

2007 Schedule of Recommended Improvements (Capital Improvement Plan)

CIP No.	Description	Size	Length	Along	Location From	To	2007 Cost Estimate			Complete	Schedule						By Others
							Constr.	Indirect	Total		2008	2009	2010	2011	2012	2013	
										Assumed inflation multiplier							
										1.05	1.10	1.16	1.22	1.28	1.34	1.41	
Pipeline Projects																	
1	Yearly old main replacement						\$150,000		\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$1,800,000	
2	15th to Pearcot transmission	12 in	1,200 ft	Baker	5th NE	6th NE	\$143,730	\$37,206	\$180,936	\$180,936							
3	15th to Pearcot transmission	18 in	250 ft	Highline	Simon	Pace	\$40,000	\$18,000	\$58,000				\$67,142				
4	15th to Pearcot transmission	12 in	1,700 ft	Pace	Highline	Ridgemont	\$205,000	\$92,250	\$297,250				\$344,104				
5	Badger Mt. Road Reconstruction	8 in	2,000 ft	Badger Mt Rd	19th NE	Daniels Dr	\$144,635	\$34,655	\$179,290	\$179,290							
6	Eastmont Widening	8 in	2,000 ft	Eastmont	15th NE	19th NE	\$142,000	\$63,900	\$205,900	\$205,900							
7	SR28 Widening	12 in	3,000 ft	SR28	Hadley	McElmurray	\$414,000	\$186,300	\$600,300	\$600,300							
8	3rd & Eastmont rebuild (with #20)	18 in	100 ft	Eastmont	3rd NE	3rd NE	\$25,000	\$11,250	\$36,250				\$41,964				
9	Airport Way realignment	12 in	550 ft	Airport Way	Grant	Terminal	\$60,000	\$27,000	\$87,000		\$91,350						
10	961 transmission extension ph 1	24 in	3,500 ft	easeont	19th NW	15th NW	\$550,000	\$247,500	\$797,500				\$143,256	\$818,947			
11	15th to Pearcot transmission	18 in	750 ft	Eastmont	1st NE	3rd NE	\$90,000	\$40,500	\$130,500			\$22,326	\$127,628				
12	15th to Pearcot transmission	12 in	700 ft	SR28	13th NE	14th NE	\$85,000	\$38,250	\$123,250		\$20,081	\$114,798					
13	Enhanced Distribution	8 in	2,600 ft	Webb	4th SE	8th SE	\$270,000	\$121,500	\$391,500			\$431,629					
14	Enhanced Distribution	8 in	3,500 ft	8th or 10th NE	Lyle	Nile	\$330,000	\$148,500	\$478,500								\$478,500
15	Baker Ave Reconstruction	12 in	5,500 ft	Baker	19th NE	27th NE	\$620,000	\$279,000	\$899,000			\$153,799	\$879,216				
16	Baker Ave Reconstruction	8 in	1,000 ft	Baker	17th NE	19th NE	\$80,000	\$36,000	\$116,000				\$19,845	\$113,447			
17	15th to Pearcot transmission	12 in	700 ft	11th St NE	Alvin Ct	Baker Ave	\$120,000	\$54,000	\$174,000			\$28,350	\$162,068				
18	Rock Island Road replacement	12 in	1,200 ft	Rock Isl. Rd	McGee	3rd SE	\$190,000	\$85,500	\$275,500	\$42,750	\$232,750						
19	SR28 Interchange	12 in	1,100 ft	Riverview	2nd SE	3rd SE	\$165,000	\$74,250	\$239,250			\$40,930	\$233,985				
20	Eastmont Reconstruction Ph1 (w/#8)	12 in	1,200 ft	Eastmont	3rd NE	5th NE	\$130,000	\$58,500	\$188,500			\$32,248	\$184,352				
21	Eastmont Ext (remove Carmichaels)	12 in	2,000 ft	Eastmont	Badger Mt	US97	\$300,000	\$135,000	\$435,000				\$50,000				\$385,000
22	Fancher Field Rd Extended	12 in	2,000 ft	FF Rd	FF Rd	Eastmont	\$150,000	\$67,500	\$217,500								\$217,500
23	961 transmission extension ph 2	24 in	5,500 ft	SR28	15th NE	9th NE	\$1,150,000	\$517,500	\$1,667,500					\$330,238	\$1,887,860		
24	Enhanced Distribution	8 in	2,200 ft	8th SE	Cherry Camp	East	\$200,000	\$90,000	\$290,000								\$290,000
25	S Nile Ave	8 in	5,500 ft	Nile	Grant	8th SE	\$500,000	\$225,000	\$725,000								\$725,000
26	North 961 transmission	12 in	12,000 ft	Cascade	19th NE	US97	\$1,250,000	\$562,500	\$1,812,500					\$358,954	\$2,052,021		
27	Eastmont Reconstruction Ph2	12 in	2,500 ft	Eastmont	5th NE	9th NE	\$360,000	\$162,000	\$522,000				\$98,456	\$562,840			
28	15th St Reconstruction	18 in	1,500 ft	15th St	SR28	Baker	\$210,000	\$94,500	\$304,500					\$60,304	\$344,740		
29	Baker Extention	12 in	1,200 ft	Baker	3rd NE	Grant	\$120,000	\$54,000	\$174,000				\$32,819	\$187,613			
30	4th St NE Widening	8 in	600 ft	4th NE	DeGage	DeGage	\$60,000	\$27,000	\$87,000				\$16,409	\$93,807			
31	27th St reconstruction	12 in	1,500 ft	27th NE	Baker	SR28	\$210,000	\$94,500	\$304,500						\$63,320	\$361,977	
32	Rock Island Road	12 in	6,000 ft	Rock Isl. Rd	Kentucky	Nile	\$670,000	\$301,500	\$971,500								\$971,500
33	Rock Island Road	12 in	5,000 ft	Rock Isl. Rd	Quincy	SR28	\$550,000	\$247,500	\$797,500								\$797,500
34	10th NE Reconstruction	12 in	4,000 ft	10th NE	Jennifer	Eastmont	\$410,000	\$184,500	\$594,500			\$106,791	\$610,488				
35	Devon Reconstruction	8 in	2,500 ft	Devon	11th NE	15th NE	\$195,000	\$87,750	\$282,750						\$58,797	\$315,125	
36	19th St Realignment	8 in	1,800 ft	19th NE	Country Club Dr	Eastmont	\$140,000	\$63,000	\$203,000					\$40,203	\$229,826		
37	Grant Rd replacement	12 in	1,600 ft	Grant	Valley Mall Pkwy	Eastmont	\$195,000	\$87,750	\$282,750			\$48,372	\$276,528		\$58,797	\$315,125	
38	Grant Rd overlay	12 in	4,000 ft	Grant	Stark	Airport Wy	\$400,000	\$180,000	\$580,000						\$120,609	\$646,410	
39	27th St reconstruction	8 in	2,000 ft	27th NE	SR28	Empire	\$200,000	\$90,000	\$290,000						\$60,304	\$323,205	
40	35th St Widening	8 in	900 ft	35th NE	SR28	Cascade	\$70,000	\$31,500	\$101,500		\$16,538	\$94,539					
41	Ward and 4th SE replacement	12 in	5,300 ft	Ward & 4th SE	Grant	Webb	\$530,000	\$238,500	\$768,500								\$768,500
42	4th SE replacement	8 in	4,000 ft	4th SE	Webb	Batterman	\$320,000	\$144,000	\$464,000	\$232,000							\$232,000
43	Batterman replacement	8 in	7,000 ft	Batterman Rd	8th SE	Southeast	\$560,000	\$252,000	\$812,000								\$812,000
44	10th SE replacement	8 in	5,000 ft	10th SE	8th SE	Van Well & 12th	\$450,000	\$202,500	\$652,500								\$652,500
45	Kentucky Ave Reconstruction			Kentucky Ave	3rd SE	8th NE	\$139,000	\$62,550	\$201,550		\$32,839	\$187,728					
46	Rock Island Road	12 in	1,600 ft	Rock Isl. Rd	3rd SE	Eller	\$180,000	\$81,000	\$261,000				\$46,884	\$268,019			
47	38th St canal crossing	8+12		38th NE	Canal		\$80,000	\$36,000	\$116,000		\$121,800						
48	38th St reconstruction	8 in	600 ft	38th NE	Cascade	SR28	\$75,000	\$33,750	\$108,750		\$17,719	\$101,292					
49	Grover sidewalk and drainage	8+12	1,000 ft	Grover St	France	12th NE	\$200,000	\$90,000	\$290,000			\$49,613	\$283,618				
50	Kansas pipe replacement	8 in	200 ft	N Kansas Ave	8th NE		\$30,000	\$13,500	\$43,500		\$45,675						
Supply and Storage Projects																	
S1	Existing reservoir repairs						\$5,000		\$5,000	\$5,000							
S2	1592 secondary transmission	12 in	8,000 ft	DNR land	10th St Tanks	Badger Mt Rd	\$557,000	\$250,650	\$807,650								\$807,650
S3	1592 pump station		1000 gpm (x2)				\$400,000	\$180,000	\$580,000								\$580,000
S4	961/883 storage-Baker Flats		1.5 MG				\$1,500,000	\$675,000	\$2,175,000	\$25,000	\$200,000						\$1,975,000
S5	961/883 transmission-Baker Flats	12 in	16,500 ft				\$2,300,000	\$1,035,000	\$3,335,000								\$3,335,000
S6	961/883 transmission-Baker Flats	16 in	2,000 ft				\$200,000	\$90,000	\$290,000								\$290,000
S7	Baker Flats control valve						\$50,000	\$22,500	\$72,500								\$72,500
S8	1592/1768 storage		0.75 MG				\$700,000	\$315,000	\$1,015,000								\$1,015,000
S9	1170 Zone Pump		800 gpm		RSS		\$100,000	\$45,000	\$145,000			\$26,047	\$148,900				
S10	1170 Zone Pump-transmission	12 in	2,000 ft	38th NE	RSS	SR28	\$238,000	\$107,100	\$345,100		\$33,737	\$78,719	\$37,194	\$202,503			
S11	Regional source well						\$500,000	\$225,000	\$725,000					\$925,304			
S12	System supply increase				RSS		\$150,000	\$67,500	\$217,500					\$277,591			
S13	1490 engine generator & 3rd pump		250kW EG + 100 hp pump				\$130,000	\$58,500	\$188,500								\$188,500
S14	1286 storage - phase 1		2.0 MG				\$2,200,000	\$990,000	\$3,190,000		\$100,000					\$4,488,650	
S15	1286 storage - phase 2 (demolition)						\$100,000	\$45,000	\$145,000							\$204,030	
S16	Regional source transmission	30 in	25,000 ft				\$3,600,000	\$1,620,000	\$5,220,000						\$6,995,299		
S17	961 storage (replace old tanks)		2.0 MG				\$2,500,000	\$1,125,000	\$3,625,000							\$5,100,739	
S18	1286 supply		1700 gpm		Shop BPS		\$100,000	\$45,000	\$145,000							\$204,030	
S19	Upper Veedol pump station		1000 gpm		Veedol site		\$400,000	\$180,000	\$580,000								\$580,000
S20	Upper Veedol transmission	12 in	3,000 ft	New ROW	Veedol Tank		\$270,000	\$121,500	\$391,500								\$391,500
S21	Upper Veedol reservoir		0.5 MG (TBD)				\$400,000	\$180,000	\$580,000								\$580,000
S22	East End pump station		500 gpm (x2)				\$400,000	\$180,000	\$580,000								\$580,000
S23	East End transmission	12 in	4,000 ft	New ROW	Batterman Rd		\$360,000	\$162,000	\$522,000								\$522,000
S24	East End reservoir		0.5 MG (TBD)				\$400,000	\$180,000	\$580,000								\$580,000
S25	Hartle transmission	8 in	7,000 ft	New ROW	12th / Van Well		\$560,000	\$252,000									

Table 8.8 - Schedule of Recommended Improvements (Capital Improvement Plan)

CIP No.	Description	Size	Length	Along	Location From	To	2005 Cost Estimate			Schedule							
							Constr.	Indirect	Total	2006	2007	2008	2009	2010	2011	2012-26	By Others
Pipeline Projects																	
1	Yearly old main replacement						\$150,000		\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$2,100,000	
2	15th to Pearcot transmission	12 in	1,200 ft	Baker	5th NE	6th NE	\$113,000	\$50,850	\$163,850	\$163,850							
3	15th to Pearcot transmission	18 in	250 ft	Highline	Simon	Pace	\$37,000	\$16,650	\$53,650	\$53,650							
4	15th to Pearcot transmission	12 in	1,700 ft	Pace	Highline	Ridgemont	\$187,000	\$84,150	\$271,150	\$271,150							
5	Badger Mt. Road Reconstruction	8 in	2,000 ft	Badger Mt Rd	19th NE	Daniels Dr	\$123,000	\$55,350	\$178,350	\$178,350							
6	Eastmont Widening	8 in	2,000 ft	Eastmont	15th NE	19th NE	\$142,000	\$63,900	\$205,900	\$205,900							
7	SR28 Widening	12 in	3,000 ft	SR28	Hadley	McElmurray	\$282,000	\$126,900	\$408,900	\$408,900							
8	3rd and Eastmont reconstruction	18 in	100 ft	Eastmont	3rd NE	3rd NE	\$20,000	\$9,000	\$29,000	\$29,000							
9	Airport Way realignment	12 in	550 ft	Airport Way	Grant	Terminal	\$52,000	\$23,400	\$75,400	\$11,700	\$63,700						
10	961 transmission extension ph 1	24 in	3,500 ft		19th NW	15th NW	\$500,000	\$225,000	\$725,000	\$112,500	\$612,500						
11	15th to Pearcot transmission	18 in	750 ft	Eastmont	1st NE	3rd NE	\$83,000	\$37,350	\$120,350	\$18,675	\$101,675						
12	15th to Pearcot transmission	12 in	700 ft	SR28	13th NE	14th NE	\$77,000	\$34,650	\$111,650	\$17,325	\$94,325						
13	Enhanced Distribution	8 in	2,600 ft	Webb	4th SE	8th SE	\$226,000	\$101,700	\$327,700		\$327,700						
14	Enhanced Distribution	8 in	3,500 ft	8th or 10th NE	Lyle	Nile	\$304,000	\$136,800	\$440,800								\$440,800
15	Baker Ave Reconstruction	12 in	5,500 ft	Baker	19th NE	27th NE	\$567,000	\$255,150	\$822,150		\$127,575	\$694,575					
16	Baker Ave Reconstruction	8 in	1,000 ft	Baker	17th NE	19th NE	\$71,000	\$31,950	\$102,950		\$15,975	\$86,975					
17	15th to Pearcot transmission	12 in	1,000 ft	French	9th NE	Standerfer	\$110,000	\$49,500	\$159,500		\$24,750	\$134,750					
18	Rock Island Road replacement	12 in	1,200 ft	Rock Isl. Rd	McGee	3rd SE	\$113,000	\$50,850	\$163,850		\$25,425	\$138,425					
19	SR28 Interchange	12 in	1,100 ft	Riverview	2nd SE	3rd SE	\$121,000	\$54,450	\$175,450		\$27,225	\$148,225					
20	Eastmont Reconstruction Ph1	12 in	1,200 ft	Eastmont	3rd NE	5th NE	\$113,000	\$50,850	\$163,850		\$25,425	\$138,425					
21	Eastmont Extended	12 in	6,000 ft	Eastmont	Badger Mt	US97	\$418,000	\$188,100	\$606,100								\$606,100
22	Fancher Field Rd Extended	12 in	2,000 ft	FF Rd	FF Rd	Eastmont	\$140,000	\$63,000	\$203,000								\$203,000
23	961 transmission extension ph 2	24 in	5,500 ft	SR28	15th NE	9th NE	\$1,060,000	\$477,000	\$1,537,000				\$238,500	\$1,298,500			
24	Enhanced Distribution	8 in	2,200 ft	8th SE	Cherry Camp	East	\$191,000	\$85,950	\$276,950		\$42,975	\$233,975					
25	S Nile Ave	8 in	5,500 ft	Nile	Grant	8th SE	\$391,000	\$175,950	\$566,950								\$566,950
26	North 961 transmission	12 in	12,000 ft	Cascade	19th NE	US97	\$1,128,000	\$507,600	\$1,635,600				\$253,800	\$1,381,800			
27	Eastmont Reconstruction Ph2	12 in	2,500 ft	Eastmont	5th NE	9th NE	\$325,000	\$146,250	\$471,250				\$73,125	\$398,125			
28	15th St Reconstruction	18 in	1,500 ft	15th St	SR28	Baker	\$198,000	\$89,100	\$287,100				\$44,550	\$242,550			
29	Baker Extension	12 in	1,200 ft	Baker	3rd NE	Grant	\$113,000	\$50,850	\$163,850				\$25,425	\$138,425			
30	4th St Widening	8 in	600 ft	4th NE	DeGage	DeGage	\$43,000	\$19,350	\$62,350				\$9,675	\$52,675			
31	27th St reconstruction	12 in	1,500 ft	27th NE	Baker	SR28	\$191,000	\$85,950	\$276,950				\$42,975	\$233,975			
32	Rock Island Road	12 in	6,000 ft	Rock Isl. Rd	Kentucky	Nile	\$659,000	\$296,550	\$955,550								\$955,550
33	Rock Island Road	12 in	5,000 ft	Rock Isl. Rd	Quincy	SR28	\$549,000	\$247,050	\$796,050								\$796,050
34	10th NE Reconstruction	12 in	4,000 ft	10th NE	Jennifer	Eastmont	\$376,000	\$169,200	\$545,200								\$545,200
35	Devon Reconstruction	8 in	2,500 ft	Devon	11th NE	15th NE	\$178,000	\$80,100	\$258,100								\$258,100
36	19th St Realignment	8 in	1,800 ft	19th NE	Country Club Dr	Eastmont	\$128,000	\$57,600	\$185,600								\$185,600
37	Grant Rd replacement	12 in	1,600 ft	Grant	Valley Mall Pkwy	Eastmont	\$176,000	\$79,200	\$255,200								\$255,200
38	Grant Rd overlay	12 in	4,000 ft	Grant	Stark	Airport Wy	\$376,000	\$169,200	\$545,200								\$545,200
39	27th St reconstruction	8 in	2,000 ft	27th NE	SR28	Empire	\$188,000	\$84,600	\$272,600								\$272,600
40	35th St Widening	8 in	900 ft	35th NE	SR28	Cascade	\$64,000	\$28,800	\$92,800								\$92,800
41	Ward and 4th SE replacement	12 in	5,300 ft	Ward & 4th SE	Grant	Webb	\$530,000	\$238,500	\$768,500								\$768,500
42	4th SE replacement	8 in	4,000 ft	4th SE	Webb	Batterman	\$320,000	\$144,000	\$464,000								\$464,000
43	Batterman replacement	8 in	7,000 ft	Batterman Rd	8th SE	Southeast	\$560,000	\$252,000	\$812,000								\$812,000
44	10th SE replacement	8 in	5,000 ft	10th SE	8th SE	Van Well & 12th	\$450,000	\$202,500	\$652,500								\$652,500
Supply and Storage Projects																	
S1	Existing reservoir repairs						\$5,000		\$5,000	\$5,000							
S2	1592 secondary transmission	12 in	8,000 ft	DNR land	10th St Tanks	Badger Mt Rd	\$557,000	\$250,650	\$807,650								\$807,650
S3	1592 pump station	1000 gpm (x2)					\$400,000	\$180,000	\$580,000								\$580,000
S4	961/883 storage-Baker Flats	1.5 MG					\$1,300,000	\$585,000	\$1,885,000		\$200,000						\$1,685,000
S5	961/883 transmission-Baker Flats	12 in	16,500 ft				\$1,200,000	\$540,000	\$1,740,000								\$1,740,000
S6	961/883 transmission-Baker Flats	16 in	2,000 ft				\$200,000	\$90,000	\$290,000								\$290,000
S7	Baker Flats control valve						\$50,000	\$22,500	\$72,500								\$72,500
S8	1592/1768 storage	0.75 MG					\$700,000	\$315,000	\$1,015,000								\$1,015,000
S9	1170 Zone Pump	800 gpm		RSS			\$100,000	\$45,000	\$145,000				\$22,500	\$122,500			
S10	1170 Zone Pump-transmission	12 in	2,000 ft	38th NE	RSS	SR28	\$238,000	\$107,100	\$345,100				\$53,550	\$291,550			
S11	Regional source well						\$500,000	\$225,000	\$725,000								\$725,000
S12	System supply increase			RSS			\$150,000	\$67,500	\$217,500								\$217,500
S13	1490 engine generator & 3rd pump	250kW EG + 100 hp pump					\$130,000	\$58,500	\$188,500								\$188,500
S14	1286 storage - phase 1	1.0 MG					\$1,200,000	\$540,000	\$1,740,000								\$1,740,000
S15	1286 storage - phase 2	1.0 MG					\$1,200,000	\$540,000	\$1,740,000								\$1,740,000
S16	Regional source transmission	30 in	25,000 ft				\$3,527,000	\$1,587,150	\$5,114,150								\$5,114,150
S17	961 storage	2.0 MG					\$2,000,000	\$900,000	\$2,900,000								\$2,900,000
S18	1286 supply	1700 gpm		Shop BPS			\$100,000	\$45,000	\$145,000								\$145,000
S19	Upper Veedol pump station	1000 gpm		Veedol site			\$400,000	\$180,000	\$580,000								\$580,000
S20	Upper Veedol transmission	12 in	3,000 ft	New ROW	Veedol Tank		\$270,000	\$121,500	\$391,500								\$391,500
S21	Upper Veedol reservoir	0.5 MG (TBD)					\$400,000	\$180,000	\$580,000								\$580,000
S22	East End pump station	500 gpm (x2)					\$400,000	\$180,000	\$580,000								\$580,000
S23	East End transmission	12 in	4,000 ft	New ROW	Batterman Rd		\$360,000	\$162,000	\$522,000								\$522,000
S24	East End reservoir	0.5 MG (TBD)					\$400,000	\$180,000	\$580,000								\$580,000
S25	Hartle transmission	8 in	7,000 ft	New ROW	12th / Van Well		\$560,000	\$252,000	\$812,000								\$812,000
S26	Hartle and 8th St PRVs	(2) 6"x2"		8th & 12th SE			\$60,000	\$27,000	\$87,000								\$87,000
O&M Projects and Studies																	
M1	Yearly meter replacement						\$250,000		\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$3,500,000	
M2	Daniels Drive tank painting						\$50,000		\$50,000	\$50,000							
M3	1170 Zone modification						\$5,000		\$5,000	\$5,000							
M4	Source evaluation study						\$50,000		\$50,000			\$50,000					
M5	2011 Comprehensive Plan						\$100,000		\$100,000						\$100,000		
Total Costs										\$1,931,000	\$2,020,850	\$1,628,375	\$869,900	\$2,458,075	\$3,361,600	\$20,336,350	\$16,776,600

Table 8.7 - Indirect Costs

Description	Percentage of Construction Cost
Surveying	4.0%
Design Engineering	13.0%
Construction Administration	5.0%
Inspection	5.0%
Contingency	10.0%
Sales Tax	8.0%
Total	45.0%

* Age of 50 assumed when actual age unknown

** 2015 assumed when actual date not set

cip#	FF	Trans	Distr	Wtr Qual	Storage	Supply	Age*	Road yr**	Year	Size	Length	Description	Along	From	To	Construction Cost	Cost rounded up	notes	
1	1				1				2006			Existing reservoir repairs				\$5,000	\$5,000		
2		1	1				36	2006	2006	12	1200	15th to Pearcot transmission	Baker	5th NE	6th NE	\$126,203	\$127,000		
3		1	1				25	2011	2006	18	250	15th to Pearcot transmission	Highline	Simon	Pace	\$36,800	\$37,000		
4		1	1				50		2006	12	1700	15th to Pearcot transmission	Pace	Highline	Ridgemont	\$214,216	\$215,000		
5	1		1				50		2006	8	2000	Badger Mt Road widening	Badger Mt Rd	19th NE	Daniels Dr	\$206,019	\$207,000		
6		1	1				50		2006	8	2000	Eastmont Widening	Eastmont	15th NE	19th NE	\$164,339	\$165,000		
7								2006	2006	12	550	Airport Way realignment	Airport Way	Grant	Terminal	\$57,843	\$58,000		
8	1	1	1				50	2007	2006	12	3000	SR28 Widening	SR28	Hadley	McElmurray	\$315,508	\$316,000		
9					1			2006	2006			Daniels Drive tank painting				\$40,000	\$40,000		
10		1	1				42	2006	2006	18	100	3rd and Eastmont reconstruction	Eastmont	3rd NE	3rd NE	\$20,000	\$20,000		
11	1	1	1			1		2007	2007	24	3500	961 transmission extension ph 1		19th NE	15th NE	\$519,030	\$520,000		
12		1				1		2007	2007	12	8000	1592 secondary transmission	DNR land	10th St Tanks	Badger Mt Rd	\$564,520	\$565,000	by developer	
13						1		2007	2007			1592 pump station				\$400,000	\$400,000	by developer	
14	1				1			2007	2007			961/883 storage-Baker Flats				\$200,000	\$200,000	by ULID	
15	1	1			1			2007	2007	12	16500	961/883 transmission-Baker Flats				\$1,735,294	\$1,736,000	by ULID	
16	1	1			1			2007	2007	16	2000	961/883 transmission-Baker Flats				\$196,130	\$197,000	by ULID	
17		1			1			2007	2007			Baker Flats control valve				\$50,000	\$50,000	by ULID	
18					1			2007	2007			1592 storage				\$500,000	\$500,000	by developer	
19	1	1	1				42	2009	2007	18	750	15th to Pearcot transmission	Eastmont	1st NE	3rd NE	\$94,507	\$95,000		
20		1	1				42	2007	2007	12	700	15th to Pearcot transmission	SR28	13th NE	14th NE	\$88,207	\$89,000		
21	1	1					42	2007	2007	12	5500	Baker Ave Reconstruction	Baker	19th NE	27th NE	\$628,431	\$629,000	plus canal crossing	
22	1	1					50	2007	2007	8	1000	Baker Ave Reconstruction	Baker	17th NE	19th NE	\$82,169	\$83,000		
23			1				36	2007	2007	8	2600	Enhanced Distribution	Webb	4th SE	8th SE	\$267,824	\$268,000		
24			1				41	2007	2007	8	3500	Enhanced Distribution	8th or 10th NE	Lyle	Nile	\$360,533	\$361,000	by developer	
25		1	1				50	2008	2008	12	1000	15th to Pearcot transmission	French	9th NE	Standerfer	\$126,009	\$127,000		
26	1		1				43	2008	2008	12	1200	Rock Island Road replacement	Rock Isl. Rd	McGee	3rd SE	3rd SE	\$126,203	\$127,000	
27	1		1					2008	2008	12	1100	SR28 Interchange	Riverview	2nd SE	3rd SE	\$138,610	\$139,000		
28	1	1					42	2009	2009	12	1200	Eastmont Reconstruction Ph1	Eastmont	3rd NE	5th NE	\$126,203	\$127,000		
29			1					2009	2009	12	6000	Eastmont Extended	Eastmont	Badger Mt	US97	\$423,390	\$424,000	by developer	
30			1					2009	2009	12	2000	Fancher Field Rd Extended	FF Rd	FF Rd	Eastmont	\$141,130	\$142,000	by developer	
31		1				1		2009	2009			Source evaluation study				\$50,000	\$50,000		
32	1	1	1			1		2010	2010	24	5500	961 transmission extension ph 2		19th NE	15th NE	\$690,608	\$691,000		
33	1		1				36	2010	2010	8	2200	Enhanced Distribution	8th SE	Cherry Camp	East	\$226,621	\$227,000		
34	1	1	1				22	2010	2010	8	5500	S Nile Ave	Nile	Grant	8th SE	\$451,931	\$452,000	by developer	
35	1	1	1				42	2011	2011	12	12000	North 961 transmission	Cascade	19th NE	US97	\$1,262,032	\$1,263,000		
36	1	1	1				42	2011	2011	12	2500	Eastmont Reconstruction Ph2	Eastmont	5th NE	9th NE	\$365,023	\$366,000	plus canal crossing	
37	1	1	1				30	2011	2011	18	1500	15th St Reconstruction	15th St	SR28	Baker	\$189,540	\$190,000		
38	1		1				40	2011	2011	12	1200	Baker Extension	Baker	3rd NE	Grant	\$126,203	\$127,000		
39			1				50	2011	2011	8	600	4th St Widening	4th NE	DeGage	DeGage	\$49,302	\$50,000		
40								2011	2011			2011 Comprehensive Plan				\$100,000	\$100,000		
41						1		2011	2011			1170 Zone Pump	RSS			\$100,000	\$100,000		
42	1	1	1			1		2011	2011	12	2000	1170 Zone Pump-transmission	38th NE	RSS	SR28	\$260,339	\$261,000	plus canal crossing	
43	1						20	2015	2011	12	1500	27th St reconstruction	27th NE	Baker	SR28	\$207,754	\$208,000	plus canal crossing	
44								2011	2011	12	6000	Rock Island Road	Rock Isl. Rd	Kentucky	Nile	\$756,056	\$757,000	by developer	
45								2011	2011	12	5000	Rock Island Road	Rock Isl. Rd	Quincy	SR28	\$630,047	\$631,000	by developer	
46						1		2012	2012			Regional source well				\$500,000	\$500,000		
47						1		2012	2012			System supply increase	RSS			\$150,000	\$150,000		
48	1				1			2012	2012			1490 storage				\$500,000	\$500,000	by developer	
49	1	1	1				42	2012	2012	12	4000	10th NE Reconstruction	10th NE	Jennifer	Eastmont	\$420,677	\$421,000		
50	1						34	2012	2012	8	2500	Devon Reconstruction	Devon	11th NE	15th NE	\$205,423	\$206,000		
51			1					2013	2013			1286 storage				\$2,000,000	\$2,000,000		
52		1				1		2013	2013	8	1800	19th St Realignment	19th NE	Country Club Dr	Eastmont	\$147,905	\$148,000		
53	1							2015	2015	30	25000	Regional source transmission				\$3,551,625	\$3,552,000		
54	1							2015	2015			961 storage				\$2,000,000	\$2,000,000		
55	1	1	1				45	2015	2015	12	1600	Grant Rd replacement	Grant	Valley Mall Pkwy	Eastmont	\$201,615	\$202,000		
56	1	1	1				36	2015	2015	12	4000	Grant Rd overlay	Grant	Stark	Airport Wy	\$420,677	\$421,000		
57	1		1				45	2015	2015	8	2000	27th St reconstruction	27th NE	SR28	Empire	\$210,339	\$211,000		
58	1						42	2015	2015	8	900	35th St Widening	35th NE	SR28	Cascade	\$73,952	\$74,000		
59						1		2020	2020			1286 supply	Shop BPS			\$100,000	\$100,000		

Lookup Tables

Priority	Category	Description
1	Q	Water Quality
2	F	Fire Flow
3	S	Storage
3	P	Pumping
4	T	Transmission
5	D	Distribution

Cost estimating

Total pipeline project cost estimate (no tax)

Size	Mainline	Other	in town	no paving	cross country
8	40	\$50	\$103.01	\$82.17	48.57
12	60	\$50	\$126.01	\$105.17	70.57
16	85	\$50	\$154.76	\$133.92	98.07
18	98	\$30	\$147.20	\$126.36	112.37
24	110	\$37	\$169.13	\$148.29	125.57
30	125	\$27	\$174.31	\$153.47	142.07

Estimate for installation cost of buried water main pipe.

This is ONLY for mainline work. Does not include valves, connections, services or any other appurtenances be
 Costs are based on multipliers of 8" pipe installation through a developed area at 4' of cover.

Grey cells are calculated

Blue cells are for data entry

- \$17.00 Current pipe price for 8" material
- \$30.00 Current hourly price for general labor
- \$50.00 Current hourly price for operator
- \$50.00 Current avg hourly price for backhoe or front loader
- \$100.00 Current hourly price for excavator
- \$55.00 Current hourly price for misc equipment
- 30% OH&P percentage

Cost Lookup table	
Diameter	Cost factor
6 in	0.75
8 in	1.00
10 in	1.25
12 in	1.50
16 in	2.00
18 in	2.25
24 in	3.00
30 in	3.75
36 in	4.50

Effort Lc
Diameter
6 in
8 in
10 in
12 in
16 in
18 in
24 in
30 in
36 in

- 700 ft Legth of pipeline
- 12 in Size of pipe
- 5 ft Depth to trench bottom

- Difficulty of construction zone
- 1.5 Difficulty factor
- 1.2 Effort factor
- 1.5 Cost factor

Difficulty Lookup table	
Difficulty	Factor
Easy	1 0.50
Med-Easy	2 0.80
Medium	3 1.00
Med-Hard	4 1.50
Hard	5 2.00
Ludicrous	6 3.00

Depth Lc
Base
3 ft
4 ft
5 ft
6 ft
8 ft
10 ft
15 ft
20 ft
25 ft

Labor effort, include backfill crew

- 1 Number of foremen/superintendants
- 2 Number of laborers
- 2 Number of backhoes and loaders
- 2 Number of excavators
- 1 Number of misc equipment

- 222 ft Footage per day
- \$354 Labor cost per hour
- \$355 Equipment cost per hour
- \$25.51 Labor & Equip cost per foot
- \$28.05 Materials per foot (includes 10% for misc fittings)
- \$53.56 Total base cost per foot
- \$5.94 Total clearing, cleanup, testing, etc. costs per foot
- \$17.85 OH&P
- \$77.35 Total cost per foot**

besides standard fittings.

Cost of misc work

Price per	Spacing/LF
\$4,000	0.00200 hydrant
\$2,500	0.00500 service
\$3,500	0.00167 connection to existing
\$1,200	0.00200 valves (12" or smaller)
\$20	1.00000 pavement patch per LF
\$35	0.02 Traffic control
15%	mob/demob/misc
\$49.57	Misc cost per foot in town
\$26.57	Misc cost per foot for transmission
\$4.15	Misc cost per foot cross country

Lookup table
Effort factor
0.8
1.0
1.2
1.2
1.5
1.5
2.0
2.5
3.0

Lookup table
Factor
0.4
0.7
1.0
1.2
1.5
2.5
2.8
3.5
4.0

Past Projects

Project	Size	Cost	Length	Cost/ft	Notes
Grant Rd	12	\$286,500	5443	\$52.64	no restoration or flagging
3rd NE	12	\$132,000	1195	\$110.46	
15th NE	16	\$429,000	3500	\$122.57	
1st & 2nd	8	\$247,000	3350	\$73.73	
24 Trans	24	\$1,507,456	15700	\$96.02	
SR28	12	\$140,000	2700	\$51.85	
ULID	12	\$340,000	5309	\$64.04	
1999	12	\$618,400	9823	\$62.95	