



MEMO

"...meeting community needs...enhancing quality of life."

TO: Finance Committee
Utilities Committee

FROM: Paula Vandehey, Director of Public Works *PAV*

DATE: May 12, 2022

SUBJECT: Resolution #5-R-22 regarding the reallocation of ARPA funds to undersized watermain replacement.

It is important to start first by acknowledging that we are not replacing as much infrastructure as we should be based on its age and condition. This underfunding was discussed as part of the 2022 Budget process. The controlling factor is not the Utility Budgets, but instead the General Fund Budget driven by declining municipal revenue when adjusted for inflation. In other words, we have capacity within the water, wastewater and stormwater budgets to replace the underground infrastructure, but do not have the corresponding capacity within the General Fund Budget to complete the pavement, sidewalk and driveway apron portions of the projects.

As part of the 2022 Budget process, the City held listening sessions to gather input on how we should allocate our \$14.9 million ARPA funds. Based on that feedback the Council approved spending the funds as shown on Page 71 of the 2022 Budget (Exhibit A attached). This Resolution requests a re-allocation of \$6 million of the \$8 million in American Rescue Plan Act funds to the replacement of undersized watermain.

Following are responses to questions we have received regarding this Resolution along with additional information we believe is relevant to the discussion.

1. **What are the miles of undersized watermain remaining in the city?**
3.77 miles of 4" and smaller watermain
33.17 miles of 6" watermain
2. **What is the estimated cost to replace those remaining miles of undersized watermain?**
\$3.6 million to replace 4" and smaller watermain
\$31.5 million to replace 6" watermain

3. How many miles of the undersized watermain could be replaced within the terrace without going into the street?

This is an unknown at this time as we will need to complete utility locates, survey and design for all 37 miles in order to accurately answer this question. Also, water services may need to be replaced at the same time the watermain is replaced which can only be done by excavating the street. (An example of a terrace watermain project with service replacement is attached as Exhibit B)

4. Are we already correlating street reconstruction with the presence of the undersized watermain whenever possible?

Yes. As shown on Exhibit C almost all of the 2022 Watermain Projects include replacing undersized watermain.

5. Is there any estimate of when we would complete the replacement of the undersized watermain under our current funding levels?

At our current rate we anticipate it will take another 20 years before all undersized watermain are replaced.

6. Can ARPA funds be used for the pavement replacement associated with the watermain relay projects?

Yes, the guidelines for these funds were expanded to include street reconstruction project costs.

7. How many streets would be affected in terms of being patched for a longer period of time than the standard year between underground utility work and pavement reconstruction?

It depends on how many miles of the undersized watermain can be relayed within the terrace area. Worst case is 37 miles of roadway (10% of our road network) would have long-term patches.

8. Are the sanitary sewer and storm sewer also in need of replacement on these same miles of street?

Yes, for the majority of the streets sanitary and/or storm also should be relayed.

9. Are there any concerns with material supply at this time?

Yes. We have been notified that hydrants and other components of watermain relay projects are 6 months out from time of order.

10. Assuming the \$6 million is reallocated to undersized watermain replacement, how soon would this project go out to bid?

Spring of 2023. Assuming there are no material supply shortages (though we are already experiencing shortages and long lead times in certain products), we would complete this work in 2023. Availability of materials would impact project timing, though it is not possible to predict duration of potential delays.

11. What factors go into prioritizing watermain projects?

The following factors are used to determine the priority of watermain projects:

- If the street is scheduled for reconstruction
- Age of the watermain. We have many miles of 8" watermain that is 90+ years old.
- Condition of the watermain. Watermain may be adequately sized and only 50 years old but has a long history of watermain breaks.
- Redundancy. Some streets do not have watermain and adding watermain along those streets improves circulation and provides redundancy to the network.

12. What are the options available to Council if these funds are reallocated to infrastructure?

- One option is to relay as much undersized watermain as possible and install permanent trench patching the following year. We estimate 6 miles of watermain could be replaced under this option.
- One option is to select a few projects and complete all underground utilities as well as pavement reconstruction. We estimate 1 mile of sanitary, storm, watermain and new pavement could be replaced under this option.

13. Did the Common Council have this information when it allocated the ARPA funds?

Yes. The watermain break log is shared at Utilities Committee monthly. We also discussed the need to prioritize infrastructure as part of the 2022 Budget process.

14. How does Appleton compare to similar municipalities as far as infrastructure maintenance goes?

According to the Water Research Foundation, communities in the United States average 25 main breaks per 100 miles per year. Since 2000, the City of Appleton has averaged approximately 25 main breaks per 100 miles per year (average of 95.5 main breaks per year 2000-2021).

However, the Water Research Foundation identifies the "optimized distribution failure frequency" at 15 breaks per 100 miles of watermain.

15. How does Appleton compare to similar cities on the amount of watermain replaced annually?

The industry standard is to replace 1% of your water infrastructure annually. For Appleton that would mean replacing 3.6 miles each year. In comparison we have been replacing 0.8% on an average annual basis.

However, because of our corrosive soils, pipe material and pipe age, our Water System Master Plan completed by AECOM in 2019 recommended replacing 6+ miles (1.7%) annually.

16. How many complaints has the city received about undersized mains?

Very few complaints are received from residents regarding undersized watermain. In fact, Fair Street is the only project currently in the 5-Year Plan based on complaints regarding undersized watermain.

17. Why doesn't the City just dedicate more General Fund money to infrastructure?

Although the Department of Public Works would advocate for more General Fund dollars to be allocated to street reconstruction, we understand that there are many competing interests for these funds. Allocating more funds to infrastructure means allocating fewer funds to other departments and programs. The budget process is the method by which the City Council prioritizes these competing interests.

18. How much does the city spend, on average, repairing watermain breaks?

On average, the city spends approximately \$1 million annually repairing main breaks.

19. Is the City in trouble with higher number of breaks this last 12 months?

City resources are allocated to watermain breaks as a high priority. Under current staffing and funding models, the city has been able to keep up with the greater-than-average number of main breaks this year. That being said, if staff is repairing a watermain break then they are not doing other routine maintenance such as exercising valves and flushing hydrants, nor proactively searching for leaking services and mains.

CITY OF APPLETON 2022 BUDGET **SPECIAL REVENUE FUNDS**

ARPA (American Rescue Plan Act)

Business Unit 2800-2804

PROGRAM BUDGET SUMMARY

Description	Actual		Budget		
	2019	2020	Adopted 2021	Amended 2021	2022
Revenues					
421000 Federal Grants	\$ -	\$ -	\$ -	\$ -	\$ 7,445,920
471000 Interest on Investments	-	-	-	-	25,000
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 7,470,920</u>
Expenses					
610100 Regular Salaries	\$ -	\$ -	\$ -	\$ -	-
610200 Labor Pool Allocations	-	-	-	-	-
610500 Overtime	-	-	-	-	-
610800 Part Time	-	-	-	-	-
615000 Fringes	-	-	-	-	-
620100 Training/Conferences	-	-	-	-	-
630100 Office Supplies	-	-	-	-	-
631603 Other Misc. Supplies	-	-	-	-	-
632400 Medical/Lab Supplies	-	-	-	-	-
632700 Miscellaneous Equipment	-	-	-	-	-
659900 Other Contracts/Obligations	-	-	-	-	-
663000 Other Grant Payments	-	-	-	-	8,000,000
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 8,000,000</u>

DETAILED SUMMARY OF 2022 PROPOSED EXPENDITURES > \$15,000**Other Grant Payments***

Early childhood development	\$ 1,500,000
Housing affordability	3,000,000
Local economic recovery	1,000,000
Social infrastructure, belonging & neighborhoods	1,000,000
Community wellness, mental health, & violence prevention	1,000,000
Arts, culture, & educational institutions	500,000
	<u>\$ 8,000,000</u>

*Note: These are prioritized allocation categories, however, specific programs, allocations, and process are yet to be defined. Specific spending will be subject to future Common Council approval.

For reference, ARPA expenditures approved in 2021 included:

	2021 Amended Budget
COVID-19 response	\$ 1,991,841
Lost revenue - Parking Utility	1,500,000
Lead service line replacement	1,000,000
Library - broadband access	2,000,000
Short-term community partners support	250,000
Consulting/Administrative support for 2022 projects	150,000
Total	<u>\$ 6,891,841</u>

BEFORE CONSTRUCTION THE CONTRACTOR SHALL HAVE THE UTILITIES AND LATERALS LOCATED BY THE UTILITY COMPANIES.

BUILD "C" INLET
MIDPOINT 17'R
EFL. CASTING 803.28

STA 1+00.00 C/L MASON STREET

WATER MAIN NOTES:

1. EXISTING STAINLESS SHALL BE CONNECTED TO NEW MAIN WITH NEW COPPERATION STOP & PIPE COUPLING.
2. MAINS TO BE REPLACED SHALL BE REMOVED TO THE MAIN WITH AN ADJACENT COPPER STOP/COUPLER. STOP/COUPLER SHALL BE NEW. MAINS TO REMAIN SHALL BE REMOVED TO THE MAIN WITH AN ADJACENT MAIN TO AND INCLUDING NEW CURB STOP AND CURB BOX MAY BE NEW.
3. EXISTING MAINS SHALL BE REMOVED TO THE MAIN WITH AN ADJACENT CURB STOP/COUPLER. STOP/COUPLER SHALL BE NEW.
4. EXISTING VALVES, CURBS AND HYDANTS ON LINES BEING ABANDONED SHALL BE REMOVED. CONTRACTOR SHALL REMOVE OF VALVE BODIES. HYDANTS SHALL BE RETURNED TO THE MAIN WITH AN ADJACENT CURB STOP/COUPLER. STOP/COUPLER SHALL BE NEW.
5. CONTRACTOR SHALL REMOVE AND REPLACE ALL CURB BOXES WITHIN THE MAINS TO BE REPLACED. CONTRACTOR SHALL REMOVE AND REPLACE CURB BOXES WITHIN MAINS TO REMAIN. CONTRACTOR SHALL REMOVE AND REPLACE CURB BOXES WITHIN MAINS TO REMAIN AND AS PART OF THE MAINS TO BE REPLACED.

SEWER NOTES:

SEWER NOTES:
1A. DYE TESTING REQUIRED TO DETERMINE WHICH LATERALS ARE ACTIVE.

2A. DO NOT DAMAGE TREE WITH LATERAL RELAY. CONTRACTOR MAY AUGER UNDER TREE OR SLIP LINE NEW 4" PIPE INSIDE LATERAL ONLY WITH THE INSPECTORS APPROVAL MAY A CONTRACTOR REALIGN THE LATERAL AROUND THE TREE USING APPROPRIATE FITTINGS. COST INCLUDED IN LINEAR FOOT BID PRICE OF SANITARY LATERAL RELAY.

NEAR FOOT BID PRICE OF SANITARY EX-

AT TOO HANDLES ARE NOT ALLOWED

3A. FLAT TOP MANHOLES ARE NOT ALLOWED.

4A. CONTRACTOR SHALL BULKHEAD AND ABANDON EXISTING 6" MINI SEWER. COST TO BULKHEAD EXISTING MINI SEWER SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

ESTIMATE OF QUANTITIES

SANTARY SENIOR PAY QUANTITIES		STORY SENIOR PAY QUANTITIES		WATER MAIN PAY QUANTITIES		RECD FITTINGS & VAL'S	
1	FAI 12" SANYTARY SENIOR	70	FAI 12" SANYTARY SENIOR	4	FAI 6" WATER MAIN	1	8" CROSS
2	FAI 12" SANYTARY SENIOR	80	FAI 12" SANYTARY SENIOR	4	FAI 6" HYDRANT MAIN	1	8" REDUCER
3	FAI 12" SANYTARY SENIOR	90	FAI 12" SANYTARY SENIOR	1	FAI 6" HYDRANT	1	8" STOP
4	FAI 12" SANYTARY SENIOR	100	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
5	FAI 12" SANYTARY SENIOR	110	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
6	FAI 12" SANYTARY SENIOR	120	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
7	FAI 12" SANYTARY SENIOR	130	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
8	FAI 12" SANYTARY SENIOR	140	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
9	FAI 12" SANYTARY SENIOR	150	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
10	FAI 12" SANYTARY SENIOR	160	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
11	FAI 12" SANYTARY SENIOR	170	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
12	FAI 12" SANYTARY SENIOR	180	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
13	FAI 12" SANYTARY SENIOR	190	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
14	FAI 12" SANYTARY SENIOR	200	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
15	FAI 12" SANYTARY SENIOR	210	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
16	FAI 12" SANYTARY SENIOR	220	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
17	FAI 12" SANYTARY SENIOR	230	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
18	FAI 12" SANYTARY SENIOR	240	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
19	FAI 12" SANYTARY SENIOR	250	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
20	FAI 12" SANYTARY SENIOR	260	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
21	FAI 12" SANYTARY SENIOR	270	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
22	FAI 12" SANYTARY SENIOR	280	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
23	FAI 12" SANYTARY SENIOR	290	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
24	FAI 12" SANYTARY SENIOR	300	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
25	FAI 12" SANYTARY SENIOR	310	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
26	FAI 12" SANYTARY SENIOR	320	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
27	FAI 12" SANYTARY SENIOR	330	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
28	FAI 12" SANYTARY SENIOR	340	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
29	FAI 12" SANYTARY SENIOR	350	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
30	FAI 12" SANYTARY SENIOR	360	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
31	FAI 12" SANYTARY SENIOR	370	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
32	FAI 12" SANYTARY SENIOR	380	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
33	FAI 12" SANYTARY SENIOR	390	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
34	FAI 12" SANYTARY SENIOR	400	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
35	FAI 12" SANYTARY SENIOR	410	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
36	FAI 12" SANYTARY SENIOR	420	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
37	FAI 12" SANYTARY SENIOR	430	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
38	FAI 12" SANYTARY SENIOR	440	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
39	FAI 12" SANYTARY SENIOR	450	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
40	FAI 12" SANYTARY SENIOR	460	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
41	FAI 12" SANYTARY SENIOR	470	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP
42	FAI 12" SANYTARY SENIOR	480	FAI 12" SANYTARY SENIOR	1	FAI 6" VALV	1	8" COUP

EROSION CONTROL PAY QUANTITIES

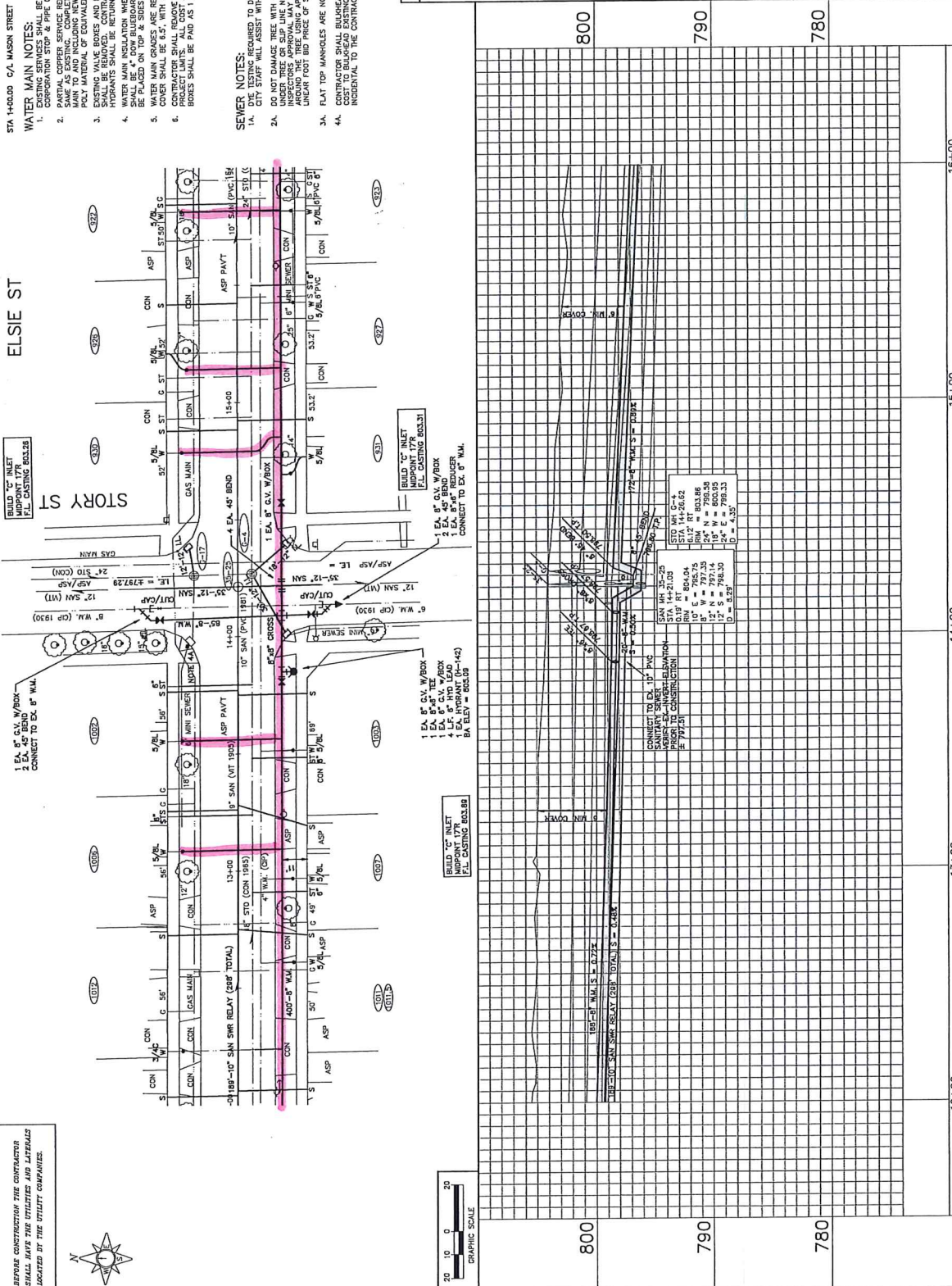
CITY OF APPLETON, WIS.

SEWER & WATER IN

ELsie ST
MASON ST TO RICHMOND ST

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17



CITY OF APPLETON 2022 BUDGET

WATER UTILITY

Distribution Capital Improvements

Business Unit 5370

PROGRAM BUDGET SUMMARY

Description	Actual		Budget		
	2019	2020	Adopted 2021	Amended 2021	2022
Expenses					
610100 Regular Salaries	\$ 110,244	\$ 54,125	\$ 166,387	\$ 166,387	\$ 139,139
610400 Call Time Wages	551	92	-	-	500
610500 Overtime Wages	7,941	9,816	-	-	9,000
610800 Part-Time Wages	351	296	4,600	4,600	3,346
630901 Shop Supplies	302	175	-	-	-
632503 Other Materials	1,692	3,643	-	-	-
632601 Repair Parts	1,114	6,798	-	-	-
640400 Consulting Services	30,343	65,932	76,500	136,005	10,000
640800 Contractor Fees	-	1,702	-	-	-
641500 Tipping Fees	-	15,414	-	-	-
642501 CEA Operations/Maint.	-	-	10,000	10,000	7,500
659900 Other Contracts/Obligation	-	175	-	-	-
680905 Water Mains	3,241,074	3,380,088	5,727,251	5,819,558	2,270,115
689900 Other Capital Outlay	(3,264,475)	(3,394,552)	-	-	-
Total Expense	\$ 129,137	\$ 143,704	\$ 5,984,738	\$ 6,136,550	\$ 2,439,600

DETAILED SUMMARY OF 2022 PROPOSED EXPENDITURES > \$15,000

	Street	From	To	Water Utility
Labor Pool				151,985
CEA				7,500
Miscellaneous	Permit; Misc.Fees; Training; Testing Mat'l, NOI, Railroad, Water			10,000
Construction	Surface Restoration - Due to 2021 Water CIP Excav.			43,850
	Subtotal			53,850
New Construction	Plamann Park	Phase 2		500,000
	French Rd	Broadway Dr	Broadway Dr (1700' n/o)	194,150
	Subtotal			694,150
Reconstruction (not related to paving)	Easement 6"	River Road	Bouten St	162,475
	Fair St 4"	Atlantic Street	Spring St	204,700
	Franklin St 6"	Appleton St	Oneida St	100,000
	WWTP	Weimar Ct	Newberry Ct	247,300
	Lead Service Line Replacement Citywide			250,000
	Subtotal			964,475
Reconstruction (prior to next year's paving)	Alvin St 4" & 6"	Wisconsin Ave	Marquette St	272,485
	Durkee St 6"	College Ave	Washington St	59,250
	Morrison St	College Ave	Washington St	135,905
	Reinke Ct - partial 6"	Kernan Ave	cds	100,000
	Subtotal			567,640
Transmission - New				
Total Water Construction				\$ 2,439,600