## 2013-2019

# CAPITAL IMPROVEMENT PROGRAM COMMITTEE

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Planning Commission Version

**NOTE:** The capital improvements that will be included in the proposed budget are restricted by the funds available. The Water & Sewer Fund is an Enterprise Fund, and therefore City Council does not formally adopt a budget for these projects.

## INTRODUCTION

The City of Novi's Capital Improvement Program (CIP) is a planning tool, with a goal to identify and schedule capital improvements over a six-year period from 2013-2019. The CIP is an opportunity to formulate strategic long-term policy decisions that extend beyond the fiscal year 2013-2014 budget year. Each year, the City of Novi invests significant time and resources to design, construct, and maintain the infrastructure and facilities needed to deliver municipal services to residents and businesses. Because of the high costs associated with building and maintaining capital assets, the City must carefully balance the need for such assets with our requirements to sustain a strong financial position.

Novi's CIP is a six year balanced plan that addresses projects that are needed, or will be needed, across a broad spectrum of areas. Annually, a significant amount of effort is expounded to update the CIP to ensure not only critical needs are being met, but also that the cost, scope and timing of all projects are coordinated throughout. Coordinating the timing of different projects in the same location is particularly important since it helps us to minimize service disruptions.

A capital improvement is defined as any new equipment, construction, acquisition or improvement to public lands, buildings or structures in excess of \$25,000 with a minimum life expectancy of five years. Maintenance-oriented, operational or continuous expenditures are not considered to be capital improvements. Capital projects include design and construction, as well as the acquisition of land and the purchase of fixed assets. A fixed assets or equipment include vehicles that are priced over the \$25,000; threshold; fire apparatuses, and plow trucks are commonly found under this category.

Specifically, the purpose of the CIP is to:

- Identify and evaluate the needs for public facilities.
- Determine cost estimates for each capital project submitted.
- Determine if there will be future operating costs for such projects.
- Determine potential sources of funding for such projects.
- Adopt policies for implementing capital improvement construction.
- Anticipate and pre-plan projects with an emphasis on seizing opportunities for partnerships and alternative funding.

The projects identified in the CIP represent the City of Novi's plan to serve residents and anticipate the needs of a growing and dynamic community. The following documents were considered in preparation of the CIP:

- Master Plan for Land Use (adopted December 1, 2004, including amendments adopted August 25, 2010)
- Water System Master Plan Report (adopted November 24, 2008)
- Storm Water Master Plan Update (adopted February 12, 2007)

- Capacity Management Operations & Maintenance Report on the City's Sanitary Sewage Collection System (March 27, 2007)
- Community Recreation Plan, including Americans with Disabilities Act Transition Plan, (2009-2013)
- Pathway and Sidewalk Prioritization Analysis and Process (adopted November 2012)
- Non-Motorized Master Plan (February 2011)

## 2013-2019

## Overview

The CIP helps track multi-year projects that may require planning, design, land acquisition and construction.

# **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, however, as they pertain to the definition of capital improvements above should be part of this CIP.

# 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. Budgetary policy states that all foreseeable operating costs related to capital projects be estimated and provided for as part of the review process associated with the Capital Improvements Program. In addition, departments are required to include costs associated with operating and maintaining capital projects that are requested for the upcoming year.

## Legal Basis of the Capital Improvements Program

The Capital Improvements Program has been authorized by the Municipal Planning Commission Act (Section 9, Public Act 285 of 1931). This mandate gives responsibility for preparing a CIP to local Planning Commission bodies, and reads as follows:

"For the purpose of furthering the desirable future development of the municipality under the master plan the city planning commission, after the commission shall have adopted a master plan, shall prepare coordinated and comprehensive programs of public structures and improvements. The commission shall annually show those public structures and improvements, in the general order of their priority, which in the commissions judgment will be needed or desirable and can be undertaken within the six-year period. The above comprehensive coordinated programs shall be based upon the requirements of the community for all types of public improvements, and, to that end, each shall upon request furnish the commission with lists, plans and estimates of time and cost of public structures and improvements within the purview of such department."

# Planning and Benefits of the Capital Improvements Program

The CIP is first and foremost, a planning tool. It can be quite useful as a primary guide in implementing the Master Plan for Land Use. With thoughtful foresight and review as a result of a CIP, the many outstanding capital projects that communities are 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 Novi'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 assists 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 often avoids reactive planning, and instead replaces it with balanced growth initiatives.

#### CIP DEVELOPMENT PROCESS

Capital improvement planning has proven to be a year-round process, with City departments continually re-evaluating and prioritizing their capital needs. However, the process is most involved from September through December. It is during this period that City staff identify and prioritize projects, estimate project costs, determine available resources, balance project requests within the available resources, and, ultimately, submit a recommended program/piece of infrastructure to the Capital Improvement Program subcommittee and ultimately to the City's Planning Commission. A collaboration between the City Manager's office, Engineering Division and the Finance Department coordinates the annual update of the six-year CIP as part of the annual budget process. Department staff also forecast revenues for the various funds used to finance capital projects, and set the financial parameters for the development of the CIP. Capital projects originate in the operating departments where subject matter experts identify needs based on master planning documents and other technical criteria. All requests are submitted and the financial parameters established and a preliminary plan is prepared for the review of the CIP Committee comprised of three City Council members and two members from the Planning Commission. The Committee recommends to the City's Planning Commission for ultimate approval prior to it being included in the City Manager's annual budget which is presented and considered by the City Council. The following is an overview of the CIP development process:

**August - September**: Operating departments identify projects, define project scopes, prepare cost estimates, and prioritize projects based on direction received from the City Manager and City Leadership Team. Department directors review project requests before final submittal.

**October**: Capital project requests are submitted to the Engineering Division for evaluation and inclusion to the CIP database.

**December**: The CIP is presented to the City Manager's office for evaluation and consideration making necessary adjustments as needed.

**January**: The CIP Sub-Committee receives the CIP and offers its recommendations during its annual meeting.

**February**: A public hearing takes place during a Planning Commission meeting. Following the public hearing the Commission approves the Capital Improvement Program. City Administration finalizes the recommended CIP for the consideration of the City Council.

**March**: The CIP is included in the City Manager's proposed budget which is presented to the City Council and by City Charter needs to be approved by the second meeting in March.

# **OPERATING BUDGET IMPACT**

The Capital Improvement Program has direct and sometimes significant impacts on Novi's operating budget. Upon their completion, most capital projects require ongoing costs for operation and maintenance. New buildings require electricity, water and sewer service, and maintenance and repair. New roads require regular sweeping as well as periodic crack filling and sealing, patching, milling, minor resurfacing, and replacement of stripes and markings. New parks and landscaped rights-of-way (such as medians and streets shoulders) require irrigation, fertilizing, mowing, and trimming. Some projects, such as a recreation center, require additional employees.

Departments submitting capital projects estimate the operations and maintenance costs of each project based on cost guidelines that are updated each year. The departments also consider any additional revenues or savings the city can reasonably expect to recognize upon completion of the project. For example, membership fees from a new recreation center help to offset the increased operating costs. The net operating costs are included not only in the project request, but also in the long-range forecasts of the respective funds to ensure that we properly account for operating budget impacts of all capital projects.

|                         |                 | Fiscal Year  | Fiscal Year |
|-------------------------|-----------------|--------------|--------------|--------------|--------------|--------------|-------------|
|                         |                 | 2013-14      | 2014-15      | 2015-16      | 2016-17      | 2017-18      | 2018-19     |
|                         |                 | Budget       | Proje        |              |              | Forecast     |             |
| Roads                   | Leveraged Funds | \$2,790,000  | \$0.00       | \$1,578,492  | \$0.00       | \$0.00       | \$0.00      |
|                         | City Costs      | \$5,658,630  | \$5,336,250  | \$4,951,475  | \$4,241,950  | \$5,097,800  | \$5,319,500 |
| Intersections & Signals | Leveraged Funds | \$92,000     | \$0.00       | \$0.00       | \$337,000    | \$0.00       | \$0.00      |
|                         | City Costs      | \$553,420    | \$220,000    | \$332,394    | \$936,740    | \$550,000    | \$225,000   |
| Sidewalks & Pathways    | Leveraged Funds | \$741,200    | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00      |
|                         | City Costs      | \$727,180    | \$446,641    | \$1,235,908  | \$3,095,838  | \$3,387,486  | \$1,203,705 |
| Storm Sewer & Drainage  | Leveraged Funds | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00      |
|                         | City Costs      | \$0.00       | \$312,700    | \$278,700    | \$160,900    | \$0.00       | \$0.00      |
| Sanitary Sewer          | Leveraged Funds | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00      |
|                         | City Costs      | \$250,000    | \$200,000    | \$350,000    | \$0.00       | \$0.00       | \$0.00      |
| Water Distribution      | Leveraged Funds | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00      |
|                         | City Costs      | \$5,901,000  | \$1,747,000  | \$2,884,000  | \$4,816,000  | \$2,819,500  | \$0.00      |
| Parks                   | Leveraged Funds | \$0.00       | \$204,319    | \$0.00       | \$0.00       | \$0.00       | \$0.00      |
|                         | City Costs      | \$1,631,515  | \$378,800    | \$1,063,750  | \$1,736,750  | \$374,945    | \$0.00      |
| Technology              | Leveraged Funds | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00      |
|                         | City Costs      | \$80,000     | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00      |
| Equipment               | Leveraged Funds | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00      |
|                         | City Costs      | \$827,500    | \$978,200    | \$407,500    | \$330,000    | \$1,135,520  | \$802,000   |
| Buildings & Property    | Leveraged Funds | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00       | \$0.00      |
| - ' '                   | City Costs      | \$1,199,774  | \$971,138    | \$873,248    | \$2,697,341  | \$15,881,801 | \$68,890    |
|                         | TOTAL           | \$20,452,219 | \$10,795,048 | \$13,955,467 | \$18,352,519 | \$29,247,052 | \$7,619,095 |

# **Program Funding**

There are multiple methods available to local governments for financing capital improvement projects. Since capital improvements require large outlays of capital for any given project, it is often necessary to pursue multiple creative solutions for financing projects.

# General Obligation (G.O.) Bonds

These types of bonds are especially useful for financing large municipal projects such as infrastructure improvements. They require voter approval and usually are used for projects that will benefit the residents of the entire community.

When the City sells G.O. Bonds, the purchaser is basically lending money to the City. The amount of the bond, plus interest is repaid through property taxes that the City, as the issuing authority, has the power to levy at the level necessary and within State guidelines to retire the debt.

A variation of the G.O. Bonds is the G.O. Limited Tax Bonds which can be repaid through tax millage. The interest rate for this type if issue is slightly higher than for the G.O. Bonds, and though voter approval is not required, a referendum period is afforded to the citizenry to challenge the proposed bond resolution.

#### **Revenue Bonds**

These bonds are generally sold as a means for constructing revenue-producing facilities such as water and sewer systems, and other such facilities that produce tolls, fees, rental charges, etc. (i.e. Novi Ice Arena, and Meadowbrook Commons). Security for and payment of revenue bonds are typically based upon the revenue-producing facility or activity rather than the economic or taxpaying base.

#### **Federal Grants**

Funding is made available to cities through Federal grants and programs. Grants are usually subject-specific, and require application by the local government for consideration. Amounts of grants vary, and are determined by the grantor through criteria-based processes. The availability of grants is usually a competitive process, so creative and effective grant writing is crucial to receiving funding for capital improvement projects.

## **Building Authority**

The City of Novi has a Building Authority that functions as a mechanism to facilitate the selling of bonds to finance public improvements. These bonds can be used as funding for buildings and recreational uses. Though voter approval is not required, a referendum period is afforded to the citizenry to challenge the proposed bond resolution. This is the mechanism used in the construction of the ice arena and the older adult housing facility.

# **Enterprise Funds**

Enterprise funds are typically established for services such as water, sewer, recreation, and housing. Revenues are generated primarily through user charges and connection fees from those who benefit from the improvements.

#### **Developer Contributions**

Developers, as part of subdivision and site planning requirements, may provide infrastructure, open space and recreational facilities. Developers may contribute a share of funds to the government entity, or install the facilities themselves as local need arises, and/or during the construction process. Once completed, the local government entity may agree to maintain the facilities.

#### **Special Assessments**

Special assessment financing allows local government to collect special taxes from owners of property directly benefiting from capital improvements. These types of improvements often include streets and sidewalks, sanitary sewer, storm drainage, and water distribution systems.

# Gas and Weight Tax

The City of Novi receives a formula-rated share of motor fuel and highway usage taxes from the State of Michigan to be utilized for transportation and maintenance-related projects.

# Millage

Property taxes are based upon the local millage rate. Revenue received from property taxes may be used for capital improvements as part of the General Fund, but such improvements are usually smaller scale and less expensive.

#### **General Fund**

The General Fund for the City of Novi may be used for capital improvements; however, it is not the intent of the CIP to earmark these funds for projects. Instead, smaller scale, less expensive capital projects with a high priority could be funded as line items.

#### **State Shared Revenue**

In addition to the Gas and Weight Taxes above which are shared revenue, the City receives its share of various taxes and fees from programs and requirements by the State of Michigan.

## **Public/Private Partnership**

This type of financing has become increasingly popular in areas where creative financing is fostered. In many communities the local revenue share may not support some types of public improvements. In contrast, private developers may avoid taking on a project where the infrastructure cost far exceeds profitability. This method of funding brings both the public sector and private contributor together to share in the costs of a project, or a part of a project, which inevitably lessens the overall financial burden falling onto a single source.

# Miscellaneous Funding

There are additional methods that are suitable for funding capital improvements. Examples of alternative funding methods are Tax Increment Financing (TIF), Impact Fees, Facility User Fees, etc. Current State legislation does not permit some of these funding methods, which have been used successfully in other states. Changes in legislation could see these and other innovative methods permitted in the future.

## **Project Summary**

The following tables include project summaries with estimated costs over the six-year period. The first column identifies an item number and the tables are followed by a numeric Project Description. Following the Project Descriptions section is the estimated future operating and maintenance cost schedule.

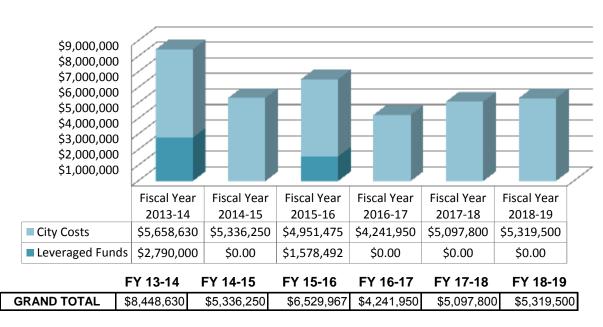
# **Roads**

Transportation-related issues are a high priority for the City of Novi. The Capital Improvement Program addresses traffic congestion by constructing new roadways, adding lanes to existing roadways, widening intersections, and enhancing traffic management systems. The maintenance and preservation of roadways is an important component of the program, which provides the necessary resources for scheduled pavement maintenance applications throughout the City.

The City of Novi contains both public and private roadways. Public roads (I-96, I-275 and M-5) are owned and operated by the Michigan Department of Transportation (MDOT), the Road Commission of Oakland County (RCOC), and the City of Novi. Private roads are owned and operated by private developments and homeowner groups. The City currently maintains approximately 171 miles of major roads and Neighborhood Streets. In order to define priorities and establish a course of action 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). Roads in poor condition would be candidates for reconstruction or rehabilitation. Those in fair condition would receive capital preventive maintenance, while roads in good condition would be candidates for routine maintenance work. The lowest rated roads in each of these categories would generally be addressed first.

Road projects in the city's six year plan are funded from a dedicated road millage that was recently approved by voters to provide 1.5 mills, generating \$2.1 million dollars for neighborhood road rehabilitation and construction.

# **Roads**



# Neighborhood Road Rehabilitation, Repaving and Reconstruction Program

Project Number: 1 CIP Number: 102-01

# **Description:**

The selection of streets is determined using the PASER surveys conducted annually. A mix of fixes (rehabilitation, repair, and reconstruction) will be applied to optimize the funds used to improve the overall condition of local roads as reflected by an increase in the overall PASER rating for the City.

#### Justification:

The project is to be completed as part of an overall asset management philosophy for infrastructure to improve the overall PASER rating for the City. See budget narrative for additional background.

| Category     | Account No.      | 2013-14     | 2014-15     | 2015-16     | 2016-17     | 2017-18     | 2018-19     | TOTAL        |
|--------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Engineering  | 203-000.00-000.0 | \$370,000   | \$370,000   | \$370,000   | \$370,000   | \$370,000   | \$370,000   | \$1,850,000  |
| Other/ROW    |                  |             |             |             |             |             |             |              |
| Construction | 203-000.00-000.0 | \$2,600,000 | \$2,600,000 | \$2,600,000 | \$2,600,000 | \$2,600,000 | \$2,600,000 | \$13,000,000 |
|              | TOTAL BUDGET     | \$2,970,000 | \$2,970,000 | \$2,970,000 | \$2,970,000 | \$2,970,000 | \$2,970,000 | \$17,820,000 |

#### Crescent Blvd Extension Between Grand River Avenue and Novi Road - Phase II and III

Project Number: 082-03

# **Description:**

Construction of a 1,300 foot long, 4 lane boulevard connecting Novi Road and Grand River Avenue in the northwest quadrant of the intersection; and a 650 foot long industrial spur road. Project includes a bridge over the Rouge River, repaving of the existing portion of Crescent Blvd west of Novi Road (f/k/a Fonda Street) and a new signal at the intersection with Grand River. The final design was completed in FY10-11.

## Justification:

As early as 1980, the City's Master Plan envisioned a "ring road" around the intersection to relieve traffic congestion and provide access to vacant land that does not have frontage on either Grad River Avenue or Novi Road. The Northeast quadrant of the ring road consisting of Crescent Boulevard and Town Center Drive, was completed in the 1990's. Completion of the Northwest Quadrant Ring Road will improve safety and reduce congestion at this busy intersection. N added benefit of the project is that it will provide a bypass for truck traffic, benefitting residents who use the Novi/Grand River intersection by diverting much of this heavy traffic

| Category     | Account No.      | 2013-14     | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL       |
|--------------|------------------|-------------|---------|---------|---------|---------|---------|-------------|
| Engineering  | 204-000.00-000.0 | \$195,300   |         |         |         |         |         |             |
| Other/ROW    |                  |             |         |         |         |         |         |             |
| Construction | 204-000.00-000.0 | \$3,292,200 |         |         |         |         |         |             |
|              | TOTAL BUDGET     | \$3,487,500 |         |         |         |         |         | \$3,487,500 |

# Town Center Drive from Grand River to 11 Mile Road (PASER 2; Asphalt)

Project Number: 3 CIP Number: 092-10

# **Description:**

Reconstruction of Town Center Drive from Grand River to 11 Mile (650 feet). The road was rated a PASER 2 in 2012 and has deteriorated beyond cost-effective maintenance measures. The cost of maintenance has increased for this portion of road over the past several years and reconstruction is the only method to improve this segment of road. This road is going from concrete to asphalt.

#### Justification:

This road has a PASER rating of 2 in 2012 and is no longer serviceable using normal maintenance. Eighteen (18) companies are located on Town Center Drive. The companies willing to disclose the number of employees housed on Crescent Blvd. Town Center Drive reported at the minimum nearly 235 staff members.

| Category     | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 | \$98,300  |         |         |         |         |         |           |
| Other/ROW    |                  |           |         |         |         |         |         |           |
| Construction | 202-000.00-000.0 | \$471,700 |         |         |         |         |         |           |
|              | TOTAL BUDGET     | \$570,000 |         |         |         |         |         | \$570,000 |

## Crescent Blvd., Novi Road to Town Center Drive Rehabilitation (PASER 2-4)

Project Number: 4 CIP Number: 082-10

# Description:

Rehabilitation and partial reconstruction of Crescent Blvd from Novi Road to Town Center Drive (1,800 feet) to provide a new smooth pavement surface in asphalt and to preserve the life of the road. The road is currently rated a PASER 2 between Novi Road and Ingersol Drive and PASER 4 between Ingersol and Town Center Drive.

## Justification:

The road has a PASER rating of 2 to 4, which is among one of the worst rated concrete roads in the City.

| Category     | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 | \$153,500 |         |         |         |         |         |           |
| Other/ROW    |                  |           |         |         |         |         |         |           |
| Construction | 202-000.00-000.0 | \$736,700 |         |         |         |         |         |           |
|              | TOTAL BUDGET     | \$890,200 |         |         |         |         |         | \$890,200 |

# Town Center Drive Rehabilitation, Crescent Blvd to 11 Mile Road (PASER 6)

Project Number: 5 CIP Number: 082-11

# **Description:**

Rehabilitation of existing Town Center Drive from Crescent Blvd to 11 Mile Road (1,600 feet) to provide a smooth asphalt surface and to extend the useful life of the roadway. This roadway was rated a PASER 4 in 2012 and should be rehabilitated to improve the pavement surface before the road deteriorates further requiring reconstruction.

#### Justification:

The road has a PASER rating of 4 in 2012.

| Category     | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |   |
|--------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|---|
| Engineering  | 202-000.00-000.0 | \$74,300  |         |         |         |         |         |           |   |
| Other/ROW    |                  |           |         |         |         |         |         |           |   |
| Construction | 202-000.00-000.0 | \$356,630 |         |         |         |         |         |           |   |
|              | TOTAL BUDGET     | \$430,930 |         |         |         |         |         | \$430,930 | ) |

## 11 Mile Road Town Center to Meadowbrook Road Rehabilitation (PASER 2; Asphalt)

Project Number: 6 CIP Number: 082-12

# **Description:**

Reconstruction of existing 11 Mile Road between Town Center Drive and just east of Meadowbrook Road including non-motorized improvements. The road was rated a PASER 2 in 2012 and has deteriorated beyond cost-effective maintenance measures. The cost of maintenance has increased for this portion of road over the past several years and reconstruction is the only method to improve this segment of road. This road is going from concrete to asphalt.

## Justification:

This road has a PASER rating of 2 in 2012 and is no longer serviceable using normal maintenance.

| Category     | Account No.      | 2013-14   | 2014-15     | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL       |
|--------------|------------------|-----------|-------------|---------|---------|---------|---------|-------------|
| Engineering  | 202-000.00-000.0 | \$100,000 | \$120,000   |         |         |         |         | \$120,000   |
| Other/ROW    |                  |           |             |         |         |         |         |             |
| Construction | 202-000.00-000.0 |           | \$1,080,000 |         |         |         |         | \$1,080,000 |
|              | TOTAL BUDGET     | \$100,000 | \$1,200,000 |         |         |         |         | \$1,300,000 |

# West Road Repaving, West Park Drive to City limits

Project Number: 7 CIP Number: 112-03

# **Description:**

Rehabilitation/Repaving of 1300 feet of West Road between West Park Drive and city limits to increase the useful life of the road. Bike lanes will be added to the road as proposed in the non-motorized master plan to improve non-motorized connectivity.

## Justification:

Improve Infrastructure

| Category     | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 |         | \$28,800  |         |         |         |         | \$28,800  |
| Other/ROW    |                  |         |           |         |         |         |         |           |
| Construction | 202-000.00-000.0 |         | \$138,250 |         |         |         |         | \$138,250 |
|              | TOTAL BUDGET     |         | \$167,050 |         |         |         |         | \$167,050 |

# **Heslip Drive Rehabilitation (PASER 4)**

Project Number: 082-25

# **Description:**

Rehabilitation of Heslip Drive from 9 Mile Road to the end (2,050 feet) to extend the life of the roadway.

## Justification:

The road has a PASER rating of 4 and should be rehabilitated in order to keep the pavement in serviceable condition. Thirty-six (36) businesses are located on Heslip Drive. The companies willing to disclose the number of employees housed on Heslip Drive reported at the minimum 156 staff members.

| Category<br>Engineering | Account No. 202-000.00-000.0 | 2013-14 | <b>2014-15</b><br>\$58,100 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | <b>TOTAL</b><br>\$58,100 |
|-------------------------|------------------------------|---------|----------------------------|---------|---------|---------|---------|--------------------------|
| Other/ROW               |                              |         |                            |         |         |         |         |                          |
| Construction            | 202-000.00-000.0             |         | \$278,600                  |         |         |         |         | \$278,600                |
|                         | TOTAL BUDGET                 |         | \$336,700                  |         |         |         |         | \$336,700                |

# Karim Blvd., Rehabilitation (PASER 2-Asphalt)

Project Number: 9 CIP Number: 082-18

# **Description:**

Reconstruction of Karim Blvd between 10 Mile Road and Grand River Avenue (1,771 feet). The pavement is in poor condition (PASER 2 in 2012) and the road lacks sufficient drainage, requiring reconstruction of the road. The project will include the construction of all existing sidewalk gaps.

## Justification:

This road has a PASER rating of 2 in 2012 and is no longer serviceable using normal maintenance. Fifteen (15) businesses are located on Karim Blvd. The companies willing to disclose the number of employees housed on Karim Blvd. reported at the minimum 15 staff members.

| Category     | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 |         | \$114,200 |         |         |         |         | \$114,200 |
| Other/ROW    |                  |         |           |         |         |         |         |           |
| Construction | 202-000.00-000.0 |         | \$548,300 |         |         |         |         | \$548,300 |
|              | TOTAL BUDGET     |         | \$662,500 |         |         |         |         | \$662,500 |

# Novi Road from 12 Mile Road to 13 Mile Road Rehabilitation (PASER 4, Asphalt)

Project Number: 10 CIP Number: 102-03

# **Description:**

Rehabilitation of Novi Road from 12 Mile Road to 13 Mile Road (6,700 feet) to provide a smooth asphalt surface and extend the life of the road. This project was submitted in 2013 for consideration of Federal funding in 2016.

## Justification:

The road is currently rated a PASER 4 and should be rehabilitated to keep the road in serviceable condition.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 |         |         | \$190,125 |         |         |         | \$190,125 |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 202-000.00-000.0 |         |         | \$760,500 |         |         |         | \$760,500 |
|              | TOTAL BUDGET     |         |         | \$950,625 |         |         |         | \$950,625 |

# Meadowbrook Road Rehabilitation, I-96 to 12 Mile, (PASER 5)

Project Number: 11 CIP Number: 112-02

# **Description:**

Rehabilitation of approximately 0.7 miles of Meadowbrook Road between the I-96 bridge and 12 Mile Road. The project will rehabilitate the existing pavement and provide paved shoulders for non-motorized connectivity. This project is being submitted in 2013 for consideration of Federal grant funding.

#### Justification:

The road has a PASER rating of 5 and requires capital preventative maintenance.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 |         |         | \$81,475  |         |         |         | \$81,475  |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 202-000.00-000.0 |         |         | \$325,900 |         |         |         | \$325,900 |
|              | TOTAL BUDGET     |         |         | \$407,375 |         |         |         | \$407,375 |

# Taft Road, 9 Mile Road to 10 Mile Road Rehabilitation (PASER 4; Asphalt)

Project Number: 12 CIP Number: 102-05

# **Description:**

Rehabilitation of 5,280 feet of Taft Road from 9 Mile Road to 10 Mile Road to provide a smooth asphalt surface and extend the life of the road. The project would add bike lanes along Taft Road as recommended by the non-motorized master plan to improve non-motorized connectivity. This project is being submitted in 2013 for potential grant funding in 2016.

#### Justification:

The road is currently rated a PASER 4 and should be rehabilitated to improve the road so it will remain serviceable.

| Category<br>Engineering | Account No. 202-000.00-000.0 | 2013-14 | 2014-15 | <b>2015-16</b> \$230,625 | 2016-17 | 2017-18 | 2018-19 | <b>TOTAL</b> \$230,625 |
|-------------------------|------------------------------|---------|---------|--------------------------|---------|---------|---------|------------------------|
| Other/ROW               |                              |         |         |                          |         |         |         |                        |
| Construction            | 202-000.00-000.0             |         |         | \$922,500                |         |         |         | \$922,500              |
|                         | TOTAL BUDGET                 |         |         | \$1,153,125              |         |         |         | \$1,153,125            |

# Taft Road, 10 mile Road to Grand River Avenue (PASER 4, Asphalt)

Project Number: 13 CIP Number: 121-001

# **Description:**

Rehabilitation of 7,500 feet of Taft Road from 10 Mile Road to Grand River Avenue to provide a smooth asphalt surface and extend the life of the road. The project would add bike lanes along Taft Road as recommended by the non-motorized master plan to improve non-motorized connectivity. This project is being submitted in 2013 for potential grant funding in 2016.

#### Justification:

The road is currently rated a PASER 4 and should be rehabilitated to improve the road so it will remain serviceable.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 |         |         | \$121,700 |         |         |         | \$121,700 |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 202-000.00-000.0 |         |         | \$486,800 |         |         |         | \$486,800 |
|              | TOTAL BUDGET     |         |         | \$608,500 |         |         |         | \$608,500 |

# 9 Mile Road, Novi Road to Meadowbrook Road Rehabilitation

Project Number: 14 CIP Number: 122-65

# Description:

Rehabilitation and partial reconstruction of 1.0 miles of Nine Mile Road between Novi Road and Meadowbrook Road. The project has been submitted to the Oakland Federal Aid Task Force for consideration of grant funding.

#### Justification:

The road was rated a PASER 5 in 2012 and is in need of rehabilitation to extend the serviceable life of the pavement.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 |         |         | \$85,325  |         |         |         | \$85,325  |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 202-000.00-000.0 |         |         | \$355,017 |         |         |         | \$355,017 |
|              | TOTAL BUDGET     |         |         | \$440,342 |         |         |         | \$440,342 |

# Wixom Road, from 10 Mile Road to 11 Mile Road (PASER 5; Asphalt)

Project Number: 15 CIP Number: 092-22

# **Description:**

Repair, mill and overlay Wixom Road from 10 Mile Road to 11 Mile Road (5,200 feet) to extend the useful life of the road. The existing roadway is asphalt and the curb and gutter is in relatively good condition. The road had a PASER rating of 5 in 2012 and minor rehabilitation would help to increase the serviceable life of the roadway.

#### Justification:

The road has a PASER rating of 5 and should be rehabilitated in order to keep the pavement in serviceable condition.

| Category<br>Engineering | Account No. 202-000.00-000.0 | 2013-14 | 2014-15 | 2015-16 | <b>2016-17</b> \$123,700 | 2017-18 | 2018-19 | <b>TOTAL</b> \$123,700 |
|-------------------------|------------------------------|---------|---------|---------|--------------------------|---------|---------|------------------------|
| Other/ROW               |                              |         |         |         |                          |         |         |                        |
| Construction            | 202-000.00-000.0             |         |         |         | \$593,700                |         |         | \$593,700              |
|                         | TOTAL BUDGET                 |         |         |         | \$717,400                |         |         | \$717,400              |

## 13 Mile Road Rehabilitation, Novi Road to Meadowbrook Road (PASER 6; Asphalt)

Project Number: 16 CIP Number: 10-2023

# **Description:**

Justification:

Repair and repave 13 Mile Road from Novi Road to Meadowbrook Road (2,600 feet) to extend the useful life of the roadway. The project includes reconstruction of a failed section of 13 Mile near Meadowbrook adjacent to a wetland and the repair of a failed section of Meadowbrook Road near Burroughs Ave. The project would also add bike lanes and other non-motorized improvements as recommended by the master plan to improve non-motorized connectivity.

The road has a PASER rating of 6 and will require capital preventative maintenance.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 |         |         |         | \$95,610  |         |         | \$95,610  |
| Other/ROW    |                  |         |         |         |           |         |         |           |
| Construction | 202-000.00-000.0 |         |         |         | \$458,940 |         |         | \$458,940 |
|              | TOTAL BUDGET     |         |         |         | \$554,550 |         |         | \$554,550 |

# Trans-X Drive Rehabilitation (PASER 5/4; Concrete)

Project Number: 17 CIP Number: 082-16

# **Description:**

Partial reconstruction and rehabilitation of discrete areas of Trans-X Road along with preventative maintenance for the remainder of the segment. This project would complement the capital preventative maintenance completed in 2010 to preserve the life of the roadway.

#### Justification:

The road has a PASER rating of 4 to 5 and should be rehabilitated in order to keep the pavement in serviceable condition.

| Category<br>Engineering | Account No. 202-000.00-000.0 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | <b>2017-18</b><br>\$65,000 | 2018-19 | <b>TOTAL</b> \$65,000 |
|-------------------------|------------------------------|---------|---------|---------|---------|----------------------------|---------|-----------------------|
| Other/ROW               |                              |         |         |         |         |                            |         |                       |
| Construction            | 202-000.00-000.0             |         |         |         |         | \$312,800                  |         | \$312,800             |
|                         | TOTAL BUDGET                 |         |         |         |         | \$377,800                  |         | \$377,800             |

# Southwest Quadrant Ring Road Flint Street, Novi Road and Grand River - New

Project Number: 18 CIP Number: 092-50

# **Description:**

A study is currently underway to evaluate the existing alignment of Flint Street and potential alternatives to provide a connection to the ring road at the northwest quadrant of Grand River Avenue and Novi Road. A study of the Southwest Quadrant was recommended by the Ring Road study of the Northwest Quadrant. Preliminary design and report will be completed at the end of FY12-13.

#### Justification:

Study recommended by the Northwest Quadrant Ring Road Scoping Study to complete the ring road around the Grand River and Novi Road intersection to improve traffic flow in the area.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18     | 2018-19 | TOTAL       |
|-------------------------|------------------|---------|---------|---------|---------|-------------|---------|-------------|
| Other/ROW               |                  |         |         |         |         |             |         |             |
| Construction            | 204-000.00-000.0 |         |         |         |         | \$1,750,000 |         | \$1,750,000 |
|                         | TOTAL BUDGET     |         |         |         |         | \$1,750,000 |         | \$1,750,000 |

# 11 Mile Road Repaving, Taft Road to Beck Road (PASER 6; Asphalt)

Project Number: 19 CIP Number: 082-30

# **Description:**

Repair and repaving of 11 Mile Road between Taft Road and Beck Road (5,280 feet). Includes the addition of a dedicated right turn lane for westbound 11 Mile Road at Beck Road as recommended in Beck Road Scoping Study short term capacity improvements. The project would also look for opportunities for non-motorized improvements, however the existing curb and gutter is in relatively good condition.

# Justification:

The road has a PASER rating of 6 and should be rehabilitated in order to keep the road in serviceable condition.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19   | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|---------|-----------|-----------|
| Engineering  | 202-000.00-000.0 |         |         |         |         |         | \$135,000 | \$135,000 |
| Other/ROW    |                  |         |         |         |         |         |           |           |
| Construction | 202-000.00-000.0 |         |         |         |         |         | \$647,700 | \$647,700 |
|              | TOTAL BUDGET     |         |         |         |         |         | \$782,700 | \$782,700 |

# Old Novi Road Rehabilitation (PASER 7; Asphalt)

Project Number: 20 CIP Number: 102-04

# **Description:**

Rehabilitation of Old Novi Road from Novi Road to 13 Mile Road (1,630 feet) to provide a smooth asphalt surface and extend the life of the road.

## Justification:

The road is currently rated a PASER 7 and will be due for capital preventative maintenance.

| Category<br>Engineering | Account No. 202-000.00-000.0 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | <b>2018-19</b><br>\$114,800 | <b>TOTAL</b> \$114,800 |
|-------------------------|------------------------------|---------|---------|---------|---------|---------|-----------------------------|------------------------|
| Other/ROW               |                              |         |         |         |         |         |                             |                        |
| Construction            | 202-000.00-000.0             |         |         |         |         |         | \$551,000                   | \$551,000              |
|                         | TOTAL BUDGET                 |         |         |         |         |         | \$665,800                   | \$665,800              |

# Donelson to Sheraton and West Oaks - New Road Construction (as recommended in Master Plan)

Project Number: 21 CIP Number: 082-32

# **Description:**

Proposed new road (2,920 feet) south of existing West Oaks development connecting West Oaks Drive to Donelson and providing access to the businesses that currently have access from Sheraton Drive. The project would include changes to existing Sheraton Drive and West Oaks Drive. Requires property owner cooperation or acquisition of right-of-way. This project was proposed in the 2007 Master Plan for Land Use update. A determination has not yet been made to use asphalt or concrete.

# Justification:

Recommended by the 2007 Master Plan for Land Use update.

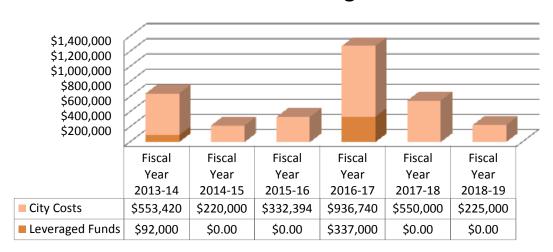
| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19   | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|---------|-----------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         |         |         | \$143,000 | \$143,000 |
| Other/ROW    | 204-000.00-000.0 |         |         |         |         |         | \$100,000 | \$100,000 |
| Construction | 204-000.00-000.0 |         |         |         |         |         | \$658,000 | \$658,000 |
|              | TOTAL BUDGET     |         |         |         |         |         | \$901,000 | \$901,000 |

# **Intersection and Signals**

The City of Novi is 32 square miles with 171 miles of major and neighborhood roads. To facilitate safe motorized and non-motorized transportation throughout the City safe road and street intersections and traffic signals need to be designed and maintained year in and year out. Sample projects found in this category are new traffic signals at City intersections, pedestrian crossing signals, turn lanes on major roads and roundabouts at key intersections to calm traffic.

Funding for proposed projects come from a variety of sources Major, Local and Municipal Street funds, and various grant programs that fund traffic related projects.

# **Intersections and Signals**



|             | FY 13-14  | FY 14-15  | FY 15-16  | FY 16-17    | FY 17-18  | FY 18-19  |
|-------------|-----------|-----------|-----------|-------------|-----------|-----------|
| GRAND TOTAL | \$645,420 | \$220,000 | \$332,394 | \$1,273,740 | \$550,000 | \$225,000 |

# Extend Right Turn Lane - Westbound Grand River Avenue at Beck Road

Project Number: 22 CIP Number: 116-02

# **Description:**

The existing right turn lane for westbound Grand River Avenue to northbound Beck Road would be extended several hundred feet to increase the capacity of the intersection. This project would alleviate the traffic back-ups that occur for westbound Grand River during the afternoon peak hours. The project has received a federal congestion mitigation/air quality (CMAQ) improvement grant for 2014 construction. The grant covers 80% of the construction cost with the remaining construction and all of the engineering/ROW costs to be the City's responsibility.

#### Justification:

Will reduce travel delays and congestion and improve safety at the intersection of Grand River Avenue and Beck Road

| Category     | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Engineering  | 204-000.00-000.0 | \$24,000  |         |         |         |         |         |           |
| Other/ROW    | 204-000.00-000.0 | \$15,000  |         |         |         |         |         |           |
| Construction | 204-000.00-000.0 | \$115,000 |         |         |         |         |         |           |
|              | TOTAL BUDGET     | \$154,000 |         |         |         |         |         | \$154,000 |

# New Traffic Signal Wixom Road and Glenwood Drive/Deerfield Elementary

Project Number: 23 CIP Number: 122-01

## **Description:**

The intersection of Wixom Road and Glenwood Drive (Island Lake of Novi) also contains the driveway for Deerfield Elementary School. The increase in traffic along Wixom Road and the lack of gaps in traffic has made the signal warranted. The signal would also provide a signalized non-motorized mid-block crossing.

#### Justification:

The proposed signal is recommended by the traffic engineering study completed in 2012 and would improve safety at the intersection.

| Category<br>Engineering | Account No. 204-000.00-000.0 | <b>2013-14</b> \$36,980 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------------------|-------------------------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               |                              |                         |         |         |         |         |         |           |
| Construction            | 204-000.00-000.0             | \$161,200               |         |         |         |         |         |           |
|                         | TOTAL BUDGET                 | \$198,180               |         |         |         |         |         | \$198,180 |

# Haggerty Road at Grand River, Add Southbound Right Turn Lane and Reconstruct Traffic Signal

Project Number: 24 CIP Number: 126-10

# **Description:**

This project was submitted for consideration for Federal safety grant funding for construction year 2014 and would add a southbound right turn lane, replace the existing diagonal span wire signals with a modern box span configuration and add additional safety improvements to the operation of the traffic signal. Pedestrian improvements such as street lighting and pedestrian signal improvements are also proposed. A grant application was submitted for safety grant funding in late 2012 for construction in 2014 (awards to be announced in early 2013).

# Justification:

The project was recommended for improvements in the 2012 Intersection Crash Study.

| Category     | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |  |
|--------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|--|
| Engineering  | 204-000.00-000.0 | \$58,650  |         |         |         |         |         |           |  |
| Other/ROW    |                  |           |         |         |         |         |         |           |  |
| Construction | 204-000.00-000.0 | \$234,590 |         |         |         |         |         |           |  |
|              | TOTAL BUDGET     | \$293,240 |         |         |         |         |         | \$293,240 |  |

# 13 Mile and Cabot-New Signal

Project Number: 25 CIP Number: 086-06

## **Description:**

Construct a new traffic signal for 13 Mile and Cabot Drive based on traffic engineering study completed in 2012.

#### Justification:

The traffic engineering study recommends installation of a traffic signal at this intersection to improve safety.

| Category<br>Engineering | Account No. 204-000.00-000.0 | 2013-14 | <b>2014-15</b><br>\$45,000 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | <b>TOTAL</b><br>\$45,000 |
|-------------------------|------------------------------|---------|----------------------------|---------|---------|---------|---------|--------------------------|
| Other/ROW               |                              |         |                            |         |         |         |         |                          |
| Construction            | 204-000.00-000.0             |         | \$175,000                  |         |         |         |         | \$175,000                |
|                         | TOTAL BUDGET                 |         | \$220,000                  |         |         |         |         | \$220,000                |

## Taft and 9 Mile Road - New Roundabout

Project Number: 26 CIP Number: 086-08

# **Description:**

Construct a modern roundabout at the intersection of Taft Road and 9 Mile Road. The roundabout would eliminate the existing four-way stop control and act as a traffic calming measure. Roundabouts not only act as a traffic calming measure (slowing traffic down) but are also safer by eliminating the head-on and angle crashes which tend to cause injury. A grant application will be submitted for potential federal funding for 100% of the construction cost (awards to be announced in early 2013 for funding year 2016).

#### Justification:

Traffic safety improvement, congestion reduction, air quality improvement and aesthetic improvement.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16  | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|----------|-----------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 |         |         | \$82,394 |           |         |         | \$82,394  |
| Other/ROW    |                  |         |         |          |           |         |         |           |
| Construction | 202-000.00-000.0 |         |         |          | \$397,990 |         |         | \$397,990 |
|              | TOTAL BUDGET     |         |         | \$82,394 | \$397,990 |         |         | \$480,384 |

# Napier Road and Ten Mile Road Intersection Improvements

Project Number: 27 CIP Number: 116-04

#### **Description:**

The project would improve the intersection by widening Napier and Ten Mile at the intersection to add left-turn lanes and could include signalization of the intersection, if warranted, or a roundabout. The intersection was determined to have a casualty ratio from crashes at a much higher rate than other intersections in SE Michigan which can be mitigated by the improvements. The project would be a potential candidate for safety grant funding.

## Justification:

Improve safety at the intersection of Ten Mile and Napier that currently has a higher than average casualty ratio.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         | \$50,000  |         |         |         | \$50,000  |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 204-000.00-000.0 |         |         | \$200,000 |         |         |         | \$200,000 |
|              | TOTAL BUDGET     |         |         | \$250,000 |         |         |         | \$250,000 |

## New Roundabout at 11 Mile Road and Wixom Road

Project Number: 28 CIP Number: 102-10

# **Description:**

The intersection of Wixom and 11 Mile Road has been studied twice and has not met the warrant for a traffic signal. The increase in traffic along Wixom Road during peak hours has decreased the number of gaps to allow vehicles to turn onto Wixom Road. A roundabout would regulate traffic at the intersection and work to calm traffic on Wixom Road consistent with the non-motorized character recommended in the non-motorized master plan.

#### Justification:

Recommended by traffic engineering study completed in 2012 and 2011 Non-Motorized Master Plan

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Engineering  | 202-000.00-000.0 |         |         |         | \$175,150 |         |         | \$175,150 |
| Other/ROW    |                  |         |         |         |           |         |         |           |
| Construction | 202-000.00-000.0 |         |         |         | \$700,600 |         |         | \$700,600 |
|              | TOTAL BUDGET     |         |         |         | \$875,750 |         |         | \$875,750 |

# Meadowbrook Road at 8 Mile Road Signal Improvements

Project Number: 29 CIP Number: 116-05

# **Description:**

The project would reconstruct and modernize the existing signal at the intersection of Eight Mile Road and Meadowbrook Road to add a left turn phase to the signal. The existing signal is nearing the end of its useful life and lacks a dedicated left turn phase for EB Eight Mile Road to Meadowbrook Road. There was a significant number of crashes at this intersection that could be mitigated by adding a left turn phase.

## Justification:

Recommended by the 2012 Intersection Crash Study

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         |         | \$35,000  |         | \$35,000  |
| Other/ROW    |                  |         |         |         |         |           |         |           |
| Construction | 204-000.00-000.0 |         |         |         |         | \$140,000 |         | \$140,000 |
|              | TOTAL BUDGET     |         |         |         |         | \$175,000 |         | \$175,000 |

# Add Dual Left Turn Lane - East Bound Grand River at Beck Road

Project Number: 30 CIP Number: 116-06

# **Description:**

This project would widen EB Grand River at Beck to add a second left turn lane to add capacity at the intersection. The operation of the intersection is impacted by the long queue for the EB left turn from Grand River to Beck and would be mitigated by the second left turn lane. This project was recommended by the I-96 Novi Transportation Study.

## Justification:

Improve the operation of the Grand River and Beck intersection

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         |         | \$93,000  |         | \$93,000  |
| Other/ROW    |                  |         |         |         |         |           |         |           |
| Construction | 204-000.00-000.0 |         |         |         |         | \$282,000 |         | \$282,000 |
|              | TOTAL BUDGET     |         |         |         |         | \$375,000 |         | \$375,000 |

# Lewis and Haggerty Road - New Signal

Project Number: 31 CIP Number: 086-07

# **Description:**

Construct a new traffic signal for the intersection of Lewis Drive and Haggerty Road based on anticipated future need.

#### Justification:

Traffic safety improvement and congestion reduction.

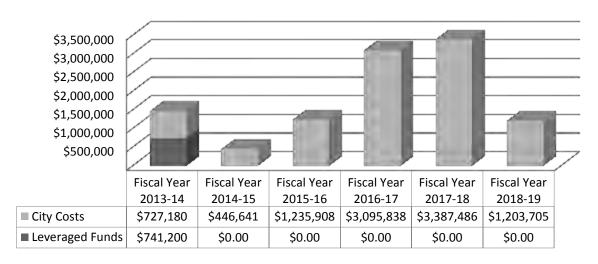
| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19   | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|---------|-----------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         |         |         | \$50,000  | \$50,000  |
| Other/ROW    |                  |         |         |         |         |         |           |           |
| Construction | 204-000.00-000.0 |         |         |         |         |         | \$175,000 | \$175,000 |
|              | TOTAL BUDGET     |         |         |         |         |         | \$225,000 | \$225,000 |

# Sidewalk and Pathways

The City of Novi is committed to providing non-motorized sidewalks and pathways in an effort to provide alternative modes of transportation for citizens and stakeholders alike. In this effort the City Council adopted a Non-Motorized Master Plan in 2011. It recommends the installation of bike routes and wayfinding signage along residential streets to enhance the existing neighborhood connections. The City of Novi has had a long standing interest in providing pathways and sidewalks to connect neighborhoods with destinations throughout the City and Region. Currently the City has over 200 miles of pathways and sidewalks. The Capital Improvement Plan incorporates plans and efforts and preferences of the Non-Motorized Plan.

Walkable Novi Committee along with the analysis from the City's Engineering and Planning Division recommends fills to the non-motorized gaps throughout the City. A portion of the City's recently voter approved road millage will go toward financing sidewalk and pathway projects in the City of Novi.

# **Sidewalks and Pathways**



|             | FY 13-14    | FY 14-15  | FY 15-16    | FY 16-17    | FY 17-18    | FY 18-19    |
|-------------|-------------|-----------|-------------|-------------|-------------|-------------|
| GRAND TOTAL | \$1,468,380 | \$446,641 | \$1,235,908 | \$3,095,838 | \$3,387,486 | \$1,203,705 |

# Americans with Disabilities Act (ADA) Compliance Plan Annual Implementation

Project Number: 32 CIP Number: 10-5002

# **Description:**

Annual program to retrofit existing sidewalk and pathway facilities in public rights-of-way with slope and ramp improvements to meet Americans with Disability Act (ADA) requirements for accessibility, based on the findings and recommendations of the February 2011 ADA Compliance Plan. This project is in addition to existing allocations in other road and sidewalk projects that are used for ADA compliance.

#### Justification:

An annual budget for ADA compliance is recommended by the 2011 ADA Compliance Transition Plan to establish a plan for ADA conformance in the City. As discussed in the ADA Compliance Plan, a provision of federal regulation 28 CFR 35 is that all state and local governments prepare a transition plan to guide efforts to bring facilities into compliance with ADA, which must include a schedule and methodology for compliance. An annual budget was initiated in 2011 of \$50,000 to facilitate compliance. See attached Council resolution and report for project justification details.

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15  | 2015-16  | 2016-17  | 2017-18  | 2018-19  | TOTAL     |
|-------------------------|------------------|----------|----------|----------|----------|----------|----------|-----------|
| Other/ROW               |                  |          |          |          |          |          |          |           |
| Construction            | 204-000.00-000.0 | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$250,000 |
|                         | TOTAL BUDGET     | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$300,000 |

# Haggerty Road and Nine Mile Road Pedestrian Improvements

Project Number: 33 CIP Number: 125-998

#### **Description:**

The Nine Mile Road pathway project was completed in 2011 and completed a pedestrian connection for three of the four quadrants of the intersection of Nine Mile Road at Haggerty Road. This project would complete the east-west pedestrian crossing on the north side of Nine Mile Road at Haggerty. This crossing is now feasible because of subsurface investigation to accurately determine the depth of the Buckeye Petroleum Pipeline in this location. The project would relocate some above ground Buckeye facilities and construct a ramp on the west side and east side of Haggerty Road north of Nine Mile Road to provide a continuous pedestrian connection along the north side.

#### Justification:

Public concerns regarding safety and improved pedestrian access for the intersection warrant the completion of this connection

| Category     | Account No.  | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|--------------|--------------|----------|---------|---------|---------|---------|---------|----------|
| Engineering  |              | \$12,340 |         |         |         |         |         |          |
| Other/ROW    |              |          |         |         |         |         |         |          |
| Construction |              | \$73,420 |         |         |         |         |         |          |
|              | TOTAL BUDGET | \$85,760 |         |         |         |         |         | \$85,760 |

# Segment NC1-East Lake Drive to Novi Road (8' foot - Asphalt)

Project Number: 34 CIP Number: 10-5004

# **Description:**

Construction of 1,000 feet of 8-foot wide pathway as a neighborhood connector between Novi Road and East Lake Drive through Hickory Woods Elementary School. Design was completed FY12-13.

#### Justification:

Recommended as a short-term non-motorized improvement

| Category     | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |  |
|--------------|------------------|----------|---------|---------|---------|---------|---------|----------|--|
| Engineering  | 204-000.00-000.0 | \$16,695 |         |         |         |         |         |          |  |
| Other/ROW    |                  |          |         |         |         |         |         |          |  |
| Construction | 204-000.00-000.0 | \$52,000 |         |         |         |         |         |          |  |
|              | TOTAL BUDGET     | \$68,695 |         |         |         |         |         | \$68,695 |  |

# M-5/I-275 Trail Connector-Phase I--(10' foot Pathway) on East Side of Meadowbrook Road from I-96 to 12 Mile Road

Project Number: 35 CIP Number: 115-022

# **Description:**

Construction of 4,500 ft of 10-foot pathway along the east side of Meadowbrook Road as the first phase of the connection between the terminus of the 275 trail at the south east corner of Meadowbrook Road and I-96 and the M-5 trail at 13 Mile and M-5 (west side). The project will include working with MDOT to identify and construct a crossing of I-96 on the existing Meadowbrook Road bridge. The pathway is proposed on the east side of Meadowbrook to minimize the number of property owners affected by easements for the project. CURRENTLY ASSUMES WE ARE FUNDED WITH A GRANT

#### Justification:

The non-motorized master plan identified several locations to cross I-96 to provide better non-motorized connectivity within the community. Meadowbrook Road is a key crossing location because of the proximity to the I-275 pathway and master planned future connection to the M-5 pathway north of 13 Mile Road.

| Category     | Account No.      | 2013-14     | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL       |
|--------------|------------------|-------------|---------|---------|---------|---------|---------|-------------|
| Engineering  | 204-000.00-000.0 | \$138,975   |         |         |         |         |         |             |
| Other/ROW    |                  |             |         |         |         |         |         |             |
| Construction | 204-000.00-000.0 | \$926,500   |         |         |         |         |         |             |
|              | TOTAL BUDGET     | \$1,065,475 |         |         |         |         |         | \$1,065,475 |

# Beck Road at Cheltenham Mid-Block Non-Motorized Crossing

Project Number: 36 CIP Number: 125-01

# **Description:**

Construction of a non-motorized crossing of Beck Road at Cheltenham, midway between 9 Mile Road and 10 Mile Road as recommended by the Non-Motorized Master Plan to facilitate a neighborhood connection between the west side and east side of Beck Road.

#### Justification:

A non-motorized crossing is necessary in this location to facilitate a neighborhood connection across Beck Road.

| Category     | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL   |   |
|--------------|------------------|----------|---------|---------|---------|---------|---------|---------|---|
| Engineering  | 204-000.00-000.0 | \$15,500 |         |         |         |         |         |         |   |
| Other/ROW    |                  |          |         |         |         |         |         |         |   |
| Construction | 204-000.00-000.0 | \$57,000 |         |         |         |         |         |         |   |
|              | TOTAL BUDGET     | \$72,500 |         |         |         |         |         | \$72,50 | 0 |

# Segment 89--Novi Road, East Side 10 Mile Road - Arena (8' foot Pathway) Concrete

Project Number: 37 CIP Number: 085-89

# **Description:**

Construction of 440 feet of 8-foot wide bike path to fill one gap along the east side of Novi Road from Arena Drive to 10 Mile Road. This project was identified as a top 20 priority segment by the Greenway/Pathway Study.

## Justification:

| Category     | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |  |
|--------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|--|
| Engineering  | 204-000.00-000.0 | \$21,700  |         |         |         |         |         |           |  |
| Other/ROW    |                  |           |         |         |         |         |         |           |  |
| Construction | 204-000.00-000.0 | \$104,250 |         |         |         |         |         |           |  |
|              | TOTAL BUDGET     | \$125,950 |         |         |         |         |         | \$125,950 |  |

# Segment 29--12 Mile Road, South Side, Between Meadowbrook Road and Novi Road

Project Number: 38 CIP Number: 125-029

# **Description:**

Construction of 400 feet of boardwalk to fill a gap along the south side of 10 Mile Road west of Meadowbrook Road. This project was identified as a priority short segment by the 2012 Update to the Pathway and Sidewalk Prioritization Analysis.

#### Justification:

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

| Category<br>Engineering | Account No. 204-000.00-000.0 | 2013-14 | <b>2014-15</b><br>\$11,900 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | <b>TOTAL</b><br>\$11,900 |
|-------------------------|------------------------------|---------|----------------------------|---------|---------|---------|---------|--------------------------|
| Other/ROW               | 201 000.00 000.0             |         | Ψ11/700                    |         |         |         |         | ψ11 <sub>1</sub> 700     |
| Construction            | 204-000.00-000.0             |         | \$57,300                   |         |         |         |         | \$57,300                 |
|                         | TOTAL BUDGET                 |         | \$69,200                   |         |         |         |         | \$69,200                 |

# Segment 16--13 Mile Road, South Side, Between Novi Road and Holmes

Project Number: 39 CIP Number: 125-016

# **Description:**

Construction of 225 LF of sidewalk along the south side of 13 Mile between Novi Road and Holmes Drive to complete the sidewalk connection along 13 Mile from Meadowbrook to Novi.

#### Justification:

This short segment would complete a non-motorized connection on 13 Mile Road between Meadowbrook and Novi.

| Category     | Account No.      | 2013-14 | 2014-15  | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|--------------|------------------|---------|----------|---------|---------|---------|---------|----------|
| Engineering  | 204-000.00-000.0 |         | \$5,000  |         |         |         |         | \$5,000  |
| Other/ROW    | 204-000.00-000.0 |         | \$30,000 |         |         |         |         | \$30,000 |
| Construction | 204-000.00-000.0 |         | \$18,000 |         |         |         |         | \$18,000 |
|              | TOTAL BUDGET     |         | \$53,000 |         |         |         |         | \$53,000 |

# Segment 76--Grand River, North Side, East of Seeley, (8' foot Pathway Short Segment) Concrete

Project Number: 40 CIP Number: 095-76

# **Description:**

Construct 400 feet of 8' pathway in concrete along the north side of Grand River just east and west of Seeley Road from the end of the existing pathway to the east to the crosswalk on Grand River constructed with the Grand River Avenue rehabilitation project in 2012.

#### Justification:

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

| Category     | Account No.      | 2013-14 | 2014-15  | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|--------------|------------------|---------|----------|---------|---------|---------|---------|----------|
| Engineering  | 204-000.00-000.0 |         | \$7,500  |         |         |         |         | \$7,500  |
| Other/ROW    | 204-000.00-000.0 |         | \$2,500  |         |         |         |         | \$2,500  |
| Construction | 204-000.00-000.0 |         | \$25,000 |         |         |         |         | \$25,000 |
|              | TOTAL BUDGET     |         | \$35,000 |         |         |         |         | \$35,000 |

# Segment 5--14 Mile Road, South Side, Beach walk to East Lake Drive

Project Number: 41 CIP Number: 125-005

# Description:

Construction of 600 LF of sidewalk along the south side of 14 Mile Road to complete a connection from East Lake Drive to Novi Road.

#### Justification:

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         | \$9,200 |           |         |         |         | \$9,200   |
| Other/ROW    | 204-000.00-000.0 |         |         | \$57,600  |         |         |         | \$57,600  |
| Construction | 204-000.00-000.0 |         |         | \$54,000  |         |         |         | \$54,000  |
|              | TOTAL BUDGET     |         | \$9,200 | \$111,600 |         |         |         | \$120,800 |

# Segment 39--Beck Road, West Side, from 11 Mile Road to Providence

Project Number: 42 CIP Number: 125-039

# **Description:**

Construction of 1,350 feet of 8' wide pathway along the west side of Beck Road to complete the gap between 11 Mile Road and Providence Park Hospital.

## Justification:

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

| Category     | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         | \$22,000  |         |         |         |         | \$22,000  |
| Other/ROW    | 204-000.00-000.0 |         | \$57,000  |         |         |         |         | \$57,000  |
| Construction | 204-000.00-000.0 |         | \$105,441 |         |         |         |         | \$105,441 |
|              | TOTAL BUDGET     |         | \$184,441 |         |         |         |         | \$184,441 |

# Segment 10--Beck Road, East Side, South of Pontiac Trail, (5' foot Sidewalk Short Segment) Concrete

Project Number: 43 CIP Number: 095-10

## **Description:**

Construct 200 feet of 5' sidewalk along the east side of Beck Road across the frontage of K & S Plaza, South of Pontiac Trail to fill an existing gap in the sidewalk system.

#### Justification:

| Category     | Account No.      | 2013-14 | 2014-15  | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|--------------|------------------|---------|----------|---------|---------|---------|---------|----------|
| Engineering  | 204-000.00-000.0 |         | \$5,300  |         |         |         |         | \$5,300  |
| Other/ROW    | 204-000.00-000.0 |         | \$15,000 |         |         |         |         | \$15,000 |
| Construction | 204-000.00-000.0 |         | \$25,500 |         |         |         |         | \$25,500 |
|              | TOTAL BUDGET     |         | \$45,800 |         |         |         |         | \$45,800 |

# M-5/I-275 Regional Trail Connection - Phase II - Meadowbrook Road and 13 Mile Road, between 12 Mile Road and M-5

Project Number: 44 CIP Number: 115-0003

## Description:

Widening the existing pathways along the east side of Meadowbrook Road between 12 Mile and 13 Mile Road and the existing pathway along the north side of 13 Mile Road between Meadowbrook Road and M-5 to a 10-foot wide regional trail. This project is the second phase of a project to create a 10-foot wide connection between the I-275 regional pathway that ends and Meadowbrook Road and I-275 and the M-5 pathway that begins at M-5 and 13 Mile Road.

#### Justification:

Provides full connectivity to a larger non-motorized regional network through the City of Novi

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|-----------|---------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         | \$170,000 |           |         |         | \$170,000 |
| Other/ROW    | 204-000.00-000.0 |         |         | \$12,000  |           |         |         | \$12,000  |
| Construction | 204-000.00-000.0 |         |         |           | \$816,510 |         |         | \$816,510 |
|              | TOTAL BUDGET     |         |         | \$182,000 | \$816,510 |         |         | \$998,510 |

# Pontiac Trail at Geisler Middle School - Non-Motorized Crossing

Project Number: 45 CIP Number: 125-5038

# **Description:**

Improvements to the existing traffic signal on Pontiac Trail at Geisler Middle School to provide a non-motorized crossing at Pontiac Trail. The project would include pedestrian ramp improvements, new pedestrian signals, and approximately 75 feet of sidewalk.

#### Justification:

| Category<br>Engineering | Account No. 204-000.00-000.0 | 2013-14 | 2014-15 | <b>2015-16</b><br>\$15,000 | 2016-17 | 2017-18 | 2018-19 | <b>TOTAL</b><br>\$15,000 |
|-------------------------|------------------------------|---------|---------|----------------------------|---------|---------|---------|--------------------------|
| Other/ROW               |                              |         |         |                            |         |         |         |                          |
| Construction            | 204-000.00-000.0             |         |         | \$70,200                   |         |         |         | \$70,200                 |
|                         | TOTAL BUDGET                 |         |         | \$85,200                   |         |         |         | \$85,200                 |

# Segment NC4--Neighborhood Connection Between Main Street and Meadowbrook Glens

Project Number: 46 CIP Number: 10-5007

# **Description:**

Construct 650 feet of 6 foot wide concrete sidewalk and acquire easement rights over existing sidewalks to develop a neighborhood connection between Meadowbrook Glens and Main Street.

#### Justification:

Recommended by Non-motorized master plan.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16  | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|--------------|------------------|---------|---------|----------|---------|---------|---------|----------|
| Engineering  | 204-000.00-000.0 |         |         | \$11,000 |         |         |         | \$11,000 |
| Other/ROW    | 204-000.00-000.0 |         |         | \$30,000 |         |         |         | \$30,000 |
| Construction | 204-000.00-000.0 |         |         | \$52,300 |         |         |         | \$52,300 |
|              | TOTAL BUDGET     |         |         | \$93,300 |         |         |         | \$93,300 |

# Segment 73--Meadowbrook (6' foot Pathway) East Side Grand River to 11 Mile Road

Project Number: 47 CIP Number: 115-73

# **Description:**

Design and construction of 550 feet of 6-foot wide pathway along the east side of Meadowbrook Road from Grand River to 11 Mile. This project was ranked 22nd in the 2012 Sidewalk Prioritization update and would link the I-275 pathway to Meadowbrook Road and Grand River Avenue.

## Justification:

| Category<br>Engineering | Account No. 204-000.00-000.0 | 2013-14 | 2014-15 | <b>2015-16</b><br>\$20,000 | 2016-17 | 2017-18 | 2018-19 | <b>TOTAL</b><br>\$20,000 |
|-------------------------|------------------------------|---------|---------|----------------------------|---------|---------|---------|--------------------------|
| Other/ROW               |                              |         |         |                            |         |         |         |                          |
| Construction            | 204-000.00-000.0             |         |         | \$75,200                   |         |         |         | \$75,200                 |
|                         | TOTAL BUDGET                 |         |         | \$95,200                   |         |         |         | \$95,200                 |

# Segment 127A--Novi Way, East Side (6' foot Sidewalk) Concrete

Project Number: 48 CIP Number: 101-127

# **Description:**

Construction of 350 feet of 6-foot wide sidewalk along the east side of Novi Way from 10 Mile Road south. The project would connect to the proposed sidewalk along the Power Park access road and provide connectivity to the Civic Center.

#### Justification:

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16  | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|--------------|------------------|---------|---------|----------|---------|---------|---------|----------|
| Engineering  | 204-000.00-000.0 |         |         | \$5,366  |         |         |         | \$5,366  |
| Other/ROW    |                  |         |         |          |         |         |         |          |
| Construction | 204-000.00-000.0 |         |         | \$25,754 |         |         |         | \$25,754 |
|              | TOTAL BUDGET     |         |         | \$31,120 |         |         |         | \$31,120 |

# Segment 93--9 Mile Road, Novi Road to Taft, North Side (6' foot Sidewalk) Concrete

Project Number: 49 CIP Number: 095-93

# **Description:**

Construction of 3,300 feet of 6-foot wide sidewalk along the north side of 9 Mile Road from Novi Road to Taft Road. This project was identified as a top 20 priority segment by the 2010 Update to the Pathway and Sidewalk Prioritization Analysis.

## Justification:

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         | \$48,572  |         |         |         | \$48,572  |
| Other/ROW    | 204-000.00-000.0 |         |         | \$17,000  |         |         |         | \$17,000  |
| Construction | 204-000.00-000.0 |         |         | \$233,146 |         |         |         | \$233,146 |
|              | TOTAL BUDGET     |         |         | \$298,718 |         |         |         | \$298,718 |

# Segment 154--Ten Mile Road (8' foot Pathway) South Side, Between Pheasant Run and Quince Drive, with Crosswalk to North

Project Number: 50 CIP Number: 115-154

#### Description:

Construction of 900 feet of 8' wide pathway along the south side of Ten Mile Road to complete the gap between Pheasant Run and Quince Drive. The project would also provide a mid-block crossing in the vicinity of Hampton Hill Drive to provide non-motorized connectivity between the neighborhoods and Orchard Hills Elementary.

#### Justification:

Promotes neighborhood connectivity as recommended in the non-motorized master plan

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         | \$49,770  |         |         |         | \$49,770  |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 204-000.00-000.0 |         |         | \$239,000 |         |         |         | \$239,000 |
|              | TOTAL BUDGET     |         |         | \$288,770 |         |         |         | \$288,770 |

# Segment 133--Wixom Road Crossing, North of 11 Mile Road (8' foot Pathway Short Segment) Concrete

Project Number: 51 CIP Number: 095-133

# Description:

Construction of approximately 75 feet of 8' pathway and associated ramps to cross Wixom Road north of 11 Mile and at Wixom Road and Glenwood to improve the pedestrian routes to Novi Middle School and Deerfield Elementary.

#### Justification:

| Category<br>Engineering | Account No. 204-000.00-000.0 | 2013-14 | 2014-15 | 2015-16 | <b>2016-17</b><br>\$4,755 | 2017-18 | 2018-19 | <b>TOTAL</b><br>\$4,755 |
|-------------------------|------------------------------|---------|---------|---------|---------------------------|---------|---------|-------------------------|
| Other/ROW               |                              |         |         |         |                           |         |         |                         |
| Construction            | 204-000.00-000.0             |         |         |         | \$22,823                  |         |         | \$22,823                |
|                         | TOTAL BUDGET                 |         |         |         | \$27,578                  |         |         | \$27,578                |

# Non-motorized Crossing of I-96 at Novi Road

Project Number: 52 CIP Number: 115-0002

## **Description:**

Construction of a non-motorized crossing of I-96 at Novi Road by constructing a sidewalk along the west side of Novi Road from Crescent Blvd to West Oaks, realigning the existing lanes on the bridge and constructing a barrier wall between vehicular and non-motorized traffic. The project may also require the upgrade of the two existing signals at Novi Road and I-96, which would be replaced with mast arms as was the rest of Novi Road.

#### Justification:

This project will provide a non-motorized connection between the north and south sides of Novi Road and provide access to shopping area.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         | \$144,000 |         |         | \$144,000 |
| Other/ROW    |                  |         |         |         |           |         |         |           |
| Construction | 204-000.00-000.0 |         |         |         | \$626,750 |         |         | \$626,750 |
|              | TOTAL BUDGET     |         |         |         | \$770,750 |         |         | \$770,750 |

## Segment 99--10 Mile Road, South Side, from Wixom Road to Beck Road (8' foot Pathway)

Project Number: 53 CIP Number: 095-99

#### **Description:**

Construction of 3,500 feet of 8' pathway along the south side of 10 Mile in two segments from Wixom to Beck

#### Justification:

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         | \$73,000  |         |         | \$73,000  |
| Other/ROW    |                  |         |         |         |           |         |         |           |
| Construction | 204-000.00-000.0 |         |         |         | \$325,000 |         |         | \$325,000 |
|              | TOTAL BUDGET     |         |         |         | \$398,000 |         |         | \$398,000 |

## Installation of Crosswalks on 12 Mile Road, at Donelson Drive and Cabaret Drive

Project Number: 54 CIP Number: 10-5008

## **Description:**

The south side of these intersections (the eastbound 12 Mile Road lanes) have traffic signals and can be retrofitted with pedestrian signals, however the north side of the intersection (westbound 12 Mile Road lanes) does not have traffic signals. Crosswalks with hybrid pedestrian signals would be added to facilitate pedestrian crossings of 12 Mile Road at Donelson and 12 Mile Road and Cabaret.

#### Justification:

Recommended in Non-motorized Master Plan and I-96 Transportation Improvement Plan

| Category<br>Engineering | Account No. 204-000.00-000.0 | 2013-14 | 2014-15 | 2015-16 | <b>2016-17</b><br>\$82,000 | 2017-18 | 2018-19 | <b>TOTAL</b><br>\$82,000 |
|-------------------------|------------------------------|---------|---------|---------|----------------------------|---------|---------|--------------------------|
| Other/ROW               |                              |         |         |         |                            |         |         |                          |
| Construction            | 204-000.00-000.0             |         |         |         | \$394,000                  |         |         | \$394,000                |
|                         | TOTAL BUDGET                 |         |         |         | \$476,000                  |         |         | \$476,000                |

## Segment 62--10 Mile Road, Eaton Center to Churchill (6' Sidewalk and Boardwalk) for North Side

Project Number: 55 CIP Number: 085-62

## **Description:**

Construction of 400 feet of boardwalk to fill a gap along the north side of 10 Mile Road from Eaton Center to Churchill Crossing. This project was identified as a top 20 priority segment by the 2012 Update to the Pathway and Sidewalk Prioritization Analysis.

#### Justification:

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         | \$25,000  |         |         | \$25,000  |
| Other/ROW    | 204-000.00-000.0 |         |         |         | \$20,000  |         |         | \$20,000  |
| Construction | 204-000.00-000.0 |         |         |         | \$118,550 |         |         | \$118,550 |
|              | TOTAL BUDGET     |         |         |         | \$163,550 |         |         | \$163,550 |

# Segement 6--West Park Drive (8 foot pathway, west side)

Project Number: 56 CIP Number: 125-006

## **Description:**

Construction of 2,100 feet of 8-foot wide pathway along the west side of West Park Drive from Bristol Corners Subdivision to Pontiac Trail.

#### Justification:

This project was ranked 47th in the 2012 Pathway Priortization.

| Category<br>Engineering | Account No.  | 2013-14 | 2014-15 | 2015-16 | <b>2016-17</b><br>\$78,750 | 2017-18 | 2018-19 | <b>TOTAL</b> \$78,750 |
|-------------------------|--------------|---------|---------|---------|----------------------------|---------|---------|-----------------------|
| Other/ROW               |              |         |         |         |                            |         |         |                       |
| Construction            |              |         |         |         | \$314,700                  |         |         | \$314,700             |
|                         | TOTAL BUDGET |         |         |         | \$393,450                  |         |         | \$393,450             |

## Taft Road at Jacob Drive - Non-Motorized Crossing

Project Number: 57 CIP Number: 115-0005

## **Description:**

Provides a mid-block crossing on Taft Road at Jacob Drive to provide access from the east side of Taft Road to the schools located on the west side of Taft Road.

#### Justification:

Recommended by the Non-Motorized Master Plan.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18  | 2018-19 | TOTAL    |
|-------------------------|------------------|---------|---------|---------|---------|----------|---------|----------|
| Other/ROW               |                  |         |         |         |         |          |         |          |
| Construction            | 204-000.00-000.0 |         |         |         |         | \$25,000 |         | \$25,000 |
|                         | TOTAL BUDGET     |         |         |         |         | \$25,000 |         | \$25,000 |

# Segment 9--Pontiac Trail, South Side (6' foot Sidewalk) Beck Road to West Park Drive

Project Number: 58 CIP Number: 115-009

## **Description:**

Construction of 5,000 feet of 6' wide sidewalk along the south side of Pontiac Trail between Beck Road and West Park Drive. The project is ranked among the top 20 in the 2011 update to the Sidewalk Prioritization Plan.

#### Justification:

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         |         | \$79,263  |         | \$79,263  |
| Other/ROW    | 204-000.00-000.0 |         |         |         |         | \$11,410  |         | \$11,410  |
| Construction | 204-000.00-000.0 |         |         |         |         | \$380,462 |         | \$380,462 |
|              | TOTAL BUDGET     |         |         |         |         | \$471,135 |         | \$471,135 |

# Segment 84--Meadowbrook Road, 9 Mile Road to 10 Mile Road (6' Sidewalk) for East Side

Project Number: 59 CIP Number: 085-84

## **Description:**

Construction of 4,400 feet of 6-foot wide sidewalk to fill two gaps along the east side of Meadowbrook Road from 9 Mile Road to 10 Mile Road. This project was identified as a top 20 priority segment by the Greenway/Pathway Study.

## Justification:

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         |         | \$106,095 |         | \$106,095 |
| Other/ROW    |                  |         |         |         |         |           |         |           |
| Construction | 204-000.00-000.0 |         |         |         |         | \$509,256 |         | \$509,256 |
|              | TOTAL BUDGET     |         |         |         |         | \$615,351 |         | \$615,351 |

# Segment 88--9 Mile Road, North Side, Novi Road - Railroad (6' Sidewalk) Concrete

Project Number: 60 CIP Number: 095-88

## **Description:**

Construction of 1,750 feet of 6-foot wide sidewalk along the north side of 9 Mile Road from Novi Road to CSX Railroad.

#### Justification:

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

| Category<br>Engineering | Account No. 204-000.00-000.0 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | <b>2017-18</b><br>\$28,000 | 2018-19 | <b>TOTAL</b> \$28,000 |
|-------------------------|------------------------------|---------|---------|---------|---------|----------------------------|---------|-----------------------|
| Other/ROW               |                              |         |         |         |         |                            |         |                       |
| Construction            | 204-000.00-000.0             |         |         |         |         | \$135,000                  |         | \$135,000             |
|                         | TOTAL BUDGET                 |         |         |         |         | \$163,000                  |         | \$163,000             |

# Non-Motorized Crossing of I-96 at Taft Road

Project Number: 61 CIP Number: 115-0005

## **Description:**

Construction of a non-motorized bridge over I-96 at Taft Road along with construction of pathways along Taft Road to connect the bridge to the rest of the non-motorized network. The bridge would be part of the larger regional trail network proposed in the Non-Motorized Master Plan.

## Justification:

The bridge would provide a north-south connection for the City over I-96 and provide a link to the proposed regional trail network.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18     | 2018-19 | TOTAL       |
|--------------|------------------|---------|---------|---------|---------|-------------|---------|-------------|
| Engineering  | 204-000.00-000.0 |         |         |         |         | \$380,000   |         | \$380,000   |
| Other/ROW    |                  |         |         |         |         |             |         |             |
| Construction | 204-000.00-000.0 |         |         |         |         | \$1,683,000 |         | \$1,683,000 |
|              | TOTAL BUDGET     |         |         |         |         | \$2,063,000 |         | \$2,063,000 |

# Segment 53--Beck Road, West Side, (8' foot Pathway) 11 Mile Road to Kirkway Place

Project Number: 62 CIP Number: 125-053

## **Description:**

Construction of 700 feet of 8-foot wide pathway along the west side of Beck Road from 11 Mile Road to Kirkway.

## Justification:

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19  | TOTAL    |
|--------------|------------------|---------|---------|---------|---------|---------|----------|----------|
| Engineering  | 204-000.00-000.0 |         |         |         |         |         | \$12,000 | \$12,000 |
| Other/ROW    | 204-000.00-000.0 |         |         |         |         |         | \$13,000 | \$13,000 |
| Construction | 204-000.00-000.0 |         |         |         |         |         | \$56,000 | \$56,000 |
|              | TOTAL BUDGET     |         |         |         |         |         | \$81,000 | \$81,000 |

## Segment 119--Meadowbrook Road, East Side, (6' foot Sidewalk) 8 Mile Road to 9 Mile Road

Project Number: 63 CIP Number: 125-119

## **Description:**

Construction of 3,800 feet of 6-foot wide pathway along the east side of Meadowbrook Road from Eight Mile Road to Nine Mile Road.

#### Justification:

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19   | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|---------|-----------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         |         |         | \$65,000  | \$65,000  |
| Other/ROW    |                  |         |         |         |         |         |           |           |
| Construction | 204-000.00-000.0 |         |         |         |         |         | \$312,000 | \$312,000 |
|              | TOTAL BUDGET     |         |         |         |         |         | \$377,000 | \$377,000 |

# Segment 81--10 Mile Road, South Side, (8' foot Pathway) Meadowbrook Road to Haggerty Road

Project Number: 64 CIP Number: 125-081

## **Description:**

Construction of 5,280 feet of 8-foot wide pathway along the south side of 10 Mile Road from Meadowbrook Road to Haggerty Road. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

## Justification:

The project will complete missing segments of the pathway system throughout the City and work to improve the connectivity of the non-motorized transportation system.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19   | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|---------|-----------|-----------|
| Other/ROW               |                  |         |         |         |         |         |           |           |
| Construction            | 204-000.00-000.0 |         |         |         |         |         | \$375,000 | \$375,000 |
|                         | TOTAL BUDGET     |         |         |         |         |         | \$375,000 | \$375,000 |

## Segment 90-10 Mile Road, (8' foot Pathway) South Side, Novi Road to Chipmunk Trail - Concrete

Project Number: 65 CIP Number: 105-90

## **Description:**

Construction of 2,400 feet of 8-foot wide pathway along the south side of 10 Mile Road from Novi Road to Chipmunk Trail. This segment was identified as a top 20 priority segment by Walkable Novi Committee.

#### Justification:

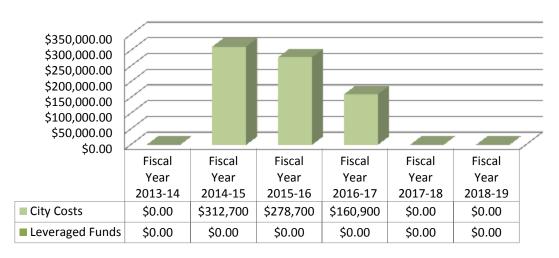
| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19   | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|---------|-----------|-----------|
| Engineering  | 204-000.00-000.0 |         |         |         |         |         | \$52,880  | \$52,880  |
| Other/ROW    | 204-000.00-000.0 |         |         |         |         |         | \$14,000  | \$14,000  |
| Construction | 204-000.00-000.0 |         |         |         |         |         | \$253,825 | \$253,825 |
|              | TOTAL BUDGET     |         |         |         |         |         | \$320,705 | \$320,705 |

# **Storm Sewer & Drainage**

The City of Novi is located within two major watersheds in southeast Michigan (the Rouge River Watershed and the Huron River Watershed). Novi is committed to protecting the water courses within and downstream of the community. As development occurs, the additional impervious surface area impacts the effective drainage of these flows, driving the need for drainage infrastructure. The City partners with the development community to ensure that onsite drainage issues are addressed during the development process.

The City's Capital Improvement Program addresses regional drainage issues through the drainage projects contained herein. Drainage projects are funded by a dedicated millage for acquiring, constructing, improving, and maintaining drain, stormwater, and flood control systems in the City of Novi; one tenth of one percent (1 mill).

# **Storm Sewer and Drainage**



|             | FY 13-14 | FY 14-15  | FY 15-16  | FY 16-17  | FY 17-18 | FY 18-19 |
|-------------|----------|-----------|-----------|-----------|----------|----------|
| GRAND TOTAL | \$0      | \$312,700 | \$278,700 | \$160,900 | \$0      | \$0      |

# Middle Rouge at Flint Street, Streambank Stabilization

Project Number: 66 CIP Number: 103-03

# **Description:**

Stabilization of Middle Rouge River streambanks upstream of Flint Street and Novi Road.

## Justification:

Recommended by 2010 Storm Water Modeling Report.

| Category     | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Engineering  | 210-211.00-000.0 |         | \$19,300  |         |         |         |         | \$19,300  |
| Other/ROW    |                  |         |           |         |         |         |         |           |
| Construction | 210-211.00-000.0 |         | \$92,600  |         |         |         |         | \$92,600  |
|              | TOTAL BUDGET     |         | \$111,900 |         |         |         |         | \$111,900 |

## Bishop District New Sedimentation Dredging Near 11 Mile Road

Project Number: 67 CIP Number: 093-11

## **Description:**

Project to address the sedimentation within the wetland south of 11 Mile and west of Meadowbrook. Potential dredging to remove accumulated sediment. Includes streambank stabilization upstream and downstream of 11 Mile Road. The project was recommended by the Phase 1 Storm Water Master Plan.

#### Justification:

Recommended by the Phase 1 Storm Water Master Plan and 2009 Storm Water Modeling Study.

| Category<br>Engineering | Account No. 210-211.00-000.0 | 2013-14 | <b>2014-15</b> \$34,600 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | <b>TOTAL</b> \$34,600 |
|-------------------------|------------------------------|---------|-------------------------|---------|---------|---------|---------|-----------------------|
| Other/ROW               |                              |         | ,                       |         |         |         |         |                       |
| Construction            | 210-210.00-000.0             |         | \$166,200               |         |         |         |         | \$166,200             |
|                         | TOTAL BUDGET                 |         | \$200,800               |         |         |         |         | \$200,800             |

## Middle Rouge Near Balcombe Drive, Streambank Stabilization

Project Number: 68 CIP Number: 103-01

## **Description:**

Stabilization of Middle Rouge River streambanks north of Balcombe Drive. Project may include removal of several small wooden dams. Park area recently acquired by City of Novi, and contains a conservation easement.

## Justification:

Recommended by 2009 Storm Water Modeling Report.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 210-211.00-000.0 |         |         | \$48,100  |         |         |         | \$48,100  |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 210-211.00-000.0 |         |         | \$230,600 |         |         |         | \$230,600 |
|              | TOTAL BUDGET     |         |         | \$278,700 |         |         |         | \$278,700 |

# **Rotary Park Streambank Stabilization**

Project Number: 69 CIP Number: 093-10

## **Description:**

Stabilization of Middle Rouge River streambanks within Rotary Park. The project was recommended by Phase I Storm Water Master Plan.

## Justification:

Recommended by 2005 Storm Water Master Plan Phase I.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Engineering  | 210-211.00-000.0 |         |         |         | \$27,700  |         |         | \$27,700  |
| Other/ROW    |                  |         |         |         |           |         |         |           |
| Construction | 210-211.00-000.0 |         |         |         | \$133,200 |         |         | \$133,200 |
|              | TOTAL BUDGET     |         |         |         | \$160,900 |         |         | \$160,900 |

# **Sanitary Sewer**

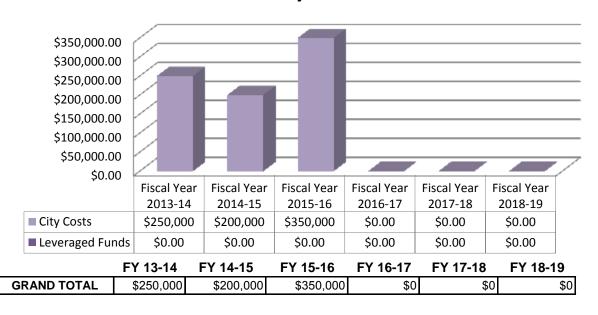
The City of Novi purchases sewage disposal services from Oakland County Water Resources Commissioner (OCWRC). The City currently has 243 miles of sanitary sewer mains. These sewer mains are part of three separate districts: the Wayne County North Huron Valley/Rouge Valley (NHV/RV) System, South Commerce Township Treatment Plant, and the Walled Lake-Novi Treatment Plant. The majority of the City is served by the NHV/RV system. The City of Novi Water & Sewer Fund, the Oakland County Water Resource Commission (OCWRC) and the Detroit Water & Sewerage Department (DWSD) are all not-for profit entities and therefore rates are intended and required to cover costs.

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

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

Water and sanitary sewer projects identified as urgent are not subject to the rating/weighting scale required of capital improvement. Projects included in this category are funded by the City's Water and Sewer Fund which is financed through user rates and connection fees.

# **Sanitary Sewer**



# **Generator for Knightsbridge Gate Sanitary Pump Station**

Project Number: 70 CIP Number: 121-095

## **Description:**

A permanent stand-by generator would be added to the existing sanitary pump station at Knightsbridge Gate. The pump station was constructed by the developer and a portable generator was provided to the City. A fixed generator at this location would better prevent sanitary sewer back-ups caused by power failures without relying on delivery of the portable generator by City personnel. The project would also include engineering, access and site improvements and screening.

## Justification:

| Category<br>Engineering | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               |                  |           |         |         |         |         |         |           |
| Construction            | 592-000.00-000.0 | \$125,000 |         |         |         |         |         |           |
|                         | TOTAL BUDGET     | \$125,000 |         |         |         |         |         | \$125,000 |

## **Generator for Regency Lift Station**

Project Number: 71 CIP Number: 121-096

## **Description:**

A permanent stand-by generator would be added to the existing sanitary pump station at Knightsbridge Gate. The pump station was constructed by the developer and a portable generator was provided to the City. A fixed generator at this location would better prevent sanitary sewer back-ups caused by power failures without relying on delivery of the portable generator by City personnel. The project would also include engineering, access and site improvements.

#### Justification:

| Category<br>Engineering | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               |                  |           |         |         |         |         |         |           |
| Construction            | 592-000.00-000.0 | \$125,000 |         |         |         |         |         |           |
|                         | TOTAL BUDGET     | \$125,000 |         |         |         |         |         | \$125,000 |

# Sanitary Sewer Upgrade to Increase Pipe Capacity - 9 Mile Road East of Meadowbrook Road.

Project Number: 72 CIP Number: 091-71

## **Description:**

Development and construction of a solution to the current capacity limitations in the sanitary sewer along 9 Mile Road east of Meadowbrook Road as identified in the 2006 sewer capacity report. Sewer modeling indicates that approx. 7,000 ft. of existing 18" sanitary sewer on the south side of 9 Mile near Meadowbrook is at or near capacity. The project will remove this bottleneck to increase flow capacity.

#### Justification:

Recommended by the 2005 Capacity Management Operations and Maintenance (CMOM) program Phase I report.

| Category     | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Engineering  | 592-000.00-000.0 |         | \$30,000  |         |         |         |         | \$30,000  |
| Other/ROW    |                  |         |           |         |         |         |         |           |
| Construction | 592-000.00-000.0 |         | \$170,000 |         |         |         |         | \$170,000 |
|              | TOTAL BUDGET     |         | \$200,000 |         |         |         |         | \$200,000 |

## Sanitary Sewer Upgrade to Increase Pipe Capacity - 9 Mile Road, West of Novi Road

Project Number: 73 CIP Number: 091-70

### **Description:**

Development and construction of a solution to the current capacity limitations in the sanitary sewer along 9 Mile Road west of Novi Road as identified in the 2006 Sewer Capacity Report. Sanitary sewer modeling indicates that approx. 2,000 ft. of existing 15" sanitary sewer is at or near capacity. The project will remove the bottleneck to increase flow capacity.

#### Justification:

Recommended by the 2006 Sewer Capacity Report. Included in CMOM Phase 1.

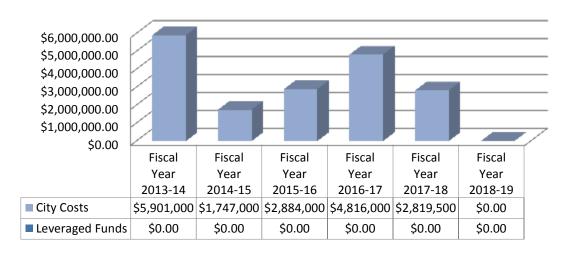
| Category<br>Engineering | Account No. 592-000.00-000.0 | 2013-14 | 2014-15 | <b>2015-16</b><br>\$87,500 | 2016-17 | 2017-18 | 2018-19 | <b>TOTAL</b><br>\$87,500 |
|-------------------------|------------------------------|---------|---------|----------------------------|---------|---------|---------|--------------------------|
| Other/ROW               |                              |         |         | 75.75                      |         |         |         | 701,722                  |
| Construction            | 592-000.00-000.0             |         |         | \$262,500                  |         |         |         | \$262,500                |
|                         | TOTAL BUDGET                 |         |         | \$350,000                  |         |         |         | \$350,000                |

#### Water Distribution

The City of Novi purchases treated water from Detroit Water and Sewerage Department (DWSD). DWSD operates the largest water system in the State of Michigan and supplies water to roughly four million people. Water production is costly. Aging water and wastewater treatment systems must be maintained and replaced to ensure reliable service. Rate increases are primarily due to new and rehabilitative projects that are completed under the DWSD Capital Improvement Programs. DWSD rates reflect energy costs to maintain water pumps, water mains, and storage tanks necessary to transport water to our community.

The City is responsible 306 miles of water main pipe, 4,003 fire hydrants and 13,530 water service connections. Projects included in this category are funded by the City's Water and Sewer Fund which is financed through user rates and connection fees.

# **Water Distribution**



|             | FY 13-14    | FY 14-15    | FY 15-16    | FY 16-17    | FY 17-18    | FY 18-19 |
|-------------|-------------|-------------|-------------|-------------|-------------|----------|
| GRAND TOTAL | \$5,901,000 | \$1,747,000 | \$2,884,000 | \$4,816,000 | \$2,819,500 | \$0      |

# **Water Storage Facility and Appurtenances**

Project Number: 74 CIP Number: 091-09

## **Description:**

The purpose of this project is to reduce wholesale water rates, and to provide storage for the purposes of becoming a Maximum Day Demand customer from DWSD, rather than a Peak Hour Demand Customer. Construct an 1.0 million gallon elevated storage tank along with associated improvements such as flow control valves at the feeds from DWSD and pressure reducing valve improvements. The project was originally recommended by the 2008 Water Master Plan and further refined as part of the 2011 Storage Tank Feasibility Study. The reduced rates from DWSD are anticipated to create a 3.2 year project payback. The project is currently in design.

#### Justification:

An elevated water storage tank with a capacity of 1 million gallons would meet the peak hour requirements of the system to allow Novi to become a maximum day customer with DWSD and thereby be eligible to receive a further reduction in the bulk water rate. Construction of a 1 million gallon tank in Novi would result in cost savings of approximately \$1.7 million per year based on the current rate methodology. The tank would have a payback period of approximately 3.2 years. See attached motion packet for project justification details.

| Category     | Account No.      | 2013-14     | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL       |
|--------------|------------------|-------------|---------|---------|---------|---------|---------|-------------|
| Engineering  | 592-000.00-000.0 | \$250,000   |         |         |         |         |         |             |
| Other/ROW    |                  |             |         |         |         |         |         |             |
| Construction | 592-000.00-000.0 | \$5,300,000 |         |         |         |         |         |             |
|              | TOTAL BUDGET     | \$5,550,000 |         |         |         |         |         | \$5,550,000 |

## 9 Mile Road and Connemara Pressure Reducing Valve (PRV) Replacement

Project Number: 75 CIP Number: 091-08

## **Description:**

Replace existing pressure reducing valve from a 2-inch PRV to a larger PRV (cost estimate assumes a 16" PRV) will be determined during project design). Recommended in 2008 Water System Master Plan.

#### Justification:

The existing PRV is ineffective and a new larger PRV is required to provide adequate flows for fire hydrant protection services.

| Category     | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Engineering  | 592-000.00-000.0 | \$87,000  |         |         |         |         |         |           |
| Other/ROW    |                  |           |         |         |         |         |         |           |
| Construction | 592-000.00-000.0 | \$264,000 |         |         |         |         |         |           |
|              | TOTAL BUDGET     | \$351,000 |         |         |         |         |         | \$351,000 |

## 13 Mile Road New Pressure Reducing Valve (PRV) to Realign Pressure District

Project Number: 76 CIP Number: 091-06

## **Description:**

Install a pressure reducing valve on 13 Mile Road just west of Novi Road. This will eliminate the need for a PRV at Cabot Road and the PRV at Twelve Mile Road and Meadowbrook Road will no longer be required. Recommended in 2008 Water System Master Plan.

#### Justification:

Provides a better pressure range to customers in the northeast part of the City including the Haggerty Corridor Corporate Park.

| Category     | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Engineering  | 592-000.00-000.0 |         | \$87,000  |         |         |         |         | \$87,000  |
| Other/ROW    |                  |         |           |         |         |         |         |           |
| Construction | 592-000.00-000.0 |         | \$264,000 |         |         |         |         | \$264,000 |
|              | TOTAL BUDGET     |         | \$351,000 |         |         |         |         | \$351,000 |

# **West Park Booster Station Upgrade**

Project Number: 77 CIP Number: 091-02

## Description:

Enhance the West Park Booster Station with upgraded controls to operate the station in a more efficient manner. The station would be set to use downstream pressure readings to control the operation of the pumps rather than relying on flow settings, which is currently being done.

## Justification:

Provides better service to the existing and future customers downstream of the booster station by operating more efficiently.

| Category<br>Engineering | Account No. 592-000.00-000.0 | 2013-14 | <b>2014-15</b><br>\$16,000 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | <b>TOTAL</b><br>\$16,000 |
|-------------------------|------------------------------|---------|----------------------------|---------|---------|---------|---------|--------------------------|
| Other/ROW               |                              |         |                            |         |         |         |         |                          |
| Construction            | 592-000.00-000.0             |         | \$49,000                   |         |         |         |         | \$49,000                 |
|                         | TOTAL BUDGET                 |         | \$65,000                   |         |         |         |         | \$65,000                 |

# 12" inch Water Main Along 8 Mile Road, Club Lane to Turnberry

Project Number: 78 CIP Number: 091-26

## **Description:**

Extend a 12-inch water main approximately 1,300 feet from the existing 12-inch water main at 8 Mile Road and Club Lane to the east to the existing 12-inch water main on 8 Mile Road east of Cambridge. Recommended in 2008 Water System Master Plan.

## Justification:

Improves service to existing customers by providing an additional water main loop and redundant service.

| Category     | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Engineering  | 592-000.00-000.0 |         | \$50,750  |         |         |         |         | \$50,750  |
| Other/ROW    |                  |         |           |         |         |         |         |           |
| Construction | 592-000.00-000.0 |         | \$152,250 |         |         |         |         | \$152,250 |
|              | TOTAL BUDGET     |         | \$203,000 |         |         |         |         | \$203,000 |

# 12" inch Water Main Along 14 Mile Road, Haverhill to Maples-New

Project Number: 79 CIP Number: 091-16

## **Description:**

Extend a 12-inch water main approximately 900 feet from the existing 12-inch water main west of Kingswood and 14 Mile Road to the existing 12-inch water main off of the northeast loop of Columbia Drive in Maples. This connection will increase the available flow and pressure in the area. Recommended in 2008 Water System Master Plan.

#### Justification:

Improves service to existing customers by providing an additional water main loop and redundant service as well as increase the fire flows.

| Category     | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Engineering  | 592-000.00-000.0 |         | \$35,000  |         |         |         |         | \$35,000  |
| Other/ROW    |                  |         |           |         |         |         |         |           |
| Construction | 592-000.00-000.0 |         | \$105,000 |         |         |         |         | \$105,000 |
|              | TOTAL BUDGET     |         | \$140,000 |         |         |         |         | \$140,000 |

# 16" inch Water Main Along Meadowbrook Road Under I-96

Project Number: 80 CIP Number: 091-01

## **Description:**

Installation of approximately 2,000 feet of 16-inch water main along Meadowbrook Road underneath I-96 and a pressure reducing valve (PRV) on the north side of I-96. This improvement will allow for a third connection across I-96. Approximately 95% of the water supply for the City is delivered from the DWSD feeds on Pontiac Trail/Fourteen Mile Road. This project was recommended for system reliability and redundancy in 2008 Water System Master Plan. Easements and permits from MDOT will be a prerequisite for this project.

#### Justification:

Improves service to existing customers by providing an additional water main loop and redundant service.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Other/ROW               |                  |         |           |         |         |         |         |           |
| Construction            | 592-000.00-000.0 |         | \$489,000 |         |         |         |         | \$489,000 |
|                         | TOTAL BUDGET     |         | \$489,000 |         |         |         |         | \$489,000 |

## 16" inch Water Main Along 9 Mile Road, Center to Novi Road

Project Number: 81 CIP Number: 091-25

### **Description:**

Extend a 16-inch water main approximately 2,400 feet from the existing 16-inch water main on 9 Mile Road east of Center St. to the east, to the existing water main at Novi Road and 9 Mile Road. Recommended in 2008 Water System Master Plan.

#### Justification:

Provides a needed loop in the water distribution system to increase pressure and to provide redundancy. The project would be completed with the planned road reconstruction project of 9 Mile in the same area.

| Category<br>Engineering<br>Other/ROW | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------------------------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Construction                         | 592-000.00-000.0 |         | \$499,000 |         |         |         |         | \$499,000 |
|                                      | TOTAL BUDGET     |         | \$499,000 |         |         |         |         | \$499,000 |

# Grand River Isolation Pressure Reducing Valve (PRV) West of Lanny's Road

Project Number: 82 CIP Number: 091-07

## **Description:**

Install a PRV at Grand River Avenue just west of Lanny's Road. The PRV should allow water to flow towards the West Park Pump Station. This will allow the West Park Pump Station to better maintain pressures on the west side of the system. This location is preferred because it prevents creating a dead end 16-inch water main with no demands on it. By using a PRV rather than an isolation or check valve, the PRV direction provides redundancy to the west automatically if the West Park Pump Station or the West Park I-96 crossing fails and still has the option to reverse its flow direction with controls, should the Novi Road crossing ever fail. Recommended in 2008 Water System Master Plan.

#### Justification:

The pressure reducing valve will prevent the flow of water that has been pumped by the West Park Booster Station from serving the eastern portion of the City, which will increase the pressures in the western portion of the City and provide better service to the water customers.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 592-000.00-000.0 |         |         | \$87,000  |         |         |         | \$87,000  |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 592-000.00-000.0 |         |         | \$264,000 |         |         |         | \$264,000 |
|              | TOTAL BUDGET     |         |         | \$351,000 |         |         |         | \$351,000 |

# Cabot Road Meter Installation and 24" inch Connection with Detroit Water and Sewerage Department (DWSD)

Project Number: 83 CIP Number: 091-11

#### **Description:**

Install a new master meter connection to DWSD along with a pressure reducing valve (PRV). If this additional connection to DWSD is constructed after the CIP project to construct an 8 million gallon water storage tank, a flow control valve will also be required at this location. Estimated cost for this is an additional \$350,000, potentially increasing this project to \$1,182,000. Recommended in 2008 Water System Master Plan.

#### Justification:

Provides additional connection to DWSD to provide service to the eastern portion of the City including the Office, Service, and Technology corridor.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 592-000.00-000.0 |         |         | \$208,000 |         |         |         | \$208,000 |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 592-000.00-000.0 |         |         | \$624,000 |         |         |         | \$624,000 |
|              | TOTAL BUDGET     |         |         | \$832,000 |         |         |         | \$832,000 |

## Cabot 24" inch Water Main, MacKenzie to 14 Mile Road

Project Number: 84 CIP Number: 091-10

## **Description:**

Construction of a 24-inch water main from the existing water main at Cabot and MacKenzie, north approximately 2,600 feet to the existing DWSD stub at Haggerty Booster Station. Recommended in 2008 Water System Master Plan.

#### Justification:

Would provide the means for an additional connection to DWSD and provide water service to the Office, Service Technology corridor.

| Category<br>Engineering | Account No. 592-000.00-000.0 | 2013-14 | 2014-15 | <b>2015-16</b> \$177,500 | 2016-17 | 2017-18 | 2018-19 | <b>TOTAL</b><br>\$177,500 |
|-------------------------|------------------------------|---------|---------|--------------------------|---------|---------|---------|---------------------------|
| Other/ROW               |                              |         |         |                          |         |         |         |                           |
| Construction            | 592-000.00-000.0             |         |         | \$532,500                |         |         |         | \$532,500                 |
|                         | TOTAL BUDGET                 |         |         | \$710,000                |         |         |         | \$710,000                 |

## Construct New 12" inch Water Main Along 12 Mile Road from East of Napier to Wixom Road

Project Number: 85 CIP Number: 091-13

## **Description:**

Construction of a 4,100 foot, 12-inch water main at Sloan St. and E. Bourne Terrace to the east along 12 Mile Road, to connect to the existing long dead-end water main serving Knightsbridge Gate, to the water main on Wixom Road. Includes a Pressure Reducing Valve (PRV) in a location that is yet to be determined to separate the Island Lake pressure district. The primary benefit of this project is redundancy, since the Knightsbridge Gate subdivision and surrounding area is served by a single, dead-end water main. Recommended in 2008 Water System Master Plan.

#### Justification:

The area along Napier Road near Twelve Mile including Knightsbridge Gate subdivision is served by a long dead-end water main. If there were a problem with the water main along Napier Road requiring a shutdown, over 300 customers would lose water service. This water main would provide redundant service to this area of the City to provide better service and bolster the City's ability to provide adequate fire flows.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Other/ROW               |                  |         |         |           |         |         |         |           |
| Construction            | 592-000.00-000.0 |         |         | \$991,000 |         |         |         | \$991,000 |
|                         | TOTAL BUDGET     |         |         | \$991,000 |         |         |         | \$991,000 |

# 12" inch Water Main Along 9 Mile Road and Napier

Project Number: 86 CIP Number: 091-14

## **Description:**

Construction of a 12-inch water main approximately 2,400 feet from the existing 12-inch water main at Torino Drive, and 9 Mile Road to Park Place Drive, and Napier Road along 9 Mile Road, and Napier Road. Recommended in 2008 Water System Master Plan.

## Justification:

This water main will increase services by looping the system. It will also help with water management and control of the water system. This also insures redundancy of the system.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Other/ROW               |                  |         |         |         |           |         |         |           |
| Construction            | 592-000.00-000.0 |         |         |         | \$374,000 |         |         | \$374,000 |
|                         | TOTAL BUDGET     |         |         |         | \$374,000 |         |         | \$374,000 |

# 12" inch Water Main Cross-Country from Island Lake to Provincial Glades

Project Number: 87 CIP Number: 091-28

## **Description:**

Construct a 12-inch water main approximately 3,000 feet from the existing 12-inch water main west of Terra Del Mar Dr and 10 Mile Road, cross-country to the south to the existing 12-inch water main at Avery Lane. The installation includes a pressure reducing valve in a location to be determined. Recommended in 2008 Water System Master Plan.

#### Justification:

This addition will allow the water system to have additional services and provide redundancy during emergencies.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Other/ROW               |                  |         |         |         |           |         |         |           |
| Construction            | 592-000.00-000.0 |         |         |         | \$819,000 |         |         | \$819,000 |
|                         | TOTAL BUDGET     |         |         |         | \$819,000 |         |         | \$819,000 |

## Cabot Drive Extension - New - MacKenzie to 14 Mile Road - Private Funds

Project Number: 88 CIP Number: 089-11

## **Description:**

A Private development project to construct a new north-south road between M-5 and Haggerty Road from the current northern end of Cabot Drive to 14 Mile Road.

## Justification:

Project will provide access to new areas of development in the Office, Service, and Technology corridor.

| Category<br>Engineering | Account No.  | 2013-14 | 2014-15 | 2015-16 | 2016-17     | 2017-18 | 2018-19 | TOTAL       |
|-------------------------|--------------|---------|---------|---------|-------------|---------|---------|-------------|
| Other/ROW               |              |         |         |         |             |         |         |             |
| Construction            |              |         |         |         | \$1,900,000 |         |         | \$1,900,000 |
|                         | TOTAL BUDGET |         |         |         | \$1,900,000 |         |         | \$1,900,000 |

## 12" Water Main Along Napier Park Place to 8 Mile Road

Project Number: 89 CIP Number: 091-23

## **Description:**

Construct a 12-inch water main along Napier Road approximately 5,700 feet from Park Place to 8 Mile Road. Recommended in 2008 Water System Master Plan.

#### Justification:

This addition will allow the water system to have additional services and provide redundancy during emergencies.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Other/ROW               |                  |         |         |         |           |         |         |           |
| Construction            | 592-000.00-000.0 |         |         |         | \$889,000 |         |         | \$889,000 |
|                         | TOTAL BUDGET     |         |         |         | \$889,000 |         |         | \$889,000 |

# 12" inch Water Main Along 10 Mile from Wixom to Terra Del Mar

Project Number: 90 CIP Number: 091-22

## **Description:**

Connect the existing water main at Wixom Road and 10 Mile Road, to the existing 12-inch water main east of Terra Del Mar on 10 Mile Road, with approximately 2,700 feet of 12-inch water main. Recommended in 2008 Water System Master Plan.

#### Justification:

Increase the service area to provide redundancy from Wixom well system for hospital.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Other/ROW               |                  |         |         |         |           |         |         |           |
| Construction            | 592-000.00-000.0 |         |         |         | \$421,000 |         |         | \$421,000 |
|                         | TOTAL BUDGET     |         |         |         | \$421,000 |         |         | \$421,000 |

## 12" inch Water Main Along 11 Mile Road, Lee BeGole Drive to the West

Project Number: 91 CIP Number: 091-17

## **Description:**

Construction of approximately 400 feet from the existing 12-inch water main, east of Town Center Drive along 11 Mile Road to the east to the existing water main east of Delwal. The installation will include a pressure reducing valve as it crosses a pressure district boundary. Recommended in 2008 Water System Master Plan.

#### Justification:

This will provide better service for businesses on Meadowbrook between Grand River and I-96. Will also provide redundancies for emergency purposes.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Other/ROW               |                  |         |         |         |           |         |         |           |
| Construction            | 592-000.00-000.0 |         |         |         | \$413,000 |         |         | \$413,000 |
|                         | TOTAL BUDGET     |         |         |         | \$413,000 |         |         | \$413,000 |

# 12" inch Water Main Along 8 Mile Road, Tuscany to Napier

Project Number: 92 CIP Number: 091-15

## **Description:**

Construction of approximately 5,000 feet of water main along 8 Mile Road from Tuscany Reserve, east to Napier Road. Recommended in 2008 Water System Master Plan.

#### Justification:

Additional service, adds redundancy on the south side of the City.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Other/ROW               |                  |         |         |         |         |           |         |           |
| Construction            | 592-000.00-000.0 |         |         |         |         | \$733,000 |         | \$733,000 |
|                         | TOTAL BUDGET     |         |         |         |         | \$733,000 |         | \$733,000 |

## 12" inch Water Main on 11 Mile Road, Seeley to Meadowbrook Road

Project Number: 93 CIP Number: 091-18

## **Description:**

Construct a 12-inch water main approximately 1,500 feet from the existing 12-inch water main at Seeley Road and 11 Mile, to the west along 11 Mile Road to the existing water main east of Meadowbrook. Recommended in 2008 Water System Master Plan.

#### Justification:

Redundancy for looped systems and services.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Other/ROW               |                  |         |         |         |         |           |         |           |
| Construction            | 592-000.00-000.0 |         |         |         |         | \$819,000 |         | \$819,000 |
|                         | TOTAL BUDGET     |         |         |         |         | \$819,000 |         | \$819,000 |

## 12" inch Water Main Along Haggerty Road North of 12 Mile Road

Project Number: 94 CIP Number: 091-31

#### **Description:**

Construction of approximately 1,500 ft of 12-inch water main cross-country, and along Haggerty Road to provide looping in Section 12. Recommended in 2008 Water System Master Plan.

#### Justification:

Provide redundancy in preparation of the new DWSD connection at Cabot and Haggerty.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Other/ROW               |                  |         |         |         |         |           |         |           |
| Construction            | 592-000.00-000.0 |         |         |         |         | \$128,000 |         | \$128,000 |
|                         | TOTAL BUDGET     |         |         |         |         | \$128,000 |         | \$128,000 |

# 24" inch Water Main on 10 Mile Road, Beck Road to Lynwood

Project Number: 95 CIP Number: 091-21

## **Description:**

Construct a 24-inch water main approximately 1,300 feet from the existing water mains at Beck and 10 Mile west to the existing 24-inch water main east of Lynwood Drive. Recommended in 2008 Water System Master Plan.

## Justification:

Redundancy in event of emergency to be able to feed water from north or south for hospital.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Other/ROW               |                  |         |         |         |         |           |         |           |
| Construction            | 592-000.00-000.0 |         |         |         |         | \$355,000 |         | \$355,000 |
|                         | TOTAL BUDGET     |         |         |         |         | \$355,000 |         | \$355,000 |

## 24" inch Water Main Replacement at Grand River and Beck Road

Project Number: 96 CIP Number: 091-12

## **Description:**

Complete the upgrade of 150 feet of water main at Beck Road and Grand River from 16-inch to 24-inch. This is the last remaining segment of the remaining 16-inch water main. Recommended in 2008 Water System Master Plan.

#### Justification:

Redundancy from north and south for hospital.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Other/ROW               |                  |         |         |         |         |           |         |           |
| Construction            | 592-000.00-000.0 |         |         |         |         | \$310,000 |         | \$310,000 |
|                         | TOTAL BUDGET     |         |         |         |         | \$310,000 |         | \$310,000 |

# 11 Mile Road Water Main Gaps, Taft to Beck Road

Project Number: 97 CIP Number: 091-19

# **Description:**

Complete the 12-inch water main on 11 Mile from Beck to Taft. The project includes a total of 4,000 feet of 12-inch water main . Recommended in 2008 Water System Master Plan.

## Justification:

Improves service to existing customers by providing an additional water main loop and redundant service.

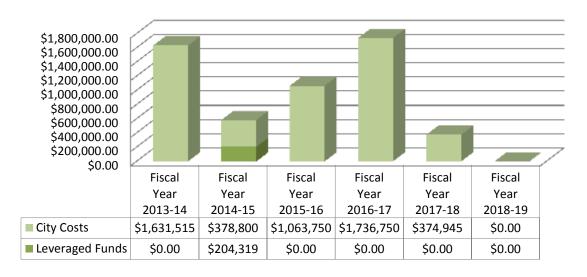
| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Engineering  | 592-000.00-000.0 |         |         |         |         | \$118,500 |         | \$118,500 |
| Other/ROW    |                  |         |         |         |         |           |         |           |
| Construction | 592-000.00-000.0 |         |         |         |         | \$356,000 |         | \$356,000 |
|              | TOTAL BUDGET     |         |         |         |         | \$474,500 |         | \$474,500 |

# Parks, Recreation and Cultural Services

Quality of life initiatives, such as those represented by parks, open space, and trails projects, are an important component of the Capital Improvement Program. The City of Novi Department of Parks, Recreation and Cultural Services offers lighted ball fields, extensive picnic grounds, shaded playgrounds, beaches, an urban lake, and much, much more. Neighborhood parks provide recreational amenities close to home, while the city's ever-growing network of trails accommodates walkers, joggers, strollers, bicyclists, roller bladers, and equestrians.

Funding for parks, open space, and cultural events is primarily from the Parks and Recreation dedicated millage that was established for maintaining parks and recreation purposes. A one-half tenth of one percent (1/2 mill), and impact fees make up the main funding source for Parks, Recreation and Cultural Services. The six year program emphasizes trail connectivity and provides for additional community parks in the southern and northern areas of the City.

# **Parks**



| _ |             | FY 13-14    | FY 14-15  | FY 15-16    | FY 16-17    | FY 17-18  | FY 18-19 |
|---|-------------|-------------|-----------|-------------|-------------|-----------|----------|
|   | GRAND TOTAL | \$1,631,515 | \$583,119 | \$1,063,750 | \$1,736,750 | \$374,945 | \$0      |

# **Greenway Development Phase 1A**

Project Number: 98 CIP Number: 109-06

## **Description:**

To plan and build a paved 4.5 mile long north-south regional pathway for recreational use along the ITC Transmission Corridor. The pathway would connect ITC Community Sports Park to the Providence Park Campus. Due to the length of the path being proposed, a phased approach to design and construction would be likely. Phase 1A of the pathway (1.5 miles long) would begin at ITC Community Sports Park, continue along the ITC corridor and end at Nine Mile Road.

## Justification:

2010 National Citizen Survey ranked ease of bicycle traveling and ease of walking in Novi at 46% and 57% respectively, (2008 Survey had the numbers at 39 and 50); (2006 Survey had the numbers at 35 and 43) on a 100 point scale, showing a need to provide linear open space for use and connectivity in the community. In addition, the 2006 City of Novi Pathway and Sidewalk Prioritization Analysis and Process document places an importance on increasing connectivity to regional or neighboring trail and sidewalk systems. From an economic standpoint, the greenway has the potential to increase real property values, in turn increasing municipal revenues.

| Category     | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Engineering  | 208-691.00-974.0 | \$85,000  |         |         |         |         |         |           |
| Other/ROW    | 208-691.00-974.0 |           |         |         |         |         |         |           |
| Construction | 208-691.00-974.0 | \$517,875 |         |         |         |         |         |           |
|              | TOTAL BUDGET     | \$602,875 |         |         |         |         |         | \$602,875 |

## **Pavilion Shore Park Phase III**

Project Number: 99 CIP Number: PRCS

## **Description:**

The City submitted a Michigan Natural Resource Trust Fund (MNRTF) development grant application through the Michigan Department of Natural Resources (MDNR) for The Landings property in March of 2010 for an overall total project cost of \$625,000. In May 2010 the MNRTF awarded Grant TF10-043 to the City of Novi. At the September 12, 2011 City Council Meeting, a Resolution approving the MNRTF project agreement and acceptance of the grant was adopted. Phase III of Pavilion Shore will inlcue the Park Pavilion, deorative paving benches and the addition of some landscaping to the project.

#### Justification:

Phase I development of the park will include a foot pathway and promenade along Walled Lake, naturalized waterfront sea wall stabilization, small fishing pier, landscaping and trees, signage, and other required infrastructure improvements (e.g. utilities and electrical). Barrier-free accessible port-a-johns will be utilized until use of the site grows and a permanent restroom is constructed in a future phase.

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|----------|-----------|---------|---------|---------|---------|-----------|
| Other/ROW               |                  |          |           |         |         |         |         |           |
| Construction            | 208-691.00-974.0 | \$87,565 | \$204,319 |         |         |         |         | \$204,319 |
|                         | TOTAL BUDGET     | \$87,565 | \$204,319 |         |         |         |         | \$291,884 |

# Novi Dog Park

Project Number: 100 CIP Number:

#### **Description:**

Construction of Novi Dog Park on 6.34 acres of land located behind the Novi Ice Arena, including an area for large dogs, small or timid dogs, and a dog agility area. Dog Park amenities would include: Fencing for all three areas, parking, landscaping, covered entry, concrete walkways, benches, tables, dog waste stations, trash receptacles and drinking fountains.

#### Justification:

The construction of Novi's first off leash dog area would is in response to the continued popularity of dog ownership and recent trend to provide a settings for dog owners to relax and socialize with their dogs, leading to healthier lifestyles and better relationships for both dogs and their owners. Dog parks provide a space to promote responsible pet ownership, enforce dog control laws, and to provide a safe environment for people as well as dogs to socialize. In addition a dog park promotes public health and safety. Well exercised dogs are better neighbors and less likely to create a nuisance, bark excessively, or destroy property

| Category<br>Engineering | Account No.  | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|--------------|-----------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               |              |           |         |         |         |         |         |           |
| Construction            |              | \$290,000 |         |         |         |         |         |           |
|                         | TOTAL BUDGET | \$290,000 |         |         |         |         |         | \$290,000 |

# Field/Parking Development with Novi Community School District for School's 11 Mile/Beck Road Property

Project Number: 101 CIP Number: PRCS

## **Description:**

The property is owned by Novi Community Schools. This project would entail working out an agreement with the schools to develop a portion of the property for recreational use. The development would consist of multi-use fields that could be used as practice space for popular sports such as soccer or used by some of our growing sports such as Lacrosse and Cricket. Conservatively, the estimated additional revenue, not including expenses or possible concession sales, would be \$90,000 with expansion of adult softball leagues, youth softball games and tournaments, cricket and lacrosse leagues and tournaments, Jaguar soccer tournaments and various sport camps and tournaments. The current scope of the project would include making minor improvements for developing multi-purpose fields and parking. Irrigation of the fields would include an estimated cost of \$25,000 an acre. The property would include a gravel drive and 20 gravel parking spaces.

#### Justification:

The project would be used as a community gathering space, utilized for sports, and recreational use.

| Category<br>Engineering | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               |                  |           |         |         |         |         |         |           |
| Construction            | 208-691.00-974.3 | \$357,000 |         |         |         |         |         |           |
|                         | TOTAL BUDGET     | \$357,000 |         |         |         |         |         | \$357,000 |

# ITC Community Sports Park Play Structure Replacement

Project Number: 102 CIP Number: 100-003

## **Description:**

This project would remove one of two existing play structures in the first quarter and replace it with a new ADA accessible play structure developed for children ages 2-12 by the end of the third quarter. With the number of organized sports teams playing at ITC Community Sports Park, there is a tremendous amount of kids passing through the park not to mention bringing their younger siblings. Therefore having the play structure specifically designed for ages 5 to 12+year-olds and 2 to 5-year-olds giving age-appropriate challenges to flex kids' muscles and stretch their imaginations.

The last 20 years in the playground industry have seen the introduction of numerous playground safety and accessibility regulations. With the advent of the Americans with Disabilities Act in 1990, the Access Board's playground accessibility rules of 2000, and the latest Department of Justice Standards published in 2010, accessibility has been at the forefront of recreation facility and playground development. Designers have consistently advocated the value of highly accessible facilities.

## Justification:

The current structure provides limited accessibility for the physically challenged community. An enhanced structure would meet current ADA standards and provide updated play equipment.

| Category<br>Engineering<br>Other/ROW | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL   |    |
|--------------------------------------|------------------|----------|---------|---------|---------|---------|---------|---------|----|
| Construction                         | 208-691.00-974.0 | \$75,000 |         |         |         |         |         |         |    |
|                                      | TOTAL BUDGET     | \$75,000 |         |         |         |         |         | \$75,00 | 00 |

## Ella Mae Power Park Play Structure Replacement

Project Number: 103 CIP Number: 109-10

#### **Description:**

This park currently has two play structures. The newest structure is designed for children ages 5 - 12 and the older unit is designed for ages 2 - 5. This project would remove the older structure in the first quarter and replace it with a new ADA accessible structure developed for children ages 2-5 by the end of the third quarter.

#### Justification:

The current structure does not provide ADA accessibility for community youth.

| Category<br>Engineering<br>Other/ROW | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL   |    |
|--------------------------------------|------------------|----------|---------|---------|---------|---------|---------|---------|----|
| Construction                         | 208-691.00-974.0 | \$75,000 |         |         |         |         |         |         |    |
|                                      | TOTAL BUDGET     | \$75,000 |         |         |         |         |         | \$75,00 | 00 |

# **ITC Community Sports Park Pathway Resurfacing**

Project Number: 104 CIP Number: 100-05

## **Description:**

This project will revitalize the park pathway system and support the active, healthy lifestyle we provide our citizens, by asphalt resurfacing one (1) mile of pathway, to include mill and overlay. Industry standards anticipate life expectancy of asphalt on a walking pathway to be around 15 to 20 years.

#### Justification:

The one mile park pathway system is 19 years old and is showing signs of degradation. The system will need to have various spots replaced and others capped in an effort to maintain the structural integrity of the walkways. The pathway system in the parks is vital to mobility between athletic surfaces, facilities, and to the health and welfare of park patrons. As the park ages, the infrastructure begins to degrade and maintenance is necessary to keep our infrastructure functional.

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|----------|---------|---------|---------|---------|---------|----------|
| Other/ROW               |                  |          |         |         |         |         |         |          |
| Construction            | 208-691.00-974.0 | \$95,445 |         |         |         |         |         |          |
|                         | TOTAL BUDGET     | \$95,445 |         |         |         |         |         | \$95,445 |

# Ella Mae Power Park Access Road, Parking Lot, and Pathway Resurfacing

Project Number: 105 CIP Number: 109-04

#### **Description:**

The construction of a 5' wide sidewalk along the east side of the approach linking Ten Mile Road to the park. The pathway system in the park is vital to mobility between athletic fields, facilities and to the health and welfare of park patrons. There is nearly 1,500 feet of pathway at Ella Mae Power Park in need of resurfacing. This will revitalize the pathway system and support the active, healthy lifestyle we provide to our citizens.

#### Justification:

The park pathway system is showing signs of degradation. The system will need to have various spots replaced and others capped in an effort to maintain the structural integrity of the walkways.

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|----------|---------|---------|---------|---------|---------|----------|
| Other/ROW               |                  |          |         |         |         |         |         |          |
| Construction            | 208-691.00-974.0 | \$48,630 |         |         |         |         |         |          |
|                         | TOTAL BUDGET     | \$48,630 |         |         |         |         |         | \$48,630 |

## **Pavilion Shore Park Phase IV**

Project Number: 106 CIP Number: PRCS

## **Description:**

Phase IV of this project would include play equipment and site lighting of the entire park.

#### Justification:

This is a development of accessible waterfront park and trailhead with 835 linear feet of naturalized shoreline and will continue improvements of a Michigan Natural Resources Trust Fund (MNRTF) development grant.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Other/ROW               |                  |         |           |         |         |         |         |           |
| Construction            | 208-691.00-974.0 |         | \$198,000 |         |         |         |         | \$198,000 |
|                         | TOTAL BUDGET     |         | \$198,000 |         |         |         |         | \$198,000 |

#### Pavilion Shore Park Phase V

Project Number: 107 CIP Number: PRCS

## **Description:**

Project would include a water feature and restroom facility.

#### Justification:

This is development of accessible waterfront park and trailhead with 835 linear feet of naturalized shoreline and will continue improvements of a Michigan Natural Resources Trust Fund (MNRTF) development grant.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Other/ROW               |                  |         |         |           |         |         |         |           |
| Construction            | 208-691.00-974.0 |         |         | \$554,400 |         |         |         | \$554,400 |
|                         | TOTAL BUDGET     |         |         | \$554,400 |         |         |         | \$554,400 |

# Ella Mae Power Park Irrigation and Fencing Fields 5 & 6 Replacement

Project Number: 108 CIP Number: PRCS

## **Description:**

The current fencing located at Ella Mae Power Park Fields 5 & 6 (ball diamonds) is in need of repair. The fences can be moved allowing more Adult and youth games and tournaments to be played. By repairing the fencing that is currently outdated and in need of repair at these fields, all fencing in the Ella Mae Power Park would be matching.

#### Justification:

The current ball diamonds located at the back of Ella Mae Power Park are called fields 5 & 6. Those fields are in need of major rehaul due to the complex and the need of more teams & tournaments wanting to play in Novi leagues. Currently the fences are very short and for playability and safety reasons, in need of repair. In order to bring those fields inline with the entire look of the rest of the Civic Center field complex and to be able to offer more adult softball games, the renovations would allow not only more leagues and tournaments to play, but also offer more business opportunity for possible naming rights opportunities.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Other/ROW               |                  |         |           |         |         |         |         |           |
| Construction            | 208-691.00-974.0 |         | \$180,800 |         |         |         |         | \$180,800 |
|                         | TOTAL BUDGET     |         | \$180,800 |         |         |         |         | \$180,800 |

## Lakeshore Park Asphalt Paved Parking Lot and Drive - Replacement

Project Number: 109 CIP Number: 100-002

## **Description:**

This project would reduce maintenance costs for Lakeshore Park's lot and drives by replacing gravel surfaces with asphalt.

## Justification:

Gravel and chloride maintenance costs could be virtually eliminated by paving these surfaces. In addition, catch basin clean-out costs would be greatly reduced. National Citizen Survey results reported a majority of citizens view park facilities good to fair. Project to be implemented during second quarter of fiscal period. The 8,355 sq. yd. drive and stone parking area associated with Lakeshore Park is routinely rutted, dusty, and has poor drainage after a significant rainfall. This lot is utilized annually by numerous patrons who have rented shelters, enrolled their children in camp, or are coming to visit the beach. The combined parking area accommodates approximately 150 spaces and is utilized seasonally.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 208-691.00-974.0 |         |         | \$43,850  |         |         |         | \$43,850  |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 208-691.00-974.0 |         |         | \$210,500 |         |         |         | \$210,500 |
|              | TOTAL BUDGET     |         |         | \$254,350 |         |         |         | \$254,350 |

## Ella Mae Power Park Lighting - Ball fields 5 & 6 - New

Project Number: 110 CIP Number: PRCS

## **Description:**

Ella Mae Power Park fields 5 & 6 are located directly south of ball fields 1-4 and are in need of field lighting. The light bases will have a concrete precast base with electrical components enclosure and wire harness on galvanized steel pole, the pole top luminaire assembly. The proposed light fixtures will use 1500 watt metal halide light bulbs which have a life expectancy of 5,000 hours. PRCS average field usage of 300 hours annually. Also included is a 25 year warranty which covers the replacement of the bulbs and personnel costs associated with the bulb replacement work.

#### Justification:

Current field availability for user groups and parks & recreation programs is limited to daylight hours. Allowing lighting will increase field usage and recreational opportunities by allowing activities to be played in the evening. Each field has four hours of use each weeknight and seven to ten hours of use each weekend. Users are NPR youth softball, Madness softball, Detroit Cricket League, fast-pitch girls softball tournaments and random rental groups for softball practice.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Other/ROW               |                  |         |         |           |         |         |         |           |
| Construction            | 208-691.00-974.0 |         |         | \$255,000 |         |         |         | \$255,000 |
|                         | TOTAL BUDGET     |         |         | \$255,000 |         |         |         | \$255,000 |

### **Greenway Development Phase 1B**

Project Number: 111 CIP Number: 125-997

### **Description:**

To plan and build a paved 4.5 mile long north-south regional pathway for recreational use along the ITC Transmission Corridor. The pathway would connect ITC Community Sports Park to the Providence Park Campus. Due to the length of the path being proposed, a phased approach to design and construction would be likely. Phase 1B of the pathway (0.7 miles long and 70% of the project) would begin at Nine Mile Road, continue along the ITC corridor and end at the parking lot of Fire Station No. 4, where a parking area could be located.

#### Justification:

2010 National Citizen Survey ranked ease of bicycle traveling and ease of walking in Novi at 46% and 57% respectively, (2008 Survey had the numbers at 39 and 50); (2006 Survey had the numbers at 35 and 43) on a 100 point scale, showing a need to provide linear open space for use and connectivity in the community. In addition, the 2006 City of Novi Pathway and Sidewalk Prioritization Analysis and Process document places an importance on increasing connectivity to regional or neighboring trail and sidewalk systems. From an economic standpoint, the greenway has the potential to increase real property values, in turn increasing municipal revenues.

| Category<br>Engineering | Account No.  | 2013-14 | 2014-15 | 2015-16 | 2016-17     | 2017-18 | 2018-19 | TOTAL       |
|-------------------------|--------------|---------|---------|---------|-------------|---------|---------|-------------|
| Other/ROW               |              |         |         |         |             |         |         |             |
| Construction            |              |         |         |         | \$1,128,000 |         |         | \$1,128,000 |
|                         | TOTAL BUDGET |         |         |         | \$1,128,000 |         |         | \$1,128,000 |

### **Greenway Development Phase II**

Project Number: 112 CIP Number: 109-06

### **Description:**

Phase II of the pathway (1.5 miles long) follows existing pathways along the east side of Wixom Road and the north side of 11 Mile Road to connect Fire Station No. 4 to the ITC corridor north of 11 Mile Road. There is existing 8-foot wide pathway along the majority of the route. This project would replace the existign 5-foot wide sidewalk section on the north side of 11 Mile Road with an 8-foot wide pathway to provide a consistent 8-foot wide pathway section from start to finish.

### Justification:

2010 National Citizen Survey ranked ease of bicycle traveling and ease of walking in Novi at 46% and 57% respectively, (2008 Survey had the numbers at 39 and 50); (2006 Survey had the numbers at 35 and 43) on a 100 point scale, showing a need to provide linear open space for use and connectivity in the community. In addition, the 2006 City of Novi Pathway and Sidewalk Prioritization Analysis and Process document places an importance on increasing connectivity to regional or neighboring trail and sidewalk systems. From an economic standpoint, the greenway has the potential to increase real property values, in turn increasing municipal revenues.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Engineering  | 208-691.00-974.0 |         |         |         | \$29,750  |         |         | \$29,750  |
| Other/ROW    | 208-691.00-974.0 |         |         |         | \$10,000  |         |         | \$10,000  |
| Construction | 208-691.00-974.0 |         |         |         | \$119,000 |         |         | \$119,000 |
|              | TOTAL BUDGET     |         |         |         | \$158,750 |         |         | \$158,750 |

### **Tim Pope Play Structure Replacement**

Project Number: 113 CIP Number: 109-03

### **Description:**

This project would remove the Tim Pope Play Structure (built in 1997, currently 14 years old) located at ITC Community Sports Park, off the 8 Mile entrance. The structure would be replaced with a new accessible structure and accessible safety surfacing. The intent would be to keep the name of the playground the same after replacement of the structure.

### Justification:

The current structure has exceeded its useful life and does not meet the Americans with Disability (ADA) and Architectural Barriers Act (ABA) standards. In addition, the current structure was constructed from chromated copper arsenate (CCA) treated wood. This chemical has been linked to health concerns with excessive exposure.

| Category<br>Engineering<br>Other/ROW | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|--------------------------------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Construction                         | 208-691.00-974.0 |         |         |         | \$300,000 |         |         | \$300,000 |
|                                      | TOTAL BUDGET     |         |         |         | \$300,000 |         |         | \$300,000 |

### Property acquistion around David Barr Property

Project Number: 114 CIP Number:

### **Description:**

The City purchased the David Barr property in 2012 along with several pieces of art the remain on the property. The Barr property, in time, will be converted into a city asset that will be programed and assist in hosting culturally geared events. With the projected events at the site a number of improvements will need to take place. An improvement that is paramount is the addition of parking for the property. Parcels to the south could be purchased by the City to expand the parking resources. Parcels 22-30-300-014 and 22-30-300-023 are currently undeveloped and are located directly south of Barr Art Park.

### Justification:

Purchasing the two undeveloped lots south of the Barr Property would double the size of the Barr Art Park and provide an area for additional art, paths, landscaping and provide an area to build a parking lot to service the park.

| Category<br>Engineering | Account No.  | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|--------------|---------|---------|---------|-----------|---------|---------|-----------|
| Other/ROW               |              |         |         |         | \$150,000 |         |         | \$150,000 |
| Construction            |              |         |         |         |           |         |         |           |
|                         | TOTAL BUDGET |         |         |         | \$150,000 |         |         | \$150,000 |

### ITC Sports Park Asphalt Paved Parking lots

Project Number: 115 CIP Number: PRCS

### **Description:**

Reduce maintenance costs for ITC Sports Park's lot and drives by replacing gravel surfaces with asphalt.

### Justification:

Gravel and chloride maintenance costs could be virtually eliminated by paving these surfaces. In addition, catch basin clean-out costs would be greatly reduced. National Citizen Survey results reported a majority of citizens view park facilities good to fair. The parking areas associated with ITC Sports Park is routinely rutted, dusty, and has poor drainage after a significant rainfall. These lots are utilized annually by numerous patrons who participate in various sports, both through park activities and user groups, field rentals, play at the Tim Pope play structure and rent the shelter. The combined parking areas are utilized seasonally.

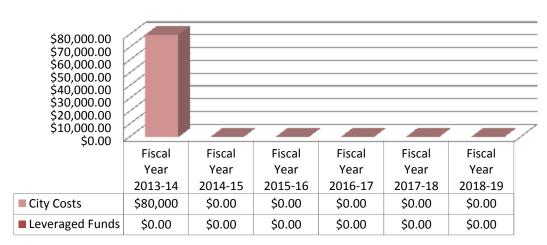
| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Engineering  | 208-691.00-974.0 |         |         |         |         | \$64,650  |         | \$64,650  |
| Other/ROW    | 208-691.00-974.0 |         |         |         |         | \$51,725  |         | \$51,725  |
| Construction | 208-691.00-974.0 |         |         |         |         | \$258,570 |         | \$258,570 |
|              | TOTAL BUDGET     |         |         |         |         | \$374,945 |         | \$374,945 |

### **Technology**

The City of Novi values and appreciates technology and the use of it to provide quality service to the residents and property owners. The City's Information Technology (IT) Department maintains a City-wide, enterprise focus when working in collaboration with all functional areas to develop strategies and plans for maximizing the business value, through utilizing the City's technology resources. Three websites and several social media outlets are tied to the City of Novi along modern display of City events, meetings and scheduled programing in addition to providing a modern and useful Geographic Information System (GIS) which provide helpful and useful information. Leveraging modern technology by placing the necessary tools in Novi Employees hands allows the delivery of service to the Novi community quickly, efficiently and consistently.

Projects found in this category deliver capitalized items that secure City facilities and assist in programing for Parks, Recreation and Cultural Services.

### **Technology**



|             | FY 13-14 | FY 14-15 | FY 15-16 | FY 16-17 | FY 17-18 | FY 18-19 |
|-------------|----------|----------|----------|----------|----------|----------|
| GRAND TOTAL | \$80,000 | \$0      | \$0      | \$0      | \$0      | \$0      |

### State of the Art Video Wall

Project Number: 116 CIP Number: PRCS

### **Description:**

The video wall will be constructed of 16 individual 46" LED panels forming a complete 184" video wall. Panels will have ultra-thin bezels for a combined width of less than 5mm in between. Features of this Video Wall; glare free screen surface, ability to display multiple content simultaneously, audio playback through the Atrium Sound System, Digital signage software with live news, weather, RSS feeds and video clip integration, live IP video stream playback (possible used to display meetings in progress), viewable distance of over 70 feet (covers any viewing spot within Atrium area with optimal detail), displays rated for 24/7 operation, high brightness, and up to 40% lower energy consumption than a projector.

### Justification:

This Video Wall will give the City of Novi the ability to engage customers, showcase promotions, create a truly dynamic experience, as well as play live or pre-recorded video feeds. We will also use the screen for our new idea of video and digital art displays and design a marquee entrance for our theatre. This video screen will also include the X20 media Digital Signage Platform; this will provide some key features to the system as well as give us an opportunity for a possible return on our investment through advertisements. Additional justification for the Video Wall arose after reviewing the expense the City incurs when setting up our Movie in the Park. It normally takes five staff members to install the movie screen outside, plus when it rains it needs to be moved indoors and that could take additional staff to set-up inside and lastly the time the movies are shown—due to the daylight, the movie starts around 10pm and which is really late when it comes to Novi's younger population trying to stay up and watch a movie. By installing this video wall movie nights could start significantly earlier and the screen quality would produce a very high resolution video at any time of the day.

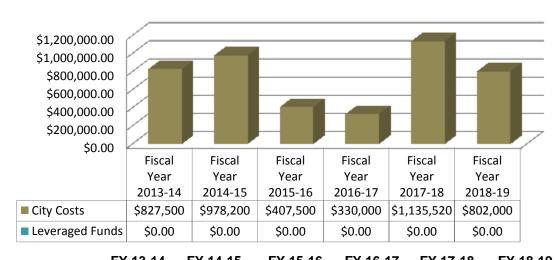
| Category<br>Engineering | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|----------|---------|---------|---------|---------|---------|----------|
| Other/ROW               |                  |          |         |         |         |         |         |          |
| Construction            | 208-693.00-960.9 | \$80,000 |         |         |         |         |         |          |
|                         | TOTAL BUDGET     | \$80,000 |         |         |         |         |         | \$80,000 |

### **Equipment**

Novi employees depend on dependable equipment to allow and assist them do their job day in and day out. The equipment comes in many forms, plow trucks, police cars, generators, fire apparatus, etc., the equipment that literally keeps the City of Novi moving. All the vehicles found in this category are the cars and trucks that appear at the front doors of Novi residents and business owners such as public safety (police, fire, water, sewer and street maintenance). Generators that keep municipal buildings and a 911 call center operational during power outages along with ice resurfaces for the City's ice arena fall under this category. Novi City Council has established the precedent over the years in providing Novi employees with the tools necessary to do their job and provide the best level of service to the community. A number of varied funding sources are used to finance the equipment necessary to efficiently deliver service: General, Major Street, Local Street, Public Safety, and Drug Forfeiture Funds.

For Fiscal Year 12-13 the CIP included three new plow trucks that assisted in revamping the City's winter maintenance program.

### **Equipment**



| <b>GRAND TOTAL</b> \$827,500 | \$978,200 | \$407,500 | \$330,000 | \$1,135,520 | \$802,000 |
|------------------------------|-----------|-----------|-----------|-------------|-----------|

### Squad #4 (Replaces #321, 2000 McCoy-Miller Ambulance)

Project Number: 117 CIP Number: FIRE

### **Description:**

This project is for the replacement of Squad 4 (Vehicle #321) a 2000 McCoy Miller Ambulance with 51,450 miles on it. This vehicle is a transport-capable basic life support (BLS) medium-duty vehicle. It is currently in fair condition. The vehicle responds to fire and emergencies on a daily basis. Following the direction of the ICMA Recommendations and the success we have had with the replacement of similar squads with SUV-type vehicles (Rescue #2 and Rescue #3), this vehicle will be replaced with a Expedition EL 4x4. The vehicle is scheduled to be replaced in the 2013-14 budget year per the Long-Term Fire Apparatus Schedule.

### Justification:

This vehicle will provide two major functions. First it will be responding to requests for fire and medical emergencies. This vehicle will carry all of the equipment according to the State of Michigan in order to be licensed as a Non-Transporting Basic Life Support Vehicle (BLS). Second, it will carry personnel to the scene of emergencies. The vehicle will be capable of carrying two personnel along with their personal protective gear, which includes turn-out gear, breathing apparatus (SCBA), basic forcible entry tools and portable extinguishers.

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|----------|---------|---------|---------|---------|---------|----------|
| Other/ROW               | 101-337.00-979.0 | \$46,500 |         |         |         |         |         |          |
| Construction            |                  |          |         |         |         |         |         |          |
|                         | TOTAL BUDGET     | \$46,500 |         |         |         |         |         | \$46,500 |

### Four- Combination V-Box Salt Spreader Inserts

Project Number: 118 CIP Number: FIELD

### **Description:**

The next step in the City's snow and ice removal program is to enhance winter maintenance functions on four tandem axle dump trucks. Combination truck box inserts are designed to carry granular rock salt and liquid anti icing solutions that can assist with winter snow and ice control and summer dust suppression on gravel roads. The combination unit is a "V-Box" that slides into the existing dump body from a self-supporting leg kit. It is equipped with liquid tanks carrying up to 720 gallons of liquid, a reversible continuous belt cross conveyor, salt slurry generator, spinner, and anti-ice boom system that can de-ice up to three lanes of traffic at one time.

### Justification:

Crushing, pre-wetting, and conservatively applying anti-icing products has the ability to reduce annual salt consumption by 25% compared to conventional methods. From 2008-09 to 2009-10 contract salt prices have increased 45%. By implementing new technology with enhanced best management practices, these inserts can save up to \$60,000 annually, depending on number and type of snow event, above existing pre-wetting practices. This savings demonstrates a potential return on investment in 3 to 4 years.

| Category<br>Engineering | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               | 101-442.20-982.0 | \$240,000 |         |         |         |         |         |           |
| Construction            |                  |           |         |         |         |         |         |           |
|                         | TOTAL BUDGET     | \$240,000 |         |         |         |         |         | \$240,000 |

### One - 1-Ton Dump Truck w/Plow - New

Project Number: 119 CIP Number: FLEFT

### Description:

A one-ton medium-duty dump truck, which is used to tow trailers up to 24,000 lbs. Transport materials, salt roads and parking lots, plow snow and perform general field operation duties, such as patching roads.

### Justification:

A one-ton dump truck is used year-round for many projects. Currently we have only 4 in the fleet, adding to the one-ton fleet will provide the opportunity to be more productive due to the versatility of this type of vehicle.

| Category<br>Engineering | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 | \$100,000 |         |         |         |         |         |           |
| Construction            |                  |           |         |         |         |         |         |           |
|                         | TOTAL BUDGET     | \$100,000 |         |         |         |         |         | \$100,000 |

### Six Force America Commandall 5100 Regulating Controllers for Winter Maintenance

Project Number: 120 CIP Number: FIELD

### **Description:**

Update six of DPS's dump trucks with Force America Commandall 5100 equipment & material regulating controllers, and retrofit required mechanical components for real time winter maintenance tracking. The enhanced systems will uniform truck controls with technology that has been installed on the two most recent truck purchases in 2011-12 and uniform the primary snow clearing fleet for operator convenience and administrative record keeping. These controls mesh seamlessly with the PreCise AVL system recently purchased by the City and will report directly through the software associated with the tracking system.

### Justification:

The specified controllers provide material use reports that are estimated to save administration up to 20 hours weekly during winter months that were previously used to manually compile material use and route completion data. The six primary winter maintenance vehicles that require upgrades are as follows: 2010 Single Axle Dump -- #601, 2003 Tandem Axle Dump -- #603, 2001 Single Axle Dump -- #605, 2008 Tandem Axle Dump -- #611, 2009 Single Axle Dump -- #619, 2001 Tandem Axle Dump -- #620.

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|----------|---------|---------|---------|---------|---------|----------|
| Other/ROW               | 101-442.20-982.0 | \$85,000 |         |         |         |         |         |          |
| Construction            |                  |          |         |         |         |         |         |          |
|                         | TOTAL BUDGET     | \$85,000 |         |         |         |         |         | \$85,000 |

CIP Number: FIRE

### Two - Tandem-Axle 7 Cubic Yard Dump Trucks w/Front Plows and Underbody Scrapers (Replaces #699, 2000, #620, 2001 Sterling)

Project Number: 121 CIP Number: FIFI D

### Description:

Used year round for snow maintenance, road maintenance, drain repairs, grading gravel road shoulders and for hauling material.

\*699 - 2000 Sterling Tandem-Axle Dump Truck, good condition, 71,386 miles with \$49,176 in repairs and maintenance (38% of original cost).

\*620 - 2001 Sterling Tandem-Axle Dump Truck, good condition, 58,335 miles with \$57,960 in repairs and maintenance (50% of original cost).

### Justification:

Truck #699 has approximately \$49,000 or 38% of its original cost invested in maintenance and repair. #620 has approximately \$58,000 or 50% of its original cost invested in maintenance and repair. When these trucks reach their useful lives it may no longer be cost effective to repair them.

| Category<br>Engineering | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 | \$356,000 |         |         |         |         |         |           |
| Construction            |                  |           |         |         |         |         |         |           |
|                         | TOTAL BUDGET     | \$356,000 |         |         |         |         |         | \$356,000 |

Compressed Air Foam System - Engine #2 & #3 (Vehicles #322, 313) - New

## Project Number: 122

Description:

This project is to retrofit a Compressed Air Foam System on Engines 2 and 3 (Vehicles #322 & #313). Compressed Air Foam Systems are a proven technology that greatly enhance the ability to effectively and efficiently put out a fire. The system introduces foam into the fire pump and an air compressor expands the foam and water mixture. As the firefighters are discharging this mixture out the nozzle, it blankets the fire and smothers it. This helps firefighter use less water and causes less damage to belongings. Engine 2 is a 2008 Pierce Fire Pumper with 19,666 miles and Engine 3 is a 2007 Pierce Fire Pumper with 40,888 miles.

### Justification:

By providing this state of the art technology it will provide firefighters with the tools they need to quickly and effectively extinguish fire. This in turn will help in fire containment and thereby reduce damages by saving more belongings and personal property. Per the Long-Term Fire Apparatus Schedule, Engine 2 is scheduled to be replaced in 2023-24 and Engine 3 is scheduled to be replaced in

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15  | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|---------|----------|---------|---------|---------|---------|----------|
| Other/ROW               | 101-337.00-979.0 |         | \$93,200 |         |         |         |         | \$93,200 |
| Construction            |                  |         |          |         |         |         |         |          |
|                         | TOTAL BUDGET     |         | \$93,200 |         |         |         |         | \$93,200 |

### Ditching Machine (Replaces #675, 1991 Gradall)

Project Number: 123 CIP Number: FIELD

### **Description:**

A Ditching Machine/Excavator can be driven instead of being trailered to job sites. Projects include road maintenance, culvert replacements and drain repairs. This machine is designed for precision excavation and the lifting of large, heavy items on construction sites.

\*675 - 1991 Gradall, good condition, with 3,850 hours, with \$14,532 in maintenance and repair costs (8% of original cost).

### Justification:

As this equipment further exceeds its useful life of 15 years, repairs become more frequent and the machine is less reliable and expenses will continue to increase. #675 has almost \$15,000 or 8% of original cost in maintenance and repair.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 |         | \$300,000 |         |         |         |         | \$300,000 |
| Construction            |                  |         |           |         |         |         |         |           |
|                         | TOTAL BUDGET     |         | \$300,000 |         |         |         |         | \$300,000 |

### **Salt Dome Loading Conveyor**

Project Number: 124 CIP Number: FIELD

#### -

**Description:** 

Installation of a rock salt conveyor system capable of loading up to 200 tons of salt per hour into the Field Services Complex salt dome. The conveyor is a self-lubricating system and includes a salt loading pit. Price includes engineering, design and construction fees. Currently, the Department loads to the salt dome using a bucket load--an operation that is very inefficient, plus it only allows for two-thirds (at most) of the dome to be loaded. A conveyor would load the dome to its capacity, which would optimize efficiency.

### Justification:

A conveyor system will allow for full storage capacity. Salt is unloaded onto a grate covering a below ground concrete pit. The salt is carried up the conveyor, into the dome, resulting in a cone-shaped pile. Currently DPS uses a front-end loader to restock the salt dome, limiting capacity to less than the 2,500 tons it was designed to contain. This method requires significant labor and equipment hours. The conveyor system would maximize our salt-storing ability and is much more efficient (200 tons/hour). Annual operating expense to continue as is without a Salt Dome Loading Conveyor \$19,072 in labor and equipment. Payback is expected in 8.91 years.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Other/ROW               | 101-442.20-982.0 |         | \$170,000 |         |         |         |         | \$170,000 |
| Construction            |                  |         |           |         |         |         |         |           |
|                         | TOTAL BUDGET     |         | \$170,000 |         |         |         |         | \$170,000 |

### Mini Excavator Replacement (Replaces #622, 2000 Bobcat)

Project Number: 125 CIP Number: FIELD

### **Description:**

The Department of Public Services currently performs such tasks as catch basin repair, water main repair, ditching, and various roadway improvement projects. Often times multiple crews require the use of the same equipment to perform excavation or heavy lifting functions. The replacement of a mini track excavator would enhance efficiency and provide a higher/expedited level of service to residents.

\*622 - 2000 Bobcat Excavator, in fair condition, with over 2,000 hours, \$12,036 in repairs and maintenance (31% of original cost).

### Justification:

Currently the Department of Public Services utilizes a Bobcat 330 with 11 feet of boom for Field Operations excavation projects. A replacement machine allows crews to enhance the level of service to our residents. #622 is in need of a new hydraulic drive motor, for which we received an estimate of \$7,400 to replace.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15  | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|---------|----------|---------|---------|---------|---------|----------|
| Other/ROW               | 101-442.20-984.0 |         | \$85,000 |         |         |         |         | \$85,000 |
| Construction            |                  |         |          |         |         |         |         |          |
|                         | TOTAL BUDGET     |         | \$85,000 |         |         |         |         | \$85,000 |

Two Single-Axle 5 Cubic Yard Dump Trucks w/Front Plows & Underbody Scrapers - Replacement (replaces #686 & #687, 1994 Fords)

Project Number: 126 CIP Number: FIFI D

### **Description:**

The replacement dump trucks will be used to transport materials and equipment, aid in road maintenance, drainage work, and snow removal operations. The trucks will come equipped with front plows and underbody scrapers.

### Justification:

Trucks #686 and #687 have exceeded their useful lives. Investing more funds into maintenance and repair for these two trucks does not make good financial sense.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 |         | \$330,000 |         |         |         |         | \$330,000 |
| Construction            |                  |         |           |         |         |         |         |           |
|                         | TOTAL BUDGET     |         | \$330,000 |         |         |         |         | \$330,000 |

<sup>\*686 - 1994</sup> Ford, Single-Axle Dump Truck, fair condition, 73,601 miles, \$42,901 in repairs and maintenance (39% of original cost).

<sup>\*687 - 1994</sup> Ford, Single-Axle Dump Truck, fair condition, 80,336 miles, \$45,093 in repairs and maintenance (63% of original cost).

### Bobcat All-Wheel Loader - New

Project Number: 127 CIP Number: FIELD

### **Description:**

An all-wheel loader is used to transport materials for confined space projects in rear yards, storm drain easements, snow removal on bridge decks, and heavily landscaped locations.

### Justification:

A versatile piece of equipment that would be used year round by the DPS and Water & Sewer Departments. A Bobcat would alleviate the need to use several pieces of equipment currently needed to perform work in confined space locations.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16  | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|---------|---------|----------|---------|---------|---------|----------|
| Other/ROW               | 101-442.20-984.0 |         |         | \$50,000 |         |         |         | \$50,000 |
| Construction            |                  |         |         |          |         |         |         |          |
|                         | TOTAL BUDGET     |         |         | \$50,000 |         |         |         | \$50,000 |

### Zamboni Ice Resurfacer - Replacement

Project Number: 128 CIP Number: ICE

### Description:

Replace the existing Model 500 Zamboni (1998, 7,031 hours, in fair condition) resurfacing machine with a new machine. The current machine will be approaching the end of its useful life. The maintenance costs with old machines are higher than with new. New machines also create a better ice surface for the customers to use.

### Justification:

The Zamboni machine will be approaching the end of it's useful life. The operating costs of older machines are higher than that of newer machines. Newer machines also create a better ice surface, which is better for skating.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16  | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|---------|---------|----------|---------|---------|---------|----------|
| Other/ROW               | 590-000.00-000.0 |         |         | \$92,500 |         |         |         | \$92,500 |
| Construction            |                  |         |         |          |         |         |         |          |
|                         | TOTAL BUDGET     |         |         | \$92,500 |         |         |         | \$92,500 |

## One - Single-Axle 5 Cubic Yard Dump Truck w/Front Plow and Underbody Scraper (Replaces #605, 2001 Osh Kosh)

Project Number: 129 CIP Number: FIELD

### Description:

Dump truck to replace existing truck (#605). The dump truck is used to transport materials and equipment, road maintenance and drainage work, and snow removal operations. The replacement truck will come equipped with a new V-Box insert which has the ability to reduce annual salt consumption by 30% compared to conventional methods.

\*605 - 2001 Osh Kosh, Single-Axle Dump Truck, has more than 50,000 miles and is in good condition. \$27,298 has been spent on repairs and maintenance (19% of original cost).

### Justification:

#605 has approximately \$28,000 or 19% in maintenance and repair. It is very difficult to procure parts for this particular truck; due to its age and limitation of parts distributors.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 |         |         | \$165,000 |         |         |         | \$165,000 |
| Construction            |                  |         |         |           |         |         |         |           |
|                         | TOTAL BUDGET     |         |         | \$165,000 |         |         |         | \$165,000 |

### One - 1-Ton Dump Truck w/Plow - New

Project Number: 130 CIP Number: FIELD

### **Description:**

A one-ton dump truck is used daily to transport materials for road maintenance, drainage activities and snow maintenance operations and for patching roads.

### Justification:

More trucks are needed in the City's fleet to improve efficiency. Instead of two employees to one truck working on one project, two employees in two trucks working on two projects. Thus efficiently performing current services.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 |         |         | \$100,000 |         |         |         | \$100,000 |
| Construction            |                  |         |         |           |         |         |         |           |
|                         | TOTAL BUDGET     |         |         | \$100,000 |         |         |         | \$100,000 |

## One - Single-Axle 5 Cubic Yard Dump Truck w/Front Plow and Underbody Scraper (Replaces #621, 2001 Sterling)

Project Number: 131 CIP Number: FIELD

### Description:

A dump truck to replace existing truck (#621). The dump truck is used to transport materials and equipment, road maintenance and drainage work, and snow removal operations. The replacement truck will come equipped with a new V-Box insert which has the ability to reduce annual salt consumption by 30% compared to conventional methods.

\*621 - 2001 Sterling Single-Axle Dump, good condition, 52,484 miles, \$39,117 in repairs and maintenance (36% of original cost)

#### Justification:

This request is to replace #621due to excessive use, rust, and frequent maintenance that take it out of service. #621 has over \$39,000 or 36% of its original cost in maintenance and repair.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 |         |         |         | \$165,000 |         |         | \$165,000 |
| Construction            |                  |         |         |         |           |         |         |           |
|                         | TOTAL BUDGET     |         |         |         | \$165,000 |         |         | \$165,000 |

### One - Single-Axle Large Dump Truck w/Front Plow and Underbody Scraper - New

Project Number: 132 CIP Number: FIFI D

### Description:

Dump trucks are used daily to transport materials and equipment for road maintenance and drainage activities, and for snow removal operations.

### Justification:

Request is for a new truck due to an aging fleet with excessive use, rust, and frequent maintenance that take trucks out of service and undermine City services.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 |         |         |         | \$165,000 |         |         | \$165,000 |
| Construction            |                  |         |         |         |           |         |         |           |
|                         | TOTAL BUDGET     |         |         |         | \$165,000 |         |         | \$165,000 |

### Public Address and Stereo System - Replacement

Project Number: 133 CIP Number: ICE AREN

### **Description:**

Replace the current tower of stereo equipment, tuners, relays, and speakers throughout the facility with new. The existing equipment is approaching the end of its useful life and there is much better equipment available to provide an atmosphere appreciated by the customers. Current equipment is outdated and the costs to repair and maintain are increasing. We use the equipment to provide music during open skating and new equipment would allow us to provide better service to the customer. This has also been scheduled on the Capital Needs Assessment that was created in August 2009.

### Justification:

The current equipment is approaching the end of its useful life and the costs to maintain and repair are increasing. New equipment can provide a better service to the customers and create a better atmosphere within the facility.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18  | 2018-19 | TOTAL    |
|-------------------------|------------------|---------|---------|---------|---------|----------|---------|----------|
| Other/ROW               | 590-000.00-000.0 |         |         |         |         | \$26,100 |         | \$26,100 |
| Construction            |                  |         |         |         |         |          |         |          |
|                         | TOTAL BUDGET     |         |         |         |         | \$26,100 |         | \$26,100 |

### Rescue #2 & #3 (Replaces #335, 344, 2011 Ford Expeditions)

Project Number: 134 CIP Number: FIRE

### **Description:**

This project is for the replacement of Rescue #2 and Rescue #3 (Vehicles #335, #344) which are both 2011 Ford Expeditions (4x4 EL). The current mileage for Rescue #2 is 7,644 and the current mileage on Rescue #3 is 10,098. The vehicles are classified as transport-capable basic life support (BLS) medium-duty vehicles. They are currently in excellent condition. Their expected useful life is 8 years. The vehicles respond to fires and emergencies on a daily basis. The two vehicles were deployed in 2011 based on the direction of the ICMA Recommendations to replace squads with SUV-type vehicles. The vehicles are scheduled to be replaced in the 2018-19 budget year per the Long-Term Fire Apparatus Schedule.

### Justification:

The vehicles provide two major functions. First, they respond to fires, and medical emergency requests. The vehicles carry all of the equipment according to the State of Michigan in order to be licensed as a Non-Transporting Basic Life Support Vehicle (BLS). Second, they carry personnel to the scene of emergencies. The vehicles are capable of carrying two personnel along with their personnel protective gear that includes turn-out gear, breathing apparatus (SCBA), basic forcible entry tools and portable extinguishers.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Other/ROW               | 101-337.00-979.0 |         |         |         |         | \$118,650 |         | \$118,650 |
| Construction            |                  |         |         |         |         |           |         |           |
|                         | TOTAL BUDGET     |         |         |         |         | \$118,650 |         | \$118,650 |

## One Single-Axle 5 Cubic Yard Dump Truck w/Front Plow and Underbody Scraper (Replaces #698, 1998 Ford)

Project Number: 135 CIP Number: FIELD

### Description:

One dump truck to replace existing truck #698. The dump truck is used to transport materials and equipment, road maintenance and drainage work, and snow removal operations. The replacement will come with new V-box inserts which have the ability to reduce annual salt consumptions by 30% compared to conventional methods.

\*#698 - 1998 Ford Single-Axle Dump Truck, in good condition, with over 71,000 miles, \$52,376 in repairs and maintenance (66% of original cost)

### Justification:

Request is to replace the dump truck due to excessive use, rust and frequent maintenance that takes the trucks out of service. #698 has over \$52,000 in maintenance and repair, or 66% of its original cost.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 |         |         |         |         | \$170,000 |         | \$170,000 |
| Construction            |                  |         |         |         |         |           |         |           |
|                         | TOTAL BUDGET     |         |         |         |         | \$170,000 |         | \$170,000 |

### Tanker #1 (Replaces #311, 1997 Chevrolet)

Project Number: 136 CIP Number: FIRE

### **Description:**

This project is for the replacement of Tanker 1 (Vehicle #311). Tanker 1 is a KME Water Tanker, built on a 1997 Chevrolet C 8500 chassis. The Tanker carries 1500 gallons of water and is equipped with a 500 gallon per minute power take off pump. This apparatus has 11,067.6 miles (9/23/2012) on it. It has 48 feet of ground ladders, 2 self contained breathing apparatus, a 2000 gallon portable water tank and is licensed by the State of Michigan as a Medical First Responder vehicle. Mileage is not the sole determination for replacement of an apparatus. Time the vehicle has been in service also must be taken into consideration. It is estimated that fire apparatus have a fifteen year life span. In 2013 Tanker 1 will have been in service for sixteen years. Advances in technology make new apparatus easier to operate making the fire fighters job easier. Advances in vehicle handling and occupant safety should be important factors in deciding when a vehicle is replaced.

### Justification:

Many areas in our city are not serviced by the municipal water system. Because of the absence of fire hydrants we rely on the water carried on the fire apparatus to extinguish the fire. Our first due engines carry between 500 and 1,000 gallons of water which many times is not enough to extinguish the fire. To increase the amount of water dispatched to the scene we rely on water tankers to supplement the supply. Tanker 1 not only holds 1500 gallons of water it also is equipped with a portable water tank that can be deployed to allow an additional 2000 gallons of capacity. Currently Tanker 1 is also serving in the role of reserve engine. If one of our current first due line apparatus is taken out of service for repair the tanker is put in its place.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Other/ROW               | 101-337.00-979.0 |         |         |         |         | \$320,770 |         | \$320,770 |
| Construction            |                  |         |         |         |         |           |         |           |
|                         | TOTAL BUDGET     |         |         |         |         | \$320,770 |         | \$320,770 |

### One - 1-Ton Dump Truck w/Plow (Replaces #633, 1998 GMC)

Project Number: 137 CIP Number: FIELD

### **Description:**

A medium duty dump truck used to tow trailers up to 24,000 lbs. Transport materials, salt roads & parking lots, plow snow and perform general field operation duties. Replaces dump truck \*#633, 1998 GMC 3500 Series 1-Ton Dump Truck, with more than 44,000 miles in poor condition, \$29,685 in repairs and maintenance (93% of original cost).

### Justification:

Truck #633 is not large enough to handle our daily operation and is incurring frequent maintenance costs. The dump body was replaced in 2010 at a cost of over \$9,500.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 |         |         |         |         | \$100,000 |         | \$100,000 |
| Construction            |                  |         |         |         |         |           |         |           |
|                         | TOTAL BUDGET     |         |         |         |         | \$100,000 |         | \$100,000 |

## Truck-Mounted Combination (Jet and Vacuum) Sewer Cleaner Replacement (Replaces #614, 2007 Sterling Vactor)

Project Number: 138 CIP Number: FIELD

### **Description:**

This piece of equipment is vital to the Department of Public Services. The replacement of this unit will help to continue cleaning storm drains, perform hydro-excavations, jet culverts and clean up after flooding incidents. The DPS Field Operations Division unit is also used as a stand-by in cases where the Water & Sewer Division Vactor is down for repair.

\*614 - 2007 Sterling Vactor, good condition, 25,000 miles, \$17,354 in repairs and maintenance (6% of original cost).

### Justification:

The existing unit will have reached its useful life in 2017 and will have enough value left to bring a decent trade-in return to the purchase of its replacement. The older this machine gets, the more costly and extensive are its repairs.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18   | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|-----------|---------|-----------|
| Other/ROW               | 101-442.20-984.0 |         |         |         |         | \$400,000 |         | \$400,000 |
| Construction            |                  |         |         |         |         |           |         |           |
|                         | TOTAL BUDGET     |         |         |         |         | \$400,000 |         | \$400,000 |

### Front-End Loader Replacement (Replaces #689,1995 Case)

Project Number: 139 CIP Number: FIELD

### **Description:**

A Front-End Loader is used daily for loading dirt, debris, road salt and to unload gravel train deliveries. It is also used for snow removal on bridge decks and parking areas.

\*689 - 1998 Case Loader 821B, fair condition, 7,800 hours, \$27,783 in repairs and maintenance (25% of original cost).

### Justification:

The existing Loader has exceeded its useful life and maintenance and repairs are excessive and expensive. #689 has over \$28,000, or 25% of original cost in maintenance and repair.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19   | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|---------|-----------|-----------|
| Other/ROW               | 101-442.20-984.0 |         |         |         |         |         | \$252,000 | \$252,000 |
| Construction            |                  |         |         |         |         |         |           |           |
|                         | TOTAL BUDGET     |         |         |         |         |         | \$252,000 | \$252,000 |

### Grader (Replaces #612, 2005 CAT)

Project Number: 140 CIP Number: FIELD

### Description:

Grader is used for snow removal, maintaining road shoulders, cutting and leveling road surfaces for asphalt and concrete repairs. As the community grows traffic volume increases on the few remaining gravel roads Novi maintains. If not maintained there becomes an increased risk of vehicle damage and traffic accidents. #612 is a rear-wheel drive Grader, which is extremely difficult to drive on snow, sleet and ice.

\*612 - 2005 CAT, with over 3,000 hours, in good condition, \$16,543 in repairs and maintenance (8% of original cost).

### Justification:

#612 has over \$16,000 or 8% of its original cost in maintenance and repairs. The replacement Grader will be an all-wheel drive piece of equipment that can drive in any weather condition.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19   | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|---------|-----------|-----------|
| Other/ROW               | 101-442.20-984.0 |         |         |         |         |         | \$300,000 | \$300,000 |
| Construction            |                  |         |         |         |         |         |           |           |
|                         | TOTAL BUDGET     |         |         |         |         |         | \$300,000 | \$300,000 |

## One Tandem-Axle 7 Cubic Yard Dump Truck w/Front Plow & Underbody Scraper (Replaces #603, 2003 Sterling)

Project Number: 141 CIP Number: FLEET

### Description:

Used year round for snow maintenance, road maintenance, drain repairs, grading gravel road shoulders and for hauling material.

#603 - 2003 Sterling, Tandem-Axle Dump Truck, good condition, 43,000 miles, \$25,908 in repairs and maintenance (23% of original cost).

### Justification:

Truck #603 has approximately \$26,000 invested in maintenance and repair. When this truck reaches its useful life it may no longer be cost effective to repair it.

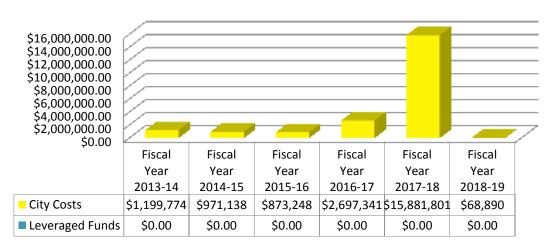
| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19   | TOTAL     |
|-------------------------|------------------|---------|---------|---------|---------|---------|-----------|-----------|
| Other/ROW               | 101-442.30-984.0 |         |         |         |         |         | \$250,000 | \$250,000 |
| Construction            |                  |         |         |         |         |         |           |           |
|                         | TOTAL BUDGET     |         |         |         |         |         | \$250,000 | \$250,000 |

### **Buildings and Property**

Operational facilities are the "bricks and mortar" from which the City of Novi provides services to its residents and businesses. Increasingly, operational facilities also include the systems that facilitate service delivery in the information age. Projects include the construction of new facilities, as well as the maintenance, rehabilitation, renovation, and expansion of existing facilities.

Operational facilities projects are funded from a variety of different sources, depending on the use of the facility. Sources mainly are tied to the General Fund and leveraged funds. Projects in the six year program include replacement of the HVAC systems at the Civic Center, parking lot replacements at the Police Station, construction of a new Fire Station and a new Public Services Complex Expansion.

### **Buildings and Property**



|             | FY 13-14    | FY 14-15  | FY 15-16  | FY 16-17    | FY 17-18     | FY 18-19 |
|-------------|-------------|-----------|-----------|-------------|--------------|----------|
| GRAND TOTAL | \$1,199,774 | \$971,138 | \$873,248 | \$2,697,341 | \$15,881,801 | \$68,890 |

### Lower Level Lobby, Hallway, and Locker Room Flooring Replacement

Project Number: 142 CIP Number: ICE

### **Description:**

The original flooring in the lower level of the ice arena was laid in 1998 and is approaching the end of its useful life. There is heavy wear with hockey and figure skates, along with regular foot traffic on that flooring. This project proposes to replace all of the flooring in the lower level with similar product. This project has been planned and budgeted for in the Capital Needs Assessment that was conducted in August 2009. The plan would be to replace the existing flooring during a time of the year to not affect the normal operation of the facility.

### Justification:

The current flooring is approaching the end of its useful life and needs to be replaced. There are many wear spots starting to show through the current flooring and will create an unsafe and customer unfriendly environment if not replaced.

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|----------|---------|---------|---------|---------|---------|----------|
| Other/ROW               | 590-000.00-000.0 | \$50,300 |         |         |         |         |         |          |
| Construction            |                  |          |         |         |         |         |         |          |
|                         | TOTAL BUDGET     | \$50,300 |         |         |         |         |         | \$50,300 |

### Police Parking Lot Improvements - Replacement

Project Number: 143 CIP Number: POLICE

### **Description:**

This project is for the rehabilitation of the Police Department front parking lot and circular drive. During 2012 the Engineering Department coordinated a review of all Public Safety parking lots. Police and Fire parking lots, along with other City parking lots, were evaluated to determine the number and types of defects and the type of repairs or rehabilitation that would be appropriate, and a geotechnical engineering investigation was also completed. In July 2012 a construction contract was awarded for the construction phase of the repairs based on available funding, which was only sufficient enough to repair the east or back parking lot. This request is for the continuation of the project, which includes the replacement of the west or front parking lot. The design phase for the repair of the front lot is complete and ready to be rebid once the project is approved. The projects calls for the removal and replacement of the entire parking lot.

### Justification:

Failure to fund the request will result in continued deterioration, increased repair cost, potential risk for injury to employees and damage to vehicles. Engineering would bid the project and oversee the work.

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|----------|---------|---------|---------|---------|---------|----------|
| Other/ROW               | 101-301.00-976.1 | \$58,810 |         |         |         |         |         |          |
| Construction            |                  |          |         |         |         |         |         |          |
|                         | TOTAL BUDGET     | \$58,810 |         |         |         |         |         | \$58,810 |

### Civic Center HVAC Air Handling Units #3 and #4 Replacement

Project Number: 144 CIP Number: FACILITY

### **Description:**

The Civic Center houses four air handler units, two of the units are located in the east penthouse of the Civic Center (units 3 and 4) and are responsible for providing airflow to over 60% of the building. These units are over 25 years old and experiencing a high volume of calls for service/repair. This has led to an increase in maintenance costs, a trend that will increase substantially. The replacement of these two units is a preventative action to prevent a total failure event.

### Justification:

Failure of the units will result in the inability to circulate airflow through the building. By replacing both units at the same time we will be able to reduce the overall cost associated with the install given the physical location of the units. Also, the replacement of both air handlers will allow optimum HVAC building performance considering the past replacement of the Chiller (replaced in 2009) and boiler (FY2012-13).

| Category<br>Engineering | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               | 101-265.00-976.0 | \$125,000 |         |         |         |         |         |           |
| Construction            |                  |           |         |         |         |         |         |           |
|                         | TOTAL BUDGET     | \$125,000 |         |         |         |         |         | \$125,000 |

### **Meadowbrook Commons Roof Replacements**

Project Number: 145 CIP Number: SENIOR

### **Description:**

This project will replace ten roofs at Meadowbrook Commons, scheduled to be replaced per the Capital Needs Assessment report (CNA) for Meadowbrook Commons, over the next ten years. The ten roofs comprise approximately 105,663 square feet of roof covering, and approximately 3,348 square feet of roof drainage.

### Justification:

The existing roof's are aging and meeting life expectancy.

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15  | 2015-16  | 2016-17  | 2017-18  | 2018-19  | TOTAL     |
|-------------------------|------------------|----------|----------|----------|----------|----------|----------|-----------|
| Other/ROW               | 594-000.00-000.0 | \$41,484 | \$42,738 | \$44,020 | \$45,341 | \$46,701 | \$68,890 | \$247,690 |
| Construction            |                  |          |          |          |          |          |          |           |
|                         | TOTAL BUDGET     | \$41,484 | \$42,738 | \$44,020 | \$45,341 | \$46,701 | \$68,890 | \$289,174 |

### **DPS Mezzanine Build-Out**

Project Number: 146 CIP Number: DPS

### **Description:**

The Department of Public Services building is 28 years old, and as the City has grown, it has run out of usable space. Employees have to eat lunch and take breaks in one of four areas throughout the building, including an improvised break area inside the garage bay (see pictures attached). The facility also lacks a training room - currently, training is conducted in the garage or the parks maintenance bay. Finally, the building lacks restroom facilities to handle high demand at breaks, lunch time, and at the beginning and end of each shift. To illustrate, DPS employs as many as 70 male workers in the summer. When they return to the DPS building for lunch, there are only 4 fixtures available for use (2 toilets; 2 urinals). The mezzanine has over 4,000 sf of unused or underutilized space that could be used to address these needs. The built-out space would include a combined lunch/training room, restrooms, a locker room, exercise/weight room, and fleet maintenance storage space. Build-out and use of the mezzanine is now legally possible because of the FY 12/13 addition of the mezzanine elevator, which makes the space ADA-accessible.

### Justification:

This project is necessary because the current DPS facility does not meet the basic needs of DPS employees. The need for adequate lunch, break, meeting, training, and restroom areas would be met by the completion of this project.

| Category     | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Engineering  | 101-442.00-976.0 | \$52,500  |         |         |         |         |         |           |
| Other/ROW    | 101-442.00-740.2 | \$54,000  |         |         |         |         |         |           |
| Construction | 101-442.00-976.0 | \$350,000 |         |         |         |         |         |           |
|              | TOTAL BUDGET     | \$456,500 |         |         |         |         |         | \$456,500 |

### Figure Skating Locker Room Remodel and Build Out

Project Number: 147 CIP Number: ICE AREN

### **Description:**

With the addition of coach Igor Shpilband and the high level ice dancing teams to the Novi Ice Arena, there has been a need for more locker room space to accommodate the increase in customers. This plan is to remodel the existing figure skating locker room and build out an additional space for coaches. We propose to divide the existing figure skating locker room into two halves to house the Skating Club of Novi skaters and coaches in each half. The current figure skating coaches room would then be converted to house the ice dancing skaters. The build out would be done to accommodate coach Shpilband and his other coaches. This will give us the most flexibility for space for our existing customers and make the arena a more attractive place for the new customers and go a long way in retaining those customers. The rooms could be converted to other purposes and still remain an attractive space should the teams decide to leave in the future.

### Justification:

The additional locker room space is needed for us to accommodate our new customers. Without this space, they may choose to look at other facilities that can provide them the space required. The additional revenue that will be gained by having the new skaters here will more than offset the cost of the project in no more than one year. The space can also be used for other purposes should the customers leave and/or when they are not in the facility.

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|----------|---------|---------|---------|---------|---------|----------|
| Other/ROW               | 590-000.00-000.0 | \$40,000 |         |         |         |         |         |          |
| Construction            |                  |          |         |         |         |         |         |          |
|                         | TOTAL BUDGET     | \$40,000 |         |         |         |         |         | \$40,000 |

### Fire Parking Lot Improvements - Replacement

Project Number: 148 CIP Number: FIRE

### **Description:**

This project is for the rehabilitation of the parking lots at Fire Stations #2, #3, #4 and the CEMS Satellite Center. During 2012, the Engineering Department coordinated a review of all Police and Fire parking lots. Public Safety parking lots, along with other City parking lots, were evaluated to determine the number and types of defects and the type of repairs or rehabilitation that would be appropriate, and a geotechnical engineering investigation was also completed. In July 2012 a construction contract was awarded for the construction phase of the repairs based on available funding. The 2012-13 budget was sufficient enough to repair the parking lot at Fire Station #1. This request is for the continuation of the project with repairs being made to the parking lots at Fire Stations #2, #3, #4 and the CEMS Satellite Center. The design phase for the repairs is complete and construction is ready to be bid once the project is approved. The rehabilitation methods to be used range from complete payment removal and replacement to minor patching and repairs. Drainage improvements will also be completed in some locations where appropriate.

### Justification:

Failure to fund the request will result in continued deterioration, increased repair costs, potential risk to employees and damage to vehicles. Engineering would bid the project and oversee the work.

| Category<br>Engineering | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               | 101-337.00-976.1 | \$236,600 |         |         |         |         |         |           |
| Construction            |                  |           |         |         |         |         |         |           |
|                         | TOTAL BUDGET     | \$236,600 |         |         |         |         |         | \$236,600 |

### Fire Training Building - New

Project Number: 149 CIP Number: FIRE

### **Description:**

The project is for a single-story house-like fire training building consisting of four (4) rooms, one of which is a burn room and offers basic functionality for live fire training, namely its pitched roof for roof exercises. The training structure features allow for the following training:

- Live Fire Training room- allows for simulation of fire operations in a safe environment
- Roof chop out- which allows for realistic roof-top ventilation training
- Moveable Wall Panels- allow for search and rescue training in a continuously changing and challenging atmosphere
- Window Opening- allow for training in the use of proper positive pressure ventilation
- Four interior rooms- allow for performing multiple operations simultaneously, as well as provide more challenging scenarios
- Westec Insulation System- provides realism in live fire training, maintained structural integrity, and has no required maintenance.

#### Justification:

The most difficult training to provide for our Firefighters is the realism of actual building fires without the danger. This training system produces the type of heat and fire conditions necessary to experience "live" fire and smoke to allow them to be better prepared for an actual event. The Training and Safety Officers can control the scenario to prevent any injuries in this controlled environment. Structure fires account for the highest hazard to firefighters and only account for a small percentage of actual emergency incidents. Which means that these low frequency, high risk operations must be practiced on a regular basis, and with realistic scenarios to increase the proficiency and decrease the potential for injury. The current fire training tower does not provide for the same capabilities as provided in the proposed structure. Furthermore, the proposed structure will cost less to build than attempting to retrofit the current training tower with the same capabilities.

| Category<br>Engineering | Account No.      | 2013-14   | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|-----------|---------|---------|---------|---------|---------|-----------|
| Other/ROW               | 101-337.00-976.0 | \$159,920 |         |         |         |         |         |           |
| Construction            |                  |           |         |         |         |         |         |           |
|                         | TOTAL BUDGET     | \$159,920 |         |         |         |         |         | \$159,920 |

### **Meadowbrook Commons Asphalt Repairs**

Project Number: 150 CIP Number: SENIOR

### **Description:**

There is \$31,155 estimated for repairs to the asphalt parking lot at Meadowbrook Commons. This money for the repairs has been scheduled for year 2014, year five, of the Capital Needs Assessment report (CAN). The final scope of work will be determined at that time due to the unforeseen weather, wear and tear that the asphalt will incur between now and then. Please see attached pictures for various examples of possible repairs that will need to be completed

### Justification:

The harsh winters and hot summers take a toll on asphalt parking lot areas. This project should be completed to maintain the integrity of the parking lot areas. Further delay and deterioration will result in an even more costly project. Taking a proactive approach will save the City money

| Category<br>Engineering | Account No.      | 2013-14  | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|----------|---------|---------|---------|---------|---------|----------|
| Other/ROW               |                  |          |         |         |         |         |         |          |
| Construction            | 594-000.00-000.0 | \$31,160 |         |         |         |         |         |          |
|                         | TOTAL BUDGET     | \$31,160 |         |         |         |         |         | \$31,160 |

### Arcade Demo and Upper Lobby Build Out

Project Number: 151 CIP Number: ICE AREN

### **Description:**

The first phase of the project would be the demolition of the arcade from the middle of the upper lobby. The plan would be to remove the walls and level the arcade. We would move the televisions and games that were located in and around the arcade to other parts of the lobby. This would open up the main lobby and give a more open and comfortable feel to the area. It will also enable the Blue Line Café to be seen from all parts of the lobby and have a more restaurant/café feel, which should help to increase sales. After the arcade is removed, we would build out from the back wall and create a new meeting/party room space to house birthday parties, team parties, or additional meeting space.

### Justification:

Removing the arcade will open up the main lobby and make it a more attractive and welcoming place for customers to gather. With our Blue Line Café in that area as well, the more people that gather there, the more sales may increase. We will relocate all the televisions and games so we do not lose any revenue stream when the project is complete. The addition of another meeting/party/gathering space will allow us to book more parties or meetings.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15  | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|---------|----------|---------|---------|---------|---------|----------|
| Other/ROW               | 590-000.00-000.0 |         | \$50,000 |         |         |         |         | \$50,000 |
| Construction            |                  |         |          |         |         |         |         |          |
|                         | TOTAL BUDGET     |         | \$50,000 |         |         |         |         | \$50,000 |

### Training Center and 2nd Floor Carpet Replacement

Project Number: 152 CIP Number: POLICE

### **Description:**

This project is for the replacement of the carpet throughout the 2nd floor of the police building and the Training Center. The existing carpet is over tens years old and worn out due to the high volume of traffic. Areas that would require replacement include the entire 2nd floor office areas and the Training Center located on the first floor. In 2011-12 the carpet throughout the first floor was replaced. The area included in this project is approximately 960 square yards and the estimated cost for replacement is \$53/per square yard.

#### Justification:

The carpet is over 10 years old. Several sections of carpeting in hallways, offices and reception areas are heavily worn and permanently stained. The carpet will continue to wear and seams are beginning to show and come unglued. Failure to replace the carpet will result in gaps between seems becoming unsightly and posing potential safety issues for staff.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15  | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|---------|----------|---------|---------|---------|---------|----------|
| Other/ROW               | 101-301.00-976.0 |         | \$53,400 |         |         |         |         | \$53,400 |
| Construction            |                  |         |          |         |         |         |         |          |
|                         | TOTAL BUDGET     |         | \$53,400 |         |         |         |         | \$53,400 |

### Civic Center HVAC Air Handling Units #1 and #2 Replacement

Project Number: 153 CIP Number: FACILITY

### **Description:**

The Civic Center houses four air handler units (a device used to condition and circulate air as part of a heating, ventilating and air-conditioning (HVAC) system), two of the units are located in the west penthouse of the Civic Center (units 1 and 2) and are responsible for providing airflow to over 40% of the building. These units are over 25 years old and experiencing a high volume of calls for service/repair. This has led to an increase in maintenance costs, a trend that will increase substantially. The replacement of these two units is a preventative action to prevent a total failure event.

### Justification:

Failure of the units will result in the inability to circulate airflow through the building. By replacing both units at the same time we will be able to reduce the overall cost associated with the install given the physical location of the units. Also, the replacement of both air handlers will allow optimum HVAC building performance considering the past replacement of the chiller (replaced in 2009) and boiler (FY2012-13).

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Other/ROW               | 101-265.00-976.0 |         | \$125,000 |         |         |         |         | \$125,000 |
| Construction            |                  |         |           |         |         |         |         |           |
|                         | TOTAL BUDGET     |         | \$125,000 |         |         |         |         | \$125,000 |

### Field Services Complex Parking Lot Reconstruction Project

Project Number: 154 CIP Number: DPS

### **Description:**

The 3-acres of parking lots/paved yard at the Field Services Complex (FSC) is 28 years old and well past its useful life. DPS commissioned an evaluation by a consulting engineering firm in FY12/13 and it was determined that (despite conflicting information shown on the facility's asbuilt drawings) there is very little base material beneath the asphalt pavement and the pavement thickness is as thin as 2" in many locations throughout the yard. Overall, the pavement is in an extremely distressed condition (i.e., potholes, full-depth cracks, etc.), which is to be expected given that it has received heavy truck traffic for nearly three decades and has an extremely inadequate composition. This project would reconstruct most of the pavement in the yard (areas that would be disturbed by a future FSC expansion project would not be included) by removing pavement, undercutting existing soil, improving site drainage, adding stone base, and paving areas with standard strength asphalt (employee and visitor parking areas), high strength asphalt (access road around the building and drives to auxiliary buildings), and heavy duty concrete (material storage and equipment maneuvering area).

### Justification:

This project is needed because failed pavement at the FSC requires ongoing and frequent maintenance in the form of patching and full-depth repairs, which subsequently fail shortly thereafter due to the amount of heavy truck traffic at the site. In addition, undercarriage damage to vehicles and equipment has occurred over the years that could have been avoided had the pavement not been in poor condition.

| Category     | Account No.      | 2013-14 | 2014-15   | 2015-16 | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|-----------|---------|---------|---------|---------|-----------|
| Engineering  | 101-442.20-971.1 |         | \$91,305  |         |         |         |         | \$91,305  |
| Other/ROW    |                  |         |           |         |         |         |         |           |
| Construction | 101-442.20-971.1 |         | \$608,695 |         |         |         |         | \$608,695 |
|              | TOTAL BUDGET     |         | \$700,000 |         |         |         |         | \$700,000 |

### DPS Field Services Complex - Building Expansion Project

Project Number: 155 CIP Number: DPS

### **Description:**

This project was recommended in the 2006 Facility Needs Master Plan to provide DPS with a facility that will meet the public services needs of the City at full build-out. The completed project would create a facility large enough to store all equipment and materials, and to accommodate the needs of administrative staff, field workers and seasonal workers assigned to DPS. The project includes: 1) a 56,606 square foot expansion of the main DPS building to provide enclosed storage space for all Field Operations Division vehicles and equipment, and additional fleet maintenance areas; 2) a 14,250 square foot standalone storage building for Water & Sewer Division vehicles and equipment; 3) two approximate 5,000 square foot buildings to store construction materials; 4) an additional visitor/staff parking lot; and 5) a larger replacement salt storage dome.

### Justification:

The Field Services Complex is 28 years old and was not designed to accommodate the needs that DPS has in order to serve a population of 55,000, let alone the City's build-out population of 68,638 residents. At least one-third of the City's current fleet assets must be stored outdoors, which reduces their useful life when exposed to the elements. Recent studies by fleet management industry experts reveal that the cost to store vehicles and equipment outside is approximately three times the cost to construct, operate and maintain a new storage garage. This is because of factors caused by ongoing exposure to the elements, such as increased maintenance costs, reduced vehicle/equipment life expectancy, reduced labor productivity during inclement weather, and reduced employee safety. Fleets in cold climates like Michigan's have special challenges: cold weather engine starts can be unreliable, and especially hard on batteries and diesel engines, resulting in additional maintenance costs and delays in vehicle response times. Proceeding with this project will enhance the services that DPS provides to Novi.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17   | 2017-18      | 2018-19 | TOTAL        |
|--------------|------------------|---------|---------|-----------|-----------|--------------|---------|--------------|
| Engineering  | 101-442.00-976.0 |         |         | \$398,600 | \$552,500 |              |         | \$951,100    |
| Other/ROW    |                  |         |         |           |           |              |         |              |
| Construction | 101-442.00-976.0 |         |         |           |           | \$15,835,100 |         | \$15,835,100 |
|              | TOTAL BUDGET     |         |         | \$398,600 | \$552,500 | \$15,835,100 |         | \$16,786,200 |

### **DPS Field Services Complex Improvements - Electrical**

Project Number: 156 CIP Number: DPS

### **Description:**

This project addresses the critical electrical needs of the DPS facility as identified in the 2006 Facility Needs Master Plan prepared by Wold Architects & Engineers and includes: upgrading the electrical service branch circuiting to accommodate mechanical improvements, upgrading generator system to separate life safety devices from non-life safety items, and replacing outdated and deteriorated main switchgear.

### Justification:

The Field Services Complex is 28 years old and requires significant electrical-related improvements to preserve its useful life, enhance worker safety, and help save energy.

| Category     | Account No.      | 2013-14 | 2014-15 | 2015-16   | 2016-17 | 2017-18 | 2018-19 | TOTAL     |
|--------------|------------------|---------|---------|-----------|---------|---------|---------|-----------|
| Engineering  | 101-442.00-976.0 |         |         | \$81,096  |         |         |         | \$81,096  |
| Other/ROW    |                  |         |         |           |         |         |         |           |
| Construction | 101-442.00-976.0 |         |         | \$349,532 |         |         |         | \$349,532 |
|              | TOTAL BUDGET     |         |         | \$430,628 |         |         |         | \$430,628 |

### **Evaporative Cooling Tower Replacement**

Project Number: 157 CIP Number: ICE

### **Description:**

Replace existing EVAPCO ATC-370 Evaporative cooling tower with new. The existing unit was installed in 1998 and is currently working and in fair condition. The cooling tower cools and condenses the hot ammonia gas back into a liquid to be used in the refrigeration process. Compressors will not run without a properly working cooling tower. Ice cannot be made without all phases of the refrigeration system operating correctly.

### Justification:

Current unit is approaching the end of its useful life and is operating less efficiently. Costs to repair and maintain are increasing. A new unit will operate more efficiently.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17  | 2017-18 | 2018-19 | TOTAL    |
|-------------------------|------------------|---------|---------|---------|----------|---------|---------|----------|
| Other/ROW               | 590-000.00-000.0 |         |         |         | \$65,000 |         |         | \$65,000 |
| Construction            |                  |         |         |         |          |         |         |          |
|                         | TOTAL BUDGET     |         |         |         | \$65,000 |         |         | \$65,000 |

### **Munters Dehumidification Unit Replacement**

Project Number: 158 CIP Number: ICE

### **Description:**

Replace the current dehumidifier (1998 Munters #AM 30) with a new unit. The unit keeps the relative humidity in the rinks at a point where the glass does not have condensation and fog. Also, with lights and electrical systems in the rink, it is very important to keep the moisture levels in the rinks at a minimum. The ice condition is also dependent on proper relative humidity. Too much humidity and the ice quality is too soft and does not set up properly and if the air is too dry the ice will also be too dry and will have a tendency to crack and chip.

### Justification:

Current unit is approaching the end of its useful life and is operating less efficiently. New models have more energy efficient capabilities that would save the City on utility costs. Costs to repair/maintain are increasing.

| Category<br>Engineering | Account No.      | 2013-14 | 2014-15 | 2015-16 | 2016-17   | 2017-18 | 2018-19 | TOTAL     |
|-------------------------|------------------|---------|---------|---------|-----------|---------|---------|-----------|
| Other/ROW               | 590-000.00-000.0 |         |         |         | \$184,500 |         |         | \$184,500 |
| Construction            |                  |         |         |         |           |         |         |           |
|                         | TOTAL BUDGET     |         |         |         | \$184,500 |         |         | \$184,500 |

### **New Fire Station 1**

Project Number: 159 CIP Number: FIRE

### **Description:**

With the continued re-development of Main Street which is located behind the City's current Fire Station 1. A needs assessment for a new Fire Station will be completed in Fiscal Year 13-14 that will determine the size and resources a new Fire Station requires. With the construction of Fire Station 4 and the relocation of Fire Administration the Police Department Administrative building the needs and requirement of a new Fire Station will be different. Projected dollar amounts are anticipated to change once formal estimates and studies are complete.

### Justification:

City Council has made the study and investigation of relocating Fire Station 1 and high priority for the foreseeable future. Repurposing City owned property along a Grand River Ave. could definitely assist in fostering economic development along one of the busiest thoroughfare of the City.

| Category<br>Engineering<br>Other/ROW | Account No.  | 2013-14 | 2014-15 | 2015-16 | <b>2016-17</b> \$225,000 | 2017-18 | 2018-19 | <b>TOTAL</b> \$225,000 |
|--------------------------------------|--------------|---------|---------|---------|--------------------------|---------|---------|------------------------|
| Construction                         |              |         |         |         | \$1,625,000              |         |         | \$1,625,000            |
|                                      | TOTAL BUDGET |         |         |         | \$1,850,000              |         |         | \$1,850,000            |

# Capital Improvement Program 2013-2019 Project Summary

|   |   |               |              | , , , , , ,         |             |                     |             |                     |             |                     |             |                     |             |                     |            |
|---|---|---------------|--------------|---------------------|-------------|---------------------|-------------|---------------------|-------------|---------------------|-------------|---------------------|-------------|---------------------|------------|
|   |   |               |              | BUD                 | GET         |                     | PROJE       | CTED                |             |                     |             | FOREC               | CAST        |                     |            |
|   |   | TOTAL PROJECT | TOTAL CITY   | FY201               | 3-14        | FY2014              | 4-15        | FY201               | 5-16        | FY201               | 6-17        | FY201               | 7-18        | FY201               | 8-19       |
| PROJECT NUMBER AND NAME   | POTENTIAL FUNDING SOURCES(S)  | COST          | COST         | Outside<br>Leverage |             | Outside<br>Leverage | COST        | Outside<br>Leverage | COST        | Outside<br>Leverage | COST        | Outside<br>Leverage | COST        | Outside<br>Leverage | COST       |
| Roads   |   |               | The same     |                     |             |                     |             |                     |             |                     |             |                     |             |                     |            |
| Neighborhood Road Rehabilitation, Repaying and<br>Reconstruction Program                          | Local Street Fund   | \$17,820,000  | \$17,820,000 |                     | \$2,970,000 |                     | \$2,970,000 |                     | \$2,970,000 |                     | \$2,970,000 |                     | \$2,970,000 |                     | \$2,970,00 |
| Crescent Blvd Extension Between Grand River Avenue and<br>Novi Road - Phase II and III            | Municipal Street Fund, Patential Fed Grant,<br>Phase 2 stream work (\$140,000) funded by Drain<br>Fund.           | \$3,487,500   | \$697,500    | \$2,790,000         | \$697,500   |                     |             |                     |             |                     |             |                     |             |                     |            |
| Town Center Drive from Grand River to 11 Mile Road     (PASER 2; Asphalt)                         | Major Street Fund   | \$570,000     | \$570,000    |                     | \$570,000   | 7                   |             |                     |             |                     |             |                     |             |                     |            |
| Crescent Blvd., Novi Road to Town Center Drive     Rehabilitation (PASER 2-4)                     | Major Street Fund   | \$890,200     | \$890,200    |                     | \$890,200   |                     |             |                     |             |                     |             |                     |             |                     |            |
| 5 Town Center Drive Rehabilitation, Crescent Blvd to 11 Mile Road (PASER 6)                       | Major Street Fund   | \$430,930     | \$430,930    |                     | \$430,930   |                     |             |                     |             |                     |             |                     |             |                     |            |
| 6 11 Mile Road Town Center to Meadowbrook Road<br>Rehabilitation (PASER 2; Asphalt)               | Major Street Fund/Municipal Street Fund   | \$1,300,000   | \$1,300,000  |                     | \$100,000   |                     | \$1,200,000 |                     |             |                     |             |                     |             |                     |            |
| 7 West Road Repaying, West Park Drive to City limits  | Major Road Funds  | \$167,050     | \$167,050    |                     |             |                     | \$167,050   |                     |             |                     |             |                     |             |                     |            |
| 8 Heslip Drive Rehabilitation (PASER 4)   | Major Street Fund   | \$336,700     | \$336,700    |                     |             |                     | \$336,700   |                     |             |                     |             |                     |             |                     |            |
| 9 Karim Blvd., Rehabilitation (PASER 2-Asphalt)   | Major Street Fund   | \$662,500     | \$662,500    |                     |             |                     | \$662,500   |                     |             |                     |             |                     |             |                     |            |
| 10 Novi Road from 12 Mile Road to 13 Mile Road<br>Rehabilitation (PASER 4, Asphalt)               | Major Street Fund/Potential Federal Grant opportunity   | \$950,625     | \$438,179    |                     |             |                     |             | \$512,446           | \$438,179   |                     |             |                     |             |                     |            |
| 11 Meadowbrook Road Rehabilitation, I-96 to 12 Mile, (PASER 5)                                    | Major Street Fund   | \$407,375     | \$223,478    |                     |             |                     |             | \$183,897           | \$223,478   |                     |             |                     |             |                     |            |
| 12 Taft Road, 9 Mile Road to 10 Mile Road Rehabilitation (PASER 4; Asphalt)                       | Major Street Fund/Potential Federal Grant opportunity (application submitted 2010)                                | \$1,153,125   | \$828,036    |                     |             |                     |             | \$325,089           | \$828,036   |                     |             |                     |             |                     |            |
| 13 Taft Road, 10 mile Road to Grand River Avenue (PASER 4, Asphalt)                               | Major Road Fund, Potential Grant Funding  | \$608,500     | .\$271,611   |                     |             |                     |             | \$336,889           | \$271,611   |                     |             |                     |             |                     |            |
| 9 Mile Road, Novi Road to Meadowbrook Road<br>Rehabilitation                                      | Major Street Fund   | \$440,342     | \$220,171    |                     |             |                     |             | \$220,171           | \$220,171   |                     |             |                     |             |                     |            |
| Asphalt)  | Major Street fund, Federal Grant application<br>submitted 2011  | \$717,400     | \$717,400    |                     |             |                     |             |                     |             |                     | \$717,400   |                     |             |                     |            |
| 16 13 Mile Road Rehabilitation, Novi Road to Meadowbrook<br>Road (PASER 6; Asphalt)               | Major Street Fund and potential Federal Grant   | \$554,550     | \$554,550    |                     |             |                     |             |                     |             |                     | \$554,550   |                     |             |                     |            |
| 17 Trans-X Drive Rehabilitation (PASER 5/4; Concrete)   | Major Street Fund   | \$377,800     | \$377,800    |                     |             |                     |             |                     |             |                     |             |                     | \$377,800   |                     |            |
| 18 Southwest Quadrant Ring Road Flint Street, Novi Road and Grand River - New                     | Municipal Street Fund   | \$1,750,000   | \$1,750,000  |                     |             |                     |             |                     |             |                     |             |                     | \$1,750,000 |                     |            |
| 19 11 Mile Road Repaying, Taft Road to Beck Road (PASER 6;<br>Asphalt)                            | Major Street Fund   | \$782,700     | \$782,700    |                     |             |                     |             |                     |             |                     |             | 1 11                |             |                     | \$782,7    |
| 20 Old Novi Road Rehabilitation (PASER 7; Asphalt)  | Major Street Fund   | \$665,800     | \$665,800    |                     |             |                     |             |                     |             |                     |             |                     | 4-          |                     | \$665,80   |
| 21 Donelson to Sheraton and West Oaks - New Road<br>Construction (as recommended in Master Plan)  | Municipal Street Fund   | \$901,000     | \$901,000    |                     |             |                     |             |                     |             |                     |             |                     |             |                     | \$901,00   |
|   | Roads Total   | \$34,974,097  | \$30,605,605 | \$2,790,000         | \$5,658,630 |                     | \$5,336,250 | \$1,578,492         | \$4,951,475 |                     | \$4,241,950 |                     | \$5,097,800 |                     | \$5,319,50 |
| Intersections & Signals   |   |               |              |                     |             |                     |             | =₹                  |             |                     |             |                     |             |                     |            |
| 22 Extend Right Turn Lane - Westbound Grand River Avenue at<br>Beck Road                          | \$92,000 Federal Grant for construction, \$63,000<br>Municipal Street Fund, Grant Funds available<br>Oct 1, 2013, | \$154,000     | \$62,000     | \$92,000            | \$62,000    |                     |             |                     |             |                     |             |                     |             |                     |            |
| 23 New Traffic Signal Wixom Road and Glenwood<br>Drive/Deerfield Elementary                       | Major Street Fund   | \$198,180     | \$198,180    |                     | \$198,180   |                     |             |                     |             |                     |             |                     |             |                     |            |
| 24 Haggerty Road at Grand River, Add Southbound Right Turn<br>Lane and Reconstruct Traffic Signal | Potential 80% grant funding for construction,<br>Municipal Street Fund  | \$293,240     | \$293,240    |                     | \$293,240   |                     |             |                     |             |                     |             |                     |             |                     |            |
| 25 13 Mile and Cabot-New Signal   | Municipal Street Fund.  | \$220,000     | \$220,000    |                     | 100         |                     | \$220,000   |                     |             |                     |             |                     |             |                     |            |
| 26 Taft and 9 Mile Road - New Roundabout  | Potential Grand, Major Road Funds   | \$480,384     | \$143,384    |                     |             | 4"                  |             |                     | \$82,394    | \$337,000           | , \$60,990  |                     | - 30        | 4                   |            |
| 27 Napier Road and Ten Mile Road Intersection Improvements  | Potential Grant, Municipal Street Fund, Tri-Party   | \$250,000     | \$250,000    |                     |             |                     |             |                     | \$250,000   |                     |             |                     |             |                     |            |
| 28 New Roundabout at 11 Mile Road and Wixom Road  | Major Road Fund   | \$875,750     | \$875,750    |                     |             |                     |             |                     |             |                     | \$875,750   |                     |             |                     |            |
| 29 Meadowbrook Road at 8 Mile Road Signal Improvements  | Potential Grant, Municipal Street Fund,   | \$175,000     | \$175,000    |                     |             |                     |             |                     |             |                     |             |                     | \$175,000   |                     |            |
| *Projects with prior commitment, grant, etc.  |   |               |              | Page 1              | 07          |                     |             |                     |             |                     |             |                     |             | 5                   | 2/8/2013   |

|   |  |               |             | BUDG                | ET        |                     | PROJE     |                     |           |                     |           | FOREC               |           |                     |           |
|---|--|---------------|-------------|---------------------|-----------|---------------------|-----------|---------------------|-----------|---------------------|-----------|---------------------|-----------|---------------------|-----------|
|   |  | TOTAL PROJECT | TOTAL CITY  | FY2013              |           | FY2014              |           | FY2015              |           | FY201               |           | FY2017              |           | FY201               |           |
| PROJECT NUMBER AND NAME   | POTENTIAL FUNDING SOURCES(S)   | COST          | COST        | Outside<br>Leverage | COST      | Outside<br>Leverage | COST      | Outside<br>Leverage | COST      | Outside<br>Leverage | COST      | Outside<br>Leverage | COST      | Outside<br>Leverage | COST      |
| Intersections & Signals   |  |               |             |                     |           |                     |           |                     |           |                     |           |                     |           |                     |           |
| 30 Add Dual Left Turn Lane - East Bound Grand River at Beck<br>Road   | Possible Grant, Possible Tri-Party, Municipal<br>Street Fund         | \$375,000     | \$375,000   |                     |           |                     |           |                     |           |                     |           |                     | \$375,000 |                     |           |
| 31 Lewis and Haggerty Road - New Signal   | Municipal Street Fund  | \$225,000     | \$225,000   |                     |           |                     |           |                     |           |                     |           |                     |           |                     | \$225,000 |
|   | Intersections & Signals Total  | \$3,246,554   | \$2,817,554 | \$92,000            | \$553,420 |                     | \$220,000 |                     | \$332,394 | \$337,000           | \$936,740 |                     | \$550,000 |                     | \$225,000 |
| Sidewalks & Pathways  |  |               |             |                     |           |                     |           |                     |           |                     |           |                     |           |                     |           |
| 32 Americans with Disabilities Act (ADA) Compliance Plan<br>Annual Implementation   | Municipal Street Fund  | \$300,000     | \$300,000   |                     | \$50,000  |                     | \$50,000  |                     | \$50,000  |                     | \$50,000  |                     | \$50,000  |                     | \$50,000  |
| 33 Haggerty Road and Nine Mile Road Pedestrian<br>Improvements  | Municipal Street Fund  | \$85,760      | \$85,760    |                     | \$85,760  |                     |           |                     |           |                     |           |                     |           |                     |           |
| 34 Segment NC1-East Lake Drive to Novi Road (8' foot -<br>Asphalt)  | Municipal Street Fund,   | \$68,695      | \$68,695    |                     | \$68,695  |                     |           |                     |           |                     |           |                     |           |                     |           |
| .35 M-5/I-275 Trail Connector-Phase I(10' foot Pathway) on<br>East Side of Meadowbrook Road from I-96 to 12 Mile Road           | Potential Grant Funding/Municipal Street Fund                        | \$1,065,475   | \$324,275   | \$741,200           | \$324,275 |                     |           |                     |           |                     | 7         |                     |           |                     |           |
| 36 Beck Road at Cheltenham Mid-Block Non-Motorized<br>Crossing  | Municipal Street Fund  | \$72,500      | \$72,500    |                     | \$72,500  |                     |           |                     |           |                     |           |                     |           |                     |           |
| 37 Segment 89-Novi Road, East Side 10 Mile Road - Arena (8' foot Pathway) Concrete  | Municipal Street Fund  | \$125,950     | \$125,950   |                     | \$125,950 |                     |           |                     |           |                     |           |                     |           |                     |           |
| 38 Segment 29–12 Mile Road, South Side, Between<br>Meadowbrook Road and Novi Road   | Municipal Street Fund  | \$69,200      | \$69,200    |                     |           |                     | \$69,200  |                     |           |                     |           |                     |           |                     |           |
| 39 Segment 16-13 Mile Road, South Side, Between Novi Road and Holmes  | Municipal Street Fund  | \$53,000      | \$53,000    |                     |           |                     | \$53,000  |                     |           |                     |           |                     |           |                     |           |
| 40 Segment 76—Grand River, North Side, East of Seeley, (8' foot<br>Pathway Short Segment) Concrete                              | Municipal Street Fund  | \$35,000      | \$35,000    |                     |           |                     | \$35,000  |                     |           |                     |           |                     |           | · ·                 |           |
| 41 Segment 5–14 Mile Road, South Side, Beach walk to East<br>Lake Drive   | Municipal Street Fund  | \$120,800     | \$120,800   |                     |           | 7                   | \$9,200   |                     | \$111,600 |                     |           |                     |           |                     |           |
| 42 Segment 39-Beck Road, West Side, from 11 Mile Road to<br>Providence  | Municipal Street Fund  | \$184,441     | \$184,441   |                     |           |                     | \$184,441 |                     |           |                     |           |                     |           |                     |           |
| 43 Segment 10–Beck Road, East Side, South of Pontiac Trail, (5' foot Sidewalk Short Segment) Concrete                           | Municipal Street Fund  | \$45,800      | \$45,800    |                     |           |                     | \$45,800  |                     |           |                     |           |                     |           |                     |           |
| 44 M-5/I-275 Regional Trail Connection - Phase II -<br>Meadowbrook Road and 13 Mile Road, between 12 Mile<br>Road and M-5       | Municipal Street Fund, Potential Transportation<br>Enhancement Grant | \$998,510     | \$998,510   |                     |           |                     |           |                     | \$182,000 |                     | \$816,510 |                     |           |                     |           |
| 45 Pontiac Trail at Geisler Middle School - Non-Motorized<br>Crossing   | Municipal Street Fund  | \$85,200      | \$85,200    |                     |           |                     |           |                     | \$85,200  | 1                   |           |                     |           |                     |           |
| 46 Segment NC4-Neighborhood Connection Between Main<br>Street and Meadowbrook Glens   | Municipal Street Fund  | \$93,300      | \$93,300    | -                   |           |                     |           |                     | \$93,300  |                     |           |                     |           |                     |           |
| 47 Segment 73—Meadowbrook (6' foot Pathway) East Side<br>Grand River to 11 Mile Road  | Municipal Street Fund  | \$95,200      | \$95,200    | 1 = 1               |           |                     |           |                     | \$95,200  |                     |           |                     |           |                     |           |
| 48 Segment 127A–Novi Way, East Side (6' foot Sidewalk) Concrete   | Municipal Street Fund  | \$31,120      | \$31,120    | - 1                 |           |                     |           |                     | \$31,120  |                     |           |                     |           |                     |           |
| 49 Segment 93–9 Mile Road, Novi Road to Taft, North Side (6' foot Sidewalk) Concrete  | Municipal Street Fund  | \$298,718     | \$298,718   |                     |           |                     |           |                     | \$298,718 |                     |           |                     |           |                     |           |
| 50 Segment 154—Ten Mile Road (8' foot Pathway) South Side,<br>Between Pheasant Run and Quince Drive, with Crosswalk<br>to North | Municipal Street Fund  | \$288,770     | \$288,770   |                     |           |                     |           |                     | \$288,770 |                     |           |                     |           |                     |           |
| 51 Segment 133–Wixom Road Crossing, North of 11 Mile Road (8' foot Pathway Short Segment) Concrete                              | Municipal Street Fund  | \$27,578      | \$27,578    |                     |           |                     |           |                     |           |                     | \$27,578  |                     |           |                     |           |
| 52 Non-motorized Crossing of I-96 at Novi Road  | Municipal Street Fund  | \$770,750     | \$770,750   |                     |           |                     |           |                     |           |                     | \$770,750 |                     |           |                     |           |
| 53 Segment 99–10 Mile Road, South Side, from Wixom Road to<br>Beck Road (8' foot Pathway)                                       | Municipal Street Fund  | \$398,000     | \$398,000   |                     |           |                     |           |                     |           |                     | \$398,000 |                     |           |                     |           |
| 54 Installation of Crosswalks on 12 Mile Road, at Donelson<br>Drive and Cabaret Drive   | Municipal Street Fund  | \$476,000     | \$476,000   |                     |           |                     |           |                     |           |                     | \$476,000 |                     |           |                     |           |
| 55 Segment 6210 Mile Road, Eaton Center to Churchill (6'<br>Sidewalk and Boardwalk) for North Side                              | Municipal Street Fund  | \$163,550     | \$163,550   |                     |           |                     |           |                     |           |                     | \$163,550 |                     |           |                     |           |
| 56 Segement 6West Park Drive (8 foot pathway, west side)  | Municipal Street Fund  | \$393,450     | \$393,450   |                     |           |                     |           |                     |           |                     | \$393,450 |                     |           |                     |           |
| 57 Taft Road at Jacob Drive - Non-Motorized Crossing<br>Capital Improvement Plan PC   | Municipal Street Fund  | \$25,000      | \$25,000    | Page 108            |           |                     |           |                     |           |                     |           |                     | \$25,000  |                     | /8/2013   |

|  |                              |               |              | BUDG                | ET          |                     | PROJE     | CTED                |             |                     |             | FORE                | CAST        |                     |            |
|--|------------------------------|---------------|--------------|---------------------|-------------|---------------------|-----------|---------------------|-------------|---------------------|-------------|---------------------|-------------|---------------------|------------|
|  |                              | TOTAL PROJECT | TOTAL CITY   | FY2013              | -14         | FY2014              | -15       | FY201               | 5-16        | FY201               | 6-17        | FY201               | 7-18        | FY201               | 18-19      |
| PROJECT NUMBER AND NAME  | POTENTIAL FUNDING SOURCES(S) | COST          | COST         | Outside<br>Leverage | COST        | Outside<br>Leverage | COST      | Outside<br>Leverage | COST        | Outside<br>Leverage | COST        | Outside<br>Leverage | COST        | Outside<br>Leverage | COST       |
| Sidewalks & Pathways   |                              |               |              |                     |             |                     |           |                     |             |                     |             |                     |             |                     |            |
| 58 Segment 9—Pontiac Trail, South Side (6' foot Sidewalk) Beck<br>Road to West Park Drive                  | Municipal Street Fund        | \$471,135     | \$471,135    |                     |             | -                   |           |                     |             |                     |             |                     | \$471,135   |                     |            |
| 59 Segment 84Meadowbrook Road, 9 Mile Road to 10 Mile<br>Road (6' Sidewalk) for East Side                  | Municipal Street Fund        | \$615,351     | \$615,351    |                     |             |                     |           |                     |             |                     |             |                     | \$615,351   |                     |            |
| 60 Segment 88–9 Mile Road, North Side, Novi Road - Railroad<br>(6' Sidewalk) Concrete                      | Municipal Street Fund        | \$163,000     | \$163,000    |                     |             |                     |           |                     |             |                     |             |                     | \$163,000   |                     |            |
| 61 Non-Motorized Crossing of I-96 at Taff Road   | Municipal Street Fund        | \$2,063,000   | \$2,063,000  |                     |             |                     |           |                     |             |                     |             |                     | \$2,063,000 |                     |            |
| 62 Segment 53-Beck Road, West Side, (8' foot Pathway) 11<br>Mile Road to Kirkway Place                     | Municipal Street Fund        | \$81,000      | \$81,000     |                     |             |                     |           |                     |             |                     |             |                     |             |                     | \$81,00    |
| 63 Segment 119-Meadowbrook Road, East Side, (6' foot<br>Sidewalk) 8 Mile Road to 9 Mile Road               | Municipal Street Fund        | \$377,000     | \$377,000    |                     |             |                     |           |                     |             |                     |             |                     |             |                     | \$377,00   |
| 64 Segment 81–10 Mile Road, South Side, (8' foot Pathway)<br>Meadowbrook Road to Haggerty Road             | Municipal Street Fund        | \$375,000     | \$375,000    |                     |             |                     |           |                     |             |                     |             |                     |             |                     | \$375,00   |
| 65 Segment 90-10 Mile Road, (8' foot Pathway) South Side,<br>Novi Road to Chipmunk Trail - Concrete        | Municipal Street Fund        | \$320,705     | \$320,705    |                     |             |                     |           |                     |             |                     |             |                     |             |                     | \$320,70   |
|  | Sidewalks & Pathways Total   | \$10,837,958  | \$10,096,758 | \$741,200           | \$727,180   |                     | \$446,641 |                     | \$1,235,908 |                     | \$3,095,838 |                     | \$3,387,486 |                     | \$1,203,70 |
| Storm Sewer & Drainage   |                              |               |              |                     |             |                     |           |                     |             |                     |             |                     |             |                     |            |
| 66 Middle Rouge at Flint Street, Streambank Stabilization  | Drain Fund                   | \$111,900     | \$111,900    |                     |             |                     | \$111,900 |                     |             |                     |             |                     |             |                     |            |
| 67 Bishop District New Sedimentation Dredging Near 11 Mile<br>Road   | Drain Fund                   | \$200,800     | \$200,800    |                     |             |                     | \$200,800 |                     |             |                     |             |                     |             |                     |            |
| 68 Middle Rouge Near Balcombe Drive, Streambank<br>Stabilization   | Drain Fund                   | \$278,700     | \$278,700    |                     |             |                     |           |                     | \$278,700   |                     |             |                     |             |                     |            |
| 69 Rotary Park Streambank Stabilization  | Drain Fund                   | \$160,900     | \$160,900    |                     |             |                     |           |                     |             |                     | \$160,900   |                     |             |                     |            |
|  | Storm Sewer & Drainage Total | \$752,300     | \$752,300    |                     |             |                     | \$312,700 |                     | \$278,700   |                     | \$160,900   |                     |             | - T                 |            |
| Sanitary Sewer   |                              |               |              |                     |             |                     |           |                     |             |                     |             |                     |             |                     |            |
| 70 Generator for Knightsbridge Gate Sanitary Pump Station  | Water & Sewer Fund           | \$125,000     | \$125,000    |                     | \$125,000   |                     |           |                     |             |                     |             |                     |             |                     |            |
| 71 Generator for Regency Lift Station  | Water & Sewer Fund           | \$125,000     | \$125,000    |                     | \$125,000   |                     |           |                     |             |                     | -           |                     |             |                     |            |
| 72 Sanitary Sewer Upgrade to Increase Pipe Capacity - 9 Mile<br>Road East of Meadowbrook Road.             | Water & Sewer Fund           | \$200,000     | \$200,000    |                     |             |                     | \$200,000 |                     |             |                     |             |                     |             |                     |            |
| 73 Sanitary Sewer Upgrade to Increase Pipe Capacity - 9 Mile Road, West of Novi Road                       | Water & Sewer Fund           | \$350,000     | \$350,000    |                     |             |                     |           |                     | \$350,000   |                     |             |                     |             |                     |            |
| 0  | Sanitary Sewer Total         | \$800,000     | \$800,000    |                     | \$250,000   |                     | \$200,000 |                     | \$350,000   |                     |             |                     |             | - 7                 |            |
| Water Distribution   |                              |               |              |                     |             |                     |           |                     |             |                     |             |                     |             |                     |            |
| 74 Water Storage Facility and Appurtenances  | Water & Sewer Fund           | \$5,550,000   | \$5,550,000  |                     | \$5,550,000 |                     |           |                     |             |                     |             |                     |             |                     |            |
| 75 9 Mile Road and Connemara Pressure Reducing Valve (PRV) Replacement                                     | Water & Sewer Fund           | \$351,000     | \$351,000    |                     | \$351,000   |                     |           |                     |             |                     |             |                     |             |                     |            |
| 76 13 Mile Road New Pressure Reducing Valve (PRV) to<br>Realign Pressure District                          | Water & Sewer Fund           | \$351,000     | \$351,000    |                     |             | I I K               | \$351,000 |                     |             |                     |             |                     |             |                     |            |
| 77 West Park Booster Station Upgrade   | Water & Sewer Fund           | \$65,000      | \$65,000     |                     |             |                     | \$65,000  |                     |             |                     |             |                     |             |                     |            |
| 78 12" inch Water Main Along 8 Mile Road, Club Lane to<br>Tumberry   | Water & Sewer Fund           | \$203,000     | \$203,000    |                     |             |                     | \$203,000 |                     |             |                     |             |                     |             |                     |            |
| 79 12" inch Water Main Along 14 Mile Road, Haverhill to<br>Maples-New                                      | Water & Sewer Fund           | \$140,000     | \$140,000    |                     |             |                     | \$140,000 |                     |             |                     |             |                     |             |                     |            |
| . 80 16" inch Wafer Main Along Meadowbrook Road Under I-96   | Water & Sewer Fund           | \$489,000     | \$489,000    |                     |             |                     | \$489,000 | -                   |             |                     |             |                     |             |                     |            |
| 81 16" inch Water Main Along 9 Mile Road, Center to Novi<br>Road   | Water & Sewer Fund           | \$499,000     | \$499,000    |                     |             |                     | \$499,000 |                     | ×           |                     |             |                     |             |                     |            |
| 82 Grand River Isolation Pressure Reducing Valve (PRV) West of Lanny's Road                                | Water & Sewer Fund           | \$351,000     | \$351,000    |                     |             |                     |           |                     | \$351,000   |                     |             |                     |             |                     |            |
| 83 Cabot Road Meter Installation and 24" inch Connection with Detroit Water and Sewerage Department (DWSD) | Water & Sewer Fund           | \$832,000     | \$832,000    |                     |             |                     |           |                     | \$832,000   |                     |             |                     |             |                     | Q.         |
| 84 Cabot 24" inch Water Main, MacKenzie to 14 Mile Road  | Water & Sewer Fund           | \$710,000     | \$710,000    |                     |             |                     |           |                     | \$710,000   |                     |             |                     |             |                     |            |

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| 200 1505 11111050 1115 111415  |   | TOTAL PROJECT | TOTAL CITY   | FY2013              |  | FY2014              |             | FY2015              |             | FY201               |             | FY201               |             | TIN Property of the control of the c |    |  |  |
| PROJECT NUMBER AND NAME  | POTENTIAL FUNDING SOURCES(S)                                  | COST          | COST         | Outside<br>Leverage | COST   | Outside<br>Leverage | COST        | Outside<br>Leverage | COST        | Outside<br>Leverage | COST        | Outside<br>Leverage |             |  | CO |  |  |
| Vater Distribution   |   |               |              |                     |  |                     |             |                     |             |                     |             |                     |             |  |    |  |  |
| 85 Construct New 12" inch Water Main Along 12 Mile Road<br>from East of Napier to Wixom Road                 | Water & Sewer Fund  | \$991,000     | \$991,000    | ×.                  |  |                     |             |                     | \$991,000   |                     |             |                     |             |  |    |  |  |
| 86 12" inch Water Main Along 9 Mile Road and Napier  | Water & Sewer Fund  | \$374,000     | \$374,000    |                     |  |                     |             |                     |             |                     | \$374,000   |                     |             |  |    |  |  |
| 87 12" inch Water Main Cross-Country from Island Lake to<br>Provincial Glades                                | Water & Sewer Fund  | \$819,000     | \$819,000    |                     |  |                     |             |                     |             |                     | \$819,000   |                     |             |  |    |  |  |
| 88 Cabot Drive Extension - New - MacKenzie to 14 Mile Road -<br>Private Funds                                | Private Funding   | \$1,900,000   | \$1,900,000  |                     |  | - 4                 |             |                     |             |                     | \$1,900,000 |                     |             |  |    |  |  |
| 89 12" Water Main Along Napier Park Place to 8 Mile Road   | Water & Sewer Fund  | \$889,000     | \$889,000    |                     |  |                     |             |                     |             |                     | \$889,000   |                     |             |  |    |  |  |
| 90 12" inch Water Main Along 10 Mile from Wixom to Terra Del<br>Mar  | Water & Sewer Fund/Private Funding                            | \$421,000     | \$421,000    |                     |  |                     |             |                     |             |                     | \$421,000   |                     |             |  |    |  |  |
| 91 12" inch Water Main Along 11 Mile Road, Lee BeGole Drive<br>to the West                                   | Private Funding   | \$413,000     | \$413,000    |                     |  |                     |             |                     |             |                     | \$413,000   |                     |             |  |    |  |  |
| 92 12" inch Water Main Along 8 Mile Road, Tuscany to Napier  | Water & Sewer Fund  | \$733,000     | \$733,000    |                     |  |                     |             |                     |             |                     |             |                     | \$733,000   |  |    |  |  |
| 93 12" inch Water Main on 11 Mile Road, Seeley to<br>Meadowbrook Road  | Water & Sewer Fund  | \$819,000     | \$819,000    |                     |  |                     |             |                     |             |                     |             |                     | \$819,000   |  |    |  |  |
| 94 12" inch Water Main Along Haggerty Road North of 12 Mile<br>Road  | Water & Sewer Fund  | \$128,000     | \$128,000    |                     |  |                     |             |                     |             |                     |             |                     | \$128,000   |  |    |  |  |
| 95 24" inch Water Main on 10 Mile Road, Beck Road to<br>Lynwood  | Water & Sewer Fund  | \$355,000     | \$355,000    |                     |  |                     |             |                     |             |                     |             |                     | \$355,000   |  |    |  |  |
| 96 24" inch Water Main Replacement at Grand River and<br>Beck Road   | Private Funding   | \$310,000     | \$310,000    |                     |  |                     |             |                     |             |                     |             |                     | \$310,000   |  |    |  |  |
| 97 11 Mile Road Water Main Gaps, Taft to Beck Road   | Water & Sewer Fund  | \$474,500     | \$474,500    |                     |  |                     |             |                     |             |                     |             |                     | \$474,500   |  |    |  |  |
|  | Water Distribution Total                                      | \$18,167,500  | \$18,167,500 |                     | \$5,901,000  |                     | \$1,747,000 |                     | \$2,884,000 |                     | \$4,816,000 |                     | \$2,819,500 |  |    |  |  |
| Parks  |   |               |              |                     |  |                     |             |                     |             |                     |             |                     |             |  |    |  |  |
| 98 Greenway Development Phase 1A   | Parks, Recreation & Cultural Services                         | \$602,875     | \$602,875    |                     | \$602,875  |                     |             |                     |             |                     |             |                     |             |  |    |  |  |
| 99 Pavilion Shore Park Phase III   | Parks, Recreation & Cultural Services                         | \$291,884     | \$87,565     |                     | \$87,565   | \$204,319           |             |                     |             |                     |             |                     |             |  |    |  |  |
| 100 Novi Dog Park  | Parks, Recreation and Cultural Services                       | \$290,000     | \$290,000    | -                   | \$290,000  |                     |             |                     |             |                     |             |                     |             | -  |    |  |  |
| 101 Field/Parking Development with Novi Community School<br>District for School's 11 Mile/Beck Road Property | Parks, Recreation & Cultural Services                         | \$357,000     | \$357,000    |                     | \$357,000  |                     |             |                     |             |                     |             |                     |             |  |    |  |  |
| 02 ITC Community Sports Park Play Structure Replacement  | Parks, Recreation & Cultural Services                         | \$75,000      | \$75,000     |                     | \$75,000   |                     |             |                     |             |                     |             |                     |             |  |    |  |  |
| 03 Ella Mae Power Park Play Structure Replacement  | Federal/State Grant/Potential Grant                           | \$75,000      | \$75,000     |                     | \$75,000   |                     | Y           |                     |             |                     |             |                     |             |  |    |  |  |
| 04 ITC Community Sports Park Pathway Resurfacing   | Parks, Recreation & Cultural Services                         | \$95,445      | \$95,445     |                     | \$95,445   |                     |             |                     |             |                     |             |                     |             |  |    |  |  |
| 05 Ella Mae Power Park Access Road, Parking Lot, and<br>Pathway Resurfacing                                  | Parks, Recreation & Cultural Services                         | \$48,630      | \$48,630     |                     | \$48,630   |                     |             |                     |             |                     |             |                     |             |  |    |  |  |
| 06 Pavilion Shore Park Phase IV  | Parks, Recreation & Cultural Services                         | \$198,000     | \$198,000    |                     |  |                     | \$198,000   |                     |             |                     |             |                     |             |  |    |  |  |
| 07 Pavilion Shore Park Phase V   | Parks, Recreation & Cultural Services                         | \$554,400     | \$554,400    |                     |  |                     |             | - 3                 | \$554,400   |                     |             |                     |             |  |    |  |  |
| 08 Ella Mae Power Park Irrigation and Fencing Fields 5 & 6 Replacement                                       | Parks, Recreation & Cultural Services                         | \$180,800     | \$180,800    | -7                  |  |                     | \$180,800   |                     |             |                     |             |                     |             |  |    |  |  |
| 09 Lakeshore Park Asphalt Paved Parking Lot and Drive -<br>Replacement                                       | Parks, Recreation & Cultural Services<br>Fund/Potential Grant | \$254,350     | \$254,350    |                     |  | 3                   |             |                     | \$254,350   |                     |             |                     |             |  |    |  |  |
| 10 Ella Mae Power Park Lighting - Ball fields 5 & 6 - New  | Parks, Recreation & Cultural Services                         | \$255,000     | \$255,000    | 1                   |  |                     |             |                     | \$255,000   |                     |             |                     |             |  |    |  |  |
| 11 Greenway Development Phase 18   | Parks, Recreation & Cultural Services/Potential<br>Grant      | \$1,128,000   | \$1,128,000  |                     |  |                     |             |                     |             |                     | \$1,128,000 |                     |             |  |    |  |  |
| 12 Greenway Development Phase II   | Parks, Recreation & Cultural Services                         | \$158,750     | \$158,750    |                     |  | - 1                 |             |                     |             |                     | \$158,750   |                     |             |  |    |  |  |
| 13 Tim Pope Play Structure Replacement   | Parks, Recreation & Cultural Services                         | \$300,000     | \$300,000    |                     |  |                     |             |                     |             |                     | \$300,000   |                     | 11          |  |    |  |  |
| 14 Property acquistion around David Barr Property  | Parks, Recreation and Cultural Services                       | \$150,000     | \$150,000    |                     |  |                     |             |                     |             |                     | \$150,000   | -                   |             |  |    |  |  |
| 15 ITC Sports Park Asphalt Paved Parking lots  | Parks, Recreation & Cultural Services                         | \$374,945     | \$374,945    |                     |  |                     |             | -                   |             |                     |             |                     | \$374,945   |  |    |  |  |
| -  | Parks Total   | \$5,390,079   | \$5,185,760  |                     | \$1,631,515  | \$204,319           | \$378,800   |                     | \$1,063,750 |                     | \$1,736,750 |                     | \$374,945   |  |    |  |  |
| echnology  |   |               |              |                     |  |                     |             |                     |             |                     |             |                     |             |  |    |  |  |
| 16 State of the Art Video Wall   | Parks, Recreation & Cultural Services                         | \$80,000      | \$80,000     |                     | \$80,000   |                     |             |                     |             |                     |             |                     |             |  |    |  |  |

|  |   | TOTAL BROJECT         | TOTAL CITY  | FY2013-1            | 14        | FY2014              | -15       | FY2015              | -16       | FY201               | 6-17      | FY201               | 7-18        | FY201               | 8-19      |
|--|---|-----------------------|-------------|---------------------|-----------|---------------------|-----------|---------------------|-----------|---------------------|-----------|---------------------|-------------|---------------------|-----------|
| PROJECT NUMBER AND NAME  | POTENTIAL FUNDING SOURCES(S)                        | TOTAL PROJECT<br>COST | COST        | Outside<br>Leverage | CITY      | Outside<br>Leverage | COST      | Outside<br>Leverage | COST      | Outside<br>Leverage | CITY      | Outside<br>Leverage | COST        | Outside<br>Leverage | COST      |
| Technology   |   |                       |             |                     |           |                     |           |                     |           |                     |           |                     |             |                     |           |
|  | Technology Total                                    | \$80,000              | \$80,000    |                     | \$80,000  |                     |           |                     | -         |                     |           |                     |             |                     |           |
| Equipment  |   |                       |             |                     |           |                     |           |                     |           |                     |           |                     |             |                     |           |
| 117 Squad #4 (Replaces #321, 2000 McCoy-Miller Ambulance)  | General Fund  | \$46,500              | \$46,500    |                     | \$46,500  |                     |           |                     |           |                     |           |                     |             |                     |           |
| 118 Four-Combination V-Box Salt Spreader Inserts   | General Fund  | \$240,000             | \$240,000   |                     | \$240,000 |                     |           |                     |           |                     |           |                     |             |                     |           |
| 119 One - 1-Ton Dump Truck w/Plow - New  | General Fund  | \$100,000             | \$100,000   |                     | \$100,000 |                     |           |                     |           |                     |           |                     |             |                     |           |
| 120 Six Force America Commandall 5100 Regulating Controllers for Winter Maintenance  | General Fund/Major Street Fund/Local Street<br>Fund | \$85,000              | \$85,000    |                     | \$85,000  |                     |           |                     |           |                     |           |                     |             |                     |           |
| Two - Tandem-Axle 7 Cubic Yard Dump Trucks w/Front<br>Plows and Underbody Scrapers (Replaces #699, 2000,<br>#620, 2001 Sterling)   | General Fund  | \$356,000             | \$356,000   |                     | \$356,000 |                     |           |                     |           |                     |           |                     |             |                     |           |
| 122 Compressed Air Foam System - Engine #2 & #3 (Vehicles #322, 313) - New   | General Fund  | \$93,200              | \$93,200    |                     |           |                     | \$93,200  |                     |           |                     |           |                     |             |                     |           |
| 123 Ditching Machine (Replaces #675, 1991 Gradall)   | General Fund  | \$300,000             | \$300,000   |                     |           |                     | \$300,000 |                     |           |                     |           |                     |             |                     |           |
| 124 Salt Dome Loading Conveyor   | General Fund  | \$170,000             | \$170,000   |                     |           |                     | \$170,000 |                     |           |                     |           |                     | 1           |                     |           |
| 125 Mini Excavator Replacement (Replaces #622, 2000<br>Bobcat)   | General Fund  | \$85,000              | \$85,000    |                     |           |                     | \$85,000  |                     |           |                     |           |                     |             |                     |           |
| Two Single-Axle 5 Cubic Yard Dump Trucks w/Front Plows 8<br>Underbody Scrapers - Replacement (replaces #686 &<br>#687, 1994 Fords) | General Fund  | \$330,000             | \$330,000   |                     |           |                     | \$330,000 |                     |           |                     |           |                     |             |                     |           |
| 127 Bobcat All-Wheel Loader - New  | General Fund  | \$50,000              | \$50,000    |                     |           |                     |           |                     | \$50,000  |                     |           |                     |             |                     |           |
| 128 Zamboni Ice Resurfacer - Replacement   | Ice Arena Fund                                      | \$92,500              | \$92,500    |                     |           |                     |           |                     | \$92,500  |                     |           |                     |             |                     |           |
| 129 One - Single-Axle 5 Cubic Yard Dump Truck w/Front Plow and Underbody Scraper (Replaces #605, 2001 Osh Kosh)                    | General Fund  | \$165,000             | \$165,000   |                     |           |                     |           |                     | \$165,000 |                     |           |                     |             |                     |           |
| 130 One - 1-Ton Dump Truck w/Plow - New  | General Fund  | \$100,000             | \$100,000   |                     |           |                     |           |                     | \$100,000 |                     |           |                     |             |                     |           |
| 131 One - Single-Axle 5 Cubic Yard Dump Truck w/Front Plow<br>and Underbody Scraper (Replaces #621, 2001 Sterling)                 | General Fund  | \$165,000             | \$165,000   |                     |           |                     |           |                     |           |                     | \$165,000 |                     |             |                     |           |
| 132 One - Single-Axle Large Dump Truck w/Front Plow and<br>Underbody Scraper - New   | General Fund  | \$165,000             | \$165,000   |                     |           |                     |           |                     |           |                     | \$165,000 |                     |             |                     |           |
| 133 Public Address and Stereo System - Replacement   | Ice Arena   | \$26,100              | \$26,100    |                     |           |                     |           |                     |           |                     |           |                     | \$26,100    | )                   |           |
| 134 Rescue #2 & #3 (Replaces #335, 344, 2011 Ford Expeditions  | General Fund  | \$118,650             | \$118,650   | 100                 |           |                     |           |                     |           |                     |           |                     | \$118,650   | )                   |           |
| 135 One Single-Axle 5 Cubic Yard Dump Truck w/Front Plow and Underbody Scraper (Replaces #698, 1998 Ford)                          | General Fund  | \$170,000             | \$170,000   |                     |           |                     |           |                     |           |                     |           |                     | \$170,000   |                     |           |
| 136 Tanker #1 (Replaces #311, 1997 Chevrolet)  | General fund  | \$320,770             | \$320,770   |                     |           |                     |           |                     |           |                     |           |                     | \$320,770   | )                   |           |
| 137 One - 1-Ton Dump Truck w/Plow (Replaces #633, 1998 GMC)  | General Fund  | \$100,000             | \$100,000   |                     |           |                     |           |                     |           |                     |           |                     | \$100,000   | )                   |           |
| 138 Truck-Mounted Combination (Jet and Vacuum) Sewer Cleaner Replacement (Replaces #614, 2007 Sterling Vactor)                     | General Fund  | \$400,000             | \$400,000   |                     |           |                     |           |                     |           |                     |           |                     | \$400,000   | 0.                  |           |
| 139 Front-End Loader Replacement (Replaces #689,1995 Case)   | General Fund  | \$252,000             | \$252,000   |                     |           |                     |           |                     |           |                     |           |                     | -           |                     | \$252,000 |
| 140 Grader (Replaces #612, 2005 CAT)   | General Fund  | \$300,000             | \$300,000   |                     |           |                     |           |                     |           |                     |           |                     |             |                     | \$300,000 |
| 141 One Tandem-Axle 7 Cubic Yard Dump Truck w/Front Plow & Underbody Scraper (Replaces #603, 2003 Sterling)                        | General Fund  | \$250,000             | \$250,000   |                     |           |                     |           |                     |           |                     |           |                     |             |                     | \$250,000 |
|  | Equipment Total                                     | \$4,480,720           | \$4,480,720 |                     | \$827,500 |                     | \$978,200 |                     | \$407,500 |                     | \$330,000 |                     | \$1,135,520 | )                   | \$802,000 |
| Buildings & Property   |   |                       |             |                     |           |                     |           |                     |           |                     |           |                     |             |                     |           |
| 142 Lower Level Lobby, Hallway, and Locker Room Flooring<br>Replacement  | Ice Arena Fund                                      | \$50,300              | \$50,300    |                     | \$50,300  |                     |           |                     |           |                     |           |                     |             |                     |           |
| 143 Police Parking Lot Improvements - Replacement  | General Fund  | \$58,810              | \$58,810    |                     | \$58,810  |                     |           |                     |           |                     |           |                     |             |                     |           |
| 144 Civic Center HVAC Air Handling Units #3 and #4 Replacement   | General Fund  | \$125,000             | \$125,000   |                     | \$125,000 |                     |           |                     |           |                     |           |                     |             |                     |           |
| 145 Meadowbrook Commons Roof Replacements  | Senior Housing Fund                                 | \$289,174             | \$289,174   |                     | \$41,484  |                     | \$42,738  |                     | \$44,020  |                     | \$45,341  |                     | \$46,701    |                     | \$68,890  |

BUDGET

PROJECTED

FORECAST

|  |  |               |              | BUDG               | ET          |                   | PROJE       | CTED              |           |                   |             | FOREC             | AST          |                   |              |
|--|--|---------------|--------------|--------------------|-------------|-------------------|-------------|-------------------|-----------|-------------------|-------------|-------------------|--------------|-------------------|--------------|
| PROJECT NUMBER AND NAME  | POTENTIAL FUNDING SOURCES(S)   | TOTAL PROJECT | TOTAL CITY   | FY2013-<br>Outside | -14<br>CITY | FY2014<br>Outside | -15<br>CITY | FY2015<br>Outside | CITY      | FY2016<br>Outside | -17<br>CITY | FY2017<br>Outside | 7-18<br>CITY | FY201a<br>Outside | 8-19<br>CITY |
| The state of the s | TOTERNAL TONDING SOCKOLO(S)  | COST          | COST         | Leverage           | COST        | Leverage          | COST        | Leverage          | COST      | Leverage          | COST        | Leverage          | COST         | Leverage          | COST         |
| Buildings & Property   |  |               |              |                    |             |                   |             |                   |           |                   |             |                   |              |                   |              |
| 146 DPS Mezzanine Build-Out  | General Fund   | \$456,500     | \$456,500    |                    | \$456,500   |                   |             |                   |           |                   |             |                   |              |                   |              |
| 147 Figure Skating Locker Room Remodel and Build Out   | Ice Arena  | \$40,000      | \$40,000     |                    | \$40,000    |                   |             |                   |           |                   |             |                   |              |                   |              |
| 148 Fire Parking Lot Improvements - Replacement  | General Fund   | \$236,600     | \$236,600    |                    | \$236,600   |                   |             |                   |           |                   |             |                   |              |                   |              |
| 149 Fire Training Building - New   | General Fund   | \$159,920     | \$159,920    |                    | \$159,920   |                   |             |                   |           |                   |             |                   |              |                   |              |
| 150 Meadowbrook Commons Asphalt Repairs  | Senior Housing Fund  | \$31,160      | \$31,160     |                    | \$31,160    |                   |             |                   |           |                   |             |                   |              |                   |              |
| 151 Arcade Demo and Upper Lobby Build Out  | Ice Arena  | \$50,000      | \$50,000     |                    |             |                   | \$50,000    |                   |           |                   |             |                   |              |                   |              |
| 152 Training Center and 2nd Floor Carpet Replacement   | General Fund   | \$53,400      | \$53,400     |                    |             |                   | \$53,400    |                   |           |                   |             |                   |              |                   |              |
| 153 Civic Center HVAC Air Handling Units #1 and #2<br>Replacement  | General Fund   | \$125,000     | \$125,000    |                    |             |                   | \$125,000   |                   |           |                   |             |                   |              |                   |              |
| 154 Field Services Complex Parking Lot Reconstruction Project  | General Fund   | \$700,000     | \$700,000    |                    |             |                   | \$700,000   |                   |           |                   |             |                   |              |                   |              |
| 155 DPS Field Services Complex - Building Expansion Project  | General Fund Project costs are based on scope verification study by URS. | \$16,786,200  | \$16,786,200 |                    |             |                   |             |                   | \$398,600 |                   | \$552,500   |                   | \$15,835,100 |                   |              |
| 156 DPS Field Services Complex Improvements - Electrical   | General Fund   | \$430,628     | \$430,628    |                    |             |                   |             |                   | \$430,628 |                   |             |                   |              |                   |              |
| 157 Evaporative Cooling Tower Replacement  | Ice Arena Fund   | \$65,000      | \$65,000     |                    |             |                   |             |                   |           |                   | \$65,000    |                   | 16           |                   |              |
| 158 Munters Dehumidification Unit Replacement  | Ice Arena Fund   | \$184,500     | \$184,500    |                    |             |                   |             |                   |           |                   | \$184,500   |                   |              |                   |              |
| 159 New Fire Station 1   | General Fund and Police and Fire   | \$1,850,000   | \$1,850,000  |                    |             |                   |             |                   |           |                   | \$1,850,000 |                   |              |                   |              |
|  | Buildings & Property Total   | \$21,692,192  | \$21,692,192 |                    | \$1,199,774 |                   | \$971,138   |                   | \$873,248 |                   | \$2,697,341 |                   | \$15,881,801 |                   | \$68,890     |