FIVE YEAR
CAPITAL IMPROVEMENT PROGRAM

INCORPORATED 1880
RIVER FOREST
Proud Heritage
Bright Future

FY 2019 – 2023

Village of River Forest
Five Year Capital Improvement Program

The Five Year Capital Improvement Program (CIP) is a planning tool for the Village that seeks to identify major capital projects and a corresponding funding source for projects that are $10,000 or more.

The Five Year Capital Improvement Plan is prepared by staff and reviewed by the Village Board as the initial step toward preparing the annual budget. The Plan is generally amended during the budget process as determinations are made for items to be moved forward or to be deferred based on current information.

The CIP is divided into the following sections:

Buildings and Improvements **3 Facilities**

Village facilities include Village Hall which houses Administration, Finance, Building, Police, and Fire operations, the Public Works Garage and the Water Pumping Station, which are located in separate facilities.

Vehicles **51 vehicles in the fleet**

The vehicle section includes an inventory of all the Village vehicles and is subdivided by police, fire and public works vehicles. The detail page for each vehicle to be replaced in 2019 provides a photo of the vehicle, historical cost and repair information, a description of how the vehicle is used, and its life expectancy.

Equipment

The Equipment section lists the capital equipment items that need to be repaired, replaced or acquired new over the next five years. This section includes equipment for the Police, Fire, and Public Works operations.

Information Technology **94 computers/tablets, 1 physical server & several virtual servers**

The Village updated the inventory and study of its Information Technology System and completed various system improvements in FY 2017. Additional improvements continued in FY 2018 to address the Village's most immediate needs. A new long-range study of maintenance and improvements is scheduled to be completed in FY 2019 and will be used for future capital planning.

Streets, Sidewalks, Alleys **31.6 miles**

The Streets program includes annual street resurfacing, alley maintenance, sidewalk and curb maintenance as well as general street patching and maintenance. The annual Street Improvement Program is funded through Motor Fuel Tax (MFT) revenues.

Water and Sewer Improvements **76.5 miles of sewer and water mains**

The Village annually budgets for the maintenance and repair of the sewer system, including sewer lining, rehab and main repairs. The Village's water system serves a population of more than 11,000. Maintenance of the pumping station and distribution system is essential to the water utility's operation. Annual funding is recommended for water main replacement and rehabilitation. Water main replacement is recommended when a history of line failure or a lack of adequate fire flow exists. Fire flow is the quantity of water available for fire-suppression purposes in excess of that which is required for other purposes. When possible, water main replacement is scheduled to coincide with street improvements to limit the impact of construction activity to a particular area.

Equipment improvements at the Water Pumping Station can be found in this section.

Village of River Forest
Financing the Five Year Capital Improvement Program

The Five Year Capital Improvement Program (CIP) is financed through the following Village funds or particular revenue sources. The individual project sheet will indicate when the project is intended to be financed by a particular revenues source, such as a grant, within the fund. The proposed FY 2019 funding levels for each fund or source can be found below.

General Fund **$ 230,000**

The General Fund is the major operating fund in the Village's budget and provides for all activities not accounted for in other funds.

Motor Fuel Tax (MFT) **$ 600,000**

The State of Illinois has imposed a gas tax on the privilege of operating motor vehicles on public highways in Illinois. MFT dollars are collected by the State of Illinois and remitted to the municipality on a per capita basis.

Water & Sewer Fund **$ 744,000**

The Water and Sewer Fund includes the following revenue sources which assist in funding capital improvements: water and sewer charges and interest income. The Village received a loan through the IEPA to fund the Northside Stormwater Management Project to complete Phase I in FY 2016. The proceeds from the IEPA loan were reported in the Water and Sewer Fund.

Capital Equipment Replacement Fund (CERF) **$ 302,983**

The Capital Equipment Replacement Fund (CERF) is a capital projects fund where Administration, Police, Fire and Public Works Departments set aside funds each year for the eventual replacement of existing equipment and vehicles, and to avoid significant fluctuations in the operating budget from one year to the next. Revenues are provided by transfers from the General and Water and Sewer Funds.

Water & Sewer - CERF Fund **$ 475,605**

The Water & Sewer - CERF Fund is part of the above mentioned CERF, only this portion is funded from Water & Sewer revenues and provides for the eventual replacement of Public Works vehicles utilized for sewer and water functions.

Capital Improvements Fund **$ 1,585,400**

The Capital Improvements Fund is used to account for improvements to buildings, parking lots, municipal lighting systems, alleys, streets and information technology. Revenue sources include red light camera revenue, parking lot fees, grants as well as transfers from other funds.

Infrastructure Improvement Bond Fund **$ 250,000**

The Infrastructure Improvement Bond Fund is a new fund that utilizes the proceeds from the 2018 General Obligation Bond issued using the Village's available debt service extension base. These funds will be used to finance the Street Improvement Project.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Fiscal Year 2019 Budget

CATEGORY	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
Buildings and Improvements	235,740	150,000	55,000	-	32,000	472,740
Vehicles	556,983	417,345	283,457	828,053	477,367	2,563,205
Equipment	221,605	110,015	199,500	-	21,000	552,120
Information Technology	258,660	123,240	38,000	198,000	38,000	655,900
Streets, Sidewalks & Alleys	2,266,000	1,050,000	755,000	850,000	810,000	5,731,000
Water and Sewer Improvements	649,000	625,000	627,500	717,000	650,500	3,269,000
Total	**4,187,988**	**2,475,600**	**1,958,457**	**2,593,053**	**2,028,867**	**13,243,965**

PROPOSED FUNDING SOURCE	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
General Fund (GF)	230,000	235,000	235,000	245,000	245,000	1,190,000
Motor Fuel Tax Fund (MFT)	600,000	250,000	250,000	250,000	250,000	1,600,000
Water and Sewer Fund (WS)	744,000	705,000	697,500	787,000	720,500	3,654,000
Capital Equipment Replacement Fund (CERF)	302,983	380,345	283,457	828,053	432,367	2,227,205
CERF/WS	475,605	147,015	199,500	-	66,000	888,120
Capital Improvements Fund (CIF)	1,585,400	508,240	293,000	483,000	315,000	3,184,640
Infrastructure Improvements Bond Fund (IIBF)	250,000	250,000	-	-	-	500,000
Totals	**4,187,988**	**2,475,600**	**1,958,457**	**2,593,053**	**2,028,867**	**13,243,965**

Buildings and Improvements – Five Year Capital Improvement Program

The Buildings and Improvements section of the Capital Improvement Program (CIP) identifies proposed improvements to the Village Hall, including the Police and Fire Department areas, as well as the Public Works Garage. Proposed improvements may include repair, replacement or the rehabilitation of Village buildings. Building improvements at the Water Pumping Station are also included.

As with other sections of the CIP, these improvements are targeted for specific years and are financed through various methods such as the General Fund, Water and Sewer Fund, Capital Equipment Replacement Fund and the Capital Improvement Fund (CIF).

Improvements planned for FY 2019 include:

Improvement	Cost of Improvement	Funding Source	Nature of Project
Village Hall Second Floor Improvements	$ 90,740	CIF	Recommended
Garage Improvements	$ 120,000	CIF	Critical
Pumping Station Improvements	$ 25,000	WS	Critical
Total	**$ 235,740**		

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law.

Critical projects are highlighted in yellow.

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Buildings and Improvements
Fiscal Year 2019 Budget

	This Project is:	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total	Funding Source
Village Hall							-	
Village Hall Improvements	Recommended	-	70,000	55,000	-	32,000	157,000	CIF
Second Floor Improvements	Recommended	90,740	-	-	-	-	90,740	CIF
Public Works							-	
Garage Improvements	Critical	120,000	70,000	-	-	-	190,000	CIF
Pumping Station Improvements	Critical	25,000	10,000	-	-	-	35,000	WS
Total		**235,740**	**150,000**	**55,000**	**-**	**32,000**	**472,740**	

Proposed Funding Source	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
Water and Sewer Fund (WS)	25,000	10,000	-	-	-	35,000
General Fund	-	-	-	-	-	-
Capital Equipment Replacement Fund (CERF)	-	-	-	-	-	-
Capital Improvement Fund (CIF)	210,740	140,000	55,000	-	32,000	437,740
Totals	**235,740**	**150,000**	**55,000**	**-**	**32,000**	**472,740**

Buildings and Improvements

Village Hall Improvements	**FY 2019**	**$0**	**CIF**
	FY 2020	**$70,000**	**CIF**
	FY 2021	**$55,000**	**CIF**
	FY 2022	**$0**	**CIF**
	FY 2023	**$32,000**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2018	$7,303 (Repair to WSCDC HVAC unit)
FY 2017	$169,861 (Roof replacement)
FY 2015	$12,000 (Repair foundation and eliminate seepage: basement level adjacent to Fire Dept.)

Project Description & Justification

The Village Hall, located at 400 Park Avenue, was constructed in 1999 and houses the Village's administrative Staff, both the Police and Fire Departments, and the West Suburban Consolidated Dispatch Center (WSCDC). The majority of janitorial and maintenance tasks and operations are performed and coordinated by the Village's Custodian. Those tasks and operations that cannot be performed by in-house Staff are outsourced.

In 2013, DTZ (a UGL Company) was contracted to conduct a Facility Condition Assessment (FCA) of the Village Hall (referred to in DTZ's report as the Administration Building). The purpose of the assessment was to evaluate the overall condition of the buildings and sites, and provide information regarding the condition and life expectancy of the major components. A follow up to this assessment was conducted in 2016 by the Garland company to provide thermal scans of the current condition of the roof. Their report recommended roof replacement for this facility in FY 2017, as well as other building envelope improvements in the next five years. An evaluation will be performed by the mechanical maintenance contractor in FY 2019 to assess the working condition of all Village Hall HVAC units and determine if replacement is needed in the next five years as well.

The following facility improvements are recommended within the next two to five years:

	Repair/Improvement	Estimated Cost	Year
1.	Replace HVAC rooftop unit	$30,000	FY 2020
2.	Tuck-pointing improvements	$40,000	FY 2020
3.	Replace roof above 2nd floor (WSCDC area)	$55,000	FY 2021
4.	Replace HVAC rooftop unit	$32,000	FY 2023
	Total	$157,000	

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Buildings and Improvements

Village Hall Second Floor Improvements	**FY 2019**	**$90,740**	**CIF**
	FY 2020	**$0**	**CIF**
	FY 2021	**$0**	**CIF**
	FY 2022	**$0**	**CIF**
	FY 2023	**$0**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History
FY 2018 - $304,440

Project Description & Justification
The Village Hall, located at 400 Park Avenue, was constructed in 1999 and houses the Village's administrative Staff, both the Police and Fire Departments, and the West Suburban Consolidated Dispatch Center (WSCDC). The second floor of the Village Hall houses various staff workspaces, the Dispatch Center and the "Front Counter" where day to day business transactions between the Village and customers take place.

On any given day the Front Counter experiences a significant amount of foot traffic as residents and others pay bills, seek to discuss sensitive public safety matters, settle matters that were decided at monthly hearings, apply for building permits or various Village licenses and more. Space restrictions at the front counter make it difficult to process multiple customers at one time and may result in delayed customer service. Conference room space is also limited and in high demand, making it difficult to utilize those spaces to meet customer service needs.

Beyond the front counter is the office space and workstations of various Village employees. Many of the furnishings and fixtures were purchased gently used several years ago and are no longer consistent with the workspace efficiency needs of today's staff and operations. Finally, the layout of the workstations, fixtures and equipment do not provide the flexibility needed to accommodate staff changes. Once per week the Village utilizes a conference room as a staff workstation. When auditors are on site each year an alternative work station must be identified and the conference room is no longer available to accommodate customer needs. Further, there is a significant amount of space dedicated to the storage of paper files, however, the Village's robust electronic records management program has eliminated the need for some of the space. It can now be utilized for other purposes.

Village staff originally proposed a multi-phase Village Hall efficiency improvement and modernization project that would be completed over a three-year period at a total cost of $667,460. The scope of the project has since been modified to achieve cost savings and reduce the overall project cost to $395,180. The three phases of work will be completed at one time with the bulk of the costs incurred in by the end of FY 2018 and the remaining work completed during the first quarter of FY 2019. The scope of work includes reconstruction of front counter area and lobby to better serve customers, reconfiguration of workstations in the general office area and replacement of carpet.

Project Alternative

Because this project is anticipated to be substantially complete in FY 2018, there is no alternative proposed to complete the remaining work in FY 2019.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Buildings and Improvements - Public Works

Public Works Garage Improvements

FY 2019	**$120,000**	**CIF**
FY 2020	**$70,000**	**CIF**
FY 2021	**$0**	**CIF**
FY 2022	**$0**	**CIF**
FY 2023	**$0**	**CIF**

(●) Critical ( ) Recommended ( ) Contingent on Funding

Spending History

FY 2018	$265,189 (East, North, and South Wall Repair/Replacement and Replacement of 38 Windows)
FY 2017	$432,095 (Roof Replacement and West Parapet Wall Replacement)
FY 2016	$10,000 (Structural Engineering Analysis)

Project Description & Justification

The Public Works Garage, located at 45 Forest Avenue, is the facility that houses all vehicles, equipment, fuel (unleaded and diesel), road salt, and other materials (stone, asphalt, topsoil, etc.) and supplies necessary for Public Works Operations and Water/Sewer Divisions. The majority of janitorial and minor maintenance tasks and operations are performed and coordinated by Public Works personnel. Tasks and operations that cannot be performed in-house are outsourced.

The property on which the Public Works Garage stands was previously considered for redevelopment. As a result, the Village delayed needed improvements based on the possibility of site redevelopment.

Based on a structural engineering analysis and facility site assessment, the following critical and recommended facility improvements should be completed in FY 2019:

	Repair/Improvement	Estimated Cost	
1.	Grind & re-point west facing exterior wall	$ 70,000	FY 2019
2.	Replacement of windows, flag pole and "Public Works" sign on west side of the building	$ 50,000	FY 2019
	Total	$ 120,000	

The following prioritized facility improvements are recommended in the **next two to five years**:

	Repair/Improvement	Estimated Cost	Year
1.	Replace salt storage shed	$ 50,000	FY 2020
2.	Replace two overhead garage doors	$ 20,000	FY 2020
	Total	$ 70,000	

2019 Recommended Projects

The following is a summary of the improvements that are proposed for FY 2019:

1. Grind and re-point west facing exterior wall: Most of the bricks along all west exterior wall of the building are in need of tuck-pointing. This process would also match the existing bricks to the newly installed bricks in terms of mortar condition and stability.
2. Replacement of windows, flag pole and "Public Works" sign on west side of the building.

Project Alternative

The alternatives to the projects listed would be just to delay the work, which will result in further structural damage to the exterior walls of the building. If this deterioration continues, a project involving the replacement of the entire walls, or sections of walls, will be necessary and significantly more costly as that work may impact load bearing walls/structures in the facility.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Pumping Station Improvements

Water & Sewer

FY 2019	**$25,000**	**WS**
FY 2020	**$10,000**	**WS**
FY 2021	**$0**	**WS**
FY 2022	**$0**	**WS**
FY 2023	**$0**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2018	$98,500 Replace lower roof, 2nd floor windows and boiler with combination HVAC system
FY 2017	$4,995 (Replace/add exterior lighting fixtures)
FY 2016	$22,600 (Replace front door)

Project Description & Justification

The Pumping Station, located at 7525 Berkshire Street, is the facility that houses all pumps, piping, valves, and auxiliary equipment (including the SCADA controls) that are all central and critical to the operation of the Village's water distribution system. The majority of janitorial and minor maintenance tasks and operations are performed and coordinated by Water Division personnel. Tasks and operations that cannot be performed in-house are outsourced.

In 2013, the Village retained the services of DTZ (a UGL Company) to conduct a Facility Condition Assessment of the Pumping Station. The purpose of the assessment was to evaluate the overall condition of the buildings and sites, and provide information regarding the condition and life expectancy of the major components. The report summarizes the recommended projects involving improvements and maintenance to this facility.

The following critical and recommended facility improvement should be completed in FY 2019:

	Repair/Improvement	Estimated Cost
1.	Relocate ComEd owned transformers	$25,000
	Total	$25,000

The following prioritized facility improvement is recommended in the **next two to five years**:

	Repair/Improvement	Estimated Cost	Year
1.	Repair chimney and stucco coating	$10,000	FY 2020
	Total	$10,000	

2019 Recommended Projects

The following is a summary of the improvement that is proposed for FY 2019:

1. Remove ComEd owned transformers from inside facility: The building currently houses three large high voltage transformers owned by ComEd and used to provide power to the building and equipment. The transformers are separated from the common areas of the building, however, they share a common wall that contains all of the power and electrical switching equipment for the facility and pump operations. Failure of one or more of the transformers could result in: 1) Damage to electrical switching equipment; 2) A fire in the facility (The room does not contain a fire suppression system); 3) Contamination of the facility from cooling oil that is used inside the transformers. Each of these scenarios could interrupt pump operations, resulting in the loss of water to the community. Staff has received a preliminary estimate from ComEd for $20,000 to remove the transformers and mount them on a utility pole outside the facility.

Project Alternative

There are essentially no alternatives to these improvements and maintenance projects as the Pumping Station is a critically important facility that houses the operations center for the Village's water distribution system. Deferring these projects would result in emergency repairs that could increase project costs (compared to soliciting bids/proposals).

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Vehicles – Five Year Capital Improvement Program

The Village of River Forest recognizes the importance of maintaining, replacing and purchasing new vehicles to guarantee public safety and the efficient delivery of services. The following is a breakdown of current vehicular levels for all vehicles owned by the Village and the replacement schedule for FY 2019:

Improvement	Number of Vehicles to be Replaced in FY 2019	Cost of Vehicles to be Replaced in FY 2019	Total Number of Vehicles in Fleet
Building	-	$ -	2
Police	2	$ 85,983	18
Fire	3	$ 26,000	10
Public Works	1	$ 445,000	21
Total	**6**	**$ 556,983**	**51**

Financing

Projects in this section are financed through the Capital Equipment Replacement Fund (CERF).

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law.

These projects are highlighted in yellow.

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles
Fiscal Year 2019 Budget

Vehicles	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total	Funding Source
Police	85,983	130,345	81,957	128,053	140,367	566,705	CERF
Fire	26,000	38,000	26,500	700,000	230,000	1,020,500	CERF
Public Works	445,000	249,000	175,000	-	107,000	976,000	CERF & CERF/WS
Total	**556,983**	**417,345**	**283,457**	**828,053**	**477,367**	**2,563,205**	

Proposed Funding Source	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
Capital Equipment Replacement Fund (CERF)	302,983	380,345	283,457	828,053	432,367	2,227,205
CERF- Water and Sewer (CERF/WS)	254,000	37,000	-	-	45,000	336,000
Water and Sewer Fund (WS)	-	-	-	-	-	-
Totals	**556,983**	**417,345**	**283,457**	**828,053**	**477,367**	**2,563,205**

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Police
Fiscal Year 2019 Budget

Police Department	Year	Vehicle #	This Project is:	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total	Funding Source
Marked Squad Car	2018	1	Recommended	-	-	45,779	-	-	45,779	CERF
Marked Squad Car	2015	2	Recommended	44,073	-	-	47,462	-	91,535	CERF
Marked Squad Car	2015	3	Recommended	-	45,490	-	-	48,988	94,478	CERF
Marked Squad Car	2016	4	Recommended	41,910	-	-	45,132	-	87,042	CERF
Marked Squad Car	2016	5	Recommended	-	40,192	-	-	43,282	83,474	CERF
Marked Squad Car	2017	6	Recommended	-	44,663	-	-	48,097	92,760	CERF
Detectives Vehicle	2017	12	Recommended	-	-	-	35,459	-	35,459	CERF
Chief's Vehicle	2015	17	Contingent	-	-	36,178	-	-	36,178	CERF
Marked Patrol	2009	7	N/A	These vehicles are replaced with used police vehicles.					-	
Unmarked Traffic/Patrol	2013	8	N/A						-	
Crime Prevention- Taurus	2013	9	N/A						-	
Deputy Chief's Vehicle	2007	11	N/A						-	
Admin Pool Vehicle	2000	14	N/A						-	
Covert Detective Ford Fusion	2015	15	N/A						-	
Patrol Commander-Taurus	2013	16	N/A						-	
Total				**85,983**	**130,345**	**81,957**	**128,053**	**140,367**	**566,705**	

Proposed Funding Source		Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
Capital Equipment Replacement Fund (CERF)		85,983	130,345	81,957	128,053	140,367	566,705
Totals		**85,983**	**130,345**	**81,957**	**128,053**	**140,367**	**566,705**

Vehicles - Police

Marked Squad Car	**FY 2021**	**$45,779**	**CERF**
Squad 1	**FY 2024**	**$49,298**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Explorer PUV
Year	2018
Cost	$42,510
Useful Life	3 yrs
Current Life	0 (Ordered)

Project Description & Justification

The estimated cost to replace Squad #1 in FY 2021 is $45,779. The estimated cost of the vehicle incorporates $9,000/car for equipment and installation, which includes exterior Police markings, light emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date for this unit is pending delivery, which is expected February 2018. The current mileage is 0 (as of 10/31/17). The average monthly miles driven is 0. Estimated mileage at time of replacement: 80,000.

Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units and forward facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs FY 2018-2021	
Routine Maintenance as of November, 2017	$0 (0 @ 0)
Cost of Repairs While Under Warranty (3-yr/36,000)	$0
Total Spent on Maintenance and Repairs	$0

Project Alternative

Due to the nature of the use, deferral beyond three years is not recommended for patrol vehicles. The reliability decreases as age increases, and maintenance and repair costs often increase.

Operational Impact

These cars are used extensively for patrol activities, so breakdowns have a direct impact on the department's ability to respond to requests from residents, provide traffic control, respond to complaints of criminal activity, and perform routine investigations.

Project Impact

Annual $ Impact on Operating Budget	**Description of Operating Budget Impact**
Approximately $2,735	Routine maintenance and periodic repairs

Carryover History

None

Vehicles - Police

Marked Squad Car	**FY 2019**	**$44,073**	**CERF**
Squad 2	**FY 2022**	**$47,462**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Dodge
Model	Charger AWD
Year	2015
Cost	$39,928
Useful Life	3 yrs
Current Life	2 yrs

Project Description & Justification

The estimated cost to replace Squad #2 is $44,073. The estimated cost of the vehicle incorporates $9,000/car for equipment and installation, which includes exterior Police markings, light emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date was May 1, 2015. The current mileage is 40,955 (as of 10/31/2017). The average monthly miles driven is 1,365. Estimated mileage at time of replacement: 59,000. This vehicle will be kept in the fleet as a secondary-line vehicle, and will replace an older secondary fleet vehicle with higher mileage in FY 2019. It should be noted that this vehicle had over ten warranty covered repairs at the dealership, which put the car out of service for over three months. This vehicle purchase was deferred from FY 2018 to FY 2019.

Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units and forward facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs FY 2015-2019	
Routine Maintenance as of November, 2017	$2,939 (22 @ 133.60)
Cost of Repairs While Under Warranty	$0
Total Spent on Maintenance and Repairs	$2,939

Project Alternative

Due to the nature of the use, deferral beyond three years is not recommended for patrol vehicles. The reliability decreases as age increases, and maintenance and repair costs often increase.

Operational Impact

These cars are used extensively for patrol activities, so breakdowns have a direct impact on the department's ability to respond to requests from residents, provide traffic control, respond to complaints of criminal activity, and perform routine investigations.

Project Impact

Annual $ Impact on Operating Budget	**Description of Operating Budget Impact**
Approximately $2,735	Routine maintenance and periodic repairs

Carryover History

This vehicle was scheduled for replacement in FY 2018 but has been deferred to FY 2019.

Vehicles - Police

Marked Squad Car	**FY 2020**	**$45,490**	**CERF**
Squad 3	**FY 2023**	**$48,988**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Explorer
Year	2016
Cost	$42,242
Useful Life	3 yrs
Current Life	Less than 1 yr

Project Description & Justification

The estimated cost to replace Squad #3 is $45,490. The estimated cost of the vehicle incorporates $9,000/car for equipment and installation, which includes exterior Police markings, light emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. Current mileage is 29,040 (as of 10/31/17). The actual in-service date was June 1, 2016. A new replacement vehicle was put in-service on June 1, 2016 due to the original vehicle being totaled out in an accident, which occurred on March 16, 2016. The average monthly miles driven is 1,708. Estimated mileage at time of replacement: 79,000. Once replaced, this car will then replace an older model in the fleet. This squad will be deferred from FY 2019 to FY 2020.

Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units and forward facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs FY 2016-2019	
Routine Maintenance as of November, 2017	$589 (10 @ $58.85)
Cost of Repairs While Under Warranty	$0
Total Spent on Maintenance and Repairs	$589

Project Alternative

Due to the nature of the use, deferral beyond three years is not recommended for patrol vehicles. The reliability decreases as age increases, and maintenance and repair costs often increase. Due to this car being replaced in June 2016, a one year deferral is recommended.

Operational Impact

These cars are used extensively for patrol activities, so breakdowns have a direct impact on the department's ability to respond to requests from residents, provide traffic control, respond to complaints of criminal activity, and perform routine investigations.

Project Impact

Annual $ Impact on Operating Budget	**Description of Operating Budget Impact**
Approximately $2,735	Routine maintenance and periodic repairs

Carryover History

This vehicle was scheduled for replacement in FY 2019 but has been deferred to FY 2020.

Vehicles - Police

Marked Squad Car	**FY 2019**	**$41,910**	**CERF**
Squad 4	**FY 2022**	**$45,132**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Explorer
Year	2016
Cost	$38,918
Useful Life	3 yrs
Current Life	1 yr

Project Description & Justification

The estimated cost to replace Squad #4 is $41,910. The estimated cost of the vehicle incorporates $9,000/car for equipment and installation, which includes exterior Police markings, light emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date was November 1, 2015. The current mileage is 45,793 (as of 10/31/17). The average monthly miles driven is 1,908. Estimated mileage at time of replacement: 82,000. Once replaced, this car will then replace an older model in the fleet or will be disposed of at auction.

Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units and forward facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs FY 2016-2019	
Routine Maintenance as of November, 2017	$2,190 (16 @ $136.90)
Cost of Repairs While Under Warranty	$0
Total Spent on Maintenance and Repairs	$2,190

Project Alternative

Due to the nature of the use, deferral beyond three years is not recommended for patrol vehicles. The reliability decreases as age increases, and maintenance and repair costs often increase.

Operational Impact

These cars are used extensively for patrol activities, so breakdowns have a direct impact on the department's ability to respond to requests from residents, provide traffic control, respond to complaints of criminal activity, and perform routine investigations.

Project Impact

Annual $ Impact on Operating Budget	**Description of Operating Budget Impact**
Approximately $2,735	Routine maintenance and periodic repairs

Carryover History

None

Vehicles - Police

Marked Squad Car	**FY 2020**	**$40,192**	**CERF**
Squad 5	**FY 2023**	**$43,282**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Dodge
Model	Charger AWD
Year	2016
Cost	$36,412
Useful Life	3 yrs
Current Life	2 yrs

Project Description & Justification

The estimated cost to replace Squad #5 is $40,192 in FY 2020. The estimated cost of the vehicle incorporates $9,000/car for equipment and installation, which includes exterior police markings, light emitting diode (LED) light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date was February 1, 2016. The current mileage is 28,082 (as of 10/31/17). The average monthly miles driven is 1,337. Estimated mileage at time of replacement: 60,000. This vehicle will be kept in the fleet as a secondary line vehicle to be used for crime prevention or back-up patrol vehicle. Due to the low mileage, it is recommended this squad be deferred to FY 2020 instead of being replaced in FY 2019.

Vehicle Description

This vehicle is a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units and forward facing video cameras. As the vehicles are rotated out of the fleet, the laptops, radars, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs FY 2016-2019	
Routine Maintenance as of November, 2017	$2,265 (15 @ $151.00)
Cost of Repairs While Under Warranty	$0
Total Spent on Maintenance and Repairs	$2,265

Project Alternative

Due to the nature of the use, deferral beyond three years is not recommended for patrol vehicles. The reliability decreases as age increases, and maintenance and repair costs often increase.

Operational Impact

These cars are used extensively for patrol activities, so breakdowns have a direct impact on the department's ability to respond to requests from residents, provide traffic control, respond to complaints of criminal activity, and perform routine investigations.

Project Impact

Annual $ Impact on Operating Budget	**Description of Operating Budget Impact**
Approximately $2,735	Routine maintenance and periodic repairs

Carryover History

This vehicle was scheduled for replacement in FY 2019 but has been deferred to FY 2020.

Vehicles - Police

Marked Squad Car	**FY 2020**	**$44,663**	**CERF**
Squad 6	**FY 2023**	**$48,097**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Explorer
Year	2017
Cost	$41,474
Useful Life	3 yrs
Current Life	Less than 1 yr

Project Description & Justification

The estimated cost to replace Squad #6 is $44,663. The estimated cost of the vehicle incorporates $9,000/car for equipment and installation, which includes exterior police markings, light emitting diode (LED) light bar, automatic license plate reader, and miscellaneous items needed to facilitate the installation of major components. The in-service date was December 29, 2016. The current mileage is 19,010 (as of 10/31/17). The average monthly miles driven is 1,728. Estimated mileage at time of replacement: 77,000. The condition of these vehicles will be analyzed when they are removed from service to determine if they are suitable to be rotated to another department for administrative use, or if they should be disposed of at auction.

Vehicle Description

The recommended replacement model is a Ford Explorer. This vehicle would serve as a multi-purpose utility vehicle for deploying the speed trailer and rapid deployment equipment. It will also house the Automatic License Plate Reader System. This vehicle will be a marked squad car used for daily patrol activities. The unit is equipped with laptop computers, moving radar units and forward facing video cameras. As the vehicles are rotated out of the fleet, reusable laptops, radars, video equipment will be removed and reinstalled in the new cars.

Maintenance Costs FY 2017-2020	
Routine Maintenance as of November, 2017	$650 (7 @ $92.79)
Cost of Repairs While Under Warranty	$0
Total Spent on Maintenance and Repairs	$650

Project Alternative

Due to the nature of the use, deferral beyond three years is not recommended for patrol vehicles. The reliability decreases as age increases, and maintenance and repair costs often increase.

Operational Impact

These cars are used extensively for patrol activities, so breakdowns have a direct impact on the department's ability to respond to requests from residents, provide traffic control, respond to complaints of criminal activity, and perform routine investigations.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
Approximately $2,735	Routine maintenance and periodic repairs

Carryover History

None

Vehicles - Police

Dodge Durango Primary Detectives Vehicle	**FY 2022**	**$35,459**	**CERF**
Squad 12	**FY 2027**	**$40,119**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Dodge
Model	Durango
Year	2017
Cost	$31,341
Useful Life	5 yrs
Current Life	1 yr

Project Description & Justification

The estimated cost to replace unit #12 is $35,459. The estimated cost of the vehicle incorporates an all-wheel drive SUV, $9,000 for covert equipment and installation, including hidden light emitting diode (LED) emergency lights, radio antennae, and miscellaneous items needed to facilitate the installation of major components. The in-service date was October 1, 2016. The current mileage is 3,210 (as of 10/31/17). The average monthly miles driven is 268. Estimated mileage at time of replacement: 40,380. Depending on the condition of the vehicle at replacement time, this vehicle can be deferred or can be rotated as the secondary Detective Unit, a tactical vehicle, or school vehicle.

Vehicle Description

This is an unmarked detective unit used daily for criminal investigations, tactical patrol, and covert surveillance. The unit is equipped with hidden emergency lights, a laptop computer, and car radios. The vehicle is set up to store protective gear and additional weapons systems.

Maintenance Costs FY 2017-2022	
Routine Maintenance as of November, 2017	$0 (0 @ $0.00)
Cost of Repairs While Under Warranty	$0
Total Spent on Maintenance and Repairs	$0 *

*Car has been in-service for only one year

Project Alternative

Due to the nature of the use, deferral beyond its estimated life is not recommended for a tactical vehicle. The reliability decreases as age increases, and maintenance and repair costs often increase.

Operational Impact

Breakdowns have a direct impact on the department's ability to respond to and investigate criminal activity. In addition, the Department depends on unmarked/covert units to perform a myriad of surveillance, tactical, investigative and, and arrest functions for the community.

Project Impact

Annual $ Impact on Operating Budget	**Description of Operating Budget Impact**
Approximately $2,735	Routine maintenance and periodic repairs

Carryover History

None

Vehicles - Police

Chief's Vehicle	**FY 2021**	**$36,178**	**CERF**
Squad 17	**FY 2027**	**$41,955**	**CERF**

○ Critical ○ Recommended ◉ Contingent on Funding

Make	Ford
Model	Explorer
Year	2015
Cost	$31,196
Useful Life	6 yrs
Current Life	3 yrs

Project Description & Justification

The cost to replace the Chief's vehicle is estimated at $36,178 for a 2021 Ford Explorer. The estimated cost of the vehicle incorporates $6,000 for equipment and installation. The in-service date was January 2015. The Chief will pass down the 2015 Ford Explorer to the Deputy Chief upon replacement. The current mileage is 34,182 as of 10/31/17. The average monthly miles driven is 1,036. The estimated mileage at replacement is 88,162.

Vehicle Description

The Ford Explorer is slightly less expensive than the base price of the Ford Taurus PPV (the replacement for the Ford Crown Victoria). The AWD Ford Explorer has a similar MPG (16/28 MPG) to the Ford Taurus (19/29). The vehicle is used daily, and is equipped with radios, hidden emergency lights, and storage for protective equipment and weapon systems.

Maintenance Costs FY 2015-2021	
Routine Maintenance as of November, 2017	$431 (9 @ 47.94)
Cost of Repairs While Under Warranty	$0
Total Spent on Maintenance and Repairs	$431

Project Alternative

As the vehicle ages the repair costs will increase which is not desirable with a fixed maintenance budget. This vehicle will maintain the six year replacement schedule.

Operational Impact

Although this vehicle is not used as extensively as the front line squad cars, it is used to respond to emergencies and should be in good operational condition.

Project Impact

Annual $ Impact on Operating Budget	**Description of Operating Budget Impact**
Approximately $2,735	Routine maintenance and periodic repairs

Carryover History

This vehicle was deferred from FY 2012 to FY 2016 due to low mileage and other budget considerations. These considerations will be evaluated again in FY 2021.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Fire
Fiscal Year 2019 Budget

Fire Department	Year	Vehicle #	This Project is:	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total	Funding Source
Administrative Vehicle	2006	200	Recommended	26,000	-	-	-	-	26,000	CERF
Administrative Vehicle	2011	201	Recommended	-	-	26,500	-	-	26,500	CERF
Ambulance	2015	215	Recommended	-	-	-	-	230,000	230,000	CERF
Utility Pick-up Truck	2006	218	Contingent	-	38,000	-	-	-	38,000	CERF
Pumper	2001	222	Recommended	-	-	-	700,000	-	700,000	CERF
Ambulance	2006	214	-	This vehicle is a reserve and replaced with frontline upon purchase					-	
Fire Prevention Bureau Vehicle	2009	299	Contingent	This vehicle is replaced with used police vehicles					-	
Total				**26,000**	**38,000**	**26,500**	**700,000**	**230,000**	**1,020,500**	

Proposed Funding Source	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
Capital Equipment Replacement Fund (CERF)	26,000	38,000	26,500	700,000	230,000	1,020,500
Totals	**26,000**	**38,000**	**26,500**	**700,000**	**230,000**	1,020,500

Vehicles - Fire

Administrative Vehicle - C200 **FY 2019** **$26,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Crown Victoria
Year	2006
Cost	$23,145
Useful Life	6 years
	4 years fleet (training & pool)
Current Life	11 years

Vehicle Description

C200 is the administrative vehicle assigned as transportation for training. The vehicle is purchased through the State of Illinois Central Management Service (CMS) program or at a local dealer that will match the cost in the State Purchasing program. This vehicle is outfitted with emergency lights and siren for emergency response and administrative function. The replacement vehicle will become the Chief's vehicle.

Vehicle	Year	Date	Road Mileage
C-200	2006	11/2017	142,290

Maintenance Costs for Past 2.5 Years	
Routine Maintenance as of November, 2017	$123 (2 items)
Cost of Repairs	$3,133 (6 items)
Total Spent on Maintenance and Repairs	$3,256

Project Alternative

- Purchase an all-wheel drive SUV to place in service for severe weather conditions. This provides better traction ability during response in extreme weather conditions (four wheel vs. two wheel drive).
- Purchase a Hybrid, Electric or Natural Gas vehicle for fuel efficiency. This will require the installation of a refueling/recharging system or identification of a system nearby.
- Maintain current vehicle for another year and re-evaluate next budget.

Operational Impact

This vehicle was originally scheduled for a five year useful life that was extended to 11 years. This vehicle will be traded-in or sold at auction and removed from the Village fleet.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
Normal reduction in maintenance costs; $500 Preventative maintenance	Reduce maintenance on fleet by providing new, warranty driven apparatus, replacing older, costlier vehicle

Carryover History

This vehicle was carried over from FY 2012

Vehicles - Fire

Administrative Vehicle - C201 **FY 2021** **$26,500** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Escape
Year	2011
Cost	$19,058
Useful Life	10 years (6 frontline)
Current Life	6 years

Vehicle Description

C201 is the administrative vehicle currently assigned to the Fire Chief. This vehicle is purchased through the State of Illinois Central Management Service (CMS) program or at a local dealer that will match the cost in the State Purchasing program. This vehicle is equipped with emergency lights and siren for emergency response and administrative function and serves as an incident command vehicle at emergency scenes. This vehicle will become the Fire Marshal's inspection vehicle when C200 is replaced.

Vehicle	Year	Date	Road Mileage
C-201	2011	11/2017	70,595

Maintenance Costs for Past 2.5 Years	
Routine Maintenance as of November, 2017	$173 (5 items)
Cost of Repairs	$3,189 (4 items)
Total Spent on Maintenance and Repairs	$3,362

Project Alternative

- Purchase an all-wheel drive SUV to place in service for severe weather conditions. This provides better traction ability during response in extreme weather conditions (four wheel vs. two wheel drive).
- Maintain current vehicle for another year and re-evaluate next budget.

Operational Impact

This vehicle was originally scheduled for a six year useful life. The requested vehicle will replace the 2011 Ford Escape, that then will be used for fire prevention, travel, and provide an auxiliary vehicle in the Village fleet for other departments.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
Normal reduction in maintenance costs; $500 Preventative maintenance	Reduce maintenance on fleet by providing new, warranty driven apparatus, replacing older, costlier vehicle

Carryover History

Purchase is being deferred to FY 2021

Vehicles - Fire

Ambulance - A215 **FY 2023** **$230,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	F-450 Wheeled Coach
Year	2015
Cost	$172,906
Useful Life	8 years
	4 years fleet (shared reserve)
Current Life	3 years

Vehicle Description

A-215 is a Type III (van style front chassis) and serves as an Advance Life Support (ALS) transport vehicle. Staffed with two firefighter/paramedics, Ambulance 215 responds to an average of 1,100 EMS calls per year. This vehicle operates to treat and transport accident victims and patients of illness to local hospitals. An innovative lifting system (Stryker Power System) is included in the cost of the new vehicle as an additional resource to minimize firefighter injuries due to bariatric (heavy) patients.

Vehicle	Year	Date	Road Mileage
A-215	2014	11/2017	20,253
A-214	2006	11/2017	52,015

Maintenance Costs for Past 2.5 Years	
Routine Maintenance	
215	$977 (3 items)
214 (Shared reserve unit)	$0
Cost of Repairs	
215	$125 (2 items)
214 (Shared reserve unit)	$2,978 (3 items)
Total Spent on Maintenance and Repairs	
215	$1,102
214 (Shared reserve unit)	$2,978

Repair Description

Ambulance 215 is in its third year of service.

Ambulance 214 (Reserve) has experienced several mechanical issues that are resolved. This vehicle had its engine replaced in FY 2016.

Project Alternative

- Eliminate the Stryker Power Lift system for a savings of $40,000.

Operational Impact

This vehicle is in the fourth year of a planned eight year useful life expectancy. The reserve ambulance is shared with the Village of Forest Park and an evaluation will be made to determine its disposition as to keeping it as a reserved/shared vehicle.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$1,000	Preventative maintenance

Carryover History

None

Vehicles - Fire

Administrative Vehicle – C218 **FY 2020** **$38,000** **CERF**

○ Critical ○ Recommended ◉ Contingent on Funding

Make	Ford
Model	F-250
Year	2006
Cost	$35,000
Useful Life	8 years
Current Life	11 years

Vehicle Description

C218 is the utility vehicle assigned to Haz-Mat & Technical Rescue. This vehicle is purchased through the State of Illinois Central Management Service (CMS) program or at a local dealer that will match the cost in the State Purchasing program. This vehicle is four-wheel drive for extreme weather conditions, and is equipped with emergency lights and siren for emergency response. It has the ability to tow safety trailers, along with the CCC trailer. Additionally, this vehicle serves as the Incident Command vehicle in situations of disaster. This vehicle will be sold or will become a pool car after its useful life.

Vehicle	Year	Date	Road Mileage
C-218	2006	11/2017	12,567

Maintenance Costs for Past 2.5 Years	
Routine Maintenance as of November, 2016	$123 (1 item)
Cost of Repairs	$98 (1 item)
Total Spent on Maintenance and Repairs	$221

Project Alternative

- Purchase an all-wheel drive SUV to place in service for severe weather conditions. This provides better traction ability during response in extreme weather conditions (four wheel vs. two wheel drive).
- Maintain current vehicle for another year and re-evaluate next budget.

Operational Impact

This vehicle was originally scheduled for an eight year useful life. The vehicle will replace the current vehicle used by Haz-Mat & Technical Rescue. The replaced vehicle can be utilized for school, training, travel, and auxiliary vehicle in the Village fleet for other departments, or sold at auction.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
Normal reduction in maintenance costs $500 preventative maintenance	Reduce maintenance on fleet by providing new, warranty driven apparatus, replacing older, costlier vehicle

Carryover History

This vehicle was carried over from FY 2014 and will be reevaluated for FY 2020.

Vehicles - Fire

Pumper - E222 **FY 2022** **$700,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Darley
Model	Pumper
Year	2001
Cost	$326,000
Useful Life	10 years front line + 10 years reserve
Current Life	16 years

Vehicle Description

E-222 is a 1,500-gallon per minute fire pumper with a 750-gallon water tank and a full complement of fire hose, ladders and equipment. This vehicle meets NFPA 1901 and Insurance Services Office (ISO) criteria for a Class 'A' Pumper. A Class A pumper entails the following pumping requirements: 100% pump capacity at 150psi, 70% capacity at 200psi, and 50% at 250psi. Class B pumps were found on older apparatus. They developed 100% pump capacity at 120psi, 70% at 200psi, and 50% at 250 psi.

Vehicle	Year	Date	Road Mileage	Engine Hours	Actual Mileage
E-222	2001	11/2017	77,630	11,015.3	275,383
*Fire and EMS vehicles use a conversion of 25 miles per engine hour due to the on scene time at an emergency call.					

Maintenance Costs for Past 2.5 Years	
Routine Maintenance	
222	$2,152 (6 items)
213	$0
Cost of Repairs	
222	$51,045 (17 items)
213	$0
Total Spent on Maintenance and Repairs	
222	$53,197
213	$0

Project Alternative

- Evaluate State of Illinois loan programs and federal grants
- Delay the purchase of this vehicle and incur increased maintenance cost and out of service time
- Sell this vehicle and purchase a used vehicle from another community that is newer

Operational Impact

This vehicle has been placed in reserve pumper status with Engine 213 moved to front line status. The need to maintain a reserve pumper exists when the front line Engine is down for maintenance or repair. It gives responding off-duty firefighters apparatus to respond with to run multiple calls when the front line pumper is in use. It also allows for mutual aid while maintaining a response pumper to provide adequate fire suppression within the Village.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
Reduction of Front-line Engine repairs (E-213)	Reduce maintenance on fleet by providing new, warranty driven apparatus, replacing older, costlier vehicle. Reduction in maintenance costs for first three years (warranty) on new vehicle and E-213 reduced by placing of 16 year old vehicle in reserve status.

Carryover History

None

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Public Works
Fiscal Year 2019 Budget

Public Works Department	Description	Vehicle Year	Vehicle #	This Project is:	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total	Funding Source
Pick-up Truck w/ Dump Body	Ford F350 Super Duty	2006	33	Critical	-	57,000	-	-	-	57,000	CERF
PickUp Truck	F550 Super Duty	2011	42	Critical	-	-	-	-	62,000	62,000	CERF
Large Int'l Dump Truck	International 4000 Series	1998	44	Critical	-	-	175,000	-	-	175,000	CERF
Aerial Truck	International 4400	2003	46	Critical	-	155,000	-	-	-	155,000	CERF
PickUp Truck	Ford F350 Super Duty	2012	48	Critical	-	37,000	-	-	-	37,000	CERF
Cargo Van	Dodge Sprinter	2006	64	Critical	63,000	-	-	-	-	63,000	CERF/WS
Sewer Truck	Vac-Con	2007	65	Critical	382,000	-	-	-	-	382,000	CERF/WS
Pick-Up Truck	Ford F350 Super Duty	2008	67	Critical	-	-	-	-	45,000	45,000	CERF/WS
Total					**445,000**	**249,000**	**175,000**	**-**	**107,000**	**976,000**	

Proposed Funding Source	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
Capital Equipment Replacement Fund (CERF)	191,000	212,000	175,000	-	62,000	640,000
CERF - Water and Sewer (CERF/WS)	254,000	37,000	-	-	45,000	336,000
Water and Sewer Fund (WS)	-	-	-	-	-	-
Totals	**445,000**	**249,000**	**175,000**	**-**	**107,000**	**976,000**

Vehicles - Public Works

Pickup Truck #33 **FY 2020** **$57,000** **CERF**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	Ford
Model	F350 Super Duty
Year	2006
Purchase Cost	$36,028
Purchased	FY 2007
Useful Life	8 years
Current Life	12 years

Vehicle Description

Various personnel in the Operations Division operate this truck. The vehicle is equipped with an eight foot stainless steel dump body, v-box salt spreader, nine foot power angling snowplow, emergency lighting, and two-way radio. This vehicle is used to plow and salt alleys and parking lots throughout the Village during snow removal operations.

Total Vehicle Miles	32,743 (As of 10/20/2017)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
9/2014	Battery	$182.30
1/2015	Repair brakes	$1,562.30
4/2015	Replace suspension parts	$423.40
4/2015	Replace suspension parts	$416.96
4/2016	Repair gauge cluster	$1,004.00
10/2016	Replace front suspension parts	$2,626.01
10/2016	Replace three tires	$600.00
12/2016	Oil and filter change	$110.00
	Total	**$6,924.97**

Project Alternative

This vehicle was originally scheduled for replacement in FY 2015. This vehicle is in good mechanical condition, therefore Staff recommends deferring its replacement to FY 2020. The vehicle will then be re-evaluated for replacement.

Operational Impact

This is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. A breakdown reduces the Village's snow removal response by a tenth and extends the time needed to complete snow removal operations. This unit is used for other operations (hauling materials) which would also be impacted if it were removed from the fleet.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

This vehicle was carried over from FY 2015

Vehicles - Public Works

Pickup Truck #42 **FY 2023** **$62,000** **CERF**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	Ford
Model	F550 Super Duty
Year	2011
Purchase Cost	$46,692
Purchased	FY 2011
Useful Life	12 years
Current Life	8 years

Vehicle Description

Various personnel in the Operations Division operate this truck. The vehicle is equipped with a dump body, v-box salt spreader, salt brine sprayer, nine foot power angling snowplow, emergency lighting, and two-way radio. This vehicle is used to apply salt brine solution to roadways, plow and salt alleys and parking lots throughout the Village during snow removal operations and hauling miscellaneous raw materials.

Total Vehicle Miles	15,514 (As of 10/26/2017)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
8/2016	Replace battery	$118.29
5/2017	Replace front suspension parts	$1,500.00
	Total	**$1,618.29**

Project Alternative

The alternative is to defer the purchase to later years.

Operational Impact

This is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. A breakdown reduces the Village's snow removal response by a tenth and extends the time needed to complete snow removal operations. This unit is used for other operations (hauling materials) which would also be impacted if it were removed from the fleet.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

None

Dump Truck #44 (previously #41) **FY 2021** **$175,000** **CERF**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	International
Model	4000 Series
Year	1998
Purchase Cost	$62,000
Purchased	FY 1998
Useful Life	12 years
Current Life	21 years

Vehicle Description

Various personnel in the Operations Division operate this truck. The vehicle is equipped with a 13 foot dump body, 11 foot power angling snowplow, dump body tarp, emergency lighting, and two-way radio.

Total Vehicle Miles	80,552 (As of 10/26/2017)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
3/2014	Replaced muffler, flexpipe, and slack adjusters	$1,210.64
12/2014	Replace turbo charger hose	$606.78
5/2015	Replace dump body lift cylinder	$3,278.16
10/2015	Replace hydraulic tank and weld crack in frame rail	$1,877.02
12/2015	Change oil and filters	$101.26
9/2017	Replace batteries	$230.00
Total		**$7,303.86**

Project Alternative

This vehicle was replaced in FY 2012 by truck #41. The vehicle was kept and refurbished in lieu of purchasing a new full size six wheel dump truck.

Background

Recognizing that both of the Village's Packer trucks (used for leaf removal) were in mechanically poor condition, staff reevaluated the Village's leaf collection program and determined that hauling leaves utilizing the dump truck fleet is the most operationally efficient means for collecting and transporting leaves. As a result, staff recommended disposing of #31 and rehabilitating the larger tandem axle dump truck (old #41) based on the following reasons:

1. Although the cab and chassis in old #41 is in good operating condition, the dump body was rusted with significant deterioration. That was the primary reason it was replaced in FY 2012.
2. Old #41 is a tandem axle truck and can transport a larger, heavier load compared to truck #31, which is a single axle dump truck.
3. The dump body on old #41 is approximately two feet longer and has higher sides compared to #31.

4. It was expected that truck #31 could be sold at public auction as surplus property for approximately $10,000 to $15,000. The vehicle actually sold for $23,350.

Staff recommended that the cab and chassis on dump truck #41 be reconditioned/ refurbished and that the dump body and some of the hydraulic controls be replaced. Costs associated with these improvements are as follows (CERF Expenditures):

- $7,000-Cab and chassis recondition/refurbish
- $19,153-Replace dump body and update hydraulic controls

Cost Comparison:

- Sale of truck #31: $23,350
- Cost to recondition current truck $26,153
- Purchase of a new dump truck: $120,000

This alternative allowed Public Works to maintain two tandem axle dump trucks in the fleet and extended the life of the old truck #41 by approximately seven years (replacement is scheduled in FY 2021). This is approximately half of the life cycle of a new dump truck. Public Works has a number of dump trucks scheduled for replacement in the coming two to three fiscal years and this alternative will help spread the replacement cycles of the dump truck fleet.

Operational Impact

This is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. A breakdown reduces the Village's snow removal response by a tenth and extends the time needed to complete snow removal operations. This unit is used for other operations (hauling materials) which would also be impacted if it were removed from the fleet.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

None

Vehicles - Public Works

Aerial Truck #46 **FY 2020** **$155,000** **CERF**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	International
Model	4400
Year	2003
Purchase Cost	$83,336
Purchased	FY 2003
Useful Life	15 years
Current Life	16 years

Vehicle Description

Various personnel in the Operations Division use this aerial truck. The vehicle is equipped with a 55' working height utility bucket, emergency lighting, and two-way radio. The vehicle is used for tree trimming, streetlight maintenance, traffic signal maintenance, and installing holiday decorations.

Total Vehicle Miles	15,534 (As of 10/26/2017) 11,430 Hours

Recent Maintenance Costs

Date	Maintenance Performed	Cost
12/2001	Repair PTO	$485.00
6/2012	Annual inspection	$900.00
7/2013	Replace AC blower motor	$128.00
6/2013	Replace PTO lines	$647.00
8/2013	Certification inspection	$900.00
1/2014	replace air filter and 2 belts	$114.75
2/2014	Repair heater module	$364.42
10/2015	Replace batteries	$207.26
10/2015	Certification inspection	$1,000.00
1/2017	Repair fuel system	$1,900.00
6/2017	Repair antilock brake sensor and modulating valve	$1,822.00
8/2017	Certification inspection	$1,100.00
9/2017	Repair brakes and leaking axle seal	$2,200.00
Total		**$11,768.43**

Project Alternative

This vehicle was originally scheduled for replacement in FY 2018. This vehicle is in good mechanical condition, therefore Staff recommends deferring its replacement to FY 2020. The vehicle will then be re-evaluated for replacement.

Operational Impact

This vehicle is the only aerial bucket truck in the fleet. Its primary use is tree trimming and streetlight maintenance and its secondary uses include building maintenance and assisting the Village with holiday decorating.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

This vehicle was carried over from FY 2018

Pickup Truck #48 — FY 2020 — $37,000 — CERF

◉ Critical ○ Recommended ○ Contingent on Funding

Make	Ford
Model	F350 Super Duty
Year	2012
Purchase Cost	$31,032
Purchased	FY 2012
Useful Life	8 years
Current Life	7 years

Vehicle Description

Various personnel in the Operations Division use this pickup truck to perform various tasks throughout the Village. This truck is equipped with emergency lighting, a two-way radio, and a nine foot angling snowplow, which is used for plowing alleys and parking lots during snow events.

Total Vehicle Miles	31,237 (As of 10/26/17)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
1/2015	Repair rear bumper	$365.00
Total		**$365.00**

Project Alternative

The alternative is to defer the purchase to later years.

Operational Impact

This is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. A breakdown reduces the Village's snow removal response by a tenth and extends the time needed to complete snow removal operations. This unit is used for other operations which would also be impacted if it were removed from the fleet.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

None

Vehicles - Public Works

Cargo Van #64 **FY 2019** **$63,000** **CERF/WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	Dodge
Model	Sprinter Cargo Van
Year	2006
Purchase Cost	$32,088
Purchased	FY 2006
Useful Life	10 years
Current Life	13 years

Vehicle Description

Various personnel in the Water Division use this cargo van. The vehicle is equipped with emergency lighting, a 2000 watt AC converter and two-way radio.

Total Vehicle Miles	54,871 (As of 10/26/2017)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
7/2013	Repair headlight and change cabin air filter	$153.00
10/2013	Replace driver's side wiper arm	$57.00
6/2014	Replace fan belt	$29.88
6/2014	Replace fan belt and pulleys	$544.82
6/2015	Replace batteries	$226.50
3/2016	Repair transmission	$668.68
3/2016	Repair transmission	$1,026.55
6/2016	Repair tail light, and blower motor	$161.49
7/2016	Repair AC system	$1,699.69
7/2016	Repair body damage	$725.00
10/2016	Repair blower motor	$100.00
12/2016	Repair heater	$870.00
5/2017	Replace water pump and rear brakes	$2,281.00
Total		**$8,543.61**

Project Alternative

This van was scheduled for replacement in FY 2016. Staff recommended replacing this vehicle in FY 2018 with a service body vehicle (pictured above right), but it was determined that the cost of the replacement vehicle exceeded the budgeted amount. As a result, staff suggested deferring the vehicle purchase another year to FY 2019 and adding additional funds to purchase a replacement. The old vehicle would be retained as a fully depreciated vehicle until major repairs are necessary, at which time it would be sold at auction.

Operational Impact

Used by the Water Department to carry all tools and equipment needed for water meter installations, meter readings, fire hydrant repairs, and water main breaks.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

This vehicle was carried over from FY 2016

Vehicles - Public Works

Sewer Truck #65	**FY 2019**	**$191,000**	**CERF**
	FY 2019	**$191,000**	**CERF/WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	Vac-Con
Model	
Year	2007
Purchase Cost	$231,537
Purchased	FY 2008
Useful Life	12 years
Current Life	11 years

Vehicle Description

This is the only vehicle of its type in the fleet and is used for routine sewer cleaning and responding to emergency sewer backups. The vehicle gives staff the ability to use high pressure water to jet clean and root cut sewer main lines. It is also equipped with a powerful vacuum system that removes debris from catch basins and sewer lines.

Total Vehicle Miles/Hours	11,683/4040 (As of 10/28/2016)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
2/2013	Replace both batteries	$208.00
5/2013	Replace PTO shaft	$835.00
10/2013	Replace suction tubing and water valves	$1,400.00
6/2014	Replace gaskets, gauges, catch basin flange, reducer	$550.00
8/2014	Replace suction hose	$205.00
5/2015	Replace fuel injectors	$9,947.78
5/2015	Replace water valve and suction hose	$364.31
11/2015	Repair hydrostatic pump	$1,938.38
1/2016	Replace in-out box on debris body	$8,984.16
12/2016	Oil change, air, fuel, and oil filters	$250.00
9/2017	Replace upper suction tube	$220.00
10/2017	Replace lower suction tube, flange and clamp	$215.00
10/2017	Replace main hydraulic pump	$11,000.00
Total		**$36,117.63**

Project Alternative

Alternative is to contract sewer cleaning.

Operational Impact

This piece of equipment was scheduled for replacement in FY 2020. Staff recommends replacing this vehicle in FY 2019 as the Village has incurred numerous expensive repairs totaling almost $40,000 since it was purchased. Worn major parts and rust have contributed to the majority of repairs. This vehicle is used to clean and televise all Village sewers and operates almost daily from early spring to late fall. It is also capable of hydro excavating areas in the parkway and roadways. Staff also recommends selling the old equipment at auction to offset the cost of the new unit.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

None

Pickup Truck #67 — FY 2023 — $45,000 — CERF/WS

(●) Critical ( ) Recommended ( ) Contingent on Funding

Make	Ford
Model	F350 Super Duty
Year	2015
Purchase Cost	$30,814
Purchased	FY 2015
Useful Life	8 years
Current Life	4 years

Vehicle Description

Various personnel in the Water Division use this pickup truck to respond to water service calls, JULIE locates, water system emergencies. This truck is equipped with emergency lighting, a two-way radio and a nine foot angling snowplow, which is used for plowing alleys and parking lots during snow events.

Total Vehicle Miles	12,766 (As of 10/26/17)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
Various dates	Three oil changes	$125.00
Total		**$125.00**

Project Alternative

The alternative is to defer the purchase to later years.

Operational Impact

This is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. A breakdown reduces the Village's snow removal response by a tenth and extends the time needed to complete snow removal operations. This unit is used for other operations which would also be impacted if it were removed from the fleet.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

None

Equipment – Five Year Capital Improvement Program

The Equipment section of the Capital Improvement Program (CIP) identifies which capital equipment items need to be repaired, replaced or acquired new over the next five years. This section of the CIP identifies all equipment other than vehicles, which are noted in their own section of the CIP.

As with other sections of the CIP, these improvements are targeted for specific years and are usually financed through the Capital Equipment Replacement Fund (CERF). The following improvements are proposed for FY 2019:

Equipment	Cost of Equipment	Funding Source	This Project is:
Pole Mounted Radar	$ 25,605	CERF	Recommended
SCBA Breathing Air Compressor (FD)	$ 45,000	CERF	Recommended
Alerting System (FD)	$ 61,000	CERF	Critical
Chipper 1800 Model (PW)	$ 90,000	CERF	Critical
Total	**221,605**		

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law.

These projects are highlighted in yellow.

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Equipment
Fiscal Year 2019 Budget

	This Project is:	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total	Funding Source
Police Department								
Overweight Truck Scales	Recommended	-	17,015	-	-	-	17,015	CERF
Pole Mounted Radar	Recommended	25,605	-	-	-	-	25,605	CERF
Village Hall Camera System	Recommended	-	-	49,500	-	-	49,500	CERF
Fire Department								
SCBA Air Compressor	Recommended	45,000	-	-	-	-	45,000	CERF
Alerting System	Critical	61,000	-	-	-	-	61,000	CERF
ALS Defibrillator 2	Contingent	-	25,000	-	-	-	25,000	CERF
Public Works								
Stump Grinder	Recommended	-	46,000	-	-	-	46,000	CERF
Stainless Steel V-Box Salt Spreader (Large)	Critical	-	22,000	-	-	-	22,000	CERF
Chipper - 1800 Model	Critical	90,000	-	-	-	-	90,000	CERF
Asphalt Kettle	Recommended	-	-	-	-	21,000	21,000	CERF
Fuel System Improvements	Critical	-	-	150,000	-	-	150,000	CERF
Total		**221,605**	**110,015**	**199,500**	**-**	**21,000**	**552,120**	

Proposed Funding Source	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
Capital Equipment Replacement Fund (CERF)	221,605	110,015	199,500	-	21,000	552,120
CERF - Water and Sewer (CERF/WS)	-	-	-	-	-	-
Totals	**221,605**	**110,015**	**199,500**	**-**	**21,000**	**552,120**

Overweight Truck Scales **FY 2020** **$17,015** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Original Purchase Date	FY 2006
Cost	$16,600
Funding History	N/A

Project Description & Justification

The Police Department currently owns four truck scales. These scales are placed under each of the tires of a suspected overweight vehicle. If determined to be overweight, the fine could be substantial depending on the violation. The Police Department conducts annual overweight truck enforcement missions and the dayshift patrol has a trained enforcement officer who does periodic enforcement, separate from the planned missions. Overweight trucks are a detriment to village streets because they decrease the life of the pavement through excessive wear. The scales are certified by the Illinois State Police annually. The useful life expectancy of the scales is ten years.

Project Alternative

Without the portable truck scales, the enforcement officers will have to seek alternate weigh scales. This would require the truck enforcement officer following the truck to an alternate location outside the Village's jurisdiction, increasing the amount of time on the traffic stop and increasing the unavailability of the officer. The purchase of this equipment may be deferred depending on the condition of the scales at the time of budget planning.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$1,000/year	Annual Re-certification of Equipment

Carryover History

Although the scales have reached their useful life expectancy, replacement of these scales has been carried over from FY 2018 and they are currently in full working order. Each year the scales are re-certified by the State of Illinois, and will require replacement only if found deficient by the State or newer, more efficient technology becomes available.

Pole Mounted Radar Speed Display Signs **FY 2019** **$25,605** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Original Purchase Date
Cost
Funding History New Equipment

Project Description & Justification

The Pole Mounted Radar Speed Display Signs are cost-effective solutions for traffic calming in residential neighborhoods, park areas, school zones, business districts, financial districts, and any location where vehicular, pedestrian, and bicyclist traffic are intermingled. The highly visible signs are strategically placed to get drivers' attention and provide an immediate reminder to slow down. The signs act as a 24-hour a day force multiplier to police patrol units and can be used to address/monitor citizen driven complaints. The signs assist in the Village's mission to provide professional public safety services and reduce accidents. The Public Works and Police Departments work together to identify locations where vehicles are known to travel at higher rates of speed and where increased risks to the general public need mitigation. The new pole mounted signs have software with the ability to conduct traffic counts and calculate average speed traveled, which will be beneficial to both the Police and Public Works Departments for engineering and enforcement analysis. In addition, the use of this type of software assists with providing accurate data for grant writing opportunities.

The Pole Mounted Speed Radar Signs come in two versions, a dual display with speed and message display, and the other a single speed display. The dual display requires hard wiring to be powered, while the single speed display can be solar powered. The dual hard-wired sign costs $4,696 and the single solar equipped sign costs $3,839. Staff recommends the purchase of six total signs split between hard-wired and solar, for a cost of $25,605.

Project Alternative

The alternatives to this equipment would be to have increased use of officers monitoring multiple areas for speeding violations and to purchase additional Speed Radar Trailers. Having speed radar equipment that can be mounted permanently or for extended periods of time is a more effective and efficient use of Village resources.

Project Impact

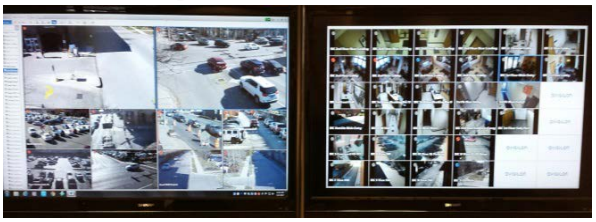
Annual $ Impact on Operating Budget	Description of Operating Budget Impact
Under warranty for one year	Periodic maintenance - battery

Carryover History

None

Village Hall Camera System **FY 2021** **$49,500** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding



Original Purchase Date	FY 2009
Cost	$350,000+
Funding History	N/A

Project Description & Justification

The Village currently has 33 fixed digital cameras located inside and around the exterior of Village Hall. The camera system is supported by software and hardwired to the server. The cameras can be monitored by supervisors, the dispatch center and patrol officers on their squad car laptops, or desktop computers. They are used to monitor the booking room, interview rooms, and prisoner cells along with the front doors and lobby. These cameras are fixed with the majority mounted inside the building, they have no moving parts therefore they have a longer useful life. The estimated life of this equipment is approximately 12 years. The Village's IT and camera vendor estimate the cost of camera replacement at $1,500 per camera.

Repair/Improvement	Estimated Cost	Fiscal Year
Replace internal cameras as needed (33 @ $1,500 per unit)	$ 49,500	FY 2021
Total Project Cost	**$ 49,500**	

Project Alternative

As with any technology the hardware and software becomes outdated and should be replaced with newer technology. The continuation of this program is highly recommended. These cameras assist with providing overall building security for employees, public officials, residents, and visitors.

Project Impact

There is no annual service fee for this program.

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	Once replaced there is no recurring annual costs for maintenance.

Carryover History

None.

SCBA Breathing Air Compressor **FY 2019** **$45,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Original Purchase Date	FY 1999
Cost	$17,200
Funding History	N/A

Project Description & Justification

The purpose of this project is to upgrade and replace the Air Compressor that fills the self-contained breathing apparatus (SCBA's). This piece of equipment is a specialized compressor with a specific filtering system necessary to fill the breathing air required for firefighters to enter an IDHL (immediately dangerous to life and health) atmosphere. Staff has delayed the scheduled purchase of a new SCBA air compressor because the current equipment is lasting longer than anticipated. However this piece of equipment is critical during times of fire suppression and training when SCBA's are in use.

Project Alternative

The alternative to this purchase is to continue maintenance of the piece of equipment and keep it usable for as long as possible; however, if the equipment fails and is not repairable immediate purchase would be required.

Project Impact

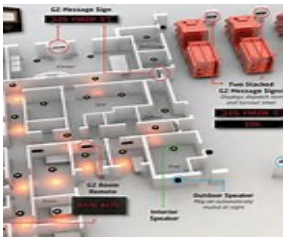
Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$1,500	Annual maintenance & flow testing after third

Carryover History

This item was carried over from FY 2017

Station Alerting System **FY 2019** **$61,000** **CERF**

◉ Critical ○ Recommended ○ Contingent on Funding



Original Purchase Date	FY 2000 (approximate)
Cost	Unknown
Funding History	N/A

Project Description & Justification

The purpose of this project is to upgrade and replace the Station Alerting System in the Fire Station. This equipment is a vital link between the Fire Department and West Suburban Consolidated Dispatch Center. 9-1-1 calls in River Forest are dispatched over the alerting system, providing the quick response times River Forest residents have come to expect.

The current Station Alerting System is approximately 18 years old (or older) and has served the Fire Department well. Over the last two years, the system has required significant repairs and has outlived its useful life. The current system's technology is extremely outdated. Although the system is currently functional, dispatches over the system are difficult to understand, potentially resulting in miscommunication and fire units responding to an incorrect location. Estimates to properly restore the current system to full function are at $40,000.

A new, state-of-the-art alerting system would provide many improvements. A computerized voice system would be clear and easy to understand. Upgraded speakers throughout the fire station would provide full coverage to all locations in the station. The tone ramp-up system incorporated into the Station Alerting System would prevent a shock to the firefighters' system at night by gradually building volume and light instead of the current full volume system. Message boards will give a visual signal for all dispatches, reinforcing the audio alert.

Project Alternative

The alternative to this purchase is to continue maintenance of the current piece of equipment and keep it usable for as long as possible. However, if the equipment fails and is not repairable, immediate purchase would be required. Lead time for a new system is six to nine months.

A second alternative is to either lease the system or finance the system. A seven year term for either of these options would cost $10,000 per year.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$3,200 – one year after five year warranty period.	Continue annual maintenance after warranty period.

Carryover History

None

ALS Defibrillator #2 **FY 2020** **$25,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Original Purchase Date	FY 2013
Cost	$23,200
Funding History	N/A

Project Description & Justification

The purpose of this project is to upgrade and replace the Advance Life Support (ALS) Defibrillator on the frontline ambulance. This piece of equipment is vital for the paramedics to provide life support care to cardiac and trauma patients. The new 12-lead cardiac monitor provides critical information to the paramedic in the field and emergency doctor in the hospital. Besides monitoring cardiac rhythms, the Life Pac 15 monitors carbon monoxide levels, pulse, blood pressures and delivers defibrillation (electric shock) to convert dangerous dysrhythmias.

Defibrillation is a common treatment for life-threatening, cardiac dysrhythmias. Defibrillation consists of delivering electrical energy to the affected heart through a set of affixed chest pads. Defibrillators are the only proven way to resuscitate a person who has had cardiac arrest who is still in ventricular fibrillation (V-fib) or ventricular tachycardia (V-tach). The success rate for V-fib patients receiving a first shock treatment is greater than 90%.

Project Alternative

The alternative to this purchase is to continue maintenance of the current piece of equipment and keep it usable for as long as possible. However, if the equipment fails and is not repairable, immediate purchase would be required. Lead time for defibrillators is approximately two months from purchase to receipt of units.

The Village's intent is to purchase and place the new ALS defibrillator on the front line ambulance and move current frontline equipment to ALS Engine 213.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$200 – one year after warranty period.	Continue annual maintenance after warranty

Carryover History

None

Stump Grinder **FY 2020** **$46,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Carlton
Model	7500
Purchase Cost	$20,000
Purchased	FY 2000
Useful Life	15 years
Current Life	19 years

Project Description & Justification

This equipment grinds tree stumps by means of a rotating cutting disk that chips away the tree stump located on Village right-of-way (typically the parkway). It is the only piece of equipment in the Village's fleet that can perform this operation.

Total Equipment Hours	1,131 (As of 10/26/2017)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
7/2013	Replace fan belt	$12.00
9/2013	Replace worn cutting teeth	$150.00
8/2014	Replace worn cutting teeth	$200.00
9/2014	Replace fan belt	$825.00
9/2014	Replace worn cutting teeth	$175.00
4/2015	Replace remote control	$678.45
Total		**$2,040.45**

Project Alternative

Alternatives to replacing the stump grinder in FY 2019 are as follows:

1. Defer replacing the system until it breaks down completely.
2. Purchase used stump grinder.
3. Lease a stump grinder.
4. Outsource all stump grinding services.
5. Incorporate stump grinding into the tree removal contract and maintain the current unit to grind stumps from in-house tree removals. This would reduce the work load on this piece of equipment by half or more and extend the life of the stumper.

Staff will analyze other alternatives and evaluate closer to the scheduled replacement of this equipment.

Operational Impact

Although there are alternatives for performing and/or providing for the removal of parkway tree stumps, not performing or providing this service would create trip hazard liabilities to the Village by eliminating the Village's capacity to remove tree stumps.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

The unit was originally scheduled for replacement in FY 2015, but since there have not been any significant maintenance issues, Staff recommends deferring its replacement to FY 2020.

Stainless Steel V-Box Salt Spreader (Large) **FY 2020** **$22,000** **CERF**

(●) Critical ( ) Recommended ( ) Contingent on Funding

Make	Swenson
Model	
Year	2006
Purchase Cost	$14,424
Purchased	FY 2007
Useful Life	12 years
Current Life	12 years

Project Description & Justification

The Village owns and utilizes three large front-line v-box salt spreaders that are used for snow fighting operations. This unit is also equipped with a liquid pre-wetting system that is used to melt snow and ice when temperatures are below twenty degrees.

Total Vehicle Miles	N/A

Recent Maintenance Costs

Date	Maintenance Performed	Cost
	None to date	
Total		**$0.00**

Project Alternative

Contractual salting and snow removal.

Operational Impact

Not having this unit would reduce the Village's ability to salt roadways by 33%.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

The unit was originally scheduled for replacement in FY 2019, but since there have not been any significant maintenance issues, Staff recommends deferring its replacement to FY 2020. The spreader will then be re-evaluated for replacement.

Brush Chipper-1800 Model **FY 2019** **$90,000** **CERF**

(●) Critical ( ) Recommended ( ) Contingent on Funding

Make	Vermeer
Model	BC1800
Purchase Cost	$29,755
Purchased	FY 2000
Useful Life	10 years
Current Life	19 years

Project Description & Justification

This unit (1800 model) is one of two chippers used by the Public Works Department to chip tree debris. The unit has a capacity to chip branches and logs up to 18-inches in diameter that are associated with tree removals, tree trimming, and emergency storm damage cleanup. This brush chipper is considered the workhorse of the Village's forestry operations and is utilized during the initial response to tree damage caused by storms. There are over 8,500 parkway trees in the Village that are maintained by the Public Works Department.

Total Equipment Hours	5,087 (As of 10/26/2017)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
7/2011	Oil pressure sensor	$50.00
8/2016	New axle	$2,700.00
9/2012	Radiator cap, thermostat, engine diagnostics	$300.00
12/2012	Rebuild starter	$475.00
2/2013	Rebuild engine	$8,158.00
9/2013	Replace hood latches	$39.00
9/2013	Repair loose belt and leaking injector	$218.00
9/2014	Sharpen blades	$144.00
7/2015	Replace tensioning pulley and belt	$678.27
10/2015	Change blades and bolts	$175.00
6/2016	Change blades and bolts	$340.84
3/2017	Change blades and bolts	$330.17
9/2017	Replaced dust cover weldments	$80.00
Total		**$13,688.28**

Project Alternative

This unit was initially scheduled for replacement in FY 2010. Since the unit was in good mechanical condition at that time its replacement was deferred to FY 2014 at a projected cost of $77,000. Engine problems involving anti-freeze leaking into the engine block required repairs that were completed in February 2013 (FY 2014). These repairs have extended the useful life of the brush chipper by approximately six more years, thus deferring its replacement until FY 2019 when, at that time, Staff will further explore replacing the unit. Until that time, and unless the unit breaks down and cannot be repaired, Staff will continue using the brush chipper and paying for repairs on an as-needed basis.

Operational Impact

The elimination of this brush chipper would reduce the chipping capacity by approximately 70% and would result in the need to contract tree and brush chipping operations for larger sized debris, including emergency storm response.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

This item was originally scheduled for replacement in 2010 but its replacement was deferred. In FY 2014 it was determined it was more cost effective to perform significant repairs that extended the useful life of the equipment.

Asphalt Kettle

FY 2023 **$21,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Stepp Manufacturing
Model	SPH-2.0
Purchase Cost	$14,445
Purchased	FY 2008
Useful Life	15 years
Current Life	11 years

Project Description & Justification

A tandem axle trailer that is used for transporting cold patch material. The trailer is equipped with a diesel fuel fired burner that is capable of heating hot and cold patch material to the proper temperature.

Recent Maintenance Costs

Date	Maintenance Performed	Cost
4/2016	Repair leaf springs	$300.00
7/2017	Replace battery	$100.00
Total		**$400.00**

Project Alternative

Contract all pothole and permanent patching.

Operational Impact

Patching potholes would have to be done from the back of a dump truck. The Village would not have the ability to work with hot patch (permanent) asphalt material.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

None

Fuel System Improvements **FY 2021** **$150,000** **CERF**

(●) Critical ( ) Recommended ( ) Contingent on Funding

Purchase Cost	$90,000
Purchased	FY 1990
Useful Life	30 years
Current Life	29 years

Project Description & Justification

The improvement project that is proposed for FY 2021 involves the replacement of the 6,000 gallon unleaded and 2,000 gallon diesel underground storage tanks, replacement of the existing fuel pumps, and upgrades to the management software.

Recent repairs/improvements to the fuel pumps include:

- FY 2012 – Replaced unleaded fuel suction pump
- Replaced all hoses
- FY 2015 – Replaced spill buckets, manholes and a portion of the cement pads on both tanks: $15,000
- FY 2016 - Removed internal moisture and sediment from bottom of diesel tank and added fuel treatment: $287
- FY 2018 Replaced two manhole covers: $200

Project Alternative

The primary alternative to these system maintenance items/improvements is to eliminate the fuel system and purchase unleaded and diesel fuel at privately owned service stations. Staff performed an analysis in FY 2013 and determined that the most cost effective means for fueling the Village's fleets (Public Works, Police, and Fire) is maintaining an in-house fuel dispensing system. This analysis remains valid and the existing system is currently a cost effective fueling solution. The fuel system is used by the local school district and park district as well.

Underground Storage Tanks (USTs): The Village's two fiberglass USTs were installed in FY 1990 at a cost of $90,000. These tanks have a useful life of approximately 30 years and their replacement is incorporated in the CERF (projected replacement in FY 2021).

Operational Impact

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Carryover History

None

Information Technology – Five Year Capital Improvement Program

The Village's Information Technology (IT) function is responsible for purchasing and maintaining all computer systems and personal computers, providing technical support to all systems and supervision of village hired consultants and vendors. In FY 2016 the Village entered into an agreement with ClientFirst to provide day-to-day and project specific IT support services. ClientFirst prepared a strategic information technology business plan in FY 2012 for the Village and updated it in preparation for the CIP. This plan evaluated the Village's hardware and software capabilities to determine any possible improvements that could be made in order to fully meet the Village's business needs, including:

The following improvements are proposed for FY 2019:

Equipment	Cost of Equipment	Funding Source	This Project is:
IT Strategic Plan	$ 20,000	CIF	Recommended
Network Improvements	$ 18,300	CIF	Critical
Software Upgrades	$ 40,000	CIF	Recommended
Computer PC Replacements	$ 38,000	CIF	Recommended
Audio Visual System	$ 90,000	CIF	Recommended
IT Security Initiatives	$ 52,360	CIF	Critical
Total	**$ 258,660**		

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law.

These projects are highlighted in yellow.

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Information Technology
Fiscal Year 2019 Budget

	This Project is:	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total	Funding Source
IT Strategic Plan	Recommended	20,000	-	-	-	-	20,000	CIF
Network Improvements	Critical	18,300	-	-	160,000	-	178,300	CIF
Software Upgrades	Recommended	40,000	21,240	-	-	-	61,240	CIF
Computer Replacements	Recommended	38,000	102,000	38,000	38,000	38,000	254,000	CIF
Audio Visual System Replacement	Recommended	90,000	-	-	-	-	90,000	CIF
IT Security Initiatives	Critical	52,360	-	-	-	-	52,360	CIF
Total		**258,660**	**123,240**	**38,000**	**198,000**	**38,000**	**655,900**	

Proposed Funding Source	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
Capital Improvement Fund (CIF)	258,660	123,240	38,000	198,000	38,000	655,900
Totals	**258,660**	**123,240**	**38,000**	**198,000**	**38,000**	**655,900**

IT Strategic Plan	**FY 2019**	**$20,000**	**CIF**
	FY 2020	**$0**	**CIF**
	FY 2021	**$0**	**CIF**
	FY 2022	**$0**	**CIF**
	FY 2023	**$0**	

○ Critical ◉ Recommended ○ Contingent on Funding

Funding History N/A

Project Description & Justification

Currently, the Village is reactive to the needs of its residents and Staff when it comes to technology. Creating an IT strategic plan will help the Village create a five-year plan for technological needs. This plan will act as a guide and, as such, will be reviewed and refined on an annual basis as part of the CIP and budget process. This plan will review current application usage and identify areas for improved utilization and more efficient business processes. The plan will consider improvements in transparency and customer service in addition to improved operational efficiencies. The cost of this project consists entirely of consulting hours and it is estimated that the final report will take approximately 135 hours to create.

Project Alternative

An alternative to this plan would be to continue operating in a reactive manner and address IT system issues as they arise. While this plan is recommended by the Village's IT consultant, ClientFirst, it could be deferred to a future Fiscal Year if funding is not available.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Network Improvements	**FY 2019**	**$18,300**	**CIF**
	FY 2020	**$0**	**CIF**
	FY 2021	**$0**	**CIF**
	FY 2022	**$160,000**	**CIF**
	FY 2023	**$0**	**CIF**

(●) Critical ( ) Recommended ( ) Contingent on Funding

Funding History

FY 2018 $ 20,300

Project Description & Justification

Recommended for FY 2019

Server Upgrade - $18,300

The Village currently has twelve legacy virtual servers running predominantly Windows 2008. These servers should be upgraded to a more current and secure operating system version of 2012 or later. This initiative will also allow for the decommissioning of three legacy servers that are no longer supported or needed in the production environment. Completing this project will stabilize the Village's environment and prolong the life of the current equipment, before replacing fully in a few years.

Recommended for FY 2022

Server Replacement - $100,000

The Village's current server can be upgraded in FY 2019 as proposed above, but will ultimately need to be replaced.

SAN (Storage Area Network) Replacement - $60,000

A SAN (storage area network) is a high performance shared data storage solution. The SAN allows all servers to have access to the same data and provide server redundancy. The Village currently has one SAN with two expansion shelves in the production environment. The Village then utilizes its other SANs for backup storage to extend the useful life of the hardware. This project is proposed to compliment the server replacement project in FY 2022.

Server Upgrade	
Hardware/Software/Licensing	$0
Consulting	$18,300
Server Replacement	
Hardware/Software/Licensing	$85,000
Consulting	$15,000
SAN (Storage Area Network) Replacement	
Hardware/Software/Licensing	$45,000
Consulting	$15,000
Total	$178,300

Project Alternative

Alternatives to both projects is to continue with the status quo or defer the project to a later date, however, it is not recommended. The Village continues to move toward management of its computer network based on best practices and these recommendations are consistent with that approach.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
N/A	N/A

Software Upgrades			
	FY 2019	**$40,000**	**CIF**
	FY 2020	**$21,240**	**CIF**
	FY 2021	**$0**	**CIF**
	FY 2022	**$0**	**CIF**
	FY 2023	**$0**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Funding History N/A

FY 2018 $85,500

Project Description & Justification

Recommended for FY 2019

Land and License Management Software - $40,000

The Village's ERP, Springbrook, was acquired by Accela. After the acquisition the Village was informed that Springbrook would continue to support the existing land management module that is utilized to process building permits and various Village licenses but that there would be no future enhancements. During FY 2018, Village staff evaluated several Land and License Management Software options including that offered by Accela. Due to the experience that the Village's IT consultant has had implementing the Accela solution with other clients, it is not being recommended at this time. This project is being deferred from FY 2018 to FY 2019 because the appropriate solution has not yet been identified. The utilization of software for this purposes is critical to Village operations and customer service. Modifying the program used to collect and process this information could provide opportunities for more efficient operations, including better customer access to real-time data, better project tracking tools, better integration with the Village's GIS, increased opportunities for constituent self-service and more.

Recommended for FY 2020

Laserfiche Upgrades - $21,240

The Village has been utilizing the Laserfiche document imaging program for several years to electronically store Village records. This has reduced physical storage needs at the Village Hall and improved productivity by making records easier to locate and reproduce when needed. A web portal into Laserfiche would streamline the process of making those records available online. Further, a web portal that is integrated with Laserfiche forms and the workflow process would allow the Village to make various applications available online and would streamline the submission, receipt, review and storage of those documents. Further, integration between records stored in Laserfiche with GIS would further streamline the search and retrieval of property-specific records. Various upgrades to the Laserfiche system, over time, will allow the Village to achieve these efficiencies and improve access to records.

Land and License Management Software	
Hardware/Software/Licensing	$35,000
Consulting	$5,000
Laserfiche Upgrades	
Hardware/Software/Licensing	$18,000
Consulting	$3,240
Total	$61,240

Project Alternative

Laserfiche improvements could be deferred to allow for more critical projects to proceed. Staff can continue to utilize the current functions of Laserfiche as is today.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$24,000	*Land & License Management:* Annual cost of subscription for individual users ($200/month/user with an estimated 10 users; this cost may be reduced if fewer users are identified).
$5,550 in FY 2020, $8,550 in FY 2021	*Laserfiche:* Annual maintenance and licensing fee for Laserfiche was previously $5,550. Adding the WebLink feature would increase the annual cost by $3,000.

Computer Replacements	**FY 2019**	**$38,000**	**CIF**
	FY 2020	**$102,000**	**CIF**
	FY 2021	**$38,000**	**CIF**
	FY 2022	**$38,000**	**CIF**
	FY 2023	**$38,000**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Funding History N/A

FY 2018 $43,490

Project Description & Justification

The purpose of this program is to upgrade the central processing units (CPUs) of the Village desktop and laptop computer inventory. The estimated service life of a computer is four to six years; however, the Village generally does not recommend keeping equipment after its warranty has expired. Replacements are prioritized based upon the job responsibilities of employees and some workstations may be assigned older but serviceable PCs while other workstations may receive a new computer on a more frequent basis. Currently, the Village owns 49 desktop computers and 38 laptop computers.

Staff and the Village's IT consultant have updated the inventory of Village-owned IT/communication equipment, identifying warranty periods for each piece and determining a replacement schedule. Based on that information, equipment can be rotated out when warranties expire. Funding IT replacements in this manner will standardize equipment throughout the organization, allow the Village to obtain bulk purchase pricing, improve IT support service efficiency, improve staff efficiency with fewer projected system interruptions, enhance system security, and avoid unnecessary spikes in IT expenses.

Public Safety In-Vehicle Laptops

Funding in FY 2020 is higher than other years due to the replacement of Police and Fire Department in-vehicle ruggedized laptops. The laptops that are in the public safety vehicles are specialized Panasonic Toughbooks that are tailored to the operating environment (a vehicle) and nearly constant usage for 24-hour shift operations. It is recommended that these machines are replaced every four years to maintain a stable and responsive platform for public safety personnel and ensure minimal downtime. The machines that are currently deployed were purchased in the Spring of 2015 and hold a three year warranty. To accommodate the new CAD system these machines machines received upgraded hard drives and memory in FY 2017. It is recommended that the entire fleet of computers is replaced at one time to avoid differences in models that can cause operational issues for both Police and IT. This cost also includes accessory items such as in-car mounts.

Periodic replacement of peripheral equipment such as monitors, keyboards and printers may still be required on an ad hoc basis and money has been set aside for that purpose in the General Fund.

PC Replacement	
Hardware/Software/Licensing	$30,000
Consulting	$8,000
Total	$38,000

Project Alternative

If this project is not funded, computers would continue to be replaced in smaller quantities and over a longer period of time, potentially reducing the productivity of the units and ability to support newer versions of software. A possible alternative to the spike in FY 2020 is splitting the cost of the public safety in-vehicle laptops over two years. This is not recommended due to the complications that may be created by having multiple models in the field, however, if this option is selected staff will work to ensure that the number of models is minimized. In FY 2020, when the Panasonic Toughbooks are scheduled for replacement, the Village will explore product alternatives to see if there is a lower cost solution that is compatible with a more ruggedized environment.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$1,000	Minor maintenance costs to update

Audio Visual System Replacement	**FY 2019**	**$90,000**	**CIF**
	FY 2020	**$0**	**CIF**
	FY 2021	**$0**	**CIF**
	FY 2022	**$0**	**CIF**
	FY 2023	**$0**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Funding History N/A

Project Description & Justification

The Village purchased Audio/Visual equipment for use in the Community Room and second floor Conference Room in 2010. The functionality of the existing equipment has become more unreliable during FY 2018. Previous CIPs contemplated replacement of this system in FY 2021 at a cost of $125,000. However, due to ongoing service issues, advances in technology, and the degree to which the Village relies on this equipment for public meetings and transparency, it is recommended that funding be accelerated and the system be replaced in FY 2019. It is believed that $90,000 is the maximum cost and that the cost can be lowered as the Village continues to refine the scope of the system.

Project Alternative

Staff will continue to monitor system performance, annual maintenance costs and determine whether its replacement should be expedited or deferred.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
N/A	N/A

IT Security Initiatives	**FY 2019**	**$52,360**	**CIF**
	FY 2020	**$0**	**CIF**
	FY 2021	**$0**	**CIF**
	FY 2022	**$0**	**CIF**
	FY 2023	**$0**	**CIF**

(●) Critical ( ) Recommended ( ) Contingent on Funding

Spending History N/A

Project Description & Justification

Security Audit - $15,000

In the recent years, the Village has undergone major changes and improvements to its IT infrastructure. Additionally, new cyber threats and attacks are continually increasing. As a measure of protection, it is recommended that the Village complete a security audit. This process would involve a third party vendor (separate from the Village's usual IT vendor) conducting a security audit of all systems. This includes penetration testing from inside and outside the network. Doing so will test past implementations and identify areas for improvement.

Laserfiche and Springbrook Active Directory Authentication - $2,140

The Village is currently maintaining multiple applications and each has its own authentication method. This initiative will combine the authentication methods of the more commonly accessed systems. Once this is complete, it will be simpler to maintain security compliance regulations by only needing to make changes in one location.

CJIS Compliance - $6,400

The Criminal Justice Information Systems (CJIS) outlines best practices that need to be observed to ensure that the proper security is being applied to all information related to criminal justice. This initiative provides funding for changes that may be required as a result of CJIS Compliance results.

Password Policy - $5,160

The Village currently has limited on guidelines on how passwords should be created, updated, and shared. This initiative will allow the Village to work with the IT Consultant on creating a Password Policy following industry best practices and is required under CJIS Compliance listed above. Once the new policy is created, it will be implemented throughout the Village.

Network Monitoring Tools and Implementation - $4,340

A network monitoring tool is the use of a system that constantly monitors a computer network for slow or failing components and then notifies the network administrator (via email, SMS or other alarms) in case of outages or other trouble. Network monitoring is part of network management. The Village has many network devices that need to be monitored. The Village will benefit from a tool that will notify IT staff when a failure occurs or may occur so the IT staff can take corrective action before the issue results in significant downtime.

Firewall Replacement - $12,800

A firewall is a network security device that monitors incoming and outgoing network traffic and decides whether to allow or block specific traffic based on a defined set of security rules. Firewalls have been a first line of defense in network security for over 25 years. They establish a barrier between secured and controlled internal networks that can be trusted and untrusted outside networks, such as the internet. The Village currently has a firewall to protect against outside threats over the internet. This is vital piece of hardware that needs to be maintained and updated as the threats and technology change. The Village's current firewall is no longer under warranty and therefore has limited functionality. In addition, the existing firewall will not support the planned increase in internet bandwidth.

Two-Factor Authentication Policy - $6,520

Two-Factor Authentication, also known as 2FA, two step verification or TFA (as an acronym), is an extra layer of security that is known as "multi factor authentication" that requires not only a password and username but also something that only that user has on them, i.e. a piece of information only they should know or have immediately to hand - such as a physical token. Some staff require access to the Village resources after hours to monitor systems or perform assigned tasks. Currently there are several different solutions in place to accomplish this need. The Village would like to consolidate down to a single method that can be audited as needed. As a part of the CJIS compliance any remote connections to the network should require two factor authentication.

Security Audit	
Hardware/Software/Licensing	$0
Consulting	$15,000
Laserfiche & Springbrook AD Authentication	
Hardware/Software/Licensing	$0
Consulting	$2,140
CJIS Compliance	
Hardware/Software/Licensing	$0
Consulting	$6,400
Password Policy	
Hardware/Software/Licensing	$0
Consulting	$5,160
Network Monitoring Tools and Implementation	
Hardware/Software/Licensing	$2,500
Consulting	$1,840
Firewall Replacement	
Hardware/Software/Licensing	$7,000
Consulting	$5,800
Two-Factor Authentication Policy	
Hardware/Software/Licensing	$0
Consulting	$6,520
Total	$52,360

Project Alternative

Each of these projects is integral in the Village's continual effort to keep its IT network secure. An alternative to the project would be to prioritize initiatives and implement them as funds allow over a longer period of time.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$2,500	*Network Monitoring Tool:* Annual cost of licensing
$2,500 in FY 2022	*Firewall:* Annual support and maintenance is included in the purchase for the first three years. Cost for support and maintenance in FY 2022 is estimated to be $2,500.

Streets Improvements – Five Year Capital Improvement Program

The Village of River Forest recognizes the importance of consistently maintaining its streets, sidewalks and alleys to ensure the safety of drivers and pedestrians.

Street System Overview

The Village has 31.6 miles of centerline streets. The recommended funding level for the next five years will maintain the average street rating in a good or excellent condition. The Village conducts an annual pavement inventory study and has implemented a microsurfacing and crack sealing program to prevent degradation of the streets. The Village rates streets as follows:

Streets		
Surface Condition	**Pavement Ranking**	**Estimated Remaining Life**
Excellent	7.6 – 9.0	15 to 20 years
Good	6.1 – 7.5	10 to 15 years
Fair	4.6 – 6.0	6 to 10 years
Poor	1.0 – 4.5	2 to 5 years

Sidewalk & Curb System Overview

The Village of River Forest recognizes the need to have a network of safe pedestrian accesses throughout the community. The primary emphasis of the sidewalk program is to ensure the safety of the Village's sidewalks. To that end, the Village funds 100% of the replacement cost of sidewalks in immediate need of replacement.

The following improvements are proposed for FY 2019:

Improvement	Cost	Funding Source	Nature of Project
Street Patching	$ 85,000	GF - $75,000 WS - $10,000	Critical
50/50 Sidewalk, Curb & Gutter	$ 65,000	GF - $55,000 WS - $10,000	Critical
Alley Improvement Program	$ 950,000	CIF	Recommended
Street Improvement Program (SIP)	$ 450,000	MFT - $150,000 WS - $50,000 IIBF - $250,000	Critical
Street Maintenance Program	$ 100,000	GF	Critical
Surface Transportation Program (STP)	$ 450,000	MFT	Critical
Traffic Signals	$ 146,000	CIF	Recommended
Parkway Pockets	$ 20,000	CIF	Contingent
Total	**$ 2,266,000**		

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law.

Critical projects are highlighted in yellow.

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Streets, Sidewalks, Alleys
Fiscal Year 2019 Budget

	This Project is:	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total	Funding Source
Street Patching Program	Critical	85,000	90,000	90,000	100,000	100,000	465,000	GF/WS
50/50 Sidewalk, Curb & Gutter	Critical	65,000	65,000	65,000	65,000	65,000	325,000	GF/WS
Alley Improvement Program	Recommended	950,000	200,000	200,000	200,000	200,000	1,750,000	CIF
Parking Lot Improvements	Recommended	-	45,000	-	85,000	45,000	175,000	CIF/PR
Street Improvement Program (SIP)	Critical	450,000	550,000	300,000	300,000	300,000	1,900,000	MFT/WS/ IIBF
Street Maintenance Program	Critical	100,000	100,000	100,000	100,000	100,000	500,000	GF
Surface Transportation Program (STP)	Critical	450,000	-	-	-	-	450,000	MFT
Lighting Systems	Recommended	146,000	-	-	-	-	146,000	CIF
Parkway Pockets	Contingent	20,000	-	-	-	-	20,000	CIF
Total		**2,266,000**	**1,050,000**	**755,000**	**850,000**	**810,000**	**5,731,000**	

Proposed Funding Source	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
General Fund (GF)	230,000	235,000	235,000	245,000	245,000	1,190,000
Motor Fuel Tax (MFT)	600,000	250,000	250,000	250,000	250,000	1,600,000
Water and Sewer Fund (WS)	70,000	70,000	70,000	70,000	70,000	350,000
Capital Improvement Fund (CIF)	1,116,000	245,000	200,000	285,000	245,000	2,091,000
CIF/Parking Reserve	-	-	-	-	-	-
Infrastructure Improvements Bond Fund (IIBF)	250,000	250,000	-	-	-	500,000
Totals	**2,266,000**	**1,050,000**	**755,000**	**850,000**	**810,000**	**5,731,000**

Street Patching Program

Streets and Alleys

	GF	WS
FY 2019	**$75,000**	**$10,000**
FY 2020	**$80,000**	**$10,000**
FY 2021	**$80,000**	**$10,000**
FY 2022	**$90,000**	**$10,000**
FY 2023	**$90,000**	**$10,000**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

Year	GF	WS	Total	
FY 2018	$54,212	$10,000	$64,212	(Projected)
FY 2017	$80,178	$10,000	$90,178	
FY 2016	$66,465	$8,860	$75,325	
FY 2015	$36,906	$10,000	$46,906	
FY 2014	$83,970	$10,000	$93,970	

Program Description & Justification

The purpose of this program is to maintain and improve surface conditions of Village streets and alleys by patching defective areas. This program is intended for streets and alleys of all condition ratings to prolong their useful lives. To accomplish this goal, an annual funding level of $75,000 to $100,000 over the next five years is recommended. These funding levels are estimates and reflect inflationary increases for construction.

Historically, Village Staff annually inspected all streets and the areas of pavement failure were placed on a patching list, which is provided to the Village's contractor. Village Staff now also includes alleys in their inspections and identifies patching needs throughout the Village. Asphalt pavement patching utilizes hot mix asphalt (HMA), the standard material approved by the Illinois Department of Transportation for surface repairs. Two inches (thickness) of the failing surface pavement is milled and replaced with new HMA. This patching process is more permanent and resilient than the use of asphalt "cold" patch. The ideal timing for this maintenance project is when streets are evaluated with a good condition rating, but showing signs of early deterioration (cracking, potholes, etc.).

Included in this street patching program are Water and Sewer funds ($10,000 annually) to install HMA patches on street openings created for the repair of the Village's water and sewer systems.

FY 2019 Recommended Project

Due to a reduction in the amount of money budgeted in FY 2018, Staff recommends an increase in this maintenance project for FY 2019, with increases in subsequent years. Various locations to be patched are identified on a continual basis.

Program Alternative

The primary alternative is to resurface the street. Resurfacing, which is a more costly process, involves not only the replacement of defective surface but also additional surface areas that have not begun to deteriorate.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

50/50 Sidewalk, Curb & Gutter

Sidewalks, Aprons, and Curb

	GF	WS
FY 2019	**$55,000**	**$10,000**
FY 2020	**$55,000**	**$10,000**
FY 2021	**$55,000**	**$10,000**
FY 2022	**$55,000**	**$10,000**
FY 2023	**$55,000**	**$10,000**

(●) Critical ( ) Recommended ( ) Contingent on Funding

Spending History

Year	GF	WS	Total
FY 2018	$53,734	$10,000	$63,734
FY 2017	$51,710	$10,000	$61,710
FY 2016	$47,979	$8,482	$56,461
FY 2015	$60,735	$4,503	$65,238
FY 2014	$47,507	$1,829	$49,336

Program Description & Justification

The purpose of this program is to improve the overall condition of public sidewalks and curb/gutters throughout the Village. The objective is to eliminate all trip hazards for pedestrians. To accomplish this objective, an annual funding level of $50,000-$75,000 is recommended. Failure to implement a sidewalk improvement program to repair deteriorated/damaged sidewalk can expose the Village to liability resulting from trips and falls.

For the purposes of this program, the Village is divided into three geographical areas. Village Staff conducts annual inspections of one area each year. Over the course of a three year period, all public sidewalks are inspected. Sidewalks are rated according to the displacement of adjoining sidewalk squares that pose a potential for a trip hazard. The following table identifies the sidewalk condition ratings, description of condition, and the recommended action:

Sidewalk Condition	Joint Displacement	Recommended Action
A	> 1/2" but < or = 1"	Consider Replacement
B	>1" but < 1 ½"	Recommend Replacement
C	>1 ½" with loose/missing pieces	Replace immediately

During annual inspections, the Village offers participation in the 50/50 sidewalk replacement cost share program upon request for sidewalks with a "B" rating. A copy of the inspection form is delivered to property owners describing the sidewalk's condition and requesting their participation. The Village replaces all sidewalks with a condition "C" rating. The Village also installs detectable warning pads, located at street crossings and intersections, that are designed for the visually impaired. The following is a summary of proposed expenditures for FY 2019:

General Fund

Sidewalk – Condition C (100% Village):	$35,000	
Sidewalk – Condition A or B (50/50):	$10,000	(revenue - $5,000)
Driveway Aprons (100% Resident):	$5,000	(revenue - $5,000)
Detectable Warning Pads (100% Village):	$5,000	

Water and Sewer Fund

Curb/gutter (100% Village):	$10,000

Sidewalk and Curb Annual Inspection Areas:

Area No.	Area Limits	Inspection Years
1	Des Plaines River to Harlem /Hawthorne to Chicago	2021, 2024, 2027
2	Thatcher to Harlem / Chicago to Greenfield	2019, 2022, 2025
3	Thatcher to Harlem / Greenfield to North	2020, 2023, 2026

In addition to the annual inspection of the aforementioned designated areas, Village Staff inspects all sidewalks in close proximity to schools, parks, and commercial/retail areas on an annual basis.

The Village also allows property owners to replace their driveway aprons and private courtesy walks through this program at 100% cost to the property owner (full payment due to the Village prior to commencement of work). The primary benefit to the property owner is that they receive competitively bid pricing for their improvement.

Program Alternative

Although the preferred option is sidewalk replacement, alternatives to this program involve the installation of asphalt cold patch in the displaced joints and/or grinding off the edge of the raised sidewalk. Not only is the patching option aesthetically unattractive, the asphalt can break loose and re-expose the displaced sidewalk that re-establishes liability to the Village and increases maintenance costs.

Another option is mud-jacking, which is a process of filling cavities or voids beneath settling concrete. The Village does not currently own equipment to perform this mud-jacking operation.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Alley Improvement Program	**FY 2019**	**$950,000**	**CIF**
	FY 2020	**$200,000**	**CIF**
	FY 2021	**$200,000**	**CIF**
	FY 2022	**$200,000**	**CIF**
	FY 2023	**$200,000**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2018	$195,000	(Gale Ave Alley - Projected)
FY 2017	$258,600	(Quick and William Alleys)
FY 2016	$59,153	(Alleys incorporated into SIP)
FY 2015	$508,901	(Green Alleys)

Project Description & Justification

The purpose of this program is to improve the condition of Village alleys. To accomplish this objective, a minimum annual funding level of $200,000 over the next five years is recommended. These funding levels are estimates based on the reconstruction of one alley per year. Additional funds have been budgeted in FY 2019 to accelerate the program. The funding levels also reflect inflationary increases for construction as the actual projects have yet to be identified. In past years, the Village's Alley Improvement Projects utilized a Special Service Area process, which requires a 50/50 cost share with the adjoining property owners. These projects typically involved removal of the top of the asphalt surface (typically 1½ inches) and replacement with new asphalt; however, this method did not address stormwater issues.

Staff will continue to perform further analysis on various permeable surfaces and products to determine the most efficient way to complete these improvements. Many homeowners adjacent to existing impervious alleys experience stormwater drainage problems on a regular basis. To simply replace the impermeable surface with another impermeable surface will not alleviate these issues. Due to the inadequacy of the Village's existing sewer system, the addition of sewers to convey runoff away from the alleys is also not a feasible option. The most economical way to mitigate these issues and provide a new alley surface is through the use of permeable materials.

While Staff conducts the annual Street Rating Survey, the alleys are also rated. This is completed utilizing the same rating system as the streets and is then used to determine the alley(s) that require improvement in a given year.

FY 2019 Recommended Projects

1. Thomas Street Alley (Seventy Two-Hundred Block) – This "T" shaped alley is located between Bonnie Brae, Division Street, Harlem Avenue, and Thomas Street. A portion consists of severely deteriorated concrete pavement while the rest consists of asphalt. The pavement is in poor/fair condition; however, the alley also experiences significant drainage issues during heavy rain events. Improving this alley will necessitate a full reconstruction throughout. Similar to recent alley improvements, all permeable options will be explored in order to determine an appropriate treatment.
2. Local Alley Projects – TBD

FY 2019 Cost Summary for Alley Improvement Plan

Reconstruction of the Thomas Street (7200 block) Alley with permeable material will cost approximately $300,000. Prior to design and bidding of this project, Staff will research additional types of permeable materials that may more efficiently solve the drainage issues at this location. Due to the high cost and "T" shape of this alley, staff will investigate ways to phase the construction of this project. Two additional alleys will also be reconstructed. These will be selected based on lower alley ratings and will each cost approximately $325,000.

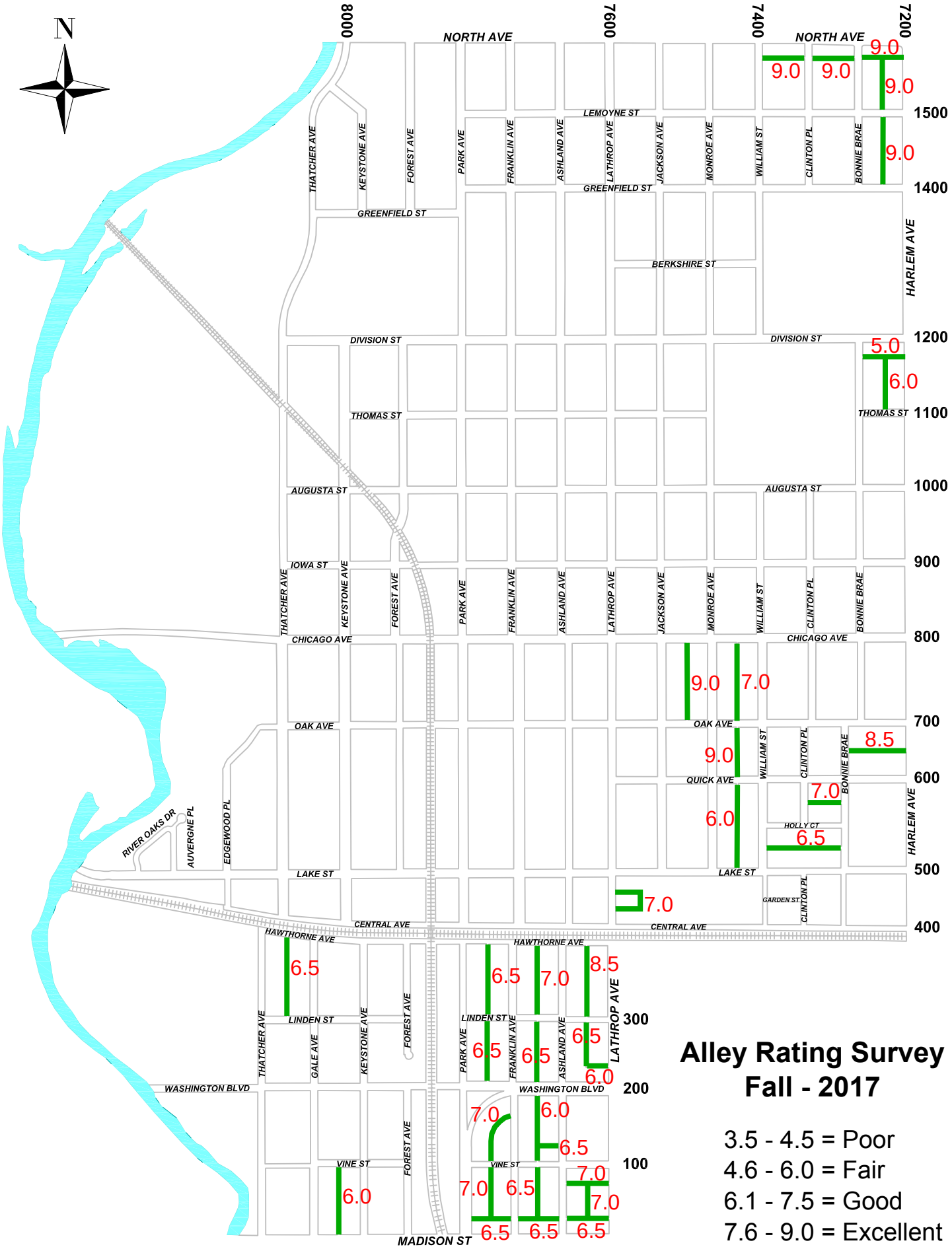
Program Alternative

Not performing any surface maintenance, particularly for alleys in deteriorating conditions, will result in total pavement failure and require reconstruction (of base and surface), which is significantly higher in cost compared to resurfacing.

Extensive pavement patching may be somewhat cost effective initially for alleys with better condition ratings, and may slow down the progression of potholes, but the pavement patching needs will be ongoing. It is also likely to promote the continued deterioration of the pavement's base and will significantly increase eventual resurfacing costs.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None



Alley Rating Survey
Fall - 2017

3.5 - 4.5 = Poor
4.6 - 6.0 = Fair
6.1 - 7.5 = Good
7.6 - 9.0 = Excellent

Parking Lot Improvements	**FY 2020**	**$45,000**	**CIF**
	FY 2022	**$85,000**	**CIF**
	FY 2023	**$45,000**	**CIF/Parking Reserve**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2017	$137,395	(West Thatcher Commuter Lot)
FY 2013	$3,920	(Lot A, sealcoating)
FY 2012	$2,998	(Lot B, sealcoating)

Program Description & Justification

The purpose of this program is to improve the condition of the parking/driving surfaces of Village-owned parking lots. The Village owns and/or maintains six parking lots:

A. Village Hall – 400 Park Avenue – **Resurfacing Scheduled for FY 2022**
B. Public Works Garage – 45 Forest Avenue - **Reconstruction Scheduled for FY 2023**
C. Southeast corner of Lake Street and Park Avenue
D. West Commuter Lot – 400 block of Thatcher Avenue
E. East Commuter Lot – 400 block of Thatcher Avenue - **Resurfacing Scheduled for FY 2020**
F. Lot on south side of 7915-7919 North Avenue – contiguous to CVS parking lot

Several options are available for improving parking lots, including full reconstruction, resurfacing, asphalt patching, seal-coating, and crack sealing.

2019 Recommended Projects

There are no parking lot improvements scheduled for FY 2019.

Program Alternative

Not performing any surface maintenance, particularly for lots with deteriorating conditions, will result in total pavement failure and require reconstruction (of base and surface) which is significantly higher in cost compared to resurfacing. Extensive pavement patching, crack sealing, and seal-coating is a cost effective option and may slow down the progression of potholes, but the pavement patching needs will be ongoing and could allow for the continued deterioration of the pavement's base. This will significantly increase eventual resurfacing costs.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Parking Lot Rating Survey Fall - 2017

3.5 - 4.5 = Poor
4.6 - 6.0 = Fair
6.1 - 7.5 = Good
7.6 - 9.0 = Excellent

Street Improvement Program

	MFT	WS	IIBF
FY 2019	**$150,000**	**$50,000**	**$250,000**
FY 2020	**$250,000**	**$50,000**	**$250,000**
FY 2021	**$250,000**	**$50,000**	**$0**
FY 2022	**$250,000**	**$50,000**	**$0**
FY 2023	**$250,000**	**$50,000**	**$0**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

Year	MFT	WS	Total
FY 2018	$188,000	$38,000	$226,000
FY 2017	$150,000	$52,898	$202,898
FY 2016	$393,243	$47,964	$441,207
FY 2015	$169,558	$20,460	$190,018
FY 2014	$233,610	$108,000	$341,610

Program Description & Justification

The purpose of this program is to improve the condition of local streets. The objective is to improve all streets with condition ratings of "Fair" or "Poor" to condition ratings of "Good" to "Excellent." This program does not include capital improvements on state routes.

Each year, Village Staff visually inspects all local streets and rates them according to the condition of the pavement, curb and gutters, and drainage. Streets rated "Poor" or "Fair" are prioritized for one of the construction options (rehabilitation, resurfacing, or reconstruction) depending on their condition, location, and estimated traffic volumes. The timing in improving streets is critical. Waiting too long to address some streets in the poor to fair condition will result in the condition deteriorating to a point where a more expensive reconstruction will be necessary versus a resurfacing.

The following tables summarize the street rating systems:

Streets		
Surface Condition	**Pavement Ranking**	**Estimated Remaining Life***
Excellent	7.6 - 9.0	15 to 20 years
Good	6.1 - 7.5	10 to 15 years
Fair	4.6 - 6.0	6 to 10 years
Poor	1.0 - 4.5	2 to 5 years

*Life estimate is based upon time frame needed for resurfacing assuming a regular maintenance program.

FY 2019 Recommended Projects

	Street	Pavement Rating
1.	Monroe Ave from Division to Augusta	Fair
2.	Jackson Ave from Division to Augusta	Fair
3.	Thomas St from Lathrop to Monroe	Fair
4.	Franklin Ave from Central to Lake	Fair
5.	Ashland Ave from Lake to Oak	Fair

6. William St from Chicago to Oak — Fair
7. Quick Ave from Bonnie Brae to Harlem — Fair

The projected cost to resurface these streets and make other associated improvements is $450,000.

While the Capital Improvement Plan proposes funding for street improvements through FY 2023, these locations have not yet been determined. Staff recommends a funding level of $300,000 for each of those years with the specific locations selected based on annual street ratings surveys.

Program Alternative

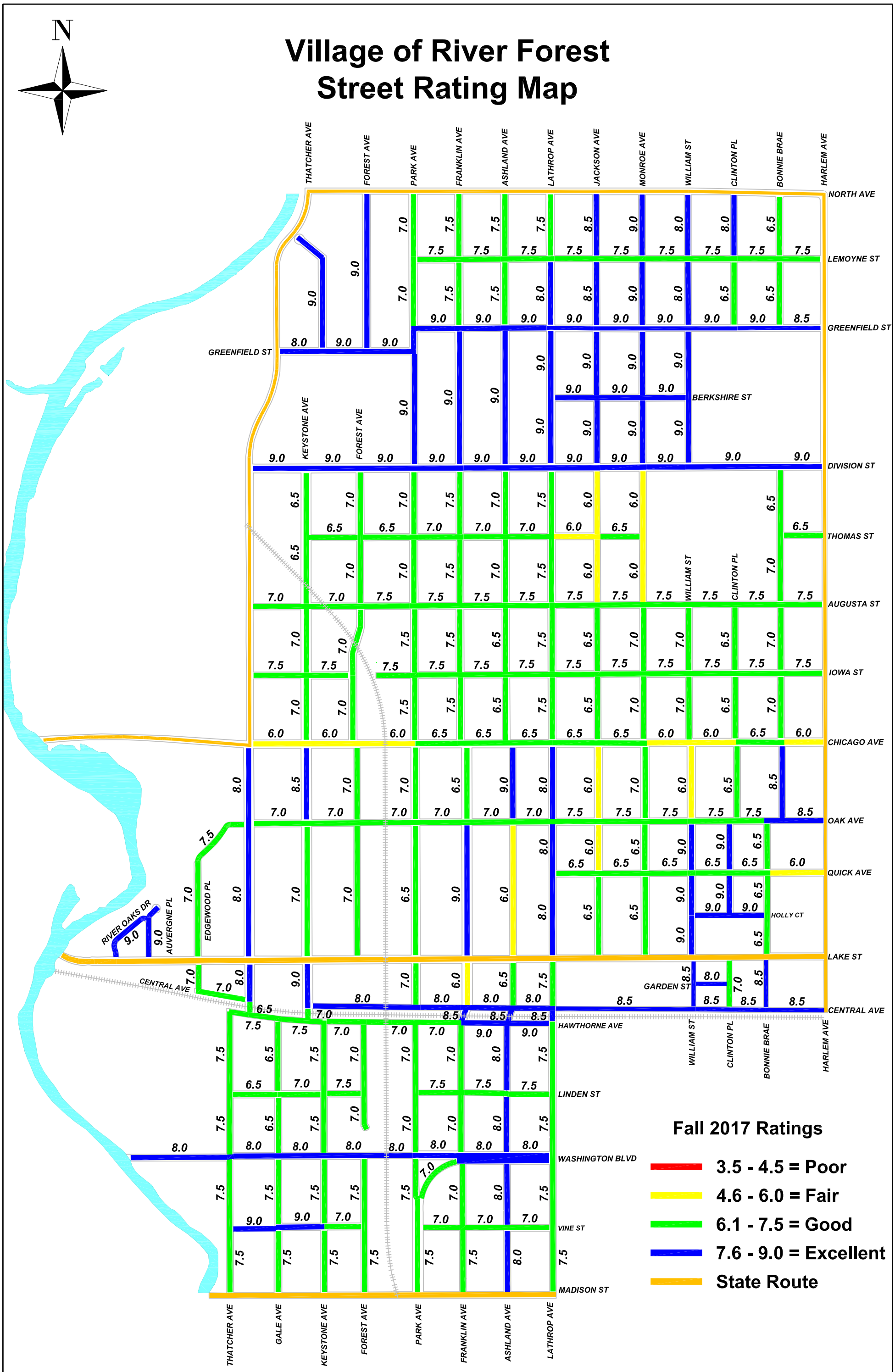
Not performing any roadway maintenance, particularly for streets in "Poor" condition, will result in total pavement failure and require reconstruction (of base and surface), which is significantly higher in cost compared to resurfacing.

Extensive pavement patching may be somewhat cost effective initially for streets with a "Fair" condition rating, and may slow down the progression of potholes, but the pavement patching needs will be ongoing. This is likely to promote the continued deterioration of the street's base, which will significantly increase eventual resurfacing costs.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Village of River Forest
Street Rating Map



Street Maintenance Program	**FY 2019**	**$100,000**	**GF**
	FY 2020	**$100,000**	**GF**
	FY 2021	**$100,000**	**GF**
	FY 2022	**$100,000**	**GF**
	FY 2023	**$100,000**	**GF**

(●) Critical ( ) Recommended ( ) Contingent on Funding

Spending History

	Crack Sealing	Rejuvenation	Total
FY 2018	$41,844	$37,258	$79,102
FY 2017	$44,652	$46,620	$91,272
FY 2016	$48,390	$23,056	$71,446
FY 2015	$32,473	$56,642	$89,115
FY 2014	$22,900	$51,724	$74,624

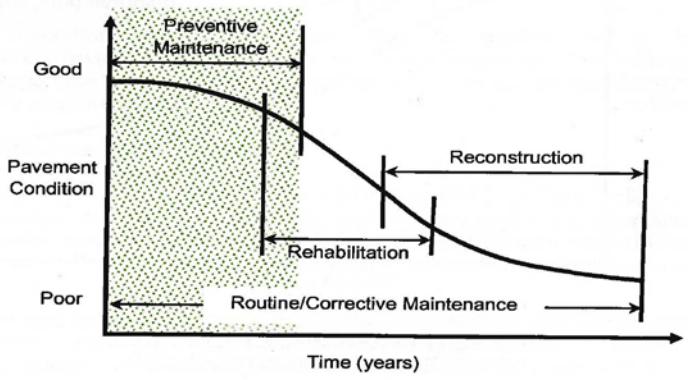
Program Description & Justification

In recent years, the practice of microsurfacing has been analyzed to determine its effectiveness. While creating an aesthetically pleasing surface, this type of treatment does nothing to rejuvenate/rehabilitate the existing pavement course. The microsurfacing layer can also create an uneven driving surface at manholes and other locations and can be dislodged due to cracking or during winter plowing activities. For these reasons, Staff conducted research of pavement rejuvenation materials during FY 2016 and FY 2017 and bid multiple pavement rejuvenation products. This type of treatment helps revive the existing pavement to prolong its life as compared to adding a thin layer of material on top of a structurally failing pavement. These projects have gone well and Staff anticipates continuing with this type of application in FY 2019. In FY 2018 the project was jointly bid with the Villages of Elmwood Park and Riverside to optimize unit pricing.

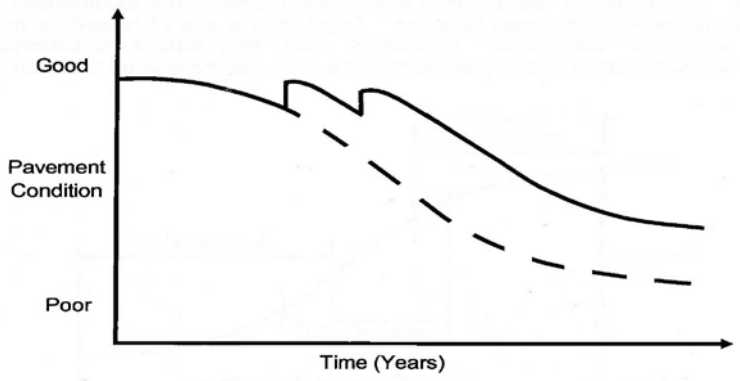
In addition to pavement rejuvenation, Village Staff believes the practice of Crack Sealing to be invaluable. Ideally, this work is completed when the pavement is still in good condition with minimal cracking. Village Staff will continue to bid this work jointly with the Village of Oak Park in an effort to optimize unit pricing.

Village Staff has identified the streets that are ideal candidates for rejuvenation and crack sealing during the annual Street Rating Survey. These streets are typically in good condition, with the idea being to maintain this condition for an extended period of time. Streets of all ratings that have cracks are eligible for crack sealing.

The following figure demonstrates the relationship between pavement condition and typical types of pavement preservation and /or street improvements:



The following figure demonstrates how preventative maintenance can extend pavement performance:



FY 2019 Recommended Projects

With the Village having recently resurfaced a significant amount of streets, Staff recommends maintaining budget amounts at $50,000 for crack sealing and $50,00 for pavement rejuvenation. This will enable Staff to maintain these recent pavements in good condition before they start deteriorating.

Pavement Rejuvenation

The following streets have been identified for rejuvenation:

Street	Condition Rating	Proposed Cost
FY 2019 SIP Streets	Excellent	$16,000
River Oaks (Lake - Auvergne)	Excellent	$2,000
Auvergne (Lake - River Oaks)	Excellent	$1,000
Franklin (Greenfield - Division)	Excellent	$4,000
Lathrop (Greenfield - Division)	Excellent	$4,000
Monroe (Greenfield - Division)	Excellent	$4,000
Washington (Thatcher - Lathrop)	Excellent	$12,000
Ashland (Hawthorne - Madison)	Excellent	$7,000

Crack Sealing

In addition to the streets to be rejuvenated, additional streets will be identified for crack sealing during late winter/early spring of 2018.

Program Alternative

The alternative is a reactive maintenance program that will accelerate deterioration of Village streets. These maintenance programs, along with pavement patching, will prolong the useful life of Village streets. By not pursuing these maintenance programs, the following infrastructure improvements will be necessary at more frequent intervals:

- Resurfacing: This is a more costly improvement that requires the removal and replacement of the existing worn pavement and minimal base improvement. This type of construction is normally completed over a several week period while rejuvenation can be completed in a few hours.
- Reconstruction: This is a significantly more costly improvement that is necessary in situations of surface pavement failure along with extensive base failure.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Surface Transportation Program (STP)	**FY 2019**	**$450,000**	**MFT**
	FY 2020	**$0**	**MFT**

(●) Critical ( ) Recommended ( ) Contingent on Funding

Spending History

FY 2018	$0
FY 2017	$219,500

Program Description & Justification

The Federal Highway Administration (FHWA) administers the Surface Transportation Program (STP), which is funded through Congress from Federal Gas Tax Revenue. The money is allocated to each state, which is then split between the State and local agencies. The funding for suburban Cook County is divided into smaller groups of communities based on geography. The Village of River Forest is part of the North Central Council of Mayors, which establishes policy and programs for the annual funding allocations.

In order for a street to be eligible for STP funding it must serve as a collector or arterial (those with higher traffic volumes and typically connect to other high-volume roads). Per North Central Council of Mayors policy, this does not include roadways under the jurisdiction of IDOT or Cook County. The streets within River Forest that are eligible for this type of funding are Division Street, Chicago Avenue, Washington Avenue, Thatcher Avenue, and Lathrop Avenue.

The purpose of the Village's STP is to improve the condition of collector and arterial roads and staff most often utilizes the scope of work involving simple resurfacing along with minor curb and gutter replacement. Staff typically applies for the option that involves 80% federal funding of the construction and construction engineering costs, with the remaining 20% being the responsibility of the Village.

FY 2019 Recommended Project

	Street	Pavement Rating
1.	Chicago Ave from Thatcher Ave to Harlem Ave	Fair

The preliminary estimate to resurface this street is $1,525,000 for construction and $145,000 for Construction Engineering, with the Village's share being approximately $450,000 (before reimbursement).

Currently, Chicago Avenue has a street rating of Fair with some sections experiencing a greater rate of deterioration than others. If existing road conditions are not improved, further damage to the street's base may occur, which will create a structural deficiency.

Program Alternative

Not performing any roadway maintenance, particularly for streets in "Poor" condition, will result in total pavement failure and require reconstruction (of base and surface), which is significantly higher in cost compared to resurfacing.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Traffic Signals **FY 2019** **$146,000** **CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2018 $4,893.36 (Traffic Evaluation of Signaled Intersections)

Project Description & Justification

A Traffic Signal Evaluation was performed in FY 2018 to determine if the left turn arrow indicators were needed at the traffic signals in the Village where they currently are not in place. Modifications were recommended at the intersections of Thatcher Avenue with Chicago Avenue and Lake Street. The accommodation of left-turn arrows at both intersections was outlined by the Traffic Signal Evaluation completed by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) in July 2017. Both of these intersections are shared jurisdiction with IDOT, however it is not anticipated that IDOT would contribute to the cost of these signal modifications.

Staff proposes the following projects to upgrade this portion of the traffic signal system within the Village:

FY 2019 Recommended Projects

Intersection Design Study (if required by IDOT): This will consist of using traffic data and base maps and will include intersection capacity calculations, existing and projected peak hour volumes, existing and projected geometrics, typical striping, right-of-way and other significant features.

Traffic Signal Design: Base maps and traffic signal plans will be prepared using the information from the intersection design study.

Lake Street at Thatcher Construction: Traffic signal modifications, add left turn arrows for N/S (includes two new mast arms w/ foundations), remove existing post and foundation in NE and SW corners, pavement marking upgrades, traffic control & protection.

Intersection Design Study	$	3,500
Traffic Signal Plans	$	6,500
Lake at Thatcher Construction	$	66,000
Total	$	76,000

Chicago at Thatcher Construction: Traffic signal modifications, add pedestrian crossings on north and west legs, add left turn arrows for East and West. Sidewalk/ADA and pavement marking upgrades, new ramps in NW corner, revise crosswalks to high-visibility markings, traffic control & protection.

Intersection Design Study	$	3,500
Traffic Signal Plans	$	6,500
Chicago at Thatcher Construction	$	60,000
Total	$	70,000

Project Alternative

The alternative to the improvements to these areas of the traffic signal system within the Village is to not act upon the recommendation of the study performed in July 2017. Keeping these intersections in the same traffic signal configuration would maintain higher levels of congestion during peak travel times. These projects can be deferred if deemed too costly to be implemented in the immediate future.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Parkway Pockets **FY 2019** **$20,000** **CIF**

○ Critical ○ Recommended ◉ Contingent on Funding

Spending History

FY 2018 $0

Project Description & Justification

The purpose of this project is to determine the feasibility of installing "pockets" throughout the Village that will be capable of storing stormwater before it enters the sewer system in an effort to relieve the over-taxed system during rain events. Staff estimates that it will cost approximately $15,000 to $20,000 to install one of these Parkway Pockets.

2019 Recommended Project

Village Staff has identified three locations that appear to be optimal for the installation of a Parkway Pocket. The intent is to install a cost-efficient system that will be capable of capturing stormwater runoff before it enters the sewer system. The system will consist of digging a large pit in the parkway immediately adjacent to an existing street inlet. The pit will be filled with large stone capable of storing stormwater (similar to the stone beneath a permeable paver system). An additional street inlet would be installed next to the existing one, with stormwater runoff entering the new inlet first. The runoff will be conveyed into the stone-filled pit where it will be stored and allowed to slowly infiltrate into the surrounding soil. Only after the pit and new inlet are filled will stormwater runoff be conveyed into the existing inlet and sewer system. The stone pit will be topped with topsoil and sod and will appear similar to the rest of the parkway. Only a small cleanout will remain so that water level observations can be made to determine the efficiency with which the Parkway Pocket re-infiltrates the runoff into the soil.

Project Alternative

The alternative to this project is the status quo, in which all stormwater runoff enters the under-sized and over-taxed combined sewer throughout the Village (with the exception of the area impacted by the Northside Stormwater Management Project). During heavy rain events, these sewers will likely fill up and run out of capacity as they have in the past.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Water and Sewer Improvements – Five Year Capital Improvement Program

This section of the Capital Improvement Plan identifies funding for sewer and water improvements, which are scheduled to continue through FY 2023. The Village's sewer and water system is comprised of the following:

Type of Sewer	Number of Miles
Combined Sanitary Sewer	33.13
Storm Sewer	3.37
Water Main	40

Improvements planned for FY 2019 include:

Improvement	Cost	Funding Source	Nature of Project
Sewer Relining	140,000	WS	Critical
Sewer Point Repairs	35,000	WS	Critical
Water Distribution System – Pumping Station	34,000	WS	Critical
Water Meter Replacement Program	16,000	WS	Critical
Water Main Replacement	400,000	WS	Critical
Hydrant Replacement	24,000	WS	Recommended
Total	**649,000**		

Each project in the CIP is categorized by the requesting department as follows:

Critical- The project must be completed in the year recommended due to safety or operational needs or as mandated by law.

Critical projects are highlighted in yellow.

Recommended- The project will significantly improve operations or safety. The project is strongly recommended for funding in the year recommended or the year after.

Contingent on Funding- The project would be a benefit to the Village and improve service levels but is only recommended if funds are available.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Water and Sewer Improvements
Fiscal Year 2019 Budget

	This Project is:	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total	Funding Source
Sewer System								
Sewer Relining	Critical	140,000	140,000	140,000	140,000	140,000	700,000	WS
Sewer Point Repairs	Critical	35,000	35,000	35,000	35,000	35,000	175,000	WS
Pumping Station								
Water Distribution System	Critical	34,000	19,000	20,000	100,000	40,000	213,000	WS
Water Distribution Improvements								
Water Meter Replacements	Critical	16,000	6,000	7,500	16,000	9,500	55,000	WS
Water Main Replacement	Critical	400,000	400,000	400,000	400,000	400,000	2,000,000	WS
Hydrant Replacement	Recommended	24,000	25,000	25,000	26,000	26,000	126,000	WS
Total		**649,000**	**625,000**	**627,500**	**717,000**	**650,500**	**3,269,000**	

Proposed Funding Source	Fiscal Year 2019	2020	2021	2022	2023	Five Year Total
Water and Sewer Fund (WS)	649,000	625,000	627,500	717,000	650,500	3,269,000
Totals	**649,000**	**625,000**	**627,500**	**717,000**	**650,500**	**3,269,000**

Sewer Lining Program	**FY 2019**	**$140,000**	**WS**
Public Sewers	**FY 2020**	**$140,000**	**WS**
	FY 2021	**$140,000**	**WS**
	FY 2022	**$140,000**	**WS**
	FY 2023	**$140,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2018	$	125,767	(including MH lining)
FY 2017	$	122,230	(including MH lining)
FY 2016	$	69,956	
FY 2015	$	122,251	
FY 2014	$	57,992	

Program Description & Justification

The purpose of this program is to improve the Village's sewer system and prevent costly repairs associated with failing sewer mains (collapsed, cracked, etc.). The objective is to evaluate the conditions of sewer mains (via televising), identify those in the worst condition, and perform lining of as many sections as possible. In some situations, sewer mains may have failed beyond the ability to line and a point repair (or replacement of a section) may be necessary. The Village's sewer system is a critically important infrastructure system.

The Water and Sewer Rate Study completed by Baxter & Woodman in FY 2012 recommends an annual funding level of $140,000 for this program. This increase in budget will allow for both the relining of damaged sewer main as well as the start of a systematic approach to relining all sewers throughout the village, regardless of their condition.

The process of sewer lining consists of inserting a sleeve made of flexible material in the existing pipe. The sleeve is then filled with steam or water heated to a high temperature for curing and hardening. This process provides the existing failing pipes with the structural support needed to continue their service and avoid a costly complete replacement.

In addition to the typical sewer lining completed each year, Village Staff has completed some lining of manholes in FY 2018. Potential candidates were researched throughout the FY 2018 year and lined in the fall. Three manholes were lined at a total cost of approximately $6,000. This work allows the manholes to be sealed and stabilized without requiring any excavation. The intent of this work is to prevent sinkholes and other pavement failures from occurring due to the decay of the interior walls and base of existing manholes.

Since the Village's first sewer lining project, nearly 40,000 lineal feet of sewers have been lined. This represents approximately 23% of the total sewer mains owned / maintained by the Village (approximately 171,000 lineal feet). All sewers that were rated either poor or fair (condition ratings "D" and "C") during the sewer televising program from the late 1990's have been lined. Lining all un-lined combined sewers that are less than 33 inches in diameter would cost approximately $9 million.

In 2011, the Public Works Department developed an in-house sewer televising program. Public Works Staff reviews the video recordings and the sections of failing sewer mains are identified and prioritized. This in-house sewer televising program has identified sewer mains in poor condition that will be lined in the coming years. Extreme weather conditions and the on-going root growth of trees have accelerated the rate of deterioration of the Village's combined sewers.

The following table identifies the sewer condition ratings, description of condition, and the recommended action:

Condition Rating	Condition Description	Recommended Action
A	Random cracking / some roots	Continue monitoring
B	Medium cracking / Medium root problem	Line in one to three years
C	Heavy cracking / Heavy root problem	Line immediately
D	Structural damage / Fully blocked by roots	Requires replacement

FY 2019 Recommended Project

Specific project locations will be determined during the winter months. Public Works Staff will review all sewer televising completed throughout the year by the Operations Department. Each sewer line televised will be rated with the most severely deteriorated sewers being selected for lining. Other sections may also be lined, based on the need for a point repair.

Program Alternative

Once the structural integrity of the pipe is severely affected, beyond the ability to line, the sole option is to perform an open-trench point repair that will require heavy street construction, temporary interruption of traffic flow, and costs associated with restoring the street's driving surface. The preferred and more cost effective option to improving sewer mains is sewer lining.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Sewer Point Repairs	**FY 2019**	**$35,000**	**WS**
Public Sewers	**FY 2020**	**$35,000**	**WS**
	FY 2021	**$35,000**	**WS**
	FY 2022	**$35,000**	**WS**
	FY 2023	**$35,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2018	$	39,600
FY 2017	$	30,770
FY 2016	$	28,875
FY 2015	$	32,800
FY 2014	$	-

Program Description & Justification

The purpose of this program is to improve the Village's sewer system by replacing failing (collapsed, cracked, etc.) sections of sewer main (also referred to as point repairs). Staff's objective is to evaluate the conditions of sewer mains (via televising), identify those in the worst condition, and perform relining of as many sections as possible. In some situations, sewer mains may have failed beyond the ability to reline and a point repair may be necessary. Most point repairs are made on an emergency basis and can be costly. The Water and Sewer Rate Study that was completed by Baxter & Woodman in FY 2012 recommends an annual funding level of $15,000 for this program.

In 2011, Public Works began an ongoing in-house sewer televising program. Village Staff reviews the video recordings to identify sections of failing sewer mains for repair.

Program Alternative

Once the structural integrity of the pipe is severely affected, beyond the ability to reline, the sole option is to perform an open-trench point repair.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Water Distribution System - Pumping Station	**FY 2019**	**$34,000**	**WS**
	FY 2020	**$19,000**	**WS**
	FY 2021	**$20,000**	**WS**
	FY 2022	**$100,000**	**WS**
	FY 2023	**$40,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2018	$	19,000
FY 2017	$	15,600
FY 2016	$	15,832
FY 2015	$	49,100
FY 2014	$	-

Project Description & Justification

The Village purchases all of its potable water (for both general consumption and fire suppression) from the City of Chicago. The water received from Chicago is treated before arriving to the Village's water distribution system where it is stored and treated (once again) before entering the water distribution system for consumption. The Pumping Station is where the following components of the Village's water distribution system are located:

- SCADA (Supervisory Control and Data Acquisition) system: computer system that monitors and controls various components and equipment
- Three Pumps
  - Pump #1: 100 horsepower; 1,540 gallons per minute
  - Pump #2: 150 horsepower; 2,350 gallons per minute
  - Pump #3: 125 horsepower; 1,750 gallons per minute
- 40 valves
- Four meters: two for incoming water from the City of Chicago (located at an off-site location) and two for incoming/outgoing water at the Pumping Station
- Water treatment system (sodium hypochlorite)
- Two underground storage reservoirs
  - 2.0 million gallon storage capacity
  - 0.5 million gallon storage capacity
- Emergency generator: backup power source in the event of a power outage (see CERF).

In FY 2014, the Village contracted the services of Dixon Engineering to perform preliminary maintenance inspections on both underground water storage reservoirs. The purpose was to evaluate the interior and exterior, and to establish maintenance programs and schedules. Dixon Engineering developed a report that included recommendations for re-inspecting each reservoir in five years. The following facility improvements will be necessary within the next two to five years:

Repair/Improvement	**Estimated Cost**		**Year**
Replace four water valves in basement of Pumping Station	$	22,000	FY 2019
2.0 MG Underground Reservoir: re-inspect exterior/interior	$	4,000	FY 2019
0.5 MG Underground Reservoir: re-inspect exterior/interior	$	3,500	FY 2019

0.5 MG Elevated Storage Tank: re-inspect exterior/interior	$	4,500	FY 2019
Replace four water valves in basement of Pumping Station	$	19,000	FY 2020
Replace four water valves in basement of Pumping Station	$	20,000	FY 2021
Replace pump #1 and associated piping as suggested in Baxter and Woodman efficiency study performed 11/2010	$	100,000	FY 2022
Install Reservoir turbine generator as suggested in Baxter and Woodman efficiency study performed 11/2010	$	40,000	FY 2023
Total	$	232,000	

Valve replacement: During the piping upgrade project (efficiency improvements) that were completed in FY 2014, it was determined that four water control valves in the basement of the Pumping Station were not operating properly. These valves are likely original to the facility. Staff recommended replacing four valves in FY 2015 and initiated a ten-year program to replace all 40 valves in the system (replace four valves annually). Proper function of these valves is critical since the valves give Staff the ability to change or re-route suction and discharge piping in case of emergencies or while maintenance is being performed on Village pumps. The following four valves are recommended for replacement:

	Description	**Problem**
Valve #1	12" Main shutoff for the outgoing supply line	Difficult to operate and leaks through
Valve #19	8" Discharge valve for pump #2	Difficult to operate
Valve #3	12" Bypass valve on discharge piping	Difficult to operate
Valve #4	12" Bypass valve on discharge piping	Difficult to operate

Project Alternative

There are no alternatives to maintaining the Village's water distribution system as it is the system that provides potable water to the entire community. Deferring these projects would result in emergency repairs that could increase project costs (compared to soliciting bids/proposals).

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Water Meter Replacement Program	**FY 2019**	**$16,000**	**WS**
	FY 2020	**$6,000**	**WS**
	FY 2021	**$7,500**	**WS**
	FY 2022	**$16,000**	**WS**
	FY 2023	**$9,500**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2018	$17,500	continuation of program to replace all meters over 20 years of age
FY 2017	$16,000	continuation of program to replace all meters over 20 years of age
FY 2016	$24,000	continuation of program to replace all meters over 20 years of age
FY 2015	$24,092	continuation of program to replace all meters over 20 years of age
FY 2014	$24,092	continuation of program to replace all meters over 20 years of age

Program Description & Justification

The purpose of this program is to improve the metering accuracy of Village-owned commercial and residential water meters. Water Division employees tested meters in the 15 to 20 year age category and found that some did not meet AWWA (American Water Works Association) standards for meter accuracy. Although not a standard, studies recommend that residential water meters be replaced every 15 to 20 years. Water meters can be damaged and deteriorate with age, thus producing inaccurate readings. Inaccurate readings will give misleading information regarding water usage, make leak detection difficult, and result in lost revenue for the system.

FY 2019 Recommended Projects

Qty.	Size	Each	Cost
78	0.625	$ 118	$ 9,204
13	0.75	$ 137	$ 1,781
14	1	$ 169	$ 2,366
3	1.5	$ 479	$ 1,437
0	2	$ 673	$ -
108		**Total**	$ 14,788

Program Alternative

As the Village's water metering system is critically important as a source of revenue, it is important to plan/budget for the replacement of water meters that have reached or exceeded the end of their useful service life. The primary alternative to this program is to not budget/plan for water meter replacements and respond to metering failures and inaccuracies as they occur.

An alternative to the Village incurring the costs of the new meters is requiring that the building/property owners incur a portion or all of the new meter costs.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Water Main Replacement Program	**FY 2019**	**$400,000**	**WS**
	FY 2020	**$400,000**	**WS**
	FY 2021	**$400,000**	**WS**
	FY 2022	**$400,000**	**WS**
	FY 2023	**$400,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2018	$ 396,000	(Projected)
FY 2017	$ 441,613	
FY 2016	$ 17,600	
FY 2015	$ 491,175	
FY 2014	$ -	

Program Description & Justification

The purpose of this program is to improve the condition of the Village's water mains by replacing aging and deteriorating water system infrastructure. This is accomplished by replacing deteriorating segments of water mains before they break which will necessitate costly repairs and the experience of significant water loss with associated water consumption costs. The Village's water distribution system is a critically important infrastructure system.

The Village has approximately 40 miles of water main. The majority of the water mains are between 50 and 80 years old. On average, there are seven water main breaks per year. It has been proven that as water mains become old and reach the end of their useful lives, performance deteriorates and results in high maintenance costs, loss of hydraulic capacity and water quality, and a significant increase in customer complaints. The AWWA recommends replacing one-percent of the distribution system every year.

Each year, Village Staff conducts an analysis of failing or problematic sections of water main for the purpose of determining the need to replace specific water mains based on history and number of breaks, outdated size, or any other defective condition. A typical water main project involves an open trench installation of the new water main pipe and the transfer of all fire hydrants and private water services to the new main before the old main is abandoned. Water main projects are typically followed by a resurfacing project of the street's surface.

2019 Recommended Projects

Location	Pipe Length (FT)
Chicago - Thatcher to CN tracks	1,200

The proposed water main replacement project will include the replacement of the existing eight inch water main on Chicago Avenue from Thatcher Avenue to the railroad tracks just east of Forest Avenue through open-cut/trench construction. Multiple valves will be replaced as part of this project. The selection of this project area is due to an increased number of water main breaks in recent years in addition to the paving of Chicago Avenue in FY 2019. Completion of this project will reduce the likelihood that excavations will be needed in the new pavement due to water main break repairs. Lead water services connected to this water main will also be replaced.

The cost estimate for this project is as follows:

- $345,000 for construction (design and permitting to be performed in-house)
- $30,000 for construction engineering services

An additional $25,000 is also being budgeted for miscellaneous lead service replacements throughout the Village based on leak repairs, homeowner partial replacements, etc.

Future Water Main Projects

Staff evaluates the Village's water distribution system and trends in water main breaks on an annual basis to identify and prioritize future projects. Staff has identified the following water system improvement projects for possible future fiscal years:

- Install an eight inch water main on Augusta Street between Thatcher Avenue and Forest Avenue to increase the flow in this area.
  Estimated project cost: $350,000

Program Alternative

As the Village's water distribution system is a critically important infrastructure system, it is important to plan/budget for the replacement of water mains that have reached or exceeded the end of their useful service life. The primary alternative to this program is to not budget/plan for water main replacement projects and respond to water main breaks as they occur. These repairs, which are typically conducted on an emergency basis, involve an open-trench that will require heavy street construction, temporary interruption of traffic flow, and costs associated with restoring the street's driving surface.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None

Hydrant Replacement Program	**FY 2019**	**$24,000**	**WS**
	FY 2020	**$25,000**	**WS**
	FY 2021	**$25,000**	**WS**
	FY 2022	**$26,000**	**WS**
	FY 2023	**$26,000**	**WS**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2018	$	8,758
FY 2017	$	22,000
FY 2016	$	23,606
FY 2015	$	7,400
FY 2014	$	-

Program Description & Justification

The Village's fire hydrant system is a critically important infrastructure system. The Village owns and operates approximately 446 fire hydrants. The purpose of this program is to maintain all of the Village's fire hydrants in excellent operating condition. The Village's Fire Department conducts two hydrant flushing programs each year. During the Village-wide hydrant flushing events, Fire Department personnel identify hydrants in need of repair and provide a list of those hydrants to the Public Works Department to coordinate and/or make the necessary repairs. Hydrants that are not in operating condition are prioritized for immediate repair.

2019 Recommended Project

The Public Works and Fire Departments have identified hydrants as operational, but "too low" (which is defined as less than 18 inches from the ground to port), which prevents the hydrant wrench from rotating freely around the main/steamer port and slows the time required connect the fire hose to the hydrant. Hydrants that have a low flow rate due to a small supply line are also identified. Each year Village staff attempts to replace three of these hydrants to try to eliminate any that do not operate efficiently or provide high flow rates.

Program Alternative

The Village's fire hydrant system is a critically important infrastructure and it is important to budget for the replacement of hydrants that have reached or exceeded the end of their useful service lives. The primary alternative to this program is to not budget/plan for hydrant replacement and make more costly emergency repairs.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	None