



990141

March 30, 1999

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Village Manager

Subject: 22nd & Finley Intersection Improvement...
water main change order and resident engineer billings

Background

This project is now complete except for some minor punchlist items. The contractor was Ganna and the original project cost was \$955,176. The work was done in 1998 under the federal Surface Transportation Program (STP). The Village received a \$500,000+ federal grant for the project.

In mid-1997 during the final stages of design, Public Works began to consider the replacement of water main in the intersection due to water main breaks. Public Works believed that it was too late in design to obtain swift IDOT concurrence with the water main replacement and the project was already dangerously close to the grant expiration in October, 1997. Therefore, Public Works informed IDOT and Ganna after the bid opening that water main replacement would be added to the project.

Public Works engineering staff and IDOT began negotiations with Ganna in early 1998 for the water main work. Ganna refused to perform the work using unit prices due to many suspected utility interferences. Therefore, Public Works agreed to the work using a force account (time and material) method. The water main replacement began in April, 1998 and was completed in June, 1998.

Cost of water main replacement

Here is a summary of the water main costs and estimates in round numbers.

- | | |
|-------------------------------------------------------------|-----------|
| 1. Original cost estimate using typical unit prices | \$68,000 |
| 2. Revised cost estimate based on engineering investigation | \$145,000 |
| 3. Actual expected cost to the Village | \$175,000 |
| 4. Billed by contractor | \$198,000 |

The original cost estimate (line 1) was unrealistically low since it did not consider the extensive utility conflicts present. The revised estimate (line 2) was prepared recently based on actual field conditions and events; materials and time used. The actual expected cost (line 3) is a number supported by 3 levels of IDOT field hierarchy based on an extensive review of contractor billings by the Village, IDOT, and consultants that netted \$23,000 of disallowed contractor charges. Line 4 shows the actual billing by Ganna.

The difference in lines 2 and 3 (\$30,000) represents the added cost to the water main project due to Ganna's inefficiencies, intended or unintended.

Resident engineering services

IDOT requires a Village engineer to perform resident engineering so a Public Works senior civil engineer was assigned the project. Typically, on IDOT jobs, the Village hires a consultant to perform the actual field work (in this case Stanley Consultants) while the Village retains the Resident Engineer title and responsibilities.

When the Village learned that the water main work was costing much more than anticipated, Public Works confronted the consultant and the contractor to determine the cause. IDOT field engineers were brought in to investigate as well. The water main work was eventually completed successfully but at much higher costs than expected.

Negotiations to reduce water main costs

Negotiations with the contractor and IDOT continued into late 1998 and early 1999 over the excessive costs. About \$23,000 in disallowed charges were deducted from Ganna's billings reducing the cost to about \$175,000. The Village Attorney's office provided assistance to Public Works during these negotiations.

However, based on an investigation by Village and Stanley Consultants, it was agreed that the work should have only cost about \$145,000. The \$30,000 difference represents slow contractor progress that could have (and should have) been noticed by Village and, especially, consultant field representatives. Ganna should have been confronted much earlier so that these costs could have been avoided, if possible.

Negotiations to reduce consultant billings

When the Village learned that there would likely be extra costs on the water main job, Public Works withheld payments (about \$70,000) from the consultant until the issue was resolved. This month, after several meetings, it was agreed by Public Works staff and Stanley Consultants that an acceptable means to resolve the \$30,000 extra cost issue would be for Stanley Consultants to forego billing the Village about \$4,000 in engineering costs related to the subsequent investigation, and the remainder (\$26,000) would be split between Stanley (\$13,001) and the Village (\$12,999). Stanley Consultants agreed to reduce their billings by \$13,001.

Conclusions

1. The contractor likely took advantage of the Village on this job. In fact, disallowed costs were discovered in contractor billings and removed.
2. Public Works could have allocated more supervisory field time to this project. However, given the \$16,000,000 CIP and the Village Engineer vacancy, Public Works engineering staff was spread rather thin in 1998. The consultant could have (and should have) confronted the contractor about slow progress earlier. IDOT was helpful during the negotiations.
3. Ganna Construction may object to IDOT's ruling on the \$23,000 billing reductions and file a claim against the project. Public Works believes this will not happen; but if it does, IDOT arbitration staff has already looked at the excessive billings and concur with the reductions which minimizes the Village's potential liability.
4. The final project cost will be about \$1,195,000. Net additions amount to about \$240,000. Other noteworthy additions to the project include \$27,000 for temporary signals and \$33,000 for temporary striping, both not included in the bid; and \$70,000 for additional subgrade and subbase improvements not anticipated. There were about \$150,000 in miscellaneous deductions.
5. Overall, 1998 change orders net about \$678,000, or 4.3% of contracted work. Over \$350,000 of net change orders occurred on SA215 Fountain Square projects not financed by the Village and not under the Village's direct supervision. Therefore, only about \$320,000 net change orders, or 2% of contracts, occurred on Village-controlled projects.
6. Despite the heavy work load and the Village Engineer vacancy, Public Works engineering staff performed very well under lots of pressure. Overall, net change orders were maintained at reasonable levels as noted by the Public Works Committee recently.
7. The water main is installed, met the testing requirements, and works properly.
8. Stanley Consultants has agreed to forego about \$17,000 in billings.
9. Assuming concurrence with the following recommendations, the water main costs can be summarized as follows:

Expected actual cost of water main	\$175,000
Reduced or waived consultant billings	<u>-17,000</u>
Net cost of water main	\$158,000
10. The \$158,000 net cost exceeds the \$145,000 revised cost estimate, based on engineering investigations, by \$13,000.

Recommendations

1. Public Works recommends that the Village accept Stanley Consultants' offer to reduce their current billings by \$13,001 and forego billing \$4,000 in additional fees as a means to settle the extra water main replacement costs incurred.

2. Public Works recommends that no further action be taken against Stanley Consultants. Staff has had very candid talks with the consultant and overall, Public Works is very satisfied with the staff assigned to Village projects.

3. Public Works recommends that Stanley Consultants be retained on future projects. They have been providing excellent service to the Village on other projects such as Olde Towne and Grace St. @ Yorktown. In fact, Stanley Consultants was instrumental in obtaining the recent American Public Works Association award for Olde Towne.

4. Public Works recommends that the standard agreement for resident engineering services be modified to include stronger statements about the responsibilities of field engineers.

Respectfully,

Stan Rickard
Director of Public Works

Village of Lombard, Illinois
Public Works Department

4/7/99

CHANGE ORDER REPORT
1998 CONSTRUCTION PROJECTS

No.	Project	Bid Award	Chng Ords To Date	Total Amended Contract	% CO	Comments
1	Finley & 22nd intersection	\$ 955,176	\$ 240,000	\$ 1,195,176	25%	Estimated COs.
2	SA215-Butterfield Rd	\$ 827,603	\$ 170,003	\$ 997,606	21%	Semi-Final balanced
3	Finley Rd South to D.G.	\$ 1,047,074	\$ 169,125	\$ 1,216,199	16%	
4	SA215 22nd (Frv to Mey)	\$ 1,259,017	\$ 161,484	\$ 1,420,501	13%	
5	Olde Towne 3	\$ 2,207,611	\$ 65,000	\$ 2,272,611	3%	Estimated
6	Underground Structures	\$ 45,637	\$ 47,879	\$ 93,516	105%	Final balanced
7	Aprons and walks restore	\$ 50,000	\$ 45,420	\$ 95,420	91%	Final balanced
8	Fan-lot -- Village Hall	\$ 180,505	\$ 44,794	\$ 225,299	25%	Final balanced
9	Morris Hill	\$ 162,701	\$ 44,567	\$ 207,268	27%	Final balanced
10	Maple Lot	\$ 309,187	\$ 42,214	\$ 351,401	14%	Final balanced
11	St. Chs Rd underground	\$ 243,688	\$ 27,000	\$ 270,688	11%	Estimated
12	Civic Center Pond	\$ 263,892	\$ 25,560	\$ 289,452	10%	Final balanced
13	SA215-Ftn Sq Undergroun	\$ 415,634	\$ 20,198	\$ 435,832	5%	Final balanced
14	Concrete Rehab	\$ 639,648	\$ 12,594	\$ 652,242	2%	Final balanced
15	Ash-Brewster Sewer Lining	\$ 128,243	\$ 9,996	\$ 138,239	8%	Final balanced
16	Asphalts cuts - spring	\$ 50,749	\$ 7,807	\$ 58,556	15%	Final balanced
17	Chs Lane Pump Station	\$ 292,292	\$ 6,850	\$ 299,142	2%	Started March 1999
18	Concrete Cuts	\$ 117,689	\$ 5,014	\$ 122,703	4%	Final balanced
19	17th Street water main	\$ 77,697	\$ 2,305	\$ 80,002	3%	Final balanced
20	CC Res P.S. Upgrade	\$ 230,132	\$ 532	\$ 230,664	0%	Final balanced
21	West Rd. temp walk	\$ 8,855	\$ 336	\$ 9,191	4%	Final balanced
22	School St. sewer lining	\$ 14,900	\$ 300	\$ 15,200	2%	Final balanced
23	Green Valley TVing	\$ 35,000	\$ -	\$ 35,000	0%	
24	Mudjacking	\$ 9,978	\$ -	\$ 9,978	0%	Final balanced
25	Parkside landscaping	\$ 41,543	\$ (548)	\$ 40,995	-1%	Final balanced
26	Sidewalks	\$ 57,325	\$ (636)	\$ 56,689	-1%	Final balanced
27	Crack sealing	\$ 47,960	\$ (871)	\$ 47,089	-2%	Final balanced
28	Sewer TVing 1	\$ 14,705	\$ (2,974)	\$ 11,731	-20%	Final balanced
29	Grace (22nd to YTown)	\$ 569,096	\$ (6,079)	\$ 563,017	-1%	Final balanced
30	Asphalt Cuts	\$ 158,640	\$ (6,804)	\$ 151,836	-4%	Final balanced
31	Sewer TVing 2	\$ 45,048	\$ (12,879)	\$ 32,169	-29%	Final balanced
32	Lombard Hills - West	\$ 1,205,416	\$ (13,218)	\$ 1,192,198	-1%	
33	Finley Pedway	\$ 248,680	\$ (25,000)	\$ 223,680	-10%	Estimated
34	Roosevelt Rd sidewalks	\$ 304,272	\$ (31,951)	\$ 272,321	-11%	Final balanced
35	Ash-Brewster	\$ 479,942	\$ (65,000)	\$ 414,942	-14%	Estimated
36	Westmore Woods	\$ 1,399,932	\$ (129,998)	\$ 1,269,934	-9%	
37	SA209 Lombard Frms nort	\$ 1,460,787	\$ (175,000)	\$ 1,285,787	-12%	Estimated
		Total \$ 15,606,254	\$ 678,020	\$ 16,284,274	4.34%	
		SA215 Change Orders	\$ (357,609)	(Paid by Fountain Square Owners)		
		Village Change Orders	\$ 320,411			2.05%