

Dewey Bondurant, Head, Engineering Design Unit

Fort Dodge, Iowa
Feb. 18, 1965

Dilman L. Moothart, Area Engineer

Beaver Watershed - Revised Material & Cost Estimate

Attached are two copies of the revised Material and Cost Estimate for the Beaver Watershed project. This estimate is based on the latest data sheets for the project including the change in tile strengths. The Estimate is set up to conform with the Bid Schedule section by section and Item by Item. In working this Estimate out I discovered one error in the Bid Schedule under Section 2 - Item 9 "Tile Equalizer No. 1; the Class III R/C Culvert Pipe should be 12" Diam. instead of 24" Diam.

Attachment-

DLMoothart:vmk

BEAVER WATERSHED

(WEBSTER COUNTY, IOWA, D.D. # 47)

BILL OF MATERIAL AND COST ESTIMATE

SECTION 1

LOWER MAIN RELIEF

		MATERIAL			LABOR			PERFORMANCE	
ITEM	LENGTH	SIZE AND TYPE	COST PER FT.	TOTAL	AV. CUT	COST PER FT.	TOTAL	TIME	
								DAYS	
1	52'	42" CMP-12GA.	12.73	661.96	7.5	2.00	104.00	2	
2	3948'	36" DT-E.Q.	4.30	16976.40	8.8	1.35	5329.80	31 @ 150'	
3	1552'	34" DT -E.Q.	3.92	6083.84	9.4	1.41	2188.32	12 @ 125'	
4	300'	34" DT-1500D	5.70	1710.00	10.3	1.55	465.00	3 @ 100'	
5	Junction Box Equalizer # 10			404.73			200.00	10	
6	Junction Box Equalizer # 11			177.21			150.00	6	
7	Surface Inlet # 1			118.18			18.00	1	
8	Surface Inlet # 2			118.18			18.00	1	
9	Small Animal Guard			189.60			3.00		
TOTALS				26440.10			8476.12		

TOTALS FOR SECTION 1 - \$34,916.22

SECTION 2

UPPER MAIN RELIEF

ITEM	LENGTH	MATERIAL		TOTAL	LABOR				
		SIZE AND TYPE	COST PER FT.		AV. CUT	COST PER FT.	TOTAL		
1	1100'	32" DT -E.Q.	3.40	3740.00	8.4	1.25	1375.00	7 @ 150'	
2	800'	32" DT-1500D	5.00	4000.00	10.6	1.57	1256.00	8 @ 100'	
3	2860'	22" DT-E.Q.	1.45	4147.00	6.4	0.84	2402.40	14 @ 200'	
4	1948'	22" DT-1500D	2.25	4383.00	10.7	1.40	2727.20	19 @ 100'	
5	1900'	18" DT -E.Q.	0.90	1710.00	6.1	0.73	1387.00	18 @ 250'	
6	180'	12" DT -E.Q.	0.44	79.20	4.8	0.50	90.00	} 2	
7	100'	36" R/C-C.P.	8.84	884.00	10.3	2.00	200.00		
8	92'	24" R/C -C.P.	4.24	390.08	10.0	1.60	147.20		

SECTION 2 (cont)

UPPER MAIN RELIEF

ITEM	LENGTH	MATERIAL	COST PER FT.	TOTAL	AV. CUT	LABOR	
		SIZE AND TYPE				COST PER FT.	TOTAL
9	Tile Line Equalizer No. 1 60'	12" R/C-C.P.	1.58	94.80	6.5	1.40	84.00
10	Tile Line Equalizer No. 2 68'	12" R/C-C.P.	1.58	107.44	6.7	1.40	95.20
11	Tile Line Equalizer No. 3 34'	8" DT-E.Q.	0.22	7.48	4.0	0.40	13.60
12	Junction Box Equalizer # 12			317.75			175.00
13	Surface Inlet No. 3			68.22			18.00
14	Surface Inlet No. 4			17.10			18.00
15	Surface Inlet No. 5			12.40			18.00
16	Surface Inlet No. 6			17.10			18.00
17	Surface Inlet No. 7			17.10			18.00
18	Surface Inlet No. 8			45.88			18.00
19	Surface Inlet No. 9			50.58			18.00
20	Surface Inlet No. 10			50.58			18.00
21	Surface Inlet No. 11			45.88			18.00
22	Surface Inlet No. 12			33.88			18.00
23	Surface Inlet No. 13			26.08			18.00
TOTALS				20,245.55 16879.55			10150.60

TOTALS FOR SECTION 2 - \$27,030.15

SECTION 3

LATERAL 1 RELIEF

1	752'	26" DT - E.Q.	2.00	1504.00	7.3	1.02	767.04	5 @ 150'
2	1500'	26" DT-1500D	3.00	4500.00	10.4	1.44	2160.00	15 @ 100'
3	700'	24" DT-E.Q.	1.70	1190.00	7.3	0.99	693.00	5 @ 150'
4	600'	24" DT-1500D	2.65	1590.00	10.5	1.42	852.00	6 @ 100'
5	1400'	18" DT- E.Q.	0.90	1260.00	6.3	0.76	1064.00	6 @ 250'
6	48'	30" R/C-C.P.	6.14	294.72	9.0	1.80	86.40	

SECTION 3 (Cont.)

LATERAL 1 RELIEF

MATERIAL			LABOR				
ITEM	LENGTH	SIZE AND TYPE	COST PER FT.	TOTAL	AV. CUT	COST PER FT.	TOTAL
7	Tile Line Equalizer No. 4 40'	8" DT-E.Q.	0.22	8.80	5.1	0.50	20.00
8	Tile Line Equalizer No. 5 102'	8" DT - E.Q.	0.22	22.44	4.4	0.44	44.88
9	Surface Inlet No. 14			12.40			18.00
10	Surface Inlet No. 15			12.40			18.00
11	Surface Inlet No. 16			47.58			18.00
12	Surface Inlet No. 17			33.88			18.00
LATERAL 1 - A							
13	60'	6" DT - E.Q.	0.15	9.00	5.4	0.54	32.40
LATERAL 1 - B							
14	60'	8" DT - E.Q.	0.22	13.20	4.6	0.46	27.60
LATERAL 1 - C							
15	400'	12" DT -E.Q.	0.44	176.00	4.6	0.48	192.00
16	400'	10" DT -E.Q.	0.30	120.00	4.2	0.42	168.00
17	1486'	8" DT -E.Q.	0.22	326.92	5.0	0.50	743.00
18	48'	12" R/C -C.P.	1.58	75.84	7.5	1.40	67.20
19	Surface Inlet No. 18			23.32			18.00
20	Surface Inlet No. 19			12.40			18.00
21	Surface Inlet No. 20			12.40			18.00
TOTALS				11245.30			7043.52

TOTAL FOR SECTION 3 - \$18,288.82

SECTION 4

LATERAL A

1	1248'	16" DT-E.Q.	0.72	898.56	6.9	0.79	985.92
2	662'	14" DT-E.Q.	0.52	344.24	5.0	0.55	364.10
3	52'	18" R/C-C.P.	2.69	139.88	6.5	1.50	78.00

SECTION 4 (Cont.)

LATERAL A

ITEM	LENGTH	MATERIAL SIZE AND TYPE	LABOR		TOTAL	
			COST PER FT.	AV. CUT		
4	Surface Inlet No. 21				36.04	18.00 /
5	Surface Inlet No. 22				36.04	18.00 /
6	Surface Inlet No. 23				31.84	18.00 /
	TOTALS				1486.60	1482.02

TOTAL FOR SECTION 4 - \$2,968.62

SECTION 5

LATERAL 2 RELIEF

1	122'	18" DT - E.Q.	0.90	109.80	8.0	0.96	117.12	/
2	4400'	16" DT - E.Q.	0.72	3168.00	7.0	0.80	3520.00	22 @ 200'
3	948'	12" DT - E.Q.	0.44	417.12	5.1	0.53	502.44	3 @ 300'
4	52'	18" R/C-C.P.	2.69	139.88	9.4	1.50	78.00	/
5	48'	12" R/C-C.P.	1.58	75.84	7.8	1.40	67.20	/
6	Tile Line Equalizer No. 6 200'	10" DT - E.Q.	0.30	60.00	5.9	0.59	118.00	/
7	Tile Line Equalizer No. 7 44'	8" DT - E.Q.	0.22	9.68	4.6	0.46	20.24	/
8	Junction Box Equalizer # 13			177.21			150.00	6
9	Surface Inlet No. 24			36.04			18.00	/
10	Surface Inlet No. 25			40.74			18.00	/
11	Surface Inlet No. 26			12.40			18.00	/
12	Surface Inlet No. 27			12.40			18.00	/
	TOTALS			4259.11			4645.00	

TOTAL FOR SECTION 5 - \$8,904.11

SECTION 6

LATERAL 3 RELIEF

1	1200'	24" DT - E.Q.	1.70	2040.00	7.3	0.99	1188.00	8 @ 150'
2	2550'	20" DT - E.Q.	1.10	2805.00	7.4	0.93	2371.50	17 @ 150'

SECTION 6 (Cont.)

LATERAL 3 RELIEF

ITEM	LENGTH	MATERIAL	COST PER FT.	TOTAL	LABOR	COST PER FT.	TOTAL	
		SIZE AND TYPE			AV. CUT			
3	550'	18" DT -E.Q.	0.90	495.00	7.5	0.90	495.00	4 @ 150'
4	400'	18" DT-1500D	1.45	580.00	8.4	1.01	404.00	4 @ 100'
5	1060'	14" DT-E.Q.	0.52	551.20	5.5	0.60	636.00	5 @ 200'
6	456'	8" DT-E.Q.	0.22	100.32	4.8	0.48	218.88	1 @ 400'
7	40'	15" R/C-C.P.	2.14	85.60	8.5	1.50	60.00	
8	Tile Line Equalizer No. 8 20'	8" DT-E.Q.	0.22	4.40	4.4	0.44	8.80	} 1
9	Tile Line Equalizer No. 9 72'	8" DT - E.Q.	0.22	15.84	4.4	0.44	31.68	
10	Junction Box Equalizer No. 14			137.92			100.00	6
11	Surface Inlet No. 28			12.40			18.00	1
12	Surface Inlet No. 29			12.40			18.00	1
TOTALS				6840.08			5549.86	

TOTAL FOR SECTION 6 - \$12,389.94

TOTALS FOR PROJECT \$67,150.74

\$37,347.12

GRAND TOTAL (MATERIAL AND LABOR)

~~\$104,497.86~~

107,863.86

TOTAL PERFORMANCE TIME 300 DA.
(WORK DAYS)