

Village of Carol Stream

CAPITAL IMPROVEMENT PROGRAM



**Armstrong Park Flood Control Projects
Fiscal Years 2016/17 Through 2025/26**

On the Cover

The Village participated in the planning, design and construction of DuPage County's three Armstrong Park Flood Control Projects (Pumping Station, Storage Reservoir and Siphon Discharge). Collectively these are the most important flood control improvements ever to be completed in Carol Stream. The \$12.5M project was recognized by the American Public Works Association Suburban Branch and Chicago Metro Chapter as an Environmental Project of the Year for its flood control, water quality and recreational benefits accomplished through a collaborative effort by the County, Village and Park District. A dual-reservoir system, the basins hold and treat floodwater from the adjacent Klein Creek during storm events before releasing it downstream of the surrounding neighborhood.

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TO: Mayor and Trustees

FROM: Joseph E. Breinig, Village Manager

RE: FY16/17 – FY25/26 Capital Improvement Program

Transmitted with this letter is the Village's FY16/17 Capital Improvement Program (CIP) document. The CIP takes a comprehensive look at the Village's infrastructure and facility needs for the next 5, 10, and 20 years. A CIP is a multi-year plan that forecasts spending for all anticipated capital projects. The CIP enables the Village to identify needed capital projects, prioritize their timing and coordinate their financing. An effective CIP consists of both an administrative process to identify the location, scale and timing of needed capital projects and a fiscal plan to provide for the funding of those projects.

The CIP links the Village's capital planning and budgeting functions. The CIP can help implement past policy decisions by establishing priorities among existing and competing capital needs and can also be used to measure and evaluate the merits of new proposals.

Traditionally, a CIP covers a period of 5 years. Because a dedicated and reasonably predictable funding source has not been identified to fund the long-term replacement and rehabilitation of general infrastructure assets, the scope of this document is expanded to provide a longer-term perspective. Therefore, the plan, as presented, also includes a 6-10 year look with estimated costs, and an 11-20 year projection of possible future projects. This is intended to better assist the Village Board in the planning and decision-making process.

The document is presented to you as a supplement to the operating budget. Since there is a direct correlation between the CIP and the operating budget, we have incorporated the operating impacts resulting from CIP projects into the operating budgets. Examples of operating impacts are decreased road maintenance costs due to reconstructions or increased operating costs due to the acquisition of an additional facility.

FY16/17 – FY20/21

The first five years of the Plan includes 42 projects in all construction categories with a total estimated cost of \$72.9 million.

Roadways

The Roadways category includes projects at an estimated cost of \$28.3 million and receives all of its funding support from the Village's Capital Projects Fund and Motor Fuel Tax Fund. The annual Flexible Pavement Program is the primary focus of the road program and makes up 64.9% of all projected expenditures over the next five year period. The Capital Projects Fund portion of the CIP predominantly relies on surplus transfers from the General Fund to finance scheduled projects.

Although the general economic climate has improved in recent years, there remains a continuing and significant threat to the long-term viability of the Village's capital program which principally consists of road work. This threat comes from Springfield, as our State government continues to operate without a 2016 budget, in addition to facing the new 2017 budget cycle just a few months from now. Although last year's threat by the Governor to reduce Carol Stream's share of the State income tax by 50% has not materialized, we can be assured that there will likely be new threats on the horizon as the State's financial situation continues to deteriorate. The Village's share of motor fuel taxes, a critical component of the CIP, was also suspended during FY15/16 for lack of State appropriation. This was subsequently restored through legislative intervention. This will likely occur again beginning in July 2016 absent a State budget or other corrective action by the Legislature. Should the State act to significantly impair revenues shared with units of local government like Carol Stream, the ability of the General Fund to produce surplus balances for subsequent transfer to the Capital Projects Fund will be jeopardized. Without these transfers, the road program will not function.

For the approved FY16/17 Village Budget, a full complement of roadway improvement projects will be undertaken. This is possible in part to the strong reserve position of the fund, including a sizable transfer from the General Fund from FY15/16 operations. Based on what decisions are ultimately made in Springfield with respect to the level of State-shared revenues, future year road programs may need to be scaled back to preserve fund balances and to ensure some level of ongoing capital improvements are possible. While our past few years of road programs have been aimed at reducing the backlog of previously deferred projects, we may find ourselves in that position again if State revenue reductions are implemented. This is unfortunate as delay in needed capital investment typically comes at an added future cost. For the FY16/17 through FY18/19 Village Budget and Financial Plan, the programmed investment in roadway system improvements averages \$5.7 million per year.

Water and Sewer Utilities

The Water and Sewer Utilities category includes a number of projects with a total projected cost of \$20.8 million over the next five years. A major focus over the next decade will involve the systematic rehabilitation and improvement of major equipment, buildings and processes at the Water Reclamation Center. Following a Facility Inspection Report completed in late 2010, many of the existing plant's mechanical and processing systems are at or near the end of their useful lives and require replacement or rehabilitation. These improvements will be completed in a phased approach based on recommendations and findings contained in the report.

Work will begin on one of the Village's largest water main replacement projects along Schmale Road which has experienced a number of significant breaks over recent years. The estimated cost of the project is \$2.5 million. Additional water main replacement projects have been programmed into the CIP and will be identified, designed and completed following a comprehensive water system study planned for FY16/17. Future rate increases will be necessary to adequately provide for the timely rehabilitation and replacement of the systems' capital infrastructure components.

The results of the water study will also identify the need for and timing of an additional reservoir and pumping station in the Southwest area of the Village in addition to a DuPage Water Commission connection and metering station. These projects are presently estimated to cost \$7.4 million and are presently scheduled in FY19/20 and FY20/21.

Facilities

Following an architectural review and space study conducted in FY15/16, a significant renovation of the Gregory J. Bielawski Municipal Center is planned for FY16/17 through FY17/18 (\$16,000,000). The building is inadequate to meet the current and future space needs of operating departments. The configuration of the building is also inefficient and presents inconvenience to customers. Additionally, most of the building contents and finishes are original to the building and are well past their service life and in need of update. A separate Police evidence storage facility (\$500,000) is included in the CIP for FY16/17 however may be deferred or cancelled pending continued planning and design work for the Municipal Center renovation.

The Public Works fuel dispensing island and underground storage tanks are now in excess of 30 years old and are in need of replacement. Replacement of these systems is scheduled for FY17/18 (\$550,000). The Village will undergo a pilot program of purchasing fuel at local retail outlets in an attempt to find an efficient and lower cost alternative to replacement of the fuel island at the Public Works Center. A successful transition to retail fueling will also have a positive impact on operating costs associated with maintaining underground storage tanks, software, fuel inventory management, and billing of external intergovernmental agencies.

Storm Water Utilities

FY16/17 may see a continuation of the flood plain structure buy-out program which will only be completed with receipt of 100% grant funding.

Also included in the plan are stream bank stabilization projects along Kehoe Blvd. and Klein Creek. These projects are heavily reliant on grant assistance to facilitate their completion. Total combined project costs exceed \$4 million.

Funding Sources / Cash Flow

Funding for the roadway, storm sewer and facilities programs comes primarily from the Capital Projects Fund. Historically, in addition to funds received through grants and other agencies, the Capital Projects Fund relies solely on transfers from the General Fund to support the bulk of the Village's infrastructure projects and maintenance programs. These transfers are generally supported by any annual surplus generated by the General Fund. As presented in this report, adequate reserves are projected to be sufficient to meet all roadway and related general infrastructure projects identified in the first 3 years of the CIP. In years 4 and 5 of the CIP, balances in the Capital Projects Fund are presently projected to be negative. These however will be supported by projected available reserves in the Motor Fuel Tax Fund which are available to fund roadway projects. A history of General Fund transfers since the Capital Projects Fund was first established as a distinct fund in FY05/06 is shown below:

<u>Fiscal Year</u>	<u>Transfer Amount</u>
FY06/07	\$4,000,000
FY07/08	1,750,000
FY08/09	3,500,000
FY09/10	0
FY10/11	0
FY11/12	5,000,000
FY12/13	2,100,000
FY13/14	3,700,000
FY14/15	2,100,000

Reserves in the Water and Sewer Fund are projected to remain positive through year 4 of the next 5 year period. This is not of grave concern at present as the plan presently identifies significant projects in the Southwest area of the Village (DuPage Water Commission metering station, reservoir and pump station) at an estimated cost of \$7.4 million, the need for which is not yet certain. An additional \$6.8 million is identified in the five year plan to begin a regular water main replacement program. These figures are presently planning “placeholders” for possible future projects. The comprehensive water system study planned in FY16/17 will be an important tool in identifying the long-term needs of the system, at which time future projects will be identified and a plan for financing will be developed.

Our longer term focus on projected future funding requirements will provide us ample insight into changes in the financial climate and whether or not we are meeting the benchmarks needed to sustain the program into the future. This level of planning is designed to assist the Village in taking the necessary actions in advance of an impending financial crisis so that it can be avoided.

While external threats to revenues, such as legislative changes to State-shared revenue distributions, have the potential to impact the long-term viability of our CIP, there is no expectation that planned projects and improvements will be impacted in the coming fiscal period. A review of cash reserve requirements and an expected General Fund surplus for FY15/16 will result in an additional transfer to the Capital Projects Fund prior to the start of the new fiscal year.

Capital improvements to our water distribution and sanitary sewage collection and treatment systems are funded entirely from user fees billed to customers on a monthly basis. Billing rates are established to cover both the day-to-day costs of operating these systems as well as to fund capital replacements and rehabilitations as needed. Depending on the results of the water system and trunk line sewer studies, accelerated rehabilitation work may be necessary and with it, some form of debt financing.

Grants

The Village actively solicits and receives financial assistance or engages in partnerships with other units of government to secure grant or other cost-sharing participation in local projects which benefit Carol Stream residents and businesses. This financial participation comes in a number of forms, whether through direct reimbursements from other governments or agencies or through projects sponsored directly by other government units which do not flow through Village budgets or accounts. A total of \$5.8 million of such direct or indirect funding assistance has been identified for in-process projects or planned projects over the next 5 years of the CIP. This represents approximately 8.0% of all projected improvement costs.

Conclusion

The Village employs a longer-term view to capital improvement planning and funding. Staff has identified foreseeable capital needs for the next five, ten and twenty years. The Village's infrastructure needs are dynamic and therefore require a document that is fluid and capable of adapting to changes in priorities and funding. Staff believes that the document presented herein embodies those characteristics.

The Village has maintained its capital assets very well during its first 50 years and needs to position itself to maintain those assets for the next 5-20 years and beyond. Although we have faced significant challenges presented by what has been the worst operating and financial climate in the Village's history, the Village has benefitted greatly from its long-range planning and forecasting activities. In that regard, the current CIP, as presented, continues our commitment to providing responsible and timely reinvestment in the critical assets which make up the backbone of the community.

Capital Financing Strategy

The Village's capital financing involves major decisions and long-term commitments that require planning as careful and as deliberate as the planning that goes into the capital improvement program (CIP).

A capital financing strategy should:

- Limit the cost of providing capital infrastructure and equipment while meeting the Village's needs.
- Ensure financial strength and flexibility in the future.
- Strengthen the Village's standing with the bond rating agencies, bond buyers, regulators and our customers.

The following six policies together create the Village's capital financing strategy.

1. Cash Reserve Policy

The Village will maintain operating cash reserve balances for its operating funds (General Corporate Fund and Water and Sewer Fund) as a means of meeting the Village's cash flow requirements and to provide a liquidity buffer to protect against short-term revenue losses, delays in State funding, or other unplanned significant expenditures. Reserve balances will be established in accordance with parameters set forth in this policy.

Operating reserves will be established based on annual "net budgeted expenditures" of the fund, which shall be defined as total budgeted expenditures minus capital expenditures.

Cash balances subject to the reserve policy shall exclude cash deposits, escrows, or other amounts held by the Village on behalf of third parties.

The Village Board may, from time to time, establish "special operating reserves", which may be maintained in addition to standard operating reserve balances. Generally, these may be established to support special programs or projects as approved by the Village Board (e.g. Emerald Ash Borer Reserve). These special operating reserves may be established as a percentage of net budgeted expenditures or as a fixed dollar amount which is reduced as qualified expenditures are incurred.

A. General Corporate Fund

The General Corporate Fund shall maintain an operating cash reserve balance at a minimum of 25% of annual net budgeted expenditures, but shall be no more than 50% of net budgeted expenditures.

In the event cash reserve balances exceed 50% of net operating expenditures, the excess amount over the 50% maximum may be:

1. Retained in the General Fund upon direction of the Village Board.
2. Transferred to the Capital Projects Fund as the primary funding support for ongoing Village infrastructure improvements.
3. Used for any other purpose as the Village Board may direct and approve.

Transfers or other disposition of balances in excess of the policy maximum need not take place more frequently than once annually and should generally be directed on or near the time of the adoption of the annual budget, or as soon as is practicable thereafter.

B. Water and Sewer Fund

The Water and Sewer Fund shall maintain an operating cash reserve balance at a minimum of 25% of annual net budgeted expenditures. All other fund reserve balances shall be designated as “capital reserve” balances and will be used to support the construction, repair, rehabilitation or replacement of capital assets serving the combined water and sewer utilities.

If fund balances are used to support one-time capital, one-time non-operating expenditures, and operating expenditure the funds must be specifically appropriated by the Village Board and a plan to replenish the reserves to the required level should accompany the request to use the funds.

2. Debt Capacity

The total general obligation debt will be limited to \$1,000 per capita, which will be reviewed annually.

The Water and Sewer Fund total long-term debt outstanding shall not exceed the amount of fund equity. The Village will endeavor to maintain 1.50 coverage for all indebtedness of the Water and Sewer Fund.

3. Maintain or Improve the Village's Bond Ratings

A bond rating is an opinion of the creditworthiness of a debt issuer with regard to specific debt, a type of debt, or a financing program. A rating evaluates an issuer's strength or weakness on factors that bear on the issuer's ability and willingness to make timely principal and interest payments on the debt.

The Village will strive to maintain and or improve its bond rating.

The Village will maintain good communications with bond rating agencies about its financial condition. The Village will follow a policy of full disclosure on every financial report and bond prospectus.

4. Debt Administration Policy

- A. The Village will confine long-term borrowing to capital improvements that cannot be financed from current revenues or reserves.
- B. The Village will target long-term borrowing for construction of long-lived capital assets only, with the remainder financed on a pay-as-you-go basis.
- C. The Village will maintain good communications with bond rating agencies about its financial condition. The Village will follow a policy of full disclosure on every financial report and bond prospectus.
- D. Every project proposed for financing through general obligation debt should be accompanied by a full analysis of the future operating and maintenance costs associated with the project.
- E. When possible and practicable, debt will be retired early.
- F. Debt will be issued under the guidelines that are outlined in the Village's Debt Management Policy.

5. Multiyear Financial Forecasting Policy

Multiyear financial forecasting is a useful tool for capital planning and finance because capital improvement programs extend over many years. A 5-year financial forecast should be prepared for the Capital Projects Fund, the Water and Sewer Fund and the Motor Fuel Tax Fund. The assumptions used in the forecasting process should be conservative. The presentation of the forecast

results should show the difference between revenues and the spending for the year and the effect of that difference on fund balance.

6. Capital Financing Policy

The Village will undertake long-term financial planning and forecasting to evaluate the effects of budget, capital budget and debt issuance decisions.

The Village will develop a three-year projection of revenues and expenditures for all operating funds and a five-year projection of projects and funding sources within the CIP. The CIP will also include projection of projects along with projected costs for years 6 thru 11 and a projection of projects only for years 11 thru 20.

Category Descriptions

Roadways

Roadways include all structures and appurtenances associated with the Village's roadway system including streets, sidewalks, paths, street lights, roadway drainage and storm water systems, pavement markings, signs, curb and gutter, bridges, culverts, traffic control signals and parkway landscaping.

Water & Sewer Utilities

Water and sewer utilities are composed of infrastructure related to the Village's water main and sanitary sewer collection and treatment systems. They include: water mains, fire hydrants, valves, services, wells, pressure adjusting stations, reservoirs, pumping stations, water treatment systems, sanitary sewer mains, laterals, manholes, lift stations, force mains and the Tom Vinson Water Reclamation Plant.

Facilities

Facilities are all the Village's buildings and grounds including: Gregory J. Bielawski Municipal Center, Public Works Center and Garage, Historic Farm House and the Ross Ferraro Town Center.

Storm Water Utilities

Storm water utilities include all structures and infrastructure associated with the Village's storm water management system including: storm sewers, flared end sections, inlets, catch basins, manholes, runoff storage facilities, restrictor/control structures, flood control facilities, dams, ditches and swales, overland flow routes, wetlands, riparian areas, ponds and creeks.

Assumptions

Construction Cost Index

For years 1-10, the existing cost estimates for the projects will be adjusted based on the Construction Cost Index, Chicago Cost Index, Materials Price Index as well as individual indexes for materials and labor as determined by the Engineering News Record Magazine (ENR.com) and the Associated General Contractors of America (AGCA). The indexes for roadway and water main projects, except the Pavement Patching Projects, indicated a 5% average annual increase in construction costs which was the amount predicted last year. A 2.5% average annual cost of construction increase was used for the Pavement Patching Projects. Indexes for sanitary sewer projects also indicate a 5% increase is needed. All future cost estimates assumed a 5% (2.5% for Pavement Patching Projects) per year increase in construction costs. Staff will continue to monitor project costs throughout the fiscal year and reevaluate cost indices in the next budget cycle.

Definitions

1. Characteristics of a capital project:

- Essential public purpose
- Long useful life
- Infrequent and expensive
- Related to other government functions
- The Village's general responsibility to provide it

2. What qualifies for the CIP?

- Road maintenance (preservative and restorative sealers, crack filling, patching, resurfacing, overlays) and reconstruction
- The purchase of land and/or buildings
- Additions to or renovations of buildings that exceed \$25,000
- Improvements to land other than buildings that exceed \$25,000
- Infrastructure additions/improvements, i.e., water and sewer lines, storm sewers
- The CIP is not intended to include vehicles and equipment

3. What costs are chargeable to a capital project?

- Construction costs (labor and material)
- Engineering fees (Phase I, II, III)
- Architect fees
- Legal fees associated with the project
- Acquisition of land or other property for the project, including brokerage fees
- Preparation of land for construction and landscaping during or after construction
- Easements related to the project
- Equipment and furnishings that are affixed to the project
- Initial inventory of movable furnishings and equipment
- Interest and other financing charges during construction

Village of Carol Stream
5 Year Capital Improvement Program - Expenditure Summary

<u>CIP Projects By Fund (\$000)</u>	<u>Fund</u>	<u>FY16/17 Proposed</u>	<u>FY17/18 Planned</u>	<u>FY18/19 Planned</u>	<u>FY19/20 Planned</u>	<u>FY20/21 Planned</u>	<u>Total</u>
<u>Roadway System:</u>							
1. Pavement Preventative Maintenance Program	CPF	\$ 491	\$ 513	\$ 537	\$ 563	\$ 590	\$ 2,694
2. Flexible Pavement Program	CPF	4,340		3,257	4,040	3,114	14,751
3. Flexible Pavement Program	MFT	-	3,628	-		-	3,628
4. Kuhn Rd. Rehabilitation - North to Lies*	CPF	32	-	-	-	-	32
5. Lies Rd. Rehabilitation - Kuhn to County Farm*	CPF	305	-	-	-	-	305
6. Lies Rd. Rehabilitation - High Ridge Pass to Fair Oaks*	CPF	37	377	-	-	-	414
7. Lies Rd. Rehabilitation - Schmale to Gary*	CPF	-	88	987	-	-	1,075
8. Vale Rd. Rehabilitation	CPF	-	-	-	139	-	139
9. Doris Ave. Rehabilitation	CPF	-	-	-	277	-	277
10. Kuhn Rd. Rehabilitation - St. Charles to North	CPF	-	-	-	-	271	271
11. Morton Rd. Rehabilitation - Mardon to Lies*	CPF	-	-	-	-	1,294	1,294
12. Roadway Condition Assessments & Inventories	CPF	73	-	-	-	70	143
13. Sidewalk Condition Assessments & ADA Inventories	CPF	32	32	32	-	-	96
14. West Branch DuPage River Trail*	CPF	527	-	-	-	-	527
15. Carol Stream - Bloomingdale Trail Improvements*	CPF	325	37	-	-	-	362
16. Lies Rd. Bike Path Extension*	CPF	383	51	-	-	-	434
17. Southeast Bike Path*	CPF	8	146	477	341	369	1,341
18. Gary Ave. Multi-Use Path*	CPF	40	-	-	-	-	40
19. Streetlight Replacement Program*	CPF	290	50	50	50	50	490
Roadway System Subtotal:		\$ 6,883	\$ 4,922	\$ 5,340	\$ 5,410	\$ 5,758	\$ 28,313
<u>Water and Sewer Utilities:</u>							
1. WRC Dewatering System Improvement	W/S	-	-	325	1,690	-	2,015
2. WRC Secondary Clarifier Improvement	W/S	-	100	-	-	-	100
3. WRC Grit/Screening Building Roof Replacement	W/S	-	82	-	-	-	82
4. WRC Blower Building #2 Roof Replacement	W/S	45	-	-	-	-	45
5. Schmale Road Water Main Replacement	W/S	2,278	253	-	-	-	2,531
6. Water System Studies	W/S	105	-	-	-	-	105
7. Water System Improvements	W/S	-	150	150	150	150	600
8. Water Main Replacement Program	W/S	-	200	2,200	2,200	2,200	6,800
9. Water Main Condition Assessments	W/S	-	161	-	-	-	161
10. Aztec Dr. Sanitary Sewer Repairs & Lining	W/S	215	-	-	-	-	215

Village of Carol Stream
5 Year Capital Improvement Program - Expenditure Summary

<u>CIP Projects By Fund (\$000)</u>	<u>Fund</u>	<u>FY16/17 Proposed</u>	<u>FY17/18 Planned</u>	<u>FY18/19 Planned</u>	<u>FY19/20 Planned</u>	<u>FY20/21 Planned</u>	<u>Total</u>
<u>Water and Sewer Utilities (continued):</u>							
11. North Ave. Sanitary Sewer Rehabilitation	W/S	66	726	-	-	-	792
12. SW Reservoir & Pumping Station	W/S	-	-	-	996	3,303	4,299
13. SW DPWC Connection & Metering Station	W/S	-	-	-	262	2,819	3,081
Water and Sewer Utilities Subtotal:		\$ 2,709	\$ 1,672	\$ 2,675	\$ 5,298	\$ 8,472	\$ 20,826
<u>Stormwater Utilities:</u>							
1. Roadway Drainage Improvements	CPF	\$ 140	\$ 145	\$ 150	\$ 150	\$ 150	\$ 735
2. Tubeway & Westgate Stormwater Study	CPF	70	-	-	-	-	70
3. Flood Plain Structure Buyout Program*	CPF	371	371	371	371	-	1,484
4. Kehoe Boulevard Stream Bank Stabilization*	CPF	14	126	693	77	-	910
5. Klein Creek Section I Stream Bank Stabilization*	CPF	32	15	460	2,376	264	3,147
Stormwater Utilities Subtotal:		\$ 627	\$ 657	\$ 1,674	\$ 2,974	\$ 414	\$ 6,346
<u>Facilities:</u>							
1. Village Hall Rehabilitation	CPF	1,500	14,500	-	-	-	16,000
2. Police Evidence Storage Building	CPF	500	-	-	-	-	500
3. PWC Fuel Island Replacement	CPF	-	550	-	-	-	550
4. PWC Storage Yard Improvement	CPF	-	15	200	-	-	215
5. Town Center Fountain Electrical Improvements	CPF	150	-	-	-	-	150
Facilities Subtotal:		\$ 2,150	\$ 15,065	\$ 200	\$ -	\$ -	\$ 17,415
Total Expenditures All Funds:		\$ 12,369	\$ 22,316	\$ 9,889	\$ 13,682	\$ 14,644	\$ 72,900

* Partially funded though outside sources.

Fund Recap

Capital Projects Fund	CPF	\$ 9,660	\$ 17,016	\$ 7,214	\$ 8,384	\$ 6,172	\$ 48,446
Motor Fuel Tax Fund	MFT	-	3,628	-	-	-	3,628
Water & Sewer Fund	W/S	2,709	1,672	2,675	5,298	8,472	20,826
Total Expenditures All Funds:		\$ 12,369	\$ 22,316	\$ 9,889	\$ 13,682	\$ 14,644	\$ 72,900

Village of Carol Stream
5 Year Capital Improvement Project/Funding Summary

<u>CIP Funding By Source (\$000)</u>	<u>Fund</u>	<u>FY16/17 Proposed</u>	<u>FY17/18 Planned</u>	<u>FY18/19 Planned</u>	<u>FY19/20 Planned</u>	<u>FY20/21 Planned</u>	<u>Total</u>
<u>Roadway System:</u>							
1. Pavement Preventative Maint. Program	CPF						
- Reserves		\$ 491	\$ 513	\$ 537	\$ 563	\$ 590	\$ 2,694
2. Flexible Pavement Program	CPF						
- Carol Stream Park District		380	-	-	-	-	380
- Reserves		3,960	-	3,257	4,040	3,114	14,371
3. Flexible Pavement Program	MFT						
- Reserves		-	3,628	-	-	-	3,628
4. Kuhn Road Pavement Rehabilitation - Phase I*	CPF						
- Reserves		32	-	-	-	-	32
5. Lies Road Pavement Rehabilitation - Phase I*	CPF						
- Reserves		305	-	-	-	-	305
6. Lies Road Pavement Rehabilitation - Phase II*	CPF						
- Reserves		37	377	-	-	-	414
7. Lies Road Pavement Rehabilitation - Phase III*	CPF						
- Reserves		-	88	987	-	-	1,075
8. Vale Rd. Pavement Rehabilitation	CPF						
- Reserves		-	-	-	139	-	139
9. Doris Ave. Pavement Rehabilitation	CPF						
- Reserves		-	-	-	277	-	277
10. Kuhn Road Pavement Rehabilitation - Phase II	CPF						
- Reserves		-	-	-	-	271	271
11. Morton Road Pavement Rehabilitation*	CPF						
- Reserves		-	-	-	-	1,294	1,294
12. Roadway Condition Assessments & Inventories	CPF						
- Reserves		73	-	-	-	70	143
13. Sidewalk Condition Assessments & ADA Inventories	CPF						
- Reserves		32	32	32	-	-	96
14. West Branch DuPage River Trail	CPF						
- WTRD		92	-	-	-	-	92
- FPDDPC		198	-	-	-	-	198
- ITEP		145	-	-	-	-	145
- Reserves		92	-	-	-	-	92

Village of Carol Stream
5 Year Capital Improvement Project/Funding Summary

<u>CIP Funding By Source (\$000)</u>	<u>Fund</u>	<u>FY16/17 Proposed</u>	<u>FY17/18 Planned</u>	<u>FY18/19 Planned</u>	<u>FY19/20 Planned</u>	<u>FY20/21 Planned</u>	<u>Total</u>
<u>Roadways (continued):</u>							
15. Carol Stream - Bloomingdale Trail Impr.	CPF						
- ITEP		127	-	-	-	-	127
- Reserves		198	37	-	-	-	235
16. Lies Road Bike Path Extension	CPF						
- ITEP		144	-	-	-	-	144
- Reserves		239	51	-	-	-	290
17. Southeast Bike Path Extension	CPF						
- ITEP		-	117	279	171	101	668
- Reserves		8	29	198	170	268	673
18. Gary Avenue Multi-Use Path	CPF						
- Reserves		40	-	-	-	-	40
19. Streetlight Replacement Program	CPF						
- Reserves		290	50	50	50	50	490
Roadway System Subtotal:		\$ 6,883	\$ 4,922	\$ 5,340	\$ 5,410	\$ 5,758	\$ 28,313
<u>Water and Sewer Utilities:</u>							
1. WRC Dewatering System Imp.	W/S						
- Reserves		\$ -	\$ -	\$ 325	\$ 1,690	\$ -	\$ 2,015
2. WRC Secondary Clarifier Improvements	W/S						
- Reserves		-	100	-	-	-	100
3. WRC Grit/Screening Bldg. Roof Replacement	W/S						
- Reserves		-	82	-	-	-	82
4. WRC Blower Bldg. #2 Roof Replacement	W/S						
- Reserves		45	-	-	-	-	45
5. Schmale Rd. Water Main Replacement	W/S						
- Reserves		2,278	253	-	-	-	2,531
6. Water System Studies	W/S						
- Reserves		105	-	-	-	-	105
7. Water System Improvements	W/S						
- Reserves		-	150	150	150	150	600
8. Water Main Replacement Program	W/S						
- Reserves		-	200	2,200	2,200	2,200	6,800

Village of Carol Stream
5 Year Capital Improvement Project/Funding Summary

<u>CIP Funding By Source (\$000)</u>	<u>Fund</u>	<u>FY16/17 Proposed</u>	<u>FY17/18 Planned</u>	<u>FY18/19 Planned</u>	<u>FY19/20 Planned</u>	<u>FY20/21 Planned</u>	<u>Total</u>
<u>Water and Sewer Utilities (continued):</u>							
9. Water Main Condition Assessments	W/S						
- Reserves		-	161	-	-	-	161
10. Aztec Drive Sanitary Sewer Replacement	W/S						
- Reserves		215	-	-	-	-	215
11. North Avenue Sanitary Sewer Rehabilitation	W/S						
- Reserves		66	726	-	-	-	792
12. SW Reservoir & Pumping Station	W/S						
- Debt		-	-	-	996	3,303	4,299
13. SW DPWC Connect./Metering Station	W/S						
- Debt		-	-	-	262	2,819	3,081
Water and Sewer Utilities Subtotal:		\$ 2,709	\$ 1,672	\$ 2,675	\$ 5,298	\$ 8,472	\$ 20,826
<u>Stormwater Utilities:</u>							
1. Roadway Drainage Improvements	CPF						
- Reserves		\$ 140	\$ 145	\$ 150	\$ 150	\$ 150	\$ 735
2. Tubeway & Westgate Stormwater Study	CPF						
- Reserves		70	-	-	-	-	70
3. Flood Plain Structure Buyout Program*	CPF						
- IEMA-HMGP		267	267	267	267	-	1,068
- DPC		89	89	89	89	-	356
- Reserves		15	15	15	15	-	60
4. Kehoe Boulevard Stream Bank Stabilization*	CPF						
- DPC		-	-	100	-	-	100
- Reserves		14	126	593	77	-	810
5. Klein Creek Section I Stream Bank Stabil.*	CPF						
- IEPA		-	-	138	713	79	930
- DRSCW		-	-	138	713	79	930
- DPC		-	-	-	594	66	660
- Reserves		32	15	184	356	40	627
Stormwater Utilities Subtotal:		\$ 627	\$ 657	\$ 1,674	\$ 2,974	\$ 414	\$ 6,346

Village of Carol Stream
5 Year Capital Improvement Project/Funding Summary

<u>CIP Funding By Source (\$000)</u>	<u>Fund</u>	<u>FY16/17 Proposed</u>	<u>FY17/18 Planned</u>	<u>FY18/19 Planned</u>	<u>FY19/20 Planned</u>	<u>FY20/21 Planned</u>	<u>Total</u>
Facilities:							
1. Village Hall Rehabilitation	CPF						
- Reserves		\$ 1,500	\$ 14,500	\$ -	\$ -	\$ -	\$ 16,000
2. Police Evidence Storage Building	CPF						
- Reserves		500	-	-	-	-	500
3. PWC Fuel Island Replacement	CPF						
- Reserves		-	550	-	-	-	550
4. PWC Storage Yard Improvement	CPF						
- Reserves		-	15	200	-	-	215
5. Town Center Fountain Electrical Improv.	CPF						
- Reserves		150	-	-	-	-	150
Facilities Subtotal:		\$ 2,150	\$ 15,065	\$ 200	\$ -	\$ -	\$ 17,415
TOTAL FUNDING		\$ 12,369	\$ 22,316	\$ 9,889	\$ 13,682	\$ 14,644	\$ 72,900
Funding Breakdown:							
Debt		\$ -	\$ -	\$ -	\$ 1,258	\$ 6,122	\$ 7,380
Grants/Cost Share		1,442	473	1,011	2,547	325	5,798
Reserves		10,927	21,843	8,878	9,877	8,197	59,722
Total Funding All Sources:		\$ 12,369	\$ 22,316	\$ 9,889	\$ 13,682	\$ 14,644	\$ 72,900

Village of Carol Stream
5 Year Capital Improvement Program - Fund Cash Flow Projections

	FY14/15 Audited Fund Balances	FY15/16 Estimated	FY16/17 Projected	FY17/18 Projected	FY18/19 Projected	FY19/20 Projected	FY20/21 Projected
<u>CAPITAL PROJECTS FUND</u>							
Proj. Beginning Fund Balance, May 1	\$ 24,258,788	\$ 22,054,316	\$ 22,759,563	\$ 16,746,063	\$ 2,732,063	\$ 164,963	\$ (3,172,037)
Estimated Revenues	84,765	45,000	1,467,000	518,000	1,061,000	2,547,000	325,000
Estimated Expenditures*	(4,389,237)	(3,735,000)	(9,665,000)	(17,021,000)	(7,219,000)	(8,384,000)	(6,172,000)
Projected Surplus / Deficit	(4,304,472)	(3,690,000)	(8,198,000)	(16,503,000)	(6,158,000)	(5,837,000)	(5,847,000)
Transfer In From General Fund	2,100,000	4,395,247	2,184,500	2,489,000	3,590,900	2,500,000	2,500,000
Proj. Ending Fund Balance, April 30	\$ 22,054,316	\$ 22,759,563	\$ 16,746,063	\$ 2,732,063	\$ 164,963	\$ (3,172,037)	\$ (6,519,037)
<u>MOTOR FUEL TAX FUND</u>							
Proj. Beginning Fund Balance, May 1	\$ 2,169,448	\$ 3,370,082	\$ 4,297,941	\$ 5,190,941	\$ 2,448,941	\$ 3,326,941	\$ 4,197,441
Estimated Revenues	1,316,631	1,027,500	1,035,000	1,035,000	1,035,000	1,035,500	1,035,500
Estimated Expenditures*	(115,997)	(99,641)	(142,000)	(3,777,000)	(157,000)	(165,000)	(173,000)
Projected Surplus / Deficit	1,200,634	927,859	893,000	(2,742,000)	878,000	870,500	862,500
Proj. Ending Fund Balance, April 30	\$ 3,370,082	\$ 4,297,941	\$ 5,190,941	\$ 2,448,941	\$ 3,326,941	\$ 4,197,441	\$ 5,059,941
<u>WATER AND SEWER FUND</u>							
Proj. Beginning Cash Balance, May 1		\$ 13,280,883	\$ 12,063,751	\$ 8,922,146	\$ 7,001,685	\$ 4,126,443	\$ 86,443
Estimated Revenues		10,299,000	10,683,000	10,697,000	10,701,000	12,258,000	17,622,000
Estimated Operating Expenses/Debt		(10,517,132)	(11,115,605)	(10,945,461)	(10,901,242)	(11,000,000)	(11,000,000)
Estimated Expenses (Construction)		(999,000)	(2,709,000)	(1,672,000)	(2,675,000)	(5,298,000)	(8,472,000)
Projected Surplus / Deficit		(1,217,132)	(3,141,605)	(1,920,461)	(2,875,242)	(4,040,000)	(1,850,000)
Proj. Ending Cash Balance, April 30**	\$ 13,280,883	\$ 12,063,751	\$ 8,922,146	\$ 7,001,685	\$ 4,126,443	\$ 86,443	\$ (1,763,557)

* Includes non-capital/operating expenditures.

** A portion of the total cash balance is reserved for operations (25% of annual operating budget).

Project Title: *Pavement Preventative Maintenance Program*

Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$2,694,000	\$0	\$491,000	\$513,000	\$537,000	\$563,000	\$590,000	\$3,399,000

Description & Scope: This Program employs a variety of pavement maintenance methods outside of the scope for the typical full-width milling, resurfacing and reconstruction projects (Flexible Pavement Program). Preventative and restorative sealers with rejuvenating agents will be applied to streets, parking lots and bike paths about every four to five years. A total of \$438,000 has been budgeted for the Pavement Rejuvenation Projects. The Pavement Preventative Maintenance Program also includes the \$53,000 Pavement Patching Project. Based upon annual assessments of streets not scheduled for full-width restoration, this element will provide for partial and full-depth asphalt patching, edge-grinding and resurfacing.

Purpose & Need: The Flexible Pavement Program addresses large-scale, structural needs through full-width milling and resurfacing. The Pavement Preventative Maintenance Program is designed to extend the life of street surfaces by preserving the pavement integrity through application of preservative and restorative sealers and by delivering structural repairs in small areas where needed. Repainting striping and symbols will provide safer traffic control and warnings for both motorists and pedestrians.

Impact on Future Operating Budget: By arresting small areas of pavement failure and applying rejuvenation materials to extend life, the program will reduce the degree of decline or failure that the annual Flexible Pavement Program must address.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	Annually	In House
Construction	5/16 - 4/17	\$491,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Capital Projects Fund	\$491,000

Pavement Preventative Maintenance Program Projects

(No specific map location is associated with these projects)

Project Title: *Flexible Pavement Program*

Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$18,379,000	\$0	\$4,340,000	\$3,628,000	\$3,257,000	\$4,040,000	\$3,114,000	\$25,852,000

Description & Scope: This is an annual project that involves either a 2” maintenance overlay (resurfacing), a 2.75” structural overlay or total removal and replacement (pavement reconstruction) of the asphalt pavement section (binder and surface). Curb and gutter, sidewalk and driveway removal and replacement as well as pipe under drainage, street and structure patching are included with these projects if the conditions meet Village criteria. The FY17 project includes \$380,000 which the Village will be reimbursed for the Park District’s resurfacing of their Simkus Center parking lot.

Purpose & Need: As pavements continue to age they come to a point of deterioration where crackfill and rejuvenation maintenance strategies no longer become effective. At that time they are considered for resurfacing or a structural overlay. When the pavement has deteriorated beyond the point where a resurfacing operation is effective, pavement reconstruction is then considered. This type of operation is typical for severely deteriorated streets.

Impact on Future Operating Budget: These operations will improve the structural integrity of the pavement, its rideability and drainage of the pavement surface as well as extend its useful pavement life. It will also reduce future maintenance repair costs. Normal maintenance operations, preservative sealing and crack filling, will be performed.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	Annually	In House
Construction	5/16 - 4/17	\$4,340,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Capital Projects Fund (FY17 & FY19-21)	\$3,960,000
Carol Stream Park District (FY17)	\$ 380,000
Motor Fuel Tax Fund (FY18)	\$3,628,000

Flexible Pavement Program Project

Street Resurfacing

**Basswood Court – Merbach Dr. to End
Cumberland Court – River Dr. to End
Hunter Drive – Merbach Dr. to Burke Dr.
Lance Court – Sussex Rd. to End
Lilac Court – Lilac Ln. to End
Lily Lane – Rose Ave. to End.
Magnolia Way – Sussex Rd. to Violet St.
New Britton Drive – Yorkshire Ln. to Rose Ave.
Paxton Place – Shelburne Dr. to Shelburne Dr.
River Drive – Shenandoah Dr. to Shenandoah Dr.
Rose Court – Rose Ave. to End
Sheffield Court – New Britton Dr. to End
Shenandoah Drive – Ridge Tr. to Birchbark Tr.
Stonewood Circle – Merbach Dr. to Merbach Dr.
Sussex Road – Rolling Oaks Dr. to Rose Ave.
Violet Street – Fair Oaks Rd. to Rose Ave.
Winding Glen Drive – Woodlake Dr. to Woodlake Dr.**

**Baybrook Lane – Lies Rd. to Woodhill Dr.
Forest Court – Baybrook Ln. to End
Iris Avenue – Violet St. to End
Lance Lane – New Britton Dr. to Sussex Rd.
Lilac Lane – Sussex Rd. to Rose Ave.
Lincolnshire Court – Rolling Oaks Dr. to End
Merbach Court – Lies Rd. to End
New London Court – Rolling Oaks Dr. to End
Ridge Trail – Morton Rd. to Existing Joint
Rolling Oaks Drive – New Britton Dr. to Fair Oaks Rd.
Royal Glen Lane – Woodhill Dr. to Woodhill Dr.
Shelburne Drive – Thunderbird Tr. to Thunderbird Tr.
Stonehenge Court – Rolling Oaks Dr. to End
Summit Pass – Rose Ave. to Waco Dr.
Valley View Trail – Ridge Tr. to Shenandoah Dr.
Winding Glen Court – Winding Glen Dr. to End
Yorkshire Drive – Birchbark Tr. to Rolling Oaks Dr.**

Structural Overlay

Greenway Trail – Hiawatha Dr. to Gary Ave.

Rose Avenue – Lies Rd. to Lies Rd.

Pavement Reconstruction

**Belair Court – Pebblecreek Tr. to End
Edgebrook Court – Hiawatha Dr. to End
Heather Lane – Hiawatha Dr. to Eagle View Dr.
Springbrook Lane – Hiawatha Dr. to End
Woodcrest Court – Hiawatha Dr. to End**

**Bluff Street – Hiawatha Dr. to Springbrook Ln.
Glen Flora Lane – Hiawatha Dr. to Pebblecreek Tr.
Pebblecreek Trail – Hiawatha Dr. to Greenway Tr.
Sunrise Court – Hiawatha Dr. to End**

Project Title: Kuhn Rd. Rehabilitation – North to Lies

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$337,187	\$305,187	\$32,000	\$0	\$0	\$0	\$0	\$0

Description & Scope: The upper 2 ½” asphalt surface course on 8,900 feet of Kuhn Road will be removed and replaced with asphalt leveling binder and surface courses. Full depth patching will be performed at severely deteriorated locations. The entire pavement surface will receive area reflective crack control treatment prior to placement of the surface course. Deteriorated driveways, storm sewer structures as well as curb and gutter sections will be repaired in accordance with Village criteria. The project limits are from Lies Road to North Avenue.

Purpose & Need: The ADT for Kuhn Road is over 8,600 VPD. This major collector serves a large residential section of Carol Stream. Although currently the two pavement sections have a PCI of 79 and 42, the roadway surface is deteriorating to the point where another structural overlay will be necessary in 5 years. Typically overlays are performed every fifteen years. The pavement has received one structural overlay in 1998. The existing overlay will be seventeen years old when it is replaced in 2015. Replacing the surface course will extend the pavement life, improve rideability and reduce maintenance costs. The Village has obtained up to \$728,000 in LAFO funding. The \$868,731 project has been completed and we are awaiting the final IDOT invoice for approximately \$32,000.

Impact on Future Operating Budget: Replacing the wearing surface course will extend the pavement life and reduce maintenance repair costs. Normal maintenance operations, preservative sealing and crack filling, will be performed.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	5/13 - 4/14	\$76,254
Construction	5/15 - 4/16	\$792,477

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
LAFO	\$531,544
Capital Projects Fund	\$337,187

Kuhn Road Rehabilitation Project – North Avenue to Lies Road



Project Title: Lies Rd. Rehabilitation – Kuhn to County Farm

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$338,971	\$33,971	\$305,000	\$0	\$0	\$0	\$0	\$0

Description & Scope: This \$667,971 project involves the 2,850 foot section of Lies Road from Kuhn Road to County Farm Road. The upper 3 ¼” asphalt surface course will be removed and replaced with 4” of asphalt leveling binder and surface courses. Full depth patching will be performed at severely deteriorated locations. The entire pavement surface will receive area reflective crack control treatment prior to placement of the surface course. Deteriorated driveways, storm sewer structures as well as curb and gutter sections will be repaired in accordance with Village criteria.

Purpose & Need: The current ADT for Lies Road is 9,900 VPD with a projected ADT of 11,000 VPD in 2040. This major collector also serves a large residential section of Carol Stream. The PCI is only 12 indicative of a failed condition. However, this rating was based on no crackfill or rejuvenation measures performed on the surface which would’ve increased its rating. Replacing the surface course will extend the pavement life, improve rideability and reduce maintenance costs. The Village has obtained up to \$346,000 in LAFO funding.

Impact on Future Operating Budget: Replacing the wearing surface course will extend the pavement life and reduce maintenance repair costs. Normal maintenance operations, preservative sealing and crack filling, will be performed.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	5/15 - 4/16	\$33,971
Construction	5/16 - 4/17	\$634,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
LAFO	\$329,000
Capital Projects Fund	\$338,971

Lies Road Rehabilitation Project – Kuhn Road to County Farm Road



Project Title: Lies Rd. Rehabilitation – High Ridge Pass to Fair Oaks

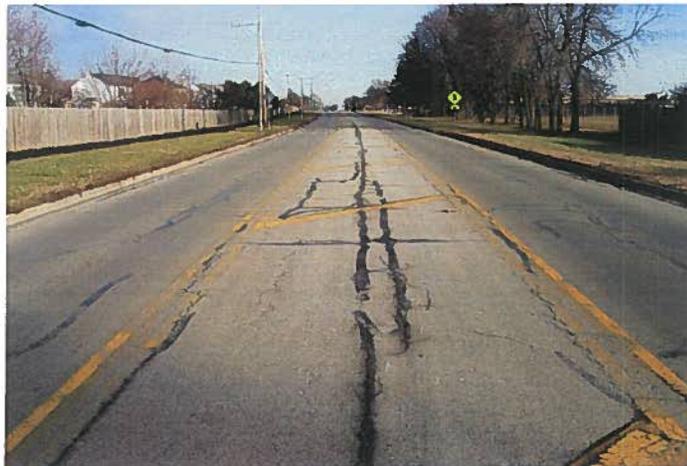
Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$414,000	\$0	\$37,000	\$377,000	\$0	\$0	\$0	\$0

Description & Scope: This project involves the 6,530 foot section of Lies Road from High Ridge Pass to Fair Oaks Road. As with the previous Lies Road Rehabilitation Project, the upper 3 ¾” asphalt surface course will be removed and replaced with 4” of asphalt leveling binder and surface courses. Full depth patching will be performed at severely deteriorated locations. The entire pavement surface will receive area reflective crack control treatment prior to placement of the surface course. Deteriorated driveways, storm sewer structures as well as curb and gutter sections will be repaired in accordance with Village criteria.

Purpose & Need: The current ADT for Lies Road is 8,850 VPD with a projected ADT of 12,000 VPD in 2040. This major collector also serves a large residential section of Carol Stream. In 2011 this street had a PCI of 50 indicative of a poor condition. Replacing the surface course will extend the pavement life, improve rideability and reduce maintenance costs. The Village has obtained up to \$421,000 in LAFO funding for this \$821,000 project.

Impact on Future Operating Budget: Replacing the wearing surface course will extend the pavement life and reduce maintenance repair costs. Normal maintenance operations, preservative sealing and crack filling, will be performed.



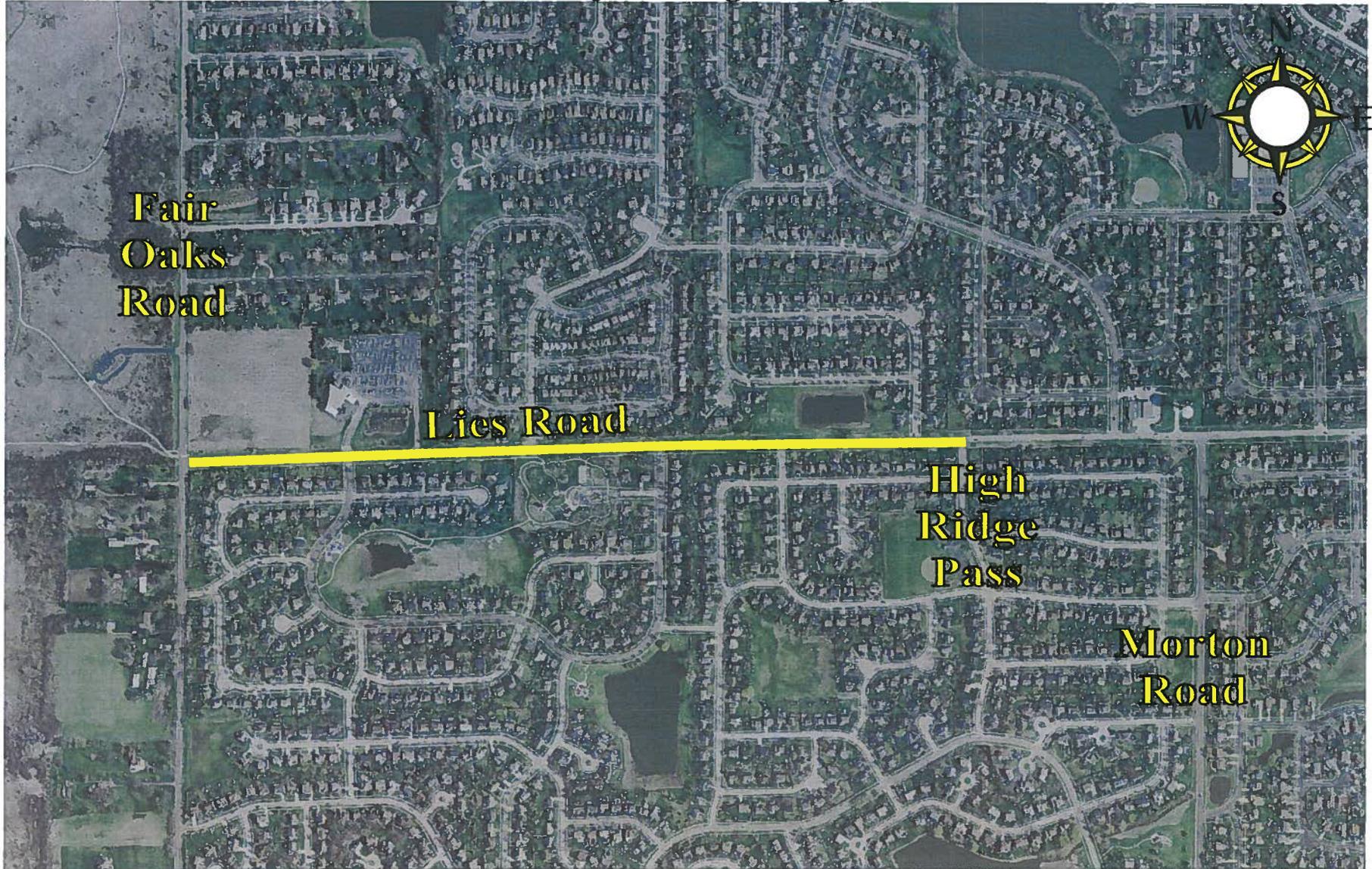
Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	5/16 - 4/17	\$37,000
Construction	5/17 - 4/18	\$784,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
LAFO	\$407,000
Capital Projects Fund	\$414,000

Lies Road Rehabilitation Project – High Ridge Pass to Fair Oaks Road



Project Title: Lies Rd. Rehabilitation – Schmale to Gary

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$1,075,000	\$0	\$0	\$88,000	\$987,000	\$0	\$0	\$0

Description & Scope: This \$1,956,000 project involves the 2,850 foot section of Lies Road from Kuhn Road to County Farm Road. As with the previous Lies Road Rehabilitation Projects, the upper 3 ¾” asphalt surface course will be removed and replaced with 4” of asphalt leveling binder and surface courses. Full depth patching will be performed at severely deteriorated locations. The entire pavement surface will receive area reflective crack control treatment prior to placement of the surface course. Deteriorated driveways, storm sewer structures as well as curb and gutter sections will be repaired in accordance with Village criteria.

Purpose & Need: The current ADT for Kuhn Road is 10,900 VPD with a projected ADT of 14,000 VPD in 2040. This major collector also serves a large industrial section of Carol Stream. The two PCI for this section are 76 and 66, indicative of a fair condition. However, the pavement surface has reached its design life and is in poor condition. Replacing the surface course will extend the pavement life, improve rideability and reduce maintenance costs. The Village is seeking \$881,000 in LAFO funding.

Impact on Future Operating Budget: Replacing the wearing surface course will extend the pavement life and reduce maintenance repair costs. Normal maintenance operations, preservative sealing and crack filling, will be performed.



Schedule of Activities

Activity	From - To	Amount
Design	5/17 - 4/18	\$ 88,000
Construction	5/18 - 4/19	\$1,868,000

Means of Financing

Funding Source	Amount
LAFO	\$ 881,000
Capital Projects Fund	\$1,075,000

Lies Road Rehabilitation Project – Schmale Road to Gary Avenue



Project Title: *Vale Rd. Rehabilitation*

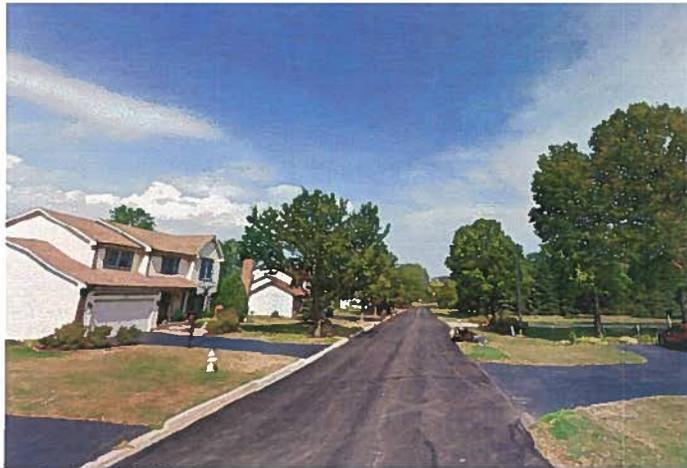
Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$139,000	\$0	\$0	\$0	\$0	\$139,000	\$0	\$0

Description & Scope: This project involves an 850 foot section of Vale Road from County Farm Road east to Ethel Street. This pavement rehabilitation involves the removal and replacement of the upper 2 ½” asphalt surface course with leveling binder and surface courses. Full depth patching will be performed at severely deteriorated locations. The entire pavement surface will receive area reflective crack control treatment prior to placement of the surface course. Deteriorated driveways, storm sewer structures as well as curb and gutter sections will be repaired in accordance with Village criteria.

Purpose & Need: The north half of Vale Road was constructed to Village standards when the North Hills Unit 5 subdivision was built leaving the south half an old chip and seal section with a bituminous overlay without curb and gutter, sidewalks, storm sewers or street lights. It was last rehabilitated in 2005. The PCI is 71 and is expected to deteriorate to the point where it will need to be rehabilitated in 2018.

Impact on Future Operating Budget: Replacing the wearing surface course will extend the pavement life and reduce maintenance repair costs. Normal maintenance operations, preservative sealing and crack filling, will be performed.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	5/18 - 4/19	In House
Construction	5/19 - 4/20	\$139,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Capital Projects Fund	\$139,000

Vale Road Rehabilitation Project



Project Title: Doris Ave. Rehabilitation

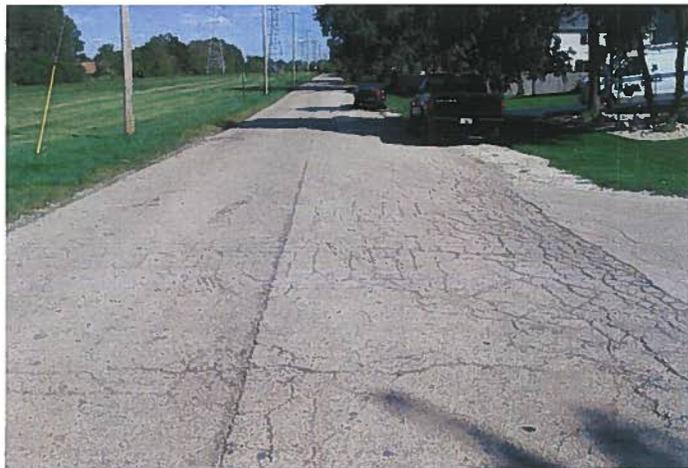
Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$277,000	\$0	\$0	\$0	\$0	\$277,000	\$0	\$0

Description & Scope: This project will involve the rehabilitation of the 1,800 foot section of Doris Avenue from Gary Avenue to Ellis Avenue. Keeping with other pavement rehabilitation projects, the upper 2 ½” asphalt surface course will be removed and replaced with asphalt leveling binder and surface courses. Full depth patching will be performed at severely deteriorated locations. The entire pavement surface will receive area reflective crack control treatment prior to placement of the surface course. Deteriorated driveways and culverts will be repaired in accordance with Village criteria. Within our right of way (ROW) ditches will be regarded where necessary to maintain drainage and the existing rural feel. The project will not include curb and gutter, sidewalks, storm sewers or street lights.

Purpose & Need: The PCI is only 73, but further deterioration is predicted by 2018 requiring pavement rehabilitation. It’s a chip and seal road with a bituminous overlay. The pavement will be beyond its useful life and will need to be replaced.

Impact on Future Operating Budget: Replacing the wearing surface course will extend the pavement life and reduce maintenance repair costs. Normal maintenance operations, preservative sealing and crack filling, will be performed.



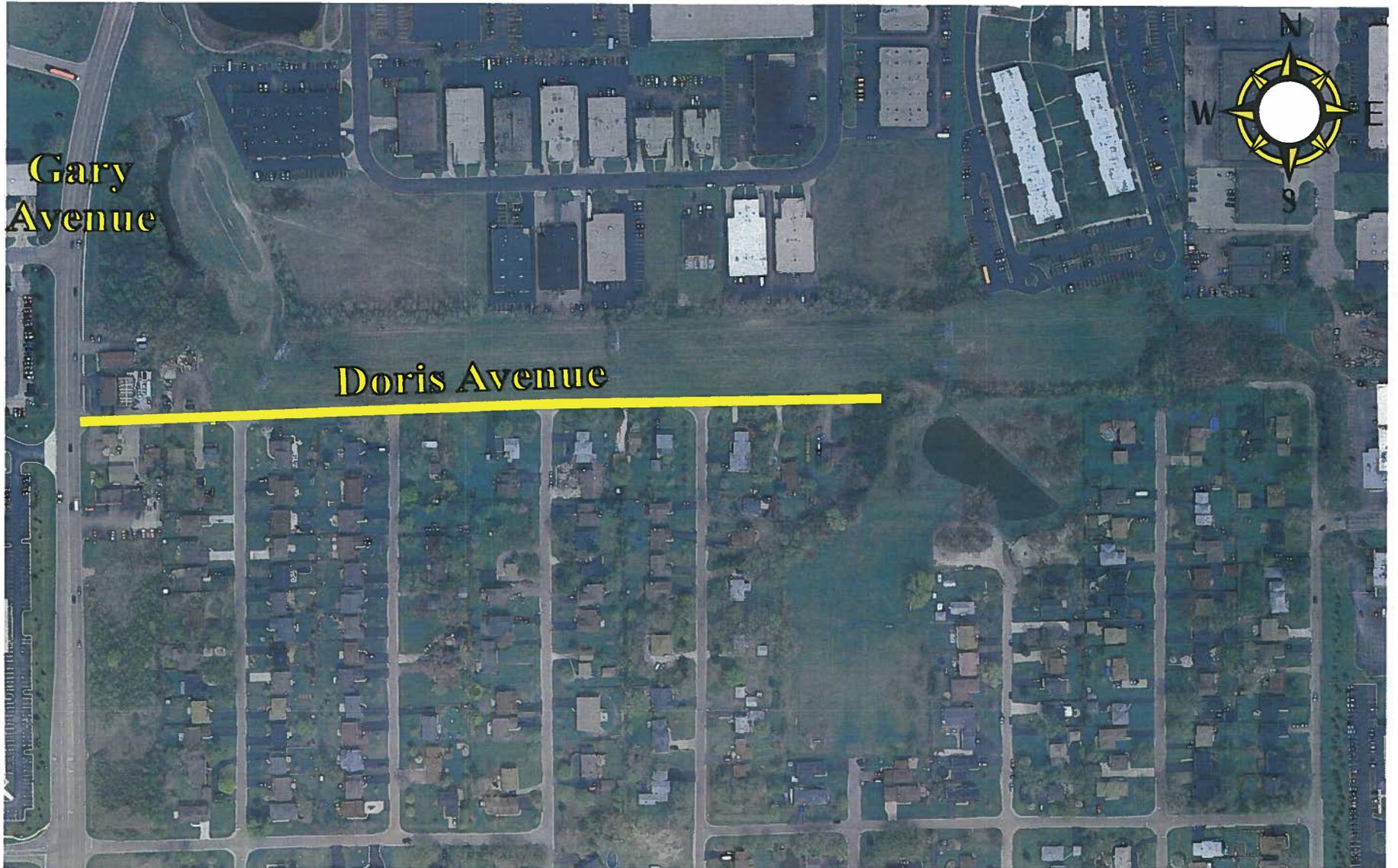
Schedule of Activities

Activity	From - To	Amount
Design	5/18 - 4/19	In House
Construction	5/19 - 4/20	\$277,000

Means of Financing

Funding Source	Amount
Capital Projects Fund	\$277,000

Doris Avenue Rehabilitation Project



Project Title: Kuhn Rd. Rehabilitation – St. Charles to North

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$271,000	\$0	\$0	\$0	\$0	\$0	\$271,000	\$0

Description & Scope: This project only involves the rehabilitation of the 1,400 foot section of Kuhn Road from North Avenue to St. Charles Road. As with other Pavement Rehabilitation Projects, the upper 2 ½” asphalt surface course will be removed and replaced with asphalt leveling binder and surface courses. Full depth patching will be performed at severely deteriorated locations. The entire pavement surface will receive area reflective crack control treatment prior to placement of the surface course. Deteriorated driveways and culverts will be repaired in accordance with Village criteria. Ditches will be regarded where necessary to maintain drainage and the existing rural feel. The project will not include curb and gutter, sidewalks, storm sewers or street lights.

Purpose & Need: This section of Kuhn Road was last resurfaced in 2011, but further deterioration is predicted by 2020 requiring pavement rehabilitation. It’s a chip and seal road with a bituminous overlay. The pavement will be beyond its useful life and will need to be replaced.

Impact on Future Operating Budget: Replacing the wearing surface course will extend the pavement life and reduce maintenance repair costs. Normal maintenance operations, preservative sealing and crack filling, will be performed.



Schedule of Activities

Activity	From - To	Amount
Design	5/19 - 4/20	In House
Construction	5/20 - 4/21	\$271,000

Means of Financing

Funding Source	Amount
Capital Projects Fund	\$271,000

Kuhn Road Rehabilitation Project – St. Charles Road to North Avenue



Project Title: Morton Rd. Rehabilitation – Mardon to Lies

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$1,294,000	\$0	\$0	\$0	\$0	\$0	\$1,294,000	\$0

Description & Scope: This project includes the rehabilitation of the 4,500 foot section of Morton Road within the Village limits from Mardon Road to Lies Road. As with other Pavement Rehabilitation Projects, the upper 2 ½” asphalt surface course will be removed and replaced with asphalt leveling binder and surface courses. Full depth patching will be performed at severely deteriorated locations. The entire pavement surface will receive area reflective crack control treatment prior to placement of the surface course. Deteriorated driveways and culverts will be repaired in accordance with Village criteria. Ditches will be regarded where necessary to maintain drainage and the existing rural feel. The project will not include curb and gutter, sidewalks, storm sewers or street lights.

Purpose & Need: The pavement section on Morton Road was removed and replaced in 2008, but further deterioration is predicted by 2020 requiring pavement rehabilitation. It’s a chip and seal road with a bituminous overlay. The pavement will be beyond its useful life and will need to be replaced.

Impact on Future Operating Budget: Replacing the wearing surface course will extend the pavement life and reduce maintenance repair costs. Normal maintenance operations, preservative sealing and crack filling, will be performed.



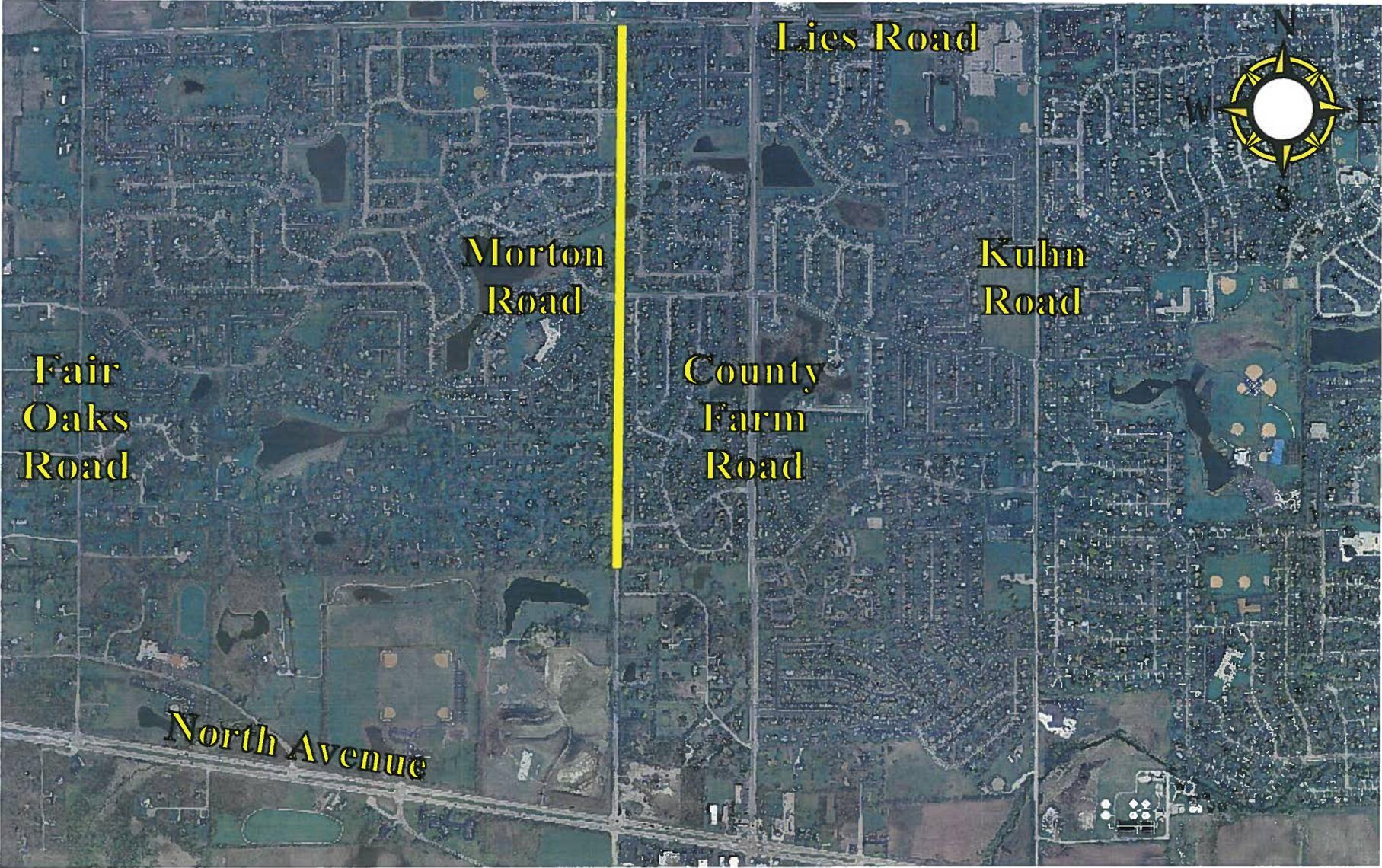
Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	5/19 - 4/20	In House
Construction	5/20 - 4/21	\$1,294,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Capital Projects Fund	\$1,294,000

Morton Road Rehabilitation Project – Mardon Road to Lies Road



Project Title: Roadway Condition Assessments

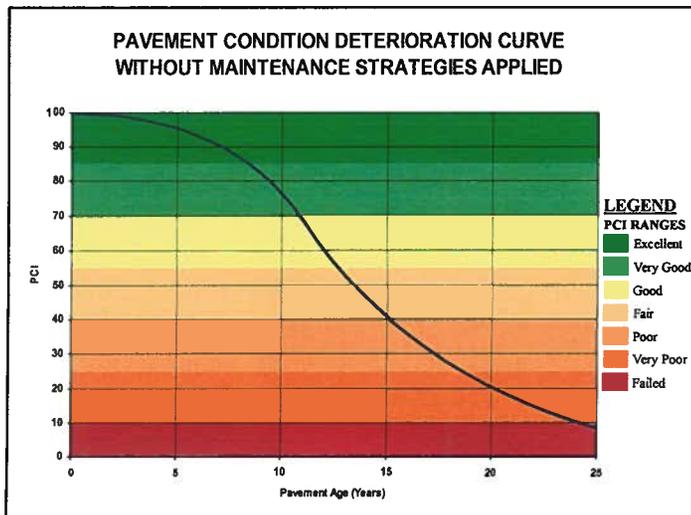
Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$143,000	\$0	\$73,000	\$0	\$0	\$0	\$70,000	\$70,000

Description & Scope: This project involves assessing the condition of all pavements in the Village’s entire roadway system. These assessments will utilize truck-mounted lasers to evaluate the surface condition. A non-destructive Dynaflect machine will test the pavement strength by determining the interaction between the base and subgrade sections. Collection of data will use GPS for incorporating results into our GIS maps. Pavement management software, data integration, system configurations and training will be provided. Photo imaging of all roadways will be performed. A re-evaluation is recommended every four years.

Purpose & Need: Since 1993 the Village has been using a Roadway Management System (RMS) Study to develop its annual roadway management program. Streets are assessed and a pavement condition index (PCI) is calculated for each street section. This PCI along with other factors assist engineers in evaluating maintenance/repair strategies and prioritizing street projects. Without this data engineers would not be able to properly develop the Village’s annual road program. The last time the streets were assessed was in 2011 utilizing American Public Work’s MicroPaver program. The program was difficult to integrate with GIS, was labor intensive and subjective. New technologies have addressed these issues.

Impact on Future Operating Budget: Reinstating the pavement condition assessments will enable engineers to properly evaluate streets for programming into various maintenance, rehabilitation and reconstruction strategies. This in turn will save the Village money by allowing staff to proactively manage roadways rather than making far more costly repairs using the worst street fix first method.



Schedule of Activities

Activity	From - To	Amount
Assessments	5/16 - 4/17	\$73,000

Means of Financing

Funding Source	Amount
Capital Projects Fund	\$73,000

Roadway Condition Assessments Project

(No specific map location is associated with this project)

Project Title: Sidewalk Condition Assessments & ADA Inventories

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$96,000	\$0	\$32,000	\$32,000	\$32,000	\$0	\$0	\$105,000

Description & Scope: Utilizing a self-evaluation process the Village will assess and inventory all sidewalks for compliance with the Americans with Disabilities Act (ADA) over a three year period. An inventory of all curb ramps, sidewalk, and traffic signals through field visits supplemented by aerial photography will be compiled. Detailed evaluations will be conducted by trained engineering and technical professionals. These evaluations will measure the specific physical attributes such as width, slope gaps, hazards and visual inspection of existing materials.

Purpose & Need: The ADA requires the Village to implement a Transition Plan that identifies barriers to accessibility, describes how the barriers will be addressed and provides a cost with schedule for taking the necessary steps to achieve compliance.

Impact on Future Operating Budget: Performing the required assessments and inventories will enable staff to identify and prioritize future projects to remove barriers and correct non-compliant issues. Various repairs, reconstructions, modifications, etc. to sidewalks, paths, ramps and aprons will be performed.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Assessments & Inventories	5/16 - 4/17	\$32,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Capital Projects Fund	\$32,000

Sidewalk Condition Assessments & ADA Inventories Project

(No specific map location is associated with this project)

Project Title: *West Branch DuPage River Trail*

Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$159,427	\$490,225	\$526,613	\$0	\$0	\$0	\$0	\$0

Description & Scope: The proposed project includes a 10’ wide bituminous path 13,000 feet along the east side of Fair Oaks Road from Oxford Drive to St. Charles Road, west to the West Branch of the DuPage River. It also includes a spur along the north side of St. Charles Road from Fair Oaks Road to Benjamin Middle School. This \$2,398,838 project now includes the Fair Oaks Road Bike Path Project as well since the Village has received up to \$1,382,000 in STP-TCM Program funding and \$499,984 in Illinois Transportation Enhancement Program (ITEP) grants that included both sections. It is a jointly funded project involving the Village, Wayne Township Road District (WTRD) and the Forest Preserve District of DuPage County (FPDDC).

Purpose & Need: Pedestrians, bicyclists and joggers have used the roadway as a path. The FPDDC has constructed a trail head with a parking facility just north of Lies Road on the west side of Fair Oaks Road. They have requested use of Village right-of-way to extend their West Branch Regional Trail System south to St. Charles Road and then west to the River where it will eventually connect with the Great Western Trail and the Illinois Prairie Path. Once constructed, this path will provide access to these trails/paths and other regional systems.

Impact on Future Operating Budget: This new asphalt path will require minimal maintenance initially. As the path ages and deteriorates more maintenance and rehabilitation will become necessary.



Schedule of Activities

Activity	From - To	Amount
Design Study & Final Engineering	5/10 - 4/15	\$ 404,629
ROW & Easement Acquisitions	5/12 - 1/16	\$ 85,596
Construction	5/16 - 4/17	\$1,908,613

Means of Financing

Funding Source	Amount
Forest Preserve District	\$ 198,000
Wayne Township Road District	\$ 159,427
FHWA STP-TCM Grant – Construction	\$1,382,000
IDOT ITEP Grant – Design Study & Final Engineering	\$ 499,984
Capital Projects Fund	\$ 159,427

West Branch DuPage River Trail Project



Project Title: Carol Stream – Bloomingdale Trail Improvements

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$235,000	\$7,000	\$325,000	\$37,000	\$0	\$0	\$0	\$0

Description & Scope: This \$734,000 project is the extension of the existing Kuhn Road Trail 3,730 feet from Lies Road north to Army Trail Road. A new 10’wide asphalt path will be constructed along the west side of the parkway. The Village has received up to \$366,000 in STP-TCM Program funding for construction. The Village also received a \$133,000 Illinois Transportation Enhancement Program (ITEP) grant for the Phase I Design Study, Phase II Final Engineering and easement acquisitions.

Purpose & Need: The extension of the existing trail along the west side of Kuhn Road is considered a significant link in the DuPage County Regional Bikeway Plan. It’s identified as a regional trail connecting the Great Western Trail on the south to Bloomingdale and eventually to the North Central DuPage Regional Trail as improvements are made to the north. It will also provide access connections to the Lies Road Bike Path and other regional systems.

Impact on Future Operating Budget: This new asphalt path will require minimal maintenance initially. As the path ages and deteriorates more maintenance and rehabilitation will become necessary.



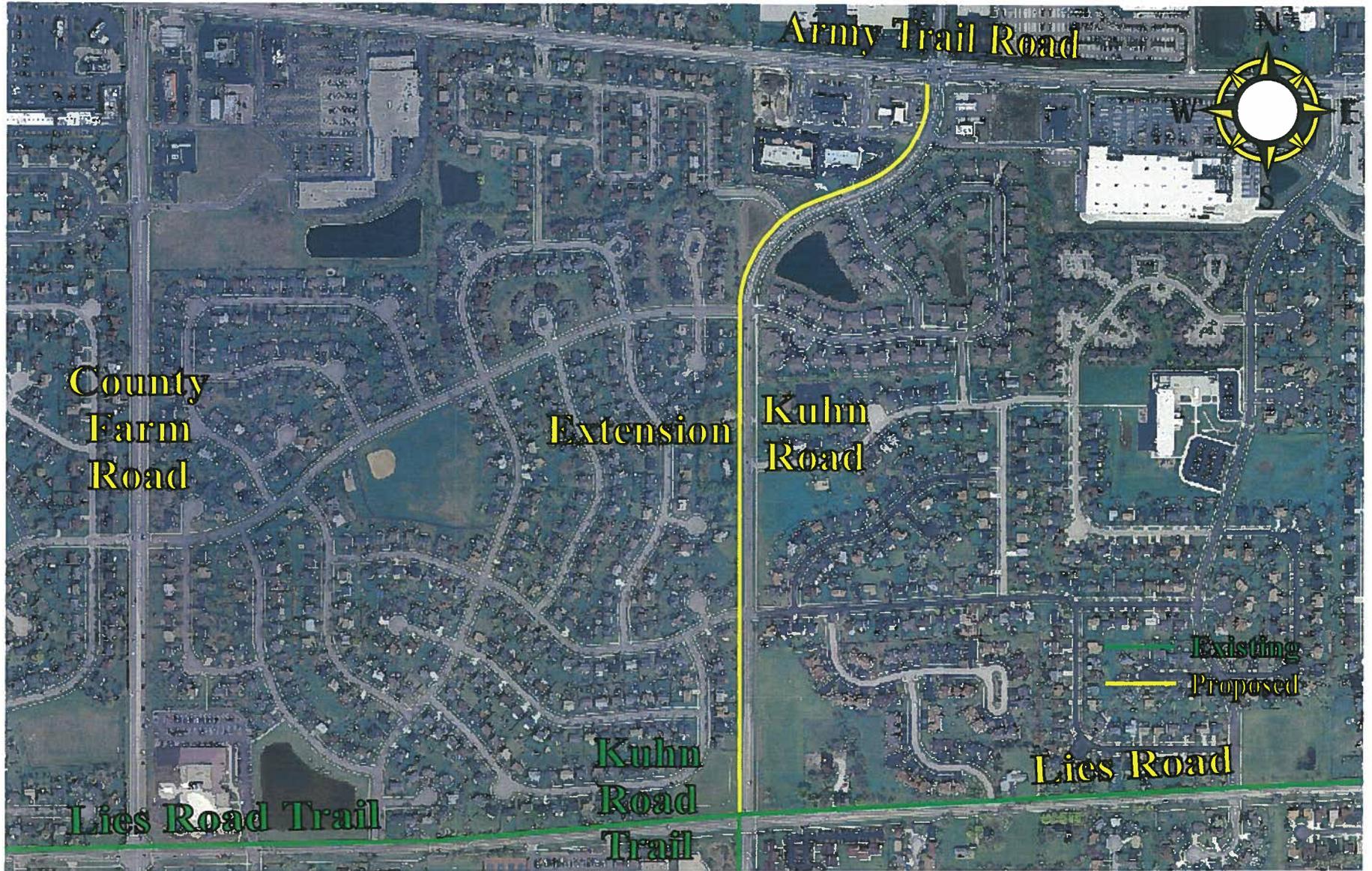
Schedule of Activities

Activity	From - To	Amount
Design Study	5/14 - 7/16	\$73,000
Final Engineering & Acquisitions	8/16 - 1/17	\$112,000
Construction	2/17 - 4/18	\$549,000

Means of Financing

Funding Source	Amount
FHWA STP-TCM Grant – Construction	\$366,000
IDOT ITEP Grant – Design Study, Acquisitions & Final Engineering	\$133,000
Capital Projects Fund	\$235,000

Carol Stream – Bloomingdale Trail Improvements Project



Project Title: Lies Rd. Bike Path Extension

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$292,000	\$10,000	\$383,000	\$51,000	\$0	\$0	\$0	\$0

Description & Scope: The existing Lies Road Bike Path will be extended along the north side of Lies Road from where the path presently terminates at Klein Creek just east of Gary Avenue all the way to Glendale Heights at Schmale Road. The \$951,000 improvement will consist of a 10-foot wide, 5,350 foot long bituminous bike path. STP-TCM Program funding up to \$507,000 for construction has been received. In addition the Village obtained a \$152,000 Illinois Transportation Enhancement Program (ITEP) grant for the Phase I Design Study and Phase II Final Engineering.

Purpose & Need: As with the Carol Stream – Bloomingdale Trail this bike path extension is also considered a significant link in the DuPage County Regional Bikeway Plan. It will provide improved access to neighborhoods in Glendale Heights and when future extensions are completed access can be gained to the East Branch DuPage River Greenway Trail.

Impact on Future Operating Budget: This new asphalt path will require minimal maintenance initially. As the path ages and deteriorates more maintenance and rehabilitation will become necessary.



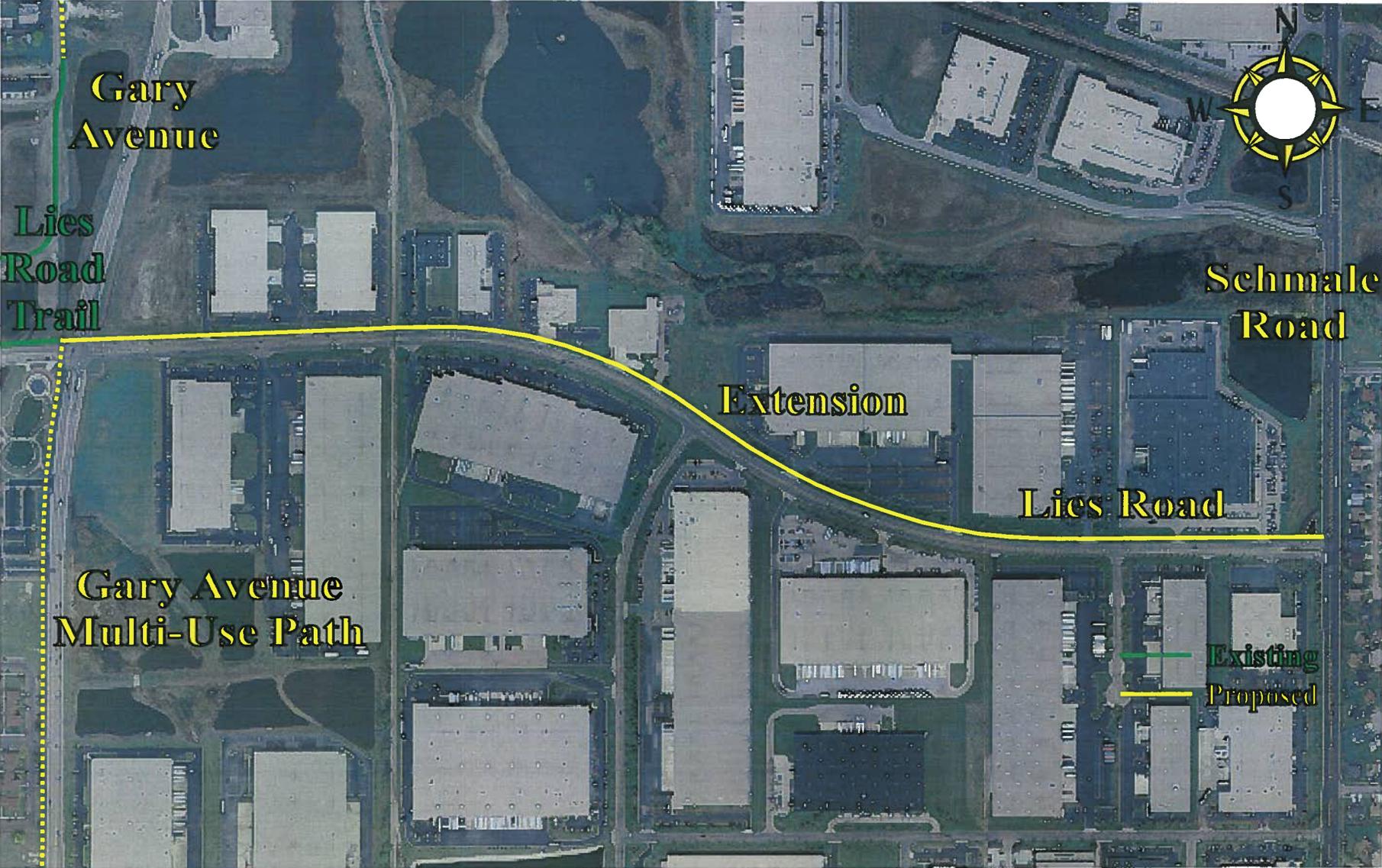
Schedule of Activities

Activity	From - To	Amount
Design Study	5/14 - 7/16	\$100,000
Final Engineering	8/16 - 1/17	\$90,000
Construction	2/17 - 4/18	\$761,000

Means of Financing

Funding Source	Amount
FHWA STP-TCM Grant – Construction	\$507,000
IDOT ITEP Grant – Design Study & Final Engineering	\$152,000
Capital Projects Fund	\$292,000

Lies Road Bike Path Extension Project



Project Title: Southeast Bike Path

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$673,000	\$0	\$8,000	\$146,000	\$477,000	\$341,000	\$369,000	\$0

Description & Scope: A 10-foot wide, 6,200 foot long bituminous bike path is proposed to be constructed in the southeast corner of the Village connecting the Great Western Trail at President Street to the existing Community Park trail system and . The path will head south from the Great Western Trail along the east side of President Street to Gundersen Drive where it will connect into the Community Park trail system. From there it will continue west along the north side of Gundersen Drive to the west side of Schmale Road where it will turn south extending down to our southern Village limits at Geneva Road. The \$2,068,000 project is contingent on obtaining STP-TCM Program funding for construction and ITEP grant funding for the Phase I Design Study, Phase II Final Engineering, Phase III Construction Administration and right of way/easement acquisitions. If successful the Village’s cost could be reduced by as much as 67%.

Purpose & Need: The purpose and need for this path is to construct a multi-use facility for pedestrian and bicyclists that will link local and regional trail systems particularly the Great Western Trail to the Community Park trails. It will also provide residents living in this area convenient access to the Outreach Community Center and numerous businesses along Schmale Road.

Impact on Future Operating Budget: This new asphalt path will require minimal maintenance initially. As the path ages and deteriorates more maintenance and rehabilitation will become necessary.



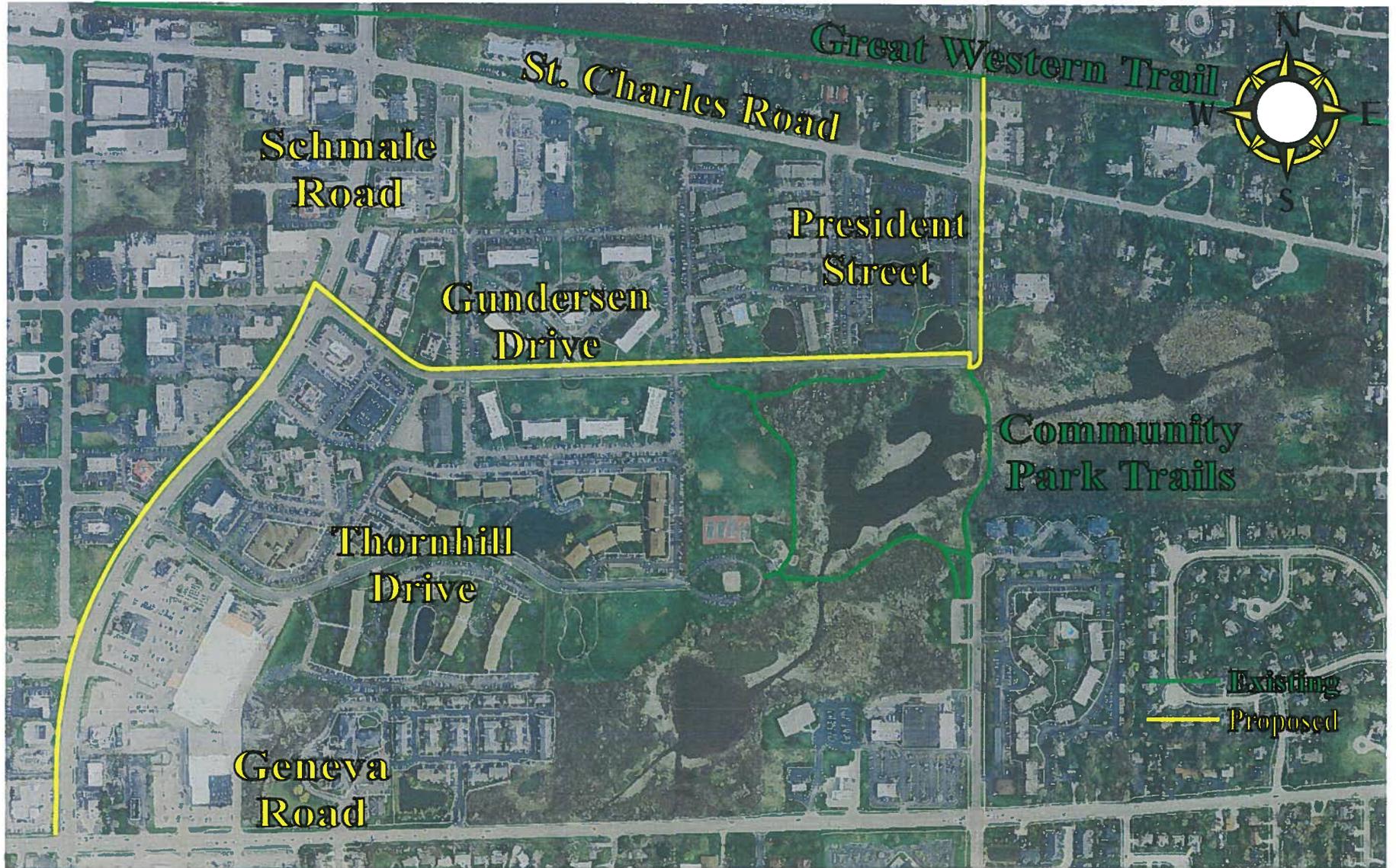
Schedule of Activities

Activity	From - To	Amount
Grant Application	5/16 - 4/17	\$ 8,000
Design Study	5/17 - 4/18	\$ 146,000
Final Engineering & Acquisitions	5/18 - 4/20	\$ 818,000
Construction	5/20 - 4/21	\$1,096,000

Means of Financing

Funding Source	Amount
FHWA STP-TCM Grant – Construction	\$ 727,000
IDOT ITEP Grant – Design Study & Final Engineering	\$ 668,000
Capital Projects Fund	\$ 673,000

Southeast Bike Path Project



Project Title: Gary Ave. Multi-Use Path

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$40,000	\$0	\$40,000	\$0	\$0	\$0	\$0	\$0

Description & Scope: This project is the Village’s final contribution towards the Gary Avenue Multi-Use Path Project. The \$3.085M Multi-Use Path Project entails the construction of a 10’ wide asphalt multi-use path along the west side of Gary Avenue from the Great Western Trail to Army Trail Road continuing west to Brighton Drive. It also includes the continuation of the existing ten-foot wide asphalt bike path along the north side of Lies Road to the Gary Avenue intersection. For our participation in the project the Village is responsible for right of way and easement acquisitions estimated at \$40,000 to adjust the path in order to accommodate bus shelters. DuPage County received a \$1,875,000 STP-TCM Program grant and has responsibility for the remaining \$1,170,000 as the lead agency.

Purpose & Need: The ROW acquisitions are needed in order to accommodate both the multi-use path and bus shelters.

Impact on Future Operating Budget: This new asphalt path will be the Village’s responsibility to maintain, but will require minimal maintenance initially. As the path ages and deteriorates more maintenance and rehabilitation will become necessary.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
ROW & Easement Acquisitions	5/16 - 4/17	\$40,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Capital Projects Fund	\$40,000

Gary Avenue Multi-Use Path Project



Project Title: *Streetlight Replacement Program*

Responsible Department: *Public Works*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$490,000	\$0	\$290,000	\$50,000	\$50,000	\$50,000	\$50,000	\$550,000

Description & Scope: The project involves the annual in-house replacement of approximately 100 streetlights with new energy-efficient LED lights. In Year 1 the project also includes the replacement of approximately 55,000 lineal feet of underground cable, one control box, one pedestal and 30 pull boxes in the area bounded by Birchbark, Iroquois, County Farm and Morton.

Purpose & Need: Phases I through III of the streetlight replacement program addressed the most deteriorated poles and cable and provided new LED lights in FY13 – FY16. The program will now focus on addressing the less efficient lights and, in Year 1, the one remaining area of frequent cable faults. The LED light fixtures will provide better, cleaner lighting.

Impact on Future Operating Budget: LED fixtures will last considerably longer than existing fixtures, reducing maintenance and replacement intervals, as well as reducing electrical consumption. Finally, the new cabling to be installed in Year 1 will require less maintenance, reduce underground failures, and allow for isolation of outages so that total street blackouts are less likely.



Schedule of Activities

Activity	From - To	Amount
Construction	5/16 - 4/17	\$290,000
Installation (In House)	5/17 - 4/21	\$200,000

Means of Financing

Funding Source	Amount
Capital Projects Fund	\$490,000

Streetlight Replacement Program Project – Shining Waters



Project Title: WRC Dewatering System Improvement

Responsible Department: Public Works

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$2,015,000	\$0	\$0	\$0	\$325,000	\$1,690,000	\$0	\$0

Description & Scope: Replacement of the belt filter presses with similar equipment. Replacement of the belt press, sludge de-watering pump, polymer feed system and all accompanying equipment.

Purpose & Need: The two existing belt presses are original equipment and other related equipment is aging and should be replaced as scheduled. This project has been rated as the number five priority in the Facility Inspection Report completed by Baxter & Woodman in late 2010.

Impact on Future Operating Budget: Sludge dewatering lowers hauling costs by lowering the water content of the sludge and thus the overall volume.



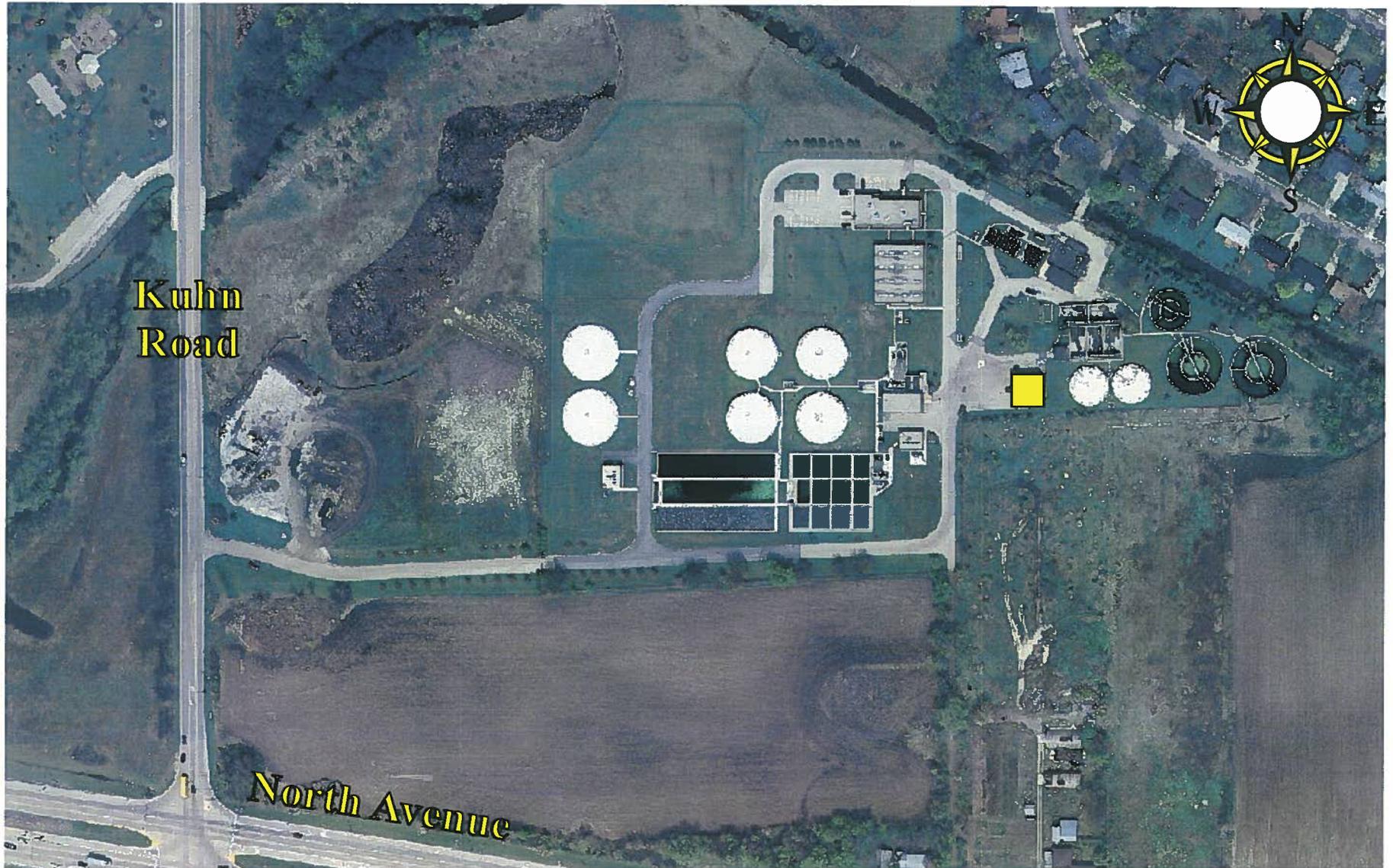
Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	5/18 - 4/19	\$ 325,000
Construction	5/19 - 4/20	\$1,690,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Water & Sewer Fund	\$2,015,000

WRC Dewatering System Improvement Project



Project Title: WRC Secondary Clarifier Improvement

Responsible Department: Public Works

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$100,000	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0

Description & Scope: This project consists of the replacing two of the deteriorated clarifier weirs and one aeration effluent weir.

Purpose & Need: Equipment will be 20 to 24 years old and will have reached the end of its useful life.

Impact on Future Operating Budget: Replacing the equipment will reduce maintenance costs and improve effectiveness of weir operation, making the operations of the plant more reliable.



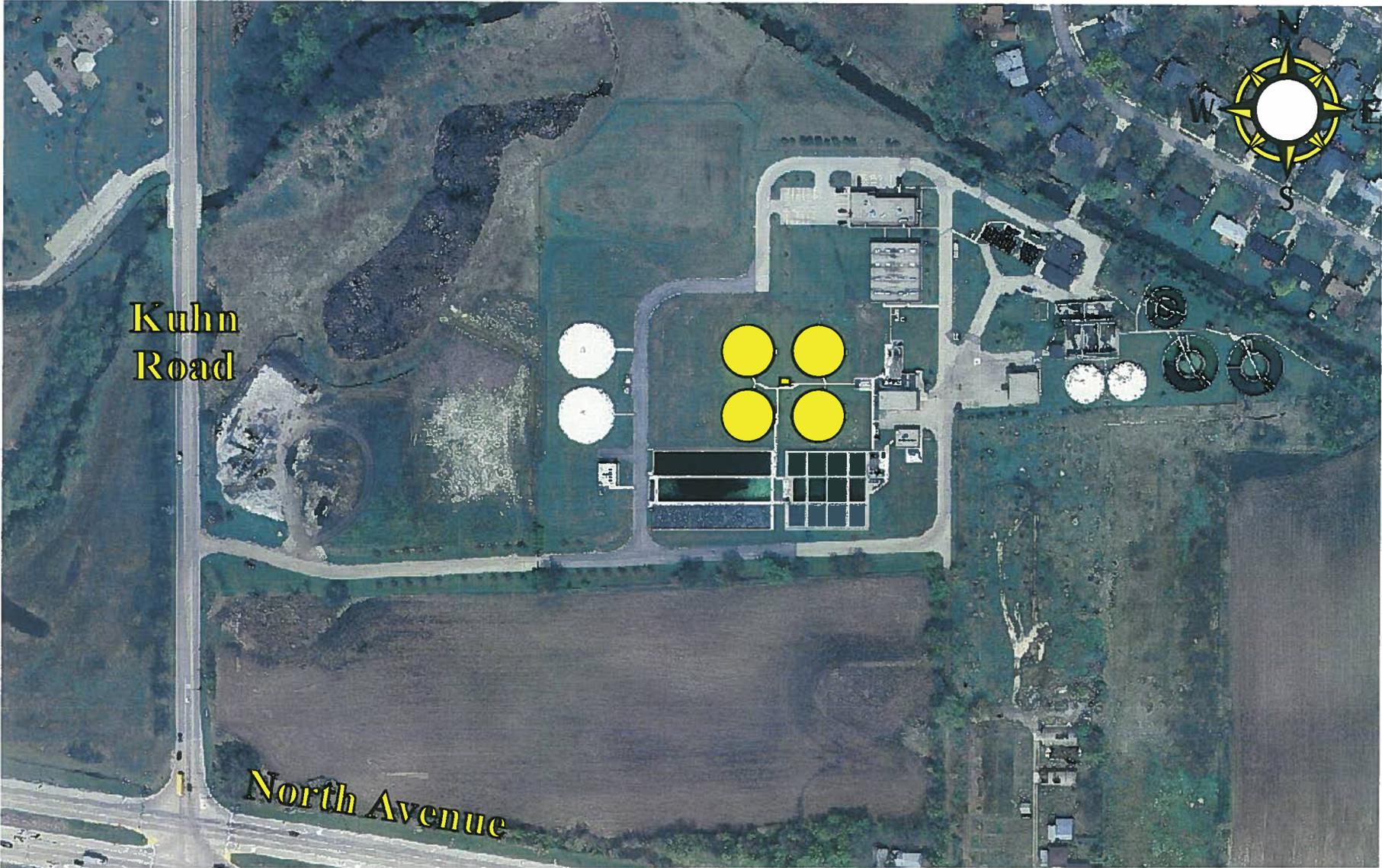
Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design & Construction	5/17 - 4/18	\$100,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Water & Sewer Fund	\$100,000

WRC Secondary Clarifier Improvement Project



Project Title: WRC Grit/Screening Building Roof Replacement

Responsible Department: Public Works

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$82,000	\$0	\$0	\$82,000	\$0	\$0	\$0	\$0

Description & Scope: Replacement of the 19 year old grit/screening building roof.

Purpose & Need: The grit/screening building roof was identified in an inspection of roof conditions conducted in 2014.

Impact on Future Operating Budget: Failure to replace roofs can cause additional damage to building structure and contents and require additional maintenance costs.



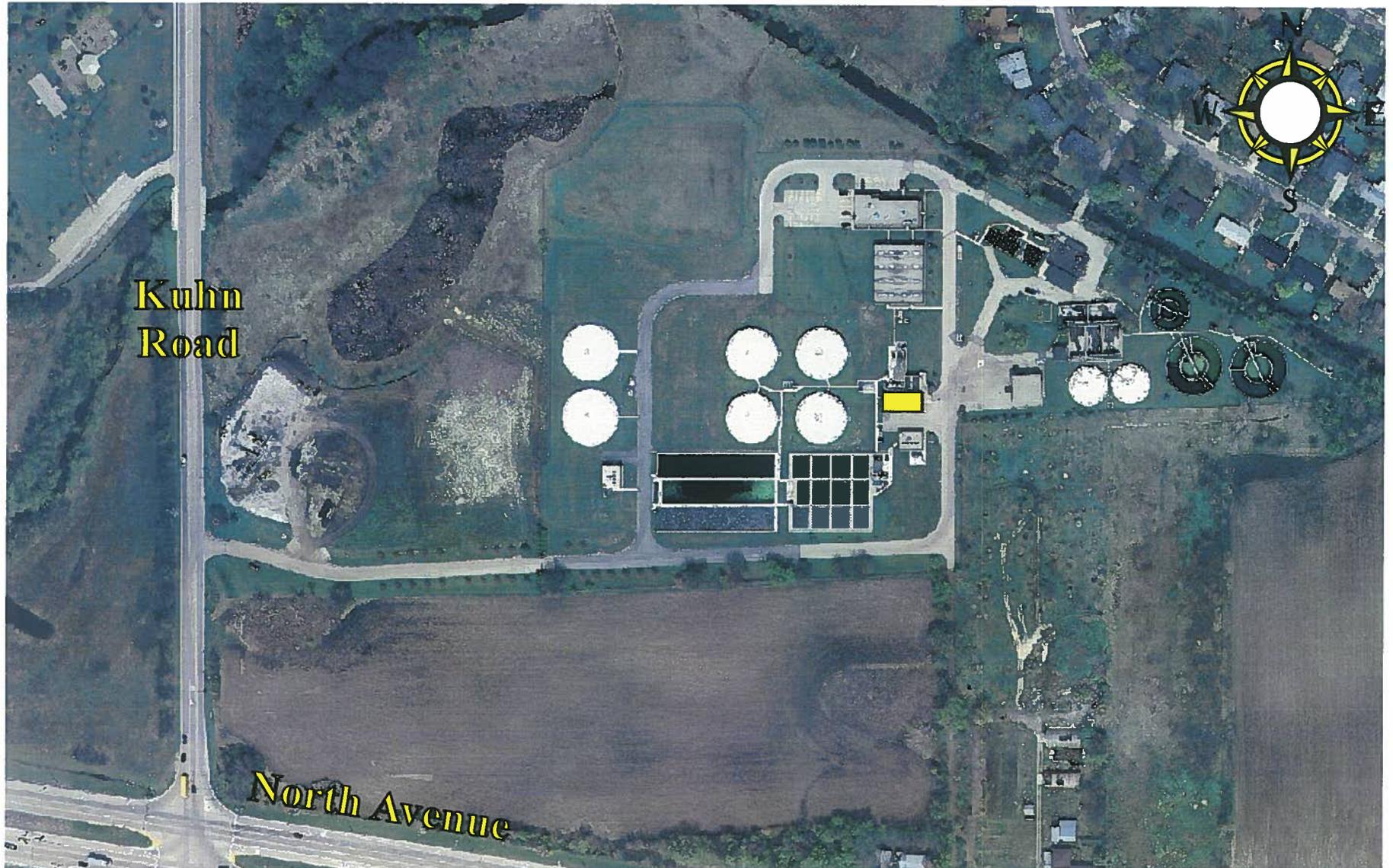
Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Construction	5/17 - 4/18	\$82,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Water & Sewer Fund	\$82,000

WRC Grit/Screening Building Roof Replacement Project



Project Title: WRC Blower Building #2 Roof Replacement

Responsible Department: Public Works

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$45,000	\$0	\$45,000	\$0	\$0	\$0	\$0	\$0

Description & Scope: Replacement of the 14-year old WRC blower building #2 roof.

Purpose & Need: This building roof was identified in an inspection of roof conditions conducted in 2014.

Impact on Future Operating Budget: Failure to replace roofs can cause additional damage to building structure and contents and require additional maintenance costs.

Schedule of Activities

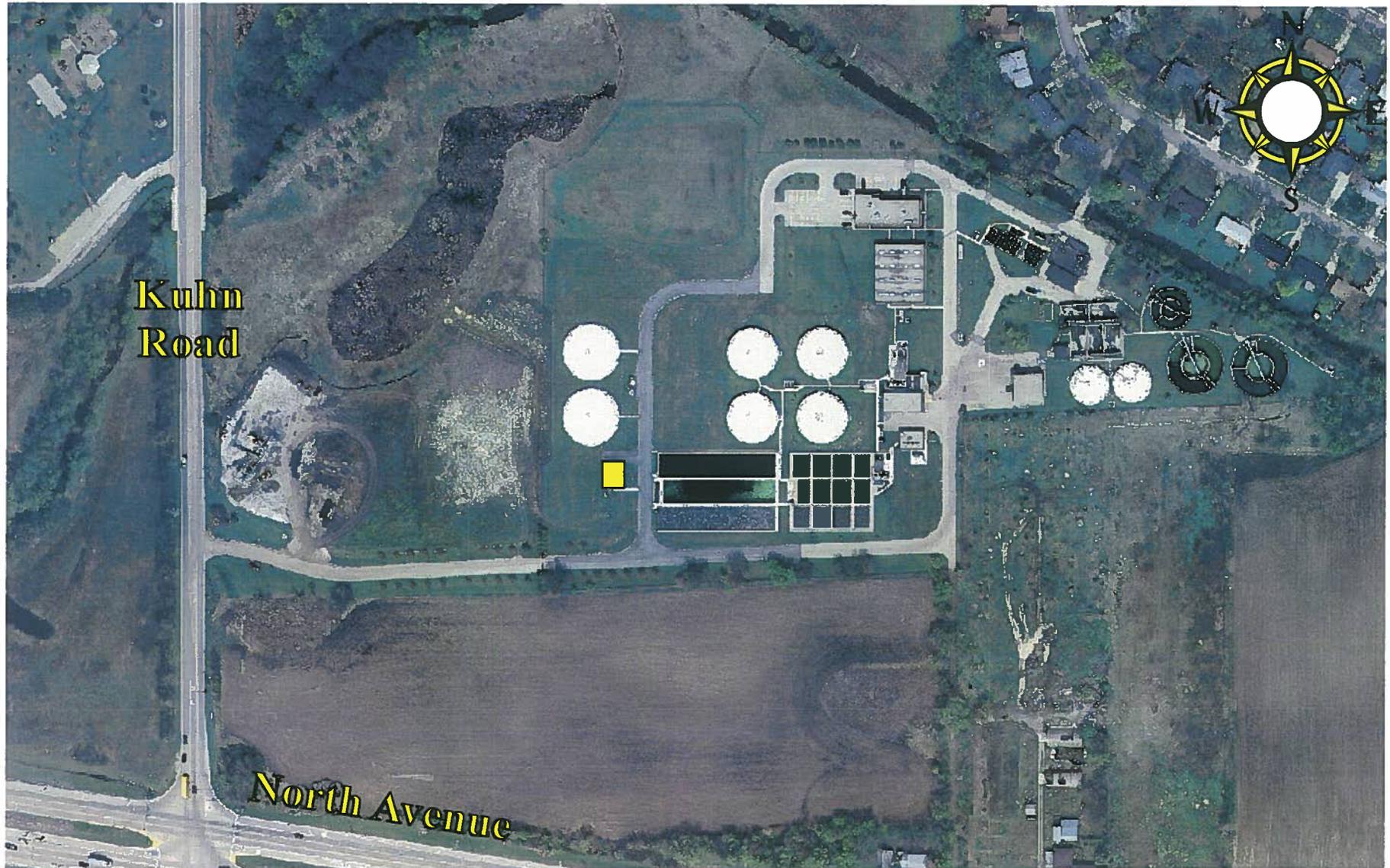
<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design & Construction	5/16 - 4/17	\$45,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Water & Sewer Fund	\$45,000



WRC Blower Building #2 Roof Replacement Project



Project Title: Schmale Road Water Main Replacement

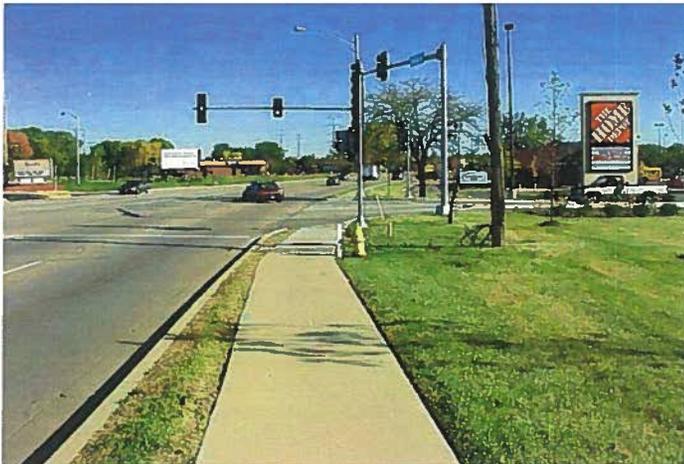
Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$2,677,621	\$146,621	\$2,278,000	\$253,000	\$0	\$0	\$0	\$0

Description & Scope: The project consists of replacing and/or upsizing approximately 7,900 feet of 10” and 12” cast iron pipe (CIP) with ductile iron pipe (DIP) along Schmale Road and St. Charles Road. The limits of the project begin south of North Avenue at Covered Bridges and extend to Geneva Road. The section along St. Charles Road is from Schmale Road east to President Street which includes a small 400 foot section where there is presently no water main. All the water main would be relocated out from under the roadway pavement within proposed easements adjacent to the right of way.

Purpose & Need: Cast iron water mains were installed early in the Village’s life and have had more frequent breaks and required more maintenance. Public Works identified recent water main breaks in this system.

Impact on Future Operating Budget: Relocating water main out from under the pavement will greatly lessen repair costs. Replacing CIP with DIP will give the system more uniform pressure with less maintenance, far superior reliability and significantly less repair costs. Addition of new water main will require routine maintenance involving hydrant flushing, valve exercising and hydrant painting.



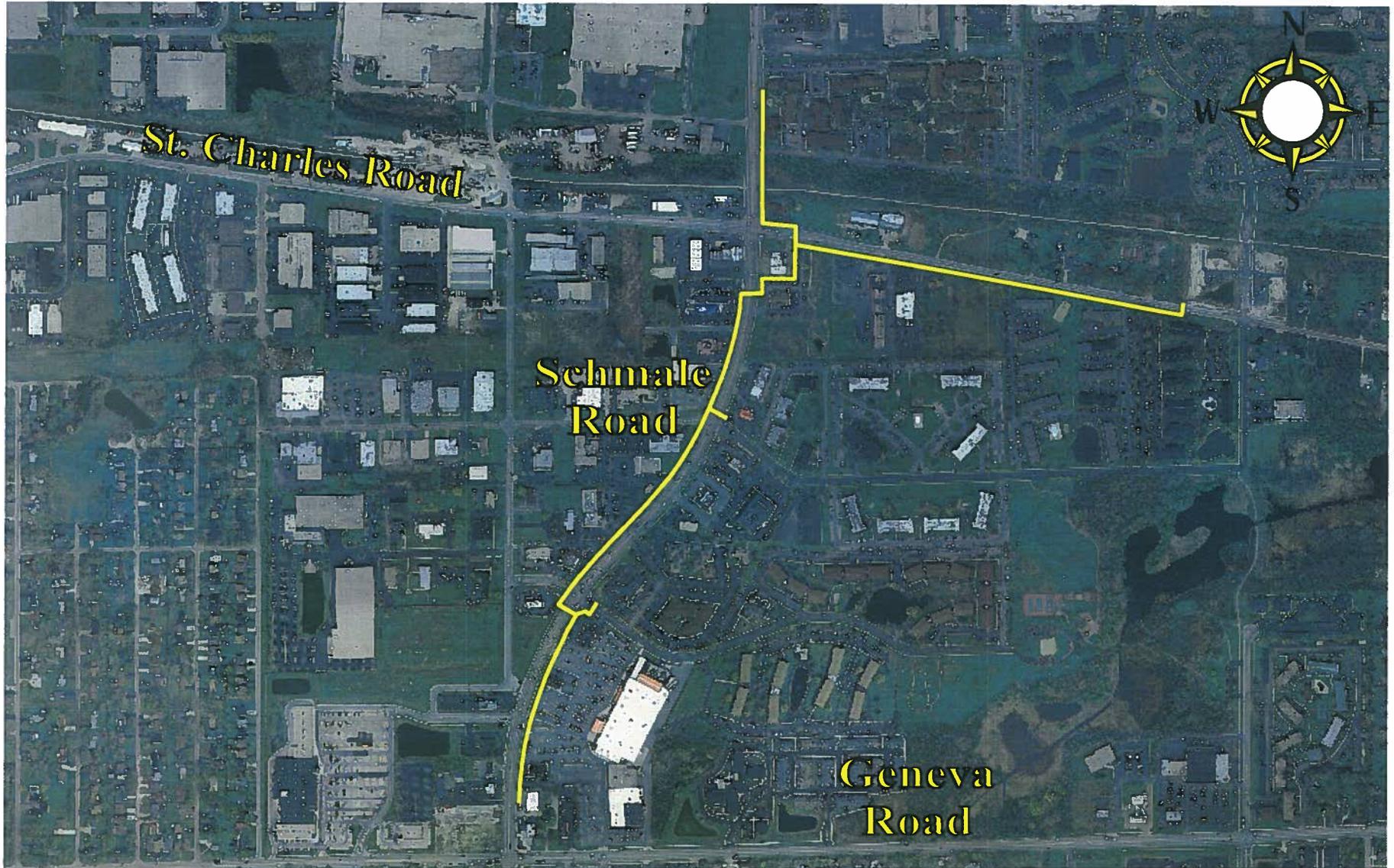
Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Preliminary Design Report	5/13 - 4/14	\$ 146,621
Design	5/13 - 4/15	\$ 215,000
Construction	5/15 - 4/16	\$2,531,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Water & Sewer Fund	\$2,677,621

Schmale Road Water Main Replacement Project



Project Title: *Water System Studies*

Responsible Department: *Engineering Services & Public Works*

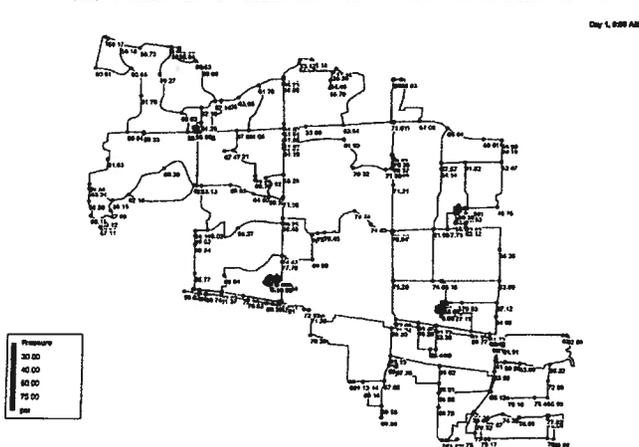
Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$105,000	\$0	\$105,000	\$0	\$0	\$0	\$0	\$0

Description & Scope: Two studies will be performed. The Southwest Area Water & Sanitary Sewer Infrastructure Study identified the need for a reservoir, pumping station and connection to DuPage Water Commission’s trunk line along St. Charles Road to provide adequate fire flow to this area of the Village. The first study will determine when it’s most appropriate for the Village to make these improvements through an analysis of the system. The second study involves a comprehensive asset study of the Village’s entire water system including condition assessments and performance evaluations.

Purpose & Need: A study is required to ascertain the impact of additional connections from the Southwest Water Main extension Project on the fire flow demand before the Village undertakes these two previously mentioned expensive projects. The aging system is experiencing more water main breaks and some functional deficiencies have been observed. The last Village wide water system study was performed in 1988. Previous Capital Improvement Programs included specific water main replacement projects. Although a Water Main Replacement Program is included in the CIP, no specific projects are being identified until completion of the comprehensive water system analysis. A system wide performance study and condition assessment is needed.

Impact on Future Operating Budget: The first study will give the Village a better indicator as to when future improvements are needed in order to provide adequate fire flows in the southwest area of the Village. The second study will provide a comprehensive condition assessment and performance evaluation of the water system that will allow the Village to better prioritize and target infrastructure maintenance programs and replacement and expansion projects for the next ten years.

CAROL STREAM PEAK DAY DEMAND 5200 GPM WITH FIREFLOW 2000 GPM AT MORTON



Schedule of Activities

Activity	From - To	Amount
Water System Analysis & Asset Study	3/16 - 4/17	\$91,000
SW Water System Study Update	3/16 - 4/17	\$14,000

Means of Financing

Funding Source	Amount
Water & Sewer Fund	\$105,000

Water System Studies

(No specific map location is associated with these studies)

Project Title: *Water System Improvements*

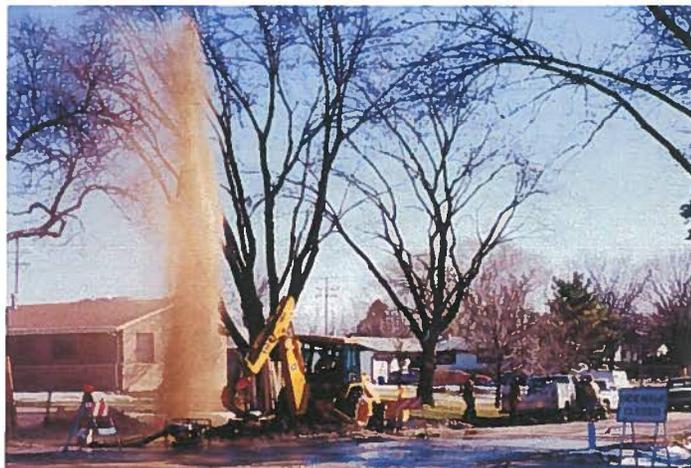
Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$600,000	\$0	\$0	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000

Description & Scope: The water system studies to be performed in FY17 will identify deficiencies in the system including inadequate connections, piping and valves, undersized mains, lack of fire protection coverage, high pressure zones, reliability issues, etc. Deficiencies will be grouped into projects where they will be programmed with more accurate cost estimates. Over the next five years the Village will undertake the projects to address those deficiencies.

Purpose & Need: From previous limited studies we have preliminary identified some of those deficiencies thereby justifying the need for a more thorough and comprehensive study. Correcting the deficiencies will improve system reliability, provide adequate pressure and fire flow, limit the area of service disruptions and increase connectivity.

Impact on Future Operating Budget: These improvements will reduce operating expenses for shutdowns and maintenance. Routine maintenance involving hydrant flushing, valve exercising and hydrant painting will be required.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	Annually	\$15,000
Water System Improvements	5/17 - 4/18	\$135,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Water & Sewer Fund	\$150,000

Water System Improvements Projects

(No specific map location is associated with these projects)

Project Title: *Water Main Replacement Program*

Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$6,800,000	\$0	\$0	\$200,000	\$2,200,000	\$2,200,000	\$2,200,000	\$11,000,000

Description & Scope: The Village has a list of previously identified water main replacement projects. These projects were based on pipe age, type, condition, size and break history. No studies were performed to assess their risk, prioritize and program their replacement. The planned FY17 Water System Study will accomplish those tasks enabling the Village to develop a Water Main Replacement Program including defined projects with more accurate cost estimates. It's anticipated starting in FY18 design work will begin on the first of several water main replacement type projects. Construction will take place the following year. Each subsequent year design and construction will follow for the next project.

Purpose & Need: Several sections of the water system are starting to show signs of deterioration. Based on past experience there will be other water mains of similar age and material type which will also begin to exhibit breaks.

Impact on Future Operating Budget: The water system will experience less maintenance, significantly better reliability and far less repair costs and more uniform pressure after replacement of the deteriorated water main. The replaced water main will require routine maintenance involving hydrant flushing, valve exercising and hydrant painting.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	Annually	\$ 200,000
Construction	5/17 - 4/18	\$2,000,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Water & Sewer Fund	\$2,200,000

Water Main Replacement Program Projects

(No specific map location is associated with these projects)

Project Title: *Water Main Condition Assessments*

Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$161,000	\$0	\$0	\$161,000	\$0	\$0	\$0	\$0

Description & Scope: This project consists of performing tests on 8,000 feet of water main pipe to obtain representative condition assessments for our system. These tests will include ultrasonic analysis and closed circuit televising (CCTV). The results will be used to determine our risk exposure.

Purpose & Need: Risk management relies on knowing the condition of our assets so we can identify the likelihood of failure. With that and knowing the consequences of failure we can ascertain our business risk exposure (BRE) for each asset. The Village has never performed an inventory and condition assessment of its water distribution system.

Impact on Future Operating Budget: Knowing the condition of our water distribution system will provide the Village with the necessary information to identify and program capital and maintenance expenditure decisions while lowering our risk exposure.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Condition Assessments	5/17 - 4/18	\$161,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Water & Sewer Fund	\$161,000

Water Main Condition Assessments Project

(No specific map location is associated with this project)

Project Title: *Aztec Drive Sanitary Sewer Replacement*

Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$215,000	\$0	\$215,000	\$0	\$0	\$0	\$0	\$0

Description & Scope: This project will line 1,400 feet of vitrified clay pipe (VCP) with a poly resin liner eliminating any leaking joints or cracks. Point repairs will also be performed. The corrugated metal pipe (CMP) culvert on Fair Oaks Road just north of Jason Court will also be lined. The sanitary sewer linings and point repairs project will also reduce inflow and infiltration (I&I) into the system.

Purpose & Need: The sanitary sewer line on Aztec Drive from Ute Lane to Chippewa Trail is constructed out of VCP. It is severely prone to root intrusions causing back-ups to connecting home services. Through the Village’s Sanitary Sewer Digital Televising Program cracks, sags and offset joints have been identified. These deteriorations have led to pipe failures, infiltration and sewer backups. This project is designed to help alleviate those issues and to maintain the Village’s sanitary sewer system in a safe and reliable operating condition. The Fair Oaks Road CMP culvert is also deteriorated.

Impact on Future Operating Budget: Relining and repairing the deteriorated sewer and culvert sections will reduce the likelihood of pipe failures and sewer backup exposure while also reducing calls for maintenance and repair.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Construction	5/16 - 4/17	\$215,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Water & Sewer Fund	\$215,000

Aztec Drive Sanitary Sewer Repairs & Lining Project



Project Title: North Avenue Sanitary Sewer Rehabilitation

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$792,000	\$0	\$66,000	\$726,000	\$0	\$0	\$0	\$0

Description & Scope: This project involves the rehabilitation of 10,000 feet of deteriorated 12” diameter sanitary sewer along North Avenue that have been identified through the Public Works department’s sewer televising program. Various rehabilitation alternatives, such as relining, replacement and boring will be considered during the design phase of the project.

Purpose & Need: The sanitary sewer has developed sags and cracks leading to pipe failure and I&I. This rehabilitation / replacement project will correct those deficiencies.

Impact on Future Operating Budget: Replacing or rehabilitating the deteriorated sewer sections will reduce the likelihood of pipe failures and sewer backup exposure. It will also lessen the amount of I&I to the Water Reclamation Center (WRC) which will reduce operating costs and the likelihood of expensive expansion projects.



Schedule of Activities

Activity	From - To	Amount
Design	5/16 - 4/17	\$66,000
Construction	5/17 - 4/18	\$726,000

Means of Financing

Funding Source	Amount
Water & Sewer Fund	\$792,000

North Avenue Sanitary Sewer Rehabilitation Project



Project Title: *Southwest Reservoir & Pumping Station*

Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$4,299,000	\$0	\$0	\$0	\$0	\$996,000	\$3,303,000	\$0

Description & Scope: This project involves the construction of a ground level reservoir and pumping station to serve the southwest area of the Village as well as the unincorporated areas with clean reliable potable water. Land acquisition will also be necessary to site the facilities.

Purpose & Need: Upon the completion of the Southwest Water Main Extension Project and as users connect onto the system a reservoir and pumping station will be necessary to provide adequate pressure and flow. The Southwest Area Water & Sanitary Sewer Infrastructure Study identified this need in the final report. It's anticipated this need will be realized by FY19 although it may occur sooner depending on the demand for connections and for flow.

Impact on Future Operating Budget: The new reservoir will require annual inspections and routine maintenance of the pumps, motors and valves. Periodic maintenance involving painting of the structures will also be necessary.



Schedule of Activities

Activity	From - To	Amount
Land Acquisition	5/19 - 4/20	\$ 691,000
Design	5/19 - 4/20	\$ 305,000
Construction	5/20 - 4/21	\$3,303,000

Means of Financing

Funding Source	Amount
Water & Sewer Fund	\$4,299,000

Southwest Reservoir & Pumping Station Project



Project Title: Southwest DPWC Connection & Metering Station

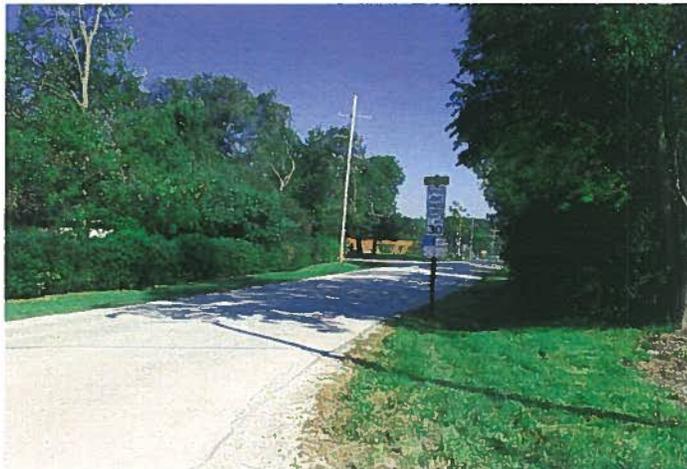
Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$3,081,000	\$0	\$0	\$0	\$0	\$262,000	\$2,819,000	\$0

Description & Scope: A connection to the DuPage Water Commission’s 48 inch diameter trunk line will be needed to properly supply water for the ground level reservoir and pumping station. These improvements will serve the Village and unincorporated residents with clean reliable water for potable use and fire suppression. Land acquisition will be required to site the facilities, but is assumed to have occurred with the reservoir and pumping station project.

Purpose & Need: As more users connect onto the system the connection and metering station will be necessary to provide adequate pressure and flow. This need was identified in the Southwest Area Water & Sanitary Sewer Infrastructure Study. As with the reservoir and pumping station, these improvements are anticipated to be needed by FY19. However, depending on the demand for connections this projected construction date may change.

Impact on Future Operating Budget: The new connection and metering station will require annual inspections and routine maintenance of the pumps, motors and valves. Periodic maintenance involving painting of the structures will also be necessary.



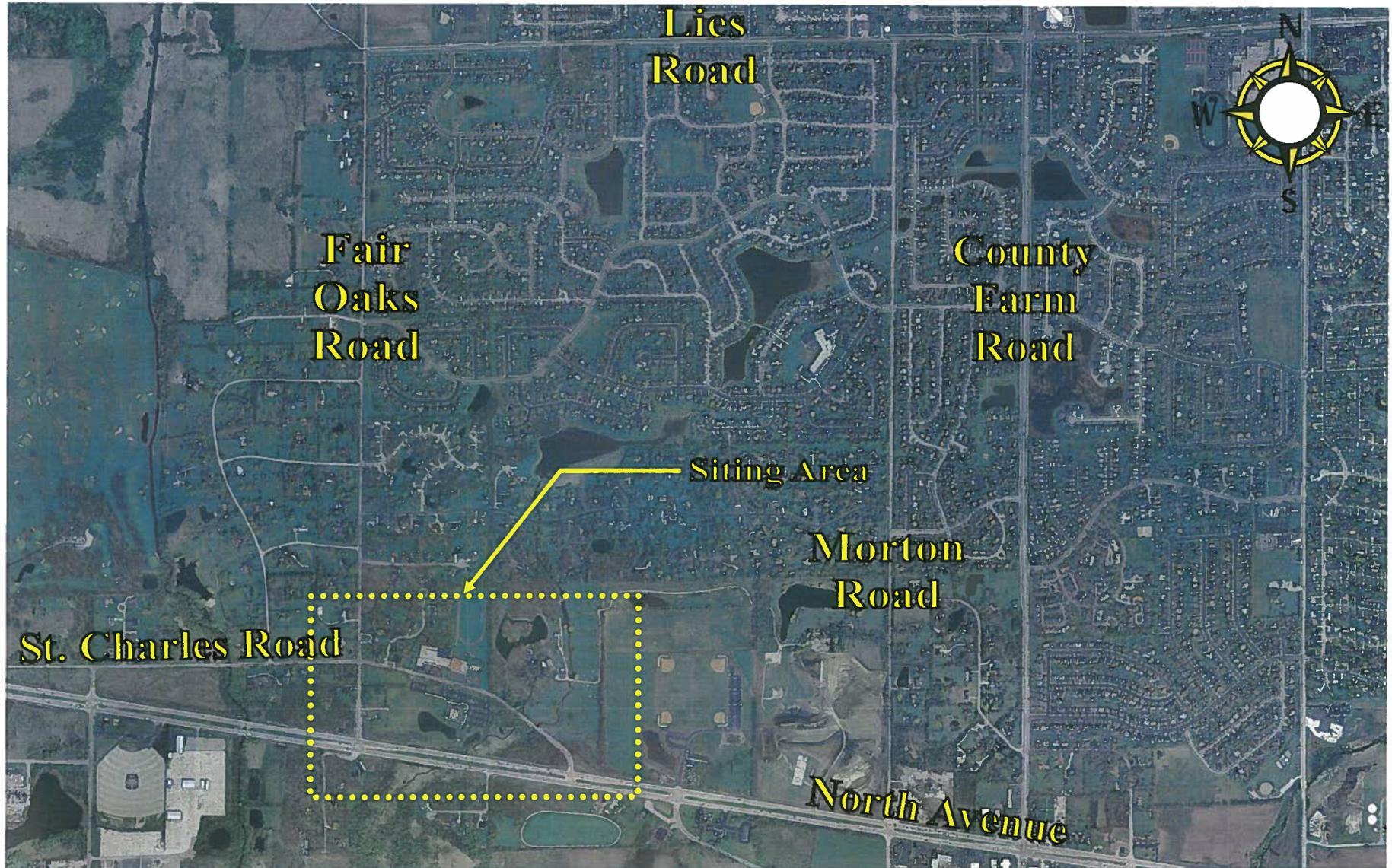
Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	5/19 - 4/20	\$ 262,000
Construction	5/20 - 4/21	\$2,819,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Water & Sewer Fund	\$3,081,000

Southwest DuPage Water Commission Connection & Metering Station Project



Project Title: *Roadway Drainage Improvements*

Responsible Department: *Engineering Services & Public Works*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$735,000	\$0	\$140,000	\$145,000	\$150,000	\$150,000	\$150,000	\$750,000

Description & Scope: This is a newly created program building on previous efforts at repairing deteriorated road storm sewer structures, curbs and gutters and installing new pipe under drains. Depending on the severity of the deterioration and type, we expect to rehabilitate approximately 30 structures every year. Deteriorated curb and gutter sections will be repaired. Poorly draining areas of the parkway or curb and gutter sections will also be included in the program. Under drain piping and re-grading will be utilized to mitigate ponding issues within the parkway. The curb and gutter sections will be removed and replaced to reestablish the profile. Only areas meeting the Village’s Element Qualification Criteria will be considered for a project.

Purpose & Need: Over time storm sewer structures within the roadway deteriorate and begin leaking. These leaks cause undermining and eventual destruction of the pavement which can lead to dangerous and sometimes unseen holes. Repairing the structures will provide a safe roadway for both motorists and pedestrians. Installing new pipe under drains can alleviate ponding of water or icing in the parkway, on sidewalks and streets.

Impact on Future Operating Budget: By making these repairs, further destruction of the structure, curb and gutter as well as the adjacent pavement can be prevented. Liability issues can be reduced by lessening the amount and frequency of slippery or iced sidewalks and streets.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	Annually	In House
Construction	5/16 - 4/17	\$140,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Capital Projects Fund	\$140,000

Roadway Drainage Improvements Project

(No specific map location is associated with this project)

Project Title: *Tubeway & Westgate Stormwater Study*

Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$70,000	\$0	\$70,000	\$0	\$0	\$0	\$0	\$0

Description & Scope: A watershed and storm water management facility study will be undertaken to identify improvements to reduce flooding in the Rothbart Subdivision and to rehabilitate the existing detention basin. An evaluation of the Day Lily Park retention basin will also be performed.

Purpose & Need: The existing Rothbart Subdivision detention basin has become overgrown with undergrowth, trees, non-native and invasive species. The bottom has two to three feet of sedimentation that has built up over the years clogging outfall pipes and reducing the efficiency of the lift station pumps. The overgrowth and sedimentation has also reduced the storage capacity of the detention basin. The pond has overtopped causing street, parking lot and truck dock flooding. The Day Lily Park retention basin has also experienced overtopping and significant reduction in water quality storage volume due to sedimentation.

Impact on Future Operating Budget: Reducing overflows and street flooding will prolong pavement life and lessen the amount of time spent on road closures.



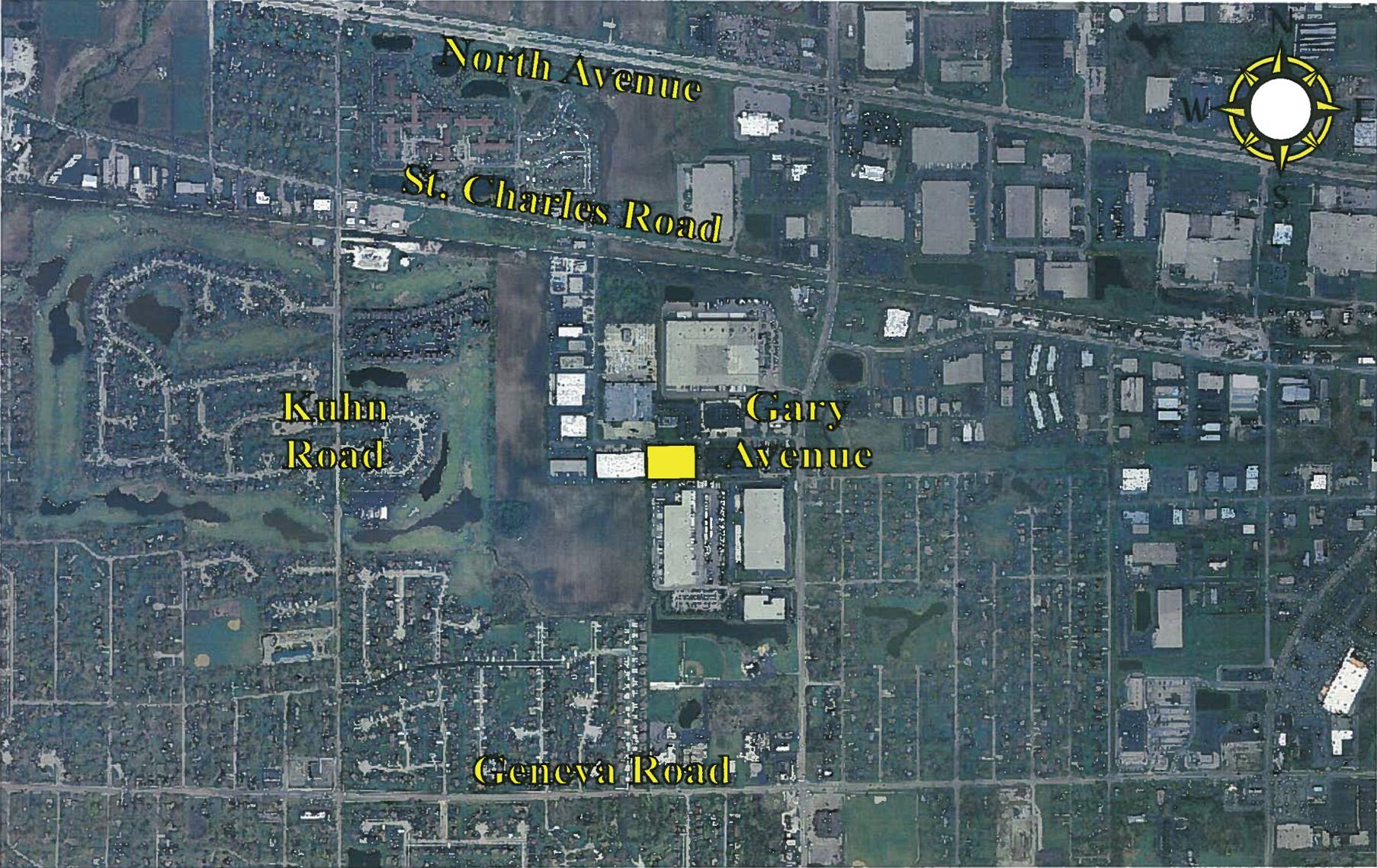
Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Study	5/16 - 4/17	\$70,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Capital Projects Fund	\$70,000

Tubeway & Westgate Stormwater Study



Project Title: Flood Plain Structure Buyout Program

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$1,484,000	\$0	\$371,000	\$371,000	\$371,000	\$371,000	\$0	\$0

Description & Scope: The \$1,484,000 program entails the purchase of four properties that have experienced repetitive flood damages. The structures would be demolished and the vacant land returned to open space per FEMA and Hazard Mitigation Grant Program (HMGP) requirements.

Purpose & Need: The homes all sustained thousands of dollars in damages from the September 2008 and 2010 floods, and have also been repeatedly subject to flood damage over the past forty plus years. All four properties contain a single-family home located in the Klein Creek 1% floodplain and are eligible for purchase through DuPage County’s buyout program and Illinois Emergency Management Agency’s (IEMA’s) HMGP funding. This project is contingent upon receiving both DuPage County and IEMA HMGP funding.

Impact on Future Operating Budget: The project will permanently eliminate the exposure of four properties (and families) to floods. There will also be fewer requests for flood damage assistance.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Acquisition/Relocation/Demolition	Annually	\$ 371,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
DuPage County	\$ 356,000
IEMA HMGP	\$1,068,000
Capital Projects Fund	\$ 60,000

Flood Plain Structure Buyout Program



Project Title: *Kehoe Boulevard Stream Bank Stabilization*

Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$910,000	\$0	\$14,000	\$126,000	\$693,000	\$77,000	\$0	\$0

Description & Scope: The eroded banks of the Kehoe Boulevard stream would be stabilized using “green engineering” techniques where practical including pool-riffle structures, native plantings, root wads, etc. The \$910,000 project involves stabilization of approximately 3,500 feet of stream banks.

Purpose & Need: Over the last several years erosion along the stream banks has increased causing not only more loss of the bank but also stream and culvert sedimentation. This will need to be corrected or continued erosion could lead to utility and roadway damages and increased costs for sediment removal. The project is contingent on receiving \$100,000 in grant funding from DuPage County’s Water Quality Improvement Program (WQIP).

Impact on Future Operating Budget: Stabilization of the stream banks will lower sedimentation removal costs and lower the potential for more significant costly damages to roadway and utility infrastructure. Minimal ongoing vegetation management will be required.



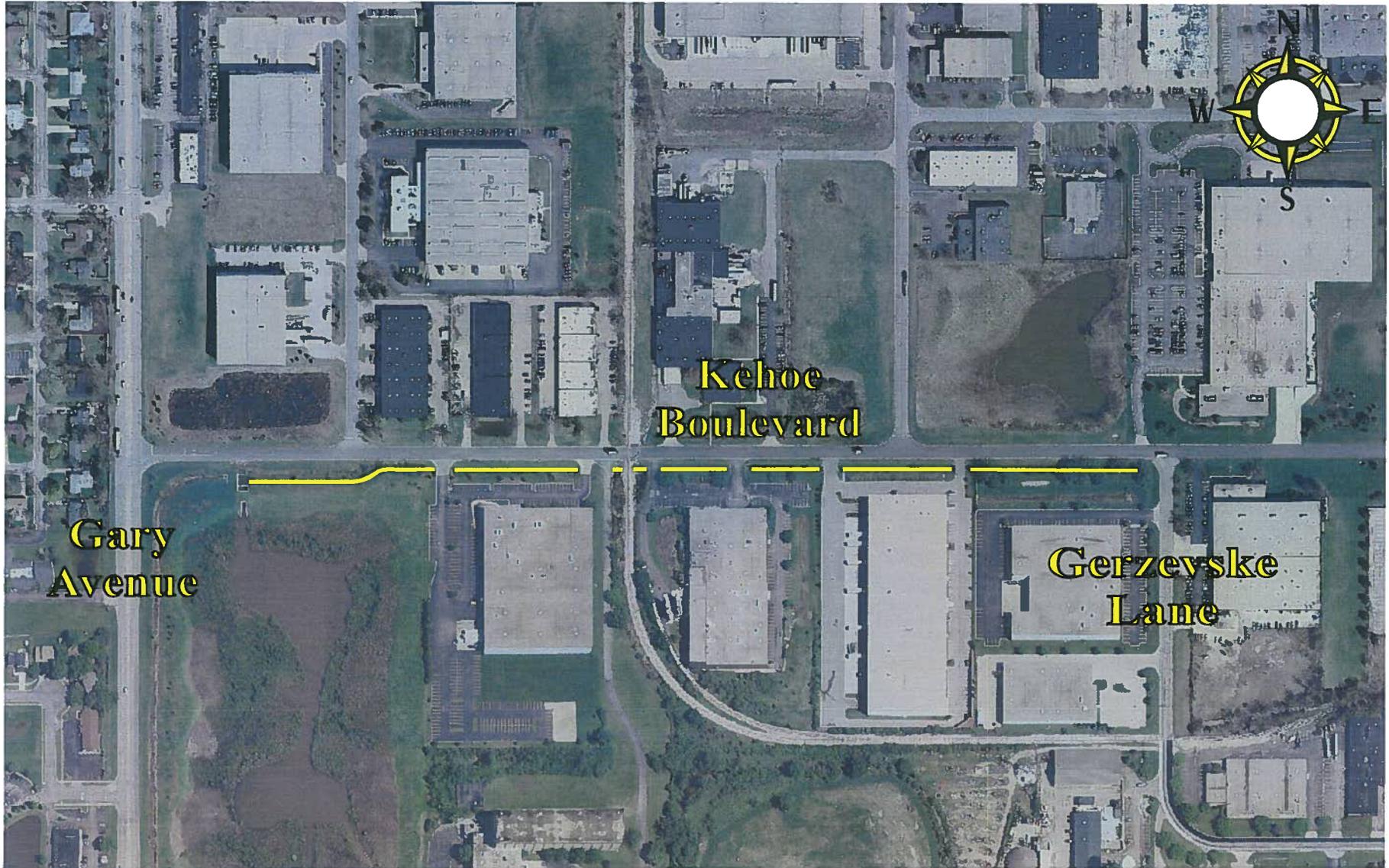
Schedule of Activities

Activity	From - To	Amount
Concept Design & Grant Appl.	5/16 - 4/17	\$14,000
Design	5/17 - 4/18	\$126,000
Construction	5/18 - 4/20	\$770,000

Means of Financing

Funding Source	Amount
DuPage County WQIP	\$100,000
Capital Projects Fund	\$810,000

Kehoe Boulevard Stream Bank Stabilization Project



Project Title: Klein Creek Section I Stream Bank Stabilization

Responsible Department: Engineering Services

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$3,147,000	\$0	\$32,000	\$15,000	\$460,000	\$2,376,000	\$264,000	\$0

Description & Scope: This \$3,147,000 project will restore 6,820 feet of severely eroded stream banks along Klein Creek from Kuhn Road to Thunderbird Trail. As with the Kehoe Boulevard Stream Bank Stabilization Project, “green engineering” techniques will also be utilized including pool-riffle structures, native plantings, root wads, habitat rehabilitation, re-meandering, stream bed restoration and wetland creation.

Purpose & Need: This project was originally designed in 2002 and 2003 using bioengineering techniques and after several attempts to obtain funding the project was abandoned. The plans will have to be redone to update to current conditions and standards. With more significant erosion resulting in loss of property, destruction of utility structures, stream and bridge sedimentation and instability of power poles the project has resurfaced as a priority. Construction of this project is contingent on significant outside funding. The Village will be seeking funding through a variety of sources including: IEPA Section 319 funds, DuPage County WQIP and the DuPage River Salt Creek Workgroup (DRSCW). The Klein Creek Watershed Flood Control Plan will need to be amended in order to qualify for grant funding.

Impact on Future Operating Budget: Stabilization of the stream banks will lower sedimentation removal costs and lower the potential for more significant costly damages to roadway and utility infrastructure. Minimal ongoing vegetation management will be required.



Schedule of Activities

Activity	From - To	Amount
Concept Design & Plan Amendment	5/16 - 4/17	\$ 32,000
Grant Applications	5/17 - 4/18	\$ 15,000
Design & Easement Acquisitions	5/18 - 4/19	\$ 460,000
Construction	5/19 - 4/21	\$2,640,000

Means of Financing

Funding Source	Amount
DuPage County WQIP	\$ 660,000
IEPA Section 319	\$ 930,000
DRSCW	\$ 930,000
Capital Projects Fund	\$ 627,000

Klein Creek Section I Stream Bank Stabilization Project



Project Title: Village Hall Rehabilitation

Responsible Department: Administration

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$16M	\$15,500	\$1,500,000	\$14,500,000	\$0	\$0	\$0	\$0

Description & Scope: Determine condition of the existing, combined municipal center/police facility in terms of current and long term space needs and find the best option to maintain, remodel, expand and/or replace the current facility.

Purpose & Need: To provide an updated or new municipal center facility to meet Village Administrative, Police and resident short and long term needs. A preliminary study of the Gregory J. Bielawski Municipal Center has indicated current Village operations and staffing levels have exceeded the capacity of the current facility that was completed in 1981 by 35%. The current facility is operationally inadequate, requires addition of additional security features and requires major updating of interior design and office features.

Impact on Future Operating Budget: Lower energy consumption costs due to implementation of LED lighting and Energy Star rated technologies. Potentially lower water consumption and maintenance costs associated with water-wise, native landscaping and elimination of turf areas.



Schedule of Activities

Activity	From - To	Amount
Analysis & Recommendations	5/15 - 4/16	\$ 15,500
Design	5/16 - 4/17	\$ 1,500,000
Construction	5/17 - 4/19	\$14,500,000

Means of Financing

Funding Source	Amount
Capital Projects Fund	\$16,015,500

Village Hall Rehabilitation Project



Project Title: *Police Evidence Storage Building*

Responsible Department: *Engineering Services*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$500,000	\$0	\$500,000	\$0	\$0	\$0	\$0	\$0

Description & Scope: This project is to provide ample space to store police evidence on a long-term basis. This could be accomplished by purchasing and renovating an existing warehouse type building, constructing a new storage facility or leasing space. The structure will need to be designed to include necessary security and storage features for criminal evidence.

Purpose & Need: Current legislation regarding the preservation of evidence in capital cases requires police departments maintain this evidence permanently. Due to the lack of available space at the Municipal Center, an off-site facility will be needed. The Village Hall lacks ample space for the storage of materials, equipment and records. The facility will allow secure storage of these items in a climate controlled structure.

Impact on Future Operating Budget: Normal operating expenses (electric, heating, A/C and rodent control) will be necessary. All exterior materials will be maintenance free or low maintenance. Eventually the roof will need to be re-shingled. We are exploring the option of leasing space to other departments that would offset some of our costs.



Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design & Construction	5/16 - 4/17	\$500,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Capital Projects Fund	\$500,000

Police Evidence Storage Building Project

(No specific map location is associated with this project)

Project Title: PWC Fuel Island Replacement

Responsible Department: Public Works

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$550,000	\$0	\$0	\$550,000	\$0	\$0	\$0	\$0

Description & Scope: The existing facility provides unleaded gasoline and diesel fuel for all Village vehicles and several outside agencies. The project includes removal and replacement of three underground tanks, pumps and piping, as well as above-ground dispensing units, control unit and related software. A pilot program of purchasing fuel at retail during FY16/17 will be undertaken as a possible lower cost alternative to fuel island replacement.

Purpose & Need: The fiberglass underground tanks are all 30 years old and, while no leaks are apparent, are reaching the end of their recommended service life. In addition, the underground pumps and piping, as well as the above-ground dispensing units and canopy are similarly aging and recommended for replacement. Monitoring equipment and tracking software for storage and dispensing will also be replaced.

Impact on Future Operating Budget: Failure to replace will increase potential for underground leaks of fuel resulting in environmental contamination and expensive clean-up. In addition, availability of fuel to support Village operations, as well as other agencies, is critical.



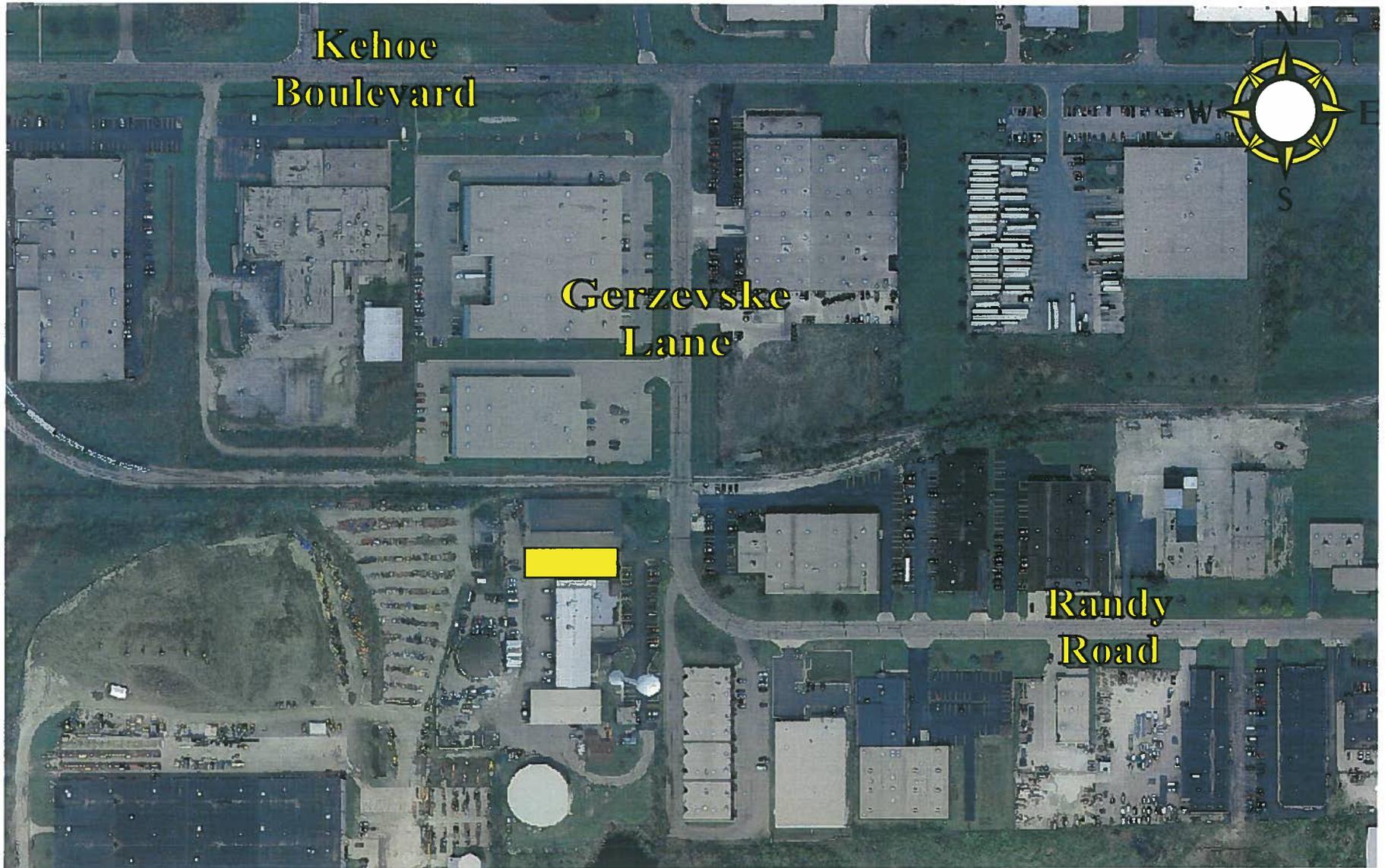
Schedule of Activities

Activity	From - To	Amount
Design & Construction	5/17 - 4/18	\$550,000

Means of Financing

Funding Source	Amount
Capital Projects Fund	\$550,000

PWC Fuel Island Replacement Project



Project Title: PWC Storage Yard Improvement

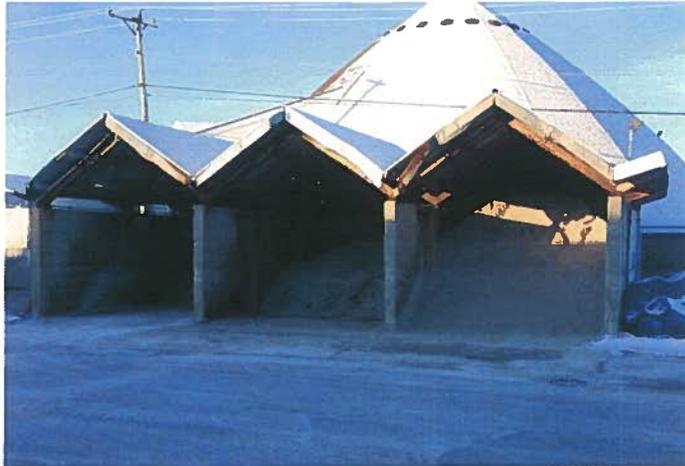
Responsible Department: Public Works

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$215,000	\$0	\$0	\$15,000	\$200,000	\$0	\$0	\$0

Description & Scope: Demolition, redesign and replacement of existing fixed and temporary storage bins in the Public Works yard.

Purpose & Need: There are three fixed bins that hold raw materials (stone, sand, dirt, etc.) whose walls are severely deteriorated and roof structure is damaged. There are also multiple temporary open-air bins that are used for holding spoil and other debris that includes: dirt, street sweepings, concrete, asphalt and landscape waste. In addition, the location of some of the existing various bins is not conducive to efficient and effective use of the available space with respect to storage, access and safety.

Impact on Future Operating Budget: Design and construction of new storage spaces will allow for more efficient access by employees and allow for storage of larger quantities which will decrease frequency of restocking which will decrease delivery costs and may decrease material unit costs. It will also allow for a more effective method of storing spoils that require testing prior to disposal which will reduce potential for pile contamination and associated costs.



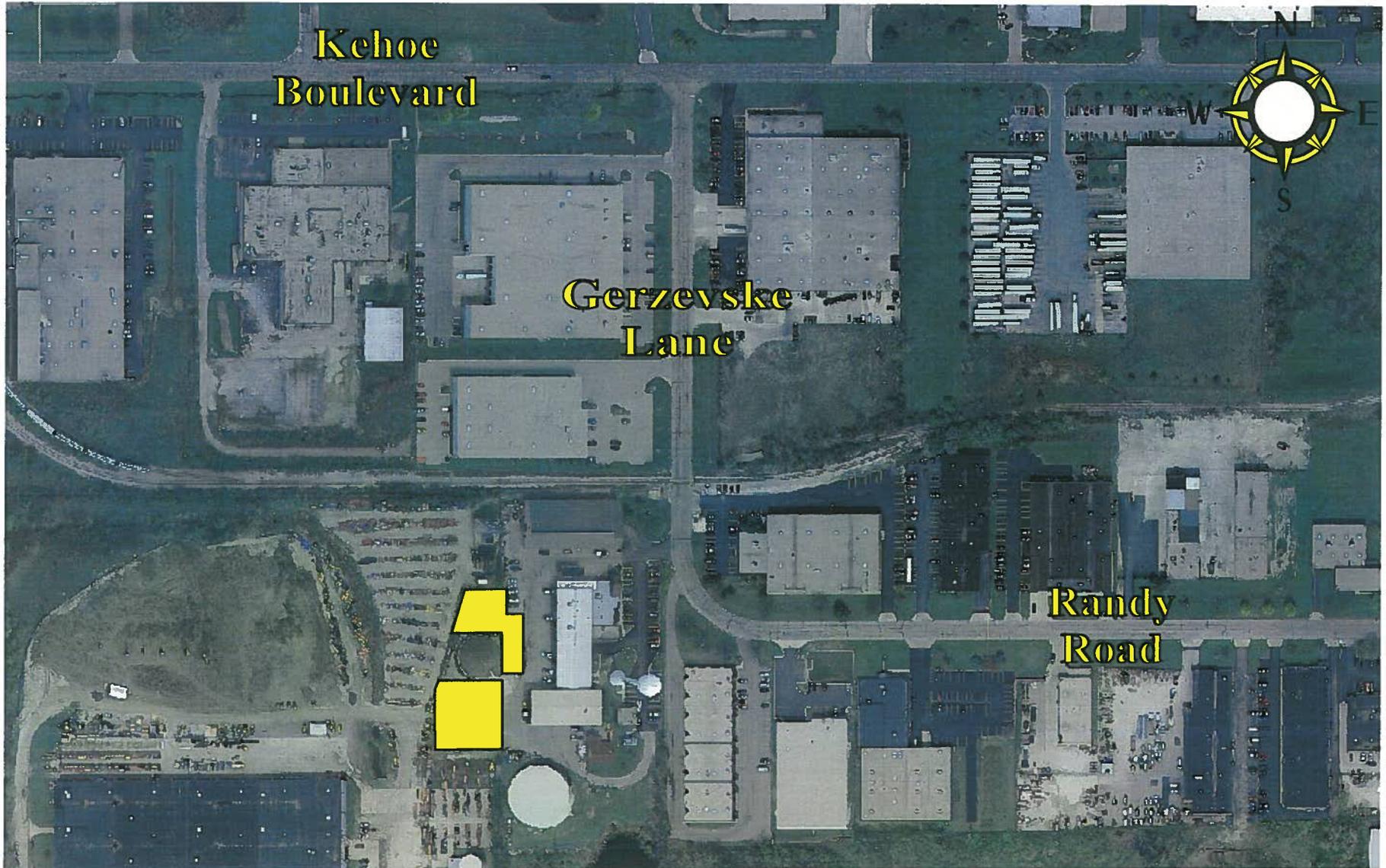
Schedule of Activities

<u>Activity</u>	<u>From - To</u>	<u>Amount</u>
Design	5/17 - 4/18	\$15,000
Construction	5/18 - 4/19	\$200,000

Means of Financing

<u>Funding Source</u>	<u>Amount</u>
Capital Projects Fund	\$215,000

PWC Storage Yard Improvement Project



Project Title: *Town Center Fountain Electrical Improvements*

Responsible Department: *Administration*

Total Project Cost	Total Expended To Date	Budget Year 1 2016-17	Unappropriated Subsequent Years				Future Funding Requirements
			Year 2 2017-18	Year 3 2018-19	Year 4 2019-20	Year 5 2020-21	
\$160,000	\$10,000	\$150,000	\$0	\$0	\$0	\$0	\$0

Description & Scope: The improvements to the Town Center fountain consist of relocating the main electrical disconnect, current transformer (CT) metering cabinet, site lighting controls, 480 volt to 120/240 volt step down transformer, distribution panel for gazebo lighting panel, fountain control panel and site lighting panel from the below grade concrete equipment vault into an above grade, concrete pad mounted, painted aluminum electrical enclosure.

Purpose & Need: The enclosure will be accessible by maintenance personnel from grade, thus eliminating the current requirement to enter the below grade, concrete equipment vault requiring adherence to the confined space entry requirements for routine electrical operations.

Impact on Future Operating Budget: The improvements will eliminate the need to follow confined space entry requirements and the liabilities associated with those enclosures. Normal maintenance of electrical components and painting of the aluminum enclosure will be required.



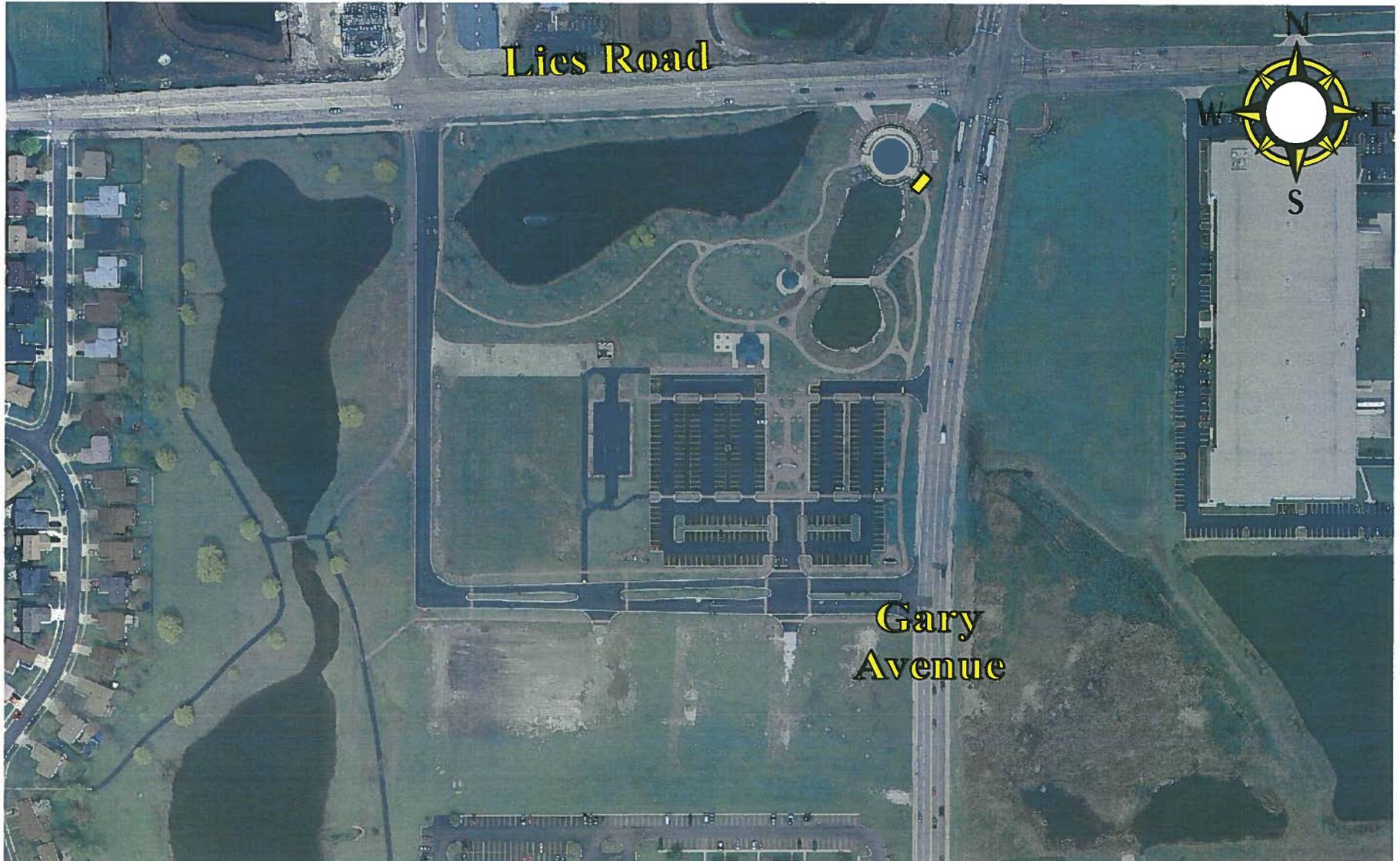
Schedule of Activities

Activity	From - To	Amount
Design	5/15 - 4/16	\$10,000
Construction	5/16 - 4/17	\$150,000

Means of Financing

Funding Source	Amount
Capital Projects Fund	\$160,000

Town Center Fountain Electrical Improvements Project



CAPITAL IMPROVEMENT PROGRAM

FY21/22 THROUGH FY25/26

<u>CIP Projects By Fund (\$000)</u>	<u>Fund</u>	<u>FY21/22</u>	<u>FY22/23</u>	<u>FY23/24</u>	<u>FY24/25</u>	<u>FY25/26</u>	<u>Total</u>
<u>Roadway System</u>							
1. Pavement Preventative Maintenance Program	CPF	\$618	\$647	\$678	\$711	\$745	\$3,399
2. Flexible Pavement Program	CPF	-	\$5,159	\$5,417	\$5,687	-	\$16,263
3. Flexible Pavement Program	MFT	\$3,617	-	-	-	\$5,972	\$9,589
4. Fair Oaks Rd. Rehabilitation	CPF	\$903	-	-	-	-	\$903
5. Old Gary Ave. Rehabilitation	CPF	\$393	-	-	-	-	\$393
6. Roadway Condition Assessments & Inventories	CPF	-	-	-	\$70	-	\$70
7. Sidewalk Condition Assessments & ADA Inventories	CPF	\$35	\$35	\$35	-	-	\$105
8. Streetlight Replacement Program	CPF	\$50	\$350	\$50	\$50	\$50	\$550
Roadway System Subtotal:		\$5,616	\$6,191	\$6,180	\$6,518	\$6,767	\$31,272
<u>Water and Sewer Utilities</u>							
1. WRC Dewater Sludge Pumps A/B Replacement	W/S	-	\$60	-	-	-	\$60
2. WRC Digester Pump Replacement	W/S	-	\$136	-	-	-	\$136
3. WRC Sand filter Replacemenet	W/S	-	-	-	-	\$250	\$250
4. Water System Improvements	W/S	\$150	-	-	-	-	\$150
5. Water Main Relacement Program	W/S	\$2,200	\$2,200	\$2,200	\$2,200	\$2,200	\$11,000
6. Sanitary Sewer I&I Reduction	W/S	\$550	\$550	\$550	\$550	\$550	\$2,750
7. SW Lift Station & Force Main	W/S	\$1,470	-	-	-	-	\$1,470
8. SW Sanitary Sewer Extension	W/S	\$72	\$774	-	-	-	\$846
9. St. Charles Rd. Sanitary Sewer Extension	W/S	\$310	\$3,011	\$335	-	-	\$3,656
10. Tall Oaks Lift Station Replacement	W/S	-	-	\$56	-	-	\$56
Water and Sewer Utilities Subtotal:		\$4,752	\$6,731	\$3,141	\$2,750	\$3,000	\$20,374
<u>Stormwater Utilities Subtotal:</u>							
1. Roadway Drainage Improvements	CPF	\$150	\$150	\$150	\$150	\$150	\$750
Stormwater Utilities Subtotal:		\$150	\$150	\$150	\$150	\$150	\$750
<u>Facilities</u>							
1. PWC Garage Roof Replacement	CPF	\$150	-	-	-	-	\$150
3. PWC Administration Bldg. Roof Replacement	CPF	-	-	-	-	\$200	\$200
Facilities Subtotal:		\$150	\$0	\$0	\$0	\$200	\$350
Total Expenditures All Funds:		\$10,668	\$13,072	\$9,471	\$9,418	\$10,117	\$52,746

* Partially funded though outside sources.

CAPITAL IMPROVEMENT PROGRAM

FY26/27 THROUGH FY35/36

	<u>Fund</u>	<u>FY</u> <u>26/27</u>	<u>FY</u> <u>27/28</u>	<u>FY</u> <u>28/29</u>	<u>FY</u> <u>29/30</u>	<u>FY</u> <u>30/31</u>	<u>FY</u> <u>31/32</u>	<u>FY</u> <u>32/33</u>	<u>FY</u> <u>33/34</u>	<u>FY</u> <u>34/35</u>	<u>FY</u> <u>35/36</u>
<u>Roadway System</u>											
1. Pavement Preventative Maintenance Program	CPF	X	X	X	X	X	X	X	X	X	X
2. Flexible Pavement Program	CPF	X	X	X		X	X	X		X	X
3. Flexible Pavement Program	MFT				X				X		
4. Doris Ave. Rehabilitation	CPF			X							
5. Kuhn Rd. Rehabilitation	CPF				X						
6. Morton Rd. Rehabilitation	CPF				X						
7. Fair Oaks Rd. Rehabilitation	CPF					X					
8. Old Gary Ave. Rehabilitation	CPF					X					
9. Vale Rd. Rehabilitation	CPF							X			
10. Streetlight Replacement Program	CPF	X	X	X	X						
<u>Water and Sewer Utilities</u>											
1. WRC Sand filter Replacement	W/S	X									
2. WRC Disinfection System Replacement	W/S	X									
3. WRC Non-potable Water Strainer Replacement	W/S			X							
4. WRC RAS Station Improvements	W/S					X					
5. Fire Hydrant Replacement Program	W/S	X	X	X	X	X	X	X	X	X	X
6. Water Main Valve Replacement Program	W/S	X	X	X	X	X	X	X	X	X	X
7. Water Main Replacements	W/S	X	X	X	X	X	X	X	X	X	X
8. Gary Avenue Gardens Watermain Improvements	W/S				X	X					
9. Sanitary Sewer Replacements	W/S	X	X	X	X	X	X	X	X	X	X
<u>Stormwater Utility</u>											
1. Roadway Drainage Improvements	CPF	X	X	X	X	X	X	X	X	X	X
<u>Facilities</u>											
1. New Police Station	CPF										
- Land		X									
- Construction			X								
2. PWC South Garage Roof Replacement	CPF	X									
3. Community Park Improvements*	CPF	X	X	X							

* Partially funded through outside source(s)

Requested But Not Programmed Project Listing

Roadways

1. **Morton Road Phase I Reconstruction**

Morton Road from the Village's southern limits to St. Charles Road is an unimproved old chip and seal road that has been overlaid and will eventually need to be reconstructed. Some development has occurred along this section. When development plans materialize and the properties and adjoining roadway become annexed into the Village the project would move forward towards construction. Total estimated cost is \$2,040,000.

2. **Morton Road Bike Path**

A bike path along Morton Road was identified by the Park District to provide pedestrian and bicycle access from the Lies Road Bike Path to McCaslin Park. This 9,200' long path is currently unfunded but has the potential for future funding through the Carol Stream Park District, Wayne Township Road District, TCM, CMAQ or ITEP. Total estimated cost is \$2,430,000.

3. **Sidewalk Improvements**

School District 87 has identified 11 sidewalk locations in their Hazardous Walking Conditions Study where they are recommending improvements or additions. Total estimated cost is \$416,000. In addition School District 93 requested a sidewalk along the north side of Thunderbird Trail from Indianwood Drive to Arrowhead Trail. This would permit children to cross Thunderbird Trail at the Arrowhead intersection where the School District currently has a crossing guard. As Joe explained in his email, in the past there has been some resistance to adding sidewalk from residents in the area. In addition the front yard of 463 Thunderbird Trail is fairly steep. This would require a large grading easement to transition the slope from the sidewalk back into their front yard and probably the removal of one or both trees. The other option would be to build a retaining wall in order to save the trees, but these are expensive and may require maintenance/replacement during its life. Taking all these factors into consideration the Village did not budget for this project in the Capital Improvement Program.

4. **Industrial Park Sidewalks**

The existing industrial park subdivisions between Gary Avenue and Schmale Road do not have sidewalks. The Village is starting to notice an increase in pedestrian traffic on these streets as workers commute to and from work. Workers also walk to area parks, restaurants and convenience stores. The recent use of streets by pedestrians has created a possible need for sidewalks. Costs will vary significantly depending on which streets need sidewalks, width, easement and right of way acquisitions, utility relocations, placement on both sides, drainage, etc.

Roadways (Continued)

5. Spring Valley Parking Lot Additions

Residents requested parking spaces be added to existing parking lots scattered throughout the Spring Valley Subdivision. This would require removal of the island, parking lot construction, restoration and possible utility relocations. Cost is estimated between \$2,000 and \$4,000 per space.

6. Asset Extractions

Roadway condition assessments are to be conducted in FY17. With these services other assets (signs, signals, supports, curb and gutter, railroad crossings, pavement markings and striping, guard rails, medians, ditches and other hardware) will be collected using the high definition video cameras. However, this information will not be extracted. Estimated cost for extracting the data is \$30,000.

7. Fair Oaks Road Guard Rail

In 2015 the damaged guardrail along the west side of Fair Oaks Road north of Jason Court was repaired. However, the guardrail on both sides of the road will need to be totally replaced to be brought up to current standards. The estimated cost is \$83,000.

8. Old Gary Avenue Bridge Replacement

A previous bridge inspection in 2014 revealed shrinkage cracks in both abutments and under the top slab. There was also spalling and efflorescence of the top slab as well as freeze-thaw damage along the water line. Eventually this bridge will need to be replaced at an estimated cost of \$793,000.

Water and Sewer Utilities

1. Wayne Township Water Main Extensions

Possible well contaminations may lead to future unincorporated water main extensions to provide safe potable water. No costs have been estimated without any need having been identified. Total estimated cost is \$9M.

2. Sanitary Force Main Replacements

A significant amount of our sanitary sewer pump station force mains are over 30 years old and have never been tested for leaks or corrosion. Force mains are the principal source of hydrogen sulfide generation that can oxidize into sulphuric acid. Approximately 2,500 feet of force main lines will be tested and repaired/replaced as warranted. Total estimated cost is \$414,000.

Stormwater Utilities

1. Klein Creek Flood Forecast Warning System

This project previously slated for construction in FY11/12 included stream/elevation gages and cameras placed strategically along Klein Creek to work with DuPage County's Advanced Flood Forecast Warning System. Total estimated cost was \$39,000.

2. Carol Stream Venture Flood Control

Further protection enhancements were contemplated with in the original study which included raising the sidewalk along Lies Road to divert flood waters down Dorchester Drive. The overland flow routes along Dorchester Drive and Chatham Drive would also be reestablished. Total estimated cost was \$258,000 and programmed for construction in FY14/15.

3. Southeast Storm Water System Improvements

Study has yet to be completed identifying projects and estimating costs.

4. Tubeway Detention Basin Rehabilitation & Improvements

The study has yet to be completed identifying projects and estimating costs.

5. Fullerton & Kimberly Stormwater Study

A study was previously proposed for FY13/14 to analyze the existing storm water management system and determine improvements to alleviate detention pond overflows and street flooding. Total estimated cost was \$13,000.

6. Fullerton & Kimberly Storm Water System Improvements

The study is not programmed and therefore cannot be completed allowing for the identification of projects and estimating costs.

7. Flood Plain Structure Buyout Lot Enhancement Program

There are a total of 8 lots slated for homes to be demolished on DuPage County's list of buyout structures. Enhancement of these vacant lots could involve the addition of rain gardens, pollinator meadows or bioretention cells. Total estimated cost is over \$786,000.

8. Flood Plain Structure Flood Proofing Program

DuPage County has identified 27 homes that would need flood proofing for flood damage protection. Total estimated cost is \$2.9M.

Stormwater Utilities (Continued)

9. Stormwater Management Facility (SWMF) Retrofitting Program

USEPA will be enacting a new storm water rule that will require, among other things, municipalities to retrofit existing SWMFs to treat polluted storm water runoff. Total estimated cost is highly variable, but will probably cost on average around \$2M per facility.

10. TMDL Stream Restoration Program

IEPA is currently developing TMDLs for dissolved oxygen, fecal coliform, pH, manganese, silver and chlorides for the West Branch. Adaptive management procedures have been utilized which may necessitate stream restorations. Total estimated cost for just Klein Creek south of Mitchell Lakes and Thunderbird Creek is \$12.5M. These three phases will restore over 24,000 feet of severely eroded stream banks along Klein Creek from Kuhn Road to Mitchell Lakes. Klein Creek serves as a major conduit that transports runoff from a watershed area of 12.7 square miles. This conveyance system has experienced severe erosion that has resulted in damage to public and private property. This series of three projects will correct this damage utilizing bioengineering techniques that will stabilize the stream bank alleviating further damage. The first southern section of Klein Creek has been programmed for restoration, but the second northern section and Thunderbird Creek have not been programmed. Possible funding sources include IEPA Section 319, future NPDES funds and DuPage County Water Quality Improvement Program grants.

11. Pond Shoreline Restoration

All these ponds are utilized by the Village as storm water runoff and flood control facilities. Over the years the 6 miles of shorelines have experienced a large amount of erosion leading to property damage, decreased water quality and silting in the ponds. These projects will also utilize bioengineering techniques to restore and permanently stabilize the shorelines from future ongoing damage. Some of the ponds are located on Park District property. Funding is dependent on financial feasibility and could include IEPA Section 319 or future NPDES funds as well as DuPage County Water Quality Improvement Program grants. Total estimated cost cannot be determined at this time due to the variability of the erosion and level of restoration required. Once these unknowns have been quantified costs can be calculated.

Facilities

1. Community Park Improvements

The last major Park improvements were performed in 1997. An overall assessment of the condition of the Park facilities is necessary to determine any necessary repairs, replacements or additions. Costs cannot be estimated until the condition assessment has been performed and projects identified.

Completed Projects

Roadways

1. 2015 Pavement Preventative Maintenance Program Projects

Sixty four streets received an application of preservative sealer and eighteen received a restorative sealer application with the Pavement Rejuvenation Projects. These two projects were completed at a total cost of \$357,672. The Pavement Patching Project included thirty nine patches on eight streets totaling nearly 10,927square feet of pavement surface. The Project was completed for \$97,778. In all, the Pavement Preventative Maintenance Program Projects were completed for a total cost of \$455,450 which was \$13,549 or 2.9% under the \$469,000 budgeted for these three projects.



Pavement Patching on Tubeway Drive

Roadways (Continued)

2. 2015 Flexible Pavement Program Project (Street Resurfacing, Structural Overlay & Pavement Reconstruction)

A total of eighteen streets or 18,127 feet received a 2” maintenance overlay and three streets or 6,191 feet had a 2.75” structural overlay and sixteen streets or 15,753 feet the pavement was reconstructed. Curb and gutter, sidewalk and driveway removal and replacement as well as pipe under drainage, reflective crack control; street and structure patching were included with the project where conditions met Village criteria. Thermoplastic pavement markings were reapplied. The project was combined with the Indianwood Dive Pavement Reconstruction and PWC Parking Lot Resurfacing Projects. It was completed at a final cost of \$2,685,415. This was \$20,584 (0.76%) under the \$2,706,000 budgeted. The following are the list of streets that received resurfacing or structural overlays or the pavement was reconstructed:

Street Resurfacings

Adobe Lane	Apache Lane	Alabama Trail
Antelope Trail	Arrowhead Trail	Cherokee Court
Cheyenne Trail	Cochise Place	Columbia Court
Commanche Court	Commanche Lane	Illini Drive
Inca Boulevard	Indianwood Drive	Iroquois Trail
Mohican Road	Seneca Lane	Teton Circle

Structural Overlays

Canyon Trail	Deerskin Trail	Flint Trail
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Pavement Reconstruction

Adam Lane	Alison Lane	Alton Court
Andrew Lane	Chestnut Drive	David Lane
Larch Drive	Linden Drive	Mathew Lane
Nebraska Circle	Penny Court	Renaissance Drive
Stuart Drive	Tamarac Drive	Texas Court
Willow Drive		



Structural Overlay on Flint Trail

Roadways (Continued)

3. Indianwood Drive Pavement Reconstruction Project

The entire pavement section consisting of a 6" Bituminous Asphalt Material (BAM) course, 2" binder course and 1½" surface course on 1,700 feet of Indianwood Drive and 300 feet of Illini Drive (including the Arrowhead Trail intersection) for approximately half the pavement width of the streets was totally replaced as a binder patch in FY15. In FY16 after DuPage County had finished their \$11M Armstrong Park Flood Control Reservoir and Siphon Projects the Village resurfaced all the streets in this area including Indianwood Drive and Illini Drive. Approximately 100 feet of curb and gutter and 400 square feet of sidewalk were also replaced. The project was combined with the Flexible Pavement and PWC Parking Lot Resurfacing Projects. It was completed at a final cost of \$2,685,415. This was \$20,584 (0.76%) under the \$2,706,000 budgeted.



Final Surface on Indianwood Drive

Roadways (Continued)

4. 2015 Streetlight Replacement Program Project

This year's program included a replacement of light fixtures only. Ninety-two (92) existing lamps were replaced with new energy-efficient LED fixtures. The 2015 Streetlight Replacement Project was completed at a cost of \$28,520, which was \$21,480 or 43% under the \$50,000 budgeted. A portion of the remaining funds (\$12,900) was then directed towards design of the Phase IV LED replacement program which will be constructed in 2016.



Project Area Map

Water & Sewer Utilities

1. WRC Phase I Pumping Station Improvement Project

The project rehabilitated the impeller, splash plate, motor, drive, gearbox and grease pump for one Primary Pump and one Second Stage Pump. The project was completed at a total cost of \$352,964, which was \$97,036 or 21.6% under the \$450,000 budgeted.



Rehabilitated Primary Pump 1

Water & Sewer Utilities (Continued)

2. WRC Phase II Pumping Station Improvement Project

Rehabilitated the impeller, splash plate, motor, drive, gearbox and grease pumps for one Primary Pump and one Second Stage Pump. The total completed project cost of \$456,000 was \$194,000 or 29.9% under the \$650,000 budgeted for this project.



Rehabilitated Second Stage Pumps

Water & Sewer Utilities (Continued)

3. WRC Non-Potable Hydrant Replacement Project

Replaced nine non-potable fire hydrants at the WRC that are used for delivery of non-potable water throughout the treatment plant for cleaning of equipment as part of routine maintenance and in advance of special maintenance projects. The project was completed at a cost of \$31,000, which was \$14,000 or 31.1% under the \$45,000 budgeted.



Replaced WRC Non-Potable Hydrant

Water & Sewer Utilities (Continued)

4. WRC Blower Building #1 Roof Replacement Project

This project replaced the 19-year old WRC Blower Building #1 for a total cost of \$44,000 which was \$1,000 or 2.2% under the budget of \$45,000.



Replaced WRC Blower Building #1 Roof

Water & Sewer Utilities (Continued)

5. WRC Administration Building Roof Replacement Project

The 20-year old WRC Administration Building roof was replaced for a total cost of \$134,000 which was \$1,000 or 0.7% under the budget of \$135,000.



Replaced WRC Administration Building Roof

Facilities

1. PWC Parking Lot Resurfacing Project

The entire 4 ¾” pavement section was removed and replaced with 3 ½” of binder and 1 ½” of final surface courses. Deteriorated sections of sidewalk, curb and gutter were replaced. A storm sewer inlet was repaired and one reconstructed along with adding 110 feet of pipe under drain to correct a drainage issue. Disturbed turf areas were restored and the parking lot was restriped. The project was combined with the Flexible Pavement and Indianwood Dive Pavement Reconstruction Projects. It was completed at a final cost of \$2,685,415. This was \$20,584 (0.76%) under the \$2,706,000 budgeted.



Resurfaced PWC Parking Lot

Appendix A

Common Funding Sources

1. Debt:

- a) General Obligation (GO) Bonds – bonds that are secured by the full faith and credit or unlimited taxing power of the Village.
- b) Revenue Bonds – debt secured by specific revenues generated by or associated with a self-supporting enterprise.
- c) Alternate Revenue Bond – a GO bond that is issued in lieu of a revenue fund. The taxes levied to pay the P&I on the GO bond are abated and the P&I is actually paid from revenues generated by the enterprise fund.
- d) Special Assessment Bonds – are issued to finance public improvements that benefit adjacent or nearby property. The bonds are secured by assessments against the benefiting property and are levied (assessed) by the Village.
- e) Special Service Area Bonds – Special Service Area (SSA) bonds require the issuer to be petitioned by taxpayers in the proposed area to issue bonds payable from ad valorem taxes levied against all taxable property within the boundaries of the SSA without limitation as to rate or amount. Improvements financed by SSA revenues should have to qualify as “special services” in order for the issuer to use this form of financing.

2. Leases:

- a) Capital Lease (tax-exemption) – a non-cancelable contract that meets one or more of the following criteria:
 - The lease transfers ownership (legal title) of the leased property to the lessee.
 - The lease contains a bargain or nominal purchase option.
 - The lease term equals 75% or more of the estimated economic life of the leased property.
 - The present value of the lease payments (excluding executory costs) equals or exceeds 90% of the fair value of the leased property at the inception of the lease.
- b) Certificates of Participation (COP) – a security that represents a share of an issuer’s lease payment. In a COP financing, title to the leased asset is assigned by the lessor to a trustee that holds it for the benefit of the investors, the certificate holders. The certificate represents a share of the lease payment to be received by the investor. The idea behind the COP-

based borrowing is to make the certificates marketable and transferable, generally behaving like conventional debt instruments.

3. **Water and Sewer Utility Users Fees** – These fees will be used to pay the P&I on Revenue Bonds and Alternate Revenue Bonds. The user rates will be adjusted to the required level to support new bond issues.
4. **Stormwater Utility Fee** – A fee charged as an equivalent residential unit (ERU) based on the amount of impervious area that will be used to pay the P&I on Revenue Bonds and Alternate Revenue Bonds for stormwater management facility improvements. As with W&S Utility User Fees these fees will also be adjusted to the required level to support new bond issues.
5. **Roadway Property Tax** – A property tax levied that is specifically dedicated to pay for the maintenance, repair and improvements to the roadway infrastructure. These taxes could be used to secure and pay for General Obligation Bonds.
6. **Motor Fuel Tax Allotments** – The Village receives a portion of the tax that is assessed on fuel by the State. A portion of these proceeds is allocated back to municipalities on a per capita basis. The State determines what the per capita formula is.
7. **Designated Revenue Source - General Corporate Fund** – The Village Board may designate a specific General Corporate revenue source to be used as an ongoing revenue source for the Capital Projects Fund.
8. **State or Federal Assistance including Illinois Revolving Loan Programs** – The Revolving Loan Program is a program where the State would make available a long-term, low-interest loan to the Village. These loans are generally granted for projects that affect the environment. Periodically, grants will be received from the Federal and/or State governments.
9. **Environmental Protection Agency (EPA) Section 319 Grants** – The EPA has allocated matching grants to states for non-point source pollution control programs as well as mitigation projects. They are federally funded at 60% with a 40% local match. The program or project must be designed in accordance with Section 319 of the Clean Water Act. Stream bank restoration projects are typically funded.
10. **Illinois Emergency Management Agency (IEMA) Hazardous Mitigation Grant Program (HMGP)** – This is a federally funded grant program designed to assist state and local government projects that eliminate or cause a reduction in the effects from natural hazards. Projects are 75% federal and 25% local contribution.

- 11. DuPage County Community Development Block Grant (CDBG) Program** – CDBGs are annual direct grants that communities can use to revitalize neighborhoods, expand affordable housing and economic activities as well as to improve facilities and services. These grants are structured to assist low to moderate-income persons.
- 12. IDNR Open Space Land Acquisition Development (OSLAD) Program and Land and Water Conservation Fund (LCWF)** – These grants are managed through IDNR and provide funds for land acquisition and the development of open space. They are typically used by Park Districts and other governmental agencies to purchase land for parks, preserves, conservation corridors and other open space areas. They can also be used for development of these areas such as stream bank stabilization and wetland or riparian creation. Maximum funding assistance is 50% up to \$750,000 for acquisition projects and up to \$400,000 for development/renovation projects.
- 13. Moving Ahead for Progress in the 21st Century Act (MAP-21)** – This is a federally funded program that provides financial assistance for transportation projects to local agencies through the Chicago Metropolitan Agency for Planning (CMAP) a Metropolitan Planning Organization (MPO).
- 14. Fixing America’s Surface Transportation (FAST) Act** – This is the replacement act for the MAP-21 Act.
- 15. FAST Congestion Mitigation and Air Quality (CMAQ) Improvement Program** – This program directs Federal Highway Administration (FHWA) funds towards transportation projects in Clean Air Act non-attainment areas that help reduce carbon monoxide emissions that contribute to ground level ozone or reduce the annual fine particulate matter standard (PM2.5). The program is administered through CMAP. Typical eligible projects include bicycle and pedestrian facilities, sidewalks, traffic flow improvements, commuter parking lots and transit improvements. The funding ratio is 80% federal and 20% local.
- 16. FAST Surface Transportation Program (STP) - Highway Projects** – The FAST STP provides FHWA funds to assist local agencies with the improvement of any road that is not classified as local or rural minor collector. Typical projects include widening or adding lanes, reconstruction, intersection improvement and traffic signals. These funds can also be used for transit capital projects and bridge projects. The program is administered through the DuPage Mayors & Managers Conference (DM&MC). Local agency participation is set at 30% with 70% funded through the Illinois Department of Transportation (IDOT) from the FHWA.
- 17. FAST Transportation Alternatives Program (TAP) Projects** – The TAP projects are funded through the FAST Act. However, eligible projects are limited to non-motorized transportation projects. The local match is 25% with the remaining 75% being funded through IDOT from the FHWA.

18. **IDOT Local Agency Functional Overlay (LAFO) Program** – This federally funded program assists local governments with the repair and resurfacing of existing Federal Aid Urban System (FAUS) routes. Projects are funded at 75% coming from FHWA through IDOT with a local match of 25%.
19. **SAFETEA-LU Illinois Transportation Enhancement Program (ITEP)** – ITEP provides funding for community based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of our transportation infrastructure. Project sponsors may receive up to 80 percent reimbursement for project costs. The remaining 20 percent is the responsibility of the project sponsor. A project must qualify as one of the 12 eligible categories listed in the ITEP Guidelines Manual and it must relate to surface transportation to be eligible for funding. Typically bike paths and trails are eligible for ITEP funding.
20. **FAST Highway Bridge Program (HBP)** – The HBP, formerly the Highway Bridge Replacement and Rehabilitation Program (HBRRP), is a federally funded FHWA program that provides financial assistance to local agencies for the replacement or rehabilitation of existing deficient bridges. Projects are funded at 80% federal and 20% local.
21. **Housing and Urban Development (HUD) Community Development Block Grant (CDBG) Program** – This program is for special one-time funding, unlike the annual DuPage County CDBG funds. In this particular case it is for disaster relief and mitigation from the 2008 floods. Projects for hazard mitigation and to repair damaged infrastructure are considered eligible.
22. **Illinois Green Infrastructure Grant (IGIG) Program** – Grants are available to local units of government and other organizations to implement green infrastructure best management practices to control storm water runoff for water quality protection in Illinois. Projects must be located within a Municipal Separate Storm Sewer System (MS4) or Combined Sewer Overflow (CSO) area. Funds are limited to the implementation of projects to install best management practices (BMPs). There are three program categories under IGIG: Combined Sewer Overflow (CSO) Rehabilitation Category, Stormwater Retention and Infiltration Category and the Green Infrastructure Small Projects Category.
23. **Illinois Green Project Reserve (GPR) Program of the State Revolving Loan Fund** – The IEPA has set aside 20% of the Federal portion of the State Clean Water and Drinking Water Revolving Fund capitalization grants, not the entire fund, for projects to address green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities. These four categories of projects are the components of the GPR. The GPR provides low interest loans which are about half the rate that is normally available to communities for these types of projects.

Project Criteria and Selection Policy

The Village of Carol Stream utilizes different criteria when selecting projects within each category: Roadways, Water & Sewer Utilities, Facilities and Stormwater Utilities. Only criteria that are applicable to a given category are used. All projects are evaluated to determine if they meet the qualifications defined on the Definition page for inclusion into the CIP. The following specifies the criteria and selection process that is utilized to identify and prioritize projects within each category.

Roadways

The Engineering Services Department uses several criteria with reference to roadway project selection. They include roadway age, preferred maintenance and rehabilitation schedule, pavement condition, geographic condition, cost/benefit analysis, utility condition, scheduling, drainage, unfunded mandates and safety.

The first step is to develop a global plan where each street is assessed and evaluated to identify a maintenance or rehabilitation strategy that is best suited for that street's distresses. Engineering has developed a Preferred Pavement Maintenance & Rehabilitation Schedule to be used as a general guideline when identifying which maintenance or rehabilitation strategy to employ and when. See Appendix B. This Schedule relates a pavement's age to a preferred strategy of maintenance or rehabilitation.

Another tool used by Engineering Services is a software program called MicroPaver. Streets are routinely inspected and assessed for distresses. The inventoried data is then entered into the program, which calculates a pavement condition index (PCI). The program further calculates a future predicted PCI based on the previous history of pavement aging. The results of the PCI Report are then displayed on a geographic information system (GIS) map where Engineering can view the condition of all pavements within the Village.

The PCI is also used as a guideline to identify what type of maintenance or rehabilitation strategy should be performed on an individual pavement section. Generally pavements with a PCI between 60 and 100 will qualify for a maintenance operation, i.e. fiberized crackfill or rejuvenation. Those with a PCI from 30 to 60 can be considered for resurfacing or a structural overlay whereas those with a PCI below 30 will probably require pavement or total reconstruction.

Engineering also relies on MicroPaver's History Report and other Village databases that relate pavement age to its past history or maintenance or rehabilitation work that was performed on each section. Previous maintenance history enables us to select strategies that perform best on a certain distress and also aids in scheduling when a strategy is applied.

Roadways (continued)

The pavement age, Preferred Pavement Maintenance & Rehabilitation Schedule, PCI Report, GIS PCI map, History Report and other databases are all used to develop a global level plan. Engineering then takes the streets with their global level identified maintenance or rehabilitation strategy and begins the process of developing individual projects. This is called the project level plan. Engineering utilizes several criteria when developing the project level plan. They include those identified in the global level plan as well as; geographic location, utility condition, other project plans, environmental and drainage issues, scheduling and patching versus total replacement.

By looking at the PCI map and the Schedule Engineering can begin to group individual pavement sections into an annual project based on geographic location. Grouping streets into a geographic area lowers the project cost by reducing mobilization costs and increasing contractor efficiency.

Each annual project is analyzed to determine if the condition of utilities within the project area could affect the project. Adjustments are then made to reduce duplication of work and minimize costs. This is also done for coordination of other project plans that could impact the roadway project.

The project is also evaluated for the presence of environmental factors and drainage issues. Environmental factors could include presence of wetlands, riparians or flood plains within the project area as well as pavement oxidation, stripping or raveling. If the roadway or adjoining properties are experiencing drainage issues then Engineering will consider the addition of a drainage component to the project. Only those meeting the Element Qualification Criteria for Project Inclusion as adopted by the Village Board in 2005 will be considered. See criteria in Appendix B.

Scheduling of projects will be reviewed to help minimize costs and to aid in prolonging pavement life. For instance, if a pavement section has already deteriorated beyond resurfacing Engineering may delay pavement reconstruction to obtain the maximum life of the pavement without jeopardizing safety or unduly increasing maintenance costs. The previous year's list of street projects identified for years 2 and three now become the present year's 1 and 2 list of street projects. They, however, are reevaluated to determine their existing condition and predicted rate of deterioration. The schedule may be adjusted based on this reevaluation of pavement conditions.

Engineering also evaluates the extent of patching required on a pavement section. Generally when 30% or more of the pavement area must be patched it is usually cheaper to replace the entire pavement rather than performing patching.

Roadways (continued)

Some projects can be dictated by unfunded mandates. New IEPA regulations can and will continue to require the Village to upgrade our wastewater treatment plant.

Safety is a prime consideration when selecting projects. The Village follows IDOT, FHWA and AASHTO design standards to ensure all roads are properly engineered, constructed and signed. Safety deficiencies in old existing roadways will receive high consideration when selecting projects for inclusion into the CIP.

Infrastructure additions such as new roadways or landscaping enhancements are generally a result of Village Board action. Other additions such as the Lies Road Multi-Use Path were proposed by staff to efficiently and safely move pedestrians and bicyclists to the Town Center and to the West Branch Trail and Prairie Path systems. These projects are usually accompanied by outside funding sources and are always approved by the Village Board.

As new technologies and processes emerge Engineering will evaluate them and incorporate their use when justified. Engineering is currently evaluating perpetual and porous pavement designs.

Water & Sewer Utilities

The Village utilizes slightly different methods to select projects for water system improvements versus sanitary sewer projects. However generally the criteria used for both utilities include: material type, age, repair or maintenance history and condition assessment, regulations, system deficiencies, safety or security issues, scheduling and infrastructure additions.

Some types of material are more prone to a certain type of failure. Reinforced concrete pipe when exposed to sulfuric acid can experience deterioration, vitrified clay pipe has more joints and thus can be more susceptible to root intrusion. Polyvinyl chloride pipe has shown to split at corporations whereas cast iron pipe will tend to pit without cathodic protection. Some fire hydrant and valve bolts will corrode. If system elements constructed with a certain material type tend to deteriorate then they will be considered for inclusion into the CIP.

Age of a section or area of the system can be an indication the Village needs to repair, rehabilitate or replace it. However, this factor should not be considered the only justification for placing a project in the CIP. It can be a major factor when selecting sections for inspection or evaluation in assessing the system's condition.

Water & Sewer Utilities (continued)

Probably the most contributing factors for project selection would include the repair or maintenance history and the condition of the particular section. The historical number of water main breaks, sanitary sewer backups or over flows, pump breakdowns or other repairs provide a good indication that more permanent repairs or rehabilitations are needed. Public Works continues to monitor the repair and maintenance history of both systems. When a section begins to experience problems they are then considered for addition to the CIP. The severity and frequency of the problems will be used to help prioritize competing projects.

Regulations imposed by IEPA can require improvements or rehabilitations to the system. This is especially true for the Water Reclamation Center (WRC). Typically these regulations are in the form of unfunded mandates. The Village will assess the requirements, determine what improvements are necessary and schedule them so as to minimize the cost to the Village.

System deficiencies such as low water pressure or flow, inadequate looping redundancy, poor fire protection coverage, undersized sanitary sewers and pumps, or limited accessibility of service can contribute to CIP qualifications. As deficiencies are identified in the system they may be utilized to justify projects.

If a part of the water or sanitary sewer system is unsafe or could lead to an unsafe condition or poses a security risk they will receive the highest priority. These conditions when known, will be addressed promptly. Using GIS technologies the Village will also begin assessing the condition of our aging water and sanitary sewer infrastructure to determine not only these safety and security issues but also to identify existing distresses that require repair, rehabilitation or reconstruction. The Village will be undertaking a multi-year sanitary sewer system evaluation study (SSES) to determine sources of inflow and infiltration (I&) and identify repair projects. Removal of I&I will reduce treatment plant costs, lessen sanitary sewer overflows (SSOs) and damage caused by basement back-ups. These water and sanitary sewer system condition assessments will be a valuable tool used to justify and prioritize projects.

Scheduling of projects can be a determining factor when and if a project is programmed. Just as we schedule roadway projects to minimize costs and service disruption, we will do the same for our underground utilities. For instance if we are planning on widening a roadway and it results in our water main being under a substantial amount of pavement, we would probably recommend relocating the water main out from under the pavement to avoid costly restorations when repairing water main breaks.

Additions to our underground utility infrastructure can be justified by system deficiencies and also the need or desire to service presently unserved areas. There may be economic justifications to attract, add or retain businesses and sales tax generators as well as the need to protect our facility planning area or enhance our corridors.

Facilities

The Village Manager's office uses several criteria when determining whether or not a facility should be purchased, rehabilitated or reconstructed. This criterion includes a needs assessment, the urgency of the need and the ultimate impact on operational efficiencies.

Initially, a needs and/or space study will be conducted either by staff or through a consultant. The level of urgency will next be measured and finally, the impact on operational efficiencies of purchasing, rehabilitating, reconstructing or doing nothing will be evaluated. The actual selection of a facility will be based on the availability and adaptability of the facility.

Stormwater Utilities

Over the last several years there has been more focus placed on municipalities to address storm water quality issues. A multitude of problems exists within the Village involving illicit discharges, lack of public education and involvement, need for good housekeeping measures, pre and post construction best management practices (BMPs). NPDES and TMDL regulations have and will continue to drive storm water quality improvement. In addition the Village must continue to maintain and repair its storm water management system. The Village has developed a Storm Water Management Program that identifies how the Village will select, implement and fund any future projects. Stormwater studies will be performed to analyze alternatives and make final project determinations.

ACRONYMS

ADT	Average Daily Traffic
ARRA	American Recovery and Reinvestment Act
BAN	Bond Anticipation Note
BMP	Best Management Practice
C2000	Conservation 2000
CAFR	Comprehensive Annual Financial Report
CATS	Chicago Area Transportation Study
CDBG	Community Development Block Grant
CIP	Capital Improvement Program
CMAQ	Congestion Mitigation and Air Quality
COP	Certificate of Participation
CPF	Capital Projects Fund
DIP	Ductile Iron Pipe
DM&MC	DuPage Mayors & Managers Conference
DPC	DuPage County
DPC-DSWM	DuPage County Department of Stormwater Management
DTC	Depository Trust Company
EIC	Effective Interest Cost
EPA	Environmental Protection Agency
ESVCP	Extra Strength Vitrified Clay Pipe
FAST	Fixing America's Surface Transportation
FAUS	Federal Aid Urban System
FEMA	Federal Emergency Management Agency
FES	Flared End Section
FHWA	Federal Highway Administration
FMAP	Flood Mitigation Assistance Program
FPDDC	Forest Preserve District of DuPage County
FY	Fiscal Year
GASB	Government Accounting Standards Board

ACRONYMS

GAAP	Generally Accepted Accounting Principles
GCF	General Corporate Fund
GO	General Obligation
HBP	Highway Bridge Program
HMGP	Hazard Mitigation Grant Program
HUD	Housing and Urban Development
IDNR	Illinois Department of Natural Resources
IDOT	Illinois Department of Transportation
IEMA	Illinois Emergency Management Agency
IEPA	Illinois Environmental Protection Agency
IRS	Internal Revenue Service
ITEP	Illinois Transportation Enhancement Program
LAFO	Local Agency Functional Overlay
LAPP	Local Agency Pavement Preservation
LWCF	Land and Water Conservation Fund
LOC	Letter of Credit
MAP-21	Moving Ahead for Progress in the 21st Century Act
MFT	Motor Fuel Tax
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSRB	Municipal Securities Rulemaking Board
NFIP	National Flood Insurance Rate Program
NIC	Net Interest Cost
NPDES	National Pollutant Discharge Elimination System
NRMSIR	National Recognized Municipal Information Depositories
OS	Official Statement
OSLAD	Open Space Land Acquisition Development
P&I	Principal and Interest
PCI	Pavement Condition Index

ACRONYMS

POS	Preliminary Official Statement
PVC	Polyvinyl Chloride
RCP	Reinforced Concrete Pipe
RFP	Request for Proposal
RMS	Roadway Management System
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SEC	Securities and Exchange Commission
SID	State Information Depositories
SSA	Special Service Area
SSO	Sanitary Sewer Overflow
STP	Surface Transportation Program
TAP	Transportation Alternatives Program
TCM	Transportation Control Measure
TMP	Transportation Mobility Program
TEA 21	Transportation Equity Act for the 21 st Century
TIC	True Interest Cost
TIF	Tax Increment Financing
TMDL	Total Maximum Daily Load
W&S	Water & Sewer
WRC	Water Reclamation Center
WTRD	Wayne Township Road District

Appendix B

Preferred Pavement Maintenance & Rehabilitation Schedule

<u>Year</u>	<u>Maintenance Operation</u>
1	Preservative Seal
4	Fiberized Crackfill
5	Preservative Seal
8	Fiberized Crackfill
9	Preservative Seal
12	Restorative Seal
15	1st Resurfacing or Structural Overlay
16	Preservative Seal
19	Fiberized Crackfill
20	Preservative Seal
23	Fiberized Crackfill
24	Preservative Seal
27	Restorative Seal
30	2nd Resurfacing or Structural Overlay
31	Preservative Seal
34	Fiberized Crackfill
35	Preservative Seal
38	Fiberized Crackfill
39	Preservative Seal
42	Restorative Seal
45	Pavement Reconstruction

This is a general guideline. Maintenance operations depend on many variables including: traffic, construction techniques, material performance, environmental factors, etc.

Assumptions

1. Pavement Rejuvenation

- A fifth of the Village's total pavement area, or 336,000 square yards, will be done every year for preservative and restorative seals. This results in a street being sealed about every four to five years.
- Use a combined unit price of \$1.30/SY for preservative and restorative seals in 2016 dollars.

2. Fiberized Crackfill

- Approximately 13% of the Village's entire pavement area, or 224,000 square yards, will be crackfilled every year. This equates to a street being crackfilled about every seven to eight years.
- Use a unit cost of \$0.63/SY for fiberized crackfilling in 2016 dollars.

3. Pavement Patching

- Approximately 15,000 square feet will be patched every year.
- Use a unit cost of \$3.50/SF for pavement patching in 2016 dollars.

4. Resurfacing & Structural Overlays

- The 1st resurfacing or structural overlay is estimated at 15 years of age with the 2nd occurring at about 30 years of pavement age. This results in approximately 110,000 square yards of resurfacing/structural overlays being performed every year. Therefore, a street is resurfaced on average about every 15 years. Resurfacing, structural overlays and pavement reconstruction projects make up the Village's Flexible Pavement Program.

- Street resurfacing/structural overlay projects for year 1 of the Program will be based on actual selected streets and their appropriate quantities and adjusted unit prices whereas years 4 through 20 will be based on 110,000 square yards per year and the combined unit price adjusted for inflation.
- Use \$23.39/SY as a unit cost in 2016 dollars for street resurfacing and structural overlay projects.

5. **Pavement Reconstruction**

- The useful pavement life is estimated at approximately 45 years when a pavement reconstruction operation will then be performed bringing the pavement back to its original "like new" condition. This yields approximately 37,000 square yards of pavement reconstruction being performed every year. The amount of pavement reconstruction performed each year will be adjusted in accordance with the amount of total reconstruction that is being performed. Resurfacing, structural overlays and pavement reconstruction projects make up the Village's Flexible Pavement Program.
- Year 1 cost estimates will be based on actual selected streets and their appropriate area and adjusted unit prices whereas the following years will be based on 37,000 square yards per year (years 2-20) and the unit prices adjusted for inflation for pavement reconstruction projects.
- Use a unit cost in 2016 dollars of \$34.53/SY for pavement reconstruction projects.

Element Qualification Criteria for Project Inclusion

The following criteria are to be used for qualifying each infrastructure element for possible inclusion into a project. Only those that meet the criteria, are not correctable by alternative means rather than reconstruction or rehabilitation, may be considered for inclusion.

Drainage Projects

1. Ponding of water or icing four feet or more into the pavement as measured from the pavement edge for a minimum length of five feet twenty-four hours after a significant rainfall event or snow melt.
2. Ponding of water or icing at a sidewalk crosswalk, bus stop, gang mailboxes or other pedestrian paths with a minimum depth of one-half inch or a distance of 5' or greater twenty-four hours after a significant rainfall event or snow melt.
3. Significant water draining across a sidewalk, drive or street, which continues beyond forty-eight hours after a significant rainfall.
4. Overland flow routes that do not function properly.
5. No other means of mitigating the excessive flow, ponding or icing exist. It is the primary responsibility of the property owner to correct the problem.

Sidewalk Projects

1. Joint differential of one inch or more.
2. Those adjacent to curbs requiring depressions.
3. For individual Public works projects any sidewalk spalled (pitted with aggregate showing) cracked or otherwise damaged sidewalk over 50% of the panel. Those adjacent to a street maintenance project will only require 25% of the panel.

4. Generally, any sidewalk humped, dipped or deflected with a change in grade greater than $\pm 10\%$ unless specifically designed for a purpose, i.e. overland flow route drainage.
5. Those sidewalks meeting the drainage requirements as identified above.

Curb and Gutter Projects

1. Those requiring depressions.
2. For individual Public Works project any curb and gutter spalled (pitted with aggregate showing), cracked or otherwise damaged over 50% of the section. Those adjacent to a street maintenance project will only require 25% of the section.
3. Generally, any curb and gutter humped, dipped or deflected with a change in grade greater than $\pm 10\%$ unless specifically designed for a purpose, i.e. drainage.
4. Curb and gutter sections being rehabilitated that are adjacent to aprons may also require apron removal and replacements. In those instances where apron removal is necessary, the apron shall be removed and replaced to the next closest joint or sawn edge for concrete aprons and an eighteen-inch minimum width required for reconstruction of bituminous aprons. Replacement of all aprons or ribbons by the Village will be limited to only broom finished concrete and bituminous asphalt. All aprons or ribbons constructed with other materials including but not limited to stamped concrete, colored concrete, stamped asphalt, colored asphalt, brick pavers, exposed aggregate or California style finishes will only be replaced with broom finished concrete and bituminous asphalt materials.