

And did cause to be made a statement of the names of the laborers, and the time each was employed by him, and every other item of expense by him incurred in and about said work, which statement is made a part of this report and hereto attached, marked Exhibit 4.

and I do further report and return herewith a form of contract to be executed by the Contractor of said work, which form of contract is hereto attached and made a part hereof and marked Exhibit 5 and which is Standard Form No. 685 with changes according to present law.

And (in case said ditch improvement drains, either in whole or in part, any public or corporate road or railroad, or benefits any of said roads) did design the necessary size culvert to properly carry a 25-year flood flow thru same.

(Here state what was done as to road)

Respectfully submitted,

Wm. C. Lic. #2859

Civil Engineer.

Dated June 27, 1949

Subscribed and sworn to before me this 27th day of June, A. D. 1949

J. McQuinn
DEPUTY COUNTY CLERK
ANNE ARBOR, MICH.

Ditch No.

ENGINEER'S REPORT

In the Matter of the Petition of

and Others

Filed A. D. 19

In the Matter of the Petition of R. W. Hunt

and Others, for a ditch improvement in the County of Anoka,

State of Minnesota, Designated and Numbered as County Ditch No. 27

To the Board of County Commissioners

of the County of Anoka, State of Minnesota:

The undersigned Civil Engineer, appointed by your order bearing date the 1st. day of March, 1948, to view the route proposed in the petition of R. W. Hunt and others for the improvement, modification and re-sectioning of for a public drainage ditch.

would respectfully report that at the time specified in your said order, he made an accurate survey of the line of said proposed drainage ditch from its source to its outlet, and caused stakes to be set along said line, numbered progressively down stream at each 100 feet, and caused a plat of said survey of said proposed ditch to be made, showing among other things a complete description of the lands over which said ditch is surveyed, which plat is made a part of this report and attached hereto, marked Exhibit 1, which plan consists of the Main, Lateral No. 1, and Sub-laterals No. 1-a and 1-b.

And did make a computation of the number of cubic yards of earth to be excavated and removed from said ditch, between ruling arbitrary points such as highways and property lines.

~~And also made a computation of the 100-foot stakes~~ and the estimated cost per cubic yard for the removal thereof, and did sum up the total number of cubic yards to be excavated and removed from the entire length of said ditch Main, Lateral, and Sub-laterals and an estimate of the total cost of laying out, establishing and constructing of the whole work, including all preliminary and other expenses connected therewith and with the inspecting and certifying to the work when and as the same is completed. And did cause the same to be prepared in tabular form, ~~showing the depth of cut, width at the bottom and width at the top,~~ at the source, outlet and each ~~one hundred foot~~ arbitrary section which tabulated statement is made a part of this report and hereto attached, marked Exhibit 2-a and 2-b.

And did, as by law required, specify the time and manner in which said work shall be done, and (in case of underground work) did specify the size and kind of tile to be used, or other material necessary in such underground work, and did estimate the cost of the same as a part of the total cost of said work, which statement and specifications and estimates are made a part of this report and hereto attached, marked Exhibit 3.

and did specify and tabulate all cleaning of obstructions of water courses, building of flumes of other wood or masonry work, construction of fences for the protection of the ditch, bridges or other additional construction work as set out in Exhibit 2-b.

EXHIBIT 2-a OF ENGINEER'S REPORT IN DITCH PROCEEDINGS.

Tabular statement showing ~~depth of cut~~, width of cut at ~~top and~~ bottom, number of cubic yards to be removed, the estimated cost per cubic yard, ~~the estimated cost per 100 foot section~~ and the total estimated cost of excavation.

In County Ditch No. 27 Anoka County, Minnesota.

Line	From Station Number	To Station Number	Depth of Cut in Feet	Width of Cut in Feet at Bottom	Width of Cut in Feet at Top	Number of Cubic Yards	Estimated Cost Per Cubic Yard	Estimated Cost Per Section
Main	100 +00	to 128 +00	4.0			5285		
	128 +00	to 142 +63	4.0			4735		
	142 +63	to 152 +78	4.0			4680		
	152 +78	to 164 +68	4.0			3189		
	164 +68	to 177 +14	4.0			7215		
	County Highway			-		163		
	177 +80	to 200 +00	4.0)		8219		
	200 +00	to 202 +23	5.0)			
	202 +23	to 215 +00	5.0			4377		
	215 +00	to 227 +61	5.0			5184		
	227 +61	to 241 +22	5.0			4313		
	241 +22	to 249 +00	6.0			3083		
	249 +00	to 257 +50	6.0			3495		
	257 +50	to 265 +53	6.0			3301		
	265 +53	to 274 +02	6.0			5376		
	274 +02	to 287 +63	6.0			5796		
	287 +63	to 295 +98	6.0			2980		
295 +98	to 303 +80	6.0			2976			
303 +80	to 327 +25	6.0			11037			
County Highway			-		107			
328 +00	to 340 +10	6.0			3268			
Total						88779	\$0.17	\$15092.43
Lat #1	0-50	to 13 +27	4.0			3675		
	13 +27	to 18 +40	4.0			1480		
	18 +40	to 30 +33	4.0			3381		
	County Highway			-		70		
	30 +80	to 61 +74	4.0			11767		
Total						20373	\$0.17	\$ 3463.41
Lat #1-a	0 +00	to 2 +43	4.0			693		
	2 +43	to 15 +20	4.0			5738		
	15 +20	to 22 +82	4.0			2518		
Total						8949	\$0.17	\$ 1521.33
Lat #1-b	0 +00	to 7 +77	4.0			2495		
	County Highway			-		58		
	8 +17	to 15 +32	4.0			3363		
	15 +32	to 20 +74	4.0			1825		
Total						7741	\$0.17	\$ 1315.97
Total all lines						125842	\$0.17	\$21393.14
Line	Estimated yardage				Spoils spreading/Cu.yd.		Total	
					(yardage x 2/3)			
Main	88779				59186		\$0.03	\$ 1775.58
Lat #1	20373				13582		0.03	407.46
Lat #1-a	8949				5966		0.03	178.98
Lat #1-b	7741				5160		0.03	154.80
Total all lines	125842				83894		0.03	\$ 2516.82

EXHIBIT 2-b OF ENGINEER'S REPORT IN DITCH PROCEEDINGS.

Recapitulation of all items of estimated costs and expenses.

In County Ditch No. 27 Anoka County, Minnesota.

Line	Item	Amount	Unit	Unit	Estimated Cost	Total Estimated Cost	
Main	Ditch construction, Sta 100 +00 to 340 +10						
	Excavation	88779	Cu.yds.	\$0.17		\$15092.43	
	Spoil bank leveling	59186	"	0.03		1775.58	
	Clearing & grubbing trees & stumps	310	Units			741.95	
	Clearing brush	23300	Sq.Ft.	0.25/ 100 s.f.		58.25	
	Fence removal	524	Rods	0.20		104.80	
	Farm crossing culvert at Sta 102 +51						
	Remove 36"x18' RCP culvert	18	Feet	0.30		5.40	
	Lay 36"x18' " "	18	"	0.40		7.20	
	Back-fill on culvert	10	Cu.yds.	0.10		1.00	
	County Highway Culvert at Sta 177 +47						
	Remove 30"x45' RCP culvert	45	Feet	0.25		11.25	
	Furnish 48"x68', #12 gage, 70 lbs./ft. CMP culvert	68	"	12.63		858.84	
	Furnish 48"x2' connecting band for above	2	Units	37.90		75.80	
	Lay 48"x68' CMP culvert	68	Feet	0.40		27.20	
	Back-fill on culvert	76	Cu.yds.	0.10		7.60	
	Farm crossing culvert at Sta 271 +47 or 275 +02						
	Remove 36"x12' RCP culvert	12	Feet	0.30		3.60	
	Furnish 48"x40' RCP culvert	40	"	10.81		432.40	
	Lay 48"x40' RCP culvert	40	"	0.50		20.00	
	Back-fill on culvert	45	Cu.Yds.	0.10		4.50	
	County Highway culvert at Sta 327 +43						
	Remove 4'x6'x34' arched top conc.culvert	34	Feet	2.00		68.00	
	Furnish 60"x60', #10 gage, 110 lb./ft. CMP culvert	60	"	19.62		1177.20	
	Furnish 60"x2' connecting band for above	1	Unit	58.86		58.86	
	Lay 60"x60' CMP culvert	60	Feet	0.50		30.00	
	Back-fill on culvert	64	Cu.Yds.	0.10		6.40	
	Farm drive culvert at Sta 329 +57						
	Remove 36"x18' RCP culvert	18	Feet	0.30		5.40	
	Total cost of Main						\$20573.66
Lat #1	Ditch construction Sta 0-50 to 61 +74						
	Excavation	20373	Cu.yds.	0.17		3463.41	
	Spoil bank leveling	13582	"	0.03		407.46	
	Clearing, grubbing trees & stumps	123	Units			148.10	
	Clearing brush	34525	Sq.Ft.	0.25/ 100 s.f.		86.31	
	Fence removal	130	Rods	0.20		26.00	
	Private road culvert at Sta 0 +14						
	Remove 12"x16' CMP culvert	16	Feet	0.10		1.60	
	Remove 10"x16' CMP culvert	16	"	0.10		1.60	
	Furnish 12"x16', #16 gage, 10.5 lbs./ft. CMP culvert	16	"	1.84		29.44	
	Furnish 12"x1' connecting band for above	1	"	1.84		1.84	
	Lay 12"x32' CMP culvert	32	"	0.20		6.40	
	Back-fill on culvert	5	Cu.yds.	0.10		0.50	
	County Highway culvert at Sta 30 +48						
	Remove 36"x20' CMP culvert	20	Feet	0.20		4.00	
	Remove 36"x20' RCP culvert	20	"	0.30		6.00	
	Furnish 36"x34' RCP culvert	34	"	7.21		231.14	
	Lay 36"x54' RCP culvert	54	"	0.40		21.60	
	Back-fill on culvert	40	Cu.yds.	0.10		4.00	
	Farm crossing at Sta 38 +87						
	Remove plank crossing bridge					2.00	
	Total cost Lat #1						\$4441.40

(over)

GRAND TOTAL

EXHIBIT 2-b OF ENGINEER'S REPORT IN DITCH PROCEEDINGS.

Recapitulation of all items of estimated costs and expenses.

In County Ditch No. 27 Anoka County, Minnesota.

Line	Item	Amount	Unit	Estimated Cost	Total Estimated Cost
Lat #1-a	Ditch construction on Sta 0 +00 to 22 +82				
	Excavation	8949	Cu.yds.	\$0.17	\$ 1521.33
	Spoil bank leveling	5966	"	0.03	178.98
	Clearing, grubbing trees & stumps	29	Units		72.45
	Clearing brush	25860	Sq.Ft.	0.25/ 100 s.f.	64.65
	Fence removal	27	Rods	0.20	5.40
	Farm crossing at Sta 6 +35				
	Remove farm crossing culvert				1.00
	Total cost Lat #1-a				\$ 1843.81
Lat #1-b	Ditch construction Sta 0 +00 to 20 +74				
	Excavation	7741	Cu.yds.	0.17	1315.97
	Spoil bank leveling	5160	"	0.03	154.80
	Clearing, grubbing trees & stumps	115	Units		146.00
	Clearing brush	54585	Sq.ft.	0.25/ 100 s.f.	136.46
	Fence removal	50	Rods	0.20	10.00
	County Highway Culvert at Sta 7 +95				
	Furnish 30"x56", #14 gage, 31 lbs./ft. CMP culvert	56	Feet	5.45	305.20
	Furnish 30"x2' connecting band for above	1	Unit	16.36	16.36
	Lay 30"x56' CMP culvert	56	Feet	0.30	16.80
	Back-fill on culvert	12	Cu.yds.	0.10	1.20
	Total cost Lat.#1-b				\$ 2102.79
SUMMATION OF ESTIMATED COST FOR ALL LINES					
<u>By Types of Work - length - 6.55 miles</u>					
	Excavation	125842	Cu.yds.	0.17	\$ 21393.14
	Spoils bank leveling	83894	"	0.03	2516.82
	Clearing, grubbing trees & stumps	577	Units		1108.50
	Clearing brush	138270	Sq.ft.	0.25	345.67
	Fence removal	731	Rods	0.20	146.20
	Bridge construction				3451.33
					\$28961.66
<u>SUMMATION OF ESTIMATED COST BY LINES</u>					
	Main				\$20573.66
	Lat #1				4441.40
	Lat #1-a				1843.81
	Lat #1-b				2102.79
	All lines				\$28961.66
<u>FINANCIAL REQUIREMENT FOR ANOKA DITCH #27 IMPROVEMENT</u>					
	Construction cost as listed above				\$28961.66
	Expenses of Attorney, Auditor, County Board, Viewers, Notices, etc.				1000.00
	Engineer's bond				50.00
	Extra help with surveys				150.00
	Stakes				35.00
	Anoka County Ditch #27-Total estimated cost				\$30,196.66
GRAND TOTAL					