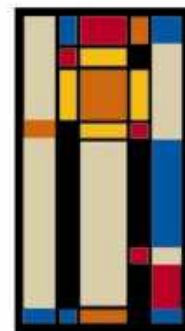


# CAPITAL IMPROVEMENT PLAN



FY 2021 - 2025



INCORPORATED 1880

**RIVER  
FOREST**

*Proud Heritage*

*Bright Future*

# INTRODUCTION AND SUMMARY

## ***Village of River Forest***

### ***Five Year Capital Improvement Program***

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All Village programs and services are provided with three guiding principles in mind: providing a safe community, protecting property values in River Forest, and working to stabilize property taxes. The Village's annual budget is prepared by Village Staff and approved by the Village Board in service to those guiding principles and with the understanding that sound management of its finances, resources and infrastructure, is key to ensuring the long term health of the organization and community.

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 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 CIP is divided into the following sections:

#### **Buildings and Improvements**

*Number of Existing Facilities: 3*

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**

*Number of Vehicles in Fleet: 48*

The Vehicles section includes an inventory of all Village vehicles and is subdivided by building, police, fire and public works vehicles. The detail page for each vehicle to be replaced in FY 2021-2025 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**

*System Equipment: 94 computers/tablets, 1 physical server and several virtual servers*

The Information Technology (IT) section includes hardware, software, equipment, licenses and consulting costs associated with supporting the robust computer network that supports the Village's day-to-day operations.

#### **Streets, Sidewalks, Alleys**

*Miles of 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. The CIP also includes implementation of recommendations from the Bicycle Plan that was adopted during FY 2020.

## **Water and Sewer Improvements**

*Miles of Water/Sewer Mains: 76.5 miles*

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***

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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 2021 funding levels for each fund or source can be found below.

**General Fund** **\$ 150,000**

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)** **\$ 630,000**

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** **\$ 992,300**

The Water and Sewer Fund includes the following revenue sources which assist in funding capital improvements: water and sewer charges and interest income.

**Capital Equipment Replacement Fund (CERF)** **\$ 646,224**

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** **\$ -**

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** **\$ 1,564,330**

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** **\$ 275,000**

The Infrastructure Improvement Bond Fund is a new fund that utilizes the proceeds from the 2020 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 2021 Budget**

CATEGORY	Fiscal Year					Five Year Total
	2021	2022	2023	2024	2025	
Buildings and Improvements	60,160	75,000	32,000	317,000	40,000	524,160
Vehicles	292,780	1,057,188	479,919	384,038	389,349	2,603,274
Equipment	457,434	150,713	63,857	447,200	111,581	1,230,785
Information Technology	888,600	543,000	313,000	265,000	128,000	2,137,600
Streets, Sidewalks & Alleys	1,678,380	1,376,470	1,000,000	965,000	935,000	5,954,850
Water and Sewer Improvements	880,500	1,817,000	827,000	618,000	619,000	4,761,500
<b>Total</b>	<b>4,257,854</b>	<b>5,019,371</b>	<b>2,715,776</b>	<b>2,996,238</b>	<b>2,222,930</b>	<b>17,212,169</b>

PROPOSED FUNDING SOURCE	Fiscal Year					Five Year Total
	2021	2022	2023	2024	2025	
General Fund (GF)	150,000	105,000	105,000	105,000	105,000	570,000
Motor Fuel Tax Fund (MFT)	630,000	490,000	490,000	490,000	490,000	2,590,000
Water and Sewer Fund (WS)	992,300	1,907,000	897,000	688,000	689,000	5,173,300
Capital Equipment Replacement Fund (CERF)	646,224	1,207,901	498,776	927,238	382,430	3,662,569
CERF/WS	-	-	45,000	221,000	118,500	384,500
Capital Improvements Fund (CIF)	1,564,330	1,059,470	680,000	565,000	418,000	4,286,800
Capital Improvements Fund/Parking Reserve (CIF/PR)	-	-	-	-	20,000	20,000
Infrastructure Improvements Bond Fund (IIBF)	275,000	250,000	-	-	-	525,000
<b>Totals</b>	<b>4,257,854</b>	<b>5,019,371</b>	<b>2,715,776</b>	<b>2,996,238</b>	<b>2,222,930</b>	<b>17,212,169</b>

# BUILDINGS AND IMPROVEMENTS

## ***Buildings and Improvements – Five Year Capital Improvement Program***

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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 and Water Pumping Station. Proposed improvements may include repair, replacement or the rehabilitation of Village buildings.

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 2021 include:

<b>Improvement</b>	<b>Cost of Improvement</b>	<b>Funding Source</b>	<b>Nature of Project</b>
Village Hall Improvements	\$ 25,160	CIF/CERF	Recommended
Garage Improvements	\$ 35,000	CIF	Contingent
<b>Total</b>	<b>\$ 60,160</b>		

**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 2021 Budget**

	This Project is:	Fiscal Year					Five Year Total	Funding Source
		2021	2022	2023	2024	2025		
<b>Village Hall</b>							-	
Village Hall Improvements	Recommended	25,160	55,000	32,000	317,000	40,000	469,160	CIF/CERF
<b>Public Works</b>							-	
Garage Improvements	Contingent	35,000	-	-	-	-	35,000	CIF
Pumping Station Improvements	Critical	-	20,000	-	-	-	20,000	WS
<b>Total</b>		<b>60,160</b>	<b>75,000</b>	<b>32,000</b>	<b>317,000</b>	<b>40,000</b>	<b>524,160</b>	

Proposed Funding Source	Fiscal Year					Five Year Total
	2021	2022	2023	2024	2025	
Water and Sewer Fund (WS)	-	20,000	-	-	-	20,000
Capital Equipment Replacement Fund (CERF)	-	-	-	317,000	-	317,000
Capital Improvement Fund (CIF)	60,160	55,000	32,000	-	40,000	187,160
<b>Totals</b>	<b>60,160</b>	<b>75,000</b>	<b>32,000</b>	<b>317,000</b>	<b>40,000</b>	<b>524,160</b>

## Buildings and Improvements

### Village Hall Improvements



FY 2021	\$25,160	CIF
FY 2022	\$55,000	CIF
FY 2023	\$32,000	CIF
FY 2024	\$317,000	CERF
FY 2025	\$40,000	CIF

Critical

Recommended

Contingent on Funding

### Spending History

FY 2020	\$5,806 (LED lighting upgrades)
FY 2019	\$2,870 (Repaired gutters and downspouts)
FY 2019	\$2,300 (Rewired controls to WSCDC HVAC unit)
FY 2018	\$7,303 (Repair to WSCDC HVAC unit)
FY 2017	\$169,861 (Roof replacement)

### 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. 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 condition of the roof. Their report recommended roof replacement for this facility in FY 2017, as well as other building envelope improvements over the following five years. An evaluation of the energy efficiency of the building was performed by ComEd in FY 2019 to assess if there are any improvements to electrical systems/fixtures that would increase efficiency and be eligible for their incentive program. The working condition of all Village Hall HVAC units is also monitored and the HVAC contractor helps in determining if replacement is needed in the next five years as well. The replacement of fluorescent lighting in all interior areas of Village Hall with energy efficient LED lighting is planned for FY 2021. The front doors are in need of replacement due to their current operating condition. This replacement will require compliance with ADA egress requirements and updated controls for opening and closing.

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

Repair/Improvement	Estimated Cost	Year
Energy efficient lighting improvements (interior)	\$14,160	FY 2021
Replace front door controls	\$11,000	FY 2021
Replace roof above 2nd floor (WSCDC area)	\$55,000	FY 2022
Replace HVAC rooftop unit	\$32,000	FY 2023
Replace Emergency Generator	\$317,000	FY 2024
Tuck-pointing improvements	\$40,000	FY 2025

Total	\$469,160
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**Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

## Buildings and Improvements - Public Works

### Public Works Garage Improvements



FY 2021	\$35,000	CIF
FY 2022	\$0	CIF
FY 2023	\$0	CIF
FY 2024	\$0	CIF
FY 2025	\$0	CIF

Critical

Recommended

Contingent on Funding

### Spending History

FY 2020	\$30,100 (Salt Storage Shed Rebuild, projected)
FY 2019	\$111,529 (West Wall Repair and Replacement of Windows and Front Door)
FY 2018	\$265,189 (East, North, and South Wall Repair, 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 replacement of two overhead garage doors and interior building improvements are planned for FY 2021.

Based on current conditions and a facility site assessment, the following facility improvements are recommended within the next five years:

Repair/Improvement	Estimated Cost	Year
Replace two overhead garage doors	\$ 20,000	FY 2021
Interior wall repairs and bathroom renovations	\$ 15,000	FY 2021
Total	\$ 35,000	

### Project Impact

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

## Buildings and Improvements - Public Works

### Pumping Station Improvements

Water & Sewer



FY 2021	\$0	WS
FY 2022	\$20,000	WS
FY 2023	\$0	WS
FY 2024	\$0	WS
FY 2025	\$0	WS

Critical

Recommended

Contingent on Funding

### Spending History

FY 2020	\$54,289 (Relocation of ComEd transformers to outside of building)
FY 2019	\$2,640 (Replacement of windows)
FY 2018	\$98,500 (Replace lower roof, 2nd floor windows and boiler with combination HVAC)
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.

Repair/Improvement	Estimated Cost	Year
Exterior application of stucco coating system	\$20,000	FY 2022
Total	\$20,000	

### Project Impact

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

# VEHICLES

## **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 2021:

<b>Department</b>	<b>Number of Vehicles to be Replaced in FY 2021</b>	<b>Cost of Vehicles to be Replaced in FY 2021</b>	<b>Total Number of Vehicles in Fleet</b>
Building	-	\$ -	1
Police	1	\$ 45,780	17
Fire	1	\$ 33,500	9
Public Works	2	\$ 213,500	21
<b>Total</b>	<b>4</b>	<b>\$ 292,780</b>	<b>48</b>

### **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 2021 Budget**

Vehicles	Fiscal Year					Five Year Total	Funding Source
	2021	2022	2023	2024	2025		
Building	-	-	-	16,293	-	16,293	CERF
Police	45,780	164,188	140,919	128,745	152,349	631,981	CERF
Fire	33,500	738,000	230,000	-	-	1,001,500	CERF
Public Works	213,500	155,000	109,000	239,000	237,000	953,500	CERF & CERF/WS
<b>Total</b>	<b>292,780</b>	<b>1,057,188</b>	<b>479,919</b>	<b>384,038</b>	<b>389,349</b>	<b>2,603,274</b>	

Proposed Funding Source	Fiscal Year					Five Year Total
	2021	2022	2023	2024	2025	
Capital Equipment Replacement Fund (CERF)	292,780	1,057,188	434,919	185,038	270,849	2,240,774
CERF- Water and Sewer (CERF/WS)	-	-	45,000	199,000	118,500	362,500
<b>Totals</b>	<b>292,780</b>	<b>1,057,188</b>	<b>479,919</b>	<b>384,038</b>	<b>389,349</b>	<b>2,603,274</b>



**Village of River Forest, Illinois**  
**Five Year Capital Improvement Program**  
**Vehicles-Building**  
**Fiscal Year 2021 Budget**

Building Department	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source
				2021	2022	2023	2024	2025		
Ford Focus	2014	1	Recommended	-	-	-	16,293	-	16,293	CERF
<b>Total</b>				-	-	-	<b>16,293</b>	-	<b>16,293</b>	

Proposed Funding Source	Fiscal Year					Five Year Total
	2021	2022	2023	2024	2025	
Capital Equipment Replacement Fund (CERF)	-	-	-	16,293	-	16,293
<b>Totals</b>	-	-	-	<b>16,293</b>	-	<b>16,293</b>

## Vehicles - Building

### Administrative Vehicle

FY 2024

\$16,293

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model Focus  
 Year 2014  
 Cost \$14,483  
 Useful Life 10 years  
 Current Life 6 years



### Vehicle Description

This vehicle is utilized by the Building Official and Code Enforcement Officer for travel to/from various properties primarily for inspections.

<b>Total Vehicle Miles</b>	3,787 as of 12/19
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Maintenance Costs	Cost
Routine Maintenance as of December, 2019 (e.g. oil change)	\$217.00
Cost of Repairs	\$0.00
<b>Total</b>	<b>\$217.00</b>

### Project Alternative

- Utilize a car that is being taken out of the police, fire or public works fleet (if available) as a pool car instead of purchasing a new vehicle.
- Examine possible leasing strategies in lieu of purchasing a new vehicle.
- Defer vehicle replacement given its low mileage and low maintenance costs.

### Operational Impact

This unit is the primary vehicle for the Building Department. Historically the Department has relied on fully depreciated vehicles as "pool cars" that are shared with other Departments and will continue to do so. The Ford Focus has had minimal maintenance and no performance issues and replacement can be deferred.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$100	Oil changes as needed plus cost of fuel.

### Carryover History

This vehicle was scheduled for replacement in FY 2020, however, due to its low mileage, condition and low maintenance costs, replacement has been deferred to FY 2024.

Village of River Forest, Illinois  
 Five Year Capital Improvement Program  
 Vehicles-Police  
 Fiscal Year 2021 Budget

Police Department	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source
				2021	2022	2023	2024	2025		
Marked Squad Car	2018	1	Recommended	-	46,695	-	-	50,284	96,979	CERF
Marked Squad Car	2019	2	Recommended	-	-	48,649	-	-	48,649	CERF
Marked Squad Car	2016	3	Recommended	-	-	48,988	-	-	48,988	CERF
Marked Squad Car	2019	4	Recommended	-	45,132	-	-	48,517	93,649	CERF
Marked Squad Car	2016	5	Recommended	-	-	43,282	-	-	43,282	CERF
Marked Squad Car	2017	6	Recommended	45,780	-	-	49,299	-	95,079	CERF
Unmarked Traffic/Patrol	2020	8	Recommended	-	-	-	-	53,548	53,548	CERF
Community Service Vehicle	2016	10	Recommended	-	-	-	35,190	-	35,190	CERF
Detectives Vehicle	2017	12	Recommended	-	35,459	-	-	-	35,459	CERF
Unmarked Tactical	2018	13	Recommended	-	-	-	44,256	-	44,256	CERF
Chief's Vehicle	2015	17	Recommended	-	36,902	-	-	-	36,902	CERF
Marked Patrol	2009	7	N/A	These vehicles are replaced with used police vehicles.					-	
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						-	
<b>Total</b>									<b>45,780</b>	<b>164,188</b>

Proposed Funding Source	Fiscal Year					Five Year Total
	2021	2022	2023	2024	2025	
Capital Equipment Replacement Fund (CERF)	45,780	164,188	140,919	128,745	152,349	631,981
<b>Totals</b>	<b>45,780</b>	<b>164,188</b>	<b>140,919</b>	<b>128,745</b>	<b>152,349</b>	<b>631,981</b>

## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2022</b>	<b>\$46,695</b>	<b>CERF</b>
<b>Squad 1</b>	<b>FY 2025</b>	<b>\$50,284</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Ford
Model	Explorer PUV
Year	2018
Cost	\$42,510
Useful Life	3 years
Current Life	<2 years

### Project Description & Justification

The estimated cost of the vehicle incorporates \$11,000/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 was May 4, 2018. The current mileage is 17,188 (as of 11/21/19). The average monthly miles driven is 1,000. 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. This vehicle also houses mission critical equipment for response to active shooter and other life-threatening events.

Maintenance Costs FY 2018-2022		
Routine Maintenance as of November, 2019	\$180.00	(6 @ \$30.00)
Cost of Repairs While Under Warranty (3-yr/36,000)	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$180.00</b>	

### 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 car will be carried over from FY 2021 to FY 2022

## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2023</b>	<b>\$48,649</b>	<b>CERF</b>
<b>Squad 2</b>	<b>FY 2027</b>	<b>\$52,298</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Chevy
Model	Tahoe PPV
Year	2019
Cost	\$44,073
Useful Life	4 years
Current Life	<1 year

### Project Description & Justification

The estimated cost of the vehicle incorporates \$11,000/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 March 20, 2019. The current mileage is 7,390 (as of 11/30/19). The average monthly miles driven is 925. 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. The vehicle carries a number of entry tools and protective equipment that is ready for immediate deployment by officers. 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 2019-2023		
Routine Maintenance as of November, 2019	\$2,475.00	(5 @ \$495.00)
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$2,475.00</b>	

### Project Alternative

Due to the nature of the use, deferral beyond three to four years is not recommended for patrol vehicles. The reliability decreases as age increases, and maintenance and repair costs often increase. At this time, staff believes the Chevy Tahoe will be able to be deferred past FY 2023 due to the expected low mileage and its heavy duty pursuit rating.

### 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

N/A

## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2023</b>	<b>\$48,988</b>	<b>CERF</b>
<b>Squad 3</b>	<b>FY 2026</b>	<b>\$51,986</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Ford
Model	Explorer PUV
Year	2020
Cost	\$45,490
Useful Life	3 years
Current Life	<1 year

### Project Description & Justification

The estimated cost of the vehicle incorporates \$11,000/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 0 (as of 11/30/19), due to the vehicle being ordered recently and having an expected in-service date of February 2020. The average monthly miles driven is expected to be approximately 1,880. Estimated mileage at time of replacement: 80,000. The former Squad 3 was 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 2020-2023		
Routine Maintenance as of November, 2019	\$0.00	(0 @ \$0.00)
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$0.00</b>	<b>*</b>

\*Ordered 11/19, not in-service yet, under warranty

### 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

N/A

## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2022</b>	<b>\$45,132</b>	<b>CERF</b>
<b>Squad 4</b>	<b>FY 2025</b>	<b>\$48,517</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Dodge
Model	Durango
Year	2019
Cost	\$41,910
Useful Life	3 years
Current Life	<1 year

### Project Description & Justification

The estimated cost of the vehicle incorporates \$11,000/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 June 1, 2019 for Squad #4. The current mileage is 10,400, as of 11/30/19. Estimated mileage at time of replacement: 80,000. Once it has reached its useful life, the car will then replace an older model in the fleet, be offered to another internal Village department 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 2019-2022		
Routine Maintenance as of November, 2019	\$68.00	(2 @ \$34.00)
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$68.00</b>	

### 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. At this time, staff believes the Dodge Durango will be able to be deferred past FY 2022 due to expected low mileage and its heavy duty pursuit rating.

### 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

<b>Marked Squad Car</b>	<b>FY 2023</b>	<b>\$43,282</b>	<b>CERF</b>
<b>Squad 5</b>	<b>FY 2026</b>	<b>\$45,931</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Dodge
Model	Charger AWD
Year	2020
Cost	\$40,192
Useful Life	3 years
Current Life	<1 year

### Project Description & Justification

The estimated cost of the vehicle incorporates \$11,000/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 is expected to be March 1, 2020. The current mileage is 0 (as of 11/30/19). The average monthly miles driven is to be determined. Estimated mileage at time of replacement: 80,000. This vehicle will be kept in the fleet as a secondary line vehicle to be used for crime prevention or back-up patrol vehicle. The old Car #5 was 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 2020-2023		
Routine Maintenance as of November, 2019	\$0.00	(0 @ \$0.00)
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$0.00</b>	*

*\*Expected order date in 01/20, not in service yet, will be under warranty*

### 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

N/A



## Vehicles - Police

<b>Marked Squad Car</b>	<b>FY 2021</b>	<b>\$45,780</b>	<b>CERF</b>
<b>Squad 6</b>	<b>FY 2024</b>	<b>\$49,299</b>	<b>CERF</b>
<input type="radio"/> Critical	<input checked="" type="radio"/> Recommended	<input type="radio"/> Contingent on Funding	
Make	Ford		
Model	Explorer		
Year	2017		
Cost	\$41,474		
Useful Life	3 years		
Current Life	3 years		

### Project Description & Justification

The estimated cost of the vehicle incorporates \$11,000/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 72,305 (as of 11/21/19). The average monthly miles driven is 2,128. Estimated mileage at time of replacement: 79,000. The condition of this vehicle will be analyzed when it is removed from service to determine if it is suitable to be rotated to another department for administrative use, or if it should be disposed of at auction.

### Vehicle Description

The recommended replacement model is a Ford Explorer or Chevy Tahoe. 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 (ALPR), which is used for both traffic and parking operations. 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, and video equipment will be removed and reinstalled in the new cars.

Maintenance Costs FY 2017-2021		
Routine Maintenance as of November, 2019	\$8,088.00	(24 @ \$337.00)
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$8,088.00</b>	

### 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. The ALPR equipment serves a mission critical function for daily parking and other enforcement assignments. Police staff recommend that this purchase be deferred from FY 2020 to FY 2021 due to its low to medium mileage.

**Project Impact**

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

**Carryover History**

Deferred in FY 2020 to FY 2021

## Vehicles - Police

<b>Marked Traffic/Patrol</b>	<b>FY 2025</b>	<b>\$53,548</b>	<b>CERF</b>
<b>Patrol 8</b>	<b>FY 2030</b>	<b>\$59,121</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Ford
Model	F-150 Police Responder
Year	2020
Cost	\$48,500
Useful Life	5 years
Current Life	<1 year

### Project Description & Justification

The current Car #8 was added to the front-line fleet in FY 2020 using General Reserve Funds. At that time the old Car #8 had over 110,000 miles. The new Car #8, the Ford F-150 Police Responder, is used as a Traffic Enforcement/Accident Investigation unit. It also serves as the Department's primary Truck Enforcement vehicle. With Car #8 just being added to the front-line rotation, it is estimated that the unit will average 8,000 miles per month and will serve as a front-line car until other operational needs or mechanical issues dictate its rotation or replacement. The estimated total costs for the FY 2020 purchase is \$48,500. This includes police markings, emergency lights, radar, computer equipment, the prisoner secure area, storage equipment, and installation.

### Vehicle Description

The F-150 Police Responder will be used for traffic enforcement, truck enforcement, accident investigation, radar/message board trailer deployment, police mountain bike deployment, evidence transport, and WESTAF Major Accident Team deployment. The unit has high water, severe winter conditions, and off-road capabilities to meet all mission critical assignments. The unit has on-board storage for evidence technician equipment, entry tools, protective gear, and other specialized hardware.

Maintenance Costs FY 2020-2025		
Routine Maintenance as of November, 2019	\$0.00	(0 @ \$0.00)
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$0.00</b>	*

\*Ordered 10/19, not in-service yet, under warranty

### Project Alternative

At this time, the Traffic Enforcement car is used for meet the number one citizen driven complaint in the community: speeding and reckless drivers. In addition, the vehicle is used for multiple operational applications. The Department will evaluate this unit's effectiveness and make recommendations to determine actual or deferred replacement.

### Operational Impact

As a front-line unit, the car is used for all patrol related activities, plus its specialized applications. This vehicle needs to be properly maintained and replaced as necessary to further the community's expectations of prompt and professional police service.

### Project Impact

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

**Carryover History**

N/A

## Vehicles - Police

<b>Community Service Vehicle</b>	<b>FY 2024</b>	<b>\$35,190</b>	<b>CERF</b>
<b>Squad 10</b>	<b>FY 2031</b>	<b>\$41,830</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Ford
Model	Transit Connect
Year	2016
Cost	\$29,604
Useful Life	7 years
Current Life	2.5 years

### Project Description & Justification

The estimated cost of the vehicle incorporates \$11,000/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 September 1, 2016. The current mileage is 32,222 (as of 11/29/19). The average monthly miles driven is 850. Estimated mileage at time of replacement: 85,000. Depending on the condition of the vehicle at replacement time, this vehicle could be offered to another department or disposed of at auction.

### Vehicle Description

This vehicle is a marked utility van used for daily Community Service activities. The unit is equipped with a laptop computer and Zebra printer. The Community Service Vehicle is used for daily parking violations, stray animals, evidence transport, traffic control, large equipment transport and deploying the Speed Trailers.

Maintenance Costs FY 2017-2024		
Routine Maintenance as of November, 2019	\$1,020.00	(10 @ \$102.00)
Cost of Repairs (Under Warranty)	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$1,020.00</b>	

### Project Alternative

Due to the nature of the use, deferral beyond its estimated seven year useful life is not recommended for a CSO 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 requests from residents, provide traffic control, respond to parking complaints, transport evidence, and perform other routine activities.

### 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

<b>Dodge Durango Primary Detectives Vehicle</b>	<b>FY 2022</b>	<b>\$35,459</b>	<b>CERF</b>
<b>Squad 12</b>	<b>FY 2027</b>	<b>\$40,119</b>	<b>CERF</b>
<input type="radio"/> Critical	<input checked="" type="radio"/> Recommended	<input type="radio"/> Contingent on Funding	

Make	Dodge
Model	Durango
Year	2017
Cost	\$31,341
Useful Life	5 years
Current Life	3 years

### Project Description & Justification

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 10,650 (as of 11/21/19). The average monthly miles driven is 281. Estimated mileage at time of replacement: 40,380. Depending on the condition of the vehicle at replacement time, this vehicle will 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, 2019	\$234.00	(3 @ \$78.00)
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$234.00</b>	

### 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. In addition, tactical or detective plain clothes units are eventually identified by the local criminal element and become somewhat ineffective for investigative purposes.

### 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

<b>Unmarked Tactical</b>	<b>FY 2024</b>	<b>\$44,256</b>	<b>CERF</b>
<b>Squad 13</b>	<b>FY 2030</b>	<b>\$51,323</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Dodge
Model	Charger
Year	2018
Cost	\$38,162
Useful Life	6 years
Current Life	2 years

### Project Description & Justification

The estimated cost of the vehicle incorporates an all-wheel drive (AWD) vehicle, \$11,000 for covert equipment and installation, including hidden light emitting diode (LED) emergency lights, radio antenna, and miscellaneous items needed to facilitate the installation of major components. The 2018 Dodge Charger in-service date was January 1, 2018. The current mileage is 15,200 (as of 11/21/19). The average monthly miles driven is 630. Estimated mileage at time of replacement: 51,000.

### Vehicle Description

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

Maintenance Costs FY 2019-2024		
Routine Maintenance as of November, 2019	\$700.00	(7 @ \$100.00)
Cost of Repairs While Under Warranty	\$0.00	
Total Spent on Maintenance and Repairs	<b>\$700.00</b>	

### 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. The effectiveness of an unmarked/undercover vehicle can be diminished over time due to local criminal offenders having identified it as a police car. The car has covert out-of-state plates.

### 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

<b>Chief's Vehicle</b>	<b>FY 2022</b>	<b>\$36,902</b>	<b>CERF</b>
<b>Squad 17</b>	<b>FY 2028</b>	<b>\$42,794</b>	<b>CERF</b>

Critical

Recommended

Contingent on Funding

Make	Ford
Model	Explorer
Year	2015
Cost	\$31,196
Useful Life	6 years
Current Life	4 years

### Project Description & Justification

The estimated cost of the vehicle incorporates \$7,000 for equipment and installation. The in-service date was January 2015. The Chief will pass down the 2015 Ford Explorer to the Deputy Chief, Patrol Commander, or another internal division upon replacement. The current mileage is 48,800 (as of 11/15/19). The average monthly miles driven is 1,225. The estimated mileage at replacement is 88,000.

### 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 2015-2022		
Routine Maintenance as of November, 2019	\$3,136.00	(14 @ \$224.00)
Cost of Repairs While Under Warranty	\$0.00	
<b>Total Spent on Maintenance and Repairs</b>	<b>\$3,136.00</b>	

### 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 and meet industry standards.

### Project Impact

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

### Carryover History

The vehicle will be deferred from FY 2021 to FY 2022 due to low mileage and other budget considerations. These considerations will be evaluated again for FY 2022.



**Village of River Forest, Illinois**  
**Five Year Capital Improvement Program**  
**Vehicles-Fire**  
**Fiscal Year 2021 Budget**

Fire Department	Year	Vehicle #	This Project is:	Fiscal Year					Five Year Total	Funding Source
				2021	2022	2023	2024	2025		
Administrative Vehicle	2011	201	Recommended	33,500	-	-	-	-	33,500	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					-	
<b>Total</b>				<b>33,500</b>	<b>738,000</b>	<b>230,000</b>	<b>-</b>	<b>-</b>	<b>1,001,500</b>	

Proposed Funding Source	Fiscal Year					Five Year Total
	2021	2022	2023	2024	2025	
Capital Equipment Replacement Fund (CERF)	33,500	738,000	230,000	-	-	1,001,500
<b>Totals</b>	<b>33,500</b>	<b>738,000</b>	<b>230,000</b>	<b>-</b>	<b>-</b>	<b>1,001,500</b>

## Vehicles - Fire

### Administrative Vehicle - C201

FY 2021

\$33,500

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model Escape  
 Year 2011  
 Cost \$19,058  
 Useful Life 10 years (6 frontline)  
 Current Life 8 years



### Vehicle Description

C201 is the administrative vehicle that is assigned to the Fire Marshal. 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 can serve as an incident command vehicle at emergency scenes in the absence of the Chief.

Vehicle	Year	Date	Road Mileage
C-201	2011	11/2019	108,478

Maintenance Costs for Past 2.5 Years	
Routine Maintenance as of November, 2019	\$2,748.00 (6 items)
Cost of Repairs	\$1,847.00 (6 items)
<b>Total</b>	<b>\$4,595.00</b>

### 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 travel to training and conferences, 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; \$1,850 Preventative maintenance and repairs	Reduce maintenance on fleet by providing new, warranty driven apparatus, replacing older, costlier vehicle

### Carryover History

Purchase is being deferred from FY 2020 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 5 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	11/2019	34,448
A-214	2006	11/2019	55,395

### Maintenance Costs for Past 2.5 Years

<i>Routine Maintenance</i>	
215	\$3,394.00 (3 items)
214 (Shared reserve unit)	\$2,079.00 (1 item)
<i>Cost of Repairs</i>	
215	\$125.00 (2 items)
214 (Shared reserve unit)	\$1,332.00 (2 items)
<b>Total</b>	
215	<b>\$3,519.00</b>
214 (Shared reserve unit)	<b>\$3,411.00</b>

### Repair Description

Ambulance 215 is in its fourth 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
\$2,775	Preventative maintenance and repairs

**Carryover History**

None

## Vehicles - Fire

### Administrative Vehicle – C218

FY 2022

\$38,000

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model F-250  
 Year 2006  
 Cost \$35,000  
 Useful Life 8 years  
 Current Life 13 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, including the Citizen Corps and MABAS trailers. Additionally, this vehicle serves as the Incident Command vehicle in disaster situations. This vehicle will be sold or will become a pool car after its useful life.

Vehicle	Year	Date	Road Mileage
C-218	2006	11/2019	15,186

Maintenance Costs for Past 2.5 Years	
Routine Maintenance as of November, 2019	\$0.00
Cost of Repairs	\$0.00
<b>Total</b>	<b>\$0.00</b>

### 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. When purchased, it 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 to FY 2022.

## 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 18 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	11/2019	88,518	12,595.6	314,890
*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	
<i>Routine Maintenance</i>	
222	\$28,039.00 (10 items)
213	\$3,618.00 (1 item)
<i>Cost of Repairs</i>	
222	\$20,148.00 (19 items)
213	\$2,471.00 (2 items)
<b>Total</b>	
222	<b>\$48,187.00</b>
213	<b>\$6,089.00</b>

### 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

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
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 2021 Budget

Public Works Department	Description	Vehicle		This Project is:	Fiscal Year					Five Year	Funding Source
		Year	#		2021	2022	2023	2024	2025	Total	
Street Sweeper	Elgin Pelican	2016	34	Critical	-	-	-	-	237,000	237,000	CERF/WS
Dump Truck	International 7400	2012	41	Critical	-	-	-	175,000	-	175,000	CERF/WS
Pick-Up Truck	F550 Super Duty	2011	42	Critical	-	-	64,000	-	-	64,000	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
Pick-Up Truck	Ford F350 Super Duty	2012	48	Critical	38,500	-	-	-	-	38,500	CERF
Pick-Up Truck	Ford F350 Super Duty	2015	49	Critical	-	-	-	40,000	-	40,000	CERF
Pick-Up Truck	Ford F350 Super Duty	2008	67	Critical	-	-	45,000	-	-	45,000	CERF/WS
Cargo Van	Ford Transit Connect	2015	68	Recommended	-	-	-	24,000	-	24,000	CERF/WS
<b>Total</b>					<b>213,500</b>	<b>155,000</b>	<b>109,000</b>	<b>239,000</b>	<b>237,000</b>	<b>953,500</b>	

Proposed Funding Source	Fiscal Year					Five Year
	2021	2022	2023	2024	2025	Total
Capital Equipment Replacement Fund (CERF)	213,500	155,000	64,000	40,000	118,500	591,000
CERF - Water and Sewer (CERF/WS)	-	-	45,000	199,000	118,500	362,500
Water and Sewer Fund (WS)	-	-	-	-	-	-
<b>Totals</b>	<b>213,500</b>	<b>155,000</b>	<b>109,000</b>	<b>239,000</b>	<b>237,000</b>	<b>953,500</b>



## Vehicles - Public Works

<b>Street Sweeper #34</b>	<b>FY 2025</b>	<b>\$118,500</b>	<b>CERF</b>
	<b>FY 2025</b>	<b>\$118,500</b>	<b>CERF/WS</b>
	<input checked="" type="radio"/> Critical	<input type="radio"/> Recommended	<input type="radio"/> Contingent on Funding
Make	Elgin		
Model			
Year	2016		
Purchase Cost	\$193,352		
Purchased	FY 2017		
Useful Life	8 years		
Current Life	4 years		

### Vehicle Description

This is the only vehicle in the Village's fleet that sweeps Village streets and State routes. State routes are swept in accordance with the intergovernmental street maintenance agreement with the Illinois Department of Transportation.

The street sweeper performs an important function as it removes debris (leaves, twigs, garbage, etc.) from Village streets and prevents such debris from entering into the Village's combined sewer system. It also improves the appearance of the Village. Removing debris from Village streets and keeping it out of the Village's sewer system ultimately prevents it from being discharged into the Des Plaines River during combined sewer overflow events.

Total Equipment Hours/Miles	1,968/6,993 (As of 11/6/2019)
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
12/9/2016	Windshield wiper protection bar, wiring harness for LED's	\$275.00
12/11/2017	Fuel filters changed and outside air filters	\$192.90
3/1/2018	Changed windshield wiper arm and blade, Replaced fill hose	\$365.00
6/27/2018	Replaced conveyor belt drive chain and gears	\$120.00
8/2/2018	Repair leaking left front hub, rebuild right front caliper and change brake pads.	\$2,757.76
9/3/2018	Replaced conveyor belt drive chain, gears and upper roller bearings	\$1,170.86
10/26/2018	Replace fuel filters due to debris in fuel tank	\$258.76
10/30/2018	Remove and clean fuel tank and replace sending unit gasket	\$1,573.00
8/13/2019	Replace fuel sensor	\$500.00
<b>Total</b>		<b>\$7,213.28</b>

### Project Alternative

Outsource sweeping operations

### Operational Impact

The operational impact would be critical as the Village would lose its ability to perform in-house street sweeping on an as-needed or emergency basis.

**Project Impact**

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

**Carryover History**

None

## Vehicles - Public Works

Dump Truck #41

FY 2024

\$175,000

CERF/WS

Critical

Recommended

Contingent on Funding

Make International  
 Model 7400 6X4  
 Year 2012  
 Purchase Cost \$117,237  
 Purchased FY 2012  
 Useful Life 12 years  
 Current Life 9 years



### Vehicle Description

Various personnel in the Operations Division operate this truck. The vehicle is equipped with a 13-foot dump body, stainless steel v-box salt spreader with manual controls, liquid salt pre-wetting system, 11-foot power angling snowplow, dump body tarp, emergency lighting and two-way radio. It is one of two tandem axle dump trucks capable of hauling heavy loads.

Total Vehicle Miles	25,557 on 11/6/19
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
5/2017	Repair electrical problem	\$1,000.00
6/2017	Repair fuel system	\$2,500.00
6/2018	Replace brake chamber, air dryer, fuel gauge sending unit	\$1,328.00
11/2018	Replaced regen sensor	\$500.00
<b>Total</b>		<b>\$5,328.00</b>

### 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

## Vehicles - Public Works

Pickup Truck #42

FY 2023

\$64,000

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 10 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	20,492 (As of 11/6/2019)
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
8/2016	Replace battery	\$118.29
5/2017	Replace front suspension parts	\$1,500.00
2/2018	Replace rear rim	\$600.00
9/2018	Replace plastic hydraulic tank	\$250.00
10/2018	Replace rear brake pads and rotors	\$1,181.42
<b>Total</b>		<b>\$3,649.71</b>

### 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

## Vehicles - Public Works

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 23 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	87,297 (As of 11/7/2019)
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### 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
12/2017	Replaced steering gear box	\$2,624.85
6/2018	Replaced right front brake chamber	\$245.94
2/2019	Replaced rusted headlight bucket	\$150.00
<b>Total</b>		<b>\$10,324.65</b>

### 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 truck #31 and rehabilitating the larger tandem axle dump truck (old #41) based on the following reasons:

1. Although the cab and chassis in old truck #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 truck #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 truck #41 is approximately two feet longer and has higher sides compared to truck #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.

**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 2022**

**\$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 17 years



### Vehicle Description

Various personnel in the Operations Division use this aerial truck. The vehicle is equipped with a 55-foot 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	17,195 (As of 11/6/2019) 12,289 Hours
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
12/2011	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
10/2018	Annual inspection and associated repairs. Replaced bucket liner	\$3,324.07
8/2018	Replaced LED light bar	\$387.68
3/2019	Replaced electronic gas pedal	\$840.00
9/2019	AC ESC module replacement and programing	\$2,720.00
<b>Total</b>		<b>\$19,040.18</b>

### 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 2022. 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



## Vehicles - Public Works

Pickup Truck #48

FY 2021

\$38,500

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 9 years



### Vehicle Description

Various personnel in the Operations Division use this pickup truck to perform 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. The vehicle is also one of three pickup trucks outfitted with a large broom attachment and is used during leaf season to push piles of leaves.

Total Vehicle Miles	40,944 (As of 11/7/19)
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
1/2015	Repair rear bumper	\$365.00
12/2018	Replaced battery	\$200.00
11/2018	Replace hydraulic pump and motor relay for plow/broom	\$1,500.00
4/2019	Body work and left rear backup sensor	\$1,440.00
10/2019	Replace rear brake pads and rotors	\$422.00
<b>Total</b>		<b>\$3,927.00</b>

### 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. It is also one of three vehicles necessary during leaf season to push piles of leaves. These two operations are very demanding on the drivetrain and suspension systems. A breakdown reduces the Village's snow removal response and extends the time needed to complete snow and leaf removal operations. This unit is used for other tasks 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

Pickup Truck #49

FY 2024

\$40,000

CERF

Critical

Recommended

Contingent on Funding

Make Ford  
 Model F350 Super Duty  
 Year 2015  
 Purchase Cost \$26,676  
 Purchased FY 2016  
 Useful Life 8 years  
 Current Life 5 years



### Vehicle Description

Various personnel in the Operations Division use this pickup truck to perform 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. The vehicle is also one of three pickup trucks outfitted with a large broom attachment and is used during leaf season to push piles of leaves.

Total Vehicle Miles	17,997 (As of 11/7/19)
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
10/2015	Replace plow hydraulic manifold	\$410.00
1/2019	Replaced front wiring harness on plow	\$230.00
<b>Total</b>		<b>\$640.00</b>

### 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. It is also one of three vehicles necessary during leaf season to push piles of leaves. These two operations are very demanding on the drivetrain and suspension systems. A breakdown reduces the Village's snow removal response and extends the time needed to complete snow and leaf removal operations. This unit is used for other tasks 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

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 6 years



### Vehicle Description

Various personnel in the Water Division use this pickup truck to respond to water service calls, JULIE locates, and 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. The vehicle is also one of three pickup trucks outfitted with a large broom attachment and is used during leaf season to push piles of leaves.

Total Vehicle Miles	21,697 (As of 11/7/19)
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### Recent Maintenance Costs

Date	Maintenance Performed	Cost
Various dates	Three oil changes	\$125.00
12/2017	Replace battery	\$161.00
12/2018	Replace tires	\$800.00
1/2019	Replace plow wiring harness	\$230.00
<b>Total</b>		<b>\$1,316.00</b>

### 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. It is also one of three vehicles necessary during leaf season to push piles of leaves. These two operations are very demanding on the drivetrain and suspension systems. A breakdown reduces the Village's snow removal response and extends the time needed to complete snow and leaf removal operations. This unit is used for other tasks 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**

**Transit Connect Van #68 (Engineering)                      FY 2024                      \$24,000                      CERF/WS**

Critical                       Recommended                       Contingent on Funding

Make                      Ford  
 Model                      Transit Connect Van  
 Year                      2015  
 Purchase Cost                      \$19,076  
 Purchased                      FY 2016  
 Useful Life                      8 years  
 Current Life                      5 years



**Vehicle Description**

Personnel in the Engineering Division use this vehicle. This vehicle was purchased as a replacement for Truck #62. It is used by the Village Engineer for the inspection of Village infrastructure and monitoring capital projects throughout the Village.

Total Vehicle Miles	5,183 (As of 11/27/2019)
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**Recent Maintenance Costs**

Date	Maintenance Performed	Cost
6/1/2018	Oil change	\$75.00
<b>Total</b>		<b>\$75.00</b>

**Project Alternative**

The alternative is to defer the purchase to later years.

**Operational Impact**

This unit is the primary vehicle for the Engineering Division within the Public Works Department. It is used to monitor the maintenance and inspection of projects as they occur within the Village.

**Project Impact**

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

**Carryover History**

None

# EQUIPMENT

## ***Equipment – Five Year Capital Improvement Program***

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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 2021:

<b>Equipment</b>	<b>Cost of Equipment</b>	<b>Funding Source</b>	<b>This Project is:</b>
Police Radios-Handheld and In-Car (PD)	\$ 17,190	CIF	Critical
Village Hall Camera System (PD)	\$ 58,444	CERF	Recommended
SCBA Breathing Air Compressor (FD)	\$ 45,000	CERF	Recommended
Permeable Pavement Maintenance System	\$ 41,800	WS	Recommended
Fuel System Improvements (PW)	\$ 250,000	CERF	Recommended
Salt Brine Application Equipment (PW)	\$ 30,000	GF	Recommended
Grapple Bucket	\$ 15,000	GF	Recommended
<b>Total</b>	<b>457,434</b>		

**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 2021 Budget**

	This Project is:	Fiscal Year					Five Year Total	Funding Source
		2021	2022	2023	2024	2025		
<b>Police Department</b>								
Automatic License Plate Reader	Recommended	-	-	-	47,052	-	47,052	CERF
Live Scan System	Critical	-	-	-	25,500	-	25,500	CERF
Overweight Truck Scales	Recommended	-	17,789	-	-	-	17,789	CERF
Pole Mounted Radar	Recommended	-	-	-	-	26,724	26,724	CERF
Police Radios	Critical	17,190	-	38,857	38,857	38,857	133,761	CIF/CERF
Radar	Recommended	-	36,124	-	-	-	36,124	CERF
Village Hall Camera System	Recommended	58,444	-	-	-	-	58,444	CERF
Digital In-Car Cameras	Critical	-	-	-	61,847	-	61,847	CERF
Street Camera System	Recommended	-	-	-	178,944	-	178,944	CERF
Taser	Recommended	-	28,800	-	-	-	28,800	CERF
<b>Fire Department</b>								
SCBA Air Compressor	Recommended	45,000	-	-	-	-	45,000	CERF
ALS Defibrillator 1	Recommended	-	-	-	28,000	-	28,000	CERF
Hydraulic Extrication Equipment	Contingent	-	-	-	45,000	-	45,000	CERF
<b>Public Works</b>								
Stump Grinder	Recommended	-	45,000	-	-	-	45,000	CERF
Stainless Steel V-Box Salt Spreader (Large)	Critical	-	23,000	-	-	-	23,000	CERF
Stainless Steel V-Box Salt Spreader (Small #1)	Critical	-	-	-	-	20,000	20,000	CERF
Asphalt Kettle	Recommended	-	-	25,000	-	-	25,000	CERF
Permeable Pavement Maintenance System	Recommended	41,800	-	-	-	-	41,800	WS
Fuel System Improvements	Recommended	250,000	-	-	-	-	250,000	CERF
Salt Brine Equipment	Recommended	-	-	-	-	26,000	26,000	CERF
Salt Brine Application Equipment	Recommended	30,000	-	-	-	-	30,000	GF
Grapple Bucket	Recommended	15,000	-	-	-	-	15,000	GF
6" Trash Pump #1	Critical	-	-	-	22,000	-	22,000	CERF/WS
<b>Total</b>		<b>457,434</b>	<b>150,713</b>	<b>63,857</b>	<b>447,200</b>	<b>111,581</b>	<b>1,230,785</b>	

Proposed Funding Source	Fiscal Year					Five Year
	2021	2022	2023	2024	2025	Total
Capital Equipment Replacement Fund (CERF)	353,444	150,713	63,857	425,200	111,581	1,104,795
Capital Improvement Fund (CIF)	17,190	-	-	-	-	17,190
Capital Improvement Fund / Grant (CIF/Grant)	-	-	-	-	-	-
General Fund (GF)	45,000	-	-	-	-	45,000
Water/Sewer (WS)	41,800	-	-	-	-	41,800
CERF - Water and Sewer (CERF/WS)	-	-	-	22,000	-	22,000
<b>Totals</b>	<b>457,434</b>	<b>150,713</b>	<b>63,857</b>	<b>447,200</b>	<b>111,581</b>	<b>1,230,785</b>



## Equipment - Police

**Automatic License Plate Reader Systems**      **FY 2024**      **\$47,052**      **CERF**

Critical

Recommended

Contingent on Funding

**Original Purchase Date**      FY 2017-19  
**Cost**      \$39,195  
**Funding History**      N/A



### Project Description & Justification

The Automated License Plate Reader (ALPR) is a third generation plate reader currently installed in squad cars #6, #10, and also includes two fixed camera locations at Lake/Thatcher and at Lake/Harlem. It consists of two cameras mounted on top of the car roof which identify license plates through recognition software. The license plate is compared to a database of wanted vehicles (Hit List) and alerts the user that a particular vehicle is wanted for the commission of a crime. All license plate data is stored on a server and can be plotted on a map and retrieved at a later date as part of an investigation. In addition, plates can be entered by investigators and officers to identify cars currently on the Boot List or that are wanted locally for investigative purposes. As of FY 2020, the ALPRs are used as part of the Village's automated PassPort Parking Program, which notes vehicles in timed zones and determines Village parking permits in Village owned lots/zones.

The ALPRs were purchased in FY 2017 and in FY 2019. As of November 30, 2019, it has read 3,327,538 license plates and it has had 8,351 "hits", or alerts that determined there is something wrong with a particular vehicle (stolen, wanted, suspended, registered sex offenders, etc.). Staff also manually enters vehicles eligible for the Denver Boot. The ALPR has identified three vehicles eligible for the boot in 2019, with over \$1,500 collected in fines/fees. Also, five Administrative Holds were identified using the ALPR which led to \$2,500 in Administrative Fees to be collected. In addition, traffic stops initiated from an ALPR "hit" resulted in five criminal arrests.

Staff continues to monitor the performance of this technology to determine if it should be expanded for use on additional squad cars or to fixed-location ALPR cameras in the business, medical, school districts and/or TIF districts. This technology has been successful with regard to the Village's permit parking and parking enforcement program (PassPort).

### Project Alternative

This is a beneficial tool and has yielded results. With previous models, the useful life of this equipment is approximately five to seven years. Although replacement is recommended in FY 2024, if the system is still functioning properly, replacement may be deferred for another year.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None with extended warranty	\$1,000/year to continue annual maintenance after warranty period

### Carryover History

None

**Equipment - Police**

**Live Scan System** **FY 2024**      **\$25,500**      **CERF**

Critical                     
  Recommended                     
  Contingent on Funding

**Original Purchase Date**                      FY 2018  
**Cost**    \$0  
**Funding History**                                      N/A



**Project Description & Justification**

The Live Scan System is an automated fingerprint system that creates digital images of an arrestee’s fingerprints. Once digitized, the prints are sent to several entities including the Illinois Bureau of Identification, Chicago Police Department and FBI, and are stored in their databases. This system is currently in use by and connected to all of the Cook County municipalities and streamlines the identification process. The life expectancy of the current system is six to eight years. The Village did not incur any costs for the initial system supplied by Cook County and the State of Illinois in 2004. This was the same for the new system installed in November 2017.

**Project Alternative**

Although the cost of replacement has been funded by Cook County and the State of Illinois in the past, there is no available information providing municipalities with future funding for this mission critical automated fingerprint system. The Village should continue to fund this equipment in case the financial responsibility of the next system is passed on to the municipality. The Live Scan Equipment is considered mission critical to daily police operations.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
None	Repairs covered by Cook County

**Carryover History**

This item continues to be carried over for future fiscal years. Replacement is dependent on Cook County’s time frame for upgrading to a new system and funding options.

## Equipment - Police

Overweight Truck Scales

FY 2022

\$17,789

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 decreasing the availability 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 2019 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 if a newer, a more efficient technology becomes available. The equipment will be carried over from FY 2021 to FY 2022.

**Equipment - Police**

**Pole Mounted Radar Speed Display Signs**      **FY 2025**      **\$26,724**      **CERF**

Critical       Recommended       Contingent on Funding

**Original Purchase Date**      FY 2020  
**Cost**      \$26,200  
**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 is intermingled. These 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 benefit 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 with a dual display with speed and message display, plus are solar-powered. As of this November 30, 2019, the solar-powered versions have been operating effectively.

**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

**Project Impact**

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

**Carryover History**

N/A

## Equipment - Police

Police Radios-Handheld and In-Car	FY 2021	\$17,190	CIF
	FY 2022	\$0	CIF
	FY 2023	\$38,857	CERF
	FY 2024	\$38,857	CERF
	FY 2025	\$38,857	CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date	FY 2020
Cost	\$17,190
Funding History	New Project



### Project Description & Justification

The use of portable and in-car radios for public safety communication is imperative for rapid and effective response to any call for service. Radio communications allow for the appropriate personnel and equipment to respond to an event. It enhances both officer and citizen safety, and allows for immediate mission critical information to be broadcast to individual officers or regional agencies monitoring the radio channel. Today's radios allow for a multitude of options such as analog/digital crossover, voice and data transmissions, Bluetooth, encryption, talk groups, priority channel scans, and GPS location tracking. In addition, with newer technology which allows for radio channel capacities that range from 32-300 channel allotment, the ability to communicate with other local, county, state, and federal agencies is possible along with the ability to communicate across other discipline lines such as fire, public works, and emergency management.

At this time, the police radio program includes a mix of Village owned single-band radios and dual-band radios owned exclusively by the Cook County Department of Homeland Security. Both types of radios are nearing or are past end of life. In addition, Cook County can request immediate return of their radio equipment at any time. Newer radio models and recent technology allows for tri-band radios in the handheld format and some dual-band in-car radios. The newer tri-band technology allows for enhanced interoperability over the VHF, UHF, and 800 MHz spectrums plus improved voice clarity, and longer lasting batteries.

Fiscal Year Projects include: FY 2021 five (5) VHF-only handheld radios; FY 2022 no purchases; FY 2023 five (5) Tri-band handheld radios; FY 2024 five (5) Tri-band handheld radios; and FY 2025 five (5) Tri-band handheld radios. This replacement schedule will continue into FY 2025-2028.

### Project Alternative

If the FY 2022-2025 WSCDC budgets allow for a group purchase for all WSCDC communities, some costs to the Village may be reduced. Public safety radios are mission critical equipment for use in day-to-day normal and emergency operations. A leasing option may be available for the handheld units but may not be supported for in-car mobile radios.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
Under warranty for one-three years	Periodic maintenance and battery replacement

### Carryover History

None

**Equipment - Police**

**Radar-Vehicle and Handheld** **FY 2022** **\$36,124** **CERF**

Critical  Recommended  Contingent on Funding

**Original Purchase Date** N/A  
**Cost** N/A  
**Funding History** New Project



**Project Description & Justification**

Law enforcement vehicle mounted and handheld radar units are used to measure the speed of autos, trucks, and motorcycles on public roadways. This proven traffic enforcement and traffic calming technology has been an effective tool for police agencies for several decades. In River Forest, like other communities, the number one citizen driven complaint is speeding vehicles on both the main and secondary streets within the Village. The industry standard for establishing probable cause and proving traffic violations in court has been the use of radar devices. This technology provides for the accurate measurement of speed.

The Police Department currently deploys seven in-car radar units and three handheld units. The in-car radar units are mounted in the six front line squad cars and in the dedicated traffic enforcement unit. The three handheld radar units are used by officers assigned to plain clothes units or secondary line squad cars. The addition of an eighth in-car radar unit will allow a system to be installed in the School Liaison Officer's marked squad car for use as part of his regular duties of ensuring school zones are safe for both vehicles and pedestrians. The current state of our handheld and in-car radar units are past or near end of life. A recommended life-span of these systems is five to seven years. The updated radar technologies draw less power which cuts down on both vehicle battery and alternator maintenance. In addition, the new systems will improve the overall effectiveness and efficiency of traffic enforcement operations of the department.

The cost of eight in-car radar systems is \$22,179 (@ \$2,772 per unit). Installation is estimated at \$500 per unit. The cost of three (3) lidar/photo handheld radar units is \$9,945.

**Project Alternative**

The use of radar for speed enforcement is an industry standard. The use of pole mounted speed radar enforcement cameras as an alternative is prohibited under Illinois state law for small municipalities. Another speed enforcement technology, lidar, is cost prohibitive due to the costs being 30% to 50% more than the standard radar systems.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
Under Warranty for one to three years	Periodic Maintenance and Battery Replacement

**Carryover History**

This project will be deferred from FY 2021 to FY 2022.

## Equipment - Police

Village Hall Camera System

FY 2021

\$58,444

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 38 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 and therefore they have a longer useful life. The estimated life of this equipment is approximately eight to ten years. These cameras assist with providing overall building security for employees, public officials, residents, visitors, and arrestees. The system enhances the liability protection strategies recommended by IRMA, the Village's insurer. The Village's IT consultant and camera vendor estimate the cost of camera replacement at \$1,538 per camera.

Repair/Improvement	Estimated Cost	Fiscal Year
Replace internal cameras as needed (38 @ \$1,538 per unit)	\$ 58,444	FY 2021
<b>Total Project Cost</b>	<b>\$ 58,444</b>	

### 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.

**Equipment - Police**

<b>Digital In-Car Cameras</b>	<b>FY 2024</b>	<b>\$61,847</b>	<b>CERF</b>
<input checked="" type="radio"/> Critical <input type="radio"/> Recommended <input type="radio"/> Contingent on Funding			
<b>Original Purchase Date</b>	FY 2017		
<b>Cost</b>	\$50,761		
<b>Funding History</b>	N/A		



**Project Description & Justification**

The seven front line vehicles and the unmarked traffic unit currently have digital cameras mounted to the dash board. The cameras/audio system are used during traffic stops and arrests for recording purposes. Evidence obtained during a traffic arrest is utilized during a trial. The traffic stops are downloaded on a server and stored for a minimum of 90 days or longer depending on the type of incident. Any future upgrades to the in-car camera system may require upgrades to the data storage system on the Village’s computer network. The in-car cameras have an expected life-span of seven years.

**Project Alternative**

This is a necessary tool that helps protect the Village and its officers from false accusations, for obtaining evidence to support a criminal convictions, and allowing increased police transparency for the public. Replacement is highly recommended.

**Project Impact**

There is no annual service fee for this program.

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
Under warranty for three years	After warranty expires, repair costs per unit as required will be incurred.

**Carryover History**

None



## Equipment - Police

Street Camera System

FY 2024

\$178,944

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2018

Cost

\$110,517

Funding History

N/A



### Project Description & Justification

The Village currently has 20 Pan-Tilt-Zoom (PTZ) digital cameras located along the business corridor on Lake Street and 38 fixed cameras in and around Village Hall. The camera system is supported by software, servers and a wireless antenna system. The cameras can be monitored by supervisors, the dispatch center as well as patrol officers on their squad car laptops, desktops or video monitors. The digital images are stored for a minimum of 90 days and are used as evidence in criminal cases. The PTZ cameras have moving parts and are out in the elements; therefore they are prone to a shorter life expectancy than fixed cameras. The estimated life of the equipment is approximately five to eight years. Future CIP processes may determine that all Village Hall, Street Cameras, and future camera expansion projects can be combined for planning and funding. A strategic planning study by the Village's IT consultant in FY 2020 included a recommendation future program expansion, equipment costs, infrastructure upgrades, IT costs, and maintenance costs. That information can be found in the Information Technology section of the CIP.

This program has been very successful as a force multiplier. Officers routinely refer to the cameras to assist in identifying suspects involved in criminal activity and the Detectives use the footage to create still shots of suspects for bulletins. Below are some images of suspects who were captured on the camera system and later identified as perpetrators of a crime. It also allows for 24-hour situational awareness of weather conditions and pedestrian/traffic flow.



Retail Theft



Retail Theft



Bike Theft



Burglary



Drug Deal



Robbery



Not only are the cameras used for helping to identify criminal suspects, the cameras have been used for situational awareness including the blizzard of 2011 where the Public Works department was able to monitor the snow accumulation and effects on traffic along the Lake Street business corridor.

<b>Repair/Improvement</b>	<b>Estimated Cost</b>	<b>Fiscal Year</b>
Camera System Servers	\$65,771	FY 2024
Street Camera System	\$61,500	FY 2024
Wireless Point to Point Antenna/Backhaul	\$51,763	FY 2024
<b>Total Project Cost</b>	<b>\$178,944</b>	

**Project Alternative**

Due to the nature of this system, there is no alternative if the project is not funded in the future. The continuation of this program is highly recommended.

**Project Impact**

There is no annual service fee for this program.

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	There is no recurring annual cost

**Carryover History**

The majority of servers, drivers, storage, software, cables, back-up batteries, antennas, mounting hardware, and cameras have been replaced during the past two fiscal years. This will allow for some equipment to have a longer life-span, which may reduce some estimated costs or allow for partial carryover of some of the equipment.

**Equipment - Police**

<b>Taser-Less Lethal Equipment</b>	<b>FY 2022</b>	<b>\$28,800</b>	<b>CERF</b>
<input type="radio"/> Critical <input checked="" type="radio"/> Recommended <input type="radio"/> Contingent on Funding			
<b>Original Purchase Date</b>	FY 2015-2017		
<b>Cost</b>	\$16,700		
<b>Funding History</b>	GF		

**Project Description & Justification**

The Department currently has eight Tasers in service. The program was initiated in December 2014. The Department currently deploys the Taser X26 model. The Taser is one of the several less-lethal force options that officers carry on a daily basis. Officers are required to attend training and complete ongoing certifications to carry this tool. The Department has several members certified as trainers. This device allows officers to maintain a safe distance when attempting to render a threat incapable of fighting back or attacking another individual.

The Taser X26 model is expected to be sunsetted in the next 18 to 36 months. The usefull life of this model is five to seven years. In October 2019, Taser introduced the model 7 which has advanced fashlight, laser, accuracy, multiple shot, and electronic reporting capabilities. The Taser 7 model costs \$3,600 per unit (with extended warranty and accessories).

**Project Alternative**

There is no project alternative to this less lethal conductive energy weapon (CEW) that offers alternatives to the use of a lethal firearm or the close quarter less lethal OC Spray and standard baton. The Taser is recommended by IRMA, the Village's insurer, due to research data that shows reductions in both offender and officer injuries and death.

**Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
Under Extended Warranty for four years	Periodic Maintenance and Battery Replacement

**Carryover History**

None

## Equipment - Fire

SCBA Breathing Air Compressor

FY 2021

\$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 (SCBAs). 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 IDLH (immediately dangerous to life and health) atmosphere. Staff has delayed the scheduled purchase of a new SCBA air compressor because the current equipment continues to last 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 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 year.

### Carryover History

This item was carried over from FY 2017

## Equipment - Fire

ALS Defibrillator #1

FY 2024

\$28,000

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2016

Cost

\$20,538

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 and oxygen 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 period.

### Carryover History

None

## Equipment - Fire

Hydraulic Extrication Equipment

FY 2024

\$45,000

CERF

Critical

Recommended

Contingent on Funding

Original Purchase Date

FY 2013

Cost

\$32,640

Funding History

N/A



### Project Description & Justification

The purpose of this project is to upgrade and replace the hydraulic extrication tools on frontline engine and Quint.

This equipment is operated by firefighting crews during vehicular accidents and technical rescue responses. The current tools have been in use for five years with a planned useful life of ten years.

New technology allows for lighter weight tools and more powerful lifting, spreading and cutting pressures. New power units may be all electric (battery powered) in the future, taking up less space on the apparatus. The Genesis extrication equipment has state of the art tools, which are lighter, faster, and easier for personnel to operate, thereby reducing the potential for back injuries and strains.

### Project Alternative

Evaluate new technology as the useful life limit approaches.

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$550 after one year	Annual maintenance after first year warranty period expires.

### Carryover History

None

**Equipment - Public Works**

**Stump Grinder** **FY 2022** **\$45,000** **CERF**

Critical  Recommended  Contingent on Funding

Make Carlton  
 Model 7500  
 Purchase Cost \$20,000  
 Purchased FY 2000  
 Useful Life 15 years  
 Current Life 21



**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	1,199 (As of 11/6/2019)
-----------------------	-------------------------

**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
<b>Total</b>		<b>\$2,040.45</b>

**Project Alternative**

Alternatives to replacing the stump grinder are as follows:

1. Defer replacing the system until it breaks down completely.
2. Purchase a 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 2022.



**Equipment - Public Works**

**Stainless Steel V-Box Salt Spreader (Large)                      FY 2022                      \$23,000                      CERF**

Critical

Recommended

Contingent on Funding

Make                      Swenson  
 Model  
 Year                      2006  
 Purchase Cost                      \$14,424  
 Purchased                      FY 2007  
 Useful Life                      12 years  
 Current Life                      15 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
n/a	None to date	\$0.00
<b>Total</b>		<b>\$0.00</b>

**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 2022. The spreader will then be re-evaluated for replacement.

**Equipment - Public Works**

**Stainless Steel V-Box Salt Spreader (Small #1)      FY 2025      \$20,000      CERF**

Critical                       Recommended                       Contingent on Funding

Make                      Swenson  
 Model  
 Year                      2013  
 Purchase Cost              \$13,749  
 Purchased              FY 2013  
 Useful Life              12 years  
 Current Life              8 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
11/2013	Replaced liquid holding tank	\$350.00
11/2015	Replaced rubber hose and fittings	\$70.00
<b>Total</b>		<b>\$420.00</b>

**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**

None

**Equipment - Public Works**

**Asphalt Kettle**

**FY 2023**

**\$25,000**

**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 13 years



**Project Description & Justification**

This tandem axle trailer 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
12/2017	Replace tires	\$300.00
<b>Total</b>		<b>\$700.00</b>

**Project Alternative**

Contract all pothole and permanent patching services.

**Operational Impact**

Without this equipment, 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

**Equipment - Public Works**

**Permeable Paver Maintenance System**                      **FY 2021**                      **\$41,800**                      **WS**

Critical

Recommended

Contingent on Funding

Make                      Pavetech  
 Model                      Typhoon-Pavevac  
 Purchase Cost                      \$41,800  
 Purchased                      New Equipment  
 Useful Life                      10 years  
 Current Life                      n/a



**Project Description & Justification**

This permeable paver maintenance system includes a permeable joint material excavator that uses high pressure and compressed air to break through the paver joint crust. It loosens and pneumatically excavates joint sediment and chip rock. It has a separate piece of equipment that attaches to a sewer truck to remove all of the excavated material on the surface and loose material from the brick joints. Aggregate then needs to be swept back into the joints of the paver bricks once this cleaning is completed. This work has been performed in past years by a contractor.

Based on the amount of pavers currently installed in Village alleys and parking lots costs will continue to rise if a contractor is used for this work. The most recent contractor charged \$225 per square foot. Since this maintenance should be done every two years at each location (approximately five alleys per year) this would equate to \$61,000 needed for contractual services each year. By purchasing and performing this maintenance in-house there will be an immediate cost savings and in the future as more permeable paver alleys and parking lots are constructed and additional maintenance is needed.

**Project Alternative**

Use a contractor for all permeable paver maintenance services.

**Operational Impact**

Not having the ability for operations staff to perform maintenance on the permeable paver area of Village alleys and parking lots will continue to increase the cost to have this work done by a contractor as more alleys and parking lots are installed with permeable pavers.

**Project Impact**

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

**Carryover History**

None

## Equipment - Public Works

### Fuel System Improvements

FY 2021

\$250,000

CERF

Critical

Recommended

Contingent on Funding

Purchase Cost           \$90,000  
 Purchased               FY 1990  
 Useful Life             30 years  
 Current Life            31 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. The upgraded system would use proximity card access and network access for multiple administrators to report fueling information.

Date	Maintenance Performed	Cost
2011	Replaced Site sentinel control board	\$1,350.00
2012	Replaced unleaded fuel suction pump	\$2,513.00
2014	Replaced all hoses	\$250.00
2015	Replaced spill buckets, manholes and a portion of the cement pads on	\$15,000.00
2016	Removed internal moisture and sediment from bottom of diesel tank	\$287.00
2018	Replaced two manhole covers	\$200.00
2019	Replaced chip key reader / perform required testing	\$1,050.00
<b>Total</b>		<b>\$20,650.00</b>

The Village of River Forest fleet of vehicles and equipment in all departments and including Park District and School District 90 vehicles use this fuel system as their primary means of re-fueling vehicles. Approximately 41,000 gallons of gasoline and 14,500 gallons of diesel fuel is used per year on average. This fuel is purchased in bulk for a lower cost than purchasing directly from local gas stations. The current costs for gasoline and diesel fuel in bulk vs. being purchased at local stations is seen below:

	<u>Gasoline</u>	<u>Diesel</u>
Bulk purchasing	\$2.20 per gallon	\$2.51 per gallon
Local gas stations	\$2.72 per gallon	\$2.97 per gallon

The costs for purchasing fuel in bulk as compared to purchasing from local gas stations on an annual basis is seen below:

	<u>Gasoline</u>	<u>Diesel</u>	<u>Total</u>
Fuel purchased per year (avg.)	41,000 gallons	14,500 gallons	
Bulk purchasing cost	\$90,200	\$36,453	\$126,653
Local gas stations cost	\$111,520	\$43,065	\$154,585

Purchasing fuel from local gas stations would result in a total cost increase of \$27,932 per year for gasoline and diesel fuel. Since the estimated cost for the replacement of the fuel system is \$250,000, this annual savings in fuel being purchased in bulk would result in a return on investment in 8.95 years.

**Project Alternative**

The primary alternative to these fuel system improvements is to eliminate the fuel system and purchase unleaded and diesel fuel at privately owned service stations. However, this would cost more in the long term due to higher fuel purchasing costs compared to bulk fuel purchasing.

Another alternative to be considered is purchasing an above ground diesel only fuel tank for Village diesel fuel fleet vehicles. Gasoline Village fleet vehicles would then purchase gasoline at local gas stations. Diesel fuel is needed for the Public Works dump trucks, heavy equipment, sewer truck, as well as Fire Department trucks, and ambulances. A diesel only tank installation and having the existing underground tanks removed would cost approximately \$40,000. This would provide an up-front cost savings of \$210,000 compared to the installation of underground gasoline and diesel tank installations. However, purchasing gasoline at local gas stations would result in a fuel purchase cost increase of \$21,320 per year. It would take 9.85 years for this annual increase in purchased fuel to match the cost of a complete \$250,000 system replacement. Therefore this option would only be recommended if this fueling location is no longer available in 10 years.

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**

Fuel needed during construction of replacement fuel system will have to be made at local gas stations

**Project Impact**

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

**Carryover History**

None

## Equipment - Public Works

### Salt Brine Equipment

FY 2025

\$26,000

CERF

Critical

Recommended

Contingent on Funding

**Make** SnowEx  
**Model** Brine Pro 2000  
**Year** 2017  
**Purchase Cost** \$20,000  
**Purchased** FY 2017  
**Useful Life** 8 years  
**Current Life** 4 years



### Project Description & Justification

This equipment is used to produce a salt brine solution that is applied to roadways in advance of a winter weather event. The solution provides melting at the onset of an event and helps prevent snow and ice from bonding with the pavement. This proactive technique has become popular in recent years and is used to improve winter road conditions while reducing overall material and operating costs.

### Recent Maintenance Costs

Date	Maintenance Performed	Cost
12/2018	Add aux. filter	\$125.00
12/2019	Rebuilt pump and replaced bearings	\$250.00
<b>Total</b>		<b>\$375.00</b>

### Project Impact

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

### Carryover History

None

**Equipment - Public Works**

<b>Salt Brine Application Equipment (2ea)</b>		<b>FY 2021</b>	<b>\$30,000</b>	<b>GF</b>
<input type="radio"/> Critical	<input checked="" type="radio"/> Recommended	<input type="radio"/> Contingent on Funding		
<i>Make</i>	TBD			
<i>Model</i>	500 gallon			
<i>Year</i>	n/a			
<i>Purchase Cost</i>	\$30,000 for both units			
<i>Purchased</i>	New equipment			
<i>Useful Life</i>	8 years			
<i>Current Life</i>	n/a			



**Project Description & Justification**

This equipment is used to apply a salt brine solution to roadways in advance of a winter weather event. The solution provides melting at the onset of an event and helps prevent snow and ice from bonding with the pavement. This proactive technique has become popular in recent years and is used to improve winter road conditions while reducing overall material and operating costs. Public Works Staff have been applying salt brine to roadways, parking lots and alleys for the last two winters and the results have been positive. Currently, the Village has one unit with a capacity of 250 gallons. The recommended application rate is 30-50 gallons per lane mile for this solution, so Staff's ability to treat Village roadways efficiently or on a larger scale is limited. Below is a cost comparison using rock salt verses salt brine on roadways.

Salt per ton	\$86.00	1 ton of salt = 1000 gallons of brine solution		
Method	Qty.	Application rate	Lane miles treated	Cost per lane mile
Rock salt	2000 lbs	450 lbs per mile	4.4	\$19.55
Salt brine	1000 gallons	50 gal. per mile	20	\$4.30

**Recent Maintenance Costs**

Date	Maintenance Performed	Cost
n/a	n/a	\$0.00
<b>Total</b>		<b>\$0.00</b>

**Project Alternative**

The alternative is to continue to treat roads, parking lots and alleys in a limited capacity or with rock salt which is far less cost effective. By comparison, anti-icing delivers the same level of service as rock salt, but uses one-quarter to one-fifth as much salt.

**Operational Impact**

Not having the additional capacity to treat roadways increases operational costs. The Village currently does not have the ability to treat roadways proactively during leaf operations because the truck that carries the unit is used for hauling leaves. Staff would equip the incoming F-550 dump truck with one unit and the outgoing fully depreciated F-350 dump truck with the other unit.

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

**Carryover History**

None



## Equipment - Public Works

### Pay Loader Grapple Bucket

FY 2021

\$15,000

GF

Critical

Recommended

Contingent on Funding

*Make* TBD  
*Model* TBD  
*Year* n/a  
 Purchase Cost \$15,000  
 Purchased New equipment  
 Useful Life 8 years  
 Current Life n/a



### Project Description & Justification

Grapple buckets are designed to efficiently load large quantities of loose material like leaves and brush. This specially designed bucket gives Public Works Staff the ability to load larger volumes of this material more efficiently than with the current pay loader bucket. The attachment will be particularly helpful for the Village's leaf pickup program and for picking up tree debris after storms.

### Recent Maintenance Costs

Date	Maintenance Performed	Cost
<b>Total</b>		<b>\$0.00</b>

### Project Alternative

The alternative is to continue to load leaves and brush using the current four-in-one bucket. The current bucket is not designed or intended to be used for heavy use in loading these materials. The Village has experienced several hydraulic cylinder failures on the current equipment bucket since it was purchased.

### Operational Impact

Not having the additional capacity to load leaves reduces overall efficiency of the operation.

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

### Carryover History

None

**Equipment - Public Works / Water and Sewer**

**6" Trash Pump #1** **FY 2024** **\$22,000** **CERF/WS**

Critical  Recommended  Contingent on Funding

Make Wacker  
 Model  
 Purchase Cost \$9,600 \*Purchased used  
 Purchased FY 2009  
 Useful Life 15 years  
 Current Life 12 years



**Project Description & Justification**

The Village owns two six-inch trash pumps that are capable of pumping water at up to 1,300 gallons per minute. These pumps are used to dewater streets and sewers during flood events.

Total Equipment Hours	310 (As of 11/6/19)
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**Recent Maintenance Costs**

Date	Maintenance Performed	Cost
	None to date	
<b>Total</b>		<b>\$0.00</b>

**Project Alternative**

The alternative is to rent this pump as needed; however, supplies of this type of pump are limited and may not be available when needed.

**Operational Impact**

Not having this equipment limits the Village's ability to respond to flood events. That may impact multiple residents.

**Project Impact**

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

**Carryover History**

None

# INFORMATION TECHNOLOGY

## ***Information Technology – Five Year Capital Improvement Program***

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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. The Village outsources its day-to-day and project specific IT support services to its current vendor, ClientFirst. In FY 2019 ClientFirst updated the Village's IT Strategic Plan with recommendations from that plan incorporated into 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.

The following improvements are proposed for FY 2021:

<b>Equipment</b>	<b>Cost of Equipment</b>	<b>Funding Source</b>	<b>This Project is:</b>
Street Camera Strategic Plan	\$ 365,000	CIF	Contingent
Network Improvements	\$ 37,000	CIF	Recommended
Software Upgrades	\$ 423,100	CIF	Recommended
Computer Replacements	\$ 38,000	CIF	Recommended
IT Security Initiatives	\$ 25,500	CIF	Recommended
<b>Total</b>	<b>\$ 888,600</b>		

**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 2021 Budget

	This Project is:	Fiscal Year					Five Year Total	Funding Source
		2021	2022	2023	2024	2025		
Street Camera System Strategic Plan	Contingent	365,000	220,000	200,000	140,000	90,000	1,015,000	CIF
Network Improvements	Recommended	37,000	160,000	-	-	-	197,000	CIF
Software Upgrades	Recommended	423,100	125,000	75,000	-	-	623,100	CIF
Computer Replacements	Recommended	38,000	38,000	38,000	125,000	38,000	277,000	CIF
IT Security Initiatives	Recommended	25,500	-	-	-	-	25,500	CIF
<b>Total</b>		<b>888,600</b>	<b>543,000</b>	<b>313,000</b>	<b>265,000</b>	<b>128,000</b>	<b>2,137,600</b>	

Proposed Funding Source	Fiscal Year					Five Year Total
	2021	2022	2023	2024	2025	
Capital Improvement Fund (CIF)	888,600	543,000	313,000	265,000	128,000	2,137,600
<b>Totals</b>	<b>888,600</b>	<b>543,000</b>	<b>313,000</b>	<b>265,000</b>	<b>128,000</b>	<b>2,137,600</b>

## Information Technology

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<b>Street Camera System Strategic Plan Implementation</b>	<b>FY 2021</b>	<b>\$365,000</b>	<b>CIF</b>
	<b>FY 2022</b>	<b>\$220,000</b>	<b>CIF</b>
	<b>FY 2023</b>	<b>\$200,000</b>	<b>CIF</b>
	<b>FY 2024</b>	<b>\$140,000</b>	<b>CIF</b>
	<b>FY 2025</b>	<b>\$90,000</b>	<b>CIF</b>

Critical

Recommended

Contingent on Funding

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**Funding History**      N/A  
FY 2020                      \$      25,000

### Project Description & Justification

The Village has worked to greatly improve and expand its street camera system over the past few years. This asset serves as a force multiplier for the Police Department and is a constant tool for day-to-day operations. Due to the expanding needs for wireless network, equipment, and storage, paired with the desire to continue to expand the system, the Village completed a review and planning process in FY 2020 to determine best practices and needs going forward. This plan formulated the following recommendations for future expansion and maintenance throughout the Village.

### Recommended for FY 2021

#### Avigilon Storage/Server Upgrade - \$20,000

The Village uses the Avigilon system to live monitor and capture video from surveillance cameras in and around the village. This video is stored on a two servers which have reached capacity. The current storage space impacts how long video is able to be retained, with priority given to the required space for the interview room and cell cameras. In order to retain video longer and or add more cameras, additional storage and servers will need to be purchased.

#### Phase 1 - Madison Expansion - \$220,000 (Madison - TIF - \$120,000, Washington/Central - CIF - \$100,000)

Phase 1 includes expansion of the Village's camera system to the south side of town, primarily along Madison Street. In total, the expansion includes seven camera sites consisting of seven PTZ (pan, tilt, zoom) cameras, four LPR (license plate reader) cameras, and four multisensor (three or four fixed lens cameras, used for corners). The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor, and includes an approximate 30% contingency. Four of the seven proposed camera locations are within the Madison Street TIF and are a TIF-eligible public safety enhancement. TIF funds will be used to help fund this project.

#### Street Camera System Maintenance Agreement - Bid Assistance - \$50,000

To better address needs, the Village will utilize the IT consultant to scope, bid, and select a vendor to perform ongoing maintenance of the Village's camera system and associated equipment. This will include routine maintenance, dealing with outages, and maintaining storage equipment.

#### Street Camera Maintenance Package- \$75,000

Based on the results of the above project, the Village will need to enter into an agreement with a vendor for a maintenance package. The projected cost represents approximately 15% of the overall budget.

**Recommended for FY 2022**

Phase 2 - Thatcher and North Expansion - \$220,000 (North - TIF - \$120,000, Thatcher - CIF - \$100,000)

Phase 2 includes expansion of the Village's camera system to the north and northwest sides of town, primarily along Thatcher Avenue and North Avenue. In total, the expansion includes six camera sites consisting of six PTZ (pan, tilt, zoom) cameras, three LPR (license plate reader) cameras, and four multisensor (three or four fixed lens cameras, used for corners). The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor, and includes an approximate 30% contingency. Three of the six proposed camera locations are within the North Avenue TIF and are a TIF-eligible public safety enhancement. TIF funds will be used to help fund this project.

**Recommended for FY 2023**

Phase 3 - Chicago and Division Expansion - \$200,000

Phase 3 includes expansion of the Village's camera system to the central corridors of town, primarily along Chicago Avenue and Division Street as they boarder Harlem Avenue and Lathrop Avenue. In total, the expansion includes six camera sites consisting of six PTZ (pan, tilt, zoom) cameras, one LPR (license plate reader) cameras, and zero multisensor (three or four fixed lens cameras, used for corners). The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor, and includes an approximate 30% contingency.

**Recommended for FY 2024**

Phase 4 - East Lake Standardization - \$140,000

Phase 4 includes the replacement and standardization of existing equipment along the east side of Lake Street, 12 locations in total. The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor, and includes an approximate 30% contingency.

**Recommended for FY 2025**

Phase 5 - West Lake Standardization - \$90,000

Phase 5 includes the replacement and standardization of existing equipment along the west side of Lake Street, seven locations in total. The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor, and includes an approximate 30% contingency.

Phase 1 Madison Expansion	
Hardware/Software/Licensing	\$170,000
Consulting	\$50,000
Street Camera Maint. - Bid Assistance	
Hardware/Software/Licensing	\$0
Consulting	\$50,000
Street Camera Maintenance Package	
Hardware/Software/Licensing	\$0
Consulting	\$75,000
Avigilon Storage/Server Upgrade	
Hardware/Software/Licensing	\$15,000
Consulting	\$5,000
Phase 2 - Thatcher and North Expansion	
Hardware/Software/Licensing	\$170,000
Consulting	\$50,000

Phase 3 - Chicago and Division Expansion	
Hardware/Software/Licensing	\$160,000
Consulting	\$40,000
Phase 4 - East Lake Standardization	
Hardware/Software/Licensing	\$120,000
Consulting	\$20,000
Phase 5 - West Lake Standardization	
Hardware/Software/Licensing	\$75,000
Consulting	\$15,000
Total	\$1,015,000

**Project Alternative**

*Expansion:* An alternative to this phasing plan would be to continue operating in a reactive manner and address issues as they arise. Additionally, the Village could elect to continue to expand on a case-by-case basis or not expand the system. These alternatives are not recommended due to difficulties created and efficiencies lost by completing the project piecemeal. Furthermore, the Village could continue to evaluate options for expansion with other vendors.

*Maintenance:* The Village could continue to maintain the system as it does now utilizing the Village's IT consultant. This is not recommended due to the growth in the size of the workload and the consultants limited resources to provide this service.

*Storage/Server Upgrade:* The Village could not complete the upgrade but would consequently not be able to expand retention of capture video or add additional cameras.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$75,000	Projected annual maintenance contract.



## Information Technology

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Network Improvements	FY 2021	\$37,000	CIF
	FY 2022	\$160,000	CIF
	FY 2023	\$0	CIF
	FY 2024	\$0	CIF
	FY 2025	\$0	CIF

Critical

Recommended

Contingent on Funding

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### Funding History

FY 2020	\$	12,500
FY 2019	\$	18,300
FY 2018	\$	20,300

### Project Description & Justification

#### Recommended for FY 2021

##### Backup Server Replacement - \$17,000

The Village's current backup server used for this purpose is over eight years old, purchased originally in May 2011. The current equipment is past its expected useful life of seven years. This initiative is part of the Village's robust back-up efforts and will provide the Village with a stable and responsive platform for data back-up and restoration related tasks.

##### Upgrade of Internet Bandwidth - \$20,000

The Village currently utilizes a Comcast Business subscription as its internet provider. This is a shared service with limited upload speeds, sporadic download speeds, and unpredictable outages. The proposed upgrade would be to a private fiber connection of at least 100mbs that would provide stability and improved performance. This project is an integral part of improving the Village's offsite backup and moving to cloud based software solutions in the future.

#### Recommended for FY 2022

##### Server Replacement - \$100,000

The Village's current server system was upgraded in FY 2019, but will ultimately need to be replaced. The scheduling of replacement in FY 2022 is consistent with the recommended seven year lifespan. This initiative will provide the Village with a stable and responsive platform for all computer related tasks and help ensure minimal down time.

##### 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 complement the server replacement project in FY 2022.

Backup Server Replacement	
Hardware/Software/Licensing	\$12,500
Consulting	\$4,500
Upgrade of Internet Bandwidth	
Hardware/Software/Licensing	\$15,000
Consulting	\$5,000
Server Replacement	
Hardware/Software/Licensing	\$85,000
Consulting	\$15,000
SAN (Storage Area Network) Replacement	
Hardware/Software/Licensing	\$45,000
Consulting	\$15,000
Total	\$197,000

### Project Alternative

Alternatives to all projects include continuing with the status quo or deferring the projects 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
\$20,000	<i>Upgrade Internet Bandwidth: Cost of contract for fiber service.</i>

## Information Technology

Software Upgrades	FY 2021	\$423,100	CIF
	FY 2022	\$125,000	CIF
	FY 2023	\$75,000	CIF
	FY 2024	\$0	CIF
	FY 2025	\$0	CIF

Critical

Recommended

Contingent on Funding

### Funding History

FY 2020	\$	230,600
FY 2019	\$	40,000
FY 2018	\$	85,500

### Project Description & Justification

#### Recommended for FY 2021

##### Land and License Management Software - \$335,000

The Village's Enterprise Resource Planning tool (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 the program 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 recommended at this time. This project was deferred from FY 2018 to FY 2019 because the appropriate solution had not yet been identified. During FY 2019, the Village issued a request for information for this service with the goal of identifying available solutions that best fit the Village's needs. Due to a low response rate, the Village formalized and issued a robust request for proposals in FY 2020. The utilization of software for this purpose 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. The budgeted amount in FY 2020 was \$135,000 for the process of completing a contract with a vendor, purchasing software, and beginning implementation. The RFP was issued in January 2020 and staff expects that some, but not all of the FY 2020 budget will be spent during that fiscal year. Accordingly, this expected continuation of the FY 2021 project has been adjusted. The cost will be for further implementation cost and software purchases.

##### ERP System Sustainability Planning Contribution - \$75,000

The Village utilizes Springbrook as its ERP tool. Currently, this system supports budgeting, payroll, accounts payable and receivable, building permits, and more. Use of the system is critical for day-to-day and long-term Village operations. In order to prepare for evaluating the enhancement, improvement, or replacement of the ERP system in the next one to four years, it is being recommended that the Village make annual contributions to begin to fund this project. Any contributions will be set aside for this purpose.

Laserfiche Gap Analysis and Improvement Plan - \$13,100

This project was originally approved for FY 2020, but is being deferred to FY 2021 to allow time to be allocated to higher priority projects. 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. While leveraged heavily by the Village today, Laserfiche has the ability to serve more purposes in the future. These services include an online web portal to improve ease of records searches, online form expansion, and better integration with GIS. Due to the complexity of some parts of the system and the scope of the work, a plan is recommended to outline best practices and workflows for the Village to use moving forward.

**Recommended for FY 2022**

Office 365 Upgrade - \$30,000

The Village is currently using an on premise Microsoft Exchange server for Village email. The recommendation is to migrate from the on premise Exchange server to a cloud based Office 365. The cloud based service will provide more reliable service regardless of on site server performance. The estimated cost is based on 100 users at the G3 Licensing level which includes Exchange, One Drive, SharePoint, Teams, MS Word, Excel, PowerPoint, Outlook, Publisher, Access, Self Service Portal, eDiscovery tools, and more. This project is contingent and dependent on the upgrade to private fiber internet service in FY 2021.

Laserfiche Upgrades - \$20,000

The Village anticipates being able to implement improvements and upgrades to the Laserfiche system in FY 2021 that are products of the improvement plan. This is anticipated to include launching a web portal, improving online form access, and further integrating Laserfiche with GIS. Various upgrades to the Laserfiche system, over time, will allow the Village to achieve efficiencies and improve access to records.

Land and License Management Software (FY 2021)	
Hardware/Software/Licensing	\$90,000
Consulting	\$75,000
Implementation Services	\$170,000
ERP System Sustainability Planning Contribution	
Hardware/Software/Licensing	\$75,000
Consulting	\$0
Laserfiche Gap Analysis and Improvement Plan	
Hardware/Software/Licensing	\$10,100
Implementation Services	\$3,000
Office 365 Upgrade	
Hardware/Software/Licensing	\$15,000
Implementation Services	\$15,000
Laserfiche Upgrades	
Hardware/Software/Licensing	\$18,000
Consulting	\$2,000
Total	\$473,100

### Project Alternative

Deferral of Land and License Management Software is not recommended at this time. If unfunded, the Village would continue to utilize the Springbrook system but would have little to no ability to improve customer service. Additionally, the Village has already invested significant funds into producing the RFP in FY 2020. The Village would also have to consider less expensive options that may not lead to the desired outcomes. ERP contributions could be deferred or lowered but could create a larger cost if left to be a one-time payment. 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. Office 365 Upgrades could be deferred and the Village could continue using its on premise Microsoft servers, but could continue to experience unreliable

### Project Impact

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$24,000	<i>Land &amp; License Management:</i> 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 2021, \$8,550 in FY 2022	<i>Laserfiche:</i> Annual maintenance and licensing fee for Laserfiche was previously \$5,550. Adding the WebLink feature would increase the annual cost by \$3,000.
\$24,000	<i>Office 365:</i> Annual subscription fees projected to be \$24,000.

## Information Technology

<b>Computer Replacements</b>	<b>FY 2021</b>	<b>\$38,000</b>	<b>CIF</b>
	<b>FY 2022</b>	<b>\$38,000</b>	<b>CIF</b>
	<b>FY 2023</b>	<b>\$38,000</b>	<b>CIF</b>
	<b>FY 2024</b>	<b>\$125,000</b>	<b>CIF</b>
	<b>FY 2025</b>	<b>\$38,000</b>	<b>CIF</b>

Critical

Recommended

Contingent on Funding

### Funding History

FY 2020	\$	124,070
FY 2019	\$	38,000
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 approximately 50 desktop computers and 50 laptop computers.

Staff and the Village's IT consultant updated an inventory of Village-owned IT/communication equipment, identified warranty periods for each piece and determined a replacement schedule. Based on that information, equipment is rotated out when warranties expire. Funding IT replacements in this manner standardizes equipment throughout the organization, allows the Village to obtain bulk purchase pricing, improves IT support service efficiency, improves staff efficiency with fewer projected system interruptions, enhances system security, and avoids unnecessary spikes in IT expenses.

#### Public Safety In-Vehicle Laptops

Funding in FY 2020 was higher than other years due to the replacement of Police and Fire Department in-vehicle ruggedized laptops. This is expected to reoccur in FY 2024. 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. 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 the Public Safety Departments 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
<b>Total</b>	<b>\$38,000</b>

### 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 2024 is splitting the cost of the public safety in-vehicle laptops over two fiscal 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.

**Project Impact**

Annual \$ Impact on Operating Budget	Description of Operating Budget Impact
\$1,000	Minor maintenance costs to update software, monitors and minor repairs

## Information Technology

IT Security Initiatives	FY 2021	\$25,500	CIF
	FY 2022	\$0	CIF
	FY 2023	\$0	CIF
	FY 2024	\$0	CIF
	FY 2025	\$0	CIF

Critical

Recommended

Contingent on Funding

### Spending History

FY 2019	\$	-
FY 2018	\$	52,360

### Project Description & Justification

#### Security Audit - \$20,000

In recent years, the Village has undergone major changes and improvements to its IT infrastructure. Additionally, new cyber threats and attacks are continually increasing and being monitored by the Village and its IT consultant. As a measure of protection, it is recommended by both the Village's IT consultant and auditor that the Village complete a security audit. This process would involve a third party vendor (separate from the Village's usual IT consultant) 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.

#### Active Directory Security Audit - \$5,500

The Village uses Active Directory to manage user rights and permissions throughout the network. Completing a security audit of the the Active Directory will assist in discovering any irregularities that could lead to a security weakness. This audit will also include a review of all users rights and permissions structures on the shared drives.

Security Audit	
Hardware/Software/Licensing	\$0
Consulting	\$20,000
Active Directory Security Audit	
Hardware/Software/Licensing	\$0
Consulting	\$5,500
Total	\$25,500

### Project Alternative

These projects are 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
None	None



# STREETS, SIDEWALKS AND ALLEYS

**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 pavement preservation and crack sealing program to prevent degradation of the streets. The Village rates streets as follows:

Streets		
Surface Condition	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 2021:

Improvement	Cost	Funding Source	Nature of Project
Street Patching	\$ 90,000	MFT - \$80,000 WS - \$10,000	Critical
50/50 Sidewalk, Curb & Gutter	\$ 65,000	GF - \$55,000 WS - \$10,000	Critical
Alley Improvement Program	\$ 300,000	CIF	Recommended
Street Improvement Program (SIP)	\$ 825,000	MFT - \$500,000 WS - \$50,000 IIBF - \$275,000	Critical
Street Maintenance Program	\$ 100,000	GF - \$50,000 MFT - \$50,000	Critical
Traffic Signals	\$ 60,000	CIF	Recommended
Bicycle Plan Implementation	\$ 238,380	CIF	Recommended
<b>Total</b>	<b>\$ 1,678,380</b>		

**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 2021 Budget**

	This Project is:	Fiscal Year					Five Year	Funding Source
		2021	2022	2023	2024	2025	Total	
Street Patching Program	Critical	90,000	100,000	100,000	100,000	100,000	490,000	MFT/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	300,000	250,000	250,000	300,000	250,000	1,350,000	CIF
Parking Lot Improvements	Recommended	-	150,000	85,000	-	20,000	255,000	CIF & CIF/PR
Street Improvement Program (SIP)	Critical	825,000	650,000	400,000	400,000	400,000	2,675,000	MFT/WS/ IIBF
Street Maintenance Program	Critical	100,000	100,000	100,000	100,000	100,000	500,000	GF/MFT
Traffic Signals	Recommended	60,000	-	-	-	-	60,000	CIF
Bicycle Plan Implementation	Recommended	238,380	61,470	-	-	-	299,850	CIF
<b>Total</b>		<b>1,678,380</b>	<b>1,376,470</b>	<b>1,000,000</b>	<b>965,000</b>	<b>935,000</b>	<b>5,954,850</b>	

Proposed Funding Source	Fiscal Year					Five Year
	2021	2022	2023	2024	2025	Total
General Fund (GF)	105,000	105,000	105,000	105,000	105,000	525,000
Motor Fuel Tax (MFT)	630,000	490,000	490,000	490,000	490,000	2,590,000
Water and Sewer Fund (WS)	70,000	70,000	70,000	70,000	70,000	350,000
Capital Improvement Fund (CIF)	598,380	461,470	335,000	300,000	250,000	1,944,850
CIF/Parking Reserve (CIF/PR)	-	-	-	-	20,000	20,000
Infrastructure Improvement Bond Fund (IIBF)	275,000	250,000	-	-	-	525,000
<b>Totals</b>	<b>1,678,380</b>	<b>1,376,470</b>	<b>1,000,000</b>	<b>965,000</b>	<b>935,000</b>	<b>5,954,850</b>

## Streets, Sidewalks, Alleys - Public Works

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### Street Patching Program

Streets, Alleys and Parking Lots

	MFT	WS
FY 2021	\$80,000	\$10,000
FY 2022	\$90,000	\$10,000
FY 2023	\$90,000	\$10,000
FY 2024	\$90,000	\$10,000
FY 2025	\$90,000	\$10,000

Critical

Recommended

Contingent on Funding

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### Spending History

Year	GF	WS	Total
FY 2020	\$ 72,600	\$ 10,000	\$ 82,600
FY 2019	\$ 48,976	\$ 10,000	\$ 58,976
FY 2018	\$ 54,212	\$ 10,000	\$ 64,212
FY 2017	\$ 80,178	\$ 10,000	\$ 90,178
FY 2016	\$ 66,465	\$ 8,860	\$ 75,325

### Program Description & Justification

The purpose of this program is to maintain and improve surface conditions of Village streets, alleys and parking lots by patching defective areas. This program is intended for pavements of all condition ratings to prolong their useful lives. To accomplish this goal, an annual funding level of \$90,000 to \$100,000 over the next five years is recommended. These funding levels are estimates and reflect inflationary increases for construction.

Village Staff annually inspects all streets and areas of pavement failure are placed on a patching list, which is provided to the Village's contractor. Village Staff also includes alleys and parking lots in their inspections and identifies patching needs on all pavements 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, unless deeper patches are required. 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 2021 Recommended Project

In FY 2021 a total of \$90,000 is recommended for this maintenance project. 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

## Streets, Sidewalks, Alleys - Public Works

### 50/50 Sidewalk, Curb & Gutter

Sidewalks, Aprons, and Curb

	GF	WS
FY 2021	\$55,000	\$10,000
FY 2022	\$55,000	\$10,000
FY 2023	\$55,000	\$10,000
FY 2024	\$55,000	\$10,000
FY 2025	\$55,000	\$10,000

Critical

Recommended

Contingent on Funding

### Spending History

Year	GF	WS	Total
FY 2020	\$ 55,089	\$ 10,000	\$ 65,089
FY 2019	\$ 55,658	\$ 10,000	\$ 65,658
FY 2018	\$ 53,734	\$ 10,000	\$ 63,734
FY 2017	\$ 51,710	\$ 10,000	\$ 61,710
FY 2016	\$ 47,979	\$ 8,482	\$ 56,461

### 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 and to bring all sidewalk ramps into compliance with the requirements set forth in the Americans with Disabilities Act (ADA). To accomplish these objectives, 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. Additionally, Staff has begun analyzing sidewalk ramp criteria at as many locations as time allows. This will allow us to optimize replacement of sidewalk ramps over time to ensure compliance with ADA requirements. Trip hazards are rated according to the displacement of adjoining sidewalk squares. The following table identifies the sidewalk condition ratings, description of condition, and the recommended action:

Sidewalk	Joint Displacement	Recommended Action
A	> 1/2" but < or = 1"	Consider Replacement
B	>1" but < 1 1/2"	Recommend Replacement
C	>1 1/2" 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 2021:

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
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**Sidewalk and Curb Annual Inspection Areas:**

<u>Area No.</u>	<u>Area Limits</u>	<u>Inspection Years</u>
1	Des Plaines River to Harlem Avenue/Hawthorne Avenue to Chicago Avenue	2021, 2024, 2027
2	Thatcher Avenue to Harlem Avenue/Chicago Avenue to Greenfield Street	2022, 2025, 2028
3	Thatcher Avenue to Harlem Avenue/Greenfield Street to North Avenue Thatcher Avenue to Lathrop Avenue/Madison Street to Hawthorne Avenue	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 within the public right of way 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**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None



## ***Streets, Sidewalks, Alleys - Public Works***

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<b>Alley Improvement Program</b>	<b>FY 2021</b>	<b>\$300,000</b>	<b>CIF</b>
	<b>FY 2022</b>	<b>\$250,000</b>	<b>CIF</b>
	<b>FY 2023</b>	<b>\$250,000</b>	<b>CIF</b>
	<b>FY 2024</b>	<b>\$300,000</b>	<b>CIF</b>
	<b>FY 2025</b>	<b>\$250,000</b>	<b>CIF</b>

Critical

Recommended

Contingent on Funding

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### **Spending History**

FY 2020	\$860,079 (Green Alley [3] and Thomas St. Alley Improvements)
FY 2019	\$193,740 (Gale Ave Alley)
FY 2018	\$0
FY 2017	\$258,600 (Quick and William Alleys)
FY 2016	\$59,153 (Alleys incorporated into SIP)

### **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 \$250,000 over the next five years is recommended for construction. These funding levels are estimates based on the reconstruction of one alley per year. Additional funds have been budgeted in FY 2021 and FY 2024 to accommodate the design of three or four alleys by a consultant. These funding levels will ensure that projects are always "shovel-ready" which will increase the feasibility of acquiring grant funding for this type of work. The funding levels also reflect inflationary increases for construction as the actual projects have yet to be identified.

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 in all cases. 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 rating is then used to determine the alley(s) that require improvement in a given year. Additional consideration is given to the severity of flooding present along an alley following rain events.

### **FY 2021 Recommended Projects**

Thatcher Avenue Alley (300 Block) - This alley is located between Thatcher Avenue and Gale Avenue, from Hawthorne Avenue to Linden Street. The pavement currently consists of severely deteriorated concrete pavement. The pavement is in poor condition and causes maintenance difficulties due to the uneven surface and level of degradation. Improving this alley will necessitate a full reconstruction. Similar to all recent alley projects, permeable pavers will be reviewed for incorporation into this project.

The alleys that have been identified for design during this fiscal year include the four alleys between Park Avenue and Ashland Avenue, from Hawthorne Avenue to Washington Boulevard. These alleys have all rated low during the FY 2020 alley rating process and Village Staff has received calls about flooding issues along two of them. By grouping these four alleys together for design, it is hoped that there will be some overall savings due to economy of scale and overlapping elements given their proximity to each other.

**FY 2021 Cost Summary for Alley Improvement Plan**

The estimated cost for this work includes the following:

- \$220,000 for construction
- \$50,000 for design (of three alleys, only one of which is to be constructed in FY 2021)
- \$30,000 for construction engineering services

**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



## Streets, Sidewalks, Alleys - Public Works

Parking Lot Improvements	FY 2021	\$0	CIF
	FY 2022	\$150,000	CIF
	FY 2023	\$85,000	CIF
	FY 2024	\$0	CIF/Parking Reserve
	FY 2025	\$20,000	CIF/Parking Reserve

Critical

Recommended

Contingent on Funding

### Spending History

FY 2020	\$	56,500	(East Thatcher Commuter Lot)
FY 2019	\$	-	
FY 2018	\$	-	
FY 2017	\$	137,395	(West Thatcher Commuter Lot)

### 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 2023**
- B. Public Works Garage – 45 Forest Avenue - **Reconstruction Scheduled for FY 2022**
- 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
- F. Lot at 7915-7919 North Avenue – adjacent to CVS parking lot - **Reconstruction Scheduled for FY 2025**

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

### FY 2021 Recommended Projects

There are no parking lot improvements currently scheduled for FY 2021.

### 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

### Project Impact

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



### Parking Lot Rating Survey Fall - 2018

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

## Streets, Sidewalks, Alleys - Public Works

### Street Improvement Program

	MFT	WS	IIBF
FY 2021	\$500,000	\$50,000	\$275,000
FY 2022	\$350,000	\$50,000	\$250,000
FY 2023	\$350,000	\$50,000	\$0
FY 2024	\$350,000	\$50,000	\$0
FY 2025	\$350,000	\$50,000	\$0

Critical

Recommended

Contingent on Funding

### Spending History

Year	MFT	WS	IIBF	Total
FY 2020	\$ 230,658	\$ 50,000	\$ 283,902	\$ 564,561
FY 2019	\$ 150,000	\$ 50,000	\$ 181,689	\$ 381,689
FY 2018	\$ 188,000	\$ 38,000	\$ -	\$ 226,000
FY 2017	\$ 150,000	\$ 52,898	\$ -	\$ 202,898
FY 2016	\$ 393,243	\$ 47,964	\$ -	\$ 441,207

### 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.

In years past, Village Staff would visually inspect all local streets and rated them according to the condition of the pavement. In 2018, however, Staff hired a firm called Roadbotics to help analyze Village roadways for the sole purpose of pavement ratings. Roadbotics employees drive all Village streets and use cell-phone technology to analyze roadway conditions at 10-foot intervals. The analysis at each point is compiled with others along the same block and a rating is then established. Streets rated "Poor" or "Fair" are prioritized for one of the construction options (rehabilitation, resurfacing, or reconstruction) depending on the condition, location, and estimated traffic volumes. The timing in improving streets is critical. Waiting too long to address street repairs will result in further deterioration, at which time a more costly repair becomes necessary.

The following tables summarize the street rating systems:

Streets		
Surface Condition	Pavement Rating	Estimated Remaining Life*
Excellent	0-1.5	15 to 20 years
Good	1.6-2.5	10 to 15 years
Fair	2.6-3.5	6 to 10 years
Poor	3.6-4.5	2 to 5 years

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

**FY 2021 Recommended Projects**

<u>Street</u>	<u>Pavement Rating</u>
1. Oak Avenue (Thatcher Avenue to Bonnie Brae Place)	3.6
2. Quick Avenue (Lathrop Avenue to Bonnie Brae Place)	3.3
3. Jackson Avenue (Chicago Avenue to Augusta Street)	3.8
4. Franklin Avenue (Oak Avenue to Chicago Avenue)	3.5
5. Keystone Avenue (Chicago Avenue to Thomas Street)	3.1
6. Forest Avenue (Chicago Avenue to Thomas Street)	3.3
7. Iowa St (Keystone Avenue to Forest Avenue)	2.5
8. Jackson Avenue (Lake Street to Quick Avenue)	2.9
9. Monroe Avenue (Lake Street to Oak Avenue)	3.4
10. Keystone Avenue (Lake Street to Oak Avenue)	3.1

The projected cost to resurface these streets and make other associated improvements is \$825,000

While the Capital Improvement Plan proposes funding for street improvements through FY 2025, these locations have not yet been determined. Staff recommends a minimum funding level of \$300,000 for each of those years, with specific locations selected based on annual street ratings surveys.

**Program Alternative**

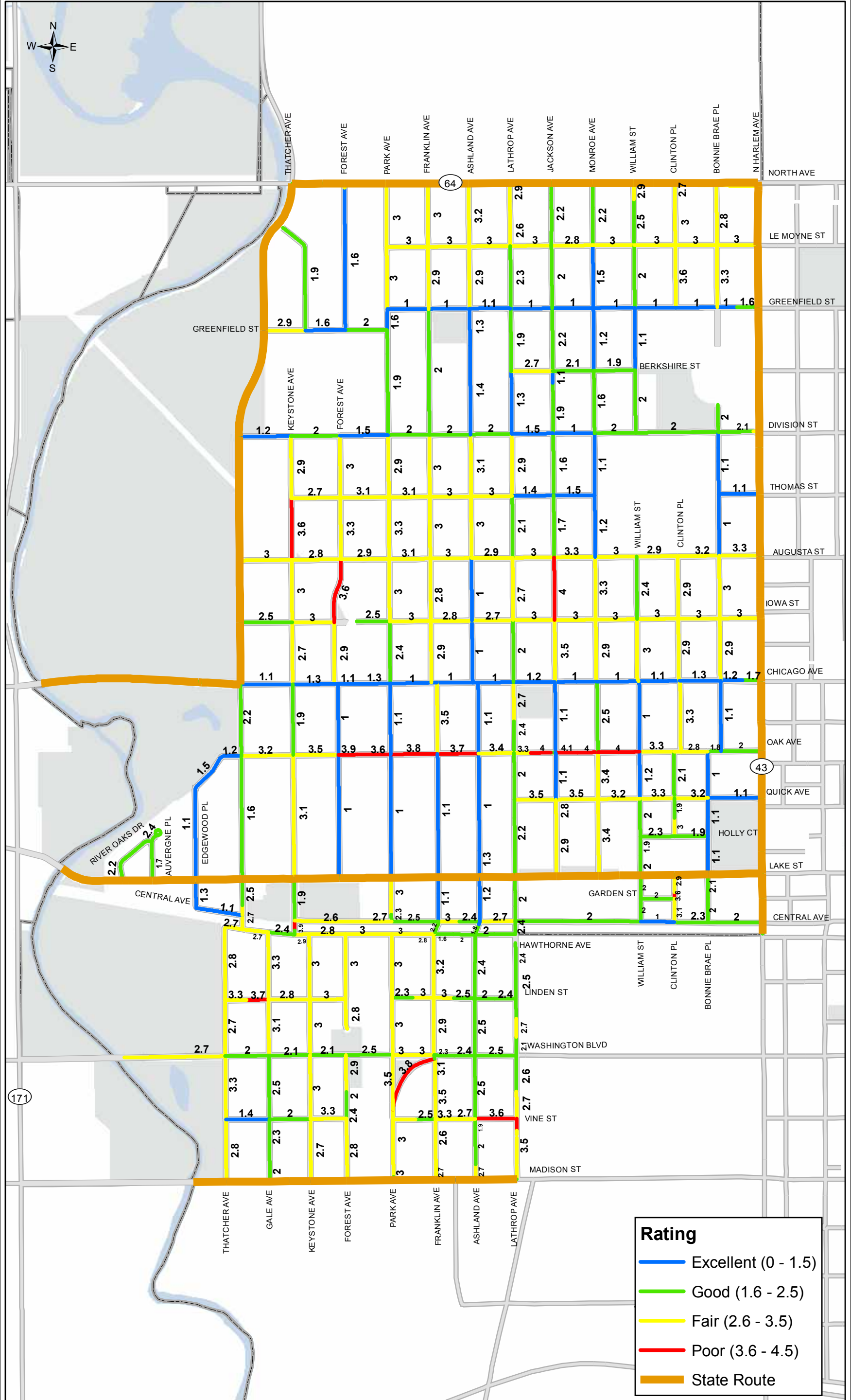
Not performing any roadway maintenance, particularly for streets in “Poor” condition, will result in total pavement failure and require reconstruction (of base and surface), which is significantly higher in cost compared to resurfacing.

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**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

# Village of River Forest Pavement Rating 2019





## Streets, Sidewalks, Alleys - Public Works

Street Maintenance Program	FY 2021	\$50,000	GF	\$50,000	MFT
	FY 2022	\$50,000	GF	\$50,000	MFT
	FY 2023	\$50,000	GF	\$50,000	MFT
	FY 2024	\$50,000	GF	\$50,000	MFT
	FY 2025	\$50,000	GF	\$50,000	MFT

Critical

Recommended

Contingent on Funding

### Spending History

	Crack Sealing	Preservation	Total
FY 2020	\$ 29,553	\$ 51,905	\$ 81,458
FY 2019	\$ 45,900	\$ 43,722	\$ 89,622
FY 2018	\$ 41,844	\$ 37,258	\$ 79,102
FY 2017	\$ 44,652	\$ 46,620	\$ 91,272
FY 2016	\$ 48,390	\$ 23,056	\$ 71,446

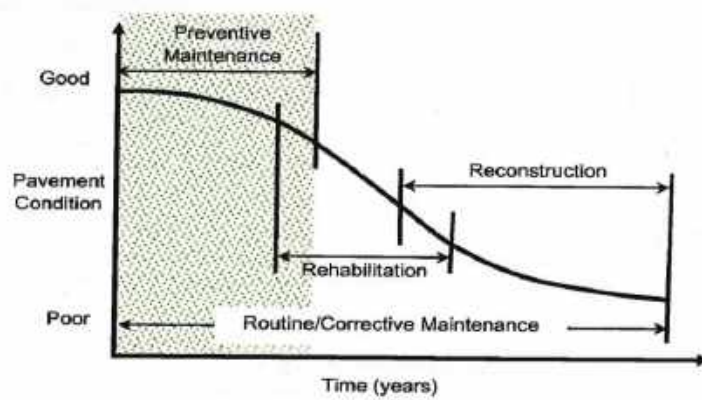
### Program Description & Justification

Over the past few years, multiple products have been specified for the pavement preservation portion of this work in an effort to find the most effective approach. While some products have caused various concerns, the product specified in FY 2020 (HA5) seems to be a success both in effectiveness as well as generally minimizing impacts to the public and adjacent residents. This approach will extend the life of the pavement and minimizes the overall cost of the pavement life cycle. As a result, Staff will be specifying the same product again in FY 2021.

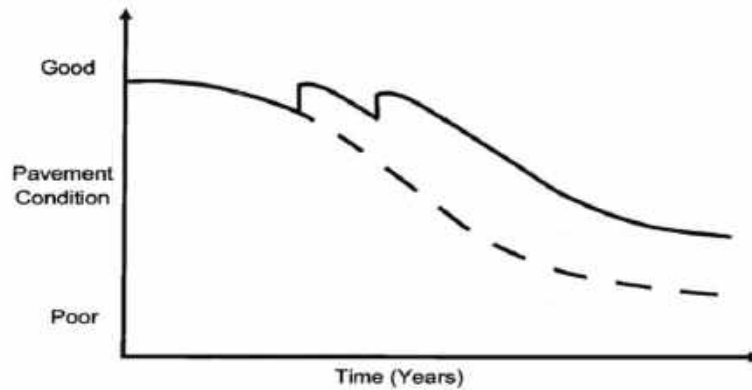
In addition to pavement preservation, Village Staff believes the practice of Crack Sealing to be invaluable. Ideally, this work is completed when the pavement is still in good condition with minimal cracking. In years past, this portion of the project has been jointly bid with Oak Park. However, recently it has come to the attention of Village Staff that this approach is not generating the most efficient unit pricing. As a result, Village Staff bid this work individually in FY 2020 and will continue to do the same in FY 2021. This approach generated unit prices that were more than 20% lower than when jointly bid in previous years.

Village Staff has identified the streets that are ideal candidates for preservation and crack sealing during the annual Street Rating Survey. These streets are typically in good condition, with the intent 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 2021 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 \$50,000 for pavement preservation. This will enable Staff to maintain these recently resurfaced pavements in good condition in hopes of preventing them from deteriorating as they normally would.

Pavement Preservation

The following streets have been identified for preservation:

<u>Street</u>	<u>Condition Rating</u>	<u>Proposed Cost</u>
Monroe Avenue (Augusta Street to Division Street)	1.2	\$14,000
Jackson Avenue (Augusta Street to Division Street)	1.7	\$13,800
Thomas Street (Lathrop Avenue to Monroe Avenue)	1.5	\$9,000
Jackson Avenue (Quick Avenue to Chicago Avenue)	1.1	\$13,200

Crack Sealing

In addition to the streets to be treated during the pavement preservation portion of this work, additional streets will be identified for crack sealing during early spring of 2020.

**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

## Streets, Sidewalks, Alleys - Public Works

### Traffic Signals

FY 2021

\$60,000

CIF

Critical

Recommended

Contingent on Funding

### Spending History

FY 2020	\$5,046.30 (IDOT engineering coordination)
FY 2019	\$13,065.78 (Traffic Signal Engineering Design)
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. Traffic signal modification for the Lake and Thatcher intersection has been bid and construction is planned for spring 2020.

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

#### FY 2021 Recommended Project

Chicago Avenue at Thatcher Avenue 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.

Chicago Avenue at Thatcher Avenue Construction	\$	60,000
<b>Total</b>	<b>\$</b>	<b>60,000</b>

### Project Alternative

The alternative to the improvements to this area of the traffic signal system within the Village is to not act upon the recommendation of the study performed in July 2017 and the engineering design performed in 2018/2019. Keeping these intersections in the same traffic signal configuration would maintain higher levels of congestion during peak travel times. This project 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

## Streets, Sidewalks, Alleys - Public Works

Bicycle Plan Implementation	FY 2021	\$238,380	CIF
	FY 2022	\$61,470	CIF

Critical

Recommended

Contingent on Funding

### Project Description & Justification

The purpose of this project is to implement the proposed improvements recommended as part of the Village Bicycle Plan that was prepared in 2019. The purpose of the plan was to establish a safe, comfortable and defined network of bicycle facilities that serves all ages and abilities and connects to key destinations in the Village, the adjoining communities, and the nearby Forest Preserves and regional trails. As part of this plan, many traffic control sign installations and pavement marking improvements are recommended.

### FY 2021 Recommended Project

This project would involve the installation of 450 signs to guide bicyclists along the designated routes, create motorist awareness, and improve safety at intersections. Sign types include bike lane signs bicycle crossing signs, and wayfinding confirmation, turn and decision signs. The plan set will identify the sign content/wording, sizing specifications, quantities, posting locations, and form of mounting (i.e., post, existing pole, etc). Implementation will also require over 600 bike lane symbols, arrows, and shared lane markings, approximately 17,000 lineal feet of solid white lane line markings, and some pavement marking removals.

The plan set will specify the locations and specifications for these pavement marking installations and removals. IDOT controlled routes are anticipated to have a longer implementation timeline due to utility conflicts, right-of-way requirements, landscaping modifications, and potential additional analysis and justification. As such, the FY 2021 portion of the bike plan implementation focuses solely on the Village controlled (non-IDOT) streets.

### FY 2022 Recommended Project

Implementation of portions of the Bicycle Plan on IDOT routes. This would include any signage and striping installations. Locations along Thatcher Avenue, North Avenue, and Harlem Avenue areas would not be included in this portion of the implementation due to the feasibility of proposed sidepaths, and to avoid duplicative work with the ongoing design of a potential bike trail adjacent to the Des Plaines river by the Intergovernmental Coalition Phase I Study Trail Advisory Group.

### Project Alternative

The alternative to this project is the status quo and/or implementation could be delayed and phased in over time.

### Project Impact

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

# WATER AND SEWER IMPROVEMENTS

***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 2025. 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 2021 include:

Improvement	Cost	Funding Source	Nature of Project
Sewer Lining	140,000	WS	Critical
Sewer Point Repairs	35,000	WS	Critical
Water Distribution System – Pumping Station	40,000	WS	Recommended
Water Tower Improvements	10,000	WS	Critical
0.5 MG Underground Reservoir Improvements	18,000	WS	Critical
Water Meter Replacement Program	7,500	WS	Critical
Water Main Replacement	475,000	WS	Critical
Hydrant Replacement	25,000	WS	Recommended
Deployable Leak Sensors	100,000	WS	Critical
Automated Metering Infrastructure	30,000	WS	Critical
<b>Total</b>	<b>880,500</b>		

**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 2021 Budget

This Project is:	Fiscal Year					Five Year Total	Funding Source
	2021	2022	2023	2024	2025		
<b>Sewer System</b>							
Sewer Lining	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
<b>Pumping Station</b>							
Water Distribution Improvements	Recommended	40,000	100,000	15,000	-	-	155,000 WS
<b>Water Distribution Improvements</b>							
Water Tower Improvements	Critical	10,000	-	-	-	4,000	14,000 WS
0.5 MG Underground Reservoir Improvements	Critical	18,000	-	-	-	8,000	26,000 WS
Water Meter Replacements	Critical	7,500	17,000	11,000	17,000	6,000	58,500 WS
Water Main Replacement	Critical	475,000	650,000	400,000	400,000	400,000	2,325,000 WS
Hydrant Replacement	Recommended	25,000	25,000	26,000	26,000	26,000	128,000 WS
Deployable Leak Sensors	Critical	100,000	-	-	-	-	100,000 WS
Automated Metering Infrastructure	Critical	30,000	850,000	200,000	-	-	1,080,000 WS
<b>Total</b>		<b>880,500</b>	<b>1,817,000</b>	<b>827,000</b>	<b>618,000</b>	<b>619,000</b>	<b>4,761,500</b>

Proposed Funding Source	Fiscal Year					Five Year Total
	2021	2022	2023	2024	2025	
Water and Sewer Fund (WS)	880,500	1,817,000	827,000	618,000	619,000	4,761,500
<b>Totals</b>	<b>880,500</b>	<b>1,817,000</b>	<b>827,000</b>	<b>618,000</b>	<b>619,000</b>	<b>4,761,500</b>



## ***Water and Sewer Improvements - Public Works***

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<b>Sewer Lining Program</b>	<b>FY 2021</b>	<b>\$140,000</b>	<b>WS</b>
Public Sewers	<b>FY 2022</b>	<b>\$140,000</b>	<b>WS</b>
	<b>FY 2023</b>	<b>\$140,000</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$140,000</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$140,000</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

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### **Spending History**

FY 2020	\$	113,207	
FY 2019	\$	150,545	(including MH lining)
FY 2018	\$	125,767	(including MH lining)
FY 2017	\$	122,230	(including MH lining)
FY 2016	\$	69,956	

### **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 2017 recommends an annual funding level of \$140,000 for this program. This budget allows 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 also identifies manholes in need of lining or bench repair. Potential candidates are researched throughout the winter and lined in the summer. 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 46,330 lineal feet of sewers have been lined. This represents approximately 27% of the total sewer mains owned/maintained by the Village (approximately 171,000 lineal feet).

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:

<b>Condition Rating</b>	<b>Condition Description</b>	<b>Recommended Action</b>
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 2021 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**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

## ***Water and Sewer Improvements - Public Works***

<b>Sewer Point Repairs</b>	<b>FY 2021</b>	<b>\$35,000</b>	<b>WS</b>
Public Sewers	<b>FY 2022</b>	<b>\$35,000</b>	<b>WS</b>
	<b>FY 2023</b>	<b>\$35,000</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$35,000</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$35,000</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

### **Spending History**

FY 2020	\$	29,270
FY 2019	\$	23,445
FY 2018	\$	39,600
FY 2017	\$	30,770
FY 2016	\$	28,875

### **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. Due to rising costs of underground work, the Village regularly budgets \$35,000 for point repairs.

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**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

**Water and Sewer Improvements - Public Works**

<b>Water Distribution System - Pumping Station</b>	<b>FY 2021</b>	<b>\$40,000</b>	<b>WS</b>
	<b>FY 2022</b>	<b>\$100,000</b>	<b>WS</b>
	<b>FY 2023</b>	<b>\$15,000</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$0</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$0</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

**Spending History**

FY 2020	\$	7,800
FY 2019	\$	16,825
mm FY 2018	\$	19,000
FY 2017	\$	15,600
FY 2016	\$	15,832

**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).

The following critical and recommended facility improvements should be **completed in FY 2021**:

<b>Repair/Improvement</b>	<b>Estimated Cost</b>	<b>Year</b>
1. Install Reservoir turbine generator as suggested in Baxter and Woodman efficiency study performed 11/2010	\$40,000	FY 2021
<b>Total</b>	<b>\$40,000</b>	

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

Repair/Improvement	Estimated Cost	Year
1. Replace pump #1 and associated piping as suggested in Baxter and Woodman efficiency study performed 11/2010	\$100,000	FY 2022
2. Add VFD to pump #1	\$15,000	FY 2023
Total	\$115,000	

**Project Description & Justification**

Reservoir Turbine Generator - There is an increasing interest in recapturing energy currently wasted during filling reservoirs by adding turbines or generators to the reservoir fill lines. Such a system cannot generate sufficient energy to run a pump; however, it can be used to power supervisory control system or other low power systems such as chemical feed within the plant. By reducing the electrical energy consumed by indirect pumping operations, the overall kWh/MG is reduced, thereby increasing the apparent electrical efficiency. Many of these systems can be readily inserted into pipe systems prior to the point the fill line enters the reservoir. The typical system requires a minimum of a 30 psi available pressure drop. In as much as the normal minimum pressure reported by the Village Staff is 39 psi, an appropriately selected and sized generator could supply a significant amount of electrical energy. The initial estimate is a generator could produce up to 12 kWh based upon a 38 psi pressure drop and 1,100 gpm (average flow rate based on 1.6 MGD ADD). Future projects that may require funding are the replacement of valves that are submerged in the .5 and 2MG reservoirs. These valves are original to the facility (circa 1920's) and are critical if reservoir maintenance has to be performed.

**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 and Sewer Improvements - Public Works

### Water Tower Improvements

Water & Sewer



FY 2021	\$10,000	WS
FY 2022	\$0	WS
FY 2023	\$0	WS
FY 2024	\$0	WS
FY 2025	\$4,000	WS

Critical

Recommended

Contingent on Funding

### Spending History

FY 2020	\$270,000
FY 2019	\$0
FY 2018	\$0
FY 2017	\$0
FY 2016	\$0

### Project Description & Justification

Cathodic protection systems are installed in steel water tanks to protect and extend the life of the interior coatings by controlling surface corrosion. It was recommended by the painting contractor that recoated the tower in FY 2020 that the Village reinstall a cathodic protection system one year after the water tower was repainted.

The following critical and recommended facility improvements should be **completed in FY 2021**:

Repair/Improvement	Estimated Cost	Year
1. Reinstall cathodic protection system	\$10,000	FY 2021
Total	\$10,000	

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

Repair/Improvement	Estimated Cost	Year
1. Reinspect reservoir	\$4,000	FY 2025
Total	\$4,000	

### Project Alternative

There are essentially no alternatives to these improvements and maintenance projects as the water tower is a critically important part of 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

## Water and Sewer Improvements - Public Works

### .5 & 2 MG Underground Reservoir Improvements

Water & Sewer



FY 2021	\$18,000	WS
FY 2022	\$0	WS
FY 2023	\$0	WS
FY 2024	\$0	WS
FY 2025	\$8,000	WS

Critical

Recommended

Contingent on Funding

#### Spending History

FY 2020	\$0
FY 2019	\$0
FY 2018	\$0
FY 2017	\$0
FY 2016	\$0

#### Project Description & Justification

On August 14, 2018 Dixon Engineering Inc. performed a maintenance inspection on the 500,000 and 2,000,000 gallon underground storage reservoirs owned by the Village of River Forest. The purpose of the inspection was to evaluate the interior piping, surfaces and appurtenances, review safety and health aspects, and make budgetary recommendations for continued maintenance of the reservoir. Inspections are recommended every five years.

The following critical and recommended facility improvement should be **completed in FY 2021:**

Repair/Improvement	Estimated Cost	Year
Abrasive blast clean the wet interior piping and steel appurtenances on both reservoirs to a near-white metal (SSPC-SP10) condition and repaint with a three coat epoxy polyamide system. The estimated cost is \$18,000. Best pricing can be obtained if work is performed with another tank painting project.	\$18,000	FY 2021
Total	\$18,000	

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

Repair/Improvement	Estimated Cost	Year
Reinspect reservoirs (\$4,000/reservoir)	\$8,000	FY 2025
Total	\$8,000	

#### Project Alternative

There are essentially no alternatives to these improvements and maintenance projects as the water reservoir is a critically important part of the Village's water distribution system. Deferring these projects would result in emergency repairs that could increase project costs (compared to soliciting

#### Project Impact

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

**Water and Sewer Improvements - Public Works**

<b>Water Meter Replacement Program</b>	<b>FY 2021</b>	<b>\$7,500</b>	<b>WS</b>
	<b>FY 2022</b>	<b>\$17,000</b>	<b>WS</b>
	<b>FY 2023</b>	<b>\$11,000</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$17,000</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$6,000</b>	<b>WS</b>

Critical
  Recommended
  Contingent on Funding

**Spending History**

FY 2020	\$22,000	continuation of program to replace all meters over 20 years of age
FY 2019	\$16,000	continuation of program to replace all meters over 20 years of age
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

**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. Funds requested over the spreadsheet total below are for accessories associated with meter replacements (nuts, bolts, gaskets, seals and sealing wire, flanges and meter couplings).

Qty.	Size	Each	Cost
1	0.625	\$ 123	\$ 123
2	0.75	\$ 142	\$ 284
7	1	\$ 175	\$ 1,225
5	1.5	\$ 505	\$ 2,525
2	2	\$ 710	\$ 1,420
17		<b>Meter Cost</b>	<b>\$ 5,577</b>
		<b>Add'l Equip</b>	<b>\$ 1,923</b>
		<b>Total Cost</b>	<b>\$ 7,500</b>

**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 and Sewer Improvements - Public Works***

<b>Water Main Replacement Program</b>	<b>FY 2021</b>	<b>\$475,000</b>	<b>WS</b>
	<b>FY 2022</b>	<b>\$650,000</b>	<b>WS</b>
	<b>FY 2023</b>	<b>\$400,000</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$400,000</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$400,000</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

### **Spending History**

FY 2020	\$	300,000 (Projected)
FY 2019	\$	318,712
FY 2018	\$	396,000
FY 2017	\$	441,613
FY 2016	\$	17,600

### **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 approximately 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. This analysis is then reviewed along with all identified needs for improvement based on the water system modeling performed by Strand Associates Engineering in 2018. 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 resurfacing the roadway.

### **FY 2021 Recommended Projects**

<u>Location</u>	<u>Pipe Length (FT)</u>
Iowa Street/Augusta Street/Thomas Street (Thatcher Avenue to Forest Avenue)	1,500

The proposed water main replacement project will include the installation of approximately 1,500 feet of eight-inch water main on Iowa Street and Thomas Street (from Keystone Avenue to Forest Avenue) and on Augusta Street (from Thatcher Avenue to Keystone Avenue). This region was identified as one in need of an improvement as part of the 2018 modeling of the water distribution system. In the area bordered by Division Street, Park Avenue, Chicago Avenue and Thatcher Avenue, there is currently only a single block with an east/west water main. This creates an area of low pressure, especially when a portion of the network needs to be shut down in this area for maintenance or emergency purposes. The installation of the proposed water mains will create much more flow to the area and ensure better distribution during high-demand periods. Open-trench and directional boring installation methods will be investigated.

The cost estimate for this project is as follows:

- \$400,000 for construction (design and permitting to be performed in-house)
- \$50,000 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 reviews the modeling report and 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 project(s) for possible future fiscal years:

- Install eight-inch water mains on alternating blocks of LeMoyne Boulevard between Park Avenue and Harlem Avenue. Project details have not yet been determined, however, modeling indicates a need for additional flow in this area. Project costs to include construction engineering services and miscellaneous lead service replacements. Estimated project cost: \$650,000

**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

## **Water and Sewer Improvements - Public Works**

<b>Hydrant Replacement Program</b>	<b>FY 2021</b>	<b>\$25,000</b>	<b>WS</b>
	<b>FY 2022</b>	<b>\$25,000</b>	<b>WS</b>
	<b>FY 2023</b>	<b>\$26,000</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$26,000</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$26,000</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

### **Spending History**

FY 2020	\$	-
FY 2019	\$	-
FY 2018	\$	8,758
FY 2017	\$	22,000
FY 2016	\$	23,606

### **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.

### **FY 2021 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 to 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 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**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
None	None

## ***Water and Sewer Improvements - Public Works***

<b>Deployable Leak Sensors</b>	<b>FY 2021</b>	<b>\$100,000</b>	<b>WS</b>
Water & Sewer	<b>FY 2022</b>	<b>\$0</b>	<b>WS</b>
	<b>FY 2023</b>	<b>\$0</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$0</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$0</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

### **Spending History**

FY 2020	\$	10,000
FY 2019	\$	-

### **Program Description & Justification**

These sensors attach to valves on the water system and “listen” for leaks during the middle of the night while it is quiet. That information is sent through a cellular network to a secure website which can be viewed by Public Works staff. These sensors are also able to communicate with each other if a leak is occurring and correlate the likely location of the leak on the system as well. Leak sensors could be incorporated within an Automatic Metering Infrastructure (AMI) system. However, these stand alone sensors would be used as a stand alone system not tied into water meter infrastructure. In 2018 the Village Board directed the Public Works Department to proceed with the purchase of additional sensors in an attempt to cover the entire water system. This would amount to 100 sensors at a cost of \$100,000 based on an estimate for the types of devices recently tested. The purchase was delayed until FY 2021 due to the availability of new products or technology.

In FY 2020 water division staff purchased ten PermaNet sensors, manufactured by Fluid Conservation Systems. The sensors have been deployed on the water system to search for any leaks that were not noticed because no water has been visible from the surface. The sensors found a leak in the system within the first week and Public Works staff was also able to locate the leak on a water service to a fire hydrant and repair it to prevent any further loss of water. Since the issue of water loss is important due to lost revenue from water leaking out of the system as well as water standard mandates from the Illinois Department of Natural Resources (IDNR), a number of methods are taken to prevent loss as much as possible.

It is important to note that there will always be a certain amount of water lost in an older water system. Although some water loss is unavoidable it is best to take a proactive approach to this issue and the use of deployable leak sensors is the latest tool in that process. Sensors are able to communicate with each other from a distance up to a 500 feet away; therefore it is estimated that 100 sensors would be needed to cover the entire Village system.

### **Program Alternative**

The alternative to this project would be to not purchase these leak sensors and continue to only listen for leaks in the system through contractual leak surveys performed once per year.

### **Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
\$2,000 for data hosting (web portal)	Technical communication

## ***Water and Sewer Improvements - Public Works***

<b>Automated Metering Infrastructure (AMI)</b>	<b>FY 2021</b>	<b>\$30,000</b>	<b>WS</b>
Water & Sewer	<b>FY 2022</b>	<b>\$850,000</b>	<b>WS</b>
	<b>FY 2023</b>	<b>\$200,000</b>	<b>WS</b>
	<b>FY 2024</b>	<b>\$0</b>	<b>WS</b>
	<b>FY 2025</b>	<b>\$0</b>	<b>WS</b>

Critical

Recommended

Contingent on Funding

### **Program Description & Justification**

This is a project to install automated metering infrastructure (AMI) technology in all water customer locations throughout the Village. Water meters will be upgraded with state-of-art equipment that will allow the Village to obtain meter readings without requiring Public Works to perform a "drive by" read, which is the current practice. This project will deliver better customer service by providing accurate bills based on actual consumption that can be seen in real time by providing meter reads on a daily basis. It can also help identify any irregularities in water usage such as leaks being experienced by residents. An enhanced system will be pursued that has customer service capabilities such as leak detection, email alerts, tamper resistance, and online usage reports, which are all desired components of the new AMI system. Currently meter reads are obtained only once per month. Every upgraded water meter will be connected to a small battery-powered device (mxu) that is installed close the meter. Typically, AMI systems will operate by having the mxu device read the meter several times each day and send a brief, low-powered radio signal to a nearby collector. Collectors then transmit all meter reads to the Village, thereby eliminating the need for manual or "drive by" meter readings. The use of leak sensors can also be incorporated into an AMI system in order to identify any leaks in the Village's water system.

This project will require upgrading over 2,000 of the Village's 3,180 existing water meters to new meters that have the ability to provide digital readings. It will also require new mxu devices for all meters, radio read collector infrastructure and software capable of interpreting the data for Public Works/Water billing staff and water customers. Since these remote reads are collected by radio signal there will be the need to install various antenna(s) throughout the Village to collect reads of all water customers. The approximate cost of the new meters needed is \$430,000 and with new mxu devices at an additional approximate cost of \$420,000. The remaining collector radio read infrastructure and software approximate cost is \$200,000. The need for initial project management in FY 2021 is \$30,000.

### **Program Alternative**

The alternative to this project would be to not purchase an AMI system and continue to obtain meter reads by the once per month "drive by" method of collection.

### **Project Impact**

<b>Annual \$ Impact on Operating Budget</b>	<b>Description of Operating Budget Impact</b>
Software for data hosting	Technical communication