City of Lathrup Village

2021 Capital Improvement Plan

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PREPARED FOR:

CITY OF LATHRUP VILLAGE
PLANNING COMMISSION
27400 SOUTHFIELD ROAD
LATHRUP VILLAGE, MI
48076

FEBRUARY 2021

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Introduction

Introduction

The 2021-2026 City of Lathrup Village Capital Improvement Plan (CIP) will serve as a tool to assist the city in turning long-range policy planning into real improvements on the ground. A six-year capital improvement plan and an annual update of that plan is a requirement for the City of Lathrup Village under the Michigan Planning Enabling Act of 2008. The following report identifies the major capital improvements needed and/or planned for the community, the time frame for implementation of those improvements, and the budget and revenue sources that will make those improvements a reality. Capital improvements cover multiple departments within the City of Lathrup Village and include new facilities, water and sewer line replacements and improvements, police equipment, parks and recreation facilities, non-motorized pathways, and professional services.

Drainage ditch repair (Giffels Webster, 2020)

WHAT IS A CAPITAL IMPROVEMENT PLAN (CIP)?

A Capital Improvement Plan is a six-year schedule of public physical improvements which identifies the needs for improvements and the sources of funding to make those improvements. It provides a schedule of expenditures for constructing, maintaining, upgrading, and/or replacing a community's physical inventory. The CIP, therefore, is a tool to assess the long-term capital project requirements (the "big jobs") of Lathrup Village. Since capital improvement projects are spread across multiple community needs (fire protection, police, water and sewer, parks and recreation, municipal administration, etc.), the CIP prioritizes these projects across the entire community and over time, providing a comparison of the community's various needs and wants.

City Street in Lathrup Village (Giffels Webster, 2020)

WHAT ARE CAPITAL IMPROVEMENT PROJECTS?

Capital improvement projects are major and infrequent expenditures, such as the construction of a new facility, a major rehabilitation or repair of an existing facility, or the purchase of major equipment. Capital improvement projects are non-recurring expenditures that tend to be large both in physical size and in cost, and have a long-term usefulness (10 years or more) . Examples of capital improvement projects can include:

- Construction of a new city hall
- Construction of a new police station
- Extension or replacement of a water/sewer line
- Major rehabilitation of a city's community center
- Creation of a new city park
- Large equipment and vehicles

Lathrup Village DPS yard (Giffels Webster, 2020)

Each city department is asked to take a long view look at future initiatives or improvements that may require capital purchases in order to be fully implemented. Each department works to improve the manner by which the city delivers services to its residents and stakeholders. Lists of need are developed based on research and discussions with communities that have similar needs. The majority of the capital purchases in these categories are funded through the general fund or other dedicated city funds. Thorough knowledge and research of our future planned costs allows for the pursuit of grant and other outside funding sources to meet our policy goals. The following sections discuss the city's various needs and proposed funding by department.

The term "major expenditure" is relative; what is "major" to one community might be "minor" to another. The City of Ann Arbor, for example, sets a minimum threshold of $100,000 for projects to be included in the City's CIP, while the City of Rochester Hills sets a minimum of $25,000. Lathrup Village's policy for determining a Capital Improvement is defined in the following section.

WHAT IS THE CITY OF LATHRUP VILLAGE'S CAPITAL IMPROVEMENT POLICY (CIP)?

A capital improvement project is a major, nonrecurring expenditure that meets one of more of the following criteria:

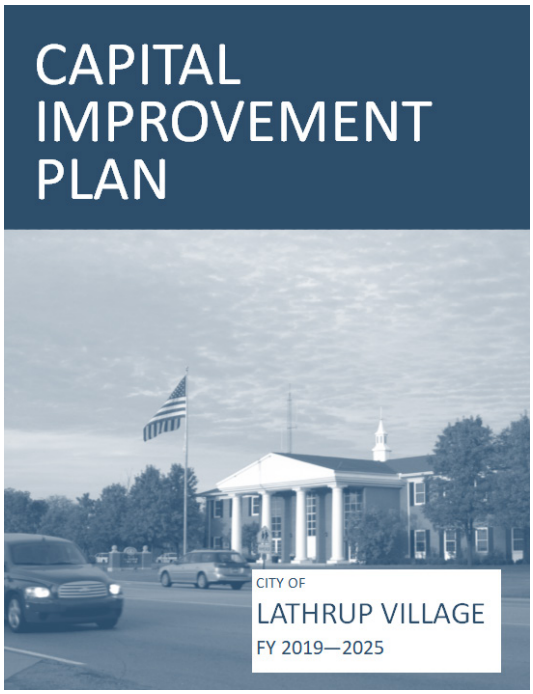
- Any acquisition of land for a public purpose which costs $5,000 or more.
- Any construction of a new public facility (city building, water/sewer lines, pathways), or any addition to an existing public facility, the cost of which equals $5,000 or more and has a useful life of three or more years.
- A nonrecurring rehabilitation (not to include annual/recurring maintenance) of a building, its grounds, a facility, or equipment, the cost of said rehabilitation being $5,000 or more with a useful life of three or more years.
- Purchase of major equipment which, individually or in total, cost $5,000 or more with a useful life of three or more years.

Planning, feasibility, engineering, or design studies related to an individual capital improvement project, or program implemented through individual capital improvement projects, with a cost of $5,000 or more and a useful life of three or more years.

Lathrup Village public safety vehicles (Giffels Webster, 2020)

WHAT IS THE ROLE OF THE CITY PLANNING COMMISSION IN THE CIP PROCESS?

The Capital Improvement Program is a dynamic planning document, intended to serve as a tool to implement the City of Lathrup Village's Master Plan. The Master Plan should correspondingly include capital improvement projects as well as guide long-term capital planning. The Planning Commission is uniquely qualified to manage the development and annual update of the City's CIP, based on their role in creating and updating the city's Master Plan. The Planning Commission's role will ensure that public works projects are consistent with the land uses identified within the Master Plan. By making a recommendation of approval for the CIP to the City Council, the Planning Commission agrees that the projects outlined within it reasonably address the city's capital improvement needs.



Lathrup Village 2019 CIP (Giffels Webster, 2020)

The CIP is an essential link between planning for capital improvement projects and budgeting for them. Once approved by the City Council, the CIP can be used to develop the capital project portion of the city's budget. Those projects included in the CIP's first year (2020) potentially form the basis for the upcoming year's capital project budget. As the CIP is annually updated, a continuous relationship will be maintained between the CIP and the city's annual budget. The annual update to the CIP will typically occur in advance of the preparation of the city's budget.

Lathrup Village DPS yard (Giffels Webster, 2020)

WHAT ARE THE BENEFITS OF PREPARING A CAPITAL IMPROVEMENT PLAN?

- Prudent use of taxpayer dollars
- Prioritizing projects across the needs of the community and across departments (an "apples-to-apples" comparison)
- Generating community support by inviting public input
- Promoting economic development
- Improving the city's eligibility for State and Federal grants
- Providing an implementation tool for the goals and objectives of the city's Master Plan
- Transparency in identification of high-priority projects
- Coordination / cost-sharing between projects

Damaged storm sewer culvert (Giffels Webster, 2020)

Program Areas

Program Areas

The following sections outline the Program Areas of the City of Lathrup Village's CIP:

1. Data Collection Process
2. Data Compilation Process
3. CIP Adoption Process

The components of the CIP are compiled and reported by Program Areas. The following table (Figure 1) displays the Program Areas used in this CIP (each assigned with a color). These program areas represent the stakeholders in the CIP.

FIGURE 1 CIP PROGRAM AREAS	
AD	Administrative
DPS	Department of Public Services
DDA	Downtown Development Authority
PR	Parks & Recreation
PD	Police Department
R	Roads
S	Sewer
W	Water

Sarackwood Park (Google, 2020)

1. DATA COLLECTION. Each of the stakeholders outlined above has either a master plan or schedule that defines the needs and resource level within their respective area of responsibility. To more easily identify projects, standard forms were created that allow the stakeholders to define their projects and resource allocation levels. The standard forms used for data collection are found in the Appendix.

Capital Project Request form

A definition of the standard CIP forms is provided as follows:

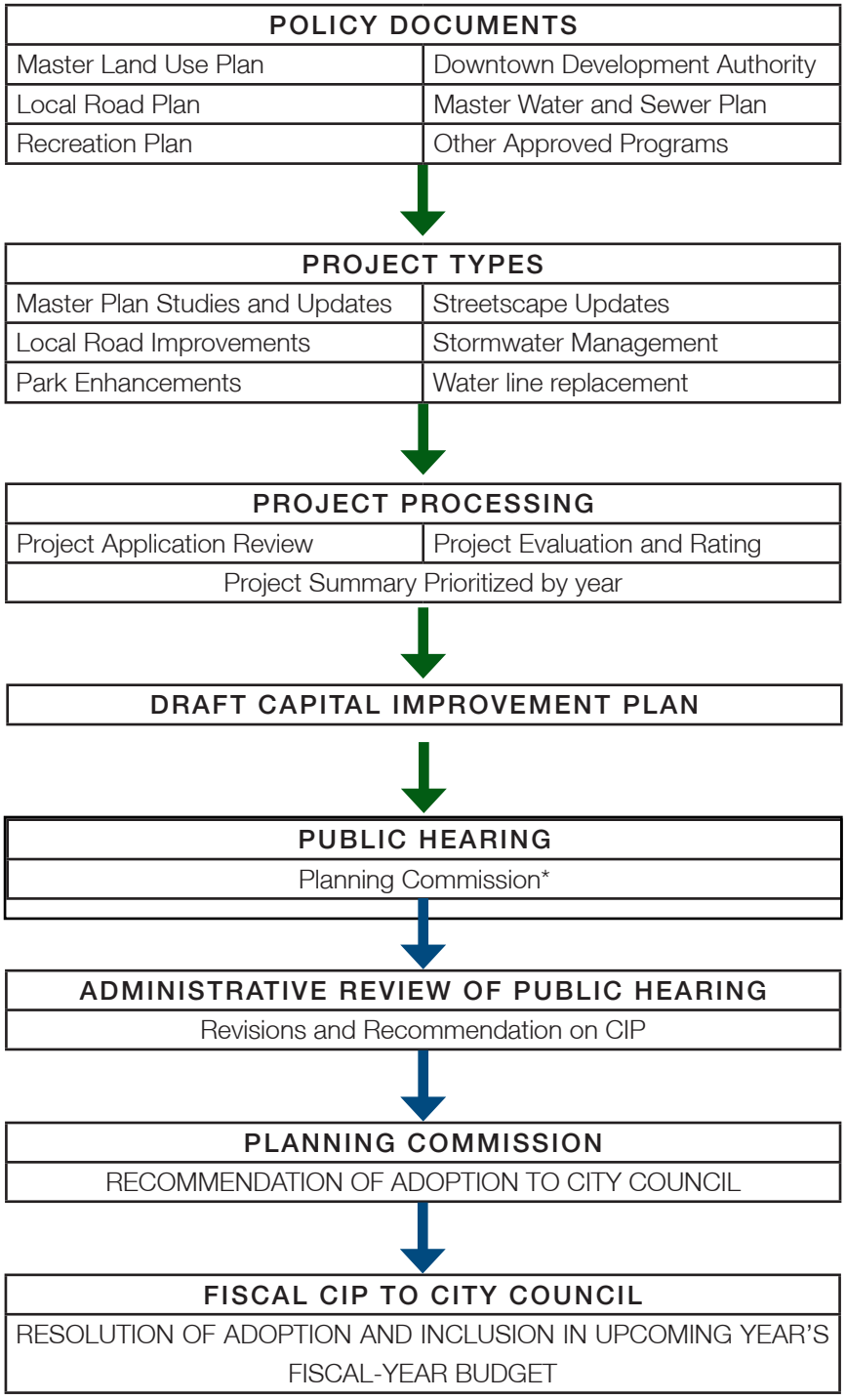
- **PROJECT APPLICATION FORM** - Consists of project descriptions, schedules, necessity, and possible sources of funding. The information provides an understanding of the overall scope of each project and how it is valued within its program area and within the City. While stakeholders may be aware of major projects further out on the horizon, only those planned for within the six-year window of the 2020-2026 CIP were included.
- **PROJECT COST DETAIL FORM** - Consists of a matrix of six (6) budget years across the top of the form and a listing of costing components along the side of the form. The form is split into two (2) parts; the upper half is the capital cost for the project and the lower half is the cost of operations or maintenance for that project if applicable. Recognition of the operations and maintenance costs of a project is a valuable tool in forecasting future needs for resource allocation. Investment in a new facility is only worthwhile if there are funds available to operate and maintain it.
- **PROJECT RATING FORM** - This form is used when new projects are identified but cannot all be funded within a given fiscal year. The forms are used to rate both the importance and impact of a project within its program area and within the city. The ratings are weighted with emphasis given to those projects that are mandated by law, by agreement, or because they are a matter affecting health safety and welfare. Projects without a ranking were not competing for funding, either because they are mandatory or because no other similar projects were proposed.

Lathrup Village welcome sign (Giffels Webster, 2020)

2. DATA COMPILATION. The information received from the stakeholders has been compiled into a Project Summary Worksheet. This worksheet contains all of the projects in the CIP over six (6) budget years with a cost summary of each budget year by program area and for the entire CIP. Included with the worksheet is the listing of possible funding sources and an estimate of the city's share for each project. The project summary worksheet can be found in the Appendix of this CIP.

Figure 2 - CIP Adoption Process

3. CIP ADOPTION PROCESS. The adoption process involves a public hearing to solicit citizen input. The CIP will then be modified (if necessary), approved by the city Planning Commission (via a formal recommendation for approval to the City Council), and forwarded to the City Council for adoption. Adoption of the CIP by the City Council does not constitute an authorization to commit resources to any project. This approval is recognition of a plan for projects within the community that may move toward implementation in the future. The projects included within Year 1 of the Capital Improvement Plan potentially form the basis for the upcoming year's capital projects budget. An outline of the process is displayed in Figure 2 on the following page.



Project Inventory

Below is a summarized list of all projects considered for the 2020 Capital Improvement Plan. Project details are shown on the following pages; they can also be viewed online via the **Interactive CIP Dashboard Map**.

Project Number	Name	Fiscal year start	Funding source	Total
Administrative				
AD21-01	Police Department building analysis	2021	General Fund	$10,000
AD21-02	City Hall Lobby Renovation	2021	General Fund	$30,000
AD21-03	City Hall Carpet Replacement	2021	TBD	$15,000
Administrative Total				**$55,000**
Department of Public Services (DPS)				
DPS21-01	Backhoe tractor (used)	2021/2022	TBD	$85,000
DPS21-02	Leaf Vac Conversion Kit	2021/2022	TBD	$8,000
DPS21-03	Pick Up Truck (plow ready)	2021/2022	TBD	$45,000
DPS21-04	Parking Lot Replacement Phase I	2021/2022	TBD	$51,000
DPS21-05	Parking Lot Replacement Phase II	2022/2023	TBD	$50,000
DPS21-06	Parking Lot Replacement Phase III	2023/2024	TBD	$50,000
DPS Total				**$289,000**
Downtown Development Authority (DDA)				
DDA21-01	Hanging Flower Baskets	2021/2022	DDA Funds	$9,225
DDA21-02	Alley feasibility study	2021/2022	DDA Funds	$8,500
DDA Total				**$17,725**
Parks and Recreation (P&R)				
PR21-01	Splash Pad Study and Planning	2021/2022	General Fund	$5,000
PR21-02	Goldengate Park Update Study and Planning	2021/2022	General Fund	$5,000
PR21-03	Replace Sarackwood Playground Equipment	2022/2023	TBD	$100,000
PR21-04	Acquisition and Development of SE Quadrant Park	2024/2025	TBD	TBD
P&R Total				**$110,000**
Police				
P21-01	Axon Taser	2021-2023	Police	$17,800
P21-02	Patrol Vehicle	2021/2022	Police	$45,000
P21-03	Mobile Data Computer Replacement	2022-2025	Police	$12,000
P21-04	New Portable Radios	2021/2022	Police	$30,000
P21-05	Body Cams	2021/2022	Police	$40,000
P21-06	Expanded Station	TBD	TBD	$1,500,000
See AD-01	New Police Station	TBD	Police	TBD
Police Total				**$1,640,350**

INTERACTIVE CIP DASHBOARD URL:

https://oakgov.maps.arcgis.com/apps/opsdashboard/index.html#/45dd43a3429a404b9d8287f40d2e7d57

Project Inventory - continued

Project Number	Name	Fiscal year start	Funding source	Total
Roads				
R21-01	Bond Paving Program	2021/2022	Paving Bond Issue	$5,845,000
R21-02	Local Road Paving Program	2021/2022	Local/Major Road Fund	$88,000
R21-03	Culvert Jet Cleaning	2021/2022	CIP Bond Issue	$30,000
R21-04	Ditches	2022/2023	CIP Bond Issue	$300,000
R21-05	Sidewalks	2022/2024	CIP Bond Issue	$20,000
Roads Total				**$6,283,000**
Storm Sewer				
21-01	2021 Retention Tank Upgrades	2021 / 2022	CIP Bond Issue	$550,000
21-02	Sanitary Sewer Repairs	2022 / 2022	CIP Bond Issue	$480,000
21-03	2021 EFSDS CAP Projects	2021/2022	Water / Sewer Fund	$2,080,800
21-04	2022/2023 Storm Sewer CCTV	2022/2023	TBD	$360,000
21-05	2023 Sewer Improvements	2023 / 2024	CIP Bond Issue	$120,000
21-06	2024 Sewer Improvements	2024 / 2025	CIP Bond Issue	$120,000
21-07	2025 Sewer Improvements CCTV	2025 / 2026	Water / Sewer Fund	$180,000
Storm Sewer Total				**$3,890,800**
Water				
W21-01	Lead and Copper Exterior Identification	2021 - 2023	CIP Bond Issue	$1,320,000
W21-02	Water Main Replacement	2021 - 2023	CIP Bond Issue	$1,360,000
W21-03	Lead & Copper Service Line Replacement	2021 - 2024	CIP Bond Issue	$500,000
W21-04	Fire Hydrants Replace / Refurbish	2021 - 2023	CIP Bond Issue	$552,000
W21-05	Gate Valve Replacement	2021 - 2023	CIP Bond Issue	$972,000
W21-06	Water Meter Replacement	2021 / 2022	CIP Bond Issue	$1,660,000
W21-07	Water Main Replacement	2025/2026	Water/Sewer Fund	$800,000
W21-08	Planned Use of Water/Sewer fund projects	2021/2024	Water/Sewer Fund	$1,000,000
Water Total				**$8,164,000**

INTERACTIVE CIP DASHBOARD URL:

https://oakgov.maps.arcgis.com/apps/opsdashboard/index.html#/45dd43a3429a404b9d8287f40d2e7d57

Administrative

The City Administrator is responsible for the efficient administration of all City Departments, ensuring all laws and ordinances are enforced, development of an annual budget, and maintenance of an accounting system that shall conform with the laws and generally accepted accounting principles. The administrative departments include the office of the City Administrator, Treasurer, City Clerk, and the City's boards and commissions. This category also includes general inter-departmental needs such as copiers, printers and other office equipment.

AD21-01		Police Department Building Analysis
Project Year:	2021-2021	A study is need to determine where a larger police building could possibly be located. A larger facility is needed to accommodate growth - the current station is at capacity.
Estimated Cost:	$10,000	
Funding Source:	General Fund	
Ranking:	TBD	
AD21-02		City Hall Lobby Renovation
Project Year:	2021-2021	Our City Hall building provides a first-impression for new residents and is a space that many Villagers visit monthly. Currently, the lobby of City Hall gives the impression that it is dark, dirty and dated. Additionally, City Office and Police Department counters are not ADA compliant.
Estimated Cost:	$30,000	
Funding Source:	General Fund	
Ranking:	TBD	
AD21-03		City Hall Carpet Replacement
Project Year:	2021-2021	
Estimated Cost:	$15,000	
Funding Source:	General Fund	
Ranking:	TBD	

Department of Public Services

Lathrup Village has maintained a contract with the private company Lathrup Services to manage all of its public service provisions. Services such as water main repair, snow plowing, landscaping and general maintenance and repairs fall into this category.

DPS21-01		Backhoe Tractor
Project Year:	2021-2022	Current tractor is 12 years old and in need of replacement.
Estimated Cost:	$,000	
Funding Source:	General Fund	
Ranking:	TBD	
DPS21-02		Leaf Vac Conversion Kit
Project Year:	2021-2022	Newest vac is three years old; next oldest is 12 years old and needs to be moved to backup status to ensure continuation of leaf program. Current tractor is 12 years old and in need of replacement.
Estimated Cost:	$8,000	
Funding Source:	General Fund	
Ranking:	TBD	
DPS21-03		Pick-Up Truck (Plow Ready)
Project Year:	2021-2022	
Estimated Cost:	$45,000	
Funding Source:	General Fund	
Ranking:	TBD	
DPS21-04		Parking Lot Replacement (Phase I of III)
Project Year:	2022/2023	Entire DPS parking lot is falling apart and salt/dirt are getting into the storm sewers. It is hard to maneuver and is unsafe.
Estimated Cost:	$51,000	
Funding Source:	General Fund	
Ranking:	TBD	
DPS21-05		Parking Lot Replacement (Phase II of III)
Project Year:	2022/2023	Entire DPS parking lot is falling apart and salt/dirt are getting into the storm sewers. It is hard to maneuver and is unsafe.
Estimated Cost:	$50,000	
Funding Source:	General Fund	
Ranking:	TBD	
DPS21-06		Parking Lot Replacement (Phase III of III)
Project Year:	2023/2024	Entire DPS parking lot is falling apart and salt/dirt are getting into the storm sewers. It is hard to maneuver and is unsafe.
Estimated Cost:	$50,000	
Funding Source:	General Fund	
Ranking:	TBD	

Downtown Development Authority - Equipment

The DDA has proposed improvements to Southfield Road at the gateways to the City as incremental improvements while the Southfield Road improvement project awaits federal funding priority. These projects will bolster economic development efforts to keep Lathrup Village competitive and attractive for business development. Streetlight Improvements include transitioning street lights to LEDs and installment of additional streetlights in the Village Center, which will improve lighting and create a more walkable, safe, downtown.

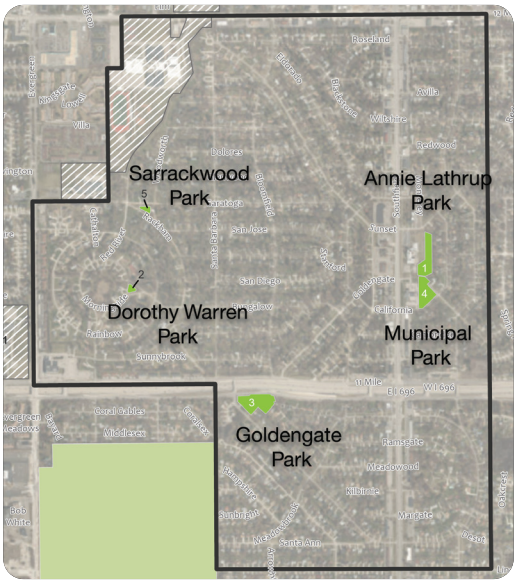
DDA21-01		Hanging Flower Baskets
Project Year:	2020/2021- 2025/2026	Purchase of Flower baskets, soil and flowers
Estimated Cost:	$9,255	
Funding Source:	DDA Funds	
Ranking:	3	
DDA21-02		Light Pole Banners
Project Year:	2021/2022	
Estimated Cost:	$8,500	
Funding Source:	DDA Funds	
Ranking:	3	

Existing Light pole banner on Southfield Road (Giffels Webster, 2020)

Parks and Recreation

The Recreation Department includes upgrades to City Parks, Community Room, and Fitness Center. The City's parks are in need of restoration and upgrades to maintain safety and accessibility. Several parks are in need of additional wood chips and landscaping around play equipment in order to ensure safety of use. Drainage improvements around recreational amenities are additionally needed to reduce instances of standing water and to protect accessibility.

PR20-01		Splash Pad Study and Planning
Project Year:	2021/2022	Determine if a splash pad would be a good investment for the city, what the best location would be and what it would cost.
Estimated Cost:	$5,000	
Funding Source:	General Fund	
Ranking:	TBD	
PR20-02		Goldengate Park Update Study and Planning
Project Year:	2021/2022	
Estimated Cost:	$5,000	
Funding Source:	General Fund	
Ranking:	TBD	
PR20-03		Replace Sarackwood Playground Equipment
Project Year:	2021/2022	Funds will only be utilized if a Recreation Passport Grant is awarded to the City. If awarded, 75% ($75,000) would be reimbursed. Total cost after installation, final inspection and grant reimbursement would be $25,000.
Estimated Cost:	$100,000	
Funding Source:	General Fund and Grant	
Ranking:	TBD	
PR20-04		Acquisition and Development of SE Quadrant Park
Project Year:	TBD	Acquire the land and develop a park in a currently vacant, private-owned property lot in the Southeast quadrant of the city. The lot is a little less than an acre in size. Project cost would depend on the types of features desired in the park.
Estimated Cost:	TBD	
Funding Source:	TBD	
Ranking:	TBD	



Police

The Lathrup Village Police Department offers full policing services to its residents including routine patrol, traffic enforcement, detective services, community relations, and other specialized functions. Lathrup Village holds the distinction of being one of the Oakland County's safest cities.

P21-01		Axon Taser
Project Year:	2020 - 2023	Tasers increase officer safety and reduce liability to department by reducing lethal force. This funding request is for two years at $4,450 per year.
Estimated Cost:	$17,800	
Funding Source:	Police	
Ranking:	TBD	
P21-02		Patrol Vehicle
Project Year:	2021/2022	Need to replace older unit in fleet
Estimated Cost:	$45,000	
Funding Source:	Police	
Ranking:	TBD	
P21-03		Mobile Data Computer Replacement
Project Year:	2022 - 2025	$3,000 per year for four (years)
Estimated Cost:	$12,000	
Funding Source:	Police	
Ranking:	TBD	
P21-04		Mobile Radios
Project Year:	2021/2022	Police communication equipment is needed for patrol vehicles and offices prep radios
Estimated Cost:	$30,000	
Funding Source:	Police	
Ranking:	TBD	
P21-05		Body Cams
Project Year:	2021/2022	
Estimated Cost:	$40,000	
Funding Source:	Police	
Ranking:	TBD	
P21-06		Expanded Police Station
Project Year:	Ongoing	A study is need to determine where a larger police building could possibly be located. A larger facility is needed to accommodate growth - the current station is at capacity.
Estimated Cost:	$1,500,000	
Funding Source:	Police	
Ranking:	TBD	

Roads

The City of Lathrup Village has 26.2 miles of local roads and 7.36 miles of major streets. In November 2020, Lathrup Village Voters passed a millage for road and ditch repair to address the urgent needs of the transportation system. The millage funds a three-year project beginning in the spring of 2021 that will take three years to complete. The project will be paid for by the issuance of a bond twill be paid back over 10 years with an average millage rate of 3.9176 mills. Due to the significant cost savings, this project includes ditch grading, culvert replacement and culvert cleaning. These additional tasks will ensure that the new roads will achieve their maximum lifespan and improve the flooding after moderate to significant rains.

S21-01		Bond Paving Program
Project Year:	2021-2022	2021/2022: 2022/2023: 2023/2024:
Estimated Cost:	$5,845,000	
Funding Source:	CIP Bond	
Ranking:	TBD	
S21-02		Local Road Paving Program
Project Year:	2021-2022	Locations TBD
Estimated Cost:	$88,000	
Funding Source:	Local/Major Road Fund	
Ranking:	TBD	
S21-03		Culvert Jet Cleaning
Project Year:	2021-2022	
Estimated Cost:	$30,000	
Funding Source:	CIP Bond	
Ranking:	TBD	
S21-04		Ditch Repair Program
Project Year:	2022-2023	
Estimated Cost:	$300,000	
Funding Source:	CIP Bond	
Ranking:	TBD	
S21-05		Sidewalk repair
Project Year:	2022-2024	
Estimated Cost:	$20,000	
Funding Source:	CIP Bond	
Ranking:	TBD	

Sewer

SANITARY SEWER

The Lathrup Village sanitary sewer system consists of approximately 145,000 linear feet (lft) of sewers ranging in size from 8 inch to 24 inches in diameter. Of the 145,000 lft of sewer, the older portion of the system is comprised of approximately 118,900 (82%) of vitrified clay pipe, while the newer portion of the system is comprised of approximately 26,100 (18%) lft of concrete pipe. Constructed in the 1920's as a combined sewer system, the city converted it to a dedicated sanitary sewer system in the 1960's (meaning that storm water and sanitary water are not permitted to mix). It is believed that all residents and businesses within the city are connected to the sanitary sewer and there are no active septic systems. Since the City of Lathrup Village reached its full development capacity the sanitary sewer system covers the entire city with no need for expansion.

During the construction of I-696, the system was severed and divided into a northern and a southern system that are metered and discharged into the Evergreen Farmington Sewage Disposal System (EFSDS). The sewer system north of I-696 is routed to a 3-million-gallon retention tank which is located at the west end of Sunnybrook, near Evergreen Road north of I-696. This facility is currently receiving significant maintenance and repair in order to safeguard the operation of the system.

Lathrup Village has invested heavily over the past couple of decades in its sanitary sewer system. As a result, the system is in good condition, but it does require maintenance to keep it from degrading. In the fall of 2020, the City invested in having 30,000 linear feet of sewer pipe inspected via closed circuit television. As a result of this process, the City Engineer recommended budgeting approximately $120,000 for necessary repairs for each of the next four years.

Sanitary Retention Tank

Lathrup Village has its own sanitary retention tank that is used to store inflow from the sanitary sewer system when the inflow rate is greater than the rate at which we are permitted to outflow to the Evergreen-Farmington Sewer Disposal System (EFSDS). In the past, there have been instances where the retention tank has filled up and the City was forced to allow the tank to overflow. As a result, the City is under a Consent Decree from the Michigan Department of Environment, Great Lakes and Energy (EGLE). In 2019, the city outsourced the operations and maintenance of the retention tank to the Oakland County Water Resource Commission (OCWRC). The County has notified us that the retention tank requires approximately $500,000 in maintenance and repairs for safety and upgrades in order to obtain compliance with the Consent Decree.

STORM SEWER

Of the four infrastructure categories of public infrastructure (sanitary sewer, storm sewer, roads and water), the city's storm sewer system has received the least amount of resources and attention in the last decade. Upkeep of ditches, culverts, and drains found in the right-of-way is, by City ordinance, the responsibility of the adjoining property owner.

For many blocks, ditches have not been properly maintained and the culverts have become damaged or have been shifted by the freeze/thaw cycle rendering them unable to perform their function. The result is a storm system that functions at a level below full capacity and leaves standing water in ditches for days following rainstorms. Poor maintenance on culverts have left them slow to drain or impassible, preventing storm water from reaching the proper drains which send water to the Rouge River. The current state of the storm and ditch system impacts the subsurface ground water levels and the volume of flow in the city's sanitary sewer system.

Sewer

S21-01		Retention Tank Repairs
Project Year:	2021-2022	The retention tank requires approximately $500,000 in maintenance and repairs for safety and upgrades
Estimated Cost:	$550,000	
Funding Source:	CIP Bond	
Ranking:	TBD	
S21-02		Sanitary Sewers Repairs
Project Year:	2021-2024	
Estimated Cost:	$480,000	
Funding Source:	CIP Bond	
Ranking:	TBD	
S21-03		EFSDS CAP Projects
Project Year:	2022-2023	The EFSDS is now a Chapter 20 Drain, entitled "Evergreen-Farmington Sanitary Drain (EFSD). The City share of the project cost is estimated at $2,080,800. The annual debt service is $133,477.
Estimated Cost:	$2,080,800 ($133,477 annually)	
Funding Source:	Sewer Fund	
Ranking:	TBD	
S21-04		2022 Storm Sewer CCTV
Project Year:	2022-2023	Perform CCTV inspection on sewer pipes.
Estimated Cost:	$360,000	
Funding Source:	Sewer Fund	
Ranking:	TBD	
S21-05		2023 Sewer Improvements
Project Year:	2023-2024	
Estimated Cost:	$120,000	
Funding Source:	CIP Bond	
Ranking:		
S21-06		2024 Sewer Improvements
Project Year:	2024-2025	
Estimated Cost:	$120,000	
Funding Source:	CIP Bond	
Ranking:		
S21-07		2023 Sewer Improvements CCTV
Project Year:	2025-2026	
Estimated Cost:	$120,000	
Funding Source:	Water/Sewer Fund	
Ranking:		

Water

Lathrup Village has approximately 31 miles of water main. Of that mileage, 17 miles of water main were installed prior to 1930 with the remaining 24 miles installed prior to 1972. The expected life of a water main is approximately 50 years. Because most of the system has already significantly outlived its useful life, the City experiences a much larger than expected number of costly water main breaks each year.

The City has been addressing this issue on an ongoing basis. In the fall of 2020, the City completed the Santa Barbara water main project, which installed about a mile of new water main to increase pressure and volume to the west side of the City. However, a large portion of the water system still needs to be replaced. As discussed in a prior recommendation, the opportune time to replace water main is simultaneous to road replacement. This dramatically reduces the cost of water main replacement and also eliminates any need to damage existing roadway in order to replace water main. The residents recently approved a three year road replacement project and it is recommended that the City replace as much water main as possible during this three-year project.

Fire Hydrants

Lathrup Village has approximately 243 fire hydrants and approximately 60% of those were installed prior to 1930. The City estimates that 120 hydrants need to be replaced or refurbished in order to provide optimal functionality should their use be required to extinguish a fire. It is estimated that 60 hydrants will need to be replaced and 60 will be able to be refurbished. The estimated cost per hydrant is $4,540. This equates to a total project cost of $545,000. The recommendation is to address 40 hydrants per year for the next three years. Completing this project (along with water main improvements) will help to improve safety and ultimately improve the City's fire rating, which should result in lower insurance rates for businesses and residents.

Water Main Gate Valves

Gate valves are used to provide isolation capability for water mains. When water mains require maintenance or repair, a gate valve can be closed to shut off the water supply to the water main in question. Lathrup Village has over 300 gate valves of which 60% were installed prior to 1930. Due to their age, a large number of these gate valves no longer function. This is huge problem, especially because of the large number of water main breaks the City experiences every year. In many instances, when a water main breaks, the contractor cannot shut off the water upstream because of a non-functioning gate valve. This means the repair must be done under pressure, which results in added expense for the repair, additional time that residents are without water, excessive water loss for which the City is liable, and safety risk for the water department staff. The City Engineer estimates that 162 gate valves require replacement. The cost of each replacement is estimated to be $5,925, which equates to $960,000 for the entire project. The 2021 CIP plans to replace 54 gate valves per year for the next three years.

Water

Distribution Service material Inventory (DSMI) and Lead\Galvanized Water Service Abatement

In response to the Flint water crisis, the State of Michigan adopted a variety of new regulations related to lead in the water system. As a result of these regulations, by 2025, the City is required to identify the material of all water service pipes leading into all homes and businesses in the City. Any service line that consists of lead or galvanized steel is required to be replaced with the cost born completely by the City. Starting in 2021, the City must replace a minimum of 5% of its lead/galvanized service lines each year for the next 20 years.

Lead and Copper Exterior Identification

Service line material verification is required at both the water stop box (usually by the sidewalk in front of each home) and where the water service physically enters the home/business. The City has already launched a self-identification campaign for residents to identify the material inside their homes and businesses. Identifying the material at the stop box is a significantly more intensive process. It requires digging five feet down on both sides of the stop box and visually inspecting the pipes leading to and going from the stop box for 18 inches on each side. The estimated cost for each stop box identification is $650. This estimate includes repairing the sidewalk when it is damaged during the identification process. In addition, most of the stop boxes in the City are over 75 years old and do not function well or at all. Because most of the work to replace the stop box will already be completed in the identification process, it is the opportune time to replace these old and failing devices. The additional cost to replace each stop box is $75, bringing the total cost to $725 per water service line. It is estimated that there will be 1,600 services to be verified and are anticipating conducting 500 verifications per year starting in 2021. Based on these numbers, the estimate to complete this project is $1.16M.The City will also be applying for grant money to help defray some of these costs.

In addition, the City will be required to replace the lead and galvanized lines that are identified via the aforementioned methods. The cost of this abatement is estimated to run about $4,500 to $5,000 per line. While there is no way to accurately estimate how many lead and galvanized lines there are in the City, it does initially appear to be relatively low. The CIP is budgeting approximately to $500,000 be utilized for this abatement.

Water Loss and Water Meters

Over the last five to ten years, the City has had larger than expected water losses. Lathrup Village purchases its water from Southeast Oakland County Water Authority (SOCWA), who meters the volume that the entire City uses. The City, in turn, bills residents and businesses based upon their individual metered usage. The discrepancy between these two meter readings has grown to 40%. This means the City is footing the bill for 40% of the City's water usage without reimbursement totaling a loss of over a quarter million dollars each year. While water loss is expected due to a variety of conditions (water main breaks, fire hydrant flushing, etc.), the rate should typically be closer to 20%. SOCWA has verified its meters are working correctly and the City has not found any significant areas of continued water loss outside of normal loss channels.

The primary area of concern lies with the water meters that are used in the City. Like most of the infrastructure, the city's water meters are quite old. It is very common for older meters to lose their accuracy and under-record actual usage. As such, all water meters in the City will be replaced. There are approximately 1,785 meters in use and the estimated cost of replacement and installation is $860,000.

Water

W21-01		Lead and Copper Exterior Identification
Project Year:	2021-2023	The City is required to identify the material of all water service pipes leading into all homes and businesses in the Cit by 2025.
Estimated Cost:	$1,320,000	
Funding Source:	CIP Bond	
Ranking:	TBD	
W21-02		Water Main Repair Program
Project Year:	2021-2023	2021: Wiltshire & San Rosa 2022 & 2023: Goldengate, Bloomfield & Glenwood
Estimated Cost:	$1,360,000	
Funding Source:	CIP Bond	
Ranking:	TBD	
W21-03		Lead and Copper Service Line Replacement
Project Year:	2021-2024	The City will be required to replace the lead and galvanized lines that are identified in the lead and copper exterior identification. The cost of this abatement is estimated to run about $4,500 to $5,000 per line.
Estimated Cost:	$500,000	
Funding Source:	CIP Bond	
Ranking:	TBD	
W2-04		Fire Hydrant Replacement / Refurbish
Project Year:	2021-2023	It is estimated that 60 hydrants need to be replaced and 60 will be able to be refurbished.
Estimated Cost:	$552,000	
Funding Source:	CIP Bond	
Ranking:	TBD	
W21-05		Gate Valve Replacement
Project Year:	2021-2023	The City's gate valves are very old and do not close correctly. Budget for the replacement of 27 valves per year for 6 years to replace all gate valves installed before 1930 . Useful life is 50 years
Estimated Cost:	$972,000	
Funding Source:	CIP Bond	
Ranking:	TBD	
W21-06		Water Meter Replacement
Project Year:	2021-2022	Replace 1,600 boxes @ $725 per box
Estimated Cost:	$1,660,000	
Funding Source:	CIP Bond	
Ranking:	TBD	

Water

W21-07		Water Main Replacement
Project Year:	2025-2026	
Estimated Cost:	$800,000	
Funding Source:	Water/Sewer Fund	
Ranking:	TBD	
W21-08		Planned Use of Water/Sewer fund projects
Project Year:	2021-2024	
Estimated Cost:	$1,880,000	
Funding Source:	Water/Sewer Fund	
Ranking:	TBD	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