THE TOWN OF FARMINGTON

INCORPORATED 1645

TOWN HALL
1 MONTEITH DRIVE
FARMINGTON, CONNECTICUT 06032-1053

INFORMATION ((860) 675-2300
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December 16, 2014

State of Connecticut
Department of Environmental Protection
Bureau of Water Management
79 Elm Street
Hartford, CT 06106-5127
Attn: Stormwater Permit Coordinator

RE: **Annual Report on Municipal Storm Sewers for 2014**
Town of Farmington

Sir or Madame:

Enclosed with this letter, we are transmitting the Annual Report on Municipal Storm Sewers covering our activities performed during the calendar year 2014 as required under subsection 6(i)(2) of the *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit)*. As noted previously, I am currently the primary contact for departmental correspondence and inquires. The stormwater monitoring data and sample locations for 2014 have been obtained based on the alternative sampling plan that the Commissioner approved in February 2007, the results of which can be found in Attachment A.

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.

Sincerely,

Russell M. Arnold, Jr., P.E.
Director/Town Engineer
Department of Public Works
Town of Farmington

enclosures

2014 ANNUAL REPORT

Municipal Separate Storm Sewer System

FARMINGTON, CT

Prepared by

TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
Engineering Division
1 Monteith Drive
Farmington, CT 06032
(860.675.2305)

December 2014

Table of Contents

1. PURPOSE AND SCOPE

This Annual Report is required by subsection 6(i)(2) of the *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit).* The *MS4 General Permit* was issued by the Connecticut Department of Energy and Environmental Protection (CTDEEP) on January 9, 2004 and it is applicable to storm sewer facilities owned or operated by the Town of Farmington. The permit was extended "as-is" until January 8, 2015. The municipal storm sewer facilities owned by the Town of Farmington were registered by the filing of Part A and Part B of the required registration forms. This report is the vehicle by which the Town of Farmington is required to annually report to the CTDEEP Stormwater Permit Coordinator on the status of compliance with the *MS4 General Permit* and to submit the stormwater monitoring data collected and analyzed during the year.

The Stormwater Monitoring Report Forms and Tunxis Laboratories LLC data results can be found in Attachment A. The mapping of the locations where the stormwater discharge samples were collected can be found in Attachment B.

The Town of Farmington alternative sampling plan that was filed as part of the 2006 Annual Report was approved by the Department of Environmental Protection Stormwater Permit Coordinator on February 27, 2007.

The certification required under subsection 7(e) of the *MS4 General Permit* is presented in Section 3 of this report.

2. BEST MANAGEMENT PRACTICES

2.1 Public Education

The Town of Farmington publishes a bi-annual newsletter entitled "Farmington Town Letter", which is distributed to all postal customers, i.e., residences and businesses with mailing addresses within the Town. It is also posted on the Town's website. The articles published in the newsletter during 2014 were notifications and general information for the public.

The first issue was published in April, where the Town had posted an article titled "Stormwater Runoff Pollution, What You Can Do to Help". An excerpt of the article is provided below and details the following things residents could do to help reduce stormwater pollution:

1. **Never dump anything down the storm drains**. Any pollutants that enter the storm drains will be washed into nearby storm drains, wetlands, streams, lakes, and rivers. Connections to the Town's storm drainage system are not permitted, without written consent by the Town.
2. Use fertilizers sparingly and sweep up driveways, sidewalks, and roads. If you apply fertilizer shortly before a rainstorm, much of it will be washed into nearby storm drains, wetlands, streams, lakes, and rivers. So when you fertilize your lawn, apply it well in advance of a rainstorm, use it sparingly, use organic slow-release fertilizers, and always follow manufacturer's recommendations. The University of Connecticut Cooperative Extension system has useful information regarding lawn maintenance tips, as well as a Nitrogen Fertilization Calculator. This information can be found at: http://www.sustainability.uconn.edu.
3. Vegetate bare spots in your yard to prevent soil erosion.
4. Use a mulching lawn mower in lieu of bagging and disposing of your yard waste. Mulching returns nutrients back to the soil and eliminates yard waste.
5. Instead of using pesticides, consider Integrated Pest Management techniques. Integrated Pest Management is a sustainable approach that provides long term solutions to pest problems. Additional information can be found at the UCONN Cooperative Extension website: http://www.ipm.uconn.edu/root/.
6. Direct Downspouts away from both your foundation and paved surfaces. Consider installing a rain garden or rain barrel as a great way to recycle water, and to use around the yard for watering gardens. Information on rain gardens and rain barrels can be found at: http://www.sustainability.uconn.edu./landscape/06-rain_barrels.html.
7. Take your car to the car wash, where wash water is filtered and recycled, instead of washing it in the driveway.
8. Check and/or repair fluid leaks in your cars, and recycle motor oil and other automotive fluids. Motor vehicle batteries and used motor oil in containers 3 gallons or less can be disposed of, free of charge, at the Highway Garage located at 544 New Britain Avenue.

9. Pick up after your pet. Pet waste can be a source of bacteria, and can lead to contamination of wetlands, streams, lakes, and rivers.
10. Have your septic system pumped and inspected regularly. An improperly operating/maintained septic system can lead to polluted surface and groundwater, and significant repair costs. Do not dispose of household chemicals down the drain, where they can enter your septic system and contaminate the groundwater. The MDC will be hosting a Household Hazardous Waste Collection Program on May 10, 2014 at the Farmington High School. Additional information can be found at the MDC website: http://www.themdc.com/what-we-do/environment-health-safety/household-hazardous-waste-collection.

The April issue also included notices for "Help Pickup Trash in our Town Annual Clean Up Day" held on April 26, 2014 and a "Clean-Up your House Day" held on May 10, 2014. These two events are further detailed in Section 2.2.

The second issue was published in the Fall/Winter, where information was presented to residents of the installation of a "Med-Return" drug collection box in the lobby of the Police Department. The Med-Return box enables the public to regularly, safely, and conveniently dispose of unwanted medications. This will reduce the amount of medicines that are either disposed of in the trash or in the public sanitary sewer system, which can adversely impact the environment.

In addition to the *Farmington Town Letter*, the Town has a Green Efforts Committee that is tasked with promoting energy efficiency, clean energy sources, as well as stormwater, recycling, understanding the value and protection of wetlands, the environment, and natural resources. The Committee consists of residents, students, Town staff, Board of Education members, as well as Town Council members. The Committee has created a "Green Initiatives" webpage on the Town of Farmington Website, which includes a Stormwater Runoff link, where the article "Stormwater Runoff Pollution: What You Can Do to Help", from the April newsletter is presented. In the future, other information will be added to the webpage bringing awareness to the effects of stormwater pollution.

Contact continues to be maintained with other organizations involved with the Town's stormwater program. These include the Department of Energy and Environmental Protection (CTDEEP), the Department of Transportation (ConnDOT), the Farmington River Watershed Association, the Pequabuck River Watershed Association, and the University of Connecticut education program known as the Nonpoint Education for Municipal Officials program.

2.2 Public Participation

The Town of Farmington has collaborated with other local non-profit organizations in an attempt to involve the public in environmentally friendly projects. While the events were planned to perform certain tasks, one of the key goals was to involve the public to educate them of the surrounding environment and the possible negative effects of their everyday lifestyles. It is the hope of these organizations that the public becomes aware of the environment and works to change their ways and encourage them to educate their friends and families.

On April 26, 2014 the Town of Farmington Green Efforts Committee sponsored a "Clean-Up the Town Day". This event is sponsored each year by local organizations and businesses in an effort to clean many areas around Town and promote the importance of protecting the environment. As noted above, the public was made aware of these activities through the "Farmington Town Letter", Town of Farmington website, several Farmington Patch online newspaper articles, as well as the Town's Everbridge notification system. The Everbridge system provides an opportunity for residents and business owners to voluntarily take part in an email distribution list to be notified of emergencies as well as local community and government issues and events.

On May 10, 2014 the Town of Farmington Conservation Commission and Green Efforts Committee sponsored, with the support of The Metropolitan District Commission, a "Clean-Up Your House Day". The event included electronics recycling, household hazardous waste collection, personal document shredding, and used clothing. The public was made aware of these activities through the "Farmington Town Letter", Town of Farmington website, several Farmington Patch online newspaper articles, as well as through the Town's Everbridge notification system.

On September 27, 2014 the Farmington River Watershed Association and several local Businesses sponsored a Farmington River Clean-Up Day. This effort involved the public in cleaning up the banks of the Farmington River.

The Irving A. Robbins Middle School in Farmington has a created a "Green Team", whereby children in grades seven and eight become involved in a variety of environmental projects. The students work on projects such as battery-inkjets-cell phone recycling, bottle-can recycling, and litter abatement, in an effort for children to become aware of their environmental surroundings. The Green Team had assisted with the Farmington River Clean-Up Day, Clean-Up your House Day, and the Clean-Up the Town Day.

2.3 Illicit Discharge Detection & Elimination

The mapping of municipal storm sewer outfalls within the Town of Farmington has been completed, and continues to be updated, as necessary. The Town of Farmington continues to map all known public, institutional and private storm sewers and outfalls as they are installed or modified. This mapping is used to assist with determining any non-point or point source discharges that directly affect surface water quality and discharges conveyed by storm sewers or other types of stormwater conveyance. The Town relies heavily on the use of the State Building Code and the Town Planning review process to establish and enforce a required local review and approval of new storm sewer connections to municipal, institutional, private and state-owned storm sewers, and the construction of new privately owned storm sewer outfalls.

An Illicit Discharge and Connection Ordinance was approved by the Farmington Town Council, on July 12, 2011. The ordinance was developed to forbid illicit discharges or connections, and gives the Town authority to inspect any possible illicit discharge or connections, and allows for the Town to issue citations and fines if deemed necessary.

2.4 Construction Site Runoff

Article IV, Section 11, of the Farmington Regulations for Zoning, requires the submission and approval of an erosion and sediment control plan whenever more than one half acre of land will be disturbed. The regulations also reference the *Connecticut Guidelines for Soil Erosion and Sediment Control*, as amended. In addition, the regulations establish enforceable performance standards for construction activities that do not require the submission of an erosion and sediment control plan, including projects disturbing less than one half acre of land. These regulatory requirements continue to be regularly monitored and strictly enforced.

On November 26, 2007 the Town had updated the Farmington Inland Wetland and Watercourse Agency regulations that now require all landowners to obtain a permit for activities listed in Section 2.1 of the permit, conducted within 150ft of a designated wetland or watercourse.

In 2012 the Town of Farmington Plan & Zoning Commission and Inland Wetlands & Watercourse Commission, were separated into two separate commissions, the "Town Plan and Zoning Commission" and the "Conservation and Inland Wetlands Commission" (CIWC). The CIWC is responsible for promoting the development and conservation of natural resources, including water resources. The Commission is also responsible for reviewing applications involving activities within wetlands or watercourses, and activities conducted within 150ft of a designated wetland or watercourse. The Commission also reviews land use applications to provide advisory recommendations to the Town Plan and Zoning Commission on environmental

and conservation related elements of these projects. The Commission is also responsible for the permitting of all regulated activities conducted upon or upland of an inland wetland or watercourse within the Town of Farmington, as those terms are defined in the Inland Wetlands and Watercourses Act of the State of Connecticut and in the Farmington Regulations for Inland Wetlands.

2.5 Post Construction Runoff Control

A post construction best management strategy has been developed and is being implemented for all new Town of Farmington Plan & Zoning Commission approved construction projects. It is based on the enforcement of Section 25 of Article IV of the existing Farmington Regulations for Zoning. It has been determined that these regulations are sufficient and no revisions or new ordinances are planned.

Where post construction maintenance of storm sewer systems by private owner(s) is necessary to ensure continuous effective operation and the avoidance of adverse water pollution impacts, the submission of maintenance programs is being required for project specific proposals, as a function of either the Farmington Plan & Zoning Commission or CIWC approval process. In many cases, these programs are included in the Homeowners Association Documents and on approved plans. The Town has developed a "Declaration of Covenants for Maintenance of Storm and Surface Water Facility" document, which is signed by the Town and the governing property owners. The document requires the owners to maintain the stormwater management system as approved by the Town. It also grants the Town the right to access the property for inspection purposes, to insure that the system is being properly maintained and is continuing to perform in an adequate manner. Should the owners fail to maintain or correct any deficiencies, the Town is authorized to enter the property and make the required maintenance or improvements, and assess the property owner for all costs associated with the work.

2.6 Good Housekeeping

Stormwater training of Town employees is through on-the-job instruction and training by supervisors, consultants, and through employee's attending University of Connecticut Technology Transfer training programs. The primary focus of the training continues to be the cross training of existing employees within the divisions that make up the Department of Public Works, aimed at ensuring a broader understanding of the roles of each member of the staff assigned specific stormwater management responsibilities, and how those activities are integrated to meet the obligations of the stormwater general permit.

The practice of sweeping paved streets as soon as practical after snowmelt has been implemented. The Town had ceased the use of the typical sand/salt mixture as ice control during the 2006/2007 winter season, and now utilizes a commercially available treated salt for deicing operations. This operational change has significantly reduced the volume of sand that is collected by street sweeping and catch basin cleaning. The elimination of sand should improve the environmental health of the small and medium sized streams and ponds within the Town of Farmington, which have characteristically developed abnormal bottom deposits dominated by the erosion of sand from roadways. ConnDOT adopted a similar program in 2005 opting to use a liquid mixture in lieu of sand and salt.

The evaluation and cleaning of stormwater structures and the evaluation and prioritization of the need to upgrade and repair stormwater structures, have always been routine activities within the Department of Public Works. These activities will be continued and the effectiveness of the effort can be expected to improve as a result of the focus created by the stormwater general permit and stormwater training. The elimination of the use of sand for skid control is a manifestation of this focus.

The Town has had a town wide leaf collection program for many years. Leaves are picked up in late fall, providing residents a minimum of two pickups. Some of the leaves are composted at the Town's composting facility, located at the former Tunxis Mead Landfill, where they are composted and offered for free to local residents. The remaining leaves are sent to a local company where the leaves are composted to create topsoil for sale to the public.

On November 4, 2014, voters approved a $57,240,000 referendum question to upgrade the Town of Farmington Water Pollution Control Facility. The Town currently serves the majority of homes and businesses in Farmington, as well as portions of Avon, Burlington, and Canton. The comprehensive upgrade will increase the facility's capacity for a useful life of 25 years, repair and replace the aging infrastructure, improve energy efficiency, and enable the Town to meet State of Connecticut DEEP requirements as they relate to public health and Farmington River water quality.

2.7 Monitoring

The monitoring of six stormwater outfalls was planned and completed during the fall of 2014. The analytical results are presented on the laboratory examination reports and on the CTDEEP Stormwater Monitoring Report Forms contained in Attachment A. The sample site locations are identified on maps presented in Attachment B. The individual sample analysis results can be correlated with the mapped monitoring site locations by reference to the following table. The sampling data is presented in the same order as the site location identifiers listed below.

Sample I-6_10-1-14 (Spring Lane)

- Laboratory Number 14005376.
- New sampling location.
- Collects surface runoff from several industrial and manufacturing facilities along Spring Lane.
- Discharges to the Pequabuck River Basin.

Sample I-7_10-1-14 (Brickyard Road)

- Laboratory Number 14005377.
- New sampling location.
- Collects surface runoff from several industrial properties along Brickyard Road.
- Sampling conducted to compare sampling performed in previous years, downstream of this location.
- Discharges to the Farmington River Basin.

Sample R-30_10-1-14 (New Britain Avenue)

- Laboratory Number 14005372.
- New sampling location.
- Collects surface runoff from neighboring residential areas.
- Discharges to the Farmington River Basin.

Sample R-32_10-1-14 (Wannowmassa Lane)

- Laboratory Number 14005373.
- New sampling location.
- Collects surface runoff from neighboring residential.
- Discharges to the Farmington River Basin.

Sample R-33_10-1-14 (Knollwood Road)

- Laboratory Number 14005374.
- New sampling location.
- Collects surface runoff from neighboring residential areas.
- Sampling conducted to compare sampling performed in previous years, downstream of this location.
- Discharges to the Farmington River Basin.

Sample R-34_10-1-14 (Garden Street)

- Laboratory Number 14005375.
- New sampling location.
- Collects surface runoff from neighboring residential areas.
- Flows through a gross particle separator.
- Discharges to the Farmington River Basin.

All six of the 2014 stormwater samples were collected during a rainstorm event that commenced during the 0500hr on the morning of October 1, 2014. The samples were collected from the identified outfalls between 0900hrs and 1030hrs, commencing after it was determined that sufficient flow would be discharging from the selected outfalls, based on data transmitted from a local rainfall monitoring station. The total rainfall produced by the storm was measured at 0.91 inches. The event was a qualifying event as the preceding rainfall event occurred on September 21, 2014.

The following is a summary of the test results for each of the six sample locations. The sample results were compared to the CTDEEP Water Quality Standards, as well as the benchmarks identified in the CTDEEP Industrial Stormwater Permit.

Outlet I-6 is a new sampling location that discharges to the Pequabuck River Basin on the east side of Spring Lane south of the southerly driveway for 48 Spring Lane. The drainage area is comprised of land in an Industrial Zone. The outlet discharges into a swale, which meanders through private properties and eventually discharges in the area of previous sampling location I-5. Test results indicated an elevated level of Escherichia Coliform. The area is serviced with both public water and sanitary sewer. The Town will have our closed drainage system in this area cleaned and inspected, and will consider future re-sampling.

Outlet I-7 is a new sampling location, and discharges to the Farmington River Basin along the west side of Brickyard Road, to the rear of 156 and 164 Brickyard Road. The drainage area is comprised of land in an Industrial Zone. Due to the difficulty of accessing the outlet location, the sample was taken from the catch basin, on the west side of Brickyard Road, prior to the discharge. Test results indicated elevated levels of Turbidity, Total Suspended Solids, and Escherichia Coliform. There was no evidence of erosion in the area, and therefore these elevate levels could be attributed from sampling in the catch basin. The elevated PH level could be attributed to local industrial uses. The area is serviced with public water. The Town will have our closed drainage system in this area cleaned and inspected, and will consider future re-sampling.

Outlet R-30 is a new sampling location that discharges to the Farmington River Basin along the east side of New Britain Avenue, to the rear of 471 New Britain Avenue. The drainage area is relatively large, and is comprised of Residential properties zoned R-30 (30,000 ft^2). The drainage discharges approximately 400 feet upland of the Farmington River. Due to the difficulty of accessing the outlet location, the sample was taken from the catch basin at the northwest corner of the New Britain Avenue and Oakridge intersection. The current sampling indicated slightly elevated levels of Turbidity, Total Suspended Solids, and Escherichia

Coliform. These elevate levels could be attributed from sampling in the catch basin. The area is serviced with both public water and sanitary sewer. The Town will have our closed drainage system in this area cleaned and inspected.

Outlet R-32 is a new sampling location, and discharges at the end of Wannowmassa Lane, to the Farmington River Basin. The drainage area is relatively large, and is comprised of Residential properties zoned R-20 (20,000 ft^2). The drainage discharges approximately 100 feet upland of the Farmington River. With the exception of an elevated level of Escherichia Coliform, sampling parameters were within acceptable levels. The area is serviced with both public water and sanitary sewer. The Town will have our closed drainage system in this area cleaned.

Sampling location R-33 is a new sampling location, and is located in the catch basin at the northwest corner of the Knollwood Road and Briarwood Road intersection. The catch basin is connected to a storm drainage system discharging to the Farmington River Basin. Sampling had been conducted to assist with locating the potential origin resulting in high levels of Escherichia Coliform at sample location R-3. Sample location R-3 had been tested in 2005 and 2013. Both sampling periods concluded high levels of Escherichia Coliform. The sampling performed at sample location R-33, resulted in slightly elevated levels of Escherichia Coliform, a fraction of those recorded in 2005 and 2013. As indicated during previous reporting, the area is serviced with both public water and sanitary sewer. The Town will have the closed drainage system cleaned again, and further testing will be performed to determine the potential source.

Outlet R-34, is a new sampling location, and discharges to the Farmington River Basin, to the rear of 88 Garden Street. The drainage area is relatively large, and is comprised of mostly Residential properties zoned R-20 (20,000 ft^2) including a small section of properties zoned R-80 (80,000 ft^2). The drainage discharges approximately 100 feet upland of the Farmington River. The closed drainage system is connected to a "BaySaver" gross particle separator located in the parking area of 88 Garden Street. With the exception of a slightly elevated level of Escherichia Coliform, sampling parameters were within acceptable levels. The area is serviced with both public water and sanitary sewer.

3. CERTIFICATION

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.

Russell M. Arnold, Jr., P.E.
Director/Town Engineer
Department of Public Works

ATTACHMENT A

Stormwater Monitoring Report Forms

and

Laboratory Data Results

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM000090

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2014) I6: Lat 41-42-02.33, Long 72-52-15.26

Discharge pipe south of southerly driveway for #48 Spring Lane

Please circle the appropriate area description: (Industrial) Commercial, or Residential

Receiving Water (name, basin): Pequabuck River, 4315-13-2-L2

Time of Start of Discharge: 05:00hrs

Date/Time Collected: October 1, 2014/09:00hrs Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Stephen Doyon

Storm Magnitude (inches): 0.91 Storm Duration (hours): 6 (approx)

Date of Previous Storm Event: September 21, 2014

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	7.1	Tunxis Lab #14005376
Rain pH	SM19 4500H+B	6.0	Tunxis Lab #14005376
Hardness	SM 2340 B	2.3 mg/L CaO3	Tunxis Lab #14005376
Conductivity	SM19 2510B	11 micromhos/cm	Tunxis Lab #14005376
Oil & Grease	EPA 1664A	<1.8 mg/L	Tunxis Lab #14005376
COD	EPA 410.4	22 mg/L	Tunxis Lab #14005376
Turbidity	EPA 180.1	8.5 NTU	Tunxis Lab #14005376
TSS	SM19 2540D	14.2 mg/L	Tunxis Lab #14005376
TP	SM19 4500PE	0.085 mg/L as P	Tunxis Lab #14005376
Ammonia	SM19 4500NHD	<0.50 mg/L	Tunxis Lab #14005376
TKN	SM194500NH3F	<1.7 mg/L	Tunxis Lab #14005376
NO_3+NO_2	EPA 300.0	<0.46 mg/L	Tunxis Lab #14005376
E. coli	SM 9222 B	2,500 per 100 mL	Tunxis Lab #14005376

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr., P.E., Director of Public Works/Town Engineer

Signature: Russell M Arnold Jr Date: December 16, 2014

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM000090

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2014) I7: Lat 41-45-4.07, Long 72-51-21.04 Catch Basin along the west side of Brickyard Road, between #156 & #164 Brickyard Road

Please circle the appropriate area description: (Industrial) Commercial, or Residential

Receiving Water (name, basin): Farmington River, 4300-28-1-L2

Time of Start of Discharge: 05:00hrs

Date/Time Collected: October 1, 2014/10:15hrs Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Stephen Doyon

Storm Magnitude (inches): 0.91 Storm Duration (hours): 6 (approx)

Date of Previous Storm Event: September 21, 2014

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	9.2	Tunxis Lab #14005377
Rain pH	SM19 4500H+B	6.0	Tunxis Lab #14005377
Hardness	SM 2340 B	41.5 mg/L CaO3	Tunxis Lab #14005377
Conductivity	SM19 2510B	49 micromhos/cm	Tunxis Lab #14005377
Oil & Grease	EPA 1664A	<1.6 mg/L	Tunxis Lab #14005377
COD	EPA 410.4	47 mg/L	Tunxis Lab #14005377
Turbidity	EPA 180.1	140 NTU	Tunxis Lab #14005377
TSS	SM19 2540D	99.0 mg/L	Tunxis Lab #14005377
TP	SM19 4500PE	0.147 mg/L as P	Tunxis Lab #14005377
Ammonia	SM19 4500NHD	<0.50 mg/L	Tunxis Lab #14005377
TKN	SM194500NH3F	<1.6 mg/L	Tunxis Lab #14005377
NO_3+NO_2	EPA 300.0	<0.46 mg/L	Tunxis Lab #14005377
E. coli	SM 9222 B	4,900 per 100 mL	Tunxis Lab #14005377

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr., P.E., Director of Public Works/Town Engineer

Signature: Russell M Arnold Jr Date: December 16, 2014

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM000090

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2014) R30: Lat 41-44-43.05, Long 72-52-16.8

Catch Basin on the northwest corner of the New Britain Avenue/Oakridge Intersection

Please circle the appropriate area description: Industrial, Commercial, or (Residential)

Receiving Water (name, basin): Farmington River, 4300-00-4+R16

Time of Start of Discharge: 05:00hrs

Date/Time Collected: October 1, 2014/09:25hrs Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Stephen Doyon

Storm Magnitude (inches): 0.91 Storm Duration (hours): 6 (approx)

Date of Previous Storm Event: September 21, 2014

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	7.1	Tunxis Lab #14005372
Rain pH	SM19 4500H+B	6.0	Tunxis Lab #14005372
Hardness	SM 2340 B	15.1 mg/L CaO3	Tunxis Lab #14005372
Conductivity	SM19 2510B	85 micromhos/cm	Tunxis Lab #14005372
Oil & Grease	EPA 1664A	<2.0 mg/L	Tunxis Lab #14005372
COD	EPA 410.4	49 mg/L	Tunxis Lab #14005372
Turbidity	EPA 180.1	94 NTU	Tunxis Lab #14005372
TSS	SM19 2540D	77.0 mg/L	Tunxis Lab #14005372
TP	SM19 4500PE	0.244 mg/L as P	Tunxis Lab #14005372
Ammonia	SM19 4500NHD	<0.50 mg/L	Tunxis Lab #14005372
TKN	SM194500NH3F	<1.6 mg/L	Tunxis Lab #14005372
NO_3+NO_2	EPA 300.0	<0.46 mg/L	Tunxis Lab #14005372
E. coli	SM 9222 B	2,300 per 100 mL	Tunxis Lab #14005372

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr., P.E., Director of Public Works/Town Engineer

Signature: Russell M Arnold Jr Date: December 16, 2014

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM000090

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2014) R32: Lat 41-44-30.59, Long 72-51-43.00

Discharge pipe south of the end of Wannowmassa Lane

Please circle the appropriate area description: Industrial, Commercial, or (Residential)

Receiving Water (name, basin): Farmington River, 4300-00-4+R17

Time of Start of Discharge: 05:00hrs

Date/Time Collected: October 1, 2014/09:55hrs Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Stephen Doyon

Storm Magnitude (inches): 0.91 Storm Duration (hours): 6 (approx)

Date of Previous Storm Event: September 21, 2014

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	6.9	Tunxis Lab #14005373
Rain pH	SM19 4500H+B	6.0	Tunxis Lab #14005373
Hardness	SM 2340 B	3.5 mg/L CaO3	Tunxis Lab #14005373
Conductivity	SM19 2510B	15 micromhos/cm	Tunxis Lab #14005373
Oil & Grease	EPA 1664A	2.0 mg/L	Tunxis Lab #14005373
COD	EPA 410.4	<20 mg/L	Tunxis Lab #14005373
Turbidity	EPA 180.1	5.3 NTU	Tunxis Lab #14005373
TSS	SM19 2540D	3.5 mg/L	Tunxis Lab #14005373
TP	SM19 4500PE	0.071 mg/L as P	Tunxis Lab #14005373
Ammonia	SM19 4500NHD	<0.50 mg/L	Tunxis Lab #14005373
TKN	SM194500NH3F	<2.0 mg/L	Tunxis Lab #14005373
NO_3+NO_2	EPA 300.0	<0.46 mg/L	Tunxis Lab #14005373
E. coli	SM 9222 B	4,200 per 100 mL	Tunxis Lab #14005373

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr., P.E., Director of Public Works/Town Engineer

Signature: Russell M Arnold Jr Date: December 16, 2014

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM000090

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2014) R33: Lat 41-44-48, Long 72-51-43

Catch Basin on the northwest corner of the Knollwood Road/Briarwood Road Intersection

Please circle the appropriate area description: Industrial, Commercial, or (Residential)

Receiving Water (name, basin): Farmington River, 4300-28-1-L2

Time of Start of Discharge: 05:00hrs

Date/Time Collected: October 1, 2014/09:48hrs Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Stephen Doyon

Storm Magnitude (inches): 0.91 Storm Duration (hours): 6 (approx)

Date of Previous Storm Event: September 21, 2014

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	6.2	Tunxis Lab #14005374
Rain pH	SM19 4500H+B	6.0	Tunxis Lab #14005374
Hardness	SM 2340 B	2.1 mg/L CaO3	Tunxis Lab #14005374
Conductivity	SM19 2510B	7.0 micromhos/cm	Tunxis Lab #14005374
Oil & Grease	EPA 1664A	<1.8 mg/L	Tunxis Lab #14005374
COD	EPA 410.4	<20 mg/L	Tunxis Lab #14005374
Turbidity	EPA 180.1	4.1 NTU	Tunxis Lab #14005374
TSS	SM19 2540D	21.5 mg/L	Tunxis Lab #14005374
TP	SM19 4500PE	0.100 mg/L as P	Tunxis Lab #14005374
Ammonia	SM19 4500NHD	<0.50 mg/L	Tunxis Lab #14005374
TKN	SM194500NH3F	<1.7 mg/L	Tunxis Lab #14005374
NO_3+NO_2	EPA 300.0	<0.46 mg/L	Tunxis Lab #14005374
E. coli	SM 9222 B	1,500 per 100 mL	Tunxis Lab #14005374

STATEMENT OF ACKNOWLEDGMENT

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Signature: Russell M Arnold Jr Date: December 16, 2014

General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Stormwater Monitoring Report Form

PERMITTEE INFORMATION

Town: Town of Farmington

Mailing Address: 1 Monteith Drive, Farmington CT 06032

Contact Person: Russell M. Arnold, Jr. P.E. Title: DPW Director Phone: 860-675-2305

Permit Registration #GSM000090

SAMPLING INFORMATION

Discharge Location (Lat/Long or other description): (2014) R34: Lat 41-43-24.71, Long 72-49-58.77

Outlet pipe to the rear of 88 Garden Street

Please circle the appropriate area description: Industrial, Commercial, or (Residential)

Receiving Water (name, basin): Farmington River, 4300-00-5+R1

Time of Start of Discharge: 05:00hrs

Date/Time Collected: October 1, 2014/10:30hrs Water Temperature: 50°F

Person Collecting Sample: Bruce Cyr & Stephen Doyon

Storm Magnitude (inches): 0.91 Storm Duration (hours): 6 (approx)

Date of Previous Storm Event: September 21, 2014

MONITORING RESULTS

Parameter	Method	Results (units)	Laboratory
Sample pH	SM19 4500H+B	6.9	Tunxis Lab #14005375
Rain pH	SM19 4500H+B	6.0	Tunxis Lab #14005375
Hardness	SM 2340 B	14.1 mg/L CaO3	Tunxis Lab #14005375
Conductivity	SM19 2510B	84 micromhos/cm	Tunxis Lab #14005375
Oil & Grease	EPA 1664A	<1.8 mg/L	Tunxis Lab #14005375
COD	EPA 410.4	<20 mg/L	Tunxis Lab #14005375
Turbidity	EPA 180.1	5.8 NTU	Tunxis Lab #14005375
TSS	SM19 2540D	4.8 mg/L	Tunxis Lab #14005375
TP	SM19 4500PE	0.114 mg/L as P	Tunxis Lab #14005375
Ammonia	SM19 4500NHD	<0.50 mg/L	Tunxis Lab #14005375
TKN	SM194500NH3F	<1.7 mg/L	Tunxis Lab #14005375
NO_3+NO_2	EPA 300.0	<0.46 mg/L	Tunxis Lab #14005375
E. coli	SM 9222 B	1,500 per 100 mL	Tunxis Lab #14005375

STATEMENT OF ACKNOWLEDGMENT

I certify that the data reported on this document were prepared under my direction or supervision in accordance with the MS4 General Permit. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Authorized Official: Russell M. Arnold, Jr. P.E., Director of Public Works/Town Engineer

Signature: Russell M [illegible] Date: December 16, 2014

TUNXIS | Laboratories, LLC
100 Northwest Drive, Plainville, Connecticut 06062
(860) 793-8666 Fax: (860) 793-8867
Alan G. Jacobs - Director CT Laboratory ID No. PH-0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering
1 Monteith Drive
Farmington, CT 06034-0948

Report No: TL1421195.0
Report Date: Wednesday, October 15, 2014
ATTN: Bruce Cyr
Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample

Collect Date: 10/1/2014

Lab#: 14005376 **Client Sample ID#:** I6-10-1-14

Received Date: 10/1/2014

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	14.2	mg/L	AGJ	10/1/2014	SM19 2540D
Nitrite - Nitrate as N	<0.46	mg/L	JF	10/3/2014	EPA 300.0
pH of Rain	6.0	units	JF	10/1/2014	SM19 4500H+B
pH	7.1	units	JF	10/1/2014	SM19 4500H+B
Specific Conductivity	11	micromhos/cm	RB	10/7/2014	SM19 2510B
Hardness, Calculated	2.3	mg/L CaCO3	JM	10/6/2014	SM 2340 B
Chemical Oxygen Demand	22	mg/L	JF	10/15/2014	EPA 410.4
Ammonia Nitrogen as N	<0.50	mg/L	MAP	10/8/2014	SM19 4500NHD
Phosphorus, Total as P	0.085	mg/L as P	JM	10/3/2014	SM19 4500PE
E. Coli	2500	per 100 mL	JF	10/1/2014	SM 9222 B
Total Kjeldahl Nitrogen	<1.7	mg/L	MAP	10/13/2014	SM194500NH3F
Turbidity	8.5	NTU	JF	10/1/2014	EPA 180.1
Calcium	0.64	mg/L	JM	10/3/2014	EPA 200.7
Magnesium	0.18	mg/L	JM	10/6/2014	EPA 200.7
Oil & Grease, Hexane Ext. Material	<1.8	mg/L	RB	10/2/2014	EPA 1664A

The results recorded in this report relate only to the samples as received on the date and time noted.

(MAP)

Averill Environmental Laboratory, Inc.
100 Northwest Drive
Plainville, Connecticut 06062

Sample Collection / Chain - of - Custody

COC Number
AEL10083 - 14

Client:	Location:	Project:
Town of Farmington, Farmington, CT	Farmington, CT	Town of Farmington Stormwater

Report To: Bruce Cyr

Sample ID	Collection Date / Time	Source	Container Type	Num	Pres.	Analytes	AEL Lab No.	Transfer Number 1	2	3	4
T-6 10-1-14	10/1/14	SW	P 100 mL	1	I	E.coli	5376	✓			
		SW	P 1/2 Gal	1	I	NO3, NO2, pH, TSS, Turb, Cond, Hardness		✓			
		SW	G Qt WM	1	S/I	O&G		✓			
		SW	P 250 mL	1	N/I	Ca, Mg		✓			
T-6 10/1/14		SW	G L	1	S/I	TKN, COD, P_TOT, NH3		✓			

Stormwater Sampling Data	Magnitude (in):	Duration (Hrs):	pH of Rainfall:	Previous Event Date:
Sample Collectors (s):			Disharge pH:	Discharge Temp (C):

Source Code: GW=Groundwater, SW=Surface Water, T=Treatment Facility, S=Soil, DW=Drinking Water

Preservation Codes: I=Iced, S=H2SO4, N=HNO3, H=HCl, Z=Zn/Ac, E=EDTA, T=Na2S2O3*5H2O, F=Filtered

Sampler's Signature: Bruce Cyr Date: 10/1/14

Transfer Number	Transfers Relinquished by	Accepted by	Date	Time
1	Bruce Cyr	[illegible]	10/1/14	10:50
2	[illegible]	Fedex	10/1/14	1120
3				
4				

TUNXIS | Laboratories, LLC
100 Northwest Drive, Plainville, Connecticut 06062
(860) 793-8866 Fax: (860) 793-8867
Alan G. Jacobs - Director CT Laboratory ID No. PH-0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering
1 Monteith Drive
Farmington, CT 06034-0948

Report No: TL1421195.0
Report Date: Wednesday, October 15, 2014
ATTN: Bruce Cyr
Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample

Collect Date: 10/1/2014

Lab#: 14005377 **Client Sample ID#:** I-7-10-1-14

Received Date: 10/1/2014

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	99.0	mg/L	AGJ	10/1/2014	SM19 2540D
Nitrite - Nitrate as N	<0.46	mg/L	JF	10/3/2014	EPA 300.0
pH of Rain	6.0	units	JF	10/1/2014	SM19 4500H+B
pH	9.2	units	JF	10/1/2014	SM19 4500H+B
Specific Conductivity	49	micromhos/cm	RB	10/7/2014	SM19 2510B
Hardness, Calculated	41.5	mg/L CaCO3	JM	10/6/2014	SM 2340 B
Chemical Oxygen Demand	47	mg/L	JF	10/15/2014	EPA 410.4
Ammonia Nitrogen as N	<0.50	mg/L	MAP	10/8/2014	SM19 4500NHD
Phosphorus, Total as P	0.147	mg/L as P	JM	10/3/2014	SM19 4500PE
E. Coli	4900	per 100 mL	JF	10/1/2014	SM 9222 B
Total Kjeldahl Nitrogen	<1.6	mg/L	MAP	10/13/2014	SM194500NH3F
Turbidity	140	NTU	JF	10/1/2014	EPA 180.1
Calcium	13.8	mg/L	JM	10/3/2014	EPA 200.7
Magnesium	1.68	mg/L	JM	10/6/2014	EPA 200.7
Oil & Grease, Hexane Ext. Material	<1.6	mg/L	RB	10/2/2014	EPA 1664A

The results recorded in this report relate only to the samples as received on the date and time noted.

(MAP)

Averill Environmental Laboratory, Inc.
100 Northwest Drive
Plainville, Connecticut 06062

Sample Collection / Chain - of - Custody

COC Number
AEL10083 - 14

Client: Town of Farmington, Farmington, CT

Location: Farmington, CT

Project: Town of Farmington Stormwater

Report To: Bruce Cyr

Sample ID	Collection Date / Time	Source	Container Type	Num	Pres.	Analytes	AEL Lab No.	Transfer Number 1	2	3	4
\		SW	P 100 mL	1	I	E.coli	5377	✓			
	\	SW	P 1/2 Gal	1	I	NO3, NO2, pH, TSS, Turb, Cond, Hardness		✓			
		SW	G Qt WM	1	S/I	O&G		✓			
		SW	P 250 mL	1	N/I	Ca, Mg		✓			
I-7-10-1-14	10/1/14	SW	G L	1	S/I	TKN, COD, P_TOT, NH3		✓			

Stormwater Sampling Data | **Magnitude (in):** | **Duration (Hrs):** | **pH of Rainfall:** | **Previous Event Date:**

Sample Collectors (s): | **Disharge pH:** | **Discharge Temp (C):**

Source Code: GW=Groundwater, SW=Surface Water, T=Treatment Facility, S=Soil, DW=Drinking Water

Preservation Codes: I=Iced, S=H2SO4, N=HNO3, H=HCl, Z=Zn/Ac, E=EDTA, T=Na2S2O3*5H2O, F=Filtered

Bruce Cyr — Sampler's Signature

10/1/14 — Date

Transfer Number	Transfers Relinquished by	Accepted by	Date	Time
1	Bruce Cyr			
2			10/1/14	10:50
3		Fedex	10/1/14	11:20
4				

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Alan G. Jacobs - Director CT Laboratory ID No. PH-0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering
1 Monteith Drive
Farmington, CT 06034-0948

Report No: TL1421195.0
Report Date: Wednesday, October 15, 2014
ATTN: Bruce Cyr
Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample

Collect Date: 10/1/2014

Lab#: 14005372 **Client Sample ID#:** R30-10-1-14

Received Date: 10/1/2014

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	77.0	mg/L	AGJ	10/1/2014	SM19 2540D
Nitrite - Nitrate as N	<0.46	mg/L	JF	10/3/2014	EPA 300.0
pH	7.1	units	JF	10/1/2014	SM19 4500H+B
pH of Rain	6.0	units	JF	10/1/2014	SM19 4500H+B
Specific Conductivity	85	micromhos/cm	RB	10/7/2014	SM19 2510B
Hardness, Calculated	15.1	mg/L CaCO3	JM	10/6/2014	SM 2340 B
Chemical Oxygen Demand	49	mg/L	JF	10/15/2014	EPA 410.4
Ammonia Nitrogen as N	<0.50	mg/L	MAP	10/8/2014	SM19 4500NHD
Phosphorus, Total as P	0.244	mg/L as P	JM	10/3/2014	SM19 4500PE
E. Coli	2300	per 100 mL	JF	10/1/2014	SM 9222 B
Total Kjeldahl Nitrogen	<1.6	mg/L	MAP	10/8/2014	SM194500NH3F
Turbidity	94	NTU	JF	10/1/2014	EPA 180.1
Calcium	3.76	mg/L	JM	10/3/2014	EPA 200.7
Magnesium	1.39	mg/L	JM	10/6/2014	EPA 200.7
Oil & Grease, Hexane Ext. Material	<2.0	mg/L	RB	10/2/2014	EPA 1664A

The results recorded in this report relate only to the samples as received on the date and time noted.

(MAP)

Averill Environmental Laboratory, Inc.
100 Northwest Drive
Plainville, Connecticut 06062

Sample Collection / Chain - of - Custody

COC Number
AEL10083 - 14

Client:	Location:	Project:
Town of Farmington, Farmington, CT	Farmington, CT	Town of Farmington Stormwater

Report To: Bruce Cyr

Sample ID	Collection Date / Time	Source	Container Type	Num	Pres.	Analytes	AEL Lab No.	Transfer Number 1	2	3	4
[illegible]		SW	P 100 mL	1	I	E.coli	5377	✓			
		SW	P 1/2 Gal	1	I	NO3, NO2, pH, TSS, Turb, Cond, Hardness		✓			
		SW	G Qt WM	1	S/I	O&G		✓			
		SW	P 250 mL	1	N/I	Ca, Mg		✓			
R30-10-1-14	10-1-14	SW	G L	1	S/I	TKN, COD, P_TOT, NH3		✓			

Stormwater Sampling Data	Magnitude (in):	Duration (Hrs):	pH of Rainfall:	Previous Event Date:
Sample Collectors (s):			Disharge pH:	Discharge Temp (C):

Source Code: GW=Groundwater, SW=Surface Water, T=Treatment Facility, S=Soil, DW=Drinking Water

Preservation Codes: I=Iced, S=H2SO4, N=HNO3, H=HCl, Z=Zn/Ac, E=EDTA, T=Na2S2O3*5H2O, F=Filtered

Sampler's Signature: [signature] Date: 10/1/14

Transfer Number	Transfers Relinquished by	Accepted by	Date	Time
1	[signature]	[signature]	10/1/14	10:50
2	[signature]	[signature] Fedex	10/1/14	11:20
3				
4				

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100 Northwest Drive, Plainville, Connecticut 06062
(860) 793-8866 Fax: (860) 793-8867
Alan G. Jacobs - Director CT Laboratory ID No. PH-0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering
1 Monteith Drive
Farmington, CT 06034-0948

Report No: TL1421195.0
Report Date: Wednesday, October 15, 2014
ATTN: Bruce Cyr
Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample

Collect Date: 10/1/2014

Lab#: 14005373 **Client Sample ID#:** R31-10-1-14

Received Date: 10/1/2014

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	3.5	mg/L	AGJ	10/1/2014	SM19 2540D
Nitrite - Nitrate as N	<0.46	mg/L	JF	10/3/2014	EPA 300.0
pH of Rain	6.0	units	JF	10/1/2014	SM19 4500H+B
pH	6.9	units	JF	10/1/2014	SM19 4500H+B
Specific Conductivity	15	micromhos/cm	RB	10/7/2014	SM19 2510B
Hardness, Calculated	3.5	mg/L CaCO3	JM	10/6/2014	SM 2340 B
Chemical Oxygen Demand	<20	mg/L	JF	10/15/2014	EPA 410.4
Ammonia Nitrogen as N	<0.50	mg/L	MAP	10/8/2014	SM19 4500NHD
Phosphorus, Total as P	0.071	mg/L as P	JM	10/3/2014	SM19 4500PE
E. Coli	4200	per 100 mL	JF	10/1/2014	SM 9222 B
Total Kjeldahl Nitrogen	<2.0	mg/L	MAP	10/8/2014	SM194500NH3F
Turbidity	5.3	NTU	JF	10/1/2014	EPA 180.1
Calcium	1.14	mg/L	JM	10/3/2014	EPA 200.7
Magnesium	0.15	mg/L	JM	10/6/2014	EPA 200.7
Oil & Grease, Hexane Ext. Material	2.0	mg/L	RB	10/2/2014	EPA 1664A

The results recorded in this report relate only to the samples as received on the date and time noted.

(MAP)

Averill Environmental Laboratory, Inc.
100 Northwest Drive
Plainville, Connecticut 06062

Sample Collection / Chain - of - Custody

COC Number
AEL10083 - 14

Client:	Location:	Project:
Town of Farmington, Farmington, CT	Farmington, CT	Town of Farmington Stormwater

Report To: Bruce Cyr

Sample ID	Collection Date / Time	Source	Container Type	Num	Pres.	Analytes	AEL Lab No.	Transfer Number 1	2	3	4
32 35 RSI-10-1-14	10/1/14	SW	P 100 mL	1	I	E.coli	5373	✓			
		SW	P 1/2 Gal	1	I	NO3, NO2, pH, TSS, Turb, Cond, Hardness		✓			
		SW	G Qt WM	1	S/I	O&G		✓			
		SW	P 250 mL	1	N/I	Ca, Mg		✓			
		SW	G L	1	S/I	TKN, COD, P_TOT, NH3		✓			

Stormwater Sampling Data	Magnitude (in):	Duration (Hrs):	pH of Rainfall:	Previous Event Date:
Sample Collectors (s):			Disharge pH:	Discharge Temp (C):

Source Code: GW=Groundwater, SW=Surface Water, T=Treatment Facility, S=Soil, DW=Drinking Water

Preservation Codes: I=Iced, S=H2SO4, N=HNO3, H=HCl, Z=Zn/Ac, E=EDTA, T=Na2S2O3*5H2O, F=Filtered

Sampler's Signature: Bruce Cyr Date: 10/1/14

Transfer Number	Transfers Relinquished by	Accepted by	Date	Time
1	Bruce Cyr	[illegible]	10/1/14	10:30
2	[illegible]	Fedex	10/2/14	1120
3				
4				

TUNXIS | Laboratories, LLC
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Alan G. Jacobs - Director CT Laboratory ID No. PH-0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering
1 Monteith Drive
Farmington, CT 06034-0948

Report No: TL1421195.0
Report Date: Wednesday, October 15, 2014
ATTN: Bruce Cyr
Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample

Collect Date: 10/1/2014

Lab#: 14005374 **Client Sample ID#:** R32-10-1-14

Received Date: 10/1/2014

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	21.5	mg/L	AGJ	10/1/2014	SM19 2540D
Nitrite - Nitrate as N	<0.46	mg/L	JF	10/3/2014	EPA 300.0
pH of Rain	6.0	units	JF	10/1/2014	SM19 4500H+B
pH	6.2	units	JF	10/1/2014	SM19 4500H+B
Specific Conductivity	7.0	micromhos/cm	RB	10/7/2014	SM19 2510B
Hardness, Calculated	2.1	mg/L CaCO3	JM	10/6/2014	SM 2340 B
Chemical Oxygen Demand	<20	mg/L	JF	10/15/2014	EPA 410.4
Ammonia Nitrogen as N	<0.50	mg/L	MAP	10/8/2014	SM19 4500NHD
Phosphorus, Total as P	0.100	mg/L as P	JM	10/3/2014	SM19 4500PE
E. Coli	1500	per 100 mL	JF	10/1/2014	SM 9222 B
Total Kjeldahl Nitrogen	<1.7	mg/L	MAP	10/8/2014	SM194500NH3F
Turbidity	4.1	NTU	JF	10/1/2014	EPA 180.1
Calcium	0.52	mg/L	JM	10/3/2014	EPA 200.7
Magnesium	0.19	mg/L	JM	10/6/2014	EPA 200.7
Oil & Grease, Hexane Ext. Material	<1.8	mg/L	RB	10/2/2014	EPA 1664A

The results recorded in this report relate only to the samples as received on the date and time noted.

(MAP)

Averill Environmental Laboratory, Inc.
100 Northwest Drive
Plainville, Connecticut 06062

Sample Collection / Chain - of - Custody

COC Number
AEL10083 - 14

Client:	Location:	Project:
Town of Farmington, Farmington, CT	Farmington, CT	Town of Farmington Stormwater

Report To: Bruce Cyr

Sample ID	Collection Date / Time	Source	Container Type	Num	Pres.	Analytes	AEL Lab No.	Transfer Number 1	2	3	4
~~R33 BC R32-10-1-14~~	10/1/14	SW	P 100 mL	1	I	E.coli	5374	✓			
		SW	P 1/2 Gal	1	I	NO3, NO2, pH, TSS, Turb, Cond, Hardness		✓			
		SW	G Qt WM	1	S/I	O&G		✓			
		SW	P 250 mL	1	N/I	Ca, Mg		✓			
~~R32-10-1-14~~		SW	G L	1	S/I	TKN, COD, P_TOT, NH3		✓			

~~33 BC~~

Stormwater Sampling Data	Magnitude (in):	Duration (Hrs):	pH of Rainfall:	Previous Event Date:
Sample Collectors (s):			Disharge pH:	Discharge Temp (C):

Source Code: GW=Groundwater, SW=Surface Water, T=Treatment Facility, S=Soil, DW=Drinking Water

Preservation Codes: I=Iced, S=H2SO4, N=HNO3, H=HCl, Z=Zn/Ac, E=EDTA, T=Na2S2O3*5H2O, F=Filtered

Bruce Cyr — Sampler's Signature

10/1/14 — Date

Transfer Number	Transfers Relinquished by	Accepted by	Date	Time
1	Bruce Cyr		10/1/14	10:50
2			10/1/14	1120
3				
4				

TUNXIS | Laboratories, LLC
100 Northwest Drive, Plainville, Connecticut 06062
(860) 793-8866 Fax: (860) 793-8867
Alan G. Jacobs - Director CT Laboratory ID No. PH-0513

REPORT ON LABORATORY EXAMINATIONS

To Client: Town of Farmington, Engineering
1 Monteith Drive
Farmington, CT 06034-0948

Report No: TL1421195.0
Report Date: Wednesday, October 15, 2014
ATTN: Bruce Cyr
Collected By: Bruce Cyr

Source: Town of Farmington, Farmington, CT

Sample Matrix: Surface Water

Sample ID: Stormwater Discharge Sample

Collect Date: 10/1/2014

Lab#: 14005375 **Client Sample ID#:** R33-10-1-14

Received Date: 10/1/2014

Test	Result	Units	Analyst	Analysis Date	Analysis Method
Total Suspended Solids	4.8	mg/L	AGJ	10/1/2014	SM19 2540D
Nitrite - Nitrate as N	<0.46	mg/L	JF	10/3/2014	EPA 300.0
pH of Rain	6.0	units	JF	10/1/2014	SM19 4500H+B
pH	6.9	units	JF	10/1/2014	SM19 4500H+B
Specific Conductivity	84	micromhos/cm	RB	10/7/2014	SM19 2510B
Hardness, Calculated	14.1	mg/L CaCO3	JM	10/6/2014	SM 2340 B
Chemical Oxygen Demand	<20	mg/L	JF	10/15/2014	EPA 410.4
Ammonia Nitrogen as N	<0.50	mg/L	MAP	10/8/2014	SM19 4500NHD
Phosphorus, Total as P	0.114	mg/L as P	JM	10/3/2014	SM19 4500PE
E. Coli	1500	per 100 mL	JF	10/1/2014	SM 9222 B
Total Kjeldahl Nitrogen	<1.7	mg/L	MAP	10/8/2014	SM194500NH3F
Turbidity	5.8	NTU	JF	10/1/2014	EPA 180.1
Calcium	4.46	mg/L	JM	10/3/2014	EPA 200.7
Magnesium	0.71	mg/L	JM	10/6/2014	EPA 200.7
Oil & Grease, Hexane Ext. Material	<1.8	mg/L	RB	10/2/2014	EPA 1664A

The results recorded in this report relate only to the samples as received on the date and time noted.

(MAP)

Averill Environmental Laboratory, Inc.
100 Northwest Drive
Plainville, Connecticut 06062

Sample Collection / Chain - of - Custody

COC Number
AEL10083 - 14

Client:	Location:	Project:
Town of Farmington, Farmington, CT	Farmington, CT	Town of Farmington Stormwater

Report To: Bruce Cyr

Sample ID	Collection Date / Time	Source	Container Type	Num	Pres.	Analytes	AEL Lab No.	Transfer 1	Transfer 2	Transfer 3	Transfer 4
R-~~33~~ 34-10/1/14	10/1/14	SW	P 100 mL	1	I	E.coli	5377	✓			
		SW	P 1/2 Gal	1	I	NO3, NO2, pH, TSS, Turb, Cond, Hardness		✓			
		SW	G Qt WM	1	S/I	O&G		✓			
		SW	P 250 mL	1	N/I	Ca, Mg		✓			
R-~~33~~ 34-10/1/14	10/1/14	SW	G L	1	S/I	TKN, COD, P_TOT, NH3		✓			

Stormwater Sampling Data	Magnitude (in):	Duration (Hrs):	pH of Rainfall:	Previous Event Date:
Sample Collectors (s):			Disharge pH:	Discharge Temp (C):

Source Code: GW=Groundwater, SW=Surface Water, T=Treatment Facility, S=Soil, DW=Drinking Water

Preservation Codes: I=Iced, S=H2SO4, N=HNO3, H=HCl, Z=Zn/Ac, E=EDTA, T=Na2S2O3*5H2O, F=Filtered

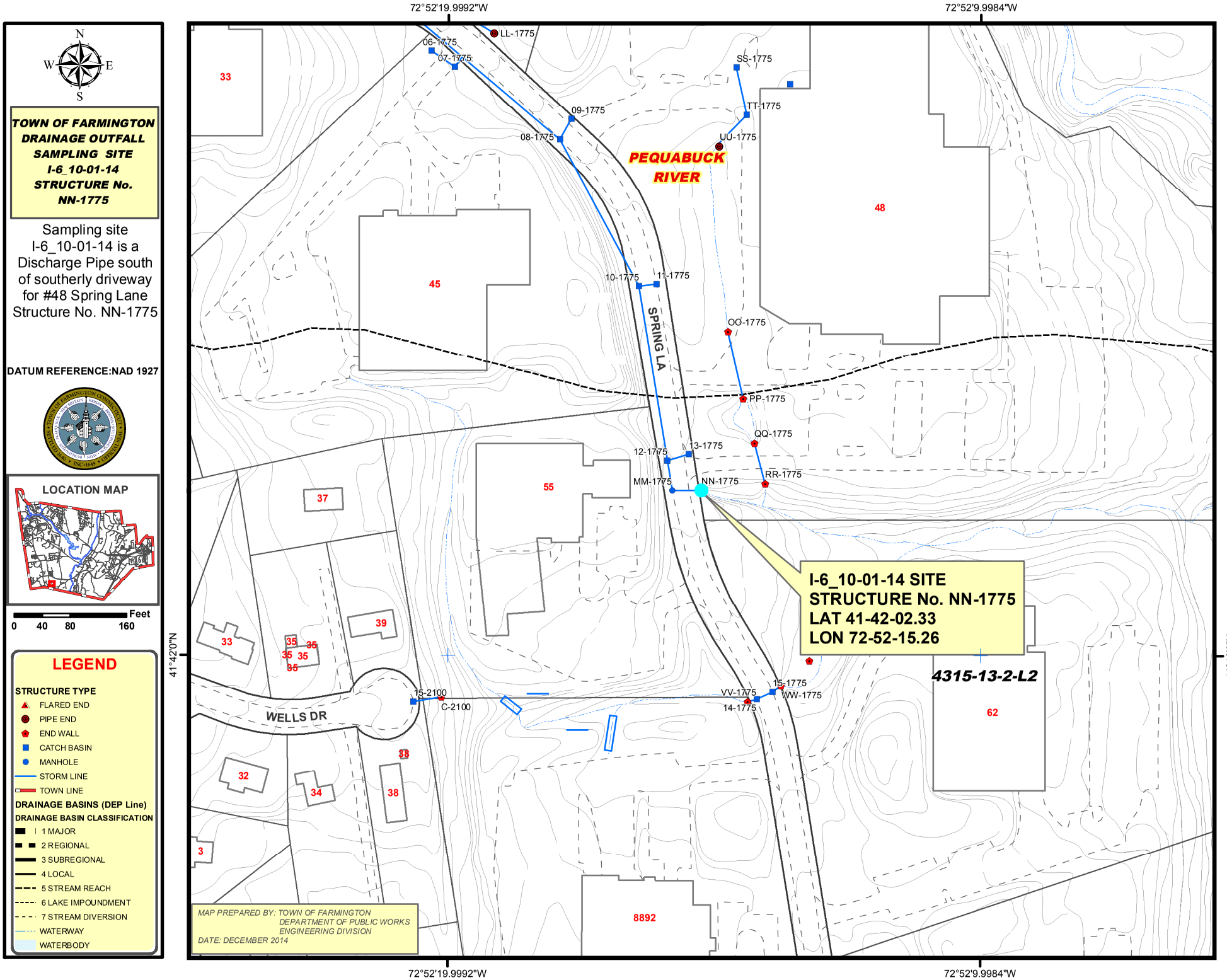
[signature] Sampler's Signature

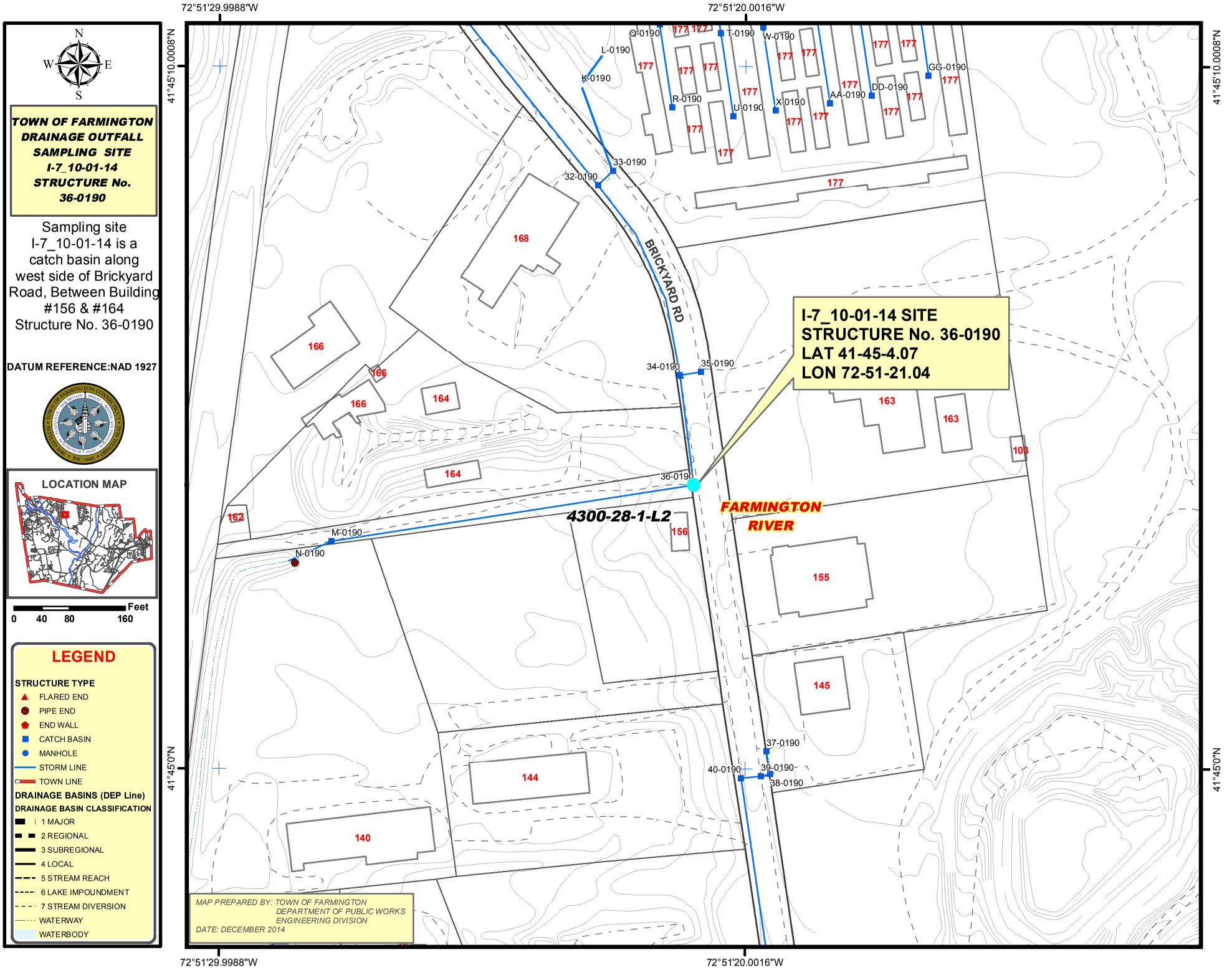
10/1/14 Date

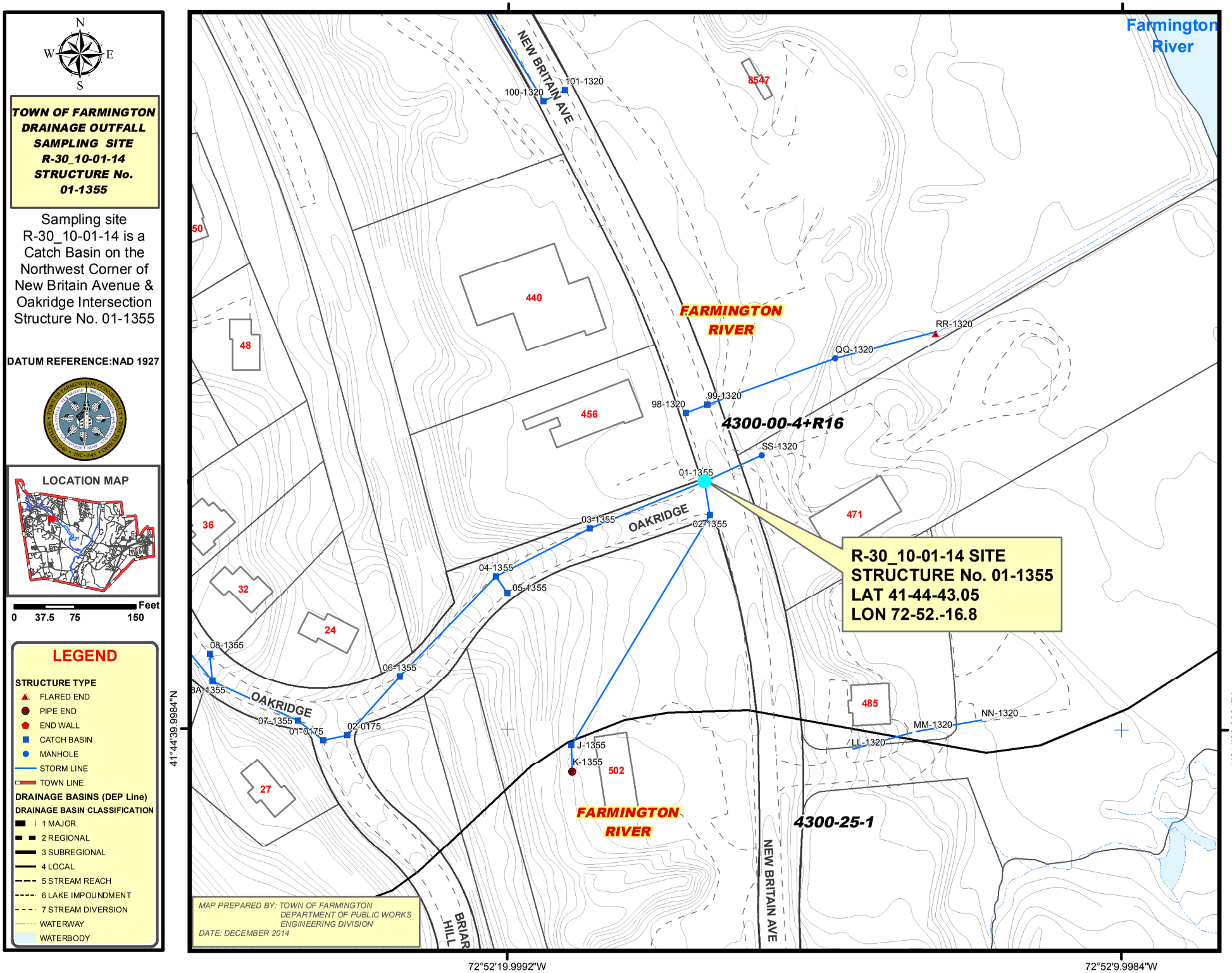
Transfer Number	Transfers Relinquished by	Accepted by	Date	Time
1	[signature]	[signature]	10/1/14	10:50
2	[signature]	[signature]	10/1/14	1120
3				
4				

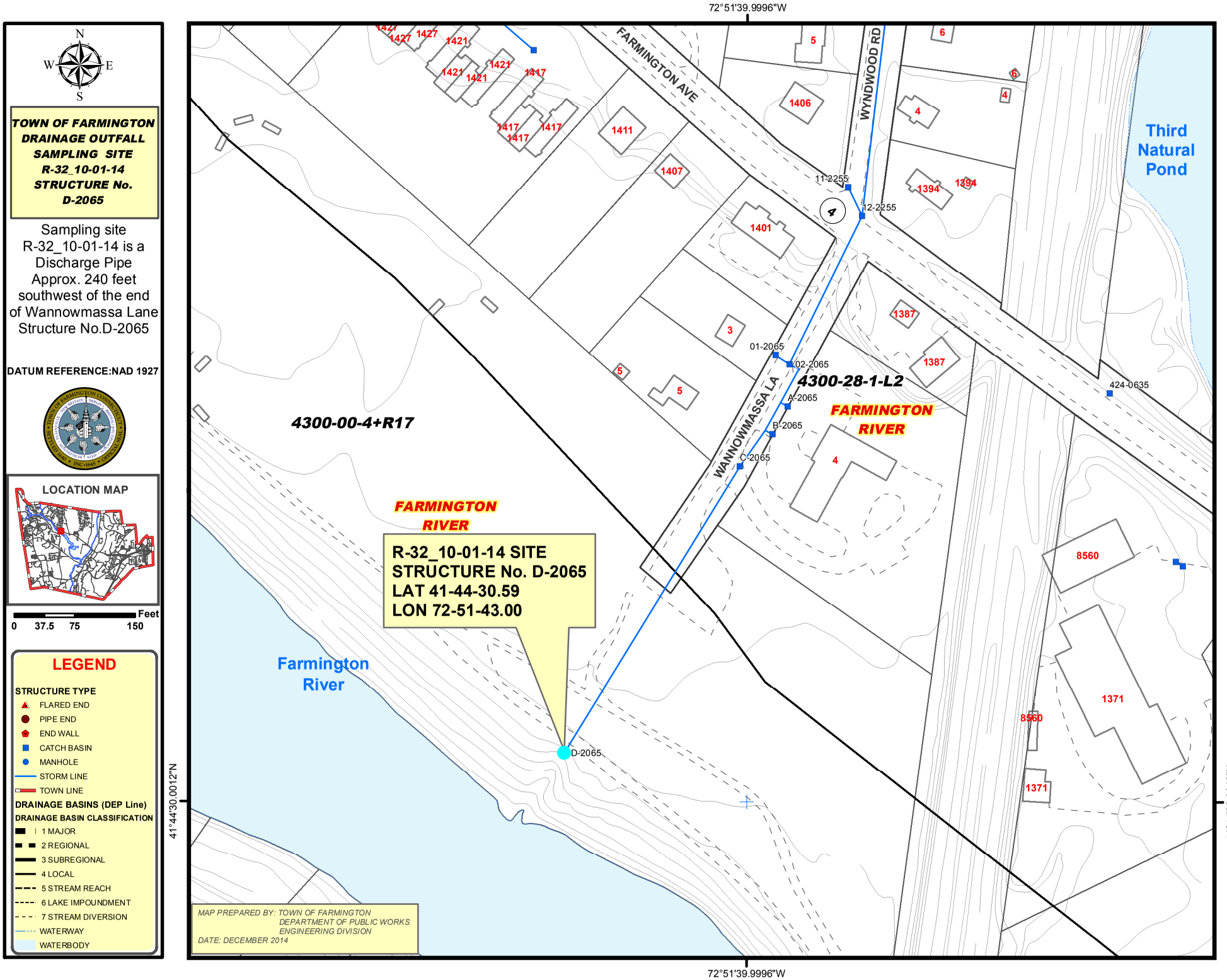
ATTACHMENT B

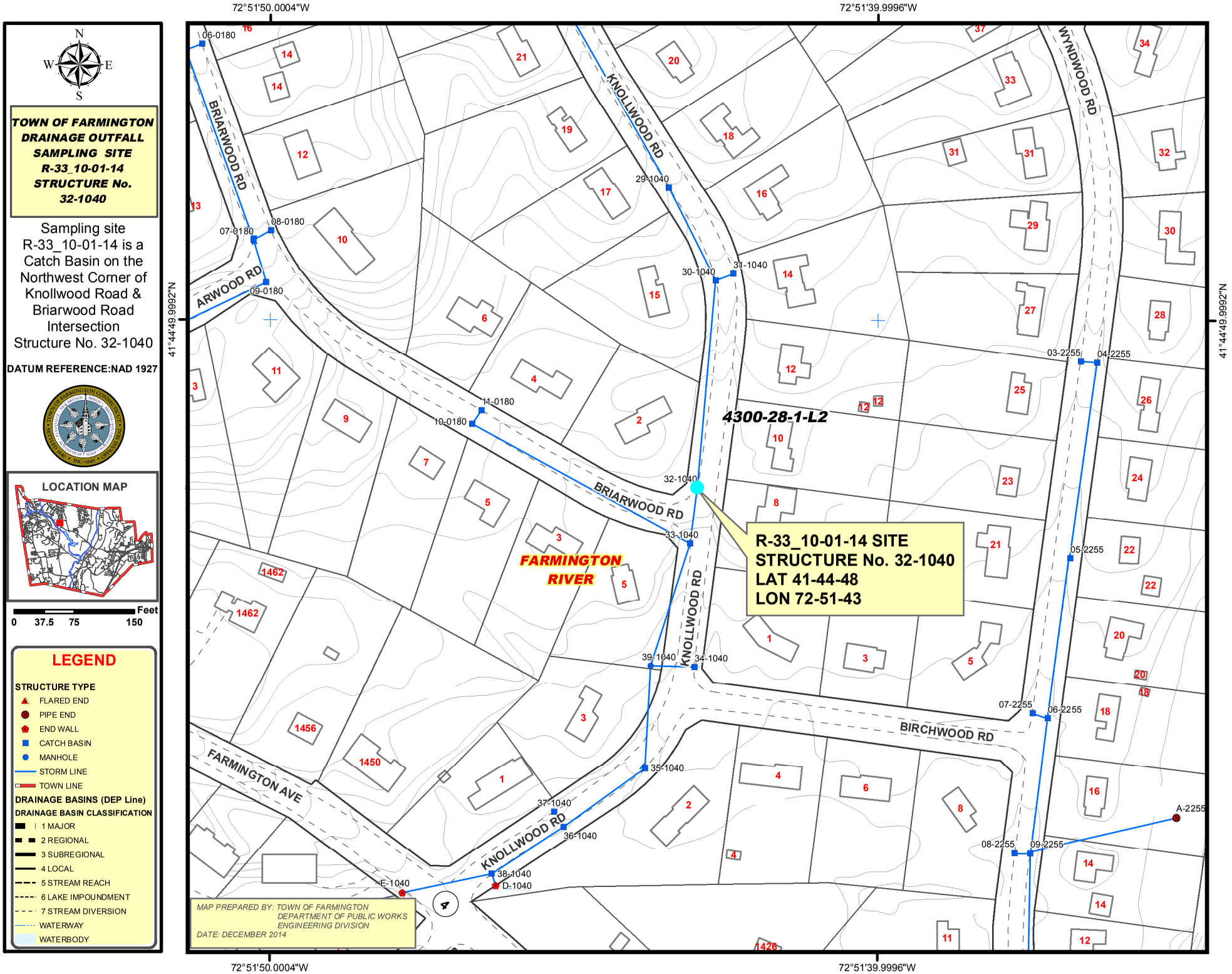
Monitoring Site Location Mapping

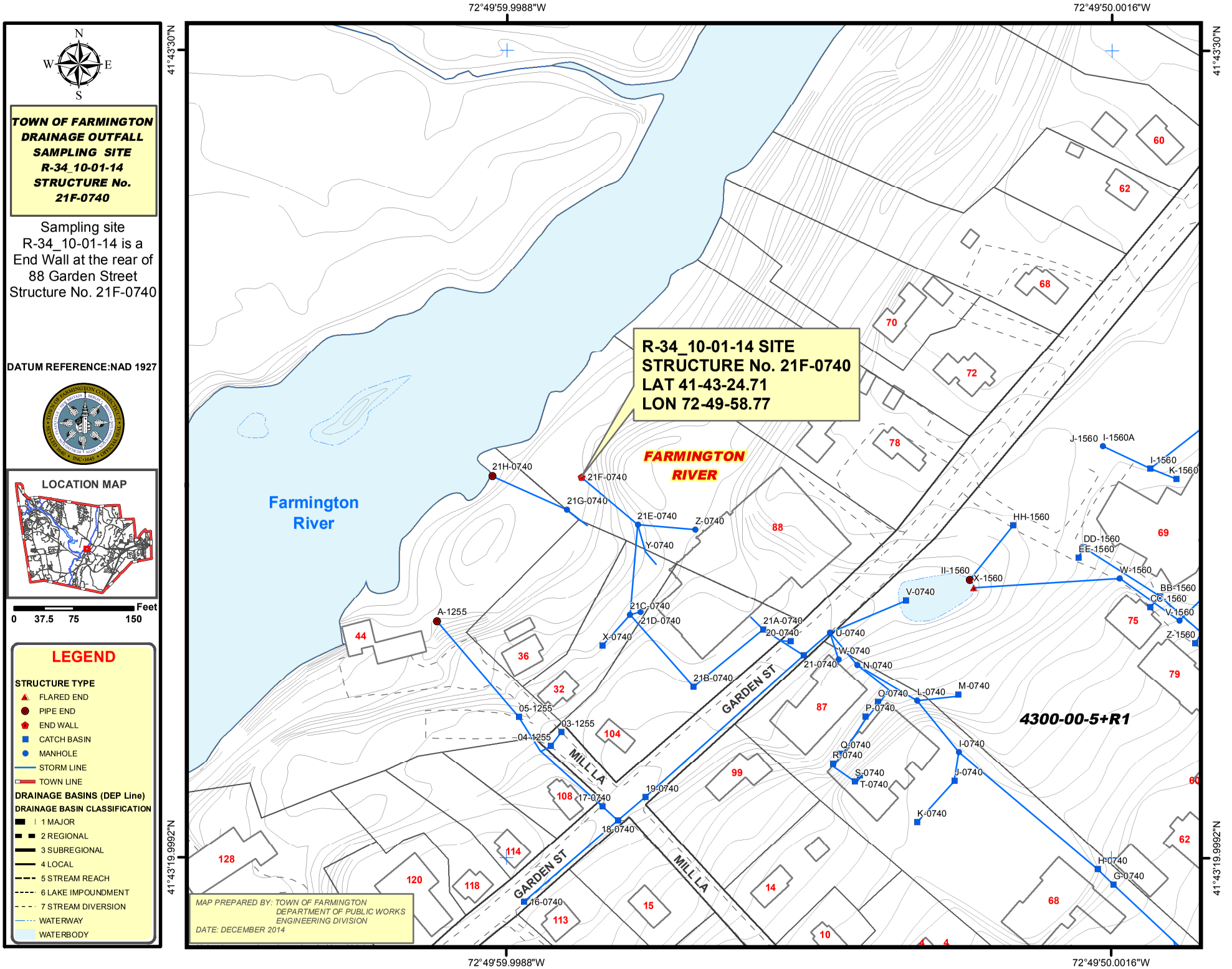

72°52'19.9992"W
72°52'9.9984"W
41°42'0"N
N
W
E
S
TOWN OF FARMINGTON
DRAINAGE OUTFALL
SAMPLING SITE
I-6_10-01-14
STRUCTURE No.
NN-1775
Sampling site I-6_10-01-14 is a Discharge Pipe south of southerly driveway for #48 Spring Lane Structure No. NN-1775
DATUM REFERENCE:NAD 1927
LOCATION MAP
Feet
0 40 80 160
LEGEND
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
CATCH BASIN
MANHOLE
STORM LINE
TOWN LINE
DRAINAGE BASINS (DEP Line)
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
WATERWAY
WATERBODY
LL-1775
06-1775
07-1775
SS-1775
09-1775
TT-1775
08-1775
UU-1775
PEQUABUCK RIVER
10-1775
11-1775
SPRING LA
OO-1775
PP-1775
QQ-1775
12-1775
13-1775
RR-1775
MM-1775
NN-1775
I-6_10-01-14 SITE
STRUCTURE No. NN-1775
LAT 41-42-02.33
LON 72-52-15.26
4315-13-2-L2
15-2100
C-2100
WELLS DR
VV-1775
14-1775
15-1775
WW-1775
MAP PREPARED BY: TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DATE: DECEMBER 2014


72°51'29.9988"W
72°51'20.0016"W
41°45'10.0008"N
41°45'0"N
TOWN OF FARMINGTON
DRAINAGE OUTFALL
SAMPLING SITE
I-7_10-01-14
STRUCTURE No.
36-0190
Sampling site I-7_10-01-14 is a catch basin along west side of Brickyard Road, Between Building #156 & #164 Structure No. 36-0190
DATUM REFERENCE:NAD 1927
LOCATION MAP
Feet
0 40 80 160
LEGEND
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
CATCH BASIN
MANHOLE
STORM LINE
TOWN LINE
DRAINAGE BASINS (DEP Line)
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
WATERWAY
WATERBODY
I-7_10-01-14 SITE
STRUCTURE No. 36-0190
LAT 41-45-4.07
LON 72-51-21.04
BRICKYARD RD
FARMINGTON RIVER
4300-28-1-L2
Q-0190
T-0190
W-0190
L-0190
K-0190
R-0190
U-0190
X-0190
AA-0190
DD-0190
GG-0190
33-0190
32-0190
34-0190
35-0190
36-0190
M-0190
N-0190
37-0190
40-0190
39-0190
38-0190
MAP PREPARED BY: TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DATE: DECEMBER 2014


72°52'19.9992"W
72°52'9.9984"W
41°44'39.9984"N
N
W
E
S
TOWN OF FARMINGTON
DRAINAGE OUTFALL
SAMPLING SITE
R-30_10-01-14
STRUCTURE No.
01-1355
Sampling site R-30_10-01-14 is a Catch Basin on the Northwest Corner of New Britain Avenue & Oakridge Intersection Structure No. 01-1355
DATUM REFERENCE:NAD 1927
LOCATION MAP
Feet
0 37.5 75 150
LEGEND
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
CATCH BASIN
MANHOLE
STORM LINE
TOWN LINE
DRAINAGE BASINS (DEP Line)
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
WATERWAY
WATERBODY
NEW BRITAIN AVE
100-1320
101-1320
8547
Farmington River
FARMINGTON RIVER
440
456
48
50
RR-1320
QQ-1320
98-1320
99-1320
4300-00-4+R16
SS-1320
01-1355
03-1355
02-1355
OAKRIDGE
471
36
32
24
04-1355
05-1355
08-1355
06-1355
BA-1355
07-1355
01-0175
02-0175
R-30_10-01-14 SITE
STRUCTURE No. 01-1355
LAT 41-44-43.05
LON 72-52.-16.8
485
MM-1320
NN-1320
LL-1320
J-1355
K-1355
502
27
FARMINGTON RIVER
4300-25-1
NEW BRITAIN AVE
BRIAR HILL
MAP PREPARED BY: TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DATE: DECEMBER 2014


72°51'39.9996"W
41°44'30.0012"N
TOWN OF FARMINGTON
DRAINAGE OUTFALL
SAMPLING SITE
R-32_10-01-14
STRUCTURE No.
D-2065
Sampling site R-32_10-01-14 is a Discharge Pipe Approx. 240 feet southwest of the end of Wannowmassa Lane Structure No.D-2065
DATUM REFERENCE:NAD 1927
LOCATION MAP
Feet
0 37.5 75 150
LEGEND
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
CATCH BASIN
MANHOLE
STORM LINE
TOWN LINE
DRAINAGE BASINS (DEP Line)
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
WATERWAY
WATERBODY
FARMINGTON AVE
WYNDWOOD RD
WANNOWMASSA LA
Third Natural Pond
4300-00-4+R17
4300-28-1-L2
FARMINGTON RIVER
FARMINGTON RIVER
R-32_10-01-14 SITE
STRUCTURE No. D-2065
LAT 41-44-30.59
LON 72-51-43.00
Farmington River
11-2255
12-2255
01-2065
02-2065
A-2065
B-2065
C-2065
D-2065
424-0635
MAP PREPARED BY: TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DATE: DECEMBER 2014


72°51'50.0004"W
72°51'39.9996"W
41°44'49.9992"N
TOWN OF FARMINGTON
DRAINAGE OUTFALL
SAMPLING SITE
R-33_10-01-14
STRUCTURE No.
32-1040
Sampling site R-33_10-01-14 is a Catch Basin on the Northwest Corner of Knollwood Road & Briarwood Road Intersection Structure No. 32-1040
DATUM REFERENCE:NAD 1927
LOCATION MAP
Feet
0 37.5 75 150
LEGEND
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
CATCH BASIN
MANHOLE
STORM LINE
TOWN LINE
DRAINAGE BASINS (DEP Line)
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
WATERWAY
WATERBODY
BRIARWOOD RD
KNOLLWOOD RD
WYNDWOOD RD
BIRCHWOOD RD
FARMINGTON AVE
FARMINGTON RIVER
4300-28-1-L2
R-33_10-01-14 SITE
STRUCTURE No. 32-1040
LAT 41-44-48
LON 72-51-43
06-0180
07-0180
08-0180
09-0180
10-0180
11-0180
29-1040
30-1040
31-1040
32-1040
33-1040
34-1040
35-1040
36-1040
37-1040
38-1040
39-1040
E-1040
D-1040
03-2255
04-2255
05-2255
06-2255
07-2255
08-2255
09-2255
A-2255
MAP PREPARED BY: TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DATE: DECEMBER 2014


72°49'59.9988"W
72°49'50.0016"W
41°43'30"N
41°43'19.9992"N
N
W
E
S
TOWN OF FARMINGTON
DRAINAGE OUTFALL
SAMPLING SITE
R-34_10-01-14
STRUCTURE No.
21F-0740
Sampling site R-34_10-01-14 is a End Wall at the rear of 88 Garden Street Structure No. 21F-0740
DATUM REFERENCE:NAD 1927
LOCATION MAP
Feet
0 37.5 75 150
LEGEND
STRUCTURE TYPE
FLARED END
PIPE END
END WALL
CATCH BASIN
MANHOLE
STORM LINE
TOWN LINE
DRAINAGE BASINS (DEP Line)
DRAINAGE BASIN CLASSIFICATION
1 MAJOR
2 REGIONAL
3 SUBREGIONAL
4 LOCAL
5 STREAM REACH
6 LAKE IMPOUNDMENT
7 STREAM DIVERSION
WATERWAY
WATERBODY
R-34_10-01-14 SITE
STRUCTURE No. 21F-0740
LAT 41-43-24.71
LON 72-49-58.77
FARMINGTON RIVER
Farmington River
21H-0740
21F-0740
21G-0740
21E-0740
Z-0740
Y-0740
A-1255
21C-0740
21D-0740
X-0740
21B-0740
21A-0740
20-0740
U-0740
V-0740
W-0740
N-0740
21-0740
05-1255
03-1255
04-1255
MILL LA
GARDEN ST
17-0740
19-0740
18-0740
16-0740
O-0740
L-0740
M-0740
P-0740
Q-0740
R-0740
S-0740
T-0740
I-0740
J-0740
K-0740
H-0740
G-0740
II-1560
X-1560
HH-1560
J-1560
I-1560A
I-1560
K-1560
DD-1560
EE-1560
W-1560
BB-1560
CC-1560
V-1560
Z-1560
4300-00-5+R1
MAP PREPARED BY: TOWN OF FARMINGTON
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DATE: DECEMBER 2014