INTRODUCTION AND SUMMARY

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RIVER FOREST
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Village of River Forest
Five Year Capital Improvement Program

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: Approximately 100 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 the final phase of implementation of the 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

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 2022 funding levels for each fund or source can be found below.

General Fund **$ 298,800**

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) **$ 490,000**

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 **$ 2,627,394**

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

Capital Equipment Replacement Fund (CERF) **$ 684,610**

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 **$ 2,435,120**

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

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

The Infrastructure Improvement Bond Fund is a new fund that utilizes the proceeds from the 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.

Madison Street Tax Increment Financing (TIF) District Fund **$ 54,000**

The Madison Street TIF was created in 2016. This fund utilizes proceeds from the Madison Street TIF District to pay for TIF-eligible projects.

North Avenue Tax Increment Financing (TIF) District Fund **$ -**

The North Avenue TIF Fund is a fund that utilizes proceeds from the North Avenue TIF District to pay for TIF-eligible projects.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Fiscal Year 2022 Budget

CATEGORY	Fiscal Year 2022	2023	2024	2025	2026	Five Year Total
Buildings and Improvements	156,300	32,000	317,000	-	40,000	545,300
Vehicles	437,160	719,945	304,549	439,488	797,917	2,699,059
Equipment	724,144	322,572	367,356	155,781	305,751	1,875,604
Information Technology	362,820	167,000	200,000	122,000	47,000	898,820
Streets, Sidewalks & Alleys	2,811,000	3,761,279	800,000	735,000	715,000	8,822,279
Water and Sewer Improvements	2,348,500	723,800	717,000	603,000	603,500	4,995,800
Total	**6,839,924**	**5,726,596**	**2,705,905**	**2,055,269**	**2,509,168**	**19,836,862**

PROPOSED FUNDING SOURCE	Fiscal Year 2022	2023	2024	2025	2026	Five Year Total
General Fund (GF)	298,800	105,000	105,000	105,000	105,000	718,800
Motor Fuel Tax Fund (MFT)	490,000	1,226,279	490,000	490,000	490,000	3,186,279
Water and Sewer Fund (WS)	2,627,394	793,800	787,000	673,000	673,500	5,554,694
Capital Equipment Replacement Fund (CERF)	684,610	898,417	668,805	432,569	1,012,668	3,697,069
CERF/WS	-	43,000	221,000	118,500	91,000	473,500
Capital Improvements Fund (CIF)	2,435,120	2,660,100	279,100	216,200	137,000	5,727,520
Capital Improvement Fund / Grant (CIF/Grant)	-	-	-	-	-	-
Capital Improvements Fund/Parking Reserve (CIF/PR)	-	-	85,000	20,000	-	105,000
Infrastructure Improvements Bond Fund (IIBF)	250,000	-	-	-	-	250,000
Madison Street TIF District (M-TIF)	54,000	-	-	-	-	54,000
North Avenue TIF District (N-TIF)	-	-	70,000	-	-	70,000
Totals	**6,839,924**	**5,726,596**	**2,705,905**	**2,055,269**	**2,509,168**	**19,836,862**

BUILDINGS AND IMPROVEMENTS

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Buildings and Improvements – Five Year Capital Improvement Program

The Buildings and Improvements section of the Capital Improvement Program (CIP) identifies proposed improvements to the Village Hall, including the Police and Fire Department areas, as well as the Public Works Garage 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 2022 include:

Improvement	**Cost of Improvement**	**Funding Source**	**Nature of Project**
Village Hall Improvements	$ 86,200	CIF/CERF	Recommended
Garage Improvements	$ 50,100	CIF	Contingent
Pumping Station Improvements	$ 20,000	WS	Critical
Total	**$ 156,300**		

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 2022 Budget

		Fiscal Year					Five Year	Funding
	This Project is:	2022	2023	2024	2025	2026	Total	Source
Police							-	
Village Hall							-	
Village Hall Improvements	Recommended	86,200	32,000	317,000	-	40,000	475,200	CIF/CERF
Public Works							-	
Garage Improvements	Contingent	50,100	-	-	-	-	50,100	CIF
Pumping Station Improvements	Critical	20,000	-	-	-	-	20,000	WS
Total		**156,300**	**32,000**	**317,000**	**-**	**40,000**	**545,300**	

	Fiscal Year					Five Year
Proposed Funding Source	2022	2023	2024	2025	2026	Total
Water and Sewer Fund (WS)	20,000	-	-	-	-	20,000
Capital Equipment Replacement Fund (CERF)	-	-	317,000	-	-	317,000
Capital Improvement Fund (CIF)	136,300	32,000	-	-	40,000	208,300
Totals	**156,300**	**32,000**	**317,000**	**-**	**40,000**	**545,300**

Buildings and Improvements

Village Hall Improvements

FY 2022	**$86,200**	**CIF**
FY 2023	**$32,000**	**CIF**
FY 2024	**$317,000**	**CERF**
FY 2025	**$0**	**CIF**
FY 2026	**$40,000**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2021	$18,428 (HVAC compressor replacements and repairs)
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.

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. LED lighting upgrades were performed as a result of this analysis on the exterior lighting of the building and in the community room. The working condition of all Village Hall HVAC units is also monitored and the HVAC contractors assist in determining if replacement is needed in the next five years as well. The replacement of fluorescent lighting on the 2nd floor, stairways and 1st floor common areas of Village Hall with energy efficient LED lighting is planned for FY 2022. This is based on the recommendations of the ComEd facility assessment, and using their energy efficiency incentives saves approximately 30% off the purchase price of lighting fixtures. 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. Several interior doors are also planned for improvements to better assist ADA egress issues.

A building envelope and roofing 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 the future need to replace the roof over the dispatch center in the near future. The dispatch center has experienced several leaks within the past year. These leaks have been surface patched temporarily, but complete replacement is needed within the next year. This area was recently reassessed by the Garland company and is recommend for replacement. A Facility Condition Assessment (FCA) of the Village Hall has been performed to analyze the areas of the building and provide a timeframe for any needed future repairs or replacements. The purpose of the assessment is to evaluate the overall condition of the building, and provide information regarding the condition and life expectancy of the major components.

The following facility improvements are recommended within the next five years with higher priority items listed first:

Repair/Improvement	Estimated Cost	Year
Replace roof above 2nd floor (WSCDC area)	$48,000	FY 2022
Replace front door and controls	$11,000	FY 2022
Energy efficient lighting improvements (interior)	$9,200	FY 2022
Interior door ADA access improvements	$18,000	FY 2022
Replace HVAC rooftop unit	$32,000	FY 2023
Replace Emergency Generator	$317,000	FY 2024
Tuck-pointing improvements	$40,000	FY 2026
Total	$475,200	

Project Impact

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

Buildings and Improvements - Public Works

Public Works Garage Improvements

FY 2022	**$50,100**	**CIF**
FY 2023	**$0**	**CIF**
FY 2024	**$0**	**CIF**
FY 2025	**$0**	**CIF**
FY 2026	**$0**	**CIF**

○ Critical ○ Recommended ◉ Contingent on Funding

Spending History

FY 2021	$1,167 (Overhead Garage Door Repair, Lighting Replacements)
FY 2020	$3,183 (Overhead Garage Door Repair, PW Garage Security Camera Upgrades)
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)

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 rebuild of the salt storage shed and the replacement of two overhead garage doors are planned for FY 2022.

Based on current conditions and a facility site assessment, the following facility improvements are recommended within the next five years with higher priority items listed first:

Repair/Improvement	Estimated Cost	Year
Rebuild salt storage shed	$ 30,100	FY 2022
Replace two overhead garage doors	$ 20,000	FY 2022
Total	$ 50,100	

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 2022	**$20,000**	**WS**
FY 2023	**$0**	**WS**
FY 2024	**$0**	**WS**
FY 2025	**$0**	**WS**
FY 2026	**$0**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2021	$3,700 (Repairs to backup generator)
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)

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.

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. LED lighting upgrades were performed as a result of this analysis on the interior lighting of the building. A Facility Condition Assessment of the Pumping Station was performed to evaluate the overall condition of the buildings and sites, and provide information regarding the condition and life expectancy of the major components. The report summarizes the recommended projects involving improvements and maintenance to this facility. The current condition of the exterior stucco of the building is deteriorating and is in need of a new application, this is planned for FY 2022.

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

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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 2022:

Department	Number of Vehicles to be Replaced in FY 2022	Cost of Vehicles to be Replaced in FY 2022	Total Number of Vehicles in Fleet
Building	-	$ -	1
Police	3	$ 138,660	17
Fire	2	$ 83,500	9
Public Works	2	$ 215,000	21
Total	**7**	**$ 437,160**	**48**

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 2022 Budget

Vehicles	Fiscal Year 2022	2023	2024	2025	2026	Five Year Total	Funding Source
Building	-	-	16,293	-	-	16,293	CERF
Police	138,660	214,945	44,256	202,488	97,917	698,266	CERF
Fire	83,500	230,000	-	-	700,000	1,013,500	CERF
Public Works	215,000	275,000	244,000	237,000	-	971,000	CERF & CERF/WS
Total	**437,160**	**719,945**	**304,549**	**439,488**	**797,917**	**2,699,059**	

Proposed Funding Source	Fiscal Year 2022	2023	2024	2025	2026	Five Year Total
Capital Equipment Replacement Fund (CERF)	437,160	676,945	105,549	320,988	797,917	2,338,559
CERF- Water and Sewer (CERF/WS)	-	43,000	199,000	118,500	-	360,500
Totals	**437,160**	**719,945**	**304,549**	**439,488**	**797,917**	**2,699,059**

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Building
Fiscal Year 2022 Budget

Building Department	Year	Vehicle #	This Project is:	Fiscal Year 2022	2023	2024	2025	2026	Five Year Total	Funding Source
Ford Focus	2014	1	Recommended	-	-	16,293	-	-	16,293	CERF
Total				**-**	**-**	**16,293**	**-**	**-**	**16,293**	

Proposed Funding Source			Fiscal Year 2022	2023	2024	2025	2026	Five Year Total
Capital Equipment Replacement Fund (CERF)			-	-	16,293	-	-	16,293
Totals			**-**	**-**	**16,293**	**-**	**-**	**16,293**

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.

Total Vehicle Miles	5,515 as of 11/30/20

Maintenance Costs	**Cost**
Routine Maintenance as of November, 2020 (e.g. oil change, tire repair)	$225.00
Cost of Repairs	$0.00
Total	**$225.00**

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 2022 Budget

Police Department	Year	Vehicle #	This Project is:	Fiscal Year 2022	2023	2024	2025	2026	Five Year Total	Funding Source
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	2020	3	Recommended	-	48,988	-	-	51,986	100,974	CERF
Marked Squad Car	2019	4	Recommended	45,132	-	-	48,517	-	93,649	CERF
Marked Squad Car	2020	5	Recommended	-	43,282	-	-	45,931	89,213	CERF
Marked Squad Car	2017	6	Recommended	46,833	-	-	50,139	-	96,972	CERF
Unmarked Traffic/Patrol	2020	8	Recommended	-	-	-	53,548	-	53,548	CERF
Detectives Vehicle	2017	12	Recommended	-	36,275	-	-	-	36,275	CERF
Unmarked Tactical	2018	13	Recommended	-	-	44,256	-	-	44,256	CERF
Chief's Vehicle	2015	17	Recommended	-	37,751	-	-	-	37,751	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						-	
Total				**138,660**	**214,945**	**44,256**	**202,488**	**97,917**	**698,266**	

Proposed Funding Source			Fiscal Year 2022	2023	2024	2025	2026	Five Year Total
Capital Equipment Replacement Fund (CERF)			138,660	214,945	44,256	202,488	97,917	698,266
Totals			**138,660**	**214,945**	**44,256**	**202,488**	**97,917**	**698,266**

Vehicles - Police

Marked Squad Car	**FY 2022**	**$46,695**	**CERF**
Squad 1	**FY 2025**	**$50,284**	**CERF**

○ 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 $12,000/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 29,100 (as of 11/12/20). The average monthly miles driven is 1,000. Estimated mileage at time of replacement: 60,000.

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		**Average Cost per Repair**
Routine Maintenance as of May 2018	$2,296.60	(16 @ $143.54)
Cost of Repairs While Under Warranty (3-yr/36,000)	$0.00	
Total Spent on Maintenance and Repairs	**$2,296.60**	

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

Marked Squad Car	**FY 2023**	**$48,649**	**CERF**
Squad 2	**FY 2027**	**$52,298**	**CERF**

○ 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 $12,000/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 34,390 (as of 11/12/20). The average monthly miles driven is 1,700. 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 2018-2022		**Average Cost per Repair**
Routine Maintenance as of March 2019	$8,667.00	(27 @ $321.00)
Cost of Repairs While Under Warranty	$0.00	
Total Spent on Maintenance and Repairs	**$8,667.00**	

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

Marked Squad Car		**FY 2023**	**$48,988**	**CERF**
Squad 3		**FY 2026**	**$51,986**	**CERF**
○ 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 $12,000/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 vehicle was put into service in July of 2020. Current mileage is 7,100 as of 11/12/20. The average monthly miles driven is expected to be approximately 1,880. Estimated mileage at time of replacement: 80,000.

Vehicle Description

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

Maintenance Costs FY 2018-2022		**Average Cost per Repair**
Routine Maintenance as of July 2020	$24.00	(1 @ $24.00)
Cost of Repairs While Under Warranty	$0.00	
Total Spent on Maintenance and Repairs	**$24.00**	

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

Marked Squad Car	**FY 2022**	**$45,132**	**CERF**
Squad 4	**FY 2025**	**$48,517**	**CERF**

○ 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 $12,000/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 29,100, as of 11/12/20. 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 2018-2022		**Average Cost per Repair**
Routine Maintenance as of June 2019	$1,580.49	(3 @ $526.83)
Cost of Repairs While Under Warranty	$0.00	
Total Spent on Maintenance and Repairs	**$1,580.49**	

Project Alternative

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

Operational Impact

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

Project Impact

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

Carryover History

None

Vehicles - Police

Marked Squad Car	**FY 2023**	**$43,282**	**CERF**
Squad 5	**FY 2026**	**$45,931**	**CERF**

○ 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 $12,000/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 August 15, 2020. The current mileage is 5,150 (as of 11/12/20). The average monthly miles driven is 1,717. 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.

Vehicle Description

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

Maintenance Costs FY 2018-2022		**Average Cost per Repair**
Routine Maintenance as of November, 2019	$100.00	(1 @ $100.00)
Cost of Repairs While Under Warranty	$0.00	
Total Spent on Maintenance and Repairs	**$100.00**	*

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

Marked Squad Car	**FY 2022**	**$46,833**	**CERF**
Squad 6	**FY 2025**	**$50,139**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Explorer
Year	2017
Cost	$41,474
Useful Life	3 years
Current Life	4 years

Project Description & Justification

The estimated cost of the vehicle incorporates $12,000/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 90,000 (as of 11/12/20). The average monthly miles driven is 1,915. Estimated mileage at time of replacement: 110,000. 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 2018-2022		**Average Cost per Repair**
Routine Maintenance as of December 2016	$15,251.94	(33 @ $462.18)
Cost of Repairs While Under Warranty	$0.00	
Total Spent on Maintenance and Repairs	**$15,251.94**	

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 2021 to FY 2022 due to the current fiscal environment.

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 and to FY 2021, and be will be deferred again to FY 2022.

Vehicles - Police

Marked Traffic/Patrol	**FY 2025**	**$53,548**	**CERF**
Patrol 8	**FY 2030**	**$59,121**	**CERF**

○ 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. The current mileage is 5,007. With Car #8 just being added to the front-line rotation on May 15, 2020, it is estimated that the unit will average 900 miles per month and will serve as a front-line car until other operational needs or mechanical issues dictate its rotation or replacement. Staff anticipates the possible opportunity to defer the purchase of a replacement vehicle beyond FY 2025 due to the pursuit and heavy duty ratings of the Ford F-150.

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 capabilites 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 2018-2022		**Average Cost per Repair**
Routine Maintenance as of May 2020	$24.00	(1 @ $24.00)
Cost of Repairs While Under Warranty	$0.00	
Total Spent on Maintenance and Repairs	**$24.00**	

Project Alternative

At this time, the Traffic Enforcment car is used to meet the number one citizen driven complaint in the community: speeding and reckless drivers. In addition, the vehicle is used for mutiple 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

Dodge Durango Primary Detectives Vehicle	**FY 2023**	**$36,275**	**CERF**
Squad 12	**FY 2028**	**$41,042**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Dodge
Model	Durango
Year	2017
Cost	$31,341
Useful Life	5 years
Current Life	4 years

Project Description & Justification

The estimated cost of the vehicle incorporates an all-wheel drive SUV, $10,000 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 15,150 (as of 11/12/20). The average monthly miles driven is 313. Estimated mileage at time of replacement: 30,000. 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, command vehicle, or training 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 2018-2022		**Average Cost per Repair**
Routine Maintenance as of October 1, 2016	$855.50	(5 @ $171.00)
Cost of Repairs While Under Warranty	$0.00	
Total Spent on Maintenance and Repairs	**$855.50**	

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

Deferred from FY 2022 to FY 2023

Vehicles - Police

Unmarked Tactical		**FY 2024**	**$44,256**	**CERF**
Squad 13		**FY 2030**	**$51,323**	**CERF**
○ Critical	◉ Recommended		○ Contingent on Funding	

Make	Dodge
Model	Charger
Year	2018
Cost	$38,162
Useful Life	6 years
Current Life	3 years

Project Description & Justification

The estimated cost of the vehicle incorporates an all-wheel drive (AWD) vehicle, $12,000 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 20,873 (as of 11/12/20). The average monthly miles driven is 630. Estimated mileage at time of replacement: 50,000.

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 2018-2022		**Average Cost per Repair**
Routine Maintenance as of November, 2019	$1,385.67	(11 @ $125.97)
Cost of Repairs While Under Warranty	$0.00	
Total Spent on Maintenance and Repairs	**$1,385.67**	

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

Chief's Vehicle	**FY 2023**	**$37,751**	**CERF**
Squad 17	**FY 2029**	**$43,778**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

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

Project Description & Justification

The estimated cost of the vehicle incorporates $9,000 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 56,500 (as of 11/12/20). The average monthly miles driven is 987. The estimated mileage at replacement is 88,000. Once replaced this unit is used as a secondary unmarked vehicle or offered to the fire department or public works to use.

Vehicle Description

The vehicle is used daily, and is equipped with radios, hidden emergency lights, and storage for protective equipment and weapon systems. The unmarked squad car is used for emergency and holds necessary command and tactical equipment.

Maintenance Costs FY 2018-2022		**Average Cost per Repair**
Routine Maintenance as of November, 2019	$3,216.64	(16 @ $201.04)
Cost of Repairs While Under Warranty	$0.00	
Total Spent on Maintenance and Repairs	**$3,216.64**	

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 was deferred from FY 2021 to FY 2022 due to low mileage and other budget considerations, and will again be deferred to FY 2023.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Fire
Fiscal Year 2022 Budget

Fire Department	Year	Vehicle #	This Project is:	Fiscal Year 2022	2023	2024	2025	2026	Five Year Total	Funding Source
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	50,000	-	-	-	-	50,000	CERF
Pumper	2001	222	Recommended	-	-	-	-	700,000	700,000	CERF
Ambulance	2006	214	-	This vehicle is a reserve and replaced with frontline upon purchase					-	
Fire Prevention Bureau Vehicle	2009	299	Contingent	This vehicle is replaced with used police vehicles					-	
Total				**83,500**	**230,000**	**-**	**-**	**700,000**	**1,013,500**	

Proposed Funding Source	Fiscal Year 2022	2023	2024	2025	2026	Five Year Total
Capital Equipment Replacement Fund (CERF)	83,500	230,000	-	-	700,000	1,013,500
Totals	**83,500**	**230,000**	**-**	**-**	**700,000**	1,013,500

Vehicles - Fire

Administrative Vehicle - C201 **FY 2022** **$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	11/2020	110,342

Maintenance Costs for Past 2.5 Years	
Routine Maintenance as of November, 2020	$1,851.00 (5 items)
Cost of Repairs	$272.00 (2 items)
Total	**$2,123.00**

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; $1,000 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 2022.

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	11/2020	40,704
A-214	2006	11/2020	55,955

Maintenance Costs for Past 2.5 Years	
Routine Maintenance	
215	$2,960.00 (5 items)
214 (Shared reserve unit)	$5,604.00 (5 items)
Cost of Repairs	
215	$175.00 (1 item)
214 (Shared reserve unit)	$1,548.00 (2 items)
Total	
215	**$3,135.00**
214 (Shared reserve unit)	**$7,152.00**

Repair Description

Ambulance 215 is in its fifth 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, however, this is not recommended as it could lead to an increase in the risk of injury.

Operational Impact

This vehicle is in the fifth 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
$4,115	Preventative maintenance and repairs

Carryover History

None

Vehicles - Fire

Administrative Vehicle – C218 **FY 2022** **$50,000** **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	11/2020	15,819

Maintenance Costs for Past 2.5 Years		
Routine Maintenance as of November, 2020	$828.00	(1 item)
Cost of Repairs	$1,244.00	(1 item)
Total	**$2,072.00**	

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 as well as towing MABAS-11 assets. 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 is being carried over from FY 2014 to FY 2022.

Vehicles - Fire

Pumper - E222 **FY 2026** **$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	11/2020	90,532	12,916.0	322,900
*Fire and EMS vehicles use a conversion of 25 miles per engine hour due to the on scene time at an emergency call.					

Maintenance Costs for Past 2.5 Years	
Routine Maintenance	
222	$10,980.00 (8 items)
213	$1,983.00 (2 items)
Cost of Repairs	
222	$12,688.00 (8 items)
213	$10,641.00 (5 items)
Total	
222	**$23,668.00**
213	**$12,624.00**

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. With the pump being rebuilt in FY 2021, this engine should be able to provide usefull service for several more years.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$10,000 in maintenance and repairs	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 20-year-old vehicle in reserve status.

Carryover History

With the pump being rebuilt in FY 2021 and the frame being rebuilt a few years earlier, replacement is being pushed back to FY 2026 from FY 2022.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Public Works
Fiscal Year 2022 Budget

Public Works Department	Description	Year	Vehicle #	This Project is:	Fiscal Year 2022	2023	2024	2025	2026	Five Year Total	Funding Source
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	-	67,000	-	-	-	67,000	CERF
Large Int'l Dump Truck	International 4000 Series	1998	44	Critical	175,000	-	-	-	-	175,000	CERF
Aerial Truck	International 4400	2003	46	Critical	-	165,000	-	-	-	165,000	CERF
Pick-Up Truck	Ford F350 Super Duty	2012	48	Critical	40,000	-	-	-	-	40,000	CERF
Pick-Up Truck	Ford F350 Super Duty	2015	49	Critical	-	-	45,000	-	-	45,000	CERF
Pick-Up Truck	Ford F350 Super Duty	2008	67	Critical	-	43,000	-	-	-	43,000	CERF/WS
Cargo Van	Ford Transit Connect	2015	68	Recommended	-	-	24,000	-	-	24,000	CERF/WS
Total					**215,000**	**275,000**	**244,000**	**237,000**	**-**	**971,000**	

Proposed Funding Source	Fiscal Year 2022	2023	2024	2025	2026	Five Year Total
Capital Equipment Replacement Fund (CERF)	215,000	232,000	45,000	118,500	-	610,500
CERF - Water and Sewer (CERF/WS)	-	43,000	199,000	118,500	-	360,500
Water and Sewer Fund (WS)	-	-	-	-	-	-
Totals	**215,000**	**275,000**	**244,000**	**237,000**	**-**	**971,000**

Vehicles - Public Works

Street Sweeper #34	**FY 2025**	**$118,500**	**CERF**
	FY 2025	**$118,500**	**CERF/WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	Elgin
Model	
Year	2016
Purchase Cost	$193,352
Purchased	FY 2017
Useful Life	8 years
Current Life	5 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 Miles	9,187	Date	10/12/2020

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
9/21/2020	Repair conveyor belt splice	$250.00
	Total	**$7,463.28**

Project Alternative

Reconsider the potential outsourcing of 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	10 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	28,409	Date	10/12/2020

Recent Maintenance Costs

Date	Maintenance Performed	Cost
5/16/2017	Repair electrical problem	$1,000.00
6/30/2017	Repair fuel system	$2,500.00
6/21/2018	Replace brake chamber, air dryer, fuel gauge sending unit	$1,328.00
11/10/2018	Replace regen sensor	$500.00
6/19/2020	Recharge AC, hydraulic filter and repair battery cables	$473.00
6/18/2020	Replace batteries	$400.00
8/12/2020	Replace left front brake chamber	$272.00
11/17/2020	Replace transmission	$9,000.00
	Total	**$15,473.00**

Project Alternative

The alternative is to defer the purchase to later years.

Operational Impact

This is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. A breakdown reduces the Village's snow removal response by a tenth and extends the time needed to complete snow removal operations. This unit is used for other operations (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** **$67,000** **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	11 years

Vehicle Description

Various personnel in the Operations Division operate this truck. The vehicle is equipped with a dump body, v-box salt spreader, 250 gallon 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	23,388	Date	10/12/2020

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
2/2020	Replaced rear strobe light	$67.00
5/2020	Replace passenger side mirror	$700.00
1/2020	Replace battery	$120.00
	Total	**$4,536.71**

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 two vehicles equipped with anti-icing equipment. A breakdown reduces the Village's snow removal response by a tenth and anti-icing capabilities by half. It also 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 2022** **$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	24 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	89,582	Date	10/12/2020

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
2/2020	Replaced sensor and rear seal	$790.00
3/2020	Repair rusted and broken lift cylinder frame brace	$3,000.00
4/2020	Replace headlight and wheel hub oil cap	$230.00
4/2020	Repair power steering leak	$130.00
8/2020	Replace rusted and leaking air tank. Replace one brake chamber, lube and adjust brakes	$1,270.00
10/2020	Replace leaking fuel tank	$1,770.00
Total		**$17,514.65**

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: $175,000

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 ten years (replacement is scheduled in FY 2022). This is approximately 80% 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 2023** **$165,000** **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	19 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.

	Mileage	Hours		
Total Vehicle Miles/Hours	18,053	9,359	Date	10/13/2020

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
Total		**$19,040.18**

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 2023. 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 2022** **$40,000** **CERF**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	Ford
Model	F350 Super Duty
Year	2012
Purchase Cost	$31,032
Purchased	FY 2012
Useful Life	8 years
Current Life	10 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	44,752	Date	10/12/2020

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
1/2020	Repair auto 4X4 system	$280.00
10/2020	Replace outer tie rod end and align front end	$400.00
Total		**$4,607.00**

Project Alternative

The alternative is to defer the purchase to later years.

Operational Impact

This vehicle was originally scheduled for replacement in FY 2020, then moved to FY2021, and deferred again to FY2022. 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

Carried over from FY 2020 and FY 2021

Vehicles - Public Works

Pickup Truck #49 **FY 2024** **$45,000** **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	6 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	21,274	Date	10/12/2020

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
6/2020	Change oil and replace front brakes	$1,100.00
7/2020	Replace catalytic converters	$1,700.00
Total		**$3,440.00**

Project Alternative

The alternative is to defer the purchase to later years.

Operational Impact

This is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. 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** **$43,000** **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	7 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	25,191	Date	10/12/2020

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
6/2020	Replace catalytic converters	$1,700.00
Total		**$3,016.00**

Project Alternative

The alternative is to defer the purchase to later years.

Operational Impact

This is one of ten primary snow plowing vehicles in the Village's snow and ice control fleet. 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	5923	Date	10/12/2020

Recent Maintenance Costs

Date	Maintenance Performed	Cost
6/1/2018	Oil change	$75.00
Total		**$75.00**

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

INCORPORATED 1880
RIVER FOREST
Proud Heritage
Bright Future

Equipment – Five Year Capital Improvement Program

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

As with other sections of the CIP, these improvements are targeted for specific years and are usually financed through the Capital Equipment Replacement Fund (CERF). The following improvements are proposed for FY 2021:

Equipment	**Cost of Equipment**	**Funding Source**	**This Project is:**
Village Hall Camera System (PD)	$ 22,450	CERF	Recommended
Street Camera System Optimization (PD)	$ 94,000	CIF/M-TIF/N-TIF	Critical
SCBA Breathing Air Compressor (FD)	$ 45,000	CERF	Recommended
Fire Radios (FD)	$ 161,800	GF	Recommended
Permeable Pavement Maintenance System	$ 188,894	WS	Recommended
Fuel System Improvements (PW)	$ 180,000	CERF	Recommended
Salt Brine Application Equipment (PW)	$ 17,000	GF	Recommended
Grapple Bucket	$ 15,000	GF	Recommended
Total	**724,144**		

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 2022 Budget

		Fiscal Year					Five Year	
	This Project is:	2022	2023	2024	2025	2026	Total	Funding Source
Police Department								
Automatic License Plate Reader	Recommended	-	-	47,052	-	-	47,052	CERF
Live Scan System	Critical	-	-	25,500	-	-	25,500	CERF
Overweight Truck Scales	Recommended	-	18,198	-	-	-	18,198	CERF
Pole Mounted Radar	Recommended	-	-	-	26,724	-	26,724	CERF
Police Radios	Critical	-	38,857	38,857	38,857	39,751	156,322	CIF/CERF
Radar	Recommended	-	36,955	-	-	-	36,955	CERF
Village Hall Camera System	Recommended	22,450	-	-	-	-	22,450	CERF
Digital In-Car Cameras	Critical	-	-	61,847	-	-	61,847	CERF
Street Camera System Optimization	Critical	94,000	101,100	99,100	44,200	-	338,400	CIF/M-TIF/N-TIF
Taser	Recommended	-	29,462	-	-	-	29,462	CERF
Fire Department								
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
Fire Radios	Recommended	161,800	-	-	-	-	161,800	GF
Self-Contained Breathing Apparatus	Recommended	-	-	-	-	175,000	175,000	CERF
Public Works								
Stump Grinder	Recommended	-	50,000	-	-	-	50,000	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
Sewer Televising System	Critical	-	-	-	-	91,000	91,000	CERF/WS
Asphalt Kettle	Recommended	-	25,000	-	-	-	25,000	CERF
Permeable Pavement Maintenance System	Recommended	188,894	-	-	-	-	188,894	WS
Fuel System Improvements	Recommended	180,000	-	-	-	-	180,000	CERF
Salt Brine Equipment	Recommended	-	-	-	26,000	-	26,000	CERF
Salt Brine Application Equipment	Recommended	17,000	-	-	-	-	17,000	GF
Grapple Bucket	Recommended	15,000	-	-	-	-	15,000	GF
6" Trash Pump #1	Critical	-	-	22,000	-	-	22,000	CERF/WS
Total		**724,144**	**322,572**	**367,356**	**155,781**	**305,751**	**1,875,604**	

Proposed Funding Source	Fiscal Year					Five Year Total
	2022	2023	2024	2025	2026	
Capital Equipment Replacement Fund (CERF)	247,450	221,472	246,256	111,581	214,751	1,041,510
Capital Improvement Fund (CIF)	40,000	101,100	29,100	44,200	-	214,400
Capital Improvement Fund / Grant (CIF/Grant)	-	-	-	-	-	-
General Fund (GF)	193,800	-	-	-	-	193,800
Water/Sewer (WS)	188,894	-	-	-	-	188,894
CERF - Water and Sewer (CERF/WS)	-	-	22,000	-	91,000	113,000
Madison Street TIF Fund (M-TIF)	54,000	-	-	-	-	54,000
North Avenue TIF Fund (N-TIF)	-	-	70,000	-	-	70,000
Totals	**724,144**	**322,572**	**367,356**	**155,781**	**305,751**	1,875,604

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 Readers (ALPR) are 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 1, 2020, it has read 3,898,397 license plates and it has had 8,771 “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 Adminstrative Fees to be collected. In addition, trafffic stops initiated from an ALPR "hit" resulted in six criminal arrests, including an offender in a Bank Robbery.

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). In addition, the ALPR Systems compliment evidence located on the Village's Street Camera System.

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 decision and protocols for upgrading to a new system and funding options.

Equipment - Police

Overweight Truck Scales	**FY 2023**	**$18,198**	**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. 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 2022 to FY 2023.

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	FY2019-FY2020

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. These ten (10) 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, 2020, 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 resources.

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 2022**	**$0**	**CIF**
	FY 2023	**$38,857**	**CERF**
	FY 2024	**$38,857**	**CERF**
	FY 2025	**$38,857**	**CERF**
	FY 2026	**$39,751**	**CERF**

◉ Critical ○ Recommended ○ Contingent on Funding

Original Purchase Date	FY 2020-FY 2021
Cost	$34,380
Funding History	FY 2010-FY 2021

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 duel-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. This multi-year project spans from FY 2021 - FY 2028.

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; FY 2025 five (5) Tri-band handheld radios; and FY 2026 five (5) Tri-band handheld radios. This replacement schedule will continue into FY 2026-2028.

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 2023** **$36,955** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Original Purchase Date	FY 2010-2020
Cost	N/A
Funding History	FY 2020-2021

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 curently 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 effectivness 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 was deferred from FY 2021 to FY 2022, and will be pushed again to FY 2023 due to the current budgetary and fiscal climates.

Equipment - Police

Village Hall Camera System	**FY 2022**	**$22,450**	**CERF**
	FY 2028	**$67,795**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Original Purchase Date	FY 2008
Cost	$90,500
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 seven 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 $1,784 per camera. For FY 2021 the CIP included the replacement of Village Hall Camera System. Due to budgetary constraints, the project was split into two phases, with the 1st phase covering the inside cameras. Phase 2 will be deferred to FY 2022, which will cover the outdoor Village Hall Security cameras at a cost of $22,450.

Repair/Improvement	Estimated Cost	Fiscal Year
Replace internal cameras as needed (38 @ $1,784 per unit)	$ 67,795	FY 2028
Total Project Cost	**$ 67,795**	

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

Partial caryover from FY 2021 to FY 2022

Equipment - Police

Digital In-Car Cameras	**FY 2024**	**$61,847**	**CERF**

◉ Critical ○ Recommended ○ Contingent on Funding

Original Purchase Date	FY 2017
Cost	$50,761
Funding History	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 stop videos 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.

Annual $ Impact on Operating Budget	**Description of Operating Budget Impact**
Under warranty for three years	After the warranty expires, repair costs per unit as required will be incurred.

Carryover History

None

Equipment - Police

Street Camera System Strategic Plan		CIF	M-TIF	N-TIF
Implementation	**FY 2022**	**$40,000**	**$54,000**	**$0**
	FY 2023	**$101,100**	**$0**	**$0**
	FY 2024	**$29,100**	**$0**	**$70,000**
	FY 2025	**$44,200**	**$0**	**$0**
	FY 2026	**$0**	**$0**	**$0**

◉ Critical ○ Recommended ○ Contingent on Funding

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

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. During FY 2021, the Village completed upgrades to the storage and software system that operates the street cameras and entered into an agreement with a new vendor for maintenance service, and future expansion. Due to anticipated budget restrictions in FY 2021, Phase 1 of the implementation and subsequent phases are being deferred by one fiscal year.

Recommended for FY 2022

Phase 1 - South Expansion - $94,000 (Madison - TIF - $54,000, Washington/Central - CIF - $40,000)

Phase 1 includes expansion of the Village's camera system to the south side of town, primarily along Madison Street and Washington Boulevard. In total, the expansion includes five camera sites consisting of seven cameras. The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor. Four of the seven proposed work 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.

Recommended for FY 2023

Phase 2 - Middle Expansion - $101,100

Phase 3 includes expansion of the Village's camera system to the central corridors of town, primarily along Chicago Avenue and Augusta Street as they intersect Harlem Avenue, Lathrop Avenue and Thatcher Avenue. In total, the expansion includes five camera sites consisting of seven cameras. The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor.

Recommended for FY 2024

Phase 3 - North Expansion - $99,100 (North - TIF - $70,000, Thatcher - CIF - $29,100)

Phase 3 includes expansion of the Village's camera system to the central corridors of town, primarily along North Avenue and Division Street as they as they intersect Harlem Avenue, Lathrop Avenue and Thatcher Avenue. In total, the expansion includes five camera sites consisting of nine cameras. The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor. Five of the seven proposed work 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 2025

Phase 4 - Optimization of Existing Infrastructure - $44,200

Phase 4 includes the replacement and standardization of existing equipment at five locations in total. The proposed cost includes all hardware, software, licensing, radio equipment, electric work, and consulting labor.

Phase 1 - South Expansion	
Hardware/Software/Licensing	$44,000
Installation and Configuration	$40,000
Electrical	$10,000
Phase 2 - Middle Expansion	
Hardware/Software/Licensing	$49,100
Installation and Configuration	$42,000
Electrical	$10,000
Phase 3 - North Expansion	
Hardware/Software/Licensing	$54,100
Installation and Configuration	$35,000
Electrical	$10,000
Phase 4 - Optimization	
Hardware/Software/Licensing	$29,200
Installation and Configuration	$10,000
Electrical	$5,000
Total	$338,400

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.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$7,000	Projected annual maintenance contract.

Equipment - Police

Taser-Less Lethal Equipment	**FY 2023**	**$29,462**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Original Purchase Date	FY 2015-2017
Cost	$16,700
Funding History	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 useful 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 deployment, 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

Annual $ Impact on Operating Budget	**Description of Operating Budget Impact**
Under Extended Warranty for four years	Periodic Maintenance and Battery Replacement

Carryover History

Carried over from FY 2022 to FY FY 2023

Equipment - Fire

SCBA Breathing Air Compressor	**FY 2022**	**$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

One 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. In the event of failure of this equipment, the River Forest Fire Department would be able to rely on neighboring communities to fill SCBA bottles until a new unit arrives.

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 - Fire

Radios **FY 2022** **$161,800** **GF**

○ Critical ◉ Recommended ○ Contingent on Funding

Original Purchase Date	N/A
Cost	$161,800
Funding History	N/A

Project Description & Justification

The purpose of this project is to upgrade and replace the portable radios currently used by the Fire Department. This communications equipment is a critical tool for firefighters to relay vital information on emergency scenes. The project is being divided over five budget years in an effort to lessen the budget impact. The first two years, VHF only radios will be purchased, providing a cost savings and allowing time for a clearer picture of WSCDC's intentions in regards to radio frequencies. In future years, tri-band radios will be purchased to bring the Fire Department up to date with technology.

This equipment is operated by firefighting crews on all emergency scenes. The current radios are on loan from the Cook County Department of Homeland Security (CCDHS) and have been in use for over ten years with a planned useful life of ten years.

New tri-band technology allows for communication on various frequencies such as short-wave, VHF, UHF and BC band. Tri-band radios allow the operator to switch between at least three frequencies. This flexibility allows greater interoperability with other departments. Good radio communication is vital to firefighter safety when operating in hazardous environments.

This project will be partially funded by an Assistance to Firefighters Grant (AFG) from FEMA. The River Forest Fire Department was awarded a grant of $95,238.09 by FEMA to purchase new portable radios. The Village's share will be $66,561.91. Due to Covid, FEMA granted an extension to completing this grant through September of 2021. Completion of the project will take about 6 months.

Project Alternative

If the Village is unable to fund its share of the radio purchase not covered by the grant, the alternative would be to purchase the radios in stages, similar to the Police Department. This would spread out the purchase over a five-year plan and prevent a mass purchase in the future. A second alternative is to use radios provided by WESCOM on the Motorola STARCOM system. The costs for these radios, as well as maintenance and replacement, would be absorbed by WESCOM.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$500 after three years	Annual maintenance after three year warranty period expires.

Carryover History

None

Equipment - Fire

Self-Contained Breathing Apparatus (SCBA)	**FY 2026**	**$175,000**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Original Purchase Date	FY 2016
Cost	$110,200
Repairs (through 11/30)	$0

Project Description & Justification

The purpose of this project is to upgrade and replace 20 self-contained breathing apparatus (SCBAs). This piece of equipment is a critical part of the firefighter's personal protective equipment (PPE). The NFPA standard for SCBAs update is every five years. Upgrades enhance the safety of firefighters when operating in an IDLH (immediately dangerous to life and health) atmosphere.

Project Alternative

The Village applies for grants through the Assistance to Firefighters Grant Program (AFG) for 18 SCBA's. The grant covers 95% of the cost of the equipment and the Village must contribute the remaining 5%. The Village would have to utilize the CERF to fund the cost of the remaining two SCBAs.

Purchasing new SCBAs will require the Village to contribute a one-time expense for seven SCBA face pieces and to equip all personnel and spare units on each vehicle. All compressed air bottles require hydrostatic testing every five years and the purchase of new equipment will provide a savings to cover those costs.

The alternative to this purchase is to continue maintaining outdated, non-compliant (NFPA Standard) air packs that provide sufficient protection when operating properly.

Project Impact

Annual $ Impact on Operating Budget	**Description of Operating Budget Impact**
$2,000 in maintenance costs for annual testing and $1,000 in parts replacement.	Continue annual maintenance & flow testing after second year.

Carryover History

None

Equipment - Public Works

Stump Grinder **FY 2023** **$50,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Carlton
Model	7500
Purchase Cost	$20,000
Purchased	FY 2000
Useful Life	15 years
Current Life	22

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	1,231	Date	10/12/2020

Recent Maintenance Costs

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

Project Alternative

Alternatives to replacing the stump grinder 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 2023.

Equipment - Public Works

Stainless Steel V-Box Salt Spreader (Large) **FY 2023** **$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
	Total	**$0.00**

Project Alternative

Contractual salting and snow removal.

Operational Impact

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

Project Impact

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

Carryover History

The unit was originally scheduled for replacement in FY 2019, but since there have not been any significant maintenance issues, Staff recommends deferring its replacement to FY 2023. 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	9 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
9/2020	Rebuild Calcium chloride pump	$250.00
	Total	**$670.00**

Project Alternative

Contractual salting and snow removal.

Operational Impact

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

Project Impact

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

Carryover History

None

Equipment - Public Works

Sewer Televising System **FY 2026** **$91,000** **CERF/WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	Envirosight
Model	Rover "X"
Year	2016
Purchase Cost	$71,200
Purchased	FY 2016
Useful Life	10 years
Current Life	6 years

Project Description & Justification

This equipment is used by Public Works personnel to televise and visually inspect the interior of the Village's sewer mains for the purpose of identifying cracks, breaks, and failing sections. This maintenance program is performed during routine and emergency televising situations. The process of sewer televising involves first cleaning the sewer pipe (sewer jetting) and then lowering a motorized camera into a manhole. Using the controls handset, the motorized and lighted camera system then travels through the cleaned pipe, documenting the condition of the interior of the sewer pipe and where visible, private lateral connections. This equipment is also used in emergency situations where a sewer problem can be quickly televised, analyzed, and documented.

Recent Maintenance Costs

Date	Maintenance Performed	Cost
9/2018	Repair camera cable	$450.00
8/2019	Repair camera joystick	$397.27
6/2020	Repair handheld controller	$1,145.50
7/2020	Repair camera cable	$600.00
9/2020	Repair camera reel	$844.69
	Total	**$3,437.46**

Project Alternative

During the mid-1990's, the Village outsourced production televising of nearly all sewer mains in the Village. Those videos (VHS tape recordings that were later converted to CD) were used to identify and prioritize sewer point repairs (remove/replace sewer sections in poor condition) and candidates for sewer relining.

In 2011, after addressing nearly all of the sewer problems via point repairs and relining, Public Works initiated an in-house sewer televising program to identify problems with the Village's sewer system that have developed since the 1990's. 2012 was the first year Public Works tracked how many lineal feet of sewer has been televised in-house.

Considering that the Village's combined sewer system is critically important infrastructure, visually inspecting the sewer system (during emergency and non-emergency situations) on a routine schedule is critical to maintaining the pipes in good condition so that the pipes can effectively convey storm and sanitary flow.

Alternatives to replacing the sewer televising equipment are as follows:
1. Defer replacing the system until it breaks down completely.
2. Purchase a new televising system.
3. Lease a televising system.
4. Outsource all sewer televising services.

Operational Impact

Although there are alternatives for performing/providing this infrastructure maintenance program, not performing or providing this service would compromise the Village's efforts to proactively eliminate cracks, breaks, and failing sections of Village sewers that could result in sewer backups into homes and businesses.

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	14 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
Total		**$700.00**

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 2022** **$188,894** **WS**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Triverus
Model	Municipal Cleaning Vehicle (MCV)
Purchase Cost	$188,894
Purchased	New Equipment
Useful Life	12 years
Current Life	n/a

Project Description & Justification

This permeable paver maintenance cleaning machine performs pervious pavement cleaning and restoration for alleys, parking lots, and any other pervious concrete/asphalt/paver areas. It also includes multifunction capability since the cleaning platform and recovery module can be removed to allow other Bobcat attachments to be fitted for other operations. It has a high flow vacuum recovery system which provides a recovery of water and debris on pervious surfaces. 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 installed and planned in Village alleys and parking lots costs will continue to rise for contractual maintenance. The most recent contractor charged $225 per square foot. Since this maintenance should be done every two years at each location this would equate to $50,000 needed for contractual services each year. By purchasing and performing this maintenance in-house there will be a return on investment for this purchase seen in less than four years.

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 2022** **$180,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Purchase Cost	$90,000
Purchased	FY 1990
Useful Life	30 years
Current Life	32 years

Project Description & Justification

The improvement project that is proposed for FY 2022 involves the replacement of the existing fuel pumps, and upgrades to the fuel management system, and fuel island terminal software. The project would also involve the removal and replacement of the concrete fuel island, underground piping, interior leak detection, and concrete replacement over the fuel tanks. The upgraded system would use proximity card access and network access for multiple administrators to report fueling information. The existing underground storage tanks were recently inspected and found to be in good condition.

Date	Maintenance Performed	Cost
2011	Replaced Site sentinal 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
Total		**$20,650.00**

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:

	Gasoline	Diesel
Bulk Purchasing	$1.68 per gallon	$1.73 per gallon
Local gas stations	$2.29 per gallon	$2.59 per gallon

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

	Gasoline	Diesel	Total
Fuel purchased per year (avg.)	41,000 gallons	14,500 gallons	
Bulk purchasing cost	$68,880	$25,085	$93,965
Local gas station cost	$93,890	$37,555	$131,445

Purchasing fuel from local gas stations would result in a total cost increase of $37,480 per year for gasoline and diesel fuel.

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. The Sustainability Commission is also examining alternative fuel vehicles and which vehicles in the Village's fleet would be most suitable for alternative fuel.

Underground Storage Tanks (USTs): The Village's two fiberglass USTs were installed in FY 1990 at a cost of $90,000. A recent inspection revealed that these types of tanks have a useful life of approximately 50 years. The replacement of the fuel pumps, and upgrades to the fuel management system, and fuel island terminal software is incorporated in the CERF.

Operational Impact

Fuel needed during construction of replacement fuel system may need 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	5 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
Total		**$375.00**

Project Impact

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

Carryover History

None

Equipment - Public Works

Salt Brine Application Equipment **FY 2022** **$17,000** **GF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Dultmeier
Model	500 gallon
Year	2021
Purchase Cost	$13,600
Purchased	FY 2022
Useful Life	10 years
Current Life	

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
Total		**$0.00**

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 and reduces the ability to provide safe road conditions during inclement weather.

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

Carryover History

None

Equipment - Public Works

Pay Loader Grapple Bucket **FY 2022** **$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

Recent Maintenance Costs

Date	Maintenance Performed	Cost
Total		**$0.00**

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 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

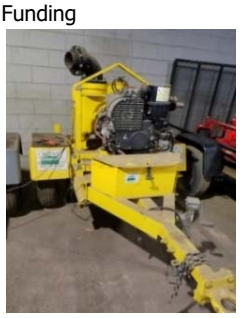
Carryover History

Was budgeted in FY 21 and pushed to FY22 due to budget constraints.

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	13 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	Date	10/12/2020

Recent Maintenance Costs

Date	Maintenance Performed	Cost
8/2020	Replace batteries	$300.00
Total		**$300.00**

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

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Information Technology – Five Year Capital Improvement Program

The Village's Information Technology (IT) function is responsible for purchasing and maintaining all computer systems and personal computers, providing technical support to all systems and supervision of Village hired consultants and vendors. 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 2022:

Equipment	**Cost of Equipment**	**Funding Source**	**This Project is:**
Network Improvements	$ 128,720	CIF	Contingent
Software Upgrades	$ 139,100	CIF	Recommended
Computer Replacements	$ 70,000	CIF	Contingent
IT Security Initiatives	$ 25,000	CIF	Contingent
Total	**$ 362,820**		

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 2022 Budget

		Fiscal Year					Five Year	Funding
	This Project is:	**2022**	**2023**	**2024**	**2025**	**2026**	**Total**	**Source**
Network Improvements	Contingent	128,720	25,000	-	-	-	153,720	CIF
Software Upgrades	Recommended	139,100	95,000	75,000	75,000	-	384,100	CIF
Computer Replacements	Contingent	70,000	47,000	125,000	47,000	47,000	336,000	CIF
IT Security Initiatives	Contingent	25,000	-	-	-	-	25,000	CIF
Total		**362,820**	**167,000**	**200,000**	**122,000**	**47,000**	**898,820**	

	Fiscal Year					Five Year
Proposed Funding Source	**2022**	**2023**	**2024**	**2025**	**2026**	**Total**
Capital Improvement Fund (CIF)	362,820	167,000	200,000	122,000	47,000	898,820
Totals	**362,820**	**167,000**	**200,000**	**122,000**	**47,000**	**898,820**

Information Technology

Network Improvements	**FY 2022**	**$128,720**	**CIF**
	FY 2023	**$25,000**	**CIF**
	FY 2024	**$0**	**CIF**
	FY 2025	**$0**	**CIF**
	FY 2026	**$0**	**CIF**

○ Critical ○ Recommended ◉ Contingent on Funding

Funding History

FY 2021	$	37,000
FY 2020	$	12,500
FY 2019	$	18,300
FY 2018	$	20,300

Project Description & Justification

Recommended for FY 2022

Hyperconverged Infrastructure System - $115,000

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.

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 was originally proposed to complement the server replacement project in FY 2022.

Recently, systems that include processing power and disk in a single unit have been introduced to replace servers, SANs and the network equipment that interconnect the two. These systems are called hyperconverged infrastructure (HCI). The consolidation of three components reduces IT support and management time. The move to HCI also reduced the original projected budget for the server and SAN replacement by $45,000.

Switch Replacement - $11,000

A switch is a piece of hardware that connects other devices, in this case servers and computers, by using packet switching to receive and forward data to the destination device. The Village has three sets of switches, two edge switches and one core switch. Best practice is to replace these switches on a seven year cycle. The two edge switches are scheduled for replacement in FY 2022.

UPS (Uninterruptible Power Supply) Replacement - $2,720

Uninterruptible Power Supply (UPS) devices provide reliable power for resilient computer systems and are critical to ensure uninterrupted and stable operations. The Village has three UPS devices, two at Village Hall and another off-site for a backup server. The UPS at the backup server contains a battery that is end of life and due for replacement during FY 2022.

Recommended for FY 2023

Switch Replacement - $25,000

A switch is a piece of hardware that connects other devices, in this case servers and computers, by using packet switching to receive and forward data to the destination device. The Village has three sets of switches, two edge switches and one core switch. Best practice is to replace these switches on a seven year cycle. The core switch is scheduled for replacement in FY 2023.

Hyperconverged Infrastructure System	
Hardware/Software/Licensing	$110,000
Consulting	$5,000
Switch Replacement	
Hardware/Software/Licensing	$8,000
Consulting	$3,000
UPS (Uninterruptible Power Supply) Replacement	
Hardware/Software/Licensing	$1,700
Consulting	$1,020
Switch Replacement	
Hardware/Software/Licensing	$20,000
Consulting	$5,000
Total	$153,720

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
$0	*N/A*

Information Technology

Software Upgrades	**FY 2022**	**$139,100**	**CIF**
	FY 2023	**$95,000**	**CIF**
	FY 2024	**$75,000**	**CIF**
	FY 2025	**$75,000**	**CIF**
	FY 2026	**$0**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Funding History

FY 2021	$	423,100
FY 2020	$	230,600
FY 2019	$	40,000
FY 2018	$	85,500

Project Description & Justification

Recommended for FY 2022

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. The scheduled contribution of $75,000 in FY21 is being differed to FY 25.

Laserfiche Gap Analysis and Improvement Plan - $13,100

This project has previously been approved for FY 2020 and FY 2021, but is being deferred to FY 2022 to allow time and budget 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.

Office 365 Upgrade - $45,000

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.

Training for Office 365 - $6,000

The migration to Office 365 will bring a change in the user experience of employees daily use of the Microsoft suite of products. To ensure a smooth transition and that employees create efficiencies in their work by utilizing improved software tools, training is being recommended to compliment the recommended upgrade to Office 365.

Recommended for FY 2023

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.

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	$30,000
Implementation Services	$15,000
Training for Office 365	
Hardware/Software/Licensing	$0
Consulting	$6,000
Laserfiche Upgrades	
Hardware/Software/Licensing	$18,000
Consulting	$2,000
Total	$159,100

Project Alternative

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 service.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$5,550 in FY 2022, $8,550 in FY 2023	*Laserfiche:* Annual maintenance and licensing fee for Laserfiche was previously $5,550. Adding the WebLink feature would increase the annual cost by $3,000.
$30,000	*Office 365:* Annual subscription fees projected to be

Information Technology

Computer Replacements	**FY 2022**	**$70,000**	**CIF**
	FY 2023	**$47,000**	**CIF**
	FY 2024	**$125,000**	**CIF**
	FY 2025	**$47,000**	**CIF**
	FY 2026	**$47,000**	**CIF**

○ Critical ○ Recommended ◉ Contingent on Funding

Funding History

FY 2021	$	38,000
FY 2020	$	124,070
FY 2019	$	38,000
FY 2018	$	43,490

Project Description & Justification

Recommended for FY 2022

PC Replacement - $47,000

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.

The Village has identified additional users that will be assigned laptops to replace their desktop computers as they are cycled off. While laptop computers are more expensive, this will allow more access to work remotely if needed or appropriate.

Increased Speeds for Police Department Squad Car Cellular - $23,000

Increased demand for video camera views by Police Officers in the field has caused a re-evaluation of bandwidth needs in the vehicles. Staff is evaluating "dual SIM" cellular routers in FY 2021 to increase signal strength and, potentially, dramatically increase bandwidth in vehicles. Dual SIM technology allows for connection redundancy and routing for improved bandwidth speed. If proven to provide officers in the field with enhanced video capabilities, this project would be recommended for implementation in FY 2022.

Recommended for FY 2024

Public Safety In-Vehicle Laptops - $125,000

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	$37,000
Consulting	$10,000
Increased Speeds for Police Department Squad Car Cellular	
Hardware/Software/Licensing	$15,000
Consulting	$8,000
Public Safety In-Vehicle Laptops	
Hardware/Software/Licensing	$108,000
Consulting	$17,000
Total	$195,000

Project Alternative

If this project is not funded, computers would continue to be replaced in smaller quantities and over a longer period of time, potentially reducing the productivity of the units and ability to support newer versions of software. A possible alternative to the spike in FY 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 2022	**$25,000**	**CIF**
	FY 2023	**$0**	**CIF**
	FY 2024	**$0**	**CIF**
	FY 2025	**$0**	**CIF**
	FY 2026	**$0**	**CIF**

○ Critical ○ Recommended ◉ Contingent on Funding

Spending History

FY 2021	$	25,500
FY 2020	$	-
FY 2019	$	-
FY 2018	$	52,360

Project Description & Justification

Artificial Intelligence Tool - $25,000

Artificial Intelligence (AI) tools would learn the Village's network over time (usually a few days) and then alert Staff to changes in behavior that may indicate a security breach of some kind. Security tools currently employed by the Village either analyze internet traffic and block malicious items (firewalls) or protect a specific device from attack (anti-virus). The Village does not have a tool that takes a holistic view of the IT infrastructure and detects potential issues. One such product in this category is called Artic Wolf, though the Village will evaluate several choices in this budget range if approved.

Artificial Intelligence Tool	
Hardware/Software/Licensing	$20,000
Consulting	$5,000
Total	$25,000

Project Alternative

Security 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**
Annual Maintenance Fees	Dependent on the tool selected, annual maintenance fee is expected to be approximately 10% of the projected $20,000 purchase, recurring annually.

STREETS, SIDEWALKS AND ALLEYS

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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 2022:

Improvement	**Cost**	**Funding Source**	**Nature of Project**
Street Patching	$ 100,000	MFT - $90,000 WS - $10,000	Critical
50/50 Sidewalk, Curb & Gutter	$ 65,000	GF - $55,000 WS - $10,000	Critical
Alley Improvement Program	$ 1,850,000	CIF	Recommended
Street Improvement Program (SIP)	$ 650,000	MFT - $350,000 WS - $50,000 IIBF - $250,000	Critical
Street Maintenance Program	$ 100,000	GF - $50,000 MFT - $50,000	Critical
Bicycle Plan Implementation	$ 46,000	CIF	Recommended
Total	**$ 2,811,000**		

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

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

Critical projects are highlighted in yellow.

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

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

Village of River Forest, Illinois
Five Year Capital Improvement Program
Streets, Sidewalks, Alleys
Fiscal Year 2022 Budget

		Fiscal Year					Five Year	
	This Project is:	2022	2023	2024	2025	2026	Total	Funding Source
Street Patching Program	Critical	100,000	100,000	100,000	100,000	100,000	500,000	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	1,850,000	2,150,000	50,000	50,000	50,000	4,150,000	CIF
Parking Lot Improvements	Recommended	-	150,000	85,000	20,000	-	255,000	CIF & CIF/PR
Street Improvement Program (SIP)	Critical	650,000	400,000	400,000	400,000	400,000	2,250,000	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	46,000	-	-	-	-	46,000	CIF
REBUILD Illinois Project	Recommended	-	736,279	-	-	-	736,279	MFT
Total		**2,811,000**	**3,761,279**	**800,000**	**735,000**	**715,000**	**8,822,279**	

	Fiscal Year					Five Year
Proposed Funding Source	**2022**	**2023**	**2024**	**2025**	**2026**	**Total**
General Fund (GF)	105,000	105,000	105,000	105,000	105,000	525,000
Motor Fuel Tax (MFT)	490,000	1,226,279	490,000	490,000	490,000	3,186,279
Water and Sewer Fund (WS)	70,000	70,000	70,000	70,000	70,000	350,000
Capital Improvement Fund (CIF)	1,896,000	2,360,000	50,000	50,000	50,000	4,406,000
CIF/Parking Reserve (CIF/PR)	-	-	85,000	20,000	-	105,000
Infrastructure Improvement Bond Fund (IIBF)	250,000	-	-	-	-	250,000
Totals	**2,811,000**	**3,761,279**	**800,000**	**735,000**	**715,000**	**8,822,279**

Streets, Sidewalks, Alleys - Public Works

Street Patching Program

Streets, Alleys and Parking Lots

	MFT	WS
FY 2022	**$90,000**	**$10,000**
FY 2023	**$90,000**	**$10,000**
FY 2024	**$90,000**	**$10,000**
FY 2025	**$90,000**	**$10,000**
FY 2026	**$90,000**	**$10,000**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

Year	GF	WS	Total
FY 2021	$ 80,421	$ 10,000	$ 90,421
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

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 2022 Recommended Project

In FY 2022 a total of $100,000 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 2022	**$55,000**	**$10,000**
FY 2023	**$55,000**	**$10,000**
FY 2024	**$55,000**	**$10,000**
FY 2025	**$55,000**	**$10,000**
FY 2026	**$55,000**	**$10,000**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

Year	GF	WS	Total
FY 2021	$ 55,579	$ 10,000	$ 65,579
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

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. Furthermore, Staff intends to investigate the possibilities of including mud-jacking to remove trip hazards. This is a more cost-effective means of removing trip hazards as compared to full replacement, which is the current practice. 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 ½”	Recommend Replacement
C	>1 ½” with loose/missing pieces	Replace immediately

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

Sidewalk and Curb Annual Inspection Areas:

Area No.	Area Limits	Inspection Years
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

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

Streets, Sidewalks, Alleys - Public Works

Alley Improvement Program	**FY 2022**	**$1,850,000**	**CIF**
	FY 2023	**$2,150,000**	**CIF**
	FY 2024	**$50,000**	**CIF**
	FY 2025	**$50,000**	**CIF**
	FY 2026	**$50,000**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2021	$230,767	(Thatcher Ave Alley)
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)

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 has been budgeted each year over the past few years. This has allowed for at least one alley to be reconstructed on an annual basis. In FY 2020, budgeting was increased which allowed for the reconstruction of a total of five alleys and in FY 2021 the budget was also increased to allow for the construction of one alley and the design of a group of four additional alleys. The idea was that these additional alleys would then be "shovel-ready" in case grant funding became available.

The Village has a total of 32 alleys, each approximately one block in length. To date, 13 of them have been reconstructed with some portion of permeable materials to help mitigate stormwater impacts. As additional alleys are reconstructed, permeable materials continue to be utilized as they have proven to be effective measures to reducing ongoing stormwater issues for adjacent residents. Though the design of these alleys occassionally changes in regard to minor elements, the general application of an inward pavement slope with a 3'-4' width of permeable pavers along the alley centerline continues to be utilized throughout the Village.

FY 2022 Recommended Projects

The Village Board has expressed interest in reconstructing all remaining alleys throughout the Village in FY 2022. This project will include 18 locations, all of which are south of Chicago Avenue and most most of which are south of Hawthorne Avenue. Some of these remaining alleys experience stormwater issues and some have pavement in poor condition. Most consist of asphalt pavement with a few having concrete pavement. Their reconstruction is intended to provide for a better driving surface as well as increased stormwater

Design is being completed for four of these remaining alleys during FY 2021, however, money has not yet been budgeted for the design of the remaining 17 alleys. It is likely that this design work will take a significant portion of FY 2022, leaving less time than may be needed for construction in FY 2022. Staff recommends a two-year phasing plan that will allow all alleys to be completed by the end of FY 2023. Project locations could then be strategically selected based on minimizing resident impacts and conflicts with other CIP projects (e.g. roadway resurfacing, pavement preservation, etc.).

It should be noted that once all alleys are reconstructed with some portion of permeable materials, the Village's annual maintenance budget will need to be increased. In order to clean the paver joints (which act like filters as the stormwater is conveyed beneath the pavers) every two years, it is estimated that the annual maintenance cost will need to be increased to $50,000 if the current practice of outsourced maintenance continues. This amount would not need to be budgeted if equipment was purchased for in-house maintenance. This equipment is currently listed in the Equipment section of the CIP and is targeted for purchase in FY 2022.

FY 2022 Cost Summary for Alley Improvement Plan

The estimated cost for this work includes the following:

- $1,510,000 for construction ($1,940,000 for construction in FY 2023)
- $175,000 for design/permitting (all to be completed in FY 2022)
- $165,000 for construction engineering services ($210,000 for construction engineering in FY 2023)

Program Alternative

The Village could continue to pursue completion of all alley design and construction in FY 2022, however, it may be difficult to find a contractor capable of performing this work when considering cooperative weather, construction personnel needed and the amount of time remaining in FY 2022 once design/permitting work is complete. Furthermore, with the location of these alleys being generally concentrated in the south portion of the Village, the amount of displaced vehicles would likely hinder activities like refuse/leaf collection and general vehicular traffic.

The Village can continue to budget for one or two alleys to be reconstructed each year, however, the timeline for completion of all alleys will be anywhere from 10-20 years. Regardless of the timeline, it is still recommended that alleys be fully reconstructed upon improvement rather than resurfaced, sealed or patched.

Project Impact

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

Streets, Sidewalks, Alleys - Public Works

Parking Lot Improvements	**FY 2022**	**$0**	**CIF**
	FY 2023	**$150,000**	**CIF**
	FY 2024	**$85,000**	**CIF/Parking Reserve**
	FY 2025	**$20,000**	**CIF/Parking Reserve**
	FY 2026	**$0**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2021	$ -	
FY 2020	$ 56,500	(East Thatcher Commuter Lot)
FY 2019	$ -	
FY 2018	$ -	

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 2024**
B. Public Works Garage – 45 Forest Avenue - **Reconstruction Scheduled for FY 2023**
C. Southeast corner of Lake Street and Park Avenue
D. West Commuter Lot – 400 block of Thatcher Avenue
E. East Commuter Lot – 400 block of Thatcher Avenue
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 2022 Recommended Projects

There are no parking lot improvements currently scheduled for FY 2022.

Program Alternative

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

Project Impact

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

Streets, Sidewalks, Alleys - Public Works

Street Improvement Program

	MFT	WS	IIBF
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**
FY 2026	**$350,000**	**$50,000**	**$0**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

Year	MFT	WS	IIBF	Total
FY 2021	$ 412,000	$ 50,000	$ 275,000	$ 737,000
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

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 began utilizing a consultant to help analyze Village roadways for the sole purpose of pavement ratings. This consultant utilizes cell-phone images of the roadway (taken at 10' intervals) to analyze roadway conditions. 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 table summarizes the general street rating system:

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 2022 Recommended Projects

	Street	Replacement Cost
1.	Hawthorne (Thatcher to Forest)	$70,650.00
2.	Gale (Hawthorne to Washington)	$66,815.00
3.	Keystone (Hawthorne to Madison)	$134,970.00
4.	Linden (Thatcher to Forest)	$57,820.00
5.	Forest (Hawthorne to Cul de sac)	$54,205.00
6.	Keystone (Division to Thomas)	$36,710.00
7.	Forest (Division to Thomas)	$31,680.00
8.	Park (Division to Thomas)	$64,495.00
9	Thomas (Forest to Lathrop)	$92,655.00

The projected cost to resurface these streets and make other associated improvements is $610,000

The budget for this project also includes an anticipated cost of $40,000 for construction engineering services, to be contracted out to an engineering firm.

While the Capital Improvement Plan proposes funding for street improvements through FY 2026, these locations have not yet been determined. Staff recommends a minimum funding level of $400,000 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

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

Streets, Sidewalks, Alleys - Public Works

Street Maintenance Program	**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**
	FY 2026	**$50,000**	**GF**	**$50,000**	**MFT**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

	Crack Sealing	Preservation	Total
FY 2021	$ 43,400	$ 50,000	$ 93,400
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

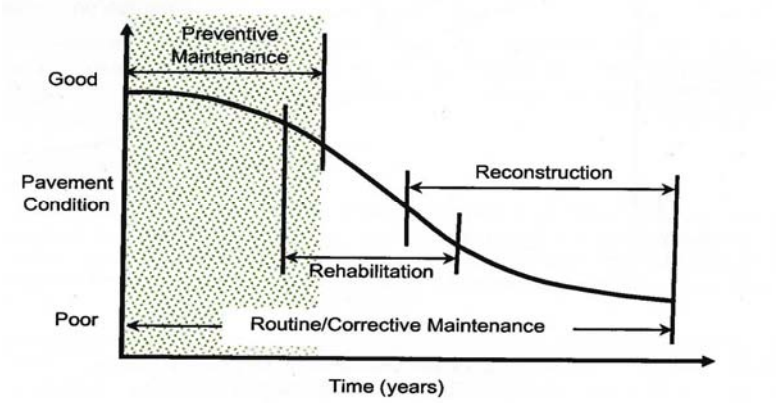
Program Description & Justification

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 and FY 2021 (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 2022.

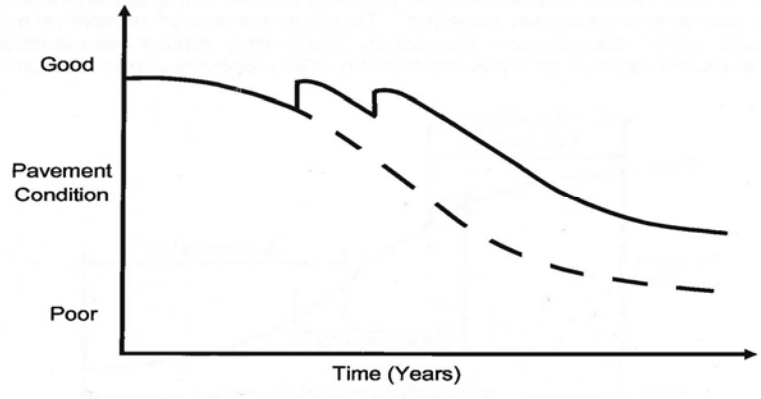
In addition to pavement preservation, Village Staff believes the practice of Crack Sealing to be invaluable. Ideally, this work is completed when the pavement is still in good condition with minimal cracking. This approach enables a pavement in good condition to remain as such for longer which ultimately extends the life of the pavement.

Village Staff will identify the streets that are ideal candidates for preservation and crack sealing each spring. The streets selected are typically in good condition and may have even been paved recently. Proper timing of these applications are critical in maximizing their effectiveness.

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 2022 Recommended Projects

With the Village continuing to resurface a significant amount of streets on an annual basis, 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 rapidly as they normally would.

Pavement Preservation

The following streets have been identified for preservation:

Street	Condition Rating	Proposed Cost
Berkshire Street (Lathrop to William)	Good	$18,913
Monroe Avenue (Greenfield to Division)	Good	$18,405
Garden Street (William to Clinton)	Satisfactory	$2,938
Clinton Place (Oak to Holly)	Satisfactory	$9,744

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 each spring.

Program Alternative

The alternative is deferring this project to minimize disruption to residents who are working from home due to the ongoing COVID-19 pandemic. Another 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 2023** **$60,000** **CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2020	$164,190 (Lake and Thatcher Signal Upgrade Project)
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. The traffic signal upgrade project for the Lake and Thatcher intersection was completed in April of 2020 and included the addition of turn signals for vehicles turning in each direction.

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

FY 2023 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. This project was previously planned for FY 2022 and is now planned for FY 2023.

Chicago Avenue at Thatcher Avenue Construction	$	60,000
Total	$	60,000

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 this intersection in the same traffic signal configuration may cause 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 2022**	**$46,000**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2021 $147,940 (Bike Plan phase I, projected)

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 bike plan was established to provide 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 were recommended.

FY 2022 Recommended Project

Implementation of portions of the Bicycle Plan on certain 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 feasability of sidepaths that are no longer being considered, and to avoid duplicative work with the ongoing design of a potential bike trail along Thatcher Avenue adjacent to the Des Plaines river by the Intergovernmental Coalition Phase I Study Trail Advisory Group. This phase of implementation includes Lake Street, and the eastern portion of Madison Street.

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

Streets, Sidewalks, Alleys - Public Works

REBUILD Illinois Project

FY 2022	**$0**	**MFT**
FY 2023	**$736,279**	**MFT**
FY 2024	**$0**	**MFT**
FY 2025	**$0**	**MFT**
FY 2026	**$0**	**MFT**

○ Critical ◉ Recommended ○ Contingent on Funding

Program Description & Justification

This project is based on newly available funding from the Illinois Department of Transportation (IDOT) known as the REBUILD Illinois capital program. These grants will be made available to the Village over the course of three years (FY 2021-FY 2023) through a series of six disbursements. Each disbursement is in the amount of $122,713.13.

While these grants are received and designated similar to the Village's annual Motor Fuel Tax (MFT) disbursements, they are to be accounted for separately. In addition, the funds must be used for a bondable capital improvement with an average useful life of greater than or equal to 13 years. Funding must be associated with an identified project(s) within one year of receipt but funding does not have to be expended until July 1, 2025.

FY 2022 Recommended Projects

Staff anticipates working with a consultant during FY 2021 to establish an allowable scope of work. It is anticipated that this project will be in the form of a roadway resurfacing work, not unlike the Village's annual Street Improvement Project. While no construction is anticipated in FY 2022, the funds will have accumulated and be available for expenditure by FY 2023. The FY 2023 construction season would see a single resurfacing project bid and constructed. MFT funds can also be used to supplement REBUILD funds for

At the completion of this project, all REBUILD funds amounting to $736,279 will have been expended.

Program Alternative

If these funds are not spent by the IDOT-designated deadline of July 1, 2025 they will be forfeited by the Village. Based on the types of construction allowed by IDOT and the type of work typically conducted in the Village, a roadway resurfacing project appears to be the most feasible project to be completed with these funds.

Project Impact

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

WATER AND SEWER IMPROVEMENTS

INCORPORATED 1880
RIVER FOREST
Proud Heritage
Bright Future

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 2026. 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 2022 include:

Improvement	Cost	Funding Source	Nature of Project
Sewer Lining	140,000	WS	Critical
Sewer Point Repairs	35,000	WS	Critical
Stormwater Master Plan	180,000	WS	Recommended
Water Distribution System – Pumping Station	110,000	WS	Contingent
0.5 MG Underground Reservoir Improvements	18,000	WS	Critical
Water Meter Replacement Program	15,500	WS	Critical
Water Main Replacement	250,000	WS	Critical
Hydrant Replacement	10,000	WS	Recommended
Automated Metering Infrastructure	1,320,000	WS	Critical
Keystone Ave Sewer Improvements	200,000	WS	Recommended
Lake Street Berm Extension	70,000	WS	Recommended
Total	**2,348,500**		

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 2022 Budget

		Fiscal Year					Five Year	Funding
	This Project is:	2022	2023	2024	2025	2026	Total	Source
Sewer System								
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
Stormwater Master Plan	Recommended	180,000	-	-	-	-	180,000	WS
Pumping Station								
Water Distribution Improvements	Contingent	110,000	25,000	-	-	-	135,000	WS
Water Distribution Improvements								
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	15,500	11,000	17,000	6,000	18,500	68,000	WS
Water Main Replacement	Critical	250,000	425,000	515,000	400,000	400,000	1,990,000	WS
Hydrant Replacement	Recommended	10,000	10,000	10,000	10,000	10,000	50,000	WS
Automated Metering Infrastructure	Critical	1,320,000	67,800	-	-	-	1,387,800	WS
Keystone Ave Sewer Improvements	Recommended	200,000	-	-	-	-	200,000	WS
Lake Street Berm Extension	Recommended	70,000	-	-	-	-	70,000	WS
Total		**2,348,500**	**723,800**	**717,000**	**603,000**	**603,500**	**4,995,800**	

	Fiscal Year					Five Year
Proposed Funding Source	**2022**	**2023**	**2024**	**2025**	**2026**	**Total**
Water and Sewer Fund (WS)	2,348,500	723,800	717,000	603,000	603,500	4,995,800
Totals	**2,348,500**	**723,800**	**717,000**	**603,000**	**603,500**	**4,995,800**

Water and Sewer Improvements - Public Works

Sewer Lining Program	**FY 2022**	**$140,000**	**WS**
Public Sewers	**FY 2023**	**$140,000**	**WS**
	FY 2024	**$140,000**	**WS**
	FY 2025	**$140,000**	**WS**
	FY 2026	**$140,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2021	$	125,163	
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)

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

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. This product has a life expectancy of 50-100 years.

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 50,885 lineal feet of sewers have been lined. This represents approximately 30% 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:

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

FY 2022 Recommended Project

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

Program Alternative

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

Project Impact

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

Water and Sewer Improvements - Public Works

Sewer Point Repairs	**FY 2022**	**$35,000**	**WS**
Public Sewers	**FY 2023**	**$35,000**	**WS**
	FY 2024	**$35,000**	**WS**
	FY 2025	**$35,000**	**WS**
	FY 2026	**$35,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2021	$	28,800
FY 2020	$	29,270
FY 2019	$	23,445
FY 2018	$	39,600
FY 2017	$	30,770

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 2017 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

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

Water and Sewer Improvements - Public Works

Stormwater Master Plan

FY 2022 **$180,000** **WS**

○ Critical ◉ Recommended ○ Contingent on Funding

Project Description & Justification

Over the past few years yard and alley flooding have become more and more prevalent, along with sewer back-up. In May, 2020 the Village experienced a heavy rain which was followed by a flooding event caused by a significant increase in the water elevation of the Des Plaines River. This event caused significant sewer back-up to residences and led to standing water in alleyways and backyards at many locations.

In an effort to combat increased severity in rain events, undersized municipal sewers and increases in impervious area associated with development, the Village Board has recommended that a Stormwater Master Plan (SMP) be created. This SMP would allow the Village to conduct a comprehensive analysis of the Village and to identify areas of concern that may require attention. It would also identify and prioritize Capital Improvement Plan (CIP) Projects that may be implemented to help mitigate the impacts of stormwater on the Village.

It is anticipated that creation of the SMP will take approximately one year to complete, with potential identification of CIP Projects to be constructed in FY 2023.

Project Alternative

The alternative is to continue to address stormwater issues as they arise and are made a priority, which does not allow for a comprehensive analysis and solution on a Village-wide basis.

Project Impact

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

Water Distribution System - Pumping Station	**FY 2022**	**$110,000**	**WS**
	FY 2023	**$25,000**	**WS**
	FY 2024	**$0**	**WS**
	FY 2025	**$0**	**WS**
	FY 2026	**$0**	**WS**

○ Critical ○ Recommended ◉ Contingent on Funding

Spending History

FY 2021	$	17,200
FY 2020	$	7,800
FY 2019	$	16,825
FY 2018	$	19,000
FY 2017	$	15,600

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 2022:

Repair/Improvement	Estimated Cost	Year
1. Replace pump #1 and associated piping as suggested in Baxter and Woodman efficiency study performed 11/2010. (see excerpt below)	$110,000	FY 2022
Total	$110,000	

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

Repair/Improvement	Estimated Cost	Year
1. Add VFD to pump #2	$25,000	FY 2023
Total	$25,000	

Project Description & Justification

Pump Replacement - Pump No. 1 should be replaced with a higher capacity pump. The pump capacity is too small to be used to meet the maximum daily demand and would have to operate in excess of 17 hours to meet the average daily demand. Pump No. 3 is capable of easily meeting the average daily demand but does not have the capacity to meet the maximum daily demand. The station is only capable of supporting three pumps, a minimum of two should be capable of meeting the maximum daily demand in the event one is out of service.

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).

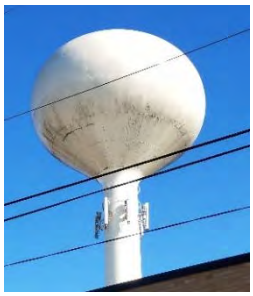
Project Impact

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

Water and Sewer Improvements - Public Works

Water Tower Improvements

Water & Sewer



FY 2022	**$0**	**WS**
FY 2023	**$10,000**	**WS**
FY 2024	**$0**	**WS**
FY 2025	**$4,000**	**WS**
FY 2026	**$0**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2021		
FY 2020	$274,915	(Water Tower Re-Painting Project)
FY 2019	$0	
FY 2018	$0	
FY 2017	$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 after the water tower was repainted.

The following critical and recommended facility improvements should be completed in FY 2022:

Repair/Improvement		Estimated Cost	Year
1. Reinstall cathodic protection system		$10,000	FY 2023
	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 2022	**$18,000**	**WS**
FY 2023	**$0**	**WS**
FY 2024	**$0**	**WS**
FY 2025	**$8,000**	**WS**
FY 2026	**$0**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2021	$0
FY 2020	$0
FY 2019	$8,000
FY 2018	$0
FY 2017	$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 2022:

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 2022
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 bids/proposals).

Project Impact

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

Water and Sewer Improvements - Public Works

Water Meter Replacement Program	**FY 2022**	**$15,500**	**WS**
	FY 2023	**$11,000**	**WS**
	FY 2024	**$17,000**	**WS**
	FY 2025	**$6,000**	**WS**
	FY 2026	**$18,500**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2021	$7,500	continuation of program to replace all meters over 20 years of age
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

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	Ea.	Cost
36	0.625	$123.00	$4,428.00
4	0.75	$142.00	$568.00
17	1	$177.00	$3,009.00
10	1.5	$505.00	$5,050.00
1	2	$710.00	$710.00
68		**Meter cost**	$13,765.00
		Add'l Equip	$1,735.00
		Total cost	$15,500.00

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

Water Main Replacement Program	**FY 2022**	**$250,000**	**WS**
	FY 2023	**$425,000**	**WS**
	FY 2024	**$515,000**	**WS**
	FY 2025	**$400,000**	**WS**
	FY 2026	**$400,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2021	$	575,000	(FY 2020 and FY 2021 Projects both completed in FY 2021)
FY 2020	$	-	
FY 2019	$	318,712	
FY 2018	$	396,000	
FY 2017	$	441,613	

Program Description & Justification

The purpose of this program is to improve the condition of the Village's water distribution system by replacing aging and deteriorating infrastructure, or by installing new infrastructure where a need becomes apparent. This approach helps reduce costly water main breaks as well as the associated water-loss. 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.

In recent years, the Illinois Environmental Protection Agency (IEPA) and the Illinois Department of Public Health (IDPH) have discussed implementing lead reduction requirements for municipalities throughout the state. One such measure being discussed is a requirement that municipalities start tracking the number of lead water services within their boundaries as well as to create a program to begin replacing these services with copper water services. Given the importance in removing lead from the water distribution system, Village Staff recommends that a program for this purpose be created and funded in FY 2022 even though a state-mandate has not yet been announced.

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 Distribution Model Report performed by Strand Associates Engineering in 2018.

Staff has reviewed water main break history and has not identified the need for a water main replacement based on this criteria for FY 2022. Furthermore, while a project has been identified in the 2018 Water Distribution Model Report, Staff believes that lead reduction measures as proposed should be prioritized.

FY 2022 Recommended Projects

The proposed project for FY 2022 includes the creation of a Lead Service Replacement Program that would allow property owners throughout the Village to replace lead water services between their building and the water main while receiving a reimbursement from the Village for a portion of the work. The program details would be submitted for review and approval to the Village Board in FY 2021 in order to establish program parameters, however, it would likely be created in a manner similar to the Sewer Backflow Reimbursement Program which is already offered to residents to help reduce risk of sewer back-ups.

The cost estimate for this project is as follows:

- $250,000 for reimbursements in FY 2022

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:

- FY 2023 - Installation of an 8" water main on two of the alternating blocks of LeMoyne between Park Avenue and Harlem Avenue as identified in the 2018 Strand Water Distribution System Modeling Report. This budget also includes $150,000 for lead water service replacements.
- FY 2024 - Installation of an 8" water main on the remaining three alternating blocks of LeMoyne between Park Avenue and Harlem Avenue as identified in the 2018 Strand Water Distribution System Modeling Report. This budget also includes $100,000 for lead water service replacements.

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 lead water services and 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 lead service replacements or water main replacement projects and respond to state-mandates and water main breaks as they occur, which could lead to much greater budget impacts.

Project Impact

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

Water and Sewer Improvements - Public Works

Hydrant Replacement Program	**FY 2022**	**$10,000**	**WS**
	FY 2023	**$10,000**	**WS**
	FY 2024	**$10,000**	**WS**
	FY 2025	**$10,000**	**WS**
	FY 2026	**$10,000**	**WS**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2021	$	6,000	Hydrant and two valves installed by in-house staff.
FY 2020	$	-	
FY 2019	$	-	
FY 2018	$	8,758	
FY 2017	$	22,000	

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 a Village-wide hydrant flushing program each year. During the 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, or are identified as being too low for proper operation are prioritized for immediate repair or replacement.

FY 2022 Recommended Project

The Public Works and Fire Departments may identify 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 these hydrants to try to eliminate any that do not operate efficiently or provide high flow rates. Public Works staff is of ten able to "rebuild" existing hydrants in lieu of replacement. This process involves replacement of the inner workings of the hydrant and is more cost effective than complete replacement.

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

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

Water and Sewer Improvements - Public Works

Automated Metering Infrastructure (AMI)	**FY 2022**	**$1,320,000**	**WS**
Water & Sewer	**FY 2023**	**$67,800**	**WS**
	FY 2024	**$0**	**WS**
	FY 2025	**$0**	**WS**
	FY 2026	**$0**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2021 $ 37,400 (Project Architecture, projected)

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. The rest of the existing meters are digital and will be compatible with an AMI system. 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 materials and installation of tower infrastructure, network endpoints, and meters is $952,500, the total project management, public relations campaign, and data integration cost is $435,300. The need for initial project architecture in FY 2021 is projected to be $37,400.

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

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
Software for data hosting	Technical communication

Water and Sewer Improvements - Public Works

Keystone Ave Sewer Improvements

FY 2022 **$200,000** **WS**

○ Critical ◉ Recommended ○ Contingent on Funding

Project Description & Justification

The 1100 block of Keystone Avenue (from Division to Thomas) occasionally experiences on-street flooding during heavy rain events. This situation was originally created by design as the sewers were separated and flow restriction was added to the catch basins in the roadway. By doing so, the idea was to slow the entry of stormwater into the combined sewer system with the goal of reducing the frequency of sewer back-up for those further "downstream".

In addition to the occurrences of on-street flooding increasing over the last few years, the rain event in May, 2020 caused a significant amount of flooding that took a significant amount of time to dissipate. Through investigation of the existing combined sewer system, Staff determined that there were several areas of substantial flow restriction caused by tree root infiltration. These obstructions were removed and the sewer was lined to prevent further root infiltration along pipe joints. Staff also worked with an engineering consultant to conceptually design a sewer improvement that would mitigate the on-street flooding issues.

The conceptual design of this improvement includes multiple options that will allow for an iterative approach. Ultimately, sewer installation may need to be installed up to the Northside Stormwate Management Project (NSMP) system. However, Staff has identified a potential option that is much less invasive and expensive that may provide an adequate level of flood reduction. This project will include the re-routing of two catch basins at the Division/Keystone intersection into an adjacent Metropolitan Water Reclamation District (MWRD) pipe. This will provide a substantial reduction to the amount of water flowing through the Keystone Avenue sewer and will help prevent on-street flooding.

The cost associated with this project includes anticipated construction costs of $180,000 and design engineering costs of $20,000.

Project Alternative

The alternative is to continue to allow water to flow through the existing (restricted) catch basins which may continue to cause on-street flooding during heavy rain events.

Project Impact

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

Water and Sewer Improvements - Public Works

Lake Street Berm Extension

FY 2022 **$70,000** **WS**

○ Critical ◉ Recommended ○ Contingent on Funding

Project Description & Justification

Over the years, Village Staff has established a set routine of actions to be taken during flooding events to help prevent overland flooding from the Des Plaines River. Staff utilizes existing berms along Thatcher Avenue (at Chicago) and along the north side of Lake Street behind the homes of River Oaks Drive to help create a barrier that prevents the rising river from continuing eastward into the Village and inundating residential properties and the municipal sewer system.

One of the techniques used to prevent this type of flooding is to effectively extend the end of the berm along Lake Street (westward, toward the bridge) using stone and plastic sheeting. This effort requires a signficant amount of effort and time to ensure the barrier is built at the right locations and elevations needed. Once the flooding event has subsided, the material then needs to be removed and the area restored to pre-flood conditions.

This project will allow for the berm to be permanently extended toward the bridge in a manner that matches the elevations and aesthetics of the existing berm. This will free up Village Staff before, during and after flood events to help address other issues that might be occuring throughout the Village.

The cost associated with this project includes anticipated construction costs of $35,000 and Cook County Forest Preserve permitting costs of $35,000.

Project Alternative

The alternative is to not extend the berm and leave the responsibility of installing additional material as needed during each flood event up to Public Works Operations Staff.

Project Impact

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