TOWN OF WATERTOWN

DEPARTMENT OF PUBLIC WORKS
124 ORCHARD STREET
WATERTOWN MA 02472

(P) 617-972-6420
(F) 617-972-6402

Gerald S. Mee Jr.
Superintendent

DPW Site Plan Review
On-site Drainage Requirements

It is the policy of the DPW that all site drainage be contained on-site to the maximum extent practicable. To that effect, on-site drainage control measures must be provided for all proposed structures (e.g., additions, garages, retaining walls, etc.) and other impervious surfaces (e.g., driveways, patios) per the criteria below. The purpose of this policy is to mitigate the effects of increased stormwater runoff onto our public streets and adjacent private property due to development. For any project that requires a DPW Site Plan Review, a site plan and drainage analysis must be prepared by a Massachusetts Registered Professional Engineer and submitted with your Site Plan Review.

Provide the following:

1. Site grading and drainage plans including the following:

    a. Topographic contours (existing and proposed) and/or adequate number of spot elevations to indicate area to be drained to each inlet.
    b. Rim elevation and flow line elevation at each inlet and drainage structure.
    c. Sufficient contours or spot elevations (original and final) around perimeter of building(s) and other site features to indicate extent of any filling or excavation.
    d. Sub-surface soils information, including soil type and depth to estimated seasonal high groundwater, prepared by a Competent Soils Professional, as defined in the *Stormwater Management Handbook, Volume 3*.
    e. Plans and Calculations shall be signed and sealed by a Registered P.E.

2. Computations to support the drainage and stormwater management system design (i.e., dry wells, infiltrator systems):

    a. All drainage analyses shall use the following 24-hour rainfall data, adopted from the web tool "Extreme Precipitation in New York and New England" developed jointly by the Northeast Regional Climate Center (NRCC) at Cornell University and the Natural Resources Conservation Service (NRCS), as available at http://precip.eas.cornell.edu/ for the Town of Watertown centered at 124 Orchard Street, as shown on the right:

Storm Event	24-Hour Precipitation (Inches)
2-year	3.2
10-year	4.9
25-year	6.2
100-year	8.9

b. Based upon the standard methodologies set forth in U.S. Soil Conservation Service Technical Release No. 55 *Urban Hydrology for Small Watersheds* and Section 4 of U.S. Soil Conservation Service, *National Engineering Hydrology Handbook.*
c. If using the Simple Dynamic or Dynamic Field methods, the infiltration rates shall be based on the Rahl's Rate documented in Volume 3 of the *Stormwater Management Handbook.*
d. Existing and proposed building sizes, driveways and natural/grassed areas.
e. Total area (and sub areas as applicable) proposed to drain to each drywell or approved inlet.

3. The runoff from roofs is considered "clean" and may be collected via gutters and connected directly to an on-site infiltration system or recycled for irrigation purposes.

4. Erosion and sedimentation control (e.g., siltation fence or hay bales, catch basin inlet protection) shall also be shown on plan.

5. An Operations and Maintenance Plan shall be provided for all structural and non-structural stormwater treatment devices.

6. The *Stormwater Management Handbook. Volumes 1 through 3*, prepared by the Massachusetts DEP and dated February 2008, as amended, shall be used as the technical reference guide for the design and performance standards for all stormwater Best Management Practices (BMPs) proposed or constructed in the Town.

7. The Applicant may request permission to connect to the Town's drainage system. Such permission shall only be granted when the Applicant has shown, to the satisfaction of the DPW, that all practicable measures have been taken to contain runoff on-site. The DPW may request that the Applicant perform an analysis to show that the downstream drainage system has adequate capacity to accept the additional flow.

8. Upon completion of the work, as-built drawings shall be submitted in both paper and electronic format. The drawings shall be based upon a field survey of actual as-built locations, and shall be stamped by a Professional Land Surveyor registered in the Commonwealth of Massachusetts. The as-built drawing shall depict all buildings, paved surfaces, topography, and major landscape features. Water, sewer, and drainage features, as well as other underground utilities installed by others, shall be located on the plan. All stormwater management controls, both structural and non-structural, designed to manage the stormwater associated with the completed site shall also be included.

9. If the project is located within a wetlands/conservation and/or floodplain, then a filing must also be submitted to the Conservation Commission for their approval.

Revised: 7/16/14