2020-2025 Capital Improvement Plan DRAFT EDITION



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Presented: April 16, 2019

2020-2025 Capital Improvement Plan Introduction

A Capital Improvement Plan (CIP) is a multi-year planning instrument used to identify needs and financing sources for public infrastructure improvements. The purpose of a CIP is to facilitate the orderly planning of infrastructure improvements; to maintain, preserve, and protect the City's existing infrastructure system; and to provide for the acquisition or scheduled replacement of equipment in order to ensure the efficient delivery of services to the community. The CIP is also utilized to ensure that capital improvements are fiscally sound and consistent with the goals and policies of the City Council and residents of Rochester Hills.

CIP & the Community

A comprehensive Capital Improvement Plan is an essential tool used in the planning and development of the social, physical, and economic well being of the City of Rochester Hills. This process is a necessary step in an organized effort to strengthen the quality of public facilities and services; to provide a framework for the realization of community goals and objectives; and to provide a sound basis on which to build a healthy and vibrant community.

The CIP informs residents and stakeholders on how the City plans to address significant capital needs over the next six-years. The CIP provides visual representations of the City's needs including maps which detail the timing, sequence, and location of capital projects. The CIP can also influence community growth as infrastructure improvements can impact development patterns.

Some of the many benefits that the CIP provides for the residents and stakeholders of Rochester Hills include:

- Optimize the uses of revenue
- Focus attention on community goals, needs, and capabilities
- Guide future growth and development
- Encourage efficient government
- Improve intergovernmental and regional cooperation
- Help maintain a sound and stable financial program
- Enhance opportunities for the participation in federal and/or state grant programs

Overview

Projects identified in the CIP represent the City of Rochester Hills' plan to serve residents and anticipate the needs of a dynamic community. Projects are guided by various development plans and policies established by the Planning Commission, City Council, and City Administration. Plans and policies include:

Components of the City's Strategic Plan
City of Rochester Hills' Mission Statement
City Council Goals & Objectives
Administrative Policies

Storm Water Management System Plan

Master Land Use Plan
Master Transportation Plan
Master Pathway Plan
Master Recreation Plan
LDFA Master Plan

2020-2025 Capital Improvement Plan CIP Process

CIP Process

Preparation of the CIP is done under the authority of the Municipal Planning Commission Act (PA 285 of 1931). It is the City of Rochester Hills Planning Commission's goal that the CIP be used as a tool to implement the City Master Plan and to assist in the City's financial planning process.

The CIP is dynamic. Each year all projects included within the CIP are reviewed, a call for new projects is made, requests for new projects are considered, and adjustments are made to existing projects arising from changes in the amount of funding required, conditions, or timeline. A new year of programming is also added each year to replace the year funded in the annual operating budget. A status report on the prior 2020-2025 CIP can be found in the Appendix section located at the end of this book.

The CIP program will continue to develop over time by adding processes to improve quality and efficiencies. Greater attention shall be devoted to provide more detailed information regarding individual project requests, program planning, fiscal analysis, fiscal policies, and debt strategy (if applicable).

CIP & the Budget Process

The CIP plays an increasingly significant role in the implementation of a master plan by providing the link between planning and budgeting for capital projects. The CIP process precedes the budget process and is used to develop the capital project portion of the upcoming annual budget. Approval of the CIP by the Planning Commission does not mean final approval of all projects contained within the plan is granted. Rather by approving the CIP, the Planning Commission acknowledges that these projects represent a reasonable interpretation of the upcoming needs for the City and that projects contained in the plan are suitable for inclusion in future budgets.

Project priority rankings do not necessarily correspond to funding sequence. For example, a road-widening project which is ranked lower than a park project may be funded before the park project because the road project may have access to a restricted revenue source, whereas a park project may have to compete for funding from other revenue sources. A project's funding depends upon a number of factors – not only its merit, but also its location, cost, funding source, and logistics.

The City of Rochester Hills strives to maximize resources by maintaining a balance between operating and capital budgets. A continuous relationship exists between the CIP and the annual budget. A direct link can be seen between the two documents, as there should be in a strategic planning environment.

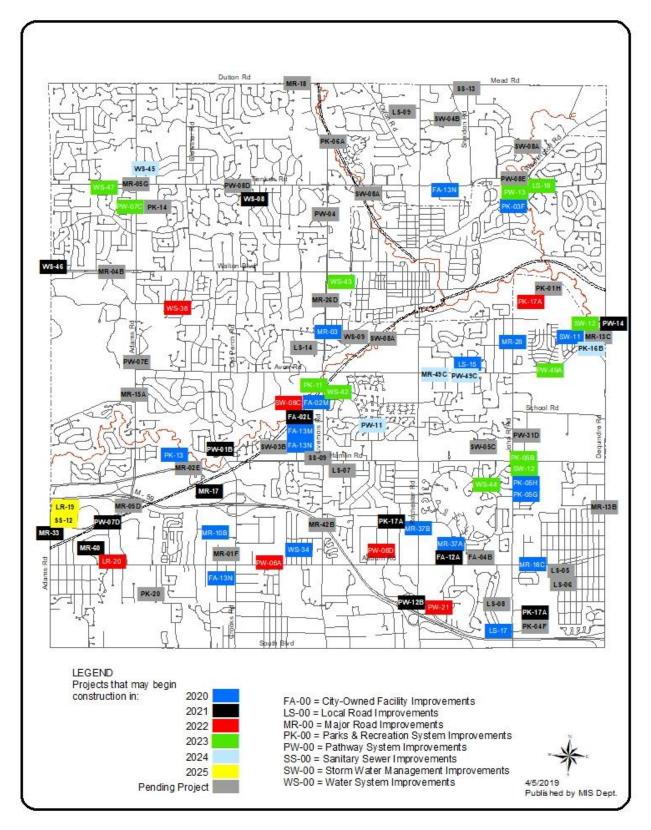
2020-2025 Capital Improvement Plan CIP Policy

As used in the City of Rochester Hills' Capital Improvement Program, a capital improvement project is defined as a major, nonrecurring expenditure that includes one or more of the following:

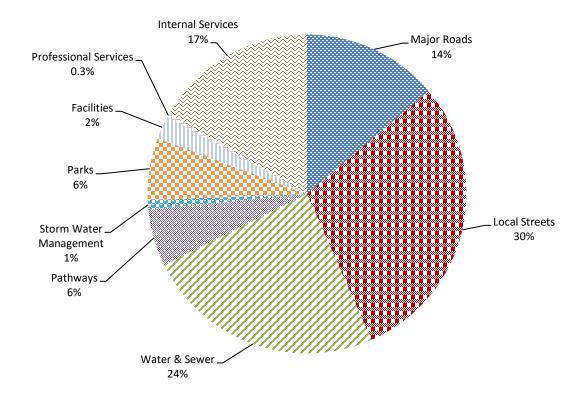
- 1. Any construction of a new facility (i.e., major/local roadways, water/sanitary sewer mains, storm water management, pathways*, recreational facilities, or public buildings), an addition to, or extension of such a facility, provided that the cost is \$25,000 or more and that the improvement will have a useful life of three years or more.
- 2. Any non-recurring rehabilitation of all or a part of a building, its grounds, a facility, or equipment, provided that the cost is \$25,000 or more and the improvement will have a useful life of three years or more.
- 3. Any purchase or replacement of major equipment to support City programs provided that the cost is \$25,000 or more and will be coded to a capital asset account.
- 4. Any planning, feasibility, engineering, or design study related to an individual capital improvement project or to a program that is implemented through individual capital improvement projects provided that the cost is \$25,000 or more and will have a useful life of three years or more.
- 5. Any planning, feasibility, engineering, or design study costing \$50,000 or more that is <u>not</u> part of an individual capital improvement project or a program that is implemented through individual capital improvement projects.
- 6. Any acquisition of land for a public purpose that is not part of an individual capital improvement project or a program that is implemented through individual capital improvement projects provided that the cost is \$25,000 or more. **
- * = Note: Beginning in FY 2008, pathway projects are reviewed and rated by the Pathway Ad-hoc Committee as opposed to the CIP raters.
- ** = Note: Land acquisition funded by the Green Space Preservation millage has <u>not</u> been included in the CIP process

Adopted March 10, 1997 by the CIP Policy Group Revised February 25, 2011 by the CIP Policy Group

2020-2025 Capital Improvement Plan Aggregate Citywide Project Locations



2020-2025 Capital Improvement Plan Aggregate City Share Summary



2020-2025 CIP City Share Breakdown					
Major Roads	\$	14,727,250	14%		
Local Streets	\$	31,441,800	30%		
Water & Sewer	\$	25,833,505	24%		
Pathways	\$	6,156,830	6%		
Storm Water Management	\$	1,013,250	1%		
Parks	\$	6,700,370	6%		
Facilities	\$	2,509,200	2%		
Professional Services	\$	350,000	0.3%		
Internal Services	\$	17,698,020	17%		
	\$	106,430,225			

2020-2025 Capital Improvement Plan



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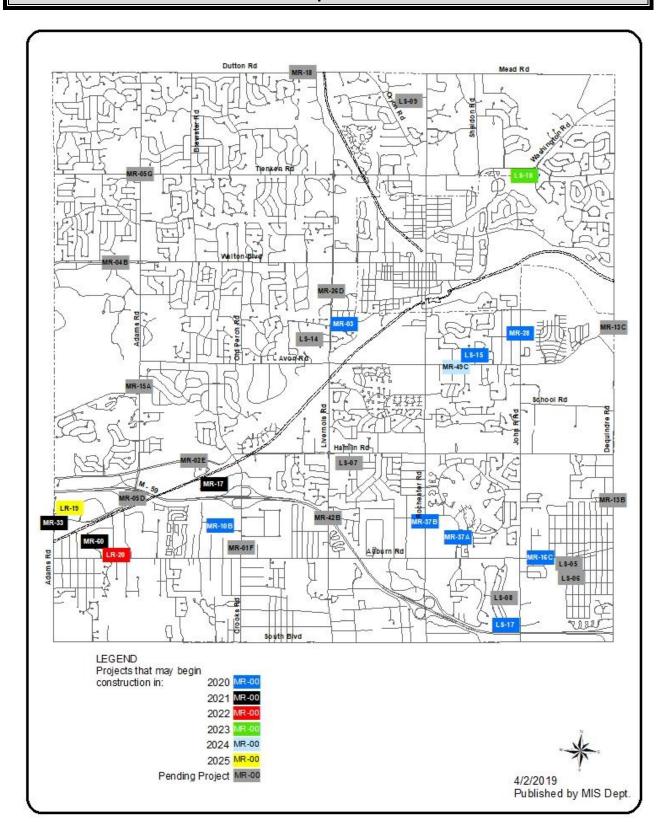
The purpose of the Street Improvement Program is to preserve and maintain safe neighborhoods in an effort to sustain the quality of life that Rochester Hills residents expect. The Street Improvement Program is part of a long-term solution aimed at the systematic maintenance, repair, and rehabilitation of City streets. This program provides a consistent standard and maintenance level over a period of years for both the major road and local street systems.

Local streets in Rochester Hills came under the City's jurisdiction in 1985. Prior to then the City was known as Avon Township and the responsibility for designing, maintaining, repairing, and replacing our streets fell upon the Road Commission of Oakland County (RCOC). Design standards were much different 30 years ago, and streets in neighborhoods which were built during the 1960's, 1970's, and early 1980's were constructed based upon design standards that have since become outdated.

In 1998, the Planning Commission adopted the Master Thoroughfare Plan to provide a better understanding of current and projected traffic trends in the community, using traffic forecasts through the year 2015. This plan presented a comprehensive program of solutions to address the problems identified by the traffic forecasts. Components of the plan have been incorporated into the Capital Improvement Plan. An update to the plan began in 2007 consisting of monthly Technical Review Committee meetings along with several public information meetings, which allowed the citizens of Rochester Hills to provide invaluable input. The Planning Commission adopted the current Master Thoroughfare Plan Update on October 21, 2008.

The City of Rochester Hills contains both public and private roadways. Public roads are owned and operated by the Michigan Department of Transportation (MDOT), the Road Commission of Oakland County (RCOC), and the City of Rochester Hills. Private roads are owned and operated by private developments and homeowner groups.

The City currently maintains approximately 42-miles of major roads, 218-miles of paved local streets, and 22-miles of gravel local streets. In order to define priorities and establish a course of action for the local street and major road rehabilitation programs, a Pavement Management System using Pavement Surface Evaluation and Rating (PASER) is used. PASER is a visual survey method for evaluating the condition of roads with the corresponding data serving as the foundation on which to build cost-effective pavement maintenance strategies. This information is a valuable tool when combined with an engineer's knowledge and experience to plan for and to prioritize reconstruction, rehabilitation, and traffic enhancement projects.



MR-01A Major Road System: Rehabilitation Program

2020-2025

Estimated City Cost: \$3,000,000 Estimated City Share: 100%

Rehabilitation or reconstruction of failed concrete and asphalt sections within the Major Road network, as identified through the City's Pavement Management System and based upon field inspections. Work also to include rehabilitating storm water structures and installing edge drains as needed. The annual Major Road Rehabilitation Program allows for greater flexibility in coordinating activities with those of DPS crews and also allows for spreading work over a wider area rather than focusing on street specific repairs. Operating costs are anticipated to decrease by \$15,000 per year for each 0.5 miles proposed to be replaced annually. This program is proposed to be funded at \$500,000 per year and is on-going.

MR-01B	LDFA Road System: Rehabilitation Program			
2020-2025				
Estimated City Cost: \$1,200,000 Estimated LDFA Share: 100%				

Rehabilitation or reconstruction of failed concrete and asphalt sections within the LDFA District Road network, as identified through the City's Pavement Management System and based upon field inspections. The annual LDFA Concrete & Asphalt Rehabilitation Program allows for greater flexibility in coordinating activities with those of DPS crews. This program assists in maintaining road infrastructure and the viability of industrial and technology parks within the LDFA District. Operating costs are anticipated to decrease by \$6,000 per year for each 0.3 miles proposed to be replaced annually. This program is proposed to be funded at \$200,000 per year and is on-going.

MR-03	Harding Avenue Rehabilitation			
Estimated	d Total Project:	\$563,200	2020-2020	
Estim	ated City Cost:	\$563,200	Estimated City Share:	100%

Rehabilitate approximately 1,300 feet of asphalt section of Harding Avenue from Livernois Road to May Road. The existing road is 27-feet wide with curb and gutter. The 2016 Paser rating was a 3 (poor) out of a scale of 10. The pavement rehabilitation strategy is a 2-inch asphalt mill and overlay (final determination upon geotechnical testing and recommendation) with selective base and curb and gutter repairs. Operating costs are anticipated to decrease approximately \$3,000 per year due to less routine maintenance. Construction is planned to begin in 2020.

MR-10B	**Austin Avenue Improvements**			
2020-2020				
Estim	ated City Cost:	\$1,110,000	Estimated City Share:	100%

Perform a 3-inch mill and overlay over an approximate stretch of 850-feet of roadway and a 3R (Resurfacing, Restoration and Rehabilitation) improvement over the remaining 1,450 feet of Austin between Crooks and Devondale. Operating costs are expected to decrease because of the new roadway surface. Construction is planned to begin in 2020.

MR-12	Major Road System: Traffic Calming Program			
Estimated	d Total Project:	\$120,000	2020-2025	
Estim	ated City Cost:	\$60,000	Estimated City Share:	50%

The City receives many traffic related concerns from subdivision homeowner's associations (HOA) regarding speeding along residential streets. After performing in-depth traffic studies, City staff bring forth recommendations to the Advisory Traffic and Safety Board (ATSB). Often speed humps or other traffic calming devices are recommended as a solution. This program allows for 'seed' money to offer a 50/50 match between the HOA and the City to provide assistance for the implementation of traffic-calming devices along residential collector type roads which are classified as major roads. This program is proposed to be funded at a City share of \$10,000 per year and is on-going.

MR-16C	Auburn Road Rehabilitation [Rochester Road to Culbertson Avenue]			
Estimated	d Total Project:	\$1,298,000	2020-2020	
Estim	ated City Cost:	\$1,298,000	Estimated City Share:	100%
				_

Perform a 2-inch mill and overlay of Auburn Road between Rochester Road and Culbertson Avenue. The jurisdiction transfer of Auburn Road between Rochester Road and Dequindre Road included a project contribution of funding from the Michigan Department of Transportation (MDOT). The acceptance of funding is conditioned upon the City using the funds to improve Auburn Road within five years. The corridor improvement project between Culbertson Avenue and Dequindre Road coupled with this project will meet the requirement. Construction is planned to coordinate with MR-16A Auburn Rd Corridor project in 2019.

MR-17	Avon Industrial Drive			
Estimate	d Total Project:	\$838,750	2021-2021	
Estim	ated City Cost:	\$838,750	Estimated City Share:	100%

Rehabilitation of approximately 2,600 feet of asphalt section of Avon Industrial Drive and 370 feet of Star Court (a side street off Avon Industrial Drive). The existing road is 36-feet wide asphalt with concrete curb and gutter. The 2016 Paser rating was a 4 out of a scale of 10. The pavement rehabilitation strategy is a 4-inch asphalt mill and overlay (final determination upon geotechnical testing & recommendation) with

selective base and curb repairs. Operating costs are anticipated to decrease by \$6,000 per year due to rehabilitation. Construction is planned to begin in 2021.

MR-27	Major Road System: Bridge Rehabilitation Program

2020-2025

Estimated City Cost: \$228,000 Estimated City Share: 100%

Performance of maintenance and rehabilitation type work to the four (4) existing City-owned bridges: 1) Shagbark Road over Sargent Creek; 2) Butler Road over Galloway Creek; 3) Rochdale Road over Sargent Creek; 4) King's Cove Drive over Paint Creek. Repairs are based upon the City's latest Biennial Bridge Structure Inventory Report, as required by the Federal Highway Administration (FHWA) and the Michigan Department of Transportation (MDOT). Bridge Rehabilitation Study is to occur every "even-year" with Bridge Rehabilitation to occur every "odd-year". This program is on-going.

MR-28	John R Road Rehabilitation [Avon Road to Bloomer Road]
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Estimated Total Project: \$844,800 2020-2020

Estimated City Cost: \$844,800 Estimated City Share: 100%

Rehabilitation of approximately 3,000 feet of asphalt section of John R Road from north of Avon Road Bloomer Road. The existing road is 22 feet wide with no curb and 2-foot wide gravel shoulders. The 2016 Paser rating was a 4 out of a scale of 10. The pavement rehabilitation strategy is a 4-inch asphalt mill and overlay (final determination upon geotechnical testing & recommendation) with selective base repairs and possible ditch re-grading. Operating cost are anticipated to decrease approximately \$6,000 per year due to rehabilitation. Construction is planned to begin in 2020.

MR-33	**Old Adams & Forester Reconstruction**

Estimated Total Project: \$1,150,000 2020-2021

Estimated LDFA Cost: \$1,150,000 Estimated LDFA Share: 100%

Pavement reconstruction of approximately 200 feet of existing Forester Blvd and 1,300 feet of Old Adams Road south of M-59 to Forester. Operating costs are expected to decrease because of the new roadway surface. This project is funded by the LDFA. Construction is planned to begin in 2021.

MR-37A	Barclay Circle Rehabilitation				
	2020-2020				
Esti	mated City Cost:	\$1,597,750	Estimated City Share:	100%	

Rehabilitate approximately 4,000 feet of asphalt section of Barclay Circle from Rochester Road to Auburn Road. The existing road is 60 feet wide from back of curb to back of curb. The 2015 City PASER Rating was 3 out of a scale of 10 from Rochester Road to Ashley Circle and 4 out of a scale of 10 from Ashley Circle to

Auburn Road. The proposed pavement rehabilitation strategy is a 3-inch asphalt mill & fill (final determination upon geotechnical testing & recommendation) with selective base repairs and concrete curb and gutter repairs as deemed necessary. Will coordinate project timing with (MR-37B) Rochester Road @ Barclay Circle: Traffic Signal Improvements. Operating costs of approximately \$15,000 per year are anticipated to decrease to \$9,000 per year due to reconstruction. Construction is planned to begin in 2020.

MR-37B	Barclay Circle @ Rochester Road: Traffic Signal Improvements			
Estimate	d Total Project:	\$375,000	2019-2020	
Estim	nated City Cost:	\$125,000	Estimated City Share:	33%

Upgrade of the existing traffic signal to a modern box span design. Work would also include upgrading non compliant pathway ramps to meet ADA compliance along with associated pedestrian countdown signals. The Barclay Circle median island will also be reworked to allow for the proper alignment between the left turn movements off Barclay Circle and Wabash Drive. This will eliminate the need for split time phasing, thus improving the traffic flow and capacity through the intersection. The traffic signal upgrade would be primarily funded via CMAQ funds. The City would be responsible for the costs associated with reconfiguring the Barclay Circle median island in order to allow for proper left turn offset with Wabash Road. Potentially minor cost savings to annual traffic signal operations and maintenance costs. Construction is planned to begin in 2020.

MR-49C	Avon Road Widening [Princeton Avenue – Grovecrest Avenue]				
Estimate	d Total Project:	\$635,250	2023-2024		
Estim	nated City Cost:	\$211,750	Estimated City Share:	33%	

Widen approximately 1,300 feet of Avon Road between Princeton Avenue and Grovecrest Avenue to accommodate an 11-foot wide center left-turn lane. The proposed project will provide safety benefits by allowing vehicles to exit the through lanes and enter a dedicated center left-turn lane. No operating costs are anticipated, due to this section of roadway being owned and operated by the RCOC. Construction is planned to begin in 2024.

MR-60	**Waterview Reconstruction**				
Estimated	d Total Project:	\$2,500,000	2020-2021		
Estima	ited LDFA Cost:	\$2,500,000	Estimated LDFA Share:	100%	

Pavement reconstruction of approximately 3,200 feet of existing road that is 36 feet wide from back of curb to back of curb. Construction of a 5-foot wide sidewalk along one side of Waterview is also included. Operating costs are expected to decrease because of the new roadway surface. This project is funded by the LDFA. Construction is planned to begin in 2021.

LS-01 Local Street System: Rehabilitation Program

2020-2025

Estimated City Cost: \$30,000,000 Estimated City Share: 100%

Rehabilitation or reconstruction of failed concrete and asphalt sections within the Local Street network, as identified through the City's Pavement Management System and based upon field inspections. Operating costs of approximately \$57,000 per year are anticipated to decrease to \$42,000 per year for each 9.0 miles of the local street network that is proposed to be rehabilitated or reconstructed annually. This program is proposed to be funded at \$5,000,000 per year and is on-going.

LS-12	Local Street System: Traffic Calming Program				
Estimated Total Project:		\$300,000	2020-2025		
Estim	nated City Cost:	\$150,000	Estimated City Share:	50%	

The City receives many traffic related concerns from subdivision homeowner's associations (HOA) regarding speeding through residential streets. After performing in-depth traffic studies, City staff bring forth recommendations to the Advisory Traffic and Safety Board (ATSB). Often speed humps or other traffic calming devices are recommended as a solution. This program would allow for 'seed' money to offer a 50/50 match between the HOA and the City to provide assistance for the implementation of approximately twenty (20) traffic-calming devices per year along residential streets. This program is proposed to be funded at a City share of \$25,000 per year and is on-going.

LS-15	Bolinger Street Paving (SAD)				
Estimated	d Total Project:	\$280,500	2019-2020		
Estim	ated City Cost:	\$112,200	Estimated City Share:	40%	

Pave approximately 600 feet of Bolinger Street north of Avon Road through the adopted City Policy for Special Assessment District gravel to pavement projects. The road is currently gravel. A majority of residents living on Bolinger Street submitted petition signatures to request the paving of Bolinger Street in accordance with the SAD policy adopted by City Council on April 17, 2017. Construction is planned to begin in 2020.

LS-17	Michelson [West of John R] (SAD)				
Estimated Total Project:		\$490,000	2019-2020		
Estim	ated City Cost:	\$196,000	Estimated City Share:	40%	

Pave approximately 1,100 feet of Michelson west of John R through the adopted City Policy for Special Assessment District gravel to pavement projects. The road is currently gravel. A majority of residents living on Michelson submitted petition signatures to request the paving of Michelson in accordance with the SAD policy adopted by City Council on April 17, 2017. Construction is planned to begin in 2020.

LS-18 Runyon Road Paving

Estimated Total Project: \$267,800 2022-2023

Estimated City Cost: \$267,800 Estimated City Share: 100%

Pave approximately 1,130 feet of Van Hoosen, Runyon and Washington Roads south of Tienken Road. The roads are currently gravel. This project could be coordinated with the proposed Runyon Road pathway project and would offset some of the storm water sewer and ditch enclosure costs that are currently in the new pathway project. Construction is planned to begin in 2023.

LR-19 **Industrial Drive Paving SAD**

Estimated Total Project: \$550,000 2024-2025

Estimated LDFA Cost: \$220,000 Estimated LDFA Share: 40%

Pave approximately 925 feet of existing gravel road with hot mix asphalt and curb and gutter east of Old Adams Road. Pavement width will be set to match the existing portion of Industrial Drive that is 30 feet from back of curb to back of curb (27 foot wide asphalt with two 18-inch wide curb and gutter lines). This project is funded by the LDFA and is dependent on the City taking on jurisdiction of the private road. This is also subject to the City's SAD Policy. Construction is planned to begin in 2025.

LR-20 **Leach Road Paving SAD**

Estimated Total Project: \$1,300,000 2021-2022

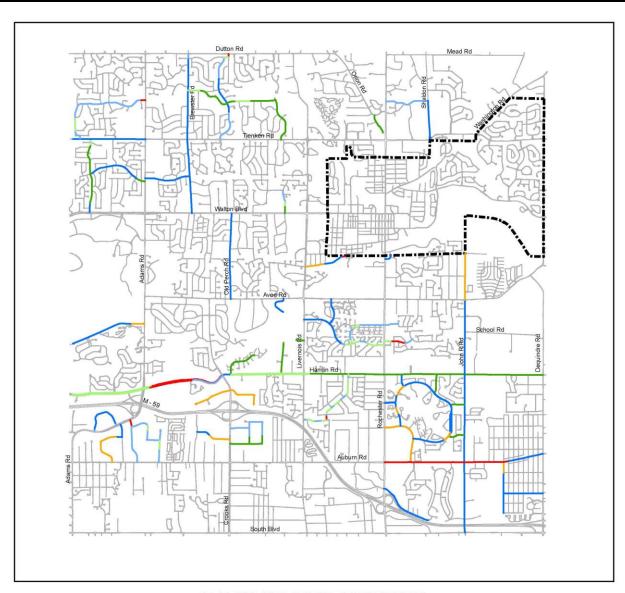
Estimated City Cost: \$520,000 Estimated LDFA Share: 40%

Pave approximately 1,650 feet of existing gravel road with hot mix asphalt and curb and gutter north of Auburn Road to the existing pavement at Waterview. Pavement width will be 36 feet from back of curb to back of curb to match the existing paved section between Waterview and Adams. This project is funded by the LDFA. This is also subject to the City's SAD Policy. Construction is planned to begin in 2022.



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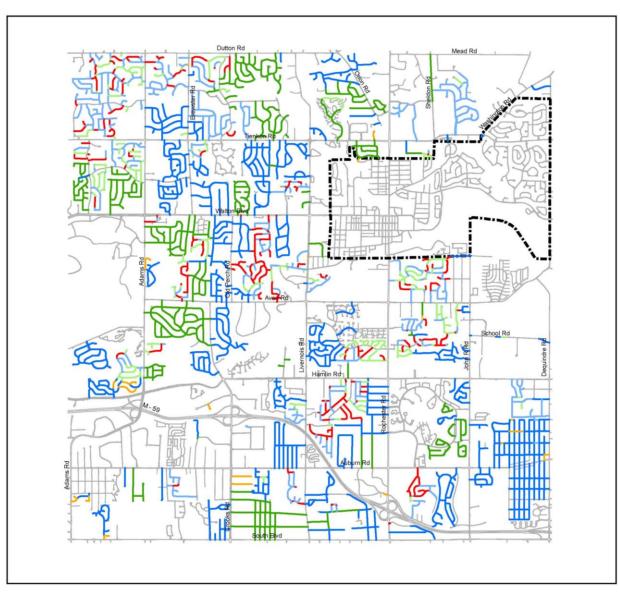
2020-2025 Capital Improvement Plan City Map – Major Road Conditions



2018 MAJOR ROAD CONDITIONS (PUBLIC PAVED ROADS)

1-4 (POOR)	(, 022.0	
Asphalt Concrete	5.67 mi 1.92 mi > 17%	City of Rochester Others
5-7 (FAIR)		
Asphalt Concrete	17.33 mi 6.35 mi > 52%	
8-10 (GOOD)		Notes:
Asphalt Concrete	7.87 mi 6.24 mi 45.38 mi	1) Actual travel length (47.86miles) 2) ACT 51 certified length (41.78 miles) 3) Roadsoft length (45.38 miles)

2020-2025 Capital Improvement Plan City Map – Local Street Conditions



2018 LOCAL ROAD CONDITIONS (PUBLIC PAVED ROADS)

	(FOBLIC F	AVED ROADS)
1-4 (POOR)		
Asphalt Concrete	2.49 mi 17.17 mi > 10%	City of Rochester Others
5-7 (FAIR)		
Asphalt Concrete	81.53 mi 37.06 mi > 61%	
8-10 (GOOD)		Notes:
Asphalt Concrete	41.33 mi 15.71 mi 195.28 mi	1) Actual travel length (218.56 miles) 2) ACT 51 certified length (199.35 miles) 3) Roadsoft length (195.28 miles)

	2018 Local Streets in P	oor Condition (PASER Rating Betwe			
Street	From	То	PASER Rating	Lenth (feet)	Pavement Surface
	Tower Hill Ln	Dead End or Start	3: Poor	•	Concrete
Ansal	Tower rilli Lii	Lake Forest	3: Poor		Concrete
	Stag Rdg	Dead End or Start	3: Poor		Concrete
	Whitney Dr	Dead End of Start	3: Poor		Concrete
	Thames Dr	Dead End or Start	3: Poor		Concrete
	Old Perch Rd	Dead End of Start	3: Poor		Asphalt
Avoncrest Dr	0.0.1.0.0.1.1.0	Dead End or Start	3: Poor		Concrete
	Hill	City/Twp Line	2: Very Poor		Asphalt
	Kingspath Dr	Wedgewood Dr	2: Very Poor		Concrete
Baypoint Dr	Oslass	Doral Dr	3: Poor	169	Concrete
· ' '	Adams Rd	Paddington Ct	3: Poor	475	Asphalt
Bembridge Dr	x	У	4: Poor		Concrete
	Whitney Dr & Arlington Dr	Bloomer	3: Poor	322	Concrete
Box Canyon	, ,	Dead End or Start	2: Very Poor	132	Concrete
Brilliance	Empire Dr	Honor Dr	3: Poor	486	Concrete
	Chelsea Ct	Dead End or Start	3: Poor	275	Concrete
	S Livernois Rd	S Livernois Rd	1: Very Poor		Asphalt
	Daylily Dr	Goldenrod Dr	3: Poor		Concrete
	Culbertson	Emmons	3: Poor		Asphalt
Campus	Old Perch Rd		2: Very Poor	79	Asphalt
Campus		Campus Ct	2: Very Poor	407	Concrete
	Campus Ct	Baylor	3: Poor	840	Concrete
Campus Ct	Campus	Dead End or Start	2: Very Poor	591	Concrete
Canterbury Trl	Chalet Dr		3: Poor	296	Concrete
Cascade Cir			3: Poor	90	Concrete
Cascade Cir			2: Very Poor	79	Concrete
Catalpa Ct	Red Oak & Catalpa		3: Poor	132	Concrete
Cedar Shake Dr	Falcon Dr & Firewood Dr		3: Poor	1135	Concrete
Lakewood Dr	Falcon Dr & Firewood Dr		4: Poor	32	Concrete
Chaffer Dr	Royal Doulton Blvd & Cobridge Dr		3: Poor	470	Concrete
Chaffer Dr	Aynsley Dr	Wedgewood Dr	3: Poor	713	Concrete
Chalet Dr	Kimberly Fair	Canterbury Trl	3: Poor	523	Concrete
Chalet Dr	Canterbury Trl		3: Poor	317	Concrete
Chelsea Ct	Bromley Ln	Dead End or Start	3: Poor	222	Concrete
Cherrywood Ct	Falcon Dr & Cherrywood Ln	Dead End or Start	4: Poor	164	Concrete
Clovelly	Weaverton	Bridget	3: Poor	322	Asphalt
Cobridge Dr	Royal Doulton Blvd & Chaffer Dr	Cobridge Ct	3: Poor	523	Concrete
	Baroque Ct	Wedgewood Dr	3: Poor	449	Concrete
Cobridge Ct	Cobridge Dr	Dead End or Start	3: Poor	222	Concrete
	Kentucky Dr	Dead End or Start	3: Poor		Concrete
	Lexham Ln		3: Poor		Concrete
	Parkland Dr	Crestline Ct	4: Poor		Concrete
Crestline	Crestline Ct	Drexelgate Pkwy	3: Poor		Concrete
Cypress		Sumac Dr	2: Very Poor		Concrete
	Arlington Dr	Hadley Rd	3: Poor		Concrete
	Hessel	Dequindre Rd	3: Poor		Asphalt
	Cumberland Dr	Highsplint Dr	3: Poor		Concrete
	Buttercup Dr	Mayapple Ct	3: Poor		Concrete
	Mayapple Ct	Vardon St	3: Poor		Concrete
Devonwood		Foresthill Dr	2: Very Poor		Concrete
	Salem Dr		2: Very Poor		Concrete
	Torrent Ct		4: Poor		Concrete
	Brandon Ct		3: Poor		Concrete
Englewood Dr			2: Very Poor		Concrete
Essex Dr		Eddington	4: Poor	428	Concrete
	Essex	Essex	4: Poor		Concrete
Essex Dr	Lexington		2: Very Poor	190	Concrete

	2018 Local Streets in F	Poor Condition (PASER Rating Betwe	en 1-4)		
		_		Lenth	Pavement
Street	From	То	PASER Rating	(feet)	Surface
Essex Dr	Lexington	Pembroke	2: Very Poor		Concrete
Essex Dr	Pembroke	Essex Ct	3: Poor		Concrete
Evergreen Ct	Stanford Cir	Dead End or Start	3: Poor		Concrete
Fair Oak Dr	Yale Ct	Dead End or Start	3: Poor		Concrete
Fairfield	C+ D-I	Ridgecrest	4: Poor		Concrete
Fawn Ct	Stag Rdg	Dead End or Start	3: Poor		Concrete
Flanders Dr	Highsplint Dr		3: Poor		Concrete
Forest View Ct	Woodfield Way	X	3: Poor		Concrete
Foresthill Dr Fox Woods Ln	Devonwood	E16-001 starting point	2: Very Poor		Concrete
Fulham Dr	Woodfield Way	Fox Wood	2: Very Poor		Concrete
	Fulham Ct	Brompton Rd & Tottenham Ct	3: Poor		Concrete
Brompton Rd Gallaland	Brompton Ct Dakota Dr	S Livernois Rd & Sierra Blvd	2: Very Poor 3: Poor		Concrete
Gallaland		Dood Find on Stort	+		Concrete
	Pioneer Dr	Dead End or Start	3: Poor		Concrete
Goldenrod Dr	Buttercup Dr	Primrose Dr	3: Poor		Concrete
Greenleaf Dr Greenleaf Dr		Pochdalo	2: Very Poor 3: Poor		Concrete Concrete
	Heron Ridge Dr	Rochdale Hickory Trl	3: Poor 3: Poor		Asphalt
Greenspring Ln Greenspring Ln	Blue Heron Ln	ITHEROTY III	3: Poor 3: Poor		Asphalt
. ,	South Blvd W	Saugrace Ct			•
Greenwood	intersection bad	Sawgrass Ct	3: Poor		Asphalt Concrete
Grosvenor Dr		intersection bad	3: Poor		
Grosvenor Dr Grovecrest	intersection bad	Harvard Dr	3: Poor		Concrete Concrete
Harlan Ct	Slumber	Misty Brook Ln	3: Poor		
Harlan Ct	Warrington Rd Flanders Dr	Flanders Dr Dead End or Start	3: Poor 3: Poor		Concrete Concrete
Harvard Dr	Grosvenor Dr	intersection Harvard& Grosvenor	3: Poor		Concrete
Harvard Dr	intersection Harvard& Grosvenor	intersection Harvard& Grosvenor	2: Very Poor		Concrete
Hedgewood Ln	Hickory Trl	Mapleridge Ct	3: Poor		Asphalt
Heidelberg Dr	Cambridge	Dead End or Start	4: Poor		Asphalt
Hessel	E Auburn Rd	Dawes	3: Poor		Asphalt
Hidden Ln	Springwood Ln	Dead End or Start	4: Poor		Concrete
Highsplint Dr	Kentucky Dr	Flanders Dr	3: Poor		Concrete
Highsplint Dr	Flanders Dr	Figure 13 Di	3: Poor		Concrete
Highsplint Dr	Warrington Rd		2: Very Poor		Concrete
Highsplint Dr	Waitington Ku		3: Poor		Concrete
Highsplint Dr		Dawson Dr	2: Very Poor		Concrete
Highsplint Dr	Dawson Dr	Dawson Di	3: Poor		Concrete
Highsplint Dr	Dawson Di	Dead End or Start	2: Very Poor		Concrete
Hillcrest Dr	Pleasant View Dr	Devonwood	2: Very Poor		Concrete
Hillcrest Dr	Devonwood	Devonwood	2: Very Poor		Concrete
Holiday Ct	Summit Rdg	Dead End or Start	2: Very Poor		Concrete
Hollenshade	Olympia Dr	Muirwood Ct	3: Poor		Concrete
Ivy Wood Ct	Arlington Dr	Dead End or Start	2: Very Poor		Concrete
Jason Cir	Snowden Cir	Quincy Dr	3: Poor		Concrete
June	Crooks Rd	Dead End or Start	3: Poor		Asphalt
Kendal Ln	Bellshire Ln	Dead End or Start	4: Poor		Concrete
Kentucky Dr	Densine Lii	Cumberland Dr	3: Poor		Concrete
Kentucky Dr		Cumberialia bi	3: Poor		Concrete
Kentucky Dr		Cumberland Dr	3: Poor		Concrete
W Kilburn Rd	Summit Rdg	Cumberiand Di	2: Very Poor		Concrete
N Kilburn Rd	N Adams Rd & W Kilburn Rd		3: Poor		Concrete
Kilburn Ct	IN Additis NO & W KIIDUIII NO	Dead End or Start	3: Poor		
Kilburn Ct Kimberly Fair			4: Poor		Concrete Concrete
KITTIDETTY FAIT		Sussex Fair	1		Concrete
Kirkton Ct					
Kirkton Ct Lake Forest	Croydon Rd	Dead End or Start Rutgers	2: Very Poor 3: Poor		Concrete

2018 Local Streets in Poor Condition (PASER Rating Between 1-4)					
Street	From	То	PASER Rating	Lenth (feet)	Pavement Surface
Lake Forest	Campus	Lake Forest Ct	3: Poor	` ,	Concrete
Lake Forest	Lake Forest Ct	Bucknell Ct	2: Very Poor		Concrete
Lake Forest	zane i orest st	Dudinien de	3: Poor		Concrete
Lake Forest			4: Poor		Concrete
Lake Forest		Sumac Dr	3: Poor		Concrete
Lake Forest	Sumac Dr	Ansal	3: Poor		Concrete
Lake Forest	Ansal	Spartan Dr	3: Poor		Concrete
Langley Rd	Beacon Hill Dr	Langley Ct	3: Poor		Concrete
Langley Rd	Langley Ct	zangrey ot	2: Very Poor		Concrete
Lexham Ln	Woodelm & W Auburn Rd	Courtfield	4: Poor		Concrete
Lexham Ln	Courtfield	Dead End or Start	3: Poor		Concrete
Lexington Dr	Essex Dr	Ternbury Dr	3: Poor		Concrete
Live Oak Dr	Ulster	Munster	4: Poor		Concrete
Live Oak Dr	Munster	Dead End or Start	3: Poor		Concrete
	Twin Oaks Ct	Lake Ridge	2: Very Poor		Concrete
Long Meadow Ln		Woodfield Way	3: Poor		Concrete
Long Meadow Ln		- vocancia way	4: Poor		Concrete
Mapleridge Ct	VVOcumena vvay	Hickory Trl	3: Poor		Asphalt
Mapleridge Ct		Dead End or Start	3: Poor		Asphalt
Mayapple Ct	Daylily Dr	Dead End or Start	3: Poor		Concrete
Meadowbrook Dr		Country Club Dr	2: Very Poor		Concrete
Meadowbrook Dr		Trailwood Dr	3: Poor		Concrete
Meadowbrook Dr	Country Club Di	Walton Blvd	3: Poor		Concrete
	Brewster Rd & Rusk	Waiton Bivu	3: Poor		Asphalt
Merriweather	Sudbury Ct	Old Homestead	4: Poor		Concrete
Michelson	S Rochester Rd	Old Holliestead	3: Poor		Concrete
Millbrook Ct	S ROCHESTEI RU	Dead End or Start			Concrete
Misty Brook Ln	Grovecrest	Rambling Dr	2: Very Poor 3: Poor		Concrete
	Culbertson	·	3: Poor		Asphalt
Morley	Emmons	Emmons	3: Poor		Asphalt
Morley Morley		Longview Harrison	3: Poor		Asphalt
Muirwood Ct	Longview Hollenshade	Dead End or Start	3: Poor		Concrete
Munster	Live Oak Dr	Stanford Cir	3: Poor		Concrete
Munster	Stanford Cir	Staniord Cir	3: Poor		Concrete
Nawakwa	S Rochester Rd		3: Poor		Asphalt
New Kent Rd	N Kilburn Rd	Lambeth Park	4: Poor		Concrete
	N KIIDUIII KU	Norton Rd & Cumberland Dr			
Norton Lawn Norton Rd		Norton Rd & Cumberland Dr	3: Poor		Concrete Concrete
Notre Dame Rd	Coordon Dr		3: Poor		Concrete
Oakrock	Spartan Dr	Ten Point Dr	2: Very Poor		Concrete
Oakrock	Rochdale	Dood End or Stort	3: Poor 2: Very Poor		Asphalt
		Dead End or Start			
Old Homestead	D. do maisses out to a m	Merriweather	4: Poor		Concrete
Old Homestead	Merriweather	Salem Dr	2: Very Poor		Concrete
Old Homestead Orchardale	Salem Dr	Summit Rdg Walton Blvd	3: Poor 3: Poor		Concrete Concrete
	Do o ob ovo ot				
Paddington Ct	Beechcrest Sandalwood Dr	Dead End or Start	3: Poor		Asphalt
Parkland Ct Parkland Dr	Sandalwood Dr	Dead End or Start	3: Poor		Concrete
	Sandalwood Dr	Parkland to Sandalwood	3: Poor		Concrete
Parkland Dr	Parkland to Sandalwood	Drexelgate Pkwy	2: Very Poor		Concrete
Pembroke Dr	Essex	Bembridge	2: Very Poor		Concrete
Pheasant Ring Dr	Pheasant Ring Ct	Eagle Dr	3: Poor		Concrete
Pleasant View Dr	Hillcrest Dr		3: Poor		Concrete
Poco Ct	Winchester	Dead End or Start	3: Poor		Concrete
Preswick			3: Poor		Concrete
Primrose Dr	Daylily Dr	Primrose Ct	3: Poor		Concrete
Primrose Dr	Primrose Ct	Goldenrod Dr	3: Poor		Concrete
Primrose Dr	Goldenrod Dr	E Auburn Rd	2: Very Poor	533	Concrete

	2018 Local Streets in Poor Condition (PASER Rating Between 1-4)					
Street	From	То	PASER Rating	Lenth (feet)	Pavement Surface	
Primrose Ct	Primrose Dr	Dead End or Start	3: Poor	127	Concrete	
Prospect Dr	Cumberland Dr	Elkhorn Dr	4: Poor		Concrete	
Quail Ridge Cir	Glengrove Dr	Park Creek Ct	3: Poor		Concrete	
Quincy Dr	Jason Cir	Salem Dr	3: Poor		Concrete	
Ridgecrest	Pleasant View Dr	Fairfield	3: Poor		Concrete	
Ridgecrest	Fairfield	Tairrieiu	3: Poor		Concrete	
Ridgefield Ct	Grandview	Dead End or Start	3: Poor		Concrete	
Rochdale	Streamview Ct	Greenleaf Dr	3: Poor		Concrete	
Rocky Crest Dr	Charlwood	Tacoma Dr	2: Very Poor		Concrete	
Rocky Crest Ct	Tacoma Dr & Rocky Crest Dr	Dead End or Start	3: Poor		Concrete	
Rosewood Ln	Falcon Dr	Dead End of Start Dead End or Start	4: Poor		Concrete	
	Lake Forest	Spartan Dr	3: Poor		Concrete	
Rutgers Sandalwood Dr	Drexelgate Pkwy	Parkland Ct	3: Poor		Concrete	
Sandalwood Dr	Parkland Ct	Sandalwood to Parkland	3: Poor		Concrete	
Sandalwood Ct	Parkiand Ct	Sandalwood Ct to CuldeSac	3: Poor		Concrete	
Sandalwood Ct	Sandalwood Ct to CuldeSac	Dead End or Start	3: Poor		Concrete	
			3: Poor			
Sawgrass Ct	Greenwood Winchester	Dead End or Start Dead End or Start			Asphalt	
Slade Ct			2: Very Poor		Concrete	
Snowden Cir	Albany Dr	Salem Dr	3: Poor		Concrete	
Snowden Ct	Salem Dr	Dead End or Start	2: Very Poor		Concrete	
Spartan Dr	Croydon Rd	Notre Dame Rd	3: Poor		Concrete	
Spartan Dr	Notre Dame Rd	Rutgers	3: Poor		Concrete	
Spartan Dr	Rutgers	Lake Forest	3: Poor		Concrete	
Stag Rdg	W Avon Rd	Antler Ct	2: Very Poor		Concrete	
Stag Rdg	Antler Ct	Fawn Ct	3: Poor		Concrete	
Stag Rdg	Fawn Ct	Ten Point Dr	3: Poor		Concrete	
Stanford Cir	W Avon Rd		3: Poor		Concrete	
Stanford Cir	Stanford Ct		2: Very Poor		Concrete	
Stanford Cir	Evergreen Ct	Munster	3: Poor		Concrete	
Starr Ct	Avon Industrial Dr	Dead End or Start	3: Poor		Asphalt	
Stonetree Cir			4: Poor	729	Concrete	
Sugar Pine	Black Maple Dr	Walton Blvd	3: Poor	533	Concrete	
Sumac Dr	Cypress	Tanglewood Dr	2: Very Poor	649	Concrete	
Summit Rdg	East Pointe Ct	W Kilburn Rd	3: Poor	898	Concrete	
Summit Rdg	McCormick Dr	Wales Dr	2: Very Poor	850	Concrete	
Summit Ct	Summit Rdg	Dead End or Start	2: Very Poor	253	Concrete	
Sussex Fair	Chalet Dr	Kimberly Fair	2: Very Poor	296	Concrete	
Sussex Fair	Kimberly Fair	Dead End or Start	3: Poor	739	Concrete	
Tamm	Crooks Rd	Dead End or Start	3: Poor	1357	Asphalt	
Tanglewood Dr		Black Maple Dr	3: Poor	238	Concrete	
Tanglewood Dr	Black Maple Dr		3: Poor	528	Concrete	
Tanglewood Dr		Sugar Pine	3: Poor	69	Concrete	
Tanglewood Dr	Sugar Pine	Lake Forest	3: Poor	227	Concrete	
Tanglewood Dr	Lake Forest	Sumac Dr	3: Poor		Concrete	
Tanglewood Dr		Dead End or Start	2: Very Poor	206	Concrete	
Tanglewood Ct	Tanglewood Dr	Dead End or Start	3: Poor	539	Concrete	
Teakwood	Falcon Dr	Cherrywood Ln & Crestwood	4: Poor		Concrete	
Crestwood	Falcon Dr	Cherrywood Ln & Crestwood	3: Poor		Concrete	
Ten Point Dr	Stag Rdg	Stag Rdg	3: Poor		Concrete	
Ten Point Dr	Stag Rdg		3: Poor		Concrete	
Ternbury Dr	Ternbury Dr	Ternbury Dr	3: Poor		Concrete	
Thames Dr	Thames to Arms Ct	Thames to Arms Ct	2: Very Poor		Asphalt	
Thornberry Ct	Beechcrest	Dead End or Start	3: Poor		Asphalt	
Thornridge Ct	Thornridge Dr	Dead End of Start Dead End or Start	2: Very Poor		Concrete	
Tienken Ct	monninge bi	Dead End of Start Dead End or Start	2: Very Poor		Asphalt	
Tower Hill Ln	Charm	Abington Ct	4: Poor		Concrete	
10MCLUIII FIL	Citatiii	[Abiligion Ct	4. 1 001	744	Concrete	

	2018 Local Streets in Poor Condition (PASER Rating Between 1-4)						
		,		Lenth	Pavement		
Street	From	То	PASER Rating	(feet)	Surface		
Tower Hill Ln		Brewster Rd	3: Poor	74	Asphalt		
Twin Oaks Ct	Long Meadow Ln	Twin Oaks Ct	3: Poor	359	Concrete		
Valley Stream Dr	Dead End or Start	Valley Stream Ct	3: Poor	190	Concrete		
Valley Stream Ct	Valley Stream Dr	Dead End or Start	3: Poor	201	Concrete		
Wagner Dr	Woodridge Dr	Dead End or Start	3: Poor	95	Concrete		
Wakefield Ct	Charlwood & Olympia Dr	Parkwood Dr	3: Poor	412	Concrete		
Warrington Rd			3: Poor	84	Concrete		
Wedgewood Dr	Arbor Creek Dr	Chaffer Dr	3: Poor	74	Concrete		
Whitney Dr	Berry Nook Ln & Arlington Dr	Pioneer Dr	3: Poor	1135	Concrete		
Whitney Dr	Arlington Dr		2: Very Poor	232	Concrete		
Wimpole		Walton Blvd	2: Very Poor	58	Concrete		
Windrift Ln		Eddington	2: Very Poor	560	Concrete		
Woodfield Way	Lake Ridge Rd	Oak View Ct	3: Poor	882	Concrete		
Woodfield Way	Oak View Ct	Forest View Ct	3: Poor	333	Concrete		
Woodfield Way	Forest View Ct	Fox Woods Ln	3: Poor	380	Concrete		
Woodfield Way	Long Meadow Ln	Fox Woods Ln	2: Very Poor	317	Concrete		
Woodridge Dr	Wagner Dr	Woodridge Ct	3: Poor	290	Concrete		
Woodridge Ct	Woodridge Dr	Dead End or Start	3: Poor	238	Concrete		
Yale Ct	Fair Oak Dr	Dead End or Start	3: Poor	370	Concrete		

Notes to Local Street Conditions:

- Pavement Surface Evaluation and Rating System (PASER) is a visual survey method for evaluating the condition of roads. This data serves as the foundation of which to build cost-effective pavement maintenance strategies.
- Local Street conditions are depicted on the map. The PASER condition ratings are grouped by the following categories: POOR (1-4); FAIR (5-7); and GOOD (8-10). Only streets in POOR condition are listed in the table.
- Local Streets are presented by segment (not by total average PASER rating). The same street may be listed as both Fair and Poor because different segments are at different quality levels.
- Streets degrade at different rates due to a variety of factors such as traffic volume, road crosssection, drainage, etc... The PASER rating listed in the tables only represent today's current street condition and <u>does not</u> guarantee that the ranking of roads will remain the same after subsequent street evaluation surveys are conducted. The entire Local Street system is re-evaluated and PASER figures updated each year.

2020-2025 Capital Improvement Plan Water & Sanitary Sewer System Improvements

The mission of the Water Supply and Sanitary Sewage Disposal System Plan is to preserve the integrity of the water and sanitary sewer systems; to implement a capital maintenance program that sustains reliability; and (if justified) to extend the distribution and collection systems throughout the remainder of the City.

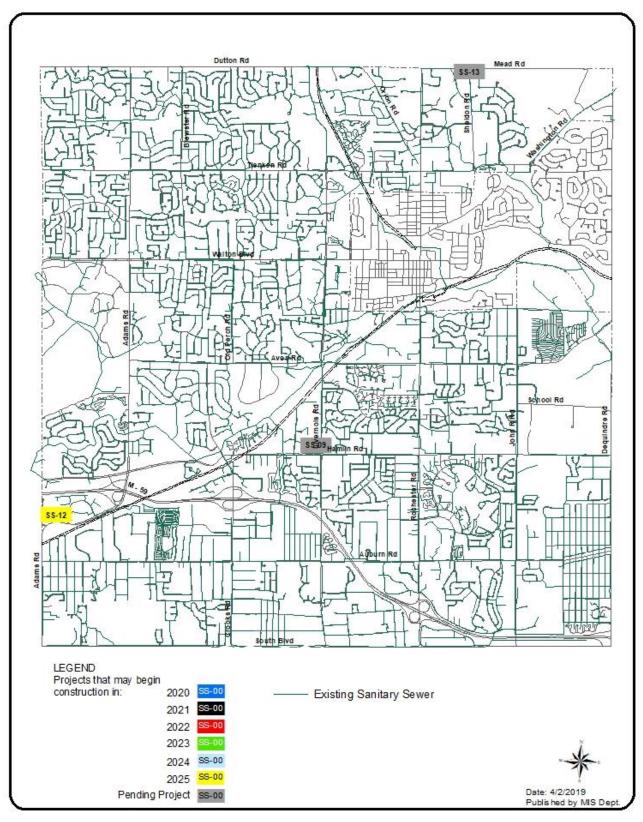
The extension of the sanitary sewage disposal system throughout the City will eventually eliminate private septic systems, thereby preserving the environment as well as the water source for private well systems, which some residents are dependent upon as their source of potable water.

The development of the proposed water and sanitary sewer projects were based upon system deficiencies and needs obtained from area residents, business owners, and City staff. These projects are coordinated with storm water management, roadway, and pathway improvements whenever possible to maximize cost savings through economies of scale, resulting in a more effective and efficient process to implement the construction projects.

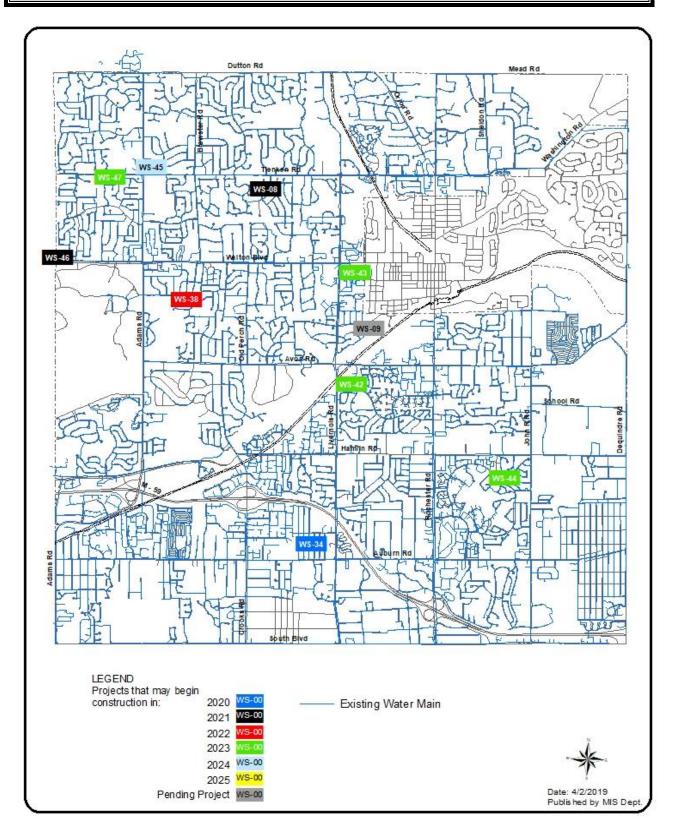
The proposed water and sanitary sewer projects are flexible, allowing for the addition of new improvements to address specific needs without deferring other projects along the way. Studies and analysis of the existing system is an on-going program that, when coupled with new technologies, provides for improved system capabilities and reliability.

Water and sanitary sewer projects identified as urgent are not subject to the rating/weighting scale required of capital improvement projects as these projects are deemed necessary for the health, safety, and welfare of our customers.

2020-2025 Capital Improvement Plan Sanitary Sewer System Improvements



2020-2025 Capital Improvement Plan Water System Improvements



2020-2025 Capital Improvement Plan Water & Sanitary Sewer System Improvements

SS-01B	SCADA System Upgrade Schedule			
	2020-2025			
Estim	ated City Cost:	\$733,880	Estimated City Share:	100%

Regular replacement of servers and other SCADA hardware components (including radio system) scheduled to occur approximately every 5 years. Servers and other SCADA hardware/software components are scheduled for replacement in 2020. The communications (radio) system is scheduled to be replaced in 2021. Annual operating costs of \$60,000 are anticipated to remain consistent with timely replacement, before more extensive service and maintenance levels are required to keep older equipment operational. This project is on-going.

SS-02B		Sanitary Sewer Rehabilitation Program			
2020-2025					
Estim	ated City Cost:	\$1,500,000	Estimated City Share:	100%	

Rehabilitation of the existing sanitary sewer system in various areas of the City as determined through an in-house sanitary sewer system evaluation study that occurs every other year. Selective rehabilitation is planned to occur in the years following the sanitary sewer system evaluation study. This program is proposed to be funded at \$500,000 every other year and is on-going.

SS-11		Oakland Macomb Interceptor Drain Improvements		
2019-2023				
Esti	Estimated City Cost: \$6,468,000 Estimated City Share: 100%			

The Oakland Macomb Interceptor Drain (OMID) is a large diameter interceptor sewer that serves approximately 830,000 residents of Macomb and Oakland Counties. The City is a part of OMID and as the Oakland County Water Resource Commission (OCWRC) does improvements on OMID, the City is assessed its percentage of the project. The City has been notified of upcoming costs (City portion) for 2019 through 2023.

SS-12	**Industrial Drive Sanitary Sewer Extension**			
Estimated	d Total Project:	\$468,750	2024-2025	
Estima	ted LDFA Cost:	\$468,750	Estimated City Share:	100%

Extend approximately 1,250 feet of 8-inch sanitary sewer along Industrial Drive from Forester Blvd to Marketplace Circle in section 30 of the City. This will provide sewer access for properties currently not connected to public sanitary sewer. This project is funded by the LDFA. Construction is planned to begin in 2025.

2020-2025 Capital Improvement Plan Water & Sanitary Sewer System Improvements

WS-08	7	Tienken Manor Subdivision:	Water Main Replacement		
	2021-2021				
Estim	ated City Cost:	\$2,681,250	Estimated City Share:	100%	

Replace approximately 1,350 feet of 6-inch and 5,300 feet of 8-inch cast iron/AC water main located In Tienken Manor Subdivision in Section 9 of the City. Cast iron and AC pipe are no longer installed in our water system and 6" water main does not meet the minimum size requirement (8-inch pipe is the minimum public water main size per the MDEQ and Ten State Standards). The water main will be replaced with 8-inch ductile iron pipe or high density polyethylene (HDPE) pipe (depends on installation method). PRV Improvements will be included with this project as well. Construction is planned to begin in 2021.

WS-34		Glidewell Subdivision: Water Main Replacement				
	2020-2020					
Estim	ated City Cost:	\$5,344,000	Estimated City Share:	100%		

Replace approximately 16,700 feet of 6-inch and 8-inch cast iron water main located in the Glidewell Subdivision in Section 28 of the City. Cast iron pipe is no longer installed in our water system and 6-inch water main does not meet the minimum size requirement (8-inch pipe is the minimum public water main size per the MDEQ and Ten State Standards). The water main will be replaced with 8-inch ductile iron pipe or high density polyethylene (HDPE) pipe (depends on installation method). Construction is planned to begin in 2020.

WS-38	Springhill Subdivision Water Main Replacement Project			
2021-2022				
Estim	nated City Cost:	\$5,312,500	Estimated City Share:	100%

Replace approximately 6,000 feet of 6-inch and 11,000 feet of 8-inch AC water main located in the Springhill Subdivision in Section 17 of the City. The water main will be replaced with 8-inch ductile iron pipe or high density polyethylene (HDPE) pipe (depends on installation method). Construction is planned to begin in 2022.

WS-41		**Advanced Metering Infrastructure (AMI)**			
2024-2025					
Esti	mated City Cost:	\$1,250,000	Estimated City Share:	100%	
	Administrative to the contest of AAAII to the contest of the conte				

Advanced Metering Implementation (AMI) is an integrated system of meters, communications networks, and data management systems that enables two-way communication between utilities and customers. The City would no longer be required to drive routes and obtain meter reads on a monthly basis. The benefits include timely data delivery, access to more data, and low operational costs. Implementation is planned to begin in 2024.

2020-2025 Capital Improvement Plan Water & Sanitary Sewer System Improvements

WS-42	**Bellbrook Water Main Replacement**				
	2022-2023				
Estim	ated City Cost:	\$890,625	Estimated City Share:	100%	

Replace approximately 2,850 feet of 8-inch ductile iron water main located along Wexford Way and the drive serving the Bellbrook Facility in Section 22 of the City. The water main in this location is approximately 33 years old and has been repaired in multiple locations. The water main will be replaced with new 8-inch ductile iron pipe. Construction is planned to begin in 2023.

WS-43	**Ascensi	**Ascension Providence Rochester Hospital Water Main Improvement**			
2022-2023					
Estim	ated City Cost:	\$1,093,750	Estimated City Share:	100%	

Replace approximately 2,400 feet of 12-inch asbestos cement (AC) water main and install approximately 1,100 feet of 8-inch water main near Ascension Providence Rochester Hospital in section 15 of the City. The AC water main will be replaced with ductile iron or high density polyethylene (HDPE) pipe, depending on the installation method. The proposed water main along Walton Blvd is to loop the water system around Ascension Providence Rochester Hospital to provide sufficient redundancy to the hospital. Construction is planned to begin in 2023.

WS-44	**London Bridge Drive Water Main Replacement**				
2022-2023					
Estim	nated City Cost:	\$1,406,250	Estimated City Share:	100%	

Replace approximately 4,500 feet of 8-inch asbestos cement (AC) water main located along London Bridge Drive in section 26 of the City. The AC water main will be replaced with ductile iron or high density polyethylene (HDPE) pipe, depending on the installation method. Construction is planned to begin in 2023.

WS-45	k	**Judson Park Subdivision Water Main Replacement**		
2023-2024				
Estim	nated City Cost:	\$4,031,250	Estimated City Share:	100%
	•		ement (AC) water main located in be replaced with 8-inch ductile iro	

Subdivision in Section 5 of the City. The water main will be replaced with 8-inch ductile iron pipe or high density polyethylene (HDPE) pipe, depending on the installation method. Construction is planned to begin in 2024.

2020-2025 Capital Improvement Plan Water & Sanitary Sewer System Improvements

WS-46	**RC-02 Improvements**				
2020-2021					
Estim	nated City Cost:	\$437,500	Estimated City Share:	100%	

The City of Rochester Hills receives water from the Great Lakes Water Authority at four different locations. The water feed located on the north side of Walton Blvd, west of Waltonshire Ct, is called RC-02, and is the City's largest feed. The feed is approximately 25 feet deep and 45 years old. The GLWA owns the vault and is planning on making improvements in 2021 and it may be beneficial for the City to upgrade equipment at the same time. Construction is planned to begin in 2021.

WS-47	**Tienken Road Water Main**				
2022-2023					
Estimated City Cost:		\$113,750	Estimated City Share:	100%	
Install approximately 260 feet of 8-inch water main on the southeast corner of Tienken and Medinah Drive					

Install approximately 260 feet of 8-inch water main on the southeast corner of Tienken and Medinah Drive in section 7 of the City. The water main adds redundancy to the feed that serves the booster station on Adams Road. Construction is planned to begin in 2023.

2020-2025 Capital Improvement Plan



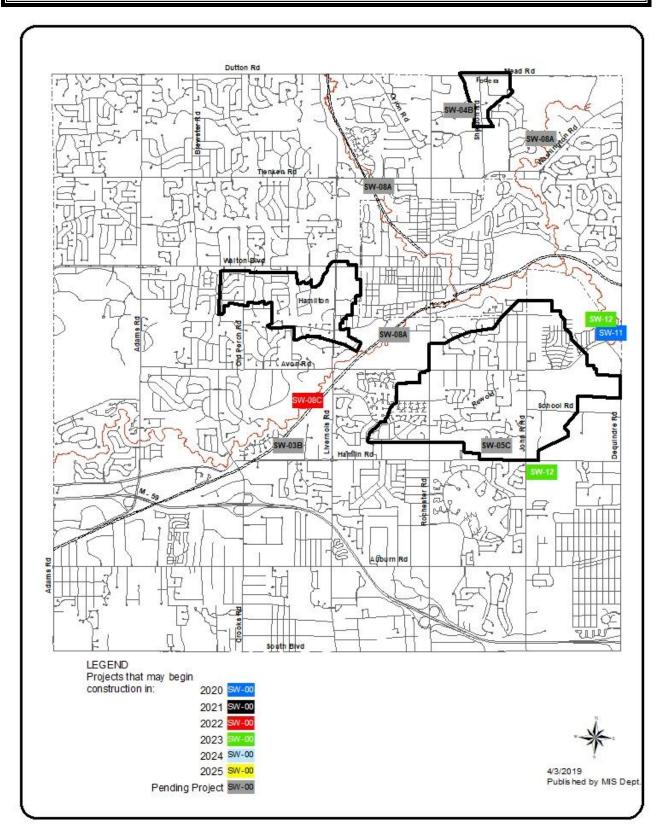
innovative by nature

Prior to FY 2000, the primary focus of Storm Water Management in Rochester Hills was to develop a storm water system adequate to provide for storm water runoff in existing flood-prone areas. Much of the storm water management improvements made were financed and constructed through the use of Chapter 20 of the Drain Code. The improvements were made in parts of the City that were developed prior to the 1970s without drainage improvements. More recently it has become apparent that rain water from smaller, more common storms pass water through detention basins un-detained and are an untreated source of surface water pollution.

The mission of the Storm Water Management Plan is to provide the City with a method of managing storm water runoff in order to provide for adequate drainage in existing flood-prone areas. In addition, the plan addresses water quality standards, minimizes impacts associated with land improvements, and complies with the NPDES Phase II rule and the City's MDEQ Municipal Separate Storm Systems Permit (MS4). The main goal is to protect the health, safety, and welfare of the public and to better protect the surface waters and natural environment of the City of Rochester Hills and downstream communities.

To accomplish this mission it is necessary to:

- Develop a comprehensive storm water management policy that clearly defines the role of the City in storm water management issues, along with a mechanism for funding capital improvements and operations/maintenance of all drainage systems within the City
- Plan and implement the actions identified in the City's Storm Water Pollution Prevention Initiative (SWPPI) and when necessary, update the SWPPI with more cost effective and efficient actions to meet the goals and objectives of the storm water management plans
- Continue to participate and support the activities of the Storm Water Advisory Groups (SWAG)
 for the Red Run, Clinton Main, Stoney/Paint Creeks, Rouge Main 1-2 Sub-Watersheds, the Alliance
 of Rouge Communities (ARC), and the Clinton River Public Advisory Council (PAC)
- Cooperate with the Oakland County Water Resources Commission to reach compliance requirements of the Soil Erosion and Sedimentation Act
- Continue the planning, design, construction, and if necessary, right-of-way acquisition for improvements based on the projects listed in the CIP
- Continue to search for and pursue alternative funding sources to help accomplish our mission
- Work cooperatively with other cities, townships, and villages to efficiently and cost effectively comply with the mandates of the NPDES Phase II rule



SW-08C Clinton River: Natural Channel Restoration

Estimated Total Project: \$840,000 2022-2024

Estimated City Cost: \$420,000 Estimated City Share: 50%

Significant bank erosion and channel widening exists along the Clinton River within the City property between Livernois Road and Crooks Road. In 2010, as part of Phase I (SW-08B), the City restored approximately 500' of the channel and stabilized the bank to protect the Clinton River Trail from collapse due to the bank's failure. The whole project area consists of approximately one mile of river through City property. It is proposed that the balance of the project (Phase II) be improved in phases as grants (up to a 50% match) become available. The City has applied for several grants and will continue to apply for additional grants to allow the City's match dollars to go further toward the goal of restoring the natural riverbank and flow characteristics of the river, and provide in-stream habitat, as well as adjacent riparian habitat within the City property. In addition to the reduction in erosion, the project will improve fish and insect habitat with the intent to create a self-sustaining fishery. Angling and paddling access to the river is also proposed to be added to protect the banks from access and use disturbance. Construction for Phase II is planned to begin in 2022, pending a funding source/grant award, or if erosion increases dramatically.

SW-11	Clinton River / Yates Park: Riverbank Stabilization			
Estimated	d Total Project:	\$400,000	2020-2022	
Estimated City Cost:		\$230,000	Estimated City Share:	50% / 100%

Angler traffic at Yates Park, the adjacent dam, and the Cider Mill area has caused bank erosion resulting in pool filling, over-widening, and lack of holding water for steelhead trout. This project seeks to utilize the latest science to design and then restore habitat and provide suitable access along the river at this trout fishery. Partnership with Clinton River Watershed Council for monitoring and public involvement will convey results. The design phase will create a master plan for future construction phases. The construction phases will be broken into smaller projects as those that can be performed with volunteers and those that would require heavy equipment/contractors. Once the planning phase is completed, construction projects will be more attractive for receiving grant support. The Great Lakes Restoration Initiative (GLRI) has been a source of grants for similar projects. Construction is planned to begin in 2020.

SW-12	Watertowns Storm Water Improvements			
Estimated	d Total Project:	\$146,500	2023-2023	
Estim	ated City Cost:	\$73,250	Estimated City Share:	50%

Incorporate recommendations of the Clinton River Watershed Council (CRWC) Watertowns Green Infrastructure Community Report to improve storm water runoff at Yates Park and Borden Park through the addition of parking lot swales, rain gardens, permeable pavers, and bio-retention cells. Improved water quality and controlled runoff of storm water would reduce the load on storm water infrastructure. Construction is planned to begin in 2023. Funding could move this project up to coincide with any of their park improvements for these locations.

SW-13 Storm Water Best Management Practices (BMP) Retrofitting

Estimated Total Project: \$450,000 2022-2023

Estimated City Cost: \$225,000 Estimated City Share: 50%

Retrofit up to 10 city-owned properties with storm water Best Management Practices (BMP) which include methods, measures, or practices to prevent or reduce surface runoff and/or water pollution, including but not limited to, structural and non-structural storm water management practices and operational / maintenance procedures. Construction is planned to begin in 2023, or if funding becomes available.

SW-15 **Infra-Red Aerial Photography Survey**

2021-2021
Estimated City Cost: \$65,000 Estimated City Share: 100%

The infra-red aerial survey provides the impervious/non-impervious surface usage for all properties in Rochester Hills. This survey will be the basis to define the Residential Equalized Units (REU) ratio to base costs relating to a Stormwater Utility. The Stormwater Utility is currently being proposed through a Public Safety & Infrastructure sub-committee, and as the process moves forward, this aerial survey is part of the requirements needed to meet implementation goals. If approved, the goal is to have the Stormwater Utility in place by 2022 and to have full utility operations by 2024. Implementation of the aerial survey is proposed to begin in 2021.

2020-2025 Capital Improvement Plan Pathway System

In the mid 1970's the City of Rochester Hills (formerly Avon Township) initiated a pathway program that planned for approximately 125-miles of pathways along major roads. To date, approximately 98 miles of pathways have been constructed by private development and/or through public funding. Approximately 31 miles of pathways are needed to complete the pathway system. Additionally, approximately 4.5 miles of the Clinton River Trailway was surfaced utilizing recycled asphalt materials in 2015.

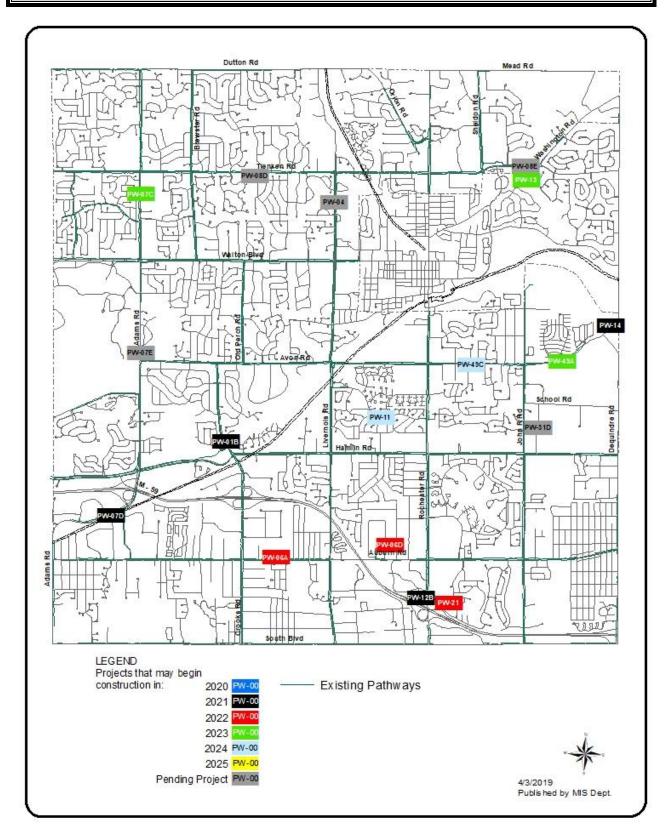
The scope of the pathway program has gone beyond the initial goal of just extending the system to both sides of all arterial roads in the City. In November of 2006, a twenty-year 0.1858 mill ballot proposal was approved by the residents of Rochester Hills to fund the continuation of new pathways, rehabilitation and maintenance of existing pathways, and to preserve the system for the public's use and enjoyment. The current pathway program has evolved through the continuation of the development of the City along with a heightened awareness of the value of a non-motorized transportation facility.

The pathway program is comprised of the following elements:

- Construction of new pathways to fulfill the goal of pathways along both sides of all arterial streets.
 - The pathway millage language allows for construction along school routes, connectivity for high volume pedestrian generator sites, and along the Clinton River Trailway.
- Rehabilitation of existing pathways to maintain an adequate level of service for pathway users.
 - Each year, more segments of the pathway system exceed their service life and require some form of rehabilitation. Additionally, any pathway upgrades or rehabilitations must now comply with current Americans with Disabilities Act (ADA) requirements.
- Maintenance of the existing pathway system to protect and extend the condition of the pathway segments to the end of their service life.
 - Beyond routine winter maintenance, other maintenance activities such as pothole patching, crack sealing, and vegetation control need to be done system-wide on a routine basis to preserve the integrity of the system.

Starting in FY 2008, the Pathway Ad-hoc Committee began reviewing and rating the pathway projects.

2020-2025 Capital Improvement Plan Pathway System



2020-2025 Capital Improvement Plan Pathway System

PW-01A	Pathway System Rehabilitation Program				
2020-2025					
Estim	ated City Cost:	\$1,500,000	Estimated City Share:	100%	

Rehabilitation of the existing City asphalt pathway system by performing bituminous overlays or large section repairs in order to maintain the integrity of the overall pathway system. In 2008, the City initiated a pedestrian bridge inspection program to be performed on a four (4) year cycle. Every fourth year following the inspection, the City may perform pedestrian bridge rehabilitation work as identified in the consultants' bridge inspection inventory and report. Operating costs of approximately \$3,400 per year for each 2.0-mile section are anticipated to decrease to \$2,950 per year due to this rehabilitation program. This program is proposed to be funded at \$250,000 per year and is on-going.

PW-01B	Crooks Road Pathway Gap [Clinton River – Bonnie Brae Street]			
2020-2021				
Estimated City Cost: \$155,130 Estimated City Share: 100%				

Construction of approximately 770' of 8' wide asphalt pathway along the east side of Crooks Road from the Clinton River to Bonnie Brae Street to fill in the existing pathway gap. Constructing this portion of pathway will connect the gap in the pathway along Crooks Road from Bonnie Brae Street to the Clinton River. Connectivity of the pathway system provides an increased level of service to pedestrians, especially considering the Clinton River Trail access is just south of this area. Operating costs of approximately \$200 per year are anticipated due to the additional pathway section added. Construction is planned to begin in 2021.

PW-06D	Auburn	Auburn Road Pathway Gaps [Walbridge Road – Hickory Lawn Road]				
2021-2022						
Estim	nated City Cost:	\$464,950	Estimated City Share:	100%		
Construction of approximately 2,100' of 8' wide asphalt pathway along the north side of Auburn Road						

Construction of approximately 2,100' of 8' wide asphalt pathway along the north side of Auburn Road between Walbridge Road and 500' east of Hickory Lawn Road to fill in the pathway gaps. Operating costs of approximately \$590 per year are anticipated due to the additional pathway sections added. Construction is planned to begin in 2022.

PW-07C	Adams	Adams Road Pathway [Powderhorn Ridge Road – Tienken Road]			
2022-2023					
Estim	ated City Cost:	\$429,250	Estimated City Share:	100%	
Construction of	Construction of approximately 2,400' of 8' wide pathway along the east side of Adams Road between				
Powderhorn Ridge Road and the Premier Academy site. Also, construct a key walk along the north side of					
Powderhorn Rid	ge Road to allow	pedestrians to safely	cross Adams Road at the traffic	intersection.	

2020-2025 Capital Improvement Plan Pathway System

Operating costs of approximately \$730 per year are anticipated due to the additional pathway sections added. Construction is planned to begin in 2023.

PW-07D	Adams Road @ Clinton River Trailway: Pathway Crossing				
2020-2021					
Estim	ated City Cost:	\$180,330	Estimated City Share:	100%	

Construction of a mid-block pedestrian crossing at Adams Road near Leach Drive and Marketplace Circle to connect the Clinton River Trailway to the nearby shopping center. The proposed crossing would incorporate the use of eight (8) solar powered push-button rapid flasher beacons (RFBs), four (4) in each direction. The project would also include the installation of two (2) steel poles and mast arms with overhead signage at the crossing. Approximately 500' of asphalt and concrete pathway would be required to be extended in order to provide connection. Note: The project is located within the Road Commission for Oakland (RCOC) county's right-of-way and will require prior approval by the RCOC demonstrating that pedestrian/bicycle volume warrants are met. Operating costs of approximately \$1,000 per year are anticipated due to routine and winter maintenance requirements. Construction is planned to begin in 2021.

PW-11	Dr	Drexelgate Pathway Gap [Wexford Way – Rochester Road]			
2023-2024					
Estimated City Cost: \$1,018,500 Estimated City Share: 100%					
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Construct approximately 5,100' of eight (8) foot wide pathway along the north side of Drexelgate Parkway between Wexford Way and Rochester Road. Contributes to the connectivity of the City's pathway network and to the goal of having pathway constructed along all major section line roads. Provides additional segments of pathway for residents and pedestrians to utilize. Operating costs of approximately \$3,000 per year are anticipated due to the additional pathway section added. Construction is planned to begin in 2024.

PW-12B	**Rochester Road Pathway at M-59**				
2020-2021					
Estimated City Cost: \$1,110,000 Estimated City Share: 100%					

Construction of approximately 3,200 feet of new 8-foot wide pathway on each side of Rochester Road and connecting to existing ends of pathway. The resulting pathway configuration would resemble the existing version at the Crooks and M-59 interchange. New pathway would not be constructed along the 325-foot bridge section but the City would coordinate with MDOT to re-purpose the paved shoulder into a 10-foot wide pathway protected by Jersey barriers. Constructing this portion of pathway will improve the level of service for pedestrians by providing a paved north-south route through the interchange at M-59. Residents that walk or cycle will benefit from the proposed travel route. Operating costs are expected to increase for maintenance and repairs. This project is dependent on grant funding. Construction is planned to begin in 2021.

2020-2025 Capital Improvement Plan Pathway System

PW-13 Runyon Road Pathway

2022-2023
Estimated City Cost: \$367,500 Estimated City Share: 100%

Construction of approximately 1,700' of 8' wide concrete pathway along the west side of Van Hoosen, south side of Runyon and east side of Washington Road. The pathway will fill an existing pathway system gap while also providing a pedestrian link to the City Museum at the Van Hoosen Farm. Construction is planned to begin in 2023.

PW-14	Yates Pathway [Yates Park to North of Avon]			
2020-2021				
Estimated City Cost: \$233,500 Estimated City Share: 100%				100%

Construct two stretches of pathway: The first being approximately 1,200' from the Yates Park parking area heading east and north along Avon and Dequindre to the City of Rochester corporate limit south of the Clinton River Trailway crossing of Dequindre; The second being approximately 200' from the southwest quadrant of the Dequindre/Avon intersection and heading west of Avon Road towards Yates Cider Mill. Construction is planned to begin in 2021.

PW-21	East Nawakwa Pathway [Rochester Road – Joshua Drive]				
2021-2022					
Estim	ated City Cost:	\$401,050	Estimated City Share:	100%	
Construction of	Construction of approximately 2,100' of 8' wide asphalt pathway along the north side of East Nawakwa				
Road between Rochester Road and Joshua Drive. Operating costs of approximately \$590 per year are					
anticipated due t	o the additional pat	thway section add	led. Construction is planned to begin in	2022.	

PW-49A	Avon R	Avon Road Pathway [LeGrande Boulevard – Cider Mill Boulevard]			
2022-2023					
Estim	ated City Cost:	\$311,750	Estimated City Share:	100%	
Construction of	Construction of approximately 1,500' of 8' wide asphalt pathway along the north side of Avon Road				
between Le Grande Boulevard and Cider Mill Boulevard. Operating costs of approximately \$420 per year					
are anticipated d	ue to the additiona	pathway section add	ed. Construction is planned to beg	in in 2023.	

2020-2025 Capital Improvement Plan **Pathway System**

PW-49C	Avo	Avon Road Pathway [Rainier Avenue – Bembridge Drive]		
2023-2024				
Estim	ated City Cost:	\$652,000	Estimated City Share	e: 100 %
Construction of	approximately 3,20	0' of 8' wide	asphalt pathway along the south s	ide of Avon Road
between Rainier	Avenue and Bemb	ridge Drive.	Operating costs of approximately \$	8890 per vear are

anticipated due to the additional pathway section added. Construction is planned to begin in 2024.

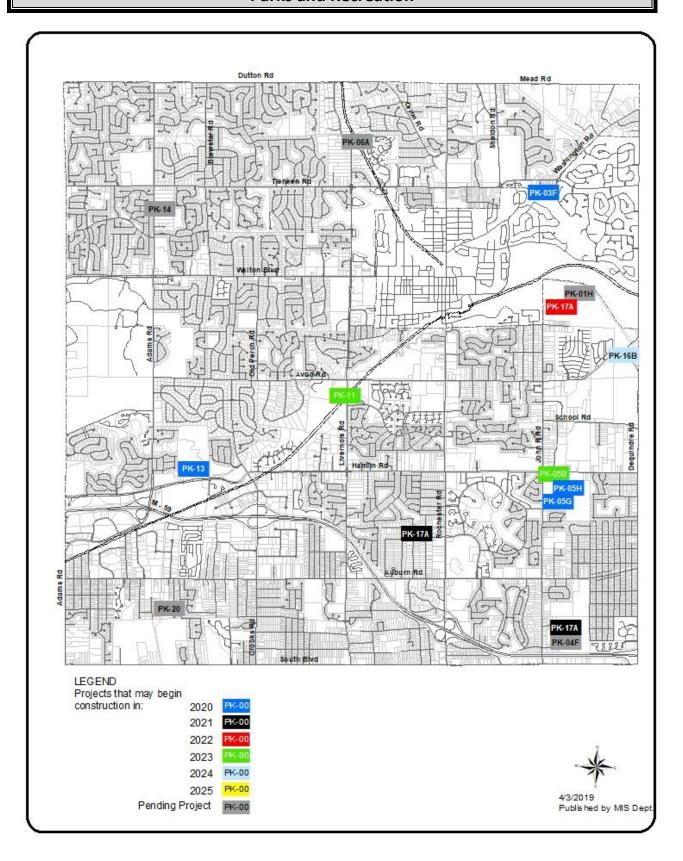
2020-2025 Capital Improvement Plan Parks and Recreation

The City of Rochester Hills' Parks provide active and passive recreational opportunities for its residents. The City operates 2 regional trails and 14 parks, Museum and Green Space that cover over 1,146 acres and vary in purpose, size, and development.

Every five years the Parks and Recreation Master Plan is updated. Once the Plan is adopted by the Planning Commission it is incorporated into the City's Master Land Use Plan. The Parks and Recreation Master Plan, which was last updated in 2016, provides an overview of regional recreational opportunities, identifies long and short-term objectives for park development, and meets criteria for Michigan Department of Natural Resources (MDNR) grant eligibility.

Park development and operational costs are supported primarily by the City's General Fund and Capital Improvement Fund and are supplemented by user fees, charges, grants, and donations.

2020-2025 Capital Improvement Plan Parks and Recreation



2020-2025 Capital Improvement Plan Parks & Recreation

PK-03F Van Hoosen Museum: Equipment Barn Replacement

Estimated Total Project: \$770,000 2019-2020

Estimated City Cost: \$577,500 Estimated City Share: 75%

The Equipment Barn was once an integral part of the Van Hoosen Farm operation. Built in 1912, it was torn down in 1999 due to its deteriorated condition. The Museum has a full set of photographs and drawings of this facility and would like to rebuild it to continue restoring the Van Hoosen Farm facility, while creating space for storage and maintenance activities. The Equipment Barn will help the Museum more accurately recreate the historic farm setting at the Van Hoosen Farm. The building will be located on the exact footprint of the original building and would replicate the original building in nearly all details. This new building will also allow two smaller buildings to transfer their contents to this building and then be open for public tours. At one time, the Van Hoosen Farm was a world class dairy operation and the equipment barn will allow us to create a broader interpretive story, create an on-site maintenance space, and bring valuable items and equipment indoors during the winter to avoid deterioration from weather and vandalism. Construction is planned to begin in 2020.

PK-05B Borden Park: Roller Hockey Rink Board & Tile Replacement Schedule

2020-2025

Estimated City Cost: \$104,810 Estimated City Share: 100%

There are two (2) roller hockey rinks located at Borden Park. The dasher boards are molded plastic and the skating surface is made up of plastic tiles. Due to age and damage from use, the boards and tiles are in need of replacement every 6-8 years. Operating costs are anticipated to decrease due to newer materials which should not require as much maintenance for the first few years. It is planned to upgrade Roller Hockey Rink #1 in 2023. This program is on-going.

PK-05G Basketball, Tennis, and Pickle Ball Court Renovation Program

Estimated Total Project: \$550,000 2020-2022

Estimated City Cost: \$550,000 Estimated City Share: 100%

Renovation of the 3 basketball courts at Borden Park, 2 basketball and 2 tennis courts at Avondale Park, and 2 tennis courts at Spencer Park. The courts currently have many cracks, drainage issues, and several have a plastic tile surface meant as a temporary fix until repairs can be made. Both the asphalt and tiles are beyond their useful life expectancy. The courts are currently considerably below industry standards and residents' expectations. This project would be a complete rebuild of the asphalt courts and fencing that would recreate the courts as they were when they were first opened. This program is on-going.

PK-05H		**Borden Park Office Relocation**				
2020-2020						
Es	stimated City Cost:	\$1,125,000	Estimated City Share:	100%		

2020-2025 Capital Improvement Plan Parks & Recreation

Relocation of the Borden Park Office to a more central location in order to provide better safety, security and customer service as well as eliminate a no longer functional old house currently serving as the office building. While working at the current location, it is not possible to observe and/or quickly react to the needs of activities in the park. The existing building is an old residential house at the eastern park boundary. It is not an acceptable office environment, is poorly insulated, lacks adequate electrical power and requires significant improvements to the heating system, windows, doors and floors. The building also has ADA compliance issues for customer access. Construction is planned to begin in 2020.

PK-07B	**Compact Loader**			
2021-2021				
Estim	ated City Cost:	\$60,000	Estimated City Share:	100%

Purchase of a compact loader and attachments to support City-wide landscaping functions to improve overall appearance of City-wide landscapes. Compact loaders can be used in very tight areas including planting beds, gardens and landscape features where traditional equipment will not fit or would cause damage. Attachments would include auger for tree planting, tiller for bed preparation, bucket for working with mulch, forks for large plants and a trencher for irrigation work. Purchase is planned for 2021.

PK-07C	**Fraize Mower**			
2020-2020				
Estim	nated City Cost:	\$40,000	Estimated City Share:	100%

Purchase of a fraize mower. Fraize mowing is a maintenance process to help clean up and minimize thatch and to control organic build-up. This process also controls and removes weed seed accumulation while leaving the crown of the plant intact ready for regeneration. Fraize mowing will be used for our major field renovations (1-2 fields a year). It will increase quality, safety and available hours of play on our sports fields. It can also be used in high traffic areas other than sports fields. This equipment will save money through reduced manpower and materials needed for renovation. Purchase is planned for 2020.

PK-11	Clinton River Access: Parking Lot & Canoe/Kayak Launch			
Estimated	d Total Project:	\$300,000	2023-2023	
Estim	ated City Cost:	\$150,000	Estimated City Share:	50%

Construction of a small parking area (approximately 20 spaces), an accessible pathway, and an accessible canoe/kayak launch into the Clinton River at Eagle's Landing. Cooperation with the Clinton River Watershed Council, the City of Rochester and/or the City of Auburn Hills could provide for additional river access points in their cities and possible grant opportunities. Operating costs of approximately \$1,000 per year are anticipated for this facility. Construction is planned to begin in 2023.

2020-2025 Capital Improvement Plan Parks & Recreation

PK-13 Innovation Hills: Park Development

Estimated Total Project: \$13,146,310 2018-2021

Estimated City Cost: \$6,573,155 Estimated City Share: Approx. 50%

Development of Innovation Hills park including parking lot, trails and boardwalks, improvements to the wetlands, invasive vegetation control, fitness stations, restrooms, playgrounds, water features & ponds, pavilion(s), sensory garden, observation areas, support structures, bridges across Clinton River, community gathering areas, & community building. Private donations and grant funding will be pursued to offset overall project costs. Construction began in 2014. Over \$1,000,000 in grants and private funding has been raised over the last year. Construction plans are currently under way for trail system, invasive vegetation control, two boardwalks, restroom, kayak landing, parking lot, water features & ponds, playground entrance, & sensory garden.

PK-16B		Yates Park: Clinton River Access Improvements		
2024-2024				
Estim	ated City Cost:	\$141,600	Estimated City Share:	100%

Construct an accessible path and kayak/canoe launch at Yates Park and a universally accessible portage around the Cider Mill Dam. Yates Park is heavily used for kayak and canoe launching into the Clinton River. The path and launch would provide ADA compliant access to the river as well as to protect the stream bank. The dam for Yates Cider Mill is a dangerous impediment for canoes and kayaks in the Clinton River as the dam separates the river as it runs from Auburn Hills to Lake St. Clair. This project would provide a safe, accessible portage around the dam with a rail system so that canoe/kayakers would not have to get out of their boats. Project also includes rain gardens and storm water improvements and paving the existing parking lot. Operating costs of approximately \$1,000 per year are anticipated for this facility. Construction is planned to begin in 2024.

PK-17A	Playground Replacement Schedule			
2020-2025				
Estimated City Cost: \$577,980 Estimated City Share: 100%				100%

Scheduled replacement and/or upgrades of existing playground equipment at City Parks to comply with Federal and State Laws by adding surfacing and equipment, or replacing existing equipment. Design and/or surfacing needs to meet ADA/CPSC/ASTM standards and guidelines. Playground Equipment is scheduled to be replaced after 20-years. It is planned to upgrade the playground equipment at Bloomer and Yates Parks in 2019, Wabash Park and Spencer Park in 2021, and Bloomer Park in 2022. Operating costs of approximately \$10,000 per year are anticipated to remain consistent with the new equipment. This program is on-going.

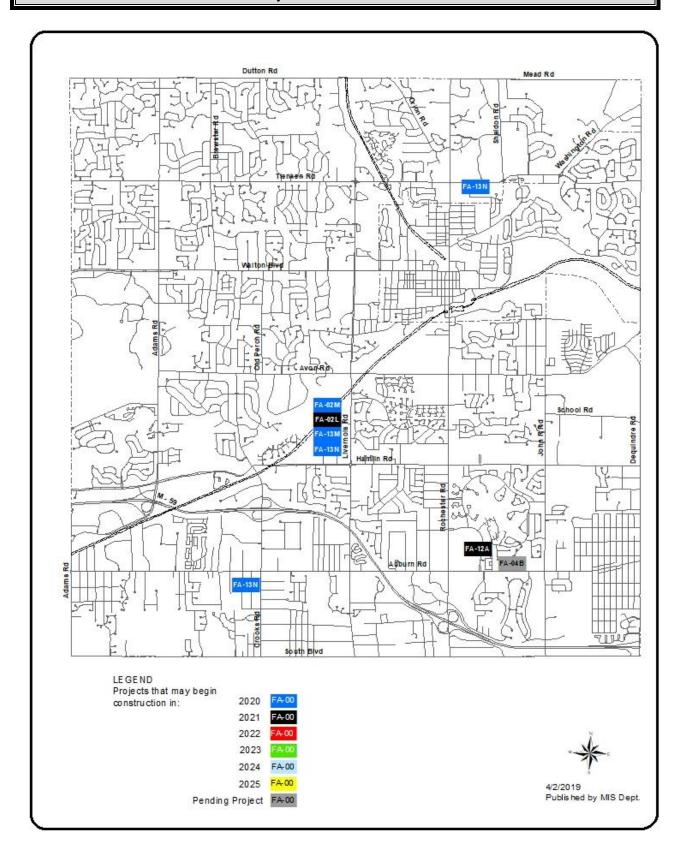
2020-2025 Capital Improvement Plan



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The City of Rochester Hills owns 34 buildings totaling over 288,000 square feet of space with a replacement cost of over \$55.8 million. These buildings support the ability of departments to provide services to the public. The rehabilitation, renovation, and/or replacement of the City's facilities is inevitable. Changes in services required by residents, changes in local government regulations, Federal and State mandated programs for health, safety or building access, changes in technology, as well as securing the investment of our taxpayers, requires systematic improvements and varying degrees of maintenance. Improvements are planned to address these issues as well as indoor air quality, ergonomics, energy conservation, and customer service.

The Capital Improvement Plan addresses the on-going deterioration of City-owned facilities caused by age and use. The Capital Reinvestment Program, as a component of the Capital Improvement Plan, involves a number of rehabilitation projects, which contain strategies to increase the useful life-span of individual facilities while reducing their maintenance and operational costs. A Facility Condition Index, a measure of repair costs as a percentage of replacement cost, determines the course of action to rehabilitate a facility; redevelop the site; or evaluate the loss of the facility to the community.



FA-02L	**Fire Station 1: Carports**			
2021-2021				
Estim	nated City Cost:	\$256,000	Estimated City Share:	100%

Install a new carport structure at Fire Station #1 to cover twelve (12) spaces where the Fire Department command vehicles park. The command vehicles will stay clear during snow and ice conditions which will allow for a quicker response time. This will also extend the life of the vehicles and allow the replacement time frame to be extended. Maintenance costs will increase approximately \$7,500 every 5 years for painting. Construction is planned to begin in 2021.

FA-02M	**Training Tower Gas-Fired Prop**			
2020-2020				
Estimated City Cost: \$200,000 Estimated City Share: 100			100%	

Installation of a gas-fired burn prop into existing Training Tower at Fire Station 1. Prop would be used to simulate actual fire conditions in a safe and effective manner. Interior fire training props deliver the realism sought in an advanced fire training program and fire events that can be used in addition to the fire training tower to provide the most advanced fire training simulation currently available. Having a gas-fired prop in the training tower would allow members to train on duty, eliminate OT costs and be able to train in live fire conditions more often. The prop provides decreased carcinogen production compared to Class A materials (pallets and hay). Several safety controls include temperature control, the ability to instantly "shut off" the fire and the ability to rapidly vent the area. Installation is planned for 2020.

FA-07C	Citywide HVAC Maintenance & Repairs Schedule			
Estimated	d Total Project:	\$1,069,200	2020-2023	
Estim	ated City Cost:	\$1,069,200	Estimated City Share:	100%

Scheduled replacement of units based on estimated life expectancy. HVAC systems require continual maintenance, repairs and upgrades to keep to City buildings safe and comfortable for all residents, visitors and employees. This program is on-going.

FA-07D	Citywide Energy Management Systems			
Estimate	d Total Project:	\$216,000	2020-2025	
Estim	ated City Cost:	\$216,000	Estimated City Share:	100%

Replacement of existing Energy Management Systems to the current system used by other City locations. Energy Management Systems allow us to use our HVAC systems with the greatest efficiency and control when functioning properly with minimal errors or delay. Upgrading to the uniform system will grant us a higher level of control over building environments. This program is on-going.

FA-09	IT Infrastructure Capacity Funding			
2023-2025				
Estimated City Cost: \$100,000 Estimated LDFA Share: 100%				100%

One of the goals of the State of Michigan's SmartZone program is to provide local communities, through an LDFA, with the capability to improve Information Technology (IT) Infrastructure within Certified Technology Parks. Capacity improvements would be on a case-by-case basis, often associated with the needs of specific companies. Funding for these projects must occur in public right-of-ways or in a deeded easement only. It is not known when these individual requests will arise, and the improvement must be constructed within a short period of time. A pool of funding set aside from the LDFA's TIF capture would allow for a quick response, and improve the competitiveness of the City's technology parks for the attraction and/or retention of companies. There are no operating cost impacts associated with these improvements since the LDFA will not own the infrastructure, but rather would only pay the installation costs.

FA-11	ADA Compliance Implementation Program			
2020-2025				
Estimated City Cost: \$240,000 Estimated City Share: 100%				

In 2010, the City contracted an outside Compliance Specialist to perform ADA (Americans with Disabilities Act) inspections of all City Facilities. A transition plan was completed identifying a full description of work areas needing ADA adjustments in order to comply with the State and Federal guidelines. This project will involve coordination with the Facilities Division, Department of Public Services, and Parks Department to coordinate similar projects for efficiency and cost savings. Examples of ADA compliance improvements include: concrete replacement, inside and outside signage upgrades, handrail installation/upgrades, wrapping of plumbing fixtures, handicap push pads on doors, accessible pathways, trailways, shelters, picnic tables, grills, boat launches, beaches, shower areas, restrooms, etc... This program is proposed to be funded at \$40,000 per year and is on-going.

FA-12A	OCSO Substation Water Heater			
Estimated	d Total Project:	\$38,000	2021-2021	
Estim	ated City Cost:	\$38,000	Estimated City Share:	100%
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Replacement of the water heater at the Oakland County Sheriff Office (OCSO) Substation. The unit is reaching the end of its useful life and more efficient options are now available. Replacement is planned in 2021.

FA-13M	Fire Station #1 Concrete Approach Replacement			
Estimated	d Total Project:	\$260,000	2020-2020	
Estim	ated City Cost:	\$260,000	Estimated City Share:	100%
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Replacement of cracked concrete approach to Fire Station #1 in front of apparatus bays. This project will provide a safe and reliable concrete drive for Fire Department vehicles to respond to emergencies. Construction is planned to begin in 2020.

FA-13N	Fire Station Bay Heaters			
Estimated	d Total Project:	\$130,000	2020-2020	
Estim	ated City Cost:	\$130,000	Estimated City Share:	100%

Replacement of the bay heaters in the Fire Station #1, 3 and 5 Apparatus Bays. They are essential to keeping the Fire vehicles and Ambulance supplies at optimal temperature for their life-saving capabilities. Without working bay heaters, emergency services can be slowed or interrupted by low temperatures. Replacement is planned in 2020.

2020-2025 Capital Improvement Plan



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2020-2025 Capital Improvement Plan Professional Services

Professional services are solicited when technical expertise or knowledge of a specialized field is critical to the performance of a service that cannot be efficiently performed in-house by City staff. Professional services involve extended analysis, discretion, and independent judgment and an advanced or specialized type of knowledge, expertise, or training which is customarily acquired either by a prolonged course of study or equivalent level of experience in the field. These services include, but are not limited to: attorneys, engineers, planning consultants, architects, and other similar professionals.

PS-07	Master Plan Update Schedule				
2020-2025					
Estim	Estimated City Cost: \$100,000 Estimated City Share: 100%				

Contract with a planning consultant to prepare scheduled updates to the City's Master Plan. The Master Plan is the policy tool used as a guide in the physical development of the community. By State Law (PA 33 of 2008) the Master Plan must be reviewed and updated every five years. The Master Plan was updated in 2018 and the next required five year review and update is planned to begin in 2023.

PS-08	Master Thoroughfare Plan Update Schedule				
2020-2025					
Estimated City Cost: \$150,000 Estimated City Share: 100%					

The Master Thoroughfare Plan is an important coordinating document that helps guide regional transportation planning by providing adjacent and regional communities with an understanding of our transportation vision, and vice versa. The current Master Thoroughfare Plan was adopted in 2008 and it is anticipated that priority projects recommended therein will be completed in the next few years. At that point, it will be time to prepare a new or updated Master Thoroughfare Plan to guide future City transportation improvements. It is anticipated that the new plan will incorporate Complete Streets concepts as required by State Law, in addition to other motorized and non-motorized transportation planning for infrastructure and right of way needs. The next update is planned to be completed in 2019.

2020-2025 Capital Improvement Plan



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Internal Service Support Programs play a pivotal role in the City's ability to deliver services to its residents. These programs involve a wide range of support services for functions that interact directly with residents. Individual components of support programs are not normally considered to be capital expenditures; however, the Capital Improvement Plan Policy includes purchases of major equipment (i.e., items with a cost individually or in total of \$25,000 or more and will be coded to a capital asset account).

Internal Service Support Program projects are funded internally by user charges to City departments or directly by millage levy. Projects in this category directly and/or indirectly affect a broad range of services including Management Information Systems (MIS); Geographic Information Systems (GIS); Fleet Equipment and Vehicles; Fire Equipment, Vehicles and Apparatus; as well as Communication Systems.

IS-02B	City Website Update Schedule				
2020-2025					
Estim	Estimated City Cost: \$35,000 Estimated City Share: 100%				
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Scheduled improvements in functionality and design to the City's current website configuration. Improvements would likely require changes to the current content management system as well as Internet hosting provider. Upgrades to the City's website are anticipated to occur every 5 years. Operating costs are anticipated to remain consistent as current website processes are already in place. The next website upgrade is planned to begin in 2023. This update schedule is on-going.

IS-04A	Fire – Turnout Gear Replacement Schedule				
2020-2025					
Estimated City Cost: \$720,000 Estimated City Share: 100%					

Scheduled replacement of turnout gear for fire suppression personnel. Turnout gear is an essential part of a firefighter's protective equipment. Turnout gear is scheduled to be replaced every 8-10 years. The Fire Department looks to grants from the Department of Homeland Security as well as other possible grants to cover all or a percentage of the costs associated with replacement. The next replacement is planned for 2021, however would need to begin in 2020 for a 2021 delivery. This replacement program is on-going. Additionally, with new studies as related to Firefighter Health and Wellness, Firefighters have a higher risk of cancer. The current recommendation is that members have two (2) sets of turnout gear so that after a fire a member can decontaminate completely, including washing of their turnout gear. Many studies on firefighters with cancer, dermal absorption studies, biochemical studies of firefighters with cancer, and University studies of dirt deposits on turnout gear have been done. There have also been ongoing studies and questions about turnout gear contamination, decontamination, cleaning, and the role turnout gear plays in carcinogen/health hazards exposure. Having the second set of turnout gear allows for immediate laundering. Finally, when repairs are being made to a set of turnout gear a member has a second set available to wear.

IS-04D	SCBA Replacement Schedule			
2020-2025				
Estim	ated City Cost:	\$956,000	Estimated City Share:	100%

Scheduled replacement of Self Contained Breathing Apparatus (SCBA) gear for fire suppression personnel. SCBA is an essential part of a firefighter's protective equipment as it allows a firefighter to enter smoke filled, toxic areas while providing clean air to breathe. SCBA gear is scheduled to be replaced every 8-10 years and air compression equipment every 16-20 years. The Fire Department looks to grants from the Department of Homeland Security as well as other possible grants to cover all or a percentage of the costs associated with replacement. The next replacement is planned to begin in 2024. This replacement program is on-going.

IS-04G	Heart Monitor Replacement Schedule				
2020-2025					
Estim	nated City Cost:	\$235,000	Estimated City Share:	100%	

Scheduled replacement of Heart Monitors. A Heart ECG Monitor allows paramedics to monitor possible life threatening heart rhythms, provide defibrillation capabilities, along with vital sign monitoring. This piece of equipment is used on approximately 60-70% of all patients treated. Heart monitors are anticipated to be replaced every 5-7 years. Operating costs are anticipated to remain consistent with timely replacement, before more extensive service and maintenance levels are required to keep older equipment operational. The next replacement is planned to begin in 2022. This replacement program is on-going.

	Citywide Fleet Replacement Schedule				
2020-2025					
imated City Cost:	\$9,886,760	Estimated City Share:	100%		
	timated City Cost:	2020-2025	2020-2025		

Scheduled replacement of various Fleet Department vehicles and equipment. Operating costs (fuel, maintenance, supplies) of approximately \$600,000 per year for the entire City Fleet are anticipated to remain consistent with timely replacement, before more extensive service and maintenance levels are required to keep older equipment operational. A detailed schedule is provided on pages 71-75 in the Appendix Section. This replacement program is on-going.

IS-05C	**Mobile Lift Columns**				
2020-2020					
Estim	ated City Cost:	\$70,000	Estimated City Share:	100%	
Purchase of six (6) mobile lift columns in the DPS Garage. The mobile lift columns will address both the need for increased weight capacity of the newer vehicles purchased, as well as an additional lift to help					

need for increased weight capacity of the newer vehicles purchased, as well as an additional lift to help maintain and repair heavy trucks and equipment with a more efficient and reasonable turn-around time for all customers and departments served. Purchase is planned for 2020.

IS-07	Citywide Copier Replacement Schedule				
2020-2025					
Estimated City Cost: \$200,000 Estimated City Share: 100%					

Scheduled replacement of City copier machines when they have reached the end of their useful service lives. Operating costs of approximately \$18,000 per year for all City copiers are anticipated to remain consistent with timely replacement. All City copier machines were replaced in 2018, the next replacement is planned for 2023. This project is on-going.

IS-08	Fire Vehicle & Apparatus Replacement Schedule				
2020-2025					
Estimated City Cost: \$3,356,250 Estimated City Share: 100%					

Scheduled replacement of various Fire Department vehicles and apparatus. Operating costs (fuel, maintenance, supplies) of approximately \$100,000 per year are anticipated to remain consistent with timely replacement, before more extensive service and maintenance levels are required to keep older equipment operational. A detailed schedule is provided on page 76 in the Appendix Section. This replacement program is on-going.

IS-10B		Computer Net	work Upgrade Schedule	
		2020-202	5	
Estim	ated City Cost:	\$1,000,000	Estimated City Share:	100%

Regularly scheduled network computer system upgrade(s). Items to be evaluated for replacement include servers, storage, firewalls, switches, and software such as operating systems, back-up, anti-virus, and network management. Operating costs are anticipated to remain consistent with timely replacement, before more extensive service and maintenance levels are required to keep the network operational. This update schedule is on-going.

IS-10D		Office Software	Suite Upgrade Schedule	
	-	2020-2025		
Estim	ated City Cost:	\$134,010	Estimated City Share:	100%
	uld pose a significa		suite to current version. Using the xt replacement is planned to begin	•

IS-12A Financial Software System Replacement Schedule
2020-2025

Estimated City Share:

100%

\$1,500,000

Estimated City Cost:

Scheduled upgrade of existing financial system to current version. Support ends in 2020 and using the product after support ends would pose a significant security risk. The next upgrade is planned to begin in 2019. The upgrade will include hardware, software, implementation services, integration services, and support. Annual maintenance costs are anticipated to remain consistent at \$40,000 per year. This replacement program is on-going.

IS-18 Election Equipment Replacement Schedule
2020-2025

Estimated City Cost: \$400,000 Estimated City Share: 100%

Scheduled replacement of voting equipment for City administered elections. In FY 2005, the City received election equipment from the State of MI through the Federal Help America Vote Act (HAVA) grant program at a discounted rate. The City currently has 38 voting tabulators, 27 Auto mark Handicap Accessible tabulators, as well as related software for programming the equipment. Operating costs of approximately \$3,500 per year are anticipated to remain consistent with timely replacement, before more extensive service and maintenance levels are required to keep older equipment operational. The election equipment was replaced in 2017, the next replacement is planned for 2023. This replacement program is on-going.

IS-19B **Auditorium / Media Equipment Replacement Schedule**

2020-2024
Estimated City Cost: \$160,000 Estimated City Share: 100%

Replacement of auditorium and media equipment to avoid interruptions in the service they provide. Keeping computer-based equipment up to date will reduce emergency expenditures brought on by equipment failure and leverage the continued improvements and advances in that technology. This project is on-going.

IS-20 **Electronic Document Management System**

2021-2023
Estimated City Cost: \$430,000 Estimated City Share: 100%

Digital records management project covering all city departments and records. This project will enable simple and accurate access to and retrieval of city records for staff. This will also simplify responses to records for FOIA and court requests. This system will also facilitate adherence to the Records Retention Policy and the paperless office with forms processing. Implementation would be completed over an approximately three year period, brining on several departments per year. It is proposed that this will be a cloud based system, limiting up front capital and management costs. Implementation is planned to begin 2021.

IS-21	**Trailer Mounted Generator**			
		2020-202	0	
Estim	ated City Cost:	\$125,000	Estimated City Share:	100%

Purchase of trailer mounted generator that will replace two old generators purchased in 1979 and 1980. The generator will be able to provide portable back up power for all sanitary sewer pump stations and water booster stations, to allow for service to continue for customers in the event of a power outage. Purchase is planned for 2020.

2020-2025 Capital Improvement Plan



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Projects pending are projects that may be deemed as potentially worthy and viable; however they are not included as part of the active 2020-2025 Capital Improvement Plan. Projects pending may require additional information, studies, research, review, or City Council policies to be in place before more accurate timelines and/or funding levels can be identified. It is possible that these projects may not fall under the City's jurisdiction and will require other agencies to move the project forward, while some projects may not fall within the 2020-2025 timeframe.

FA-04B DPS Facility: Alternative Energy

Provide an alternative electrical energy source for the Department of Public Services (DPS) Facility. Alternative sources could include, but are not limited to, solar and wind power. Annual operating costs for electricity at the DPS Facility are anticipated to be reduced by a minimum of 75% and/or possibly eliminated. The City intends to seek out grant funding sources to be used towards project implementation. If grant funding is secured for this project which will bring the Return on Investment (ROI) within acceptable levels.

MR-01F Crooks Boulevard: Street Lighting

Installation of street lighting along Crooks Boulevard between South Boulevard and the M-59 Interchange to provide for increased nighttime travel safety and visibility. This project is proposed to be entirely funded through METRO Act funding sources. Operating costs of approximately \$15,000 per year are anticipated due to the lighting addition. A Comprehensive City Street Lighting Policy approved by City Council is recommended to be in place prior to including as an active CIP project.

MR-02E Hamlin Boulevard: Street Lighting

Installation of street lighting along Hamlin Boulevard between the West City Limit and Livernois Road to provide for increased nighttime travel safety and visibility. This project is proposed to be entirely funded through METRO Act funding sources. Operating costs of approximately \$28,000 per year are anticipated due to the lighting addition. A Comprehensive City Street Lighting Policy approved by City Council is recommended to be in place prior to including as an active CIP project.

MR-04B Walton Boulevard: Street Lighting

Installation of street lighting along Walton Boulevard between the West City Limit and just east of Adams Road to provide for increased nighttime travel safety and visibility. This project is proposed to be entirely funded through METRO Act funding sources. Operating costs of approximately \$10,800 per year are anticipated due to the lighting addition. A Comprehensive City Street Lighting Policy approved by City Council is recommended to be in place prior to including as an active CIP project.

MR-05D Adams Boulevard: Street Lighting

Installation of street lighting along Adams Boulevard between Marketplace Circle and just north of Hamlin Boulevard to provide for increased nighttime travel safety and visibility. This project is proposed to be entirely funded through METRO Act funding sources. Operating costs of approximately \$10,400 per year are anticipated due to the lighting addition. A Comprehensive City Street Lighting Policy approved by City Council is recommended to be in place prior to including as an active CIP project.

MR-05G Adams Road @ Tienken Road: Intersection Improvements

Extension of the northbound Adams Road right-turn lane and the southbound Adams Road right-turn lane to increase storage capacity. Work also involves upgrading the existing traffic signal from a "span-wire" to a "box-span" configuration. This improvement is recommended based upon the City's Master Thoroughfare Plan Update and a previous joint traffic study between the cities of Rochester Hills and Auburn Hills. This project may assist with minimizing southbound Adams Road cut-through traffic through the Judson Park Subdivision, which has been brought forth to the Advisory Traffic and Safety Board on several occasions. No operating costs are anticipated due to this section of roadway being owned and operated by the RCOC.

MR-13B Dequindre Road Reconstruction (Hamlin Road - Auburn Road)

Reconstruction of Dequindre Road as a 5-lane road between Auburn Road and Hamlin Road. This improvement is part of a larger Road Commission of Oakland County (RCOC) project to widen Dequindre Road as a 5-lane road southbound to Long Lake Road in the City of Troy. No operating costs are anticipated due to this section of roadway being owned and operated by the RCOC.

MR-13C Dequindre Road Realignment (South of Avon – 23 Mile Road)

Construction of Dequindre Road on a new alignment behind the Yates Cider Mill to eliminate the Dequindre Road offset at Avon Road. No operating costs are anticipated due to this section of roadway being owned and operated by the RCOC.

MR-15A Adams Road @ Butler Road: Traffic Signal & Road Improvement

Installation of a new traffic signal at the Adams Road @ Butler Road intersection. Corresponding center left-turn lane improvements are required to facilitate the proposed traffic signal. Pathway ramps meeting ADA compliance will also be installed, including push button and countdown signals. The City has received confirmation from RCOC that the intersection meets signal warrants #2 for installation with the condition that the University Presbyterian Church's (UPC) existing drive be removed and relocated to align with Butler Road and that UPC perform on-site parking lot improvements at their cost. The traffic signal installation is also conditioned upon restricting the turning movements in and out of the UPC's southerly drive and the existing drive for the Brookfield Academy to the north. The City and RCOC would share the costs for the installation of the traffic signal and construction of road improvements. The future operations and maintenance costs of the traffic signal would be shared by the City (25%), RCOC (50%), and the University Presbyterian Church (25%). Operating costs of approximately \$6,000 per year are anticipated due to the widened roadway section and the operation of an additional traffic signal.

MR-18

Dutton Road Paving (Rainbow Drive – Arthurs Way)

Pave and improve approximately 4,200' of Dutton Road between approximately 3,000' west of Livernois Road (just east of Rainbow Drive) and the existing Dutton Road pavement just east of Livernois Road (approximately 1,200'). Proposed road improvements include placing concrete curb & gutter along both sides of Dutton Road to thereby eliminate extensive erosion of existing open ditching and abrupt side embankments adjacent to tree areas. Paving this segment of Dutton Road as a 2-lane roadway would improve road safety by providing a uniform paved road surface for steep road grade and improve safety for Dutton Road at its intersections: Tall Oaks Boulevard, Acorn Glen, Livernois Road, and the Paint Creek Trailway. No operating costs are anticipated due to this section of roadway being owned and operated by the RCOC.

MR-26D

Livernois Boulevard: Street Lighting

Installation of street lighting along Livernois Boulevard between Avon Road and just north of Walton Boulevard to provide for increased nighttime travel safety and visibility. This project is proposed to be entirely funded through METRO Act funding sources. Operating costs of approximately \$12,500 per year are anticipated due to the lighting addition. A Comprehensive City Street Lighting Policy approved by City Council is recommended to be in place prior to including as an active CIP project.

MR-42B

Livernois Road @ M-59 Highway: Bridge Expansion

Participate in a cost share agreement for expanding the Livernois Road @ M-59 Highway Bridge. The City and RCOC may have the option to construct a complete expansion to the 5-lane bridge, or construct and have abutments placed. No operating costs are anticipated due to this section of roadway being owned and operated by the RCOC.

LS-05

Reuther Middle School Area Street Lighting

Installation of approximately 20 street lights along the walking routes, i.e., Culbertson Ave and Marlowe Ave near Reuther Middle School. Funding will be sought from Safe Routes to School for the installation of the street lights. The ongoing operations and maintenance would be funded 50/50 between Rochester Community School (RCS) District and the City. The installations would be coordinated with DTE Energy.

LS-06

Reuther Middle School Area Sidewalks

Installation of approximately 5,900' of 5' wide concrete sidewalk along the walking routes, i.e., Culbertson Ave and Marlowe Ave, near Reuther Middle School. Funding will be sought from Safe Routes to School for the installation of the sidewalks. The on-going operations and maintenance will be the responsibility of the adjacent property owners.

LS-07

Hamlin Court Drainage Improvements

Hamlin Court has had poor drainage and has been difficult to maintain for years. This project would extend storm water piping southbound down Hamlin Court to a point that an open ditch could be installed in order to provide drainage for the balance of the road. Any increased operating costs for maintenance would be offset by road and ditch maintenance cost savings.

LS-08

Bendelow Road Ditching (East Side)

Provide drainage for the east side of Bendelow Road including the front yards and road base. The spring thaws and heavy rains can cause water to pond in the yards and adjacent to the Bendelow roadway. In 1996, drainage for Bendelow Road was planned to be improved as part of the west branch of the East Ferry Drain. In 2004, the developer of the Country Club Village Subdivision agreed to install storm sewers that would provide drainage for the west side of Bendelow Road. In 2006, the East Ferry Drain project (SW-06A) was designed and constructed without the Bendelow Road improvements. The change in the project saved the City approximately \$420,000. This project would utilize the improvements previously installed by the developer to provide for catch basins and ditching to the east side of Bendelow Road. No additional operating costs are anticipated for site maintenance.

LS-09

Hillview Street Drainage Improvements

Install ditches along Hillview Street. Hillview Street is a gravel local street, 595' in length which runs east to west and slopes steeply at the eastern end. The roadway was constructed without a design and has experienced drainage problems throughout its life. The problem has gotten worse in the last few years as a result of the ditch's loss of definition. Most storm water travels down the roadway causing erosion and depositing the gravel material in a residential front yard. After heavy rains, residents routinely use a wheelbarrow and shovel to manually return the sand and gravel.

LS-14

Kingsview Avenue Paving (SAD)

Pave approximately 2,100' of Kingsview Avenue from Livernois Road to Springwood Lane through the adopted City Policy for Special Assessment District gravel to pavement projects. The road is currently gravel. A majority of residents living on Kingsview Avenue submitted petition signatures to request the paving of Kingsview Avenue in accordance with the SAD policy adopted by City Council on October 1, 2013. This project does not include the paving of Kingsview Avenue Court since 3 out of 4 residents were against participation. Operating costs are anticipated to decrease for a period of time by approximately \$1,680 per year due to gravel road grading/chloride operations being eliminated.

PK-01H

Bloomer Park: Restroom Modernizations

Remodel/upgrade or replace restroom facilities and shelters in Bloomer Park. Project includes an assessment of each building to determine cost effectiveness of an upgrade or replacement of each building. Upgrades include bringing the buildings into compliance with the ADA and universal accessibility and adding heat to provide modern restrooms for year round use.

PK-04F

Splash Pad / Spray Park

Add new water play feature (Splash Pad) to Spencer Park and/or Bloomer Park. This project can also address some ADA features for lake access and increase the offerings at Spencer Park. It would add a water feature to Bloomer Park. The project would generate additional attendance and revenue in either park.

PK-06A

Paint Creek Trailway: Resurfacing Schedule

The Paint Creek Trail is surfaced with limestone fines which require major maintenance approximately every fifteen (15) years. As a member of the Paint Creek Trailway Commission, the City is responsible for the maintenance of its portion of the trail located within the City. The project will be coordinated by the Paint Creek Trailway Commission staff. No changes to operating costs are anticipated. Construction was last done in 2019.

PK-14

Nowicki Park: Development

Development of the 35-acre park located on Adams Road to include both active and passive recreational opportunities.

PK-20

Avondale Park: Field Rehabilitation

Growing demand for field rental is greater than available resources. Improved turf and irrigation will aid in the recovery of a field after use, allowing additional games to be played at the park to help meet demand and to generate additional revenue. Private Local League support will be sought to offset some of the costs to rehabilitate the field. Operating costs of approximately \$10,000 per year per field are anticipated to remain consistent with timely renovation, before more extensive service levels are required to keep the field in a suitable condition for play.

PW-04

Livernois Road Pathway (New Life Lane – Tienken Road)

Construction of approximately 4,000' of 8' wide pathway along the west side of Livernois Road between New Life Lane and Tienken Road. Project is also to include a bridge crossing over Sargent Creek. Operating costs of approximately \$1,120 per year are anticipated due to the additional pathway section added.

PW-07E

Adams Road Pathway - East Side [Avon Road - S of Hillendale]

Construction of approximately 3,330 feet of 8 foot wide asphalt pathway along the east side of Adams Road between Avon Rd and just south of Hillendale Dr. Project also includes a bridge or culvert crossing over the stream. Operating costs of approximately \$1,200 per year due to the additional pathway section added.

PW-08D

Tienken Road Pathway Gaps [Tiverton Trail Drive – E of Whispering Knoll Lane]

Construction of approximately 810' of 8' wide asphalt pathway along the north side of Tienken Road between Tiverton Trail Drive and 400' east of Whispering Knoll Lane to fill in the pathway gaps. Operating costs of approximately \$250 per year are anticipated due to the additional pathway sections added.

PW-08E

Tienken Road Pathway [Van Hoosen Road – Washington Road]

Construction of approximately 1,100' of 8' wide pathway along the south side of Tienken Road between Van Hoosen Road and Washington Road, including ramps at the SE and NW corners of the roundabout. Operating costs of approximately \$600 per year are anticipated due to the additional pathway section added.

PW-31D

John R Road Pathway [Hamlin Road – School Road]

Construction of approximately 4,350' of 8' wide asphalt pathway along the east side of John R Road between Hamlin Road and School Road. Operating costs of approximately \$1,220 per year are anticipated due to the additional pathway section added. Construction is planned to begin in 2023.

SS-09

Livernois Sanitary Sewer Extension

Extend the sanitary sewer approximately 540 linear feet south on Livernois to provide access for properties currently not connected to public sewer.

SS-13

Sheldon Road: Sanitary Sewer Metering Equipment

Installation of new sanitary sewer metering equipment in existing manhole location on Sheldon Road to monitor the amount of Oakland Township sanitary sewer flows entering the City of Rochester Hills Sanitary Sewer System. The installation of this equipment will allow the City to monitor Oakland Township's sanitary sewer flow in order to insure that they are not exceeding their allotted capacity. The sanitary sewer installation on Sheldon Road was constructed with the District 21 Sanitary Sewer Interlocal Agreement approved by City Council. The City is currently visually monitoring Oakland Township flow and proposes to install the equipment when additional homes are connected to the system. Annual operating costs are anticipated to be covered by the Oakland County Water Resources Commissioner.

SW-03B

Karas Creek Bank Stabilization

Perform bank stabilization along the Karas Creek (Section 21) from Hamlin Road north to the Clinton River. The existing open ditch is badly eroded and is very sinuous. Soil from the bank is eroding away and is being transported to the Clinton River. If allowed to continue, adjacent lands are at risk of falling into the creek and continued sediment deposits into the river could cause negative impacts to this channel and the Clinton River bank improvements. No additional operating costs are anticipated for site maintenance.

SW-04B

Stoney Creek Drain Extension

In the northeast section of Rochester Hills there are three (3) main tributary branches of Stoney Creek referred to as the Fodera Drain (the Sheldon Road Branch, the Mead Road Branch, and the Tienken Road Branch). These branches service a drainage area of approximately 1,230 acres that extend into Oakland Township. The Mead Road Branch is intended to address the drainage of Mead Road and areas between Blue Beech Road and Wimberly Road. The Tienken Road Branch is intended to address drainage along Rochester Road north of Tienken Road including Perrydale Street and along Orion Road between Ann Maria Drive and Cherry Tree Lane. The Tienken Road branch is also intended to include local drainage for the adjacent streets along Orion Road.

SW-05C

Rewold Drain (Phase C)

Construction of a regional detention basin north of Hamlin Road and west of John R Road on the Christian Memorial Cultural Center site. According to the Rewold Drain Study, floodwaters can flood over John R Road during a significant rain event, while water currently floods over Hamlin Road near John R Road. This project will correct both of these conditions except during an extreme rain event. Operating costs of approximately

\$5,000 per year are anticipated for site maintenance. The City will pursue cost-sharing options for this project and also for the on-going operations.

SW-08A

Major Waterway Preservation

Project to identify areas along the Clinton River, Paint Creek, and Stony Creek that could benefit from a variety of actions such as stream bank stabilization and/or land acquisition to protect the natural features of the waterways and adjacent tributary areas such as floodplains and wetlands. This project is intended to be funded entirely through grant sources. The City is continuing to seek grant support for preservation.

SW-10

Sump Line Collection System

Provide a permanent connection point for sump pump discharge for subdivisions that do not have sump collection systems. Many of the subdivisions developed in the 1970's and early 1980's do not have sump pump collection systems designed to capture footing drain discharge from residential homes. Many complaints are received of icing in roadways and yards from being saturated by excess sump water. This project proposes to install approximately 83,000 lineal feet of sump collection lines along roadways and will require that homeowners connect. In addition to icing and wet ground complaints, there is a concern that some homeowners may have violated city code by connecting footing drains to the sanitary sewer system, which reduces capacity in the sanitary sewer system and increases the amount of discharge to the county interceptor which increases overall sanitary sewer disposal costs.

WS-09

Flora Valley Court - River Bend Drive: Water Main Connection

Install approximately 1,300' of 8" water main between River Bend Drive and Flora Valley Court (Proposed Drive) in Section 15 to complete a water main loop and eliminate two long dead end mains. The City discourages dead end water mains that extend more than 600'. A looped system eliminates the need for flushing and creates a more redundant system. Impact on future operating costs minimal as this would be a small addition to our water main system, will save on the need for flushing dead end water mains.

2020-2025 Capital Improvement Plan



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2020-2025 Capital Improvement Plan CIP Role Identification

The Capital Improvement Plan **Policy Group** reviews the policy, develops the project rating and weighting criteria, rates project applications, reviews funding options, and presents the six-year recommendation to the Administrative Group.

Planning Commission Representative (2)
City Council Representative
Building/Ordinance/Facilities Director
Chief Financial Officer
Parks & Natural Resources Director
Planning & Economic Development Director
Department of Public Services Director

The Capital Improvement Plan **Project Group** prepares new project applications, reviews existing CIP projects, and serves as support staff to departments and the Policy Group as needed.

City Clerk Planning Manager

Facilities Manager Media Production Leader

Deputy Director DPS / City Engineer Park Manager

Deputy Information Systems Director Public Utilities Engineering Manager

Fire Chief Senior Financial Analyst

Fleet Manager Communication Systems Administrator Economic Development Manager Transportation Engineering Manager

The **Administrative Group** brings the CIP Draft forward at the Planning Commission Workshop and presents the CIP at the Planning Commission Public Hearing.

Chief Financial Officer
Planning & Economic Development Director

The **Planning Commission** works with the Policy Group during the plan development, conducts workshops, reviews the Policy Group's recommendation, receives public input, conducts public hearings, adopts the plan, and requests City Council to consider incorporating funding for projects into the upcoming three-year Budget Plan.

The **City Council** is encouraged to use the CIP as a tool in the adoption of the three-year Budget Plan in accordance with City Council goals and objectives.

Residents are encouraged to participate in plan development by working with various Boards and Commissions at the Planning Commission workshops, the Planning Commission public hearings, and at City Council budget workshops and public hearings. As always, communication is open between residents, Council representatives, Planning Commission representatives, and staff.

2020-2025 Capital Improvement Plan Project Application Forms

Project Title:	Program Area:
Prepared By:	Date Prepared:
CIP ID #:	
Droject Descrip	otion: Provide a brief (1-2 paragraph) description of project:
Diamina Conta	and to the available and of an Adental December Delian of Disc.
	ext: Is the project part of an Adopted Program, Policy or Plan?
Yes (Mi	ust Identify):
No No	
Must List the a	dopted program or policy, and how this project directly or indirectly meets these objectives:
Legal Context:	Is the City Legally Obligated to perform this service?
Yes	No No
Yes	
Yes	No No
Yes	No No
Yes Please describe	e City's Obligation:
Yes Please describe Schedule: Est	e City's Obligation: No timated project beginning and ending dates. If project will take several years to complete, plea
Yes Please describe Schedule: Est	e City's Obligation:
Yes Please describe Schedule: Est	No e City's Obligation: timated project beginning and ending dates. If project will take several years to complete, plead out Form 2. If applicable, be sure to include any work done in prior years, including studies or
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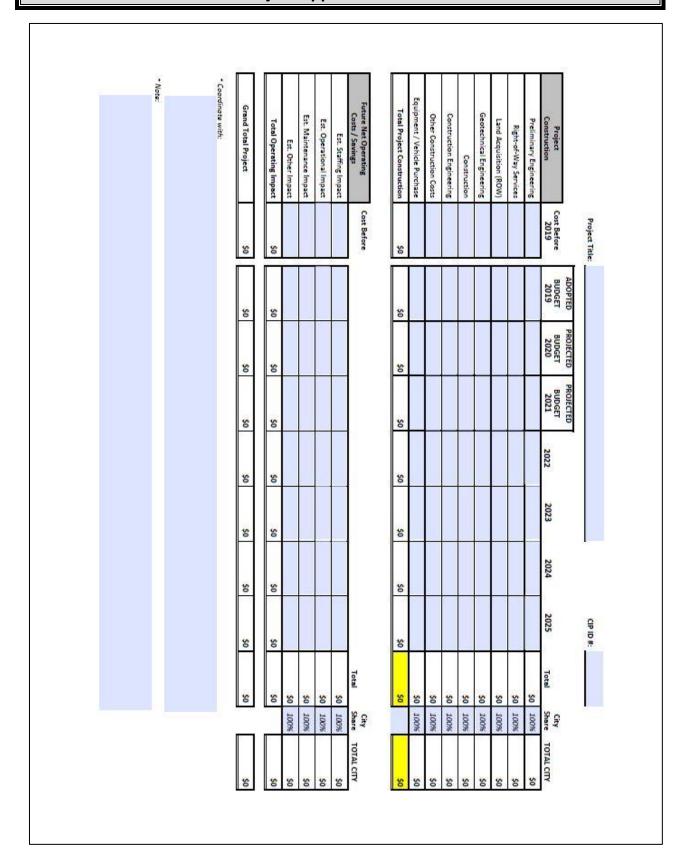
2020-2025 Capital Improvement Plan Project Application Forms

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Y	es (Ple	ease check appropriat	e box(es) below)		lo	
		City Council		Planning Commis	sion	
		2019 Budget		Prior Year Budge	et	
Total Esti		d Cost: In 2019 dollar	s (Amount show	n here should agree	with total on Fo	orm 2)
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Recomme	ended	funding option(s) to	be used? (i.e: Op	erating Revenues. F	und Balance. Bo	nd Issue etc)
		stimate: Please check comparable facility /			numb indicator /	unit costs
		timate from engineer			ary estimate	
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Budget II	10 C 10 C	Any and all future Maintenance; Sup		this project/item v	vill create: Payro	oll/Staffing;
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provided	with t	he implementation o	f this project (* D	etails Required)		

2020-2025 Capital Improvement Plan Project Application Forms

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Depai	tment:					
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Purch	ase		46.73	Rental / Le	ease	
Numb	er of Units F	Requested:				
Estim	ated Service	Life (Years):				
Total	Net Impac	t Over Service Life	Per	Unit (\$):	Total Cost (\$):	
	Purchase Pri				\$0.00	
Plus:	Installation (or Related Charges:			\$0.00	
Less:	Trade-in, Sa	lvage Value, Discount:			\$0.00	
Ne	t Purchase C	ost / Annual Rent:		\$0.00	\$0.00	
Plus:	Annual Ope	rational – After:			\$0.00	
Less:	Annual Ope	rational – Savings:			\$0.00	
Ne	t Annual Op	erational Impact:	70	\$0.00	\$0.00	
Ne	t Operationa	al Impact Over Service Li	fe:	\$0.00	\$0.00	
To	tal Net Impa	ct Over Service Life:	9	\$0.00	\$0.00	
irpose of Ex	penditure:	Please check appropriate	box(es):			
Sched	luled Replace	ement	Prese	ent Equipmen	t Obsolete	
Penla	ce Worn-Out	t Equipment	Pedu	ce Personnel	Time	
20 (S)		20020	92		Time	
Expan	ded Service	Life [New	Operation		
Increa	sed Safety		Impr	oved Service t	to Community, Procedure	s etc
Other	1,					
eplaced Iten	n(s): Attach	Separate Sheet if Necess	ary			
Iter	n	Make	Age	Mainte	Prior Year's nance Rental	Cost
itei	CO.	IVIGAC	Ayc	\$	\$	COST
				\$	\$	
				P	7	

2020-2025 Capital Improvement Plan Project Application Forms



2020-2025 Capital Improvement Plan Project Rating Form

	Project Name:	Project #:			
	ECOLOR DO SOLO DE	E/28030366005	. 24	0	
	Department:	Total Score:			į.
_	Rater Name:	Score Range	Rater Score	Weight	Poir
1	Contributes to Health, Safety and Welfare			5	_
	Eliminates a known hazard (accident history)	5		5	
	Eliminates a potential hazard Materially contributes	3			0
	Minimally contributes	1			1
	No Impact	0			
2	Project Needed to Comply with Local, State or Federal Law			-	
	Yes	5		5	C
	No	0			-
3	Project Conforms to Adopted Program, Policy or Plan			4	
	Project is consistent with adopted City Council policy or plan	5			0
	Project is consistent with Administrative policy	3			U
	No policy / plan in place	0			
4	Project Remediates an Existing or Projected Deficiency			3	
	Completely Remedy Problem	5		52	0
	Partially Remedy Problem No	0			
-	Mile Professional Profession				
>	Will Project Upgrade Facilities Rehabilitates / upgrades existing facility	5		3	
	Replaces existing facility	3			0
	New facility	1			
6	Contributes to Long-term Needs of Community		1		
	More than 30 years	5		2	
	21 - 30 years	4			0
	11 - 20 years	3			
	4 - 10 years 3 years or less	2			
	20 mar 1 mar				75
7	Annual Impact on Operating Costs Compared to Operating Costs Absent the Project			2	
	Net Cost Savings	5			
	No Change	4			0
	Minimal increase (<\$25,000)	3			
	Moderate Increase (\$25,000 - \$100,000)	2			
	Major Increase (> \$100,000)	1			
8	Impact Measures - Net Present Value & Internal Rate of Return /			2	
	# of Years to Recoup Costs			-	
	High / 0-3 Years Medium-High / 4-7 Years	5			33
	Medium / 8-11 Years	3			C
	Medium-Low / 12-15 Years	2			2000
	Low / 16 - 20 Years	1			
	Never	0			
9	Service Area of Project				
	Regional	5		2	
	City-Wide	4			0
	Several neighborhoods One neighborhood or less	3 1			
		•			9
10	Department Priority	5		2	22
	High Medium	3		1	0
	Low	1			1000
			2	(A)	ě.
11	Project Delivers Level of Service Desired by Community				
11	Project Delivers Level of Service Desired by Community High	5		2	
11	Project Delivers Level of Service Desired by Community High Medium	5		2	C

Wheel Load Weigher OCSO #1123 8 \$ Zero Turn Mower Parks - Borden #6263 4 \$ 1 Zero Turn Mower Parks - Borden #6264 4 \$ 1 Pressure Washer DPS - Fleet #6743 5 \$ 1 Utility Vehicle Parks - Borden #6776 4 \$ 1 Utility Vehicle Parks - Borden #6777 4 \$ 1 <th>5,790 5,790</th>	5,790 5,790
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Wheel Load Weigher OCSO #1123 8 \$ Zero Turn Mower Parks - Borden #6263 4 \$ 1 Zero Turn Mower Parks - Borden #6264 4 \$ 1 Pressure Washer DPS - Fleet #6743 5 \$ 1 Utility Vehicle Parks - Borden #6776 4 \$ \$ Utility Vehicle Parks - Borden #6777 4 \$ \$ \$ Utility Vehicle Parks - Museum #6780 4 \$ \$ *	5,790
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Pressure Washer DPS - Fleet #6743 5 \$ 1 Utility Vehicle Parks - Borden #6776 4 \$ Utility Vehicle Parks - Borden #6777 4 \$ Utility Vehicle Parks - Museum #6780 4 \$ Trailer Mounted Hot Pathcer DPS - Roads 39-235 8 \$ 3 Tractor/Loader/Backhoe DPS - Roads 39-084 12 \$ 14 Steam Generating Unit/Trailer DPS 39-225 12 \$ 2 Tractor / Loader DPS 39-286 10 \$ 14 Wheel Loader DPS - Roads 39-296 10 \$ 20 Radar Smart Cart OCSO 39-324 5 \$ 1 Wood Chipper Forestry 39-355 8 \$ 4 Sewer Camera Truck DPS - W&S 39-158 12 \$ 6 Pickup 4wd Forestry 39-160 7 \$ 3 </td <td>L,800</td>	L , 800
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Trailer Mounted Hot Pathcer DPS - Roads 39-235 8 \$ 3 Tractor/Loader/Backhoe DPS - Roads 39-084 12 \$ 14 Steam Generating Unit/Trailer DPS 39-225 12 \$ 2 Tractor / Loader DPS 39-286 10 \$ 14 Wheel Loader DPS - Roads 39-296 10 \$ 20 Radar Smart Cart OCSO 39-324 5 \$ 1 Wood Chipper Forestry 39-335 8 \$ 4 Sewer Camera Truck DPS - W&S 39-158 12 \$ 6 Pickup 4wd Forestry 39-160 7 \$ 3 Tandem-Axle Dump Truck DPS 39-189 12 \$ 23	,340
Tractor/Loader/Backhoe DPS - Roads 39-084 12 \$ 14 Steam Generating Unit/Trailer DPS 39-225 12 \$ 2 Tractor / Loader DPS 39-286 10 \$ 14 Wheel Loader DPS - Roads 39-296 10 \$ 20 Radar Smart Cart OCSO 39-324 5 \$ 1 Wood Chipper Forestry 39-335 8 \$ 4 Sewer Camera Truck DPS - W&S 39-158 12 \$ 6 Pickup 4wd Forestry 39-160 7 \$ 3 Tandem-Axle Dump Truck DPS 39-189 12 \$ 23	,260
Steam Generating Unit/Trailer DPS 39-225 12 \$ 2 Tractor / Loader DPS 39-286 10 \$ 14 Wheel Loader DPS - Roads 39-296 10 \$ 20 Radar Smart Cart OCSO 39-324 5 \$ 1 Wood Chipper Forestry 39-335 8 \$ 4 Sewer Camera Truck DPS - W&S 39-158 12 \$ 6 Pickup 4wd Forestry 39-160 7 \$ 3 Tandem-Axle Dump Truck DPS 39-189 12 \$ 23	3,320
Tractor / Loader DPS 39-286 10 \$ 14 Wheel Loader DPS - Roads 39-296 10 \$ 20 Radar Smart Cart OCSO 39-324 5 \$ 1 Wood Chipper Forestry 39-335 8 \$ 4 Sewer Camera Truck DPS - W&S 39-158 12 \$ 6 Pickup 4wd Forestry 39-160 7 \$ 3 Tandem-Axle Dump Truck DPS 39-189 12 \$ 23	,510
Wheel Loader DPS - Roads 39-296 10 \$ 20 Radar Smart Cart OCSO 39-324 5 \$ 1 Wood Chipper Forestry 39-335 8 \$ 4 Sewer Camera Truck DPS - W&S 39-158 12 \$ 6 Pickup 4wd Forestry 39-160 7 \$ 3 Tandem-Axle Dump Truck DPS 39-189 12 \$ 23	3,360
Radar Smart Cart OCSO 39-324 5 1 Wood Chipper Forestry 39-335 8 \$ 4 Sewer Camera Truck DPS - W&S 39-158 12 \$ 6 Pickup 4wd Forestry 39-160 7 \$ 3 Tandem-Axle Dump Truck DPS 39-189 12 \$ 23	720,
Wood Chipper Forestry 39-335 8 \$ 4 Sewer Camera Truck DPS - W&S 39-158 12 \$ 6 Pickup 4wd Forestry 39-160 7 \$ 3 Tandem-Axle Dump Truck DPS 39-189 12 \$ 23	l,710
Sewer Camera Truck DPS - W&S 39-158 12 \$ 6 Pickup 4wd Forestry 39-160 7 \$ 3 Tandem-Axle Dump Truck DPS 39-189 12 \$ 23	5,120
Pickup 4wd Forestry 39-160 7 \$ 3 Tandem-Axle Dump Truck DPS 39-189 12 \$ 23	1,490
Tandem-Axle Dump Truck DPS 39-189 12 \$ 23	,820
· ·	3,620
Tandem-Axle Dumn Truck DPS 39-190 12 \$ 23	5,150
14 14 15 15 15 15 15 15 15 15 15 15 15 15 15	5,150
Tandem-Axle Dump Truck DPS 39-270 12 \$ 23	5,150
Tandem-Axle Dump Truck DPS 39-271 12 \$ 23	5,150
Tandem-Axle Dump Truck DPS 39-272 12 \$ 23	5,150
	2,660
	5,010
Pickup 4wd w\ Plow	,010
Pickup 4wd w\ Plow	3,870
Pickup 4wd w\ Plow	3,870
Pickup 4wd w\ Plow	3,870
Pickup 4wd w\ Plow	1,580
Passenger Car City Pool 39-525 7 \$ 2	1,850
Passenger Car DPS - Traffic 39-526 7 \$ 2	,850
Pickup 4wd w\ Plow	3,870
Pickup 4wd w\ Plow	,700
Pickup 4wd	,290
Pickup 4wd w\ Plow & Platform DPS 39-535 7 \$ 3	3,910
	1,580
	,580
	3,910
	7,580
),750
	5,170
	3,440
	5,040
Pickup 4wd w\ Platform Parks - Borden 39-560 7 \$ 4 TOTAL 2020 FLEET VEHICLE / EQUIPMENT COSTS: \$2,77),000 7,320

2021 FLEET EQUIPMENT PURCHASES BREAKDOWN						
			REPLACEMENT	ES	TIMATED	
VEHICLE TYPE	DEPARTMENT	VEHICLE #	CYCLE		COST	
Fuel Management System	Fleet	#6143	10	\$	31,940	
Field Rake	Parks - Borden	#6841	5	\$	14,240	
Integrated Tool Carrier	DPS	39-169	12	\$	270,050	
Forklift	DPS	39-188	10	\$	35,030	
Trash Pump	DPS - Fleet	39-212	10	\$	63,100	
Municipal Tractor	DPS	39-287	12	\$	165,070	
Asphalt Roller	DPS - Roads	39-231	10	\$	8,680	
Crash Attenuator	Fleet	39-327	10	\$	24,250	
Concrete Saw	DPS - Roads	39-336	10	\$	25,450	
Pickup 4wd	DPS	39-297	10	\$	42,830	
2-Yard Dump Truck	DPS	39-531	10	\$	54,350	
Sanitary Sewer Truck	DPS - W&S	39-532	10	\$	544,210	
Sport Utility 4wd	DPS - W&S	39-550	7	\$	25,720	
Passenger Car	Assessing	39-551	7	\$	25,220	
Pickup 4wd w\ Plow	DPS	39-567	6	\$	39,030	
Pickup 4wd w\ Plow	DPS	39-568	6	\$	39,030	
Pickup 4wd w\ Crane Body	DPS	39-569	6	\$	72,260	
	TOTAL 2021 FLEET V	EHICLE / EQL	JIPMENT COSTS:	\$1	L,480,460	

2022 FLEET EQUIPMENT PURCHASES BREAKDOWN						
			REPLACEMENT	ES	TIMATED	
VEHICLE TYPE	DEPARTMENT	VEHICLE #	CYCLE		COST	
Dump Body Vehicle Insert	Parks - Borden	#6134	5	\$	8,840	
Rotary Broom	Parks - Spencer	#6155	4	\$	7,170	
Zero Turn Mower	Parks - Borden	#6265	4	\$	15,720	
Municipal Tractor	Parks - Borden	#6270	10	\$	55,160	
Utility Vehicle	Parks - Borden	#6606	4	\$	9,410	
Dump Body Vehicle Insert	Parks - Borden	39-232	10	\$	9,700	
Dump Body Vehicle Insert	Cemetery	39-233	10	\$	8,670	
Dump Body Vehicle Insert	Parks - Borden	39-234	10	\$	11,610	
Equipment Trailer	DPS	39-236	10	\$	10,240	
Equipment Trailer	DPS	39-237	10	\$	10,240	
Pickup 4wd w\ Plow	Parks - Borden	39-579	6	\$	34,830	
Tandem-Axle Dump Truck	DPS	39-294	12	\$	255,650	
Tandem-Axle Dump Truck	DPS	39-295	12	\$	255,650	
2-Yard Dump Truck	Parks - Borden	39-549	8	\$	95,590	
Forestry Chipper Truck	Forestry	39-552	8	\$	76,460	
Sport Utility 4wd	Building	39-561	7	\$	27,830	
Pickup 4wd	Ordinance	39-563	7	\$	31,570	
Pickup 4wd	DPS	39-564	7	\$	31,570	
Pickup 4wd	DPS - Roads	39-565	7	\$	31,570	
Pickup 4wd	DPS - W&S	39-566	7	\$	31,570	
Cargo Van	DPS - W&S	39-570	7	\$	25,010	
Cargo Van	DPS - W&S	39-571	7	\$	25,010	
Sport Utility 4wd	Building	39-592	7	\$	27,830	
	TOTAL 2022 FLEET V	EHICLE / EQU	JIPMENT COSTS:	\$1	1,096,900	

2023 FLEET EQUIPMENT PURCHASES BREAKDOWN							
			REPLACEMENT	ES	TIMATED		
VEHICLE TYPE	DEPARTMENT	VEHICLE #	CYCLE		COST		
Sign Shop Cutter	DPS - Roads	#6163	5	\$	6,890		
Slide-In Aluminum Dump Unit	DPS	#6526	10	\$	8,090		
Zero-Turn Mower	Parks - Borden	#6736	4	\$	12,790		
Zero-Turn Mower	Parks - Borden	#6737	4	\$	12,790		
Utility Vehicle	Parks - Spencer	#6778	4	\$	17,310		
Utility Vehicle	Parks - Borden	#6779	4	\$	23,590		
Traffic Arrowboard	DPS	39-325	7	\$	5,780		
Traffic Arrowboard	DPS	39-326	7	\$	5,780		
Pickup 4wd w/Plow	DPS	39-575	7	\$	51,080		
Pickup 4wd w/Plow & Dump Body	Cemetery	39-589	6	\$	41,540		
Jeep Patriot FWD	DPS	39-582	7	\$	25,130		
GMC TS15653	Building	39-576	7	\$	34,690		
GMC Savanna	Facilities	39-574	7	\$	29,500		
2 WD EXT CAB PICKUP	Building	39-577	7	\$	34,690		
4X4 CREW CAB PICKUP	Building	39-578	7	\$	34,500		
GMC SIERRA 4X4 PICKUP w\ Plow	Parks - Borden	39-587	6	\$	33,250		
GMC SIERRA 4X4 PICKUP w\ Plow	Parks - Borden	39-588	6	\$	33,250		
GMC 4X4 EXTENDED CAB	Ordinance	39-545	10	\$	31,020		
VACTOR 2115 COMBINATION	DPS	39-546	10	\$	577,050		
	TOTAL 2023 FLEET VEHICLE / EQUIPMENT COSTS:						

2024 FLEET EQUI	2024 FLEET EQUIPMENT PURCHASES BREAKDOWN							
			REPLACEMENT	ES	TIMATED			
VEHICLE TYPE	DEPARTMENT	VEHICLE #	CYCLE		COST			
Finish Machine	DPS - Fleet	#902547	5	\$	10,360			
Zero-Turn Mower	Parks - Borden	#6832	4	\$	13,800			
Zero-Turn Mower	Parks - Borden	#6833	4	\$	13,800			
Slide IN Combination Unit	DPS	#6375	12	\$	55,880			
Slide IN Combination Unit	DPS	#6376	12	\$	55,880			
Four Mobile Lift Column	DPS	#6607	10	\$	57,140			
TIG Welder	DPS - Fleet	#6882	8	\$	8,150			
Equipment Trailer	OCSO	39-230	5	\$	10,870			
4X4 CREW CAB PICKUP	Building	39-590	7	\$	37,820			
Cargo Van	DPS - Meters	39-591	7	\$	29,090			
Cargo Van	Facilities	39-592	7	\$	29,090			
4X4 CREW CAB PICKUP	DPS	39-586	7	\$	37,820			
2 WD EXT CAB PICKUP	Parks - Bloomer	39-585	7	\$	28,550			
Pickup 4wd w∖ Crane Body	DPS	39-593	7	\$	63,850			
Street Sweeper	DPS	39-029	7	\$	355,710			
Pickup 4wd w\ Plow	DPS	39-289	7	\$	62,410			
GMC Cut Away Van/Cube w\ Interior Package	DPS	39-442	10	\$	75 <i>,</i> 810			
Tandem Axle Dump Truck	DPS	39-556	10	\$	275,780			
Tandem Axle Dump Truck	DPS	39-556	10	\$	275,780			
Tandem Axle Dump Truck	DPS	39-556	10	\$	275,780			
Tandem Axle Dump Truck	DPS	39-556	10	\$	275,780			
Freightliner	DPS	39-542	12	\$	267,450			
Freightliner	DPS	39-541	12	\$	271,870			
Freightliner	DPS	39-540	12	\$	274,820			
T	OTAL 2024 FLEET V	EHICLE / EQU	JIPMENT COSTS:	\$2	2,863,290			

2025 FLEET EG	QUIPMENT PURCHASES	BREAKDOW	'N		
			REPLACEMENT	ES	TIMATED
VEHICLE TYPE	DEPARTMENT	VEHICLE #	CYCLE		COST
Tri-Wave 60 inch Overseeder	Parks - Borden	#2432	8	\$	17,330
Pressure Washer	DPS - Fleet	#6743	5	\$	12,800
John Deere Gator	Parks - Borden	#6776	5	\$	11,360
John Deere Gator	Parks - Borden	#6777	5	\$	11,360
EZ Go Utility Vehicle	Parks - Museum	#6780	5	\$	11,260
Asphalt Roller: Multiquip	DPS	39-303	8	\$	19,150
Radar Speed Display Trailer	OCSO	39-337	5	\$	17,280
John Deere Backhoe	DPS	39-572	10	\$	173,320
Electric Utility Vehicle	Cemetery	39-331	7	\$	15,460
Cargo Van	Facilities	39-604	7	\$	30,120
Dump Truck	DPS - Roads	39-282	7	\$	60,060
Pickup 4wd	Building	39-598	7	\$	32,810
Pickup 4wd	Building	39-599	7	\$	32,810
Pickup 4wd	Building	39-600	7	\$	32,810
Pickup 4wd	Building	39-601	7	\$	32,810
Passenger Vehicle	Building	39-597	7	\$	34,340
Cargo Van	Facilities	39-602	7	\$	30,120
Passenger Vehicle	DPS - Admin	39-596	7	\$	34,340
Pickup 4wd w\ Plow	Parks	39-529	7	\$	43,080
	TOTAL 2025 FLEET V	EHICLE / EQU	JIPMENT COSTS:	\$	652,620

	2020 FIRE DEPARTMENT VEHICLE & APPARATUS BREAKDOWN							
			REPLACEMENT		ESTIMATED			
VEHICLE TYPE	DIVISION	VEHICLE #	CYCLE (Years)		COST			
Pickup 4wd	Fire Suppression	Utility 1	10	\$	51,250			
Pickup 4wd	Fire Suppression	Utility 3	10	\$	51,250			
Pickup 4wd	Fire Suppression	Utility 2	10	\$	51,250			
Sport Utility 4wd	Fire Suppression	Battalion 1	5	\$	67,500			
Sport Utility 4wd	Fire Prevention	Public Education	10	\$	39,000			
Fire Safety Trailer	Fire Prevention	Public Education	15	\$	100,000			
	2020 TOTAL FIRE D	DEPARTMENT VEHICLE & A	APPARATUS COSTS:	\$	360,250			

2021 FIRE DEPARTMENT VEHICLE & APPARATUS BREAKDOWN								
	REPLACEMENT							
VEHICLE TYPE	DIVISION	VEHICLE #	CYCLE (Years)	COST				
None Scheduled				\$	-			
	2021 TOTAL FIRE DEF	PARTMENT VEHICLE 8	APPARATUS COSTS:	\$	-			

2022 FIRE DEPARTMENT VEHICLE & APPARATUS BREAKDOWN							
			REPLACEMENT	E	STIMATED		
VEHICLE TYPE	DIVISION	VEHICLE #	CYCLE (Years)		COST		
Rescue Pumper	Fire Suppression	Engine 1	15	\$	640,000		
Rescue Pumper	Fire Suppression	Engine 4	15	\$	640,000		
Ambulance	EMS	Alpha 21	6	\$	330,000		
Ambulance	EMS	Alpha 22	6	\$	330,000		
Ambulance	EMS	Alpha 24	6	\$	330,000		
Ambulance	EMS	Alpha 23	6	\$	330,000		
Ambulance	EMS	Alpha 25	6	\$	330,000		
	\$	2,930,000					

2023 FIRE DEPARTMENT VEHICLE & APPARATUS BREAKDOWN									
	ESTIMATED								
VEHICLE TYPE	DIVISION	VEHICLE #	CYCLE (Years)		COST				
None Scheduled				\$	•				
	2023 TOTAL FIRE DEF	PARTMENT VEHICLE 8	APPARATUS COSTS:	\$	-				

2024 FIRE DEPARTMENT VEHICLE & APPARATUS BREAKDOWN					
			REPLACEMENT		ESTIMATED
VEHICLE TYPE	DIVISION	VEHICLE #	CYCLE (Years)		COST
Sport Utility 4wd	Fire Suppression	Battalion 1	10	\$	33,000
Sport Utility 4wd	Fire Suppression	Inspector 2	10	\$	33,000
2024 TOTAL FIRE DEPARTMENT VEHICLE & APPARATUS COSTS:			\$	66,000	

2025 FIRE DEPARTMENT VEHICLE & APPARATUS BREAKDOWN					
			REPLACEMENT		ESTIMATED
VEHICLE TYPE	DIVISION	VEHICLE #	CYCLE (Years)		COST
None Scheduled				\$	-
2025 TOTAL FIRE DEPARTMENT VEHICLE & APPARATUS COSTS: \$ -				-	

2020-2025 Capital Improvement Plan



innovative by nature

2020-2025 Capital Improvement Plan Aggregate Spreadsheet

Aggregate Spreadsheet (page #1)

2020-2025 Capital Improvement Plan Aggregate Spreadsheet

Aggregate Spreadsheet (page #2)

2020-2025 Capital Improvement Plan CIP Schedule

January 15	Planning Commission representative (at Planning Commission meeting) announces request for public submission of any eligible project. Project Application form will be available on City website for public.
January 22	CIP Project Group receives CIP schedule and instructions. Mayor or City Council representative (at City Council meeting) announces request for public submission of any eligible project.
February 22	Deadline to submit new CIP project applications/re-evaluations.
March 21	CIP Project group & CIP Policy group meeting (Q & A opportunity for CIP Policy group).
April 3	CIP Project ratings due from Policy Group.
April 16	Planning Commission Workshop and public hearing to review Draft 2020-2025 CIP and to provide an opportunity for public input.

2020-2025 Capital Improvement Plan Notice of Public Hearing



NOTICE OF PUBLIC HEARING ON THE PROPOSED 2020-2025 CAPITAL IMPROVEMENT PLAN

ROCHESTER HILLS PLANNING COMMISSION

Notice is hereby given that the City of Rochester Hills Planning Commission will hold a Public Hearing at 1000 Rochester Hills Drive, Rochester Hills, Oakland County, Michigan 48309, on Tuesday, April 16, 2019 at 7:00 p.m. to receive public comments regarding the City of Rochester Hills 2020-2025 Capital Improvement Plan as a component of the City's Comprehensive Plan.

Information regarding the Capital Improvement Plan may be obtained from the Fiscal Department during regular business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, or by calling (248) 656-4660. Written comments concerning this matter will be received by the Planning and Economic Development Department prior to the Public Hearing or by the Planning Commission at the Public Hearing.

Deborah Brnabic, Chairperson Rochester Hills Planning Commission

Note: Anyone planning to attend the meeting who has need of special assistance under the Americans Disabilities Act (ADA) is asked to contact the Facilities Division (248) 656-2560 forty-eight (48) hours prior to the meeting. Staff will be pleased to make the necessary arrangements.

Dated this 21st day of March 2019 at Rochester Hills, Michigan. Publish Monday, April 1, 2019

2020-2025 Capital Improvement Plan Capital Improvement Plan Review

2020-2025 Capital Improvement Plan / Projects Added			
		<u>Year</u>	
FA-02L	Fire Station 1 Carports	2021	New Project
FA-02M	Fire Station 1: Training Tower Gas-Fired Prop	2020	New Project
IS-05C	Mobile Lift Columns	2020	New Project
	Auditorium / Media Equipment Replacement		
IS-19B	Schedule	2020-2024	New Project
IS-20	Electronic Document Management System	2021-2023	New Project
IS-21	Trailer Mounted Generator	2020	New Project
LR-19	Industrial Drive Road Paving - LDFA	2024-2025	New Project
LR-20	Leach Road Paving - LDFA	2021-2022	New Project
MR-10B	Austin Avenue Improvements	2020	New Project
MR-33	Old Adams and Forester Reconstruction - LDFA	2020-2021	New Project
MR-60	Waterview Reconstruction - LDFA	2020-2021	New Project
PK-05H	Borden Park Office Relocation	2020	New Project
PK-07B	Compact Loader	2021	New Project
PK-07C	Fraize Mower	2020	New Project
PW-12B	Rochester Road Pathway at M-59	2020-2021	New Project
SS-12	Industrial Drive Sanitary Sewer Extension - LDFA	2024-2025	New Project
SW-15	Infra-Red Aerial Photography	2020	New Project
WS-41	Advanced Metering Infrastructure (AMI)	2024-2025	New Project
WS-42	Bellbrook Water Main Replacement Project	2022-2023	New Project
	Ascension Providence Rochester Hospital Water		
WS-43	Main Improvement Project	2022-2023	New Project
	London Bridge Dr Water Main Replacement		
WS-44	Project	2022-2023	New Project
	Judson Park Subdivision Water Main		
WS-45	Replacement Project	2023-2024	New Project
WS-46	RC-02 Improvements	2020-2021	New Project
WS-47	Tienken Road Water Main Project	2022-2023	New Project

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2020-2025 Capital Improvement Plan / Projects Deleted			
		Reason Not Included	
FA-02J	City Hall Compound Gate	Project Complete	
FA-05B	Van Hoosen Dairy Barn Generator	Project Complete	
FA-03B	Van Hoosen Museum Schoolhouse Siding	Project Complete	
FA-05C	_	Draiget Complete	
FA-03C	Project Fire Department LED Signs	Project Complete	
	Fire Department LED Signs	Project Complete	
IS-04H	Scott Sight Thermal Imaging Camera	Project Complete	
IS-16C	Electronic Plan Review Software	Project Complete	
LS-05	Reuther Middle School Area Street Lighting	Moved to Pending	
LS-06	Reuther Middle School Area Sidewalks	Moved to Pending	
LS-13	School Road Paving [John R - 1,700 feet East]	Project Complete	
MR-16A	Auburn Road Corridor Improvements	Project Complete	
	Livernois Reconstruction [Avon Rd to N of		
MR-26G	Walton Blvd]	Project Complete	
MR-46	Star Batt Drive Reconstructino	Project Complete	
MR-59	LDFA Major Road Upgrades	Project Deleted	
	Auburn Road Pathway Gaps [Alexander Avenue -		
PW-06A	Livernois]	Project Complete	
PW-06C	Auburn Pathway Gaps [John R - Dequindre]	Project Complete	
SS-09	Livernois Sanitary Sewer Extension	Moved to Pending	
SS-30	Sanitary Sewer Easement Machine	Project Complete	
SS-59	LDFA Sanitary Sewer Main Upgrades	Project Deleted	
	Flora Valley Court-River Bend Drive: Water		
WS-09	Main Connection	Moved to Pending	
	Bedford Sq Apts/Tienken Ct: Water Main		
WS-16	Replacement	Project Complete	
WS-17	Wayside Park: Water Main Extension	Project Complete	
WS-39	Meter Test Bench Replacement	Project Complete	
WS-59	LDFA Water Main Upgrades	Project Deleted	

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2020-2025 Capital Improvement Plan / Project Timeline Changes			
		Project Timelines:	
		<u>Prior</u>	<u>Revised</u>
MR-03	Harding Avenue Rehabilitation	2019	2020
	Auburn Road Rehabilitation [Rochester Road to		
MR-16C	Culbertson]	2019	2020
PK-11	Clinton River Access (Parking Lot & Canoe Launch)	2020	2023
PK-16B	Yates Park: Clinton River Access Improvements	2021	2024
	Tienken Manor Subdivision: Water Main		
	Replacement (fka Fieldstone & Ironstone: Water		
WS-08	Main Replacement)	2020	2021
WS-34	Glidewell Subdivision: Water Main Replacement	2021	2020

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