



BUILDINGS
2021-004
BULLETIN
TECHNICAL

ISSUANCE DATE
May 17, 2021

ISSUER: Gus Sirakis, P.E.

First Deputy Commissioner

PURPOSE: This bulletin provides guidance to owners, contractors, and designers for placing sidewalk sheds near green infrastructure.

SUBJECT(S): Green infrastructure, sidewalk sheds

RELATED CODE SECTIONS

BC 3307.6.4.10, BC 3307.9, BC 3307.10, AC28-103.8, 15 RCNY §19-01

I. BACKGROUND

This bulletin (BB2021-004) provides guidance to owners, contractors, and designers for placing sidewalk sheds near green infrastructure.

Green infrastructure is typically located within or adjacent to a sidewalk, a public right-of-way. Green infrastructure must be accounted for when designing and placing a sidewalk shed to ensure the sidewalk shed does not damage or negatively impact green infrastructure.

II. WHAT IS GREEN INFRASTRUCTURE?

Green infrastructure collects and manages rainwater or ‘stormwater’ that falls on our City’s streets and sidewalks. Green infrastructure prevents stormwater from entering the City’s sewer system, which helps to improve the health of local waterways. Green infrastructure can include rain gardens, infiltration basins, and permeable pavement. The New York City Department of Environmental Protection (DEP) is in the midst of a capital program to install green infrastructure throughout the City.

Green infrastructure is defined in 15 RCNY §19-01, Rules of NYC DEP, as “the range of city-owned measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest or reuse, or landscaping to store, infiltrate or evapotranspire stormwater and reduce flows to sewer systems or to surface waters.”

III. HOW TO IDENTIFY GREEN INFRASTRUCTURE

Look for signs of stormwater conveyance (see Figure 1):

- tapered curbs
- cuts in the curb
- stormwater grates

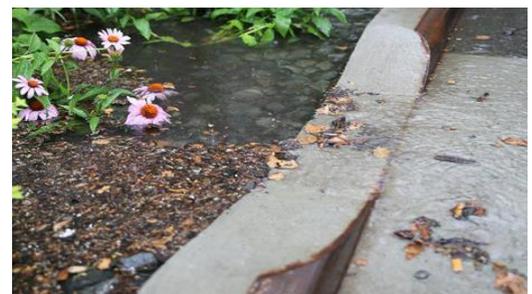


Photo Source: Courtesy NYC DEP

Figure 1: Cut for stormwater conveyance

Look for other identifying features (see *Figures 2A & 2B*):

- Signs with DEP logo
- rain garden decals
- pucks on concrete header in sidewalk



Photo Source: Courtesy NYC DEP



Photo Source: Courtesy NYC DEP

Figures 2A & 2B: Green infrastructure signage

More green infrastructure information, including a map detailing green infrastructure information in the City, can be found on DEP's page at <https://www1.nyc.gov/site/deplwater/green-infrastructure.page>.

IV. RAIN GARDENS

What is a rain garden?

Rain gardens are planted areas in the sidewalk that are designed to collect and manage stormwater (see *Figures 3 and 4*). Rain gardens are vegetated, or landscaped depressions designed with an engineered soil layer that promote infiltration of stormwater runoff into the underlying soil.



Image Source: Courtesy NYC DEP

Figure 3: Rain Garden Schematic Example

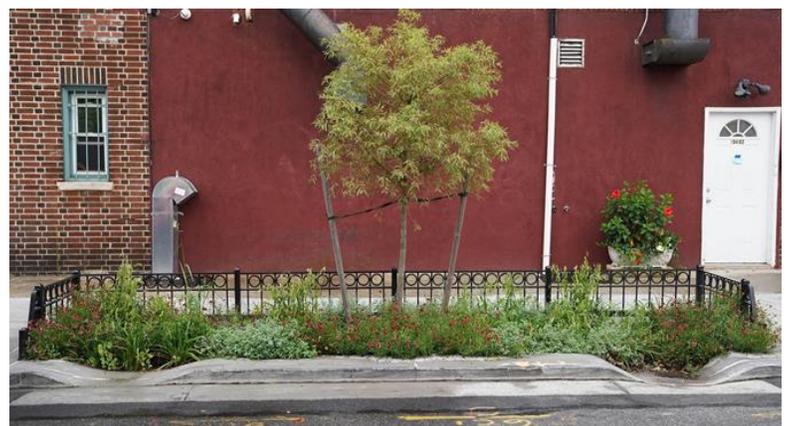


Photo Source: Courtesy NYC DEP

Figure 4: Example of a Rain Garden

Restrictions on Placing a Sidewalk Shed Around a Rain Garden

Sidewalk shed legs and sills shall not be placed within the footprint of a rain garden, nor shall they be placed on or within 6 inches of the concrete header around the rain garden (see Figure 5). Section BC 3307.6.4.10 requires sidewalk sheds to have adequate founding. The engineered soil used in a rain garden will not provide adequate founding, neither will the concrete headers.

Sidewalk shed decking does not have to cover the rain garden, as the rain garden is a fenced area not intended to be accessed by pedestrians. To the extent possible, the deck of the sidewalk shed shall be set back, notched out, or left open around the rain garden to allow sunlight to reach vegetation within the rain garden.

Care must be taken to not step on or otherwise disturb the soil and vegetation in a rain garden while installing, removing, or utilizing a sidewalk shed. Do not disturb fencing installed around a rain garden. Per Section BC 3307.9, public property must be left in as good a condition as it was before such work was commenced.

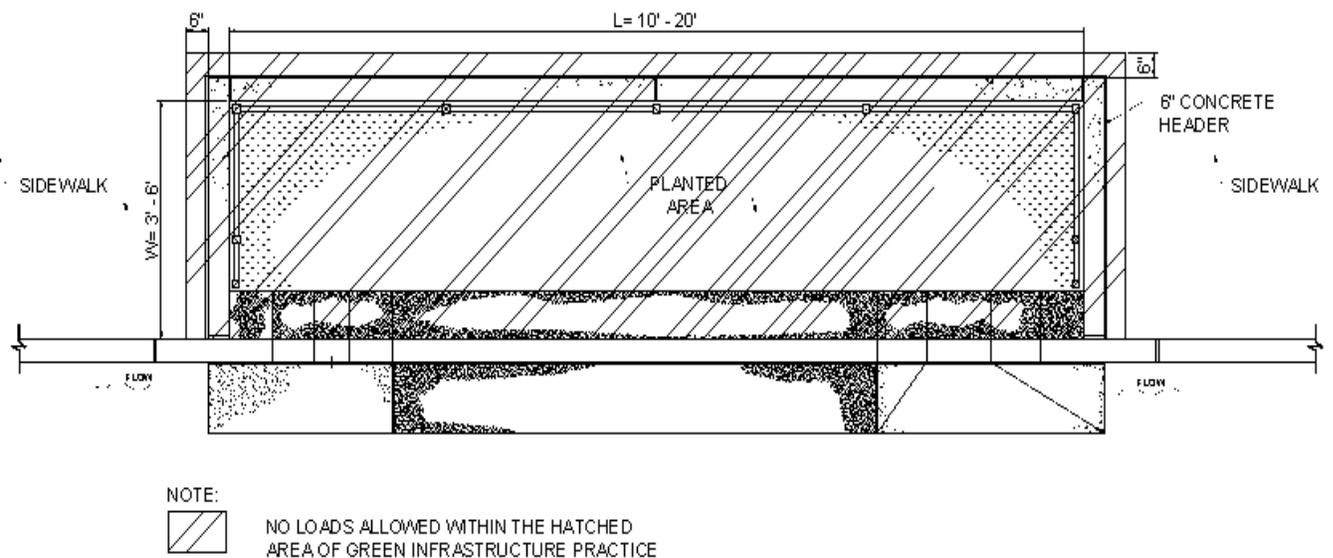


Image Source: Courtesy NYC DEP

Figure 5: Schematic Example of Prohibited Loading Areas Around a Rain Garden

V. INFILTRATION BASINS

What is an infiltration basin?

Infiltration basins provide temporary storage of stormwater runoff underground (see Figures 6 through 9). These systems have an open bottom and can incorporate perforated pipe and stormwater chambers for added detention volume. Systems are primarily designed with a gravel bed that stores water until it infiltrates into the ground. At ground level, infiltration basins can have a concrete top or a grass top.

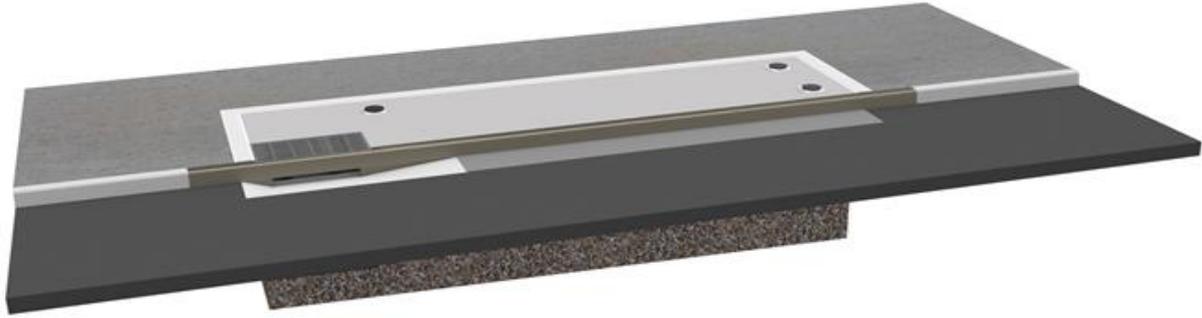


Image Source: Courtesy NYC DEP

Figure 6: Schematic Example of Infiltration Basin



Image Source: Courtesy NYC DEP

Figure 7: Schematic Example of Infiltration Basin Cutaway

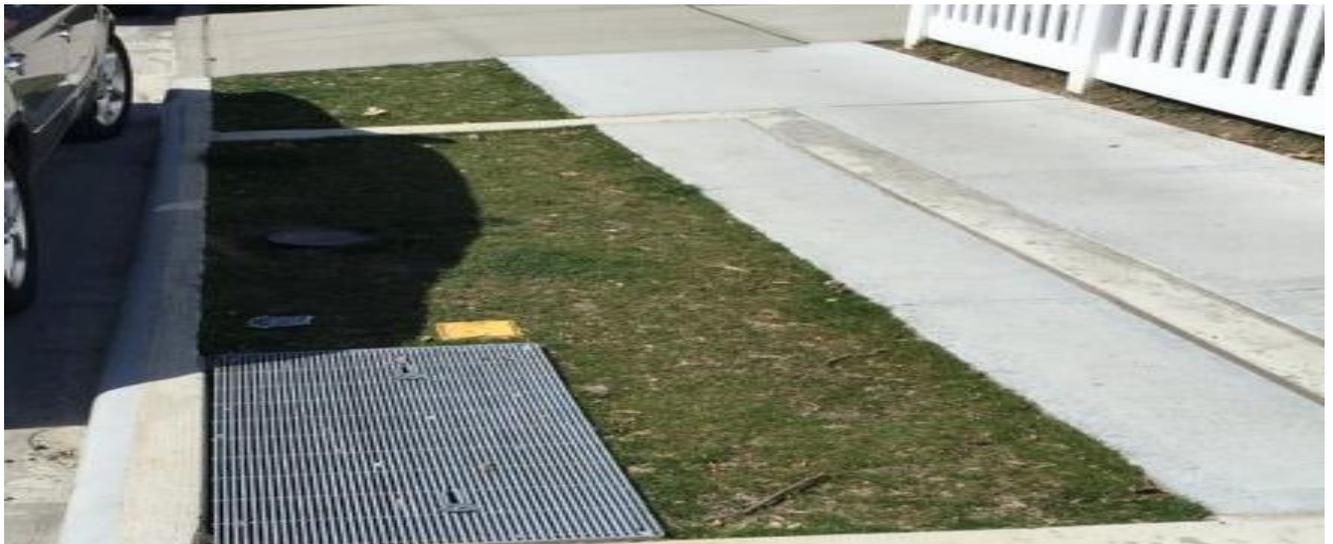


Photo Source: Courtesy NYC DEP

Figure 8: Example of Grass Top Infiltration Basin



Photo Source: Courtesy NYC DEP

Figure 9: Example of Concrete Top Infiltration Basin

Restrictions on Placing a Sidewalk Shed Around an Infiltration Basin

Sidewalk shed legs and sills shall not be placed on grass top portions of an infiltration basin, or on or within 6 inches of infiltration basin grates, cleanout covers, or the concrete header around the infiltration basin (see Figures 10 and 11). Section BC 3307.6.4.10 requires sidewalk sheds to have adequate founding. Grates, cleanout covers, concrete headers, and the gravel bed and soil used in a grass top infiltration basin will not provide adequate founding.

Dunnage shall not be placed across infiltration basin grates or cleanout covers. Lateral bracing and other sidewalk shed elements shall be installed such that they do not impede access to grates or cleanout covers. DEP will need to access grates and covers to clean out and maintain the infiltration basin. Sidewalk sheds that interfere with DEP operations will be ordered to be removed and reinstalled per Section BC 3307.10.

Concrete top portions of an infiltration basin are intended for pedestrian use and must be protected by the deck of the sidewalk shed to the same extent as a normal sidewalk. A sidewalk shed deck is not required over grass top portions of an infiltration basin, as it is equivalent to a sidewalk median strip, which does not require protection per Section BC 3307.6.

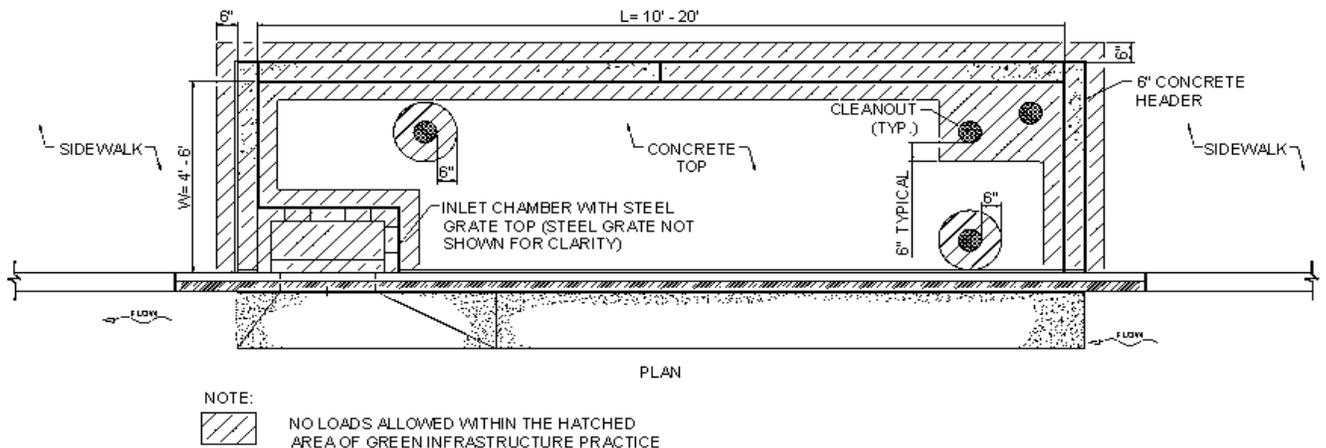


Image Source: Courtesy NYC DEP

Figure 10: Schematic Example of Prohibited Loading Areas Around a Concrete Top Infiltration Basin

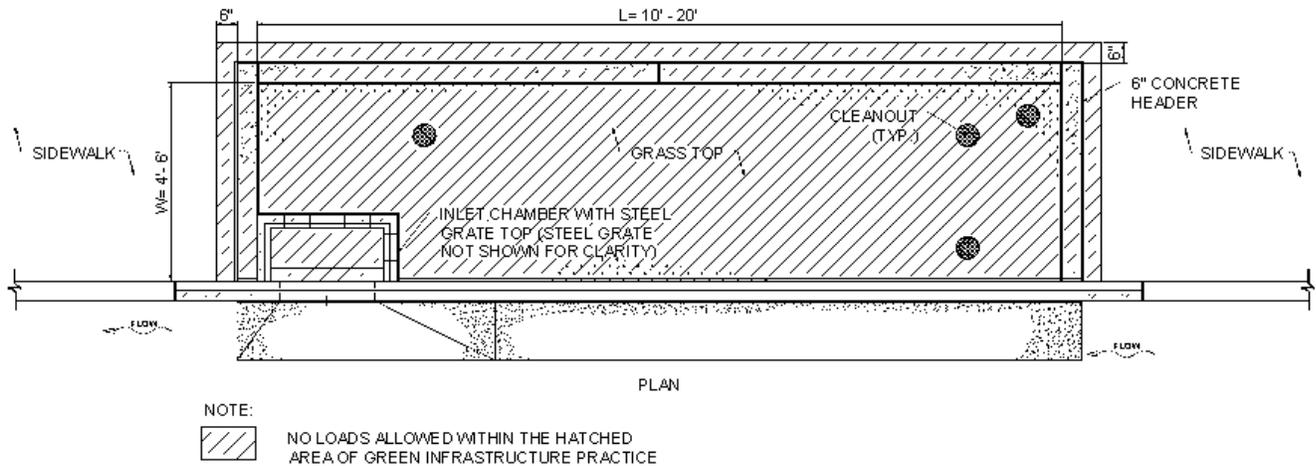


Image Source: Courtesy NYC DEP

Figure 11: Schematic Example of Prohibited Loading Areas Around a Grass Top Infiltration Basin

VI. OTHER MEASURES REQUIRED BY DEP

DEP may require other measures to be instituted when working near green infrastructure, including but not limited to notifying DEP in advance of the work, installing protective fencing, controlling runoff, and ensuring drains and curb cuts are not blocked. For more information, please visit DEP's green infrastructure page at <https://www1.nyc.gov/site/dep/water/green-infrastructure.page>.

Find protection measures regarding green infrastructure are discussed at <https://www1.nyc.gov/assets/dep/downloads/pdf/water/stormwater/green-infrastructure/right-of-way-green-infrastructure-protections-during-construction.pdf>.