.06 DUCTILE IRON ANCHORING TEE AND BLOCK (8-inch x 8-inch x 6-inch)	EA	10	\$700.00	\$7,000.00
11	11.11 TEST TAP	EA	5	\$2,200.00	\$11,000.00
12	12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	60	\$50.00	\$3,000.00
12	12.07 ASPHALTIC CONCRETE DRIVEWAY (match existing)	SY	35	\$120.00	\$4,200.00
13	12.13 GRAVEL DRIVEWAY (match existing)	SY	201	\$50.00	\$10,050.00
14	12.xx REMOVE TREE	EA	8	\$1,500.00	\$12,000.00
15	12.14 BEST MANAGEMENT PRACTICE	LS	1	\$4,000.00	\$4,000.00
TOTAL				\$1,546,270.00	

SUB DISTRICT HB - Upper Lick Branch				Engineer's Cost Opinion	
Item No.	Description	Unit of Measure	Estimated Quantity	Unit Cost Total	Total Cost
1	6.01 CLASS 50 DUCTILE IRON PIPE (8-inch) – w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	2525	\$170.00	\$429,250.00
2	6.02.B CLASS 50 DUCTILE IRON PIPE (8-inch) – Restrained Joint, w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	194	\$200.00	\$151,410.00
3	6.03 C-900, C-909 Poly Vinyl Chloride (PVC)(8-inch) – w/all Fittings, Bends, Blocking, Extensions, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	811	\$140.00	\$113,540.00
4	6.03.B C-900, Poly Vinyl Chloride (PVC)(8-inch) – Restrained Joint w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	84	\$175.00	\$14,700.00
5	7.01 CONNECT TO EXISTING MAIN/TIE-IN(8-inch Main)	EA	1	\$3,000.00	\$3,000.00
6	8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	4	\$7,400.00	\$29,600.00
7	9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8-inch)	EA	4	\$2,650.00	\$10,600.00
8	10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4" THRU 2") (Service line materials provided by NKWD)	EA	9	\$2,800.00	\$25,200.00
9	11.04 PLUG AND BLOCK (8-inch)	EA	1	\$800.00	\$800.00
10	11.06 DUCTILE IRON ANCHORING TEE AND BLOCK (8-inch x 8-inch x 6-inch)	EA	4	\$700.00	\$2,800.00
11	12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	714	\$50.00	\$35,700.00
12	12.10 CONCRETE DRIVEWAY (match existing)	SY	25	\$146.00	\$3,650.00
13	12.13 GRAVEL DRIVEWAY (match existing)	SY	79	\$50.00	\$3,950.00
14	12.14 BEST MANAGEMENT PRACTICE	LS	1	\$4,000.00	\$4,000.00
TOTAL					\$828,200.00

SUB DISTRICT HB - Pond Creek (KY 1936)				Engineer's Cost Opinion	
Item No.	Description	Unit of Measure	Estimated Quantity	Unit Cost Total	Total Cost
1	6.01 CLASS 50 DUCTILE IRON PIPE (8-inch) – w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	1651	\$170.00	\$280,670.00
2	6.02.B CLASS 50 DUCTILE IRON PIPE (8-inch) – Restrained Joint, w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	103	\$200.00	\$20,600.00
3	7.01 CONNECT TO EXISTING MAIN/TIE-IN (8-inch Main)	EA	1	\$3,000.00	\$3,000.00
4	8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	3	\$7,400.00	\$22,200.00
5	9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8-inch)	EA	1	\$2,650.00	\$2,650.00
6	10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4" THRU 2") (Service line materials provided by NKWD)	EA	2	\$2,800.00	\$5,600.00
7	11.04 PLUG AND BLOCK (8-inch)	EA	1	\$800.00	\$800.00
8	11.05 AIR RELEASE VALVE (ARV and service line materials provided by NKWD)	EA	1	\$2,300.00	\$2,300.00
9	11.06 DUCTILE IRON ANCHORING TEE AND BLOCK (8-inch x 8-inch x 6-inch)	EA	3	\$700.00	\$2,100.00
10	12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	90	\$50.00	\$4,500.00
11	12.07 ASPHALTIC CONCRETE DRIVEWAY (match existing)	SY	13	\$120.00	\$1,560.00
12	12.13 GRAVEL DRIVEWAY (match existing)	SY	27	\$50.00	\$1,350.00
13	12.14 BEST MANAGEMENT PRACTICE	LS	1	\$4,000.00	\$4,000.00
TOTAL				\$351,330.00	

SUB DISTRICT HB - Poplar Thicket					Engineer's Cost Opinion	
Item No.	Description	Unit of Measure	Estimated Quantity	Unit Cost Total	Total Cost	
1	6.01 CLASS 50 DUCTILE IRON PIPE(8-inch) – w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	2666	\$170.00	\$453,220.00	
2	6.02.B CLASS 50 DUCTILE IRON PIPE(8-inch) – Restrained Joint, w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	243	\$200.00	\$48,600.00	
2	6.03 C-900, C-909 Poly Vinyl Chloride (PVC)(8-inch) – w/all Fittings, Bends, Blocking, Extensions, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	2091	\$140.00	\$292,740.00	
3	7.01 CONNECT TO EXISTING MAIN/TIE-IN(8-inch Main)	EA	1	\$3,000.00	\$3,000.00	
4	8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	5	\$7,400.00	\$37,000.00	
5	9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8-inch)	EA	4	\$2,650.00	\$10,600.00	
6	9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (12-inch)	EA	2	\$6,500.00	\$13,000.00	
7	10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4" THRU 2") (Service line materials provided by NKWD)	EA	5	\$2,800.00	\$14,000.00	
8	11.01 CONCRETE ENCASEMENT	LF	85	\$100.00	\$8,500.00	
9	11.04 PLUG AND BLOCK (8-inch)	EA	1	\$800.00	\$800.00	
10	11.06 DUCTILE IRON ANCHORING TEE AND BLOCK (8-inch x 8-inch x 6-inch)	EA	5	\$700.00	\$3,500.00	
11	11.06 DUCTILE IRON ANCHORING TEE AND BLOCK (12-inch x 12-inch x 8-inch)	EA	1	\$1,200.00	\$1,200.00	
11	11.11 TEST TAP	EA	1	\$2,200.00	\$2,200.00	
12	12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	200	\$50.00	\$10,000.00	
13	12.13 GRAVEL DRIVEWAY (match existing)	SY	95	\$50.00	\$4,750.00	
14	12.xx REMOVE TREE	EA	4	\$1,500.00	\$6,000.00	
15	12.14 BEST MANAGEMENT PRACTICE	LS	1	\$4,000.00	\$4,000.00	
TOTAL				\$913,110.00		

SUB DISTRICT HB - Rifle Range Road				Engineer's Cost Opinion	
Item No.	Description	Unit of Measure	Estimated Quantity	Unit Cost Total	Total Cost
1	6.01 CLASS 50 DUCTILE IRON PIPE (8-inch) – w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	9428	\$170.00	\$1,602,760.00
2	6.02.B CLASS 50 DUCTILE IRON PIPE (8-inch) – Restrained Joint, w/all Fittings, Bends, Blocking, Extensions, Polywrap, Backfill & Flowable Fill. (Detail 103, 103a, 104, 104a, 110)	LF	524	\$200.00	\$104,800.00
2	P 7.01 CONNECT TO EXISTING MAIN/TIE-IN (8-inch Main)	EA	1	\$3,000.00	\$3,000.00
3	8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	10	\$7,400.00	\$74,000.00
4	9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8-inch)	EA	10	\$2,650.00	\$26,500.00
5	10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4" THRU 2") (Service line materials provided by NKWD)	EA	11	\$2,800.00	\$30,800.00
5	11.01 CONCRETE ENCASEMENT	LF	193	\$100.00	\$19,300.00
6	11.04 PLUG AND BLOCK (8-inch)	EA	1	\$800.00	\$800.00
7	11.05 AIR RELEASE VALVE (ARV and service line materials provided by NKWD)	EA	6	\$2,300.00	\$13,800.00
8	11.06 DUCTILE IRON ANCHORING TEE AND BLOCK (8-inch x 8-inch x 6-inch)	EA	10	\$700.00	\$7,000.00
9	11.11 TEST TAP	EA	3	\$2,200.00	\$6,600.00
10	12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	611	\$50.00	\$30,555.56
10	12.07 ASPHALTIC CONCRETE DRIVEWAY (match existing)	SY	33	\$120.00	\$3,960.00
11	12.10 CONCRETE DRIVEWAY (match existing)	SY	37	\$146.00	\$5,402.00
12	12.13 GRAVEL DRIVEWAY (match existing)	SY	97	\$50.00	\$4,850.00
13	12.xx REMOVE TREE	EA	5	\$1,500.00	\$7,500.00
14	12.14 BEST MANAGEMENT PRACTICE	LS	1	\$4,000.00	\$4,000.00
TOTAL				\$1,945,627.56	