

# CAPITAL IMPROVEMENT PLAN



CITY OF

**LATHRUP VILLAGE**

FY 2019—2025

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# Introduction

## Introduction

The 2019-2025 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 timeframe 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.

### 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.



*Infrastructure improvements*



*Goldengate Park*

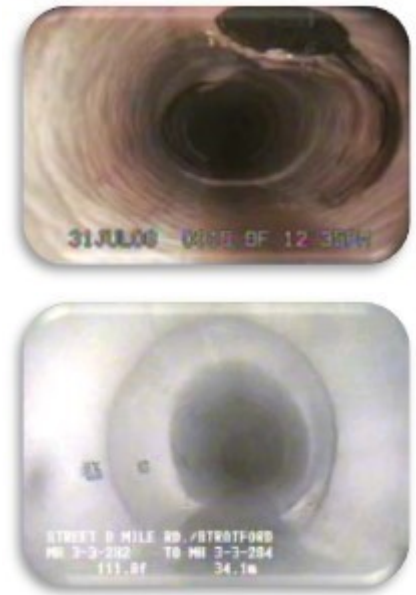
## What are Capital Improvement Projects?

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

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. Wish lists 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.



*Example of Sewer Rehab (before and after)*

## What is City of Lathrup Village’s Capital Improvement Policy?

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

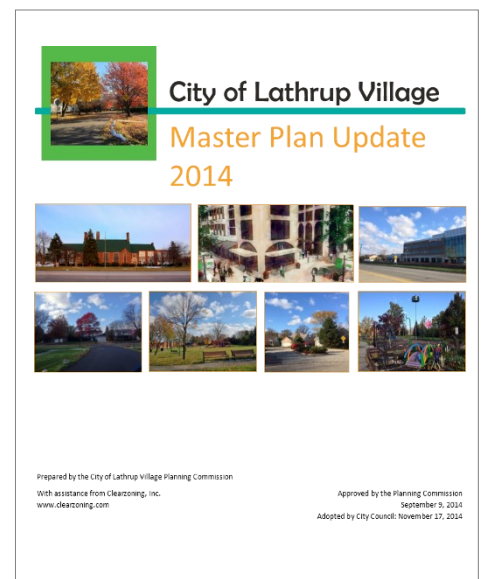
- Any acquisition of land for a public purpose which costs \$5,000 or more.
- Any construction of a new public facility (city building, water/sewer lines, pathways), or any addition to an existing public facility, the cost of which equals \$5,000 or more and has a useful life of three or more years.
- 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.

## 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 City Hall*



*City of Lathrup Village Master Plan*

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 (2019) 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.

### **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



*Book share in Lathrup Village Park*



*City of Lathrup Village Police Department  
Patrol Vehicle*

# 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                          |

## 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.

In 2018, before projects were ranked, a subcommittee consisting of three planning commission members was selected to oversee the project ranking process. A meeting with the subcommittee and other involved stakeholders was convened, where the CIP and ranking process was explained in detail. Projects were then scored using the project ranking forms found in the appendix. Because the 2019 updated CIP is not significantly different than last year, the subcommittee did not meet in 2019, but the full PC did review the draft CIP twice before the public hearing.

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 2019-2025 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.



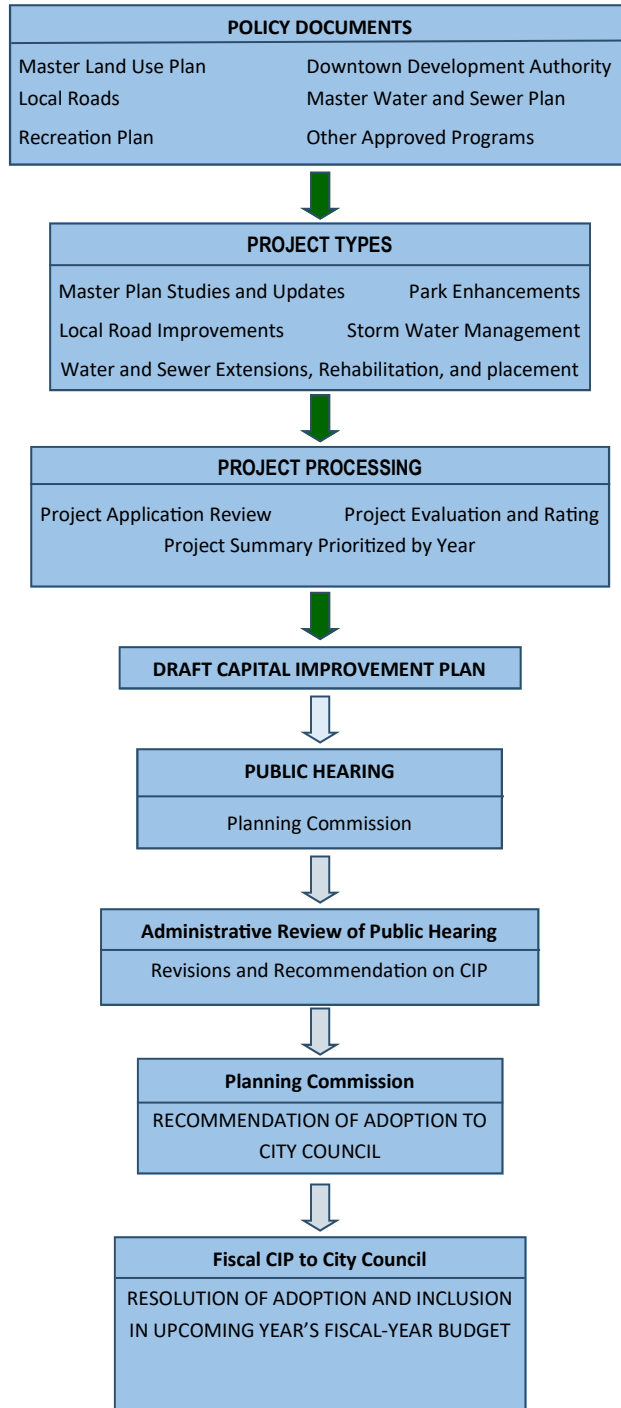
*Repaving Meadowbrook Way (before: top, and after: bottom)*

**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.

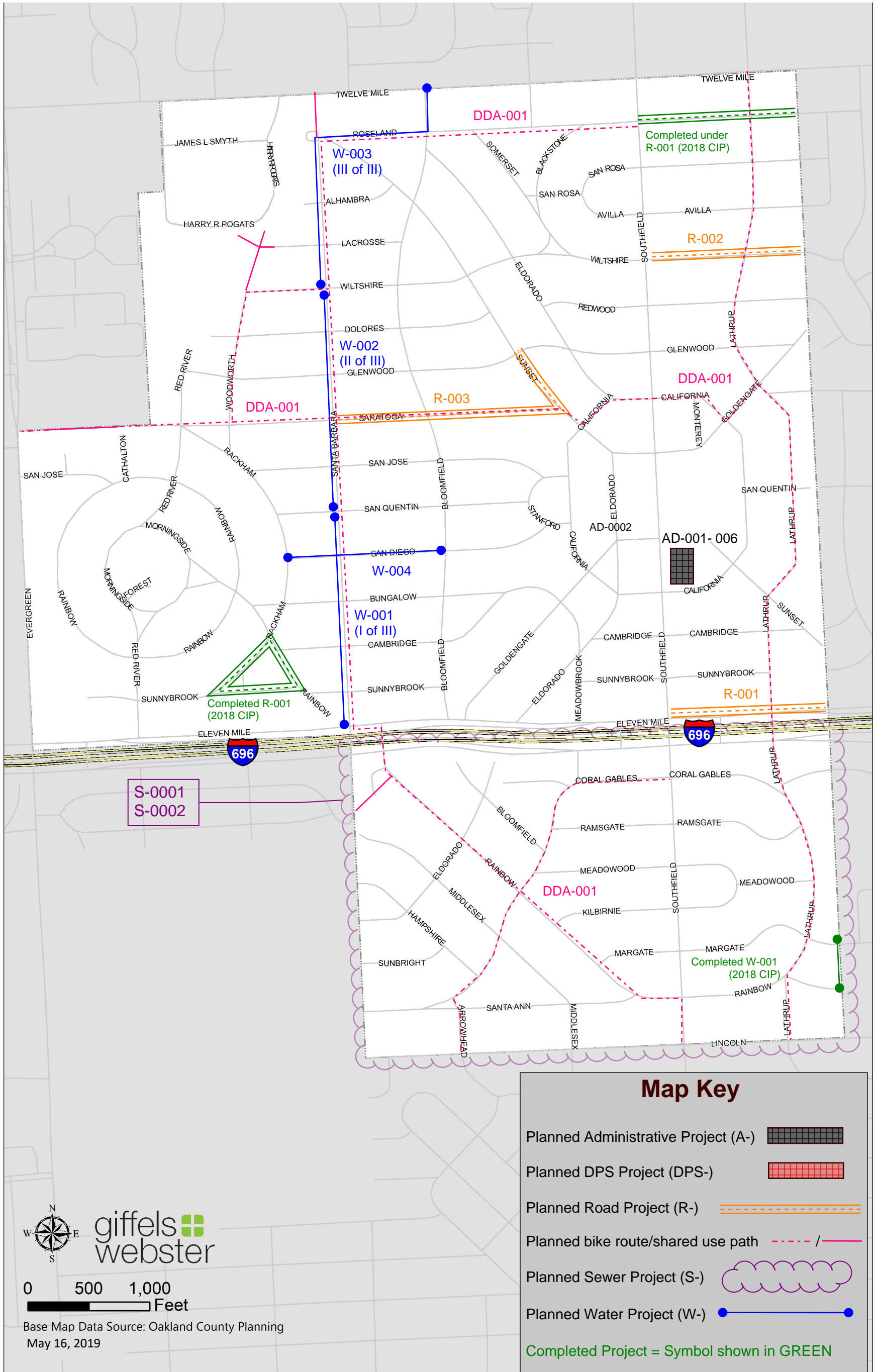
**3. CIP Adoption Process.** The adoption process involves a public hearing to solicit citizen input. The CIP will then be modified (if necessary), approved by the city Planning Commission (via a formal recommendation for approval to the City Council), and forwarded to the City Council for adoption. 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.



# FIGURE 2 - CIP ADOPTION PROCESS



# 2019 CIP Project Map



0 500 1,000 Feet

Base Map Data Source: Oakland County Planning  
May 16, 2019

### Map Key

- Planned Administrative Project (A-)
- Planned DPS Project (DPS-)
- Planned Road Project (R-)
- Planned bike route/shared use path
- Planned Sewer Project (S-)
- Planned Water Project (W-)
- Completed Project = Symbol shown in GREEN

*Intentionally blank*

# 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.

|                                |  |
|--------------------------------|--|
| <b>AD-001</b>                  | <b>Server</b>  |
| <b>Project year:</b> 2019—2020 | Server will become ineligible for upgrades. Need to upgrade this critical piece of equipment.  |
| <b>Est. Cost :</b> \$7,500     |  |
| <b>Funding:</b> General Fund   |  |
| <b>Ranking</b> TBD             |  |
| <b>AD-002</b>                  | <b>Office Equipment</b>  |
| <b>Project year:</b> 2019—2020 | Ongoing replacement and upgrading of computers.  |
| <b>Est. Cost :</b> \$5,000     |  |
| <b>Funding:</b> General Fund   |  |
| <b>Ranking</b> TBD             |  |
| <b>AD-003</b>                  | <b>Cable TV Equipment</b>  |
| <b>Project year:</b> 2019—2020 | Bring in house the recording of events instead of renting or contracting for the equipment. Looking at the initial purchase of two cameras instead of the three on the estimate                  |
| <b>Est. Cost :</b> \$15,000    |  |
| <b>Funding:</b> General Fund   |  |
| <b>Ranking</b> TBD             |  |
| <b>AD-004</b>                  | <b>Community Room—Kitchen Rehab</b>  |
| <b>Project year:</b> 2019—2020 | This space gets a lot of usage for events and rentals and needs updating. The kitchen in particular has drawers and cabinets that are falling off and the locks need to be replaced.             |
| <b>Est. Cost :</b> \$7,500     |  |
| <b>Funding:</b> General Fund   |  |
| <b>Ranking</b> TBD             |  |
| <b>AD-005</b>                  | <b>Generator</b>   |
| <b>Project year:</b> 2019—2020 | City Hall has experienced frequent power outages, resulting in having to close offices and the loss of rental income. Emergency generator would allow for basic functions to remain operational. |
| <b>Est. Cost :</b> \$15,000    |  |
| <b>Funding:</b> General Fund   |  |
| <b>Ranking</b> TBD             |  |
| <b>AD-006</b>                  | <b>City Hall—2nd floor carpet</b>  |
| <b>Project year:</b> 2019—2020 | Carpet has become worn and is creating a trip hazard.  |
| <b>Est. Cost :</b> \$5,000     |  |
| <b>Funding:</b> General Fund   |  |
| <b>Ranking</b> TBD             |  |

|                                |   |
|--------------------------------|---|
| <b>AD-007</b>                  | <b>BS&amp;A Software</b>                            |
| <b>Project year:</b> 2019-2020 | Project and property information tracking software. |
| <b>Est. Cost :</b> \$5,000     |   |
| <b>Funding:</b> General Fund   |   |
| <b>Ranking</b> 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.

|                         |   |
|-------------------------|---|
| <b>DPS-001</b>          | <b>New Parking Lot—DPS Building</b>   |
| Project year: 2020-2021 | DPS parking lot is falling apart and salt/dirt are getting into the storm sewers. It is hard to maneuver and is unsafe.                   |
| Est. Cost: \$40,000     |   |
| Funding: General Fund   |   |
| Ranking TBD             |   |
| <b>DPS-002</b>          | <b>Rear Parking Lot Resurfacing</b>   |
| Project year: 2021-2022 | Lot is falling apart—thin blacktop should be concrete.  |
| Est. Cost: \$7,500      |   |
| Funding: General Fund   |   |
| Ranking TBD             |   |
| <b>DPS-003</b>          | <b>Metal Roof for DPS Building</b>  |
| Project year: 2021-2022 | Roof of DPS building leaks and needs to be patched every year.  |
| Est. Cost : \$30,000    |   |
| Funding: General Fund   |   |
| Ranking TBD             |   |
| <b>DPS-004</b>          | <b>Covered Parking—DPS Building</b>   |
| Project year: TBD       | Outside covered parking for equipment would help extend the life of equipment.  |
| Est. Cost : TBD         |   |
| Funding: General Fund   |   |
| Ranking TBD             |   |
| <b>DPS-005</b>          | <b>Backhoe Tractor</b>  |
| Project year: 2020-2021 | Current tractor is 12 years old and in need of replacement.   |
| Est. Cost : \$80,000    |   |
| Funding: General Fund   |   |
| Ranking TBD             |   |
| <b>DPS-006</b>          | <b>Leaf Vac</b>   |
| Project year: TBD       | 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. |
| Est. Cost : TBD         |   |
| Funding: General Fund   |   |
| Ranking TBD             |   |

|                |              |  |
|----------------|--------------|--|
| <b>DPS-007</b> |              | <b>Hotpatch Trailer</b>  |
| Project year:  | TBD          | A new trailer is needed to keep patch pliable and speed up the process of keeping roads in good condition. |
| Est. Cost :    | TBD          |  |
| Funding:       | General Fund |  |
| Ranking        | TBD          |  |
| <b>DPS-008</b> |              | <b>New 4WD Pick-up truck</b>   |
| Project year:  | TBD          | Current truck is from 2006 and is in need of replacement   |
| Est. Cost :    | TBD          |  |
| Funding:       | General Fund |  |
| Ranking        | TBD          |  |
| <b>DPS-009</b> |              | <b>New bed for flatbed</b>   |
| Project year:  | TBD          | Truck is in good condition but bed has rusted from salt use  |
| Est. Cost :    | TBD          |  |
| Funding:       | General Fund |  |
| Ranking        | TBD          |  |

# Downtown Development Authority

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.

|                         |   |
|-------------------------|---|
| <b>DDA-001</b>          | <b>Complete Streets</b>   |
| Project year: 2020-2021 | Implement city's complete streets non-motorized transportation plan as adopted in 2011  |
| Est. Cost : \$40,000    |   |
| Funding: Grants Funds   |   |
| Ranking TBD             |   |
| <b>DDA-002</b>          | <b>Parking Lot addition</b>   |
| Project year: 2022-2023 | Construct (14) 10' x 20' parking spaces of porous asphalt, south of existing city hall. |
| Est. Cost : \$35,000    |   |
| Funding: DDA Funds      |   |
| Ranking TBD             |   |
| <b>DDA-003</b>          | <b>Streetlights in Village center</b>   |
| Project year: 2020-2021 | Install new streetlights in Village Center area   |
| Est. Cost : \$91,000    |   |
| Funding: General Fund   |   |
| Ranking TBD             |   |



# 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.

|                         |  |
|-------------------------|--|
| <b>PR-001</b>           | <b>Resurfacing and Drainage at Sarackwood Park</b> |
| Project year: 2020-2021 | Sarackwood Park improvements                       |
| Est. Cost : \$10,000    |  |
| Funding: General Fund   |  |
| Ranking TBD             |  |
| <b>PR-002</b>           | <b>Wood Chips</b>                                  |
| Project year: 2019-2020 | Park improvements                                  |
| Est. Cost : \$15,000    |  |
| Funding: General Fund   |  |
| Ranking TBD             |  |
| <b>PR-003</b>           | <b>SMART Van</b>                                   |
| Project year: 2019-2020 | Opportunity for grant funds with City match        |
| Est. Cost : \$20,000    |  |
| Funding: General Fund   |  |
| Ranking TBD             |  |

# Public Safety (Police Department)

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.

|  |   |
|--|---|
| <b>PD-001</b>                                  | <b>Tasers</b>   |
| <b>Project year:</b> 2019-2020                 | Tasers increase officer safety and reduce liability to department by reducing lethal force.                           |
| <b>Est. Cost :</b> \$17,800 (\$4,450 x 5 yrs.) |   |
| <b>Funding:</b> Police Fund                    |   |
| <b>Ranking</b> TBD                             |   |
| <b>PD-002</b>                                  | <b>Camera System</b>  |
| <b>Project year:</b> 2019-2020                 | Audio/visual recording system throughout city hall will reduce liability to city / events and assist with complaints. |
| <b>Est. Cost :</b> \$25,000                    |   |
| <b>Funding:</b> Police Fund                    |   |
| <b>Ranking</b> TBD                             |   |
| <b>PD-003</b>                                  | <b>Lexipol</b>  |
| <b>Project year:</b> 2020-2021                 | Online officer training software  |
| <b>Est. Cost :</b> \$6,124                     |   |
| <b>Funding:</b> Police Fund                    |   |
| <b>Ranking</b> TBD                             |   |
| <b>PD-004</b>                                  | <b>Interview Room Cameras</b>   |
| <b>Project year:</b> 2019-2020                 | Audio/video recording system needed to meet state mandated minimum requirements for an interview room                 |
| <b>Est. Cost :</b> \$5,200                     |   |
| <b>Funding:</b> Police Fund                    |   |
| <b>Ranking</b> TBD                             |   |
| <b>PD-005</b>                                  | <b>In-car computers</b>   |
| <b>Project year:</b> 2020-2021                 | In-car computers are needed for in-car activity logs, crashes, citations and reports                                  |
| <b>Est. Cost :</b> \$6,000                     |   |
| <b>Funding:</b> Police Fund                    |   |
| <b>Ranking</b> TBD                             |   |
| <b>PD-006</b>                                  | <b>Police Vehicle</b>   |
| <b>Project year:</b> 2020-2021                 | Need to replace older unit in fleet   |
| <b>Est. Cost :</b> \$45,000                    |   |
| <b>Funding:</b> Police Fund                    |   |
| <b>Ranking</b> TBD                             |   |

|                      |                    |   |
|----------------------|--------------------|---|
| <b>PD-007</b>        |                    | <b>Communication System</b>   |
| <b>Project year:</b> | 2020-2021          | Police communication equipment is needed for patrol vehicles and offices prep radios        |
| <b>Est. Cost :</b>   | \$60,000           |   |
| <b>Funding:</b>      | Police Fund        |   |
| <b>Ranking</b>       | TBD                |   |
| <b>PD-008</b>        |                    | <b>New Police Department Building</b>   |
| <b>Project year:</b> | 2024               | Larger police building is needed to accommodate growth - the current station is at capacity |
| <b>Est. Cost :</b>   | TBD                |   |
| <b>Funding:</b>      | Bond/Grant/Millage |   |
| <b>Ranking</b>       | TBD                |   |

# Roads

The City of Lathrup Village has 26.2 miles of local roads and 7.36 miles of major streets. In each year since 2012, the city has dedicated an equivalent of 1.5 to 2 mils of taxable value to repaving local roads. While this did constitute a major increase in funding from previous years, it should be noted that based on the engineer's industry experience, the entire street system should be put on a 15-20 year resurfacing cycle. The overall goal is to provide an adequate level of road maintenance within the local street system; however, based on the long term estimates, a 20-year resurfacing cycle would require an annual contribution of \$495,000+ (or approximately 4.2 mils) and adjusted in each subsequent year based on inflation. This will require ongoing discussion and policy-setting by City Council.

|                      |                            |   |
|----------------------|----------------------------|---|
| <b>R-001</b>         | <b>2019 Paving Program</b> |   |
| <b>Project year:</b> | 2019-2020                  | Resurfacing .25 miles of major roads. WB Eleven Mile from the east City border to Southfield Rd. (Includes 25% engineering/MDOT paperwork fee)<br><br>Lathrup Village received a \$250,000 federal grant to offset the cost of this project |
| <b>Est. Cost :</b>   | \$394,400                  |   |
| <b>Funding:</b>      | Roads                      |   |
| <b>Ranking</b>       | TBD                        |   |
| <b>R-002</b>         | <b>2020 Paving Program</b> |   |
| <b>Project year:</b> | 2020-2021                  | Resurfacing .25 miles of local streets. E. Wiltshire from Southfield Rd. to east City limits and TBD (includes 17% engineering fee)   |
| <b>Est. Cost :</b>   | \$397,000 (\$147,000 city) |   |
| <b>Funding:</b>      | Local/Major Roads          |   |
| <b>Ranking</b>       | TBD                        |   |
| <b>R-003</b>         | <b>2021 Paving Program</b> |   |
| <b>Project year:</b> | 2021-2022                  | Resurfacing .40 miles of local streets. Saratoga from Santa Barbra to Sunset and Sunset from California to Glenwood. (Includes 17% engineering fee)   |
| <b>Est. Cost :</b>   | \$180,000                  |   |
| <b>Funding:</b>      | Local/Major Roads          |   |
| <b>Ranking</b>       | TBD                        |   |
| <b>R-004</b>         | <b>2022 Paving Program</b> |   |
| <b>Project year:</b> | 2022-2021                  | Resurfacing approx. .40 miles of local streets. Street segments to be determined. (Includes 17% engineering fee)  |
| <b>Est. Cost :</b>   | \$180,000                  |   |
| <b>Funding:</b>      | Local/Major Roads          |   |
| <b>Ranking</b>       | TBD                        |   |

## Southfield Road Project

The City of Lathrup Village is bisected by Southfield Road, our community's major commercial thoroughfare. For decades, there has been discussion surrounding the redevelopment of Southfield Road from Mt. Vernon in Southfield to Beverly Road in the City of Beverly Hills. A steering committee comprising representatives from Lathrup Village, the city of Southfield, village of Beverly Hills, the Michigan Department of Transportation, and the Road Commission of Oakland County have overseen the environmental assessment of the project.

## 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.

In 2012 and 2013, all sanitary sewers on the south side of I-696 were cleaned and visually inspected for apparent structural failures and signs of inflow and infiltration (I & I) and found that approximately 66% of the sewers that were assessed were in need of repairs. The city engineer recommended that Lathrup Village repair the identified sewers in an effort to provide structural improvements to sewers with multiple cracks within the sewer segment and reduce the amount of infiltration of ground water. According to the project's final report, the majority of the defects can be addressed by either grouting the sewer joints or by installing cured-in-place pipe (CIPP). The following map depicts the sewers locations recommended for either joint-grouting or CIPP.

The City of Lathrup Village sewer system is a separated system but still considered a "wet" system due to the presence of footing drains. The City's upgrades and maintenance over the past 15 years has been done with the primary goal of "drying out" or removing the ground and storm water from the system; however, recent studies by the Oakland County Water resource commissioner's office has called into question the effectiveness of relining sewer mains and grouting joints as a method of lowering inflow and infiltration (I & I). Their current hypothesis is that the sanitary sewer leads and footing drains contribute enough I & I to negate any benefits gained from sealing sewer mains. The relining process does add structural integrity to the system which prevents against failures and collapse. The cost of sanitary sewer capital projects is calculated into annual sewer rates and paid through monthly water and sewer billing.

## 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.

Over the next six years, an aggressive maintenance and re-ditching program will be implemented through our contract with Lathrup Services LLC. Given the scope of the repairs that are needed, this program could take over ten years to complete. Areas where ditches could be enclosed with corrugated drain pipes will also be studied. There was a successful pilot project on the 17300 section of Rainbow Drive, which included new approach work. If the success of that project can be replicated through cost sharing or a specific millage, the city may be able to remove the need for homeowner ditch maintenance.

|                         |   |
|-------------------------|---|
| <b>S-001</b>            | <b>2018 + 2019 Sewer Improvements</b>   |
| Project year: 2019-2020 | Grout approx. 4,500' of sewers (1,500 joints) to reduce the amount of infiltration entering the sewer system. Section 624 (south of 696; PH I+II of II)<br>(Includes 20% engineering fee) |
| Est. Cost : \$180,000   |   |
| Funding: Sewer Fund     |   |
| Ranking TBD             |   |
| <b>S-002</b>            | <b>2020 Sewer Improvements</b>  |
| Project year: 2020-2021 | Continue performing improvements to the sewer system to reduce infiltration.<br>(Includes 20% engineering fee)  |
| Est. Cost : \$120,000   |   |
| Funding: Sewer Fund     |   |
| Ranking TBD             |   |
| <b>S-003</b>            | <b>2021 Sewer Improvements</b>  |
| Project year: 2021-2022 | Continue performing improvements to the sewer system to reduce infiltration.<br>(Includes 20% engineering fee)  |
| Est. Cost : \$120,000   |   |
| Funding: Sewer Fund     |   |
| Ranking TBD             |   |
| <b>S-004</b>            | <b>2022 Sewer Improvements</b>  |
| Project year: 2022-2023 | Continue performing improvements to the sewer system to reduce infiltration.<br>(Includes 20% engineering fee)  |
| Est. Cost : \$120,000   |   |
| Funding: Sewer Fund     |   |
| Ranking TBD             |   |

|               |  |   |
|---------------|--|---|
| <b>W-001</b>  | <b>2019 Water Main Repair Program (I of III)</b>   |   |
| Project year: | 2019-2020  | Install approx. 1,700' of new 12" water main from 11 Mile to San Quentin. (Santa Barbara Phase I of III) (Includes 7% engineering fee)                        |
| Est. Cost :   | \$340,000  |   |
| Funding:      | Water Fund   |   |
| Ranking       | TBD  |   |
| <b>W-002</b>  | <b>2020 Water Main Repair Program (II of III)</b>  |   |
| Project year: | 2020-2021  | Install approx. 1,700' of NEW 12" water main from San Quentin to Wiltshire (Santa Barbara Phase II of III) (Includes 7% engineering fee)                      |
| Est. Cost :   | \$500,000  |   |
| Funding:      | Water Fund   |   |
| Ranking       | TBD  |   |
| <b>W-003</b>  | <b>2021 Water Main Repair Program (III of III)</b> |   |
| Project year: | 2021-2022  | Install approx. 1,700' of NEW 12" water main from Wiltshire to 12 Mile. (Santa Barbara Phase III of III) (Includes 7% engineering fee)                        |
| Est. Cost :   | \$180,000  |   |
| Funding:      | Water Fund   |   |
| Ranking       | TBD  |   |
| <b>W-004</b>  | <b>2021 Water Main Repair Program</b>              |   |
| Project year: | 2021-2022  | Replace approx. 650' of existing 6" water main (1928) located in San Diego from Rackham to Bloomfield (San Diego Phase I of II) (Includes 7% engineering fee) |
| Est. Cost :   | \$325,000  |   |
| Funding:      | Water Fund   |   |
| Ranking       | TBD  |   |
| <b>W-005</b>  | <b>2022 Water Main Repair Program</b>              |   |
| Project year: | 2022-2023  | Replace approx. 1,000' of existing 6"/8" deteriorated water main at locations to be determined. (Includes 7% engineering fee)                                 |
| Est. Cost :   | \$200,000  |   |
| Funding:      | Water Fund   |   |
| Ranking       | TBD  |   |
| <b>W-006</b>  | <b>2023 Water Main Repair Program</b>              |   |
| Project year: | 2023-2024  | Replace approx. 1,000' of existing 6"/8" deteriorated water main at locations to be determined. (Includes 7% engineering fee)                                 |
| Est. Cost :   | \$200,000  |   |
| Funding:      | Water Fund   |   |
| Ranking       | TBD  |   |

|   |  |
|---|--|
| <b>W-007</b>                                    | <b>Gate Valve replacement program</b>  |
| <b>Project year:</b> 2020-2026                  | 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.   |
| <b>Est. Cost :</b> \$960,000 (\$160K x 6 years) |  |
| <b>Funding:</b> TBD                             |  |
| <b>Ranking:</b> TBD                             |  |
| <b>W-008</b>                                    | <b>Fire Hydrant Replacement Program</b>  |
| <b>Project year:</b> 2019-2024                  | The City's fire hydrants are very old and experiencing operational issues. Budget for the replacement of 20 hydrants per year for 6 years to replace all hydrants installed before 1930 . Useful life is 50 years.<br><br>(\$90,800 annually x 6 years)  |
| <b>Est. Cost :</b> \$544,000                    |  |
| <b>Funding:</b> Water Fund                      |  |
| <b>Ranking</b> TBD                              |  |
| <b>W-009</b>                                    | <b>Water Leak detection program</b>  |
| <b>Project year:</b> 2019-2024                  | The City is experiencing water losses nearing 30%. Leak detection will determine any leaking valves, hydrants, pipes, water services. Repairs may be needed to fix. Entire City would be assessed in 19/20; remaining years would perform half the city each year. Useful life is one - year.<br><br>(\$12,000 1st year + \$6k per year) |
| <b>Est. Cost :</b> \$42,000                     |  |
| <b>Funding:</b> Water Fund                      |  |
| <b>Ranking</b> TBD                              |  |



CITY OF  
**LATHRUP  
VILLAGE**



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