

2023 CWSRF PROJECT PLAN

Prepared for
The City of Grosse Pointe Woods



AEW Project No. 0160-0462

Prepared by:



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Executive Summary

The City of Grosse Pointe Woods hired Anderson Eckstein, and Westrick, Inc. (AEW), the City's consulting engineer, to develop a Project Plan in order to apply for a Clean Water State Revolving Fund (CWSRF) loan through the Michigan Department of Environment, Great Lakes and Energy (EGLE). This Project Plan was prepared for in accordance with CWSRF Project Planning Document Preparation Guidance (January 2023).

The intent of the CWSRF Project is to repair deficiencies identified at Torrey Road Pump Station (TRPS) as well as defects identified within the combined sewer system itself. The goal of the CWSRF Project is to improve the efficiency and reliability of the existing combined sewer system. Based on the analysis summarized in this project plan, two projects were selected.

1. Sewer Rehabilitation by Open Cut Repairs and Cured-in-Place Pipe (CIPP) Lining

Grosse Pointe Woods owns and operates a combined sewer system that serves the entire city. On an annual basis, Grosse Pointe Woods conducts thorough sewer cleaning and video investigation programs to evaluate the current conditions of the combined sewer system and develop a plan to address any structural deficiencies. As a result of this proactive approach to infrastructure maintenance, the entire city has been cleaned and televised.

As part of the cleaning and video inspection efforts, AEW conducted a detailed review of all televised sewers. This review determined the condition of each sewer segment and identified structural deficiencies and locations of other potential obstructions to flow. The review also includes a determination of the most cost-effective rehabilitation method based on each individual defect. A summary of all identified defects within the combined sewer system is included in the Appendix.

The proposed sewer rehabilitation project includes repairing all locations with National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) scores of 4 or higher. A preliminary cost estimate for the sewer rehabilitation project is included in the appendix. A map of all locations in this project is included in the Appendix. The cost of this project is estimated to be \$4,757,122.30.

2. Torrey Road Pump Station Improvements

TRPS is the only wastewater facility owned and operated by Grosse Pointe Woods. TRPS was originally constructed in the 1940s and serves the upstream portion of the combined sewer system. The station has undergone improvements over time. However, several elements of the station are nearing the end of their useful service life or need replacement entirely.

TRPS has two separate service connections from their power provider, DTE Energy for reliability and redundancy. However, TRPS does not currently have backup power generation and is therefore completely dependent on the reliability of DTE Energy. With the increased intensity and frequency of storm events as a result of climatic factors, installing a generator at TRPS is a priority for Grosse Pointe Woods to improve the reliability of such a critical wastewater facility. The TRPS Improvement project includes the installation of a new backup generator.

The TRPS Improvement project also includes replacement or refurbishment of the various elements within the TRPS nearing the end of their useful service life to improve the efficiency and reliability of the critical wastewater facility. A preliminary cost estimate for the TRPS Improvement project is included in the appendix. The cost of this project is estimated to be \$3,222,271.80.

The total cost of the CWSRF Project is \$7,979,394.10. The CWSRF loan is anticipated to be financed for a 20-year term at 1.875 percent interest. Debt service must be financed by a sewer system user charge system (UCS) that is consistent with the Environmental Protection Agency (EPA) and EGLE guidelines.

Background

Study and Service Area

The City of Grosse Pointe Woods is located in the north east section of District 1 in Wayne County. Grosse Pointe Woods borders St. Clair Shores to the North, Grosse Pointe Shores to the east, the city of Harper Woods to the west, and the cities of Grosse Pointe Farms and Detroit to the south.

The project study area encompasses the combined sewer system owned by Grosse Pointe Woods. The Study Area Map is presented in Appendix A. The study area map identifies the existing sewer system and the location of the proposed improvements.

The study area consists of 3.3 square miles. Existing land use data, by category, was provided by Southeast Michigan Council of Governments (SEMCOG) for the study area and is included in Appendix B (SEMCOG Community Profile).

Single-family residential homes occupy the largest share of the study area's total acreage consisting of 1,199.7 acres, or 57.4 percent, of land are being used for this purpose. Existing single-family development is concentrated in platted subdivisions within the city.

Multiple-family residential occupies 11.3 acres of land. This accounts for 0.6 percent of the study area. Most multiple-family development in the study area is primarily located in the vicinity of the major roads.

Commercial and Office developments occupy 50.7 acres of land, or 2.4 percent of the study area. Office development is located principally along all the principal and minor arterials and the major collector streets located in the city. Most of the commercial developments are located in a linear fashion along Mack Avenue.

Industrial developments occupy 0.4 acres of the study area's land, or 0.0 percent of the study area.

Institutional developments occupy 137 acres of the study area land, or 6.6 percent of the study area. Institutional development is generally scattered throughout the study area.

A table summarizing the acreage and percentage of each category in the study area (that being the entire city) as well as the land use changes from 2015 to 2020 can be found in the SEMCOG Community Profile in Appendix B.

Population

The residential population for Grosse Pointe Woods is 16,487 people, based on 2020 Census data. Seasonal fluctuations due to resorts or tourism are negligible. According to SEMCOG, the population projections for the city in 2030, 2040 and 2045 are 15,004, 14,870 and 15,077 respectively.

Existing Environment Evaluation

Cultural and Historic Resources

The projects discussed in this project plan are confined to previously constructed wastewater infrastructure located in publicly owned property or public Right of Way which has already been developed. Consequently, the proposed projects are not expected to impact cultural or historic resources.

Air Quality

There are no known air quality issues in Grosse Pointe Woods. Emissions from heavy equipment can be expected during construction. Additionally, the proposed generator will produce emissions as a result of fuel combustion to provide backup power generation. However, it is expected that these emissions will have a negligible long-term impact on air quality in Grosse Pointe Woods.

Wetlands

No wetland areas have been identified within Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact wetlands.

Great lakes Shorelands, Coastal Zones, and Coastal Management Areas

Grosse Pointe Woods is a landlocked community surrounded by neighboring communities along the entirety of their border. Consequently, the proposed projects are not expected to impact Great Lakes Shorelands, Coastal Zones, and Coastal Management Areas.

Floodplains

There are no special flood hazards within Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact floodplains.

Natural or Wild and Scenic Rivers

There are no Natural or Wild and Scenic Rivers within Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact floodplains.

Major Surface Waters

There are no major surface waters within Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact major surface waters.

Topography

According to the United States Geographical Survey (USGS) map as shown in Appendix C, Grosse Pointe Woods is relatively flat. Elevations range from approximately 620 ft at the western most portion of the city to 576 ft along the northern border of the city. The elevation of the eastern shoreline of Lake St. Clair is approximately 571 ft. This indicates a difference in elevation in range of 5 feet from the lowest point in the city to Lake St. Clair to 49 feet from the highest point. In general, the average elevation throughout the city is 590 feet.

Geology

There are no geological structures or formations in the vicinity of the proposed projects.

Soil Types

Soil conditions throughout the city are classified generally as being silty sandy clay loam. Much of the city has soil stratum that consists of varying depths of fine sand, medium stiff moist gray silty clay, soft moist gray silt clay and bed rock. A map of the existing soils in Grosse Pointe Woods is included in Appendix D.

Agricultural Resources

There is no agricultural land within the Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact agricultural resources.

Fauna and Flora

The projects discussed in this project plan are confined to previously constructed wastewater infrastructure located in publicly owned property or public Right of Way which has already been developed. Consequently, the proposed projects are not expected to impact any natural habitats. However, the MSU Extensions will be contacted to ascertain whether any species of fauna or flora listed or proposed to be listed in the MNFI as endangered or threatened, or the critical habitat of such species, is found in the vicinity of the proposed projects.

Existing System

Grosse Pointe Woods is a fully developed community served by a combined sewer system. A map of the sewer system is included in Appendix A. The outlet of the combined sewer system is the Milk River Pump Station and Retention Treatment Basin located at the northern border of the city. The facility is owned and operated by the Southeast Macomb Sanitary District (SEMSED). The facility pumps the sewage to the Great Lakes Water Authority (GLWA) for treatment or during extreme wet weather events, it discharges to Lake St Clair via the Milk River. Grosse Pointe Woods does not own or operate any wastewater treatment facilities.

Throughout the system, a network of larger diameter sewers collect sanitary sewage and surface drainage from the local sewers via lateral connections. The southern portion of the city is the furthest upstream end of the system. The larger diameter sewers serving this area discharge into the Torrey Road Pump Station (TRPS). TRPS consists of two sanitary pumps and three storm pumps which discharge into a large diameter sewer that was constructed over the course of several different contracts. The Black Marsh Drain is the segment between TRPS and Lochmoor Blvd. The Milk River Drain is the segment from Lochmoor Blvd to the Milk River Pump Station and Retention Treatment Basin. The Girard Drain also outlets into the Milk River Drain at Marter Road.

Grosse Pointe Woods began developing in the early 1900's. The oldest sewers in operation are over 80 years old. A hydrologic and hydraulic study has not been conducted for the combined sewer system. Additionally, due to the incremental nature of development over an extended period of time, the system does not have a known design capacity.

Due to the lack of industrial presence in Grosse Pointe Woods, there are no major industrial discharges.

Grosse Pointe Woods does not experience sanitary sewer overflows (SSO) or combined sewer overflows (CSO). However, the city experienced basement sewer backups during the historic June 25, 2021 storm event.

Due to the combined nature of the sewer system, it is vulnerable to increased basement flooding risk as a result of increased intensity storm events. Additionally, TRPS does not currently have backup power generation and is therefore dependent on the service from the power provider. Installation of a backup generator at TRPS is one of the proposed projects included in this project plan. Further discussion regarding backup power generation at TRPS is included in the next section of this project plan.

Need for the Project

The combined sewer system is a gravity system that discharges into the Milk River Pump Station and Retention Basin owned and operated by the SEMSD and from there discharged to the GLWA system where it is transported and treated by GLWA. Consequently, NPDES compliance, discharge permits and the Discharge Data Form are not applicable to Grosse Pointe Woods.

There are no court orders, federal or state enforcement orders, or administrative consent orders involving Grosse Pointe Woods.

Grosse Pointe Woods is an established community where the entire city has been sewered in the past and as such there are no known septic systems.

Based on population projection information provided by SEMCOG, the city is predicted to decline in population over the next 20 years.

The goal of the CWSRF project plan is to improve the efficiency of the existing combined sewer system and to restore the structural integrity of sections of the system where issues have been identified.

As Part of the CWSRF Project Plan, two projects have been proposed to improve the reliability of the existing system.

1. Sewer Rehabilitation by Open Cut Repairs and Cured-in-Place Pipe (CIPP) Lining
 2. Torrey Road Pump Station Improvements
1. On an annual basis, Grosse Pointe Woods proactively performs cleaning and video inspection of the combined sewer system, to identify structural deficiencies. A list of repairs and rehabilitation required has been created for its sewers, ranked by severity. A summary of this evaluation can be found in Appendix G.

As the City's sewer system ages, the risk of deterioration, blockages and collapses become a major concern. An unexpected collapse of a sewer line can result in a number of problems, a few of which include:

- Health exposures from bacteria and other hazardous microorganisms
- Risk of electrocution
- Destruction of valuables
- Damage to structures and other personal property
- Expensive and unbudgeted repair costs

The CWSRF loan will provide Grosse Pointe Woods a funding mechanism to address projects identified as high priority or critical. These locations are included in the proposed project. The combined sewer system may not be able to provide full capacity due to mineral deposit buildup, heavy roots, cracked pipe, broken or missing pipe, the buildup of debris and solid waste, and many other obstructions. The repair and rehabilitation conducted as a part of this project will extend the life of the sewer system and restore the integrity of the combined sewer system by eliminating collapsed or collapsing pipe and in other instances decreasing the potential for structural deficiencies, infiltration and possible collapse.

2. TRPS serves the upstream portion of the combined sewer system. If a failure occurs at TRPS, the entire service area tributary to TRPS would be at risk of basement sewer backups causing

widespread property damage. TRPS has two separate service connections from their power provider, DTE Energy, for reliability and redundancy. However, TRPS does not have backup power generation, and is therefore completely dependent on the reliability of DTE Energy. Additionally, power outages most often occur during significant storm events when the performance of TRPS is most critical. With increasing intensity and frequency of storm events as a result of climatic factors, installing a backup power generator at TRPS is a priority for Grosse Pointe Woods to improve the reliability of such a critical wastewater facility. The TRPS Improvement Project includes the installation of a new backup generator.

TRPS was originally constructed in the 1940s. The station has undergone improvements however, several elements of the station need updates. For example, many of the electrical elements in the station are beyond their useful life and maintenance efforts have become more frequent. Similarly, other equipment within TRPS including sluice gates, and hydraulic actuation have degraded with age. The TRPS Improvement project includes replacement or refurbishment of the various elements within the TRPS nearing the end of their useful service life to improve the efficiency and reliability of the critical wastewater facility.

Projected Future Needs

Due to the fact that Grosse Pointe Woods is both fully developed and is also predicted to experience population decline, residential wastewater is not expected to increase over a period of 20 years and was not considered in this project plan.

Additionally, this project plan does not include construction of new wastewater facilities. The sewer rehabilitation projects are intended to address previously identified structural issues, and are therefore not intended to increase system capacity. Similarly, the TRPS improvements are intended to address issues at the existing station and are therefore not intended to increase system capacity. However, these improvements are expected to improve the system's resilience to changes resulting from climatic factors as discussed in the previous section.

Analysis of Alternatives

To apply for a CWSRF loan a cleaning and televising program consisting of several projects were conducted and analyzed to determine the condition of the existing combined sewer system. The goal of the CWSRF project plan is to eliminate or reduce the number and severity of structural deficiencies present in the combined sewer system.

No Action

The No Action alternative represents the decision to do nothing beyond the cleaning of the sewers that has already taken place as part of the cleaning and televising program. Abandoning efforts to correct the structural deficiencies will provide inadequate capacity and further deterioration of the sewer system, most likely causing future collapsed sections of pipe. Collapsing pipes can result in losses of service for significant portions of the service area. Such failures would result in large capital expenditures that are not typically anticipated by the city, including but not limited to, collapsed sections of pipe, sewer backups, and service laterals potentially backing up and possibly causing basement sewer backups.

Similarly, if no action is taken to address the deteriorating components of TRPS that are nearing the end of their useful service life, the likelihood of a catastrophic failure would greatly increase over time. As noted in the Need for the Project section, a failure at TRPS could result in basement sewer backups throughout the TRPS service area causing widespread property damage.

The long-term impact of the no action alternative is cost prohibitive and not in the best interest of the city.

Optimum Performance of Existing System

This project is intended to address structural issues identified within the combined sewer system and aging components of TRPS. Consequently, optimizing performance of the system cannot resolve existing structural issues or aging components of TRPS. Therefore, the Optimum Performance of Existing System alternative was not considered an applicable option.

Regionalization

The issues identified within the combined sewer system are limited to the local service areas in Grosse Pointe Woods. Consequently, the regionalization alternative is not considered viable or practical for the deficiencies evaluated in this project plan.

Monetary Evaluation

The most cost-effective repair method was determined as part of the previously completed sewer inspection review efforts, based on the type of defect identified using the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP) system. Therefore, separate alternatives were not evaluated for every individual defect location. Preliminary construction cost estimates have been prepared for the Sewer Rehabilitation Project by Open Cut Repairs and CIPP Lining as well as the TRPS Improvement project. The preliminary construction cost estimates are included in Appendix E.

Sunk Costs

Per the project planning document guidance, sunk costs were not included as a part of the monetary analysis as they are costs incurred regardless of what alternatives are selected. Sunk costs include the cost to operate and maintain the existing sewer system and pump stations and the associated lands, all outstanding debts and the cost incurred to prepare this project plan.

Present Worth

A present worth analysis, covering the 20-year planning period, was conducted. The discount rate used to calculate the present worth is 7% according to the Federal Office of Management and Budget (OMB). The present worth analysis calculations are included in Appendix F. The present worth was calculated using the following steps:

- Determine the capital cost. The construction costs from the estimates are for current value and are assumed to be present worth.
- Determine the salvage value at 20 years for each alternative using straight-line depreciation.
- Given the future salvage value, the present worth of the salvage value can be calculated as the salvage value at 20 years, multiplied by the single payment present worth factor of 0.4146 to determine present worth from a future amount in 20 years.
- Interest during construction has been calculated as 7.0 percent multiplied by the construction period in years and the total capital cost. The total is then multiplied by 0.5. This is per the guidance document for construction periods less than four (4) years.
- The total present worth is calculated by deducting the present worth of the salvage value at 20 years and the present worth of revenue generated from the sum of the present worth of the capital costs and the interest during construction.

- The equivalent annual cost is calculated by multiplying the total present worth by the capital recovery factor of 0.09439, to determine the annual cost for 20 years based on the total present worth.

Salvage Value

In accordance with the Project Planning Document Preparation Guidance the salvage value at the end of the 20-year planning period was calculated using straight line depreciation with a useful life of 50 years.

Escalation

The proposed projects are not expected to result in the purchase of more land or increases in energy use. The proposed generator will consume fuel. However, based on the lack of historical outages experienced at TRPS, it is anticipated that the generator will be used in such rare circumstances that the cost of fuel is considered negligible for the purposes of this analysis. Consequently, escalation costs were not considered in the monetary analysis.

Interest During Construction

The construction period is expected to be less than four years. As a result, interest was calculated as one half of the product of the construction period (in years), the total capital expenditures (in dollars), and the real discount rate.

User Costs

The combined sewer system is made up of 9,633 residential equivalency units (REU's). Based on the present worth analysis, the equivalent annual cost of the CWSRF projects is \$662,763.88. Therefore, the estimated annual costs per REU is \$68.80.

Project Delivery Method

The traditional Design-Bid-Build delivery method will be utilized for the CWSRF projects. Therefore, the project delivery method was not considered in the monetary evaluation.

Environmental Evaluation

All improvements proposed within this project plan will be made to existing wastewater infrastructure. Additionally, the construction methods themselves are expected to have minimal environmental impact. Soil erosion and sedimentation control measures are included in the capital cost of the project and enforced during construction.

Selected Alternative

Design Parameters

1. Sewer Rehabilitation by Open Cut Repairs and CIPP Lining

On an annual basis, Grosse Pointe Woods proactively performs cleaning and video inspection of the combined sewer system, to identify structural deficiencies. The city has identified numerous locations within the combined sewer system which have become significantly deteriorated and need rehabilitation or repair. These sewers along with their varied locations serve a large portion of Grosse Pointe Woods.

The most cost-effective repair method was determined as part of the previously completed sewer inspection review efforts, based on the type of defect identified using the PACP system. This project plan is intended to repair all locations in the combined sewer system with structural

PACP scores of 4 or 5. A table summarizing the results of the sewer video inspection is included in Appendix G. The goal of the selected project components is to provide for system reliability by correction of structural deficiencies in existing sewers. The recommended project will include open cut sewer repairs, sewer rehabilitation by full length cured-in-place pipe (FCIPP), and sewer rehabilitation by sectional cured-in-place pipe (SCIPP).

Open Cut Repairs

At select locations within the combined sewer system there are pipes that have structurally failed and collapsed to the point where the only option for rehabilitation is by excavating and replacing either a section of a line section known as a point repair or complete sewer replacement.

FCIPP Rehabilitation

Rehabilitation by FCIPP is best utilized where several deficiencies were identified for correction within a length of existing sewer. The use of trenchless technologies such as cured-in-place pipe has several advantages over traditional removal and replacement of sewers. FCIPP rehabilitation limits adverse impact to the environment since excavation is not required to complete the work. Secondly, this method of construction will lessen the impact of construction noise, pollution and traffic congestion. The Contractor can accomplish the construction faster and with less equipment comparing it to open excavation replacement. Additionally, FCIPP proved to be the most cost-effective method of sewer rehabilitation for the sewer segments selected.

SCIPP Rehabilitation

Rehabilitation by SCIPP utilizes the same trenchless technology as FCIPP and therefore represents the same benefits and cost savings when compared to Open Cut Pipe Repair. The difference with SCIPP is that only a portion of a line segment requires rehabilitation due to a structural deficiency. Whereas FCIPP rehabilitates a complete line segment from manhole to manhole, SCIPP is a location specific rehabilitation method for particular section within a line segment which requires a localized repair. Since there are a number of areas that require a sectional repair/rehabilitation, SCIPP proves to be a greater costs savings versus an open excavation type of repair.

The locations of all proposed repairs included in the CWSRF project plan are shown on the map in Appendix A.

2. Torrey Road Pump Station Improvements

There are no court orders, federal or state enforcement orders, administrative consent orders, or local health department findings or directives related to TRPS. The facility does not perform any activity related to treatment, discharges, or residuals management. Additionally, the proposed improvements at TRPS will not have an impact on system capacity. As a result of these factors. A basis of design is not applicable to the proposed improvements to TRPS. The proposed improvements include installation of a backup generator and the replacement or restoration of the various elements within the TRPS nearing the end of their useful service life to improve the efficiency and reliability of the critical wastewater facility.

Useful Life

Open cut sewer repairs, sewer rehabilitation by FCIPP, and sewer rehabilitation by SCIPP all have useful life expectancy exceeding 30 years. Lining efforts conducted over 30 years ago within the city of Grosse Pointe Woods are still in service today.

The proposed improvements at TRPS are expected to maintain the facility beyond 30 years. Literature on life expectancy of backup power generators relate the useful life to the hours of use. Based on the lack of historical outages at TRPS, it is anticipated that the hours of use will be less than 100 hours per year, almost entire from routine weekly test startups for preventative maintenance purposes.

Project Maps

See Appendix A for a map identifying all work areas associated with the proposed CWSRF Projects.

Water and Energy Efficiency

All improvements proposed within this project plan will be made to previously constructed wastewater infrastructure to address previously identified structural issues. Consequently, the water and energy efficiency alternatives are not considered as part of this project.

Schedule for Design and Construction

A preliminary schedule for design and construction of the selected alternatives is presented below:

Publish public hearing notice	3/31/23
Conduct formal public meeting	4/17/23
Public comment period ends	4/17/23
City Council approves resolution to proceed with project plan	4/17/23
Project plan submittal to MDEQ	5/1/23
Submit engineering plans for required permits	8/1/24
Part I application due (financial documentation and assurances)	9/1/24
Part II application due (submit approved UCS and project plans)	10/1/24
Publish advertisement for bids	10/1/24
Part III application due (bid tabulation with tentative award)	11/1/24
Order of Approval issued	11/15/24
Loan close	12/1/24
Conduct preconstruction meeting and issue notices to proceed	1/6/25
Start construction	2/1/25
Mitigation of environmental impacts	2/1/25
Project completion	2/1/26

Cost Summary

The total cost of the CWSRF Project is estimated to be \$7,979,394.10. The CWSRF loan is anticipated to be financed for a 20-year term at 1.875 percent interest. Debt service must be financed by a sewer system user charge system (UCS) that is consistent with the Environmental Protection Agency (EPA) and EGLE guidelines.

Implementability

The City of Grosse Pointe Woods is a municipal unit organized under the State of Michigan Constitution and statutes and is legally able to own and operate public utilities. The city owns and operates its public water system and combined sewer system. All improvements proposed

as a part of this project will be completed within city owned utility infrastructure. All city-owned sewers are located within a city owned utility easement or public rights-of-way.

The selected alternatives will not pose any issues related to the implementability of the project. Grosse Pointe Woods has the legal authority, managerial capability, and financial means to build, operate, and maintain the system. Grosse Pointe Woods passed a resolution to adopt this Project Plan at the April 17, 2023 City Council meeting.

Environmental and Public Health Impacts

Direct Impacts

Cultural and Historic Resources

The projects discussed in this project plan are confined to previously constructed wastewater infrastructure located in publicly owned property or public Right of Way which has already been developed. Additionally, the National Register of Historical Places does not include any locations within Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact cultural or historic resources.

Air Quality

Emissions from heavy equipment can be expected during construction. Additionally, the proposed generator will produce emissions as a result of fuel combustion to provide backup power generation. However, it is expected that these emissions will have a negligible long-term impact on air quality in Grosse Pointe Woods.

Wetlands

No wetland areas have been identified within Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact wetlands.

Great lakes Shorelands, Coastal Zones, and Coastal Management Areas

Grosse Pointe Woods is a landlocked community surrounded by neighboring communities along the entirety of their border. Consequently, the proposed projects are not expected to impact Great Lakes Shorelands, Coastal Zones, and Coastal Management Areas.

Floodplains

There are no special flood hazards within Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact floodplains.

Natural or Wild and Scenic Rivers

There are no Natural or Wild and Scenic Rivers within Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact floodplains.

Major Surface Waters

There are no major surface waters within Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact major surface waters.

Agricultural Resources

There is no agricultural land within the Grosse Pointe Woods. Consequently, the proposed projects are not expected to impact agricultural resources.

Fauna and Flora

The projects discussed in this project plan are confined to previously constructed wastewater infrastructure located in publicly owned property or public Right of Way which has already been developed. Consequently, the proposed projects are not expected to impact any natural habitats. However, the MSU Extensions will be contacted to ascertain whether any species of fauna or flora listed or proposed to be listed in the MNFI as endangered or threatened, or the critical habitat of such species, is found in the vicinity of the proposed projects.

Construction Impacts

The proposed work for the project is generally limited to the public right-of-way where streets may be impacted depending on the location of the existing sewers. Construction methods are selected to minimize disruptions. Standard traffic and safety control devices meeting MDOT construction standards such as barricades and lighted barrels will be in place to warn and protect residents during construction activities.

Where sewer main replacement work is taking place within or near road right-of-ways, roads may have to be partially or completely closed to vehicular and/or pedestrian traffic. In addition, construction equipment and vehicles will have to be parked within the road right-of-way for a specified period of time.

Closures may result in the re-routing or postponement of garbage pick-up, mail delivery, parcel delivery and other deliveries to residences and businesses. Access for emergency vehicles and access for handicapped or disabled persons will also require attention.

Consideration must be taken to establish haul routes that minimize impact to residents and businesses. Construction truck traffic will be confined to the construction project itself and accessing the sites from major roads only. No truck traffic will be allowed to be on adjacent residential streets.

During the course of construction, the noise level will be increased as a result of construction equipment and truck traffic.

Where open cut excavations will take place, special attention will be required when stockpiling excavated materials in addition to other material stockpiles and their locations to not interfere with existing drainage patterns and transfer particulates into the drainage system. Soil erosion and sedimentation control measures such as, but not limited to silt sacks, filter fabrics and straw bales will be installed at storm water facilities as part of the construction activities to prevent soil erosion and sedimentation concerns.

The vegetation to be disturbed for this project are grass areas maintained by each property owner. Any disturbed area will be restored. Tree removals may be necessary. Any miscellaneous tree removal will be replaced with a tree of compatible species native to the area.

Any contamination encountered during construction will be remediated by the contractor.

Operational Impacts

The proposed projects will not result in any changes to the current system, operational or otherwise.

Social Impacts

Minor increases in rates may be a social impact of the project if the city chooses to increase rates to finance the loan debt. Additionally, traffic impacts discussed in the Construction

Impacts section of the report can be considered a social impact. Long-term impacts related to relocation of business or residents due to these projects are not expected due to the nature of the proposed projects.

Indirect Impacts

Due to the fact that the service area is fully developed, the proposed projects are confined to previously constructed wastewater infrastructure, and the service area is predicted to experience population decline, there are no anticipated indirect impacts to the following aspects:

- Changes in rate, density, or development type
- Changes in land use
- Changes in air or water quality
- Changes to the natural setting or sensitive features
- Impacts on cultural, human, social and economic resources
- Impacts on area aesthetics
- Resource consumption over the useful life of the project

Cumulative Impacts

Due to the fact that the service area is fully developed, the proposed projects are confined to previously constructed wastewater infrastructure, and the service area is predicted to experience population decline, there are no anticipated indirect impacts as a result of the proposed projects to the following aspects:

Mitigation

Mitigation of Short-Term Construction Related Impacts

General Construction

Many mitigation techniques used to minimize short term construction impacts are standard procedures included in construction contracts. For example, traffic control measures will be included in the construction contract to safely maintain traffic during construction activities.

Allowable work hours are controlled by local ordinances in order to mitigate impacts related to increased noise levels during construction.

Soil Erosion and Sedimentation Control

Soil Erosion and Sedimentation Control (SESC) plans and permit requirements are included in the construction contract as well. SESC measures include the use of inlet filters for catch basins within the project influence area to prevent soils or other construction materials from entering the combined sewer system. Silt fences may also be used to prevent runoff from carrying soils from the construction site and potentially entering waterways.

Where feasible, trenchless technologies will be used to perform rehabilitation and limit required excavation. However, where trenchless rehabilitation methods cannot accomplish the necessary rehabilitation, open cut excavation will be required. For all excavated areas, it will be necessary for the contractor to stockpile excavated and backfill materials. During open cut operations, effort will be made to minimize the amount of open trench by backfilling as soon as possible after work is complete. This practice will minimize the amount of material stockpiled on

the site, thereby minimizing the potential for sedimentation runoff and airborne particulate/dust problems. All excess soils will be removed from the project site as the work progresses.

The contractor will be required to maintain a safe and clean work site. This includes performing street sweeping as necessary during construction.

Existing Landscape

Any surface features impacted by the construction such as paved surfaces, lawns, or vegetation will be repaired or replaced as part of the construction contract.

Existing Underground Utilities

It is common to encounter existing utilities during excavation. Existing underground utilities that may be encountered include, but are not limited to, electric, gas, communications, water mains, and sewers. Every effort will be made to obtain information regarding underground utilities from all utility owners for inclusion on the construction plans. The contractor will be required to have all construction sites staked by MISS DIG for the location of all underground utilities. It will be the contractor's responsibility to protect all underground utilities during construction.

Culturally and Historically Significant Sites

Per the direction of the State Historical Preservation Office (SHPO), any culturally or historically significant artifacts that are uncovered during excavation require all work to be stopped and the area where the artifact(s) were encountered will be immediately surveyed by SHPO or any of the Tribal Historical Preservation Officers (THPO) who may have stated, by written correspondence, that their tribe has had past influence in the City. If encountered, every effort will be made to accommodate and not disturb any cultural or historically significant artifacts. If necessary, the project will be redesigned to maintain historically significant properties. The proposed excavation is in areas of previously constructed wastewater infrastructure where the ground has been previously disturbed during original construction. Therefore, we anticipate that culturally or historically significant artifacts will not be encountered.

Natural Water Features

Construction is not expected to occur near wetlands, floodplains, surface waters or natural streams and rivers. Therefore, mitigation related to these features is not considered in this project plan.

Mitigation of Long-Term Impacts

Siting Decisions

The only feature that will be constructed above the ground surface will be the generator and related appurtenances on the TRPS lot. This equipment will be mostly set back from public view towards the rear of the lot. There is currently landscaping along the TRPS lot lines to provide privacy and concealment for the residential lots adjacent to TRPS.

Operational Impacts

The sewer rehabilitation project will not result in any operational impact whatsoever as these locations are confined to gravity sewers that do not require operational activities.

In an effort to mitigate the noise from the proposed generator at TRPS, a level 2 noise attenuating enclosure will be specified. Additionally, aside from routine weekly test startups for preventative maintenance purposes, the generator will only run in emergency situations.

Mitigation of Indirect Impacts

The proposed projects do not involve the expansion of the sewer system or implementation of a wastewater treatment facility. The proposed work will not have an effect on the rate of development, population density, zoning or land use. Therefore, no indirect impacts are foreseen as a part of this project.

Staging of Construction

Due to the varied locations of the proposed projects, staging of the construction will not provide any additional mitigation benefits.

Public Participation

Public Meeting

A public meeting was held at Grosse Pointe Woods City Hall on Monday, April 17, 2023. The following items were discussed.

1. A description of the water quality problems to be addressed by the project and the principal alternatives that were considered.
2. A description of the recommended alternative, including its capital costs and a cost breakdown by project components (e.g., treatment plant, sewer system).
3. A discussion of project financing and costs to users, including the proposed method of project financing and estimated monthly debt retirement; the proposed annual, quarterly, or monthly charge to the typical residential customer; and any special fees that will be assessed.
4. A description of the anticipated social and environmental impacts associated with the recommended alternative and the measures that will be taken to mitigate adverse impacts.

Public Meeting Advertisement

In accordance with the Project Planning Document Preparation Guidance, the advertisement was published on the city's website on Friday, March 31, 2023. The public meeting advertisement is included in Appendix H.

Public Meeting Summary

The following elements from the public meeting are included in Appendix H:

- Summary of the meeting held and what was covered during the meeting.
- List of attendees.
- Concerns raised during the meeting and the responses.
- Written comments received during the public notice period and the responses.
- Changes made to the project because of public comment

Adoption of the Project Planning Document

The resolution to adopt this Project Plan passed at the April 17, 2023 city council meeting is included in Appendix I.

Technical Considerations

The projects included in this project plan are intended to address previously identified structural issues. Therefore, infiltration and inflow (I&I) removal was not considered as part of this analysis. Similarly, a sewer system evaluation survey (SSES) was not conducted as part of this analysis.

Structural Integrity

A table summarizing the results of the NASSCO PACP sewer video inspection is included in Appendix G. A map of the proposed sewer projects with areas of Grade 4 or 5 defects is included in Appendix A.

DRAFT

Appendix A

Map of Service Area with Proposed Projects Locations



CITY OF ST. CLAIR SHORES

MACOMB COUNTY

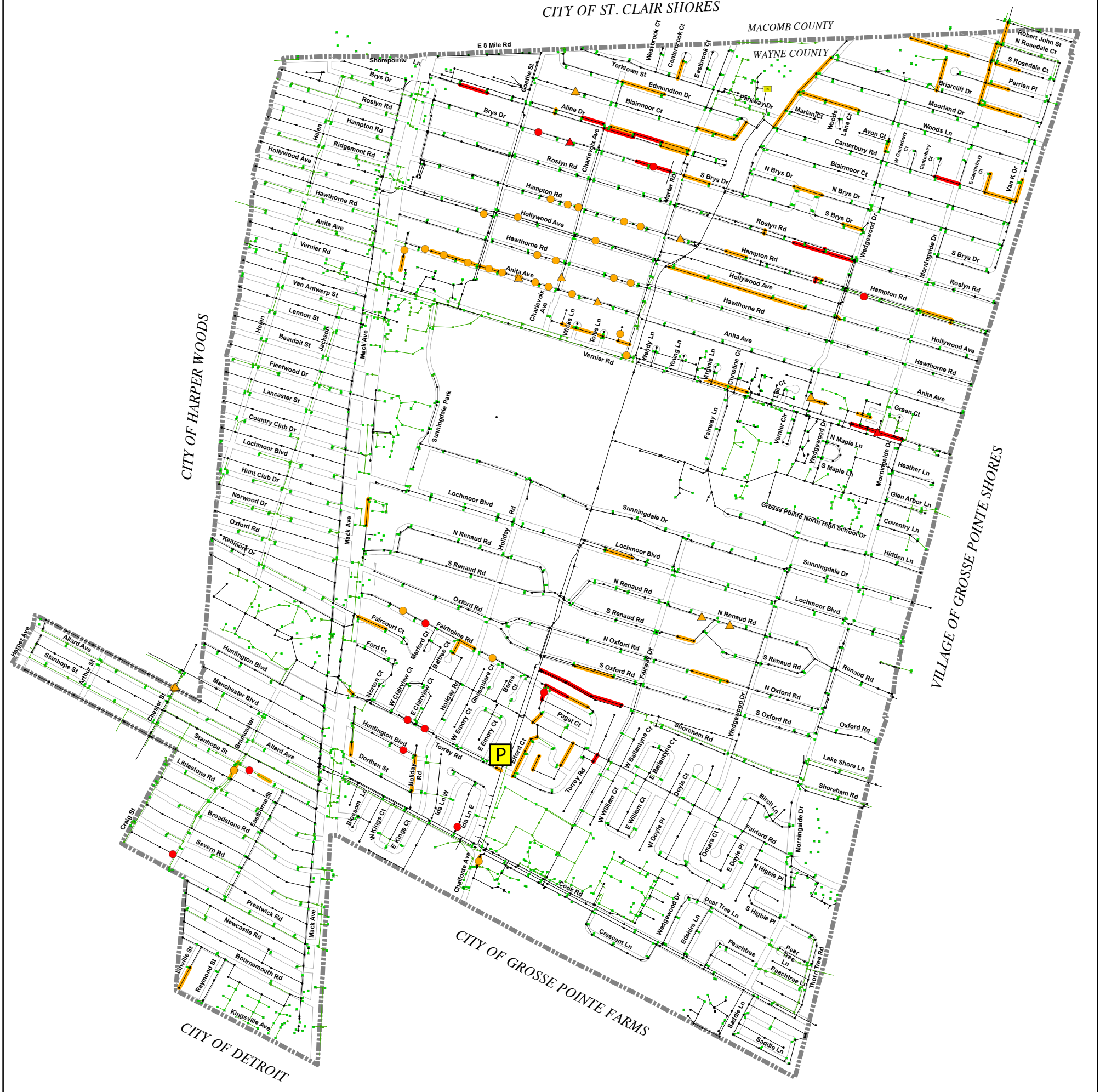
WAYNE COUNTY

CITY OF HARPER WOODS

VILLAGE OF GROSSE POINTE SHORES

CITY OF GROSSE POINTE FARMS

CITY OF DETROIT



FCIPP Repair Locations

- CRITICAL
- HIGH

SCIPP Repair Locations

- CRITICAL
- HIGH

Open Cut Repair Locations

- CRITICAL
- HIGH

Sewers

- Combined/Sanitary Sewer
- Storm Sewer

Sewer Structures

- PS Pump Station
- Combined/Sanitary Manhole
- Storm Manhole
- Catch Basin
- P** TORREY RD PUMP STATION

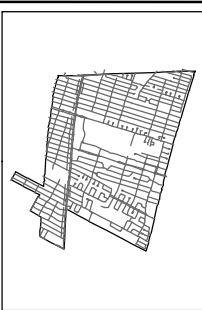
ANDERSON, ECKSTEIN AND WESTRICK, INC.
 CIVIL ENGINEERS SURVEYORS ARCHITECTS
 5330 Schoenherr Rd
 Shelby Township, Michigan 48315
 Phone: 586.726.1234 Fax: 586.726.8786
 www.aewinc.com

DATE PRINTED: March 30, 2023 DATE CREATED: March 30, 2023
 SCALE: NTS MAP DOCUMENT: Over all Rehab.mxd
 PROJECT NO: 0160-0462 CREATED BY: JMM CHECKED BY: JEM

CITY OF GROSSE POINTE WOODS
 URBAN MAGNA PULCHRITUDINIS
 CORPORATE SEAL

City of Grosse Pointe Woods

Proposed CWSRF Project Locations



REFERENCE SHEET NUMBER INDEX	PAGE NAME INDEX
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CAUTION THIS MAP IS INTENDED FOR REFERENCE PURPOSES ONLY. ANDERSON, ECKSTEIN AND WESTRICK, INC. AND THE CITY OF GROSSE POINTE WOODS DO NOT GUARANTEE THE ACCURACY OF THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM ALL CLAIMS, SUITS, DEMANDS AND JUDGEMENTS ARISING FROM THE USE OF THIS INFORMATION.	

Appendix B

SEMCOG Community Profile

DRAFT

Community Profiles

YOU ARE VIEWING DATA FOR:

City of Grosse Pointe Woods

20025 Mack Plaza Dr
Grosse Pointe Woods,
MI 48236-2343
<http://www.gpwmi.us>



Census 2020 Population:
16,487
Area: 3.3 square miles

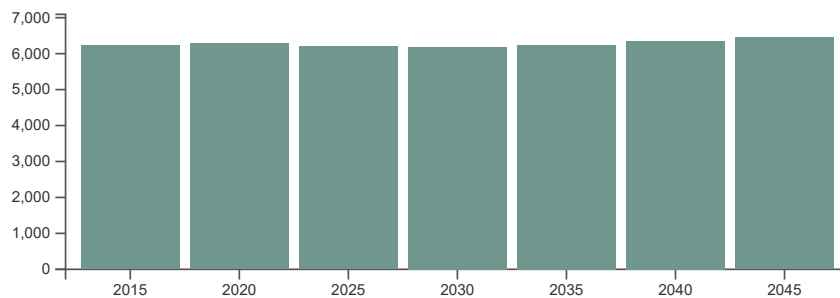
[VIEW COMMUNITY EXPLORER MAP](#)

[VIEW 2020 CENSUS MAP](#)

Economy & Jobs

Link to American Community Survey (ACS) Profiles: **Select a Year** **Economic**

Forecasted Jobs



Source: **SEMCOG 2045 Regional Development Forecast**

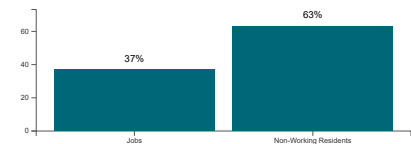
Forecasted Jobs by Industry Sector

Forecasted Jobs By Industry Sector	2015	2020	2025	2030	2035	2040	2045	Change 2015-2045	Pct Change 2015-2045
Natural Resources, Mining, & Construction	240	236	225	228	231	229	230	-10	-4.2%
Manufacturing	62	55	46	40	38	35	31	-31	-50%
Wholesale Trade	124	128	124	125	119	127	128	4	3.2%
Retail Trade	525	503	488	472	441	428	417	-108	-20.6%
Transportation, Warehousing, & Utilities	44	47	42	41	41	40	40	-4	-9.1%
Information & Financial Activities	871	836	782	764	760	765	758	-113	-13%
Professional and Technical Services & Corporate HQ	477	496	493	490	499	521	544	67	14%
Administrative, Support, & Waste Services	684	697	699	710	731	752	767	83	12.1%
Education Services	744	742	730	729	737	744	758	14	1.9%
Healthcare Services	1,068	1,115	1,152	1,170	1,212	1,270	1,323	255	23.9%
Leisure & Hospitality	687	707	708	712	724	736	749	62	9%
Other Services	586	599	591	586	588	588	582	-4	-0.7%
Public Administration	119	121	121	121	121	121	122	3	2.5%
Total Employment Numbers	6,231	6,282	6,201	6,188	6,242	6,356	6,449	218	3.5%

Source: SEMCOG 2045 Regional Development Forecast

Daytime Population

Daytime Population	ACS 2016
Jobs	4,634
Non-Working Residents	7,950
Age 15 and under	2,947
Not in labor force	4,519
Unemployed	484
Daytime Population	12,584



Source: 2012-2016 American Community Survey 5-Year Estimates and 2012-2016 Census Transportation Planning Products Program (CTPP). For additional information, visit SEMCOG's [Interactive Commuting Patterns Map](#)

Note: The number of residents attending school outside Southeast Michigan is not available. Likewise, the number of students commuting into Southeast Michigan to attend school is also not known.

Where Workers Commute From 2016

Rank	Where Workers Commute From *	Workers	Percent
1	Grosse Pointe Woods	1,127	24.3%
2	Detroit	745	16.1%
3	St. Clair Shores	497	10.7%
4	Warren	209	4.5%
5	Clinton Twp	179	3.9%
6	Grosse Pointe Park	176	3.8%
7	Harper Woods	153	3.3%
8	Macomb Twp	151	3.3%
9	Grosse Pointe Farms	112	2.4%
10	Grosse Pointe	85	1.8%
-	Elsewhere	1,200	25.9%
* Workers, age 16 and over employed in Grosse Pointe Woods		4,634	100%

Source: **U.S. Census Bureau** - 2012-2016 CTPP/ACS Commuting Data and **Commuting Patterns in Southeast Michigan**

Where Residents Work 2016

Rank	Where Residents Work *	Workers	Percent
1	Detroit	1,660	19.8%
2	Grosse Pointe Woods	1,127	13.5%
3	St. Clair Shores	578	6.9%
4	Warren	530	6.3%
5	Troy	402	4.8%
6	Southfield	360	4.3%
7	Grosse Pointe	328	3.9%
8	Clinton Twp	283	3.4%
9	Grosse Pointe Farms	243	2.9%
10	Sterling Heights	193	2.3%
-	Elsewhere	2,669	31.9%
* Workers, age 16 and over residing in Grosse Pointe Woods		8,373	100%

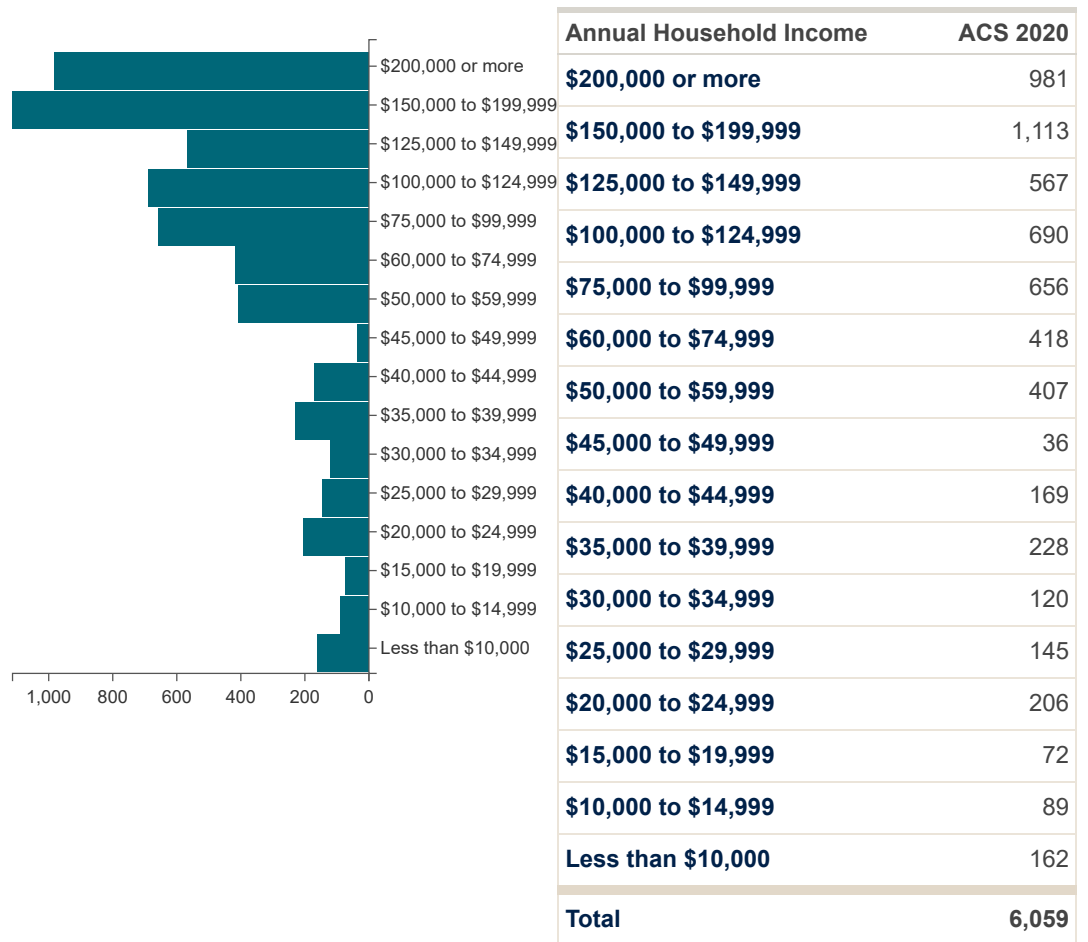
Source: **U.S. Census Bureau** - 2012-2016 CTPP/ACS Commuting Data and **Commuting Patterns in Southeast Michigan**

Household Income

Income (in 2020 dollars)	ACS 2010	ACS 2020	Change 2010-2020	Percent Change 2010-2020
Median Household Income	\$102,057	\$111,392	\$9,335	9.1%
Per Capita Income	\$48,206	\$50,172	\$1,966	4.1%

Source: U.S. Census Bureau, 2006-2010 and 2016-2020 American Community Survey 5-Year Estimates

Annual Household Income



Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

Poverty

Poverty	ACS 2010	% of Total (2010)	ACS 2020	% of Total (2020)	% Point Chg 2010-2020
Persons in Poverty	606	3.7%	634	4.1%	0.4%
Households in Poverty	307	4.8%	328	5.4%	0.6%

Source: U.S. Census Bureau, 2006-2010 and 2016-2020 American Community Survey 5-Year Estimates

Housing

Link to American Community Survey (ACS) Profiles: **Select a Year** **Housing**

Building Permits 2000 - 2023

Year	Single Family	Two Family	Attach Condo	Multi Family	Total Units	Total Demos	Net Total
2000	3	0	0	0	3	1	2
2001	2	0	0	0	2	1	1
2002	2	0	0	0	2	1	1
2003	0	0	0	0	0	0	0
2004	2	0	0	0	2	0	2
2005	3	0	0	38	41	1	40
2006	3	0	0	0	3	1	2
2007	2	0	0	0	2	1	1
2008	1	0	0	0	1	0	1
2009	0	0	0	0	0	1	-1
2010	0	0	0	0	0	1	-1
2011	0	0	0	0	0	0	0
2012	0	0	26	0	26	1	25
2013	0	0	14	0	14	1	13
2014	4	0	0	0	4	1	3
2015	1	0	0	5	6	1	5
2016	2	0	0	0	2	1	1
2017	0	0	0	0	0	0	0
2018	2	0	0	0	2	1	1
2019	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0
2021	0	0	0	0	0	1	-1
2022	1	0	0	0	1	0	1
2023	0	0	0	0	0	0	0
2000 to 2023 totals	28	0	40	43	111	15	96

Source: **SEMCOG Development**

Note: Permit data for most recent years may be incomplete and is updated monthly.

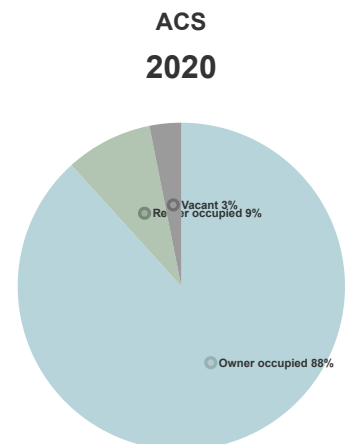
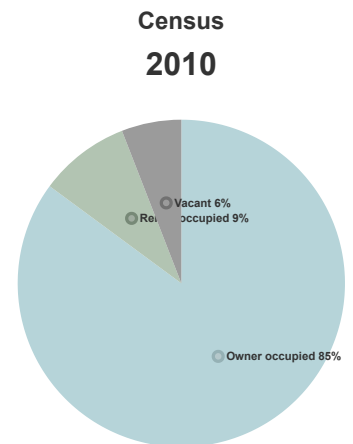
Housing Types

Housing Type	ACS 2010	ACS 2020	Change 2010-2020	New Units Permitted Since 2019
Single Unit	6,359	5,911	-448	1
Multi-Unit	213	321	108	0
Mobile Homes or Other	9	23	14	0
Total	6,581	6,255	-326	1
Units Demolished				-1
Net (Total Permitted Units - Units Demolished)				0

Source: U.S. Census Bureau, 2006-2010 and 2016-2020 American Community Survey 5-Year Estimates, SEMCOG Development

Housing Tenure

Housing Tenure	Census 2010	ACS 2020	Change 2010-2020
Owner occupied	5,804	5,522	-282
Renter occupied	612	537	-75
Vacant	403	196	-207
Seasonal/migrant	28	28	0
Other vacant units	375	168	-207
Total Housing Units	6,819	6,255	-564



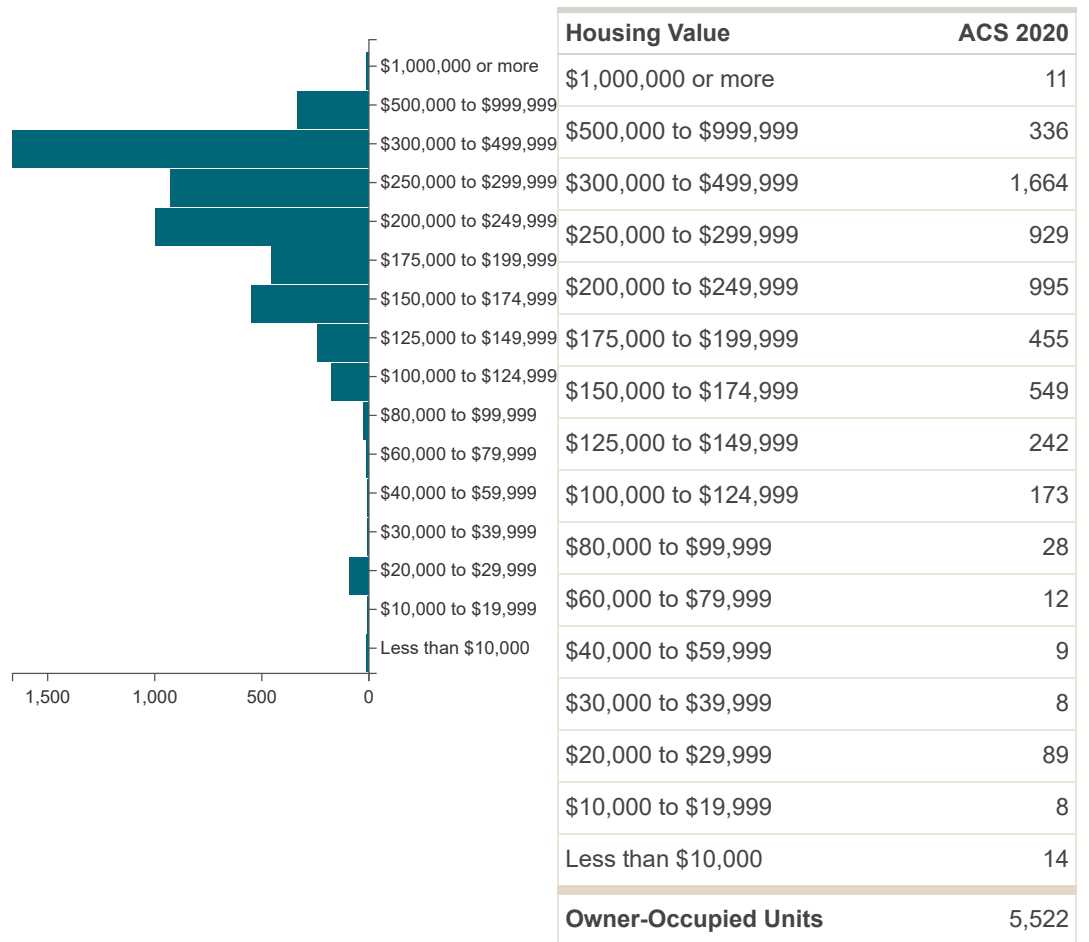
Source: U.S. Census Bureau, 2006-2010 and 2016-2020 American Community Survey 5-Year Estimates

Housing Value and Rent

Housing Value (in 2020 dollars)	ACS 2010	ACS 2020	Change 2010-2020	Percent Change 2010-2020
Median housing value	\$297,340	\$259,600	-\$37,740	-12.7%
Median gross rent	\$1,449	\$1,485	\$36	2.5%

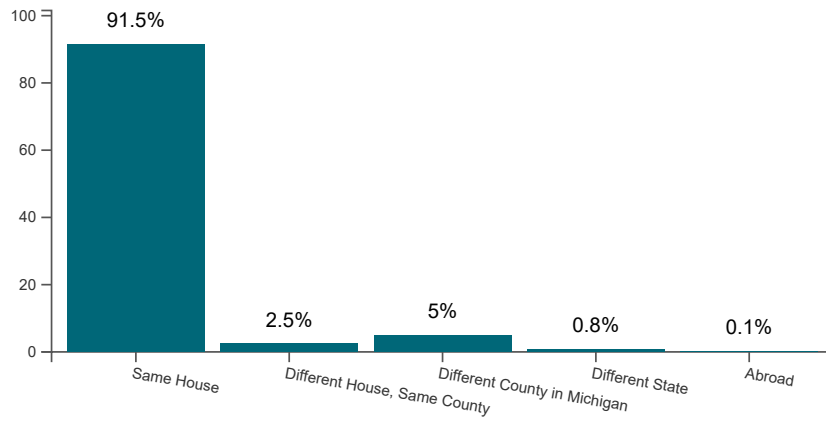
Source: U.S. Census Bureau, 2006-2010 and 2016-2020 American Community Survey 5-Year Estimates

Housing Value



Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

Residence One Year Ago *



* This table represents persons, age 1 and over, living in City of Grosse Pointe Woods from 2016-2020. The table does not represent person who moved out of City of Grosse Pointe Woods from 2016-2020.

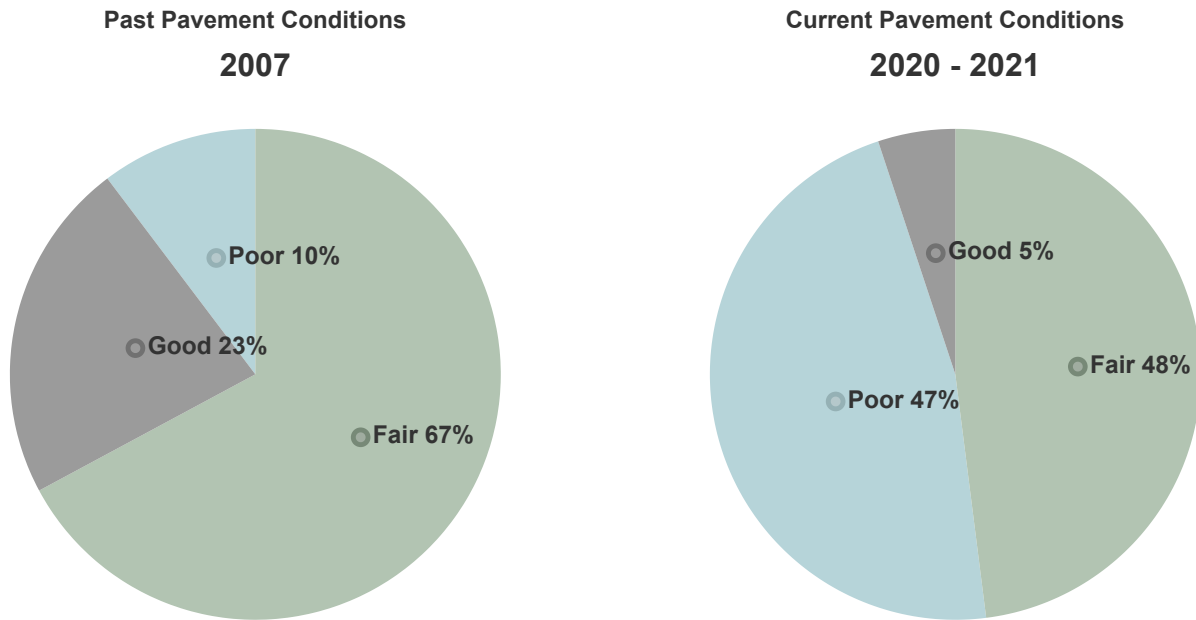
Source: **U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates**

Transportation

Miles of public road (including boundary roads): 61

Source: **Michigan Geographic Framework**

Pavement Condition (in Lane Miles)



Note: Poor pavements are generally in need of rehabilitation or full reconstruction to return to good condition. Fair pavements are in need of capital preventive maintenance to avoid deteriorating to the poor classification. Good pavements generally receive only routine maintenance, such as street sweeping and snow removal, until they deteriorate to the fair condition.

Source: SEMCOG

Bridge Status

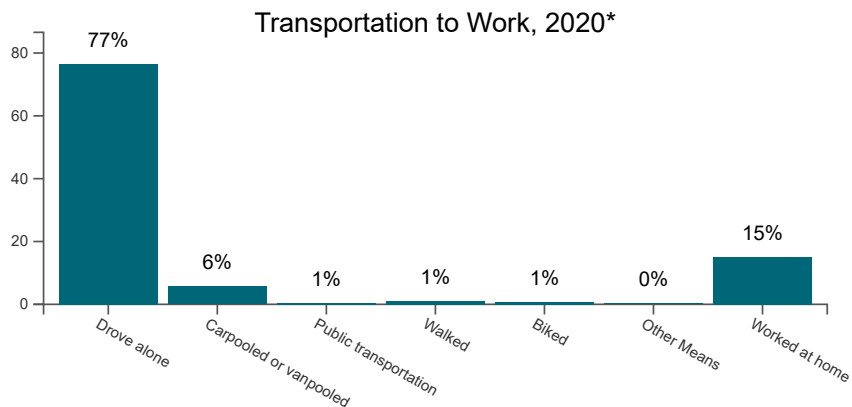
Bridge Status	Percent Point Chg 2008-2010
Open	-
Open with Restrictions	-
Closed*	-
Total Bridges	0.0%
Deficient Bridges	-

* Bridges may be closed because of new construction or failed condition.

Note: A bridge is considered deficient if it is structurally deficient (in poor shape and unable to carry the load for which it was designed) or functionally obsolete (in good physical condition but unable to support current or future demands, for example, being too narrow to accommodate truck traffic).

Source: Michigan Structure Inventory and Appraisal Database

Detailed Intersection & Road Data



* Resident workers age 16 and over

Transportation to Work

Transportation to Work	ACS 2010	% of Total (ACS 2010)	ACS 2020	% of Total (ACS 2020)	% Point Chg 2010-2020
Drove alone	7,087	89.1%	5,841	76.6%	-12.5%
Carpooled or vanpooled	304	3.8%	435	5.7%	1.9%
Public transportation	5	0.1%	40	0.5%	0.4%
Walked	85	1.1%	82	1.1%	0%
Biked	55	0.7%	64	0.8%	0.1%
Other Means	93	1.2%	22	0.3%	-0.9%
Worked at home	323	4.1%	1,143	15%	10.9%
Resident workers age 16 and over	7,952	100.0%	7,627	100.0%	0.0%

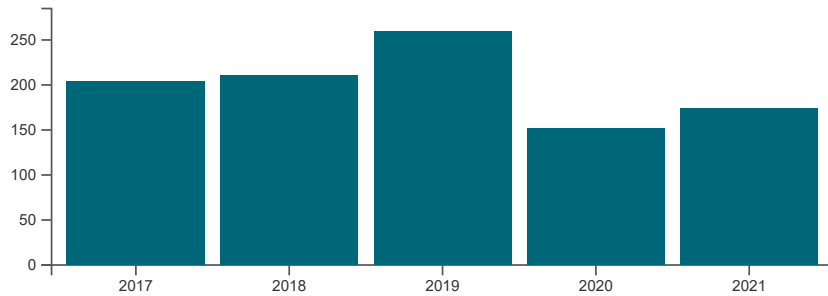
Source: U.S. Census Bureau, 2006-2010 and 2016-2020 American Community Survey 5-Year Estimates

Mean Travel Time to Work

Mean Travel Time To Work	ACS 2010	ACS 2020	Change 2010-2020
For residents age 16 and over who worked outside the home	23.9 minutes	21.6 minutes	-2.3 minutes

Source: U.S. Census Bureau, 2006-2010 and 2016-2020 American Community Survey 5-Year Estimates

Crashes, 2017-2021



Source: Michigan Department of State Police with the Criminal Justice Information Center and SEMCOG

Note: Crash data shown is for the entire city.

Crash Severity

Crash Severity	2017	2018	2019	2020	2021	Percent of Crashes 2017 - 2021
<u>Fatal</u>	0	1	0	0	0	0.1%
<u>Serious Injury</u>	3	1	3	1	2	1%
<u>Other Injury</u>	27	35	40	20	23	14.5%
<u>Property Damage Only</u>	174	174	216	131	149	84.4%
<u>Total Crashes</u>	204	211	259	152	174	100%

Crashes by Type

Crashes by Type	2017	2018	2019	2020	2021	Percent of Crashes 2017 - 2021
<u>Head-on</u>	3	1	1	2	1	0.8%
<u>Angle or Head-on/Left-turn</u>	46	54	69	32	51	25.2%
<u>Rear-End</u>	44	55	54	38	42	23.3%
<u>Sideswipe</u>	33	40	57	30	32	19.2%
<u>Single Vehicle</u>	15	15	18	13	12	7.3%
<u>Backing</u>	26	27	30	16	15	11.4%
<u>Other or Unknown</u>	37	19	30	21	21	12.8%

Crashes by Involvement

Crashes by Involvement	2017	2018	2019	2020	2021	Percent of Crashes 2017 - 2021
<u>Red-light Running</u>	3	2	2	1	3	1.1%
<u>Lane Departure</u>	38	31	33	31	37	17%
<u>Alcohol</u>	3	7	7	1	6	2.4%
<u>Drugs</u>	4	0	1	1	4	1%
<u>Deer</u>	0	0	1	0	0	0.1%
<u>Train</u>	0	0	0	0	0	0%
<u>Commercial Truck/Bus</u>	4	11	13	3	13	4.4%
<u>School Bus</u>	0	0	0	0	1	0.1%
<u>Emergency Vehicle</u>	3	0	1	2	1	0.7%
<u>Motorcycle</u>	0	0	0	1	0	0.1%
<u>Intersection</u>	54	56	96	40	48	29.4%
<u>Work Zone</u>	1	2	1	1	0	0.5%
<u>Pedestrian</u>	2	2	3	1	2	1%
<u>Bicyclist</u>	9	5	4	1	2	2.1%
<u>Distracted Driver</u>	19	14	18	8	13	7.2%
<u>Older Driver (65 and older)</u>	70	50	77	47	46	29%
<u>Young Driver (16 to 24)</u>	55	57	67	32	47	25.8%
<u>Secondary</u>	1	1	0	1	0	0.3%

High Frequency Intersection Crash Rankings

Local Rank	County Rank	Region Rank	Intersection	Jurisdiction	Annual Avg 2017-2021
1	1347	3,203	Mack Ave @ Vernier Rd	County/City	5.6
2	1479	3,516	Mack Ave @ Vernier Rd	County/City	5.2
3	1832	4,283	Mack Ave @ Lancaster Ave	County	4.4
4	1934	4,518	Mack Ave @ Vernier Rd	County/City	4.2
5	2189	5,059	Harper Ave N @ Allard Ave	City	3.8
6	2189	5,059	Mack Ave @ Littlestone Rd	County	3.8
7	2332	5,352	Mack Ave @ Lancaster Ave	County	3.6
8	2706	6,113	Vernier Rd @ Marter Rd	City	3.2
9	2706	6,113	Mack Ave @ Lochmoor Blvd	County	3.2
10	2883	6,551	Vernier Rd @ Morningside Dr	City	3

Note: Intersections are ranked by the number of reported crashes, which does not take into account traffic volume. Crashes reported occurred within 150 feet of the intersection.

Source: **Michigan Department of State Police with the Criminal Justice Information Center** and **SEMCOG**

High Frequency Road Segment Crash Rankings

Local Rank	County Rank	Region Rank	Segment	From Road - To Road	Jurisdiction	Annual Avg 2017-2021
1	220	786	Mack Ave	Cook Rd - Vernier Rd	County	23
2	268	959	Mack Ave	Cook Rd - Vernier Rd	County	21
3	633	1,911	Mack Ave	Moross Rd - Cook Rd	County	14.6
4	956	2,767	Harper Ave N	E I 94/Allard Ramp - E I 94/M 102 Ramp	City	11.2
5	1072	3,025	Vernier Rd	Harper Ave N - Mack Ave	City	10.4
6	1355	3,796	Mack Ave	Moross Rd - Cook Rd	County	8.6
7	1355	3,796	Vernier Rd	Marter Rd - Morningside Dr	City	8.6
8	1676	4,585	Mack Ave	Vernier Rd - Mack Ave	County	7.2
9	1728	4,709	Marter Rd	Marter Rd - Jefferson Ave	City	7
10	1889	5,135	Mack Ave	Vernier Rd - Mack Ave	County	6.4

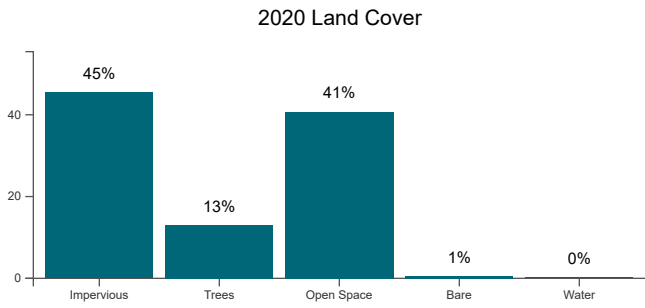
Note: Segments are ranked by the number of reported crashes, which does not take into account traffic volume.

Environment

2020 Land Use

Parcel Land Use	Acres 2015	Acres 2020	Change 2015-2020	Pct Change 2015-2020
Single-Family Residential	1,199.7	1,200.7	1	0.1%
Attached Condo Housing	15.9	9.2	-6.7	-41.9%
Multi-Family Housing	2.1	2.1	0	0%
Mobile Home	0	0	0	0%
Agricultural/Rural Residential	0	0	0	0%
Mixed Use	0	0	0	0%
Retail	12.8	13.9	1.2	9.2%
Office	19.4	17.6	-1.8	-9.3%
Hospitality	3.2	3.3	0.1	1.9%
Medical	15.2	15.9	0.7	4.5%
Institutional	146.7	137	-9.7	-6.6%
Industrial	0.4	0.4	0	0%
Recreational/Open Space	69.2	69.2	0	0%
Cemetery	0	0	0	0%
Golf Course	128.7	128.7	0	0%
Parking	12	12	0	0%
Extractive	0	0	0	0%
TCU	0	0	0	0%
Vacant	19.1	34.4	15.3	80%
Water	0.9	0.9	0	0%
Not Parceled	445.1	445	-0.1	0%
Total	2,090.3	2,090.3	0	0%

1. **Agricultural / Rural Res** includes any residential parcel containing 1 or more homes where the parcel is 3 acres or larger.
2. **Mixed Use** includes those parcels containing buildings with Hospitality, Retail, or Office square footage and housing units.
3. **Not Parceled** includes all areas within a community that are not covered by a parcel legal description.
4. Parcels that do not have a structure assigned to the parcel are considered vacant unless otherwise indicated, even if the parcel is part of a larger development such as a factory, school, or other developed series of lots.



Type	Description	Acres	Percent
Impervious	buildings, roads, driveways, parking lots	942.4	45.4%
Trees	woody vegetation, trees	270.6	13%
Open Space	agricultural fields, grasslands, turfgrass	845.1	40.7%
Bare	soil, aggregate piles, unplanted fields	12.4	0.6%
Water	rivers, lakes, drains, ponds	3.9	0.2%
Total Acres		2,074.3	

SEMCOG 2022 Tree Canopy

Type	Acres	Percent
Tree Canopy	698	33.7%

Tree canopy is the layer of tree leaves, needles, branches, and stems that provide tree coverage of the ground, viewed from an aerial perspective.

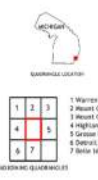
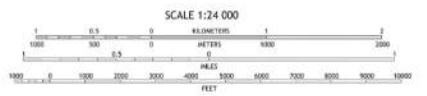
Appendix C

USGS Topographic Map



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1:50,000 scale and Universal Transverse Mercator Zone 17T
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands and other
restrictions may not be shown. Obtain permission before
entering private lands.

Legend:
 Imagery: NIP, August 2016 - October 2016
 Roads: U.S. Census Bureau, 2016
 Names: CNP, 1980-2016
 Hydrography: National Hydrography Dataset, 2006-2010
 Contours: National Elevation Dataset, 2010-2016
 Boundaries: Master source, see metadata for 2010-2016
 Public Land Survey System: BLM, 2016
 Wetlands: FWS National Wetlands Inventory, 2000



ROAD CLASSIFICATION

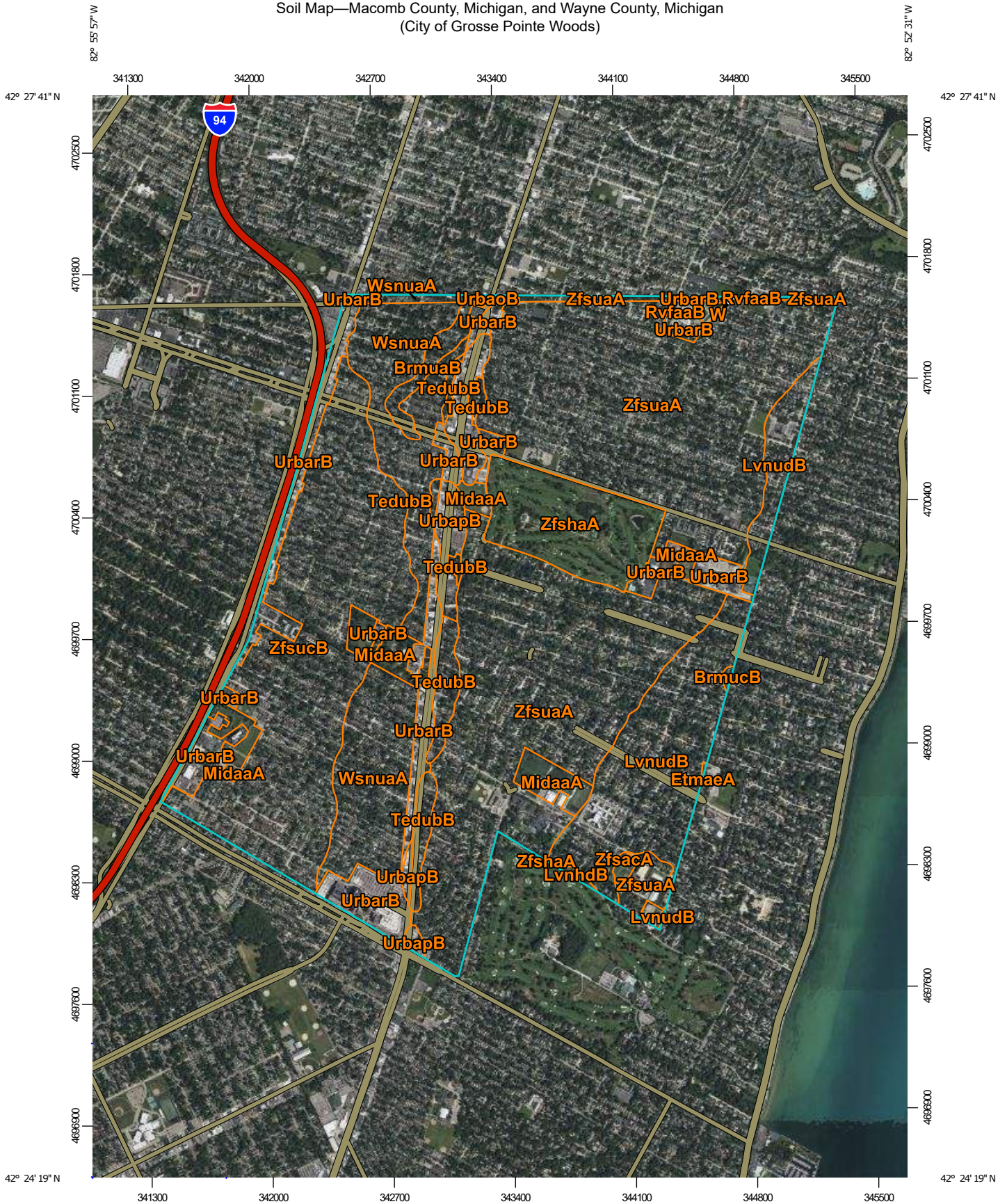
Expressway	Local Connector	State Route
Secondary Hwy	Local Road	
Range	ARC	
Interstate Route	US Route	

COPYRIGHT INTERVAL, 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
This map was produced in conformity with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 6.8.18

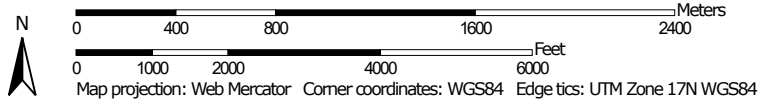
DRAFT

Appendix D
NRCS Soils Map

Soil Map—Macomb County, Michigan, and Wayne County, Michigan
(City of Grosse Pointe Woods)



Map Scale: 1:30,300 if printed on A portrait (8.5" x 11") sheet.



Soil Map—Macomb County, Michigan, and Wayne County, Michigan
(City of Grosse Pointe Woods)

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)




















Soils






 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:12,000 to 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Macomb County, Michigan

Survey Area Data: Version 19, Aug 29, 2022

Soil Survey Area: Wayne County, Michigan

Survey Area Data: Version 8, Aug 29, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 5, 2020—Aug 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend


Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BrmuaB	Brems-Urban land complex, 0 to 4 percent slopes	0.5	0.0%
RvfaaB	Riverfront sandy loam, 0 to 4 percent slopes	0.6	0.0%
UrbaoB	Urban land-Fortress family complex, 0 to 4 percent slopes	1.0	0.0%
UrbarB	Urban land-Riverfront complex, dense substratum, 0 to 4 percent slopes	3.6	0.1%
W	Water	0.2	0.0%
WsnuA	Wauseon-Urban land complex, 0 to 2 percent slopes	7.2	0.3%
ZfsuaA	Ziegenfuss-Urban land complex, 0 to 2 percent slopes	10.2	0.4%
Subtotals for Soil Survey Area		23.2	0.9%
Totals for Area of Interest		2,460.3	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BrmuaB	Brems-Urban land complex, 0 to 4 percent slopes	21.4	0.9%
BrmucB	Brems-Urban land complex, loamy substratum, 0 to 4 percent slopes	1.3	0.1%
EtnaeA	Anthropotic Udorthents, dense substratum, 0 to 2 percent slopes	0.4	0.0%
LvnhdB	Livonia-Freesoil sandy loams, dense substratum, 0 to 4 percent slopes	2.1	0.1%
LvnudB	Livonia-Urban land-Freesoil complex, dense substratum, 0 to 4 percent slopes	242.2	9.8%
MidaaA	Midtown gravelly-artifactual sandy loam, 0 to 2 percent slopes	75.4	3.1%
RvfaaB	Riverfront sandy loam, 0 to 4 percent slopes	2.8	0.1%
TedubB	Tedrow-Urban land complex, dense substratum, 0 to 4 percent slopes	51.4	2.1%
UrbaoB	Urban land-Fortress family complex, 0 to 4 percent slopes	2.1	0.1%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UrbapB	Urban land-Fortress family complex, dense substratum, 0 to 4 percent slopes	58.5	2.4%
UrbarB	Urban land-Riverfront complex, dense substratum, 0 to 4 percent slopes	185.1	7.5%
W	Water	0.8	0.0%
WsuaA	Wauseon-Urban land complex, 0 to 2 percent slopes	253.9	10.3%
ZfsacA	Ziegenfuss clay loam, 0 to 1 percent slopes	4.2	0.2%
ZfshaA	Ziegenfuss sandy loam, 0 to 2 percent slopes	121.7	4.9%
ZfsuaA	Ziegenfuss-Urban land complex, 0 to 2 percent slopes	995.1	40.4%
ZfsucB	Ziegenfuss-Urban land-Blount complex, 0 to 4 percent slopes	418.6	17.0%
Subtotals for Soil Survey Area		2,437.1	99.1%
Totals for Area of Interest		2,460.3	100.0%

Appendix E

Preliminary Construction Cost Estimates

 <p>ANDERSON, ECKSTEIN & WESTRICK, INC. CIVIL ENGINEERS - SURVEYORS - ARCHITECTS Shelby Township - Roseville - Lironia 586.726.1234 www.aewinc.com</p> <p align="center">PRELIMINARY ESTIMATE Torrey Road Pump Station Improvements AEW PROJECT NO. 0160-0462</p>	<p>PROJECT NAME: TRPS Improvements</p> <p>OWNER: City of Grosse Pointe Woods</p> <p>PREPARED BY: Ross Wilberding</p> <p>DATE: 3/29/2023</p>																																																																																																																																																																																																
	<table border="1"> <thead> <tr> <th>WORK ITEM</th> <th>QUANTITY</th> <th>UNIT</th> <th>UNIT PRICE</th> <th>AMOUNT</th> </tr> </thead> <tbody> <tr><td>1. Bonds, Insurance, Mobilization (5%)</td><td>1</td><td>LSUM</td><td>\$114,000.00</td><td>\$114,000.00</td></tr> <tr><td>2. Fence, chain-link, vinyl</td><td>112</td><td>Ft</td><td>\$19.50</td><td>\$2,184.00</td></tr> <tr><td>3. Gate, chain-link, sliding</td><td>1</td><td>Ea</td><td>\$3,575.00</td><td>\$3,575.00</td></tr> <tr><td>4. Gate, man</td><td>1</td><td>Ea</td><td>\$650.00</td><td>\$650.00</td></tr> <tr><td>5. Generator, pad</td><td>144</td><td>Sft</td><td>\$26.00</td><td>\$3,744.00</td></tr> <tr><td>6. Generator, enclosure</td><td>48</td><td>Ft</td><td>\$331.50</td><td>\$15,912.00</td></tr> <tr><td>7. Generator, gate</td><td>1</td><td>Ea</td><td>\$3,900.00</td><td>\$3,900.00</td></tr> <tr><td>8. Landscaping</td><td>1</td><td>Ea</td><td>\$3,900.00</td><td>\$3,900.00</td></tr> <tr><td>9. Sprinkler System</td><td>1</td><td>Ea</td><td>\$6,500.00</td><td>\$6,500.00</td></tr> <tr><td>10. Roof, EPDM</td><td>1,450</td><td>Sft</td><td>\$32.50</td><td>\$47,125.00</td></tr> <tr><td>11. Doors, Rear, Man</td><td>2</td><td>Ea</td><td>\$3,250.00</td><td>\$6,500.00</td></tr> <tr><td>12. Doors, Main Repair</td><td>1</td><td>Ea</td><td>\$1,560.00</td><td>\$1,560.00</td></tr> <tr><td>13. Windows, Front</td><td>2</td><td>Ea</td><td>\$1,560.00</td><td>\$3,120.00</td></tr> <tr><td>14. Roof Access ladder</td><td>1</td><td>Ea</td><td>\$4,550.00</td><td>\$4,550.00</td></tr> <tr><td>15. Power Washing, Brick</td><td>1</td><td>Ea</td><td>\$2,600.00</td><td>\$2,600.00</td></tr> <tr><td>16. Tuckpointing Brick</td><td>1</td><td>Ea</td><td>\$4,160.00</td><td>\$4,160.00</td></tr> <tr><td>17. Epoxy Floor, Ground Level Only</td><td>1,450</td><td>Sft</td><td>\$13.00</td><td>\$18,850.00</td></tr> <tr><td>18. 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Relocate Sanitary Pump Starter</td><td>2</td><td>Ea</td><td>\$26,000.00</td><td>\$52,000.00</td></tr> <tr><td align="right" colspan="4">Construction Total</td><td>\$2,386,868.00</td></tr> <tr><td colspan="3">Contingency (15%)</td><td></td><td>\$358,030.20</td></tr> <tr><td colspan="3">Engineering Fees (20%)</td><td></td><td>\$477,373.60</td></tr> <tr><td align="right" colspan="4">Grand Total</td><td>\$3,222,271.80</td></tr> </tbody> </table>	WORK ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	1. Bonds, Insurance, Mobilization (5%)	1	LSUM	\$114,000.00	\$114,000.00	2. Fence, chain-link, vinyl	112	Ft	\$19.50	\$2,184.00	3. Gate, chain-link, sliding	1	Ea	\$3,575.00	\$3,575.00	4. Gate, man	1	Ea	\$650.00	\$650.00	5. Generator, pad	144	Sft	\$26.00	\$3,744.00	6. Generator, enclosure	48	Ft	\$331.50	\$15,912.00	7. Generator, gate	1	Ea	\$3,900.00	\$3,900.00	8. Landscaping	1	Ea	\$3,900.00	\$3,900.00	9. Sprinkler System	1	Ea	\$6,500.00	\$6,500.00	10. Roof, EPDM	1,450	Sft	\$32.50	\$47,125.00	11. 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**ANDERSON, ECKSTEIN & WESTRICK, INC.**

51301 Schoenherr Road
 Shelby Township, MI 48315
 Phone: 586-726-1234
 Fax No: 586-726-8780

PRELIMINARY ESTIMATE**Sewer Rehab. By Open Cut Repairs and CIPP Lining**

AEW PROJECT NO. 0160-0462

Page 1 of 3

PROJECT: CWSRF - Sewer Rehabilitation by Full Length CIPP Lining

OWNER: Grosse Pointe Woods

PREPARED BY: Pat Marcus

DATE: 3/29/2022

CHECKED BY: Frank Varicalli

DATE: 3/29/2022

WORK ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
_Audio Visual Record of Construction Influence Area	1	LS	\$7,000.00	7,000.00
_Sewer, Pre-Construction, Clean and CCTV, 8 inch	1,425	FT	\$2.80	3,990.00
_Sewer, Pre-Construction, Clean and CCTV, 10 inch	1,125	FT	\$2.80	3,150.00
_Sewer, Pre-Construction, Clean and CCTV, 12 inch	5,950	FT	\$2.80	16,660.00
_Sewer, Pre-Construction, Clean and CCTV, 15 inch	5,775	FT	\$4.20	24,255.00
_Sewer, Pre-Construction, Clean and CCTV, 18 inch	5,025	FT	\$4.20	21,105.00
_Sewer, Pre-Construction, Clean and CCTV, 21 inch	1,550	FT	\$4.20	6,510.00
_Sewer, Pre-Construction, Clean and CCTV, 24 inch	975	FT	\$5.60	5,460.00
_Sewer, Pre-Construction, Clean and CCTV, 27 inch	325	FT	\$5.60	1,820.00
_Sewer, Pre-Construction, Clean and CCTV, 30 inch	1,575	FT	\$5.60	8,820.00
_Sewer, Pre-Construction, Clean and CCTV, 36 inch	500	FT	\$5.60	2,800.00
_Sewer, Pre-Construction, Clean and CCTV, 42 inch	2,675	FT	\$7.00	18,725.00
_Sewer, CIPP, 8 inch, Full Length	1,425	FT	\$63.00	89,775.00
_Sewer, CIPP, 10 inch, Full Length	1,125	FT	\$70.00	78,750.00
_Sewer, CIPP, 12 inch, Full Length	5,950	FT	\$77.00	458,150.00
_Sewer, CIPP, 15 inch, Full Length	5,775	FT	\$84.00	485,100.00
_Sewer, CIPP, 18 inch, Full Length	5,025	FT	\$105.00	527,625.00
_Sewer, CIPP, 21 inch, Full Length	1,550	FT	\$126.00	195,300.00
_Sewer, CIPP, 24 inch, Full Length	975	FT	\$140.00	136,500.00
_Sewer, CIPP, 27 inch, Full Length	325	FT	\$175.00	56,875.00
_Sewer, CIPP, 30 inch, Full Length	1,575	FT	\$210.00	330,750.00
_Sewer, CIPP, 36 inch, Full Length	500	FT	\$245.00	122,500.00
_Sewer, CIPP, 42 inch, Full Length	2,675	FT	\$280.00	749,000.00
_Sewer, Post-Construction, CCTV, 8 inch	1,425	FT	\$1.40	1,995.00
_Sewer, Post-Construction, CCTV, 10 inch	1,125	FT	\$1.40	1,575.00
_Sewer, Post-Construction, CCTV, 12 inch	5,950	FT	\$1.40	8,330.00
_Sewer, Post-Construction, CCTV, 15 inch	5,775	FT	\$2.10	12,127.50
_Sewer, Post-Construction, CCTV, 18 inch	5,025	FT	\$2.10	10,552.50
_Sewer, Post-Construction, CCTV, 21 inch	1,550	FT	\$2.10	3,255.00
_Sewer, Post-Construction, CCTV, 24 inch	975	FT	\$2.80	2,730.00
_Sewer, Post-Construction, CCTV, 27 inch	325	FT	\$2.80	910.00
_Sewer, Post-Construction, CCTV, 30 inch	1,575	FT	\$2.80	4,410.00
_Sewer, Post-Construction, CCTV, 36 inch	500	FT	\$2.80	1,400.00
_Sewer, Post-Construction, CCTV, 42 inch	2,675	FT	\$4.20	11,235.00
_Lateral, Preparation	50	EA	\$280.00	14,000.00
_Lateral, Reinstate	549	EA	\$175.00	96,075.00
_Cutting Service Lead Protrusions	19	EA	\$175.00	3,325.00
_Mineral Deposit, Rem	100	EA	\$175.00	17,500.00
_Traffic Maintenance and Control	1	LS	\$35,000.00	35,000.00
_Deliverables	1	LS	\$3,500.00	3,500.00
			SUBTOTAL CONSTRUCTION COST (FCIPP)	\$3,578,540.00



ANDERSON, ECKSTEIN & WESTRICK, INC.
 51301 Schoenherr Road
 Shelby Township, MI 48315
 Phone: 586-726-1234
 Fax No: 586-726-8780

PRELIMINARY ESTIMATE

Sewer Rehab. By Open Cut Repairs and CIPP Lining
 AEW PROJECT NO. 0160-0462

PROJECT: CWSRF - Sewer Rehabilitation by Sectional CIPP Lining

OWNER: Grosse Pointe Woods

PREPARED BY: Pat Marcus

DATE: 3/29/2022

CHECKED BY: Frank Varicalli

DATE: 3/29/2022

WORK ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Audio Visual Record of Construction Influence Area	1	LS	\$2,100.00	2,100.00
Sewer, Pre-Construction, Clean and CCTV, 12 inch	900	Ft	\$2.80	2,520.00
Sewer, Pre-Construction, Clean and CCTV, 15 inch	600	Ft	\$2.80	1,680.00
Sewer, Pre-Construction, Clean and CCTV, 18 inch	1,700	Ft	\$4.20	7,140.00
Sewer, Pre-Construction, Clean and CCTV, 21 inch	350	Ft	\$4.20	1,470.00
Sewer, Pre-Construction, Clean and CCTV, 24 inch	250	Ft	\$5.60	1,400.00
Sewer, CIPP, 12 inch, Sectional 3 feet	1	Ea	\$4,200.00	4,200.00
Sewer, CIPP, 12 inch, Sectional 10 feet	1	Ea	\$4,480.00	4,480.00
Sewer, CIPP, 12 inch, Sectional 15 feet	1	Ea	\$4,620.00	4,620.00
Sewer, CIPP, 15 inch, Sectional 6 feet	1	Ea	\$5,040.00	5,040.00
Sewer, CIPP, 18 inch, Sectional 6 feet	1	Ea	\$5,740.00	5,740.00
Sewer, CIPP, 18 inch, Sectional 10 feet	1	Ea	\$5,880.00	5,880.00
Sewer, CIPP, 18 inch, Sectional 20 feet	3	Ea	\$6,160.00	18,480.00
Sewer, CIPP, 21 inch, Sectional 10 feet	1	Ea	\$6,580.00	6,580.00
Sewer, CIPP, 24 inch, Sectional 3 feet	1	Ea	\$7,000.00	7,000.00
Sewer, Post-Construction, CCTV, 12 inch	150	Ft	\$1.40	210.00
Sewer, Post-Construction, CCTV, 15 inch	50	Ft	\$1.40	70.00
Sewer, Post-Construction, CCTV, 18 inch	300	Ft	\$1.40	420.00
Sewer, Post-Construction, CCTV, 21 inch	50	Ft	\$1.40	70.00
Sewer, Post-Construction, CCTV, 24 inch	50	Ft	\$1.40	70.00
Lateral, Preparation	1	Ea	\$420.00	420.00
Lateral, Reinstate	4	Ea	\$350.00	1,400.00
Cut Protruding Taps	1	Ea	\$210.00	210.00
Mineral Deposit, Rem	10	Ea	\$210.00	2,100.00
Traffic Control and Maintenance	1	LS	\$7,000.00	7,000.00
Deliverables	1	LS	\$1,400.00	1,400.00
			SUBTOTAL CONSTRUCTION COST (SCIPP)	\$91,700.00

**ANDERSON, ECKSTEIN & WESTRICK, INC.**

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PRELIMINARY ESTIMATE**Sewer Rehab. By Open Cut Repairs and CIPP Lining**

AEW PROJECT NO. 0160-0462

Page 3 of 3

PROJECT: CWSRF - Sewer Rehabilitation by Open Cut Repairs

OWNER: Grosse Pointe Woods

PREPARED BY: Pat Marcus

DATE: 3/29/2022

CHECKED BY: Frank Varicalli

DATE: 3/29/2022

WORK ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
_Audio Visual Record of all Construction Influence Areas	1	LS	14,000.00	14,000.00
Sidewalk, Rem	265	Syd	16.80	4,452.00
_Driveway, Conc, Rem	80	Syd	30.80	2,464.00
Curb and Gutter, Rem	60	Ft	25.20	1,512.00
_Erosion Control, Inlet Protection, Drop-In Filter	18	Ea	210.00	3,780.00
_Maintenance Aggregate, 21AA	150	Cyd	70.00	10,500.00
_Sanitary Sewer, Post-Construction, CCTV, 06 inch - 12 inch	360	Ft	42.00	15,120.00
_Sanitary Sewer, Post-Construction, CCTV, 15 inch - 21 inch	460	Ft	42.00	19,320.00
_Sanitary Sewer, Pre-Construction, Clean and CCTV, 06 in - 12 in	2,500	Ft	47.60	119,000.00
_Sanitary Sewer, Pre-Construction, Clean and CCTV, 15 in - 21 in	1,525	Ft	47.60	72,590.00
_External Structure Wrap, 18 inch	1	Ea	770.00	770.00
Dr Structure Cover, Adj, Case 1, Modified	1	Ea	490.00	490.00
Dr Structure, Adj, Add Depth	2	Ft	420.00	840.00
_Dr Structure Frame and Cover, Sanitary Manhole	1	Ea	980.00	980.00
Cement	1	Ton	700.00	700.00
Pavt Repr, Nonreinf Conc, 8 inch	150	Syd	140.00	21,000.00
Pavt Repr, Rem	150	Syd	35.00	5,250.00
Curb and Gutter, Match Existing	60	Ft	91.00	5,460.00
Driveway, Nonreinf Conc, 6 inch	80	Syd	98.00	7,840.00
Sidewalk, Conc, 4 inch	2,100	Sft	18.20	38,220.00
Sidewalk, Conc, 6 inch	200	Sft	19.60	3,920.00
_ADA-Detectable Warning Surface	10	Ft	105.00	1,050.00
_Sidewalk Ramp, Conc, 8 inch	100	Sft	28.00	2,800.00
_Surface Restoration, Sodding	155	Syd	28.00	4,340.00
_Sanitary Lateral Repr, 6 dia	190	Ft	175.00	33,250.00
_Sanitary Sewer Repr, Remove and Replace 06-12 dia, 0'-12' Depth	75	Ft	1,050.00	78,750.00
_Sanitary Sewer Repr, Remove and Replace 15-21 dia, 0'-12' Depth	60	Ft	1,400.00	84,000.00
_Sanitary Sewer Repr, Remove and Replace 15-21 dia, 12'-24' Depth	20	Ft	1,680.00	33,600.00
_Sanitary Lateral, Open Cut Repair Investigation	2	Ea	560.00	1,120.00
_Sanitary Lateral, Reconnect	19	Ea	4,200.00	79,800.00
_Sanitary Sewer Repr, Install Straight Tee, 06-12 x 6 dia SDR 26	8	Ea	2,520.00	20,160.00
_Sanitary Sewer Repr, Install Straight Tee, 15-21 x 6 dia SDR 26	11	Ea	5,320.00	58,520.00
_Traffic Maintenance and Control	1	LS	35,000.00	35,000.00
Project Cleanup	1	LS	21,000.00	21,000.00
_Deliverables	1	LS	3,500.00	3,500.00
			SUBTOTAL CONSTRUCTION COST (OCR)	\$805,098.00
			SUBTOTAL CONSTRUCTION COST (FCIPP)	\$3,578,540.00
			SUBTOTAL CONSTRUCTION COST (SCIPP)	\$91,700.00
			TOTAL REHAB. CONSTRUCTION COSTS	\$4,475,338.00
Contingency (15%)				120,764.70
Engineering Fees (20%)				161,019.60
			GRAND TOTAL REHAB. CONSTRUCTION COSTS	4,757,122.30

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Appendix F

Present Worth Analysis of Selected Alternatives

PRESENT WORTH ANALYSIS				
No.	Item	Sewer Rehab. Project	TRPS	CWSRF Project
		Open Cut & CIPP Lining	Improvements	Total
1	Capital Cost	\$ 4,757,122.30	\$ 3,222,271.80	\$ 7,979,394.10
2	Salvage Value at 20 years	\$ 2,854,273.38	\$ 1,933,363.08	\$ 4,787,636.46
3	Present Worth of Salvage	\$ 737,544.24	\$ 499,581.02	\$ 1,237,125.26
4	Interest During Construction	\$ 166,499.28	\$ 112,779.51	\$ 279,278.79
5	Annual O&M Costs	\$ -	\$ -	\$ -
6	Present Worth of O&M	\$ -	\$ -	\$ -
7	Total Present Worth	\$ 4,186,077.34	\$ 2,835,470.29	\$ 7,021,547.63
8	Equivalent Annual Cost	\$ 395,123.84	\$ 267,640.04	\$ 662,763.88

Notes:

(1) From The Preliminary Cost Estimate.

(2) Salvage Value at the end of the 20 year planning period is computed on the basis of straight line depreciation.

(3) Present Worth of Salvage Value = 0.4146 x SalvageValue at the end of 20 years
(P/F, Discount Rate=7.0%, 20 years) = 0.2584

(4) Interest During Construction = 0.5 x P x I x C
P = Construction Period in Years = 1 year
I = Discount Rate = 7.0%
C = Total Capital Cost

(5) Total Present Worth = Total Capital Cost + Present Worth of O&M + Interest During Construction - Present Worth of Salvage

(6) Equivalent Annual Cost = 0.09439 x Total Present Worth
(A/P, Discount Rate = 7.0%, 20 years) = 0.09439

Appendix G

CCTV Investigation Summary

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
CRITICAL	5.0	2.0	SW746	1A	Canterbury	M1-1-4-3	M1-1-4-2	292.0	21	RCP	Hole with Void(96'), Surface Damage - Aggregate Visible	FCIPP	292	0	6	\$ 30,740.00
CRITICAL	5.0	1.0	SW2333	1B	Vernier	M7-1-8	M7-1-7A	21.0	15	VCP	Broken Void Visible @ 17'	FCIPP	21	0	0	\$ 1,365.00
CRITICAL	5.0	2.0	SW2334	1B	Vernier	M7-17A	M7-1-7B	499.0	21	VCP	M7-1-7B is buried. Mult Misc/Hinge Fracturing throughout	FCIPP	499	0	1	\$ 47,905.00
CRITICAL	5.0	1.7	SW818	2B	Roslyn	M6-8-3	M5-5-6-1	359.0	10	RCP	Moderate to Heavy H2S damage throughout; Hinge Fracturing/Broken @ 100'-120'; Hole Soil Visible @ 52', 110'; Reversal needed due to roots @ 228'. FROM M5-5-6-1: Hinge Fracturing @ 100'-123'; Survey Abandoned @ 123' due to roots	FCIPP	359	0	4	\$ 18,155.00
CRITICAL	5.0	1.4	SW817	2B	Roslyn	M5-5-6-1	M5-5-6	40.0	15	RCP	Heavy H2S damage throughout; Hole Void Visible @ 13'	FCIPP	40	0	0	\$ 2,600.00
CRITICAL	5.0	1.6	SW816	2B	Roslyn	M5-5-4-2	M5-5-6-1	362.0	10	RCP	Moderate H2S damage throughout; Hinge Fracturing @ 0'-20'; Hinge/Mult Fracture @ 280'-285', 285'-320'	FCIPP	362	1	6	\$ 19,790.00
CRITICAL	5.0	1.5	SW711	2B	Hampton	M4-5-1	M4-5	37.0	10	RCP	Heavy H2S damage throughout; Broken @ 15'; Hinge Fracturing @ 15'-EOL	FCIPP	37	0	0	\$ 1,665.00
CRITICAL	5.0	2.8	SW847	3A	Aline	G15	G14	323.0	15	RCP	Heavy H2S damage throughout; Hinge Fracture @ 74'-107', 227'-245'	FCIPP	323	0	6	\$ 23,995.00
CRITICAL	5.0	1.4	SW894	3A	Aline	C7-2	C7-1	247.0	8	RCP	H2S damage throughout; Mult Fracture @ 1', 241'; Long. Fracture @ 2'-37'; Hinge Fracture @ 174'-183'; Major offset in lateral @ 174'	FCIPP	247	1	7	\$ 15,115.00
CRITICAL	5.0	1.7	SW915	3A	Aline	M5-11-1	M5-11	43.0	8	RCP	H2S damage throughout; Hole Soil Visible @ 41'	Dig Mainline @ 38'-EOL; FCIPP	43	0	0	\$ 1,935.00
CRITICAL	5.0	2.8	SW917	3A	Aline	M5-11-1	M5-10-1	260.0	8	RCP	Heavy H2S damage throughout; Hinge Fracture @ 3'; Survey Abandoned due to roots from fracture. Reversal: Heavy H2S damage throughout; Survey abandoned @ 100' due to roots. Line not completed, approx 70' short	FCIPP	330	0	0	\$ 14,850.00
CRITICAL	5.0	2.2	SW906	3A	Aline	C7	M5-11	348.0	12	RCP	Heavy H2S damage throughout; Hinge Fracturing @ 117'-130', 145'-176'; Hole in bottom of lateral @ 71'	FCIPP	348	0	5	\$ 23,380.00
CRITICAL	5.0	2.0	SW902	3A	Brys	C5-2	C5-1	463.0	12	VCP	Hinge/Mult Fractures throughout; Hole Soil Visible @ 291'; Brick in lateral @ 378', appears to be an attempt at capping the service	3' SCIPP @ 289'-292' (CRIT); FCIPP (MED)	463	4	25	\$ 42,280.00
CRITICAL	5.0	2.0	SW439	8B	S Renaud	M13-2-10	M13-2-9	367.0	15	RCP	Surface Damage Aggregate Visible T/O, Hinge Fracture(155'-170'), Long. Crack(201'-217', 338', 341'-367')	FCIPP	367	0	3	\$ 25,355.00
CRITICAL	5.0	2.0	SW1056	7A	Huntington	GP9-4	GP9-3	306.7	15	RCP	Light H2S damage throughout; Light Long. Cracking throughout; SCIPP @ 1'-26'; Lateral @ 152' Fractured at main; Lateral @ 195' Broken Void Visible	FCIPP (LOW); Dig laterals @ 152', 195' (CRITICAL)	307	0	7	\$ 23,455.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
CRITICAL	5.0	3.0	SW387	6C	Fairholme	M20-9-4	M20-9-3	263.4	18	RCP	Hinge Fracture 4 @ 10'-25'; Hinge Cracking @ 80'-90'; Long. Cracking through 100'; Hinge Fracture 4 w/Minor Deformation @ 170'-200'	Dig Mainline @ 165'-200' w/2 laterals (CRIT); FCIPP (MED)	263	0	9	\$ 24,225.00
CRITICAL	5.0	2.0	SW365	6C	Fairholme	M19-1-5	M19-1-4	272.8	12	RCP	Heavy to Severe H2S damage throughout	FCIPP	273	1	6	\$ 19,880.00
CRITICAL	5.0	2.0	SW359	6C	Paget Ct	M19-1-4	M19-1-3	167.5	15	RCP	Heavy H2S damage throughout; Hinge Fracture @ 5'; Lateral @ 107' offset, it appears that the hub is collapsing	Dig Lateral @ 107' (CRITICAL); FCIPP (HIGH)	168	0	1	\$ 11,420.00
CRITICAL	5.0	2.5	SW348	6C	Fairford	M19-6-1	M19-6	85.6	12	RCP	Mult Misc Fractures throughout; Heavy to Severe H2S damage throughout; Point Repair @ 78'-EOL (PVC)	FCIPP	86	0	0	\$ 5,160.00
CRITICAL	5.0	2.0	SW402	6C	N of Fairholme	M18-4	M18-3	361.8	12	RCP	Heavy to Severe H2S damage throughout; US MH is buried	Expose US MH, FCIPP	362	0	0	\$ 21,720.00
CRITICAL	5.0	2.0	SW401	6C	N of Fairholme	M18-3	M18-2	327.3	12	RCP	Heavy to Severe H2S damage throughout	FCIPP	327	0	0	\$ 19,620.00
CRITICAL	5.0	2.0	SW266	6C	N of Fairholme	M18-2	M18	325.3	12	RCP	Heavy H2S damage throughout	FCIPP	325	0	0	\$ 19,500.00
HIGH	4.0	2.0	SW786	1A	S Rosedale	M1-17B	M1-17A	276.0	10	VCP	Mult Fractures(1', 24', 46'-51', 70', 88', 94', 118'-276'), Broken(151')	FCIPP	276	0	5	\$ 14,920.00
HIGH	4.0	2.0	SW779	1A	S Rosedale	M1-14-4	M1-14-3	212.0	12	RCP	Surface Damage - Aggregate Missing	FCIPP	212	0	5	\$ 15,220.00
HIGH	4.0	1.9	SW778	1A	S Rosedale	M1-14-3	M1-14-2	203.0	12	RCP	Surface Damage - Aggregate Missing	FCIPP	203	0	4	\$ 14,180.00
HIGH	4.0	2.0	SW777	1A	S Rosedale	M1-14-2	M1-14-1	272.0	15	RCP	Surface Damage - Aggregate Missing	FCIPP	272	0	6	\$ 20,680.00
HIGH	4.0	2.0	SW774	1A	Perrien	M1-11-1	M1-11	274.0	12	RCP	Surface Damage - Aggregate Missing	FCIPP	274	0	7	\$ 19,940.00
HIGH	4.0	2.1	SW781	1A	Briarcliff	M1-8-2	M1-8-1	208.7	12	RCP	Surface Damage - Aggregate Missing, Survey abandoned(209')--Large Rock in line	FCIPP	227	1	6	\$ 17,120.00
HIGH	4.0	1.9	SW780	1A	Briarcliff	M1-8-1	M1-8	144.1	12	RCP	Surface Damage - Aggregate Missing	FCIPP	144.1	0	3	\$ 10,146.00
HIGH	4.0	2.1	SW772	1A	Van K	M1-10-2	M1-10-1	249.0	15	RCP	Surface Damage - Aggregate Missing	FCIPP	249	1	6	\$ 19,685.00

CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
HIGH	4.0	2.1	SW768	1A	Briarcliff	M1-10-1	M1-10	246.0	15	RCP	Surface Damage - Aggregate Missing	FCIPP	246	1	6	\$ 19,490.00
HIGH	4.0	1.9	SW1026	1A	Morningside	M1-18	M1-17	269.3	15	RCP	Surface Damage - Aggregate Missing	FCIPP	269.3	0	1	\$ 18,004.50
HIGH	4.0	2.0	SW785	1A	Morningside	M1-17	M1-16	56.1	15	RCP	Surface Damage - Aggregate Missing	FCIPP	56.1	0	0	\$ 3,646.50
HIGH	4.0	2.1	SW948	1A	Morningside	M1-16	M1-15	197.0	15	RCP	Surface Damage - Aggregate Missing	FCIPP	197	0	2	\$ 13,805.00
HIGH	4.0	2.0	SW1506	1A	Morningside	M1-15	M1-14	25.0	30	RCP	Surface Damage - Aggregate Missing	FCIPP	25	0	0	\$ 3,000.00
HIGH	4.0	2.1	SW1289	1A	Morningside	M1-14	M1-13	84.5	30	RCP	Surface Damage - Aggregate Missing	FCIPP	84.5	0	0	\$ 10,140.00
HIGH	4.0	1.0	SW1288	1A	Morningside	M1-13	M1-12	8.0	30	RCP	Surface Damage - Aggregate Missing	FCIPP	8	0	0	\$ 960.00
HIGH	4.0	2.1	SW1287	1A	Morningside	M1-12	M1-11	155.0	30	RCP	Surface Damage - Aggregate Missing, Rebar visible(72')	FCIPP	155	1	3	\$ 20,600.00
HIGH	4.0	2.0	SW1286	1A	Morningside	M1-11	M1-10	253.0	30	RCP	Surface Damage - Aggregate Missing	FCIPP	253	1	2	\$ 31,860.00
HIGH	4.0	2.0	SW740	1A	Van K	M1-3-12	M1-1-4-5	52.0	18	RCP	Surface Damage - Aggregate Missing	FCIPP	52	0	0	\$ 3,900.00
HIGH	4.0	2.1	SW750	1A	Canterbury	M1-1-4-5	M1-1-4-4	320.0	18	RCP	Surface Damage - Aggregate Missing	FCIPP	320	0	8	\$ 28,000.00
HIGH	4.0	2.1	SW749	1A	Canterbury	M1-1-4-4A	M1-1-4-4	217.2	12	RCP	Surface Damage - Aggregate Missing	FCIPP	217.2	0	5	\$ 15,532.00
HIGH	4.0	2.1	SW751	1A	Van K	M1-3-12	M1-3-11	258.0	12	RCP	Surface Damage - Aggregate Missing	FCIPP	258	0	6	\$ 18,480.00
HIGH	3.9	2.1	SW10916	1A	Wedgewood	M1-1-4B	M1-1-4A	115.0	12	RCP	Hole(4'), Circ. Crack(48'), Surface Damage - Aggregate Missing	FCIPP	115	0	3	\$ 8,400.00
HIGH	4.0	1.6	SW706	1B	Hampton	M6-11-3-1	M6-11-3	35.0	12	RCP	Surface Damage - Aggregate Visible, Lt Roots at joints T/O	FCIPP	35	0	0	\$ 2,100.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
HIGH	4.0	1.9	SW704	1B	Hampton	M6-11-3	M6-11-2	395.0	15	RCP	Surface Damage - Aggregate Missing	FCIPP	395	0	5	\$ 28,175.00
HIGH	4.0	2.5	SW694	1B	Hollywood	M6-7-3	M6-7-2	38.0	21	RCP	Surface Damage - Aggregate Missing	FCIPP	38	0	0	\$ 3,610.00
HIGH	4.0	5.0	SW44	1B	Wedgewood	M7-16-2	M7-16-3	152.0	12	RCP	Moderate H2S damage throughout; Survey Abandoned due to Roots @ 27', approx 125'; Do not see reversal	Remove roots and FCIPP	152	0	0	\$ 9,120.00
HIGH	4.0	2.0	SW46	1B	Wedgewood	M7-13-2	M7-13-3	60.0	21	RCP	Hinge Fracture @ 20'-60'	FCIPP	60	0	1	\$ 6,200.00
HIGH	4.0	1.4	SW47	1B	Wedgewood	M7-13-1	M7-13-2	110.0	21	RCP	Surface Damage - Aggregate Visible, Hinge Fracture(0'-62'), Long. Fracture(62'-87')	FCIPP	110	0	2	\$ 11,450.00
HIGH	4.0	2.0	SW1655	1B	Wedgewood	M7-13-1A	M7-13-1	75.0	10	RCP	Mult Fracture @ 71'	3' SCIPP @ 70'-73'	75	0	0	\$ 3,375.00
HIGH	4.0	2.1	SW1296	2A	Woods Lane	M1-3-2	M1-3-1	400.0	30	RCP	Surface Damage - Aggregate Visible, Mult Fracture(24'), Long. Fracture(27', 36', 41'-65', 122', 203', 236', 292'), Rebar Visible(35', 100', 108', 173', 230', 303'), Lift Holes T/O	FCIPP	400	0	10	\$ 53,000.00
HIGH	4.0	2.1	SW1295	2A	Woods Lane	M1-3-1	M1-3	326.0	30	RCP	Surface Damage - Aggregate Visible, Rebar Visible(43', 51', 108', 116', 205', 254'), Long. Fracture(177'-214', 251', 299')	FCIPP	326	0	7	\$ 42,620.00
HIGH	4.0	2.1	SW886	2A	Blairmoor Ct	M2-1-4	M2-1-3	220.0	15	RCP	Surface Damage - Aggregate Missing, Rebar Visible(90')	FCIPP	220	0	5	\$ 16,800.00
HIGH	4.0	2.1	SW884	2A	Blairmoor Ct	M2-1-3	M2-1-2	216.0	15	RCP	Surface Damage - Aggregate Missing, Long. Fracture(119'), Survey abandoned(168')--Mineral Deposit, Reverse-Surface Damage - Aggregate Missing	FCIPP	216	0	7	\$ 17,540.00
HIGH	4.0	2.0	SW885	2A	Blairmoor Ct	M2-1-2	M2-1-1	50.0	15	RCP	Surface Damage - Aggregate Missing	FCIPP	50	0	1	\$ 3,750.00
HIGH	4.0	2.1	SW883	2A	Blairmoor Ct	M2-1-1	M2-1	190.0	15	RCP	Surface Damage - Aggregate Missing	FCIPP	190	0	2	\$ 13,350.00
HIGH	4.0	2.1	SW1292	2A	River	M1-5	M1-4	243.0	42	RCP	Surface Damage - Aggregate Visible, Rebar Visible at various locations T/O	FCIPP	243	0	3	\$ 37,950.00
HIGH	4.1	2.1	SW1293	2A	River	M1-4	M1-3	293.0	42	RCP	Surface Damage - Aggregate Visible, Rebar Visible at various locations T/O	FCIPP	293	0	5	\$ 46,450.00
HIGH	4.2	2.0	SW10936	2A	River	M1-3	M1-2	258.0	42	RCP	Surface Damage - Aggregate Visible, Rebar Visible at various locations T/O	FCIPP	258	0	4	\$ 40,700.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
HIGH	4.2	2.1	SW10937	2A	River	M1-2	M1-1	240.0	42	RCP	Surface Damage - Aggregate Visible, Rebar Visible at various locations T/O	FCIPP	240	0	3	\$ 37,500.00
HIGH	4.0	1.9	SW828	2B	Brys Dr N	M3-6	M3-5	334.0	18	RCP	Moderate H2S damage throughout; Hinge/Mult Fracture @ 134'-207'	FCIPP	334	0	6	\$ 28,050.00
HIGH	4.0	1.5	SW834	2B	Brys	M3-2-5	M3-2-4	224.0	15	RCP	Moderate H2S damage throughout; Broken Soil Visible @ 218'	FCIPP	224	0	6	\$ 17,560.00
HIGH	4.3	2.0	SW820	2B	Brys Dr S	M5-6A	M5-6	308.0	27	RCP	Moderate to Heavy H2S damage throughout;	FCIPP	308	0	14	\$ 43,960.00
HIGH	4.0	1.0	SW814	2B	Roslyn	M5-5-4A	M5-5-4-1	40.0	12	RCP	H2S damage throughout; Repair Patch @ 28' (BRICKS); Void Visible @ 35'	FCIPP	40	0	0	\$ 2,400.00
HIGH	4.0	1.4	SW1585	2B	Hampton	M4-5A	M4-5	73.0	12	RCP	Hinge Fracture @ 36'-EOL	FCIPP	73	0	2	\$ 5,380.00
HIGH	4.0	2.1	SW717	2B	Hampton	M4-2A	M4-2	235.5	18	RCP	Heavy H2S damage throughout; Reversal due to roots. FROM M4-2:Broken @ 43'	FCIPP	236	0	4	\$ 19,700.00
HIGH	4.0	1.9	SW719	2B	Hampton	M5-4A	M5-4	342.0	21	RCP	Hinge Fracture @ 51'-58'	10' SCIPP @ 50'-60' (HIGH); FCIPP (MED)	342	0	7	\$ 35,990.00
HIGH	5.0	1.9	SW1325	2C	Hollywood	M6-5	M6-4	400.0	42	RCP	Reinforcement Visible at laterals throughout	FCIPP	400	0	7	\$ 63,500.00
HIGH	5.0	2.0	SW1327	2C	Hollywood	M6-4	M6-3	400.0	42	RCP	Reinforcement Visible at laterals throughout	FCIPP	400	0	7	\$ 63,500.00
HIGH	5.0	2.0	SW1328	2C	Hollywood	M6-3	M6-2	399.0	42	RCP	Reinforcement Visible at laterals throughout	FCIPP	399	0	6	\$ 62,850.00
HIGH	4.7	2.0	SW1330	2C	Hollywood	M6-2	M6-1	433.0	42	RCP	Reinforcement Visible at laterals throughout; Small weir wall at DS MH	FCIPP	433	0	7	\$ 68,450.00
HIGH	5.0	1.9	SW1671	2C	Vernier	M7-1-4	M7-1-3	494.0	18	VCP	Pipe Segment @ 131'-142' have dropped, Broken @ 140'; Long. Fractures @ 364'-EOL	FCIPP	494	0	6	\$ 40,050.00
HIGH	4.0	2.1	SW870	3A	Centerbrook	M2-4-3-1	M2-4-3	206.0	12	RCP	H2S damage throughout; Cir Fracture @ 2', 24'; Posible patch @ 127'	FCIPP	206	0	3	\$ 13,860.00
HIGH	4.0	2.0	SW1313	3A	Edmunton	M2-7	M2-6	500.0	36	RCP	Reinforcement visible at laterals throughout; Lift Holes throughout	FCIPP	500	0	14	\$ 82,000.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
HIGH	4.5	1.0	SW895	3A	Aline	C9-1	C9	46.0	8	RCP	Mult Fractures throughout; Broken Soil Visible @ 41'	FCIPP	46	0	0	\$ 2,070.00
HIGH	4.0	2.3	SW916	3A	Aline	M5-11-2	M5-11-1	275.0	8	RCP	H2S damage throughout; Mult Misc Cracks/Fractures throughout; Large Hole Soil Visible @ 273'	Dig Mainline @ 270'-EOL-Completed in 0160-0413; FCIPP	275	2	7	\$ 16,875.00
HIGH	5.0	1.9	SW907	3A	Aline	M5-10-1	M5-10-2	325.0	8	RCP	H2S damage throughout; Mult Misc Fractures throughout; Broken (Displacement) @ 145'	FCIPP	325	0	7	\$ 18,125.00
HIGH	4.0	2.6	SW941	3A	Aline	M5-10	M5-9	321.0	18	RCP	Heavy H2S damage throughout; Hole in side of lateral @ 191'	FCIPP	321	0	7	\$ 27,575.00
HIGH	4.0	4.0	SW622	3B	Hampton	C2-3	C2-2	236.0	18	RCP	H2S damage throughout; Majority of laterals are shearing at the main	Dig laterals (HIGH); FCIPP (MED)	236	0	12	\$ 23,700.00
HIGH	4.0	4.0	SW623	3B	Hampton	C2-2	C2-1	175.0	24	RCP	Light H2S damage throughout	Dig laterals (HIGH); FCIPP (LOW)	175	0	8	\$ 23,250.00
HIGH	4.0	4.0	SW618	3B	Hampton	C2-1	C2	75.0	24	RCP	Light H2S damage throughout	Dig lateral @ 30' (HIGH); FCIPP (LOW)	75	0	2	\$ 9,250.00
HIGH	4.0	4.0	SW628	3B	Hampton	M5-4-6	M5-4-5	230.0	18	RCP	Light H2S damage throughout	Dig laterals (HIGH); FCIPP (LOW)	230	0	10	\$ 22,250.00
HIGH	4.0	4.0	SW629	3B	Hampton	M5-4-5	M5-4-4	170.0	24	RCP	Light H2S damage throughout	Dig laterals (HIGH); FCIPP (LOW)	170	0	9	\$ 23,200.00
HIGH	4.0	4.0	SW989	3B	Hollywood	G6-1	G6	192.0	18	RCP	Light H2S damage throughout	Dig laterals @ 17', 173' (HIGH); FCIPP (LOW)	192	0	7	\$ 17,900.00
HIGH	4.0	2.0	SW2693	3B	Anita	G8-2-4	Bulkhead	161.0	12	RCP	VCP for first 11'; H2S damage throughout	Install MH at US end, then FCIPP	161	0	1	\$ 10,160.00
HIGH	5.0	4.5	SW666	3B	Anita	G8-2-2	G8-2-1	299.0	18	VCP	Hinge Fracturing throughout	Dig Lateral @ 292'; FCIPP	299	0	15	\$ 29,925.00
HIGH	5.0	5.0	SW665	3B	Anita	G8-2-1	G8-2	285.0	18	VCP	Hinge Fracture @ 196'-EOL; Long. Fractures in spots throughout	Dig Lateral @ 72'; FCIPP	285	0	13	\$ 27,875.00
HIGH	5.0	4.0	SW664	3B	Anita	G8-2A1	G8-2	221.0	15	VCP	Hinge Fracture @ 6'; Long. Crack @ 41'-53'; Hinge Crack @ 84'-121'	Dig Lateral @ 44', 84'; FCIPP	221	0	11	\$ 19,865.00
HIGH	4.0	1.3	SW592	3B	Wicks	M5-1-5-3	M5-1-5-4	178.0	12	RCP	Surface Damage - Aggregate Visible, Long. Fracture(75', 77', 78', 108', 122', 138', 146', 147'-178')	FCIPP	178	0	5	\$ 13,180.00

**CITY OF GROSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
HIGH	4.0	2.7	SW591	3B	Wicks	M5-1-5-3	M5-1-5-2	320.0	15	RCP	Surface Damage - Aggregate Visible, Mult Fracture(31', 159'), Survey abandoned(203')--Roots, Reverse-Surface Damage - Aggregate Visible, Hinge Fracture(75'-82'), Survey abandoned(117')--Roots	FCIPP	320	0	8	\$ 24,800.00
HIGH	4.0	1.9	SW48	3B	Toles	M5-1-5-1	M5-1-5	142.0	15	RCP	Surface Damage - Aggregate Visible, Long. Fracture(3'-8'), Hinge Fracture(8'-25', 100'-113'), Broken(102')	FCIPP	142	0	4	\$ 11,230.00
HIGH	4.0	2.0	SW678	3B	Charlevoix	M5-1-4D	C1-1A	298.0	18	RCP	H2S damage throughout; Hinge Fracture @ 76'-82'	10' SCIPP @ 74'-84' (HIGH); FCIPP (MED)	298	0	1	\$ 22,850.00
HIGH	4.0	2.0	SWSW492	6A	Mack	M14-11	M14-12	297.0	18	RCP	Long. Crack(201'-249'), Hinge Crack(249'-297')	FCIPP	297	0	4	\$ 24,275.00
HIGH	4.0	2.0	SW1148A	6B	Lochmoor	M12A	M12B	312.1	30	VCP	Long. Fracture(2'-48'), Broken(67'), Hinge Fracture(48'-146'), Size reduction to 10"(310')	FCIPP	312.1	0	1	\$ 37,952.00
HIGH	4.0	3.0	SW460	8B	S Renaud	M13-2-8	M13-2-7	194.0	21	RCP	Surface Damage Aggregate Visible T/O, Hinge Fracture(132'-155'), Long. Crack(37'-59')	FCIPP	194	0	7	\$ 21,930.00
HIGH	4.0	2.0	SW426	8B	N Oxford	M17-7	M17-6	420.0	18	RCP	Surface Damage Aggregate Visible T/O, Long. Fracture(55'-79'), Hinge Fracture((79'-92'), Broken with soil visible(84')	Dig Mainline (78'-88') - done in 0160-0413 FCIPP	420	0	15	\$ 39,000.00
HIGH	4.0	2.0	SW9795	5A	Stanhope	M21-14-3	M21-14-2	148.4	8	VCP	PVC for first 3'; Large angular joint/Deposit @ 12'; Repair patch @ 16'; Hinge Fracture 2 @ 26'-36'; Roots at joints throughout Mult Fractures @ 134'-138'; Line ends at bulkhead	Install MH at 150'; FCIPP	148	0	0	\$ 6,660.00
HIGH	4.0	2.9	SW1760	5B	Bramcaster	M21-15	M21-14	208.2	18	RCP	Broken(2'), Mult Fracture(2'-14'), Long. Crack(42'), Hole(105'), Med Roots at joints(99', 107'-137')	Dig Mainline(132'-143') FCIPP	208.2	0	0	\$ 15,615.00
HIGH	4.0	1.8	SW57	5C	Linville	MA54-6-4	MA54-6-3	264.8	12	RCP	Surface Damage - Aggregate Projecting, Long. Crack(1'-40', 49', 257', 260'), Mult Crack(58'), Mult Fracture(193', 197')	FCIPP	264.8	0	14	\$ 22,888.00
HIGH	4.0	2.1	SW185	6C	Faircourt	MA26-3	MA26-2	350.6	15	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout. Multiple Cracks Throughout. Med Offset at 213'. Inflow Runner at 268'	FCIPP	350.6	1	12	\$ 29,289.00
HIGH	4.0	2.0	SW267	6C	Torrey	GP2-1	Blind Tap	52.6	12	RCP	Moderate to Heavy H2S damage throughout; Alignment shift down throughout	Install MH; FCIPP	53	0	1	\$ 3,680.00
HIGH	5.0	2.0	SW1450	7A	Mack Alley	GP9-7	GP9-7A	143.2	12	RCP	Moderate to Heavy H2S damage throughout; SCIPP @ 4'-14'; Deposits throughout	FCIPP	143	1	6	\$ 12,080.00
HIGH	5.0	2.0	SW135	7A	Esmt West of Holiday North of Cook	GP9-3	GP9-2	406.5	18	RCP	Long. Fractures throughout; Minor Deformation @ 292'; Roots at 55' (AT CONNECTION); Deposits throughout	FCIPP	407	2	6	\$ 34,525.00
HIGH	4.0	2.0	SW168	7A	Chalfonte	GP3-2-3	GP3-2-2	102.8	24	RCP	Moderate H2S damage throughout; Brick Repair patch @ 90'; Broken @ 100'; Grease attached throughout	FCIPP; Dig Lateral @ 93'	103	0	1	\$ 11,830.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
HIGH	4.0	2.0	SW197	6C	Mack	MA28-4	MA28-3A	57.4	15	RCP	Moderate to Heavy H2S damage throughout; Cracking throughout. Note: Line does not match proposed length, do not know where DS MH is	FCIPP	57	0	0	\$ 3,705.00
HIGH	5.0	2.0	SW381	6C	Fairholme	M20-8-4	M20-8-3	191.4	12	RCP	Long. Fracturing throughout; Light to Moderate H2S damage throughout; Minor Deformation @ 52'-60'; Heavy Roots at connection @ 31', believe it is just at connection, not further up the line; Fracture in lateral @ 36'	FCIPP	191	1	4	\$ 13,960.00
HIGH	4.0	2.0	SW380	6C	Baltree	M20-8-3	M20-8-2	164.9	12	RCP	Moderate to Heavy H2S damage throughout	FCIPP	165	0	0	\$ 9,900.00
HIGH	5.0	2.0	SW364	6C	Fairholme	M19-1-6	M19-1-5	267.3	12	RCP	Heavy H2S damage throughout	FCIPP	267	0	5	\$ 18,520.00
HIGH	4.0	2.0	SW269	6C	Paget Ct	M19-1-1	M19-1	125.7	18	RCP	Moderate H2S damage throughout; Mult Fractures throughout; Roots through barrel in spots	FCIPP	126	0	2	\$ 10,450.00
HIGH	4.0	2.0	SW355	6C	Elford	M19-4-4	M19-4-3	179.7	12	RCP	Moderate to Heavy H2S damage throughout; Debris in lateral @ 63'	FCIPP	180	0	5	\$ 13,300.00
HIGH	4.0	2.0	SW353	6C	Between Elford & Torrey	M19-4-1	M19-4	294.9	15	RCP	Moderate to Heavy H2S damage throughout; Point Repair @ 284'-EOL	FCIPP	295	0	9	\$ 23,675.00
HIGH	4.0	2.0	SW357	6C	Elford	M19-2-4	M19-2-3	326.0	15	RCP	Heavy H2S damage throughout; Aggregate Damage in lateral hubs throughout; Fracture in lateral @ 212'	FCIPP	326	0	4	\$ 23,190.00
HIGH	4.0	2.0	SW358	6C	Elford	M19-2-3	M19-2-2	156.0	15	RCP	Moderate to Heavy H2S damage throughout; Roots throughout	FCIPP	156	0	3	\$ 11,640.00
HIGH	4.0	2.0	SW268	6C	Elford	M19-2-2	M19-2-1	72.6	15	RCP	Moderate to Heavy H2S damage throughout; Long. Fractures in spots; Roots throughout	FCIPP	73	0	1	\$ 5,245.00
HIGH	4.0	2.0	SW393	6C	S Oxford	M16-3	M16-2	452.1	24	RCP	Moderate to Heavy H2S damage throughout; Laterals @ 28', 414' are fractured inside; Cannot tell if lateral @ 211' is capped or collapsed; Long. Fracture @ 241'	FCIPP	452	0	14	\$ 56,720.00
MEDIUM	3.3	2.1	950	1A	Robert John	M1-19	M1-18A	303.0	10	VCP	Long. Fracture(86', 87', 104'), Mult Fracture(231')	FCIPP	303	0	10	\$ 18,635.00
MEDIUM	3.0	2.1	1601	1A	Robert John	M1-18A	M1-18	65.0	10	VCP	Long. Fracture (59')	FCIPP	65	0	2	\$ 3,925.00
MEDIUM	3.8	1.8	789	1A	Van K	M1-17-3	M1-17-2	224.8	10	VCP	Long. Fracture(87'), Mult Fracture(126', 153', 214')	FCIPP	224.8	0	3	\$ 11,616.00
MEDIUM	3.0	1.9	788	1A	Van K	M1-17-2	M1-17-1	349.0	10	VCP	Mult and Long. Fractures T/O, Broken(35')	FCIPP	349	0	6	\$ 18,705.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	773	1A	Perrien	M1-11A	M1-11	333.0	15	RCP	Surface Damage - Aggregate Protruding	FCIPP	333	0	10	\$ 26,645.00
MEDIUM	3.0	2.1	770	1A	Van K	M1-10-4	M1-10-3	255.0	12	RCP	Long. Fracture(5'-34'), Surface Damage - Aggregate Visible	FCIPP	255	1	2	\$ 16,800.00
MEDIUM	3.0	2.0	769	1A	Van K	M1-10-3A	M1-10-3	51.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	51	0	1	\$ 3,560.00
MEDIUM	3.5	2.0	767	1A	Van K	M1-10-3	M1-10-2	251.2	15	RCP	Surface Damage - Aggregate Visible and Missing	FCIPP	251.2	3	4	\$ 19,828.00
MEDIUM	3.1	2.0	1283	1A	Briarcliff	M1-10	M1-9	450.0	36	RCP	Surface Damage - Aggregate Visible, Rebar visible(195', 259', 332')	FCIPP	450	0	11	\$ 73,000.00
MEDIUM	3.1	2.0	1284	1A	Briarcliff	M1-9	M1-8	66.0	36	RCP	Surface Damage - Aggregate Visible, Rebar visible(34')	FCIPP	66	0	1	\$ 10,400.00
MEDIUM	3.1	2.2	1285	1A	Briarcliff	M1-8	M1-7	381.0	36	RCP	Surface Damage - Aggregate Visible, Rebar visible(45', 182', 268')	FCIPP	381	0	4	\$ 59,150.00
MEDIUM	3.0	2.1	753	1A	Mooreland	M1-3-9	M1-3-8	338.1	12	RCP	Surface Damage - Aggregate Visible	FCIPP	338.1	0	8	\$ 24,286.00
MEDIUM	3.0	2.0	754	1A	Mooreland	M1-3-8	M1-3-7	333.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	333	2	7	\$ 24,480.00
MEDIUM	3.0	2.0	755	1A	Mooreland	M1-3-7	M1-3-6	274.0	15	RCP	Surface Damage - Aggregate Visible	FCIPP	274	0	6	\$ 20,810.00
MEDIUM	2.9	1.9	756	1A	Mooreland	M1-3-6	M1-3-5	269.0	15	RCP	Circ. Crack(0', 56', 161', 185'), Surface damage - Aggregate Visible	FCIPP	269	0	6	\$ 20,485.00
MEDIUM	3.0	2.0	757	1A	Mooreland	M1-3-5	M1-3-4	394.0	21	RCP	Surface Damage - Aggregate Visible, Rebar Visible(11')	FCIPP	394	0	9	\$ 41,930.00
MEDIUM	3.0	2.4	762	1A	Woods Lane	M1-3-3-5	M1-3-3-4	285.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	285	0	9	\$ 21,600.00
MEDIUM	3.0	2.1	763	1A	Woods Lane	M1-3-3-4	M1-3-3-3	341.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	341	0	8	\$ 24,460.00
MEDIUM	3.0	2.1	759	1A	Woods Lane	M1-3-3-3	M1-3-3-2	259.0	15	RCP	Surface Damage - Aggregate Visible, Rebar Visible(105')	FCIPP	259	0	7	\$ 20,335.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	761	1A	Woods Lane	M1-3-3-2	M1-3-3-1	349.0	15	RCP	Surface Damage - Aggregate Visible	FCIPP	349	0	8	\$ 26,685.00
MEDIUM	3.0	2.1	760	1A	Woods Lane	M1-3-3-1	M1-3-3	326.0	18	RCP	Surface Damage - Aggregate Visible, Long. Fracture(193')	FCIPP	326	0	8	\$ 28,450.00
MEDIUM	3.0	2.0	748	1A	Canterbury	M1-1-4-4	M1-1-4-3	308.0	18	RCP	Surface Damage - Aggregate Visible	FCIPP	308	0	9	\$ 27,600.00
MEDIUM	3.0	2.1	747	1A	Canterbury	M1-1-4-3A	M1-1-4-3	266.4	12	RCP	Surface Damage - Aggregate Visible	FCIPP	266.4	0	6	\$ 18,984.00
MEDIUM	3.0	2.0	745	1A	Canterbury	M1-1-4-2	M1-1-4-2A	221.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	221	0	5	\$ 15,760.00
MEDIUM	3.0	2.0	744	1A	Canterbury	M1-1-4-2	M1-1-4-1	299.0	24	RCP	Surface Damage - Aggregate Visible	FCIPP	299	0	7	\$ 36,390.00
MEDIUM	3.0	2.0	743	1A	Canterbury	M1-1-4-1	M1-1-4-1A	221.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	221	0	5	\$ 15,760.00
MEDIUM	2.9	2.0	10919	1A	Canterbury	M1-1-4-1	M1-1-4	332.0	24	RCP	Surface Damage - Aggregate Visible	FCIPP	332	0	6	\$ 39,520.00
MEDIUM	3.0	2.0	735	1A	Blairmoor Ct	M1-1-5-4	M1-1-5-3	336.2	15	RCP	Surface Damage - Aggregate Visible	FCIPP	336.2	0	8	\$ 25,853.00
MEDIUM	3.0	2.1	733	1A	Blairmoor Ct	M1-1-5-3	M1-1-5-2	264.0	15	RCP	Surface Damage - Aggregate Visible	FCIPP	264	0	5	\$ 19,660.00
MEDIUM	3.0	2.1	734	1A	Blairmoor Ct	M1-1-5-2	M1-1-5-1	269.0	18	RCP	Long. Fracture(29'), Rebar Visible(66'), Surface Damage - Aggregate Visible	FCIPP	269	0	9	\$ 24,675.00
MEDIUM	3.1	2.0	738	1A	Blairmoor Ct	M1-1-5-1	M1-1-5	396.0	18	RCP	Rebar Visible(26', 239'), Hole(366', 391'), Surface Damage - Aggregate Visible	FCIPP	396	0	10	\$ 34,700.00
MEDIUM	3.0	2.0	723	1A	Brys	M1-1-10-2	M1-1-10-1	341.0	15	RCP	Surface Damage - Aggregate Visible	FCIPP	341	0	8	\$ 26,165.00
MEDIUM	3.0	2.0	724	1A	Brys	M1-1-10-1	M1-1-10	339.0	15	RCP	Surface Damage - Aggregate Visible	FCIPP	339	0	7	\$ 25,535.00
MEDIUM	3.0	2.0	728	1A	Brys	M1-1-10	M1-1-9	394.0	21	RCP	Surface Damage - Aggregate Visible	FCIPP	394	0	10	\$ 42,430.00

CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.1	729	1A	Brys	M1-1-9	M1-1-8	398.0	24	RCP	Surface Damage - Aggregate Visible	FCIPP	398	1	8	\$ 48,280.00
MEDIUM	3.0	2.0	730	1A	Brys	M1-1-8	M1-1-7	132.0	27	RCP	Long. Fracture(0'-38'), Surface Damage - Aggregate Visible	FCIPP	132	0	0	\$ 15,840.00
MEDIUM	3.0	2.1	731	1A	Brys	M1-1-7	M1-1-6	130.0	27	RCP	Surface Damage - Aggregate Visible	FCIPP	130	0	0	\$ 15,600.00
MEDIUM	3.0	2.1	736	1A	Van K	M1-1-5-6	M1-1-5-5	108.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	108	0	2	\$ 7,480.00
MEDIUM	3.0	2.2	741	1A	Van K	M1-3-12	M1-1-5-5	262.0	12	RCP	Long. Fracture(0'), Surface Damage - Aggregate Visible	FCIPP	262	0	5	\$ 18,220.00
MEDIUM	3.0	2.1	739	1A	Van K	M1-3-10	M1-3-9	366.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	366	0	4	\$ 23,960.00
MEDIUM	3.0	2.2	722	1A	Van K	M1-1-10-3	M1-1-10-2	61.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	261	0	4	\$ 17,660.00
MEDIUM	3.0	2.2	1603	1A	Van K	M1-1-10-2A	M1-1-10-2	70.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	70	0	2	\$ 5,200.00
MEDIUM	3.0	2.0	758	1A	Wedgewood	M1-3-4	M1-3-3	261.0	21	RCP	Circ. Fracture(64'), Surface Damage - Aggregate Visible	FCIPP	261	0	1	\$ 25,295.00
MEDIUM	2.7	2.0	10912	1A	Wedgewood	M1-1-4B	M1-1-4C	30.0	12	RCP	Circ. Crack(13'), Surface Damage - Aggregate Visible	FCIPP	30	0	1	\$ 2,300.00
MEDIUM	2.9	2.1	10917	1A	Wedgewood	M1-1-4A	M1-1-4	113.0	18	RCP	Surface Damage - Aggregate Visible, Circ. Crack(6', 39', 56'), Rebar visible(15')	FCIPP	113	0	1	\$ 8,975.00
MEDIUM	3.0	2.0	732	1A	Wedgewood	M1-1-6	M1-1-5	146.0	27	RCP	Surface Damage - Aggregate Visible	FCIPP	146	0	1	\$ 18,020.00
MEDIUM	3.0	2.0	10918	1A	Wedgewood	M1-1-5	M1-1-4	260.0	27	RCP	Surface Damage - Aggregate Visible, Rebar Visible(91')	FCIPP	260	0	2	\$ 32,200.00
MEDIUM	3.0	2.1	1604	1B	Wedgewood	M3-2-5	M3-2-6	102.0	12	RCP	H2S damage throughout	FCIPP	102	1	1	\$ 7,120.00
MEDIUM	3.0	2.1	727	1B	S Brys	M1-1-13	M1-1-12	314.0	15	RCP	Surface Damage - Aggregate Visible	FCIPP	314	0	10	\$ 25,410.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.2	725	1B	Morningside	M1-1-11	M1-1-10	338.0	21	RCP	Surface Damage - Aggregate Visible	FCIPP	338	0	2	\$ 33,110.00
MEDIUM	3.0	1.0	601	1B	Roslyn	M6-18	M6-17	265.0	15	RCP	Surface Damage - Aggregate Visible	FCIPP	265	0	6	\$ 20,225.00
MEDIUM	3.0	1.7	600	333	Roslyn	M6-17	M6-16	305.0	21	RCP	Surface Damage - Aggregate Visible	FCIPP	305	0	8	\$ 32,975.00
MEDIUM	3.0	3.0	599	1B	Roslyn	M6-16	M6-15	258.0	24	RCP	Surface Damage - Aggregate Visible	FCIPP	258	0	3	\$ 29,880.00
MEDIUM	3.0	1.7	598	1B	Roslyn	M6-15	M6-14	200.0	24	RCP	Surface Damage - Aggregate Visible	FCIPP	200	0	3	\$ 23,500.00
MEDIUM	3.0	1.0	597	1B	Roslyn	M6-14	M6-13	420.0	27	RCP	Surface Damage - Aggregate Visible	FCIPP	420	0	7	\$ 53,900.00
MEDIUM	3.0	1.9	701	1B	Hampton	M6-11-4	M6-11-3	433.0	12	RCP	Surface Damage - Aggregate Visible, Mult Fracture(11'), Long. Fracture(1'-35', 41'-56')	FCIPP	433	0	6	\$ 28,980.00
MEDIUM	3.0	1.6	645	1B	Hampton	M6-10-2	M6-10-1	345.9	10	RCP	Surface damage - Aggregate Visible, Hole with Void(86', 157', 228'), Survey abandoned(228')--Hole in pipe, Reverse--Survey abandoned(117')--Hole in pipe	Dig Mainline (83'-89'), (154'-160'), (225'-231') from 2, Dig Mainline (115'-121') from 1 - Done in 0160-0413, FCIPP	377	0	7	\$ 20,465.00
MEDIUM	3.0	2.2	690	1B	Hawthorne	M6-6-9	M6-6-8	230.0	18	RCP	Surface Damage - Aggregate Visible, Long. Crack(28')	FCIPP	230	0	7	\$ 20,750.00
MEDIUM	3.0	2.2	691	1B	Hawthorne	M6-6-7	M6-6-6	356.0	24	RCP	Surface Damage - Aggregate Visible, Long. Fracture(193')	FCIPP	356	0	9	\$ 43,660.00
MEDIUM	3.0	2.0	687	1B	Hawthorne	M6-6-6	M6-6-5	220.0	27	RCP	Surface Damage - Aggregate Visible	FCIPP	220	0	7	\$ 29,900.00
MEDIUM	3.0	2.2	688	1B	Hawthorne	M6-6-5	M6-6-4	229.0	27	RCP	Surface Damage - Aggregate Visible	FCIPP	229	0	6	\$ 30,480.00
MEDIUM	3.0	2.1	1376	1B	Hawthorne	M6-6-4	M6-6-3	219.0	30	RCP	Lift Holes T/O, Surface Damage - Aggregate Visible	FCIPP	219	0	4	\$ 28,280.00
MEDIUM	3.0	2.1	1375	1B	Hawthorne	M6-6-3	M6-6-2	219.0	30	RCP	Lift Holes T/O, Surface Damage - Aggregate Visible	FCIPP	219	0	6	\$ 29,280.00
MEDIUM	3.1	2.0	659	1B	Anita	M5-1-4-14	M5-1-4-13	280.0	15	RCP	Surface Damage - Aggregate Visible, Rebar Visible(22', 94', 156')	FCIPP	280	2	9	\$ 23,700.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.1	658	1B	Anita	M5-1-4-13	M5-1-4-12	240.0	15	RCP	Surface Damage - Aggregate Visible, Rebar Visible(234')	FCIPP	240	0	7	\$ 19,100.00
MEDIUM	3.0	2.1	657	1B	Anita	M5-1-4-12	M5-1-4-11	252.0	18	RCP	Surface Damage - Aggregate Visible	FCIPP	252	1	8	\$ 23,400.00
MEDIUM	3.0	2.0	656	1B	Anita	M5-1-4-11	M5-1-4-10	344.0	18	RCP	Surface Damage - Aggregate Visible, Rebar Visible(102'), Long. Fracture(159')	FCIPP	344	0	9	\$ 30,300.00
MEDIUM	3.1	1.8	655	1B	Anita	M5-1-4-10	M5-1-4-9	344.0	18	RCP	Surface Damage - Aggregate Visible, Rebar Visible(46', 100', 175', 337')	FCIPP	344	0	10	\$ 30,800.00
MEDIUM	2.9	1.9	951	1B	Anita	M5-1-4-9	M5-1-4-8	244.0	21	RCP	Surface Damage - Aggregate Visible, Rebar Visible(22', 77', 146')	FCIPP	244	0	8	\$ 27,180.00
MEDIUM	3.0	2.0	1590	1B	Anita	M5-1-4-8	M5-1-4-7	51.0	27	RCP	Surface Damage - Aggregate Visible	FCIPP	51	0	0	\$ 6,120.00
MEDIUM	3.0	2.3	1639	1B	Vernier	M7-17	M7-17-1	53.0	15	RCP	H2S damage throughout	FCIPP	53	0	0	\$ 3,445.00
MEDIUM	3.0	2.7	1004	1B	Wedgewood	M7-16-1	M7-16	196.0	18	RCP	H2S damage throughout	FCIPP	196	0	0	\$ 14,700.00
MEDIUM	3.0	2.0	952	1B	Vernier	M7-18-1	M7-18	55.0	24	RCP	Surface damage - Aggregate Visible	FCIPP	55	0	1	\$ 6,550.00
MEDIUM	3.0	2.0	21	1B	Vernier	M7-19	M7-18	42.0	18	RCP	Surface damage - Aggregate Visible	FCIPP	42	0	0	\$ 3,150.00
MEDIUM	3.0	2.1	1374	1B	Vernier	M7-18	M7-17	410.0	30	RCP	H2S damage throughout	FCIPP	410	1	10	\$ 54,700.00
MEDIUM	3.0	4.0	1373	1B	Vernier	M7-16	M7-17	282.0	30	RCP	H2S damage throughout; Lateral @ 5' appears broken	Dig Lateral @ 5'; FCIPP	282	0	5	\$ 36,340.00
MEDIUM	3.0	2.0	1644	1B	Vernier	M7-16	M7-15A	50.0	30	RCP	H2S damage throughout	FCIPP	50	0	1	\$ 6,500.00
MEDIUM	3.0	2.0	1371	1B	Vernier	M7-15A	M7-15	82.0	30	RCP	H2S damage throughout	FCIPP	82	0	0	\$ 9,840.00
MEDIUM	3.0	2.1	1370	1B	Vernier	M7-15	M7-14A	168.0	30	RCP	H2S damage throughout	FCIPP	168	0	1	\$ 20,660.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	1650	1B	Vernier	M7-14A	M7-14	94.0	30	RCP	H2S damage throughout	FCIPP	94	0	1	\$ 11,780.00
MEDIUM	3.0	2.0	1649	1B	Vernier	M7-14	M7-13A	31.0	30	RCP	H2S damage throughout	FCIPP	31	0	0	\$ 3,720.00
MEDIUM	3.0	1.0	1369	1B	Vernier	M7-13A	M7-13	14.0	30	RCP	H2S damage throughout	FCIPP	14	0	0	\$ 1,680.00
MEDIUM	3.0	2.0	1368	1B	Vernier	M7-13	M7-12	108.0	30	RCP	H2S damage throughout	FCIPP	108	0	2	\$ 13,960.00
MEDIUM	3.1	2.0	1290	2A	Briarcliff	M1-7	M1-6	350.0	36	RCP	Surface Damage - Aggregate Visible, Rebar visible(22', 99', 169, 240', 313')	FCIPP	350	0	5	\$ 55,000.00
MEDIUM	3.1	1.8	1291	2A	Briarcliff	M1-6	M1-5	541.0	42	RCP	Surface Damage - Aggregate Visible, Rebar visible(30', 179', 318')	FCIPP	541	0	7	\$ 84,650.00
MEDIUM	3.0	2.1	766	2A	Mooreland	M1-4-3	M1-4-2	314.0	12	RCP	Surface Damage - Aggregate Visible, Rebar visible(109', 265')	FCIPP	314	1	11	\$ 24,840.00
MEDIUM	2.9	2.0	765	2A	Mooreland	M1-4-2	M1-4-1	349.0	12	RCP	Surface Damage - Aggregate Visible, Circ. Fracture(2', 31', 42', 201'), Rebar visible(90')	FCIPP	349	0	10	\$ 25,940.00
MEDIUM	3.0	2.1	764	2A	Mooreland	M1-4-1	M1-4	207.0	15	RCP	Surface Damage - Aggregate Visible	FCIPP	207	1	5	\$ 16,455.00
MEDIUM	3.1	2.0	1297	2A	Mooreland	M1-3-3	M1-3-2	424.0	30	RCP	Surface Damage - Aggregate Visible, Rebar Visible(44', 107', 116', 180', 189', 391'), Long. Fracture(43', 81'-93', 105'-162', 181'-202', 253'-424')	FCIPP	424	0	11	\$ 56,380.00
MEDIUM	3.0	2.1	794	2A	Woods Lane	M1-2-4	M1-2-3	273.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	273	0	2	\$ 17,380.00
MEDIUM	3.0	2.1	10923	2A	Avon	M1-1-4B	M1-1-4D	347.0	12	RCP	Circ. Crack(218'), Rebar visible(277'), Surface Damage - Aggregate Visible	FCIPP	347	1	8	\$ 25,320.00
MEDIUM	3.3	2.2	1308	2A	Edmunton	M2-3	M2-2	367.0	36	RCP	Surface Damage - Aggregate Visible, Rebar Visible at various locations T/O, Broken (177')	FCIPP	367	0	16	\$ 63,050.00
MEDIUM	3.1	2.1	1307	2A	Edmunton	M2-2	M2-1	75.0	36	RCP	Surface Damage - Aggregate Visible, Rebar Visible(28'), Long. Fracture(21', 26')	FCIPP	75	0	1	\$ 11,750.00
MEDIUM	3.1	2.1	1306	2A	Edmunton	M2-1	M2	136.0	36	RCP	Surface Damage - Aggregate Visible, Rebar Visible(47', 65', 74')	FCIPP	136	0	2	\$ 21,400.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	1304	2A	Edmunton	M2	M1	120.0	36	RCP	H2S damage throughout	FCIPP	120	0	0	\$ 18,000.00
MEDIUM	2.9	2.0	804	2A	River	M1-1A-1	M1-1A	102.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	102	0	3	\$ 7,620.00
MEDIUM	2.7	2.0	795	2A	River	M1-1A	M1-1	279.0	18	RCP	Surface Damage - Aggregate Visible, Circ. Cracks at various locations T/O	FCIPP	279	0	7	\$ 24,425.00
MEDIUM	3.1	2.1	10924	2A	Canterbury	M1-1-4	M1-1-3	375.0	42	RCP	Surface Damage - Aggregate Visible, Rebat Visible(47', 65, 227', 275', 276', 283', 316', 322', 338', 341'), Long.Fracture(97'-375')	FCIPP	375	0	10	\$ 61,250.00
MEDIUM	3.0	2.1	1300	2A	Canterbury	M1-1-3	M1-1-2	560.0	42	RCP	Surface Damage - Aggregate Visible, Rebat Visible at various locations T/O	FCIPP	560	0	17	\$ 92,500.00
MEDIUM	3.2	2.2	1235	2A	Canterbury	M1-1-2	M1-1-1	327.0	42	RCP	Surface Damage - Aggregate Visible, Rebat Visible at various locations T/O	FCIPP	327	0	10	\$ 54,050.00
MEDIUM	3.1	2.1	1302	2A	Canterbury	M1-1-1	M1-1	50.0	42	RCP	Surface Damage - Aggregate Visible, Long. Fracture(2'-50'), Rebar visible(24', 29')	FCIPP	50	0	1	\$ 8,000.00
MEDIUM	3.0	2.1	803	2A	Blairmoor Ct	M1-1E	M1-1D	296.0	12	RCP	Surface Damage - Aggregate Visible, Broken(22'), Long. Fracture(238', 241', 261'-267', 271', 277', 290')	FCIPP	296	0	9	\$ 22,260.00
MEDIUM	2.9	2.1	802	2B	Blairmoor Ct	M1-1D	M1-1C	289.0	12	RCP	Surface Damage - Aggregate Visible; Long. Fracture @ 0'-10', 262'-289'	FCIPP	289	0	9	\$ 21,840.00
MEDIUM	3.0	2.0	801	2B	Blairmoor Ct	M1-1C	M1-1B	329.0	15	RCP	Surface Damage - Aggregate Visible; Long. Fracture @ 279'-EOL	FCIPP	329	0	8	\$ 25,385.00
MEDIUM	2.9	2.0	800	2B	Blairmoor Ct	M1-1B	M1-1A	330.0	15	RCP	Surface Damage - Aggregate Visible; Lift holes at 184'-EOL	FCIPP	330	0	8	\$ 25,450.00
MEDIUM	2.9	1.8	825	2B	Brys Dr N	M3-8	M3-7	260.0	15	RCP	Moderate H2S damage throughout; Long. Fracture @ 118'-133'; SCIPP @ 1'-33'	FCIPP	260	0	6	\$ 19,900.00
MEDIUM	2.9	2.0	829	2B	Brys Dr N	M3-7	M3-6	342.0	18	RCP	Moderate H2S damage throughout; Long. Fractures throughout	FCIPP	342	0	10	\$ 30,650.00
MEDIUM	3.0	2.0	830	2B	Brys Dr N	M3-5	M3-4	247.0	21	RCP	Moderate H2S damage throughout	FCIPP	247	0	7	\$ 26,965.00
MEDIUM	3.1	2.1	822	2B	Brys Dr N	M3-4	M3-3	286.0	24	RCP	Moderate H2S damage throughout; Surf Reinf Vis at Laterals @ 8', 42', 131', 202'	FCIPP	286	0	8	\$ 35,460.00

CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.1	826	2B	River	M3-3A	M3-3	121.0	10	RCP	H2S damage throughout	FCIPP	121	1	3	\$ 7,445.00
MEDIUM	2.9	2.0	827	2B	River	M3-3	M3-2	251.0	27	RCP	H2S damage throughout; Cir Fracture @ 17'	FCIPP	251	0	3	\$ 31,620.00
MEDIUM	3.2	2.0	823	2B	Brys Dr S	M3-2-2	M3-2-1	207.0	24	RCP	H2S damage throughout; Chips at joints throughout	FCIPP	207	0	6	\$ 25,770.00
MEDIUM	3.2	2.1	832	2B	Brys Dr S	M3-2-1	M3-2	330.0	24	RCP	H2S damage throughout; Chips at joints throughout	FCIPP	330	0	9	\$ 40,800.00
MEDIUM	3.3	1.9	819	2B	Brys Dr S	M3-2	M5-6C	117.0	27	RCP	H2S damage throughout; Reversal needed due to roots from lateral @ 63'	FCIPP	117	0	3	\$ 15,540.00
MEDIUM	3.9	1.9	957	2B	Brys Dr S	M5-6C	M5-6B	117.0	27	RCP	Moderate H2S damage throughout	FCIPP	117	0	2	\$ 15,040.00
MEDIUM	2.8	1.9	1340	2B	Brys Dr S	M5-6B	M3	36.0	24	RCP	H2S damage throughout; Drop Connection @ 31'	FCIPP	36	0	1	\$ 4,460.00
MEDIUM	4.1	2.0	821	2B	Brys Dr S	M5-6B	M5-6A	177.1	27	RCP	Moderate H2S damage throughout	FCIPP	177	1	8	\$ 25,740.00
MEDIUM	2.9	1.5	943	2B	Aline	M5-9-1-3	M5-9-1-2	191.0	8	RCP	H2S damage throughout; Long. Fracture throughout	FCIPP	191	0	5	\$ 11,095.00
MEDIUM	2.9	1.4	944	2B	Aline	M5-9-1-1	M5-9-1	48.0	10	RCP	H2S damage throughout; Misc Fractures throughout	FCIPP	48	0	0	\$ 2,160.00
MEDIUM	2.9	1.9	946	2B	Aline	M5-9-3	M5-9-2	111.0	8	RCP	H2S damage throughout; Misc Fractures throughout	FCIPP	111	0	2	\$ 5,995.00
MEDIUM	3.6	2.1	942	2B	Aline	M5-9-1	M5-9	77.0	15	RCP	H2S damage throughout; Long. Fracture @ 1'	FCIPP	77	0	1	\$ 5,505.00
MEDIUM	3.0	1.5	815	2B	Roslyn	M5-5-4-2	M5-5-4-1	356.0	10	RCP	Wrong video for line, recommendation based off of tv report	FCIPP	356	0	5	\$ 18,520.00
MEDIUM	3.0	2.1	806	2B	Roslyn	M5-5-7	M5-5-6	329.6	12	RCP	H2S damage throughout; Long. Fracture @ 141'-150'. Reversal needed due to roots	None	203	0	4	\$ 14,180.00
MEDIUM	4.0	2.0	807	2B	Roslyn	M5-5-2	M5-5-1	37.0	21	RCP	Moderate H2S damage throughout	FCIPP	37	0	0	\$ 3,515.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	4.0	2.2	805	2B	Roslyn	M5-5-1	M5-5	396.0	24	RCP	Moderate H2S damage throughout	FCIPP	396	0	9	\$ 48,060.00
MEDIUM	3.8	2.0	1586	2B	Hampton	M4-4A	M4-4	57.0	15	RCP	Moderate H2S damage throughout	FCIPP	57	0	1	\$ 4,205.00
MEDIUM	3.6	1.8	1587	2B	Hampton	M4-4	M4-3A	228.0	18	RCP	Long. Fractures throughout	FCIPP	228	0	4	\$ 19,100.00
MEDIUM	3.6	1.9	718	2B	Hampton	M4-2	M4-1	316.0	21	RCP	Moderate H2S damage throughout; Long. Fracture throughout; Hole in channel in DS MH	FCIPP	316	0	4	\$ 32,020.00
MEDIUM	2.9	2.0	720	2B	Hampton	M5-4C	M4	319.0	10	RCP	Mult Fracture @ 3'	FCIPP	319	0	4	\$ 16,355.00
MEDIUM	3.0	3.0	953	2B	Marter	M5-8	M5-7	44.0	21	RCP	Surface Damage - Aggregate Visible	FCIPP	44	0	0	\$ 4,180.00
MEDIUM	3.0	2.0	294	2B	Marter	M5-7	M5-6	131.0	36	RCP	H2S damage throughout	FCIPP	131	0	1	\$ 20,150.00
MEDIUM	3.0	2.0	1338	2B	Marter	M5-6	M5-5	359.0	36	RCP	H2S damage throughout; Long. Fracture @ 76'-117'	FCIPP	359	1	2	\$ 55,350.00
MEDIUM	3.0	2.0	1337	2B	Marter	M5-5	M5-4	335.0	42	RCP	H2S damage throughout	FCIPP	335	0	0	\$ 50,250.00
MEDIUM	3.0	2.0	1333	2B	Marter	M5-4	M5-3	213.0	42	RCP	H2S damage throughout	FCIPP	213	0	0	\$ 31,950.00
MEDIUM	3.0	2.0	1589	2C	Marter	M6-1-1	M6-1-1A	79.0	36	RCP	H2S damage throughout	FCIPP	79	0	2	\$ 12,850.00
MEDIUM	3.0	2.1	1332	2C	Marter	M6-1-1	M5-3	285.0	36	RCP	H2S damage throughout	FCIPP	285	0	6	\$ 45,750.00
MEDIUM	3.0	2.2	686	2C	Hawthorne	M5-1-2-9	M5-1-2-8	203.0	21	RCP	H2S damage throughout	FCIPP	203	0	5	\$ 21,785.00
MEDIUM	3.0	2.1	685	2C	Hawthorne	M5-1-2-8	M5-1-2-7	261.0	21	RCP	H2S damage throughout	FCIPP	261	0	6	\$ 27,795.00
MEDIUM	3.0	2.2	684	2C	Hawthorne	M5-1-2-7	M5-1-2-6	228.0	24	RCP	H2S damage throughout	FCIPP	228	0	8	\$ 29,080.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.1	683	2C	Hawthorne	M5-1-2-6	M5-1-2-5	211.0	24	RCP	H2S damage throughout	FCIPP	211	0	6	\$ 26,210.00
MEDIUM	3.0	2.1	1348	2C	Hawthorne	M5-1-2-5	M5-1-2-4	339.0	30	RCP	H2S damage throughout; Lift Holes throughout	FCIPP	339	0	10	\$ 45,680.00
MEDIUM	3.0	2.0	1347	2C	Hawthorne	M5-1-2-4	M5-1-2-3	227.0	30	RCP	H2S damage throughout; Lift Holes throughout	FCIPP	227	0	7	\$ 30,740.00
MEDIUM	3.1	2.3	1346	2C	Hawthorne	M5-1-2-3	M5-1-2-2	211.0	30	RCP	H2S damage throughout; Lift Holes throughout	FCIPP	211	0	7	\$ 28,820.00
MEDIUM	2.7	2.1	1345	2C	Hawthorne	M5-1-2-2	M5-1-2-1	196.0	36	RCP	H2S damage throughout; Long. Crack @ 134'-196'	FCIPP	196	0	7	\$ 32,900.00
MEDIUM	2.9	2.1	1342	2C	Hawthorne	M5-1-2-1	M5-1-2	269.0	36	RCP	H2S damage throughout; Long. Crack @ 252'-269'	FCIPP	269	0	5	\$ 42,850.00
MEDIUM	3.8	1.9	1152	2C	Wedgewood	M5-1-4-7-2	M5-1-4-7-2A	163.0	10	RCP	H2S damage throughout	FCIPP	163	0	3	\$ 8,835.00
MEDIUM	3.0	2.0	1641	2C	Wedgewood	M5-1-4-7-1	M5-1-4-7-2	13.0	12	RCP	H2S damage throughout; Long. Fracture @ 8'	FCIPP	13	0	0	\$ 780.00
MEDIUM	3.9	1.5	1627	2C	Wedgewood	M5-1-4-7-1	M5-1-4-7	139.0	12	RCP	H2S damage throughout	FCIPP	139	0	0	\$ 8,340.00
MEDIUM	4.0	1.0	654	2C	Anita	M5-1-4-7	M5-1-4-6A	35.0	27	RCP	H2S damage throughout	FCIPP	35	0	0	\$ 4,200.00
MEDIUM	4.0	1.7	653	2C	Anita	M5-1-4-6A	M5-1-4-6	328.0	27	RCP	H2S damage throughout	FCIPP	328	1	10	\$ 44,860.00
MEDIUM	3.9	1.9	652	2C	Anita	M5-1-4-6	M5-1-4-5	393.0	27	RCP	H2S damage throughout; Long. Fracture @ 264'-345'	FCIPP	393	0	14	\$ 54,160.00
MEDIUM	3.0	2.3	651	2C	Anita	M5-1-4-5	M5-1-4-4	342.0	30	RCP	H2S damage throughout; Reversal needed due to roots at joint @ 254'. Reversal: Reached point of previous inspection	FCIPP	342	0	12	\$ 47,040.00
MEDIUM	2.7	2.0	1349	2C	Anita	M5-1-4-4	M5-1-4-3	353.0	30	RCP	H2S damage throughout	FCIPP	353	0	14	\$ 49,360.00
MEDIUM	3.0	2.1	1350	2C	Anita	M5-1-4-3	M5-1-4-2	349.0	30	RCP	H2S damage throughout	FCIPP	349	1	13	\$ 48,880.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	1351	2C	Anita	M5-1-4-2	M5-1-4-1	264.0	30	RCP	H2S damage throughout	FCIPP	264	1	9	\$ 36,680.00
MEDIUM	3.0	2.1	1354	2B	Marter	M5-1-5	M5-1-6	117.0	30	RCP	H2S damage throughout	FCIPP	117	0	0	\$ 14,040.00
MEDIUM	3.0	2.0	1353	2B	Marter	M5-1-5	M5-1-4	353.0	30	RCP	H2S damage throughout	FCIPP	353	0	2	\$ 43,360.00
MEDIUM	3.0	2.0	1344	2B	Marter	M5-1-4	M5-1-3	329.0	36	RCP	H2S damage throughout	FCIPP	329	0	3	\$ 50,850.00
MEDIUM	3.0	2.0	1343	2C	Marter	M5-1-3	M5-1-2	30.0	42	RCP	H2S damage throughout	FCIPP	30	0	0	\$ 4,500.00
MEDIUM	3.0	2.1	1341	2C	Marter	M5-1-2	M5-1-1	292.0	42	RCP	H2S damage throughout	FCIPP	292	1	1	\$ 44,800.00
MEDIUM	3.0	2.0	1334	2B	Marter	M5-3	M5-2	41.0	48	RCP	H2S damage throughout	FCIPP	41	0	0	\$ 7,175.00
MEDIUM	2.9	2.0	12	2C	Lee Ct	M7-11-2	M7-11-1	98.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	98	0	0	\$ 5,880.00
MEDIUM	3.0	2.1	13	2C	Vernier	M7-11-1A	M7-11-1	88.0	12	RCP	H2S damage throughout; Drop Connection @ 86'	FCIPP	88	0	3	\$ 6,780.00
MEDIUM	3.0	2.1	10	2C	Vernier	M7-11-1	M7-11	138.0	12	RCP	H2S damage throughout	FCIPP	138	0	1	\$ 8,780.00
MEDIUM	2.9	2.0	1158	2C	Lochmoor	M7-10B-1	M7-10B	65.0	15	RCP	H2S damage throughout	FCIPP	65	0	0	\$ 4,225.00
MEDIUM	3.0	2.1	9	2C	Christine	M7-8-2	M7-8-1	183.0	12	RCP	H2S damage throughout	FCIPP	183	0	7	\$ 14,480.00
MEDIUM	3.0	2.3	8	2C	Christine	M7-8-1	M7-8	158.0	12	RCP	H2S damage throughout	FCIPP	158	0	1	\$ 9,980.00
MEDIUM	3.0	2.0	4	2C	Young	M7-3-2	M7-3-3	161.0	12	RCP	H2S damage throughout; Long. Fracture @ 143'-151'	FCIPP	161	1	4	\$ 12,160.00
MEDIUM	3.0	3.0	5	2C	Young	M7-3-2-1	M7-3-2	54.0	12	RCP	H2S damage throughout	FCIPP	54	0	1	\$ 3,740.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	2	2C	Wendy	M7-3-1A	M7-3-1	54.0	12	RCP	H2S damage throughout	FCIPP	54	0	0	\$ 3,240.00
MEDIUM	3.0	2.0	7	2C	Wendy	M7-3-1	M7-3	167.0	12	RCP	H2S damage throughout	FCIPP	167	0	0	\$ 10,020.00
MEDIUM	3.0	2.0	1648	2C	Vernier	M7-12	M7-11A	19.0	30	RCP	H2S damage throughout	FCIPP	19	0	0	\$ 2,280.00
MEDIUM	3.0	2.0	1367	2C	Vernier	M7-11A	M7-11	288.0	30	RCP	H2S damage throughout; Asphalt in invert @ 0'-13'	FCIPP	288	0	2	\$ 35,560.00
MEDIUM	3.0	1.0	10929	2C	Vernier	M7-11	M7-10D	24.0	30	RCP	H2S damage throughout	FCIPP	24	0	0	\$ 2,880.00
MEDIUM	3.0	2.0	10928	2C	Vernier	M7-11A	M7-10C	36.0	30	RCP	H2S damage throughout	FCIPP	36	0	1	\$ 4,820.00
MEDIUM	3.0	2.0	1366	2C	Vernier	M7-10C	M7-10B	200.0	30	RCP	H2S damage throughout	FCIPP	200	0	1	\$ 24,500.00
MEDIUM	3.0	2.0	1365	2C	Vernier	M7-10B	M7-10A	52.0	30	RCP	H2S damage throughout	FCIPP	52	0	2	\$ 7,240.00
MEDIUM	3.0	2.1	1364	2C	Vernier	M7-10A	M7-8	139.0	30	RCP	H2S damage throughout	FCIPP	139	0	3	\$ 18,180.00
MEDIUM	3.0	2.0	1363	2C	Vernier	M7-8	M7-7A	77.0	30	RCP	H2S damage throughout	FCIPP	77	0	0	\$ 9,240.00
MEDIUM	3.0	1.0	1657	2C	Vernier	M7-7	M7-7A	10.0	30	RCP	H2S damage throughout	FCIPP	10	0	0	\$ 1,200.00
MEDIUM	3.0	2.0	1362	2C	Vernier	M7-7	M7-6	199.0	30	RCP	H2S damage throughout	FCIPP	199	0	0	\$ 23,880.00
MEDIUM	3.0	2.1	1361	2C	Vernier	M7-6	M7-5	127.0	30	RCP	H2S damage throughout	FCIPP	127	0	1	\$ 15,740.00
MEDIUM	3.0	1.0	1658	2C	Vernier	M7-5	M7-5A	73.0	30	RCP	H2S damage throughout	FCIPP	73	0	0	\$ 8,760.00
MEDIUM	3.0	2.0	1360	2C	Vernier	M7-5A	M7-4	323.0	30	RCP	H2S damage throughout	FCIPP	323	0	1	\$ 39,260.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	1359	2C	Vernier	M7-4	M7-3	196.0	30	RCP	H2S damage throughout	FCIPP	196	0	1	\$ 24,020.00
MEDIUM	3.0	2.0	1358	2C	Vernier	M7-2	M7-3	151.0	30	RCP	H2S damage throughout	FCIPP	151	0	1	\$ 18,620.00
MEDIUM	3.0	2.0	882	3A	Westbrook	M2-4-5-2	M2-4-5-1	63.0	12	RCP	H2S damage throughout	FCIPP	63	0	3	\$ 5,280.00
MEDIUM	3.0	2.2	874	3A	Westbrook	M2-4-5-1	M2-4-5	223.0	12	RCP	H2S damage throughout; Lateral @ 150' possibly capped	FCIPP	223	0	4	\$ 15,380.00
MEDIUM	2.9	2.2	881	3A	Centerbrook	M2-4-3-1	M2-4-3-2	90.0	12	RCP	H2S damage throughout; US MH buried, survey abandoned approx 15' short due to deposits from lateral	FCIPP	106	0	5	\$ 8,860.00
MEDIUM	2.9	2.1	880	3A	Eastbrook	M2-4-2-2	M2-4-2-1	203.0	12	RCP	H2S damage throughout	FCIPP	203	0	9	\$ 16,680.00
MEDIUM	2.8	2.0	878	3A	Yorktown	M2-4-9	M2-4-8	182.0	15	RCP	H2S damage throughout; Long. Crack @ 19'-67'	FCIPP	182	0	5	\$ 14,330.00
MEDIUM	3.0	2.0	877	3A	Yorktown	M2-4-8	M2-4-7	174.0	15	RCP	H2S damage throughout	FCIPP	174	0	5	\$ 13,810.00
MEDIUM	3.0	2.0	876	3A	Yorktown	M2-4-7	M2-4-6	154.0	21	RCP	H2S damage throughout	FCIPP	154	0	5	\$ 17,130.00
MEDIUM	3.0	2.0	868	3A	Yorktown	M2-4-6	M2-4-5	175.0	21	RCP	H2S damage throughout	FCIPP	175	0	5	\$ 19,125.00
MEDIUM	3.0	2.0	875	3A	Yorktown	M2-4-5	M2-4-4	158.0	24	RCP	H2S damage throughout	FCIPP	158	0	3	\$ 18,880.00
MEDIUM	3.0	2.0	873	3A	Yorktown	M2-4-4	M2-4-3	106.0	24	RCP	H2S damage throughout	FCIPP	106	0	3	\$ 13,160.00
MEDIUM	3.0	2.1	872	3A	Yorktown	M2-4-3	M2-4-2	284.0	24	RCP	H2S damage throughout	FCIPP	284	0	6	\$ 34,240.00
MEDIUM	3.0	2.0	871	3A	Yorktown	M2-4-2	M2-4-1	145.0	27	RCP	H2S damage throughout	FCIPP	145	0	2	\$ 18,400.00
MEDIUM	3.0	2.0	866	3A	Edmunton	M2-7-3	M2-7-2	111.0	12	RCP	H2S damage throughout; Long. Crack @ 94'	FCIPP	111	0	0	\$ 6,660.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	2.9	2.0	867	3A	Edmunton	M2-7-2	M2-7-1	330.0	12	RCP	H2S damage throughout	FCIPP	330	0	9	\$ 24,300.00
MEDIUM	3.0	2.1	865	3A	Edmunton	M2-7-1	M2-7	378.0	15	RCP	H2S damage throughout	FCIPP	378	4	10	\$ 31,570.00
MEDIUM	3.0	2.0	1310	3A	Marter	M2-4-1	M2-4	215.0	30	RCP	H2S damage throughout; Lift Holes throughout	FCIPP	215	0	0	\$ 25,800.00
MEDIUM	2.8	2.2	1045	3A	Goethe	M2-12A	M2-12	302.0	12	RCP	H2S damage throughout	FCIPP	302	0	0	\$ 18,120.00
MEDIUM	3.0	2.2	890	3A	Blairmoor Ct	M2-8-1	M2-8	262.0	15	RCP	H2S damage throughout	FCIPP	262	1	8	\$ 21,530.00
MEDIUM	2.6	2.0	888	3A	Blairmoor Ct	M2-8-2	M2-1-5	227.0	12	RCP	H2S damage throughout; Long. Crack @ 18'-121'	FCIPP	227	0	9	\$ 18,120.00
MEDIUM	2.8	2.0	887	3A	Blairmoor Ct	M2-1-5	M2-1-4	228.0	12	RCP	H2S damage throughout; Cir Fracture @ 225'	FCIPP	228	0	6	\$ 16,680.00
MEDIUM	3.2	1.0	963	3A	Aline	G15-1	G15	47.0	10	RCP	H2S damage throughout; Broken Soil Visible @ 44'	FCIPP	47	0	0	\$ 2,115.00
MEDIUM	3.0	1.7	854	3A	Aline	G15-1	G14-1	324.0	8	RCP	H2S damage throughout; Long. Fracture @ 314'; Cir Fracture @ 321'	FCIPP	324	0	6	\$ 17,580.00
MEDIUM	2.9	1.3	851	3A	Aline	G14-1	G14	47.0	8	RCP	H2S damage throughout; Cir Fracture @ 45'	FCIPP	47	0	0	\$ 2,115.00
MEDIUM	2.7	2.0	853	3A	Aline	G14-1	G13-1	301.0	8	RCP	H2S damage throughout majority of line; Hinge Fracture 2 @ 3'-22'; Long. Fracture @ 27'-50'	FCIPP	301	0	6	\$ 16,545.00
MEDIUM	2.9	1.9	850	3A	Aline	G13-2	G13-1	116.0	8	RCP	H2S damage throughout; Long. Fracture throughout	FCIPP	116	0	3	\$ 6,720.00
MEDIUM	2.7	1.0	297	3A	Aline	G13-1	G13	45.0	8	RCP	H2S damage throughout; Misc Fractures throughout	FCIPP	45	0	0	\$ 2,025.00
MEDIUM	3.0	2.2	843	3A	Aline	G14	G13	303.0	18	RCP	H2S damage throughout; Long. Crack @ 48'-58'	FCIPP	303	0	6	\$ 25,725.00
MEDIUM	2.9	2.2	842	3A	Aline	G13	G12	159.0	18	RCP	H2S damage throughout; Long. Crack @ 150'-159'	FCIPP	159	0	3	\$ 13,425.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	958	3A	Aline	M5-10-2	M5-9	45.0	10	RCP	Surface Damage - Aggregatye Visible	FCIPP	45	0	0	\$ 2,025.00
MEDIUM	3.0	2.0	1028	3A	Brys	G11-3	G11-4	177.0	15	RCP	H2S damage throughout	FCIPP	177	0	8	\$ 15,505.00
MEDIUM	3.0	2.0	644	3A	Brys	G11-3	G11-2	331.0	15	RCP	H2S damage throughout	FCIPP	331	0	16	\$ 29,515.00
MEDIUM	3.0	2.5	643	3A	Brys	G11-2	G11-1	373.0	18	RCP	H2S damage throughout	FCIPP	373	6	19	\$ 40,475.00
MEDIUM	3.0	2.3	642	3A	Brys	G11-1	G11	150.0	18	RCP	H2S damage throughout	FCIPP	150	0	5	\$ 13,750.00
MEDIUM	3.0	2.0	609	3B	Roslyn	M5-5E	M5-5D	201.0	24	RCP	Surface damage - Aggregate visible T/O	FCIPP	201	0	10	\$ 27,110.00
MEDIUM	3.0	2.0	608	3B	Roslyn	M5-5D	M5-5A	164.0	24	RCP	Surface damage - Aggregate visible T/O	FCIPP	164	0	0	\$ 18,040.00
MEDIUM	3.0	2.0	611	3B	Alley (Roslyn/Hollywood)	G9-9	G9-8	145.0	12	RCP	H2S damage throughout; Hole @ 88'	FCIPP	145	0	6	\$ 11,700.00
MEDIUM	3.0	2.0	1206	3B	Alley (Roslyn/Hollywood)	G9-8	G9-7	171.0	12	RCP	H2S damage throughout; Long. Fracture @ 166'	FCIPP	171	0	6	\$ 13,260.00
MEDIUM	3.0	2.0	632	3B	Alley (Roslyn/Hollywood)	G9-7	MA8-5	51.0	18	RCP	H2S damage throughout	FCIPP	51	0	0	\$ 3,825.00
MEDIUM	3.0	2.0	631	3B	Alley (Roslyn/Hollywood)	MA8-5	MA8-4	156.0	18	RCP	H2S damage throughout	FCIPP	156	0	5	\$ 14,200.00
MEDIUM	3.0	2.0	634	3B	Alley (Roslyn/Hollywood)	MA8-4	MA8-3	43.0	18	RCP	H2S damage throughout	FCIPP	43	0	0	\$ 3,225.00
MEDIUM	3.0	2.0	633	3B	Alley (Roslyn/Hollywood)	MA8-3	MA8-2	110.0	18	RCP	H2S damage throughout; Drop Connection @ 106'	FCIPP	110	0	1	\$ 8,750.00
MEDIUM	3.0	2.0	1614	3B	Alley (Roslyn/Hollywood)	G9-5B	G9-5A	160.0	12	RCP	H2S damage throughout; Cir Fracture @ 2'	FCIPP	160	0	5	\$ 12,100.00
MEDIUM	3.0	1.0	625	3B	Hampton	M5-4-4	M5-4-3	212.0	24	RCP	H2S damage throughout	FCIPP	212	0	8	\$ 27,320.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	1.0	1211	3B	Hampton	M5-4-3	M5-4-2	10.0	24	RCP	H2S damage throughout	FCIPP	10	0	0	\$ 1,100.00
MEDIUM	3.0	1.0	967	3B	Hollywood	G8-1A	G8	25.0	12	RCP	H2S damage throughout	FCIPP	25	0	0	\$ 1,500.00
MEDIUM	3.0	5.0	650	3B	Anita	M5-1-4A	M5-1-4	330.0	21	RCP	Moderate H2S damage throughout	Dig Lateral @ 192', 194', Dig lat at 277'-277' dig done in 0160-0413 (CRITICAL); FCIPP (MED)	330	0	18	\$ 40,350.00
MEDIUM	3.0	2.8	593	3B	Wicks	M5-1-5-4	M5-1-5-5	123.0	12	RCP	Surface Damage - Aggregate Visible, Long. Fracture(11'-123')	FCIPP	123	0	3	\$ 8,880.00
MEDIUM	3.0	1.0	291	3B	Charlevoix	M5-1-5-4A	M5-1-5-4	166.0	12	RCP	H2S damage throughout; Long. Fracture @ 49'	FCIPP	166	0	3	\$ 11,460.00
MEDIUM	3.0	1.9	293	3B	Wicks	M5-1-5-2A	M5-1-5-2	52.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	52	0	0	\$ 3,120.00
MEDIUM	3.0	2.0	900	3B	Charlevoix	C4	C3	8.0	33	RCP	Surface Damage - Aggregate Visible	FCIPP	8	0	0	\$ 1,200.00
MEDIUM	3.0	2.0	1214	3B	Charlevoix	C3	C2	337.0	32	RCP	H2S damage throughout	FCIPP	337	0	1	\$ 500.00
MEDIUM	3.0	2.0	901	3B	Charlevoix	C2	C1	329.0	36	RCP	H2S damage throughout	FCIPP	329	0	0	\$ 49,350.00
MEDIUM	3.0	1.0	1209	3B	Charlevoix	C1-1A	C1-1	10.0	18	RCP	H2S damage throughout	FCIPP	10	0	0	\$ 750.00
MEDIUM	3.0	2.0	679	3B	Charlevoix	C1-1	C1	332.0	24	RCP	H2S damage throughout; Drop connection @ 328'	FCIPP	332	1	2	\$ 38,020.00
MEDIUM	3.0	2.0	669	3B	Goethe	G8-3	G8-2	163.0	18	RCP	H2S damage throughout; Long. Fracture @ 152', 154'	FCIPP	163	0	0	\$ 12,225.00
MEDIUM	3.0	2.0	670	3B	Goethe	G8-2	G8-1	305.0	21	RCP	H2S damage throughout	FCIPP	305	0	1	\$ 29,475.00
MEDIUM	3.0	1.0	1675	7A	Chalfonte	GP3-2-5	GP3-2-4	127.0	24	RCP	H2S damage throughout	FCIPP	127	0	0	\$ 13,970.00
MEDIUM	3.0	2.0	169	7A	Chalfonte	GP3-2-4	GP3-2-3	21.0	24	RCP	H2S damage throughout	FCIPP	21	0	0	\$ 2,310.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	168	7A	Chalfonte	GP3-2-2	GP3-2-3	102.0	24	RCP	H2S damage throughout; Brick Patch @ 10'	FCIPP	102	0	1	\$ 11,720.00
MEDIUM	3.0	1.0	170	7A	Chalfonte	GP3-2-2	GP3-2-1	26.0	24	RCP	H2S damage throughout	FCIPP	26	0	0	\$ 2,860.00
MEDIUM	3.0	2.3	31	8A	Coventry	M8-22	M8-21	106.0	15	RCP	Surface Damage - Aggregate Visible	FCIPP	106	0	5	\$ 9,390.00
MEDIUM	3.0	2.0	1022	8B	N Renaud	M11-7-1-5	M11-7-1-4	218.0	12	RCP	H2S damage throughout	FCIPP	218	0	0	\$ 13,080.00
MEDIUM	3.0	2.0	454	8B	N Renaud	M11-7-1-4	M11-7-1-3	153.0	15	RCP	M11-7-1-3 is buried. H2S damage throughout; Long. Fracture @ 139', 142'	FCIPP	153	0	2	\$ 10,945.00
MEDIUM	3.0	2.0	455	8B	N Renaud	M11-7-1-3	M11-7-1-2	114.0	15	RCP	H2S damage throughout; Pieces of sewer snake throughout	FCIPP	114	0	3	\$ 8,910.00
MEDIUM	3.0	1.9	456	8B	N Renaud	M11-7-1-2	M11-7-1-1	327.0	15	RCP	H2S damage throughout	FCIPP	327	0	6	\$ 24,255.00
MEDIUM	3.0	2.0	470	8B	N Renaud	M13-10	M13-9	241.0	21	RCP	H2S damage throughout	FCIPP	241	0	8	\$ 26,895.00
MEDIUM	3.0	2.0	473	8B	N Renaud	M13-8	M13-9	25.0	21	RCP	H2S damage throughout	FCIPP	25	0	0	\$ 2,375.00
MEDIUM	3.0	2.0	472	8B	N Renaud	M13-8	M13-7	40.0	24	RCP	H2S damage throughout; Long. Crack throughout	FCIPP	40	0	0	\$ 4,400.00
MEDIUM	3.0	2.0	471	8B	N Renaud	M13-7	M13-6	239.0	24	RCP	H2S damage throughout; Long. Crack @ 11'-35'	FCIPP	239	0	7	\$ 29,790.00
MEDIUM	3.0	2.0	1592	8B	N Renaud	M13-6	M13-5	248.0	24	RCP	H2S damage throughout; Long. Crack @ 110'-144'	FCIPP	248	0	10	\$ 32,280.00
MEDIUM	3.0	2.0	1593	8B	N Renaud	M13-5	M13-4	249.0	24	RCP	H2S damage throughout	FCIPP	249	0	10	\$ 32,390.00
MEDIUM	3.0	2.5	474	8B	N Renaud	M13-4	M13-3	169.0	24	RCP	H2S damage throughout	FCIPP	169	0	4	\$ 20,590.00
MEDIUM	3.0	2.0	468	8B	N Renaud	M13-3	M13-2	334.0	27	RCP	H2S damage throughout	FCIPP	334	0	8	\$ 44,080.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	SW490	6A	Mack	M14-10A	M14-10	78.0	12	RCP	Surface Damage Aggregate Visible T/O, Long. Crack(69')	FCIPP	78	0	0	\$ 4,680.00
MEDIUM	3.0	2.0	SW487	6A	S Renaud	M14-8	M14-7	295.0	21	RCP	Surface Damage Aggregate Visible T/O	FCIPP	295	0	9	\$ 32,525.00
MEDIUM	3.0	2.0	SW486	6A	S Renaud	M14-7	M14-6	294.0	21	RCP	Surface Damage Aggregate Visible T/O, Hinge Fracture(134')	FCIPP	294	0	7	\$ 31,430.00
MEDIUM	3.0	2.0	SW485	6A	S Renaud	M14-6	M14-5	299.0	24	RCP	Surface Damage Aggregate Visible T/O	FCIPP	299	0	10	\$ 37,890.00
MEDIUM	3.0	2.0	SW484	6A	S Renaud	M14-5	M14-4	346.0	24	RCP	Surface Damage Aggregate Visible T/O, Lt MD at select joints T/O	FCIPP	346	0	9	\$ 42,560.00
MEDIUM	3.0	2.0	SW483	6A	N Renaud	M14-2-8	M14-8	227.0	12	RCP	Surface Damage Aggregate Visible T/O, Med OS joint(122', 126')	FCIPP	227	0	4	\$ 15,620.00
MEDIUM	3.0	2.0	SW482	6A	N Renaud	M14-2-8	M14-2-7	105.0	15	RCP	Surface Damage Aggregate Visible T/O, Long. Fracture(17', 20'-90'), Lt MD at joints(3'-20')	FCIPP	105	0	3	\$ 8,325.00
MEDIUM	3.0	2.0	SW210	6A	N Renaud	M14-2-7	M14-2-6	293.0	18	RCP	Surface Damage Aggregate Visible T/O, Long. Crack(11')	FCIPP	293	0	10	\$ 26,975.00
MEDIUM	3.0	2.0	SW211	6A	N Renaud	M14-2-6	M14-2-5	302.0	18	RCP	Surface Damage Aggregate Visible(243'-302'), Long. Fracture(290', 293'-302')	FCIPP	302	3	10	\$ 29,150.00
MEDIUM	3.0	2.5	SW479	6A	N Renaud	M14-2-5	M14-2-4	296.0	21	RCP	Surface Damage Aggregate Visible T/O, Long. Fracture(221'-296')	FCIPP	296	0	8	\$ 32,120.00
MEDIUM	3.0	2.0	SW481	6A	N Renaud	M14-2-4	M14-2-3	304.0	21	RCP	Surface Damage Aggregate Visible T/O	FCIPP	304	0	7	\$ 32,380.00
MEDIUM	3.0	2.0	SW513	6A	Sunningdale	M9-7	M9-6	422.0	18	RCP	Surface Damage-aggregate visible T/O, Long. Crack(233')	FCIPP	422	0	6	\$ 34,650.00
MEDIUM	3.0	2.0	SW514	6A	Sunningdale	M9-6	M9-5	450.0	24	RCP	Surface Damage-aggregate visible T/O	FCIPP	450	1	4	\$ 52,000.00
MEDIUM	3.0	2.0	SW515	6A	Sunningdale	M9-5	M9-4	172.0	27	RCP	Surface Damage-aggregate visible T/O, Lt MD at select joints T/O	FCIPP	172	0	1	\$ 21,140.00
MEDIUM	3.0	1.0	SW12058	6B	Oxford	M17-1-4	M17-1-3A	40.0	24	RCP	Surface Damage-aggregate visible T/O	FCIPP	40	0	2	\$ 5,400.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.1	2.0	SW271	6B	Oxford	M17-1-3A	M17-1-3	158.0	24	RCP	Surface Damage-aggregate visible T/O, Broken pipe(111')	FCIPP	158	0	5	\$ 19,880.00
MEDIUM	3.0	2.0	SW12059	6B	Oxford	M17-1-3	M17-1-2A	149.0	24	RCP	Surface Damage-aggregate visible T/O	FCIPP	149	0	4	\$ 18,390.00
MEDIUM	3.0	2.0	SW431	6B	Oxford	M17-1-2A	M17-1-2	216.0	24	RCP	Surface Damage-aggregate visible T/O	FCIPP	216	0	10	\$ 28,760.00
MEDIUM	3.0	2.0	SW428	6B	N Oxford	M17-5	M17-4A	116.0	21	RCP	MH 4A found, Surface damage aggregate visible T/O	FCIPP	116	0	3	\$ 12,520.00
MEDIUM	3.0	2.0	SW428A	6B	N Oxford	M17-4A	M17-4	305.0	21	RCP	Surface Damage-aggregate visible T/O	FCIPP	305	0	10	\$ 33,975.00
MEDIUM	3.0	2.0	SW429	6B	N Oxford	M17-4	M17-3A	404.0	24	RCP	Surface Damage-aggregate visible T/O, Long. Fracture(283', 334')	FCIPP	404	0	14	\$ 51,440.00
MEDIUM	3.0	2.0	SW12057	6B	N Oxford	M17-3A	M17-3	43.0	24	RCP	Surface Damage-aggregate visible T/O	FCIPP	43	0	1	\$ 5,230.00
MEDIUM	3.0	3.0	SW430	6B	N Oxford	M17-3	M17-2	400.0	27	RCP	Surface Damage-aggregate visible T/O, Hvy roots blocking mainline(230'), Runners at joints(336', 340')	FCIPP	400	0	19	\$ 57,500.00
MEDIUM	3.0	2.0	SW480	6B	N Renaud	M14-2-2	M14-2-3	392.0	21	RCP	Surface Damage Aggregate Visible T/O	FCIPP	392	0	12	\$ 43,240.00
MEDIUM	3.0	2.0	SW478	6B	N Renaud	M14-2-2	M14-2-1	63.0	21	RCP	Surface Damage Aggregate Visible T/O	FCIPP	63	0	1	\$ 6,485.00
MEDIUM	3.0	2.0	SW475	6B	N Renaud	M14-2-1	M14-2	215.0	21	RCP	Surface Damage Aggregate Visible T/O, Heavy Roots at joint(1')	FCIPP	215	0	4	\$ 22,425.00
MEDIUM	3.0	2.0	SW476	6B	S Renaud	M14-3	M14-2	142.0	27	RCP	Surface Damage Aggregate Visible T/O	FCIPP	142	0	5	\$ 19,540.00
MEDIUM	3.0	2.0	SW921	6B	S Renaud	M14-2	M14-1	120.0	33	RCP	Surface Damage Aggregate Visible T/O, Lt MD at joints(58', 98')	FCIPP	120	0	1	\$ 18,500.00
MEDIUM	3.0	3.0	SW922	6B	S Renaud	M14-1	M14	60.0	33	RCP	Surface Damage Aggregate Visible T/O, Lt Roots at joints(4', 8', 13')	FCIPP	60	0	1	\$ 9,500.00
MEDIUM	3.0	1.0	SW923	6B	S Renaud	M14	Blind Tap South	20.0	33	RCP	Surface Damage Aggregate Visible T/O	FCIPP	20	0	0	\$ 3,000.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	SW464	6B	S Renaud	M13-2-4	M13-2-3	233.0	24	RCP	Surface Damage Aggregate Visible T/O, Long. Crack(13'-79')	FCIPP	233	0	8	\$ 29,630.00
MEDIUM	3.0	2.0	SW466	6B	S Renaud	M13-2-3	M13-2-2	250.0	24	RCP	Surface Damage Aggregate Visible T/O, Long. Crack(53'-189')	FCIPP	250	0	10	\$ 32,500.00
MEDIUM	3.0	2.0	SW465	6B	S Renaud	M13-2-2	M13-2-1	249.0	24	RCP	Surface Damage Aggregate Visible T/O, Long. Crack(134'-249')	FCIPP	249	0	10	\$ 32,390.00
MEDIUM	3.0	2.0	SW467	6B	S Renaud	M13-2-1	M13-2A	162.0	21	RCP	Surface Damage Aggregate Visible T/O, Long. Crack(54', 139')	FCIPP	162	0	4	\$ 17,390.00
MEDIUM	3.0	2.0	SW1169	6B	S Renaud	M13-2A	M13-2	157.0	21	RCP	Surface Damage Aggregate Visible T/O, Long. Crack(19'-157')	FCIPP	157	0	3	\$ 16,415.00
MEDIUM	3.0	2.0	SW1012	6B	Sunningdale	M9-4	M9-3	126.0	27	RCP	Surface Damage aggregate visible T/O, Lt MD at select jonts T/O	FCIPP	126	0	0	\$ 15,120.00
MEDIUM	3.0	2.0	SW1113	6B	Sunningdale	M9-3	M9-2	299.0	30	RCP	Surface Damage aggregate visible T/O, Lt MD at select jonts T/O, Alignment change(62', 98')	FCIPP	299	0	3	\$ 37,380.00
MEDIUM	3.0	2.0	SW1114	6B	Sunningdale	M9-2	M9-1	273.0	30	RCP	Surface Damage aggregate visible T/O, Lt MD at jonts T/O	FCIPP	273	1	3	\$ 34,760.00
MEDIUM	3.0	2.0	SW933	6B	Oxford	M17-1-6	M17-1-5A	87.0	18	RCP	Surface Damage aggregate visible T/O	FCIPP	87	0	4	\$ 8,525.00
MEDIUM	3.0	2.0	SW433	6B	Oxford	M17-1-5A	M17-1-5	280.0	21	RCP	Surface Damage aggregate visible T/O, Long Crack(123')	FCIPP	280	0	9	\$ 31,100.00
MEDIUM	3.0	2.0	SW954	6B	Oxford	M17-1-5	M17-1-4	150.0	21	RCP	Surface Damage aggregate visible T/O, Long. Fracture(111', 114'-150')	FCIPP	150	0	8	\$ 18,250.00
MEDIUM	3.0	2.0	SW445	8B	S Renaud	M11-7-2-5	M11-7-1-4	212.0	12	RCP	Surface Damage Aggregate Visible, Lt Roots at select joints	FCIPP	212	0	2	\$ 13,720.00
MEDIUM	3.0	2.2	SW446	8B	S Renaud	M11-7-2-5	M11-7-2-4	51.1	15	RCP	Surface Damage Aggregate Visible, Long. Crack(3'-30')	FCIPP	51.1	0	2	\$ 4,321.50
MEDIUM	3.0	2.0	SW441	8B	S Renaud	M11-7-2-4	M11-7-2-3	351.0	15	RCP	Surface Damage Aggregate Visible, Lt MD at select joints	FCIPP	351	0	8	\$ 26,815.00
MEDIUM	3.0	2.0	SW444	8B	S Renaud	M11-7-2-3	M11-7-2-2	76.0	15	RCP	Surface Damage Aggregate Visible, Lt MD at select joints T/O	FCIPP	76	0	1	\$ 5,440.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	SW443	8B	S Renaud	M11-7-2-2	M11-7-2-1	43.0	15	RCP	Surface Damage Aggregate Visible, Lt MD at select joints T/O	FCIPP	43	0	0	\$ 2,795.00
MEDIUM	3.0	2.0	SW442	8B	S Renaud	M11-7-2-1	M11-7-2	21.0	15	RCP	Surface Damage Aggregate Visible, Lt MD at select joints T/O	FCIPP	21	0	1	\$ 1,865.00
MEDIUM	3.0	2.0	SW461	8B	S Renaud	M13-2-7	M13-2-6	185.0	21	RCP	Surface Damage Aggregate Visible T/O, Long. Crack(44', 47'-67'), Survey abandoned(67')--Roots at lat, Reverse--Survey abandoned(118')--point of previous progress	FCIPP	185	0	5	\$ 20,075.00
MEDIUM	3.0	2.0	SW463	8B	S Renaud	M13-2-6	M13-2-5	26.0	21	RCP	Surface Damage Aggregate Visible T/O, Long. Crack(6'-26')	FCIPP	26	0	0	\$ 2,470.00
MEDIUM	3.0	2.0	SW462	8B	S Renaud	M13-2-5	M13-2-4	42.0	21	RCP	Surface Damage Aggregate Visible T/O, Circ. Fracture(36'),	FCIPP	42	0	0	\$ 3,990.00
MEDIUM	3.0	2.0	SW423	8B	N Oxford	M11-7-3-1	M11-7-3	111.0	15	RCP	Surface Damage Aggregate Visible T/O, Lt MD at select joints T/O	FCIPP	111	0	4	\$ 9,215.00
MEDIUM	3.0	2.0	SW425	8B	N Oxford	M17-7	M11-7-3	256.0	18	RCP	Surface Damage Aggregate Visible T/O, Lt MD at select joints	FCIPP	256	1	11	\$ 25,200.00
MEDIUM	3.0	1.8	SW9853	4A	Ridgemont	MA6C	MA6B	163.3	10	CP	Surface Damage - Roughness Increased, Long. Crack(9',15', 18'), Circ. Fracture(24', 59', 92'), Broken(159'), Lt MD and Lt Roots at joints T/O, Tap root at joint(45')	FCIPP	163.3	0	0	\$ 7,348.50
MEDIUM	3.5	2.0	SW1041	5C	Mack	MA56A-A	M56A	52.1	24	RCP	Surface Damage - Roughness Increased, Mult Crack(2'), Mult Fracture(4'-14'), Broken(7'), Hole(9.3'), Long. Crack(25')	FCIPP	52.1	0	0	\$ 5,731.00
MEDIUM	3.5	2.0	SW58	5C	Mack	M56A	M56B	85.3	24	RCP	Surface Damage - Aggregate Visible, Mult Crack(1'), Mult Fracture(78'), Concrete at joints(9', 10')	FCIPP	85.3	0	0	\$ 9,383.00
MEDIUM	3.0	2.0	SW1423	5C	Mack	MA47	MA46	219.0	45	RCP	Surface Damage - Aggregate Missing, Lt MD at joints T/O	FCIPP	219	1	4	\$ 2,500.00
MEDIUM	3.6	2.0	SW182	6C	Ford Court	MA28-10	MA28-9	100.3	12	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout. Infil Weeper at (28', 31', 34'). Crack Long. at (5'). Dripper at Lat (51'). Lt Roots in Mainline at Lat (54'). Dripper at Joint (92')	FCIPP	100.3	0	3	\$ 7,518.00
MEDIUM	3.8	1.6	SW1069	6C	Ford Court	MA28-9	MA28-8A	247.4	12	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout. Fracture Cir at (3'). Lt Roots in Mainline at Lat (8'). PVC Pipe from (42'-55', 91'-111', 143'-153'). Hole at (116'). Fracture Multiple at (241'). Broken at (246')	FCIPP	247.4	0	11	\$ 20,344.00
MEDIUM	3.8	1.9	SW1070	6C	Ford Court	MA28-8A	MA28-8	117.8	15	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout. Long Fractures Throughout.	FCIPP	117.8	0	4	\$ 9,657.00
MEDIUM	2.7	2.0	SW1071	6C	Ford Court	MA28-8-1	MA28-8	48.9	12	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout.	FCIPP	48.9	1	4	\$ 5,434.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.8	1.6	SW1061	6C	Norton Court	MA28-6	MA28-5	217.1	18	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout. Med Roots at Joint (172')	FCIPP	217.1	0	5	\$ 18,782.50
MEDIUM	3.8	1.7	SW1060	6C	Torrey	M20-13	M20-12	252.8	18	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout. Long. Cracks and Fractures Throughout. Lt Roots at Joints Throughout. Lats at 146.4' and 211' is protruding, hole w/void around seal.	FCIPP	252.8	2	4	\$ 21,960.00
MEDIUM	3.0	2.5	SW1063	6C	Torrey	GP2-4	GP2-3	283.1	12	RCP	Low to Moderate H2S damage throughout; Mult Misc Cracks/Fractures @ 10'-45'; Mult Fracture @ 103'; Deposits throughout	FCIPP	283	2	8	\$ 21,980.00
MEDIUM	3.0	2.0	SW51	6C	Torrey	GP2-2	GP2-1	169.5	15	RCP	Moderate H2S damage throughout; Long. Fracture @ 3'-17'; Mult Fracture @ 44', 160'; Long. Crack @ 84', 168'; Tap Roots @ 166'	Dig Lateral @ 95'; FCIPP	170	0	4	\$ 13,050.00
MEDIUM	2.5	2.0	SW1057	7A	Huntington	GP9-5	GP9-4	252.0	12	CP	Moderate H2S damage throughout; Long. Cracking/Fracturing @ 232'-248'; Infil Dripper @ 59'	FCIPP	252	0	7	\$ 18,620.00
MEDIUM	3.0	2.0	SW16649	7A	Esmt West of Holiday North of Cook	EOL North	GP9-3	121.0	12	CP	Moderate H2S damage throughout; Long. Cracking/Fracturing throughout	FCIPP	121	0	1	\$ 7,760.00
MEDIUM	3.0	2.0	SW1429	7A	Cook	GP12A	GP12	99.7	10	CP	Light H2S damage throughout; Long. Cracking /Fracturing throughout; Deposits throughout; Drop Connection @ 96'	FCIPP	100	0	3	\$ 6,000.00
MEDIUM	3.0	2.5	SW136	7A	Esmt between Blossom Ln & Kings Ct	GP11-1A	GP11-1	249.2	12	RCP	Light to Moderate H2S damage throughout; Long. Fracture @ 7'-26'; Cir Crack @ 128'; Roots/Deposits throughout	FCIPP	249	1	6	\$ 18,440.00
MEDIUM	3.5	2.0	SW162	7A	Esmt between Blossom Ln & Kings Ct	GP11-1	GP11	337.8	12	RCP	Light to Moderate H2S damage throughout; Hinge Fracturing @ 6'-28'; Long. Fracture @ 61'-65'; Deposits throughout	FCIPP	338	0	7	\$ 23,780.00
MEDIUM	3.5	2.0	0	7A	Chalfonte	GP3-2-5	GP3-2-4	127.3	24	RCP	Moderate H2S damage throughout	FCIPP	127	0	0	\$ 13,970.00
MEDIUM	3.0	2.0	SW170	7A	Chalfonte	GP3-2-2	GP3-2-1	23.9	24	RCP	Light to Moderate H2S damage throughout	FCIPP	24	0	0	\$ 2,640.00
MEDIUM	3.0	3.0	SW171	7A	Chalfonte	GP3-2-1	GP3-2	40.4	24	RCP	Moderate H2S damage throughout; Drop Connection @ 40', is mostly plugged with debris. Weir wall @ EOL	FCIPP	40	0	1	\$ 4,900.00
MEDIUM	3.0	2.0	SW16676	2C	Christine Ct	M7-8-1-A	M7-8-1	110.8	12	RCP	Light to Moderate H2S damage throughout; Deposits throughout	FCIPP	111	1	3	\$ 8,660.00
MEDIUM	4.0	3.0	SW909	3A	Brys	C5-2	G11	417.7	12	VCP	Mult Misc Cracks/Fractures throughout; Roots at connections throughout; Patched hole @ 98'; Hole Soil Visible @ 158'; Broken/Infil Dripper @ 262', looks like attempted patch (plastic bag/visqueen?); Point Repair @ 309'-312' (PVC), 409'-EOL (PVC); Minor Deformation @ 317'	FCIPP	418	8	22	\$ 40,080.00
MEDIUM	3.0	2.0	SW10947	6C	Mack	MA28-3A	MA28-3	189.9	15	RCP	Moderate H2S damage throughout; Cracks/Fractures in spots throughout; Drop Connection @ 188'	FCIPP	190	0	1	\$ 12,850.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	SW390	6C	Fairholme	M20-9-7	M20-9-6	115.5	12	RCP	Long. Cracks/Fractures throughout	FCIPP	116	0	4	\$ 8,960.00
MEDIUM	3.0	2.0	SW389	6C	Fairholme	M20-9-6	M20-9-5	239.2	12	RCP	Moderate H2S damage throughout; Broken in hub of lateral @ 155'	Dig Lateral @ 155' (MED); FCIPP (MED)	239	0	10	\$ 19,340.00
MEDIUM	3.5	2.5	SW382	6C	Fairholme	M20-9-3	M20-8-3	314.8	12	RCP	Moderate H2S damage throughout; Deposits/Roots throughout	FCIPP	315	0	6	\$ 21,900.00
MEDIUM	3.5	2.0	SW369	6C	Fairholme	M20B	M20A	330.1	15	RCP	Mult Misc Fracturing through 60'; Light to Moderate H2S damage throughout	FCIPP	330	1	7	\$ 25,450.00
MEDIUM	3.0	2.0	SW1065	6C	Marford	M20-9-3	M20-9-2	161.5	18	RCP	Moderate H2S damage throughout	FCIPP	162	0	1	\$ 12,650.00
MEDIUM	3.5	2.0	SW384	6C	Marford	M20-9-2A	M20-9-2	128.5	12	RCP	Moderate H2S damage throughout	FCIPP	129	0	2	\$ 8,740.00
MEDIUM	3.5	2.0	SW385	6C	Marford	M20-9-1	M20-9	270.2	21	RCP	Moderate H2S damage throughout; Hinge Fracture 3 @ 94'	FCIPP	270	0	2	\$ 26,650.00
MEDIUM	3.0	2.0	SW1058	6C	E Clairview Ct	M20-12	M20-11	383.5	21	RCP	Moderate H2S damage throughout; Large Tap Root at connection @ 95'; Long. Cracking in spots near EOL	FCIPP	384	0	8	\$ 40,480.00
MEDIUM	3.5	2.0	SW1054	6C	E Clairview Ct	M20-10-1	M20-10	176.7	18	RCP	Moderate H2S damage throughout; Deposits throughout	FCIPP	177	0	4	\$ 15,275.00
MEDIUM	3.5	2.0	SW386	6C	Clairview Ct	M20-10	M20-9	206.9	27	RCP	Moderate H2S damage throughout	FCIPP	207	0	2	\$ 25,840.00
MEDIUM	3.0	2.0	SW10944	6C	N of Clairview	M20-9	M20-8	270.9	36	RCP	Moderate H2S damage throughout	FCIPP	271	0	1	\$ 41,150.00
MEDIUM	3.0	2.0	SW927	6C	Baltree	M20-8	M20-7	122.6	36	RCP	Moderate H2S damage throughout	FCIPP	123	0	0	\$ 18,450.00
MEDIUM	3.0	2.0	SW379	6C	Baltree	M20-8-2	M20-8-1	112.6	15	RCP	Moderate H2S damage throughout	FCIPP	113	0	1	\$ 7,845.00
MEDIUM	3.5	2.0	SW378	6C	Baltree	M20-8-1	M20-8	272.4	15	RCP	Moderate H2S damage throughout	FCIPP	272	0	8	\$ 21,680.00
MEDIUM	3.0	2.0	SW928	6C	Holiday	M20-7	M20-6	166.3	36	RCP	Moderate H2S damage throughout	FCIPP	166	0	1	\$ 25,400.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
MEDIUM	3.0	2.0	SW373	6C	Ghesquiere	M20-6A	M20-6	270.0	12	RCP	SCIPP @ 0'-16'; 263'-EOL; Moderate H2S damage throughout	FCIPP	270	0	10	\$ 21,200.00
MEDIUM	3.0	2.0	SW370	6C	Ghesquiere	M20-4-1	M20-4A	258.9	12	RCP	Light to Moderate H2S damage throughout	FCIPP	259	0	8	\$ 19,540.00
MEDIUM	3.0	2.0	SW1166	6C	N of Emory Ct	M20-4A	Blind Tap	10.8	12	RCP	Cir Crack @ 1'; Long. Fracture @ 7'; Moderate H2S damage throughout	FCIPP	11	0	0	\$ 660.00
MEDIUM	3.0	2.0	SW361	6C	Paget Ct	M19-1-3	M19-1-2	107.1	18	RCP	Moderate H2S damage throughout	FCIPP	107	0	2	\$ 9,025.00
MEDIUM	3.0	2.0	SW360	6C	Paget Ct	M19-1-2	M19-1-1	74.1	18	RCP	Moderate H2S damage throughout	FCIPP	74	0	2	\$ 6,550.00
MEDIUM	3.5	2.0	SW354	6C	Elford	M19-4-3	M19-4-2	260.9	12	RCP	Moderate to Heavy H2S damage throughout	FCIPP	261	0	8	\$ 19,660.00
MEDIUM	3.5	2.0	SW352	6C	Elford	M19-4-2	M19-4-1	173.6	12	RCP	Moderate to Heavy H2S damage throughout; SCIPP @ 156'-EOL	FCIPP	174	0	1	\$ 10,940.00
MEDIUM	3.5	2.0	SW356	6C	Elford	M19-2-1	M19-2	144.7	15	RCP	Moderate H2S damage throughout; Large offset in lateral @ 80'	FCIPP	145	0	3	\$ 10,925.00
MEDIUM	2.5	2.0	SW955	8C	Fairway	M16-4	M16-3A	158.8	24	RCP	Light to Moderate H2S damage throughout; Lateral @ 139' appears to be broken inside	FCIPP	159	0	6	\$ 20,490.00
MEDIUM	3.0	2.0	SW394	6C	S Oxford	M16-3A	M16-3	260.8	24	RCP	Moderate H2S Damage throughout; Long. Fracturing in spots throughout	FCIPP	261	0	7	\$ 32,210.00
MEDIUM	3.0	2.0	SW344	6C	S Oxford	M16-2	M16-1A	23.8	27	RCP	Moderate H2S Damage throughout	FCIPP	24	0	1	\$ 3,380.00
MEDIUM	3.5	2.0	SW392	6C	S Oxford	M16-1A	M16-1	350.0	27	RCP	Moderate H2S damage throughout; Cannot tell if lateral @ 4' is capped/collapsed/blocked by minerals; Lateral @ 97' appears to be collapsed	FCIPP	350	0	12	\$ 48,000.00
LOW	2.9	2.1	771	1A	Van K	M1-10-5	M1-10-4	84.0	12	RCP	Circ. Crack(1'), Surface Damage - Aggregate Visible	FCIPP	84	0	4	\$ 7,040.00
LOW	2.5	2.0	737	1A	Blairmoor Ct	M1-1-5-5	M1-1-5-4	336.0	12	RCP	Surface Damage - Aggregate Visible, Long. Fracture(5', 18')	FCIPP	336	0	7	\$ 23,660.00
LOW	2.7	2.1	726	1B	S Brys	M1-1-12	M1-1-11	303.5	15	RCP	Surface Damage - Aggregate Visible	FCIPP	303.5	0	7	\$ 23,227.50

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
LOW	2.3	2.2	692	1B	Hawthorne	M6-6-8	M6-6-7	229.0	18	RCP	Surface Damage - Aggregate Visible, Long. Crack(15', 22'), Broken(55')	FCIPP	229	0	5	\$ 19,675.00
LOW	2.5	2.1	298	2A	Woods Lane	M1-2-5	M1-2-4	113.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	113	0	4	\$ 8,780.00
LOW	2.9	1.9	793	2A	Woods Lane	M1-2-2	M1-2-3	82.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	82	0	0	\$ 4,920.00
LOW	2.8	2.1	10934	2A	Woods Lane	M1-2-2	M1-2-1	276.0	12	RCP	Surface Damage - Aggregate Visible, Broken (244')	FCIPP	276	1	7	\$ 20,560.00
LOW	2.9	2.1	10935	2A	Woods Lane	M1-2-1	M1-2	69.0	12	RCP	Surface Damage - Aggregate Visible	FCIPP	69	0	1	\$ 4,640.00
LOW	2.6	2.0	1339	2B	Brys Dr S	M3-1	M3	210.0	36	RCP	H2S damage throughout; Lift Holes throughout; Spiral Fracture @ 107'	FCIPP	210	0	0	\$ 31,500.00
LOW	2.5	2.8	831	2B	Brys Dr S	M3-2	M3-1	28.0	27	RCP	Long. Fracture(15')	FCIPP	28	0	1	\$ 3,860.00
LOW	3.8	2.0	630	2B	Hampton	M5-4A	M4-1	61.0	21	RCP	Long. Fracture @ 41'; Cir Fracture @ 48'; Hole in channel in DS MH	FCIPP	61	0	1	\$ 6,295.00
LOW	3.5	2.5	721	2B	Hampton	M4-1	M4	17.0	21	RCP	Spiral Fracture @ 8'; Drop Connection @ 14'	FCIPP	17	0	1	\$ 2,115.00
LOW	2.0	1.5	1329	2C	Marter	M6-1-1A	M6-1-2	594.0	36	RCP	Long. Crack @ 482'-594'	FCIPP	594	0	12	\$ 95,100.00
LOW	2.0	2.3	590	2C	Virginia	M7-6-1	M7-6	154.0	10	VCP	Long. Crack @ 26'-107'	FCIPP	154	0	1	\$ 7,430.00
LOW	2.9	2.0	879	3A	Yorktown	M2-4-10	M2-4-9	208.0	15	RCP	Light H2S damage throughout; Lateral @ 179' is undercut, liner blocking bottom 40%	FCIPP	208	0	4	\$ 15,520.00
LOW	2.8	2.0	889	3A	Blairmoor Ct	M2-8-2	M2-8-1	258.0	15	RCP	Light H2S damage throughout; Long. Crack @ 12'-37'	FCIPP	258	1	8	\$ 21,270.00
LOW	1.0	2.1	1047	3A	Goethe	M2-14A	G12	185.0	10	VCP	Deposits throughout	FCIPP	185	0	0	\$ 8,325.00
LOW	2.0	2.0	SW918	6A	Lochmoor	M12-8	M12-7	259.0	36	RCP	Long. Crack(108', 137', 209'), Lt MD at joints T/O	FCIPP	259	0	3	\$ 40,350.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
LOW	2.0	2.0	SW1120	6B	Sunningdale	M10-4	M10-3	97.0	48	RCP	Long. Crack(12', 60'-97'), Lt MD at joints T/O	FCIPP	97	0	1	\$ 17,475.00
LOW	2.0	2.8	SW1118	6B	Sunningdale	M10-3	M10-2	226.0	48	RCP	Long. Crack(58', 66'-226'), Lt Roots at select joints	FCIPP	226	0	2	\$ 40,550.00
LOW	2.0	2.0	SW1117	6B	Sunningdale	M10-2	M10-1	250.0	48	RCP	Long. Crack(3'-250'), Lt MD at joints T/O	FCIPP	250	0	3	\$ 45,250.00
LOW	2.0	2.0	SW437	8B	S Renaud	M11-7-2	M13-2-10	357.0	15	RCP	Long. Crack(6'-59'), Lt MD at joints T/O	FCIPP	357	0	14	\$ 30,205.00
LOW	2.1	2.0	SW56	5C	Raymond	MA55-9	MA55-8	264.7	12	RCP	Broken pipe in lats(133', 216'), Surface Damage - Roughness Increased, Long. Crack(2'-48', 54'), Circ. Fracture(93', 132', 259'), Long. Fracture(253')	FCIPP	264.7	0	14	\$ 22,882.00
LOW	2.3	1.8	SW81	5C	Raymond	MA55-8	MA55-7	263.4	15	RCP	Surface Damage - Roughness Increased, Circ. Crack(9'), Mult Crack(181', 218'), Long. Crack(184', 187', 215', 221', 225'), Long. Fracture(222', 228')	FCIPP	263.4	0	13	\$ 23,621.00
LOW	2.0	2.0	SW1413	5C	Bournemouth	MA56	MA55	209.2	33	RCP	Surface Damage - Roughness Increased, Lt MD at joints T/O	FCIPP	209.2	0	5	\$ 33,880.00
LOW	2.0	2.0	SW1416	5C	Mack	MA55	MA54	173.9	33	RCP	Surface Damage - Roughness Increased, Lt MD at joints T/O	FCIPP	173.9	0	2	\$ 27,085.00
LOW	2.0	2.0	SW1417	5C	Mack	MA54	MA53	199.4	39	RCP	Surface Damage - Roughness Increased, Lt MD at joints T/O	FCIPP	199.4	1	2	\$ 1,500.00
LOW	2.0	2.1	SW1425	5C	Mack	MA45	MA43	332.3	45	RCP	Surface Damage - Roughness Increased, Rebar visible at lat(151'), Lt MD at joints T/O	FCIPP	332.3	0	4	\$ 2,000.00
LOW	2.3	2.0	SW1066	6C	Faircourt	MA26-4	MA26-3	233.8	12	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout.	FCIPP	233.8	1	8	\$ 18,528.00
LOW	3.1	2.1	SW1067	6C	Ford Court	MA28-8	MA28-7	120.7	15	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout. Long Cracks and Fractures Throughout. Hole at (83').	FCIPP	120.7	2	2	\$ 9,845.50
LOW	2.9	2.0	SW184	6C	Torrey	MA28-5	MA28-4	224.1	15	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout. Long. Cracks and Fractures (108'-220'). Cutter Blade was left in Pipe at (216')	FCIPP	224.1	0	1	\$ 15,066.50
LOW	2.3	1.8	SW1059	6C	Torrey	MA28-5	M20-13	14.3	15	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout. Long. Cracks and Fractures Throughout. Crack Multiple (4'). Pipe sections are offset (small).	FCIPP	14.3	0	0	\$ 929.50
LOW	2.0	2.0	SW154	7A	Esmt between Mack & Blossom Ln	GP12-1	GP12	270.3	12	CP	Light H2S damage throughout; SCIPP @ 115'-118'; Deposits throughout; Debris left in line @ EOL	FCIPP	270	0	6	\$ 19,200.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
LOW	2.5	2.0	SW1430	7A	Cook	GP12	GP11	329.0	10	CP	Long. Fracture @ 77'; Long. Crack @ 102', 198'; Misc. Cracking @ 166'-184'; Broken @ 326'; Drop Connection @ 327'	FCIPP	329	0	5	\$ 17,305.00
LOW	2.0	2.0	SW1431	7A	Cook	GP11	GP10	300.3	10	RCP	Light H2S damage throughout; Deposits throughout; Drop Connection @ 299'	FCIPP	300	1	6	\$ 17,000.00
LOW	2.5	2.0	SW169	7A	Chalfonte	GP3-2-4	GP3-2-3	20.8	24	RCP	Light to Moderate H2S damage throughout	FCIPP	21	0	0	\$ 2,310.00
LOW	2.5	2.0	SW16648	2C	Christine Ct	M7-8-1-B	M7-8-1	47.9	8	VCP	US MH is buried; Mult Cracks @ 13'; Long. Crack @ 24'	FCIPP	48	0	0	\$ 2,160.00
LOW	2.0	2.0	SW1625	5A	S of Mack Plaza	MA28-3A	MA28-3	11.7	15	RCP	VCP @ 5'-8'; Cracking throughout	FCIPP	12	0	0	\$ 780.00
LOW	2.5	2.0	SW1481	6C	Fairholme	M20A	Blind Tap	44.3	15	RCP	Light to Moderate H2S damage throughout	FCIPP	44	0	1	\$ 3,360.00
LOW	2.0	2.0	SW383	6C	Marford	M20-9-2	M20-9-1	158.6	21	RCP	Light H2S damage throughout	FCIPP	159	0	1	\$ 15,605.00
LOW	2.5	2.0	SW1062	6C	W Clairview Ct	M20-11	M20-10	178.6	24	RCP	Light to Moderate H2S damage throughout	FCIPP	179	0	4	\$ 21,690.00
LOW	2.0	2.0	SW376	6C	Holiday	M20-7-1	M20-7	214.8	12	RCP	Light H2S damage throughout; Light cracking in spots	FCIPP	215	0	3	\$ 14,400.00
LOW	2.0	2.0	SW375	6C	Emory Ct	M20-6-2	M20-6-1	287.2	12	RCP	Light H2S damage throughout	FCIPP	287	0	10	\$ 22,220.00
LOW	2.0	2.0	SW374	6C	Holiday	M20-6-1	M20-6	182.6	12	RCP	Light H2S damage throughout	FCIPP	183	1	4	\$ 13,480.00
LOW	2.0	2.0	SW371	6C	Emory Ct	M20-3-2	M20-3-1	326.5	12	RCP	Light H2S damage throughout	FCIPP	327	0	12	\$ 25,620.00
LOW	2.0	2.0	SW372	6C	Emory Ct	M20-3-1	M20-3A	126.0	12	RCP	Light H2S damage throughout	FCIPP	126	0	2	\$ 8,560.00
LOW	2.0	2.0	SW1165	6C	Emory Ct	M20-3A	Blind Tap	20.6	12	RCP	Light H2S damage throughout	FCIPP	21	0	0	\$ 1,260.00
LOW	2.5	2.0	SW367	6C	Between Fairholme & Paget	M19-1-3B	M19-1-3A	312.1	12	RCP	Mult Long. Cracks through 25'; Light to Moderate H2S damage throughout	FCIPP	312	0	10	\$ 23,720.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
FCIPP PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	FULL LENGTH CIPP LINING			
													LENGTH (FT)	LATERALS		SUBTOTAL
														CUT PROTRUDING	RE-INSTATE	
LOW	2.0	2.0	SW1560	6C	S Oxford	M17-1-1	M17-1	6.0	18	RCP	Appears to be some H2S damage	FCIPP	6	0	0	\$ 450.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
SCIPP BY PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	SECTIONAL CIPP LINING								
													LENGTH (FT)					LATERALS		SUBTOTAL	
													3	6	10	15	20	25	CUT PROTRUDING		RE-INSTATE
CRITICAL	5.0	1.9	1666	1B	Vernier	M7-18-1	M7-1-8	596.0	15	VCP	Mult Fracture/Deformed @ 272'; Spiral Crack @ 476'	6' SCIPP @ 270'-276'	0	1	0	0	0	0	0	0	\$ 3,600.00
CRITICAL	5.0	2.0	902	3A	Brys	C5-2	C5-1	463.0	12	VCP	Hinge/Mult Fractures throughout; Hole Soil Visible @ 291'; Brick in lateral @ 378'; appears to be an attempt at capping the service	3' SCIPP @ 289'-292' (CRIT); FCIPP (MED)	1	0	0	0	0	0	1	0	\$ 3,500.00
HIGH	3.9	1.9	719	2B	Hampton	M5-4A	M5-4	342.0	21	RCP	Hinge Fracture @ 51'-58'	10' SCIPP @ 50'-60' (HIGH); FCIPP (MED)	0	0	1	0	0	0	0	1	\$ 5,200.00
HIGH	5.0	2.1	891	3A	Blairmoor Ct	M2-10	M2-9	227.0	24	RCP	Reinforcement visible around lateral @ 54'	3' SCIPP @ 53'-56'	1	0	0	0	0	0	0	1	\$ 5,500.00
HIGH	4.0	5.0	662	3B	Anita	G8-2B	M5-1-4E	93.0	12	VCP	Hinge Crack @ 25'-33'; Large offsets in laterals @ 35', 73'	Dig Laterals @ 35', 73' (HIGH); 10' SCIPP @ 24'-34' (MED)	0	0	1	0	0	0	0	1	\$ 3,700.00
HIGH	3.0	5.0	663	3B	Anita	G8-2B	G8-2A	303.0	12	VCP	Long. Fracture @ 27'-40'; Severe offset in lateral @ 243'	Dig Lateral @ 243'; 15' SCIPP @ 26'-41'	0	0	0	1	0	0	0	0	\$ 3,300.00
HIGH	5.0	4.0	SW660	3B	Anita	M5-1-4B	M5-1-4A	292.0	18	CIPP	Hole in liner @ 35'; reversal needed due to roots @ 56'	3' SCIPP @ 34'-37'	1	0	0	0	0	0	0	1	\$ 4,500.00
HIGH	4.0	2.0	678	3B	Charlevoix	M5-1-4D	C1-1A	298.0	18	RCP	H2S damage throughout; Hinge Fracture @ 76'-82'	10' SCIPP @ 74'-84' (HIGH); FCIPP (MED)	0	0	1	0	0	0	0	0	\$ 4,200.00
HIGH	5.0	2.0	459	8B	N Renaud	M13-12	M13-11	373.0	18	RCP	Hinge Fracturing @ 95'-134'	40' SCIPP @ 95'-135'	0	0	0	0	2	0	0	0	\$ 8,800.00
HIGH	4.0	2.0	469	8B	N Renaud	M13-11	M13-10	299.0	18	RCP	H2S damage throughout; Hinge Fracture @ 163'-181'	20' SCIPP @ 162'-182'	0	0	0	0	1	0	0	0	\$ 4,400.00
HIGH	4.0	2.0	SW109	5A	Chester	MA40-9-1	MA40-9-2	399.7	18	VCP	Broken(2'), Lt MD at joints T/O	6' SCIPP (0'-6')	0	1	0	0	0	0	0	0	\$ 4,100.00
MEDIUM	3.0	1.0	594	1B	Roslyn	M6-19	M6-18	239.0	15	RCP	Long. Fracture(174')	6' SCIPP (172'-178')	0	1	0	0	0	0	0	0	\$ 3,600.00
MEDIUM	3.0	2.0	41	1B	Vernier	M7-18-4	M7-18-3B	61.0	12	VCP	Long. Crack @ 51'; Mult Crack @ 57'; Mult fractures in M7-18-3B	10' SCIPP @ 55'-M7-18-3B	0	0	1	0	0	0	0	0	\$ 3,200.00
MEDIUM	3.3	4.0	1651	1B	Vernier	M7-18-3A	M7-18-3	81.0	12	VCP	RCP for first 2'; Broken @ 2'; Small hole between lateral and main @ 74'	3' SCIPP @ 0'-3'; Dig Lateral @ 74'	1	0	0	0	0	0	0	0	\$ 3,000.00
MEDIUM	3.0	2.0	43	1B	Vernier	M7-18-2	M7-18-1	205.0	12	VCP	Lateral @ 2' appears to be Abandoned/Capped; Spiral Fracture @ 13'; Numerous alignment shifts throughout	3' SCIPP @ 11'-14'	1	0	0	0	0	0	0	0	\$ 3,000.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWERS
SCIPP BY PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	SECTIONAL CIPP LINING							SUBTOTAL		
													LENGTH (FT)					LATERALS				
													3	6	10	15	20	25	CUT PROTRUDING		RE-INSTATE	
MEDIUM	3.4	2.0	1640	2C	Wedgewood	M5-1-4-7-3	M5-1-4-7-2	283.0	12	RCP	Long. Fracture @ 163'-166'	6' SCIPP @ 162'-168'	0	1	0	0	0	0	0	0	1	\$ 3,600.00
MEDIUM	3.6	4.0	1669	2C	Vernier	M7-1-7	M7-1-5	412.0	21	VCP	Hinge Crack @ 3'-50'; Mult Crack @ 153'; Lateral @ 200' does not appear to be draining into main	50' SCIPP @ 0'-50'; 6' SCIPP @ 151'-157'; Dig Lateral @ 200'	0	1	0	0	0	0	2	0	0	\$ 14,600.00
MEDIUM	5.0	2.0	856	3A	Aline	G16	M2-18	150.0	18	RCP	Hinge Crack @ 33'	6' SCIPP @ 31'-37'	0	1	0	0	0	0	0	0	0	\$ 4,100.00
MEDIUM	3.0	2.0	SW12061	8B	N Oxford	M11-7-3-1A	M11-7-3-1	154.0	15	VCP	Long. Fracture(15'),Lt MD at joints(2'-43'), Lt Roots at joints(129'-154')	3' SCIPP (14'-17')	1	0	0	0	0	0	0	0	0	\$ 3,500.00
MEDIUM	3.0	2.0	SW10725	5A	Bramcaster	M21-14-1	MA40-4	139.2	10	VCP	Hinge Fracture @ 5', 90', 115'; Roots at joints throughout	6' SCIPP @ 3'-9', 88'-94', 113'-119'	0	3	0	0	0	0	0	0	0	\$ 8,250.00
MEDIUM	4.0	3.0	SW125	5A	Manchester Allard	MA36-6	MA36-5	190.9	12	CIPP	Med Roots in mainline at lats(116', 124', 130'), Hole cut in liner with no lat(131')	3' SCIPP (130'-133')	1	0	0	0	0	0	0	0	0	\$ 3,000.00
MEDIUM	3.0	2.0	SW9791	5B	Stanhope	M21-14-1A	M21-14-1	310.0	8	VCP	Point Repair @ 175'-179' (PVC); Long. Fracture @ 185'; Spiral Fracture @ 191'; Chipped at joint @ 194'; Deposits throughout	10' SCIPP @ 185'-195'	0	0	1	0	0	0	0	0	0	\$ 3,000.00
MEDIUM	3.0	2.0	SW83	5C	Bournemouth	MA55-7	MA55-6	125.9	18	RCP	Hole(42'), Long. Crack(115'), Lt MD at joints T/O	3' SCIPP (41'-44')	1	0	0	0	0	0	0	0	0	\$ 4,000.00
MEDIUM	3.0	2.9	SW140	5C	Bournemouth Newcastle	MA54-1	MA54	400.7	21	CIPP	Med Roots and Med MD in mainline at lats T/O, Hole with Roots(315')	3' SCIPP (314'-317')	1	0	0	0	0	0	0	1	\$ 5,000.00	
MEDIUM	3.5	2.0	SW164	7A	Esmt West of Holiday North of Cook	GP9-2	GP9-1	193.1	21	RCP	Long. Crack @ 7'-10', 45'-55'; SCIPP @ 40'-46'; Lateral @ 43' appears to be cracked; Mult Fracture @ 76'; Light Cracking @ 93'-100'; Deposits throughout	10' SCIPP @ 45'-55'; 6' SCIPP @ 73'-79'	0	1	1	0	0	0	0	0	1	\$ 9,800.00
MEDIUM	3.0	2.0	SW377	6C	Holiday	M20-7-2	M20-7-1	248.2	12	RCP	Long. Cracking/Fracturing throughout majority of line; Cracks in lateral hub @ 7'	10' SCIPP @ 0'-10'	0	0	1	0	0	0	0	0	1	\$ 3,700.00
MEDIUM	3.5	4.0	SW232	6C	N of Fairholme	M18-1C	M18-1B	318.1	15	RCP	Compacted Debris @ 135'-264'; Longitudinal Crack @ 160', 200'; Hinge Crack 3 @ 220'	6' SCIPP @ 217'-223'	0	1	0	0	0	0	0	0	0	\$ 3,600.00
LOW	2.0	2.1	775	1A	Perrien	M1-11-2	M1-11-1	295.0	12	RCP	Long.Fracture(291'), Lt MD at joints T/O	3' SCIPP (290'-293')	1	0	0	0	0	0	0	0	0	\$ 3,000.00
LOW	2.0	2.0	849	3A	Aline	G15-2	G15-1	234.0	8	RCP	Long Fracture @ 172'; Cri Fracture @ 231'	6' SCIPP @ 167'-173'	1	0	0	0	0	0	0	0	0	\$ 2,500.00
LOW	2.0	2.3	602	3B	Roslyn	C4-1	C4	152.0	18	RCP	Cir Fracture @ 149'	3' SCIPP @ 147'-150'	1	0	0	0	0	0	0	0	0	\$ 4,000.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWER
OPEN CUT REPAIRS BY PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	DIG-UPS			
													MAIN LINE	SUBTOTAL	LATERAL	SUBTOTAL
CRITICAL	5.0	2.0	SW746	1A	Canterbury	M1-1-4-3	M1-1-4-2	292	21	RCP	Hole with Void(96'), Surface Damage - Aggregate Visible	Dig Mainline (93'-99')	1	\$ 8,500.00	0	\$ -
CRITICAL	5.0	1.9	SW699	1B	Hampton	M6-10-1	M6-10	425	10	CIPP	Broken with Soil visible in lat(318')	Dig Mainline (315'-321')	1	\$ 8,500.00	0	\$ -
CRITICAL	5.0	5.0	SW909	3A	Brys	G11	C5-2	0	12	RCP	Collapse at beginning of line, Root ball 13' from DS MH, Line cannot be televised. Once OCR is performed, retelevis	Dig Mainline @ 0'-10'	1	\$ 8,500.00	0	\$ -
CRITICAL	5.0	2.1	SW903	3A	Brys	M5-6-2	M5-6-1	355.5	15	VCP	Hinge/Mult Fractures throughout; Hole Soil Visible @ 129'; Survey Abandoned @ 262' due to roots. Reversal: Hole Soil Visible @ 92'; Survey Abandoned @ 94' due to hole in invert. Line not completed, approx 50' short	Dig Mainline @126'-132' (FROM M5-6-2); Dig Mainline @ 89'-95' due to gas line (FROM M5-6-1); FCIPP	2	\$ 17,000.00	0	\$ -
CRITICAL	5.0	5.0	SW9794	5A	Stanhope	M21-14-2	M21-14-1	77.9	8	VCP	Offset Soil Visible @ 3', 22'; Broken Soil Visible @ 12', 16', 20', 34', 51'; Hinge Fracturing @ 14'; Broken @ 18'; Point Repair @ 34'-42' (PVC)(Large offset at end of repair); Survey Abandoned @ 55' due to pipe being destroyed/invert missing. Reversal: PVC @ 0'-5'; Broken Soil Visible @ 6'; Broken @ 10'; Survey Abandoned @ 33' due to missing invert; Line not completed, approx 160' missing	Dig Mainline @ 55'-??? from M21-14-1	2	\$ 17,000.00	0	\$ -
CRITICAL	5.0	2.5	SW93	5B	Severn Prestwick	MA49-6	MA49-5	357	12	CIPP	Survey abandoned(310')--2 Grounding Rods thru sewer, Reverse--Survey abandoned(47')--Point of previous progress	Dig Mainline (308'-314')	1	\$ 8,500.00	0	\$ -
CRITICAL	5.0	3.0	SW387	6C	Fairholme	M20-9-4	M20-9-3	263.4	18	RCP	Hinge Fracture 4 @ 10'-25'; Hinge Cracking @ 80'-90'; Long. Cracking through 100'; Hinge Fracture 4 w/Minor Deformation @ 170'-200'	Dig Mainline @ 165'-200' w/2 laterals (CRIT); FCIPP (MED)	1	\$ 8,500.00	2	\$ 12,000.00
CRITICAL	5.0	1.4	SW894	3A	Aline	C7-2	C7-1	247	8	RCP	H2S damage throughout; Mult Fracture @ 1', 241'; Long. Fracture @ 2'-37'; Hinge Fracture @ 174'-183'; Major offset in lateral @ 174'	FCIPP	0	\$ -	1	\$ 6,000.00
CRITICAL	5.0	2.2	SW906	3A	Aline	C7	M5-11	348	12	RCP	Heavy H2S damage throughout; Hinge Fracturing @ 117'-130', 145'176'; Hole in bottom of lateral @ 71'	FCIPP	0	\$ -	1	\$ 6,000.00
CRITICAL	3.8	2.3	SW1029	6C	Torrey	M20-10-3	M20-10-2	220.1	12	RCP	Surface Damage Aggregate Visible Throughout. Lt Encrustation at Joints Throughout. Long. Cracks and Fractures Throughout. Lt Roots at Joints Throughout. Broken at (50'). Broken Void Visible in Lats (85', 139')	Dig Laterals at 85' and 139' (CRIT); FCIPP-Lined in 0160-0454	0	\$ -	2	\$ 12,000.00
CRITICAL	5.0	3.0	SW1053	6C	Torrey	M20-10-2A	M20-10-2	224.6	12	RCP	Broken Soil Visible @ 2'; Offset in lateral @ 55'; Broken Void Visible in lateral @ 85'	Dig Lateral @ 85' (CRIT); FCIPP-Lined in 0160-0454	0	\$ -	1	\$ 6,000.00
CRITICAL	2.0	2.0	SW1056	7A	Huntington	GP9-4	GP9-3	306.7	15	RCP	Light H2S damage throughout; Light Long. Cracking throughout; SCIPP @ 1'-26'; Lateral @ 152' Fractured at main; Lateral @ 195' Broken Void Visible	FCIPP (LOW); Dig laterals @ 152', 195' (CRITICAL)	0	\$ -	2	\$ 12,000.00
CRITICAL	5.0	2.0	SW172	7A	Esmt between Ida Lanes E & W	GP6-2	GP6-1	116.6	18	CIPP	Roots @ 31' (AT CONNECTION); Lateral @ 34' Broken Void Visible	Dig Lateral @ 34'	0	\$ -	1	\$ 6,000.00
CRITICAL	5.0	2.0	SW359	6C	Paget Ct	M19-1-4	M19-1-3	167.5	15	RCP	Heavy H2S damage throughout; Hinge Fracture @ 5'; Lateral @ 107' offset, it appears that the hub is collapsing	Dig Lateral @ 107' (CRITICAL); FCIPP (HIGH)	0	\$ -	1	\$ 6,000.00

**CITY OF GROSSE POINTE WOODS
SANITARY SEWER
OPEN CUT REPAIRS BY PRIORITY**

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	DIG-UPS			
													MAIN LINE	SUBTOTAL	LATERAL	SUBTOTAL
HIGH	4.0	1.0	1355	2C	Vernier	M5-1-7	M5-1-6	12	12	VCP	Broken @ 4', 8'	Dig Mainline	1	\$ 8,500.00	0	\$ -
HIGH	4.0	3.0	SW122	5B	Chester	MA36-8	Blind Tap	9.3	6	VCP	Separated joint at 9.1', void, soil visible	Dig mainline (8'-9.5')	1	\$ 8,500.00	0	\$ -
HIGH	4.0	2.9	SW1760	5B	Bramcaster	M21-15	M21-14	208.2	18	RCP	Broken(2'), Mult Fracture(2'-14'), Long. Crack(42'), Hole(105'), Med Roots at joints(99', 107'-137')	Dig Mainline(132'-143') FCIPP	1	\$ 8,500.00	0	\$ -
HIGH	4.0	2.6	941	3A	Aline	M5-10	M5-9	321	18	RCP	Heavy H2S damage throughout; Hole in side of lateral @ 191'	FCIPP	0	\$ -	1	\$ 6,000.00
HIGH	4.0	4.0	622	3B	Hampton	C2-3	C2-2	236	18	RCP	H2S damage throughout; Majority of laterals are shearing at the main	Dig laterals (HIGH); FCIPP (MED)	0	\$ -	8	\$ 48,000.00
HIGH	4.0	4.0	623	3B	Hampton	C2-2	C2-1	175	24	RCP	Light H2S damage throughout	Dig laterals (HIGH); FCIPP (LOW)	0	\$ -	6	\$ 36,000.00
HIGH	4.0	4.0	618	3B	Hampton	C2-1	C2	75	24	RCP	Light H2S damage throughout	Dig lateral @ 30' (HIGH); FCIPP (LOW)	0	\$ -	1	\$ 6,000.00
HIGH	4.0	4.0	628	3B	Hampton	M5-4-6	M5-4-5	230	18	RCP	Light H2S damage throughout	Dig laterals (HIGH); FCIPP (LOW)	0	\$ -	8	\$ 48,000.00
HIGH	4.0	4.0	629	3B	Hampton	M5-4-5	M5-4-4	170	24	RCP	Light H2S damage throughout	Dig laterals (HIGH); FCIPP (LOW)	0	\$ -	4	\$ 24,000.00
HIGH	4.0	4.0	989	3B	Hollywood	G6-1	G6	192	18	RCP	Light H2S damage throughout	Dig laterals @ 17', 173' (HIGH); FCIPP (LOW)	0	\$ -	2	\$ 12,000.00
HIGH	4.0	4.0	SW993	3B	Hollywood	M5-1-1-2	M5-1-1-3	476	12	CIPP	Sag @ 14'	Dig Lateral @ 424'	0	\$ -	1	\$ 6,000.00
HIGH	4.0	4.0	SW991	3B	Hollywood	G8-1B	G8-1A	460	12	CIPP	Sags in spots throughout; Reversal needed due to roots	Dig Lateral @ 353'	0	\$ -	1	\$ 6,000.00
HIGH	4.0	4.0	674	3B	Hawthorne	C1-3	C1-2	211	24	RCP	Laterals shearing at the main	Dig Laterals	0	\$ -	5	\$ 30,000.00

CITY OF GROSSE POINTE WOODS
SANITARY SEWER
OPEN CUT REPAIRS BY PRIORITY

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	DIG-UPS			
													MAIN LINE	SUBTOTAL	LATERAL	SUBTOTAL
HIGH	4.0	4.0	647	3B	Hawthorne	C1-2	C1-1	236	24	RCP	Laterals shearing at the main	Dig Laterals @ 10', 58', 91'	0	\$ -	3	\$ 18,000.00
HIGH	4.0	4.0	676	3B	Hawthorne	M5-1-3-3	M5-1-3-2	200	18	RCP	Laterals shearing at the main	Dig Laterals @ 38', 111', 119', 176'	0	\$ -	4	\$ 24,000.00
HIGH	4.0	4.0	675	3B	Hawthorne	M5-1-3-2	M5-1-3-1	205	18	RCP	Laterals shearing at the main	Dig Laterals @ 35', 182'	0	\$ -	2	\$ 12,000.00
HIGH	5.0	1.6	667	3B	Anita	G8-2-4	G8-2-3	157	8	VCP	Hole around lateral @ 20' with roots	Dig Lateral @ 20'	0	\$ -	1	\$ 6,000.00
HIGH	4.0	4.0	SW11952	3B	Anita	G8-2-2A	G8-2-2	153	18	CIPP	Lateral offset @ 45'	Dig Lateral @ 45'	0	\$ -	1	\$ 6,000.00
HIGH	5.0	4.5	666	3B	Anita	G8-2-2	G8-2-1	299	18	VCP	Hinge Fracturing throughout	Dig Lateral @ 292'; FCIPP	0	\$ -	1	\$ 6,000.00
HIGH	5.0	5.0	665	3B	Anita	G8-2-1	G8-2	285	18	VCP	Hinge Fracture @ 196'-EOL; Long. Fractures in spots throughout	Dig Lateral @ 72'; FCIPP	0	\$ -	1	\$ 6,000.00
HIGH	4.0	5.0	662	3B	Anita	G8-2B	M5-1-4E	93	12	VCP	Hinge Crack @ 25'-33'; Large offsets in laterals @ 35', 73'	Dig Laterals @ 35', 73' (HIGH); 10' SCIPP @ 24'-34' (MED)	0	\$ -	2	\$ 12,000.00
HIGH	4.0	5.0	2433	3B	Anita	M5-1-4E	M5-1-4D	225	12	VCP	Multiple offset laterals	Dig lateral @ 60', 180', 182'	0	\$ -	3	\$ 18,000.00
HIGH	4.0	5.0	663	3B	Anita	G8-2B	G8-2A	303	12	VCP	Long. Fracture @ 27'-40'; Severe offset in lateral @ 243'	Dig Lateral @ 243'; 15' SCIPP @ 26'-41'	0	\$ -	3	\$ 18,000.00
HIGH	5.0	4.0	664	3B	Anita	G8-2A1	G8-2	221	15	VCP	Hinge Fracture @ 6'; Long. Crack @ 41'-53'; Hinge Crack @ 84'-121'	Dig Lateral @ 44', 84'; FCIPP	0	\$ -	2	\$ 12,000.00
HIGH	4.0	5.0	1571	3B	Anita	G8-2A	G8-2A1	93	15	VCP	Holes in lateral @ 21'	Dig Lateral @ 21'	0	\$ -	1	\$ 6,000.00
HIGH	4.0	5.0	SW1215	3B	Anita	M5-1-4C	M5-1-4B	317	15	CIPP	Roots in spots throughout	Dig Lateral @ 99', 135'	0	\$ -	2	\$ 12,000.00

CITY OF GROSSE POINTE WOODS
SANITARY SEWER
OPEN CUT REPAIRS BY PRIORITY

PRIORITY	STRUCTURAL PACP SCORE	O & M PACP SCORE	PIPE ID	MAP #	STREET	MH	to MH	LENGTH (FT)	SIZE (IN)	PIPE MAT.	COMMENTS	RECOMMENDATIONS	DIG-UPS			
													MAIN LINE	SUBTOTAL	LATERAL	SUBTOTAL
HIGH	4.0	5.0	SW50	3B	Toles	M5-1-5-1A	M5-1-5-1	170	12	CIPP	Hole in lateral invert @ 48'	Dig Lateral @ 48'	0	\$ -	1	\$ 6,000.00
HIGH	4.0	2.0	SW168	7A	Chalfonte	GP3-2-3	GP3-2-2	102.8	24	RCP	Moderate H2S damage throughout; Brick Repair patch @ 90'; Broken @ 100'; Grease attached throughout	FCIPP; Dig Lateral @ 93'	0	\$ -	1	\$ 6,000.00
HIGH	5.0	2.0	SW388	6C	Fairholme	M20-9-5	M20-9-4	333.4	15	CIPP	Hole in hub of lateral @ 174'; 50% offset in lateral @ 229'; Sag @ 262'; Lateral @ 284' is undercut	Dig laterals @ 174', 229'	0	\$ -	2	\$ 12,000.00
HIGH	4.0	2.0	SW368	6C	Fairholme	M20C	M20B	264.1	12	RCP	Light H2S damage throughout; Fracture in lateral @ 15'; Hole Void Visible in lateral @ 162'	Dig Lateral @ 162'	0	\$ -	1	\$ 6,000.00
MEDIUM	3.0	1.0	11007	2C	Vernier	MR-1-1	Blind Tap	26	24	RCP	Long. Fracture @ 12'	Dig Mainline	1	\$ 8,500.00	0	\$ -
MEDIUM	3.0	4.0	SW123	5A	Manchester Allard	MA36-7	Blind Tap	4	6	VCP	Mult Cracks(2'), Survey abandoned(4')--Line turns down	Dig Mainline (0'-3')	1	\$ 8,500.00	0	\$ -
MEDIUM	3.5	2.0	SW120	5B	Chester	MA40-9	Blind Tap	14	6	VCP	Broken(1'), Med OS joint(5')Lt MD at joints(1', 13'), Survey abandoned(14')--steep drop	Dig Mainline (0'-6')	1	\$ 8,500.00	0	\$ -
MEDIUM	3.0	3.0	SW1030	6C	S Oxford	M16-1	Blind Tap	12.6	27	RCP	Moderate H2S damage throughout; Alignment Right @ 13'; Appears to be possible structure at the turn that may have been abandoned. Survey Abandoned @ 13' due to alignment shift. No reversal possible, DS is Blind Tap	Dig Mainline	1	\$ 8,500.00	0	\$ -
MEDIUM	3.3	4.0	1651	1B	Vernier	M7-18-3A	M7-18-3	81	12	VCP	RCP for first 2'; Broken @ 2'; Small hole between lateral and main @ 74'	3' SCIPP @ 0'-3'; Dig Lateral @ 74'	0	\$ -	1	\$ 6,000.00
MEDIUM	3.0	4.0	1373	1B	Vernier	M7-16	M7-17	282	30	RCP	H2S damage throughout; Lateral @ 5' appears broken	Dig Lateral @ 5'; FCIPP	0	\$ -	1	\$ 6,000.00
MEDIUM	3.6	4.0	1669	2C	Vernier	M7-1-7	M7-1-5	412	21	VCP	Hinge Crack @ 3'-50'; Mult Crack @ 153'; Lateral @ 200' does not appear to be draining into main	50' SCIPP @ 0'-50'; 6' SCIPP @ 151'-157'; Dig Lateral @ 200'	0	\$ -	1	\$ 6,000.00
MEDIUM	3.0	5.0	650	3B	Anita	M5-1-4A	M5-1-4	330	21	RCP	Moderate H2S damage throughout	Dig Lateral @ 192', 194', Dig lat at 277'-277' dig done in 0160-0413 (CRITICAL); FCIPP (MED)	0	\$ -	2	\$ 12,000.00
MEDIUM	3.0	2.0	SW51	6C	Torrey	GP2-2	GP2-1	169.5	15	RCP	Moderate H2S damage throughout; Long. Fracture @ 3'-17'; Mult Fracture @ 44', 160'; Long. Crack @ 84', 168'; Tap Roots @ 166'	Dig Lateral @ 95'; FCIPP	0	\$ -	1	\$ 6,000.00

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Appendix H

Public Meeting Advertisement and Summary

NOTICE OF PUBLIC MEETING

Clean Water State Revolving Fund (CWSRF) Loan Project

The City of Grosse Pointe Woods will hold a public meeting on the proposed Clean Water State Revolving Fund (CWSRF) Project for the purpose of receiving comments from interested persons.

Public comments regarding this proposed project will be heard during the regularly scheduled meeting of the Grosse Pointe Woods City Council scheduled for Monday, April 17, 2023, at 6:00pm, in the City Council chambers, located in the Grosse Pointe Woods City Hall, 20025 Mack Plaza Dr, Grosse Pointe Woods, Michigan 48236.

The purpose of the proposed project is to rehabilitate sewers throughout the City that have been identified to be in poor structural condition based upon recent sewer cleaning and television investigation programs. In addition to sewer rehabilitation the city plans to install a backup generator and make other improvements at Torrey Road Pump Station. The estimated cost to users for the proposed project is expected to be approximately \$8M utilizing a low-interest loan over a 20-year period.

Copies of the draft plan detailing the proposed project will be available for inspection on the city website. The plan will be available beginning on Friday, March 31, 2023.

Written comments received before the public meeting concludes on Monday, April 17, 2023, will receive a written response in the final project plan. Written comments should be sent to the city's consulting engineer preparing the final project plan. Direct written comments to Anderson, Eckstein and Westrick, ATTN: Ross Wilberding, Project Manager, 51301 Schoenherr Road, Shelby Township, Michigan 48315 or by e-mail at rwilberding@awinc.com.

Appendix I

**City Council Resolution to Adopt Project
Planning Document**