FIVE YEAR
CAPITAL IMPROVEMENT PROGRAM

INCORPORATED 1880
RIVER FOREST
Proud Heritage
Bright Future

FY 2018 – 2022

Village of River Forest
Five Year Capital Improvement Program

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

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

The CIP is divided into the following sections:

Buildings and Improvements **3 Facilities**

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

Vehicles **51 vehicles in the fleet**

The vehicle section includes an inventory of all the Village vehicles and is subdivided by police, fire and public works vehicles. The detail page for eaceh vehicle to be replaced in 2018 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 Administration, Fire, Police and Public Works operations.

Information Technology **87 computers, 1 physical server and multiple virtualized servers**

The Village updated the inventory and study of its Information Technology System and updated its capital spending needs in FY 2016. Current and previous recommendations from the study are incorporated into the five-year CIP including upgrades to the Village's wireless network, power source, disaster recovery system, and storage area network for day-to-day operations as well as police arbitrator data. The Village will bring licensing up-to-date, create a schedule for regular PC replacements and make upgrades and security improvements to its network.

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, formerly funded through bond proceeds, is now funded through Motor Fuel Tax (MFT) revenues.

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

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

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

Village of River Forest
Financing the Five Year Capital Improvement Program

The Five Year Capital Improvement Program (CIP) is financed through the following Village funds or particular revenue sources. The individual project sheet will indicate when the project is intended to be financed by a particular revenues source, such as a grant, within the fund. The proposed FY 2018 funding levels for each fund or source can be found below.

General Fund **$ 230,000**

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

Motor Fuel Tax (MFT) **$ 325,000**

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 **$ 832,500**

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

Capital Equipment Replacement Fund (CERF) **$ 852,953**

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 **$ 45,000**

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

Capital Improvements Fund **$ 1,074,985**

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.

Village of River Forest, Illinois
Five Year Capital Improvement Program
Fiscal Year 2018 Budget

CATEGORY	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total
Buildings and Improvements	670,725	248,235	171,700	60,500	5,500	1,156,660
Vehicles	639,586	467,092	374,585	297,597	917,024	2,695,884
Equipment	258,367	156,000	33,000	171,000	-	618,367
Information Technology	212,670	50,000	30,000	155,000	30,000	477,670
Streets, Sidewalks & Alleys	873,590	980,000	800,000	755,000	765,000	4,173,590
Water and Sewer Improvements	705,500	641,500	624,000	626,500	635,000	3,232,500
Total	**3,360,438**	**2,542,827**	**2,033,285**	**2,065,597**	**2,352,524**	**12,354,671**

PROPOSED FUNDING SOURCE	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total
General Fund (GF)	230,000	230,000	235,000	235,000	245,000	1,175,000
Motor Fuel Tax Fund (MFT)	325,000	480,000	250,000	250,000	250,000	1,555,000
Water and Sewer Fund (WS)	832,500	716,500	704,200	702,000	710,500	3,665,700
Capital Equipment Replacement Fund (CERF)	852,953	623,092	242,585	468,597	917,024	3,104,251
CERF/WS	45,000	-	165,000	-	-	210,000
Capital Improvements Fund (CIF)	1,074,985	493,235	436,500	410,000	230,000	2,644,720
CIF/Parking Reserve	-	-	-	-	-	-
Totals	**3,360,438**	**2,542,827**	**2,033,285**	**2,065,597**	**2,352,524**	**12,354,671**

Buildings and Improvements – Five Year Capital Improvement Program

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

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

Improvements planned for FY 2018 include:

Improvement	Cost of Improvement	Funding Source	Nature of Project
Village Hall Improvements	$ 25,000	CIF	Recommended
Village Hall Second Floor Improvements	$ 352,725	CIF	Recommended
Garage Improvements	$ 236,000	CIF	Critical
Pumping Station Improvements	$ 57,000	WS	Critical
Total	**$ 670,725**		

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 2018 Budget

	This Project is:	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total	Funding Source
Village Hall							-	
Village Hall Improvements	Recommended	25,000	-	40,000	55,000	-	120,000	CIF
Second Floor Improvements	Recommended	352,725	243,235	71,500	-	-	667,460	CIF
Public Works							-	
Garage Improvements	Critical	236,000	-	50,000	-	-	286,000	CIF
Pumping Station Improvements	Critical	57,000	5,000	10,200	5,500	5,500	83,200	WS
Total		**670,725**	**248,235**	**171,700**	**60,500**	**5,500**	**1,156,660**	

Proposed Funding Source	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total
Water and Sewer Fund (WS)	57,000	5,000	10,200	5,500	5,500	83,200
General Fund	-	-	-	-	-	-
Capital Equipment Replacement Fund (CERF)	-	-	-	-	-	-
Capital Improvement Fund (CIF)	613,725	243,235	161,500	55,000	-	1,073,460
Totals	**670,725**	**248,235**	**171,700**	**60,500**	**5,500**	**1,156,660**

Village Hall Improvements	**FY 2018**	**$25,000**	**CIF**
	FY 2019	**$0**	**CIF**
	FY 2020	**$40,000**	**CIF**
	FY 2021	**$55,000**	**CIF**
	FY 2022	**$0**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2015 $12,000 (Repair foundation and eliminate seepage: basement level adjacent to Fire Dept.)

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. Those tasks and operations that cannot be performed by in-house Staff are outsourced.

In 2013, DTZ (a UGL Company) was contracted to conduct a Facility Condition Assessment (FCA) of the Village Hall (referred to in DTZ's report as the Administration Building). The purpose of the assessment was to evaluate the overall condition of the buildings and sites, and provide information regarding the condition and life expectancy of the major components. A follow up to this assessment was conducted last year by the Garland company to provide thermal scans of the current condition of the roof. Their report recommended one project for this facility in FY 2017, as well as other building envelope improvements in the next five years.

The following facility improvement is recommended to be completed in FY 2018:

	Repair/Improvement	Estimated Cost	Year
1.	FCA - Replace HVAC rooftop unit #3 (above WSCDC)	$25,000	FY 2018

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

	Repair/Improvement	Estimated Cost	Year
2.	Tuck-pointing improvements	$40,000	FY 2020
3.	Replace roof above 2nd floor (WSCDC area)	$55,000	FY 2021
	Total	$95,000	

2018 Recommended Project

Replace HVAC rooftop unit #3 (above WSCDC): This HVAC unit is in fair operating condition at this time. It was identified within the Facility Condition Assessment as an item that would require replacement within the FY 2018 timeframe. Replacement would include the installation of two smaller units in its place, each rated at 65% of the required load. This way, if one fails, the WSCDC can run comfortably with the other operating unit rated at 65%.

Project Alternative

The alternative to this project is to not make this replacement; however, this will need to be determined with an analysis of the unit. It is an item that will eventually need to be replaced as the condition of the unit continues to deteriorate.

Project Impact

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

Village Hall Second Floor Improvements	**FY 2018**	**$352,725**	**CIF**
	FY 2019	**$243,235**	**CIF**
	FY 2020	**$71,500**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Project Description & Justification

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

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

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

Village staff proposes a multi-phase Village Hall remodeling project to take into account the needs of the current and future work force. Each phase is as follows:
Phase I - Reception Desk and Lobby - Reconstruction of front counter area and lobby to better serve customers
Phase II - Village Hall Open Office Area, Carpeting and Furniture - Reconfiguration of workstations and replacement of carpet and furniture in non-Police work areas
Phase III - Police Department Administrative Area, Carpeting and Furniture - Replacement of carpeting and furniture in the Police Department offices and workstations

Project Alternative

Project alternatives include the deferral of this work indefinitely, to a date certain beyond the recommended time period, or to refine or redefine the scope of work requested.

Project Impact

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

Public Works Garage Improvements	**FY 2018**	**$236,000**	**CIF**
	FY 2020	**$50,000**	**CIF**

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

Spending History

FY 2016	$10,000 (Structural Engineering Analysis)
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 property on which the Public Works Garage stands was previously considered for redevelopment. As a result, the Village delayed needed improvements based on the possibility of site redevelopment.

Based on a structural engineering analysis and facility site assessment, the following critical and recommended facility improvements should be completed in FY 2018:

	Repair/Improvement	Estimated Cost	
1.	Exterior wythe brick repair (east wall)	$ 100,000	FY 2018
2.	Grind & re-point remainder of all brick walls	$ 90,000	FY 2018
3.	Re-caulk window perimeters, copings, misc. areas	$ 15,000	FY 2018
4.	Replace single pane glass windows (26)	$ 20,000	FY 2018
5.	Replace two overhead garage doors	$ 11,000	FY 2018
	Total	$ 236,000	

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

	Repair/Improvement	Estimated Cost	Year
1.	Replace salt storage shed	$ 50,000	FY 2020
	Total	$ 50,000	

2018 Recommended Projects

The following is a summary of the improvements that are proposed for FY 2018:

1. Exterior wythe brick repair (east wall): This wall needs to be rebuilt from years of water damage and deterioration. Bricks along this wall are currently dislodged and structurally damaged.
2. Grind and re-point remainder of all brick walls: Most of the bricks along all the exterior walls of the building are in need of tuck-pointing. This process would also match the existing bricks to the newly installed bricks in terms of mortar condition and stability.
3. Re-caulk window perimeters, copings, miscellaneous areas

4. Replace single pane glass windows (26): These would be replaced with more energy efficient double pane windows.
5. Replace two overhead garage doors

Project Alternative

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

Project Impact

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

Pumping Station Improvements

Water & Sewer

FY 2018	**$57,000**	**WS**
FY 2019	**$5,000**	**WS**
FY 2020	**$10,200**	**WS**
FY 2021	**$5,500**	**WS**
FY 2022	**$5,500**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

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.

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

The following critical and recommended facility improvements should be completed in FY 2018:

	Repair/Improvement	Estimated Cost
1.	Replace lower roof	$20,000
2.	Replace boiler and radiator heater system	$25,000
3.	Paint soffit, fascia and metal work on exterior of building	$12,000
	Total	$57,000

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

	Repair/Improvement	Estimated Cost	Year
1.	Replace fire detection system	$5,000	FY 2019
2.	Replace interior detection system	$10,200	FY 2020
3.	Replace staircase	$5,500	FY 2021
	Total	$20,700	

2018 Recommended Projects

The following is a summary of the improvements that are proposed for FY 2018:

1. Replace lower roof: This section of the roof at the Pumping station is near the end of its useful life. Replacement is needed at this time.
2. Replace boiler and radiator heater system: This system will be replaced by gas fired unit heaters (two for each floor). By having multiple heaters per floor there is a redundancy if one were to fail. Right now, the boiler is a single point of potential failure.
3. Paint soffit, fascia and metal work on exterior of building

Project Alternative

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

Project Impact

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

Vehicles – Five Year Capital Improvement Program

The Village of River Forest recognizes the importance of maintaining, replacing and purchasing new vehicles to guarantee public safety and the efficient delivery of services. The following is a breakdown of current vehicular levels for all vehicles owned by the Village and the replacement schedule for FY 2018:

Improvement	Number of Vehicles to be Replaced in FY 2018	Cost of Vehicles to be Replaced in FY 2018	Total Number of Vehicles in Fleet
Building	-	$ -	2
Police	2	$ 80,672	18
Fire	1	$ 353,914	10
Public Works	2	$ 205,000	21
Total	**5**	**$ 639,586**	**51**

Financing

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

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

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

These projects are highlighted in yellow.

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

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

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles
Fiscal Year 2018 Budget

Vehicles	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total	Funding Source
Police	80,672	169,592	44,585	122,597	217,024	634,470	CERF
Fire	353,914	90,500	-	-	700,000	1,144,414	CERF
Public Works	205,000	207,000	330,000	175,000	-	917,000	CERF & CERF/WS
Total	**639,586**	**467,092**	**374,585**	**297,597**	**917,024**	**2,695,884**	

Proposed Funding Source	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total
Capital Equipment Replacement Fund (CERF)	594,586	467,092	209,585	297,597	917,024	2,485,884
CERF- Water and Sewer (CERF/WS)	45,000	-	165,000	-	-	210,000
Water and Sewer Fund (WS)	-	-	-	-	-	-
Totals	**639,586**	**467,092**	**374,585**	**297,597**	**917,024**	**2,695,884**

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Police
Fiscal Year 2018 Budget

Police Department	Year	Vehicle #	This Project is:	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total	Funding Source
Marked Squad Car	2014	1	Recommended	42,510	-	-	45,698	-	88,208	CERF
Marked Squad Car	2015	2	Recommended	-	43,791	-	-	47,158	90,949	CERF
Marked Squad Car	2015	3	Recommended	-	45,199	-	-	48,363	93,562	CERF
Marked Squad Car	2016	4	Recommended	-	41,642	-	-	44,557	86,199	CERF
Marked Squad Car	2016	5	Recommended	-	38,960	-	-	41,687	80,647	CERF
Marked Squad Car	2017	6	Recommended	-	-	44,585	-	-	44,585	CERF
Community Service Vehicle	2016	10	Recommended	-	-	-	-	-	-	CERF
Detectives Vehicle	2017	12	Recommended	-	-	-	-	35,259	35,259	CERF
Unmarked Tactical	2012	13	Recommended	38,162	-	-	41,024	-	79,186	CERF
Chief's Vehicle	2015	17	Recommended	-	-	-	35,875	-	35,875	CERF
Marked Patrol	2009	7	N/A	These vehicles are replaced with used police vehicles.					-	
Unmarked Traffic/Patrol	2013	8	N/A						-	
Crime Prevention- Taurus	2013	9	N/A						-	
Deputy Chief's Vehicle	2007	11	N/A						-	
Admin Pool Vehicle	2000	14	N/A						-	
Covert Detective Ford Fusion	2015	15	N/A						-	
Patrol Commander-Taurus	2013	16	N/A						-	
Vehicle Equipment Set-Up			N/A	-	-	-	-		-	
Total				**80,672**	**169,592**	**44,585**	**122,597**	**217,024**	**634,470**	

Proposed Funding Source		Fiscal Year 2018	2019	2020	2021	2022	Five Year Total
Capital Equipment Replacement Fund (CERF)		80,672	169,592	44,585	122,597	217,024	634,470
Totals		**80,672**	**169,592**	**44,585**	**122,597**	**217,024**	**634,470**

Vehicles - Police

Marked Squad Car	**FY 2018**	**$42,510**	**CERF**
Squad 1	**FY 2021**	**$45,698**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Explorer PUV
Year	2014
Cost	$38,580
Useful Life	3 yrs
Current Life	3 years

Project Description & Justification

An estimated cost to replace Squad #1 is $42,510. The estimated cost of the vehicle incorporates $8,000/car for equipment and installation, which includes exterior Police markings, light emitting diode light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date was January, 2014. The current mileage is 31,222 (as of 12/14/16). The average monthly miles driven is 823. Estimated mileage at time of replacement: 46,833. Once replaced, this car will then replace Car 7, which is currently a 2009 Ford Crown Victoria. Current Car 7 has incurred over $10,133 in repair and maintenance costs to date, and will have approximately 76,147 miles in FY 2018.

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 2014-2018	
Routine Maintenance as of November, 2016	$1,548 (16 @ 96.73)
Cost of Repairs (Under Warranty)	$0
Total Spent on Maintenance and Repairs	$1,548

Project Alternative

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

Operational Impact

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

Project Impact

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

Carryover History

None

Vehicles - Police

Marked Squad Car	**FY 2019**	**$43,791**	**CERF**
Squad 2	**FY 2022**	**$47,158**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Dodge
Model	Charger AWD
Year	2015
Cost	$39,928
Useful Life	3-4 yrs
Current Life	Almost 2 years

Project Description & Justification

An estimated cost to replace Squad #2 is $43,791. The estimated cost of the vehicle incorporates $8,000/car for equipment and installation, which includes exterior Police markings, light emitting diode light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date was May 1, 2015. The current mileage is 28,916 (as of 12/14/2016). The average monthly miles driven is 1,620. Estimated mileage at time of replacement: 59,000. This vehicle will be kept in the fleet as a front-line vehicle, and will replace an older secondary fleet vehicle with higher mileage in FY 2019. It should be noted that this vehicle had over 10 warranty covered repairs at the dealership, which put the car out of service for over 3-months. Due to the low mileage, this vehicle purchase will be deferred from FY 2018 to FY 2019.

Vehicle Description

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

Maintenance Costs FY 2015-2018	
Routine Maintenance as of November, 2016	$1,756.82 (13 @ 135.14)
Cost of Repairs (Under Warranty)	$0
Total Spent on Maintenance and Repairs	$1,756.82

Project Alternative

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

Operational Impact

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

Project Impact

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

Carryover History

None

Vehicles - Police

Marked Squad Car	**FY 2019**	**$45,199**	**CERF**
Squad 3	**FY 2022**	**$48,363**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

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

Project Description & Justification

An estimated cost to replace Squad #3 is $45,199. The estimated cost of the vehicle incorporates $8,000/car for equipment and installation, which includes exterior Police markings, light emitting diode light bar, and miscellaneous items needed to facilitate the installation of major components. Current mileage is 10,972 (as of 11/06/16). The actual in-service date was June 1, 2016. A new replacement vehicle was put in-service on June 1, 2016 due to the original vehicle being totaled out in an accident, which occurred on March 16, 2016. The average monthly miles driven is 2,194. Estimated mileage at time of replacement: 79,000. Once replaced, this car will then replace an older model in the fleet.

Vehicle Description

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

Maintenance Costs FY 2016-2019	
Routine Maintenance as of November, 2016	$48 (2 @ $24)
Cost of Repairs (Under Warranty)	$0
Total Spent on Maintenance and Repairs	$48

Project Alternative

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

Operational Impact

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

Project Impact

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

Carryover History

None

Vehicles - Police

Marked Squad Car		**FY 2019**	**$41,642**	**CERF**
Squad 4		**FY 2022**	**$44,557**	**CERF**
○ Critical	◉ Recommended	○ Contingent on Funding		

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

Project Description & Justification

An estimated cost to replace Squad #4 is $41,642. The estimated cost of the vehicle incorporates $8,000/car for equipment and installation, which includes exterior Police markings, light emitting diode light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date was November 1, 2015. The current mileage is 27,117 (as of 11/06/16). The average monthly miles driven is 2,260. Estimated mileage at time of replacement: 82,000. Once replaced, this car will then replace an older model in the fleet or will be auctioned off.

Vehicle Description

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

Maintenance Costs FY 2016-2019	
Routine Maintenance as of November, 2015	$196 (7 @ $28)
Cost of Repairs (Under Warranty)	$0
Total Spent on Maintenance and Repairs	$196

Project Alternative

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

Operational Impact

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

Project Impact

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

Carryover History

None

Vehicles - Police

Marked Squad Car	**FY 2019**	**$38,960**	**CERF**
Squad 5	**FY 2022**	**$41,687**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Dodge
Model	Charger AWD
Year	2016
Cost	$36,412
Useful Life	3 yrs
Current Life	Less Than 1 year

Project Description & Justification

An estimated cost to replace Squad #5 is $38,960. The estimated cost of the vehicle incorporates $8,000/car for equipment and installation, which includes exterior Police markings, light emitting diode light bar, and miscellaneous items needed to facilitate the installation of major components. The in-service date was February 1, 2016. The current mileage is 14,906 (as of 11/06/16). The average monthly miles driven is 1,656. Estimated mileage at time of replacement: 60,000. This vehicle will be kept in the fleet as a secondary line vehicle to be used for crime prevention or back-up patrol vehicle.

Vehicle Description

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

Maintenance Costs FY 2016-2019	
Routine Maintenance as of November, 2016	$96 (4 @ $24)
Cost of Repairs (Under Warranty)	$0
Total Spent on Maintenance and Repairs	$96

Project Alternative

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

Operational Impact

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

Project Impact

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

Carryover History

None

Vehicles - Police

Marked Squad Car	**FY 2020**	**$44,585**	**CERF**
Squad 6	**FY 2023**	**$47,706**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Explorer
Year	2017
Cost	$41,474
Useful Life	3 yrs
Current Life	2 months

Project Description & Justification

An estimated cost to replace Squad #6 is $44,585. The estimated cost of the vehicle incorporates $8,000/car for equipment and installation, which includes exterior Police markings, light emitting diode light bar, automatic license plate reader, and miscellaneous items needed to facilitate the installation of major components. The current mileage is 200 (as of 11/21/16). The average monthly miles driven is 2,000. Estimated mileage at time of replacement: 77,000. The condition of these vehicles will be analyzed when they are removed from service to determine if they are suitable to be rotated to another department for administrative use, or if they should be disposed of at auction.

Vehicle Description

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

Maintenance Costs FY 2017-2020	
Routine Maintenance as of November, 2016	$0
Cost of Repairs (Under Warranty)	$0
Total Spent on Maintenance and Repairs	$0 *

*Car at installer, has not been released for street duty

Project Alternative

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

Operational Impact

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

Project Impact

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

Carryover History

None

Vehicles - Police

Dodge Durango Primary Detectives Vehicle	**FY 2022**	**$35,259**	**CERF**
Squad 12	**FY 2027**	**$39,667**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Dodge
Model	Durango
Year	2017
Cost	$31,341
Useful Life	5 yrs
Current Life	Less than 3 months

Project Description & Justification

An estimated cost to replace unit #12 is $35,259. An estimated cost of the vehicle incorporates an all-wheel drive (AWD) Pick-up Truck, $8,000 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 673 (as of 11/20/16). The average monthly miles driven is 673. Estimated mileage at time of replacement: 40,380. Depending on the condition of the vehicle at replacement time, this vehicle may be used as a tactical vehicle, school vehicle, be offered to Public Works, or offered for sale at auction.

Vehicle Description

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

Maintenance Costs FY 2017-2022	
Routine Maintenance as of November, 2016	$0
Cost of Repairs (Under Warranty)	$0
Total Spent on Maintenance and Repairs	$0 *

*Car has been in-service for less than 3 months

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.

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

Ford Explorer Unmarked Tactical	**FY 2018**	**$38,162**	**CERF**
Squad 13	**FY 2021**	**$41,024**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Explorer PUV
Year	2013
Cost	$31,500
Useful Life	5 yrs
Current Life	3 yrs

Project Description & Justification

An estimated cost to replace unit #13 is $38,162. An estimated cost of the vehicle incorporates an all-wheel drive (AWD) SUV, $8,000 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 in-service date was May 1, 2012. The current mileage is 61,012 (as of 12/14/16). The average monthly miles driven is 1,126. Estimated mileage at time of replacement: 74,323. Once replaced, this car will be rotated to a secondary line vehicle. It will replace Car 11, a 2007 Dodge Charger that is expected to approximately 83,684 miles in FY 2018. In addition, Car 11 has incurred over $17,911 worth of repairs and maintenance costs to date.

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 2012-2018	
Routine Maintenance as of November, 2016	$362 (9 @ $40)
Cost of Repairs	$2,591
Total Spent on Maintenance and Repairs	$2,953 *

*Includes 3 year history of maintenance and repairs

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.

Project Impact

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

Carryover History

None

Vehicles - Police

Chief's Vehicle	**FY 2021**	**$35,875**	**CERF**
	FY 2027	**$41,256**	**CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Ford
Model	Explorer
Year	2015
Cost	$31,196
Useful Life	6 yrs
Current Life	2 yrs

Project Description & Justification

The cost to replace the Chief's vehicle is estimated at $35,875 for a 2021 Ford Explorer. The estimated cost of the vehicle incorporates $5,000 for equipment and installation. The Chief will pass down the 2015 Ford Explorer to the Deputy Chief upon replacement. Current mileage as of 11/21/16 is 23,265. The average monthly miles driven is 1,224. The estimated mileage at replacement is 88,162.

Vehicle Description

The Ford Explorer is slightly less expensive than the base price of the Ford Taurus PPV (the replacement for the Ford Crown Victoria). The AWD Ford Explorer has a similar MPG (16/28 MPG) to the Ford Taurus (19/29) and will have the fuel efficient "EcoBoost" motor available in the 2017 model. The vehicle is used daily, and is equipped with radios, hidden emergency lights, and storage for protective equipment and weapon systems.

Maintenance Costs FY 2015-2021	
Routine Maintenance as of November, 2016	$164 (6 @ 27.33)
Cost of Repairs (Under Warranty)	$0
Total Spent on Maintenance and Repairs	164.00

Project Alternative

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

Operational Impact

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

Project Impact

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

Carryover History

None

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Fire
Fiscal Year 2018 Budget

Fire Department	Year	Vehicle #	This Project is:	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total	Funding Source
Chief's Vehicle	2006	200	Recommended	-	26,000	-	-	-	26,000	CERF
Deputy Chief's Vehicle	2011	201	Recommended	-	26,500	-	-	-	26,500	CERF
Ambulance	2015	215	Recommended	-	-	-	-	-	-	CERF
Utility Pick-up Truck	2006	218	Contingent	-	38,000	-	-	-	38,000	CERF
105' Aerial Quint	2013	219	Contingent	-	-	-	-	-	-	CERF
Pumper	2001	222	Recommended	-	-	-	-	700,000	700,000	CERF
Ambulance	2006	214	-	This vehicle is a reserve and replaced with frontline upon purchase					-	
Pumper	1992	226	Recommended	353,914	-	-	-	-	353,914	CERF
Total				**353,914**	**90,500**	**-**	**-**	**700,000**	**1,144,414**	

Proposed Funding Source	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total
Capital Equipment Replacement Fund (CERF)	353,914	90,500	-	-	700,000	1,144,414
Totals	**353,914**	**90,500**	**-**	**-**	**700,000**	1,144,414

Vehicles - Fire

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

○ Critical ◉ Recommended ○ Contingent on Funding

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

Vehicle Description

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

Vehicle	Year	Date	Road Mileage
C-200	2006	11/2016	131,980

Maintenance Costs for Past 3.5 Years	
Routine Maintenance as of November, 2016	$1,056 (9 items)
Cost of Repairs	$3,826
Total Spent on Maintenance and Repairs	$4,882

Project Alternative

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

Operational Impact

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

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$500	Preventive maintenance

Carryover History

This vehicle was carried over from FY 2012

Vehicles - Fire

Administrative Vehicle - C201 **FY 2019** **$26,500** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

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

Vehicle Description

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

Vehicle	Year	Date	Road Mileage
C-201	2011	11/2016	44,344

Maintenance Costs for Past 3.5 Years	
Routine Maintenance as of November, 2016	$250 (5 items)
Cost of Repairs	$225
Total Spent on Maintenance and Repairs	$475

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 school and training, travel, and provide an auxiliary vehicle in the Village fleet for other departments.

Project Impact

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

Carryover History

None

Vehicles - Fire

Administrative Vehicle – C218 **FY 2019** **$38,000** **CERF**

○ Critical ○ Recommended ◉ Contingent on Funding

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

Vehicle Description

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

Vehicle	Year	Date	Road Mileage
C-218	2006	11/2016	12,567

Maintenance Costs for Past 3.5 Years	
Routine Maintenance as of November, 2016	$643 (6 items)
Cost of Repairs	$1,140
Total Spent on Maintenance and Repairs	$1,783

Project Alternative

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

Operational Impact

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

Project Impact

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

Carryover History

This vehicle was carried over from FY 2014

Vehicles - Fire

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

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Darley
Model	Pumper
Year	2001
Cost	$326,000
Useful Life	10 years front line + 10 years reserve
Current Life	15 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	11/2016	72,612	10,236.3	255,908

*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 3.5 Years	
Routine Maintenance	
222	$3,527 (14 items)
226	$950 (1 items)
Cost of Repairs	
222	$60,896
226	$9,789
Total Spent on Maintenance and Repairs	
222	$64,423
226	$10,739

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

The replacement of this vehicle will be placed in front line service, with Engine 211 moved to reserve status. The need to maintain a reserve pumper exists when the front line Engine is down for maintenance or repair. It gives responding off-duty firefighters apparatus to respond with to run multiple calls when the front line pumper is in use. It also allows for mutual aid while maintaining a response pumper to provide adequate fire suppression within the Village.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
Reduction of Front-line Engine repairs (211)	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-211 reduced by placing of 15 year old vehicle in reserve status.

Carryover History

None

Vehicles - Fire

Pumper - E211 (E-226) **FY 2018** **$353,914** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Darley
Model	Pumper
Year	1992
Cost	$210,000
Useful Life	10 years front line + 10 years reserve
Current Life	25 years

Vehicle Description

E-226 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 has the following pumping requirements: 100% pump capacity at 150psi, 70% capacity at 200psi, and 50% at 250 psi.

In 2002, the Village decided to improve efficiency and approved the purchase of E-222, a Class 'A' pumper with the addition of CAFS (compressed air foam system). With the introduction of a chemical foam concentrate, the frontline engine uses less water, which in turn allows firefighters to extinguish structure fires quicker and with less water damage. The replacement of E-226 (non-CAFS unit) will include the installation of CAFS to continue efficiency.

In addition to the ISO requirements this vehicle is designed to operate as an Advance Life Support (ALS) non-transport vehicle. It will respond with firefighter/paramedics to emergency medical calls and provide service to patients prior to the arrival of a transport ambulance. This allows the Fire Department to handle multiple simultaneous calls in the community. Currently E-222 (frontline engine) responds on an average of 5.2 calls per day.

This vehicle purchase is split between two fiscal years, with the chassis purchase in FY 2017 at $222,886 and the remainder of the $576,800 due at delivery in FY 2018.

Vehicle	Year	Date	Road Mileage	Engine Hours	Actual Mileage
E-226	1992	11/2016	49,445	7,667.0	191,675
*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 3.5 Years	
Routine Maintenance	
226	$950 (1 item)
222	$3,527 (14 items)
Cost of Repairs	
226	$9,789
222	$60,896
Total Spent on Maintenance and Repairs	
226	$10,739
222	$64,423

At the most recent preventative maintenance evaluation by Certified Fleet Service, mechanics found several deficiencies and have estimated repair costs at $29,700, which includes the following: Multiple oil leaks ($800 to$1,000), power steering leak ($300), coolant leak at radiator neck ($200), right rear spring broken ($1,600), tires (seven years - $1,800), rusted out frame for booster tank ($6,000 to $8,000), pump not holding vacuum (will not pass NFPA pump test - $13,000 to $16,000) and inoperable air conditioner ($500 to $800). There are also unknown costs for repairs to the emergency generator and there is extensive rust corrosion to body and frame. A final tally of all costs will not be available unless and until all the work is performed.

Project Alternative

Evaluate State of Illinois loan programs, federal grants and lease / purchase programs. The Village may also delay the purchase of this vehicle and incur increased maintenance cost and increased out of service time. Since this unit is recommended to be further deferred from a FY 2014 replacement to FY 2017 with the purchase of a Quint, this option is not recommended.

Operational Impact

The replacement of this vehicle will be placed in front line service, with Engine 222 moved to reserve 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 a mutual aid while maintaining a response pumper to provide adequate fire suppression within the Village.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
Reduction of Front-line Engine repairs-between $10,000 to $22,000	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 E222-reduced by placing of 15 year old vehicle in reserve status.

Carryover History

This vehicle was carried over from FY 2017

Village of River Forest, Illinois
Five Year Capital Improvement Program
Vehicles-Public Works
Fiscal Year 2018 Budget

Public Works Department	Description	Vehicle Year	Vehicle #	This Project is:	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total	Funding Source
Large Int'l Dump Truck	International 4000 Series	2002	30	Critical	-	-	-	-	-	-	CERF
Large Int'l Dump Truck	International	2004	32	Critical	160,000	-	-	-	-	160,000	CERF
Pick-up Truck w/ Dump Body	Ford F350 Super Duty	2006	33	Critical	-	57,000	-	-	-	57,000	CERF
Street Sweeper	Elgin Pelican	2003	34	Critical	-	-	-	-	-	-	CERF/WS
Large Int'l Dump Truck	International 4000 Series	2001	40	Critical	-	-	-	-	-	-	CERF
Large Int'l Dump Truck	International 4000 Series	1998	44	Critical	-	-	-	175,000	-	175,000	CERF
Aerial Truck	International 4400	2003	46	Critical	-	150,000	-	-	-	150,000	CERF
Skid Steer Loader	Bobcat 763	2000	N/A	Recommended	-	-	-	-	-	-	CERF
Pick-Up Truck (Engineering)	Ford Ranger Super	2007	62	Recommended	-	-	-	-	-	-	CERF
Cargo Van	Dodge Sprinter	2006	64	Critical	45,000	-	-	-	-	45,000	CERF/WS
Sewer Truck	Vac-Con	2007	65	Critical	-	-	330,000	-	-	330,000	CERF/WS
Pick-Up Truck	Ford F350 Super Duty	2008	66	Critical	-	-	-	-	-	-	CERF/WS
Cargo Van	Ford Transit Connect	2015	68	Recommended	-	-	-	-	-	-	WS
Total					**205,000**	**207,000**	**330,000**	**175,000**	**-**	**917,000**	

Proposed Funding Source	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total
Capital Equipment Replacement Fund (CERF)	160,000	207,000	165,000	175,000	-	707,000
CERF - Water and Sewer (CERF/WS)	45,000	-	165,000	-	-	210,000
Water and Sewer Fund (WS)	-	-	-	-	-	-
Totals	**205,000**	**207,000**	**330,000**	**175,000**	**-**	**917,000**

Vehicles - Public Works

Dump Truck #32 (w/conveyor dump body) **FY 2018** **$160,000** **CERF**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	International
Model	
Year	2004
Purchase Cost	$93,455
Purchased	FY 2004
Useful Life	12 years
Current Life	14 years

Vehicle Description

Various personnel in the Operations Division operate this truck. The vehicle is equipped with a liquid salt pre-wetting system, computerized ground sensing salt application system, 11 foot power angling snowplow, dump body tarp, emergency lighting, and two-way radio. The vehicle is also equipped with a nine foot walking floor dump body.

Total Vehicle Miles	24,283 (As of 10/27/2016)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
11/2011	New bearings, new hydraulic lines	$260.00
12/2011	Repair brakes	$1,200.00
2/2013	Repair PTO solenoid and wiring	$910.00
1/2014	Flush brake system air lines	$116.40
2/2014	Repair brakes and replace oil pan	$3,348.75
3/2014	Replace rear brake chambers	$394.14
1/2015	Replace blower motor	$161.64
1/2015	Replace blower motor resistor	$223.74
2/2015	Replace leaf springs	$1,616.76
11/2015	Replaced hydraulic hose	$163.26
10/2016	Repair wiring problems and tighten front wheel bearing	$568.02
Total		**$8,962.71**

Project Alternative

This vehicle was originally scheduled for replacement in FY 2016. The alternative is to delay the purchase and reschedule during later years. The current configuration limits the vehicle's ability to haul some materials as the dump body is constructed in the shape of a v-box with a conveyor "belt" system down the center of the dump body. Staff recommends that this vehicle be replaced in FY 2018 with a unit that has a separate V-box and standard dump body. The $160,000 replacement estimate would include the new dump truck and plow.

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.

Project Impact

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

Carryover History

This vehicle was carried over from FY 2016

Vehicles - Public Works

Pickup Truck #33 **FY 2019** **$57,000** **CERF**

◉ Critical ○ Recommended ○ Contingent on Funding

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

Vehicle Description

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

Total Vehicle Miles	30,579 (As of 10/27/2016)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
9/2014	Battery	$182.30
1/2015	Repair breaks	$1,562.30
4/2015	Replace suspension parts	$423.40
4/2015	Replace suspension parts	$416.96
4/2016	Repair gauge cluster	$1,004.00
10/2016	Replace front suspension parts	$2,626.01
10/2016	Replace three tires	$600.00
Total		**$6,814.97**

Project Alternative

This vehicle was originally scheduled for replacement in FY 2015. This vehicle is in good mechanical condition, therefore Staff recommends deferring its replacement to FY 2019. The vehicle will then be re-evaluated for replacement.

Operational Impact

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

Project Impact

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

Carryover History

This vehicle was carried over from FY 2015

Vehicles - Public Works

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

◉ Critical ○ Recommended ○ Contingent on Funding

Make	International
Model	400 Series
Year	1998
Purchase Cost	$62,000
Purchased	FY 1998
Useful Life	12 years
Current Life	20 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.

Total Vehicle Miles	77,661 (As of 10/28/2016)

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
Total		**$7,073.86**

Project Alternative

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

Background

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

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

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

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

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

Cost Comparison:

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

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

Operational Impact

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

Project Impact

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

Carryover History

None

Vehicles - Public Works

Aerial Truck #46 **FY 2019** **$150,000** **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	15 years

Vehicle Description

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

Total Vehicle Miles	14,634 (As of 10/28/2016)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
12/2001	Repair PTO	$485.00
1/2012	Repair air governor	$45.00
6/2012	Annual inspection	$900.00
7/2013	Replace AC blower motor	$128.00
6/2013	Replace PTO lines	$647.00
8/2013	Annual 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	Annual inspection	$1,000.00
Total		**$4,791.43**

Project Alternative

The alternative is to delay the purchase and reschedule during later years.

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

None

Vehicles - Public Works

Cargo Van #64 **FY 2018** **$45,000** **CERF/WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	Dodge
Model	Sprinter Cargo Van
Year	2006
Purchase Cost	$32,088
Purchased	FY 2006
Useful Life	10 years
Current Life	12 years

Vehicle Description

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

Total Vehicle Miles	50,016 (As of 10/31/2016)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
7/2013	Repair headlight and change cabin air filter	$153.00
10/2013	Replace driver's side wiper arm	$57.00
6/2014	Replace fan belt	$29.88
6/2014	Replace fan belt and pulleys	$544.82
6/2015	Replace batteries	$226.50
3/2016	Repair transmission	$668.68
3/2016	Repair transmission	$1,026.55
6/2016	Repair tail light, and blower motor	$161.49
7/2016	Repair AC system	$1,699.69
Total		**$4,567.61**

Project Alternative

This vehicle was scheduled for replacement in FY 2016. Staff recommends replacing this vehicle in FY 2018 and retaining it as a fully depreciated vehicle until major repairs are necessary, at which time it would be sold at auction.

Operational Impact

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

Project Impact

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

Carryover History

This vehicle was carried over from FY 2016 to FY 2018

Vehicles - Public Works

Sewer Truck #65	**FY 2020**	**$165,000**	**CERF**
	FY 2020	**$165,000**	**CERF/WS**

◉ Critical ○ Recommended ○ Contingent on Funding

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

Vehicle Description

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

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

Recent Maintenance Costs

Date	Maintenance Performed	Cost
2/2013	Replace both batteries	$208.00
5/2013	Replace PTO shaft	$835.00
10/2013	Replace suction tubing and water valves	$1,400.00
6/2014	Replace gaskets, gauges, catch basin flange, reducer	$550.00
8/2014	Replace suction hose	$205.00
5/2015	Replace fuel injectors	$9,947.78
5/2015	Replace water valve and suction hose	$364.31
11/2015	Repair hydrostatic pump	$1,938.38
1/2016	Replace in-out box on debris body	$8,984.16
Total		**$24,432.63**

Project Alternative

• Alternative is to contract sewer cleaning.

Operational Impact

Not having this vehicle would eliminate staff's ability continue routine sewer cleaning and televising. It would also require staff to rely on contractors to respond to emergency sewer backups.

Project Impact

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

Carryover History

None

Equipment – Five Year Capital Improvement Program

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

As with other sections of the CIP, these improvements are targeted for specific years and are usually financed through the Capital Equipment Replacement Fund (CERF). The following improvements are proposed for FY 2018:

Equipment	Cost of Equipment	Funding Source	This Project is:
Live Scan System (PD)	$ 25,000	CERF	Critical
Overweight Truck Scales (PD)	$ 20,750	CERF	Recommended
Street Camera System (PD)	$ 110,517	CERF	Recommended
Street Camera System Expansion (PD)	$ 41,100	CERF	Contingent
SCBA Breathing Air Compressor (FD)	$ 45,000	CERF	Recommended
Stainless Steel V-Box Spreader (Small) (PW)	$ 16,000	CERF	Recommended
Total	**258,367**		

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 2018 Budget

	This Project is:	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total	Funding Source
Police Department								
Live Scan System	Critical	25,000	-	-	-	-	25,000	CERF
Overweight Truck Scales	Recommended	20,750	-	-	-	-	20,750	CERF
Village Hall Camera System	Recommended	-	-	-	21,000	-	21,000	CERF
Street Camera System	Recommended	110,517	-	-	-	-	110,517	CERF
Street Camera System Expansion	Contingent	41,100	-	-	-	-	41,100	CERF
Fire Department								
SCBA Air Compressor	Recommended	45,000	-	-	-	-	45,000	CERF
ALS Defibrillator 2	Contingent	-	-	25,000	-	-	25,000	CERF
Public Works								
Stump Grinder	Recommended	-	46,000	-	-	-	46,000	CERF
Stainless Steel V-Box Salt Spreader (Large)	Critical	-	20,000	-	-	-	20,000	CERF
Stainless Steel V-Box Salt Spreader (Small)	Recommended	16,000	-	-	-	-	16,000	CERF
Chipper - 1800 Model	Critical	-	90,000	-	-	-	90,000	CERF
Tandem Axle Trailer	Recommended	-	-	8,000	-	-	8,000	CERF
Fuel System Improvements	Critical	-	-	-	150,000	-	150,000	CERF
Total		**258,367**	**156,000**	**33,000**	**171,000**	**-**	**618,367**	

Proposed Funding Source	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total
Capital Equipment Replacement Fund (CERF)	258,367	156,000	33,000	171,000	-	618,367
CERF - Water and Sewer (CERF/WS)	-	-	-	-	-	-
Totals	**258,367**	**156,000**	**33,000**	**171,000**	**-**	**618,367**

Equipment - Police

Live Scan System **FY 2018** **$25,000** **CERF**

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

Original Purchase Date	FY 2006
Cost	$25,000
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 is 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 eight years.

Project Alternative

Although the cost of replacement is the responsibility of the municipality, the controlling agency for this system is Cook County. Unless the County goes to a different system in the future there is no alternative to Live-Scan.

The Live Scan System is critical to the Police Department's operations and should the project be deferred and the system malfunction, immediate replacement would be required.

Project Impact

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

Carryover History

This item has been carried over for several fiscal years. Replacement is dependent on Cook County's time frame for upgrading to a new system.

Overweight Truck Scales **FY 2018** **$20,750** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

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

Project Description & Justification

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

Project Alternative

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

Project Impact

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

Carryover History

Although the scales have reached their useful life expectancy, replacement of these scales has been carried over from FY 2017 and they are currently in working order. Each year the scales are re-certified and will require replacement if found deficient by the State.

Village Hall Camera System **FY 2021** **$21,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

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

Project Description & Justification

The Village currently has 37 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 and prisoner cells along with the front doors and lobby. These cameras are fixed with the majority mounted inside the building, they have no moving parts therefore they have a longer useful life. The estimated life of this equipment is approximately 12 years.

Repair/Improvement	Estimated Cost	Fiscal Year
Replace internal cameras as needed	$ 21,000	FY 2021
Total Project Cost	**$ 21,000**	

Project Alternative

This program to date has been very successful. Numerous crimes have been captured via video surveillance. As with any technology the hardware and software becomes outdated and should be replaced with newer technolgy. The continuation of this program is highly recommended.

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

Carryover History

None.

Street Camera System **FY 2018** **$110,517** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

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

Project Description & Justification

The Village currently has eight Pan-Tilt-Zoom (PTZ) digital cameras located along the business corridor on Lake Street and 37 fixed cameras in and around Village Hall. The camera system is supported by software, servers and a wireless antenna system. The cameras can be monitored by supervisors, the dispatch center as well as patrol officers, on their squad car laptops, desktops or video monitors. The digital images are stored for a minimum of 30 days and are used as evidence in criminal cases. The PTZ cameras have moving parts and are out in the elements; therefore they are prone to a shorter life expectancy than fixed cameras. The estimated life of the equipment is approximately four years and the fixed cameras nearly 20 years.

This program has been very successful as a force multiplier. Officers routinely refer to the cameras to assist in identifying suspects involved in criminal activity and the Detectives use the footage to create still shots of suspects for bulletins. Below are some images of suspects who were captured on the camera system and later identified as perpetrators of a crime.

Retail Theft

Retail Theft

Bike Theft

Burglary

Drug Deal

Robbery

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

Repair/Improvement	Estimated Cost	Fiscal Year
Camera System Servers	$36,800	FY 2018
Street Camera System	$35,000	FY 2018
Wireless Point to Point Antenna/Backhaul	$38,717	FY 2018
Total Project Cost	**$110,517**	

Project Alternative

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

Project Impact

There is no annual service fee for this program.

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	There is no recurring annual costs

Carryover History

The majority of the hard drives that support the camera system servers were replaced under warranty in mid-2015. This allows the replacement of the servers to be deferred until FY 2018 or when needed. The wireless point to point antennae that support the street cameras operation were anticipated to be replaced in FY 2019, however the hardware is seven years old and Village Staff have experienced some issues with the wireless transmission. Therefore it is recommended to move the replacement schedule up one year. Server replacement fee's includes hardware and IT costs.

Street Camera System Expansion **FY 2018** **$41,100** **CERF**

○ Critical ○ Recommended ◉ Contingent on Funding

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

Project Description & Justification

The Village security management program consists of internal and external cameras and a Village Hall access control system. The external street cameras are currently placed along the Lake Street business corridor between Harlem and Jackson Avenues. The anticipated expansion will include an additional four cameras along Lake Street between Lathrop and Thatcher Avenues. This will cover the west Lake Street business corridor, Keystone Park and the area surrounding the train station.

Repair/Improvement	Estimated Cost	Fiscal Year
Electrical supply to street lamps	$12,000	FY 2018
Street Cameras	$19,100	FY 2018
Wireless Point to Point Antenna/Backhaul	$8,000	FY 2018
Additional Avigilon Enterprise Licenses	$2,000	FY 2018
Total Project Cost	**$41,100**	

Project Alternative

This is an expansion project that is contingent on funding. It will enhance the current system which is limited in the covered area.

Project Impact

Currently the system does not require an annual operating budget line-item, as there is no recurring annual service fees.

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
None	There is no recurring annual costs

Carryover History

None

Equipment - Fire

SCBA Breathing Air Compressor **FY 2018** **$45,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

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

Project Description & Justification

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

Project Alternative

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

Project Impact

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

Carryover History

This item was carried over from FY 2017

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

○ Critical ◉ Recommended ○ Contingent on Funding

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

Project Description & Justification

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

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

Project Alternative

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

The Village's intent is to purchase and place the new ALS defibrillator on the front line ambulance and move current frontline equipment to ALS Engine 222.

Project Impact

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

Carryover History

None

Stump Grinder

FY 2019 **$46,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Carlton
Model	7500
Purchase Cost	$20,000
Purchased	FY 2000
Useful Life	15 years
Current Life	18 years

Equipment Description

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. The Village grinds all stumps in-house, grinding approximately 120 stumps annually.

Total Equipment Hours	1,095 (As of 10/31/2016)

Recent Maintenance Costs

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

Project Alternative

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

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

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

Operational Impact

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

Project Impact

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

Carryover History

The unit was originally scheduled for replacement in FY 2015, but since there have not been any significant maintenance issues, Staff recommends deferring its replacement to FY 2019.

Stainless Steel V-Box Salt Spreader (Large) **FY 2019** **$20,000** **CERF**

◉ Critical ○ Recommended ○ Contingent on Funding

Make	Swenson
Model	
Year	2006
Purchase Cost	$14,424
Purchased	FY 2007
Useful Life	12 years
Current Life	11 years

Equipment Description

The Village owns and utilizes three large front-line v-box salt spreaders that are used for snow fighting operations. Two are drop-in vehicle mounted front line salt spreaders and the third is a v-box salt spreader that was built and incorporated into the dump body of dump truck #32. This unit is also equipped with a liquid pre-wetting system that is used to melt snow and ice when temperatures are below twenty degrees.

Total Vehicle Miles	N/A

Recent Maintenance Costs

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

Project Alternative

Contractual salting and snow removal.

Operational Impact

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

Project Impact

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

Carryover History

None

Stainless Steel V-Box Salt Spreader (Small) **FY 2018** **$16,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Make	Swenson
Model	
Year	
Purchase Cost	
Purchased	
Useful Life	12 years
Current Life	

Equipment Description

The Village owns and utilizes three large front-line v-box salt spreaders that are used for snow fighting operations. Two are drop-in vehicle mounted front line salt spreaders and the third is a v-box salt spreader that was built and incorporated into the dump body of dump truck #32. 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. Since truck #32 is scheduled to be replaced this fiscal year with a truck that has a conventional dump body, an additional salt spreader will need to be purchased.

Total Vehicle Miles	N/A

Recent Maintenance Costs

Date	Maintenance Performed	Cost
	N/A	
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

None

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

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

Make	Vermeer
Model	BC1800
Purchase Cost	$29,755
Purchased	FY 2000
Useful Life	10 years
Current Life	18 years

Equipment Description

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

Total Equipment Hours	4,732 (As of 11/17/2015)

Recent Maintenance Costs

Date	Maintenance Performed	Cost
7/2011	Oil pressure sensor	$50.00
8/2016	New axle	$2,700.00
9/2012	Radiator cap, thermostat, engine diagnostics	$300.00
12/2012	Rebuild starter	$475.00
2/2013	Rebuild engine	$8,158.00
9/2013	Replace hood latches	$39.00
9/2013	Repair loose belt and leaking injector	$218.00
9/2014	Sharpen blades	$144.00
7/2015	Replace tensioning pulley and belt	$678.27
10/2015	Change blades and bolts	$175.00
6/2016	Change blades and bolts	$340.84
Total		**$13,278.11**

Project Alternative

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

Operational Impact

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

Project Impact

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

Carryover History

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

Tandem Axle Trailer

FY 2020 **$8,000** **CERF**

○ Critical ◉ Recommended ○ Contingent on Funding

Purchase Cost	$3,805
Purchased	FY 2000
Useful Life	20 years
Current Life	18 years

Equipment Description

A tandem axle trailer that is used for transporting supplies and equipment. The trailer is equipped with folding ramps and can also be used to transport vehicles. This equipment is currently in good condition.

Recent Maintenance Costs

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

Project Alternative

Operational Impact

Equipment would not be able to be moved to needed locations around the Village.

Project Impact

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

Carryover History

None

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

◉ Critical ○ Recommended ○ Contingent on Funding

Purchase Cost	$90,000
Purchased	FY 1990
Useful Life	30 years
Current Life	28 years

Equipment Description

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

Recent repairs/improvements to the fuel pumps include:

- FY 2012 – Replaced unleaded fuel suction pump
- Replaced all hoses
- FY 2015 – Replaced spill buckets, manholes and a portion of the cement pads on both tanks: $15,000
- FY 2016 - Removed internal moisture and sediment from bottom of diesel tank and added fuel treatment: $287.00

Project Alternative

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

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

Operational Impact

Project Impact

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

Carryover History

None

Information Technology – Five Year Capital Improvement Program

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

The following improvements are proposed for FY 2018:

Equipment	Cost of Equipment	Funding Source	This Project is:
Network Improvements	$ 20,300	CIF	Critical
Springbrook Upgrade	$ 21,000	CIF	Critical
PC Replacements	$ 43,490	CIF	Recommended
Land and License Management Software	$ 40,000	CIF	Recommended
Back-up Expansion	$ 34,350	CIF	Critical
Office 365 Migration	$ 15,300	CIF	Recommended
Mobile Device Management	$ 10,730	CIF	Recommended
Disaster Recovery	$ 27,500	CIF	Critical
Total	**$ 212,670**		

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 2018 Budget

	This Project is:	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total	Funding Source
IT Strategic Plan	Recommended	-	20,000	-	-	-	20,000	CIF
Network Improvements	Critical	20,300	-	-	-	-	20,300	CIF
Springbrook Upgrade	Critical	21,000	-	-	-	-	21,000	CIF
PC Replacements	Recommended	43,490	30,000	30,000	30,000	30,000	163,490	CIF
Land and License Management Software	Recommended	40,000	-	-	-	-	40,000	CIF
Back-Up Expansion	Critical	34,350	-	-	-	-	34,350	CIF
Office 365 Migration	Recommended	15,300	-	-	-	-	15,300	CIF
Audio Visual System Replacement	Recommended	-	-	-	125,000	-	125,000	CIF
Mobile Device Management	Recommended	10,730	-	-	-	-	10,730	CIF
Disaster Recovery Solution	Critical	27,500	-	-	-	-	27,500	CIF
Total		**212,670**	**50,000**	**30,000**	**155,000**	**30,000**	**477,670**	

Proposed Funding Source	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total
Capital Improvement Fund (CIF)	212,670	50,000	30,000	155,000	30,000	477,670
Totals	**212,670**	**50,000**	**30,000**	**155,000**	**30,000**	**477,670**

IT Strategic Plan	**FY 2019**	**$20,000**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Funding History N/A

Project Description & Justification

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

Project Alternative

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

Project Impact

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

Network Improvements **FY 2018** **$20,300** **CIF**

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

Funding History N/A

Project Description & Justification

Network Services

Currently the Village Hall maintains all primary network services. Any major issue with Village Hall IT services will affect the entire Village. This initiative will allow the Village to leverage existing hardware configured in a backup role to provide redundant network services on multiple Servers and in multiple locations. An offsite backup repository for the Village Hall production servers will be configured using existing equipment. This initiative will increase the resilience of the Village network well improving the overall experience for the users at Public Works.

Public Works Network Enclosure (Cabinet)

There is very little computer and network equipment located at Public Works facility currently and it is not well prepared for many of the Villages expansion plans to improve the reliability of the network. This initiative will install a half height wall mounted network cabinet. This cabinet will be temperature controlled and house the necessary Servers, Networking equipment and UPS to provide reliable power for resilient computer systems. It is recommended that this work be completed at the same time as the network service improvements.

Network Services	
Hardware/Software/Licensing	$1,000
Consulting	$7,640
Public Works Network Enclosure (Cabinet)	
Hardware/Software/Licensing	$7,800
Consulting	$3,860
Total	$20,300

Project Alternative

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

Project Impact

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

Springbrook Upgrade **FY 2018** **$21,000** **CIF**

◉ Critical ○ Recommended ○ Contingent on Funding

Funding History N/A

Project Description & Justification

The Village utilizes the Springbrook Enterprise Resource Planning (ERP) system to manage utility accounts, the Village's day to day financial transactions, budgeting, payroll, service request tracking, building permits, licensing and more. It is the financial backbone in the Village's day to day operations and a critical piece of software. In FY 2013 the Village underwent a significant upgrade from Version 6 to Version 7. Since that time, Springbrook has been acquired by Accela, and additional upgrade of Version 7 is both available and recommended.

There are also changes to the server that are recommended for FY 2018. Microsoft is discontinuing support for the Windows Progress Server and an upgrade to the SQL Server will be required to ensure a stable operating environment for Springbrook software. SQL Reporting Service, included in SQL Server, will provide an improved report writing tool for Ad Hoc reports. Temporary interruptions in Springbrook have an immediate and direct impact on the Village's ability to process utility bill payments, route service requests to the appropriate operating department, process building permits and respond to questions about permits and licenses, etc. A reliable ERP is essential to meeting the day to day needs of the community.

Hardware/Software/Licensing	$16,000
Consulting	$5,000
	$21,000

Project Alternative

An alternative to this project is to continue operating under the existing version of Springbrook, however, it is not recommended as Microsoft will no longer be supporting the existing Windows Server. A stable operating environment is critical to providing customer service to the community.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$22,000	Annual maintenance fee that is currently paid will be modified to an annual subscription fee at the same price or possibly slightly lower.

PC Replacements	**FY 2018**	**$43,490**	**CIF**
	FY 2019	**$30,000**	**CIF**
	FY 2020	**$30,000**	**CIF**
	FY 2021	**$30,000**	**CIF**
	FY 2022	**$30,000**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Funding History N/A

Project Description & Justification

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

Staff and the Village's IT consultant have updated the inventory of Village-owned IT/communication equipment, identifying warranty periods for each piece and determining a replacement schedule. Based on that information, equipment can be rotated out when warranties expire. Funding IT replacements in this manner will standardize equipment throughout the organization, allow the Village to explore bulk purchase pricing, improve IT support service efficiency, improve staff efficiency with fewer projected system interruptions, enhance system security, and avoid large spikes in IT expenses. Funding in FY 2018 is higher than other years due to the replacement of Police and Fire Department laptops.

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	$6,490
Total	$43,490

Project Alternative

If this project is not funded, PCs 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.

Project Impact

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

Land and License Management Software **FY 2018** **$40,000** **CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Funding History N/A

Project Description & Justification

The Village's ERP, Springbrook, was recently acquired by Accela. After the acquisition the Village was informed that Springbrook would continue to support the existing land management module that is utilized to process building permits and various Village licenses but that there would be no future enhancements. The Village will evaluate whether to utilize the product now offered by Accela or another party. The utilization of software for this purposes is critical to Village operations and customer service. Modifying the program used to collect and process this information could provide opportunities for more efficient operations, including better customer access to real-time data, better project tracking tools, better integration with the Village's GIS, increased opportunities for constituent self-service and more.

Hardware/Software/Licensing	$	35,000
Consulting	$	5,000
	$	40,000

Project Alternative

An alternative would be to defer this project one year.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$24,000	Annual cost of subscription for individual users ($200/month/user with an estimated 10 users; this cost may be reduced if fewer users are identified)

Back-Up Expansion **FY 2018** **$34,350** **CIF**

◉ Critical ○ Recommended ○ Contingent on Funding

Funding History N/A

Project Description & Justification

Video Surveillance ($17,175)

Currently, Village video surveillance files are stored locally, without a backup. This initiative will add an expansion shelf to the Village's current backup repository. This will allow ample storage space with room for video file backup and future growth. The Village will be able to administer the hardware through a single management console. Police video will then be uploaded to a cloud storage solution. This process will help ensure the Village's police data is backed up and archived off site to help ensure the files will be available when needed.

Arbitrator 360 ($17,175)

Currently, the police video files are stored locally, without a backup. This initiative will add an expansion shelf to the Village's current backup repository that will be used exclusively for Police video. This will allow the data to remain safely segmented while allowing ample storage space with room for future expansion for police video file backup. The Village will be able to administer the hardware through a single management console. Police video will then be uploaded to a CJIS certified cloud storage solution. This process will help ensure the Village's police data is backed up and archived off site to help ensure the files will be available when needed.

Video Surveillance	
Hardware/Software/Licensing	$13,355
Consulting	$3,820
Arbitrator 360	
Hardware/Software/Licensing	$13,355
Consulting	$3,820
Total	$34,350

Project Alternative

An alternative to this project is not recommended as it is critical to ensure that public safety data is recoverable.

Project Impact

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

Office 365 Migration **FY 2018** **$15,300** **CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Funding History N/A

Project Description & Justification

The Village is primarily using Microsoft Office 2010. On October 13, 2015 Microsoft announced the end of Mainstream support for Office 2010. The Village's move to Office 365 will allow Staff and the Village's IT consultant to leverage a low monthly cost with all updates included in the subscription model. There is no additional need for large Village-wide upgrades of Office software each time the Village upgrades to the next generation of Office. Moving the Village to Microsoft Office 365 is a cloud based strategy to keep the Village moving forward and adopting current trends of the technology that allow new and updated collaboration features.

Hardware/Software/Licensing	$4,400
Consulting	$10,900
Total	$15,300

Project Alternative

Continue use of Microsoft Office 2010 and defer this project to the future.

Project Impact

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

Audio Visual System Replacement	**FY 2021**	**$125,000**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Funding History N/A

Project Description & Justification

The Village purchased Audio/Visual equipment for use in the Community Room and second floor Conference Room in 2010. The equipment is still functional but staff recommends that the Village begin planning for its replacement as certain equipment is becoming more prone to failure and may be obsolete.

Project Alternative

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

Project Impact

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

Mobile Device Management **FY 2018** **$10,730** **CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History N/A

Project Description & Justification

Currently the Village does not allow most of the Village Staff to join the wireless network in order to limit potential security issues. This initiative will enable the IT team to monitor, manage, and secure employee mobile devices that are utilized for work purposes, and will allow the Village to provide a more robust and secure network. The widespread proliferation of consumerization of IT means more personal consumer computing devices, such as smartphones, laptops and tablets, are brought to the workplace by employees for use and connectivity on the network. If these devices are lost or stolen, Mobile Device Management software will allow the Village to disable and clean Village devices remotely to prevent security breaches.

Hardware/Software/Licensing	$5,000
Consulting	$5,730
Total	$10,730

Project Alternative

An alternative is to continue to prohibit employees from connecting these devices to the network and to utilize mobile data plans instead while they are on site, however, this will not provide the Village's IT team with the ability to wipe the devices remotely to prevent potential security breaches.

Project Impact

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

Disaster Recovery Solution **FY 2018** **$27,500** **CIF**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History N/A

Project Description & Justification

The Village file server and application data is being safely backed up in the cloud. However if the Village were to suffer a loss of the server room or building there would be no immediate solution in place to help recover the data and get the applications functioning again. This initiative will begin to address some of those issues by establishing a set of standards and processes to aid in the event of a disaster. The Village will develop a disaster recovery process to restore access to the Village's primary applications and resources such as Payroll and Email. This process will be aided by having the data already stored in the cloud for backups. If the Village takes the time to prepare now before a disaster occurs, we will be better equipped to respond and limit any outages.

Hardware/Software/Licensing	$6,300
Consulting	$21,200
Total	$27,500

Project Alternative

An alternative to this project would be to continue the status quo or defer the expense to another Fiscal Year. These alternatives are not recommended as it is critical to ensure that the Village has a disaster recovery plan in place that is consistent with industry best practices.

Project Impact

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

Streets Improvements – Five Year Capital Improvement Program

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

Street System Overview

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

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

Sidewalk & Curb System Overview

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

The following improvements are proposed for FY 2018:

Improvement	Cost	Funding Source	Nature of Project
Street Patching	$ 85,000	GF - $75,000 WS - $10,000	Critical
50/50 Sidewalk, Curb & Gutter	$ 65,000	GF - $55,000 WS - $10,000	Critical
Alley Improvement Program	$ 200,000	CIF	Recommended
Street Improvement Program (SIP)	$ 300,000	MFT - $250,000 WS - $50,000	Critical
Street Maintenance Program	$ 100,000	GF	Critical
Surface Transportation Program (STP)	$ 75,000	MFT	Critical
Municipal Lighting Systems	$ 48,590	CIF	Recommended
Total	**$ 873,590**		

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 2018 Budget

		Fiscal Year					Five Year	Funding
	This Project is:	2018	2019	2020	2021	2022	Total	Source
Street Patching Program	Critical	85,000	85,000	90,000	90,000	100,000	450,000	GF/WS
50/50 Sidewalk, Curb & Gutter	Critical	65,000	65,000	65,000	65,000	65,000	325,000	GF/WS
Alley Improvement Program	Recommended	200,000	200,000	200,000	200,000	200,000	1,000,000	CIF
Parking Lot Improvements	Recommended	-	-	45,000	-	-	45,000	CIF/PR
Street Improvement Program (SIP)	Critical	300,000	200,000	300,000	300,000	300,000	1,400,000	MFT/WS
Street Maintenance Program	Critical	100,000	100,000	100,000	100,000	100,000	500,000	GF
Surface Transportation Program (STP)	Critical	75,000	330,000	-	-	-	405,000	MTF
Municipal Lighting Systems	Recommended	48,590	-	-	-	-	48,590	0
Total		**873,590**	**980,000**	**800,000**	**755,000**	**765,000**	**4,173,590**	

	Fiscal Year					Five Year
Proposed Funding Source	2018	2019	2020	2021	2022	Total
General Fund (GF)	230,000	230,000	235,000	235,000	245,000	1,175,000
Motor Fuel Tax (MFT)	325,000	480,000	250,000	250,000	250,000	1,555,000
Water and Sewer Fund (WS)	70,000	70,000	70,000	70,000	70,000	350,000
Capital Improvement Fund (CIF)	248,590	200,000	245,000	200,000	200,000	1,093,590
CIF/Parking Reserve	-	-	-	-	-	-
Totals	**873,590**	**980,000**	**800,000**	**755,000**	**765,000**	**4,173,590**

Street Patching Program

Streets and Alleys

	GF	WS
FY 2018	**$75,000**	**$10,000**
FY 2019	**$75,000**	**$10,000**
FY 2020	**$80,000**	**$10,000**
FY 2021	**$80,000**	**$10,000**
FY 2022	**$90,000**	**$10,000**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

Year	GF	WS	Total
FY 2017	$80,178	$10,000	$90,178
FY 2016	$66,465	$8,860	$75,325
FY 2015	$36,906	$10,000	$46,906
FY 2014	$83,970	$10,000	$93,970
FY 2013	$51,732	$7,342	$59,074

Program Description & Justification

The purpose of this program is to maintain and improve surface conditions of Village streets and alleys by patching defective areas. This program is intended for streets and alleys of all condition ratings to prolong their useful lives. To accomplish this goal, an annual funding level of $85,000 to $100,000 over the next five years is recommended. These funding levels are estimates and reflect inflationary increases for construction.

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

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

FY 2018 Recommended Project

Due to the amount of streets that have been resurfaced as part of the Northside Stormwater Management Project, the resurfacing of Division Street, and the upcoming resurfacing of Chicago Avenue, Staff recommends a slight reduction in this maintenance project for FY 2018 and FY 2019. Various locations to be patched are identified on a continual basis.

Program Alternative

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

Project Impact

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

50/50 Sidewalk, Curb & Gutter

Sidewalks, Aprons, and Curb

	GF	WS
FY 2018	**$55,000**	**$10,000**
FY 2019	**$55,000**	**$10,000**
FY 2020	**$55,000**	**$10,000**
FY 2021	**$55,000**	**$10,000**
FY 2022	**$55,000**	**$10,000**

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

Spending History

Year	GF	WS	Total
FY 2017	$51,710	$10,000	$61,710
FY 2016	$47,979	$8,482	$56,461
FY 2015	$60,735	$4,503	$65,238
FY 2014	$47,507	$1,829	$49,336
FY 2013	$43,648	$15,360	$59,008

Program Description & Justification

The purpose of this program is to improve the overall condition of public sidewalks and curb/gutters throughout the Village. The objective is to eliminate all trip hazards for pedestrians. To accomplish this objective, an annual funding level of $50,000-$74,000 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 all public sidewalks in each of these three areas over three-year periods. Sidewalks are rated according to the displacement of adjoining sidewalk squares that pose a potential for trip hazard. The following table identifies the sidewalk condition ratings, description of condition, and the recommended action:

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

During annual inspections, the Village offers participation in the 50/50 sidewalk replacement cost share program upon request for sidewalks with a "B" rating. A copy of the inspection form is delivered to property owners describing the sidewalk's condition and requests their participation. The Village replaces all sidewalk 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 to feel the raised, truncated domes with their feet. The following is a summary of proposed expenditures for FY 2018:

General Fund

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

Water and Sewer Fund

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

Sidewalk and Curb Annual Inspection Areas:

Area No.	Area Limits	Inspection Years
1	Des Plaines River to Harlem /Hawthorne to Chicago	2018, 2021, 2024
2	Thatcher to Harlem / Chicago to Greenfield	2019, 2022, 2025
3	Thatcher to Harlem / Greenfield to North	2020, 2023, 2026

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

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

Program Alternative

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

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

Project Impact

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

Alley Improvement Program	**FY 2018**	**$200,000**	**CIF**
	FY 2019	**$200,000**	**CIF**
	FY 2020	**$200,000**	**CIF**
	FY 2021	**$200,000**	**CIF**
	FY 2022	**$200,000**	**CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2017	$275,000	(Quick and William Alleys - Projected)
FY 2016	$59,153	(Alleys incorporated into SIP)
FY 2015	$508,901	(Green Alleys - projected)
FY 2013	$14,745	(Lake/Edgewood Alley-SSA)

Project Description & Justification

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

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

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

FY 2018 Recommended Projects

1. Gale Avenue Alley (Zero-Hundred Block) – This north-south alley, which connects Madison Street and Vine Street, consists of a concrete surface that has deteriorated substantially and is in very poor condition. Improving this alley will necessitate a full reconstruction throughout. Similar to recent alley improvements, all permeable options will be explored in order to determine an appropriate treatment.
2. Local Alley Project – TBD

FY 2018 Cost Summary for Alley Improvement Plan

Reconstruction of the Gale Avenue Alley with permeable material will cost approximately $150,000. Prior to design and bidding of this project, Staff will research additional types of permeable materials that may more efficiently solve the drainage issues at this location.

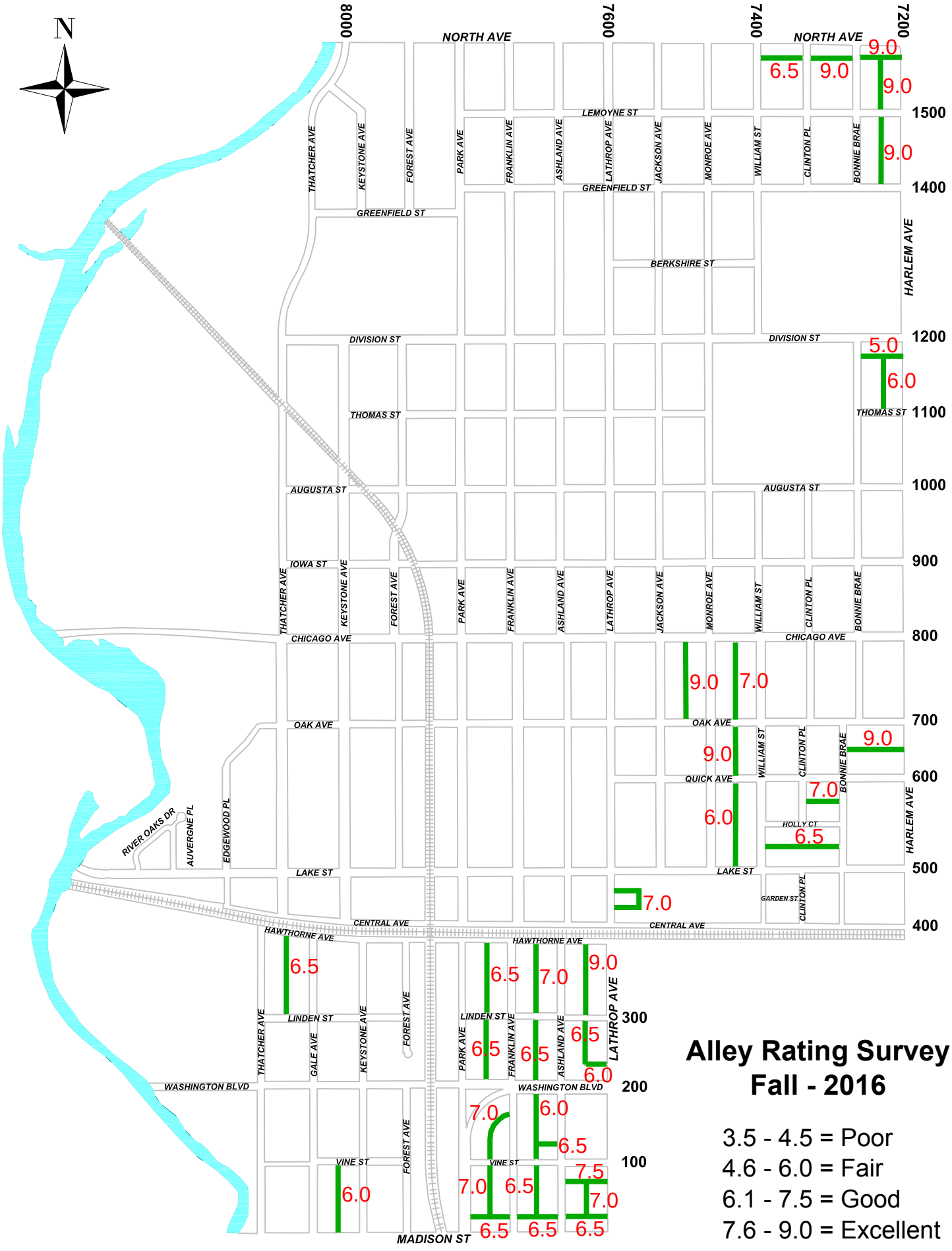
Program Alternative

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

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

Project Impact

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



Alley Rating Survey
Fall - 2016

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

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

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

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

Program Description & Justification

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

A. Village Hall – 400 Park Avenue – **Resurfacing Scheduled for FY 2020**
B. Public Works Garage – 45 Forest Avenue
C. Southeast corner of Lake Street and Park Avenue
D. West Commuter Lot – 400 block of Thatcher Avenue – Reconstruction Scheduled for FY 2017
E. East Commuter Lot – 400 block of Thatcher Avenue
F. Lot on south side of 7915-7919 North Avenue – contiguous to CVS parking lot

Several options for improving parking lots include full reconstruction, resurfacing, asphalt patching, seal-coating, and crack sealing. In FY 2012 and 2013, the conditions of the asphalt surfaces on the two parking lots that were improved (Lots A and E) were considered to be in good condition which allowed seal-coating as an improvement option.

2018 Recommended Projects

There are no parking lot improvements scheduled for FY 2018.

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

Street Improvement Program

	MFT	WS
FY 2018	**$250,000**	**$50,000**
FY 2019	**$150,000**	**$50,000**
FY 2020	**$250,000**	**$50,000**
FY 2021	**$250,000**	**$50,000**
FY 2022	**$250,000**	**$50,000**

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

Spending History

Year	MFT	WS	Total
FY 2017	$150,000	$52,898	$202,898
FY 2016	$393,243	$47,964	$441,207
FY 2015	$169,558	$20,460	$190,018
FY 2014	$233,610	$108,000	$341,610
FY 2013	$283,860	$115,369	$399,229

Program Description & Justification

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

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

The following tables summarize the street rating systems:

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

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

FY 2018 Recommended Projects

	Street	Pavement Rating
1.	Vine St from Thatcher to Keystone	Fair
2.	Hawthorne Ave from Franklin to Lathrop	Fair
3.	Franklin Ave from Oak to Lake	Fair
4.	Ashland Ave from Chicago to Oak	Fair
5.	William St from Oak to Quick	Fair
6.	Clinton Pl from Oak to Quick	Fair

The projected cost to resurface these streets is $290,000.

While the Capital Improvement Plan proposes funding for street improvements through FY 2022, these locations have not yet been determined. Staff recommends a funding level of $300,000 for each of those years with the specific locations selected based on annual street ratings surveys.

Program Alternative

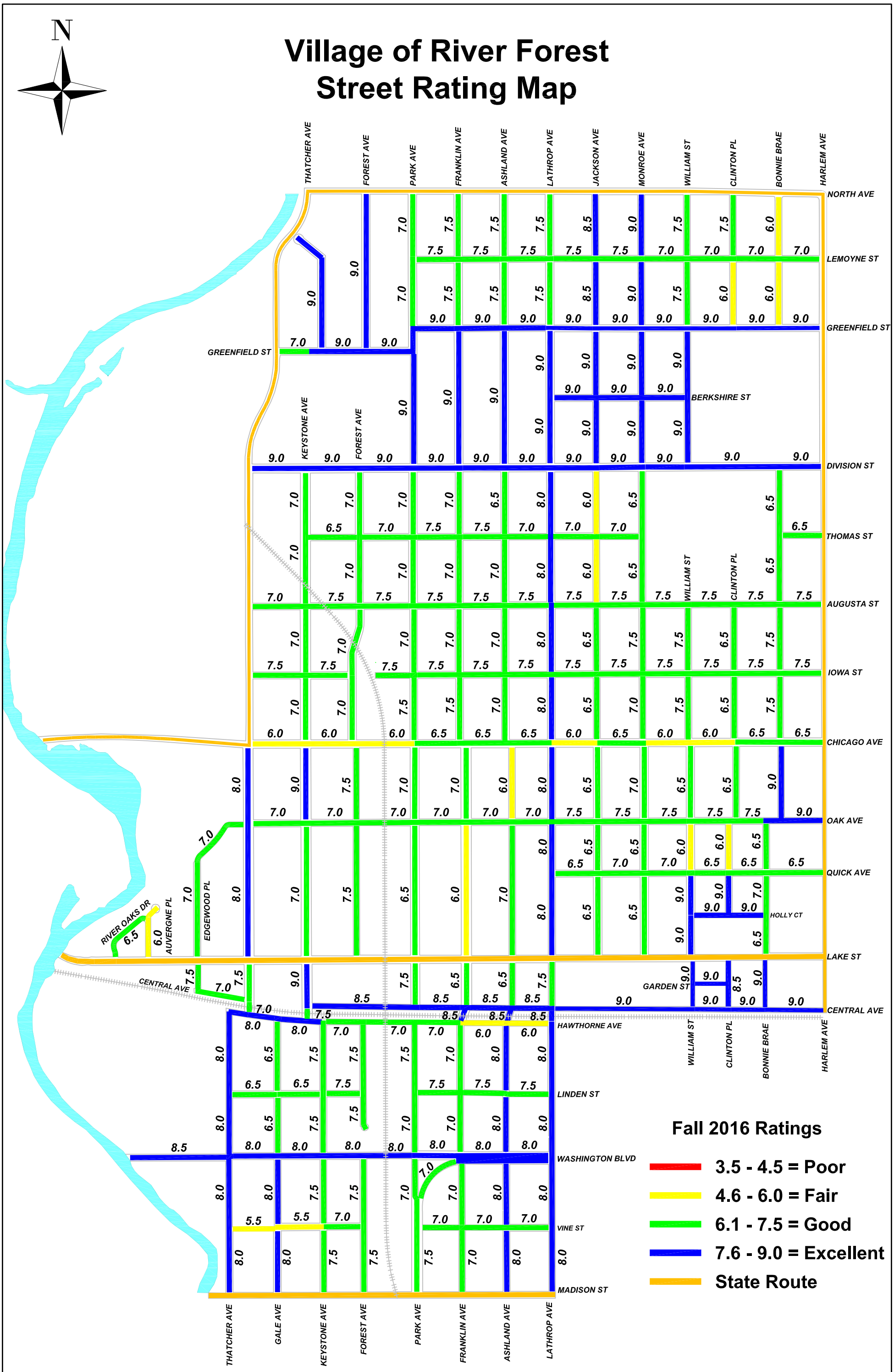
Not performing any roadway maintenance, particularly for streets in "Poor" condition, will result in total pavement failure and require reconstruction (of base and surface) which is significantly higher in cost compared to resurfacing.

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

Project Impact

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

Village of River Forest
Street Rating Map



Street Maintenance Program	**FY 2018**	**$100,000**	**GF**
	FY 2019	**$100,000**	**GF**
	FY 2020	**$100,000**	**GF**
	FY 2021	**$100,000**	**GF**
	FY 2022	**$100,000**	**GF**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

	Crack Sealing	Microsurfacing	Total
FY 2017	$44,652	$46,620	$91,272
FY 2016	$48,390	$23,056	$71,446
FY 2015	$32,473	$56,642	$89,115
FY 2014	$22,900	$51,724	$74,624
FY 2013	$22,933	$58,282	$81,215

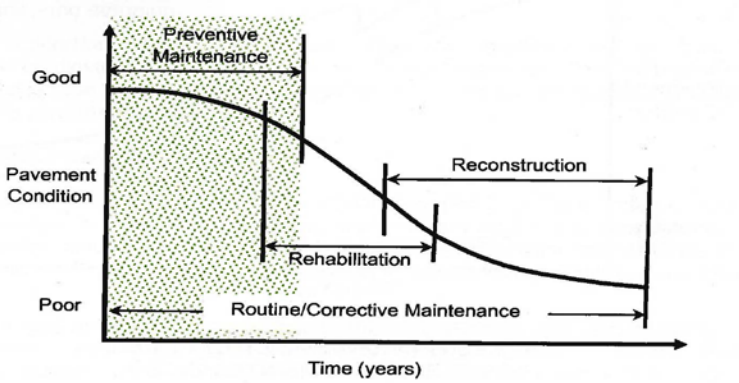
Program Description & Justification

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

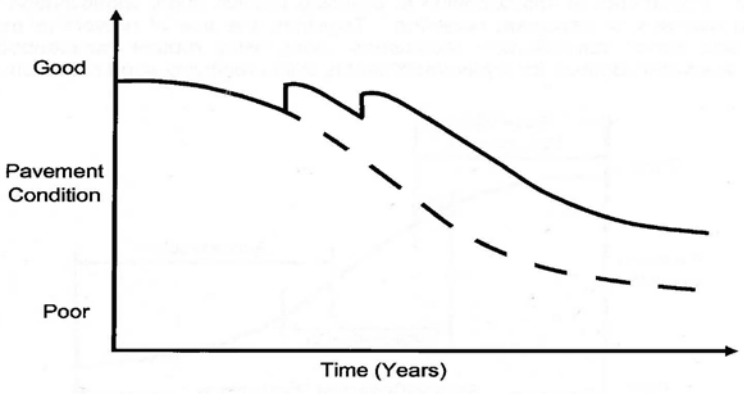
In addition to pavement rejuvenation, Village Staff believes the practice of Crack Sealing to be invaluable. Ideally, this work is completed when the pavement is still in good condition with minimal cracking. Village Staff will continue to bid this work jointly with the Village of Oak Park in an effort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

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

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



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



FY 2018 Recommended Projects

Due to the amount of streets being recently resurfaced as part of the Northside Stormwater Management and Division Street Projects, as well as funding received for the resurfacing of Chicago Avenue, Village Staff recommends decreasing the budgeted amounts (identified above) to $50,000 for crack sealing and $50,000 for a pavement rejuvenation method.

Pavement Rejuvenation

The following streets have been identified for rejuvenation:

Street	Condition Rating	Proposed Cost
FY 2018 SIP Streets	Excellent	$12,890
Greenfield (Thatcher - Harlem)	Excellent	$14,262
Keystone (Greenfield - Thatcher)	Excellent	$3,436
Forest (Greenfield - North)	Excellent	$3,471
Park (Division - Greenfield)	Excellent	$2,700
Ashland (Division - Greenfield)	Excellent	$4,093
Jackson (Division - Greenfield)	Excellent	$3,900
William (Division - Greenfield)	Excellent	$4,005

Crack Sealing

In addition to the streets to be rejuvenated, additional streets will be identified for crack sealing during late winter/early spring of 2017.

Program Alternative

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

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

Project Impact

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

Surface Transportation Program (STP)	**FY 2018**	**$75,000**	**MFT**
	FY 2019	**$330,000**	**MFT**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History N/A

Program Description & Justification

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

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

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

FY 2018 Recommended Project

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

The preliminary estimate to resurface this street is $1,500,000 for construction and $150,000 for Construction Engineering, with the Village's share being approximately $330,000.

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

Program Alternative

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

Project Impact

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

Municipal Lighting Systems **FY 2018** **$48,590** **CIF**

○ Critical ◉ Recommended ○ Contingent on Funding

Project Description & Justification

I. Street lighting: This system is comprised of approximately 1,100 street poles, 22 street light control cabinets, and 16 parking lot poles with light fixtures. The following is a summary of the types and styles of poles, fixtures, and bulbs that the Village owns and maintains:

Pole Type: Concrete (streets) and Aluminum (parking lots)
Pole Height: 12 and 30 foot (streets), various (parking lots)
Fixture Style: Post-top, overhead (davit arm, mast arm) and wall pack
Bulb/Lamp: Light emitting diode (LED), mercury vapor, metal halide, induction

II. Parking lot lighting: The Village own and maintains a total of 16 fixtures. Six light fixtures are located at the Village Hall that illuminate the front and south parking lots and ten light fixtures located at the east and west Thatcher Ave commuter parking lots.

III. Viaduct lighting: The Village owns and maintains 55 wall pack fixtures (10/viaduct) located beneath six Union Pacific Railroad viaducts - Thatcher Ave, Keystone Ave, Franklin Ave, Ashland Ave, Lathrop Ave, and the west side of Harlem Ave (five beneath viaduct).

The Village is responsible for energy consumption costs associated with these lighting systems. In 2012, the Village's energy broker solicited bids for the purchase of electricity for the street light system. The Village entered into a two-year agreement with Constellation that expires in December 2018.

Past Projects

- ***Street Lighting*** : In 2010/2011, the Village initiated a project involving the replacement of 126 street lights and 16 parking lot lights with **more energy-efficient** LED street light luminaires. A portion of this project was funded by the Tax Increment Financing District and the balance used grant funds from the American Recovery and Reinvestment Act. The Village received an Energy Efficiency and Conservation Block Grant of $100,000 (through Cook County) for this project. The total cost of this project was $140,584 (excluding the disposal of old lamps).
- ***Viaduct Lighting*** : All 55 of these fixtures were replaced and upgraded (utilizing Village Staff) to the LED lamp type in FY 2013. Through an energy rebate program with the State of Illinois' Department of Commerce and Economic Opportunity (DCEO), the Village was reimbursed for approximately 58% of the costs to purchase these fixtures. The total cost of this project was $27,589 and $15,988 was received in grant reimbursements from the Illinois DCEO.
- ***Side Street Lighting*** : Phase I (FY 2016): All side street post top light fixtures using mercury vapor bulbs were retrofitted with LED luminaires. This project consisted of retrofitting approximately 675 fixtures.

- ***Internal Main Streets:*** Phase II (FY 2017): 121 mercury vapor fixtures (175 watt) on Thatcher Avenue (north of Chicago Avenue), Chicago Avenue, and Division Street were replaced. Staff also replaced 86 metal halide fixtures (250 watt) on Lake Street between Harlem Avenue and the Des Plaines River. All of these fixtures (including the lamp) were upgraded to LED. In summary, the project involved the replacement of 207 overhead fixtures/lamps with LED fixtures.
- ***Accidents***: On the average, five street lights are struck by cars each year – many of which require replacement which is coordinated contractually as soon as possible following the accident. The approximate contractual cost to replace a knockdown is $4,500. These costs are typically recovered through the Village's insurance provider (IRMA).

Staff proposes the following projects to upgrade the remainder of the Village's street light system:

2018 Recommended Project

Phase III (FY 2018): The final phase will entail replacing approximately 86 higher wattage (250 and 400 watt) metal halide and mercury vapor overhead fixtures currently found along state (IDOT) routes such as North Avenue, and Harlem Avenue. It is estimated that the cost of that project will be approximately $48,590. Staff will seek to reduce the cost of this project by seeking out grant funds from DCEO and Illinois Clean Energy Foundation or ICE.

Fixtures 86 X $440	$	37,840
Labor 86 X $125	$	10,750
Total	$	48,590

Project Alternative

The alternatives to these improvement and maintenance projects to the Village's municipal lighting systems, which is a critically important system for the general safety of the community, are limited due to the obsolescence of the equipment. Deferring this multi-phased project will result in a lack of available repair parts and bulbs for current fixtures. As a result, the Village should expect repair costs to the existing fixtures to escalate as parts become scarce.

Project Impact

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

Water and Sewer Improvements – Five Year Capital Improvement Program

This section of the Capital Improvement Plan identifies funding for sewer and water improvements, which are scheduled to continue through FY 2022. 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 2018 include:

Improvement	Cost	Funding Source	Nature of Project
Sewer Relining	140,000	WS	Critical
Sewer Point Repairs	35,000	WS	Critical
Water Distribution System – Pumping Station	19,000	WS	Critical
Water Meter Replacement Program	17,500	WS	Critical
Water Main Replacement	450,000	WS	Critical
Hydrant Replacement	24,000	WS	Recommended
Parkway Pockets	20,000	WS	Contingent
Total	**705,500**		

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 2018 Budget

	This Project is:	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total	Funding Source
Sewer System								
Sewer Relining	Critical	140,000	140,000	140,000	140,000	140,000	700,000	WS
Sewer Point Repairs	Critical	35,000	35,000	35,000	35,000	35,000	175,000	WS
Pumping Station								
Water Distribution System	Critical	19,000	25,500	19,000	20,000	20,000	103,500	WS
Water Distribution Improvements								
Water Meter Replacements	Critical	17,500	17,000	6,000	7,500	16,000	64,000	WS
Water Main Replacement	Critical	450,000	400,000	400,000	400,000	400,000	2,050,000	WS
Hydrant Replacement	Recommended	24,000	24,000	24,000	24,000	24,000	120,000	WS
Parkway Pockets	Contingent	20,000	-	-	-	-	20,000	WS
Total		**705,500**	**641,500**	**624,000**	**626,500**	**635,000**	**3,232,500**	

Proposed Funding Source	Fiscal Year 2018	2019	2020	2021	2022	Five Year Total
Water and Sewer Fund (WS)	705,500	641,500	624,000	626,500	635,000	3,232,500
Totals	**705,500**	**641,500**	**624,000**	**626,500**	**635,000**	**3,232,500**

Sewer Lining Program	**FY 2018**	**$140,000**	**WS**
Public Sewers	**FY 2019**	**$140,000**	**WS**
	FY 2020	**$140,000**	**WS**
	FY 2021	**$140,000**	**WS**
	FY 2022	**$140,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2017	$ 153,000	(including MH lining)
FY 2016	$ 69,956	
FY 2015	$ 122,251	
FY 2014	$ 57,992	
FY 2013	$ 79,466	

Program Description & Justification

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

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

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

In addition to the typical sewer lining completed each year, Village Staff has completed some lining of manholes in FY 2017. Potential candidates were researched throughout the FY 2017 year and lined in the fall. Seven manholes were lined at a total cost of approximately $17,000. This work allows the manholes to be sealed and stabilized without requiring any excavation. The intent of this work is to prevent sinkholes and other pavement failures from occurring due to the decay of the interior walls and base of existing manholes.

Since the Village's first sewer lining project, over 38,000 lineal feet of sewers have been lined. This represents approximately 22% of the total sewer mains owned / maintained by the Village (approximately 171,000 lineal feet). All sewers that were rated either poor or fair (condition ratings "D" and "C") during the sewer televising program from the late 1990's have been lined. Lining all un-lined combined sewers that are less than 33 inches in diameter would cost approximately $9 million.

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

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

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

FY 2018 Recommended Project

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

Program Alternative

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

Project Impact

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

Sewer Point Repairs	**FY 2018**	**$35,000**	**WS**
Public Sewers	**FY 2019**	**$35,000**	**WS**
	FY 2020	**$35,000**	**WS**
	FY 2021	**$35,000**	**WS**
	FY 2022	**$35,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2017	$	30,770
FY 2016	$	28,875
FY 2015	$	32,800
FY 2014	$	-
FY 2013	$	7,337

Program Description & Justification

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

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

Program Alternative

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

Project Impact

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

Northside Stormwater Management Project

TBD **$6,600,000** **WS**

Phase 2

○ Critical ◉ Recommended ○ Contingent on Funding

Project Description & Justification

In September 2014, the Village Board approved a contract to proceed with the construction of the Northside Stormwater Management Project (NSMP). This phased project will create a separation between the (new) storm sewer and the existing sanitary sewer in the area bound by Division Street, Harlem Avenue, North Avenue, and Thatcher Avenue. All phases of this project are financed with an Illinois Environmental Protection Agency (IEPA) low interest loan, which will be repaid via an increase in the sewer rate.

Upon realizing that the Illinois Department of Transportation planned to have Thatcher Avenue closed to traffic between Greenfield Avenue and North Avenue, Staff worked with Christopher Burke Engineering to expedite the portion of the NSMP that would involve construction along Thatcher Avenue. This work was identified as "Phase 0" and was completed in FY 2015. By moving this construction forward, no additional closures of Thatcher Avenue were needed during the NSMP construction.

Phase 1 (FY 2016) originally included the installation of a large-diameter storm sewer on Keystone Avenue and Greenfield Avenue (east to William Street). New storm sewers were also installed on Forest Avenue and all streets between Greenfield Avenue and Division Street. With the contractor being well ahead of schedule and under budget with the original Phase 1 scope of work, the determination was made to extend the large-diameter sewer installation on Greenfield Avenue up to Harlem Avenue. This will avoid the need for any additional closures on Greenfield Avenue for future (Phase 2) work. Phase 2 (timeframe TBD) includes the installation of storm sewers on all streets north of Greenfield Avenue from Park Avenue to Harlem Avenue.

The scope of work for both Phase 1 and Phase 2 also includes some water main installation and adjustments as well as small portions of new sanitary sewer installation. This work is necessary due to the numerous utility conflicts created by the installation of the new storm sewer.

Project Alternative

The alternative is to continue to maintain the existing combined system which causes significant street flooding and sewer backup during large rain events.

Project Impact

Annual $ Impact on Operating Budget	Description of Operating Budget Impact
$882,433	Principal and Interest on IEPA Loan

Water Distribution System - Pumping Station	**FY 2018**	**$19,000**	**WS**
	FY 2019	**$25,500**	**WS**
	FY 2020	**$19,000**	**WS**
	FY 2021	**$20,000**	**WS**
	FY 2022	**$20,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2017	$	15,600
FY 2016	$	15,832
FY 2015	$	49,100
FY 2014	$	-
FY 2013	$	-

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
- Forty valves
- Four meters: two for incoming water from the City of Chicago (located at an off-site location) and two for incoming/outgoing water at the Pumping Station
- Water treatment system (sodium hypochlorite)
- Two underground storage reservoirs
  - 2.0 million gallon storage capacity
  - 0.5 million gallon storage capacity
- Emergency generator: backup power source in the event of a power outage (see CERF).

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

Repair/Improvement	**Estimated Cost**		**Year**
Replace four water valves in basement of Pumping Station	$	19,000	FY 2018
Replace four water valves in basement of Pumping Station	$	18,000	FY 2019
2.0 MG Underground Reservoir: re-inspect exterior/interior	$	4,000	FY 2019
0.5 MG Underground Reservoir: re-inspect exterior/interior	$	3,500	FY 2019

Replace four water valves in basement of Pumping Station	$	19,000	FY 2020
Replace four water valves in basement of Pumping Station	$	20,000	FY 2021
Total	$	102,500	

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

	Description	**Problem**
Valve #2	12" Main shutoff for the outgoing supply line	Difficult to operate and leaks through
Valve #14	8" Discharge dump valve for pump #1	Leaking
Valve #16	8" Prime line valve for pump #2	Difficult to operate
Valve #15	8" Bypass through relief valve to .5 MG reservoir	Difficult to operate

Project Alternative

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

Project Impact

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

Water Meter Replacement Program	**FY 2018**	**$17,500**	**WS**
	FY 2019	**$17,000**	**WS**
	FY 2020	**$6,000**	**WS**
	FY 2021	**$7,500**	**WS**
	FY 2022	**$16,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

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

Program Description & Justification

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

FY 2018 Recommended Projects

Qty.	Size	Each	Cost
77	0.625	$ 118	$ 9,086
16	0.75	$ 137	$ 2,192
15	1	$ 162	$ 2,430
4	1.5	$ 479	$ 1,916
0	2	$ 673	$ -
112		**Total**	$ 15,624

Program Alternative

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

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

Project Impact

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

Water Main Replacement Program	**FY 2018**	**$450,000**	**WS**
	FY 2019	**$400,000**	**WS**
	FY 2020	**$400,000**	**WS**
	FY 2021	**$400,000**	**WS**
	FY 2022	**$400,000**	**WS**

◉ Critical ○ Recommended ○ Contingent on Funding

Spending History

FY 2017	$ 441,613
FY 2016	$ 17,600
FY 2015	$ 491,175
FY 2014	$ -
FY 2013	$ 116,416

Program Description & Justification

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

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

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

2018 Recommended Projects

Location	Pipe Length (FT)
River Oaks Drive and Auvergne Place	1,100

The proposed water main replacement project will include the replacement of the existing eight inch water main in on River Oaks Drive and Auvergne Place through open-cut/trench construction. Two valves will be replaced as part of this project, in addition to the fire hydrants in the area. The selection of this project area is due to a high number of water main breaks relative to other areas throughout the Village.

Completion of this project will enable the Village to abandon a section of six inch water main along the north parkway of Lake Street between River Oaks and Auvergne. This section of water main appears to have been left in place over time but is redundant within the water main system. By removing this section of water main and making the proper connections from the new fire hydrants and residences to the new water main, this will reduce the amount of unnecessary water main in the system by approximately 360 feet.

The cost estimate for this project is as follows:

- $375,000 for construction (design, permitting, and construction engineering to be performed in-house)
- $75,000 for the installation of concrete base and asphalt resurfacing of entire roadway.

Future Water Main Projects

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

- Increase the six inch main on Thatcher Avenue between Lake Street and Hawthorne Avenue to increase the flow across the railroad tracks at the west end of the Village.
  Estimated project cost: $300,000

Program Alternative

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

Project Impact

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

Hydrant Replacement Program	**FY 2018**	**$24,000**	**WS**
	FY 2019	**$24,000**	**WS**
	FY 2020	**$24,000**	**WS**
	FY 2021	**$24,000**	**WS**
	FY 2022	**$24,000**	**WS**

○ Critical ◉ Recommended ○ Contingent on Funding

Spending History

FY 2017	$	22,000
FY 2016	$	23,606
FY 2015	$	7,400
FY 2014	$	-
FY 2013	$	14,590

Program Description & Justification

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

2018 Recommended Project

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

Program Alternative

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

Project Impact

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

Parkway Pockets **FY 2018** **$20,000** **CIF**

○ Critical ○ Recommended ◉ Contingent on Funding

Project Description & Justification

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

2018 Recommended Project

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

Project Alternative

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

Project Impact

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