



# CAPITAL IMPROVEMENTS PROGRAM 2018 – 2024

Approved March 13, 2018 – Planning Commission  
Accepted March 26, 2018 – City Council



**City of Mason Planning Commission**

**Approved: March 13, 2018**

**Received: March 13, 2018**

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**City of Mason City Council**

**Accepted: March 26, 2018**

**Received: March 26, 2018**

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### **Definition of a Capital Improvement**

The CIP allows for responsible and thoughtful planning of future major expenditures that are not necessarily financed or automatically included in the annual budgeting process. All capital projects that fit the description under the policy (see Page 6) should be part of this CIP.

### **Legal Basis of the Capital Improvements Program**

The CIP has been authorized by the Michigan Planning Enabling Act (Public Act 33 of 2008). This mandate gives responsibility for preparing a CIP for local Planning Commission bodies, and reads as follows:

**125.3865 Capital Improvements program of public structures and improvements/ preparation; basis. Sec. 65. (1)** To further the desirable future development of the local unit of government under the master plan, a planning commission, after adoption of a master plan, shall annually prepare a capital improvements program of public structures and improvements, unless the planning commission is exempted from this requirement by charter or otherwise. If the planning commission is exempted, the legislative body either shall prepare and adopt a capital improvements program, separate from or as a part of the annual budget, or shall delegate the preparation of the capital improvements program to the chief elected official or a nonelected administrative official, subject to final approval by the legislative body. The capital improvements program shall show those public structures and improvements, in the general order of their priority, that in the commission's judgment will be needed or desirable and can be undertaken within the ensuing 6-year period. The capital improvements program shall be based upon the requirements of the local unit of government for all types of public structures and improvements. Consequently, each agency or department of the local unit of government with authority for public structures or improvements shall upon request furnish the planning commission with lists, plans, and estimates of time and cost of those public structures and improvements.

### **Planning and Benefits of the Capital Improvements Program**

The CIP is, first and foremost, a planning tool and is dynamic. Each year all projects included within the CIP are reviewed, a call for new projects is made, and adjustments are made to existing projects arising from changes in the amount of funding required, conditions, or time line. A new year of programming is also added each year to replace the year funded in the annual operating budget. With thoughtful foresight and review as a result of a CIP, the many outstanding capital projects that Mason is faced with implementing every year can be viewed as one package, rather than as small, fragmented groups or lists, with no unified sense of focus and direction.

When capital improvements begin with careful planning and study, the City of Mason's chances for receiving state and federal grants are greatly enhanced. Some grants require the inclusion of a CIP with their application. Formulation of a CIP helps those involved to look at alternative funding mechanisms that might not have been considered before. Instead of relying on local revenue sources alone, the CIP allows the City to think more creatively to fulfill Master Plan for Land Use goals and policies. The CIP will continue to develop over time by adding features to gradually improve quality and sophistication. Greater attention shall be devoted to provide more detailed information about individual project requests, program planning, fiscal analysis, fiscal policies, and developing debt strategy. The CIP often avoids reactive planning, and instead replaces it with balanced growth initiatives.

### **Impact of Capital Budget on the Operating Budget**

As new policies and programs are approved, both the operating and capital budgets are impacted. For example, an increase in service levels approved as part of the operating budget would have long-term effects on the Capital Improvements Program. Conversely, a restrictive change to the use of long-term debt would slow capital programs. Regardless of the difference between the operating and capital budgets, the two are interdependent.

Approval of the CIP by the Mason Planning Commission does not mean they grant final approval of all projects contained within the plan. Rather by approving the CIP, the Planning Commission acknowledges that these projects represent a reasonable interpretation of the upcoming needs for the community and that projects contained in the first year of the plan are suitable for inclusion in the upcoming budget.

The community of Mason 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.

### **Process**

**Mason Leadership Team:** recommends projects from their area of expertise, reviews all projects, evaluates the prioritization of projects based on established criteria, considers funding options, and presents the recommendation to the Planning Commission.

- City Administrator
- City Clerk/Human Resources Director
- Community Development Director
- Finance Director/Treasurer
- Fire Chief
- Police Chief
- Public Works Director

**City Administrator:** clarifies any issues, finalizes the ratings and approves the CIP draft. The City Administrator recommends the CIP draft at the Planning Commission workshop and presents the CIP at the Planning Commission public hearing.

**Mason Planning Commission:** reviews the Policy Group's recommendation, conducts workshops (if necessary), receives public input, conducts public hearings, adopts the plan, and requests the governing body to consider incorporating funding for the first-year projects into the budget plan.

**Mason City Council:** is encouraged to use the CIP as a tool in the adoption of the annual budget process in accordance with the governing body goals and objectives.

**Mason 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 the governing body's budget workshops and public hearings. As always, communication is open between residents, governing body representatives, Planning Commission representatives, and staff.

# Policy

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As used in the City of Mason Capital Improvements Program, a capital improvements 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., a public building, water/sanitary sewer mains, storm sewers, major/local roadways, recreational facilities), an addition to, or extension of, such a facility, provided the cost is \$5,000 or more and that the improvement will have a useful life of three years or more.
2. Any nonrecurring rehabilitation of all or part of a building, its grounds, a facility, or equipment, provided the cost is \$5,000 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 community programs provided the cost is \$5,000 or more and will be coded to a capital asset account.
4. Any planning, feasibility, engineering, or design study related to an individual capital improvements project or to a program that is implemented through individual capital improvements projects provided the cost is \$5,000 or more and will have a useful life of three years or more.
5. Any planning, feasibility, engineering, or design study costing \$10,000 or more that is not part of an individual capital improvements project or a program that is implemented through individual capital improvements projects.

# Funding Overview

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Capital improvements projects involve the outlay of substantial funds making numerous sources of funding necessary to provide financing over the life of the project. Most capital funding sources are earmarked for specific purposes and cannot be transferred from one capital program to another. The CIP has to be prepared with some projections as to the amount of money available. The following is a summary of the funding sources for projects included in the CIP:

## Bonds

When the community of Mason sells bonds, purchasers are, in effect, lending the community money. The money is repaid, with interest, from taxes or fees over the years. The logic behind issuing bonds (or “floating a bond issue”) for capital projects is that the citizens who benefit from the capital improvements over a period of time should help the community pay for them.

**General Obligation (G.O.) bonds:** Perhaps the most flexible of all capital funding sources, G.O. bonds can be used for the design or construction of any capital project. These bonds are financed through property taxes. In financing through this method, the taxing power of the community is pledged to pay interest and principal to retire the debt. Voter approval is required if the community wants to increase the taxes that it levies and the amount is included in Mason’s state-imposed debt limits. To minimize the need for property tax increases, the community makes every effort to coordinate new bond issues with the retirement of previous bonds. G.O. bonds are authorized by a variety of state statutes.

- *Mason currently has one outstanding bond related to the infrastructure put in place on Temple Street. The bond has a remaining payment balance of \$210,000 with a final payment estimated in 11/2020.*
- *Mason also has one outstanding bond related to the City Hall/Police Station. The bond has a remaining payment balance of \$3,520,000 with a final payment estimated in 04/2040.*

**Revenue bonds:** Revenue bonds are sold for projects that produce revenues such as water and sewer system projects. Revenue bonds depend on user charges and other project-related income to cover their costs. Unlike G.O. bonds, Revenue bonds are not included in the community state-imposed debt limits because the full faith and credit of the community backs them. Revenue bonds are authorized by Public Act of 1933, the Revenue Bond Act. The City of Mason currently has no outstanding revenue bonds.

## Building Authority

The Mason Building Authority was established for the purpose of acquiring, furnishing, equipping, owning, improving, enlarging, operating, and maintaining a building or buildings, automobile parking lots or structures, recreation facilities and the necessary site or sites therefore thereof, and the payment of the bond principal and interest for any related debt incurred. The Building Authority functions as a mechanism to facilitate the selling of bonds to finance public improvements.

- *Mason currently has one outstanding bond related to the Fire Station. The bond has a remaining payment balance of \$75,000 with a final payment estimated in 10/2018.*

## Enterprise Fund (Water and Sewer Fund)

In enterprise financing, funds are accumulated in advance for capital requirements. Enterprise funds not only pay for capital improvements, but also for the day-to-day operations of community services and the debt payment on revenue bonds. The community can set levels for capital projects; however, increases



# **CAPITAL IMPROVEMENTS PROGRAM 2018-2024**

## **LIST OF PROJECTS**

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# Streets, Sidewalks, Bridges (S)

## OVERVIEW

Transportation-related issues are a high priority for the City of Mason. The City of Mason contains both public and private roadways. Public roads are owned and operated by the Michigan Department of Transportation (MDOT), the Ingham County Road Commission, and the City of Mason. Private roads are owned and operated by private developments and homeowner groups. The City currently maintains 12.25 miles of major streets, 19.78 miles of local streets, 2.21 miles of cemetery drives, and 2.5 miles of non-motorized trail.

In order to define priorities for the local street and major road rehabilitation programs, the City has a formal asset management program that categorizes roads based on their Pavement Surface Evaluation and Rating (PASER) first. Table 1 illustrates PASER ratings for asphalt pavements.

**Table 1. PASER Rating Overview**

Rating	Visible Distress	General Treatment and Conditions
<b>10 Good</b>	None	New construction.
<b>9 Good</b>	None	Recent overlay.
<b>8 Good</b>	No longitudinal cracks except reflection of paving joints. Occasional transverse cracks, widely spaced (40' or greater). All cracks sealed or tight (open less than 1/4").	Recent sealcoat or new cold mix. Little or no maintenance required.
<b>7 Fair</b>	Very slight or no raveling, surface shows some traffic wear. Longitudinal cracks (open 1/4") due to reflection or paving joints. Transverse cracks (open 1/4") spaced 10' or more apart, little or slight crack raveling. No patching or very few patches in excellent condition.	First signs of aging. Maintain with routine crack filling.
<b>6 Fair</b>	Slight raveling (loss of fines) and traffic wear. Longitudinal cracks (open 1/4" – 1/2"), some spaced less than 10'. First sign of block cracking. Slight to moderate flushing or polishing. Occasional patching in good condition.	Shows signs of aging. Sound structural condition. Could extend life with sealcoat.
<b>5 Fair</b>	Moderate to severe raveling (loss of fine and coarse aggregate). Longitudinal and transverse cracks (open 1/2") show first signs of slight raveling and secondary cracks. First signs of longitudinal cracks near pavement edge. Block cracking up to 50% of surface. Extensive to severe flushing or polishing. Some patching or edge wedging in good condition.	Surface aging. Sound structural condition. Needs sealcoat or thin non-structural overlay (less than 2").
<b>4 Poor</b>	Severe surface raveling. Multiple longitudinal and transverse cracking with slight raveling. Longitudinal cracking in wheel path. Block cracking (over 50% of surface). Patching in fair condition. Slight rutting or distortions (1/2" deep or less).	Significant aging and first signs of need for strengthening. Would benefit from a structural overlay (2" or more).
<b>3 Poor</b>	Closely spaced longitudinal and transverse cracks often showing raveling and crack erosion. Severe block cracking. Some alligator cracking (less than 25% of surface). Patches in fair to poor condition. Moderate rutting or distortion (1" or 2" deep). Occasional potholes.	Needs patching and repair prior to major overlay. Milling and removal of deterioration extends the life of overlay.
<b>2 Poor</b>	Alligator cracking (over 25% of surface). Severe distortions (over 2" deep). Extensive patching in poor condition. Potholes.	Severe deterioration. Needs reconstruction with extensive base repair. Pulverization of old pavement is effective
<b>1 Poor</b>	Severe distress with extensive loss of surface integrity.	Failed. Needs total reconstruction.

The lowest-rated roads in each of these categories would generally be addressed first. However, the last PASER evaluation was completed in 2017 so staff takes into account changes in conditions. PASER ratings will be scheduled and completed on a two-year cycle beginning in 2019.

Following the PASER evaluation, the City looks at underground utilities and considers whether the condition of those utilities would move a street project up in priority. This is followed by the impact to residents and how many property owners would be impacted positively due to the improvement.

Finally, the City considers the budget and how many streets can be completed within a year based on the resources available. Mason voters have approved that a minimum value of 4 mills must be used for road projects every year. Due to the construction season crossing fiscal years and unforeseen factors impacting the ability for a project to be completed, the City maintains a rolling summary to assure the City is meeting this requirement (see Table A). This allocation can be funded by numerous resources to meet this requirement.

The City's policy is to evaluate sidewalks on any road that is being improved and replace them as needed.

Once prioritized the road work will typically be completed in one of the three following ways:

- **Mill and Fill:** Consists of grinding the surface layer with a milling machine, hauling and disposing of the milled bituminous pavement. A new lift of hot mix asphalt (HMA) is laced over the milled surface. This treatment methodology can facilitate up to 10 years of additional service life without full reconstruction. This method of surface rehabilitation provides the greatest value in areas where the base layers of pavement do not have extensive cracking and utility repairs or replacements are not warranted. Sidewalks are evaluated and replaced as necessary.
- **Pulverize, Shape and Repave:** Consists of crushing the full depth of the existing pavement and intermixing the pulverized HMA with the aggregate base. This pulverized material is then graded and compacted to the original cross slope of the street. Any excess material is hauled off site. New HMA is placed upon this pulverized section in as many as three lifts. This method provides the equivalent of a new street cross-section without the added expenses of removing and replacing all of the concrete curb and gutter. In addition, the pulverized material can be temporarily stockpiled on the adjacent lane to facilitate any utility repairs or replacements. Sidewalks are evaluated and replaced as necessary.
- **Reconstruction:** Consists of the complete removal and replacement of all components of the street, including but not limited to concrete curb and gutter, existing pavement and gravel section. This method of construction is limited to areas too badly deteriorated to be improved using the Mill and Fill or Pulverize, Shape and Repave methods. After removal, the street is completely rebuilt by re-grading the base, placing new aggregate, pouring new concrete curb and gutters, and repaving the road. Often new drainage structures and storm sewer are installed as a reconstruction project. Typically, this method is reserved for circumstances such as a road widening or narrowing or the complete replacement or reconstruction of deep utilities such as a sanitary sewer interceptor. This is also the costliest, most time-consuming and disruptive street construction.

**Table 2. Road Appropriation Summary: 1997-2018**

Fiscal Year	Required Appropriation	Actual Spent	Over/(Under)
96/97	507,106.00	803,717.10	296,611.10
97/98	503,411.00	1,134,462.84	631,051.84
98/99	521,918.00	862,454.56	340,536.56
99/00	558,522.00	477,509.15	(81,012.85)
00/01	629,313.00	858,359.18	229,046.18
01/02	666,271.00	1,658,096.87	991,825.87
02/03	764,684.00	454,414.70	(310,269.30)
03/04	792,587.00	888,647.89	96,060.89
04/05	828,705.00	976,705.77	148,000.77
05/06*	739,970.00	1,045,585.41	305,615.41
06/07	824,935.00	648,943.35	(175,991.65)
07/08	871,830.00	1,042,490.52	170,660.52
08/09	916,258.08	2,876,791.12	1,960,533.04
09/10	967,322.26	539,350.61	(427,971.65)
10/11	896,553.96	823,558.74	(72,995.22)
11/12**	871,232.00	3,573.02	(867,658.98)
12/13	860,205.00	68,164.78	(792,040.22)
13/14	869,376.00	1,477,869.35	608,493.35
14/15	853,096.00	480,704.23	(372,391.77)
15/16	864,892.00	1,509,285.83	644,393.83
16/17	853,788.00	369,815.29	(483,972.71)
17/18***	872,460.00	266,211.67	(606,248.33)
<b>Totals</b>	<b>17,034,435.30</b>	<b>19,266,711.98</b>	<b>2,232,276.88</b>

\* Note: 5 Mill to 4 Mill Requirement

\*\* Note: Street Construction Waived

\*\*\* Note: Partial Year

## Proposed Project Year: 2018-19

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### Project Number: 2017-S6      South Street - Northbrook Street to West City Limits

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**Description:** The road from Northbrook to the City limit will be pulverized, shaped and repaved thereby restoring the road to excellent condition with an anticipated 20-year life span.

**Justification:** The road was reconstructed nearly 20 years ago in 1998. The road has a current PASER rating of 4 with a portion of the road rated as 9; however, the higher rating of 9 is due to a recent cosmetic overlay which does not increase the overall longevity of the road. The overlay was intended to patch the road temporarily until this year for reconstruction. Sidewalks will be evaluated and replaced as necessary.

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### Project Number: 2017-S7      Avon Street - All

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**Description:** Pulverize, shape and repave. The road was last worked on in 1980 and had a total reconstruction in that year. The top course is starting to break down and base is showing cracks through to base course. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 4. Normal maintenance is no longer adequate. Four homes will be directly impacted by this improvement.

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### Project Number: 2017-S8      Northbrook Street – South Street to Carom Circle

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**Description:** Full reconstruction and narrowing of road. The road was last worked on in 1996 and was milled and refilled. The road is in poor condition and is in need of spot storm sewer repairs and narrowing. Sidewalks will be evaluated and replaced as necessary. Driveways will be extended to accommodate the road narrowing.

**Justification:** This is a priority brought forward by Council primarily as a traffic calming action to slow traffic going into this subdivision. The road had a PASER rating of 4. Normal maintenance is no longer adequate. Eighteen homes will be directly impacted by this improvement.

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### Project Number: 2017-S9      S. Jefferson Street – Oak Street to Kipp Road

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**Description:** Mill and fill. The road was last worked on in 1997 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 5. Normal maintenance is no longer adequate. Thirty-seven homes will be directly impacted by this improvement. MDOT has provided 80% of the funding and the City will be responsible for the 20% local match.

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### Project Number: 2017-S10      Sidewalk Program: Summerwood

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**Description:** The sidewalk program will evaluate the sidewalks in a designated area of the City. This may be included in our Special Assessments as appropriate. The City will let a bidding package specifically for sidewalk work. See Figure 1.

**Justification:** Summerwood was selected as these public sidewalks are currently not in compliance with the Americans with Disabilities Act (ADA).

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**Project Number: 2018-S1**      Temple Street Safety Grant From MDOT

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**Description:** The City of Mason applied for and received a Safety Grant from MDOT to improve the safety crossing of Temple Street in front of the Middle School.

**Justification:** Eighty percent of the construction cost will be provided by MDOT. A 20% local match is required to accept the grant. Improvements will consist of a mid-block raised pedestrian crossing with striping and flashing beacon advance warning signage. The improvements will be made in two locations at the intersections of Temple and Maple Street and at Temple and Cindy Street.

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**Project Number: 2018-S32**      Columbia Street – Cedar Street to US 127

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**Description:** Pulverize, shape and repave Columbia Street from Cedar Street to the US 127 overpass.

**Justification:** Records indicate the last time this portion of Columbia was reconstructed was approximately 42 years ago. The pavement has outlived its anticipated useful life while the condition of the road base has deteriorated and been exacerbated by the recent wet weather and fluctuating temperatures. Originally estimated for 2026, this project has been moved to FY 18-19 from FY 21-22 due to the recent deterioration.

**Proposed Project Year: 2019-20**

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**Project Number: 2017-S5**      Walnut Street - Columbia Street to North End

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**Description:** Pulverize, shape and repave. The road was last worked on in 1989 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 3. Normal maintenance is no longer adequate. Eight homes will be directly impacted by this improvement.

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**Project Number: 2017-S10**      Sidewalk Program: Northwest Quadrant of the City

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**Description:** This program will evaluate the sidewalks in a designated area of the City. This may be included in our Special Assessments as appropriate. The City will let a bidding package specifically for sidewalk work. See Figure 1.

**Justification:** The current evaluation of sidewalks only occurs when a street is being worked on, which can result in 20 years before that sidewalk is evaluated again. Without a systematic review of the sidewalks, we are currently only allocating resources on a spot basis when the problem becomes a safety hazard. This program will allow us to address affected areas proactively and receive the cost savings of bidding it with a concrete-specific project.

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**Project Number: 2017-S11**      Kerns Road – Cedar Street to Howell Road

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**Description:** Full reconstruction of the road with the addition of sidewalks.

**Justification:** The road has a PASER rating of 1. Normal maintenance is no longer adequate. No reconstruction records could be found for this street. It does not have curb and gutter and the base of the road is failing due to the limited drainage system in place to serve the road. Eight businesses will be directly impacted by this improvement. This project has been delayed to 2019-2020 in order to coordinate work with the Hayhoe Trail Extension to Kerns and Howell roads. (2018-P3)

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**Project Number: 2017-S12**      W. Elm Street - Henderson Street to Jefferson Street

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**Description:** Pulverize, shape and repave. The road was last worked on in 1998 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 4. Normal maintenance is no longer adequate. Seven homes will be directly impacted by this improvement.

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**Project Number: 2017-S13**      Park Street – Elm Street to Oak Street

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**Description:** Pulverize, shape and repave. 1998 had total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 4. Normal maintenance is no longer adequate. The project was moved back due to cost estimates increasing for Jefferson project (2017-S9).

**Proposed Project Year: 2020-21**

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**Project Number: 2017-S10**      Sidewalk Program: Northeast Quadrant of the City

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**Description:** This program will evaluate the sidewalks in a designated area of the City. This may be included in our Special Assessments as appropriate. The City will let a bidding package specifically for sidewalk work. See Figure 1.

**Justification:** The current evaluation of sidewalks only occurs when a street is being worked on, which can result in 20 years before that sidewalk is evaluated again. Without a systematic review of the sidewalks, we are currently only allocating resources on a spot basis when the problem becomes a safety hazard. This program will allow us to address affected areas proactively and receive the cost savings of

bidding it with a concrete-specific project.

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**Project Number: 2017-S14**      East Cherry Street – Rogers Street to End

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**Description:** Mill and fill. The road was last worked on in 1997 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 5. Normal maintenance is no longer adequate. Thirty-two homes will be directly impacted by this improvement.

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**Project Number: 2017-S15**      S. Barnes Street – Ash Street to Kipp Road

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**Description:** Mill and fill. The road was last worked on in 1988 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 5. Normal maintenance is no longer adequate. Fifty-six homes will be directly impacted by this improvement.

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**Project Number: 2017-S16**      Maple Street Bridge Repair

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**Description:** Bridge repair due to safety concerns. These repairs are only for the top of the bridge and further repairs will need to be done in the future.

**Justification:** Bridge was evaluated and the report shows that the concrete head walls have severe spalling and are in need of repair and hand rails on the bridge are not safe.

**Proposed Project Year: 2021-22**

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**Project Number: 2017-S10**      Sidewalk Program: Southeast Quadrant of the City

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**Description:** This program will evaluate the sidewalks in a designated area of the City. This may be included in our Special Assessments as appropriate. The City will let a bidding package specifically for sidewalk work. See Figure 1.

**Justification:** The current evaluation of sidewalks only occurs when a street is being worked on, which can result in 20 years before that sidewalk is evaluated again. Without a systematic review of the sidewalks, we are currently only allocating resources on a spot basis when the problem becomes a safety hazard. This program will allow us to address affected areas proactively and receive the cost savings of bidding it with a concrete-specific project.

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**Project Number: 2017-S17**      Center Street – Walnut Street to N. Bush Street

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**Description:** Mill and fill. Staff does not have any records indicating when the road was constructed. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 5. Normal maintenance is no longer adequate. Eighteen homes will be directly impacted by this improvement.

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**Project Number: 2017-S18** Brookdale Street - Judy Court to Willow Street

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**Description:** Pulverize, shape and repave. The road was last worked on in 1997 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 5. Normal maintenance is no longer adequate. Sixteen homes will be directly impacted by this improvement.

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**Project Number: 2017-S19** Cherry Street - McRoberts Street to Henderson Street

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**Description:** Pulverize, shape and repave. The road was last worked on in 1998 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 5. Normal maintenance is no longer adequate. Twenty-six homes will be directly impacted by this improvement.

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**Project Number: 2017-S20** Columbia Street – Orchard Lane to Walnut Street

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**Description:** Pulverize, shape and repave. The road was last worked on in 2009 and was a mill and fill. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 4. Normal maintenance is no longer adequate. Thirteen homes will be directly impacted by this improvement.

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**Project Number: 2017-S21** Eaton Drive - All

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**Description:** Pulverize, shape and repave. The road was last worked on in 1979 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 4. Normal maintenance is no longer adequate. Twenty-four homes will be directly impacted by this improvement.

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**Project Number: 2017-S22** W. Elm Street – McRoberts Street to Henderson Street

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**Description:** Pulverize, shape and repave. The road was last worked on in 1998 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.



**Justification:** The road had a PASER rating of 4. Normal maintenance is no longer adequate. Twenty-five homes will be directly impacted by this improvement.

### **Proposed Project Year: 2022-23**

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#### **Project Number: 2017-S10      Sidewalk Program: Southwest Quadrant of the City**

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**Description:** This program will evaluate the sidewalks in a designated area of the City. This may be included in our Special Assessments as appropriate. The City will let a bidding package specifically for sidewalk work. See Figure 1.

**Justification:** The current evaluation of sidewalks only occurs when a street is being worked on, which can result in 20 years before that sidewalk is evaluated again. Without a systematic review of the sidewalks, we are currently only allocating resources on a spot basis when the problem becomes a safety hazard. This program will allow us to address affected areas proactively and receive the cost savings of bidding it with a concrete specific project.

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#### **Project Number: 2017-S23      Rayner Street – Randolph Street to Columbia Street**

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**Description:** Pulverize, shape and repave. The road was last worked on in 1996 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 3. Normal maintenance is no longer adequate. Eleven homes will be directly impacted by this improvement.

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#### **Project Number: 2017-S24      Eugenia Drive – Northbrook Street to End**

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**Description:** Pulverize, shape and repave. The road was last worked on in 1996 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 5. Normal maintenance is no longer adequate. Fifty homes will be directly impacted by this improvement.

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#### **Project Number: 2017-S25      Hall Blvd - Ash Street to South Street**

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**Description:** Pulverize, shape and repave. The road was last worked on in 1980 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 4. Normal maintenance is no longer adequate. Twenty-seven homes will be directly impacted by this improvement.

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#### **Project Number: 2017-S26      Columbia Street - Park Street to Jefferson Street to South Street**

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**Description:** Pulverize, shape and repave. The road was last worked on in 1999 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 5. Normal maintenance is no longer adequate. Four homes will be directly impacted by this improvement.

### **Proposed Project Year: 2023-24**

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#### **Project Number: 2017-S10      Sidewalk Program: North West Quadrant of the City**

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**Description:** This program will evaluate the sidewalks in a designated area of the City. This may be included in our Special Assessments as appropriate. The City will let a bidding package specifically for sidewalk work. See Figure 1.

**Justification:** The current evaluation of sidewalks only occurs when a street is being worked on, which can result in 20 years before that sidewalk is evaluated again. Without a systematic review of the sidewalks, we are currently only allocating resources on a spot basis when the problem becomes a safety hazard. This program will allow us to address affected areas proactively and receive the cost savings of bidding it with a concrete specific project.

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#### **Project Number: 2018-S27      Peachtree Place - Columbia Street to South Street**

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**Description:** Pulverize, shape and repave. The road was last worked on in 1997 and had a mill and repave. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 4. Normal maintenance is no longer adequate. Sixty-three homes will be directly impacted by this improvement.

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#### **Project Number: 2018-S29      McRoberts Street - Columbia Street to Maple Street**

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**Description:** Pulverize, shape and repave. The road was last worked on in 1998 and had mill and fill work done. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 4. Normal maintenance is no longer adequate. Nine homes will be directly impacted by this improvement.

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#### **Project Number: 2018-S30      Steele Street – Ash Street to Elm Street**

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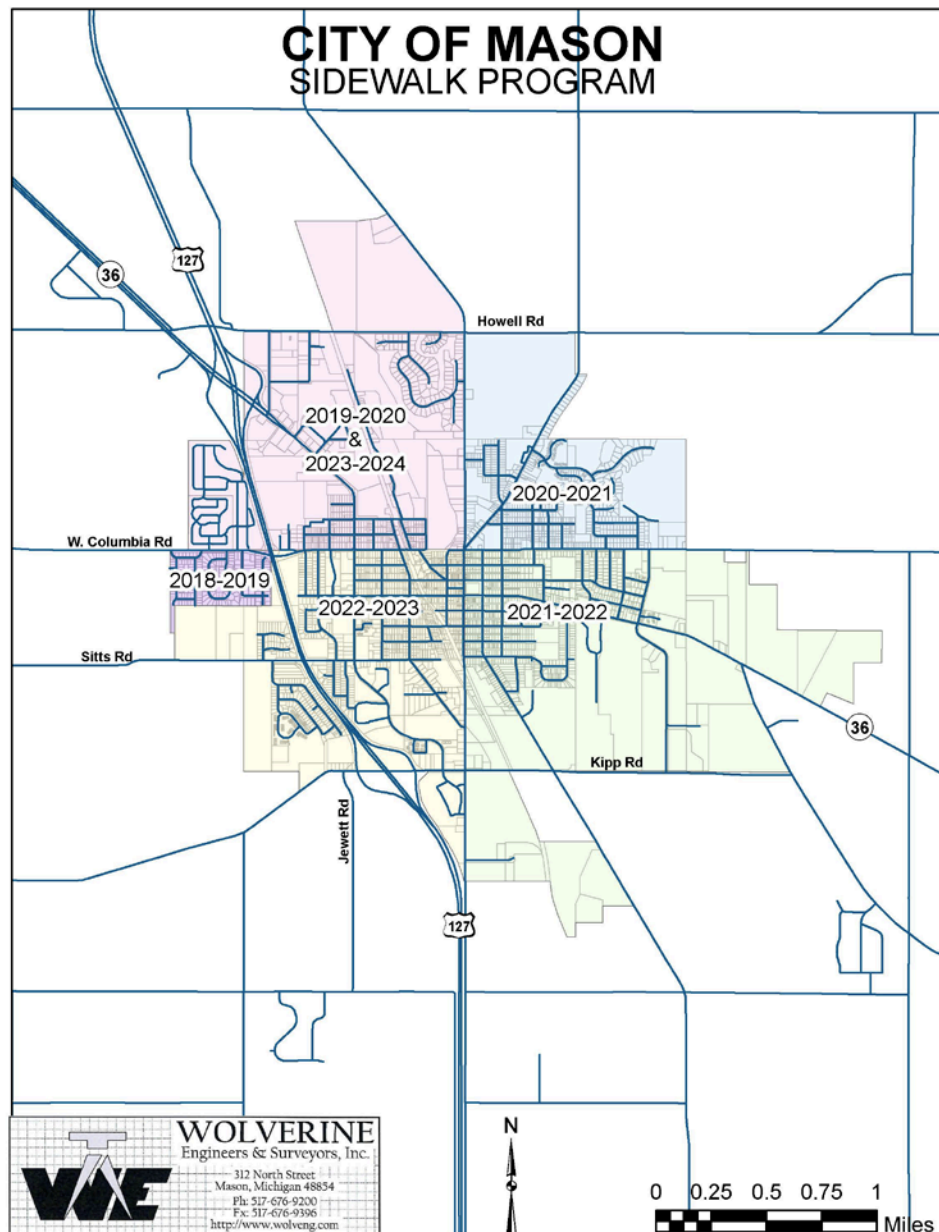
**Description:** Pulverize, shape and repave. The road was last worked on in 1996 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 4. Normal maintenance is no longer adequate. Seven homes will be directly impacted by this improvement.

**Description:** Pulverize, shape and repave. The road was last worked on in 1998 and had a total reconstruction in that year. Sidewalks will be evaluated and replaced as necessary.

**Justification:** The road had a PASER rating of 5. Normal maintenance is no longer adequate. Seventeen homes will be directly impacted by this improvement.

**Figure 1 - Sidewalk Program**



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# Utilities: Sanitary Sewer, Storm Water, and Water Distribution (U)

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## OVERVIEW

**Sanitary Sewer:** The sewage collection and treatment system consist of a 1.5 Million Gallons per Day (MGD) activated sludge treatment plant, 32 miles of sewer line including interceptors, and four lift stations. The City, like most other communities in Michigan, operates under a National Pollutant Discharge Elimination System permit (NPDES) administered by the MDEQ. This permit establishes the allowable effluent levels to be discharged to the receiving waters, namely Sycamore Creek.

A study was completed by Wolverine Engineers to determine the best method of providing sewer service to areas on the undeveloped east side of Mason. The feasibility study has identified six districts, known as the Rayner Creek Utility Districts, which are served via a common lift station and force main. During 2005, as part of the Temple Street extension from M-36 to Kipp Road, the sewer and pump station were constructed to serve District 3 as this area develops.

**Storm Water System:** The State of Michigan Department of Environmental Quality regulates Municipal Separate Storm Sewer Systems (MS4). The goal of the MS4 program is to reduce the discharge of pollutants to surface waters of the state. The current gravity system consists of concrete drainage pipes ranging from 6 inches to 42 inches in diameter, along with corrugated metal pipes up to 72 inches in diameter. These pipes are connected to the street network through a series of catch basins. Eventual outflow is to one of the three creeks flowing through town - Sycamore, Willow or Rayner - since the system is separated from the sanitary sewer system.

Maintenance of the storm water system is divided between the City and the Ingham County Drain Commission. The county has designated drains that flow through the City such as the Willow and Rayner Creek Drains.

**Water:** The City's water system consists of seven wells, two 500,000-gallon elevated storage towers, 600 fire hydrants and one one-million-gallon ground storage tank and approximately 45 miles of water main in various sizes (4" to 16"). The City has a centralized treatment facility; the water is pumped through raw water mains to the treatment plant to remove Radium 226 and 228 as well as iron.

The development of the proposed sanitary sewer and water projects is funded through the Water and Sewer Fund and is based upon system deficiencies and needed improvement to the treatment plant.

Utilities in streets are planned for the first three years of the CIP. The plan is to extend the Utility estimates out to six years next year.

## Proposed Project Year: 2018-19

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### Project Number: 2018-U1      Utilities for Properties on Kipp Road (Klavon's, S & Sue, Vacant Lot)

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**Description:** The extension of water, sanitary sewer and storm sewer to serve the redevelopment of property located at the northeast quadrant of US-127 and Kipp Road.

**Justification:** The utility extension is necessary to serve the redevelopment of property located within the City that is not currently served by public utilities. Funding for the utility extension is through a tax increment financing plan supported by the County Brownfield Authority.

---

### Project Number: 2017-U3.2      Design and Construction – Waste Water Treatment Plant Upgrades

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**Description:** This is the design and construction of the upgrades to the waste water plant that have been recommended from the study that was done in the 2017-2018 budget. The study looked at the plant and evaluated the processes and condition of the equipment and made recommendations to make improvements to the plant that will put the City of Mason waste water treatment plant back in good condition for another 20 years. This project is to start in 2018-2019 budget and is estimated to be completed in the 2019-2020 budget.

**Justification:** The study of the waste water Plant will show equipment and processes that need improvement as they were getting to the end of their life cycle. The waste water plant is struggling to meet permit requirements with high flows in the spring and in the summer the equipment cannot produce enough dissolved oxygen to meet the needs of the process. These upgrades will address the problems at hand and design for the next 20 year's growth.

---

### Project Number: 2017-U3.3      Design of the New Department of Public Works Facility

---

**Description:** Contract an engineering firm to plan and design a new DPW facility.

**Justification:** The existing facility is estimated to be nearly 90 years old, built in the 1930s and renovated in the 1970s. A new DPW facility will need to be constructed whether or not the waste water treatment plant expansion is found to be moved to the DPW site. If the DPW site is not needed for the expansion the site is in poor shape and will need to be reconstructed. This design work will be to put a plan in place for future needs and expansion.

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### Project Number: 2017-U6      Abandon Monitoring Wells by Airport

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**Description:** Abandon two monitoring wells by the Airport that were put in place in consideration of adding a well near the Airport.

**Justification:** This project was pushed back a year because of other unexpected expenses and a lack of urgency by the airport since they are no longer selling the property. Also, the Airport has determined it is

not selling the property this year which allows the City more time to get this project completed.

---

**Project Number: 2017-U9**      Northbrook Street – South Street to Carom Circle

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**Description:** Relocate storm sewer structures to allow for narrowing of the street.

**Justification:** Narrowing of the street will require the relocation of some storm structures and leads to allow for a narrower road. This project is connected to project number 2017-S8

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**Project Number: 2017-U10**      S. Jefferson Street – Oak Street to Kipp Road

---

**Description:** Replace valves on the current water main. Replace storm sewer that is in need of repair.

**Justification:** The valves on this water main do not work to stop water when working on repairs on other streets. The storm and sanitary sewers were evaluated this year and the sanitary sewer was found to be okay. The storm sewer will need to be replaced as it is in poor shape on the North end of the project. This project is connected to project number 2017-S9

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**Project Number: 2017-U12**      300,000-Gallon Storage Tank Top Sealing

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**Description:** This 300,000-gallon sludge storage tank is the older of the two storage tanks at the WWTP. This tank is used to hold digested sludge until it can be applied to the land as bio-solids.

**Justification:** The 300,000-gallon tank is receiving inflow from snow melt and rainwater through the cracks in the top of the tank. This inflow reduces the sludge storage capacity of the tank. This storage capacity, along with the other storage tank, is needed to store the digested sludge that accumulates throughout the year. These storage tanks will not be affected by the construction upgrades of the waste water treatment plant.

---

**Project Number: 2017-U13**      Well No. 7 Rebuild

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**Description:** Kipp Road Well No. 7 Rebuild

**Justification:** History of this well indicates the need to rebuild this well every five-to-six years and this well was last serviced in 2012. Well maintenance and regular replacement are critical steps to maintaining the water supply for our residents.

---

**Project Number: 2017-U15**      Replace Two Fire Hydrants Behind Mason Plaza

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**Description:** Replace two fire hydrants behind Mason Plaza

**Justification:** These hydrants break easily and parts are difficult to source. It has also been determined by

Fire Chief Minshall that the hydrants are too close to the building for safety during firefighting operations.

---

**Project Number: 2017-U16**      Cathodic Protection for Ground Storage Tank

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**Description:** Cathodic protection for ground storage tank. Cathodic protection is when measures are taken to prevent or minimize electrolytic corrosion of metallic equipment and structures.

**Justification:** The Finish Water Ground Storage Tank at the Water Treatment Plant was constructed in 2008. This tank is constructed of painted steel and is subject to stray voltage cathodic corrosion. A Cathodic Corrosion Inhibiting System was installed on this tank when new and is currently not operable. The manufacturer of this system is no longer in business and used a proprietor specific system. Other vendors have been engaged and do not have the ability to fix the current system. In FY 2015-16 a cathodic study was performed and the recommendation was to install an industry-standard system.

---

**Project Number: 2017-U17**      High Service Pump No. 1 Rebuild

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**Description:** Water Treatment Plant High Service Pump No. 1 Rebuild

**Justification:** The Water Treatment Plant has three high service pumps; two pumps were rebuilt in FY 2016-17. Chlorine has attacked the zinc impregnated in the brass impellers, causing "Zincification." The zinc replaced lead in the manufacture of the impellers mandated by the EPA Lead in Drinking Water Elimination Program in the early 2000s. This issue was unforeseen when these pumps were originally specified for the Water Treatment Plant completed in 2008. The rapid drop in performance necessitated the emergency rebuild of pumps #2 and #3. Stainless steel impellers were specified in the rebuild of pumps #2 and #3. Pump #1 is demonstrating the same indications of "Zincification."

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**Project Number: 2017-U18**      Replace Chlorine Analyzer for the High Service Pump Room

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**Description:** Replacement of chlorine analyzer for finish water in 2018-2019

**Justification:** The Water Treatment Plant was originally designed with two Chlorine residual level analyzers. These analyzers are expensive to operate and required frequent maintenance. The post filter analyzer has been updated with another brand/process machine with more capabilities and less expense and maintenance. It is beneficial to replace this analyzer to save time in frequent maintenance and expense of monthly reagent replacement. Standardization of brand/process machines will save expense on service supplies and spare parts.

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**Project Number: 2018-U35**      BS&A Software Work Order Application

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**Description:** BS&A work order application is designed for centralized tracking of both non-integrated as well as integrated (i.e., utility billing, community development and requests for service) work orders.

**Justification:** This program will help the Public Works Department track and manage resources to help better service our customers. Our goal is to have our costumers be able to be heard and have a quick



response from our staff with the ability to track the costs of work being done for asset management.

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**Project Number: 2018-U36**      Sewer Push Camera Replacement

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**Description:** Push camera used to investigate inflow problems in small leads

**Justification:** Our current one has broken this year and needs to be replaced. This is a vital tool for doing investigations for sewer inflow investigation.

---

**Project Number: 2018-U37**      Log Jam Removal in the Sycamore Creek

---

**Description:** The Sycamore Creek currently has numerous log jams in the creek downstream of the Waste Water plant that need to be removed.

**Justification:** During high flow events in the creek, these log jams artificially raise the creek level interrupting the out flow from the Waste Water Plant into the creek. This causes major operational issues in the treatment process of the waste water plant.

**Proposed Project Year: 2019-20**

---

**Project Number: 2017-U11**      Turbine Aeration Blower at POTW (Publicly Owned Treatment Work)

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**Description:** Variable speed turbine blower used to supply oxygen to the activated sludge process. This project was pushed back to year 2019-2020 because the study has not been completed yet.

**Justification:** The Hoffman Blowers currently in use supply oxygen to the activated sludge process. These blowers have become worn and less productive. During hot weather events these blowers do not supply enough oxygen to aeration tanks to maintain the desired dissolved oxygen levels needed to provide adequate ammonia removal. Ammonia removal is a critical process in treating waste water and must be achieved to maintain compliance with the NPDES permit. It has been estimated that the electrical cost savings on this variable speed turbine blower could show a payback to the City within five years.

---

**Project Number: 2017-U14**      Department of Public Works Facility Design and Construction

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**Description:** A new facility will need to be built to allow for the Waste Water Plant to be expanded and because the existing facility is reaching the end of its useful life. This new facility will house all public works activities and equipment for the future needs of the City of Mason.

**Justification:** When the City upgrades the Waste Water Treatment Plant the DPW facilities may need to be relocated. This anticipated relocation provides the opportunity to consolidate all operations to a single point including streets, water, sewer, parks and cemeteries. The conceptual DPW facility will put all facets of the City Physical Plant operations under one roof. This will aid in streamlining the operations, supervision and coordination of the DPW.

The greatest amount of space will likely be dedicated to housing all vehicles and equipment indoors. This will reduce stresses particularly in the winter months and could result in an increase in vehicle longevity and/or salvage values. In addition, greater controls of consumable items, such as vehicle parts and water fittings, will be gained through the elimination of multiple storage areas. As was the case with the recently constructed Water Treatment Plant, an understanding of future needs and expansion will be given to the overall dimensions of the proposed DPW building. The building will also include storage currently housed at Fire Station 2, so that property can be sold and provide for additional document storage needed for the City Hall facility.

---

**Project Number: 2017-U19**      Kerns Road – Cedar Street to Howell Road

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**Description:** New storm sewer and extend sanitary sewer to Cedar Street.

**Justification:** There are currently no storm sewer pipes on this street and the sanitary sewer only goes 3/4 of the way down the street. While we are putting in curb and gutter, it is the ideal time to address these issues. This project is connected to project number 2017-S11

---

**Project Number: 2017-U20**      W. Elm Street - Henderson Street to Jefferson Street

---

**Description:** Replace 4" water main under the bridge to Park Street then up to Oak Street with new 8" main and valves.

**Justification:** The water main that went under this bridge was washed out in the 1970s and there is very poor fire flow. This will also improve water quality as the current main is 4". This project is connected to project number 2017-S12.

---

**Project Number: 2017-U21**      Park Street – Elm Street to Oak Street

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**Description:** New 8" water main from the bottom of the hill at Elm and Oak. This is part of the W. Elm to Henderson Project.

**Justification:** This is part of the water main loop from W. Elm to Oak and will eliminate a dead end. This will increase fire flow to the west side of town. This project is connected to project number 2017-S13.

---

**Project Number: 2017-U22**      Stop Gates for Aeration Discharge Piping

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**Description:** Stop gates located at the entrance and at the outfall of the "bottle neck" piping that was installed in 2016 between the aeration tanks and the secondary clarifiers.

**Justification:** These gates would prevent this pipe from collecting unwanted flow during normal operations conditions and will reduce the amount of settleable solids forming in the pipe. These solids could build up in the pipe creating a restriction or a stoppage of flow. These gates would be opened when

needed during high flow conditions.

---

**Project Number: 2017-U23**      Well No. 6 Rebuild and New Variable Frequency Drive (VFD)

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**Description:** Franklin Farm Well No. 6 rebuild and new VFD

**Justification:** History of this well indicates the need to rebuild this well every five-to-six years and this well was last serviced in 2015. Well maintenance and replacement are critical to maintaining the water supply for our residents. Original VFD installed in 2008 on all other wells in 2008 have failed. Life cycle for VFDs of this size are 10 years. We have changed the VFD brand for better service.

---

**Project Number: 2017-U24**      Study of Sewer Flow on Mason Street

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**Description:** Study of sewer flow on Mason Street.

**Justification:** This sewer is running over 80% full most of the time and the City needs to plan for the future of this line. The City will have to either upsize this line or put a second line in to relieve some flow off this line. This line takes the flow from Cedar Street and could be a limiting factor for future growth on Cedar Street.

---

**Project Number: 2017-U25**      Gutters for Water Treatment Plant

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**Description:** Rain gutters for entire Water Treatment Plant.

**Justification:** The Water Treatment Plant was constructed in 2008. In an effort to control construction costs, the rain gutters on the plant were reduced to installation over the doors. Water management for the administration portion of the Water Treatment Plant is essential to keep the foundation and sidewalk of the building stable. The process end of the Water Treatment Plant is in need of rainwater management to keep the asphalt around the plant from excessive wear and tear.

---

**Project Number: 2017-U26**      New Well at Franklin Farms

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**Description:** New well at Franklin Farms site. The proposal is to drill a small-bore deep well at the Franklin site and case off the bore past the zone of collapse. A submersible pump would be installed to pull water from the lower formation. If approved, the original vertical turbine pump of Well No. 6 would be reengineered and a more economical submersible pump would be installed during the well rebuild scheduled for this year. This would be similar to the setup of Wells No. 9 and No. 10. This will save considerable funds as opposed to building a new well site. The configuration will likely yield more water from this site than current production.

**Justification:** The well bore for the Franklin well is compromised. There is screen in the bottom of this well to stabilize the bore from collapse. The bore is also not aligned with the screen so total well cleaning is not possible. The production has fallen off from the original level to approximately 30%. An additional

well at the Franklin Well No. 6 site is being requested.

The likelihood of the City of Mason utilizing Well No. 3 at the north tower site is unlikely. It will be too expensive to install a water main to pump to the Water Plant or install treatment on site. To keep this well on standby status is also expensive. Monthly and quarterly testing is a draw on resources that will bear no fruit.

### **Proposed Project Year: 2020-21**

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#### **Project Number: 2018-U32      South Water Tower Interior Maintenance and Repair**

---

**Description:** Clean out inside the bowl and sand blast and repaint the wet interior of the south water tower.

**Justification:** The South water tower was inspected in 2017 and was found to have some paint flaking and bare metal showing on the interior of the bowl where the water is stored. It was recommended to have the interior wet section of the bowl sand blasted and repainted to extend the life of the tower. There was also ice damage to the ladder inside the bowl that will need to be fixed.

---

#### **Project Number: 2017-U8      Replace Programmable Logic Controllers (PLC) on 3 Wells**

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**Description:** Supervisory Control and Data Acquisition (SCADA) Control Work Upgrades on PLC, power supply and any control panel issues from the original installation. This project is to do three wells at a time to help reduce costs on this project.

**Justification:** Control Wave Programmable Logic Computer boards are the originals installed in 2002. These PLCs are not available or repairable. The low voltage power supplies for the control panels are experiencing stability issues. There are control issues at all three sites. The upgrades to sites will allow staff to be more effective and efficient with system operations. This is the first phase of the three-year replacement cycle for the three controllers plan.

---

#### **Project Number: 2017-U27      Cherry Street – Rogers Street to End**

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**Description:** Sewer main replacement and manhole replacement.

**Justification:** The sanitary sewer was constructed in 1940 and needs to be replaced. It has clay tile and inflow problems. The sanitary manholes are brick and in poor shape, requiring replacement.

---

#### **Project Number: 2017-U28      S. Barnes Street – Ash Street to Kipp Road**

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**Description:** New water main and valves to replace existing 4" and dual mains.

**Justification:** This is an old water main from the early 1900s from Ash Street to Bond. Upsizing to 8" water

mains and eliminating places where dual mains exist will help with firefighting ability and water quality. It will also allow staff to isolate for water main breaks.

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**Project Number: 2017-U29**      Generators for ISD\* and Curtis Street Lift Stations

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**Description:** Install standby generators for ISD and Curtis Street lift stations.

**Justification:** Staff gets called out to these locations multiple times a year for power-related problems. This requires them to have a bypass pump or set up portable generators for as long as three days at a time for power outages.

*\*ISD = Ingham Intermediate School District. When this station was originally installed, ISD was the only user. While the users have changed, the name of the lift station has remained.*

---

**Project Number: 2018-U33**      Well No. 4 Rebuild

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**Description:** Hayes Park Well No. 4 Rebuild

**Justification:** History of this well indicates the need to rebuild this well every 5-6 years and this well was last serviced in 2015. Pump efficiency testing will be another tool to use for indicating the need to rebuild this well at the time. Well maintenance and replacement are critical to maintaining the water supply for our residents.

**Proposed Project Year: 2021-22**

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**Project Number: 2018-U34**      Well No. 5 Rebuild

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**Description:** Ash Street Well No. 5 Rebuild

**Justification:** History of this well indicates the need to rebuild this well every five-to-six years and this well was last serviced in 2016. Well maintenance and replacement are critical to maintaining the water supply for our residents.

**Proposed Project Year: 2022-23**

---

**Project Number: 2018-U37**      Well No. 10 Rebuild

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**Description:** Temple Street Well No. 10 Rebuild

**Justification:** History of this well indicates the need to rebuild this well every five-to-six years and this well was last serviced in 2016. Well maintenance and replacement are critical to maintaining the water supply for our residents.

## Proposed Project Year: 2023-24

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### Project Number: 2017-U8      Replace Programmable Logic Controllers (PLC) on Three (3) Wells

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**Description:** Supervisory Control and Data Acquisition (SCADA) Control Work- Upgrades on PLC, power supply and any control panel issues from the original installation. Wells are improved on a three-year cycle, three wells at a time, which helps to reduce project costs. This is the second phase of the three-year replacement plan for three controllers.

**Justification:** Control Wave Programmable Logic Computer boards are the originals installed in 2002. These PLCs are not available or repairable. The low voltage power supplies for the control panels are experiencing stability issues. There are control issues at all three sites. The upgrades to sites will allow staff to be more effective and efficient with system operations.

---

### Project Number: 2018-U39      Well No. 9 Rebuild

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**Description:** Temple Street Well No. 9 Rebuild.

**Justification:** History of this well indicates the need to rebuild this well every five-to-six years and this well was last serviced in 2016. Well maintenance and replacement are critical to maintaining the water supply for our residents.

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### Project Number: 2018-U40      North Water Tower Exterior/Interior Evaluation and Repaint

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**Description:** This is a place holder and estimate for a repaint for the North water tower.

**Justification:** During the last inspection of the North water tower it was suggested that the City plan for a tower repaint in 20 years. This is only a recommendation from the inspector; the tower will be inspected every five years and this time line may be extended.

# Parks, Cemetery and Forestry (P)

## OVERVIEW

The City of Mason operates Mason's only cemetery, Maple Grove Cemetery, located in the central portion of the City within the northern sector. Established in 1844, it comprises approximately 38 acres with additional acreage available for expansion. Sycamore Creek flows along the eastern edge of the property which is important to the development of the Hayhoe Riverwalk Trail throughout the City. Approximately 50 burials are performed on average per year. The older portion of the cemetery has been listed on the National Register of Historic Places.

The City of Mason owns and operates eight municipal parks within the City limits totaling 92.74 acres and includes a wide variety of seasonal recreation activities.

**Table 4- City of Mason Inventory of City Parks**

Property	Park Type*	Service Area**	Acres	Description/Facilities
Laylin Park	NP	CQ	7.2	Two stocked fishing ponds w/fishing docks, catch/release, picnic shelter, restrooms, picnic tables, grills, playground equipment
Lee Austin Park	NP	N	0.9	Sycamore Creek/Hayhoe Riverwalk Trail, picnic tables, grill, workout equipment
Hayes Park	CP	VS	9.22	Lighted softball field, basketball court, two tennis courts, sledding hill, playground equipment, shelter, restrooms, picnic tables, grills
Bond Park	NP/SU	N	5.3	Lighted softball field, skateboard park, roller hockey rink, drinking fountain, restrooms, Rayner Creek
Griffin Park	NP	N	0.65	Historical markings, landscape plantings, picnic table, gazebo
Bicentennial Park	SU	VS	2.27	Pink school house, serves as one of Mason Historical Society museums
Maple Grove Park	NRA	CQ	5.2	Undeveloped property, Sycamore Creek, used for nature walking
Rayner Park	CP	EC	62	Playground, one large soccer playing field, one small soccer practice field, basketball court, one baseball field, picnic shelter, picnic tables, grills, nature area
Hayhoe Riverwalk Trail	PT	VS	2.5 miles	Nature walk/trail heads

\*Park types: NP (Neighborhood Park), CP (Community Park), NRA (Natural Resource Area), SU (Special Land Use), PP (Private Park), PT (Park Trail)

\*\*Service area: N (Neighborhood), CQ (City Quadrant), VS (Village/Surrounding Townships), EC (Entire County)

## Proposed Project Year: 2018-2019

### Project Number: 2017-P8

### Laylin Park Improvements

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**Description:** Rebuild two bridges over open drain. Enhance existing walking path with a new walking path entrance off Columbia St. Upgrade pavilion with rest room improvements, new roof and electrical. Add permanent handicap accessible picnic tables and grills to north side of park. New fishing docks for both ponds. Stock ponds with fish.

**Justification:** All the above listed improvements were presented to and discussed at a neighborhood forum in December 2017. The attendees voted on improvements offered during the forum.

### Project Number: 2018-P-1

### Howell Road - Hayhoe Riverwalk Trailhead (Dart Trailhead)

---

**Description:** Extension of Hayhoe Riverwalk Trail along the south side of Howell Road from the current terminus north of Riverwalk Subdivision to Kerns Road, including the construction of a trailhead parking area on the City of Mason property.

**Justification:** The River Walk extension and trailhead provide needed parking and safety improvements for users of the River Walk and begin the link to the Cedar Street corridor.

### Project Number: 2018 P-2

### Howell Road - Hayhoe Riverwalk Trail Extension

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**Description:** Extension of Hayhoe Riverwalk Trail along the south side of Howell Road from the current terminus north of Riverwalk Subdivision to Kerns Road, including the construction of a trailhead parking area on the City of Mason property. This project is to complete the new construction of the next phase of the Hayhoe Riverwalk Trail that will bring it to the northeastern corner of the City of Mason near Dart Headquarters, in preparation for a connection with the trail from Delhi Township's Sycamore Trail. This project has been identified as a regional priority corridor of the Ingham County Trails and Parks Comprehensive Report. The trail extension and trailhead will be owned by the City of Mason, and the Ingham County Road Commission owns the right of way where the trail will be placed. They have approved their support of the trail location on that right of way. The City of Mason owns the land where the trailhead will be located. This extension will address safety concerns along Howell where no sidewalk exists and eliminate parking on the side of the road.

**Justification:** The Hayhoe trail is a shared-use trail that passes through Lee Austin Park and Maple Grove Cemetery, close to downtown Mason wandering predominantly by the Creek. One of the challenges with the trail is the lack of a safe entrance from the north. Visitors park on the edge of Howell Road (55 mph) and our police department has indicated that there are major traffic and safety concerns with this practice. This trailhead and extension will solve that issue, while completing a critical piece of the puzzle that will ultimately connect the Hayhoe Riverwalk Trail through Delhi and finally to the City of Lansing. The City has received funding for majority of this project through grants and private donations.



**Project Number: 2018-P3****Planning: Parks/Recreation Plan – 5-year update (minor)**

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**Description:** The City of Mason Parks/Recreation Plan outlines the plan for operations, maintenance, capital improvements and programming of the City's parks and trails. Public engagement is a critical component of the planning process and community input will be obtained to inform decisions about park and trail improvements. A minor update is recommended to maintain grant eligibility with a major update in the next five-year cycle to coincide with the Master Plan update and the 2020 Census.

**Justification:** The Parks/Recreation plan is required by statute in order to be eligible for grants, in particular, the Michigan Department of Natural Resources (DNR). The plan provides detailed descriptions of our parks spending and ensure that the community members' vision for and usage of the parks is considered in the decision-making process for improvements. The plan also serves as documentation of our compliance with State and Federal requirements such as the Americans with Disabilities Act.

**Project Number: 2018-P5****City Tree Evaluation**

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**Description:** This is an evaluation of all City-owned trees. This will provide City staff with the health condition of each tree size, type, and geographical location. This information could be brought into a GIS map layer of the City.

**Justification:** Maintaining the tree canopy is important to a city. A tree canopy will moderate storm water runoff to ease pressure on the storm water system during a storm event to lessen flooding. This is also a great process to help City staff plan for tree removals and replacements and assess the condition of our City trees.

**Proposed Project Year: 2019-20****Project Number: 2017-P10****Bond Park Improvements**

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**Description:** TBD based upon Recreation Plan recommendations.

**Justification:** Evaluate usage and input from the neighborhood to determine improvements.

**Project Number: 2018 P-3****Kerns Road - Hayhoe Riverwalk Trail Extension**

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**Description:** Extension of Hayhoe Riverwalk Trail along the east side of Kerns Road from Howell to Cedar Street, due to land constraints on the west side. This will connect to the Howell Road Extension CIP 2018-P1 anticipated to be completed in the Summer of 2018. This project would be done in coordination with the complete reconstruction of Kern Road. During the ongoing analysis of the Howell Road extension, it became clear that many pedestrians, especially from Angel House, are currently walking on Kerns Road to Howell to get to the trail. Based on that, the City believes a better solution would be a wider 10' extension of the trail instead of the planned sidewalk.

**Justification:** No sidewalks currently exist along this road and it is one of the few City roads remaining that does not have pedestrian access. This extension will address safety concerns along Kerns Road where no

sidewalk exists and encourage use of the trail to get to business establishments. The City is currently pursuing grant funding to help offset the costs of this extension.

### **Proposed Project Year: 2020-21**

**Project Number: 2017-P11**      Hayes Park Improvements

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**Description:** TBD based upon Recreation Plan recommendations

**Justification:** Evaluate usage and input from the neighborhood to determine improvements.

### **Proposed Project Year: 2021-22**

**Project Number: 2017-P14**      Griffin Park Improvements

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**Description:** TBD based upon Recreation Plan recommendations.

**Justification:** Evaluate usage and input from the neighborhood to determine improvements.

**Project Number: 2017-P4**      Lee Austin Park improvements

---

**Description:** TBD based upon Recreation Plan recommendations.

**Justification:** Evaluate usage and input from the neighborhood to determine improvements.

### **Proposed Project Year: 2022-23**

**Project Number: 2017-P13**      Rayner Park Pond Dredging

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**Description:** TBD based upon Recreation Plan recommendations.

**Justification:** Evaluate usage and input from the neighborhood to determine improvements.

### **Proposed Project Year: 2023-24**

**Project Number: 2017-P12**      Rayner Park Improvements

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**Description:** TBD based upon Recreation Plan recommendations.

**Justification:** Evaluate usage and input from the neighborhood to determine improvements.

**Project Number: 2018-P3****Planning: Parks/Recreation Plan – 5-Year Update (major)**

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**Description:** The City of Mason Parks/Recreation plan outlines the plan for operations, maintenance, capital improvements and programming of the City's parks and trails. Public engagement is a critical component of the planning process and community input will be obtained to inform decisions about park and trail improvements. A major update is recommended to account for changes related to the Master Plan update and the 2020 Census data.

**Justification:** The Parks/Recreation plan is required by statute in order to be eligible for grants, in particular, the Michigan Department of Natural Resources (DNR). The plan provides detailed descriptions of our parks spending and ensure that the community members' vision for and usage of the parks is considered in the decision-making process for improvements. The plan also serves as documentation of our compliance with State and Federal requirements such as the Americans with Disabilities Act.

**Project Number: 2018-P5,6,7,8 Hayhoe Trail Internal Loops – East, North, South, West**

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**Description:** TBD based upon Recreation Plan recommendations.

**Justification:** Dependent upon final plans.

**Project Number: 2018-P15****Second Drive - Cemetery**

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**Description:** Put second entrance into the Cemetery on East Street.

**Justification:** This is a second entrance into the Cemetery that will help with traffic and give our residents a second entrance.

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# Motor Vehicle Pool (MVP)

The City of Mason maintains a motor vehicle pool (MVP) consisting of over 59 trucks, cars, and pieces of motorized equipment. Each one has a lifespan determined by a combination of information from the manufacturers, condition based upon maintenance records including number of miles/hours between repairs, and the trade-in value compared to estimated maintenance costs. Below is a summary of the MVP and replacement schedule for each MVP type. The detailed replacement schedule showing the fiscal year of replacement can be found in the CIP Budget on page 57.

**Table 3. City of Mason MVP Summary and Replacment Schedule**

Department	Type	Units	Lifespan	# of Years Between Replacement	# of Replacements Per Rotation
Police	Patrol Cars	5	5	1	1
Police	Detective Car	1	10	10	1
Fire	Command Truck	2	10	5	1
Fire	Brush Truck	1	5	5	1 received from DPW/WTP ¾ Ton 4x4 Truck
Fire	3/4 Ton 4x4 Front V-plow Pick-up Truck	1	10	5	1 from DPW
DPW	Mowers	5	6	1	1
DPW	5-yard Dump/Plow Truck	4	20	5	1
DPW	Salt Spreaders	2	20	20	2
DPW	3/4 Ton 4x4 Front V-plow Pick-up Truck	2	10	5	1 purchased, old truck goes to Fire Dept. (above)
DPW-WTP	3/4 Ton 4x4 Front V-plow Pick-up Truck	1	10	10	1
DPW-WTP	Mower	1	6	1	
DPW	½ Ton 2x4 Pickup trucks	9	10	1	1
DPW	SUV-Personnel	1	8	8	1
DPW	1 1/4 ton Front Plow Dump Truck	1	15	15	1
DPW	Man lift truck	1	25	25	1
DPW	Street Sweeper	1	25	25	1
DPW	Vactor/Sewer Rodding Truck	1	25	25	1
DPW	Front End Material Loader	1	3	3	1

DPW	Back Hoe	1	25	25	1
DPW	4x4 Universal Terrain Vehicle (UTV) - Tool Cat	1	20	20	1
DPW	6x4 UTV (currently JD Gator, to be replaced with Tool Cat)	1	20	20	1
DPW	20-yard Leaf Loader	2	25	25	2
DPW	Utility Tractor	1	25	25	1
DPW	Utility Tractor with Front Loader and Belly Mower	1	25	25	1
DPW	Utility Tractors with Brush Hog	2	25	25	2
DPW	High Cubic Feet per Minute (CFM) Air Compressor with Jack Hammer	1	25	25	1
DPW	Trailers in various configurations	6	20	20	6
DPW	75 kilowatt (kw) Stand By Portable Generators	2	40	40	2
DPW	Other equipment		20	as needed	as needed
	<b>Total Vehicles/Equipment</b>	<b>59</b>	<b>17</b>		
	plus Other Equipment		Avg. Lifespan		

# Building, Property and Equipment (B)

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## OVERVIEW

**Administrative Services and City Hall:** The current City Hall was built in 2010 and houses the following Departments: Administration, Assessing, Finance, Police, and Zoning and Development.

The Council Chambers and Community Room is located on the main floor of City Hall. This is a multi-purpose room that can be divided into two meeting rooms by tract walls, facilitating more than one event at a time. It is primarily used for City Council meetings, various other board and commission meetings, election precincts for all elections, as well as the Mason Area Seniors Club. This room is used by a variety of groups and residents for various functions.

**Fire Services:** The Mason Fire Department operates out of two stations. Station 1 (12,403 square feet) was built in 1998 and is located at 221 West Ash Street adjacent to City Hall. The building houses the administrative offices as well as most of the firefighting equipment. Station 2 is located at 615 Curtis Street and was built in 1976. The 1,800 square-foot building currently houses Ingham County Hazardous Materials equipment, reserve firefighting equipment and a DPW pump. The City plans to relocate the items in Station 2 to the new DPW facility and sell the property to reduce maintenance costs.

Department staffing consists of a full-time Chief, a paid on-call Assistant Chief, Captain, two Lieutenants and 34 Engineer, Firefighter and/or Trainees for a total of 39 members. The fire service area includes the City of Mason, Aurelius Township and Vevay Township, and a portion of Alaiedon Township for a total of 85 square miles serving a population of approximately 16,000 residents.

**Police Services:** The Mason Police Department, a full-time, full-service law enforcement agency, is conveniently located on the first floor of the Mason City Hall at 201 West Ash Street. The Department staff is comprised of the Chief of Police, two patrol sergeants, one detective corporal, nine police patrol officers, one code enforcement officer, and one clerical support members responsible for all staff support services.

**Library:** The Mason Library at 145 West Ash is owned by the City of Mason and operated by the Capital Area District Library as part of its 13-branch library system serving 13 communities and 23 municipalities. The building was commissioned by Mr. Albert Hall and constructed in 1938 as a memorial to his wife, Ada. Through the years it has undergone two expansions/renovations bringing the total area used to 6,424 square feet on three floors. A major renovation of the Mason Library was completed in 2012, which included upgraded equipment, interior remodeling, updated furnishings, roof repairs, partial window replacement, storm sewer upgrade and landscaping.

## Proposed Project Year: 2018-19

### Project Number: 2017-B3.1      Police: Portable Radios

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**Description:** Five portable radios

**Justification:** The Department needs to upgrade its portable radios. Ingham County has begun the process of replacing the county-wide system but has no timeline for completion. The Department needs 16 units over three years, modifying its purchases as the prospect of the County's initiative comes to fruition. The Department intends to purchase five units this year, of a model that can be converted to other systems to replace two patrol radios and supply three reserve officers with an assigned unit.

The Department's portable radios have become outdated and unsupportable by the single proprietary vendor who now offers a smaller updated version compatible to the current county-wide radio system and can be programmed to other system networks. Costs and frequency of repairs are increasing and as on-shelf parts become less available, the chance of units going off line increases. Each radio is programmed to an individual officer for tracking and safety purposes so each officer is assigned a unit.

### Project Number: 2017-B4      Building: Landscaping and Outdoor Lighting Conversion to LED

---

**Description:** Remove and replace existing landscaping around City Hall that is overgrown and that requires maintenance and weeding. Recommending more visually appealing landscaping designed around the windows and design of the building with a focus on less maintenance.

Convert 29 exterior light fixtures to LED, including exterior building sconces (12), canopy can lights (10), and parking pole lights (7).

**Justification:** Much of the existing landscaping is overgrown and does not compliment the building. Many windows are blocked due to the placement and variety of the shrubs and trees. It is conducive to weeds and regularly contains poison ivy. The grasses have grown together and require frequent trimming as they obstruct the sidewalks and are unsightly. This project would improve the look of City Hall while reducing the costs of maintenance.

LED fixtures require less staff time for bulb replacement and use a fraction of the energy. This will make staff more efficient and save on utility costs.

### Project Number: 2017-B6      Fire: Fire Engine 809/Tower 808

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**Description:** Engine 809 is a 1990 Grumman built on an HME chassis. It currently responds as our first-out pumper in the townships and for mutual aid and second-out in the City. As it is a pre-1991 apparatus, the National Fire Protection Agency recommends that it be put in reserve or replaced. Tower 808 is a 2001 Pierce 105' aerial platform truck and makes few runs as a ladder. Staff recommends selling T808 and consolidating Engine 809's replacement into one vehicle being a 75' Quint ladder truck.

**Justification:** NFPA 1911 Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire



Apparatus recommends that fire apparatus manufactured prior to 1991 but less than 25 years old be placed in reserve status and any pre-1991 apparatus replaced. Tower 808 is a great piece of equipment; however, it is often too large to maneuver into the majority of our fire scenes making it less effective. It is not used as a ladder and ends up staged at the road. A smaller piece of equipment would be dispatched first and used more frequently.

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**Project Number: 2018-B4**      IT: BS&A Timesheet Program

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**Description:**    BSA Timesheet Software Module

**Justification:**    Currently we have different timekeeping in all departments making it inconsistent and very time-consuming. The Timesheet Module will integrate with the Human Resource and Payroll systems. The Timesheet program would be loaded on computers in all the departments giving employees access to enter their own time and submit to the supervisors for approval. The Timesheet modular will make the payroll process more efficient, consistent and more accurate.

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**Project Number: 2018-B4**      IT: BS&A Cemetery Upgrade and BS&A Human Resource Upgrade

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**Description:**    BS&A Cemetery Software Module and BS&A Human Resource Module

**Justification:**    Currently our cemetery system is completely handwritten and a time-intensive process. By implementing an electronic cemetery record system, it will allow for quick access to cemetery records for all employees involved in the process of cemetery lot purchases and grave openings/closings, as well as increase employee productivity by decreasing the processing time of cemetery records.

Currently we have no Human Resource software module. With the implementation of the Clerk/Human Resource position it has become apparent that this position needs access to certain Human Resource information as well as a place to track important personnel-related information. In addition, the module is set up to provide job posting and application tracking which would provide a smoother hiring process.

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**Project Number: 2018-B6**      IT: AV Room Technology Patch

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**Description:**    Convert the video control system to a manual control system. Revise the lectern presentation system so presentations can easily be incorporated into the final program. Revise the control system responsible for control of the in-room projection system. Revise the video camera monitoring system. Simplify the live-stream signal flow and associated physical connections.

**Justification:** The AV system is outdated and complicated, resulting in difficulties in the broadcast of City Council and Planning Commission meetings.

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**Project Number: 2018-B7**      Planning: Cedar/127 Corridor (Transportation and Land Use)

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**Description:**    Sub-area corridor study along the Cedar/127 Corridor to evaluate transportation infrastructure improvements that support and maximize land-use development opportunities in

accordance with the community's vision and master plan.

**Justification:** The City of Mason is growing as a place for new and renewed investment. Available land for development is becoming scarcer. The Cedar/127 Corridor is an area that is served by existing infrastructure, contains undeveloped and under-developed land and is easily accessible to/from highway U.S. 127. This area was identified in the community's Master Plan as an area to incentivize future growth. A professional corridor study will position Mason to maximize capital funding, grants, zoning, and partnerships with Michigan Department of Transportation and Ingham County to ensure changes in this corridor result in a well-planned area that supports quality development for current and future residents and businesses.

---

**Project Number: 2018-B24**      Building: Rental Space Furniture Replacement

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**Description:** Replace tables, chairs and other items as necessary in the rental space

**Justification:** The City Hall offers space available to our community for rent to accommodate special events such as parties and club meetings. Average wear and tear on tables, chairs and other furniture in those spaces is to be expected. Chairs that are worn and stained need to be replaced, as well as tables with wear or damage that make them unsafe.

**Proposed Project Year: 2019-20**

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**Project Number: 2017-B3.1**      Police: Portable Radios

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**Description:** Portable Radios (8)

**Justification:** The current radio system used by Ingham County is not going to be supported by the manufacturer after 2021. The 911 Advisory Committee is in the process of deciding on the replacement of the radios and system. The replacement radios purchased will be compatible with the new system upgrade.

---

**Project Number: 2017-B5**      Building: Library Improvements

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*Pending the results of the Library Facilities Evaluation, this line item combines the previous Phase I and Phase II Library projects.*

**Description:** Tuck pointing is needed in many areas of the building exterior, particularly the chimney, near doors and windows, and foundation. Replace 27 exterior windows. Relocate basement bathrooms to first floor garage to make them ADA compliant. Install hot water circulation pump to all facility sink faucets. Install new central air conditioning system and a fire alarm system. Install ADA automatic door and push button. Remove/replace ceiling tiles in magazine room and book rooms. Create hallway doorway pass-through from magazine room to front desk.

**Justification:** Exterior brickwork is preventive maintenance. There are 27 original exterior windows that remain in the building. These windows are single pane, steel frame and are rusting in many places and

very energy inefficient. The current bathrooms are located in the basement and are inaccessible to persons with disabilities. Hot water supplied to bathrooms and sink faucets is supplied by a single hot water heater in the basement. A new central air system has been requested by CADL to help preserve the collections in the building as well as to keep employees and patrons comfortable. The library facility currently does not have a fire alarm system. Fire alarm systems are a standard early warning system for institutional facilities. The library facility currently does not have an automatic ADA door anywhere in the facility. Library staff has reported that the facility is very difficult to access by persons with disabilities, particularly those in wheelchairs. An ideal location for an automatic door, with push button, is at the top of the ADA ramp. Adding this feature would greatly enhance the accessibility of the library facility. Much of the library facility has older fiberboard ceiling tiles that are sagging, stained or damaged. Replacing the material with drywall, new tile or other product would greatly enhance the appearance of the facility. Currently patrons moving from the magazine room to the front desk must maneuver through the employee area behind the front desk. Library staff has requested that the City explore the possibility of extending the magazine room hallway through the wall to circumvent the employee area.

---

**Project Number: 2017-B7**      **Building: Parking Lot Repairs**

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**Description:** Repairs to City Hall parking lot including additional curb, curb and asphalt repair

**Justification:** Over time, parking lot surfaces and curb shrink and expand with changing weather systems. The parking lot asphalt surface at City Hall is showing signs of settling and cracking. Crack sealing has been performed for the past few years. However, there are a few areas that are beginning to crumble to the point where sealing will no longer provide the required fix. Also, there are several curbs with significant chunks broken out. There isn't any curb or gutter at the west end allowing the water runoff to erode the dirt onto the railroad tracks. Some of the parking lot is very old and broken and was not replaced at the time of the City Hall project and was not built to withstand the fire trucks.

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**Project Number: 2017-B10**      **Fire: Fire Station 1- Furnace/AC, Office Area and Training Room**

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**Description:** Replacement of furnaces and air conditioners. Fire Station 1 has two furnaces and air conditioners - one for the basement training room and the other for the office areas.

**Justification:** The furnaces are original to the station in 1998 and will likely need replacing in the near future.

---

**Project Number: 2017-B11**      **Fire: Fire Station 1- Commercial Washing and Drying Machines**

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**Description:** Replacement of Heavy Duty Commercial Washing and Drying Machines located within Fire Station 1

**Justification:** NFPA 1851: Standard on Selection, Care, and Maintenance of Structural Firefighting Protective Ensembles requires the regular cleaning and advanced cleaning of all turnout gear every six months or sooner depending on use to help prevent exposures to toxins and carcinogens. Our commercial washer and dryer were purchased in 1994 and have been repaired several times. They should be considered for replacement.

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**Project Number: 2017-B12**      IT: New Servers (windows and mail exchange)

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**Description:** New Windows and Exchange Servers

**Justification:** The servers need to be upgraded on a five-year rotation to keep up with the technology changes and meet the needs of both the staff and citizens. Microsoft begins limiting updates to older servers as new versions are released.

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**Project Number: 2018-B8**      IT: Phone Upgrades

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**Description:** Upgrade 50 new phones City-wide

**Justification:** The current phones were purchased in 2010 and have been failing over the last year. According to the manufacturer they have a five-year life expectancy. We are using VoIP (Voice over Internet Protocol) technology. A VoIP telephone is essentially a mini computer and consists of hardware and software components. The software requires standard networking components such as a TCP/IP network stack, client implementation for DHCP, and the Domain Name System (DNS).

---

**Project Number: 2018-B10**      IT: BS&A Planning and AccessMyGov Module for Online Permitting

---

**Description:** Software module to allow for building permits and development applications to be submitted and paid for online, and processed for internal review.

**Justification:** The City of Mason is growing as a place for new and renewed investment. The need to expedite permit applications at higher volumes will require additional support. The Online Permitting module will allow our customers to submit applications and plans online, pay permit fees, receive permits and inspection results by email, and check on the status of permits - all at their convenience 24/7/365. The Planning module automates the review process, serves as a central database of permits and development applications, reviewer comments, inspection results, and code enforcement activity connected with Assessors property records and searchable by any staff member with BS&A access. By using these modules in BS&A, data will be more readily available for the purposes of monitoring development activity in the City, meeting statutory reporting requirements (Census), and providing leadership with better information for planning and decision making.

---

**Project Number: 2018-B11**      Planning: Kipp Road/Temple Street (Transportation and Land Use)

---

**Description:** Sub-area corridor study along both Kipp Road and the Temple Street Corridors to evaluate transportation infrastructure improvements that support and maximize land-use development opportunities in accordance with the community's vision and master plan.

**Justification:** The City of Mason is growing as a place for new and renewed investment. Available land for development is becoming scarcer. Kipp Road serves as access from US 127 to Temple Street. Both corridors are areas that are served by existing infrastructure, contain undeveloped and under-developed

land and are easily accessible to/from the highway U.S. 127. These areas were identified in the community's Master Plan as an area to incentivize future growth. A professional corridor study will position Mason to maximize capital funding, grants, zoning, and partnerships with Michigan Department of Transportation and Ingham County to ensure changes in this corridor result in a well-planned area that supports quality development for current and future residents and businesses.

---

**Project Number: 2018-B12**      **Building: Carpet Replacement**

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**Description:** Replace foyer/Community Room and worn/stained areas

**Justification:** The carpeting in these areas gets the most use and is getting worn and stained. The Community Room gets rented often with food and drinks getting spilled. This is part of a regular replacement program to keep the facility updated.

---

**Project Number: 2018-B13**      **Fire: Extrication Tools (Jaws of Life) in Engine 809's Replacement**

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**Description:** New extrication tools (Jaws of Life) to replace 20-year-old set

**Justification:** Extrication tools are primarily used by the Fire Department to cut patients out of their vehicles that have been involved in a serious accident. The current set of extrication tools is our oldest set and was purchased about 20 years ago. It only allows us to run one tool at a time and doesn't have the strength to cut through some of the newer vehicles. The new sets allow for simultaneous tool operation and have more cutting power.

---

**Project Number: 2018-B14**      **Fire: Rehab 815 Replacement**

---

**Description:** Mason Fire Rehab 815, formerly Squad 815, is a Chevrolet 3500 HD Ambulance Body. It is used to bring extra equipment, manpower and rehabilitation supplies to fire incidents. Rehab is important to help keep our firefighters rested and safe from heat stroke and dehydration. It provides a place to get vitals checked, get out of the weather and get air tanks changed.

**Justification:** The vehicle is currently 26 years old and is becoming unreliable. It is an ambulance box and is not user friendly as a rehab truck. Staff recommends replacing it with a vehicle more conducive to rehab operations and also with the capacity to transport more personnel to and from fire incidents.

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**Project Number: 2018-B15**      **Fire: Sprinkler System in Fire Department Truck Bay**

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**Description:** Install new automatic sprinkler system for truck bay.

**Justification:** The Mason Fire Station was built in 1998 and at the time the fire sprinkler system was not extended from the office to the apparatus bays. The Mason Fire Station currently houses roughly 3.2 million dollars in vehicles along with other costly equipment. Staff recommends that the fire sprinkler system in Station 1 be expanded from the office area to include the apparatus bays. This fire station

provides essential services to the community which should be protected in order to avoid interruption of emergency response service capabilities. The time and future cost to repair or rebuild the Fire Station as well as replace or repair the damaged vehicles and equipment would be difficult. Automatic sprinkler protection should be considered a means for protecting the community's investment in the Fire Station.

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**Project Number: 2018-B16**      **Fire: Rear Approach Fire Station 1**

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**Description:** Rebuild rear approach to Fire Station 1

**Justification:** The rear approach of Fire Station 1 currently has the original concrete from 1998 when the building was built. The concrete is worn, crumbling and in need of repair. The rear approach is used by fire trucks as they enter the garage. The concrete approach needs to be stable, bear heavy weight and create a safe driving condition for the parking of the fire apparatus.

---

**Project Number: 2018-B17**      **Police: Mobile Data Computers**

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**Description:** Five patrol car Mobile Data Computers (MDCs) will be eight years old. The Department maintains one MDC in each patrol car and one on the shelf as backup in case needed if an in-car unit fails and needs to be replaced.

**Justification:** The Mobile Data Computers are critical tools for patrol operations. They provide up-to-date dispatch capability, field-based reporting, electronic crash reports and can be used for e-ticket features including remote downloading to district court records. The field-based reporting and e-daily features are an effective mechanism to keep officers on the street, visible to the public.

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**Project Number: 2018-B19**      **IT: Wireless connectivity to DPW and POTW**

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**Description:** Install antenna and wireless bridge on all three buildings to connect DPW, POTW and City Hall.

**Justification:** Current connectivity speed at DPW and POTW is less than 3 mpbs. This upgrade will increase the speed to at least 400 mbps.

## Proposed Project Year: 2020-21

### Project Number: 2017-B3.1      Police: Portable Radios

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**Description:** Portable Radios (8)

**Justification:** With the anticipated termination of manufacturer support for the existing radio system hardware in 2021, the Department is requesting eight additional replacement portable radios to update its supply. The Department's portable radio units will continue failing limiting availability of radios to officers and reserves. Replacement parts are no longer manufactured and the on-shelf parts supplies will dissipate rendering repairs impossible. The Department needs eight additional new radios for distribution to patrol operations and needs to replace the units in use. The replacement models can be converted to a new radio system which is most likely the Michigan State Police 800 megahertz system thus reducing cost when the conversion occurs.

### Project Number: 2017-B13      IT: AV Room Technology Replacement

---

**Description:** Replacement of failing audio, video, and camera equipment by which meetings of City Council, boards and commissions may be recorded, televised and streamed.

**Justification:** Staff continues to have challenges with the existing equipment due to the programs no longer being supported and the aging technology. We will need to upgrade the equipment in the near future to assure we continue to provide public viewing of our meetings through the website and the cable access channel. This project would include comprehensive system design, equipment selection, bid packets, bid analysis, integration, testing, training, and as-built documentation.

### Project Number: 2017-B17      Fire: Self-Contained Breathing Apparatus (SCBA) units

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**Description:** Air Packs-SCBA 24 units were purchased in 2008 through a FEMA grant and are required by our Fire Department for entering into atmospheres immediately dangerous to life and health. Each pack is required to have an extra cylinder for a total of 48. The confined entry cart is used for more constricted areas where an SCBA won't fit or where we may have need for a longer work time. It must be compatible with the SCBA's being used.

**Justification:** The Self Contained Breathing Apparatuses (SCBA) and the confined entry cart are currently sufficient and in good working order. SCBA packs are flow-tested annually and repaired as necessary. Many of components on the packs were originally warranted for 10 years. They are now 10 years old the costs to service them has gone up. Availability of parts will begin to become more difficult. The cylinders have service life of 15 years from the manufacture date and cost about \$1,000 each today.

### Project Number: 2018-B18      Police: Taser Units

---

**Description:** Ten new Electronic Control Weapons (ECWs) commonly known as tasers. The purchase of 10 units would also include holsters, cartridges and a four-year warranty. Ten units will be an appropriate

number to assign field officers as well as newly added reserves during large special events as well as one back-up to allow for a unit to be taken out of inventory if the need for repair/support arises.

**Justification:** The Department currently owns units, all still in service since 2009, but their life cycle is ending and support from the manufacturer will soon not be available. At times during large community events six units have not been enough to field the police force during the event. ECWs have proven themselves to be a safe less-than-lethal control option for officers in the field, while reducing risk to the public, suspects and officers. ECWs are recognized industry-wide as an outstanding and strongly endorsed risk management option.

---

**Project Number: 2018-B20**      Fire: Carpet Replacement for Fire Station

---

**Description:** Replace the carpet in the office building at Fire Station 1. It is the original carpet that was laid when the building was built in 1998.

**Justification:** The carpet in Fire Station 1 is 20 years old and suffers from general wear and tear. The walking paths are worn and the general meeting areas are worn and stained. It is now at the point of being unable to clean at an acceptable level. The Fire Station is used regularly for fire training classes, bi-weekly meetings and firefighter training, other local meetings and is open to the public. Staff recommends re-carpeting Fire Station 1 to maintain an appearance of excellence in our community.

---

**Project Number: 2018-B21**      Police: Interview & Interrogation Digital Recording System

---

**Description:** Replace two existing interview room cameras through replacement and add one digital recording system in the waiting room outside the Department's front entrance.

**Justification:** The State of Michigan, by statute, mandates interrogations involving major felonies and some serious misdemeanors. The Mason Police Department requires all interviews and or contacts, with rare exception identified by policy, be recorded. To this end, the Department currently has two L3 digital recording camera systems located one each in the soft interview room, the other in the secured interview room. At the time of this request, the interview/interrogation system will be seven years old and in need of upgrading. This is a critical piece of technology the Department must maintain in order to comply with SOM statute. The Department wishes to add a third digital recording system in the waiting room outside the Department's front entrance and update the two existing interrogation and interview room cameras. The cameras all download into the L3 server which also stores data from the in-car recording systems and body worn cameras.

---

**Project Number: 2018-B23**      Planning: Master Plan/Zoning 5-year Update (Major): Phase I

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**Description:** The City of Mason Master Plan is intended to be a robust community conversation that results in a 20-year roadmap for keeping the City of Mason a special place for generations to come. The Master Plan is comprised of professional technical studies, graphics, maps, analysis and recommendations for ensuring that land uses, public facilities and infrastructure investments are well coordinated in a manner that supports the public's health, safety and social/economic/environmental welfare consistent



with the community's vision. This phase will focus on community engagement and technical analysis.

**Justification:** The City of Mason is growing as a place for new and renewed investment. Available land for development is becoming scarcer. As development pressures challenge Mason's desire to retain its "small town character," it is critical that we proactively identify ways to harness economic opportunity to support the community's vision. In order to implement the Master Plan, the City's Zoning Ordinance will need to be updated to ensure alignment between the ordinances and the Master Plan. The Master Plan will also serve as an important foundation for the City's Capital Improvement Program.

Further, a Master Plan is required by State of Michigan statute for communities that have adopted the Michigan Zoning Enabling Act, which Mason has. The Master Plan is required to be updated every five years. Staff recommends that investment in this effort be made to make a major update following the 2020 Census. The City of Mason's boundary will also be expanding as the 425 Agreements expire, resulting in more land and infrastructure to be managed.

A professional Master Plan process will position Mason to maximize capital funding, grants, zoning, private investment, and partnerships with economic partners, Michigan Department of Transportation and Ingham County to ensure changes in the community over time are well-planned and carefully coordinated.

Note - The Master Plan investment is phased over three fiscal years - community engagement and technical analysis in phases one and two (FY2021 and 2022) with the city ordinance updates taking place in phases two and three (FY2022 and 2023).

## **Proposed Project Year: 2021-22**

**Project Number: 2017-B15**      Fire: Rescue Boat and Motor

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**Description:** One Rescue Boat and Motor

**Justification:** The boat is used for ice and water rescues in lakes, ponds, or streams by the Fire Department. This equipment was initially purchased in reaction to a double drowning in Columbia Lakes that the Fire Department did not have the equipment to respond to. This was originally purchased by the Fire Association, but will need to be replaced in the near future.

**Project Number: 2017-B16**      Fire: Portable Radios

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**Description:** Portable (26)/ Truck (10) Radios

**Justification:** The current radio system used by Ingham County is not going to be supported by the manufacturer after 2021. The 911 Advisory Committee is in the process of deciding on the replacement of the radios and system. Depending on the outcome of those discussions, we may have to either share in the purchase of updating our existing Fire and Police radios or purchase them all ourselves.

**Project Number: 2018-B22**      Police: Body Worn Cameras and Redaction Software

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**Description:** Fifteen Body Worn Cameras; Redaction Software

**Justification:** The City's current BWCs were purchased and put online in 2015. In 2016, L3 MobilVision recognized a factory defect and replaced each unit under warranty. In the 2021 – 2022 Fiscal Year the BWCs will be five years old and at the end of their life cycle. The BWCs are critical to the functions of the Department for a myriad of reasons including, but not least, as best evidence in criminal and internal quality controls, personnel audits and both internal and external transparency. The Michigan Municipal Risk Management Authority considers BWCs a high quality and effective risk management tool. The internal auditing, quality control and evidentiary features alone insure their value of these tools. Fifteen BWCs will provide one for each sworn personnel and reserve officers, excluding the chief. The purpose of individually assigned BWCs is so each camera can be digitally entered into the server identifying it to the assigned user for data tracking and recovery for viewing and duplication.

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**Project Number: 2018-B23**      **Planning: Master Plan/Zoning 5-year Update (Major): Phase II**

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**Description:** The City of Mason Master Plan is intended to be a robust community conversation that results in a 20-year roadmap for keeping the City of Mason a special place for generations to come. The Master Plan is comprised of professional technical studies, graphics, maps, analysis and recommendations for ensuring that land uses, public facilities and infrastructure investments are well coordinated in a manner that supports the public's health, safety and social/economic/environmental welfare consistent with the community's vision. This phase will focus on technical analysis and city ordinance updates.

**Justification:** The Master Plan investment is phased over three fiscal years - community engagement and technical analysis in phases one and two (FY2021 and 2022) with the city ordinance updates taking place in phases two and three (FY2022 and 2023).

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**Project Number: 2018-B24**      **Building: Rental Space Furniture Replacement**

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**Description:** Replace tables, chairs and other items as necessary in the rental space

**Justification:** The City Hall offers space available to our community for rent to accommodate special events such as parties and club meetings. Average wear and tear on tables, chairs and other furniture in those spaces is to be expected. Chairs that are worn and stained need to be replaced, as well as tables with wear or damage that make them unsafe.

## Proposed Project Year: 2022-23

**Project Number: 2018-B23**      Planning: Master Plan/Zoning 5-year Update (Major): Phase III

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**Description:** The City of Mason Master Plan is intended to be a robust community conversation that results in a 20-year roadmap for keeping the City of Mason a special place for generations to come. The Master Plan is comprised of professional technical studies, graphics, maps, analysis and recommendations for ensuring that land uses, public facilities and infrastructure investments are well coordinated in a manner that supports the public's health, safety and social/economic/environmental welfare consistent with the community's vision. This final phase will focus on city ordinance updates.

**Justification:** The Master Plan investment is phased over three fiscal years - community engagement and technical analysis in phases one and two (FY2021 and 2022) with the city ordinance updates taking place in phases two and three (FY2022 and 2023).

**Project Number: 2018-B26**      Police: Patrol Car Modem Upgrades

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**Description:** Six Patrol Car Modems

**Justification:** The department intends to upgrade the patrol car modems which were installed in 2017, and maintain a spare unit for replacement if a unit in use needs to be removed for repairs or maintenance. Modems have a certain amount of data capacity for communications from the car to the recipient and back again. As patrol car technology becomes faster and more efficient, the amount of data produced increases as well. 5G technology is currently in the works. With the amount of data output from a patrol car, a higher handling capacity is imperative to keep the car's systems on-line and reduce the chance of failure and data loss.

## Proposed Project Year: 2023-24

**Project Number: 2018-B25**      Police: In-Car Digital Recording System

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**Description:** Four patrol cars will receive replacement in-car digital recording systems.

**Justification:** The L3 MobilVision in-car digital recording systems will be six years old and beyond their life expectancy. The Department must replace four in-car digital recording systems. To support the in-car systems, current body cameras and interview/interrogation room cameras, the Department will purchase a high-definition server from L3 MobilVision to manage increased data storage, easier extrapolation and higher quality evidentiary recordings for reproduction. This includes four replacement back seat infra-red cameras and collision sensors.

The digital recording system used by patrol operations is a significant tool for mitigating risk to the City. Interview room systems, Body Worn Cameras and patrol car systems, including impact detectors and back seat digital recorders are unequivocally the best tools for accurately documenting and recalling incidents and officer actions during every event the Department is involved in. These tools are so critical; the Department mandates usage with only few exceptions to protect certain privacies. Unfortunately, the

technology changes at such a rapid rate that every five years obtaining service or repairs becomes almost impossible and when it is, is exceedingly expensive or cost prohibitive. By the 2023-2024 Fiscal Year, it is unknown what technology will be available at what cost but a certainty is that the hardware will become unsupported and it is in the City's best interest to renew this outstanding risk management tool.



# **CAPITAL IMPROVEMENTS PROGRAM 2018-2024**

## **BUDGET**

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CAPITAL IMPROVEMENTS PROGRAM 2018-2024  
Approved March 13, 2018 - Planning Commission  
Accepted March 26, 2018 - City Council

STREETS, SIDEWALKS, BRIDGES (S)					BUDGET	FORECAST		PROJECTIONS			Total Project Cost
Requester	Project Number	Category	Project Name/Description	Funding Source	2018-19	2019-20	2020-2021	2021-2022	2022-2023	2023-2024	
Heck	2017-S6	Streets/ Sidewalks	South Street - Northbrook Street to West City Limits	Local	\$ 71,259.00						\$ 71,259.00
Heck	2017-S7	Streets/ Sidewalks	Avon Street - All	Local	\$ 28,745.00						\$ 28,745.00
Heck	2017-S8	Streets/ Sidewalks	Northbrook Street - South Street to Carom Circle	Local	\$ 291,078.00						\$ 291,078.00
Heck	2017-S9	Streets/ Sidewalks	S. Jefferson - Oak Street to Kipp Road	Major	\$ 664,804.00						\$ 664,804.00
Heck	2017-S10	Streets/ Sidewalks	Sidewalk Program - Summerwood (Doesn't count toward 4 mil)	General Fund	\$ 20,000.00						\$ 20,000.00
Heck	2018-S1	Streets/ Sidewalks	Temple Street Safety Grant from MDOT (Local match)	General Fund	\$ 25,000.00						\$ 25,000.00
Heck	2018-S32	Streets/ Sidewalks	Columbia Street - Cedar Street to US 127	General Fund	\$ 181,635.00						\$ 181,635.00
Heck	2017-S5	Streets/ Sidewalks	Walnut- Columbia to North End	Local		\$ 71,954					\$ 71,954.00
Heck	2017-S10	Streets/ Sidewalks	Sidewalk Program - Northwest Quadrant of the City (Doesn't count toward 4 mil)	General Fund		\$ 20,000					\$ 20,000.00
Heck	2017-S11	Streets/ Sidewalks	Kerns Road - Cedar Street to Howell Road	Major		\$ 709,217					\$ 709,217.04
Heck	2017-S12	Streets/ Sidewalks	W. Elm Street - Henderson Street to Jefferson Street (Sewer/Water improvements)	Local		\$ 95,589					\$ 95,588.64
Heck	2017-S13	Streets/ Sidewalks	Park Street - Elm Street to Oak Street	Local		\$ 42,317					\$ 42,316.80
Heck	2017-S10	Streets/ Sidewalks	Sidewalk Program - Northeast Quadrant of the City (Doesn't count toward 4 mil)	General Fund			\$ 20,000				\$ 20,000.00
Heck	2017-S14	Streets/ Sidewalks	East Cherry Street - Rogers Street to End	Local			\$ 109,608				\$ 109,608.00
Heck	2017-S15	Streets/ Sidewalks	S. Barnes Street - Ash Street to Kipp Road	Major			\$ 755,160				\$ 755,160.00
Heck	2017-S16	Bridge	Maple Street Bridge Repair	Local			\$ 20,000				\$ 20,000.00
Heck	2017-S10	Streets/ Sidewalks	Sidewalk Program - Southeast Quadrant of the City (Doesn't count toward 4 mil)	General Fund				\$ 20,000			\$ 20,000.00
Heck	2017-S17	Streets/ Sidewalks	Center Street - Walnut Street to N. Bush Street	Local				\$ 100,920			\$ 100,920.00
Heck	2017-S18	Streets/ Sidewalks	Brookdale Street - Judy Court to Willow Street	Local				\$ 84,100			\$ 84,100.00
Heck	2017-S19	Streets/ Sidewalks	Cherry- McRoberts to Henderson	Local				\$ 218,660			\$ 218,660.00
Heck	2017-S21	Streets/ Sidewalks	Eaton Drive - All	Local				\$ 168,200			\$ 168,200.00
Heck	2017-S22	Streets/ Sidewalks	W. Elm Street - McRoberts Street to Henderson Street	Local				\$ 210,250			\$ 210,250.00
Heck	2017-S10	Streets/ Sidewalks	Sidewalk Program - Southwest Quadrant of City (Doesn't count toward 4 mil)	General Fund				\$ 20,000			\$ 20,000.00
Heck	2017-S23	Streets/ Sidewalks	Rayner Street - Randolph Street to Columbia Street	Local				\$ 53,430			\$ 53,429.60
Heck	2017-S24	Streets/ Sidewalks	Eugenia Drive - Northbrook to End	Local				\$ 316,680			\$ 316,680.00
Heck	2017-S25	Streets/ Sidewalks	Hall Blvd - Ash Street to South Street	Local				\$ 422,240			\$ 422,240.00
Heck	2017-S26	Streets/ Sidewalks	Columbia Street - Park Street to Jefferson Street	Major				\$ 75,690			\$ 75,690.00
Heck	2017-S10	Streets/ Sidewalks	Sidewalk Program - Northwest Quadrant of City (Doesn't count toward 4 mil)	General Fund						\$ 20,000.00	\$ 20,000.00
Heck	2018-S27	Streets/ Sidewalks	Peachtree Place Columbia Street to South Street	Major						\$ 457,720.00	\$ 457,720.00
Heck	2018-S29	Streets/ Sidewalks	McRoberts Street - Columbia Street to Maple Street	Local						\$ 84,355.00	\$ 84,355.00
Heck	2018-S30	Streets/ Sidewalks	Steele Street - Ash Street to Elm Street	Local						\$ 68,900.00	\$ 68,900.00
Heck	2018-S31	Streets/ Sidewalks	W. Oak Street - McRoberts Street to Lansing Street	Local						\$ 130,188.00	\$ 130,188.00
					\$ 1,282,521.00	\$ 939,076	\$ 904,768	\$ 802,130	\$ 888,040	\$ 761,163.00	\$ 5,577,698.08

UTILITIES: SANITARY SEWER, STORM WATER, AND WATER DISTRIBUTION (U)					BUDGET	FORECAST		PROJECTIONS			Total Project Cost
Requester	Project Number	Category	Project Name/Description	Funding Source	2018-19	2019-20	2020-2021	2021-2022	2022-2023	2023-2024	
Heck	2018-U1	Streets/Sidewalks	Utilities for Properties on Kipp Road (Klavorn's, S & Sue, Vacant Lot)	Water/Sewer	\$ 200,000.00						\$ 200,000.00
Baker	2017-U3.2	POTW	Design and Construction - Waste Water Treatment Plant Upgrades	Water/Sewer/LDFA	\$ 12,000,000.00						\$ 12,000,000.00
Baker	2017-U3.3	DPW	Design of the New Department of Public Works Facility	Water/Sewer/LDFA	\$ 75,000.00						\$ 75,000.00
Baker	2017-U6	DPW	Abandon Monitoring Wells by Airport	Water/Sewer	\$ 30,000.00						\$ 30,000.00
Heck	2017-U9	Streets/ Sidewalks	Northbrook Street - South Street to Carom Circle	Water/Sewer	\$ 3,500.00						\$ 3,500.00
Heck	2017-U10	Streets/ Sidewalks	S. Jefferson Street - Oak Street to Kipp Road	Water/Sewer	\$ 100,000.00						\$ 100,000.00
Baker	2017-U12	POTW	300,000 Gallon Storage Tank Top Sealing	Water/Sewer	\$ 12,000.00						\$ 12,000.00
Baker	2017-U13	DPW	Well No. 7 Rebuild	Water/Sewer	\$ 40,000.00						\$ 40,000.00
Baker	2017-U15	DPW	Replace Two Fire Hydrants Behind Mason Plaza	Water/Sewer	\$ 25,000.00						\$ 25,000.00
Baker	2017-U16	DPW	Cathodic protection for Ground Storage Tank	Water/Sewer	\$ 25,000.00						\$ 25,000.00
Baker	2017-U17	DPW	High Service Pump No. 1 Rebuild	Water/Sewer	\$ 18,000.00						\$ 18,000.00
Baker	2017-U18	DPW	Replace Chlorine Analyzer for High Service Pump Room	Water/Sewer	\$ 10,000.00						\$ 10,000.00
Baker	2018- U35	DPW	BS&A Software Work Order Application	Water/Sewer	\$ 12,000.00						\$ 12,000.00
Baker	2018- U36	DPW	Sewer Push Camera Replacement	Water/Sewer	\$ 16,000.00						\$ 16,000.00
Baker	2018-U37	POTW	Log Jam Removal in the Sycamore Creek	Water/Sewer	\$ 16,000.00						\$ 16,000.00
Baker	2017-U11	POTW	Turbine Aeration Blower at POTW	Water/Sewer		\$ 260,000.00					\$ 260,000.00
Baker	2017-U14	DPW	Department of Public Works Facility Design and Construction	Water/Sewer		\$ 6,780,000.00					\$ 6,780,000.00
Baker	2017-U19	Streets/ Sidewalks	Kerns Road - Cedar Street to Howell Road	Major		\$ 96,461.00					\$ 96,461.00
Heck	2017-U20	Streets/ Sidewalks	W. Elm Street - Henderson Street to Jefferson Street	Local		\$ 170,520.00					\$ 170,520.00
Baker	2017-U21	Streets/ Sidewalks	Park Street - Elm Street to Oak Street	Local		\$ 33,802.40					\$ 33,802.40
Baker	2017-U22	POTW	Stop Gates for Aeration Discharge Piping	Water/Sewer		\$ 10,000.00					\$ 10,000.00
Baker	2017-U23	DPW	Well No. 6 Rebuild and New Variable Frequency Drive (VFD)	Water/Sewer		\$ 45,000.00					\$ 45,000.00
Baker	2017-U24	DPW	Study of Sewer Flow on Mason Street	Water/Sewer		\$ 15,000.00					\$ 15,000.00
Baker	2017-U25	DPW	Gutters for Water Treatment Plant	Water/Sewer		\$ 7,000.00					\$ 7,000.00
Baker	2017-U26	DPW	New Well Franklin Farms	Water/Sewer		\$ 400,000.00					\$ 400,000.00
Baker	2018-U32	DPW	South Water Tower Interior Maintenance and Repair	Water/Sewer			\$ 300,000.00				\$ 300,000.00
Baker	2017-U8	DPW	Replace Programmable Logic Controllers (PLC) on 3 Wells	Water/Sewer			\$ 40,000.00				\$ 40,000.00
Heck	2017-U27	Streets/ Sidewalks	Cherry Street - Rogers Street to End	Water/Sewer			\$ 160,800.00				\$ 160,800.00
Heck	2017-U28	Streets/ Sidewalks	S. Barnes Street - Ash Street to Kipp Road	Water/Sewer			\$ 546,360.00				\$ 546,360.00
Baker	2017-U29	DPW	Generators for ISD and Curtis Street Lift Stations	Water/Sewer			\$ 40,000.00				\$ 40,000.00
Baker	2018-U33	DPW	Well No. 4 Rebuild	Water/Sewer			\$ 40,000.00				\$ 40,000.00
Baker	2017-U34	DPW	Well No. 5 Rebuild	Water/Sewer				\$ 40,000.00			\$ 40,000.00
Baker	2018-U37	DPW	Well No. 10 Rebuild	Water/Sewer				\$ 40,000.00			\$ 40,000.00
Baker	2017-U8	DPW	Replace Programmable Logic Controllers (PLC) on Three (3) Wells	Water/Sewer					\$ 45,000.00		\$ 45,000.00
Baker	2018-U39	DPW	Well No. 9 Rebuild	Water/Sewer					\$ 40,000.00		\$ 40,000.00
Baker	2018-U40	DPW	North Water Tower Exterior/Interior Evaluation and Repaint 20 Year	Water/Sewer					\$ 750,000.00		\$ 750,000.00
					\$ 12,582,500.00	\$ 7,817,783.40	\$ 1,127,160.00	\$ 40,000.00	\$ 40,000.00	\$ 835,000.00	\$ 22,442,443.40

PARKS/ CEMETERY/ FORESTRY/ NONMOTORIZED (P)											
Requester	Project Number	Category	Project Name/Description	Funding Source	BUDGET	FORECAST		PROJECTIONS			
					2018-19	2019-20	2020-2021	2021-2022	2022-2023	2023-2024	Total Project Cost
Hude	2017-P8	Laylin	Laylin Park Improvements	Rayner Bond/General Fund	\$ 85,000.00						\$ 85,000.00
Hude	2018-P1	Non-Motorized	Howell Road - Hayhoe Riverwalk Trailhead (Dart Trailhead)	Rayner/County	\$ 1,000,000.00						\$ 1,000,000.00
Heck	2018-P2	Non-Motorized	Howell Road - Hayhoe Riverwalk Trail Extension	Rayner/Dart Found	\$ 37,000.00						\$ 37,000.00
Hude	2018-P3	All	Planning: Parks/Recreation Plan - 5 year update (minor)	Rayner Bond	\$ 5,000.00						\$ 5,000.00
Baker	2018-P5	Forestry	City Tree Evaluation	General Fund	\$ 20,000.00						\$ 20,000.00
Hude	2017-P10	Bond	Bond Park Improvements	Rayner Bond		\$ 100,000.00					\$ 100,000.00
Heck	2018-P3	Non-Motorized	Kerns Road - Hayhoe Riverwalk Trail Extension	Rayner Bond		\$ 160,000.00					\$ 160,000.00
Hude	2017-P11	Hayes	Hayes Park Improvements	Rayner Bond			\$ 100,000.00				\$ 100,000.00
Hude	2017-P14	Griffin	Griffin Park Improvements	Rayner Bond				\$ 20,000.00			\$ 20,000.00
Hude	2018-P4	Austin	Lee Austin Park Improvements	Rayner Bond				\$ 100,000.00			\$ 100,000.00
Hude	2017-P13	Rayner	Rayner Park Pond Dredging	General Fund					\$ 300,000.00		\$ 300,000.00
Hude	2017-P12	Rayner	Rayner Park Improvements	Rayner Bond						\$ 150,000.00	\$ 150,000.00
Hude	2018-P3	All	Planning: Parks/Recreation Plan - 5 year update (major)	Rayner Bond						\$ 15,000.00	\$ 15,000.00
Hude	2018-P5	Non-Motorized	Hayhoe Trail: Internal Loop-South Side (Jefferson/High School/Rayner Street)	General Fund						\$ 150,000.00	\$ 150,000.00
Hude	2018-P6	Non-Motorized	Hayhoe Trail: Internal Loop North Side- (Howell/ Mason Street/Cemetery)	General Fund						\$ 150,000.00	\$ 150,000.00
Hude	2018-P7	Non-Motorized	Hayhoe Trail: Internal Loop West Side- (Columbia 127 pedestrian bridge w/mid-block crossing)	General Fund						\$ 1,675,000.00	\$ 1,675,000.00
Hude	2018-P8	Non-Motorized	Hayhoe Trail: Internal Loop East Side- (Rayner/Middle School/Laylin)	General Fund						\$ 15,000.00	\$ 15,000.00
Baker	2018 P15	Cemetery	Second Drive - Cemetery	General Fund						\$ 70,000.00	\$ 70,000.00
					\$ 25,000.00	\$ 260,000.00	\$ 100,000.00	\$ 120,000.00	\$ 300,000.00	\$ 2,140,000.00	\$ 2,945,000.00

MOTOR VEHICLE POOL (MVP)											
Requester	Project Number	Category	Project Name/Description	Funding Source	BUDGET	FORECAST		PROJECTIONS			
					2018-19	2019-20	2020-2021	2021-2022	2022-2023	2023-2024	Total Project Cost
Baker	2017-MVP6	Equipment- DPW	1/2 Ton 2x4 Pickup Truck	MVP	\$ 26,000.00						\$ 26,000.00
Baker	2017-MVP7	Equipment- DPW	Mower	MVP	\$ 11,000.00						\$ 11,000.00
Baker	2017-MVP8	Equipment- DPW	Police Cars	MVP	\$ 39,000.00						\$ 39,000.00
Baker	2017-MVP9	Equipment- DPW	Large Items	MVP	\$ 60,000.00						\$ 60,000.00
Baker	2017-MVP10	Equipment- DPW	5-yard Dump/Plow Trucks	MVP	\$ 165,000.00						\$ 165,000.00
Baker	2017-MVP18	Equipment- DPW	Other Equipment	MVP	\$ 85,000.00						\$ 85,000.00
Baker	2017-MVP30	Equipment- DPW	Front End Material Loader: Lease ends 6 / 2018	MVP	\$ 130,000.00						\$ 130,000.00
Baker	2017-MVP11	Equipment- DPW	1/2 Ton 2x4 Pickup Truck	MVP		\$ 26,000.00					\$ 26,000.00
Baker	2017-MVP12	Equipment- DPW	Mower	MVP		\$ 11,000.00					\$ 11,000.00
Baker	2017-MVP13	Equipment- DPW	Police Cars	MVP		\$ 39,000.00					\$ 39,000.00
Baker	2017-MVP15	Equipment- DPW	1/2 Ton 2x4 Pickup Truck	MVP			\$ 26,000.00				\$ 26,000.00
Baker	2017-MVP16	Equipment- DPW	Mower	MVP			\$ 11,000.00				\$ 11,000.00
Baker	2017-MVP17	Equipment- DPW	Police Cars	MVP			\$ 39,000.00				\$ 39,000.00
Baker	2017-MVP19	Equipment- DPW	5-yard Dump/Plow Trucks	MVP			\$ 150,000.00				\$ 150,000.00
Baker	2017-MVP20	Equipment- DPW	1/2 Ton 2x4 Pickup Truck	MVP				\$ 26,000.00			\$ 26,000.00
Baker	2017-MVP21	Equipment- DPW	Mower	MVP				\$ 11,000.00			\$ 11,000.00
Baker	2017-MVP22	Equipment- DPW	Police Cars	MVP				\$ 39,000.00			\$ 39,000.00
Baker	2017-MVP23	Equipment- DPW	3/4 Ton Pickup Truck	MVP				\$ 35,000.00			\$ 35,000.00
Baker	2017-MVP24	Equipment- DPW	Other Equipment: Asphalt roller and trailer	MVP				\$ 12,000.00			\$ 12,000.00
Baker	2017-MVP25	Equipment- DPW	1/2 Ton 2x4 Pickup Truck	MVP					\$ 26,000.00		\$ 26,000.00
Baker	2017-MVP26	Equipment- DPW	Mower	MVP					\$ 11,000.00		\$ 11,000.00
Baker	2017-MVP27	Equipment- DPW	Police Cars	MVP					\$ 39,000.00		\$ 39,000.00
Baker	2017-MVP28	Equipment- DPW	3/4 Ton Pickup Truck	MVP					\$ 35,000.00		\$ 35,000.00
Baker	2017-MVP29	Equipment- DPW	6x4 John Deer Gator UTV	MVP					\$ 10,000.00		\$ 10,000.00
Baker	2018-MVP1	Equipment- DPW	1/2 Ton 2x4 Pickup Truck	MVP						\$ 26,000.00	\$ 26,000.00
Baker	2018-MVP2	Equipment- DPW	Mower	MVP						\$ 11,000.00	\$ 11,000.00
Baker	2018-MVP3	Equipment- DPW	Police Cars	MVP						\$ 39,000.00	\$ 39,000.00
Baker	2018-MVP4	Equipment- DPW	3/4 Ton Pickup Truck	MVP						\$ 35,000.00	\$ 35,000.00
Baker	2018-MVP5	Equipment- DPW	Back Hoe	MVP						\$ 130,000.00	\$ 130,000.00
					\$ 380,000.00	\$ 76,000.00	\$ 226,000.00	\$ 123,000.00	\$ 121,000.00	\$ 241,000.00	\$ 1,167,000.00



BUILDING, PROPERTY, EQUIPMENT (B)					BUDGET	FORECAST				PROJECTIONS	
Requester	Project Number	Category	Project Name/Description	Funding Source	2018-19	2019-20	2020-2021	2021-2022	2022-2023	2023-2024	Total Project Cost
Stressman	2017-B3.1	Equipment- Police	Police: Portable Radios	General Fund	\$ 8,000.00						\$ 8,000.00
Minshall	2017-B4	Building- City Hall	Building: Landscaping and Outdoor Lighting Conversion to LED	General Fund	\$ 32,100.00						\$ 32,100.00
Minshall	2017-B6	Equipment- Fire	Fire: Fire Engine 809/Tower 808	Fire Equipment	\$ 750,000.00						\$ 750,000.00
Borle	2018-B4	Equipment- IT	IT: BS&A Timesheet Program	General Fund	\$ 8,000.00						\$ 8,000.00
Borle	2018-B4	Equipment-IT	IT: BS&A Cemetery Upgrade and BS&A Human Resource Upgrade	General Fund	\$ 16,000.00						\$ 16,000.00
Borle	2018-B6	Equipment- IT	IT: AV Room Technology Patch	General Fund	\$ 10,000.00						\$ 10,000.00
Hude	2018-B7	Planning	Planning: Cedar/127 Corridor (Transportation and Land Use)	General Fund	\$ 50,000.00						\$ 50,000.00
Minshall	2018-B24	Building- City Hall	Building: Rental Space Furniture Replacement	General Fund	\$ 5,000.00						\$ 5,000.00
Stressman	2017-B3.1	Equipment- Police	Police: Portable Radios	General Fund		\$ 8,000.00					\$ 8,000.00
Minshall	2017-B5	Building- Library	Building: Library Improvements	General Fund		\$ 300,000.00					\$ 300,000.00
Haywood	2017-B7	Building- City Hall	Building: Parking Lot Repairs	General Fund		\$ 40,350.00					\$ 40,350.00
Minshall	2017-B10	Building- Fire	Fire: Fire Station 1- Furnace/AC, Office Area and Training Room	General Fund		\$ 20,000.00					\$ 20,000.00
Minshall	2017-B11	Equipment- Fire	Fire: Fire Station 1- Commercial Washing and Drying Machines	General Fund		\$ 7,500.00					\$ 7,500.00
Smith	2017-B12	Equipment- IT	IT: New Servers (windows and mail exchange)	General Fund		\$ 20,000.00					\$ 20,000.00
Borle	2018-B8	Equipment- IT	IT: Phone Upgrades	General Fund		\$ 30,000.00					\$ 30,000.00
Hude	2018-B10	Equipment- IT	IT: BS&A Planning and AccessMyGov Module for Online Permitting	General Fund		\$ 6,260.00					\$ 6,260.00
Hude	2018-B11	Planning	Planning: Kipp Road/Temple Street (Transportation and Land Use)	General Fund		\$ 30,000.00					\$ 30,000.00
Minshall	2018-B12	Building- City Hall	Building: Carpet Replacement	General Fund		\$ 20,000.00					\$ 20,000.00
Minshall	2018-B13	Equipment- Fire	Fire: Extrication Tools (Jaws of Life) in Engine 809's Replacement	General Fund		\$ 50,000.00					\$ 50,000.00
Minshall	2018-B14	Equipment- Fire	Fire: Rehab 815 Replacement	General Fund		\$ 75,000.00					\$ 75,000.00
Minshall	2018-B15	Building- Fire	Fire: Sprinkler System in Fire Department Truck Bay	General Fund		\$ 25,000.00					\$ 25,000.00
Minshall	2018-B16	Building- Fire	Fire: Rear Approach Fire Station 1	General Fund		\$ 25,000.00					\$ 25,000.00
Stressman	2018-B17	Equipment- Police	Police: Mobile Data Computers	General Fund		\$ 7,500.00					\$ 7,500.00
Borle	2018-B19	Equipment- IT	IT: Wireless connectivity to DPW and POTW	General Fund		\$ 35,000.00					\$ 35,000.00
Stressman	2017-B3.1	Equipment- Police	Police: Portable Radios	General Fund			\$ 16,000.00				\$ 16,000.00
Borle	2017-B13	Equipment- IT	IT: AV Room Technology Replacement	General Fund			\$ 150,000.00				\$ 150,000.00
Minshall	2017-B18	Equipment- Fire	Fire: Self-Contained Breathing Apparatus (SCBA) units	General Fund			\$ 205,000.00				\$ 205,000.00
Stressman	2018-B18	Equipment- Police	Police: Taser Units	General Fund			\$ 16,733.00				\$ 16,733.00
Minshall	2018-B20	Building- Fire	Fire: Carpet Replacement for Fire Station	General Fund			\$ 15,000.00				\$ 15,000.00
Stressman	2018-B21	Equipment- Police	Police: Interview & Interrogation Digital Recording System	General Fund			\$ 13,308.00				\$ 13,308.00
Hude	2018-B23	Planning	Planning: Master Plan/Zoning 5-year Update (Major): Phase I	General Fund			\$ 25,000.00				\$ 25,000.00
Minshall	2017-B15	Equipment- Fire	Fire: Rescue Boat and Motor	General Fund				\$ 10,000.00			\$ 10,000.00
Minshall	2017-B16	Equipment- Fire	Fire: Portable Radios	General Fund				\$ 108,000.00			\$ 108,000.00
Stressman	2018-B22	Equipment- Police	Police: Body Worn Cameras and Redaction Software	General Fund				\$ 8,250.00			\$ 8,250.00
Hude	2018-B23	Planning	Planning: Master Plan/Zoning 5-year Update (Major): Phase II	General Fund				\$ 100,000.00			\$ 100,000.00
Minshall	2018-B24	Building- City Hall	Building: Rental Space Furniture Replacement	General Fund				\$ 5,000.00			\$ 5,000.00
Hude	2018-B23	Planning	Planning: Master Plan/Zoning 5-year Update (Major): Phase III	General Fund					\$ 25,000.00		\$ 25,000.00
Stressman	2018-B26	Equipment-Police	Police: Patrol Car Modem Upgrades	General Fund					\$ 5,000.00		\$ 5,000.00
Stressman	2018-B25	Equipment- Police	Police: In-Car Digital Recording System	General Fund						\$ 40,000.00	\$ 40,000.00
					\$ 879,100.00	\$ 699,610.00	\$ 441,041.00	\$ 231,250.00	\$ 30,000.00	\$ 40,000.00	\$ 2,321,001.00

	BUDGET	FORECAST		PROJECTIONS			
	2018-19	2019-20	2020-2021	2021-2022	2022-2023	2023-2024	Total Project Cost
GRAND TOTALS	\$ 15,149,121.00	\$ 9,792,469.88	\$ 2,798,969.00	\$ 1,316,380.00	\$ 1,379,039.60	\$ 4,017,163.00	\$ 34,453,142.48