Effective date: (to be determined)

CITY OF METHUEN

STORMWATER MANAGEMENT RULES AND REGULATIONS

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SECTION 1. PURPOSE

The purpose of these Stormwater Regulations is to protect, maintain and enhance public health, safety, environment, and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased runoff, decreased ground water recharge, erosion and sedimentation, and nonpoint source pollution associated with new development and redevelopment of land, pursuant to the Ordinance Governing Stormwater Management and Erosion Control (Chapter 30 of the Municipal Code of Methuen, Massachusetts).

Development of land including loss of vegetative cover to create impervious surfaces, regrading, and other land use changes, permanently alter the hydrologic system of local watersheds by decreasing transpiration and infiltration, and increasing stormwater runoff rates and volumes, causing an increase in flooding, stream channel erosion, and sediment transport and deposition, and water quality degradation. This additional runoff contributes to increased nonpoint source pollution and degradation of receiving waters.

Stormwater management systems that are properly designed utilizing low impact design (LID) and green infrastructure (GI) techniques and appropriate best management practices (BMPs) can better simulate the natural hydrologic condition and reduce adverse impacts.

During the construction process, soil is often exposed for periods of time and most vulnerable to erosion by wind and water. The eroded soil endangers water resources by reducing water quality, and causing the siltation of valuable wetland resources including swamps, streams, rivers, lakes and aquatic habitat for fish and other desirable species.

The impacts of construction and post-development stormwater runoff quantity and quality can adversely affect public safety, public and private property, surface water drinking water supplies, groundwater resources including drinking water supplies, recreation, aquatic habitats, fish and other aquatic life, property values and other uses of lands and waters.

These Stormwater Regulations (Regulations) have been developed to provide reasonable guidance for the regulation of project design, construction, and post-development stormwater runoff for the purpose of protecting local water resources from degradation. It is in the public interest to regulate construction and post-development stormwater runoff discharges in order to control and minimize increases in stormwater runoff rates and volumes, soil erosion and sedimentation, stream channel erosion, and nonpoint source pollution associated with construction site and post-development stormwater runoff.

SECTION 2. DEFINITIONS

Abutter: The owner(s) of land adjacent to regulated activity.

Alteration of drainage characteristics: Any activity on an area of land that changes the water quality, force, direction, timing or location of runoff flowing from the area. Such changes include: change from distributed runoff to confined or discrete discharge, change in the volume of runoff from the area; change in the peak rate of runoff from the area; and change in the recharge to groundwater on the area.

As-built drawing: Drawings that completely record and document applicable aspects and features of conditions of a project following construction using Stormwater Management Plans derived from a Stormwater Management Permit.

Certificate of completion (COC): A document issued by the Stormwater Authority after all construction activities have been completed, which states that all conditions of an issued Stormwater Management Permit have been met and that a project has been completed in compliance with the conditions set forth in the permit.

Certified professional in erosion and sediment control (CPESC): A certified specialist in soil erosion and sediment control. This certification program, sponsored by the Soil and Water Conservation Society in cooperation with the American Society of Agronomy, provides the public with evidence of professional qualifications.

Clean Water Act: The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) As hereafter amended.

Critical Root Zone (CRZ): The minimum area beneath the canopy of a tree which must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The CRZ is represented by a concentric circle centering on the tree's trunk and extending outward towards the tree's drip-line. The minimum area of the CRZ shall be dependent on the required minimum radius of the CRZ; the required minimum radius of the CRZ

shall be determined by multiplying a tree's diameter at breast height (in inches) by eighteen (18) inches, with the resulting product constituting the minimum radius of the CRZ.

Discharge of pollutants: The addition from any source of any pollutant or combination of pollutants into the municipal storm drain system or into the Waters of the United States or Commonwealth from any source.

Drainage easement: A legal right granted by a landowner to a grantee allowing the use of private land for stormwater management purposes.

Drip-line: The area surrounding the tree from the trunk to the outermost branches. This area is distinguished from, and not to be confused with Critical Root Zone.

Erosion and sedimentation control plan: A document containing narrative, drawings and details developed by a registered Professional Engineer (PE) or a Certified Professional in Erosion and Sedimentation Control (CPESC), which includes best management practices, or equivalent measures designed to control surface runoff, erosion and sedimentation during pre-construction and construction related land disturbing activities.

Erosion control: The prevention or reduction of the movement of soil particles or rock fragments due to stormwater runoff.

Estimated habitat of rare wildlife and certified vernal pools: Habitats delineated for state-protected rare wildlife and certified vernal pools under the Wetlands Protection Act Regulations (310 CMR 10.00) and the Forest Cutting Practices Act Regulations (304 CMR 11.00).

Groundwater: Water beneath the surface of the ground.

Grubbing: The act of clearing land surface by digging up roots and stumps.

Hazardous material: Any material which, because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment. Toxic or hazardous materials include any synthetic organic chemical, petroleum product, heavy metal, radioactive or infectious waste, acid and alkali, and any substance defined as "toxic" or "hazardous" under MGL c. 21C and c. 21E, and the regulations at 310 CMR 30.000 and 310 CMR 40.0000.

Illicit discharge: Direct or indirect discharge to the municipal storm drain system that is not composed entirely of stormwater, except as exempted in Section 29-6 of the Ordinance Governing Illicit Connections and Discharges to the Municipal Storm Drain System (Chapter 29 of the Municipal Code of Methuen, Massachusetts).

Impoundment: A stormwater pond created by either constructing an embankment or excavating a pit which retains a permanent pool of water.

Infiltration: The act of allowing or facilitating surface water to percolate into the ground to permit groundwater recharge and the reduction of stormwater runoff from a project site.

Land Use With Higher Potential Pollutant Load (LUHPPL): Land uses such as auto salvage yards, auto fueling facilities, exterior fleet storage yards, vehicle service and equipment cleaning areas, commercial parking lots with high intensity use, road salt storage areas, outdoor storage and loading areas of hazardous substances, confined disposal facilities and disposal sites, marinas, boat yards or other uses as identified by the Massachusetts Stormwater Handbook.

Lot: An individual tract of land as shown on the current Assessor's Map for which an individual tax assessment is made. For the purposes of these regulations, a lot also refers to an area of a leasehold on a larger parcel of land, as defined in the lease agreement and shown by approximation on the Assessor's Map.

Low Impact Development (LID): site planning and design strategies that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product.

Nonpoint source pollution: Pollution from many diffuse sources caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and man-made pollutants finally depositing them into a water resource area.

Off-site compliance: an approach whereby pollutant removal practices are implemented at redevelopment or retrofit sites at another location in the same HUC12 watershed, as approved by the Stormwater Authority.

Outfall: The point at which stormwater flows out from a point source discernible, confined and discrete conveyance into Waters of the Commonwealth.

Owner: A person with a legal or equitable interest in property.

Point source: Any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged.

Pre-construction: All activity in preparation for construction.

Priority habitat of rare species: Habitats delineated for rare plant and animal populations protected pursuant to the Massachusetts Endangered Species Act (M.G.L. c. 131A) and its regulations.

Recharge: The process by which groundwater is replenished by precipitation through the percolation of runoff and surface water through the soil.

Sedimentation: The process or act of deposition of sediment.

Site: The area extent of construction activities, including but not limited to the creation of new impervious cover and improvement of existing impervious cover.

Slope: The incline of a ground surface expressed as a ratio of horizontal distance to vertical distance.

Stabilization: The use, singly or in combination, of mechanical, structural, or vegetative methods, to prevent or retard erosion.

Strip: Any activity which removes the vegetative ground surface cover, including tree removal, clearing, grubbing, and storage or removal of topsoil.

Total Maximum Daily Load or TMDL: Section 303(d) of the Clean Water Act authorizes the EPA to assist states, territories and authorized tribes in listing impaired waters and developing Total Maximum Daily Loads (TMDLs) for these waterbodies. A TMDL establishes the

maximum amount of a pollutant that a water body can accept and still meet water quality standards for protecting public health and maintaining the designated beneficial uses of those waters for drinking, swimming, recreation, and fishing. A TMDL includes Waste Load Allocations for point source discharges, Load Allocations for nonpoint sources and/or natural background, and must include a margin of safety and account for seasonal variations.

Total suspended solids or TSS: Undissolved organic or inorganic particles in water.

Vernal pools: Temporary bodies of freshwater which provide critical habitat for a number of vertebrate and invertebrate wildlife species.

Watercourse: A natural or man-made channel through which water flows or a stream of water, including a river, brook or underground stream.

Waters of the Commonwealth: All waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, and groundwater and Waters of the United States as defined under the Federal Clean Water Act (33 U.S.C. § 1251, et seq.) as hereafter amended.

Wetland resource area: areas specified in the Massachusetts Wetlands Protection Act G.L. c. 131, § 40 and in Section 12-5 of the Municipal Code of Methuen.

Wetlands: tidal and non-tidal areas characterized by saturated or nearly saturated soils most of the year that are located between terrestrial (land-based) and aquatic (water-based) environments, including freshwater marshes around ponds and channels (rivers and streams), brackish and salt marshes; common names include marshes, swamps and bogs.

SECTION 3. AUTHORITY AND ADMINISTRATION

A. Stormwater Authority

The Methuen Conservation Commission is designated as the Stormwater Authority under Chapter 30 of the Municipal Code of Methuen, Massachusetts: Ordinance Governing Stormwater Management and Erosion Control [hereafter referred to as "Stormwater Ordinance"]. These Stormwater Regulations have been adopted by the Stormwater Authority in accordance with the City's Stormwater Ordinance. The Methuen Conservation Commission shall administer, implement and enforce these Regulations. Any powers granted to or duties imposed upon the Stormwater Authority may be delegated in writing by the Stormwater Authority to its employees or agents. The Department of Public Works (DPW) is considered an authorized agent of the Commission for the purposes of administering the Administrative Land Disturbance Reviews. DPW may also act as the agent of the Stormwater Authority for the purposes of reviewing stormwater submittals, conducting inspections, and advising the Stormwater Authority regarding enforcement.

B. Amendments

The Stormwater Authority may periodically amend these regulations pursuant to Section 30-6 subpart C. of the Stormwater Ordinance.

C. Conflict with Other City Rules or Ordinances

Nothing in these Regulations is intended to replace or be in derogation of the requirements of any other City of Methuen ordinance.

SECTION 4. APPLICABILITY

A. Applicability Thresholds

These regulations apply to all activities in accordance with Section 30-4 Applicability of the Stormwater Ordinance unless specifically exempt pursuant to Section 30-5.

B. Coordination with other City Permits

If a portion of a project or activity meets the Applicability of the Stormwater Ordinance according to Section 4.A and it is within the specific jurisdiction of the Community Development Board or another City board, then the Conservation Commission will remain the Stormwater Authority, responsible for facilitating stormwater review and approval of the Stormwater Management Permit or Administrative Land Disturbance Review. The specific application submission requirements, public notices, and fee requirements of the applicable board, commission, and/or department shall remain in effect in addition to the requirements of the Stormwater Ordinance. The Conservation Commission and other City boards shall coordinate any necessary expert engineering and other consultant services and resulting Consultant Fees. The Conservation Commission and other City boards may, at the request of the Applicant, coordinate the public hearing process. No work may commence, including site preparation and clearing of vegetation and trees, without a Stormwater Management Permit or Administrative Land Disturbance Review.

SECTION 5. WAIVERS

A. General

The Stormwater Authority may waive strict compliance with any requirement of the Stormwater Ordinance or the rules and regulations promulgated hereunder, in accordance with Section 30-6 subpart B of the Stormwater Ordinance.

B. Waiver Request Procedures

Any person seeking a waiver must submit a written waiver request. Such a request shall be accompanied by an explanation or documentation supporting the waiver request and demonstrating that such Waiver from the Stormwater Ordinance and Regulations remains consistent with the Purpose of said Ordinance and Regulations. Any waivers shall not constitute an exemption from any applicable Federal or State permitting requirements.

SECTION 6. ADMINISTRATIVE LAND DISTURBANCE REVIEW PROCEDURES AND STANDARDS

A. Administrative Review and Approval Required.

Administrative Land Disturbance Approval must be obtained prior to the commencement of land disturbing activity disturbing between 5,000 square feet and one acre of land in accordance with Section 30-4 of the Stormwater Ordinance.

B. Application

A completed application for an Administrative Land Disturbance Review shall be filed with the Department of Public Works in accordance with Section 30-7 of the Stormwater Ordinance. The Administrative Land Disturbance Review Application package shall include:

1. A completed Application Form with original signatures of all property owners;
2. Narrative describing the proposed work including existing and proposed site conditions (including structures, vegetation, and drainage), measures to mitigate any stormwater impacts, and anticipated maintenance requirements;
4. An operation and maintenance plan to inspect, properly maintain and repair installed best management practices (BMPs) after project completion to ensure that they are functioning according to manufacturer or design specifications for the life of the BMP;
5. Two (2) copies of plans that include:
    a. Existing site features including structures, pavement, plantings, and stormwater management systems etc.;
    b. Proposed work including proposed stormwater management systems and limits of disturbance; and
    c. Basic erosion and sedimentation controls.
6. Payment of the application fee. Each application must be accompanied by the appropriate application fee as established by the Stormwater Authority. The Stormwater Authority is authorized to retain a registered Professional Engineer (PE) or other professional consultant to advise on any or all aspects of the Application. Applicants may also be required to pay review fees as determined by the Stormwater Authority sufficient to cover any expenses connected with the review of the Administrative Land Disturbance Review Application before the review process commences. Additional fee information is provided in Section 8.

C. Performance Standards

1. Site planning and drainage design shall ensure that the proposed work will not result in an increase in the rate of runoff leaving the site at any point on the property line. All post-development runoff must continue to flow into and recharge the same watershed as it did under pre-development conditions. Proper easements and deed restrictions, if required for drainage structures, shall provide suitable language to include property-owner responsibility and maintenance.
2. Ensure that there will be no illicit discharges to the MS4 or waters of the Commonwealth.
3. The selection, design and construction of all pre-treatment, treatment and infiltration BMPs shall be in accordance with Massachusetts Stormwater Handbook and shall be consistent with all elements of the Massachusetts Stormwater Standards including but not limited to those regarding new stormwater conveyances, peak runoff rates, recharge, land uses with higher potential pollutant loads, discharges to Zone II or interim wellhead protection areas, sediment and erosion control, and illicit discharges. An operation and maintenance plan must be prepared to inspect, properly maintain, and repair installed best management practices (BMPs) after project completion to ensure that they are functioning according to manufacturer or design specifications for the life of the BMP.

4. Erosion and sediment control measures will include, but not be limited to, provisions for:

    - Minimizing erosion and avoiding disturbance of areas susceptible to erosion and sediment loss.
    - Protecting all storm drain inlets.
    - Inspecting and maintaining erosion & sediment control BMPs.
    - Pollution prevention controls including but not limited to: prevent spilled or leaked materials from polluting stormwater runoff; provide for proper construction and solid waste storage & disposal; and provide portable toilets securely located away from the drainage system and waters of the U.S.
    - Stabilizing construction site entrances and exits to prevent off-site tracking.
    - Final site stabilization.

5. Use Low Impact Development (LID) techniques where adequate soil, groundwater and topographic conditions allow. These may include but not be limited to reduction in impervious surfaces, disconnection of impervious surfaces, bioretention (rain gardens), and infiltration systems. Where site conditions allow, stormwater should be infiltrated onsite.

6. Existing trees with a Diameter at Breast Height of 10 inches or greater should be protected and preserved to the maximum extent feasible. See also Section 9.B.4 of these Regulations.

D. Consent to Entry onto Property

An applicant consents to entry of the Stormwater Authority or its authorized agents in or on site to verify the information in the application and to inspect for compliance with permit conditions.

E. Information requests

The applicant shall submit all additional information requested by the Department of Public Works to issue a decision on the application.

F. Action by the Stormwater Authority.

The Department of Public Works may:

1. Approve the Administrative Land Disturbance Review Application if it finds that the proposed plan meets the performance standards set forth herein;

2. Approve the Administrative Land Disturbance Review Application with conditions, modifications or restrictions that the Stormwater Authority determines are required to meet the performance standards set forth herein; or

3. Require submission of a Stormwater Management Permit Application if the project will disturb land beyond administrative review thresholds or in the opinion of the Department of Public Works requires more extensive review.

G. Project Changes

The Applicant, or their agent, must notify the Department of Public Works in writing of any change or alteration of a land-disturbing activity authorized in an Administrative Land Disturbance Review approval before any change or alteration occurs. If the Department of Public Works determines that the change or alteration is significant, based on the design requirements listed in Section 6.C and accepted construction practices, the Department of Public Works may require a new Administrative Land Disturbance Review Application be filed. If any change or alteration from the Administrative Land Disturbance Review approval occurs during any land disturbing activities, the Department of Public Works may require the installation of interim erosion and sedimentation control measures before approving the change or alteration.

H. Permit Expiration/Extension

An approved Administrative Land Disturbance Review is valid for three years from the date of issuance. If work has not been completed within three (3) years, the applicant may request in writing to the Department of Public Works, a one-time extension of up to one year. This request shall be submitted thirty (30) days prior to expiration of the approved Administrative Land Disturbance Review to determine whether the plan still satisfies applicable state and local requirements and to verify that all design factors are still valid. If the Department of Public Works finds the previously filed Application to be insufficient, a modified Application shall be submitted and approved prior to issuance of the Extension.

SECTION 7. STORMWATER MANAGEMENT PERMIT AND PROCEDURES

A. Application

A completed application for a Stormwater Management Permit shall be filed with Stormwater Authority. The Stormwater Management Permit Application package shall include:

1. A completed Application Form with original signatures of all property owners;
2. A list of abutters within 300 feet of the property, certified by the Methuen Assessors Office. Proof of notification of all abutters shall be submitted to the Commission prior to, or at, the public hearing.
3. **Nine (9)** copies (three full sized and six reduced-size) of the completed Application and accompanying drawings including:
    a. Stormwater Management Plan;
    b. Erosion and Sediment Control Plan; and
    c. Operation and Maintenance Plan.
4. One (1) copy of the Application Form and the list of abutters filed with the City Clerk.
5. Copies of the complete Application shall be sent or delivered at the same time, by certified mail, to the Director of Public Works, the Community Development Board, and the Board of Health. Proof of such notification shall be submitted to the Commission prior to, or at, the public hearing.

B. Determination of Completeness

The Stormwater Authority shall make a determination as to the completeness of the application and adequacy of the materials submitted. No review shall take place until the application is determined complete. The applicant shall submit all additional information requested by the Stormwater Authority to issue a decision on the application.

C. Fees.

Each application must be accompanied by the appropriate application fee as established by the Stormwater Authority. Applicants shall also pay review fees as determined by the Stormwater Authority sufficient to cover any expenses connected with the public hearing and review of the Stormwater Management Permit Application before the review process commences. The Stormwater Authority is authorized to retain a registered Professional Engineer or other professional consultant to advise the Stormwater Authority on any or all aspects of the Application. Additional fee information is provided in Section 8.

D. Entry

Filing an application for a permit grants the Stormwater Authority or its agent, permission to enter the site to verify the information in the application and to inspect for compliance with permit conditions.

E. Public Hearing

The Stormwater Authority shall hold a public hearing within a reasonable time from the receipt of a complete application and may continue the hearing as necessary for complete review. The Stormwater Authority shall take final action within thirty (30) days from the time of the submission of all required information unless such time is extended by agreement between the applicant and Stormwater Authority. Notice of the public hearing shall be by publication, posting, and by first-class mailings to abutters at least seven (7) days prior to the hearing. The Stormwater Authority shall make the application available for inspection by the public during business hours.

F. Action by the Stormwater Authority

The Stormwater Authority may:

1. Approve the Stormwater Management Permit Application and issue a permit if it finds that the performance standards and requirements set forth herein have been met;
2. Approve the Stormwater Management Permit Application and issue a permit with conditions, modifications or restrictions that Stormwater Authority determines are required to ensure that the performance standards and requirements set forth herein are met;
3. Disapprove the Stormwater Management Permit Application and deny the permit if it finds that the performance standards and requirements set forth herein have not been met; or

4. Disapprove the Stormwater Management Permit Application "without prejudice" where an applicant fails to provide requested additional information or review fees that in the Stormwater Authority's opinion are needed to adequately describe or review the proposed project.

G. Final Approval

Final approval, if granted, shall be endorsed on the Stormwater Management Permit by the signature of the majority of the Conservation Commission.

H. Plan Changes

The permittee, or their agent, must notify Stormwater Authority in writing of any change or alteration of a land-disturbing activity authorized in a Stormwater Management Permit before any change or alteration occurs. If Stormwater Authority determines that the change or alteration is significant, based on the design requirements listed in Sections 9 and 10 and accepted construction practices, the Stormwater Authority may require that an amended Stormwater Management Permit application be filed and a public hearing held. If any change or alteration from the Stormwater Management Permit occurs during any land disturbing activities, Stormwater Authority may require the installation of interim erosion and sedimentation control measures before approving the change or alteration.

I. Permit Expiration/Extension

An approved Stormwater Management Permit is valid for three years from the date of issuance. If work has not been completed within three (3) years, the applicant may request in writing to the Stormwater Authority, a one-time extension of up to one year. This request shall be submitted thirty (30) days prior to expiration of the approved Stormwater Management Permit. The Stormwater Authority may re-evaluate the originally approved Stormwater Management Permit application and Stormwater Report to determine whether the plan still satisfies applicable state and local requirements and to verify that all design factors are still valid. If the Stormwater Authority finds the previously filed plan to be insufficient, a modified plan shall be submitted and approved prior to issuance of the Extension per the procedure in Section 7 of these Regulations.

SECTION 8. FEES

A. Initial application fees

1. Administrative Land Disturbance Review: $50.
2. Stormwater Management Permit: $200.

B. Consultant Fees

1. Purpose. As provided by G.L. Ch. 44 §53G and the Stormwater Ordinance**,** the Stormwater Authority may impose reasonable fees for the employment of outside consultants, engaged by the Stormwater Authority, for specific expert services to assist the Stormwater Authority in its review of applications for Administrative Land Disturbance Review and Stormwater Management Permits and oversight of permit compliance.

2. Special Account. Funds received pursuant to these rules shall be deposited with the municipal treasurer who shall establish a special account for this purpose. Expenditures from this special account may be made at the direction of the Stormwater Authority without further appropriation as provided in G.L. Ch. 44 §53G. Expenditures from this account shall be made only in connection with a specific project or projects for which a consultant fee has been collected from the applicant. Expenditures of accrued interest may also be made for these purposes.
3. Consultant Services. Specific consultant services may include but are not limited to technical or legal review of the permit application and associated information, on-site monitoring during construction, or other services related to the project deemed necessary by the Stormwater Authority The consultant shall be chosen by, and report only to, the Stormwater Authority or its staff.
4. Notice. The Stormwater Authority shall give written notice to the applicant of the selection of an outside consultant. Such notice shall state the identity of the consultant, the amount of the fee to be charged to the applicant, and a request for payment of said fee in its entirety. Such notice shall be deemed to have been given on the date it is mailed or delivered. No such costs or expenses shall be incurred by the applicant if the application or request is withdrawn within five days of the date notice is given.
5. Payment of Fee. The fee must be received prior to the initiation of consulting services. The Stormwater Authority may request additional consultant fees if necessary review requires a larger expenditure than originally anticipated or new information requires additional consultant services. Failure by the applicant to pay the consultant fee specified by the Commission within ten (10) business days of the request for payment, or refusal of payment, shall be cause for the Stormwater Authority to deny the application based on lack of sufficient information to evaluate whether the project meets applicable performance standards. An appeal stops the clock on the above deadline; the countdown resumes on the first business day after the appeal is either denied or upheld.
6. Appeals. The applicant may appeal the selection of the outside consultant to the City Council, who may only disqualify the outside consultant selected on the grounds that the consultant has a conflict of interest or does not possess the minimum required qualifications. The minimum qualifications shall consist of either an educational degree or three or more years of practice in the field at issue or a related field. Such an appeal must be in writing and received by the City Council and a copy received by the Stormwater Authority, so as to be received within ten (10) days of the date consultant fees were requested by the Stormwater Authority. The required time limits for action upon the application shall be extended by the duration of the administrative appeal.
7. Return of Unspent Fees. When the Stormwater Authority's review of a permit application and oversight of the permitted project is complete, any balance in the special account attributable to that project shall be returned within 30 days. The excess amount, including interest, shall be repaid to the applicant or the applicant's successor in interest. For the purpose of this regulation, any person or entity

claiming to be an applicant's successor in interest shall provide the Stormwater Authority with appropriate documentation. A final report of said account shall be made available to the applicant or applicant's successor in interest.

SECTION 9. STORMWATER MANAGEMENT PLAN FOR PERMIT APPLICATIONS

A. Stormwater Management Plan Required Contents

The application for a Stormwater Management Permit shall include a Stormwater Management Plan. The Stormwater Management Plan shall contain sufficient information for the Stormwater Authority to evaluate the environmental impact, effectiveness, and acceptability of the site planning process and the measures proposed by the applicant to reduce adverse impacts from stormwater runoff during construction, and post-construction in the long-term.

The Stormwater Management Plan shall fully describe the project in narrative, drawings, and calculations. It shall at a minimum include:

1. Contact Information. The name, address, and telephone number of all persons having a legal interest in the property and the tax reference number and parcel number of the property or properties affected.
2. Narrative describing:
    a. Purpose;
    b. Methodologies and assumptions;
    c. Existing and proposed uses and conditions;
    d. Project impacts and mitigation techniques including:
        i. Summary of proposed land area to be cleared, existing and proposed impervious area, work within proximity of regulated wetland resources, aquifer protection zones, earthwork within 4 feet of seasonal high groundwater elevations, and other sensitive environmental areas;
        ii. Explanation of how LID site planning and design strategies are being utilized to the maximum extent feasible and an explanation as to why LID techniques were included or excluded from the project
        iii. Proposed best management practices;
        iv. Identifying the watershed basin that the project is located in and the immediate down gradient waterbody(s) that stormwater runoff from the project site discharges to, EPA’s watershed and waterbody assessment and TMDL and/or impairment status of the watershed and waterbody(s), and the LIDs and BMPs included in the project to address the pollutant(s) of concern;
    e. Summary of pre- and post-development peak rates and volumes of stormwater runoff demonstrating no adverse impacts to down-gradient properties, stormwater management systems and wetland resources; and

f. Summary of how project meets stormwater management criteria.

3. Plans
    a. Portion of the USGS Map indicating the site locus and properties within a minimum of 500 feet of project property line;
    b. Existing conditions and proposed design plans showing:
        i. Buildings and/or structures including materials, approximate height;
        ii. Utilities including size, material and invert data; and
        iii. Regulated wetland resource areas within proximity of the site
    c. Stormwater management design plan(s) and details showing:
        i. Location, size, material, inverts data and details for all existing and proposed stormwater management system components including structures, pipes, swales, detention, retention, and infiltration systems and any other LID techniques or BMPs;
        ii. Profiles of drainage trunk lines; and
        iii. Drainage easements;
    d. Separate Pre- and Post- Condition Watershed Plans indicating:
        i. Structures, pavements, surface vegetation and other ground cover materials;
        ii. Topography sufficient to delineate watershed areas;
        iii. Point(s) of analysis;
        iv. Watershed areas including upgradient areas that contribute stormwater flow onto the project site, labeled to be easily identified in calculations. Total pre and post watershed areas should be equivalent;
        v. Breakdown summary of various surface conditions by soil hydrologic group rating; and
        vi. Flow path for time of concentration (Tc) calculation.
4. Calculations
    a. Hydrologic calculation to determine pre and post peak rates and volumes of stormwater runoff for 2, 10, 25 and 100 year 24 hour storm events;
    b. Groundwater recharge calculations and BMP drawdown (time to empty);
    c. Water quality calculations including (if applicable):
        i. TSS removal calculation for each watershed;
        ii. Specific BMPs utilized in critical areas;
        iii. Specific BMPs utilized for land uses of higher potential pollutant loads (LUHPPL); and

iv. Specific treatment for pollutant causing impairment of down-gradient waterbody identified by U.S. Environmental Protection Agency and Massachusetts Department of Environmental Protection.

d. Hydraulic calculations to size drainage pipes, swales and culverts; and

e. Supplemental calculations for sizing LID and BMPs and addressing impairments to water bodies.

5. Soil mapping and test data;

6. Massachusetts Department of Environmental Protection Checklist for Stormwater Report completed, stamped and signed by a registered Professional Engineer (PE) licensed in the Commonwealth of Massachusetts to certify that the Stormwater Management Plan is in accordance with the criteria established in the Massachusetts Stormwater Management Standards, the Stormwater Ordinance, and these regulations; and

7. Any other information requested by the Stormwater Authority.

B. General Performance Standards for All Sites

1. LID site planning and design strategies must be utilized to the maximum extent feasible. Projects must use LID techniques where adequate soil, groundwater, and topographic conditions allow. These may include but not be limited to reduction in impervious surfaces, disconnection of impervious surfaces, bioretention, and infiltration systems.

2. Stormwater management plans and site design should to avoid disturbance of areas susceptible to erosion and sediment loss, avoiding, to the greatest extent practicable: the damaging of large forest stands; building on steep slopes (15% or greater); and disturbing land in wetland buffer zones and floodplains.

3. The selection, design and construction of all pre-treatment, treatment and infiltration BMPs shall be in accordance with Massachusetts Stormwater Handbook and shall be consistent with all elements of the Massachusetts Stormwater Standards including but not limited to those regarding new stormwater conveyances, peak runoff rates, recharge, land uses with higher potential pollutant loads, discharges to Zone II or interim wellhead protection areas, sediment and erosion control, and illicit discharges.

4. Tree Protection and Preservation

Trees can be an important tool for retention and detention of stormwater runoff. Trees provide additional benefits, including cleaner air, reduction of heat island effects, carbon sequestration, reduced noise pollution, reduced pavement maintenance needs, and cooler cars in shaded parking lots. The City therefore deems that the preservation and protection of certain trees on public and private property, and the requirement to replant trees to replace those removed, are public purposes that protect the public health, welfare, environment and aesthetics. At the discretion of the Stormwater Authority, existing trees on private property with a diameter at breast height of 10 inches or greater and existing trees within the right-of-way or on City property may be considered protected trees to be retained on the property. Such

trees shall be protected and delineated within the submitted Erosion and Sedimentation Plan and described in the Stormwater Management Plan. The area surrounding a tree which includes at a minimum the Critical Root Zone ("CRZ") and Drip-Line of all Protected Trees must be enclosed within a fence prior to land disturbing activity and remain undisturbed until work is completed on the property so as to prevent damage to the tree. The Stormwater Authority may require tree replanting either on the applicant's land or on land abutting the applicant's land, with the express written approval of the owner of such abutting land, where protected trees cannot be saved.

5. Protection of Riparian Buffers

Riparian buffers, also known as a vegetated buffer or forest buffers, are vegetated areas along a stream, usually forested, which helps shade and partially protect a stream from the impact of adjacent land uses. Where possible, establish and protect a naturally vegetated buffer system along all perennial streams and other water features that encompass critical environmental features such as the 100-year floodplain, steep slopes (in excess of 15%), lake shorelands, and wetlands.

Riparian stream buffers should be preserved or restored with native vegetation. Buffers are most effective when maintained in an undisturbed condition, mowing and brush hogging should not take place within a buffer.

C. Performance Standards for New Development

1. Stormwater management systems on new development shall be designed to meet an average annual pollutant removal equivalent to 90% of the average annual load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 60% of the average annual load of Total Phosphorus (TP) related to the total postconstruction impervious surface area on the site. Average annual pollutant removal requirements shall be achieved through one of the following methods:

    a. Installing stormwater Best Management Practices (BMPs) that meet the pollutant removal percentages required in 9.D.(1) based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance; or

    b. Retaining the volume of runoff equivalent to, or greater than, one (1.0) inch multiplied by the total post-construction impervious surface area on the new development site; or

    c. Meeting a combination of retention and treatment that achieves the above standards.

D. Performance Standards for Redevelopment Sites

1. Stormwater management systems on redevelopment sites shall be designed to meet an average annual pollutant removal equivalent to 80% of the average annual postconstruction load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 50% of the average annual load of Total Phosphorus (TP) related to the total post-construction impervious surface area on the site. Average annual pollutant removal requirements shall be achieved through one of the following methods:
    a. installing BMPs that meet the pollutant removal percentages based on calculations developed consistent with EPA Region 1's BMP Accounting and Tracking Tool (2016) or other BMP performance evaluation tool provided by EPA Region 1, where available. If EPA Region 1 tools do not address the planned or installed BMP performance, then any federally or State-approved BMP design guidance or performance standards (e.g., State stormwater handbooks and design guidance manuals) may be used to calculate BMP performance; or
    b. retaining the volume of runoff equivalent to, or greater than, 0.8 inch multiplied by the total post-construction impervious surface area on the redeveloped site; or
    c. meeting a combination of retention and treatment that achieves the above standards; or
    d. utilizing offsite mitigation that meets the above standards within the same USGS HUC12 as the redevelopment site.
2. Unless specifically exempt from the Stormwater Ordinance Section 30-5, redevelopment activities that are exclusively limited to maintenance and improvement of existing public roadways (including widening less than a single lane, adding shoulders or sidewalks, correcting substandard intersections, improving existing drainage systems, and repaving projects) shall improve existing conditions where feasible and are exempt from Section 9.D.1 and may be exempt from Massachusetts Stormwater Standards 1, 2, 3, 5, and 6.
3. Partial redevelopment. If both new development and redevelopment are proposed for a project site, the redevelopment work shall be conducted in accordance with the provisions in this section and the new development work shall be conducted in accordance with the provisions in Section 9.C.

E. Performance Standards for Redevelopment Projects - Offsite Mitigation

1. For Redevelopment projects where the Applicant proposes to utilize offsite mitigation to meet the average annual pollutant removal requirements of 9.E.(1), the Applicant will describe in writing why it is not technically feasible to meet the average annual pollutant removal requirements on-site, including which on-site treatment BMPs were considered and why they were deemed not feasible.

2. Offsite mitigation shall be located within the City of Methuen and the same tributary to the maximum extent feasible. Under no circumstances will offsite mitigation be located outside the same USGS HUC12.
3. The offsite mitigation project shall be designed and constructed in a manner consistent with the requirements of the Stormwater Ordinance and related regulations.
4. The Stormwater Authority shall, at its discretion, identify priority areas within the watershed in which offsite mitigation may be completed.
5. Offsite mitigation provided at a site not owned by the City requires a separate Stormwater Management Permit application covering the offsite mitigation project, the terms and conditions of which, including ongoing operations and maintenance requirements, shall run with the land where the Off-Site Compliance is located.
6. Construction of the Off-Site Compliance project shall commence within 12 months of Land Disturbance Permit issuance and be completed within 12 months of commencement.

F. Sensitive Areas – Additional Design Criteria

Stormwater discharges to Critical Areas with sensitive resources as defined in the Massachusetts Stormwater Management Standard No. 6 are subject to additional criteria and may need to utilize or restrict certain Stormwater Best Management Practices at the discretion of the Stormwater Authority.

The Stormwater Authority has also designated the following Sensitive Areas with specific design criteria:

1. Discharges to Water Quality Impaired Waters. The applicant must determine whether stormwater discharges from the proposed site will contribute, either directly or indirectly, to an impaired water body with or without a final Total Maximum Daily Load. Structural and non-structural stormwater BMPs shall be selected that will control the discharge of the pollutants of concern and ensure that the discharges will not cause an in-stream exceedance of applicable water quality standards. To the extent that the project will discharge, directly or indirectly, to a water body subject to one or more pollutant-specific TMDLs, implement structural and non-structural Stormwater BMPs that are consistent with each such TMDL. To the extent the project will discharge, directly or indirectly, to an impaired water body not subject to a TMDL, implement structural and non-structural Stormwater BMPs optimized to remove the pollutant or pollutants responsible for the impairment. Pollutants of concern refer to the pollutant identified as causing the impairment. Applicants are encouraged to seek assistance from the Stormwater Authority in categorizing waterbodies and to work with the Stormwater Authority to determine appropriate stormwater best management practices to mitigate pollutants of concern. For information on impaired waterbodies and the most recent Integrated List of Impaired Waterbodies, see MassDEP's TMDL website.
2. Stormwater management systems designed on commercial and industrial land use area draining to waterbodies impaired by solids, turbidity, or sedimentation/siltation shall incorporate designs that allow for shutdown and containment where appropriate

to isolate the system in the event of an emergency spill or other unexpected event. Pollutant removal equal to or greater than the level of pollutant removal provided through the use of biofiltration of the same volume of runoff, should be provided by stormwater management systems prior to infiltration.

3. New development and redevelopment stormwater management BMPs that discharge to waterbodies impaired by total phosphorus or their tributaries shall be optimized for phosphorus removal. The applicant shall document the BMP type, total area treated by the BMP, the design storage volume of the BMP, and the estimated phosphorus removed in mass per year consistent with Attachment 3 to Appendix F of the Small MS4 General Permit.

G. Stormwater Management Design Standards

1. Projects must be designed to collect and dispose of stormwater runoff from the project site in accordance with Massachusetts Stormwater Management Standards, the Small MS4 General Permit, Department of Public Works requirements, recognized engineering methodologies and these regulations with an emphasis on including Low Impact Development techniques in the design.
2. Projects must manage surface runoff so that no flow is conducted over public ways, nor over land not owned or controlled by the Applicant unless a drainage easement in proper form is obtained permitting such discharge.
3. All hydrological calculations shall be completed and certified by a Massachusetts Registered Professional Engineer licensed to practice in this field. Typically the procedures to follow will include Technical Release Number 55 (TR55) and/or TR20 (as amended) to calculate peak rate and volume of runoff from pre-development to post-development conditions.
4. Watershed area for hydrologic analysis and BMP sizing calculations must include at a minimum the site area and all upgradient areas from which stormwater runoff flows onto the site.
5. For purposes of computing runoff, all pervious lands in the site are assumed prior to Development to be in "good hydrologic condition" regardless of the conditions existing at the time of the computation.
6. Length of sheet flow used for times of concentration is to be no more than 50 feet.
7. The rainfall amounts shall be determined using the 24-hour rainfall data taken from National Oceanic and Atmospheric Administration Atlas 14, Precipitation-Frequency Atlas of the United States (Vol. 10, Northeastern States, published 2015, revised 2019), as it may be amended or rainfall data as specified by the MA Stormwater Handbook, whichever is more stringent.
8. Soils tests to be conducted by a Registered Professional Engineer or Massachusetts Soil Evaluator, performed at the location of all proposed LID techniques and BMPs, to identify soil descriptions, depth to estimated seasonal high groundwater, depth to bedrock, and soil texture.
9. The design infiltration rate shall be determined from the on-site soil texture and Rawls rates published in the Massachusetts Stormwater Handbook or saturated

hydraulic conductivity tests.

10. Size drainage pipes to accommodate the 25-year storm event and maintain velocities between 2.5 and 10 feet per second, and provide calculations using the Mannings Equation.
11. Size drainage swales to accommodate the 25-year storm event and velocities below 4 feet per second
12. Size culverts to accommodate the 50-year storm event and design adequate erosion protection. Design stream crossing culverts in accordance with the latest addition of the Massachusetts Stream Crossing Handbook.
13. Size stormwater basins to accommodate the 100-storm event with a minimum of one foot of freeboard.
14. All drainage structures are to be able to accommodate HS-20 loading.
15. Catch basins shall be located on both sides of the roadway on continuous grades at intervals of not more than two hundred and fifty (250') feet, and at all low points and at the corners' low points as may be required. Intervals of less than two hundred and fifty (250') may be required on steep grades. Catch basin sumps shall be at least four (4') feet in depth measured from the invert of the outlet pipe.
16. All drainpipes in public ways are to be reinforced concrete pipe and have a minimum diameter of 12 inches. High Density Polyethylene (HDPE) pipe may be allowed for private property with consultation with the Department of Public Works.
17. Outfalls are to be designed to prevent erosion of soils, and the Stormwater Authority may require pipes 24 inches or larger are to be fitted with grates or bars to prevent ingress.
18. Drainage easements are to provide sufficient access for maintenance and repairs of system components and be at least 20 feet wide.
19. Minimize permanently dewatering soils by.

SECTION 10. EROSION AND SEDIMENTATION CONTROL PLAN FOR PERMIT APPLICATIONS

A. General

The Erosion and Sediment Control Plan shall be designed to ensure compliance with these regulations, the Small MS4 General Permit, and if applicable, the NPDES General Permit for Storm Water Discharges From Construction Activities. In addition, the plan shall ensure that the Massachusetts Surface Water Quality Standards (314 CMR 4.00) are met in all seasons. Refer to the latest version of the *Massachusetts Erosion and Sediment Control Guidelines for Urban & Suburban Areas* for detailed guidance. The Erosion and Sediment Control Plan shall remain on file with the Stormwater Authority.

B. NPDES SWPPP

If a project requires a Stormwater Pollution Prevention Plan (SWPPP) per the NPDES General Permit for Storm Water Discharges From Construction Activities (and as amended), then the applicant is required to submit a complete copy of the SWPPP and the signed Notice

of Intent. If the SWPPP meets the requirements of the General Permit, it will be considered equivalent to the Erosion and Sediment Control Plan described in this section. Construction may not commence until the applicant has submitted EPA's approval of the Construction General Permit Notice of Intent to the Stormwater Authority and the final SWPPP is posted at the site.

C. Erosion and Sedimentation Control Plan Content.

The Plan shall contain the following information:

1. Names, addresses, and telephone numbers of the owner, applicant, and person(s) or firm(s) preparing the plan;
2. Title, date, north arrow, names of abutters, scale, legend, and locus map;
3. Location and description of natural features including:
    a. Watercourses and water bodies, wetland resource areas and all floodplain information, including the 100-year flood elevation based upon the most recent Flood Insurance Rate Map, or as calculated by a Registered Professional Engineer for areas not assessed on these maps;
    b. Existing vegetation including tree lines, canopy layer, shrub layer, and ground cover, and trees with a diameter at breast height of 10 inches or greater, noting specimen trees and forest communities; and
    c. Habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species within five hundred (500) feet of any construction activity.
4. Lines of existing abutting streets showing drainage and driveway locations and curb cuts;
5. Existing soils, volume and nature of imported soil materials;
6. Topographical features including existing and proposed contours at intervals no greater than two (2) feet with spot elevations provided when needed;
7. Surveyed property lines showing distances and monument locations, all existing and proposed easements, rights-of-way, and other encumbrances, the size of the entire parcel, and the delineation and number of square feet of the land area to be disturbed;
8. Drainage patterns and approximate slopes anticipated after major grading activities (Construction Phase Grading Plans);
9. Location and details of erosion and sediment control measures with a narrative of the construction sequence/phasing of the project, including both operation and maintenance for structural and non-structural measures, interim grading, and material stockpiling areas;
10. Path and mechanism to divert uncontaminated water around disturbed areas, to the maximum extent practicable. When determining whether the requirements have been met, the Stormwater Authority shall consider all stormwater management practices

available and capable of being implemented after taking into consideration costs, existing technology, proposed use, and logistics in light of overall project purposes. Project purposes shall be defined generally (e.g., single family home or expansion of a commercial development).;

11. Location and description of industrial discharges, including stormwater discharges from dedicated asphalt plants and dedicated concrete plants, which are covered by this permit;
12. Stormwater runoff calculations in accordance with the Massachusetts Department of Environmental Protection's Stormwater Management Handbook and Stormwater Standards;
13. Location and description of and implementation schedule for temporary and permanent seeding, vegetative controls, and other stabilization measures;
14. A description of construction and waste materials expected to be stored on-site. The Plan shall include a description of controls to reduce pollutants from these materials, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response;
15. A description of provisions for phasing the project where one acre of area or greater is to be altered or disturbed;
16. Plans must be stamped and certified by a qualified Professional Engineer registered in Massachusetts or a Certified Professional in Erosion and Sediment Control; and
17. Such other information as is required by the Stormwater Authority.

D. Erosion Controls Design Standards

At a minimum, the Erosion and Sediment Control Plan shall meet the following standards:

1. Minimize total area of disturbance;
2. Sequence activities to minimize simultaneous areas of disturbance;
3. Minimize peak rate of runoff in accordance with the Massachusetts Department of Environmental Protection Stormwater Standards;
4. Minimize soil erosion and control sedimentation during construction;
5. Divert uncontaminated water around disturbed areas;
6. Maximize groundwater recharge;
7. Install and maintain all Erosion and Sediment Control measures in accordance with the *Massachusetts Erosion and Sedimentation Control Guidelines for Urban and Suburban Areas*, manufacturers specifications and good engineering practices;
8. Prevent off-site transport of sediment;
9. Protect and manage on and off-site material storage areas (overburden and stockpiles of dirt, borrow areas, or other areas used solely by the permitted project are considered a part of the project);

10. Comply with applicable Federal, State and local laws and regulations including waste disposal, sanitary sewer or septic system regulations, and air quality requirements, including dust control;
11. Protect natural resources and prevent significant alteration of habitats mapped by the Massachusetts Natural Heritage & Endangered Species Program as Endangered, Threatened or Of Special Concern, Estimated Habitats of Rare Wildlife and Certified Vernal Pools, and Priority Habitats of Rare Species from the proposed activities;
12. Institute interim and permanent stabilization measures, which shall be instituted on a disturbed area as soon as practicable but no more than 14 days after construction activity has temporarily or permanently ceased on that portion of the site;
13. Properly manage on-site construction and waste materials, including truck washing and cement concrete washout facilities;
14. Prevent off-site vehicle tracking of sediments; and
15. Incorporate appropriate BMPs designed to comply with the Massachusetts Stormwater Handbook.

SECTION 11. OPERATION AND MAINTENANCE PLAN FOR PERMIT APPLICATIONS

A. General

A stand-alone Operation and Maintenance Plan (O&M Plan) is required at the time of application for all projects that include structural and non-structural stormwater BMPs. The Operation and Maintenance Plan shall be designed to ensure compliance with the Permit and these regulations for the life of the system. The Operation and Maintenance Plan shall remain on file with the Stormwater Authority and shall be an ongoing requirement. The Applicant shall provide copies of the Operation and Maintenance Plan to all persons responsible for maintenance and repairs.

B. O&M Plan Contents

1. The name(s) of the owner(s) for all components of the system;
2. A map showing the location of the systems and facilities including all structural and nonstructural stormwater best management practices (BMPs), catch basins, manholes/access lids, pipes, and other stormwater devices. The O&M Plan and as-built plans prepared according to Section 13 showing such systems and facilities to be privately maintained, including associated easements, shall be recorded with the Northern Essex Registry of Deeds prior to issuance of a Certificate of Completion by the Stormwater Authority pursuant to Section 13.
3. Maintenance Agreement that specifies:
    a. The names and addresses of the person(s) responsible for operation and maintenance;
    b. The person(s) financially responsible for maintenance and emergency repairs;
    c. An Inspection and Maintenance Schedule for all stormwater management facilities including routine and non-routine maintenance tasks to be performed. Where applicable, this schedule shall refer to the Maintenance

Criteria provided in the Stormwater Handbook or the EPA National Menu of Stormwater Best Management Practices or equivalent;

d. Instructions for routine and long-term operation and maintenance shall have sufficient detail for responsible parties to perform necessary maintenance activities and prevent actions that may adversely affect the performance of each structural and/or nonstructural stormwater BMP.

e. A list of easements with the purpose and location of each; and

f. The signature(s) of the owner(s) and all persons responsible for operation and maintenance, financing, and emergency repairs, as defined in the Maintenance Agreement, if maintenance is to be performed by an entity other than the owner.

4. Stormwater Management Easement(s)

   a. Stormwater Management easements shall be provided by the property owner(s) as necessary for:

      i. Access for facility inspections and maintenance;

      ii. Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event; and

      iii. Direct maintenance access by heavy equipment to structures requiring maintenance.

   b. The purpose of each easement shall be specified in the Maintenance Agreement signed by the property owner.

   c. Stormwater Management easements are required for all areas used for permanent stormwater control, unless a waiver is granted by the Stormwater Authority pursuant to Section 5.B.

   d. Easements shall be recorded with the Registry of Deeds prior to issuance of a Certificate of Completion by the Stormwater Authority pursuant to Section 13.

5. Changes to Operation and Maintenance Plans

   a. The owner(s) of record of the Stormwater Management system must notify the Stormwater Authority of changes in ownership, assignment of Operation and Maintenance responsibilities, or assignment of financial responsibility within 30 days of the change in ownership. The owner of record shall be responsible for Operation and Maintenance activities until a copy of the updated Operation and Maintenance Plan has been furnished to the Stormwater Authority signed by the new owner or any new responsible person.

   b. The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of the Stormwater Ordinance by mutual agreement of the Stormwater Authority and the Responsible Parties. Amendments must be in

writing and signed by all Responsible Parties. Responsible Parties shall include owner(s), persons with financial responsibility, and persons with operational and/or maintenance responsibility.

6. Enforcement. To ensure adequate long-term operation and maintenance of stormwater management practices, applicants are required to file an annual Operation and Maintenance Report with the Stormwater Authority on a form specified by the Stormwater Authority, accompanied by an annual filing fee of $25 for administration and enforcement of the Operation and Maintenance plan. This Report will be due annually on or before February 15 and shall document the work that has been done during the prior calendar year to properly operate and maintain the stormwater control measures. The certification shall be signed by the person(s) or authorized agent of the person(s) named in the permit as being responsible for ongoing operation and management

SECTION 12. INSPECTION AND SITE SUPERVISION FOR PERMIT APPLICANTS

A. Pre-construction Meeting

Prior to starting the clearing, excavation, construction, Redevelopment or land disturbing activity, the applicant, the applicant's technical representative, the general contractor or any other person with authority to make changes to the project, may be required to meet with the Stormwater Authority, to review the approved plans and their proposed implementation. The need for a pre-construction meeting shall be determined by the Stormwater Authority based on the project scope.

B. EPA Construction General Permit

For projects covered by the EPA NPDES General Permit for Stormwater Discharges from Construction Activities (Construction General Permit), the permittee is required to submit a copy of the EPA NPDES General Permit for Stormwater Discharges from Construction Activities, along with copies of any and all other permits for the activities related to the project and to conduct inspections in accordance with requirements of the Construction General Permit. Construction may not commence until the applicant has submitted EPA's approval of the Construction General Permit Notice of Intent to the Stormwater Authority and the final SWPPP is posted at the site.

C. Stormwater Authority Inspections

The Stormwater Authority or its designated agent shall make inspections as herein required and shall either approve that portion of the work completed or shall notify the applicant wherein the work fails to comply with the Erosion and Sedimentation Control Plan or the Stormwater Management Plan as approved.

1. Inspections will be conducted by a "qualified person" from the Stormwater Authority or a third party hired to conduct such inspections. A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the appropriate skills and training to assess conditions at the construction site that could impact stormwater quality, and the appropriate skills and training to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of these Regulations.

2. The approved Erosion and Sedimentation Control Plan and associated plans for grading, stripping, excavating, and filling work, bearing the signature of approval of the Stormwater Authority, shall be maintained at the site during the progress of the work.
3. In order to obtain inspections, the applicant shall notify the Stormwater Authority at least two (2) working days before each of the following events:
    a. Erosion and sedimentation control measures are in place and stabilized;
    b. Site Clearing has been substantially completed;
    c. Rough Grading has been substantially completed;
    d. Final Grading has been substantially completed;
    e. Close of the Construction Season; and,
    f. Final Landscaping (permanent stabilization) and project final completion.

D. Applicant Inspections

The applicant or his/her agent shall conduct and document inspections of all control measures at a frequency consistent with EPA's Construction General Permit or as specified in the Stormwater Management Permit. The purpose of such inspections will be to determine the overall effectiveness of the Erosion and Sedimentation Control Plan, and the need for maintenance or additional control measures as well as verifying compliance with the Stormwater Management Plan. The applicant or his/her agent shall submit monthly reports to the Stormwater Authority or designated agent in a format approved by the Stormwater Authority.

SECTION 13. FINAL REPORT AND CERTIFICATE OF COMPLETION FOR PROJECTS REQUIRING PERMITS

No later than two years after completion of the project, the applicant/owner shall submit the following to the Stormwater Authority for approval:

1. a written request for Certificate of Completion;
2. a hard copy and an electronic copy of as-built record drawings; and
3. an updated Operation & Maintenance Plan noting any changes and new responsible parties.

As-built record drawings shall be full size plans at a scale approved by the Stormwater Authority that reflect "as-built" conditions, including surveyed positions of all structural stormwater BMPs, drainage structures, conveyances, outfalls, catch basins, post-construction topography, curbing and headwalls and shall be stamped and signed by a Registered Professional Engineer or Land Surveyor stating that all work has been completed in accordance with the Stormwater Management Permit and plans submitted. All changes to project design shall be recorded in red ink on plans to define changes made or otherwise noted as changes. All work deleted, corrections in elevations, and changes in materials, shall be shown on the as-built drawings. Deviations from the approved plans, if any, shall be certified in writing by a Registered Professional Engineer. As-built record drawings shall also include delineation of

drainage areas and a calculation of Impervious Area in square feet (ft2) for pre- and post-development conditions. The as-built record drawings shall be electronically submitted in CADD Format or digital format compatible with Methuen's Geographic Information System (GIS).

If, after a site inspection, the Stormwater Authority determines that the Permit has not been satisfactorily complied with, the request for certificate may be denied. This decision shall be forwarded to the applicant, along with the reasons for denial within twenty-one (21) days of the date of receipt of the request for a certificate. Otherwise, the Stormwater Authority shall issue a letter certifying completion upon receipt and approval of the final reports and/or upon otherwise determining that all work has been conducted in conformance with these regulations and the Stormwater Management Permit conditions.

SECTION 14. ENFORCEMENT

The Stormwater Authority or its authorized agent shall enforce these Regulations per Section 30-12 of the Ordinance, and any associated orders, violation notices, and enforcement orders and may pursue all civil and criminal remedies for such violations.

A. Orders.

The Stormwater Authority or its authorized agent may issue a written order to enforce the provisions the Stormwater Ordinance, these Regulations, or permit. Violations include, without limitation, failure to obtain a Stormwater Management Permit or Administrative Review for an activity subject to this bylaw, or failure to follow the requirements of a Stormwater Management Permit and the related Stormwater Management Plan, Erosion and Sedimentation Control Plan, or Operation and Maintenance Plan or any other authorization issued pursuant to the Stormwater Ordinance or regulations issued hereunder. The written order may require the violator to remediate the non-compliance and/or any adverse impact caused by it, including without limitation:

1. A requirement to cease and desist from the land-disturbing activity until there is compliance with the Ordinance and provisions of the Stormwater Management Permit or other authorization;
2. Maintenance, installation or performance of additional erosion and sediment control measures;
3. Monitoring, analyses, and reporting;
4. Remediation of erosion and sedimentation resulting directly or indirectly from the land-disturbing activity;
5. Construction, reconstruction, repair or maintenance of stormwater BMPs or any other aspect of the post-construction stormwater management system;
6. Remediation of adverse impacts resulting from improper construction or operation of the post-construction stormwater management system; and/or
7. A requirement to eliminate discharges, directly or indirectly, into the MS4, a watercourse or into the Waters of the Commonwealth.

B. Entry to perform duties under this bylaw.

To the extent permitted by local, state or federal law, or if authorized by the owner or other party in control of the property, the Stormwater Authority, its agents, officers, and employees may enter upon privately owned property for the purpose of performing their duties under this bylaw and regulations and may make or cause to be made such examinations, surveys or sampling as the Stormwater Authority deems reasonably necessary.

C. Appeals.

The decisions or orders of the Stormwater Authority shall be final. Further relief shall be appealed to a court of competent jurisdiction.

D. Remedies not exclusive.

The remedies listed in this section are not exclusive of any other remedies available under any applicable federal, state or local law.