

THE CHARTER TOWNSHIP OF BLOOMFIELD

Storm Water Management Program Plan (SWMP)



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Section I - Introduction and Background

The National Pollutant Discharge Elimination System (NPDES) Phase I requirements took effect in 1990 and regulated Municipal Separate Storm Sewer Systems (MS4s) located in communities with a population over 100,000. In 1999, Bloomfield Township voluntarily developed programs to meet the requirements of the then proposed NPDES Phase II permit and in 2003 these voluntary actions became required. Furthermore, in 2008, the MDEQ issued the Wastewater General Permit No. MIS040099 (hereafter referred to as “permit” or “the permit”) that mandated programs and activities that the Township must implement with the goal of protecting water quality.

It is important to note, the Township owns or operates only 25.54 acres of property (0.15%) out of the 16,500 acres located in the Township. The Township does not own or operate any roads, and the Township owns or operates a total of 21 outfalls, with 1 outfall 36” in diameter or larger. In addition, no nested jurisdictions are covered under the Township’s permit.

The following Storm Water Management Program Plan (SWMP) integrates Bloomfield Township’s Illicit Discharge Elimination Plan (IDEP), Public Education Plan (PEP), Storm Water Pollution Prevention Plan (SWPPP) and all other required elements into a single document containing Bloomfield Township’s commitments to help reduce the discharge of pollutants to storm water to the Maximum Extent Practicable (MEP). The SWMP includes those actions expected to be implemented over, and in some cases beyond, the term of the permit.

While Bloomfield Township holds a jurisdictional permit, the Township recognizes that by working collectively with the other stakeholders on a regional and watershed basis illicit discharge elimination, public education and other water management activities, can be implemented more effectively and cost-efficiently.

Section II – Discharge Point Location

The Township currently has twenty-one (21) known outfalls under its jurisdiction. Appendix A is a map of the Township’s known discharge points and a table with the required receiving body of water and latitude and longitude identified. Each point is given a unique identification code (number), which has remained consistent over the previous two cycles (1999-present). Because the Township has kept the unique identification code consistent over the past two permit cycles, as true ownership has been identified and the discharge points removed from the Township’s list, the identification code has remained the same. This explains why the identification codes are not consecutive

Newly Constructed Outfalls

In order to seek authorization for discharge, for any discharge point that is identified, constructed or installed after July 28, 2008, the Township will provide an updated outfall map clearly showing the location of the discharge point, its unique identification code, the latitude and longitude of the discharge point, and the receiving waters of the state.

MS4 Discharge Point Labeling

The Township will provide permanent identification for any discharge point structure that is or was constructed after March 10, 2004 and discharges storm water to waters of the state.

Section III – Total Maximum Daily Loads (TMDL) *E.coli* & Biota

A. Wet Weather Sampling

The Township is required to identify and prioritize actions to reduce pollutants in storm water discharges from our MS4 in order to make progress towards meeting TMDL requirements for *E. coli* & Biota.

B. Escherichia coli (*E. coli*)

Within the first three years of the issuance of our Certificate of Coverage (COC), the Township will take at least one representative sample of a storm water discharge from at least fifty (50) percent of the major discharge points (36 inches or larger) discharging directly to surface waters of the state within the portion of the TMDL watershed in the urbanized area. Since the Township currently has one major discharge point under its jurisdiction, this point will be analyzed for all TMDL sampling activities. This sampling will be analyzed for *E. coli*. The results of this sampling will be reported in the second progress report.

If *E. coli* levels are found to be elevated, the Township through its current IDEP, Public Education Efforts, and work with other local agencies and municipalities, will work to ensure that sources of excessive *E. coli* are identified and eliminated. Also, the Township will develop a prioritized list of actions meant to reduce the discharge of *E. coli* in an effort to be consistent with the TMDL. This priority list of actions will be submitted in the second progress report and will be implemented in the 2013 permit cycle.

C. Biota

Within the first three years of the issuance of our Certificate of Coverage (COC), the Township will take at least one representative sample of a storm water discharge from at least fifty (50) percent of the major discharge points (36 inches or larger) discharging directly to surface waters of the state within the portion of the TMDL watershed in the urbanized area. Since the Township currently has one major discharge point under its jurisdiction, this point will be analyzed for all TMDL sampling activities. This sampling will be analyzed for Total Suspended Solids (TSS). The results of this sampling will be reported in the second progress report.

If in-stream, wet weather levels of TSS are found to be above 80mg/l, the Township through its current IDEP, Public Education Efforts, and work with other local agencies and municipalities, will work to ensure that sources of excessive TSS are identified and eliminated. Also, the Township will develop a prioritized list of actions meant to reduce the discharge of TSS in an effort to be consistent with the TMDL. This priority list of actions will be submitted in the second progress report and will be implemented in the 2013 permit cycle.

Section IV – Public Education Plan (PEP)

A. Program Overview

The Charter Township of Bloomfield believes that adequate public education and resident involvement is essential for protecting and enhancing natural resources. Also, requirements of the permit obligate Bloomfield Township to develop a Public Education Plan (PEP) to educate the public regarding the impact of their actions on the watershed. The objective of this PEP is to promote, publicize and facilitate watershed education for the purpose of encouraging the public to reduce or prevent the discharge of pollutants in storm water to the maximum extent practicable.

B. Required Elements

The required elements of this PEP are to educate the public regarding:

- hazards associated with illicit discharges and improper disposal of waste;
- the water body that would be potentially impacted by improper actions at or near a person's home;
- availability, location and requirements of facilities for collection and/or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, grass clippings, leaf litter, animal wastes, and motor fluids;
- acceptable application and disposal of pesticides, herbicides, and fertilizers including the use of phosphorus-free fertilizer alternatives as appropriate;
- preferred car cleaning agents and procedures for non-commercial car washing;
- proper septic system maintenance and how to recognize system failure;
- management of riparian lands to protect water quality;
- public responsibilities and stewardship in their watershed;
- the benefits of using native vegetation instead of non-native vegetation;
- prevention of grease and litter discharges by commercial food service providers.

C. Current Efforts

Many of the Public Education Requirements outlined in the permit and above are specific to certain activities and pollution sources that do not exist within the Bloomfield Township regulated area. Although many of our materials and much of our program is focused on educating the general public at large, we wish to be clear that we will only report on those Public Education activities that are required within our regulated area.

It is important that Township employees, contractors, and visitors to Township-owned property alike, understand the value of protecting and restoring our natural resources. Appendix B – PEP Table, is designed to identify education objectives, assess current

education efforts, identify the audience targeted by public education efforts, and establish time frames for development and implementation of planned activities. In addition, the Public Education Plan identifies responsibilities for implementing various components of the plan and a method for evaluating the effectiveness of each initiative. All employees are provided Township newsletters that contain articles pertaining to storm water pollution prevention. In addition, displays and brochures regarding storm water pollution prevention are available in employee lunchroom and other public areas.

Section V – Public Involvement and Participation

- A. Bloomfield Township will encourage the public to be involved in all aspects of the SWMP. The Township will produce a webpage to notify the public that a SWMP will be implemented for the Township. Copies of the plan will be available to the public via this webpage and upon request at the Township offices.

- B. Bloomfield Township is also a member in good standing in the Alliance of Rouge Communities (ARC). The ARC is a voluntary public watershed entity currently comprised of 37 municipal governments (i.e. cities, townships and villages), three counties (i.e., Wayne, Oakland and Washtenaw) and the Wayne County Airport Authority as authorized by Part 312 (Watershed Alliances) of the Michigan Natural Resources and Environmental Protection Act (MCL 324.101 to 324.90106) as amended by Act No. 517, Public Acts of 2004.

The purpose of the Alliance of Rouge Communities (ARC) is to provide an institutional mechanism to encourage watershed-wide cooperation and mutual support to meet water quality permit requirements and to restore beneficial uses of the river to the area residents. The programs proposed within this SWMP align with the activities and goals of the ARC.

C. In addition to its membership in the ARC, Township staff works closely with the non-profit group Friends of the Rouge (FOTR) through Rouge Rescue, the Rouge Education Project and other stewardship initiatives. This cooperation will continue throughout the implementation of this SWMP by seeking ways to meet permit requirements through FOTR's existing programs.

Section VI – Illicit Discharge Elimination Plan (IDEP)

A. Program Overview

The IDEP section of the SWMP was developed to prohibit and effectively eliminate illicit discharges (including the discharge of sanitary wastewater) to the separate storm water drainage system under the jurisdiction of Bloomfield Township. Again, it is important to note that, Township owns or operates only 25.54 acres of property (0.15%) out of the 16,500 acres located in the Township, the Township does not own or operate any roads, and the Township owns or operates a total of 21 outfalls, with 1 outfall 36" in

diameter or larger. In addition, no nested jurisdictions are covered under the Township's permit.

B. Required Elements

An ordinance and program, or regulatory mechanism to effectively prohibit illicit discharges into the MS4 owned or operated by the permittee that implements appropriate enforcement actions. At a minimum, the ordinance or regulatory mechanism shall:

- 1) Regulate the contribution of pollutants to the MS4 owned by the permittee
- 2) Prohibit illicit discharges, including the direct dumping or disposal of materials into the MS4 owned or operated by the permittee
- 3) Establish the authority to investigate inspect, and monitor suspected illicit discharges owned or operated by the permittee
- 4) Require and enforce elimination of illicit discharges and connections into the MS4 owned or operated by the permittee.

C. Current Efforts

Although, the Township has jurisdiction over a very small portion of land within its borders, this regulatory program is focused on eliminating illicit discharges throughout the Township. The program involves and relies on coordination between the Township, the Oakland County Water Resource Commissioners Office, the Oakland County Health Department, the Michigan Department of Transportation, the Michigan Department of Natural Resources and Environment, school districts and other private entities to correct illicit discharge/connection issues within the Township. The current IDEP efforts being undertaken by the Township are explained in more detail below.

- 1) Regulate the contribution of pollutants to the MS4 owned by the permittee:
 - a. Enforcement of Existing Ordinances - Bloomfield Township will continue to enforce the Sewer Ordinance # 246, which requires owners of failing septic systems to connect to the Township sewer system if it is available (within 200 feet of the structure). In cases where sewer is not available Township staff work with the Oakland County Health Department to ensure the illicit discharge is eliminated. A copy of Ordinance # 246 is included as Appendix C.
 - b. Existing IDEP Program - The IDEP program administered by the Township has been effective in identifying and eliminating nearly 100 illicit discharges/illicit connections during the previous five-year permit cycle. Twenty-seven Township employees are currently trained through the Wayne County IDEP Program to recognize the signs illicit discharges and illicit connections.
 - c. Coordination with other local Entities – Bloomfield Township recognizes that we have jurisdiction over a small portion of the storm sewer system found in the Township. As such, organizations such as MDOT, the Road

Commission for Oakland County (RCOC), the Oakland County Water Resources Commissioners (OCWRC) Office and private entities, own and operate many of the storm sewers located in the Township. We realize coordinating our IDEP activities with the entities that have jurisdiction over these storm sewers is critical to the successful identification and elimination of such discharges. This coordination will be documented and reported on in our IDEP concern log.

- 2) Prohibit illicit discharges, including the direct dumping or disposal of materials into the MS4 owned or operated by the permittee:
 - a. Property Maintenance Ordinance – The Township’s Ordinance Department enforces many distinct Ordinances that are meant to prohibit illicit discharges. They include; the International Property Maintenance Code, Litter Ordinance, Wetlands Ordinance, and Sewer Ordinance.
 - b. “Dump No Waste” catch basin covers – The Township requires that all catch basins installed as part of a Township project be labeled “Dump No Waste Drains to Local Waterway”.

- 3) Establish the authority to investigate inspect, and monitor suspected illicit discharges owned or operated by the permittee:
 - a. Coordination with Ordinance Department/EESD Ordinance Officer – In order to better protect our natural resources and streamline environmental enforcement actions, a staff member from the Engineering & Environmental Services Department (EESD) was sworn in as an Ordinance Officer in 2009. This gives this staff member the direct authority to write violations and order corrective actions when a violation is reported or witnessed.

This staff member is trained to recognize possible IDEP issues and perform water quality monitoring activities. This has allowed for more timely coordination in the event of an illicit discharge or illicit connection.

- 4) Require and enforce elimination of illicit discharges and connections into the MS4 owned or operated by the permittee:
 - a. Coordination with other local Entities – Bloomfield Township recognizes that we have jurisdiction over a small portion of the storm sewer system found in the Township. As such, organizations such as MDOT, the Road Commission for Oakland County, the Oakland County Water Resources Commissioners (OCWRC) Office and private entities, own and operate many of the storm sewers located in the township. Bloomfield Township responds to resident complaints of suspected illicit discharges or connections although the Township does not own the majority of the MS4

within its borders. We realize communicating findings with the entities that have jurisdiction over these storm sewers is critical to the successful identification and elimination of such discharges.

- b. Bloomfield Township MS4 – The Township owns or operates only 25.54 acres of property (0.15%) out of the 16,500 acres located in the Township, the Township does not own or operate any roads, and the Township owns or operates a total of 21 outfalls, with 1 outfall 36” in diameter or larger. In addition, no nested jurisdictions are covered under the Township’s permit. Bloomfield Township dye tested all its facilities during the previous permit cycle. Since then, the Township has constructed new facilities. Those buildings will be dye tested and inspected in 2011 and any illicit connections that may be found will be corrected.
- 5) Dry Weather Storm Sewer Outfall Inspection - Dry weather discharges can be indicative of illicit connections. The Township will continue to visually inspect each outfall under its jurisdiction, as shown in Appendix A, once every five years with the next cycle beginning in 2011.

If flow is observed during the dry weather outfall inspections, the Township will sample the flow for pollutant parameters typically found in illicit connection. At a minimum sampling parameters include: pH, ammonia, surfactants, and temperature.

If the source of the illicit discharge is not identified through the methods described above, the Township may employ indicator parameter testing, dye testing, video evaluation and/ or site inspections to determine the source of the discharge. Dye testing will not be performed prior to receiving authorization to do so from the MDNRE.

- 6) Owner Notifications - Once an illicit connection/discharge has been identified and verified, the Township will notify the owner of the property and/or the operator of the receiving MS4 where the illicit discharge originates in writing and direct them to eliminate the illicit connection/discharge within a specified time frame. The notification will require the owner to inform the Township when the connection has been eliminated. The time frame for eliminating the connection/discharge will depend on the type of illicit connection/discharge and how difficult elimination will be. The Township will follow up with the property and/or MS4 owner to ensure that the connection/discharge has been eliminated. If the connection has not been eliminated, the Township will enforce its ordinances to obtain compliance. The Township works with the responsible entity and tracks all IDEP concerns it receives until corrected.

D. Future Efforts

- 1) Storm Sewer Map – On or before September 1, 2011, the Township will create a storm sewer system map showing the location of all discharge points owned or operated by the

Township and the receiving water for each. This map will include Township MS4 areas such as parking lots, catch basins, gutters, ditches, etc.

2) Staff Training Program – The Township will develop a program to train staff involved with illicit discharge related activities regarding the following:

- Proper Storage, handling, and use of pesticides, herbicides, and fertilizers
- Good housekeeping and pollution prevention activities
- The definition of an illicit discharge, an illicit connection, and sanitary seepage
- Techniques for locating illicit discharges
- Methods for eliminating illicit discharges and the proper
- Proper procedures for responding to spills and emergency situations

This training program will be developed during 2010 and will be administered by September 1, 2011. The training will occur annually for all Township employees that have field jobs with the potential for witnessing illicit discharges and connections. A sign-in sheet will document employee attendance at the training.

Section VII – Post-Construction Storm Water Control for New Developments and Redevelopment Projects

Bloomfield Township currently utilizes Ordinance #167 its Engineering and Design Standards Ordinance to regulate development and post-construction runoff. The Township has jurisdiction over a small portion of the storm water conveyance system within its boundaries and the majority of that system is on the Township campus. At present, the Township has no plans to redevelop any of its existing properties. In the event that the Township redevelops any properties under its jurisdiction, the storm water controls outlined in the permit including; minimum treatment volume standard, channel protection criteria, and a combination of structural and non-structural BMPs will be used to meet permit goals.

The majority of the drainage systems in the Township are under the authority of the Michigan Department of Transportation (MDOT), the Road Commission for Oakland County (RCOC), and the Oakland County Water Resources Commissioner (OCWRC). School Districts and other agencies are required to have a MS4 permit and are ultimately the responsible agency for post-construction storm water control required under their permit. Bloomfield Township will continue to work with these agencies to ensure their requirements are implemented accordingly during the site plan review process. Furthermore, we will work with individual applicants to ensure that they have had communication with the other agencies (RCOC, OCWRC, MDOT, etc.) to comply with their post-construction storm water control requirements.

Also, through the Township's engineering review process, the Township will continue to recommend the implementation of low-impact development (LID) and best management practices (BMP) to control post-construction storm water impacts on a site-by-site basis,

as site conditions allow. In addition to any other requirements set forth by other agencies that may have jurisdiction.

Section VIII – Construction Storm Water Runoff Control

At present, the OCWRC is the Township's Authorized Public Agency (APA) for implementation of Soil Erosion and Sedimentation Control (SESC) Part 91 requirements. Where applicable, during all Township construction projects, a SESC Part 91 permit is obtained. Bloomfield Township submits engineering plans to OCWRC for SESC review. In addition, the Township requires SESC permits for the record for all construction related activities. When the Township receives complaints of Soil erosion or sedimentation issues, we will respond and notify the Authorized Public Agency (OCWRC, MDOT) overseeing the permit.

Section IX – Pollution Prevention / Good Housekeeping for Municipal Operations

A. Program Overview

The NPDES, MS4 program requires permittees to implement best management practices for the minimum measures specified in the permit. The permittee shall develop, implement and ensure compliance with a program of operation and maintenance of BMP's, with the ultimate goal of preventing or reducing pollutant runoff to the MEP from municipal operations that discharge storm water to the surface waters of the state.

B. Current Efforts

Structural Storm Water Control Effectiveness

- 1) The Township has performed an assessment of all its owned or operated properties. This has resulted in a summary list of municipal properties, their location, and their structural storm water controls. This list is attached as Appendix D This summary list includes inspection frequencies for each structural control. In addition, all newly constructed facilities will be dye tested to confirm no IDEP issues are present in 2011.
- 2) The Township has performed an assessment of all its owned or operated properties. This has resulted in a summary list of municipal properties, their location, and their structural storm water controls. This list is attached as Appendix D. This summary list includes inspection frequencies for each structural control.
- 3) At present, the Township has no plans to add facilities or structural controls at any of its properties. In the event that the Township chooses to perform this type of project, the storm water controls outlined in the permit including; minimum treatment volume standard, channel protection criteria, requirements for operation and maintenance, and a combination of structural and non-structural BMPs will be used to meet permit goals.

Retrofitting of existing structural storm water controls will be considered as funding becomes available.

Roadways, Parking Lots, and Bridges

- 1) The Township owns or operates only 25.54 acres of property (0.15%) out of the 16,500 acres located in the Township. Also, the Township does not own or operate any roads. Pollution prevention and good housekeeping activities for Township owned or operated impervious infrastructure are outlined in great detail in Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan (SWPPP)
- 2) The Township is committed to working, to the MEP, towards a goal of 25% TSS removal from paved surfaces as compared to annual loading of runoff with no suspended solids controls. The Township will maintain a program to sweep paved surfaces at least one time each month. In addition, catch basin sumps will be cleaned on an annual and as needed basis. According to the Center for Watershed Protection's Deriving Reliable Pollutant Removal Rates for Municipal Street Sweeping and Storm Drain Cleanout Programs in the Chesapeake Bay Basin report (CWP 2008), monthly mechanical street sweeping removes 9% of the TSS load and annual catch basin cleaning removes 18% of the TSS load. These two BMPs will reduce TSS load by an estimated 27%.
- 3) Bloomfield Township does not own any roads within its borders. All public roadways are owned by either RCOC or MDOT. Township DPW personnel are contracted to maintain some public roadways owned by RCOC. The Township will continue to meet the specifications of that contract.

Each Township owned snow plow/salt application truck has an on-board salt application control device. This device regulates the application rate of salt based upon the vehicles speed. In addition, the Township utilizes BMPs such as loading area cleanup and pre wetting of rock salt to minimize storm water impacts. These processes are outlined in more detail in Appendix E– Bloomfield Township Storm Water Pollution Prevention Plan (SWPPP)

- 4) The Township's regulated area does not include unpaved roads or unpaved parking lots.
- 5) Bloomfield Township does not utilize coal tar emulsions to seal asphalt surfaces.

Fleet Maintenance and Storage Yards/Facilities

- 1) The Township has developed a SWPPP for its Township Campus Complex located at 4200 Telegraph Road, Bloomfield Hills, MI 48302.

The SWPPP is overseen by Noah Mehalski CSWO # C-14811 and as stated above is included in Appendix E– Bloomfield Township Storm Water Pollution Prevention Plan (SWPPP) Appendix D lists all municipal properties and as referenced above a SWPPP has been developed for each facility that requires one (Township Municipal Campus).

- 2) The SWPPP is signed by the facility manager and is retained on-site by the CSWO.

3) Fleet Maintenance Areas / Storage Yards

Fleet maintenance operations are conducted indoors. All floor drains are connected to the sanitary sewer system and an oil/water separator. Secondary containment is present around the salt brine tank and all significant materials are stored indoors. More information regarding this topic can be found in Appendix E.

Vehicle Wash Water

All vehicles are washed inside. Vehicle wash water is discharged to the sanitary sewer system; floor drains are directed through an oil/water separator before entering sanitary system. Phosphorous-free soap is also used.

Vehicle Rinse Water

Some vehicles may be rinsed outside. No soap of any kind is utilized in this process. Adjacent storm drains are protected with catch basins having 3-foot sumps. The sump is cleaned on an as needed basis.

- 4) The Township has developed a SWPPP, which outlines the measures in place to prevent the discharge of pollutants to the MS4. Vector truck waste is disposed of at the Mt Clemens Waste Water Treatment Plant. All deposited waste is manifested according to MDNRE requirements. The Township's Generator ID is MIG999999991.

Managed Vegetative Properties

- 1) The Township will develop a program to train staff regarding topics that impact storm water quality. This training will include the following:
 - Proper Storage, handling, and use of pesticides, herbicides, and fertilizers
 - Good housekeeping and pollution prevention activities
 - The definition of an illicit discharge, an illicit connection, and sanitary seepage
 - Techniques for locating illicit discharges
 - Methods for eliminating illicit discharges and the proper
 - Proper procedures for responding to spills and emergency situations

This training program will be developed during 2010 and will be administered by September 1, 2011. The training will occur annually for all Township employees that have field jobs with the potential for witnessing illicit discharges and connections. A sign-in sheet will document employee attendance at the training. In addition, two Road Division and two Grounds Division employees are Registered Pesticide Applicators with endorsements in turf, ornamental and right of way care.

- 2) The Township recently enacted Ordinance # 621 which prohibits the application of phosphorus to turf grass by commercial applicators throughout the Township. Township Department of Public Works, Grounds Division personnel do not utilize fertilizers containing phosphorus on any Township properties. In addition, all turf management companies are required to follow
- 3) The Township's vegetative properties are managed in a way that minimizes storm water impacts to surrounding water bodies. Township personnel have been trained in the proper storage handling, and use of pesticides, fertilizers, and herbicides. All fertilizer spreaders are equipped with guards to prevent overspray and all hard surfaces are swept after application. Also, as stated above, two Road Division and two Grounds Division employees are Registered Pesticide Applicators with endorsements in turf, ornamental and right of way care.

C. Future Efforts

Employee Training

The Township will develop a program to train staff regarding topics that impact storm water quality. This training will include the following:

- Proper Storage, handling, and use of pesticides, herbicides, and fertilizers
- Good housekeeping and pollution prevention activities
- The definition of an illicit discharge, an illicit connection, and sanitary seepage
- Techniques for locating illicit discharges
- Methods for eliminating illicit discharges and the proper
- Proper procedures for responding to spills and emergency situations

This training program will be developed during 2010 and will be administered by September 1, 2011. The training will occur annually for all Township employees that have field jobs with the potential for witnessing illicit discharges and connections. A sign-in sheet will document employee attendance at the training.

Contractor Training

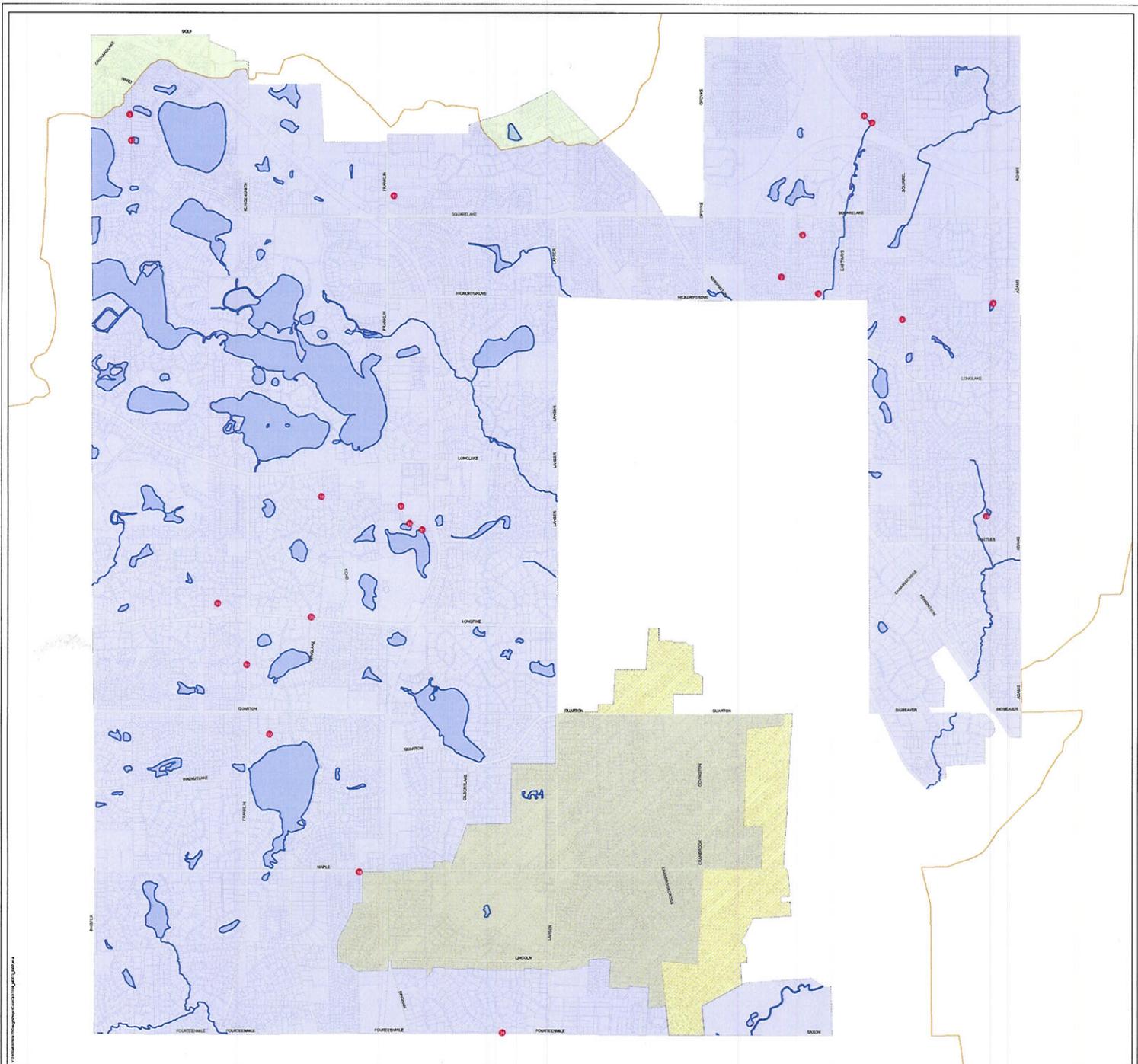
Bloomfield Township will develop a contractor storm water education brochure by September 1, 2011. This brochure will seek to ensure contract staff that are performing activities that may impact storm water utilize BMPs to limit their impact on storm water

to the MEP. Also, when applicable, the Township will modify bid specification requirements to minimize the risk of pollution to storm water discharges.

References

Center for Watershed Protection (CWP). 2008. Deriving Reliable Pollutant Removal Rates for Municipal Street Sweeping and Storm Drain Cleanout Programs in the Chesapeake Bay Basin. EPA Grant CB-973222-01. Ellicott City, MD.

Appendix A – Bloomfield Township Outfall Map



Outfall	Description	Section #	Drainage Type	Local Land Use
2	Bloomfield Crossing No. 2	11N	Outfall	Residential
3	North Bloomfield Hills No. 1	11N	Outfall	Residential
4	Crofton Estates	11N	Outfall	Residential
5	Hammond Lake Estates No. 8	8N	Outfall	Residential
7	Bloomfield Estates North	1N	Outfall	Residential
8	Hidden Pines	12S	Outfall	Residential
9	East Bloomfield Farms No. 2	12S	Outfall	Residential
10	Carillon Hills	17S	Outfall	Residential
11	Shaker Heights	1N	Outfall	Residential
12	The Meadowlands of Bloomfield	6S	Outfall	Residential
13	Fire Station #4	4S	Outfall	Fire Station 4, Commercial
14	Fire Station #3	32N	Outfall	Fire Station 3, Residential
15	Civic Center Area	16S	Outfall	Civic Center Site
16	Civic Center Area	16S	Outfall	Civic Center Site
17	Civic Center Area	16S	Outfall	Civic Center Site
18	Woodcrest Farms No. 1	20S	Outfall	Residential
19	Bloomfield Heights No. 7	19N	Outfall	Residential
20	Bloomfield Heights No. 1	20N	Outfall	Residential
21	Jackson Park Dike Storm Sewer	33S	Outfall	Residential
22	Forman's Wing Lake	29N	Outfall	Residential
28	Hickory Heights	13S	Outfall	Residential

**Bloomfield Township
Outfall Location Map 2008**

Legend

- Township Outfall Separate Storm Sewer
- Clinton-Main Watershed
- Rouge Main 1-2 Watershed
- Watershed
- CSO_Area



Appendix A – Bloomfield Township Outfall Map

Outfall	Description	Section #	Latitude	Longitude	Ultimate Receiving Water
2	Bloomfield Crossing No. 2	11N	83°14'16.9411"W	42°35'55.1938"N	Rouge River
3	North Bloomfield Hills No. 1	11N	83°14'0.0958"W	42°35'50.1778"N	Rouge River
4	Crofton Estates	11N	83°14'7.9998"W	42°36'8.9788"N	Rouge River
5	Hammond Lake Estates No. 8	6N	83°19'11.9483"W	42°36'40.7459"N	Rouge River
7	Bloomfield Estates North	1N	83°13'38.3600"W	42°36'45.9028"N	Rouge River
8	Hidden Pines	12S	83°13'22.1461"W	42°35'42.7666"N	Rouge River
9	East Bloomfield Farms No. 2	12S	83°12'41.5660"W	42°35'48.8813"N	Rouge River
10	Carillon Hills	17S	83°17'40.2826"W	42°34'40.1967"N	Rouge River
11	Shaker Heights	1N	83°13'41.9821"W	42°36'48.0429"N	Rouge River
12	The Meadowlands of Bloomfield	6S	83°19'10.8043"W	42°36'32.4022"N	Rouge River
13	Fire Station #4	4S	83°17'11.9217"W	42°36'17.3046"N	Rouge River
14	Fire Station #3	32N	83°17'18.1865"W	42°32'40.3172"N	Rouge River
15	Civic Center Area	16S	83°16'54.5332"W	42°34'30.5813"N	Rouge River
16	Civic Center Area	16S	83°17'0.2738"W	42°34'32.4701"N	Rouge River
17	Civic Center Area	16S	83°17'4.3937"W	42°34'37.9140"N	Rouge River
18	Woodcrest Farms No. 1	20S	83°18'11.4711"W	42°33'45.4316"N	Rouge River
19	Bloomfield Heights No. 7	19N	83°18'25.3738"W	42°34'4.7337"N	Rouge River
20	Bloomfield Heights No. 1	20N	83°17'43.2447"W	42°34'1.3370"N	Rouge River
21	Jackson Park Drive Storm Sewer	33S	83°16'11.8453"W	42°31'50.0541"N	Rouge River
22	Forman's Wing Lake	29N	83°18'0.2765"W	42°33'23.4379"N	Rouge River
28	Hickory Heights	13S	83°12'41.7151"W	42°34'40.7657"N	Rouge River

Bloomfield Township Public Education Plan Table for Jurisdictional Permit

Public Education Topics	Target Audience	Key Messages	Delivery Mechanism / Activity	Timetable	Responsible Party	Evaluation
Hazards associated with illicit discharges and the improper disposal of waste.	Township Employees, Contractors & Visitors to Township-owned property	Promotion of illicit discharge reporting system and how to report an illicit discharge. Newsletter articles and brochures regarding the water quality impacts associated with illicit discharges and improper waste disposal and the importance of identifying and correcting failing on-site sewage disposal systems.	Annual staff training program. Maintenance of an illicit discharge reporting mechanism	Part of current ongoing program.	EESD & DPW	Annual training sign in sheet. Number of Illicit Discharges & Illicit connections corrected.
			Annual staff training program. Newsletter article highlighting a phone number to call to report illicit discharges. Brochure available at Township Offices.	Part of current ongoing program.	EESD	Annual training sign in sheet. Number of articles published. Brochures available at all times.
Ultimate storm water discharge location and potential impacts	Township Employees, Contractors & Visitors to Township-owned property	Storm drains in the Township lead to Rouge and Clinton Rivers. Storm water is not treated prior to discharge.	Annual staff training program. Newsletter article highlighting the storm sewer map. Map posted at Township offices.	Develop storm sewer system map on or before September 11, 2011	EESD	Annual training sign in sheet. Storm sewer system map submitted on or before September 1, 2011
Waste management assistance	Township Employees, Contractors & Visitors to Township-owned property	Identification of household hazardous wastes and available alternatives, Disposal locations, requirements, and availability for household hazardous wastes & other chemicals.	Annual staff training program. Advertise for E-waste & Medication / Household Hazardous Waste Collection Days via newsletter articles, press releases and Township website.	Part of current ongoing program.	DPW & EESD	Annual training sign in sheet. Track the number of residents and the amount waste collected during Hazardous Household Waste / E-waste & Medication collection days.
			Annual staff training program. Brochures, Articles, Displays	Part of current ongoing program.	EESD	Annual training sign in sheet. Number of newsletter articles published. Brochures available at Township offices.
Acceptable application and disposal of chemicals	Township Employees, Contractors & Visitors to Township-owned property	Pesticide use, fertilizer use, and their disposal, proper disposal of pesticides and herbicides, effects of residential wastes on our water bodies	Annual staff training program. Webpage dedicated to newly enacted Fertilizer Ordinance, registered applicators program.	Part of current ongoing program.	EESD	Annual training sign in sheet. Number of Registered Fertilizer Applicators.
Car washing	Township Employees, Contractors & Visitors to Township-owned property	Preferred car washing agents and procedures for noncommercial car washing. Wash all vehicle indoors.	Annual Staff Training Program, Standard operating procedures.	Part of current ongoing program.	DPW & EESD	Annual training sign in sheet. More information found in Appendix E.
Septic System Maintenance	The Township does not have any septic systems within its regulated area.	The Township does not have any septic systems within its regulated area.	The Township does not have any septic systems within its regulated area.	The Township does not have any septic systems within its regulated area.	The Township does not have any septic systems within its regulated area.	The Township does not have any septic systems within its regulated area.
Management of riparian lands	Township Employees, Contractors & Visitors to Township-owned property	Importance of riparian corridors, Lawn maintenance BMP's for protecting water quality, proper management of grass clippings, leaf litter, animal wastes, and other wastes	Annual staff training program. Newsletter article, bulletin board display at Township offices, brochure available at Township offices.	Part of current ongoing program.	EESD	Annual training sign in sheet. Number of articles published, displays produced, brochures available at Township offices.
Personal watershed stewardship	Township Employees, Contractors & Visitors to Township-owned property	Definition of Watershed, ways that individuals can affect the watershed through their activities	Annual staff training program. Newsletter article, bulletin board display at Township offices, brochure available at Township offices.	Part of current ongoing program.	EESD	Annual training sign in sheet. Number of articles published, displays produced, brochures available at Township offices.
Benefits of native vegetation	Township Employees, Contractors & Visitors to Township-owned property	water quality benefits of installing native vegetation and buffers.	Annual staff training program. Newsletter article, bulletin board display at Township offices, brochure available at Township offices.	Part of current ongoing program.	EESD	Annual training sign in sheet. The use of native vegetation is encouraged and utilized in site design.

<p>Educate commercial, industrial, institutional, and food service entities likely to have storm water impacts</p>	<p>The Township does not have any commercial, industrial or institutional entities within its regulated area.</p>	<p>The Township does not have any commercial, industrial or institutional entities within its regulated area.</p>	<p>The Township does not have any commercial, industrial or institutional entities within its regulated area.</p>	<p>The Township does not have any commercial, industrial or institutional entities within its regulated area.</p>	<p>The Township does not have any commercial, industrial or institutional entities within its regulated area.</p>	<p>The Township does not have any commercial, industrial or institutional entities within its regulated area.</p>
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Appendix C – Excerpt from Sewers Ordinance # 246

DIVISION 2. - SEWER CONNECTIONS

Sec. 38-124. - Definitions.

Sec. 38-125. - Septic disposal system failure; availability of public sanitary sewer system.

Sec. 38-126. - Unlawful for continuance of use after septic disposal system failure.

Sec. 38-127. - Enforcement.

Sec. 38-128. - Penalty.

Secs. 38-129—38-150. - Reserved.

Sec. 38-124. - Definitions.

The following words, terms and phrases, when used in this division, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Available public sanitary sewer system means a public sanitary sewer system located in a right-of-way, easement, highway, street or public way which crosses, adjoins or abuts upon the property and passing not more than 200 feet at the nearest point from a structure in which sanitary sewage originates.

Public sanitary sewer system means a sanitary sewer or a combined sanitary and storm sewer used or intended for use by the public for collection and transportation of sanitary sewage for treatment or disposal, owned, operated and maintained by the township on behalf of the public.

Septic disposal system failure means discharge or flow of sewage on to the ground surface, into watercourses, ponds, lakes, streams, or any other enclosure or pipes other than a public sanitary sewer system.

Structure in which sanitary sewage originates means a building in which toilet, kitchen, laundry, bathing or other facilities which generate water-carried sanitary sewage, are used or available for use for household, commercial, industrial or other purposes.

System shall be deemed to refer to the said sewage disposal system.

Township board means the township board of the Charter Township of Bloomfield, the legislative and governing body thereof and also the board of health.

(Ord. No. 246, § 2.01, 1-22-1973)

Sec. 38-125. - Septic disposal system failure; availability of public sanitary sewer system.

Appendix C – Excerpt from Sewers Ordinance # 246

It is hereby determined that a septic disposal system failure poses an immediate threat to the public health; that such presents a potential for ill health, transmission of disease, mortality and potential economic blight and constitutes a threat to the quality of surface and subsurface waters of the township and that connection to available public sanitary sewer system be made by the owner or occupant of a structure situated on lands on which a septic disposal system failure is located as provided herein.

Summary List of Bloomfield Township Owned Properties and Associated Storm Water Controls

Municipal Properties	Type	Location	Description of Structural Controls	Inspection Frequency
Municipal Campus	Offices, Fire Station, Courthouse, Salt Storage, Recreation Center	4200 Telegraph Road, Bloomfield Hills, MI 48302	Catch Basins, curbing, secondary containment for brine	Monthly per SWPPP Requirements
Fire Station #2	Fire Station	1063 Westview Dr., Bloomfield Hills, MI 48304	None	N/A
Fire Station #3	Fire Station	4151 W. Maple Rd., Bloomfield Hills, MI 48301	Catch Basin	Monthly per SWPPP Requirements
Fire Station #4	Fire Station	2389 Franklin Rd., Bloomfield Hills, MI 48302	Catch Basin	Monthly per SWPPP Requirements
Golf Drive Facility	Enclosed Storage	Golf Drive & Fairfax Ave, Bloomfield Hills, MI 48302	None	N/A
Outfall #2	Detention Basin Outfall	83o14'16.9411"W 42o35'55.1938"N	15" CMP	once every 5 years in coordination with Outfall surveys
Outfall #3	Detention Basin Outfall	83o14'0.0958"W 42o35'50.1778"N	Cut in concrete weir	once every 5 years in coordination with Outfall surveys
Outfall #4	Detention Basin Outfall	83o14'7.9998"W 42o36'8.9788"N	12" CMP	once every 5 years in coordination with Outfall surveys
Outfall #5	Detention Basin Outfall	83o19'11.9483"W 42o36'40.7459"N	No Data	once every 5 years in coordination with Outfall surveys
Outfall #7	Detention Basin Outfall	83o13'38.3600"W 42o36'45.9028"N	15" RCP	once every 5 years in coordination with Outfall surveys
Outfall #8	Detention Basin Outfall	83o13'22.1461"W 42o35'42.7666"N	30" RCP	once every 5 years in coordination with Outfall surveys
Outfall #9	Detention Basin Outfall	83o12'41.5660"W 42o35'48.8813"N	18" RCP	once every 5 years in coordination with Outfall surveys
Outfall #10	Detention Basin Outfall	83o17'40.2826"W 42o34'40.1967"N	15" RCP	once every 5 years in coordination with Outfall surveys
Outfall #11	Detention Basin Outfall	83o13'41.9821"W 42o36'48.0429"N	12" RCP	once every 5 years in coordination with Outfall surveys
Outfall #12	Detention Basin Outfall	83o19'10.8043"W 42o36'32.4022"N	6" PVC	once every 5 years in coordination with Outfall surveys
Outfall #13	Detention Basin Outfall	83o17'11.9217"W 42o36'17.3046"N	No Data	once every 5 years in coordination with Outfall surveys
Outfall #14	Detention Basin Outfall	83o17'18.1865"W 42o32'40.3172"N	10" RCP	once every 5 years in coordination with Outfall surveys
Outfall #15	Township Campus Outfall	83o16'54.5332"W 42o34'30.5813"N	24" RCP, Underground Storm Water Retention, Catch Basins, Oil/Water Sperator	once every 5 years in coordination with Outfall surveys
Outfall #16	Township Campus Outfall	83o17'0.2738"W 42o34'32.4701"N	36" RCP	once every 5 years in coordination with Outfall surveys
Outfall #17	Township Campus Outfall	83o17'4.3937"W 42o34'37.9140"N	24" RCP	once every 5 years in coordination with Outfall surveys
Outfall #18	Detention Basin Outfall	83o18'11.4711"W 42o33'45.4316"N	18" RCP	once every 5 years in coordination with Outfall surveys
Outfall #19	Detention Basin Outfall	83o18'25.3738"W 42o34'4.7337"N	24" RCP	once every 5 years in coordination with Outfall surveys
Outfall #20	Detention Basin Outfall	83o17'43.2447"W 42o34'1.3370"N	12" RCP	once every 5 years in coordination with Outfall surveys
Outfall #21	Detention Basin Outfall	83o16'11.8453"W 42o31'50.0541"N	24" RCP	once every 5 years in coordination with Outfall surveys
Outfall #22	Detention Basin Outfall	83o18'0.2765"W 42o33'23.4379"N	24" CMP	once every 5 years in coordination with Outfall surveys
Outfall #28	Detention Basin Outfall	83o12'41.7151"W 42o34'40.7657"N	No Data	once every 5 years in coordination with Outfall surveys

THE CHARTER TOWNSHIP OF BLOOMFIELD

Storm Water Pollution Prevention Plan (SWPPP)



PREPARED BY:

**BLOOMFIELD TOWNSHIP
4200 TELEGRAPH ROAD
P.O. Box 489
BLOOMFIELD HILLS, MICHIGAN 48303-0489**

August 30, 2010

Chapter 1: General Facility Information

Table 1: General Facility Information

NAME OF FACILITY:	Bloomfield Township Municipal Campus
FACILITY ADDRESS:	4200 Telegraph, PO Box 489 Bloomfield Hills, MI 48302
FACILITY CONTACT INFORMATION	
Name and title:	Noah Mehalski, Environmental Specialist / Ordinance Officer
Mailing Address:	4200 Telegraph Road, PO Box 489, Bloomfield Hills, MI 48303-0489
Telephone:	248-594-2808
24-Hour Emergency Telephone:	248-568-0729
Email:	nmehalski@bloomfieldtp.org
SPILL PREVENTION AND CONTROL COORDINATOR	
Name and title:	Noah Mehalski, Environmental Specialist / Ordinance Officer
Telephone:	248-594-2808
Email:	nmehalski@bloomfieldtp.org
PHASE II PERMIT INFORMATION	
Certificate of Coverage Number and Effective Date of Coverage:	MIS040099
Receiving Waters:	Rouge River

Chapter 2: Storm Water Pollution Prevention and Spill Response Team

The Charter Township of Bloomfield is committed to maintaining the environmental integrity of municipally owned property by helping improve storm water quality through the storm water permit program. The Charter Township of Bloomfield Department of Public Works staff is knowledgeable in storm water protection activities in conjunction with their fleet maintenance and material storage operations. The Township campus includes the Public Services Building which houses equipment for road maintenance, utility maintenance, and a fueling station. The campus also includes a facility for the storage of road salt and salt brine in threshold management quantities that requires the identification of responsible for on-site spill prevention and control.

Township staff identified to assist in storm water pollution prevention and pollution incident prevention activities are as follows:

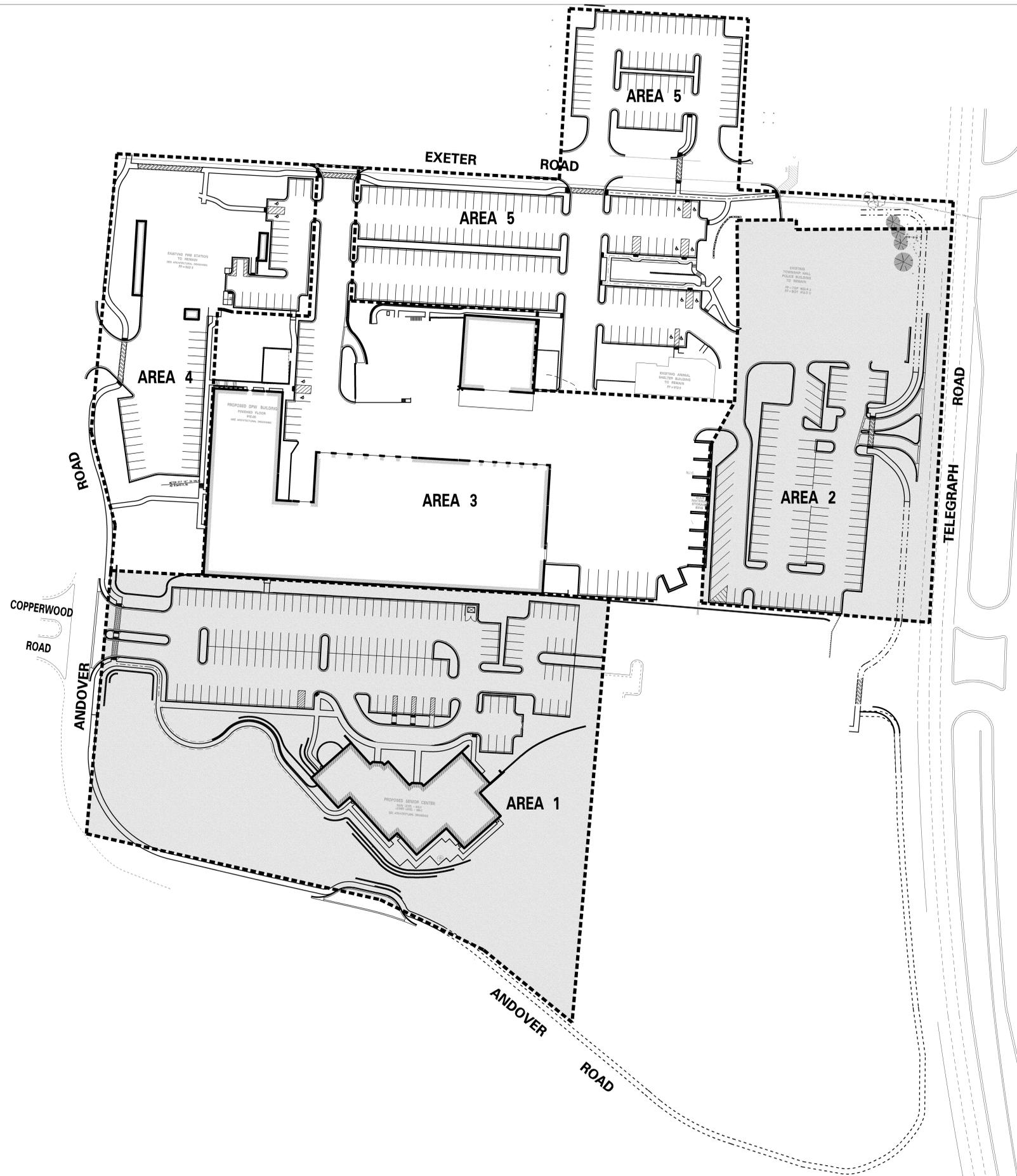
Table 2: Storm Water Pollution Prevention and Spill Response Team

NAME AND TITLE	RESPONSIBILITY
Rich Davis, Superintendent, DPW Roads	Spill Response Coordination
Noah Mehalski, Environmental Specialist	Spill Response Coordination
Duane Poole, Road Foreman	Containment & Cleanup Response
Ken Brown, Water Foreman	Containment & Cleanup Response
Bloomfield Township Fire Department	Hazmat Response

Chapter 3: Site Map

Please see the following six (6) pages for site map.

PERMITS
 RCOC Permit #2800-140 for the above ground work on Andover
 ---Does not include the underground utilities on Andover. (Applied for)
 MDOT Permit #63031-0103-07
 ODCS SESC #BLT/2008-0233/16/GA
 MDEQ WATER PERMIT #V084058



CONSTRUCTION AREAS

AREA	DESCRIPTION
1	SENIOR CENTER
2	POLICE LOT

LEGEND

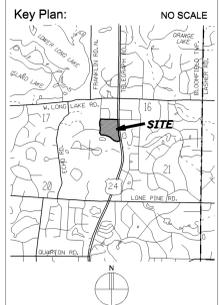
- AREA LIMITS
- PHASE 1/CONSTRUCTION AREA

N
 SCALE: 1" = 50' FULL SIZE
 1" = 100' HALF SIZE



NOTICE:
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Project Name and Client:
CAPITAL BUILDING PROGRAM
CAMPUS MASTER PLAN



CHARTER TOWNSHIP OF BLOOMFIELD
 Seal:

Date	Issued For
09/06/07	SCHEMATIC DESIGN
10/05/07	SITE PLAN SUBMITTAL
12/10/07	OWNER'S REVIEW
12/17/07	BID PACKAGES

Drawn: BS
 Checked: JFB
 Approved: JFB

Sheet Title:
COMPOSITE SITE PLAN

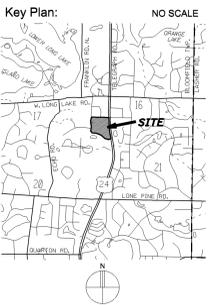
Project Number: 06-121.01
 Sheet Number: C-0.01

SCALE: 1" = 20' FULL SIZE
1" = 40' HALF SIZE



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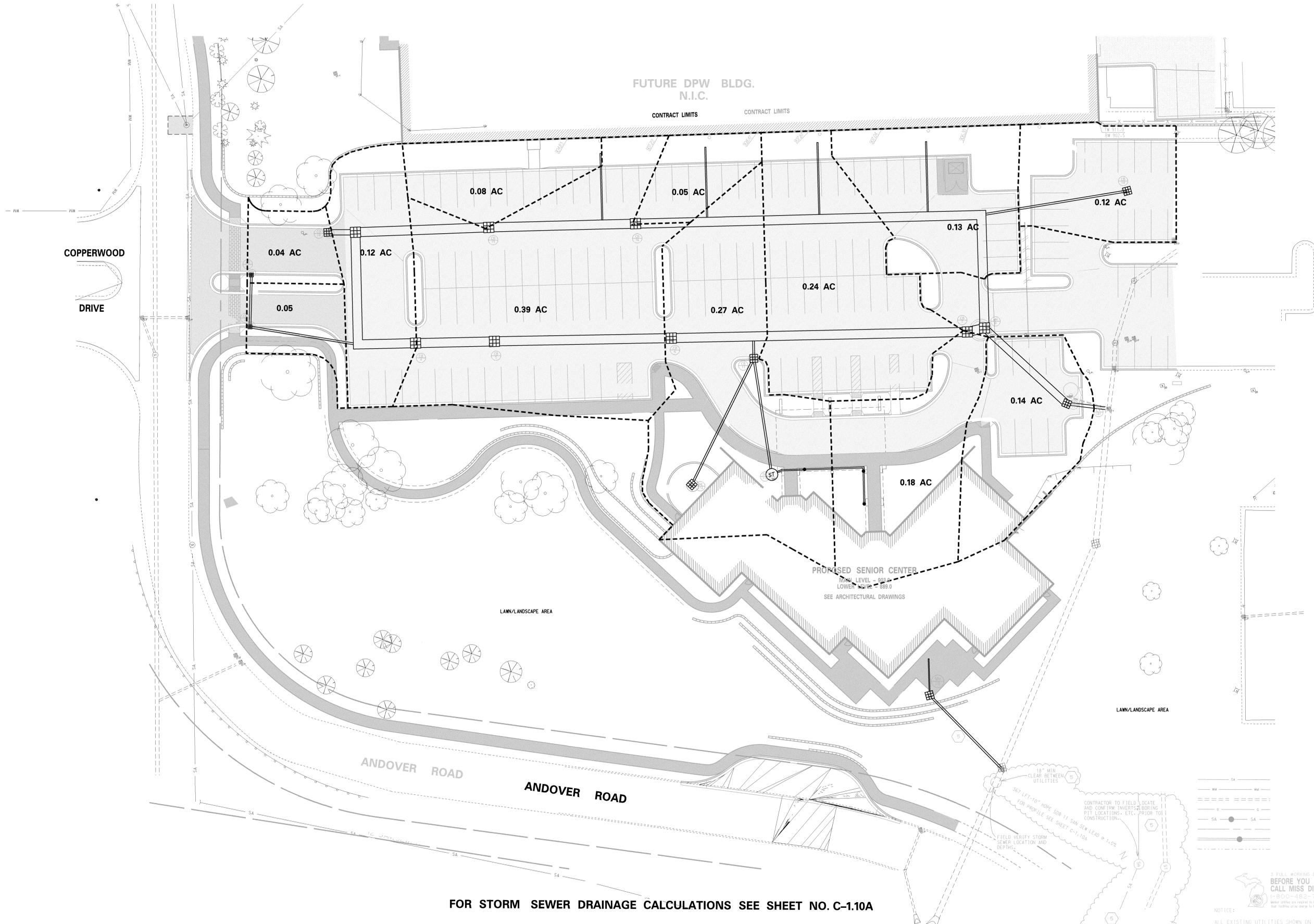
UTILITY PLAN AREA-1

Record Drawings

Project Number: 06-121.01

Sheet Number: C-1.07A-rd

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NOTE:
RECEIVING WATER IS HIDDEN LAKE, MAIN 1 BRANCH ROUGE RIVER

FOR STORM SEWER DRAINAGE CALCULATIONS SEE SHEET NO. C-1.10A

FOR STORM SEWER CALCULATIONS
SEE SHEET C-1.10A

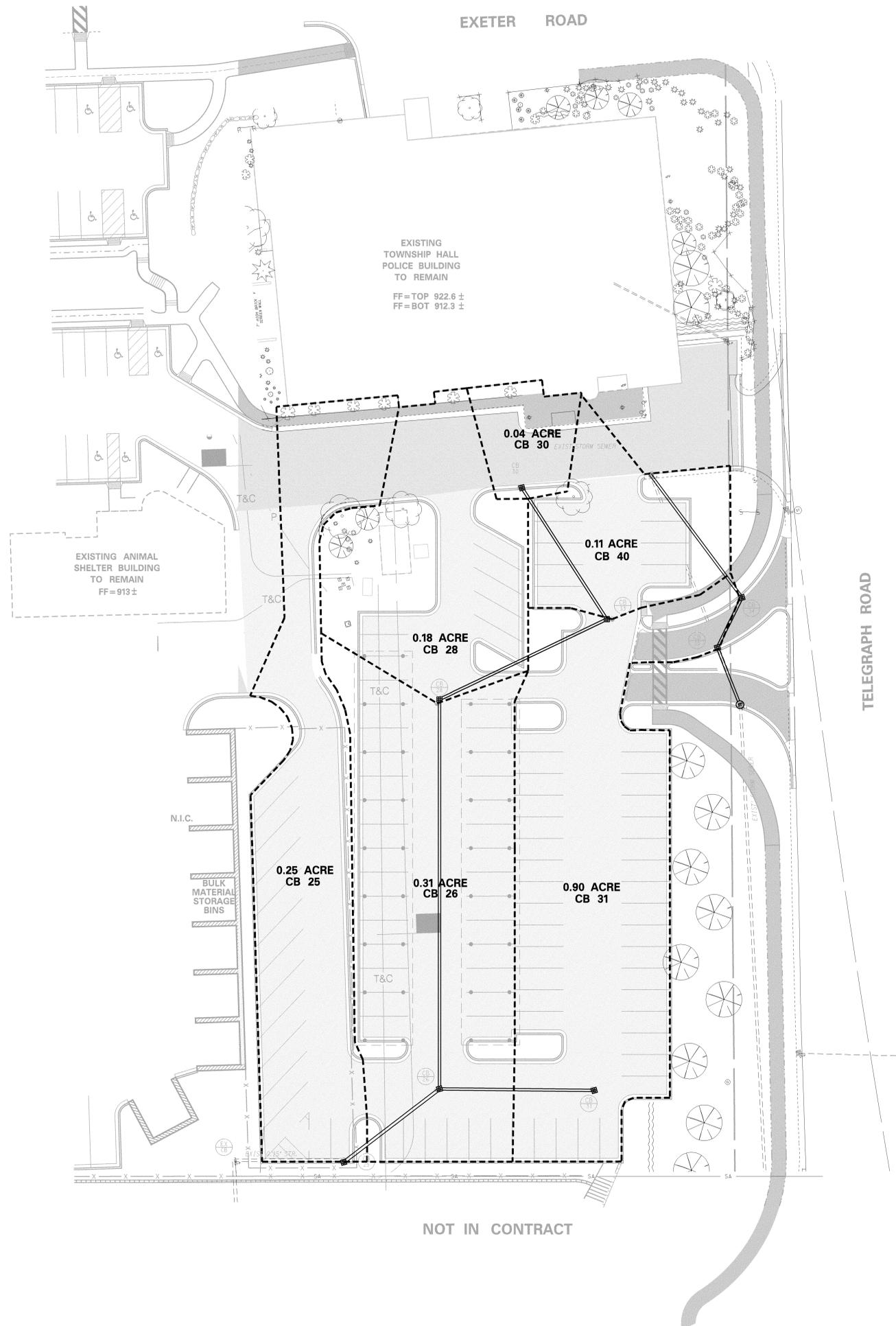
18" MIN CLEAR BETWEEN UTILITIES
36" LET-10" HOPE SDR 11 SAN SEW LEAD @ 1.0%
FOR PRIFLE SEE SHEET C-1.10A
FIELD VERIFY STORM SEWER LOCATION AND DEPTHS
CONTRACTOR TO FIELD LOCATE AND CONFIRM INVERTS, BORING PIT LOCATIONS, ETC. PRIOR TO CONSTRUCTION.
CLEAR TREES AS NECESSARY FOR ACCESS OVER EXIST UTILITIES 20" WIDE MAX. AVOID TREES 12" DIA. AND LARGER IF POSSIBLE.

NOTICE:
3 FULL WORKING DAYS BEFORE YOU DIG CALL MISS DIG. (1-800-482-7171)
Missed utilities are subject to locate. Your liability is to locate to the utility.

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EXETER ROAD

EXETER ROAD



DRAINAGE STRUCTURE SCHEDULE

STRUCTURE	RIM	COORDINATES	FRAME AND COVER	DESCRIPTION
CB 25	903.44	N=5194.1233 E=4770.6302	E.J.I.W. 7045 MI	4'-0" DIA. W/ 3' SUMP
CB 26	903.58	N=5212.4561 E=4819.5294	E.J.I.W. 1040 MI	4'-0" DIA. W/ 3' SUMP
CB 28	907.21	N=5267.7865 E=4857.0990	E.J.I.W. 1040 MI	4'-0" DIA. W/ 3' SUMP
CB 33	907.99	N=5383.0952 E=4935.8760	E.J.I.W. 1040 MI	4'-0" DIA. W/ 3' SUMP
CB 30	909.74	N=5445.8265 E=4913.3433	E.J.I.W. 7045 MI	4'-0" DIA. W/ 3' SUMP
CB 31	903.33	N=5196.9314 E=4877.3593	E.J.I.W. 1040 MI	4'-0" DIA. W/ 3' SUMP
CB 34	908.50	N=5377.8328 E=4988.9752	E.J.I.W. 7045 MI	4'-0" DIA. CB OVER EXIST. SEWER
CB 35	908.55	N=5359.7447 E=4975.2254	E.J.I.W. 7045 MI	4'-0" DIA. W/ 3' SUMP

WATER MAIN STRUCTURE SCHEDULE

STRUCTURE	COORDINATES	F.G./RIM
HYD 2-1	N=5387.5260 E=4759.1354	909.80
TSVAV 2-1 W/ 8" VALVE	N=5335.6632 E=4964.2764	906.55
V.B. 2-1A W/ 2" VALVE	N=5387.9583 E=4784.5338	909.65

UTILITY QUANTITIES

NOTES

- RECEIVING AREA IS HIDDEN LAKE, MAIN 1 BRANCH ROUGE RIVER.
- AREA DRAINS TO OUTFALL #15.



SCALE: 1" = 20' FULL SIZE
1" = 40' HALF SIZE

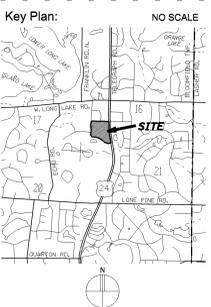


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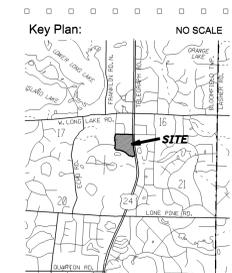
Sheet Title:

UTILITY PLAN
AREA-2

Record Drawings

Project Number: 06-121.01

Sheet Number: C-2.07-rd



Project Name and Client:
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CAMPUS MASTER PLAN

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Sheet Title:

UTILITY PLAN
AREA 3

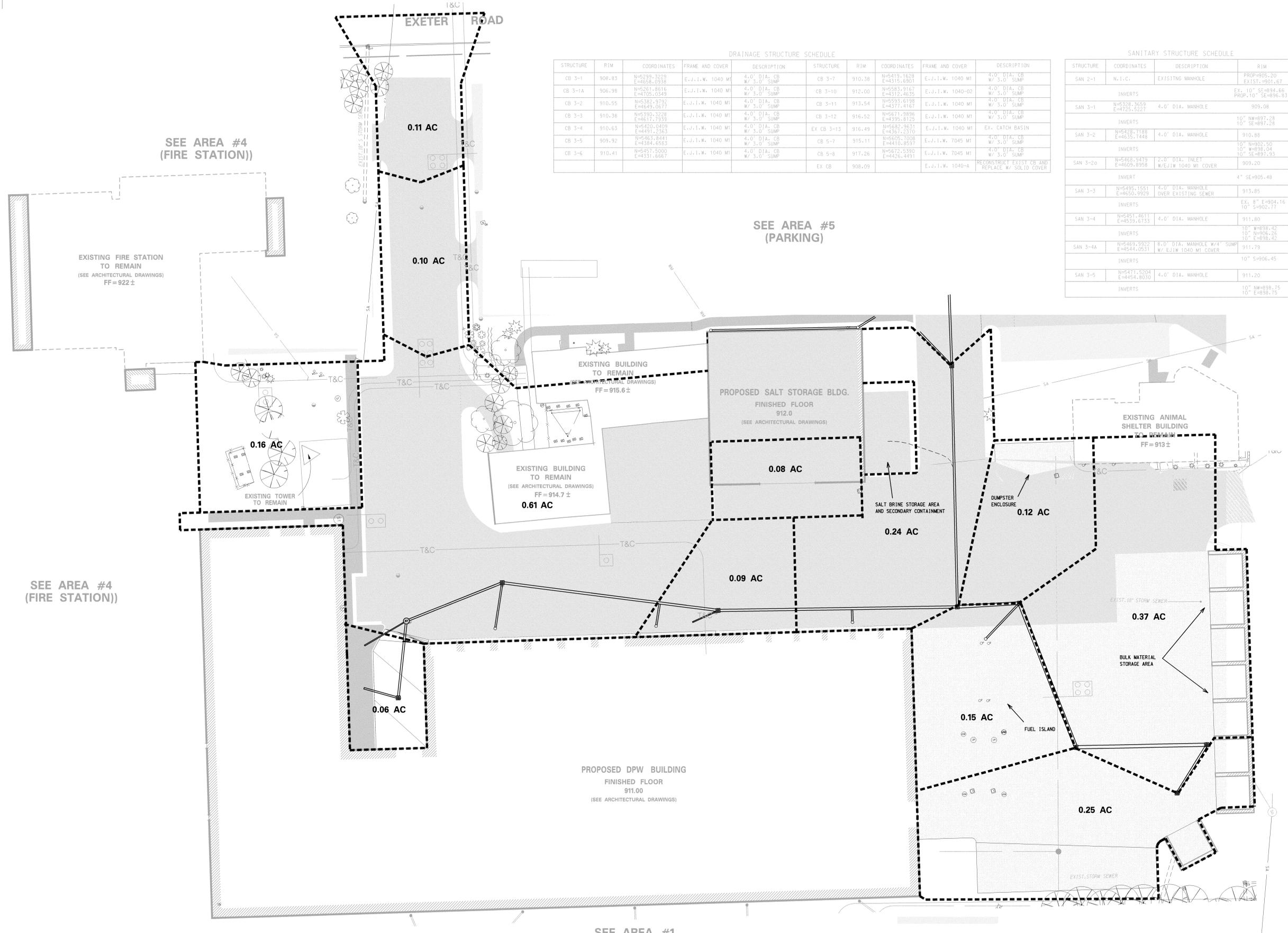
Record Drawings

Project Number: 06-121.01

Sheet Number: C-3.07-rd

DRAINAGE STRUCTURE SCHEDULE									
STRUCTURE	RIM	COORDINATES	FRAME AND COVER	DESCRIPTION	STRUCTURE	RIM	COORDINATES	FRAME AND COVER	DESCRIPTION
CB 3-1	908.83	N=5299.3229 E=4658.0938	E.J.L.W. 1040 MI	4.0' DIA. CB W/ 3.0' SUMP	CB 3-7	910.38	N=5419.1628 E=4315.6901	E.J.L.W. 1040 MI	4.0' DIA. CB W/ 3.0' SUMP
CB 3-1A	906.98	N=5261.8616 E=4705.0349	E.J.L.W. 1040 MI	4.0' DIA. CB W/ 3.0' SUMP	CB 3-10	912.00	N=5583.9167 E=4312.4635	E.J.L.W. 1040-02	4.0' DIA. CB W/ 3.0' SUMP
CB 3-2	910.55	N=5382.9792 E=4649.0677	E.J.L.W. 1040 MI	4.0' DIA. CB W/ 3.0' SUMP	CB 3-11	913.54	N=5593.6198 E=4377.4162	E.J.L.W. 1040 MI	4.0' DIA. CB W/ 3.0' SUMP
CB 3-3	910.38	N=5390.3228 E=4617.7939	E.J.L.W. 1040 MI	4.0' DIA. CB W/ 3.0' SUMP	CB 3-12	916.52	N=5671.9896 E=4395.8125	E.J.L.W. 1040 MI	4.0' DIA. CB W/ 3.0' SUMP
CB 3-4	910.63	N=5420.0409 E=4491.2365	E.J.L.W. 1040 MI	4.0' DIA. CB W/ 3.0' SUMP	EX CB 3-13	916.49	N=5682.9631 E=4367.2370	E.J.L.W. 1040 MI	EX. CATCH BASIN
CB 3-5	909.92	N=5463.8441 E=4384.6563	E.J.L.W. 1040 MI	4.0' DIA. CB W/ 3.0' SUMP	CB 5-7	915.11	N=5605.7008 E=4410.8597	E.J.L.W. 7045 MI	4.0' DIA. CB W/ 3.0' SUMP
CB 3-6	910.41	N=5457.5000 E=4331.6667	E.J.L.W. 1040 MI	4.0' DIA. CB W/ 3.0' SUMP	CB 5-8	917.26	N=5672.5390 E=4426.4491	E.J.L.W. 7045 MI	4.0' DIA. CB W/ 3.0' SUMP
					EX CB	908.09		E.J.L.W. 1040-A	RECONSTRUCT EXIST. CB AND REPLACE W/ SOLID COVER

SANITARY STRUCTURE SCHEDULE			
STRUCTURE	COORDINATES	DESCRIPTION	RIM
SAN 2-1	N. 1.C.	EXISTING MANHOLE	PROP=905.20 EXIST.=901.67
INVERTS			
		EX. 10" S=894.66 PROP. 10" SE=896.83	
SAN 3-1	N=5328.3659 E=4725.5227	4.0' DIA. MANHOLE	909.08
INVERTS			
		10" NW=897.28 10" SE=897.28	
SAN 3-2	N=5428.7788 E=4635.7448	4.0' DIA. MANHOLE	910.88
INVERTS			
		10" N=902.50 10" W=898.04 10" SE=897.93	
SAN 3-2a	N=5468.9479 E=4609.8958	2.0' DIA. INLET W/EJ.W 1040 MI COVER	909.20
INVERT			
		4" SE=905.48	
SAN 3-3	N=5495.1551 E=4650.9929	4.0' DIA. MANHOLE OVER EXISTING SEWER	913.85
INVERTS			
		EX. 8" E=904.16 10" S=902.77	
SAN 3-4	N=5481.4611 E=4539.6733	4.0' DIA. MANHOLE	911.80
INVERTS			
		10" W=898.42 10" N=896.26 10" E=898.42	
SAN 3-4A	N=5469.9927 E=4544.0531	8.0' DIA. MANHOLE W/4' SUMP W/ EJ.W 1040 MI COVER	911.79
INVERTS			
		10" S=906.45	
SAN 3-5	N=5471.5204 E=4454.8030	4.0' DIA. MANHOLE	911.20
INVERTS			
		10" NW=898.75 10" E=898.75	



SEE AREA #4 (FIRE STATION))

SEE AREA #5 (PARKING)

SEE AREA #4 (FIRE STATION))

SEE AREA #2 (POLICE STATION))

SEE AREA #1 (SENIOR CENTER)

- NOTES:**
- RECEIVING WATER IS HIDDEN LAKE, MAIN 1 BRANCH ROUGE RIVER.
 - AREA DRAINS TO OUTFALL #17.

UTILITY QUANTITIES

WATERMAIN	90 LFT
8" WATERMAIN CL 54 DUCTILE IRON	1 EA
HYDRANTS COMPLETE ASSEMBLY	

STORM SEWER

24" DIA. C76 CLIV RCP PIPE	125 LFT
21" DIA. C76 CLIV RCP PIPE	154 LFT
18" DIA. C76 CLIV RCP PIPE	144 LFT
15" DIA. C76 CLIV RCP PIPE	116 LFT
12" DIA. C76 CLIV RCP PIPE	388 LFT
10" DIA. PVC SCH 40 PIPE	118 LFT
6" DIA. PVC SCH 40 PIPE	51 LFT
4" DIA. CATCH BASIN	11 EA
48" DIA. C.I.P. D.S. RISER	4 EA

SANITARY SEWER

10" SAN. SEWER ABS OR PVC TRUSS	372 LFT
8" SAN. SEWER ABS OR PVC TRUSS	68 LFT
6" SAN. LEAD SCHEDULE 40 PVC	152 LFT
4" D.I.P.	48 LFT
8.0" DIA. SAN. MANHOLE	1 EA
4.0" DIA. SAN. MANHOLE	5 EA
2.0" DIA. INLET	1 EA
SAN SEWER TAP	1 EA

WATER MAIN STRUCTURE SCHEDULE

STRUCTURE	COORDINATES	F.O.
HYD 3-1	N=5222.5071 E=4354.8084	912.50

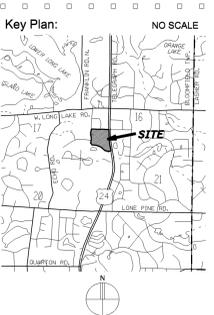
LEGEND

SA	EXISTING SANITARY
WM	EXISTING WATER MAIN
SS	EXISTING STORM SEWER
G	EXISTING GAS
SA	PROPOSED SANITARY
WM	PROPOSED WATER MAIN
SS	PROPOSED STORM SEWER
ED	PROPOSED EDGE DRAIN

SCALE: 1" = 20' FULL SIZE
1" = 40' HALF SIZE

NOTICE:
ALL EXISTING UTILITIES SHOWN ON THIS TOPOGRAPHIC SURVEY HAVE BEEN TAKEN FROM VISUAL OBSERVATION AND RECORD MAPPING WHERE AVAILABLE. NO GUARANTEE IS MADE, OR SHOULD BE ASSUMED, AS TO THE COMPLETENESS OR ACCURACY OF THE UTILITIES SHOWN ON THIS DRAWING. PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS PRIOR TO CONSTRUCTION ACTIVITIES.

FOR STORM SEWER PROFILE AND CALCULATIONS SEE SHEET C-3.09
SANITARY SEWER PROFILE SEE SHEET C-3.10



Project Name and Client:
CAPITAL BUILDING PROGRAM
CAMPUS MASTER PLAN



CHARTER TOWNSHIP OF BLOOMFIELD
Seal:

Date Issued For
09/06/07 SCHEMATIC DESIGN
10/05/07 SITE PLAN SUBMITTAL
12/10/07 OWNER'S REVIEW
12/17/07 BID PACKAGES

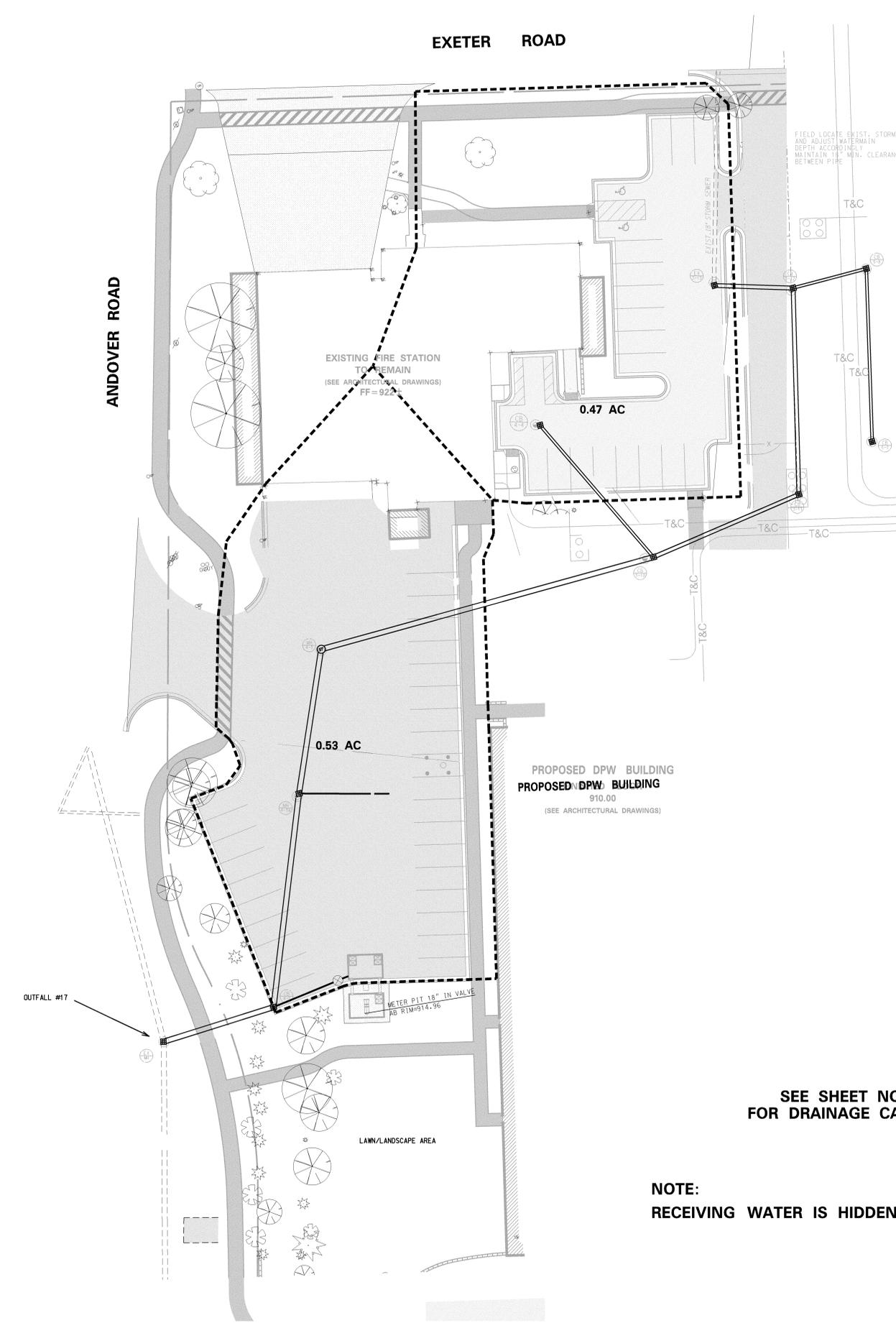
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Checked: JFB
Approved: JFB

Sheet Title:

UTILITY PLAN
AREA 4

Record Drawings

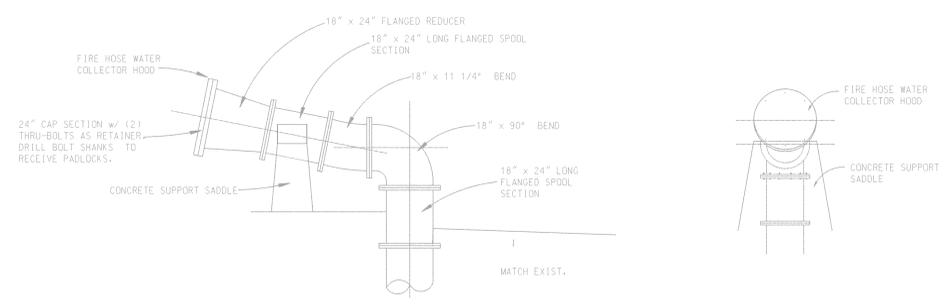
Project Number: 06-121.01
Sheet Number: C-4.07-rd



SEE SHEET NO. C-4.09
FOR DRAINAGE CALCULATIONS

NOTE:
RECEIVING WATER IS HIDDEN LAKE, MAIN 1 BRANCH ROUGE RIVER.

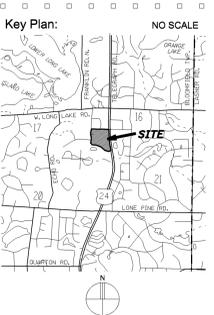
NOTE:
ALL PIPE FOR WATER
COLLECTOR ASSEMBLY TO BE
C110 FLANGED DUCTILE IRON
(PAINT)



SCALE: 1" = 20' FULL SIZE
1" = 40' HALF SIZE



NOTICE:
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Project Name and Client:
CAPITAL BUILDING PROGRAM
CAMPUS MASTER PLAN



CHARTER TOWNSHIP OF BLOOMFIELD
Seal:

Date	Issued For
09/06/07	SCHEMATIC DESIGN
10/05/07	SITE PLAN SUBMITTAL
12/10/07	OWNER'S REVIEW
12/17/07	BID PACKAGES

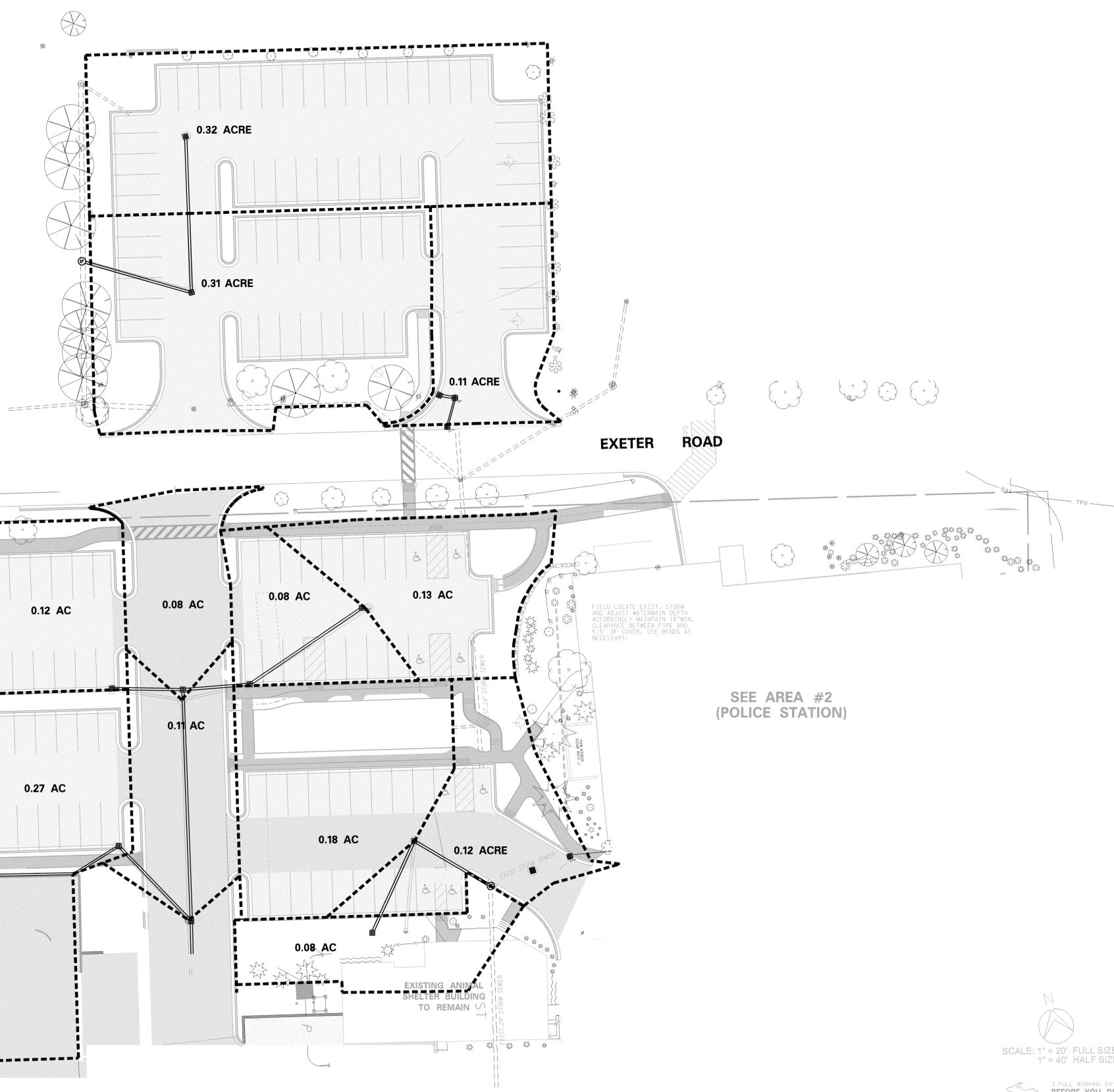
Drawn: BS
Checked: JFB
Approved: JFB

Sheet Title:

UTILITY PLAN AREA 5

Record Drawings

Project Number: 06-121.01
Sheet Number: C-5.07-rd



SEE AREA #4 (FIRE STATION)

SEE AREA #2 (POLICE STATION)

SEE AREA #3 (DPW)

UTILITY QUANTITIES

- NOTES:**
- RECEIVING WATER IS HIDDEN LAKE, MAIN 1 BRANCH ROUGE RIVER.
 - AREA DRAINS TO OUTFALL #17.

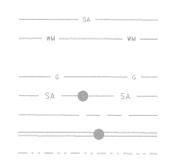
SEE SHEET NO. C-5.09 FOR DRAINAGE CALCULATIONS

FOR STORM SEWER PROFILE AND CALCULATIONS SEE SHEET C-5.09

SCALE: 1" = 20' FULL SIZE
1" = 40' HALF SIZE



NOTICE:
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Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

The Bloomfield Township municipal campus consists of eight (8) buildings. The 8 buildings include the following:

1. Township Hall
2. Central Fire Station
3. Salt Storage Facility
4. Cable Building
5. Public Services Building
6. Public Services Building Annex
7. Senior Services Center
8. District Courthouse

Floor Drains in each of the buildings lead to the sanitary sewer system. Facilities existing in 2005 were dye tested to confirm this connection. Those buildings constructed during 2010 will be dye tested in 2011.

The Salt Dome is completely enclosed and has a loading pad with a catch basin leading to the sanitary sewer. The loading pad is also pitched back toward the catch basin to prevent the release of salt during loading operations. In addition, during the winter months, the catch basin is blocked with a solid lid to prevent salt from entering the sanitary sewer system. The loading area is swept regularly and maintained to be free of salt residue.

The 11,979-gallon salt brine tank has concrete secondary containment. The drain for this secondary containment is maintained in the off position at all times. If rainwater accumulates within the secondary containment, it is visually inspected for unnatural turbidity, color, visible sheens, oil films, foams, solids, or deposits. If there are none and upon authorization from the receiving WWTP, this rainwater will be released to the sanitary sewer system.

The oil service system is located in the maintenance area of the Public Services Building. The system is a closed loop and all stock of these materials is stored in an underground roofed room.

The fuel island was completely reconstructed in 2010 and is equipped with overflow sensors and emergency shutoff devices. In addition, two spill kits are located on the fuel island. Also, Township personnel are trained to be the first responders to spills that may occur during operations.

Chapter 4: Significant Materials & Activities

Inventory and Description of Exposed Significant Materials & Municipal Activities

To identify potential sources of significant materials, Township staff conducted an inventory of municipal facilities, activities and materials that may be exposed to storm water. Municipal activity areas consistent with the SWPPP requirements for the Facility include the following:

1. Loading, unloading and other material handling operations
2. Outdoor storage
 - Bulk material storage area
 - Rock Salt and salt brine are stored on site in quantities that meet PIPP requirements. The PIPP requirements have been incorporated into this document.
3. On-site waste disposal
4. Maintenance and cleaning of vehicles and equipment
 - All vehicle maintenance is conducted indoors. All floor drains are connected to the sanitary sewer. The PIPP requirements have been incorporated into this document.

The following areas/activities as identified in the standard SWPPP template are not applicable to the DPW facility:

- Areas of exposed and/or erodible soils
- Outdoor manufacturing or processing activities
- Significant dust or particulate generating processes
- Discharge from rooftop vents, stacks and air emission controls
- Sites of environmental contamination listed under the NREPA Act 451, part 201 of 1994
- Areas of significant material residues
- Areas where wild or domestic animals congregate and deposit waste

The results are displayed in Table 3:

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

Table 3. Municipal Activities, Significant Materials, Exposure and Material Handling

Municipal Activity Areas	Area/Process Description	Significant Material	Method of Exposure	Exposure Potential	Material Handling & Storage Procedures	Discharge Point
1. Loading, unloading, and other material handling operations	Fuel Area	Gasoline, Diesel Fuel	Spillage during vehicle fueling, leaking from vehicles	Low	2 spill kits are located on the fuel island. An additional spill kit is located in the Public Services Building vehicle maintenance area. Absorbent material is also stored in the vehicle maintenance area.	Outfall # 17
	Raw Material Storage (6 bins, 100-225 ton capacity each)	Sand, soil, gravel	Runoff	Low	Raw materials are stored on a cement pad that is walled with cement on three sides. Materials bins are covered when not in use.	Outfall # 17
	Road Salt storage	Rock salt (Capacity to store 3,500 tons)	Track out	Low	Salt is stored inside cement building with a metal roof. All loading and unloading occurs on a cement pad adjacent to that building. The loading area is equipped with a drain leading to the sanitary sewer. The loading area is swept regularly and maintained to be free of salt residue.	Outfall # 17
2. Outdoor storage including secondary containment structures	Salt Brine Storage	Salt Brine (11,979 gallon capacity)	Spillage during transfer to vehicles, leaking, puncture of container	Low	Secondary containment is present around the salt brine storage tank. The discharge valve is maintained in the off position. Spill response materials are located at the adjacent fuel island and vehicle maintenance area.	Outfall # 17
3. On-site waste disposal practices	Dumpsters (4 bins, 4 yards each)	General refuse	Spillage during loading and unloading, leaks	Low	Dumpsters have solid covers and are emptied regularly.	Outfall # 17

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

4. Maintenance and cleaning of vehicles, machines, and equipment	Used and Virgin Oil Storage	2,680 gallons of oil, (1680 gallons new oil and 1,000 gallons used oil).	Spillage during transfer	Low	Containers are located in a covered, underground room. Transfer areas are equipped with permanent drip pans.	N/A
	Vehicle washing	Vehicle wash water	Drains to Sanitary Sewer	Low	Vehicles are washed inside. Vehicle wash water is discharged to the sanitary sewer system; floor drains are directed through an oil/water separator before entering sanitary system. Phosphorous-free soap is also used.	N/A
	Vehicle Rinsing	Vehicle Rinse Water	Storm Drain Inlet	Med	Vehicles may be rinsed outside. No soap of any kind is utilized in this process. Adjacent storm drains are protected with three-foot sumps and inlet filters.	Outfall # 17

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

Solid Salt Storage

The Charter Township of Bloomfield has a salt storage facility constructed out of concrete with a metal roof on an impervious cement pad. The facility has the capacity to store 3,500 tons of salt. All loading and unloading occurs on a cement pad adjacent to that building. The loading area is equipped with a drain leading to the sanitary sewer. The loading area is swept regularly and maintained to be free of salt residue.

The salt storage facility **is not** located within 50 feet of a lakes shore, stream bank, or wetland, nor is it located in a 100-year floodplain.

Salt Brine Storage

Liquid salt brine is stored in a tank with a 11,979-gallon capacity. Secondary containment is present around the salt brine storage tank. The valve is maintained in the off position. Spill response materials are located at the adjacent fuel island and vehicle maintenance area.

Spill Response Procedures and Equipment

For significant materials covered under the SWPPP, if there is a spill or release to the waters of the state, a Spill Response Form will be filled out, and Bloomfield Township will contact the MDNRE Pollution Emergency Alert System (PEAS) at 1-800-292-4706 during non-business hours. During regular business hours, the local district office will be contacted at:

SE Michigan District Office
27700 Donald CT
Warren MI 48092-2793
(586) 753-3700

Detailed procedures for spill response related to both the SWPPP and the PIPP are located in **Appendix D**.

List of Significant Spills and Leaks

There have been no significant spills and significant leaks of polluting materials that have occurred at areas that are exposed to precipitation or that otherwise discharge to a point source at the Facility in the last three years.

Any release that occurs after the SWPPP has been developed shall be controlled in accordance with the SWPPP. If there is cause for the SWPPP to be updated, it will be done within 14 calendar days of obtaining knowledge of the spill or loss.

Summary of Sampling Data

The SWPPP requires a summary of existing storm water discharge sampling data (if available) describing pollutants in storm water discharges. Outfalls 15, 16, & 17 were inspected in 2005 and 2007. Ammonia, Surfactant, and *E. coli* sampling was performed on outfalls 15 & 16 in 2007 due to the presence of dry-weather flow. The sampling indicated NO illicit discharges/connections were present on the campus system and a report of these results is available upon request.

Chapter 5: Nonstructural Controls

The Charter Township of Bloomfield is committed to employing preventative maintenance practices through the use of nonstructural controls to prevent storm water pollution. These nonstructural controls are everyday types of activities undertaken by employees at the facility. The permit requires that the SWPPP shall, at a minimum, include each of the following non-structural controls:

1. Routine Inspections & Good Housekeeping Procedures
2. Comprehensive Site Inspections
3. Soil Erosion & Sedimentation Control Measures
4. Employee Training Program
5. List of Significant Materials Still Present

Routine Inspections and Good Housekeeping Procedures

Preventive maintenance at the Charter Township of Bloomfield involves the regular inspection, testing, and cleaning of facility equipment, vehicles, and operational systems. A Routine Inspection Form has been created for the Facility and is located in **Appendix A**. Facility staff will use the Routine Inspection Form during site walk-throughs that will be conducted on a **monthly** basis. The purpose of these inspections is to identify and prevent conditions that could lead to storm water pollution. Good housekeeping procedures reduces the potential for pollutants to come into contact with storm water.

Additionally, Charter Township of Bloomfield staff inspects all vehicles **daily** and each vehicle is equipped with a computer based fleet maintenance software monitoring system that alerts vehicle maintenance personnel when repairs or routine maintenance is required.

Part 5 rules also require surveillance of polluting materials. The routine inspections will include this information for the salt facility and the calcium chloride container.

A log of the inspection and corrective actions shall be maintained on file and shall be retained for three years.

Comprehensive Site Inspection

The permit requires a schedule for comprehensive site inspection to include but not be limited to, the areas and equipment identified in the preventive maintenance program and good housekeeping procedures, a review of the routine preventive maintenance reports, and any other paperwork associated with the SWPPP. The whole facility will be evaluated during the comprehensive inspection. In contrast to the routine inspections, the comprehensive inspections will focus on areas that have a reasonable potential for significant materials to contaminate the storm water runoff. This inspection will determine the overall adequacy of the SWPPP and will be coordinated with our annual plan review.

The comprehensive site inspection for the Facility will be conducted once every six months. A report of the comprehensive site inspection results shall be prepared and retained for three years. The report shall identify any incidents of non-compliance with the SWPPP or this permit. If there are no reportable incidents of non-compliance, the report shall contain a certification that the facility is in compliance with this permit. The Comprehensive Site Inspection and Report Form that will be used for each inspection is located in **Appendix B**.

Soil Erosion & Sedimentation Control Measures

The permit requires the identification of areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion. *There are no areas present that have a high potential for significant soil erosion.*

Employee Training Program

The permit requires a description of employee training programs, which will be implemented to inform appropriate personnel at all levels of responsibility, the components and goals of the SWPPP. Employee training components include:

Employees Trained	Training Description and Frequency
All Township Field Personnel	Annually, employees will: <ul style="list-style-type: none">• Review the Township's S.W.M.P. / S.W.P.P.P.• Received IDEP training• Receive Storm Water Protection Training• Review Routine Inspection Forms

TMDL Requirements

The TMDL requirements for Bloomfield Township are addressed in **Section III** of Bloomfield Township's Storm Water Management Program Plan.

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

List of Significant Materials Still Present (*if applicable*)

The permit requires the identification of significant materials expected to be present in storm water discharges following implementation of nonstructural preventative measures and source controls. Significant materials are not expected to be present in storm water discharges following implementation of nonstructural controls. The ultimate discharge point for all storm water runoff generated from the Facility is the Rouge River.

Chapter 6: Structural Controls

The permit requires that where implementation of non-structural controls does not control storm water discharges to prevent contact with significant materials to the maximum extent practicable, the SWPPP shall provide a description of the location, function, and design criteria of structural controls for prevention and treatment.

Several structural controls have been implemented at the Facility to prevent storm water from being exposed to significant materials and municipal activities. These structural controls include:

Structural Control Type	Description	Significant Materials Intended to be Managed
Catch Basins with 3-foot sumps	The Township requires catch basins with 3-foot sumps to protect water quality. Catch Basins are inspected during the routine inspection and cleaned as needed.	Sediment/Oil & Grease/Phosphorus
Curbing	The entire campus	Sediment
Signs and labels	All material storage containers are clearly identified and labeled and storm water inlets are labeled “dump no waste drains to local waterway”.	Gasoline, oil, antifreeze, windshield solvent
Fuel Island Controls	Emergency Shutoff and overfill protection	Fuel
Impervious Loading Pad – Salt Dome	Impervious concrete pad pitched back toward covered dome. Catch basin leads to sanitary sewer.	Rock salt residue
Secondary Containment	The salt brine storage area equipped with secondary containment. The outlet valve is maintained in the closed position at all times and drains to the sanitary sewer system.	Salt brine residues

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

Facility Security Measures

The Charter Township of Bloomfield DPW yard is completely fenced with a gated entrance. The facility operates with one full-time shift for a total of 10 hours per day.

Chapter 7: Annual Review

The permit requires that the permittee shall review the SWPPP annually after it is developed and maintain written summaries of the reviews (See **Appendix C** for Annual Review Form). Based on the review, the Charter Township of Bloomfield will amend the SWPPP as needed to ensure continued compliance with the terms and conditions of the permit. The annual review will be retained on site.

Chapter 8: Record Keeping

The Charter Township of Bloomfield will maintain records of all SWPPP-related inspections and maintenance activities. Records will also be kept describing spills or other discharges that can affect the quality of storm water runoff. All such records will be retained for three years. The following records are required by the Phase II permit:

- Routine and Good Housekeeping Inspection Reports
- Comprehensive Inspection Reports
- Written summaries of the annual SWPPP review

The Charter Township of Bloomfield will notify the MDNRE Water Bureau District Office within 30 days of completing the PIPP requirements at:

SE Michigan District Office
27700 Donald CT
Warren MI 48092-2793
(586) 753-3700

Chapter 9: SWPPP Certification

The completed SWPPP shall be signed by the facility manager and certified storm water operator or storm water program manager, as applicable, and retained on-site at the facility, which generates the storm water discharge.



8/30/10

Thomas Trice, Department of Public Works Director, Facility Manager

Date



8/30/10

Noah Mehalski, Environmental Specialist, Storm Water Operator

Date

Appendix A: SWPPP Routine Inspection and Good Housekeeping Report

Date:	Facility Name:
Inspector Name:	
Routine Inspection Schedule:	

Preventative maintenance involves the regular inspection, testing, and cleaning of facility equipment, vehicles, and operational systems. All systems and equipment in which a breakdown could result in significant materials getting into storm water runoff should be included in a preventative maintenance program.

Municipal Activity Area #1: Loading, unloading, and other material handling operation areas

Fueling Area

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Spill clean-up materials are located near fueling station	
<input type="checkbox"/>	Fuel pump shutoffs are installed and working properly	
<input type="checkbox"/>	Fuel dispensing equipment is properly maintained	
<input type="checkbox"/>	Overflow protection devices on tank systems	
<input type="checkbox"/>	Protective guards are installed around tanks	
<input type="checkbox"/>	Hose breakaways are implemented and properly working	
<input type="checkbox"/>	Roof downspouts are located so they don't run across fueling area	
<input type="checkbox"/>	Fuel area is covered with permanent material	
<input type="checkbox"/>	No mobile fueling observed	
<input type="checkbox"/>	Secondary Containment valve in off position	

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

Raw Material Storage Areas

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Assess areas for track-out	
<input type="checkbox"/>	Areas swept for litter	
<input type="checkbox"/>	Spill clean-up materials located near loading/unloading areas.	
<input type="checkbox"/>	Check loading/unloading equipment for leaks and container integrity.	
<input type="checkbox"/>	Downspouts positioned away from loading docks	
<input type="checkbox"/>	Fully Stocked spill clean-up materials near fueling station.	

Salt Storage Facility

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Spill clean-up materials located near salt storage area	
<input type="checkbox"/>	Areas swept for salt back into salt storage building/area.	
<input type="checkbox"/>	Check loading/unloading equipment for leaks	
<input type="checkbox"/>	Downspouts positioned away from salt storage area	
<input type="checkbox"/>	Assess durability of the covering/enclosure	

Municipal Activity Area #2: Outdoor storage, including secondary containment structures

Material Storage Practices

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Materials are stored away from high traffic areas. If they are in high traffic areas, there are posts or guard rails to prevent collision damage.	
<input type="checkbox"/>	Materials are stored away from drip edges, down spouts, and storm water inlets whenever possible.	

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

<input type="checkbox"/>	Materials, chemicals, and other containers are stored off of the ground (i.e. on pallets)	
<input type="checkbox"/>	Inspect storage areas for spills and leaks	
<input type="checkbox"/>	New containers are inspected for loose fittings, poor welding, etc.	
<input type="checkbox"/>	Containers are properly labeled (waste materials should state type of waste and date placed in storage)	
<input type="checkbox"/>	Tank foundations, connections and piping systems are inspected for corrosion, leaks, and cracks	
<input type="checkbox"/>	Stockpiles of gravel, dirt, sand and other similar materials are contained and located away from catch basins to minimize runoff. Excess material is swept back into contained areas. Containers are covered when not in use.	

Salt Brine Storage Container and Secondary Containment

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Inspect container for leaks and spills	
<input type="checkbox"/>	Inspect overhead application nozzle for leaks	
<input type="checkbox"/>	Tank foundations, connections and piping systems are inspected for corrosion, leaks, and cracks	
<input type="checkbox"/>	Inspect Secondary Containment for material buildup	
<input type="checkbox"/>	Spill clean-up materials are readily available	
<input type="checkbox"/>	Container is properly labeled	

Municipal Activity Area #3: On-site waste disposal practices

Dumpsters

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Dumpsters are free of leaks	
<input type="checkbox"/>	Dumpsters are located away from storm drains	

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

<input type="checkbox"/>	Dumpsters lids are kept closed	
<input type="checkbox"/>	Dumpster area is secure	

Municipal Activity Area #4: Maintenance and cleaning of vehicles, machines, and equipment

Operation and Maintenance

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Surfaces are clean, dry, and well-maintained	
<input type="checkbox"/>	Waste materials are regularly picked-up	
<input type="checkbox"/>	Preventive maintenance on equipment is being performed	
<input type="checkbox"/>	Leaks and spills are properly contained and cleaned-up	
<input type="checkbox"/>	Spill clean-up materials and procedures are clearly accessible to employees	
<input type="checkbox"/>	Spent fluids are recycled	
<input type="checkbox"/>	Drip pans and funnels are used when transferring fluids or to collect leaking or dripping fluids	
<input type="checkbox"/>	Dry clean up methods (e.g. absorbents) are used to clean up spills and leaks.	

Vehicle Rinsing Area

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Storm Drain inlets are protected with 3-foot sump. Inlet filter is maintained to ensure effectiveness	

Vehicle Parking and Storage Areas

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Inspect parking and equipment storage areas for leaks and spills	

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

<input type="checkbox"/>	Drip pans are available and used for leaking vehicles	
<input type="checkbox"/>	Fluids are drained as soon as possible from wrecked vehicles	

Storm water Structural Controls

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Inspect catch basins and clean when sumps or inserts are full.	
<input type="checkbox"/>	Review direction of drainage lines or ditches and their destinations for potential blockage or contamination	
<input type="checkbox"/>	Review posted signs for wear and repair or replace when necessary	

Outdoor Pavement Cleaning

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Use dry methods (sweeping, absorbants) to clean work areas	
<input type="checkbox"/>	Sweep paved areas regularly	

Appendix B: SWPPP Comprehensive Inspection Report

Date:	Facility Name:
Inspector Name:	
Comprehensive Inspection Schedule:	

The permit requires a schedule for comprehensive site inspection (see Table 3) to include but not be limited to, the areas and equipment identified in the preventive maintenance program and good housekeeping procedures, a review of the routine preventive maintenance reports, and any other paperwork associated with the SWPPP. The whole facility should be evaluated during the comprehensive inspection. In contrast to the routine inspections, comprehensive inspections should focus on areas that have a reasonable potential for significant materials to contaminate storm water runoff. This inspection should determine the overall adequacy of the SWPPP and should be coordinated with your annual plan review.

Check Box	Method	Comment/Action Taken
<input type="checkbox"/>	Review Routine Inspection and Good Housekeeping Forms	
<input type="checkbox"/>	Review vehicle and equipment maintenance logs	
<input type="checkbox"/>	Review spill reports (if applicable)	
<input type="checkbox"/>	Visual Inspection of outfalls	
<input type="checkbox"/>	Material Safety Data Sheets are up-to-date and available for all chemicals onsite	
<input type="checkbox"/>	Check high-risk areas for need of safety posts, barriers, or fences to eliminate accidental spills due to human error. Many of these types of structures may already be required under other regulations.	
<input type="checkbox"/>	Other:	

Appendix C: Annual SWPPP Review Form

Date of Review:

Reviewer Name	
Print:	Signature:

Annual SWPPP Review Checklist

1) Facility general information and SWPPP team information is current and accurate	Yes	No	
2) Site map is current and accurate	Yes	No	
3) Significant material inventory is current and accurate	Yes	No	
4) New exposures, processes and related controls have been documented	Yes	No	NA
5) Spills have been recorded and reported as appropriate	Yes	No	NA
6) Records of routine preventative maintenance, housekeeping and employee training are available in the SWPPP file	Yes	No	
7) Comprehensive site inspections have been completed, certified and filed in the SWPPP file	Yes	No	
8) Corrective actions noted in the inspection reports have been completed	Yes	No	
11) SWPPP has been reviewed and signed by the Storm water Program Manager and the Permittee or designated representative	Yes	No	

Additional Comments:

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

**Appendix D: Charter Township of Bloomfield
SPILL RESPONSE PLAN**

SPILL RESPONSE PERSONNEL

NAME AND TITLE	RESPONSIBILITY
Rich Davis, Superintendent, DPW Roads	Spill Response Coordination
Noah Mehalski, Environmental Specialist	Spill Response Coordination
Duane Poole, Road Foreman	Containment & Cleanup Response
Ken Brown, Water Foreman	Containment & Cleanup Response
Bloomfield Township Fire Department	Hazmat Response

EMERGENCY NUMBERS

Fire Department

Emergency 911

Non-Emergency 248-433-7745

Police

Emergency 911

Non-Emergency 248-433-7755

MNDRE

SE Michigan District Office

27700 Donald CT

Warren MI 48092-2793

(586) 753-3700

After hours PEAS Hotline 1-800-292-4706

Detroit Water and Sewerage Department (DWSD)

For spills into the sanitary system, contact DWSD 24-hour emergency line at 313-267-7401

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

SPILL RESPONSE PLAN - FOR SMALL SPILLS OF SIGNIFICANT MATERIALS (1 - 25 gallons)

1. Make sure area is safe for entry and the spill does not pose an immediate threat to health or safety of responder
2. Check for hazards (flammable material, noxious fumes, cause of spill). If flammable liquid is spilled, turn off engines and (nearby electrical equipment). If serious hazard are present leave the area and call 911. When in doubt consult the Material Safety Data Sheets for hazards
3. Stop source of spill (plug hole, upright the container, shut off valve)
4. Notify Spill Response Coordinator
5. Block the nearest storm drain (use absorbent or other material as necessary, close valve to drain, cover or plug drain)
6. If spilled material has entered a storm sewer, check catch basins and attempt to isolate contaminated material. Also, contact **Ken Brown, Water Foreman at 248-425-2453** with a location and description of the spill.
7. Clean up spilled material/absorbent (do not flush with water)
8. Dispose of cleaned material/absorbent into secure container for proper disposal as required by state and federal law.
9. Ensure entire spill area is properly cleaned and all hazards have been removed
10. Complete a Spill Reporting Sheet

SUGGESTED MINIMUM SPILL RESPONSE EQUIPMENT

20 lb floor dry

1 – Shovel

Caution Tape

1 – Absorbent Boom

1 – Broom

Container for clean-up 30 gal

20 – Absorbent Pads

Sample Bottles

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

SPILL RESPONSE PLAN - LARGE SPILLS OF SIGNIFICANT MATERIALS (Greater than 25 Gallons)

1. Make sure area is safe for entry and the spill does not pose an immediate threat to health or safety of responder
2. Check for hazards (flammable material, noxious fumes, cause of spill). If flammable liquid is spilled, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911.
3. Stop source of spill (plug hole, upright the container, shut off valve)

LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD AND MAY REQUIRE SPILL RESPONSE SERVICES FROM ONE OF THE COMPANIES LISTED BELOW.

4. Call co-workers and Supervisor for assistance and to make them aware of the spill and potential dangers. Have Supervisor notify P.D. and F.D. of spill and possible lane closure and possible need for assistance.
5. Stop spill from entering drain (use absorbent or other material as necessary, close valve to drain, cover or plug drain)
6. Stop spill from spreading (use absorbent or other material)
7. If spilled material has entered a storm sewer, check catch basins and contact: **Ken Brown, Water Foreman at 248-425-2453** with a location and description of the spill.
8. Clean up spilled material/absorbent (do not flush with water) – If outside clean-up service is required contact one of the spill response agencies listed below.

Environmental Quality, Inc.

Emergencies: (800) 839-3975

Non-Emergencies: (734) 547-2500

Marine Pollution Control

313-849-2333

Young's Environmental

1-800-496-8647

9. Dispose of cleaned material/absorbent into secure container for proper disposal waste as required by state and federal law.
10. Ensure entire spill area is properly cleaned and all hazards have been removed
11. Complete a Spill Reporting Sheet

SUGGESTED MINIMUM SPILL RESPONSE EQUIPMENT

20 lb floor dry

1 – Shovel

Caution Tape

1 – Absorbent Boom

1 - Broom

Container for clean-up 30 gal

20 – Absorbent Pads Sample Bottles

Appendix E – Bloomfield Township Storm Water Pollution Prevention Plan

SPILL REPORTING SHEET

Date of Incident	
Time of Incident	
Location & Cross Streets	
Type of Spill	
Estimated Quantity	
Reported To	
Cause of Spill	
Time Reported	
Responsible Party	
Address	
Phone Number/Contact	
Describe measures taken to respond to release, and materials used to clean up spill:	
Measures taken to prevent recurrence of similar releases:	
Completed By:	

Additional Notes: