



# THE CITY RECORD

Official Journal of The City of New York

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## THE CITY RECORD

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## PUBLIC HEARINGS AND MEETINGS

See Also: Procurement; Agency Rules

### BOROUGH PRESIDENT - QUEENS

#### ■ PUBLIC HEARINGS

NOTICE IS HEREBY GIVEN that a special Borough Board Meeting will be held by the Borough President of Queens, Donovan Richards, on Monday, June 26, 2023 starting at 5:30 P.M. The meeting will take place in the Borough President's Conference Room at 120-55 Queens Boulevard, Kew Gardens, NY 11424.



The Borough Board intends to vote on the following item:

**CITYWIDE - ULURP #N230113 ZRY - IN THE MATTER OF** an application submitted by the New York City Department of City Planning pursuant to Sections 197-c and 201 of the New York City Charter for zoning text amendments to 214 Sections (12, 13, 16, 22-26, 32-37, 42, 44, 52, 54, 62-64, 66, 73, 75, 78, 81, 82, 84-88, 91-93, 97, 98, 101, 104, 107, 109, 111, 114-118, 121, 124, 125, 126, 128, 131, 133-136, 139, 141-143) of the NYC Zoning Resolution to remove impediments to, and expand opportunities for, decarbonization projects within all zoning districts, and across all 59 of the City's Community Districts.

Accessibility questions: [vgarvey@queensbp.org](mailto:vgarvey@queensbp.org), by: Wednesday, June 21, 2023, 12:00 P.M.



j20-26

### CITY COUNCIL

#### ■ PUBLIC HEARINGS

NOTICE IS HEREBY GIVEN that the Council has scheduled the following public hearing on the matters indicated below:

The Subcommittee on Zoning and Franchises will hold a public hearing, accessible remotely and in person at 250 Broadway, 14<sup>th</sup> Floor, New York, NY 10007, on the following matters commencing at 10:00 A.M. on June 28, 2023. The hearing will be live-streamed on the Council's website at <https://council.nyc.gov/live/>. Please visit <https://council.nyc.gov/land-use/> in advance for information about how to testify and how to submit written testimony.

43<sup>RD</sup> AVENUE DEMAPPING

QUEENS CB - 11

C 210323 MMQ

Application submitted by Anthony Lim pursuant to Sections 197-c and 199 of the New York City Charter and Section 5-430 et seq. of the New York City Administrative Code for an amendment to the City Map involving:

1. the elimination, discontinuance and closing of a portion of 43rd Avenue between 222nd Street and 223rd Street;
  2. the adjustment of grades and block dimensions necessitated thereby;
- including authorization for any acquisition or disposition of real property related thereto, in accordance with Map No. 5036 dated June 21, 2022, and signed by the Borough President.

**OCEAN CREST REZONING**

**QUEENS CB - 14 C 230041 ZMQ**

Application submitted by TCB Beach Channel Drive Limited Partnership pursuant to Sections 197-c and 201 of the New York City Charter for an amendment of the Zoning Map, Section No. 31a by changing from an R4-1 District to an R6A District property bounded by Ocean Crest Boulevard, a line 175 feet northeasterly of Beach 32nd Street, a line 100 feet southeasterly of Ocean Crest Boulevard, a line 250 feet southwesterly of Hartman Lane, Beach Channel Drive, and Beach 32nd Street, as shown on a diagram (for illustrative purposes only) dated January 30, 2023, and subject to the conditions of CEQR Declaration E-702.

**OCEAN CREST REZONING**

**QUEENS CB - 14 N 230042 ZRQ**

Application submitted by TCB Beach Channel Drive Limited Partnership pursuant to Section 201 of the New York City Charter, for an amendment of the Zoning Resolution of the City of New York, modifying APPENDIX F for the purpose of establishing a Mandatory Inclusionary Housing area.

Matter underlined is new, to be added;  
Matter ~~struck out~~ is to be deleted;  
Matter within # # is defined in Section 12-10;  
\* \* \* indicates where unchanged text appears in the Zoning Resolution.

**APPENDIX F  
Inclusionary Housing Designated Areas and Mandatory  
Inclusionary Housing Area**

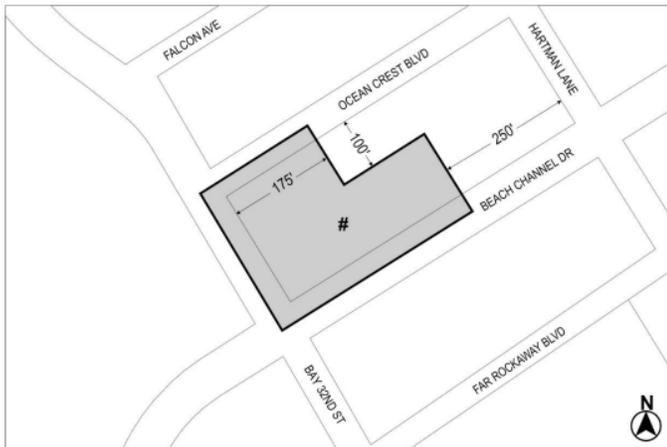
\* \* \*

**QUEENS  
Queens Community District 14**

\* \* \*

Map 5 – [date of adoption]

[PROPOSED MAP]



Mandatory Inclusionary Housing Program Area see Section 23-154(d)(3)  
Area # — [date of adoption] MIH Program Option 1

Portion of Community District 14, Queens

\* \* \*

**7120 NEW UTRECHT REZONING**

**BROOKLYN CB - 11 C 230001 ZMK**

Application submitted by 7120 New Utrecht LLC pursuant to Sections 197-c and 201 of the New York City Charter for an amendment of the Zoning Map, Section No. 22d:

1. eliminating from within an existing R5 District a C2-2 District bounded by 71st Street, New Utrecht Avenue, 72nd Street and a line 100 feet northwesterly of New Utrecht Avenue; and
2. changing from an R5 District to a C4-4L District property bounded by 71st Street, New Utrecht Avenue, 72nd Street, a line perpendicular to the northeasterly street line of 72nd Street distant 140 feet northwesterly (as measured along the street

line) from the point of intersection of the northeasterly street line of 72nd Street and the northwesterly street line of New Utrecht Avenue, a line midway between 71st Street and 72nd Street, and a line perpendicular to the southwesterly street line of 71st Street distant 80 feet northwesterly (as measured along the street line) from the point of intersection of the southwesterly street line of 71st Street and the northwesterly street line of New Utrecht Avenue;

Borough of Brooklyn, Community District 11, as shown on a diagram (for illustrative purposes only) dated January 30, 2023, and subject to the conditions of CEQR Declaration E-704.

**7120 NEW UTRECHT REZONING**

**BROOKLYN CB - 11 C 230002 ZRK**

Application submitted by 7120 New Utrecht LLC pursuant to Section 201 of the New York City Charter, for an amendment of the Zoning Resolution of the City of New York, modifying APPENDIX F for the purpose of establishing a Mandatory Inclusionary Housing area.

Matter underlined is new, to be added;  
Matter ~~struck out~~ is to be deleted;  
Matter within # # is defined in Section 12-10;  
\* \* \* indicates where unchanged text appears in the Zoning Resolution.

\* \* \*

**APPENDIX F  
Inclusionary Housing Designated Areas and Mandatory  
Inclusionary Housing Areas**

\* \* \*

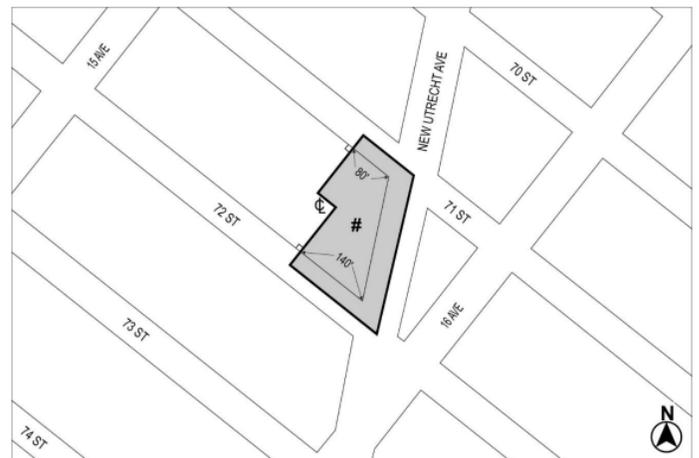
**BROOKLYN**

\* \* \*

**Brooklyn Community District 11**

\* \* \*

Map 3 – [date of adoption]



Mandatory Inclusionary Housing Program Area see Section 23-154(d)(3)  
Area # — [date of adoption] MIH Program Option 1 and Option 2

Portion of Community District 11, Brooklyn

\* \* \*

**For questions about accessibility and requests for additional accommodations, please contact swerts@council.nyc.gov or nbenjamin@council.nyc.gov or (212) 788-6936 at least three (3) business days before the hearing.**

Accessibility questions: Kaitlin Greer, kgreer@council.nyc.gov, by: Friday, June 23, 2023, 3:00 P.M.



j22-28

**CITY PLANNING COMMISSION**

**■ PUBLIC HEARINGS**

The City Planning Commission will hold a public hearing accessible both in-person and remotely via the teleconferencing application Zoom, at 10:00 A.M. Eastern Daylight Time, on Wednesday, June 28, 2023, regarding the calendar items listed below. The public hearing will be

held in person in the NYC City Planning Commission Hearing Room, Lower Concourse, 120 Broadway, New York, NY. Anyone attending the meeting in-person is encouraged to wear a mask.

The meeting will be live streamed through Department of City Planning's (DCP's) website and accessible from the following webpage, which contains specific instructions on how to observe and participate, as well as materials relating to the meeting: https://www.nyc.gov/site/nycengage/events/city-planning-commission-public-meeting/428790/1

Members of the public attending remotely should observe the meeting through DCP's website. Testimony can be provided verbally by joining the meeting using either Zoom or by calling the following number and entering the information listed below:

877 853 5247 US Toll-free
888 788 0099 US Toll-free

253 215 8782 US Toll Number
213 338 8477 US Toll Number

Meeting ID: 618 237 7396
[Press # to skip the Participation ID]
Password: 1

To provide verbal testimony via Zoom please follow the instructions available through the above webpage (link above).

Written comments will also be accepted until 11:59 P.M., one week before the date of vote. Please use the CPC Comments form that is accessible through the above webpage.

Please inform the Department of City Planning if you need a reasonable accommodation, such as a sign language interpreter, in order to participate in the meeting. The submission of testimony, verbal or written, in a language other than English, will be accepted, and real time interpretation services will be provided based on available resources. Requests for a reasonable accommodation or foreign language assistance during the meeting should be emailed to [AccessibilityInfo@planning.nyc.gov] or made by calling [212-720-3508]. Requests must be submitted at least five business days before the meeting.

BOROUGH OF THE BRONX
Nos. 1 - 3
893 EAGLE AVENUE REZONING

CD 3 C 220334 ZMX

IN THE MATTER OF an application submitted by the Housing Options and Geriatric Association Resources, Inc. pursuant to Sections 197-c and 201 of the New York City Charter for for an amendment of the Zoning Map, Section No. 6c, changing from an R6 District to a R7- 2 District property bounded by a line 100 feet northerly of East 161st Street, Eagle Avenue, East 161st Street and a line midway between Third Avenue and Eagle Avenue, as shown on a diagram (for illustrative purposes only) dated February 13, 2023, and subject to the conditions of CEQR Declaration E-667.

No. 2

CD 3 N 220335 ZRX

IN THE MATTER OF an application submitted by Housing Options and Geriatric Association Resources, Inc. (H.O.G.A.R., Inc.) pursuant to Section 201 of the New York City Charter, for an amendment of the Zoning Resolution of the City of New York, modifying APPENDIX F for the purpose of establishing a Mandatory Inclusionary Housing area.

Matter underlined is new, to be added;
Matter struck out is to be deleted;
Matter within # # is defined in Section 12-10;
\* \* \* indicates where unchanged text appears in the Zoning Resolution

\* \* \*

APPENDIX F
Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas

\* \* \*

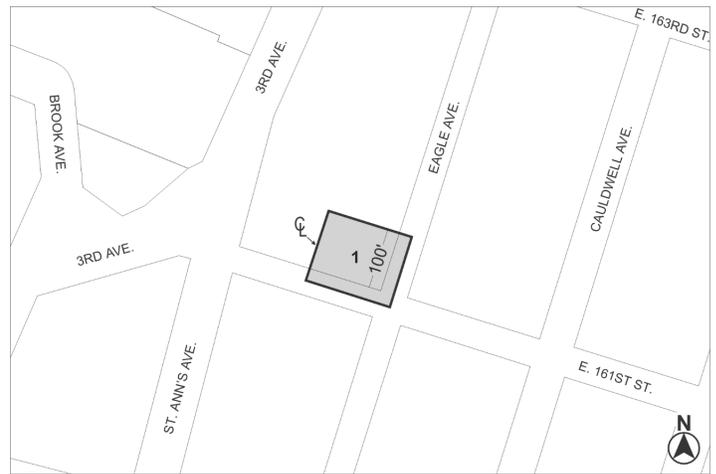
THE BRONX

\* \* \*

The Bronx Community District 3

\* \* \*

Map 2 - [date of adoption]



Mandatory Inclusionary Housing Area (see Section 23-154(d)(3))
Area 1 - [date of adoption] - MIH Program Option 1 and Option 2

Portion of Community District 3, The Bronx

\* \* \*
No. 3

CD 3 C 220336 ZSX

IN THE MATTER OF an application submitted by the Housing Options and Geriatric Association Resources, Inc. pursuant to Sections 197-c and 201 of the New York City Charter for the grant of a special permit pursuant to Section 74-903 of the Zoning Resolution to modify the requirements of 24-111 (Maximum Floor Area Ratio for Certain Community Facility Uses) to permit the allowable community facility floor area ratio of Section 24-11 (Maximum Floor Area Ratio and Percentage of Lot Coverage) to apply to a non-profit institution with sleeping accommodations, in connection with a proposed 11-story building on property located at 893 Eagle Avenue (Block 2620, Lots 49, 50, 52 & 56), in an R7-2\* District.

\*Note: This site is proposed to be rezoned by changing an R6 District to an R7-2 District under a concurrent related application for a Zoning Map change (C 220334 ZMX).

Plans for this proposal are on file with the City Planning Commission and may be seen on the Zoning Application Portal at https://zap.planning.nyc.gov/projects/P2018X0270, or at the Department of City Planning, 120 Broadway, 31st Floor, New York, NY 10271.

BOROUGH OF BROOKLYN
Nos. 4 & 5
1233 57th STREET REZONING
No. 4

CD 12 C 230117 ZMK

IN THE MATTER OF an application submitted by 1233 57 ST. LLC pursuant to Sections 197-c and 201 of the New York City Charter for an amendment of the Zoning Map, Section No. 22c by changing from an R5 District to an R6A District property bounded by a line midway between 56th Street and 57th Street, a line 150 feet westerly of 13th Avenue, 57th Street, and a line 440 feet westerly of 13th Avenue as shown on a diagram (for illustrative purposes only) dated February 27, 2023, and subject to the conditions of CEQR Declaration E-709.

No. 5

CD 12 N 230118 ZRK

IN THE MATTER OF an application submitted by 1233-57 ST. LLC pursuant to Section 201 of the New York City Charter, for an amendment of the Zoning Resolution of the City of New York, modifying APPENDIX F for the purpose of establishing a Mandatory Inclusionary Housing area.

Matter underlined is new, to be added;
Matter struck out is to be deleted;
Matter within # # is defined in Section 12-10;
\* \* \* indicates where unchanged text appears in the Zoning Resolution

APPENDIX F
Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas

\* \* \*

BROOKLYN

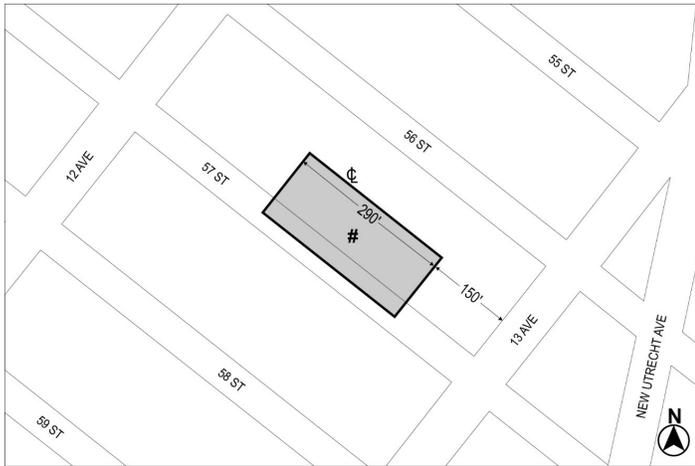
\* \* \*

Brooklyn Community District 12

\* \* \*

[PROPOSED MAP]

Map 5 – [date of adoption]



Mandatory Inclusionary Housing Program Area see Section 23-154(d)(3)

Area # — [date of adoption] MIH Program Option 1 and Option 2

Portion of Community District 12, Brooklyn

\* \* \*

BOROUGH OF MANHATTAN

No. 6

262 FIFTH AVENUE

CD 5 C 230094 ZSM

IN THE MATTER OF an application submitted by Five Points 262 Project LLC pursuant to Sections 197-c and 201 of the New York City Charter for the grant of special permits pursuant to Sections 13-45 (Special Permits for Additional Parking Spaces) and 13-451 (Additional parking spaces for residential growth) of the Zoning Resolution to allow an automated accessory off-street parking facility with a maximum capacity of 23 spaces on portions of the ground floor, cellar, sub-cellar level 1 and sub-cellar level 2, of a proposed residential building at 262 Fifth Avenue (Block 830, Lot 44), on a zoning lot located at 254-262 Fifth Avenue (Block 830, Lots 40, 41, 42, 44), in C5-2 and M1-6 Districts.

Plans for this proposal are on file with the City Planning Commission and may be seen on the Zoning Application Portal at https://zap.planning.nyc.gov/projects/2022M0352, or the Department of City Planning, 120 Broadway, 31st Floor, New York, NY 10271-0001.

BOROUGH OF STATEN ISLAND

No. 7

SOUTH RICHMOND ZONING RELIEF

CD 3 N 230112 ZRR

IN THE MATTER OF an application submitted by New York City Department of City Planning, pursuant to Section 201 of the New York City Charter, for an amendment of the Zoning Resolution of the City of New York, modifying provisions of Article X, Chapter 7 (Special South Richmond Development District) and related Sections.

Matter underlined is new, to be added; Matter struck out is existing, to be deleted;

Matter within # # is defined in Section 12-10, 66-11 or 107-01;

\* \* \* indicates where unchanged text appears in the Zoning Resolution.

ARTICLE I GENERAL PROVISIONS

Chapter 1 Title, Establishment of Controls and Interpretation of Regulations

\* \* \*

11-45 Authorizations or Permits in Lower Density Growth Management Areas

The provisions of this Section shall apply within #lower density growth management areas#.

(a) Notwithstanding the provisions of N 040414 ZRY, pertaining

to #lower density growth management areas#, and subject to the provisions of Section 11-30 (BUILDING PERMITS ISSUED BEFORE EFFECTIVE DATE OF AMENDMENT) with respect to amendments of this Resolution other than N 040414 ZRY, Section 11-42 (Lapse of Authorization or Special Permit Granted by the City Planning Commission Pursuant to the 1961 Zoning Resolution) and Section 11-43 (Renewal of Authorization or Special Permit), the following provisions shall apply with respect to special permits and authorizations granted by the City Planning Commission or for which certification or referral for public review has been made prior to August 12, 2004:

(1)(a) Any #development# or #enlargement#, including minor modifications thereto, granted a special permit or authorization by the Commission and, where applicable, the City Council, prior to August 12, 2004, may be #developed# or #enlarged# pursuant to the terms of such permit or authorization and, to the extent not modified under the terms of such permit or authorization, in accordance with the regulations in effect at the time such permit or authorization was granted.

(2)(b) Any application for a special permit certified by the Department of City Planning or application for an authorization referred by the Department of City Planning for public review prior to May 24, 2004, may be continued pursuant to the regulations in effect at the time of certification or referral and, if granted by the Commission and, where applicable, the City Council, may be #developed# or #enlarged# pursuant to the terms of such permit or authorization, including minor modifications thereto and, to the extent not modified under the terms of such permit or authorization, in accordance with the regulations in effect at the time such application was certified or referred for public review.

(b) Notwithstanding the provisions of N040414ZRY, the following provisions shall apply to certain #developments# within the #Special South Richmond Development District#:

(1) #Developments#, including minor modifications thereto, within the #Special South Richmond Development District# that contain #designated open space# and a portion of the #waterfront esplanade#, where such #development# is conditioned upon a restrictive declaration that includes a site plan for such #development#, including provisions for public access to such #designated open space# and #waterfront esplanade#, may be #developed# in accordance with the regulations in effect prior to August 12, 2004.

(2) #Developments# within the #Special South Richmond Development District# accessed, in part, by #private roads# and consisting, in part, of construction within #streets# that are unimproved, and for which a conservation easement has been granted to the City, and for which the Board of Standards and Appeals has granted a permit pursuant to Section 35 of the General City Law, or its successor, and an application for an authorization for such #development# has been filed pursuant to paragraph (a) of Section 26-27 (Waiver of Bulk Regulations Within Unimproved Streets) prior to May 1, 2004, may be #developed# in accordance with the regulations in effect prior to August 12, 2004.

\* \* \*

ARTICLE X SPECIAL PURPOSE DISTRICTS

Chapter 7 Special South Richmond Development District

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GENERAL PURPOSES
- The “Special South Richmond Development District” established in this Resolution is designed to promote and protect public health, safety, general welfare and amenity. These general goals include, among others, the following purposes:
- to guide future development in accordance with the Land Use Plan for South Richmond and the Capital Improvement Plan for the Special District area;
  - to promote balanced land use and development of future land uses and housing in the Special District area, including private and public improvements such as schools, transportation, water, sewers, drainage, utilities, open space and recreational facilities, on a schedule consistent with the City’s Capital Improvement Plan and thereby provide public services and facilities in the most efficient and economic manner, and to ensure the availability of essential public services and facilities for new development within the area;
  - to avoid destruction of irreplaceable natural and recreational resources such as lakes, ponds, watercourses, beaches and natural vegetation and to maintain the natural ecological balance of the area with minimum disruption of natural topography, trees, lakes and other natural features; and
  - to promote the most desirable use of land in the South Richmond area and thus to conserve the value of land and buildings and thereby protect the City’s tax revenues.
- 107-01  
Definitions**
- Definitions specially specifically applicable in this Chapter are set forth in this Section. The definitions of other defined terms are set forth in Section 12-10 (DEFINITIONS).
- Area of no disturbance
- An “area of no disturbance” is an area designated on a site plan or #area plan# to be protected from #site alteration#, except for new native planting. An #area of no disturbance# shall contain natural features including, but not limited to, trees, natural topography, #designated open space#, and aquatic features.

#Plan review sites# may include safeguards such as an #area of no disturbance# to define areas where #site alterations# shall not be proposed.

#### Area plan

An “area plan” is a proposed layout for a #zoning lot# subdivision with traffic circulation, including curb cuts on #arterials#; access easements; #areas of no disturbance#; #wetland-adjacent areas#; areas of #designated open space#; #building# envelopes; required #building# setbacks within proposed #zoning lots# in #Residence Districts#; and any other information prescribed by the City Planning Commission.

#### Arterial

An “arterial” is a #street# designated as an #arterial# listed in Section 107-25 107-24 (Special Regulations Along Certain Streets for Arterials or Railroads Rights of Way) whose function is primarily the accommodation of through vehicular traffic and to which special provisions of this Chapter apply. All such #arterials# are shown on the District Plan, Map 2 in Appendix A, which is hereby incorporated as an integral part of the provisions of this Chapter.

#### Caliper (of a tree)

“Caliper” of a tree is the diameter of a tree trunk measured 4 feet, 6 inches from the ground. If a tree splits into multiple trunks below this height, the trunk is measured at its narrowest point beneath the split. For trees with a diameter of less than three inches measured 4 feet, 6 inches from the ground, the #caliper# shall be measured 12 inches from the ground.

#### Development

For the purposes of this Chapter, a “development” includes a #development# as defined in Section 12-10 (DEFINITIONS), the #enlargement# of a non-#residential building#, or the #enlargement# of a #residential use# that involves the addition of one or more #dwelling units#.

To “develop” is to create a #development#.

#### Designated open space

“Designated open space” is a portion of the #open space network# located on a #zoning lot# as shown on the District Plan (Map 3 in Appendix A), and is to be preserved in its natural state in accordance with the provisions of the #Special South Richmond Development District#.

#### Detached

For the purposes of this Chapter a “detached” #building# is a #building# surrounded by #yards# or other open area on the same #zoning lot# or is a #building# #abutting# a #street line# which is surrounded by #yards# or open area on the same #zoning lot# except where the #building# #abuts# the #street line#.

#### Drainage scheme

A “drainage scheme” is a plan for a system of storm sewers and/or sanitary sewers intended to serve a #development# which is submitted to the Department of Environmental Protection for review and approval.

#### Open space network

The “open space network” is a planned system of #open spaces# as shown on the District Plan (Map 3 in Appendix A), which includes #public parks#, #park streets#, #designated open space#, and the #waterfront esplanade#.

#### Park street

A “park street” is a #street# designated as such in Section 107-25 (Special Regulations Along Certain Streets or Railroads) and whose primary function is to provide connecting links for pedestrians and cyclists between portions of the #open space network# and to which special provisions of this Chapter apply. #Park streets# shall be designated to provide limited vehicular access.

#### Plan review site

A “plan review site” is any #zoning lot# that contains one or more acres, where there is a proposed #development, #enlargement#, #site alteration#, or subdivision of such #zoning lot# into two or more #zoning lots#.

#### Sewer acceptance

A “sewer acceptance” is the acceptance by the Department of Environmental Protection of a system of storm and/or sanitary sewers which were built in accordance with an approved #drainage scheme# intended to serve a #development#.

#### Site alteration

A “site alteration” is an alteration on any vacant tract of land, #land with minor improvements# or any tract of land containing #buildings or other structures#, which includes land contour work, permanent topographic modifications, removal of topsoil, removal of trees of six-inch caliper or more, excavating, filling, dumping, changes in existing drainage systems, improvements in public rights-of-way; whether or not a permit is required from the Department of Buildings, the Department of Transportation or other public agencies. A #site alteration# shall include any land operation within #designated open space#.

#### Tree credit

A “tree credit” is a credit for preserving an existing tree or for planting a new tree which is counted towards tree requirements.

#### Waterfront esplanade

The “waterfront esplanade” is a pedestrian way to be provided for public #use# within the #open space network# along the Raritan Bay waterfront, as shown on the District Plan (Map 3 in Appendix A).

#### Wetland-adjacent area

A “wetland-adjacent area” is an area that #abuts# an aquatic feature and which is under the jurisdiction of the New York State Department of Environmental Conservation (NYSDEC).

### 107-02

#### General Provisions

In harmony with the general purpose and intent of this Resolution and the general purpose of the #Special South Richmond Development District#, the regulations of the districts upon which this Special District is superimposed are supplemented or modified in accordance with the provisions of this Chapter. Except as modified by the express provisions of this Chapter, the regulations of the underlying districts remain in effect. In #flood zones#, or for #transit-adjacent sites#, as defined in Section 66-11 (Definitions), in the event of a conflict between the provisions of this Chapter and the provisions of Article VI, Chapter 4 (Special Regulations Applying in Flood Hazard Areas), or Article VI, Chapter 6 (Special Regulations Applying Around Mass Transit Stations), the provisions of Article VI shall control.

Property within the jurisdiction and control of the Department of Environmental Protection shall be exempt from the provisions of this Chapter where such property is an existing or planned portion of the Staten Island Bluebelt intended to support best management practices of stormwater.

In addition to applicability as provided in Section 11-10 (ESTABLISHMENT AND SCOPE OF CONTROLS, ESTABLISHMENT OF DISTRICTS, AND INCORPORATION OF MAPS), the provisions of this Chapter shall apply to #site alterations# or subdivision of #zoning lots#, except:

- (a) — public improvement projects for which preliminary design contracts were approved by the Board of Estimate prior to January 2, 1975, or for which title was vested by the City prior to September 11, 1975; and
- (b) — any #large-scale development# for which an authorization or special permit was granted prior to September 11, 1975. For the purposes of this Chapter, the City Planning Commission may extend such authorization or special permit for a renewable term of one year provided that the Commission finds that the facts upon which the authorization or special permit was granted have not substantially changed and that the adoption of this amendment shall not constitute a substantial change of fact.

For all #developments# located within areas D, F or K as shown on the District Plan (Map 4 in Appendix A), the applicant shall obtain from the Commission a certification indicating that the #development# complies with the approved South Richmond Development Plan. As a condition for such certification, the Commission shall find that:

- (1) — the minimum #lot area# for any #commercial# #development# is at least two acres;
- (2) — vehicular access and egress for the #development# is arranged so that it affords the best means of controlling the flow of traffic generated by such #development#; and

(3) — due consideration has been given to relate the proposed #development# to the character of the surrounding area by providing suitable buffering, landscaping and #building# setbacks.

For such certification, the applicant shall submit to the Commission a site plan and drawings depicting the proposed #buildings# and location of off-street parking facilities, curb cuts and pedestrian walkways. For #residential uses# within Area K, the #bulk# and parking regulations of R3-2 Districts, as modified by this Chapter, shall apply.

### 107-03

#### Requirements for Certification, Authorization or Special Permit Application

An application to the City Planning Commission for a certification, authorization or special permit respecting a #development#, #enlargement#, or #site alteration# shall include a survey map, prepared by a licensed land surveyor and dated no more than two years prior to the date of filing an application, showing:

- (a) existing topography at two foot contour intervals;;
- (b) the location of all existing #buildings or other structures#, and the location of all proposed #buildings or other structures#;;
- (c) the location of individual existing trees of six inch caliper or more;;
- (d) the location of any elements of the #open space network# on or adjacent to the #zoning lot#; and
- (e) the location of any #wetland-adjacent areas#, streams, and natural watercourses;

and such other information as may be required by the Commission for its determination as to whether or not the certification, authorization or special permit is warranted.

### 107-05

#### Relationship to Public Improvement Projects

In all cases, the City Planning Commission shall deny a special permit, authorization or certification application whenever a #development# will interfere with a public improvement project (including, without limitation, housing, highways, public #buildings# or facilities, redevelopment or renewal projects, or rights-of-way for sewers, transit or other public facilities) which is approved by or pending before the Board of Estimate, City Planning Commission or Site Selection Board.

### 107-06

#### District Plan (Appendix A)

The District Plan for the #Special South Richmond Development District# shows the #open space network#, #designated open space#, #park streets#, #waterfront esplanade#, and #building# setback lines. The elements of the District Plan are set forth in Appendix A, which is hereby incorporated as an integral part of the provisions of this Chapter.

### 107-07

#### Tree Selection (Appendix B)

Where planting of trees is required by the provisions of this Chapter, the selection of trees for their planting shall be in accordance with the Tree Selection Table set forth in Appendix B, which is hereby incorporated as an integral part of the provisions of this Chapter.

### 107-08

#### Future Subdivision of Certain Plan Review Sites

Within the Special District, any #zoning lot# existing on September 11, 1975, may be subdivided into two or more #zoning lots# provided that the existing topography, all individual trees of six inch caliper or more and all land located within a #designated open space#, to the greatest extent possible, are preserved under future #development# options.

Any subdivision of a #plan review site# that is proposed to take place within the Special District after September 11, 1975, shall be filed with the Department of City Planning Commission, and the Chairperson of the City Planning Commission shall certify that such subdivision of such #plan review site# complies with the approved South Richmond Plan and the above objective.

- (a) does not contain, or have frontage along, any District Plan Element listed in Section 107-20 (DISTRICT PLAN ELEMENTS), inclusive;

(b) does not contain a #wetland-adjacent area#;

(c) does not exceed the rate of two #tree credits# per 1,000 square feet of lot area; and

(d) does not have a violation for tree removal without prior permission or approval and no trees been removed since [date of adoption] unless permitted pursuant to Section 107-312 (Regulations within plan review sites).

In the case of a subdivision which does not comply with the above conditions, subdivision of such #plan review site# shall not be permitted unless authorized by the Commission pursuant to Section 107-64 (Future Subdivision of Certain Plan Review Sites). of a tract of land containing #designated open space#, a site plan indicating the distribution of #bulk# for the individual #zoning lots# shall be submitted to the Commission. Such approved subdivision shall then be recorded in the land records and indexed against all #zoning lots#.

The subdivision plan for the #plan review site# shall include a survey map indicating existing topography at two foot contour intervals, all individual trees of six inch #caliper# or more, and the location of #designated open space# or any #wetland-adjacent area# within the area. When a #zoning lot# existing on September 11, 1975, is more than five acres and is intended to be subdivided, an area plan of the entire subdivision shall be filed with the Commission. The area plan shall include the proposed vehicular circulation system within the area, #block# and lot layouts and any other information required by the Commission.

For the purpose of applying the provisions of this Section, a subdivision includes reconfiguration of a #zoning lot# in a manner that would change its area or any dimension of such #zoning lot#.

### 107-09

#### Applicability of Article VI

\* \* \*

### 107-10

#### GENERAL SPECIAL REQUIREMENTS

### 107-11

#### Special Requirements for Application

Prior to the approval of any application to the Department of Buildings for For a #site alteration#, or a #development#, or #enlargement#, no certificate of occupancy or sign-off of a permit, as applicable, shall be issued by the Department of Buildings until the planting requirements of the following provisions, as applicable, have been satisfied, and reflected on an as-built survey, tree schedule, or any such information as may be required:

Section 107-32 (Tree Requirements)

Section 107-48 (Special Landscaping and Buffering Provisions)

the applicant shall file applications with the appropriate City agency requesting the certifications required in Section 107-12 (Public Facilities):

Any application to the Department of Buildings for a #site alteration# or #development# shall include a survey map or maps prepared by a licensed land surveyor showing, for the site, existing topography at two foot contour intervals and the locations, names and calipers of all existing trees of six inch caliper or more and; for any #development#, the application shall also include certifications from the appropriate City agencies as required by Section 107-12.

However, the requirements of a survey map at two foot contour intervals shall not apply to #zoning lots# 4,000 square feet or less owned separately and individually from all other adjoining #zoning lots# on September 11, 1975, and on the date of filing such application.

However, when a #zoning lot# which was owned separately and individually from all other adjoining #zoning lots# existing prior to January 2, 1975, is proposed to be #developed# with one #single# or #two-family# #detached# #residence#, the certification reports of Section 107-12 shall not be required, but the provisions of local laws shall apply. When a permit for land contour work, storm water drainage systems or other #site alteration# work is required from the Department of Transportation or Department of Environmental Protection or when a public agency requires a #site alteration# on either privately or City-owned land, the public agency involved shall, prior to initiating or issuing a permit for such site work, notify the Department of Buildings.

The Department of Buildings and the public agency involved shall jointly determine that the proposed #site alteration# work is consistent with the provisions of Sections 107-31 (Topographic Regulations), 107-32 (Tree Regulations) and 107-25 (Special Regulations along Certain Streets and Railroads). In case of non-agreement, the provisions of Section 107-91 (Inter-agency Coordination) shall apply.

**107-12**

**Public Facilities**

**107-121**

**Public schools**

For any #development# containing #residential uses#, the Department of Buildings shall be in receipt of a certification from the Chairperson of the City Planning Commission which certifies that sufficient #school# capacity exists to accommodate the anticipated primary and intermediate public school children of the #development#. All applications for certification pursuant to this Section shall be referred by the Chairperson of the Commission to the Board of Education.

The Board of Education shall issue a report concerning the availability of #school# capacity within 60 days after receipt of the application. The Chairperson of the Commission shall respond within 90 days after receipt of an application. The report shall specify the following:

- (a) whether or not #school# space is available;
- (b) if #school# space is not available, the report shall include:
  - (1) the number of seats required;
  - (2) the grade organization;
  - (3) the location of the #school#;
  - (4) the size of #school# (sq. ft. per pupil); and
  - (5) the proposed financing mechanism.

For the purposes of this Section, sufficient #school# capacity shall be deemed to exist if:

- (1) such capacity is available in existing #schools#; or
- (2) construction funds have been authorized in the Capital Budget to accommodate anticipated primary and intermediate public school children from the #development# upon its completion or within three years from the date of the Chairperson's certification; or
- (3) sufficient #school# space is to be provided by the applicant under a plan jointly approved by the Chairperson of the Commission and Board of Education.

After approval of the Chairperson of the Commission and Board of Education of the applicant's plan to provide the #school# #building#, the certification may be granted either upon approval of a financial agreement by the Board of Estimate or such guarantee of construction with provision for future #school# occupancy as may be accepted by the Board of Education and the Chairperson of the Commission.

However, the Chairperson of the Commission may grant such certification if capacity is not currently available and the Board of Education after consulting with the Community School Board determines that the impact from the #development# will have a minimal effect on the concerned #schools# and includes such statement in their report.

A certification by the Chairperson of the Commission that sufficient capacity will be available in the public #schools#, as set forth in the above circumstances, shall automatically lapse if substantial construction of the foundations of the #development# in accordance with approved plans has not been completed within one year from the date of such certification.

No certification concerning the availability of #school# capacity shall be required for any #development# within a predominantly built up area or within an area for which #drainage schemes# were approved prior to January 1, 1975. For the purposes of this Chapter, a "predominantly built up area" is a #block# having a maximum of four acres which is #developed# with #buildings# on #zoning lots# comprising 75 percent or more of the area of the #block#. All such #buildings# shall have a certificate of occupancy or other evidence acceptable to the Commissioner of Buildings issued not less than three years prior to the date of application for a building permit.

**107-20**

**DISTRICT PLAN ELEMENTS**

All land in the #open space network# as shown on the District Plan (Map 3 in Appendix A), except #public parks#, and any #zoning lot# along an #arterial# as shown on the District Plan (Map 2 in Appendix A), are is subject to the provisions of this Section, inclusive.

**107-21**

**Modification of Designated Open Space**

\* \* \*

**107-22**

**Designated Open Space**

\* \* \*

Within any #designated open space#, removal of trees, alteration of topography, #development# or #enlargement# of active recreational facilities, or the establishment of utility easements may be undertaken only in accordance with the provisions of this Section and Section 107-30 (TOPOGRAPHIC AND TREE NATURAL FEATURE REGULATIONS).

\* \* \*

**107-221**

**Active recreational facilities**

#Designated open space# may be used for active recreational facilities provided that the City Planning Commission certifies that such #uses# are compatible with the purposes of the network #open space network# and have minimal impact on tree removal, topographic alterations or drainage conditions.

Active recreational facilities may include swimming pools, tennis courts or facilities and equipment normally found in playgrounds, and shall comply with the #use# regulations of the underlying district.

In the development of active recreational facilities, no individual trees of six-inch #caliper# or more shall be removed except by special authorization of the Commission in accordance with the provisions of Section 107-64 (Removal of Trees) or 107-65 (Modification of Existing Topography) 107-65 (Modification of Natural Feature Regulations). Active recreational facilities shall not be allowed within 60 feet of any watercourse in #designated open space# unless the Commission certifies that a location closer to such watercourse will not adversely affect the natural character of the watercourse or its drainage function. The Commission, where appropriate, shall be guided by the reports from other City agencies involved in land contour work, storm water drainage systems or similar operations.

If the City of New York acquires an easement for public access to any #designated open space# on which a #building# has been, is being or could be in the future, constructed in accordance with the provisions of this Chapter, the City's acquisition of an easement shall not affect the qualifications of the #designated open space# for satisfying #lot area# requirements, #yard# requirements, #floor area# or #lot coverage# restrictions or #open space# requirements as provided in Section 107-224 (Qualification of designated open space as lot area for bulk computations) and shall not be deemed to create a #non-compliance#.

**107-222**

**Public pedestrian ways**

For any #site alteration#, #development#, or #enlargement# on a #zoning lot# which contains #designated open space#, the City Planning Commission shall certify whether or not the applicant shall be required to provide a public pedestrian way through a portion of the #designated open space#.

When a public pedestrian way is required, it shall be built and maintained by the owner of the #zoning lot# and shall be accessible to the public at all times. The public pedestrian way shall be improved at the time the #site alteration#, #enlargement#, or #development# takes place, except that for #site alterations# or #developments# on a tract of land less than 1.5 acres, the Commission may allow the applicant to delay the construction of the public pedestrian way if the applicant complies with Section 107-24 (Performance Bond).

The location and dimension of such pedestrian way shall be determined by the Commission. The owner of the #zoning lot# may request the City to take an easement on the property. If the City of New York acquires an easement for public access to any #designated open space# on which a #building# has been, is being or could be in the future, constructed in accordance with the provisions of this Chapter, the City's acquisition of an easement shall not affect the qualifications of the #designated open space# requirements as provided in Section 107-224 (Qualification of designated open space as lot area for bulk computations) and shall not be deemed to create a #non-compliance#.

**107-223**  
**Permitted obstruction in designated open space**

\* \* \*

**107-224**  
**Qualification of designated open space as lot area for bulk computations**

\* \* \*

**107-225**  
**Special bulk regulations for developments containing designated open space**

\* \* \*

**107-226**  
**Zoning lots entirely or substantially within designated open space**

When a #zoning lot# owned separately or individually from all adjoining #zoning lots# prior to January 2, 1975, is located entirely or substantially within #designated open space# and no reasonable development is possible on the #zoning lot#, the owner may request the City to provide, in exchange, a City-owned #zoning lot#.

The #zoning lots# may be exchanged only after an appraisal made by a body consisting of the following:

- (a) one independent fee appraiser appointed by the City;
- (b) one independent fee appraiser appointed by the private property owner, which appraiser may be the same as in paragraph (a) of this Section; and
- (c) if needed to resolve a disagreement between the two appraisers appointed in paragraphs (a) and (b), one independent fee appraiser chosen by mutual agreement between the two individually appointed appraisers.

Such requests for exchange shall be filed by the owner of the #zoning lot# with the City Planning Commission:

If such exchange of #zoning lots# is not feasible under this Section or Section 384-7.0 of the New York City Administrative Code, the City may either acquire such #zoning lot# or permit development to proceed thereon with the minimal modification of the #designated open space# necessary to permit #development# containing #residences#.

**107-23**  
**Waterfront Esplanade**

\* \* \*

**107-24**  
**Performance Bond**

When the provision of the required improvement is to be delayed for a period not to exceed five years from the date of the City Planning Commission certification, the owner of the #zoning lot# shall, prior to obtaining any certificate of occupancy, provide to the Comptroller of the City of New York a performance bond or City securities to ensure the future provision of either the #waterfront esplanade# or the public pedestrian way.

When the required improvement has been constructed, the Comptroller of the City of New York may release the bond or City securities posted to ensure such construction, provided an amount of the bond or City securities to ensure maintenance of the improvement, as set forth in the paragraph above, remains with the Comptroller:

The value of the bond or City securities tendered to ensure the future provision of the improvement shall be at the rate of \$400 per 100-square feet of #waterfront esplanade# and at \$200 per 100-square feet of public pedestrian way, if such bond or securities are tendered prior to January 1, 1980.

At five year intervals after January 1, 1980, the Commission, with the approval of the Board of Estimate, shall establish the new rates for the future provision (and maintenance) of the improvement.

**107-25 107-24**  
**Special Regulations for Arterials Along Certain Streets or Railroads Rights of Way**

Along the following #streets# designated as either #arterials# or #park streets# and identified as such on the District Plan; or along a designated railroad, special regulations relating to restriction of access; and setback of #buildings#; and landscaping apply as set forth in this Section and shown on the District Plan (Map 2 in Appendix A).

**Arterials**

- Hylan Boulevard
- Woodrow Road
- Amboy Road
- Frontage roads for Richmond Parkway
- Huguenot Avenue
- Page Avenue
- Arthur Kill Road
- Service roads for West Shore Expressway
- Richmond Avenue

**Park Streets**

- Marcy Avenue from Richmond Parkway to Woodrow Road
- Albee Avenue from Richmond Parkway to Amboy Road
- Grantwood Avenue from Richmond Parkway to Woodrow Road
- Miles Avenue from Arthur Kill Road to Barlow Avenue
- Barlow Avenue from Miles Avenue to Colon Avenue

**Railroads**

The Staten Island Rapid Transit right-of-way.

In accordance with the primary function of an #arterial# to accommodate vehicular through traffic, access is restricted to #arterials# pursuant to paragraph (a) of Section 107-241 (Special provisions for arterials).

In addition, along portions of #arterials# as indicated on Maps 2.1 through 2.4 (Arterial Setback Plan) in Appendix A of this Chapter, the #building# setback provisions of paragraph (b) of Section 107-241 apply.

**107-251 107-241**  
**Special provisions for arterials**

Along those #streets# designated as #arterials#, the following regulations shall apply:

- (a) Access restrictions

Curb cuts are not permitted along an #arterial# #street# on #zoning lots# with access to a frontage on an improved non-#arterial# #street#. For #zoning lots# with access frontage only to an #arterial# #street#, one curb cut is permitted along such #arterial# #street#. For purposes of this Section, adjoining #zoning lots# in the same ownership or control on [date of adoption] shall be treated as one #zoning lot#. For any #zoning lot# which includes an #area plan# approved by the City Planning Commission, no curb cut shall be allowed except where a curb cut is designated on such #area plan#. Such access restrictions with regard to curb cuts shall not apply to #schools#, hospitals and related facilities, police stations, or fire stations.

For a #zoning lot# with no less than 100 feet of frontage on an #arterial# #street#, the Commissioner of Buildings may approve curb cuts that exceed the access restrictions listed above where the Commissioner of Transportation submits a letter certifying that such additional curb cuts are necessary to avoid adverse effects on the traffic operations and safety of the #arterial#, or that such curb cuts will not adversely affect traffic operations and safety on the #arterial# including, but not limited to, all curb cut locations on an #arterial# #street# by either implementing a traffic pattern serving right-turn only movements or the implementation of traffic signalization, or other reasons acceptable to the Commissioner of Transportation.

For #zoning lots# with access only to a #arterial street#, the City Planning Commission may, by certification, approve additional curb cuts for access to such #arterial street# when necessary to avoid adverse effects on the traffic flow of the #arterial#.

For #zoning lots# with access to both #arterial# and non-#arterial streets#, the Commission may authorize one or more curb cuts on the #arterial street#, pursuant to the provisions of Section 107-68 (Modification of Group Parking Facility and Access Regulations):

(b) #Building# setback

Along portions of the #arterials#, as indicated on the District Plan (Maps 2.1 through 2.4 in Appendix A of this Chapter), a 20 foot #building# setback shall be provided for the full length of the #front lot line# #abutting# such #arterial#. The front #building# setback area shall be unobstructed from its lowest level to the sky except as permitted by this Section. Where a front #building# setback area at least 35 feet in depth is provided, such setback area may be used for required #accessory# off-street parking or loading facilities. No portion of such required setback area may be used for open storage.

In the case of the service roads of the West Shore Expressway, a 30 foot #building# setback shall be provided and required off-street parking and loading facilities are permitted within such setback. Within the required front #building# setback, there shall be provided one tree of three-inch #caliper# or more, pre-existing or newly planted, for each 400 square feet of such front open area, unless waived pursuant to the provisions of paragraph (c) of Section 107-483 (Planting and screening for parking areas). The trees shall be selected in accordance with the provisions of Section 107-32 (Tree Requirements) the table set forth in Appendix B.

**107-252**  
**Special provisions for park streets**

For those #streets# designated as #park streets#, the following regulations shall apply:

(a) Access restrictions

No curb cuts are permitted on such #streets# except that one curb cut is permitted for any #residential#, #community facility# or #commercial# #use# whose #zoning lot# has frontage only on a #park street#. For purposes of this Section, adjoining #zoning lots# in the same ownership shall be treated as one #zoning lot#.

For #zoning lots# with access to both #park streets# and non-#park streets#, the City Planning Commission may authorize one or more curb cuts on the #park street#, pursuant to the provisions of Section 107-68 (Modification of Group Parking Facility and Access Regulations):

(b) Landscaping

One tree of at least three inch caliper, pre-existing or newly planted, shall be provided for each 400 square feet of area of the #street# sidewalk area. Trees shall be selected in accordance with the table set forth in Appendix B and shall be planted in the #street# sidewalk area.

(c) Development and maintenance responsibility

The owner of each #development# abutting a #park street# shall have responsibility for landscaping and maintenance of that portion of the #park street# located between the #front lot line# and the curb.

Alternatively, maintenance responsibility may be vested in a properly constituted Home Association or other organization established for this purpose. Those segments of a #park street# which are abutted by land #developed# prior to the effective date of the Special District designation shall be #developed#, landscaped and maintained by the City of New York.

**107-253-107-242**  
**Building setbacks along railroad rights-of-way**

For all #developments# on #zoning lots# immediately adjacent or directly opposite to the Staten Island Rapid Transit right-of-way, a #building# setback of at least 20 feet in depth, unobstructed from its lowest level to the sky, except as permitted herein, shall be provided along the #lot line# immediately adjacent to or directly opposite the right-of-way of such railroad. Such #building# setback shall be measured perpendicular to such #lot line#, as indicated on the District Map.

Within such #building# setback area, unless the area is within a #street# or is waived according to the planting waiver provisions of paragraph (c) of Section 107-483 (Planting and screening for parking areas), there shall be provided one tree of three-inch #caliper# or more, pre-existing or newly planted, for each 400 square feet of such open area. The trees-Tree species shall be selected in accordance with the table set forth in Appendix B Section 107-32 (Tree Requirements).

**107-30**  
**TOPOGRAPHIC AND TREE NATURAL FEATURE REGULATIONS**

Any #development#, #enlargement# resulting in changes to #lot coverage#, or #site alteration# shall comply with the provisions of this Section, inclusive.

All #zoning lots# shall comply with the provisions of Sections 107-31 (General Regulations for Natural Features), inclusive, and 107-32 (Tree Requirements).

In addition, regulations within areas of #designated open space# are set forth in Section 107-311 (Areas within designated open space).

Any #plan review site# shall also comply with the provisions of Section 107-312 (Regulations within plan review sites).

Any application to the Department of Buildings for a #site alteration#, #development#, or #enlargement# shall include a survey map prepared by a licensed land surveyor showing, for the site: existing topography at two-foot contour intervals; the locations, names and #calipers# of all existing trees of six-inch #caliper# or more; the location of any elements of the #open space network#; and the location of any #wetland-adjacent areas#, streams, and natural watercourses.

A site plan for such application shall also include the location of any #area of no disturbance#, proposed paving, and shall identify those trees proposed to be removed and proposed to be preserved.

**107-31**  
**General Topographic Regulations for Natural Features**

Except for any existing topographic natural feature which is unsafe and the removal of which is required by the Department of Buildings to eliminate hazardous conditions, no topographic modifications #site alteration# may take place except as provided in this Section or as authorized by Section 107-65, inclusive.

No modification of topography shall take place within eight feet of a tree that is counted toward minimum #tree credits# pursuant to the provisions of Section 107-32 (Tree Requirements).

Within any #zoning lot# which is not a #plan review site#, tree removal shall be permitted in areas that do not contain #designated open space#, provided that such #zoning lot# complies with the provisions of Section 107-32.

**107-311**  
**Areas within designated open space**

Within #designated open space# on a #zoning lot#, any #site alteration# shall be permitted only by authorization of the City Planning Commission pursuant to Section 107-65 (Modification of Existing Topography Natural Feature Regulations).

**107-312**  
**Areas not within designated open space Regulations within plan review sites**

On any portion of a #zoning lot# #plan review site# not within #designated open space#, #development#, #enlargement#, or #site alteration# of topography shall be permitted only in accordance with the provisions of this Section or by authorization of the City Planning Commission pursuant to the provisions of Section 107-65 (Modification of Natural Feature Regulations) or by certification of the Chairperson of the City Planning Commission pursuant to the provisions of Section 107-51 (Certification of Certain Plan Review Sites).

The ground elevation of land existing on September 11, 1975 [date of adoption], may be modified by up to two feet of cut or fill, provided that such modification shall not result in the destruction of trees of six-inch #caliper# or more, unless authorized pursuant to other provisions of this Chapter. Modification of topography to a greater extent and removal of trees of six-inch #caliper# or more shall only be is permitted:

- (a) in an area designated for within 20 feet of an existing #building's# foundations, driveways, or in an area designated for utilities for a proposed #building or other structure#; whose location is approved by the Department of Buildings in accordance with the provisions of this Chapter; and
- (b) in order to meet the legal mapped grades of a #street#, the existing topography of that portion of the #zoning lot# abutting such #street# may be modified to create a slope on the #zoning lot# of not less than one foot vertical to each two feet horizontal, provided the slope is landscaped to prevent erosion;
- (c) within an existing #group parking facility#, or within existing landscaping required pursuant to Section 107-483 (Planting and screening for parking areas), which does not result in the removal of parking spaces or travel lanes;

- (d) where such modification of topography takes place more than 20 feet from the boundary of an area of #designated open space#, a #wetland-adjacent area#, a #side lot line#, or a #rear lot line#; or
- (e) where such tree interferes with another tree of six-inch #caliper# or more, and such tree to be preserved belongs to a species pursuant to the provisions of Section 107-32 (Tree Requirements).

Topographic modifications not permitted by the provisions of this Section may be permitted only by authorization of the City Planning Commission pursuant to the provisions of Section 107-65.

If an existing tree of six-inch #caliper# or more is removed without prior approval from the Department of Buildings or the City Planning Commission and does not meet the provisions of this Section, any permit issued by the Department of Buildings for a #site alteration#, #enlargement#, #development#, or any #use# on the #zoning lot# shall not be granted a letter of completion, certificate of occupancy, or similar sign-off until such tree is replanted, or proposed to be replaced, as applicable, in accordance with Section 107-32. A violation for tree removal without prior permission or approval shall be recorded against such site.

**107-32  
Tree Regulations**

The following regulations in Sections 107-321 through 107-323, inclusive, shall not apply to existing trees which are unsafe and the removal of which is required by the Department of Buildings.

**107-321  
Tree preservation**

No trees of six-inch caliper or more shall be removed, or land operations affecting their survival undertaken, in connection with any #site alteration#, or #development#, except in compliance with the provisions of this Section.

Prior to any such removal or land operations, plans shall be filed with the Department of Buildings showing the locations of all trees of six-inch caliper or more on the #zoning lot# and in the public sidewalk area of the #street# or #streets# adjacent thereto, and identifying those which are proposed to be removed. Removal of live trees of six-inch caliper or more will be permitted only under the following circumstances:

- (a) where such trees are located areas to be occupied by #buildings#, driveways, areas for required #accessory# parking, or within a distance of eight feet of the exterior walls of such #building#, provided that it is not possible to avoid such removal by adjustments in the arrangement of such #buildings#, driveways or required parking areas;
- (b) where the would create special hazards or dangers to persons or property, which it would not be possible or practical to eliminate by pruning;
- (c) where continued presence of the trees would interfere with another tree of six-inch caliper or more designated for preservation and belonging to a species listed in Appendix B (Tree Selection Tables); or
- (d) where authorizations granted by the City Planning Commission under the provisions of this Chapter require or clearly contemplate the removal of such trees.

If an existing tree of six-inch caliper or more identified for preservation is removed without prior approval by the Department of Buildings or the City Planning Commission, any permit issued by the Department of Buildings for a #site alteration#, #development# or any #use# on the #zoning lot# shall be revoked.

In order to remove such violations, the owner of the #zoning lot# shall request the Commission to specify the tree restoration requirements and to certify such requirements to the Department of Buildings.

No building permit, reinstatement of such permit or issuance of a certificate of occupancy shall occur until the owner of the #zoning lot# either posts with the Comptroller of the City of New York a landscaping performance bond in an amount determined by the Commission or completes the replanting in accordance with the requirements set forth by the Commission in order to correct the planting violations.

Replacement trees to be planted shall be of a caliper no less than three inches and be of a species listed in Appendix B and the sum of whose calipers shall be at least equivalent to that of the trees removed.

In addition, the Commission may require a restrictive declaration specifying the terms of implementing the restoration plan.

Where on-site planting of such replacement trees would result in over-crowding or would adversely affect the ecology of the site, the Commission may authorize planting of one or more replacement trees on adjoining public sidewalks or in a nearby public area or substituting

other planting material pursuant to Section 107-323.

**107-322-107-32  
Tree requirements Requirements**

For all #zoning lots#, New newly planted trees shall be provided in accordance with the table set forth in Appendix B planted no closer than eight feet from any other tree and be of a species selected from the New York City Native Species Planting Guide (as issued and revised by the Department of Parks and Recreation), or its successor.

For any existing tree of at least six-inch caliper which is preserved, credit for one tree shall be given for the first six inches of caliper and, for each additional four inches of caliper, credit for an additional tree shall be given.

- (a) On site Planting in #Residence Districts# or in a #zoning lot# with fewer than 10 parking spaces.

In connection with any #development#, #site alteration#, or #enlargement# involving the addition of at least 1,000 square feet of #floor area# in a #Residence District#, or in any #group parking facility# with fewer than 10 parking spaces, that are not fully enclosed, newly planted trees of at least one three-inch #caliper# and less than six-inch #caliper#, or pre-existing or newly planted, trees of at least six-inch #caliper#, shall be provided on the #zoning lot# at the rate of one #tree credit# for each 1,000 square feet of #lot area# or portion thereof.

A newly planted tree of between one and two-inch #caliper# shall have 0.5 #tree credits#, and a newly planted tree greater than two-inch #caliper# but less than six-inch #caliper# shall have one #tree credit#. Newly planted trees appearing on a site plan in an approved application may be counted toward #tree credits# on site plans for future applications if they have not yet grown to a six-inch or greater #caliper#, provided that they remain in good health and continue to comply with the standards set forth in this Section.

Any existing tree of at least six-inch #caliper# which is preserved and has no new paving, #development#, #enlargement#, or modification of topography within eight feet of such tree, shall have one #tree credit# for the first six inches of #caliper# and an additional #tree credit# for each additional three inches of #caliper#.

- (b) Planting for open parking areas

Any #development# or #enlargement# on a #zoning lot# that contains with open off-street parking areas with a #group parking facility# with 10 or more parking spaces that are not fully enclosed in or more shall be subject to the tree planting and screening requirements of Section 107-483.

**107-323-107-33  
Substitution of other plant materials Other Plant Materials**

For any #development#, #site alteration# or #enlargement# which is required to provide trees in accordance with the provisions of paragraph (a) of Section 107-322, the City Planning Commission may allow the substitution of other plant material for such required trees, provided a detailed landscaping plan is filed with the Commission for approval and certification. A copy of such approved landscaping plan shall be filed with the Department of Buildings by the Commission.

**107-33-107-34  
Preservation of Natural Features**

\* \* \*

**107-40  
SPECIAL USE, BULK AND PARKING REGULATIONS**

**107-41  
Type of Residence**

\* \* \*

**107-411  
Affordable independent residences for seniors in Area SH**

\* \* \*

**107-412  
Special bulk regulations for certain community facility uses in lower density growth management areas**

\* \* \*

**107-42  
Minimum Lot Area and Lot Width for Residences**

For all #zoning lots# containing #residences#, the minimum #lot area# and #lot width# requirements set forth in the table in this Section shall apply, which shall vary by #building# height. Where two or more #buildings# that are #single-# or #two-family# #detached# or #semi-detached# #residences# are located on a #zoning lot#, the applicable minimum #lot area# requirement shall be multiplied by the number of such #buildings# on the #zoning lot#.

The #lot width# requirements set forth in this Section shall be applied as set forth in the definition of #lot width# in Section 12-10 (DEFINITIONS), provided that the applicable #lot width#, in feet, set forth in the table shall be met along at least one #street line# of the #zoning lot# or, for #corner lots#, along each intersecting #street line#. No #residence#, or portion thereof, shall be permitted between opposing #side lot lines# where such #lot lines# would be nearer to one another at any point where such #residence# is located than the applicable minimum lot width, in feet, set forth in the table.

However, one #single-family# #detached# #residence# or, where permitted, one #single-# or #two-family residence#, may be built upon a #zoning lot# consisting entirely of a tract of land, that:

- (a) has less than the minimum #lot area# or #lot width# required pursuant to this Section; and
- (b) was owned separately and individually from all other adjoining tracts of land, both on December 8, 2005, and on the date of application for a building permit.

In all cases, the density regulations of the applicable district shall remain in effect, except that the factor for determining the maximum number of #dwelling units# shall be 1,000 in R3A and R4A Districts, 1,140 in R3X Districts, and 685 for #semi-detached# #residences# in R3-1 and R3-2 Districts.

District	Type of #Residence#	Height (in stories)	Minimum #Lot Area# (in sq. ft.)	Minimum #Lot Width# (in feet)
R1-1	#detached#	1-4	9,500	100
R1-2	#detached#	1-2	5,700	40
		3	5,700	50
		4	5,700	60
R2	#detached#	1-4	3,800	40
R3-1	#detached#	1-2	3,800	40
		3-4	3,800	45
R3-1 R3-2	#semi-detached#	1-2	2,375 <sup>3</sup>	24 <sup>3</sup>
		3-4	3,800	40
R3-2	#detached#	1-2	3,800	40
		3-4	4,275	45
	#attached#	1-2	1,700	18
		1-2	2,375 <sup>1</sup>	24 <sup>1</sup>
		3-4	2,280	24
3-4	3,800 <sup>1</sup>	40 <sup>1</sup>		
R3A	#detached#	1-3	3,325	35
R3X <sup>2</sup>	#detached#	1-2	3,800	40
		3	4,750	50
		4	5,700	60
R4A	#detached#	1-3	3,325	35
R4-1	#semi-detached# #detached#	1-3	2,375 <sup>3</sup>	24 <sup>3</sup>
		1-3	3,325	35

<sup>1</sup> For #attached buildings# that #abut# an #attached building# on a separate #zoning lot# on one side and on the other side are bounded by #yards# or open area.

<sup>2</sup> In Area LL as shown on the District Plan (Map 4 in Appendix A) of this Chapter, all #residences# shall have a minimum #lot area# of 5,700 square feet and a minimum #lot width# of 50 feet. However, the minimum #lot area# and minimum #lot width# set forth in this table shall apply to any #development# on a #zoning lot# having an area of at least 1.5 acres for which applications for certifications pursuant to Sections 107-08 (Future Subdivision) and 107-121 (Public schools) have been filed prior to March 1, 2003.

<sup>3</sup> For #two-family# #semi-detached# #residences# with a height of one or two #stories# in R3-1 and R3-2 Districts and for all #two-family# #semi-detached# #residences# in R4-1 Districts, the minimum #lot area# shall be 3,135 square feet and the minimum #lot width# shall be 33 feet.

BY SPECIAL PERMIT (PURSUANT TO SECTION 107-74)

District	Type of #Residence#	Height (in stories)	Minimum #Lot Area# (in sq. ft.)	Minimum #Lot Width# (in feet)
R2	#semi-detached#	1-4	3,800	30

	#attached#	1-4	3,800	22
R3-1	#attached#	1-2	1,700	20
		2-3	2,280	24

**107-421**  
**Minimum lot area and lot width for zoning lots containing certain community facility uses**

\* \* \*

**107-43**  
**Maximum Height for Buildings or Structures**

Subject to the requirements for maximum height of walls and required setbacks in Sections 23-63, 24-52 or 33-43, no #building# or other structure# shall exceed a height of four #stories# and no structures other than #buildings# shall exceed a height of 50 feet unless modified by a special permit of the City Planning Commission, pursuant to Section 107-73 (Exceptions to Height Regulations).

**107-44**  
**Maximum Floor Area Ratio for Community Facility Uses**

\* \* \*

**107-45**  
**Required Open Space for Residences**

\* \* \*

**107-46**  
**Yard and Court Regulations**

\* \* \*

**107-461**  
**Front yards**

\* \* \*

**107-462**  
**Side yards**

\* \* \*

**107-463**  
**Side yard regulations for other residential buildings**

\* \* \*

**107-464**  
**Side yards for permitted non-residential use**

\* \* \*

**107-465**  
**Modifications of special yard regulations for certain zoning lots**

\* \* \*

**107-466**  
**Court regulations**

\* \* \*

**107-467**  
**Modifications of yard and court requirements**

\* \* \*

**107-47**  
**Special Parking Regulations**

**107-471**  
**Modification of waiver requirements for spaces below minimum number**

For the purposes of this Chapter, the waiver provision set forth in Section 36-231 (In districts with high, medium or low parking requirements) shall not apply to any #development# in the Special District.

**107-472**  
**Maximum size of group parking facility Group parking facilities within plan review sites**

For the purposes of this Chapter, no #accessory# #group parking facility# for non-#residential uses# shall contain more than 30 off-street parking spaces be permitted anywhere on a #plan review site#, or any #zoning lot# that contained one or more acres on [date of adoption], except as set forth in Sections 107-51 (Certification of Certain Plan Review Sites) or 107-68 (Modification of Group Parking Regulations).

107-473

Location of required parking

For a #residential# #building# on a #zoning lot# containing a #wetland-adjacent area# or #designated open space#, the provisions of Section 25-622 (Location of parking spaces in lower density growth management areas) that do not permit open off-street parking between the #street line# and the #street wall# or prolongation thereof of a #building# shall not apply.

107-48

Special Landscaping and Buffering Provisions

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107-481

Planting provisions along Residence District boundaries

\* \* \*

107-482

Landscaped buffer for manufacturing development adjacent to residences

\* \* \*

107-483

Planting and screening for open parking areas

#Zoning lots# that contain a #group parking facility# with 10 or more parking spaces that are not fully enclosed, shall be subject to paragraphs (a) and (b) of this Section and may be subject to paragraph (c) of this Section.

(a) Tree planting requirements for open parking

The provisions of Section 37-921 (Perimeter landscaping) shall apply to all facilities. In addition, one tree, of three-inch #caliper# or more, pre-existing or newly planted, shall be provided for each four open parking spaces and. Such trees may be located in the perimeter landscaped area of the parking area or in planting islands within the parking area.

However, where 30 or more open parking spaces are provided, at least 50 percent of the required trees shall be located within planting islands within the parking area. Such planting islands shall have a minimum area of 150 square feet of pervious surface and comply with the requirements of paragraphs (a), (b) and (c) of Section 37-922 (Interior landscaping).

For open parking areas with at least 36 parking spaces, the total number of trees required pursuant to Section 37-922- (Interior landscaping) shall be superseded by the number of trees required pursuant to this Section.

(b) Screening requirements

The For open parking areas or parking garages located on the ground floor and not fully enclosed, such non-enclosed portion shall be screened from all adjoining #zoning lots# by a landscaped area at least four feet in width, densely planted with shrubs maintained at a maximum height of three feet. Such Open parking areas shall also be screened from all adjoining #streets# by a perimeter landscaped area at least seven feet in width in accordance with Section 37-921 (Perimeter landscaping). Such perimeter landscaped area may be interrupted only by vehicular entrances and exits. Sidewalks that provide a direct connection between the public sidewalk and a pedestrian circulation route within the parking area may also interrupt a perimeter landscaped area.

In addition, such screening shall be maintained in good condition at all times and may be interrupted by normal entrances and exits.

(c) Planting Wwaiver

Tree planting and screening requirements may be waived if the Commissioner of Buildings certifies that planting is unfeasible due to:

- (1) unique geological conditions, such as excessive subsurface rock conditions or high water table;
(2) underground municipal infrastructure; or
(3) a City, State or Federal mandated brownfield remediation that requires the site to be capped.

Such waiver shall be based on a report prepared by a licensed engineer that such conditions exist.

For #developments# in #Residential Residence Districts#, trees provided in accordance with the provisions of this Section may be counted for the purposes of meeting the requirements of paragraph (a) of Section 107-322, paragraph (a). Furthermore, for #developments# in #Commercial# or #Manufacturing Districts#, which provide trees in accordance with the provisions of this Section, the requirements of

Section paragraph (a) of 107-322, paragraph (a), shall not apply.

107-49

Special Regulations for Area M

\* \* \*

107-491

Special use regulations for residential uses

\* \* \*

107-492

Special bulk regulations

\* \* \*

107-50

CERTIFICATIONS

Administrative certifications from the City Planning Commission are required, as set forth in various sections of this Chapter, in any one of the following circumstances:

- (a) when a tract of land is certain #plan review sites# are subdivided, as set forth in Section 107-08 (Future Subdivision of Certain Plan Review Sites);
(b) when a #development# contains #residential uses#, as set forth in Section 107-121 (Public schools);
when certain #plan review sites# meet the requirements set forth in Section 107-51 (Certification of Certain Plan Review Sites) and do not require an authorization pursuant to Section 107-60, inclusive;
(c) when a #zoning lot# contains #designated open space#, as set forth in Section 107-22 (Designated Open Space);
(d) where required #yards# or equivalents are to be modified as set forth in Section 107-465 (Modifications of special yard regulations for certain zoning lots);
(e) where a #zoning lot# along an #arterial# requests more than one curb cut, as set forth in Section 107-251 (Special provisions for arterials);
(f) where plant material is substituted for required trees as set forth in Section 107-32 107-33 (Substitution of other plant materials Other Plant Materials); or
(g) when #development# takes place within areas D, F, or K, as set forth in Section 107-02 (General Provisions); or
(h) when a #zoning lot# contains a portion of the proposed #waterfront esplanade#, as set forth in Section 107-23 (Waterfront Esplanade).

107-51

Certification of Certain Plan Review Sites

For any #enlargement# or #site alteration# on a #plan review site# which does not comply with the provisions of Section 107-31 (General Regulations for Natural Features), the Chairperson of the City Planning Commission shall certify that:

- (a) such #plan review site# does not:
(1) contain any of the district plan elements as set forth in Section 107-20 (DISTRICT PLAN ELEMENTS), inclusive;
(2) contain a #wetland-adjacent area#; and
(3) exceed the rate of two #tree credits# per 1,000 square feet of lot area as of [date of adoption];
(b) new or existing tree planting shall satisfy tree requirements pursuant to Section 107-32 (Tree Requirements); and
(c) the resulting #enlargement# or #site alteration# does not require more than 10 additional accessory off-street parking spaces for a #commercial#, #community facility#, or #manufacturing use#.

Any #enlargement or #site alteration# on a #plan review site# which does not comply with these conditions, or any #development# on a #plan review site#, shall require an authorization pursuant to Section 107-60 (AUTHORIZATIONS).

107-60

AUTHORIZATIONS

107-61

General Provisions

\* \* \*

**107-62  
Yard, Court and Parking Regulations**

For any #plan review site# or any #zoning lots# containing #designated open space# or a #wetland-adjacent area#, the City Planning Commission may authorize variations in the #yard# or #court# regulations as set forth in Section 107-46, inclusive, or in the location of parking, driveway or curb cut regulations as set forth in Sections 23-44 (Permitted Obstructions in Required Yards or Rear Yard Equivalents), 25-621 (Location of parking spaces in certain districts), 25-622 (Location of parking spaces in lower density growth management areas) and 25-631 (Location and width of curb cuts in certain districts) 25-632 (Driveway and curb cut regulations in lower density growth management areas) for the purpose of allowing proper arrangements of #buildings#, driveways or required parking areas so as to avoid the destruction of natural features, existing topography and individual trees of six-inch caliper or more. #Rear yard#, #side yard# or #side yard# equivalent variations shall not be authorized on the periphery of a #development# unless acceptable agreements are jointly submitted for #development# of two or more adjacent #zoning lots# by the owners thereof, incorporating the proposed #yard# or #side yard# equivalent variations along their common #lot lines#.

As a condition for granting such authorizations, the Commission shall find that the proposed placement of #buildings# and arrangement of #open spaces# will not have adverse effects upon light, air and privacy on adjacent #zoning lots# and will preserve natural features in #areas of no disturbance#.

**107-63  
Minimum Distance Between Buildings**

\* \* \*

**107-64  
Removal of Trees Future Subdivision of Certain Plan Review Sites**

For any #development#, the City Planning Commission may authorize the removal of trees of six-inch caliper or more whose removal would otherwise be prohibited under the provisions of Section 107-32 provided that the Commission makes one or more of the following findings:

- (a) that the tree's retention would cause serious disadvantage in the arrangement of open areas on the lot, impairing the usefulness of such areas;
- (b) that such tree is located in an area where more than two feet of cut or fill is required and measures for saving the tree would be extremely difficult and impractical; or
- (c) that provision of a segment of the #waterfront esplanade# is not feasible without such tree's removal.

For any #plan review site# that does not comply with Section 107-08 (Future Subdivision of Certain Plan Review Sites), the City Planning Commission may authorize a future subdivision into two or more #zoning lots#, provided that the Commission finds that:

- (a) to the greatest extent possible, all individual trees of six-inch #caliper# or more, the existing topography, and all land located within a #designated open space#, are preserved under future #development# options;
- (b) such subdivision complies with the goals described in paragraph (c) of Section 107-00 (GENERAL PURPOSES); and
- (c) where vehicular access and egress are located on an #arterial#, the location of such vehicular access and egress permits better site planning.

Any subdivision that is proposed to take place within the Special District after [date of adoption], shall be filed with the City Planning Commission. A site plan and #area plan# shall indicate the distribution of #bulk# for the individual #zoning lots# submitted to the Commission. Such approved subdivision shall then be recorded in the land records and indexed against all #zoning lots#.

**107-65  
Modifications of Existing Topography Natural Feature Regulations**

For any #development#, #enlargement#, or #site alteration# on #plan review sites# or within #designated open space#, the City Planning Commission may authorize modifications of the natural topography existing on September 11, 1975 [date of adoption] beyond the amount specified in Section 107-31 (Topographic Regulations General Regulations for Natural Features), inclusive, or modification of tree regulations pursuant to Sections 107-312 (Regulations within plan review sites) and 107-32 (Tree Requirements), provided that the Commission finds that:

The Commission may authorize modifications to natural features, provided that the Commission finds that:

- (a) #development# on the #zoning lot# is not feasible without such modifications the modifications are the minimum necessary to facilitate the project;
- (b) such modification of topography is necessary to accommodate public amenities, such as public pedestrian ways, the #waterfront esplanade# or active recreational facilities within a #designated open space# as required under the provisions of this Chapter;
- (c) such modification will not cause unnecessary disturbance of the drainage pattern in the area; and
- (d) such modified topography modification will have minimal impact on the existing natural topography features of the surrounding area and will blend harmoniously with it; and
- (e) areas within the #zoning lot# that contain natural features are preserved within a proposed #area of no disturbance#, especially those areas which are contiguous to #designated open space#, #wetland-adjacent areas#, or other area containing mostly natural features.

Where a permit for land contour work or topographic modification is required from the Department of Transportation or the Department of Buildings, the City Planning Commission and other such agencies shall jointly determine the conditions under which such topographic modification may be permitted so as best to serve the purposes of the Special District, in accordance with the provisions of Section 107-91 (Inter-agency Coordination).

The Commission may prescribe appropriate conditions and safeguards to minimize adverse effects on the character of the surrounding area.

**107-66  
Developments Partly Within Designated Open Space**

**107-661  
Modification of permitted obstructions**

\* \* \*

**107-662  
Modification of required yards of building setbacks**

On application, the City Planning Commission may grant an authorization modifying the building setback requirements of Section 107-251 107-241 (Special provisions for arterials), provided that the Commission finds that:

\* \* \*

**107-67  
Uses and Bulk Permitted in Certain Areas**

**107-671  
In Areas F and K**

In Areas F and K, as shown in the District Plan (Map 4 in Appendix A), the City Planning Commission may authorize one or more #uses# in the Use Groups specified in this Section not permitted by the underlying district regulations:

As a condition for such authorization, the Commission shall find that:

- (a) such #uses# are so located as not to impair the essential character of the surrounding area for its future development;
- (b) the minimum #lot area# of a #zoning lot# on which such #uses# are located is at least 20 acres;
- (c) vehicular access and egress for such proposed #uses# are located and arranged so as to draw a minimum of vehicular traffic to and through local #streets# in nearby residential areas; and
- (d) where vehicular access and egress are located on an #arterial#, such location affords the best means for controlling the flow of traffic generated by such proposed #uses# to and from such #arterial#.

In each case the Commission may prescribe additional conditions and safeguards, including requirements for adequate screening, planting or landscaping.

Areas (as designated on the District Map)	Permitted Use Groups
F	12
K	7A 7B 7D 7E

**107-672 107-671  
In Area SH**

\* \* \*

**107-68  
Modification of Group Parking Facility and Access Regulations**

For a permitted #commercial#, #community facility# or #manufacturing# #use#, the City Planning Commission may authorize more than 30 #accessory# off-street parking spaces in a #plan review site# or portion of a #plan review site# existing on [date of adoption] and for any #use#, may modify access restrictions with regard to curbs cuts as set forth in paragraph (a) of Section 107-251 (Special provisions for arterials) or paragraph (a) of Section 107-252 (Special provisions for park streets). In order to grant such authorization, the Commission, upon a review of the site plan, shall find that:

- (a) vehicular access and egress are located and arranged so as to draw a minimum of vehicular traffic to and through local #streets# in nearby residential areas;
- (b) where vehicular access and egress are located on an #arterial# or #park street#, such location affords the best means for controlling the flow of traffic generated by such #use# to and from such #arterial# or #park street#, and does not unduly interfere with pedestrian traffic; and
- (c) the location of such vehicular access and egress the design of the parking facility permits better site planning avoids undue conflict between pedestrian and vehicular movements in a manner that results in a better site plan.

The Commission may prescribe appropriate conditions and safeguards to minimize adverse effects on the character of the surrounding area and may, in appropriate cases, condition its authorization upon compliance with an approved site and landscaping plan. The Commission may also permit modifications to parking lot landscaping and maneuverability requirements only if such modifications preserve vegetation and natural topography natural features.

**107-69  
Residential Uses in Area M**

\* \* \*

**107-70  
SPECIAL PERMITS**

**107-71  
General Provisions**

On application, the City Planning Commission, may grant special permits for modifications of specified regulations of this Chapter or of the underlying districts in accordance with the provisions of Sections 107-72 to 107-78, inclusive, relating to Special Permits special permits.

**107-72  
Qualification of Designated Open Space as Lot Area**

\* \* \*

**107-73  
Exceptions to Height Regulations**

\* \* \*

**107-74  
Modification of Permitted Use Regulations**

\* \* \*

**107-75  
Modification of Underlying R1-1 District Regulations**

For any #development#, the City Planning Commission may grant special permits for the modifications of underlying R1-1 District regulations on #yards# or #courts# where such modifications are appropriate in order to:

- (a) permit siting of a #building# or driveway so as to avoid destruction of a valuable tree of six-inch caliper or more; or
- (b) allow a #building# to be arranged on a #zoning lot# that includes #designated open space# without encroaching on such #designated open space#.

As a condition for granting such modifications, the Commission shall find that:

- (1) the siting of the #building# will not adversely affect adjacent properties by impairing privacy or access of light and air;
- (2) the benefits to the surrounding area from the proposed arrangement of #buildings# and #open spaces# outweigh any disadvantages which may be incurred thereby in the area; and
- (3) such modification is the least modification required to achieve the purpose for which it is granted.

The Commission may impose appropriate conditions or safeguards, such as special landscaping requirements, to minimize any adverse effects on the character of the surrounding area.

**107-76  
Boundary Adjustments in Designated Open Space**

\* \* \*

**107-77  
Community Facility Buildings or Treatment Plants Permitted in Designated Open Space**

\* \* \*

**107-78  
Other Buildings Permitted in Designated Open Space**

\* \* \*

**107-80  
LARGE-SCALE RESIDENTIAL DEVELOPMENT REGULATIONS**

**107-81  
Applicability of Large-scale Residential Development Regulations**

All regulations of Article VII, Chapter 8 (Special Regulations Applying to Large-scale Residential Development), are applicable in the Special District.

**107-82  
Applicability of Large-scale Residential Development Regulations to Parcels Containing Designated Open Space**

Any #development# used predominantly for #residential use# on a #zoning lot# which includes #designated open space# may be treated as a #large-scale residential development#, and special authorizations or special permits for such #development# may be granted in accordance with the provisions of Article VII, Chapter 8, as modified herein, regardless of whether such #development# will have the area, number of #buildings#, or number of #dwelling units# specified in the definition of #large-scale residential development# as set forth in Section 12-10 (DEFINITIONS), except as provided in Sections 107-821 to 107-823, inclusive.

**107-821  
Bonus provisions**

Bonuses which may be granted for #large-scale residential developments# under the provisions of Sections 78-32 (Bonus for Good Site Plan), 78-33 (Bonus for Common Open Space) or 78-35 (Special Bonus Provisions), may not be granted for #developments# which have less than the minimum area, number of #buildings# or number of #dwelling units# required by the definition of a #large-scale residential development#.

**107-822  
Lot area restriction**

Authorizations or special permits granted within the #Special South Richmond Development District# pursuant to this Resolution shall be consistent in all cases with the provisions of Section 107-224 (Qualification of designated open space as lot area for bulk computations).

**107-823  
Common open space**

Approval by the City Planning Commission of a development plan incorporating #designated open space# as common #open space# shall be conditioned upon the findings required in Section 78-52 (Common Open Space), except that the Commission may waive or modify any requirements of paragraph (g) of Section 78-52.

Notwithstanding any provision in Article VII, Chapter 8, or elsewhere in this Zoning Resolution, if the City of New York acquires title or a less than fee interest in any #designated open space# which serves as required #open space# for a #development# and the acquisition occurs while the #development# is under construction or after it is completed, it shall not affect the area's qualifications for satisfying #open space# requirements for #zoning lots# in the #development#.

**107-83  
Modification of Minimum Required Lot Area for Residences**

Modification of minimum required #lot area# for #residences# as set forth in Section 107-42 may be granted by the City Planning Commission, pursuant to Section 78-311, paragraph (c).

**107-84  
Joint Applications**

Notwithstanding the provisions of Section 78-06 (Ownership), a tract of land which includes #designated open space# and which is the subject of an application under the provisions of Section 107-81 (Applicability of Large-scale Residential Development Regulations), may include adjacent properties in more than one ownership, provided that the application is filed jointly by the owners of all the properties

included. Any subdivision of the tract reflecting ownerships at the time of application or creating new ownerships before, during or after #development# shall be subject to the provisions of Section 78-51- (General Provisions):

107-90 SPECIAL ADMINISTRATIVE PROVISIONS FOR RECORDATION

107-91 Inter-agency Coordination

Where an authorization or permit for a #site alteration# or #development# is required from the City Planning Commission pursuant to this Chapter and where a permit is required from the Department of Transportation or Department of Buildings for land contour work, or from the Department of Environmental Protection for a storm water drainage system for #buildings# or adjacent areas, or where construction of a public improvement project is undertaken by a City agency, the Department of City Planning and the agencies involved shall jointly determine the conditions under which such proposed #development# or #site alteration# will best meet the purposes of the #Special South Richmond Development District#.

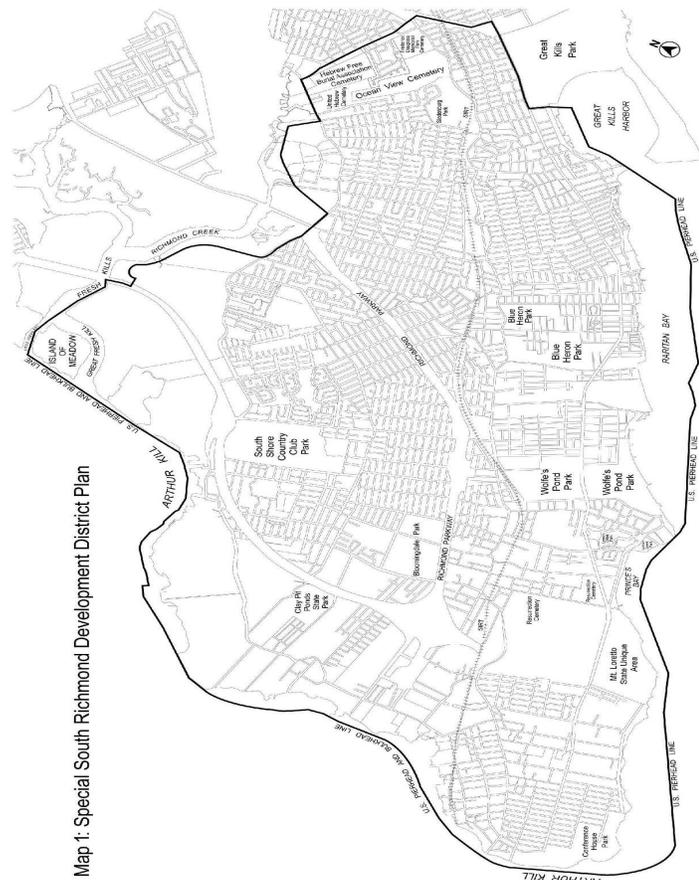
107-92 Recordation

When any #yard# requirement of the applicable district regulations is modified by the City Planning Commission pursuant to Section 107-46 (Yard and Court Regulations), prior to the filing of an application for any permit with the Department of Buildings, there shall be recorded in the Office of the County Clerk, County of Richmond, and indexed against such #zoning lots# to be #developed# as a unit, an instrument describing all conditions and restrictions required by the Commission for the #development# and #use# of such #zoning lots#. Recordation of instruments may be required in connection with any other zoning application hereunder. A certified copy of such instrument shall be submitted to the City Planning Commission upon recordation thereof.

The #Special South Richmond Development District# Plan, individual District Plan Maps and Tree Selection Tables are incorporated as Appendices A and B Appendix A of this Chapter.

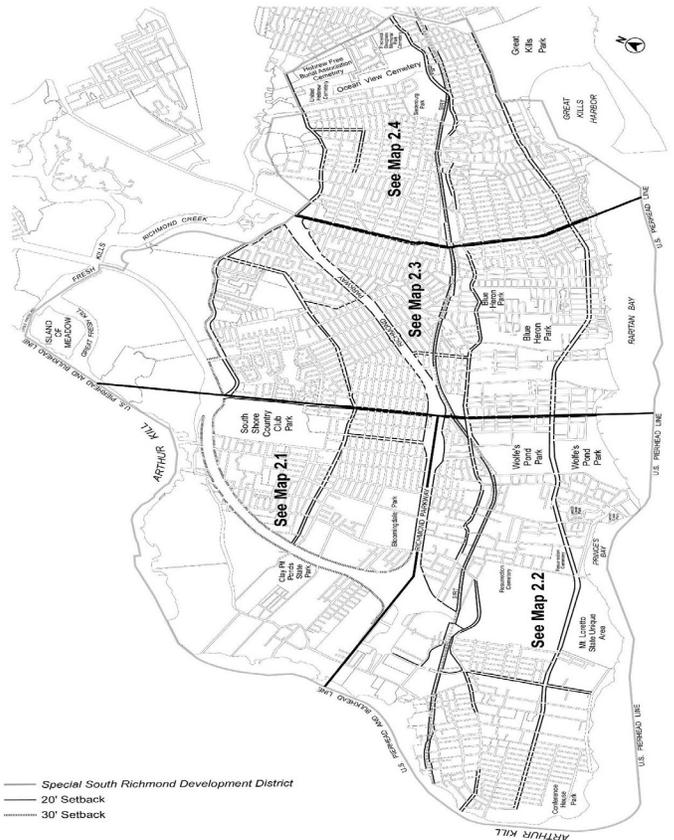
Appendix A Special South Richmond Development District Plan

Map 1 — District Plan



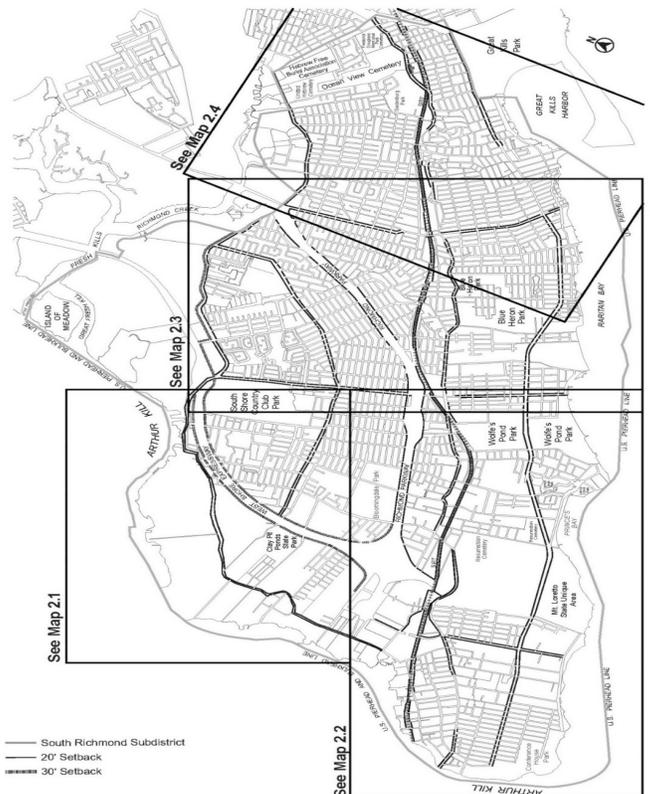
Map 2 — Arterial Setback Plan

[EXISTING MAP]



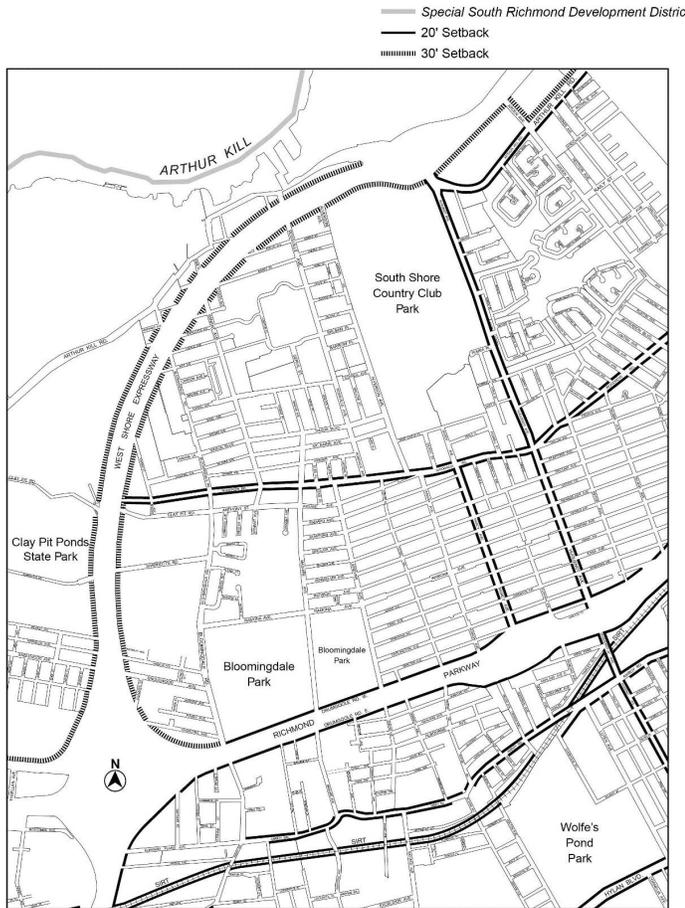
[PROPOSED MAP]

Appendix A Map 2. Arterial Setback Plan (date of adoption)



Map 2.1 — Arterial Setback Plan

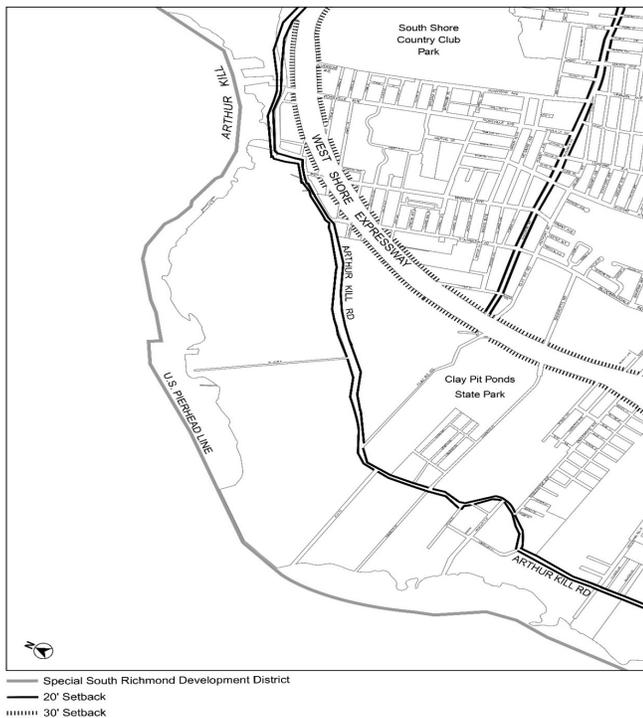
[EXISTING MAP]



[PROPOSED MAP]

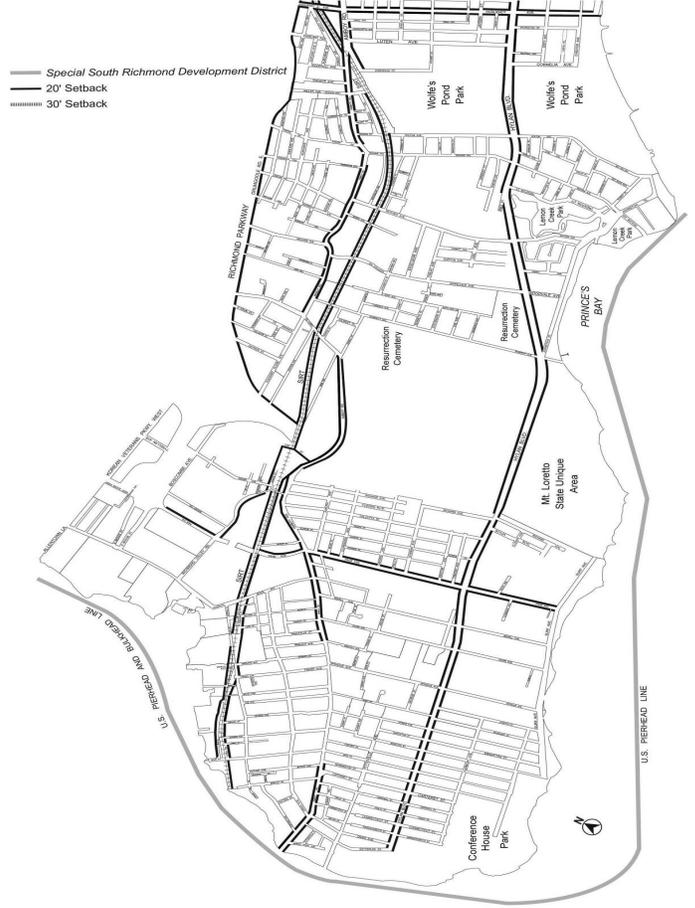
Appendix A

Map 2.1 Arterial Setback Plan (date of adoption)



Map 2.2 — Arterial Setback Plan

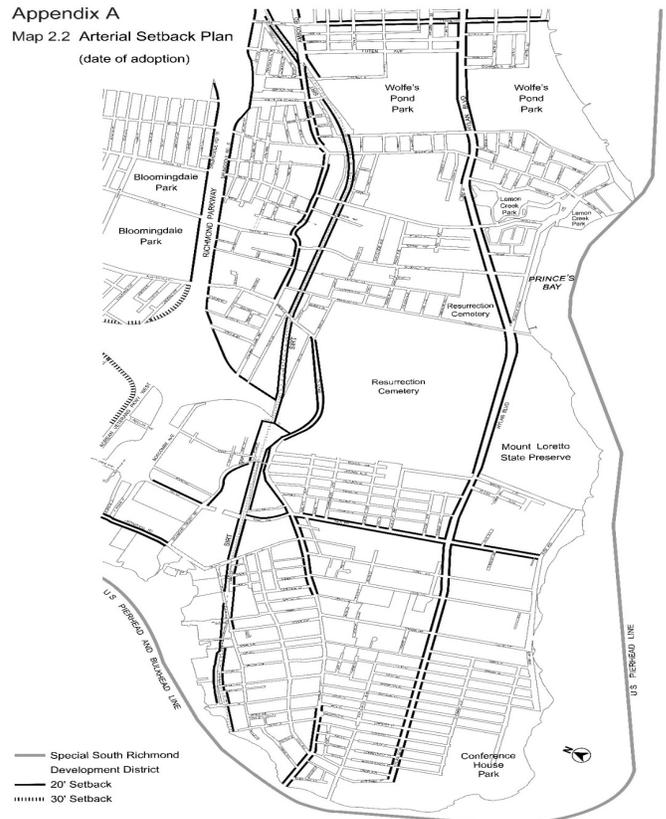
[EXISTING MAP]



[PROPOSED MAP]

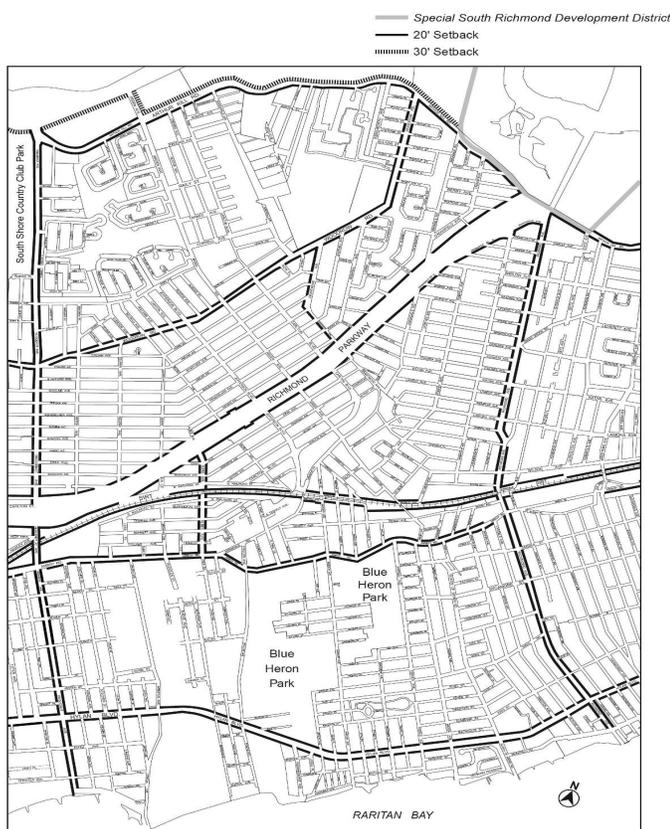
Appendix A

Map 2.2 Arterial Setback Plan (date of adoption)



Map 2.3 — Arterial Setback Plan

[EXISTING MAP]



[PROPOSED MAP]

Appendix A

Map 2.3 Arterial Setback Plan (date of adoption)



- Special South Richmond Development District
- - - 20' Setback
- ..... 30' Setback

Map 2.4 — Arterial Setback Plan

[EXISTING MAP]



[PROPOSED MAP]

Appendix A

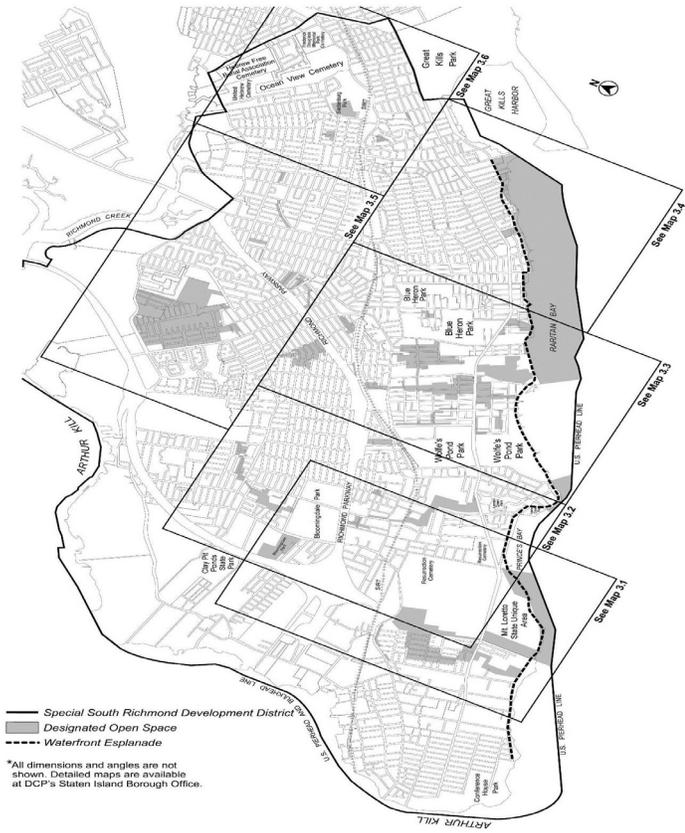
Map 2.4 Arterial Setback Plan (date of adoption)



- Special South Richmond Development District
- - - 20' Setback
- ..... 30' Setback

Map 3 — Open Space Network

[EXISTING MAP]



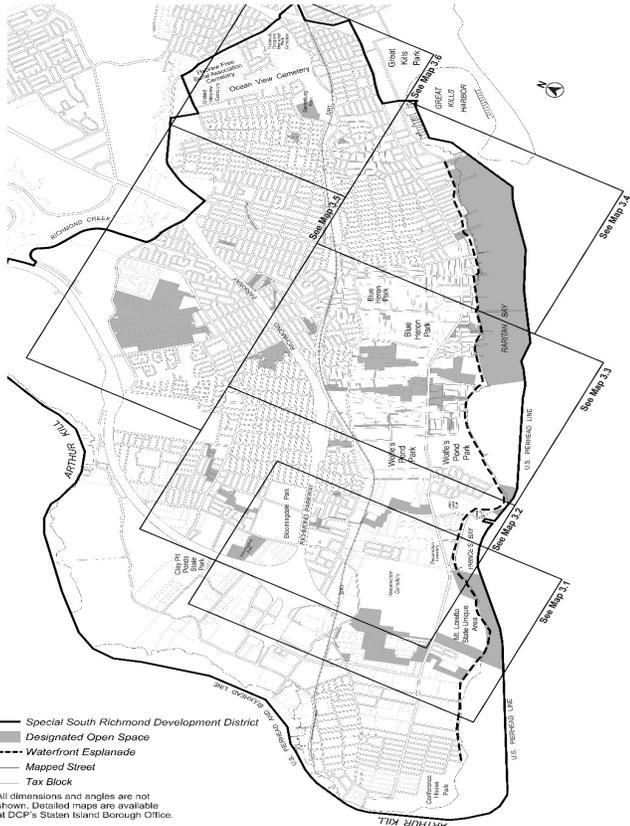
- Special South Richmond Development District
- Designated Open Space
- - - Waterfront Esplanade

\*All dimensions and angles are not shown. Detailed maps are available at DCP's Staten Island Borough Office.

[PROPOSED MAP]

Appendix A

Map 3 Open Space Network (date of adoption)

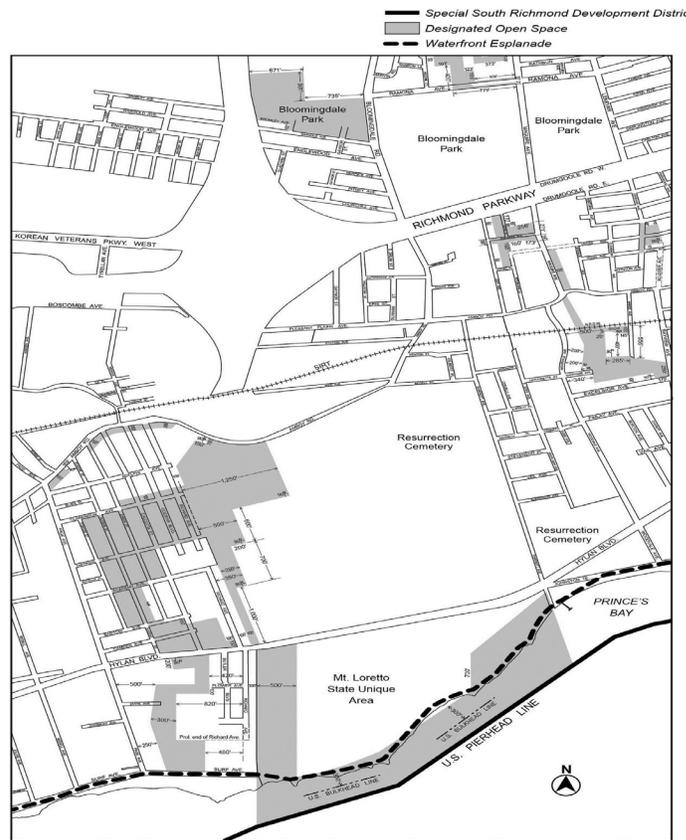


- Special South Richmond Development District
- Designated Open Space
- - - Waterfront Esplanade
- Mapped Street
- Tax Block

\*All dimensions and angles are not shown. Detailed maps are available at DCP's Staten Island Borough Office.

Map 3.1 — Open Space Network

[EXISTING MAP]

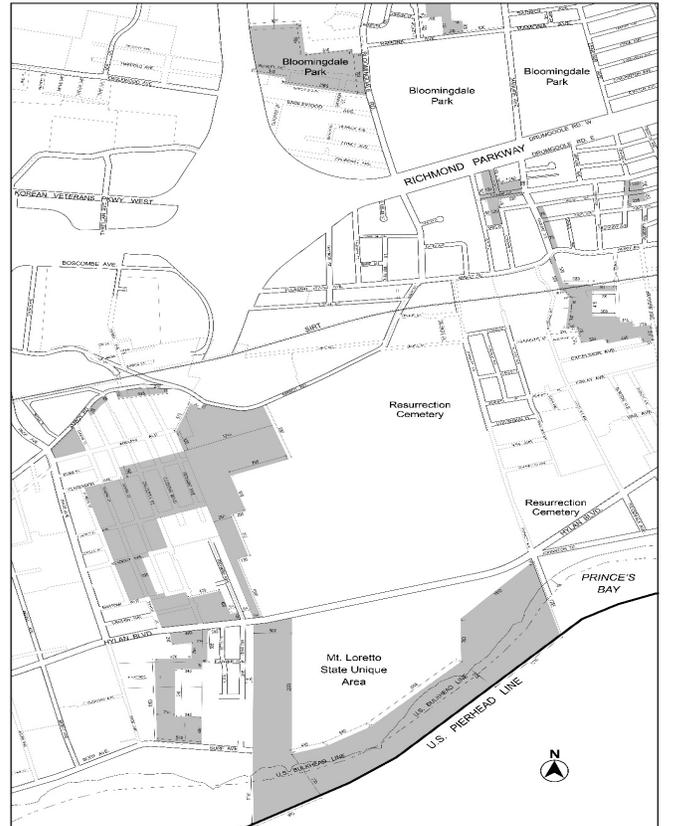


- Special South Richmond Development District
- Designated Open Space
- - - Waterfront Esplanade

[PROPOSED MAP]

Appendix A

Map 3.1 (date of adoption)

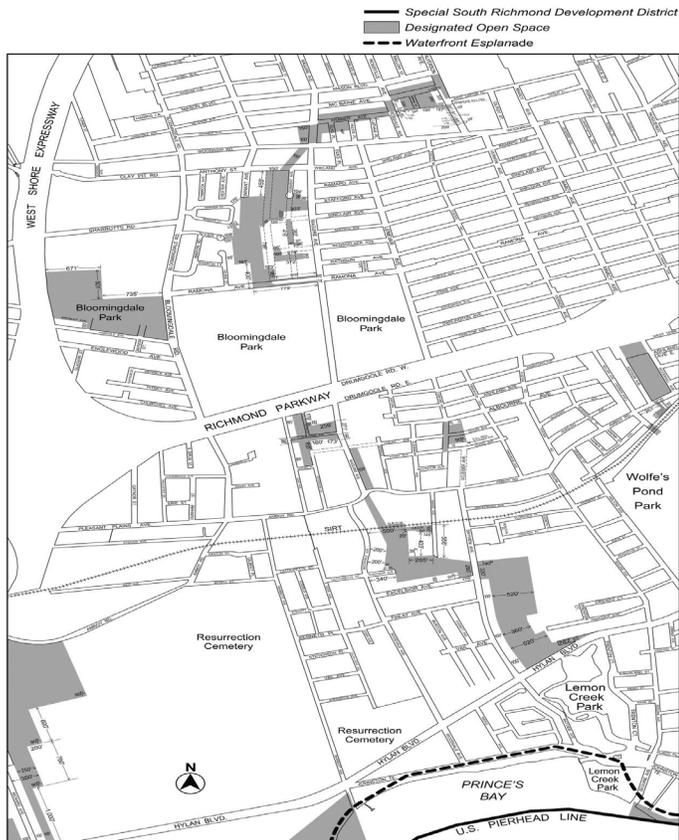


- Special South Richmond Development District
- Designated Open Space
- - - Waterfront Esplanade
- Mapped Street
- Tax Block

\*All dimensions are in feet

Map 3.2 — Open Space Network (6/29/11)

[EXISTING MAP]

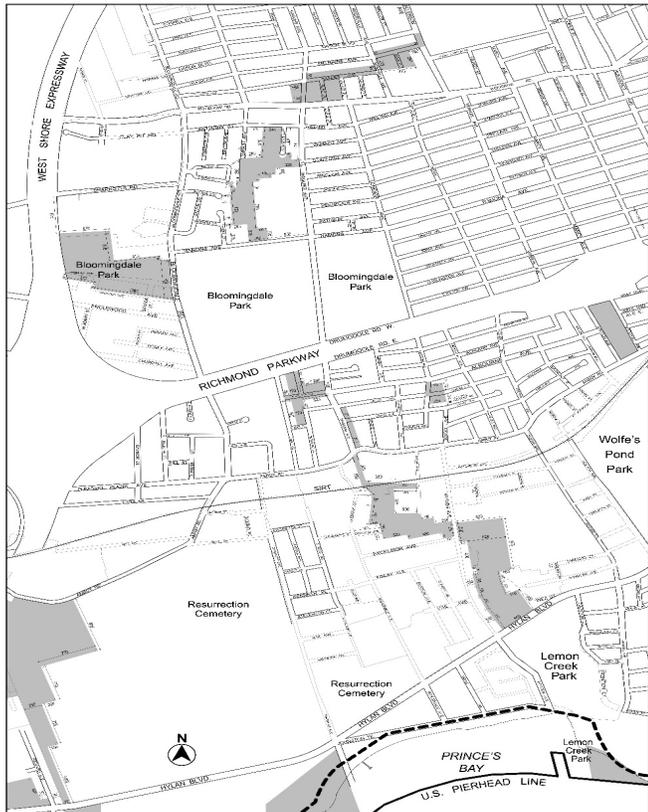


[PROPOSED MAP]

Appendix A

Map 3.2 (date of adoption)

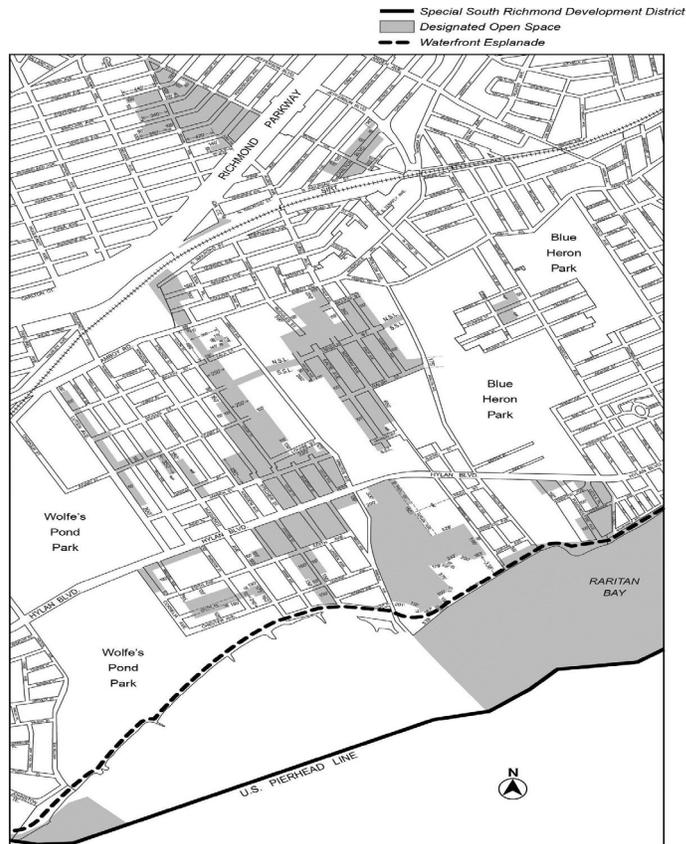
- Special South Richmond Development District
- Designated Open Space
- Waterfront Esplanade
- Mapped Street
- Tax Block



\*All dimensions are in feet

Map 3.3 — Open Space Network

[EXISTING MAP]

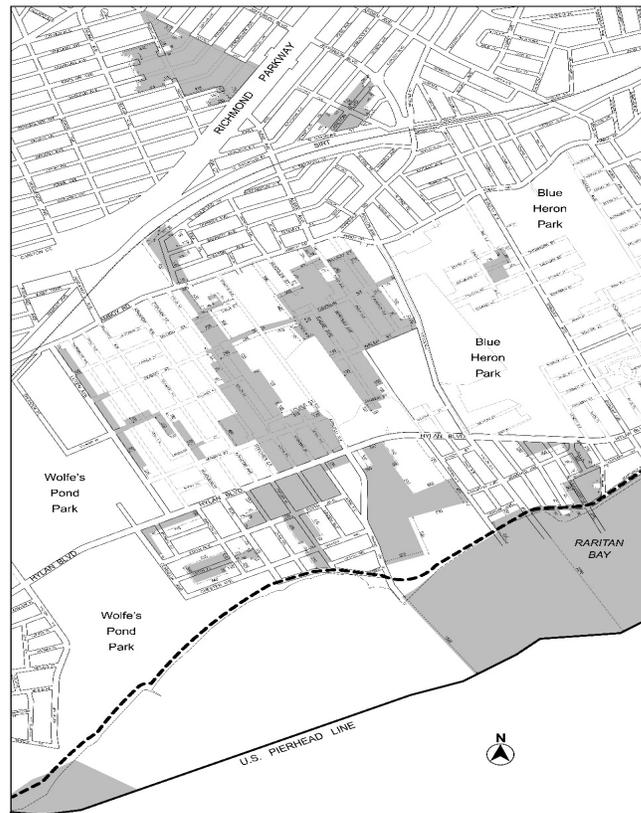


[PROPOSED MAP]

Appendix A

Map 3.3 (date of adoption)

- Special South Richmond Development District
- Designated Open Space
- Waterfront Esplanade
- Mapped Street
- Tax Block



\*All dimensions are in feet

Map 3.4 — Open Space Network (7/29/92)

[EXISTING MAP]

- Special South Richmond Development District
- Designated Open Space
- - - Waterfront Esplanade



[PROPOSED MAP]

Appendix A

Map 3.4 (date of adoption)

- Special South Richmond Development District
- Designated Open Space
- - - Waterfront Esplanade
- Mapped Street
- Tax Block



\*All dimensions are in feet

Map 3.5 — Open Space Network (10/22/81)

[EXISTING MAP]

- Special South Richmond Development District
- Designated Open Space



[PROPOSED MAP]

Appendix A

Map 3.5 (date of adoption)

- Special South Richmond Development District
- Designated Open Space
- Mapped Street
- Tax Block

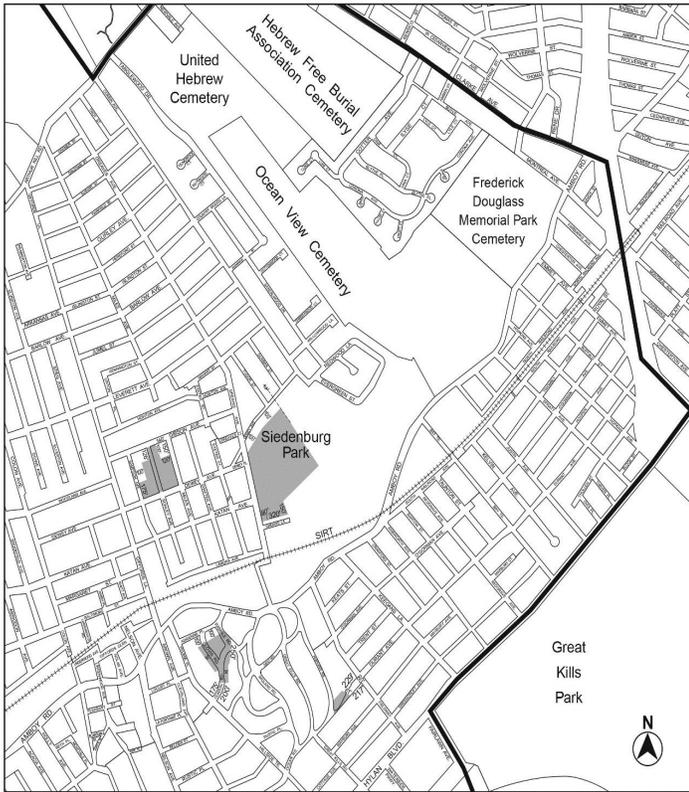


\*All dimensions are in feet

Map 3.6 — Open Space Network

[EXISTING MAP]

- Special South Richmond Development District
- Designated Open Space

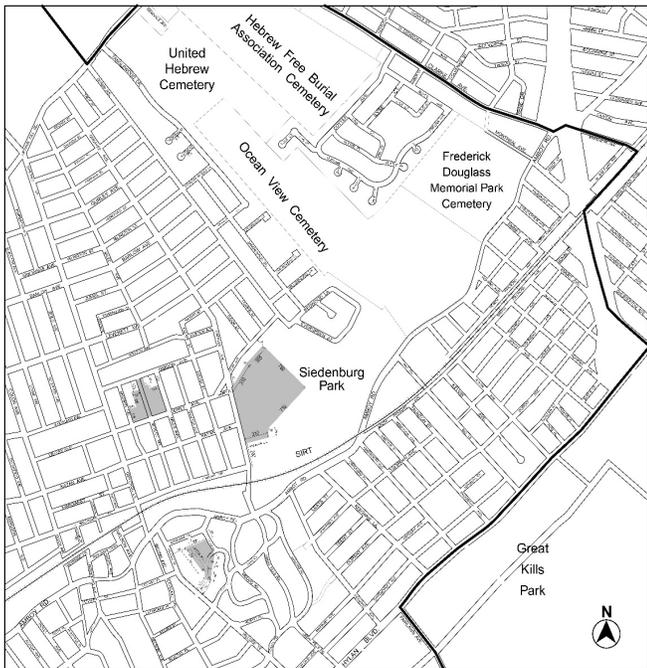


[PROPOSED MAP]

Appendix A

Map 3.6 (date of adoption)

- Special South Richmond Development District
- Designated Open Space
- Mapped Street
- Tax Block



\*All dimensions are in feet

Map 4 — Special Areas

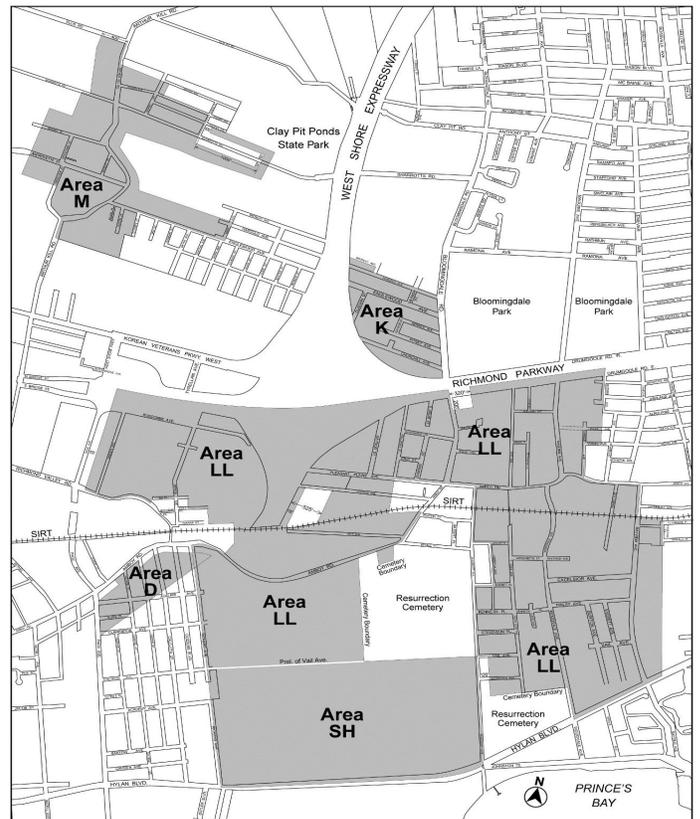
- Special South Richmond Development District
- Special Areas- D, F, K, M
- Large Lot (LL), Senior Housing (SH)



Map 4.1 4 — Special Areas D, K, LL, M and SH

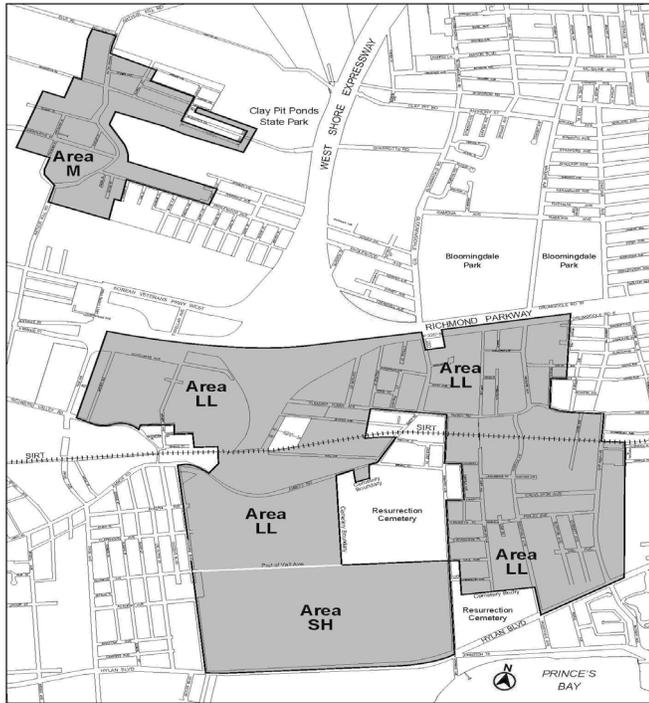
[EXISTING MAP]

Map 4.1: Special Areas D, K, LL, M and SH

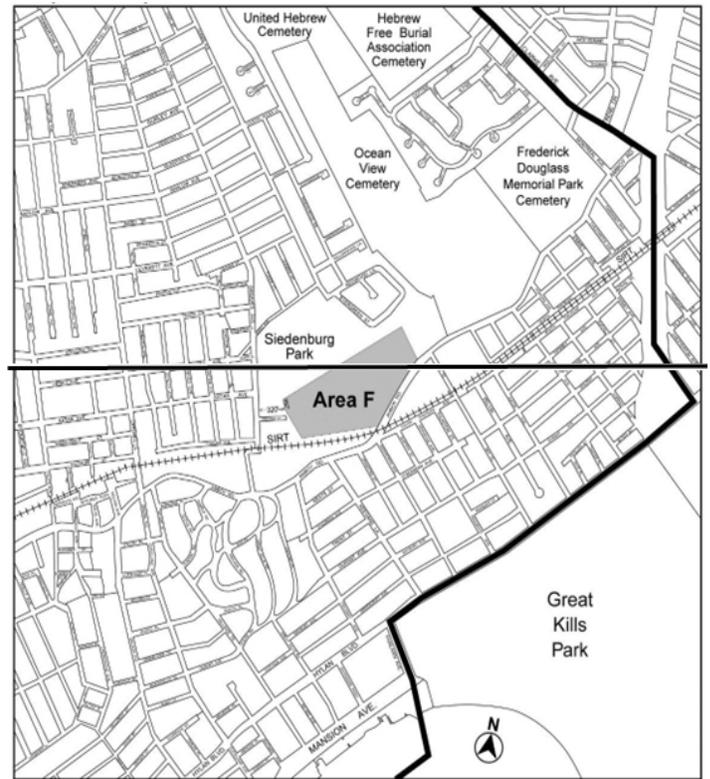


[PROPOSED MAP]

Appendix A (date TBD)  
 Map 4. Special Areas LL, M and SH



Map 4.2 — Special Area F



Appendix B  
 Tree Selection Tables

Small Trees, 12 - 35 feet at mature height: Uses

Species	Use						
	Sidewalk	On Lot	Common open space	Screening	Setback	Park Street	Replacement
Crabapple (Malus)		x	x				x
Carolina Silver Bell (Halesia carolina)		x	x				
Flowering Cherry (Prunus)	x	x	x		x	x	x
Flowering Dogwood (Cornus florida)		x	x		x	x	x
Golden Rain Tree (Koelreuteria paniculata)	x	x	x			x	x
Hawthorne (Crataegus)		x	x		x		
Hedge Maple (Acer campestre)		x	x	x	x	x	x
Japanese Maple (Acer palmatum)		x	x		x		
Russian Mulberry (Morus alba 'Tatarica')		x	x			x	
Russian Olive (Elaeagnus augustifolia)	x	x	x				
Saucer Magnolia (Magnolia soulangeana)		x	x	x	x	x	x

Small Trees, 12 - 35 feet at mature height: Shape, Foliage, Advantages, Disadvantages and Characteristics:

Species	Shape	Foliage	Advantages	Disadvantages	Other Characteristics
Crabapple (Malus)	round	dense	moderate growth rate, easily transplanted, no maintenance	litters, needs full sun	flowering fruit, fall color: yellow-orange
Carolina Silver Bell (Halesia carolina)	round	light	withstands insects	requires well drained soil; requires moist soil	flowers, fall color
Flowering Cherry (Prunus)	round	light	tolerant of shade	short lived	flowering
Flowering Dogwood (Cornus florida)	spreading	light	moderate growth rate, easily transplanted, no maintenance	needs wind protection; requires well drained soil	flowers, red fall color
Golden Rain Tree (Koelreuteria paniculata)	round	dense	all soils, rapid growth rate, tolerates city, easily transplanted	requires sun	flowers
Hawthorne (Crataegus)	round	dense	easily transplanted	needs pruning, thorns; intolerate of pests, slow growth	fall color: bronze, red
Hedge Maple (Acer campestre)	round	dense	all soils, tolerates city	requires well drained soil	fall color
Japanese Maple (Acer palmatum)	round	dense	no maintenance	slow growth rate, difficult to transplant	red fall color
Mulberry (Morus alba 'Tatarica')	round	dense	all soils, rapid growth rate	litters, needs wind protection, needs pruning	fruit
Russian Olive (Elaeagnus augustifolia)	spreading	light	withstands insects, grows in dry soil	requires sun	flowers
Saucer Magnolia (Magnolia soulangeana)	round	dense	moderate growth rate, easily transplanted, tolerates city	requires well drained soil; requires rich moist soil; needs sun	flowers, bronze fall color

Medium Trees, 35 - 75 feet at mature height: Uses

Species	Use						
	Sidewalk	On Lot	Common open space	Screening	Setback	Park Street	Replacement
American Yellowwood (Cladrastis lutea)		x	x				
Ash, Green (Froxinus pennsylvatica lanceolata)	x	x	x	x	x	x	x
Bradford Pear (Pyrus calleryana)	x	x	x			x	x
Chinese Chestnut (Castanea mollissima)		x	x		x	x	x
Gork Tree, Amur (Phellodendron amurense)	x	x	x				
Elm, Smooth Leaf (Ulmus carpinifolia)	x	x	x	x	x	x	
Elm, Chinese (Ulmus parvifolia)		x	x			x	
Elm, Siberian (Ulmus pumila)		x	x			x	
European Beech (Fagus sylvatica)				x			x

European Hornbeam (Carpinus betulus)		x	x			x	
Honey Locust (Gleditsia triacanthos)							
Katsura (Cercidiphyllum-japonicum)	x	x	x		x	x	
Little Leaf Linden (Tilia-cordata)	x	x	x		x	x	x
Maple, Norway (Acer-platanoides)		x	x			x	x
Maple, Red (Acer rubrum)	x	x	x	x	x	x	x
Oak, Willow (Quercus-phellos)	x		x				x
Poplar, Lombardi (Populus-nigra 'Italica')		x	x	x	x	x	x
Zelkova, Japanese (Zelkova-serrata)	x						x

Medium Trees, 35 - 75 feet at mature height: Shape, Foliage, Advantages, Disadvantages and Characteristics:

Species	Shape	Foliage	Advantages	Disadvantages	Other Characteristics
American Yellowwood (Cladrastis lutea)	round	dense	withstands insects	spreading shallow roots; difficult to transplant	flowers, yellow fall color
Ash, Green (Froxinus-pennsylvatica lanceolata)	round	dense	all soils, rapid growth rate, wind resistant	low insect resistance	fall color
Bradford Pear (Pyrus-calleryana)	pyramidal	dense	tolerates city, withstands fire blight	needs pruning	flowers, fall color: bronze/red
Chinese Chestnut (Castanea mollissima)	spreading round	dense	rapid growth rate, withstands insects	requires well drained soil	fruit, fall colors
Cork Tree, Amur (Phellodendron amurense)	round	light	rapid growth rate, tolerates city, easily transplanted	litters	fruit, fall color: yellow
Elm, Smooth Leaf (Ulmus-carpinifolia)	round	dense	rapid growth rate, withstands insects	blight	
Elm, Chinese (Ulmus parvifolia)	round-oval	dense	rapid growth rate, withstands insects	blight	
Elm, Siberian (Ulmus pumila)	round	light	all soils, rapid growth rate, withstands insects	blight	
European Beech (Fagus sylvatica)	pyramidal	dense	easily trans-planted, use as hedge if pruned	slow growth rate, requires well drained soil	fall color: bronze
European Hornbeam (Carpinus betulus)	round	dense	all soils, withstands insects	slow growth rate, requires sun	fruit, fall color
Honey Locust (Gleditsia triacanthos)	open-headed	light	moderate growth rate, tolerates city, all soils	litters, needs sun	fall color: pale yellow
Katsura (Cercidiphyllum-japonicum)	round	dense	no maintenance rapid growth rate, disease free	prefers open sunny site	fall color: yellow some scarlet or purple
Little Leaf Linden (Tilia-cordata)	oval-pyramidal	dense	withstands insects, tolerates city, easily transplanted	needs maintenance, slow growth rate	fall color: pale yellow

Maple, Norway (Acer-platanoides)	columnar	dense	tolerates city, rapid growth rate, easily transplanted no maintenance	surface roots	fall color: yellow
Maple, Red (Acer rubrum)	round	dense	rapid growth rate, easily transplanted resists disease	litters	fall color: scarlet/ orange yellow
Oak, Willow (Quercus-phellos)	pyramidal-spreading	dense	rapid growth rate, easily transplanted	prefers moist soil, can't withstand cold winter	fall color: yellow
Poplar, Lombardi (Populus-nigra 'Italica')	fastigiate	light-dense	easily transplanted rapid growth rate	short-lived, needs maintenance, roots pry open sewers	fall color: yellow
Zelkova, Japanese (Zelkovaserrata)		dense	all soils, rapid growth rate		

Large Trees, 75 feet or more at mature height: Uses

Species	Use						
	Sidewalk	On Lot	Common open space	Screening	Setback	Park Street	Replacement
American Beech (Fagus-grandifolia)		x	x			x	x
Black Gum (Sour Gum) (Nyssa-sylvatica)		x	x				
Cucumber Tree (Magnolia-acuminata)		x	x				
European White Birch (Betula-perdula)		x	x			x	x
Ginkgo (Ginkgo-biloba)	x	x	x	x	x	x	x
Japanese Pagoda (Sophora-japonica)	x	x	x				x
Kentucky Coffee Tree (Gymnocladus-dioicus)		x	x	x	x	x	x
Linden, Silver (Tilia-petiolaris)	x	x	x		x		x
Locust, Black (Robinia-pseudoacacia)		x	x		x	x	
Maple, Silver (Acer-saccharinum)		x	x			x	x
Maple, Sugar (Acer-saccharum)		x	x			x	x
Oak - Pin (Quercus-palustris)		x	x		x	x	x
Oak, Red (Quercus-borealis)	x	x	x		x	x	x
Oak, White (Quercus-alba)		x	x				
Sweetgum (Liquidambar-styraciflua)	x	x	x	x		x	
Sycamore, London Plane (Platanus-acerifolia)	x	x	x	x	x	x	x

Tulip Tree (Liriodendron tulipifera)		x	x			x	x
Blue Atlas Cedar (Cedrus atlantica 'Glauca')		x	x	x	x		x
Douglas Fir (Pseudotsuga menziesii)		x	x	x	x		x
Eastern White Pine (Pinus strobus)			x	x	x		x

Large Trees, 75 feet or taller at mature height: Shape, Foliage, Advantages, Disadvantages and Characteristics:

Species	Shape	Foliage	Advantages	Disadvantages	Other Characteristics
American Beech (Fagus grandifolia)	round	dense	hedge use if pruned, wind resistant, easily transplanted	slow growth rate, shallow roots	fall color: bronze
Black Gum (Sour Gum) (Nyssa sylvatica)	pyramidal	dense	withstands insects, moderate growth rate no maintenance	difficult to transplant	fall color: scarlet/orange
Cucumber Tree (Magnolia acuminata)	pyramidal (varies)	dense	withstands insects, rapid growth rate, grows in partial shade/sun		flowers
European White Birch (Betula pendula)	pyramidal	light	easily transplanted rapid growth rate withstands insects	needs protection, prefers cold climate	fall color: yellow
Ginkgo (Ginkgo biloba)	columnar pyramidal spreading	light	all soils, withstands insects, tolerates city, easily transplanted	slow growth rate, avoid female	fall color: pale yellow
Japanese Pagoda (Sophora japonica)	round-weeping	light	all soils, withstands insects, tolerates city, easily transplanted rapid growth rate	needs maintenance, requires sun	flowers, fall color: yellow
Kentucky Coffee Tree (Gymnocladus dioica)	fastigiata	light	all soils, long life, withstands insects, long life	needs protection, requires sun, slow growth rate	
Linden, Silver (Tilia petiolaris)	fastigiata	dense	rapid growth rate, withstands heat & drought		fall color: pale yellow
Locust, Black (Robinia pseudoacacia)	columnar	light	all soils, tolerates city, rapid growth rate	susceptible to insects	flowers
Maple, Silver (Acer saccharinum)	fastigiata	dense	rapid growth rate, easily transplanted	brittlewood, needs maintenance	fall color: red/yellow-orange
Maple, Sugar (Acer saccharum)	fastigiata	dense	easily transplanted long life	slow growth rate, little tolerance for city	fall color: scarlet/yellow-orange
Oak, Pin (Quercus palustris)	pyramidal	dense	all soils, withstands insects, rapid growth rate, easily transplanted	needs maintenance	fall color: scarlet
Oak, Red (Quercus borealis)	oval	dense	tolerates city, grows faster than other oaks, easily transplanted		fall color: red
Oak, White (Quercus alba)	round	dense	holds leaves in winter	slow growth rate, prefers dry soil	
Sweetgum (Liquidambar styraciflua)	pyramidal	dense	moderate growth rate, withstands insects	difficult to transplant	flowers, fall color
Sycamore, London Plane (Platanus Acerifolia)	round-spreading	light-dense	all soils, tolerates city, easily transplanted rapid growth rate	overplanted in NYC, susceptible to fungus	
Tulip Tree (Liriodendron tulipifera)	pyramidal		withstands insects	requires well drained soil	flowers, fall color

Blue Atlas Cedar (Cedrus-atlantica 'Glauca')	pyramidal	evergreen	moderate growth rate, easily transplanted no maintenance	
Douglas Fir (Pseudotsuga-menziessii)	pyramidal	evergreen	easily transplanted rapid growth rate	needs protection
Eastern White Pine (Pinus-strobus)	pyramidal	evergreen	easily transplanted rapid growth rate	requires well-drained soil

\* \* \*

**NOTICE**

On Wednesday, June 28, 2023, a public hearing is being held by the City Planning Commission (CPC), accessible in-person and remotely, in conjunction with the above hearing to receive comments related to a Draft Environmental Impact Statement (DEIS) concerning an application by the New York City Department of City Planning (DCP). The Proposed Action is a zoning text amendment to update the Special South Richmond Development District (SSRDD) to provide a clear and consistent framework that balances developments with natural features regulations within the special district. In 2020 and 2021, the project was proposed as the Staten Island Special Districts Update. Since the public scoping meeting, the project has been renamed and limited to only amend the SSRDD due to public feedback received during the public outreach process. The modifications to Special Natural Area District and Special Hillside Preservation District are no longer included in the Proposed Action.

The Proposed Action is a zoning text amendment that would affect the SSRDD (Article X, Chapter 7) and all of Staten Island's SSRDD which is located in Community District 3. The Proposed Action would amend the existing SSRDD regulations to allow most small sites, less than 1 acre, an as-of-right framework by codifying CPC best practices and updating the regulations that govern the natural features on large sites to provide a clearer framework for CPC discretionary review. The analysis year is 2030.

Written comments on the DEIS are requested and will be received and considered by the Lead Agency through 5:00 PM on Monday, July 10, 2023.

For instructions on how to submit comments and participate, both in-person and remotely, please refer to the instructions at the beginning of this agenda.

This hearing is being held pursuant to the State Environmental Quality Review Act (SEQRA) and City Environmental Quality Review (CEQR), CEQR No. 20DCP130R.

**BOROUGH OF BROOKLYN  
No. 8**

**LINDEN STREET HISTORIC DISTRICT**

**CD 4 N 230353 HKK**  
IN THE MATTER OF a communication dated from May 18, 2023, the Executive Director of the Landmarks Preservation Commission regarding the Linden Street Historic District designation, designated by the Landmarks Preservation Commission on May 9, 2023. (Designation List No. 531/LP-2665). The Linden Street Historic District consists of the 32 properties bounded by a line beginning at the northwest corner of Bushwick Avenue and Linden Street, continuing northwesterly along the southwestern curb line of Bushwick Avenue to a point on a line extending northeasterly from the northwestern property line of 55 Linden Street (aka 1020-1026 Bushwick Avenue), southwesterly along said line and the northwestern property lines of 55 Linden Street (aka 1020-1026 Bushwick Avenue) through 15 Linden Street; southeasterly along the southwestern property line of 15 Linden Street and a line extending southeasterly to the northwestern curb line of Linden Street; southwesterly along the northwestern curb line of Linden Street to a point on a line extending northwesterly from the southwestern property line of 14 Linden Street; southeasterly along said line and the southwestern property line of 14 Linden Street; northeasterly along the southeastern property lines of 14 through 34 Linden Street; northwesterly along the northeastern property line of 34 Linden Street and a line extending northwesterly to the northwestern curb line of Linden Street; northeasterly along the northwestern curb line of Linden Street to the place of beginning, Borough of Brooklyn, Community District 4.

**BOROUGH OF MANHATTAN  
No. 9**

**80 PINE STREET IBO OFFICE SPACE**

**CD 1 N 230279 PXM**  
IN THE MATTER OF a Notice of Intent to acquire office space submitted by the Department of Citywide Administrative Services and the Independent Budget Office, pursuant to Section 195 of the New

York City Charter for use of property located at 80 Pine Street (Block 39, p/o Lot 12) (Independent Budget Office office).

Sara Avila, Calendar Officer  
City Planning Commission  
120 Broadway, 31<sup>st</sup> Floor, New York, NY 10271  
Telephone (212) 720-3366

Accessibility questions: (212) 720-3508, AccessibilityInfo@planning.nyc.gov, by: Thursday, June 22, 2023, 5:00 P.M.



j13-28

**CITYWIDE ADMINISTRATIVE SERVICES**

**■ PUBLIC HEARINGS**

**HUMAN CAPITAL LINE OF SERVICE  
PROPOSED AMENDMENT TO CLASSIFICATION**

**PUBLIC NOTICE IS HEREBY GIVEN** of a virtual public hearing to amend the Classification of the Classified Service of the City of New York.

A virtual public hearing will be held by the Commissioner of Citywide Administrative Services in accordance with Rule 2.6 of the Personnel Rules and Regulations of the City of New York via Microsoft Teams on June 28, 2023, at 10:00 AM.

**Topic:** Public Hearing - NYS Civil Service Commission Proposal - HELP Program

**Meeting link:** <https://www.microsoft.com/microsoft-teams/join-a-meeting>

**Meeting ID:** 290 781 280 011

**Passcode:** MCEoTm

**Phone Number:** 1 646-893-7101

**Phone Conference ID:** 394 806 280#

For more information go to the DCAS website at <https://www1.nyc.gov/site/dcas/about/public-hearings.page>

**RESOLVED**, that the classification of the Classified Service of the City of New York is hereby amended under the heading of **ALL CITY AGENCIES [999]** as follows:

I. To classify the following non-managerial titles and positions in the Non-Competitive Class, subject to Rule XI, Part II:

<u>Title Code Number</u>	<u>Class of Positions</u>	<u>Salary Range</u>	<u>Number of Authorized Positions</u>
XXXXX	Police Communications Technician (HELP Program)	#	Unlimited
XXXXX	Probation Officer Trainee (HELP Program)	#	Unlimited
XXXXX	Probation Officer (HELP Program)	#	Unlimited

# Salary is determined by applicable collective bargaining agreements.

Part II positions are covered by Section 75 of the Civil Service Law disciplinary procedures after 5 years of service.

Accessibility questions: (212) 386-0256, accessibility@dcas.nyc.gov, by: Friday, June 23, 2023, 5:00 P.M.



j21-23

## ECONOMIC DEVELOPMENT CORPORATION

### ■ PUBLIC HEARINGS

Pursuant to Section 1-16 of the Concession Rules of the City of New York, please be advised that the New York City Department of Small Business Services ("SBS") intends to seek Franchise & Concession Review Committee Approval to Enter into a significant Sole Source interim Concession Agreement with FirstFlight Helicopters, LLC d/b/a Saker Aviation Services for the Operation of the Downtown Manhattan Heliport at Pier 6 in Manhattan. It is anticipated that this interim Sole Source agreement would provide for one (1) six-month term, with two (2) six-month options to renew at the discretion of SBS. Compensation will be the greater of (i) a minimum term fee of \$1,036,811 in the Initial Term (and \$518,406 in each Renewal Term) or (ii) Thirty percent (30%) of Gross Receipts per Term. The hearing will be held at 22 Read Street, New York, NY 10007 beginning at 2:30 P.M. on July 10, 2023.

This sole source interim concession agreement intends to keep DMH operational while EDC, on behalf of SBS, procures a heliport operator to enter into a new concession agreement, as the former agreement expired April 30, 2023. There is currently a Temporary Use Authorization Agreement in place.

This concession has been determined not to be a major concession as defined in Chapter 7 of the Rules of the City Planning Commission.

A draft copy of the agreement may be obtained at no cost the following methods:

- (A) downloading a copy from NYCSBS' website from 06/23/2023 through 7/10/2023. To download a draft copy of the agreement, visit <https://www.nyc.gov/site/sbs/index.page>.
- (B) submitting a written request by mail to NYCEDC, Asset Management, PortNYC, One Liberty Plaza, 10040. Written requests must be received by 07/04/2023. For mail-in requests, please include your name, return address, and Concession ID: 10481

A transcript of the hearing will be posted on the FCRC website at <http://www1.nyc.gov/site/mocs/reporting/agendas.page>.

For further information on accessibility or to make a request for accommodations, such as sign language interpretation services, please contact the Mayor's Office of Contract Services ("MOCS") via e-mail at [DisabilityAffairs@mocs.nyc.gov](mailto:DisabilityAffairs@mocs.nyc.gov) or via phone at (212) 298-0734. Any person requiring reasonable accommodation for the public hearing should contact MOCS at least five (5) days in advance of the hearing to ensure availability.

Please direct any questions or comments you may have regarding the terms of the sole source interim concession agreement to Mary Clarke by phone at (212) 312-3621 or via email at [mclarke@edc.nyc](mailto:mclarke@edc.nyc).

Accessibility questions: Mayor's Office of Contract Services ("MOCS") via e-mail at [DisabilityAffairs@mocs.nyc.gov](mailto:DisabilityAffairs@mocs.nyc.gov) or via phone at (212) 298-0734, by: Friday, June 30, 2023, 2:30 P.M.



• j23

## HOUSING AUTHORITY

### ■ NOTICE

The next Board Meeting of the New York City Housing Authority is scheduled for Thursday, June 29, 2023, at 10:00 A.M. in the Ceremonial Room on the 5th Floor of 90 Church Street, New York, New York (unless otherwise noted). Copies of the Calendar will be available on NYCHA's Website or may be picked up at the Office of the Corporate Secretary at 90 Church Street, 5th Floor, New York, NY, no earlier than 24 hours before the upcoming Board Meeting. Copies of the Minutes will also be available on NYCHA's Website or may be picked up at the Office of the Corporate Secretary no earlier than 3:00 P.M. on the Friday following the Board Meeting.

Any changes to the schedule will be posted here and on NYCHA's Website at <https://www1.nyc.gov/site/nycha/about/board-meetings.page> to the extent practicable at a reasonable time before the meeting.

The meeting is open to the public. Pre-registration, at least 45 minutes before the scheduled Board Meeting, is required by all speakers. Comments are limited to the items on the Calendar. Speaking time will be limited to three minutes. The public comment period will conclude upon all speakers being heard or at the expiration of 30 minutes allotted by law for public comment, whichever occurs first.

The meeting will be streamed live on NYCHA's YouTube Channel at <https://www.youtube.com/c/nycha> and NYCHA's Website, at <https://www1.nyc.gov/site/nycha/about/board-meetings.page>.

For additional information, please visit NYCHA's Website or contact (212) 306-6088.

Accessibility questions: Office of the Corporate Secretary (212-306-6088), by: Tuesday, June 20, 2023, 5:00 P.M.



j8-29

## LANDMARKS PRESERVATION COMMISSION

### ■ NOTICE

**NOTICE IS HEREBY GIVEN** that pursuant to the provisions of Title 25, Chapter 3 of the Administrative Code of the City of New York (Sections 25-303, 25-307, 25-308, 25-309, 25-313, 25-318, 25-320) on Tuesday, June 27, 2023, at 9:30 A.M., a public hearing will be held in the public hearing room at 1 Centre Street, 9th Floor, Borough of Manhattan, with respect to the following properties, and then followed by a public meeting. Participation by video conference may be available as well. Please check the hearing page on LPC's website (<https://www.nyc.gov/site/lpc/hearings/hearings.page>) for updated hearing information.

The final order and estimated times for each application will be posted on the Landmarks Preservation Commission website the Friday before the hearing. Please note that the order and estimated times are subject to change. An overflow room is located outside of the primary doors of the public hearing room. Any person requiring reasonable accommodation in order to participate in the hearing or attend the meeting should contact Gregory Cala, Community and Intergovernmental Affairs Coordinator, at [gcala@lpc.nyc.gov](mailto:gcala@lpc.nyc.gov) or (212) 602-7254 no later than five (5) business days before the hearing or meeting. Members of the public not attending in person can observe the meeting on LPC's YouTube channel at [www.youtube.com/nyclpc](http://www.youtube.com/nyclpc) and may testify on particular matters by joining the meeting using either the Zoom app or by calling in from any phone. Specific instructions on how to observe and testify, including the meeting ID and password, and the call-in number, will be posted on the agency's website, on the Monday before the public hearing. Finally, please be aware: COVID-19 safety protocols are in effect at the location; all attendees over the age of two who are medically able to tolerate a face covering will be required to wear a face covering, regardless of vaccination status.

#### **30 College Place - Brooklyn Heights Historic District**

**LPC-23-04641** - Block 236 - Lot 52 - **Zoning:** R7-1

#### **CERTIFICATE OF APPROPRIATENESS**

A brick carriage house. Application is to construct a rooftop addition, modify the rear facade, and excavate the cellar.

#### **171 Columbia Heights - Brooklyn Heights Historic District**

**LPC-23-09747** - Block 234 - Lot 7503 - **Zoning:** R6

#### **CERTIFICATE OF APPROPRIATENESS**

A Beaux-Arts style hotel building built in 1903. Application is to create new window openings.

#### **158 Clinton Street - Brooklyn Heights Historic District**

**LPC-23-08456** - Block 267 - Lot 32 - **Zoning:** R6

#### **CERTIFICATE OF APPROPRIATENESS**

A Greek Revival style rowhouse built in 1847. Application is to construct a rear yard addition and rear dormer, alter the roof, and replace a door.

#### **302 Grand Avenue - Clinton Hill Historic District**

**LPC-22-05952** - Block 1951 - Lot 30 - **Zoning:** R6B, C2-4

#### **CERTIFICATE OF APPROPRIATENESS**

Two vacant lots. Application is to construct two new buildings, and create a curb cut.

#### **120 Pacific Street - Cobble Hill Historic District**

**LPC-22-05837** - Block 291 - Lot 12 - **Zoning:** R6

#### **CERTIFICATE OF APPROPRIATENESS**

A Greek Revival style rowhouse built c. 1842. Application is to establish a Master Plan governing the future installation of windows.

#### **304 Carroll Street - Carroll Gardens Historic District**

**LPC-23-10618** - Block 450 - Lot 38 - **Zoning:** R6B

#### **CERTIFICATE OF APPROPRIATENESS**

A rowhouse designed by Edward P. Crane and built in 1872-73. Application is to legalize the installation of stucco at the rear façade and alteration of the areaway fence and curb without Landmarks Preservation Commission permits, and to replace windows.

#### **306 Carroll Street - Carroll Gardens Historic District**

**LPC-23-09006** - Block 450 - Lot 39 - **Zoning:** R6B

#### **CERTIFICATE OF APPROPRIATENESS**

A rowhouse designed by Edward P. Crane and built in 1872-73. Application is to alter facades and modifying openings, replace windows, raise the height of the roof and install HVAC equipment,

install ironwork, expand a rear yard addition, and reconstruct the garage and install a roof deck at the garage.

**277 Canal Street, aka 277-289 Canal Street, and 418-422 Broadway - SoHo-Cast Iron Historic District Extension LPC-23-09351** - Block 209 - Lot 1 - **Zoning:** M1-5/R9X **CERTIFICATE OF APPROPRIATENESS**

A Renaissance Revival style theater, store, and loft building designed by David M. Oltarsh and built 1927-28. Application is to construct a vertical enlargement and establish a master plan governing the installation of storefront infill and signage.

**52 Charles Street - Greenwich Village Historic District LPC-23-05495** - Block 611 - Lot 13 - **Zoning:** C2-6 **CERTIFICATE OF APPROPRIATENESS**

A Greek Revival style rowhouse built in 1839-40. Application is to construct rear yard and rooftop additions.

**140 West 81st Street - Upper West Side/Central Park West Historic District LPC-23-04861** - Block 1211 - Lot 50 - **Zoning:** R8B **CERTIFICATE OF APPROPRIATENESS**

A Romanesque Revival style church building designed by John F. Capen and built in 1893. Application is to apply a coating on the masonry façade.

**1014 Fifth Avenue - Metropolitan Museum Historic District LPC-23-10928** - Block 1494 - Lot 72 - **Zoning:** R10, R8B, Pl **CERTIFICATE OF APPROPRIATENESS**

A Beaux-Arts style townhouse designed by Welch, Smith & Provot and built in 1906-1907. Application is to amend work approved under LPC-23-00224, to modify doors, install signage, alter the areaway, and replace sidewalk pavers.

**1209 Park Avenue - Expanded Carnegie Hill Historic District LPC-23-11109** - Block 1523 - Lot 72 - **Zoning:** R10 **CERTIFICATE OF APPROPRIATENESS**

A converted 19th century rowhouse with a Modern style façade designed by Lucien David and altered in 1960. Application is to reclad the front facade, replace the rear facade and construct rooftop and rear yard additions.

**15 West 122nd Street - Mount Morris Park Historic District LPC-23-04680** - Block 1721 - Lot 8 - **Zoning:** R7-2 **CERTIFICATE OF APPROPRIATENESS**

A rowhouse designed by Cleverdon and Putzel and built in 1887-1888. Application is to approve the construction of a rooftop addition built slightly taller than approved by Certificate of No Effect 19-24553.

j14-27

**TRANSPORTATION**

■ PUBLIC HEARINGS

**NOTICE IS HEREBY GIVEN**, pursuant to law, that the following proposed revocable consents, have been scheduled for a public hearing by the New York City Department of Transportation. The hearing will be held remotely commencing on Thursday June 29, 2023 at 2:00 P.M., via the WebEx platform and in person, on the following petitions for revocable consent.

**WebEx: Meeting Number (access code): 2632 403 7009**

**Meeting Password: Fu6A5Z8PsAS**

**The hearing will be held in person at 55 Water St, BID ROOM, in the Borough of Manhattan. Masks are required to be worn to enter the building and during the hearing.**

**#1 IN THE MATTER OF** a proposed revocable consent authorizing 186 Manhattan Associates, LLC to continue to maintain and use a stoop and a fenced-in area on the south sidewalk of East 93<sup>rd</sup> Street, west of Third Avenue, in the Borough of Manhattan. The revocable consent is for ten years from July 1, 2023 to June 30, 2033 and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 1880**

- For the period July 1, 2023 to June 30, 2024 - \$747/per annum
- For the period July 1, 2024 to June 30, 2025 - \$761
- For the period July 1, 2025 to June 30, 2026 - \$775
- For the period July 1, 2026 to June 30, 2027 - \$789
- For the period July 1, 2027 to June 30, 2028 - \$803
- For the period July 1, 2028 to June 30, 2029 - \$817
- For the period July 1, 2029 to June 30, 2030 - \$831
- For the period July 1, 2030 to June 30, 2031 - \$845
- For the period July 1, 2031 to June 30, 2032 - \$859
- For the period July 1, 2032 to June 30, 2033 - \$873

with the maintenance of a security deposit in the sum of \$2,000 and the insurance shall be in the amount of Two Million Dollars

(\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations.

**#2 IN THE MATTER OF** a proposed revocable consent authorizing Commons Associates LLC to continue to maintain and use conduits, lampposts, planting areas, and a bench, on and under Myrtle Avenue, between Flatbush Avenue Extension and Duffield Street, on the west sidewalk of Duffield Street, west of Flatbush Avenue Extension, and under and across Tech Place, east of Bridge Street, in the Borough of Brooklyn. The revocable consent is for a term of ten years from the Approval Date by the Mayor and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 1511**

From the date of approval to June 30, 2026 - \$25/per annum

with the maintenance of a security deposit in the sum of \$0.00 the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations.

**#3 IN THE MATTER OF** a proposed revocable consent authorizing Long Island University to construct, maintain and use planters on the south sidewalk of Willoughby Street, west of Ashland Place, and on the west sidewalk of Ashland Place, south of Willoughby Street, in the Borough of Brooklyn. The revocable consent is for a term of ten years from the Approval Date by the Mayor and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 2617**

From the Approval Date to June 30, 2034 - \$940/per annum

with the maintenance of a security deposit in the sum of \$7,500 and the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations.

**#4 IN THE MATTER OF** a proposed revocable consent authorizing RXR 196 Willoughby Owner LLC to construct, maintain and use a planter on the south sidewalk of Willoughby Street between Fleet Street and Ashland Place, in the Borough of Brooklyn. The proposed revocable consent is for a term of ten years from the Approval Date by the Mayor and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 2618**

From the Approval Date to June 30, 2034 - \$55 /per annum

with the maintenance of a security deposit in the sum of \$1,000 and the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations

**#5 IN THE MATTER OF** a proposed revocable consent authorizing Trustees of Columbia University in the City of New York to continue to maintain and use conduits under and across West 168<sup>th</sup> Street, west of Broadway, in the Borough of Manhattan. The revocable consent is for a term of ten years from July 1, 2023 to June 30, 2033 and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 831**

- For the period July 1, 2023 to June 30, 2024 - \$6,163 per annum
- For the period July 1, 2024 to June 30, 2025 - \$6,276
- For the period July 1, 2025 to June 30, 2026 - \$6,389
- For the period July 1, 2026 to June 30, 2027 - \$6,502
- For the period July 1, 2027 to June 30, 2028 - \$6,615
- For the period July 1, 2028 to June 30, 2029 - \$6,728
- For the period July 1, 2029 to June 30, 2030 - \$6,841
- For the period July 1, 2030 to June 30, 2031 - \$6,954
- For the period July 1, 2031 to June 30, 2032 - \$7,067
- For the period July 1, 2032 to June 30, 2033 - \$7,180

with the maintenance of a security deposit in the sum of \$7,200 and the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations.

**#6 IN THE MATTER OF** a proposed revocable consent authorizing West 64<sup>th</sup> Street LLC to continue to maintain and use an underground improvement under the south sidewalk of West of West 65<sup>th</sup> Street, east sidewalk of Broadway and north sidewalk of West 64<sup>th</sup> Street, in the Borough of Manhattan. The revocable consent is for a term of ten years from July 1, 2023 to June 30, 2033 and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 1861**

For the period July 1, 2023 to June 30, 2024 - \$239,669  
 For the period July 1, 2024 to June 30, 2025 - \$244,034  
 For the period July 1, 2025 to June 30, 2026 - \$248,399  
 For the period July 1, 2026 to June 30, 2027 - \$252,794  
 For the period July 1, 2027 to June 30, 2028 - \$257,129  
 For the period July 1, 2028 to June 30, 2029 - \$261,494  
 For the period July 1, 2029 to June 30, 2030 - \$265,859  
 For the period July 1, 2030 to June 30, 2031 - \$270,224  
 For the period July 1, 2031 to June 30, 2032 - \$274,589  
 For the period July 1, 2032 to June 30, 2033 - \$278,954  
 For the period July 1, 2033 to June 30, 2034 - \$283,319

with the maintenance of a security deposit in the sum of \$279,000 and the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations

**#7 IN THE MATTER OF** a proposed revocable consent authorizing Anthony Diaz to construct, maintain and use two stoops and fenced-in area with stair on the northwest sidewalk of Greene Avenue, between Woodward Avenue and Fairview Avenue, in the Borough of Queens. The revocable consent is for a term of ten years from the Approval Date by the Mayor and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 2605**

From the Approval Date to June 30, 2023 - \$6,100/per annum  
 For the period July 1, 2023 to June 30, 2024 - \$6,214  
 For the period July 1, 2024 to June 30, 2025 - \$6,328  
 For the period July 1, 2025 to June 30, 2026 - \$6,442  
 For the period July 1, 2026 to June 30, 2027 - \$6,556  
 For the period July 1, 2027 to June 30, 2028 - \$6,670  
 For the period July 1, 2028 to June 30, 2029 - \$6,784  
 For the period July 1, 2029 to June 30, 2030 - \$6,898  
 For the period July 1, 2030 to June 30, 2031 - \$7,012  
 For the period July 1, 2031 to June 30, 2032 - \$7,126  
 For the period July 1, 2032 to June 30, 2033 - \$7,240  
 For the period July 1, 2033 to June 30, 2034 - \$7,354

with the maintenance of a security deposit in the sum of \$7,000 and the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations.

**#8 IN THE MATTER OF** a proposed revocable consent authorizing City Harvest, Inc. to construct, maintain and use an accessible ramp and stairs on the south sidewalk of 52<sup>nd</sup> Street, between 1<sup>st</sup> Avenue and 2<sup>nd</sup> Avenue, in the Borough of Brooklyn. The revocable consent is for a term of ten years from the Approval Date by the Mayor and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 2609**

From the Approval Date by the Mayor to June 30, 2023 - \$3,025/per annum  
 For the period July 1, 2023 to June 30, 2024 - \$3,081  
 For the period July 1, 2024 to June 30, 2025 - \$3,137  
 For the period July 1, 2025 to June 30, 2026 - \$3,193  
 For the period July 1, 2026 to June 30, 2027 - \$3,249  
 For the period July 1, 2027 to June 30, 2028 - \$3,305  
 For the period July 1, 2028 to June 30, 2029 - \$3,361  
 For the period July 1, 2029 to June 30, 2030 - \$3,417  
 For the period July 1, 2030 to June 30, 2031 - \$3,473  
 For the period July 1, 2031 to June 30, 2032 - \$3,529  
 For the period July 1, 2032 to June 30, 2033 - \$3,585  
 For the period July 1, 2033 to June 30, 2034 - \$3,641

with the maintenance of a security deposit in the sum of \$35,000 and the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations.

**#9 IN THE MATTER OF** a proposed revocable consent authorizing I414 Realty LLC to construct, maintain and use an enclosure for trash receptacles on the south sidewalk of West 45<sup>th</sup> Street, between 9<sup>th</sup> Avenue and 10<sup>th</sup> Avenue, in the Borough of Manhattan. The revocable consent is for a term of ten years from the Approval Date by the Mayor and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 2611**

From the Approval Date by the Mayor to June 30, 2034 - \$53/per annum

with the maintenance of a security deposit in the sum of \$1,000 and the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations.

**#10 IN THE MATTER OF** a proposed revocable consent authorizing Kupo Ljesnjanin & Ifeta Ljesnjanin to construct, maintain and use an accessibility lift, entry steps, and fenced-in planted area on the west sidewalk of 47<sup>th</sup> Street, between 30<sup>th</sup> Avenue and 28<sup>th</sup> Avenue, in the Borough of Queens. The revocable consent is for a term of ten years from the Approval Date by the Mayor and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 2602**

From the Approval Date by the Mayor to June 30, 2023 - \$3,125/per annum  
 For the period July 1, 2023 to June 30, 2024 - \$3,183  
 For the period July 1, 2024 to June 30, 2025 - \$3,241  
 For the period July 1, 2025 to June 30, 2026 - \$3,299  
 For the period July 1, 2026 to June 30, 2027 - \$3,357  
 For the period July 1, 2027 to June 30, 2028 - \$3,415  
 For the period July 1, 2028 to June 30, 2029 - \$3,473  
 For the period July 1, 2029 to June 30, 2030 - \$3,531  
 For the period July 1, 2030 to June 30, 2031 - \$3,589  
 For the period July 1, 2031 to June 30, 2032 - \$3,647  
 For the period July 1, 2032 to June 30, 2033 - \$3,705  
 For the period July 1, 2033 to June 30, 2034 - \$3,763

with the maintenance of a security deposit in the sum of \$7,000 and the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations.

**#11 IN THE MATTER OF** a proposed revocable consent authorizing Ellivkroy Realty Corporation to continue to maintain and use planters on the south sidewalk of East 86<sup>th</sup> Street, west of York Avenue, in the Borough of Manhattan. The revocable consent is for a term of ten years from July 1, 2014 to June 30, 2024 and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 1642**

For the period July 1, 2014 to June 30, 2024 - \$50/annum

with the maintenance of a security deposit in the sum of \$500 and the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations.

**#12 IN THE MATTER OF** a proposed revocable consent authorizing New York University to construct, maintain and use an overhead building projection Triangle Fire Memorial above and along the west sidewalk of Greene Street and the north sidewalk of Washington Place, in the Borough of Manhattan. The revocable consent is for a term of ten years from the Approval Date by the Mayor and provides among other terms and conditions for compensation payable to the City according to the following schedule: **R.P. # 2570**

From the Approval Date by the Mayor to June 30, 2023 - \$10,762/per annum  
 For the period July 1, 2023 to June 30, 2024 - \$10,962  
 For the period July 1, 2024 to June 30, 2025 - \$11,162  
 For the period July 1, 2025 to June 30, 2026 - \$11,362  
 For the period July 1, 2026 to June 30, 2027 - \$11,562  
 For the period July 1, 2027 to June 30, 2028 - \$11,762  
 For the period July 1, 2028 to June 30, 2029 - \$11,962  
 For the period July 1, 2029 to June 30, 2030 - \$12,162  
 For the period July 1, 2030 to June 30, 2031 - \$12,362  
 For the period July 1, 2031 to June 30, 2032 - \$12,562  
 For the period July 1, 2032 to June 30, 2033 - \$12,762  
 For the period July 1, 2033 to June 30, 2034 - \$12,962

with the maintenance of a security deposit in the sum of \$100,000 and the insurance shall be in the amount of Two Million Dollars (\$2,000,000) per occurrence for bodily injury and property damage, One Million Dollars (\$1,000,000) for personal and advertising injury, Two Million Dollars (\$2,000,000) aggregate, and Two Million Dollars (\$2,000,000) products/completed operations.

j9-29

## PROPERTY DISPOSITION

*The City of New York in partnership with PublicSurplus.com posts online auctions. All auctions are open to the public.*

Registration is free and new auctions are added daily. To review auctions or register visit <https://publicsurplus.com>

**CITYWIDE ADMINISTRATIVE SERVICES**

■ SALE

The City of New York in partnership with IAAI.com posts vehicle and heavy machinery auctions online every week at:

<https://iaai.com/search?keyword=dcas+public>

All auctions are open to the public and registration is free.

Vehicles can be viewed in person at:

Insurance Auto Auctions, Green Yard  
137 Peconic Avenue, Medford, NY 11763  
Phone: (631) 207-3477

No previous arrangements or phone calls are needed to preview.  
Hours are Monday from 10:00 A.M. – 2:00 P.M.

jy29-j17

**PROCUREMENT**

*“Compete To Win” More Contracts!*

*Thanks to a new City initiative - “Compete To Win” - the NYC Department of Small Business Services offers a new set of FREE services to help create more opportunities for minority and Women-Owned Businesses to compete, connect and grow their business with the City. With NYC Construction Loan, Technical Assistance, NYC Construction Mentorship, Bond Readiness, and NYC Teaming services, the City will be able to help even more small businesses than before.*

- Win More Contracts, at [nyc.gov/competetowin](http://nyc.gov/competetowin)

*“The City of New York is committed to achieving excellence in the design and construction of its capital program, and building on the tradition of innovation in architecture and engineering that has contributed, to the City’s prestige as a global destination. The contracting opportunities for construction/construction services and construction-related services that appear in the individual agency listings below reflect that commitment to excellence.”*

**HHS ACCELERATOR PREQUALIFICATION**

To respond to human services Requests for Proposals (RFPs), in accordance with Section 3-16 of the Procurement Policy Board Rules of the City of New York (“PPB Rules”), vendors must first complete and submit an electronic HHS Accelerator Prequalification Application using the City’s PASSPort system. The PASSPort system is a web-based system maintained by the City of New York for use by its Mayoral Agencies to manage procurement. Important business information collected in the Prequalification Application is required every three years. Documents related to annual corporate filings must be submitted on an annual basis to remain eligible to compete. Prequalification applications will be reviewed to validate compliance with corporate filings and organizational capacity. Approved organizations will be eligible to compete and would submit electronic proposals through the PASSPort system. The PASSPort Public Portal, which lists all RFPs, including HHS RFPs that require HHS Accelerator Prequalification, may be viewed at [https://passport.cityofnewyork.us/page.aspx/en/rfp/request\\_browse\\_public](https://passport.cityofnewyork.us/page.aspx/en/rfp/request_browse_public). All current and prospective vendors should frequently review information listed on roadmap to take full advantage of upcoming opportunities for funding. For additional information about HHS Accelerator Prequalification and PASSPort, including background materials, user guides and video tutorials, please visit <https://www1.nyc.gov/site/mocs/systems/about-go-to-passport.page>.

**ADMINISTRATION FOR CHILDREN’S SERVICES**

**FAMILY PERMANENCY SERVICES**

■ AWARD

*Human Services/Client Services*

**ENHANCED FAMILY FOSTER CARE (EFFC)** - Competitive Sealed Proposals/Pre-Qualified List - PIN# 06821P0330016 - AMT: \$97,484,725.60 - TO: New York Foundling, 590 Avenue of the Americas, New York, NY 10011-2019.

Foster Care RFP - to provide foster care services in a home-based setting for children not able to safely remain at home.

Special Case Determination not required because procurement is for Client/Human Services and is the preferred method under PPB Rule 3-01 (c).

• j23

**AGING**

**PROGRAM OPERATIONS**

■ AWARD

*Services (other than human services)*

**MICROSOFT OFFICE TRAINING** - M/WBE Noncompetitive Small Purchase - PIN# 12523W0005001 - AMT: \$98,000.00 - TO: Sarder Inc., 252 West 37th Street, 12th Floor, Suite 1200W, New York, NY 10018.

This solicitation is being made pursuant to the M/WBE Noncompetitive Small Purchase Method, Section 3-08 of the New York City Procurement Policy Board (PPB) Rules, this procurement is exclusively for the City Certified Minority and Woman Owned Business (M/WBEs). Contracts awarded under this method may not exceed \$1,000,000, inclusive of any and all change orders, overruns, amendments, renewals and extensions. To train older adults in Microsoft Word, Microsoft Excel, and Microsoft Outlook software. The training courses will provide essential knowledge of Microsoft Office applications to participants in the NYC Aging Senior Employment program that have the desire to pursue careers as administrative assistants and clerical workers in today’s job market. The certification they earn will enhance their marketability during the job search process.

To train older adults in Microsoft Word, Microsoft Excel, and Microsoft Outlook software. The training courses will provide essential knowledge of Microsoft Office applications to participants in the NYC Aging Senior Employment program that have the desire to pursue careers as administrative assistants and clerical workers in today’s job market. The certification they earn will enhance their marketability during the job search process.

• j23

**CITYWIDE ADMINISTRATIVE SERVICES**

■ SOLICITATION

*Services (other than human services)*

**PQL ID: PQL000134 ARMED/UNARMED SECURITY GUARDS AND RELATED SERVICES, CITYWIDE M/WBE PQL** - Request for Qualifications - PIN# 000134 - Due 8-8-23 at 2:00 P.M.

DCAS’ Office of Citywide Procurement is issuing a Request for Qualifications (“RFQ”) to evaluate and pre-qualify a list of City Certified Minority and Women-Owned Business Enterprise Vendors (M/WBE’s) for Armed/Unarmed Security Guards and Related Services.

Pursuant to this Request for Qualifications (“RFQ”), the City of New York, through DCAS’, is seeking to identify qualified Armed/Unarmed Security Guards and Related Services vendors to furnish all labor, materials equipment necessary and required to perform Security and Related service projects (“Projects”) throughout the City.

DCAS anticipates establishing a total of three (3) PQLs grouped into distinct categories (“Options”) of Armed/Unarmed Security Guards and Related Services as follows:

- a. PQL Option #1 – Armed Security Guard Services
- b. PQL Option #2 – Unarmed Security Guards Services
- c. PQL Option #3 – Related Services

By establishing contractors’ qualifications and experience in advance, this RFQ will result in Pre-Qualified Lists of competent M/WBE’s

which various City Agencies will utilize to solicit Armed/Unarmed Security Guards and Related Services bids for work in City buildings and facilities with an estimated cost of \$1,000,000 or less. DCAS will administer the PQL.

Projects are defined as those which are identified as Armed/Unarmed Security Guards and Related Services that will fall within the specific categories listed above and are required by the Agency to provide Security Guards and Related Services in City buildings and facilities.

DCAS will hold an OPTIONAL PQL INFORMATION CONFERENCE on: DATE: July 10, 2023 TIME: 11:00 A.M.(EST)

LOCATION: <https://dcas-nyc-gov.zoom.us/meeting/register/tZlpcCurzwpGNDON0c5Oyn-fK175tV0NLau>

Please note: Attendance is NOT MANDATORY but strongly recommended.

It is anticipated that the PQLs for Options 1, 2, & 3 will be established by: November 30, 2023. This date is subject to change. All applications are completed electronically using the City's digital Procurement and Sourcing Solutions Portal ("PASSPort").

To access this RFQ, please visit the following link: [https://passport.cityofnewyork.us/page.aspx/en/rfp/request\\_browse\\_public](https://passport.cityofnewyork.us/page.aspx/en/rfp/request_browse_public)

Click on the "Prequalified Lists" tab and search the PQL ID "PQL000134" in the Keyword field. Then click on the icon. All questions and requests for additional information concerning the applications for this RFQ must be sent via email to: [BMathieu@dcas.nyc.gov](mailto:BMathieu@dcas.nyc.gov).

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.

Citywide Administrative Services, [https://passport.cityofnewyork.us/page.aspx/en/rfp/request\\_browse\\_public](https://passport.cityofnewyork.us/page.aspx/en/rfp/request_browse_public). Balduin Mathieu (212) 386-0423; [BMathieu@dcas.nyc.gov](mailto:BMathieu@dcas.nyc.gov)

j20-26

## CORRECTION

### ■ INTENT TO AWARD

*Services (other than human services)*

**07223Y0168-SECURUS PREMIUM CONTENT SERVICES**  
- Request for Information - PIN#07223Y0168 - Due 7-5-23 at 2:00 P.M.

Pursuant to Section 3-05 of the NYC Procurement Policy Board Rules, it is the intent of The New York City Department of Correction to enter into a Sole Source negotiation, with Securus Technologies LLC, with offices located at 4000 International Parkway, Carrollton, TX 75007 for premium content services for Securus tablets (which includes movies, music, games, and television programming).

Any vendor besides Securus Technologies LLC that believe it can provide the above referenced services may express interest responding to the RFI E-PIN 07223Y0168 in PASSPort no later than July 5, 2023 at 2:00 P.M.

j21-27

## DESIGN AND CONSTRUCTION

### ■ AWARD

*Construction Related Services*

**BOX.COM ENTERPRISE LICENSE SUBSCRIPTION - M/WBE**  
Noncompetitive Small Purchase - PIN# 85023W0014001 - AMT: \$93,060.00 - TO: Clutch Solutions LLC, 2152 S Vineyard Avenue, Building 1, Mesa, AZ 85210.  
DDC Enterprise ID: 995293 Part Number: 4062-2-36586

j23

## PROGRAM MANAGEMENT

### ■ VENDOR LIST

*Construction / Construction Services*

### PQL: EMERGENCY WATER MAIN WORK

NYC DDC is certifying the EMERGENCY WATER WORK with the following approved vendors:

1. CAC Industries Inc.
2. Difazio IND LLC
3. Inter Contracting Corp.
4. JLJ IV Enterprises Inc.

5. Jr Cruz Corp
6. Perfetto Enterprises Company Inc.
7. Triumph Construction Corp.

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.

Design and Construction, 30-30 Thomson Avenue, First Floor, Long Island City, NY 11101. Lorraine Holley (718) 391-1362; [rfq\\_pql@ddc.nyc.gov](mailto:rfq_pql@ddc.nyc.gov)

j16-23

## DISTRICT ATTORNEY - BRONX COUNTY

### ■ INTENT TO AWARD

*Goods and Services*

**CELLEBRITE PREMIUM LICENSES** - Sole Source - Available only from a single source - PIN# 90223S001 - Due 7-3-23 at 5:00 P.M.

Pursuant to Procurement Policy Board Rules, Section 3-05, the Bronx County District Attorney intends to enter into a sole source agreement with Cellebrite Inc. for Cellebrite Premium licenses. Cellebrite Premium is a comprehensive on-premise solution that enables law enforcement agency to access iOS and high-end Android devices. Any qualified vendor that wishes to express interest in providing such product and believes that at present or in the future it can also provide related software, and services is invited to do so by submitting an expression of interest to Darryl Rodney ([RodneyD@bronxda.nyc.gov](mailto:RodneyD@bronxda.nyc.gov)), Jonathan Demera ([DemeraJ@bronxda.nyc.gov](mailto:DemeraJ@bronxda.nyc.gov)), and Selena Ley ([LeyS@Bronxda.nyc.gov](mailto:LeyS@Bronxda.nyc.gov)).

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.

District Attorney - Bronx County, 198 East 161st Street, 4th Floor, Room 428, Bronx, NY 10451. Jonathan Demera (718) 644-1255; [demeraj@bronxda.nyc.gov](mailto:demeraj@bronxda.nyc.gov)

j23-29

## DISTRICT ATTORNEY - NEW YORK COUNTY

### ■ INTENT TO AWARD

*Services (other than human services)*

**INTENT TO NEGOTIATE: ANNUAL MAINTENANCE FOR LAWCROUT ATTORNEY SUBSCRIPTION** - Sole Source - Available only from a single source - PIN# 901LAWCRUIT24 - Due 6-28-23 at 10:00 A.M.

PPB Rules Sole Source Procurement Section 3-05.

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.

District Attorney - New York County, 80 Centre Street, Room 409, New York, NY 10013. Ana Montano-Molinar (212) 335-3484; [molinarmontanoa@dany.nyc.gov](mailto:molinarmontanoa@dany.nyc.gov)

j22-28

## EMERGENCY MANAGEMENT

### ADMINISTRATION AND PROCUREMENT

### ■ INTENT TO AWARD

*Services (other than human services)*

**LEARNING MANAGEMENT SYSTEM** - Sole Source - Available only from a single source - PIN# 01723Y0051 - Due 6-29-23 at 2:00 P.M.

Learning Management System (LMS) that provides access to online trainings, registration for in-person trainings, and maintains learning records for NYCEM staff and agency partners.

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other

information; and for opening and reading of bids at date and time specified above.  
Emergency Management, 165 Cadman Plaza East, Brooklyn, NY 11201.  
Ying Li (646) 771-7981; yli@oem.nyc.gov

• j23-29

**FINANCIAL INFORMATION SERVICES AGENCY**

■ AWARD

*Services (other than human services)*

**INFORMATION TECHNOLOGY AND OTHER CONSULTANT SERVICES** - Renewal - PIN# 127FY2300031 - AMT: \$27,750,912.00 - TO: Apex Systems, LLC , 4400 Cox Road, Suite 200, Glen Allen, VA 23060.

Renewal of 5 of 33 vendors in the FISA-OPA IT and Other Consultant Services Agreement. The term of the renewal is three (3) years commencing July 1, 2023 and terminating on June 30, 2026.

\*For Informational Purposes Only\*

127FY2300031 (C) Apex Systems, LLC (Class A, C) 4400 Cox Road, Suite 200, Glen Allen, VA 23060. Allocated Amount: \$700,000.00.

127FY2300031 (P) Kforce, Inc. (Class A, C) 1150 Assembly Dr, Suite 500, Tampa, FL 33607. Allocated Amount: \$700,000.00.

127FY2300031 (DD) The North Highland Company (Class C) One Penn Plaza, Suite 3205, New York, NY 10119. Allocated Amount: \$200,000.00.

127FY2300031 (B) Accenture LLP (Class F) One Manhattan West, 395 9th Avenue, New York, NY 10001. Allocated Amount: \$200,000.00.

127FY2300031 (L) Experis US LLC (Class A,C, E, F) (\*There was the Assignment from MISICOM, Inc. to Experis US LLC.) 100 Manpower Place, Milwaukee, WI 53212. Allocated Amount: \$1,100,000.00.

• j23

**HEALTH AND MENTAL HYGIENE**

**AGENCY CHIEF CONTRACTING OFFICER**

■ INTENT TO AWARD

*Human Services/Client Services*

**POSTGRADUATE CENTER FOR MENTAL HEALTH** - Request for Proposals - PIN# 131656681 - Due 6-29-23 at 12:00 A.M.

Provider Name: Postgraduate Center For Mental Health  
PIN#: 19AZ010005R1X00  
Contract Term: 10/1/2023 - 9/30/2027  
Service Address/Administrative Address: 158 East 35th Street, New York, NY 10016-4102.

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.

Health and Mental Hygiene, 42-09 28th Street, 17th Floor, CN 30A, Long Island City, NY 11101. Denise Beach (347) 396-6624; dbeach@health.nyc.gov

• j23-29

**HOUSING PRESERVATION AND DEVELOPMENT**

**LEGAL AFFAIRS**

■ AWARD

*Services (other than human services)*

**LEGAL SERVICES FOR REAL ESTATE TRANSACTIONS - MWBE SP - DAYREL SEWELL** - M/WBE Noncompetitive Small Purchase - PIN# 80623W0029001 - AMT: \$75,000.00 - TO: Law Firm of Dayrel Sewell PLLC, 599 E. 2nd Street, Brooklyn, NY 11218.

• j23

**HUMAN RESOURCES ADMINISTRATION**

■ INTENT TO AWARD

*Human Services/Client Services*

**06923N0077-NAE WITH CATHOLIC CHARITIES NEIGHBORHOOD SERVICES 64U SCATTER SITE** - Negotiated Acquisition - Other - PIN# 06923N0077 - Due 6-28-23 at 3:00 P.M.

The Human Resources Administration (HRA) intends to extend the existing contract with Catholic Charities Neighborhood Services Inc. to provide permanent housing and supportive services to Agency's clients. This Negotiated Acquisition Extension is necessary to ensure housing and supportive services continuity to clients. The contract term will be: 07/01/2023 - 09/30/2023. The contract total value is \$698,311.00.

Procurement and award are in accordance with Section 3-01(d)(2)(vii) for the reasons set forth herein.

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.

Human Resources Administration, 150 Greenwich Street, 37th Floor, New York, NY 10007. Adrienne Williams; ACCOContractPlanning@dss.nyc.gov

j21-27

**06923N0078-NAE WITH HARLEM CONGREGATIONS FOR COMMUNITY IMPROVEMENT 60U SCATTER SITE** - Negotiated Acquisition - Other - PIN# 06923N0078 - Due 6-27-23 at 3:00 P.M.

The Human Resources Administration (HRA) intends to extend for one year the existing contract with Harlem Congregations for Community Improvement Inc. to provide more time to release a Competitive Sealed Proposal. This Negotiated Acquisition Extension is necessary to ensure continuity of housing and supportive services delivered to Agency's clients by incumbent provider Harlem Congregations for Community Improvement Inc. The contract term will be: 7/1/2023 - 6/30/2024. The contract total value is \$ 3,321,945.00.

This procurement and award are in accordance with Section 3-01(d)(2)(vii) for the reasons set forth herein.

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.

Human Resources Administration, 150 Greenwich Street, 37th Floor, New York, NY 10007. Adrienne Williams; ACCOContractPlanning@dss.nyc.gov

j20-26

**06923N0076- NAE WITH CATHOLIC CHARITIES NEIGHBORHOOD SERVICES 70U SCATTER SITE** - Negotiated Acquisition - Other - PIN# 06923N0076 - Due 6-28-23 at 3:00 P.M.

The Human Resources Administration (HRA) intends to extend the existing contract with Catholic Charities Neighborhood Services Inc. to provide permanent housing and supportive services to Agency's clients. This Negotiated Acquisition Extension is necessary to ensure housing and supportive services continuity to clients. The contract term will be: 07/01/2023 - 09/30/2023. The contract total value is \$745,161.00.

This procurement and award are in accordance with Section 3-01(d)(2)(vii) for the reasons set forth herein.

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.

Human Resources Administration, 150 Greenwich Street, 37th Floor, New York, NY 10007. Adrienne Williams; ACCOContractPlanning@dss.nyc.gov

j21-27

*Services (other than human services)*

**SIP (SESSION INITIATION PROTOCOL) TRUNK SERVICES- VERIZON** - Negotiated Acquisition - Other - PIN# 06923N0074 - Due 6-27-23 at 3:00 P.M.

Pursuant to Section 3-04 of the PPB Rules, HRA/ITS intends to enter into a Negotiated Acquisition (NA) contract with Verizon Business Network Services LLC to close the Session Initiation Protocol (SIP) Trunk Services contract performed by Verizon for the period from 9/1/2020 to 12/31/2022 for \$2,658,856.12.

j20-26

## INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS

### PUBLIC SAFETY

#### ■ AWARD

*Services (other than human services)*

**7-858-0251A PUBLIC SAFETY SERVICE DESK - M/WBE**  
Noncompetitive Small Purchase - PIN# 85823W0104001 - AMT:  
\$241,488.00 - TO: Island Computer Products Inc Icp Inc., 20 Clifton  
Avenue, Staten Island, NY 10305.

• j23

## LAW DEPARTMENT

### ADMINISTRATION

#### ■ AWARD

*Services (other than human services)*

**PRIVATE INVESTIGATION SERVICES - Innovative Procurement**  
- Other - PIN# 02521W8268KXLA001 - AMT: \$150,000.00 - TO: BZB  
Investigative Services LLC, 1825 Park Avenue, Suite #1, New York, NY  
10035.

The New York City Law Department (NYCLAW) utilized the M/WBE  
Noncompetitive Innovative Procurement Method under section 3-12 of  
the Procurement Policy Board Rules to procure private investigation  
services.

Pursuant to Section 3-12 of the New York City Procurement Policy  
Board (PPB) Rules NYCLAW has extended its original agreement  
between BZB Investigative Services LLC and NYCLAW for one year  
and added additional funds in order to maintain continuity of services  
for reasons not known to either party when the original agreement was  
entered into.

• j23

### PROCUREMENT

#### ■ INTENT TO AWARD

*Goods and Services*

**HOTDOCS ANNUAL MAINTENANCE RENEWAL - Sole Source -**  
Available only from a single source - PIN#02523x001578 - Due 7-3-23  
at 5:00 P.M.

It is the intent of the New York City Law Department ("Department")  
to enter into a contract, commencing on January 1, 2023 and  
terminating on December 31, 2023, with Abacus data Systems, Inc.,  
pursuant to Procurement Policy Board ("PPB") Rules Section 3-05.  
Under the terms of the contract, Abacus Data Systems, Inc. will provide  
system updates and monthly maintenance to the HotDocs document  
management system. Pursuant to Section 3-05(a) of the PPB Rules,  
Abacus was determined to be the only source available to provide the  
system updates and maintenance as it is the creator and sole owner of  
HotDocs and is the only vendor capable of providing maintenance  
service to the software, including but not limited to, all programming  
and maintenance services.

*Use the following address unless otherwise specified in notice, to  
secure, examine or submit bid/proposal documents, vendor pre-  
qualification and other forms; specifications/blueprints; other  
information; and for opening and reading of bids at date and time  
specified above.*

*Law Department, 100 Church Street, 5th Floor, Room 5-208a, New York,  
NY 10007. Henry Sheehan (212) 356-1128; hsheehan@law.nyc.gov*

j21-27

**INSTAKNOW LICENSES AND SERVICES - Sole Source - Available**  
only from a single source - PIN#02523X001167 - Due 7-3-23 at 5:00 P.M.

Pursuant to Section 3-05 of the NYC Procurement Policy Board Rules,  
it is the intent of the New York City Law Department to enter into sole  
source negotiations with Instaknow, Inc. with the expectation that  
Instaknow will be awarded a contract with the Law Department for  
the provision of Instaknow annual licenses and professional services  
associated with the Department's Process Automation Project, which  
is necessary for the Department to maintain, operate and expand its  
automation applications. Instaknow tools are used by the Law  
Department for the continuation of the Department's various  
applications. Instaknow will provide supportive software and services  
to the Department as necessary to fulfill requirements of the process  
automation project. Any vendor besides Instaknow, Inc. that believes it

can provide the above referenced services may express interest by  
responding to the RFI EPIN 02523Y0048 in PASSPort no later than  
June 22, 2023. If you need additional assistance with PASSPort, please  
contact the MOCS Service Desk at [https://mocssupport.atlassian.net/  
serviceesk/customer/portal/8](https://mocssupport.atlassian.net/serviceesk/customer/portal/8): [https://www1.nyc.gov/site/mocs/systems/  
passport-user-materials.page](https://www1.nyc.gov/site/mocs/systems/passport-user-materials.page) If you need additional assistance please  
contact MOCS Service desk at [https://mocssupport.atlassian.net/  
serviceesk/customer/portal/8](https://mocssupport.atlassian.net/serviceesk/customer/portal/8).

*Use the following address unless otherwise specified in notice, to  
secure, examine or submit bid/proposal documents, vendor pre-  
qualification and other forms; specifications/blueprints; other  
information; and for opening and reading of bids at date and time  
specified above.*

*Law Department, 100 Church Street, 5th Floor, Room 5-208a, New York,  
NY 10007. Henry Sheehan (212) 356-1128; hsheehan@law.nyc.gov*

j21-27

*Services (other than human services)*

**ABM JANITORIAL AUTHORIZED CLEANING SERVICES - Sole**  
Source - Available only from a single source - PIN#02523Y0053 -  
Due 7-3-23 at 5:00 P.M.

It is the intent of the New York City Law Department ("Department")  
to enter into a contract, commencing on November 1 2022 and  
terminating on June 30, 2023, with ABM Janitorial Services, Inc.,  
pursuant to Procurement Policy Board ("PPB") Rules Section 3-05.  
Under the terms of the contract, ABM Janitorial Services will provide  
various office and bathroom cleaning as well as disinfecting all  
desktops and counters and trash disposal. Pursuant to Section 3-05(a)  
of the PPB Rules, ABM Janitorial Services was determined to be the  
only source available to provide the cleaning services required as it is  
the only cleaning vendor permitted by the building management to  
perform such services to all tenants at this building location.

*Use the following address unless otherwise specified in notice, to  
secure, examine or submit bid/proposal documents, vendor pre-  
qualification and other forms; specifications/blueprints; other  
information; and for opening and reading of bids at date and time  
specified above.*

*Law Department, 100 Church Street, 5th Floor, Room 5-208a, New York,  
NY 10007. Henry Sheehan (212) 356-1128; hsheehan@law.nyc.gov*

j21-27

## NYC HEALTH + HOSPITALS

### ■ SOLICITATION

*Services (other than human services)*

**LEGAL SERVICES PROVIDER FOR MEDICAL LEGAL**  
**PARTNERSHIP - Request for Information - PIN# 2712 - Due 7-19-23**  
at 5:00 P.M.

In NYC Health + Hospitals' patient population, unmet legal needs  
related to social determinants of health (e.g. residence in substandard  
housing, immigration status, and wrongful denial of government  
benefits) frequently impacts health. The medical-legal partnership  
(MLP) model is an innovative and unique health care delivery  
mechanism designed to embed civil legal services into the health care  
team in order to address legal needs tied to underlying and  
intersecting social determinants of health. NYC Health + Hospitals  
operates one of the oldest and largest medical legal partnerships in the  
country. New York City Health + Hospitals is investigating legal  
services providers to participate in its medical-legal partnership  
program.

*Use the following address unless otherwise specified in notice, to  
secure, examine or submit bid/proposal documents, vendor pre-  
qualification and other forms; specifications/blueprints; other  
information; and for opening and reading of bids at date and time  
specified above.*

*NYC Health + Hospitals, 50 Water Street, 5th Floor, New York, NY  
10004. Randy Lee (646) 815-3245; leer31@nychhc.org*

• j23

## PARKS AND RECREATION

### REVENUE

#### ■ SOLICITATION

*Human Services/Client Services*

**RFP FOR THE RENOVATION, OPERATION, AND**  
**MAINTENANCE OF MOSHOLU GOLF COURSE - Competitive**

Sealed Proposals - Judgment required in evaluating proposals - PIN# X92-3-GC-2023 - Due 7-21-23 at 3:00 P.M.

In accordance with Section 1-13 of the Concession Rules of the City of New York, the Department of Parks and Recreation ("Parks") is issuing, as of the date of this notice, a non-significant RFP for the renovation, operation, and maintenance of Mosholu Golf Course at Van Cortlandt Park, Bronx.

There will be a recommended remote proposer meeting on Tuesday, June 27, 2023, at 12:00 P.M. If you are considering responding to this RFP, please make every effort to attend this recommended remote proposer meeting.

The Microsoft Teams link for the remote proposer meeting is as follows:

https://teams.microsoft.com/l/meetup-join/19%3ameeting\_MTg5M2QwMTItNTFkNi00Mzg1LTk2MzEtZDA0YTM1M2E2M2U3%40thread.v2/0?context=%7b%22Tid%22%3a%2232f56fc7-5f81-4e22-a95b-15da66513bef%22%2c%22Oid%22%3a%222fb21b72-0af5-451c-a2d8-fe9025c74e2a%22%7d

You may also join the remote proposer meeting by phone using the following information:

Dial: +1-646-893-7101

Phone Conference ID: 685 896 273#

Subject to availability and by appointment only, we may set up a meeting at the concession site at 3545 Jerome Avenue, in Van Cortlandt Park, Bronx.

All Proposals submitted in response to this RFP must be submitted by no later than Friday, July 21, 2023, at 3:00 P.M.

Hard copies of the RFP can be obtained, at no cost, commencing, June 16, 2023, through July 21, 2023, by contacting Barbara Huang, Project Manager, at (212) 360-3490 or at Barbara.Huang@parks.nyc.gov.

The RFP is also available for download, commencing June 16, 2023, through July 21, 2023, on Parks' website. To download the RFP, visit http://www.nyc.gov/parks/businessopportunities and click on the "Concessions Opportunities at Parks" link. Once you have logged in, click on the "download" link that appears adjacent to the RFP's description.

For more information or if you cannot attend the remote proposer meeting, the prospective proposer may contact Barbara Huang, Project Manager, at (212) 360-3490 or via email: Barbara.Huang@parks.nyc.gov.

TELECOMMUNICATION DEVICE FOR THE DEAF (TDD) (212) 504-4115.

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.

Parks and Recreation, 830 Fifth Avenue, New York, NY 10065. Barbara Huang (212) 360-3490; Barbara.Huang@parks.nyc.gov

Accessibility questions: Barbara Huang, by: Wednesday, July 19, 2023, 3:00 P.M.



j16-29

PROBATION

ADMINISTRATION

INTENT TO AWARD

Human Services/Client Services

NEON ARTS NA - Negotiated Acquisition - Other - PIN#78123N0009 - Due 7-6-23 at 2:00 P.M.

Pursuant to Section 3-04(b)(2)(c) and 3-04(b)(2)(iii) of the NYC Procurement Policy Board Rules, the Department of Probation intends to enter into a contract with Renaissance Youth Center. To ensure continuity of services for the NeON Arts program. The contract term will be from July 1, 2023 to June 30, 2024 with an anticipated contract amount of \$787,500.00. This ad is for informational purposes only, anyone who would like additional information regarding this procurement or future like procurements may send an email to acco@probation.nyc.gov no later than the due date and time stated in this advertisement.

j21-27

TRANSPORTATION

BUDGET AND CAPITAL PROGRAM MANAGEMENT

INTENT TO AWARD

Construction/Construction Services

84123T0003-HWR706 CONSTRUCTION OF ROAD SIDEWALKS IN STATEN ISLAND - Government to Government - PIN# 84123T0003 - Due 6-28-23 at 9:00 P.M.

The New York City Department of Transportation intends to enter into a sole source negotiation with another government entity, under section 1-02 (f) (1) of the PPB Rules. This project will construct new sidewalk on the western side of Forest Hill Road between Willowbrook Road and Steers Street, including pedestrian ramp improvements and new curbs where needed. Any firm that would like to express their interest in providing services for similar projects in the future may do so by phone and joining the City Bidder's list by filling out the NYC-FMS Vendor Enrollment form at https://a127-pip.nyc.gov/webapp/PRDPCW/SelfService/to enroll your organization with the City of New York.

j21-27

YOUTH AND COMMUNITY DEVELOPMENT

PROCUREMENT

INTENT TO AWARD

Human Services/Client Services

NEIGHBORHOOD SAFETY AND PREVENTION OF GUN VIOLENCE SERVICES NEGOTIATED ACQUISITION - Negotiated Acquisition - Other - PIN# 26023N0079 - Due 6-28-23 at 5:00 P.M.

In accordance with section 3-04(b)(2)(i)(D) of the Procurement Policy Board Rules, the Department of Youth and Community Development (DYCD) wishes to enter into negotiations with the following providers who operate Neighborhood Safety and Prevention of Gun Violence Service contracts previously held by the Mayor's Office of Criminal Justice for the terms and amounts noted below with the option to renew for up to two years.

67th Precinct Clergy Council, Inc. 203 East 37th Street Brooklyn, NY 11203 DYCD ID: 800001 Term: July 1, 2023 to June 30, 2025 \$1,777,668.00

Community Mediation Services, Inc. 89-64 163rd Street Jamaica, NY 11432 DYCD ID: 800004 Term: July 1, 2023 to June 30, 2025 \$694,163.00

Institute for Mediation & Conflict Resolution, Inc. 369 East 148th Street, Bronx, NY 10455 DYCD ID: 800006 Term: July 1, 2023 to June 30, 2025 \$450,660.00

Justice Innovation, Inc. 520 8th Avenue, 18th Floor New York, NY 10018 DYCD ID: 800008 Term: July 1, 2023 to June 30, 2025 \$1,675,000.00 DYCD ID: 800016 Term: July 1, 2023 to June 30, 2025 \$309,700.00

King of Kings Foundation, Inc. 137-11 161st Street Rochdale Village, NY 11434 DYCD ID: 800009 Term: July 1, 2023 to June 30, 2024 \$1,250,000.00

Legal Aid Society 199 Water Street, 3rd Floor New York, NY 10038 DYCD ID: 800015 Term: July 1, 2023 to June 30, 2025 \$7,500,000.00

New York Center for Interpersonal Development Inc  
130 Stuyvesant Place, 5th Floor  
Staten Island, NY 10301  
DYCD ID: 800010  
Term: July 1, 2023 to June 30, 2025  
\$679,310.00

New York Peace Institute, Inc.  
111 John Street, 600  
New York, NY 10038  
DYCD ID: 800011  
Term: July 1, 2023 to June 30, 2025  
\$1,425,000.00

Police Athletic League, Inc.  
34 ½ East 12th Street  
New York, NY 10003  
DYCD ID: 800012  
Term: July 1, 2023 to June 30, 2025  
\$6,020,018.00

Southside United Housing Development Fund Corp.  
434 South 5th Street  
Brooklyn, NY 11211  
DYCD ID: 800013  
Term: July 1, 2023 to June 30, 2025  
\$14,216,523.00

Please be advised that this is for information purposes only. If you wish to contact DYCD for further information, please send an email to [ACCO@dycd.nyc.gov](mailto:ACCO@dycd.nyc.gov).

Use the following address unless otherwise specified in notice, to secure, examine or submit bid/proposal documents, vendor pre-qualification and other forms; specifications/blueprints; other information; and for opening and reading of bids at date and time specified above.

Youth and Community Development, 2 Lafayette Street, 14th Floor, New York, NY 10007. Dana Cantelmi (646) 343-6310; [dcantelmi@dycd.nyc.gov](mailto:dcantelmi@dycd.nyc.gov)

j22-28

## CONTRACT AWARD HEARINGS

**NOTE: LOCATION(S) ARE ACCESSIBLE TO INDIVIDUALS USING WHEELCHAIRS OR OTHER MOBILITY DEVICES. FOR FURTHER INFORMATION ON ACCESSIBILITY OR TO MAKE A REQUEST FOR ACCOMMODATIONS, SUCH AS SIGN LANGUAGE INTERPRETATION SERVICES, PLEASE CONTACT THE MAYOR'S OFFICE OF CONTRACT SERVICES (MOCS) VIA E-MAIL AT [DISABILITYAFFAIRS@MOCS.NYC.GOV](mailto:DISABILITYAFFAIRS@MOCS.NYC.GOV) OR VIA PHONE AT (212) 298-0734. ANY PERSON REQUIRING REASONABLE ACCOMMODATION FOR THE PUBLIC HEARING SHOULD CONTACT MOCS AT LEAST THREE (3) BUSINESS DAYS IN ADVANCE OF THE HEARING TO ENSURE AVAILABILITY.**



## ENVIRONMENTAL PROTECTION

### ■ PUBLIC HEARINGS

**NOTICE IS HEREBY GIVEN** that a Public Hearing will be held by the Department of Environmental Protection via conference call on July 11, 2023, commencing at 10:00 A.M. on the following:

**IN THE MATTER OF** a proposed Purchase Order/Contract between the Department of Environmental Protection and Gianco Environmental Services, located at 35 Pinelawn Rd Ste 209E, Melville, NY 11747 for Lead-Acid and Lithium-Ion Battery Removal. The Contract term shall be one hundred twenty consecutive calendar days from the date of the written notice to proceed. The Contract amount shall be \$309,150.00 Location: 59-17 Junction Boulevard, Flushing, NY 11373 PIN#4800400X.

The Vendor was selected by MWBE Noncompetitive Small Purchase pursuant to Section 3-08(c)(1)(iv) of the PPB Rules.

In order to access the Public Hearing and testify, please call 1-347-921-5612, Access Code: 370328530# no later than 9:55 AM. If you need further accommodations, please let us know at least five business days in advance of the Public Hearing via email at [noahs@dep.nyc.gov](mailto:noahs@dep.nyc.gov).

Pursuant to Section 2-11(c)(3) of the Procurement Policy Board Rules, if DEP does not receive, by June 30, 2023, from any individual a

written request to speak at this hearing, then DEP need not conduct this hearing. Requests should be made to Mr. Noah Shieh via email at [noahs@dep.nyc.gov](mailto:noahs@dep.nyc.gov).

◀ j23

**NOTICE IS HEREBY GIVEN** that a Public Hearing will be held by the Department of Environmental Protection via conference call on July 11, 2023, commencing at 10:00 A.M. on the following:

**IN THE MATTER OF** a proposed Purchase Order/Contract between the Department of Environmental Protection and Green Mechanical Corp. located at 16402 95th Street, Howard Beach, NY 11414 for Repair of Building Management Systems. The Contract term shall be two calendar years from the date of the written notice to proceed. The Contract amount shall be \$119,550.00 Location: 59-17 Junction Boulevard, Flushing, NY 11373 PIN#3030678X/ 4030027X.

The Vendor was selected by MWBE Noncompetitive Small Purchase pursuant to Section 3-08(c)(1)(iv) of the PPB Rules.

In order to access the Public Hearing and testify, please call 1-347-921-5612, Access Code: 835406816# no later than 9:55 AM. If you need further accommodations, please let us know at least five business days in advance of the Public Hearing via email at [noahs@dep.nyc.gov](mailto:noahs@dep.nyc.gov).

Pursuant to Section 2-11(c)(3) of the Procurement Policy Board Rules, if DEP does not receive, by June 30, 2023, from any individual a written request to speak at this hearing, then DEP need not conduct this hearing. Requests should be made to Mr. Noah Shieh via email at [noahs@dep.nyc.gov](mailto:noahs@dep.nyc.gov).

◀ j23

## AGENCY RULES

## ENVIRONMENTAL PROTECTION

### ■ NOTICE

#### Notice of Public Hearing and Opportunity to Comment on Proposed Rules

**What are we proposing?** The Department of Environmental Protection ("Department" or "DEP") is proposing to amend its rules governing management of construction and post-construction stormwater sources (Title 15, chapter 19.1 of the Rules of the City of New York ("RCNY")).

**When and where is the hearing?** The Department will hold a public hearing on the proposed rule amendments. The public hearing will take place at 11 am on July 26, 2023. To participate in the public hearing, please follow these instructions:

Microsoft Teams meeting

**Join on your computer, mobile app or room device**

[Click here to join the meeting](#)

Meeting ID: 299 760 179 823  
Passcode: TQVgpV

[Download Teams](#) | [Join on the web](#)

**Or call in (audio only)**

+1 347-921-5612,,811683509#

Phone Conference ID: 811 683 509#

**How do I comment on the proposed rules?** Anyone can comment on the proposed rules by:

- **Website.** You can submit comments to the Department through the NYC rules web site at <http://rules.cityofnewyork.us>.
- **Email.** You can email written comments to [nycrules@dep.nyc.gov](mailto:nycrules@dep.nyc.gov).
- **Mail.** You can mail written comments to the Department, Bureau of Legal Affairs, 59-17 Junction Boulevard, 19<sup>th</sup> Floor, Flushing, NY 11373.
- **Fax.** You can fax written comments to the Department, Bureau of Legal Affairs, at 718-595-6543.

- **By speaking at the hearing.** Anyone who wants to comment on the proposed rule at the public hearing must sign up to speak. You can sign up before the hearing by calling 718-595-6531. You can speak for up to three minutes.

**Is there a deadline to submit written comments?** Yes, you must submit written comments by July 26, 2023.

**What if I need assistance to participate in the hearing?** You must tell the Department's Bureau of Legal Affairs if you need a reasonable accommodation of a disability at the hearing. You must tell us if you need a sign language interpreter. You can tell us by postal mail or email to the addresses given above. You may also tell us by telephone at 718-595-6531. You must tell us by July 19, 2023.

**Can I review the comments made on the proposed rules?** You can review the comments made online on the proposed rules by going to the website at <http://rules.cityofnewyork.us/>. A few days after the hearing, a transcript of the hearing and copies of the written comments will be available to the public at the Bureau of Legal Affairs.

**What authorizes the Department to make these rules?** Section 1043(b-1) of the New York City Charter ("City Charter") and section 24-553 of the Administrative Code of the City of New York authorize the Department to make these proposed rules which were included in the Department's regulatory agenda for fiscal year 2023.

**Where can I find the Department's rules?** The Department's rules are in Title 15 of the Rules of the City of New York.

**What laws govern the rulemaking process?** The Department must meet the requirements of Section 1043 of the City Charter when creating or changing rules. This notice is made according to the requirements of Section 1043(b) of the City Charter.

#### Statement of Basis and Purpose

The New York City Department of Environmental Protection ("DEP" or "Department") proposes to amend its rules in Chapter 19.1 of the RCNY that govern management of construction and post-construction stormwater sources.

Section 1403(b-1) of the Charter of the City of New York provides that the Commissioner of Environmental Protection has "the power to administer and enforce provisions of law, rules and regulations relating to the management and control of discharges and runoff from public and private property, including but not limited to stormwater discharges, which may convey pollutants and other materials that may enter and have an adverse impact on the waters of the state." Chapter 5-A of Title 24 of the Administrative Code of the City of New York establishes stormwater management controls for construction projects to reduce the flow of stormwater runoff and water borne pollutants into sewers that empty directly into the waters of the state or that overflow into such waters because of rain or snowmelt that exceeds the design capacity of wastewater treatment plants. And Administrative Code § 24-553, in Chapter 5-A, specifically authorizes the Department to promulgate rules that establish exemptions from permit requirements.

The Department is proposing these amendments to further clarify the unified stormwater program that the Department administers citywide. These amendments to Chapter 19.1, including the appended NYC Stormwater Manual, will also provide more procedural and technical guidance to owners, developers, and applicants.

Specifically, these amendments will:

- Give Chapter 19.1 an official title: "Stormwater Management for Pollution Control."
- Add, amend, and delete several definitions in § 19.1-01.2 to clarify that "covered roadway maintenance" is defined as maintenance work that involves 20,000 square feet or more in the municipal right of way, including milling and filling of existing asphalt pavements and replacement of concrete pavement slabs.
- Change the definition of "impervious area (cover)" in § 19.1-01.2 to include any portion of the site of a covered development project from which impervious cover was removed within five (5) years before SWPPP submission to the Department.
- Clarify two things in § 19.1-03.3: (1) covered roadway maintenance would not require a permit but must implement erosion and sediment control practices in accordance with new changes to the Appendix to Chapter 19.1, (the NYC Stormwater Manual) and (2) the Stormwater Pollution Prevention Plan (SWPPP) required for construction permitting must include all elements applicable to the project.
- Add a definition in the NYC Stormwater Manual for "developed storm flow," the average rate of storm runoff.
- Clarify requirements for certain release rates in the NYC Stormwater Manual, including computing developed storm flow (in Chapter 2.3), and calculating release rates for

controlled-flow orifices (in Chapter 4.10).

- Include in the NYC Stormwater Manual infiltration testing for porous pavement as part of routine inspection tasks (in Chapter 5.3).
- Add a new Chapter 7 to the NYC Stormwater Manual that contains requirements for "covered roadway maintenance."
- Make conforming edits throughout Chapter 19.1 and the NYC Stormwater Manual.

New material is underlined. Deleted material is shown in [brackets].

"Shall" and "must" denote mandatory requirements and may be used interchangeably in the rules of the department, unless otherwise specified or unless the context clearly indicates otherwise.

Section 1. Chapter 19.1 of Title 15 of the Rules of the City of New York is amended by adding a title to read as follows:

#### Chapter 19.1 Stormwater Management for Pollution Control

§ 2. Section 19.1-01.2 of Chapter 19.1 of Title 15 of the Rules of the City of New York is amended by deleting the definition of "covered maintenance activity" and by amending the definitions of "roadway maintenance," "covered development project," "developer," and "impervious area (cover)" as follows:

#### § 19.1-01.2 Definitions.

**Covered development project.** The term "covered development project" means development activity, private or public, that involves or results in an amount of soil disturbance greater than or equal to 20,000 square feet; or creation of 5,000 square feet or more of impervious surface; or covered roadway maintenance [activity]. Such term includes development activity that is part of a larger common plan of development or sale involving or resulting in soil disturbance greater than or equal to 20,000 square feet or creation of 5,000 square feet or more of impervious surface.

**[Roadway Maintenance] Covered roadway maintenance.** The term "covered roadway maintenance" means maintenance work that involves 20,000 [sf] square feet or more in the municipal right of way (ROW) including milling and filling of existing asphalt pavements ("milling and paving") and replacement of concrete pavement slabs[, and similar work that does not expose soil or disturb the bottom six inches of subbase material; and long-term use of equipment storage areas, at or near highway maintenance facilities].

**[Covered Maintenance Activity.** The term "covered maintenance activity" means roadway maintenance that involves 20,000 sf or more.]

**Developer.** The term "developer" means a person that owns or leases land on which development activity that is part of a covered development project is occurring, or a person that has operational control over the plans and specifications for the development [activity's] activity or covered roadway maintenance [activity's plans and specifications], including the ability to make modifications[, to the construction plans and specifications.

**Impervious area (cover).** The term "impervious area (cover)" means all impermeable surfaces that cannot effectively infiltrate rainfall[. This includes], including paved, concrete and gravel surfaces (e.g., parking lots, driveways, roads, runways and sidewalks); building rooftops; [and] miscellaneous impermeable structures such as patios, pools, and sheds; and any portion of the site of a covered development project from which impervious cover was removed within five (5) years before SWPPP submission to the Department.

§ 3. Section 19.1-03.1 of Chapter 19.1 of Title 15 of the Rules of the City of New York is amended to read as follows:

#### 19.1-03.1 Applicability.

(a) 15 RCNY § 19.1-03 applies to covered development projects, public and private.

(1) The following activities are not considered covered development projects:

- (i) Routine maintenance activities; and
- (ii) Emergency activities that are immediately necessary for the protection of life, property or natural resources.

§ 4. Section 19.1-03.3 of Chapter 19.1 of Title 15 of the Rules of the City of New York is amended to read as follows:

#### § 19.1-03.3 Permits.

(a) *Permit Program Requirements.*

....

(6) *Exemptions for certain covered development projects.*

(i) A permit is not required for a covered development project that drains to waters of the state through an outfall approved by NYSDEC unless the outfall is owned or operated by the city of New York.

(ii) Upon receiving an application, DEP may determine that a permit is not required for a covered development project where a public combined or storm sewer is not available.  
 (iii) Covered roadway maintenance must implement erosion and sediment control practices in accordance with the NYC Stormwater Manual (Chapter 7 Roadway Maintenance requirements) but does not require a permit under this section.

(b) *Stormwater Construction Permit.*

(1) Except as otherwise provided in paragraph (6) of subdivision (a) of this section or subdivision (b) of 15 RCNY § 19.1-03.1, no developer may perform development activity in connection with a covered development project, public or private, without having first obtained a stormwater construction permit from the department. The commissioner, in his or her discretion, may impose such terms and conditions in the permit as he or she deems necessary to protect the sewer system or to protect the public health or welfare.

(2) [The following activities are not considered covered development projects:

(i) Routine maintenance activities; and

(ii) Emergency activities that are immediately necessary for the protection of life, property, or natural resources] Recordkeeping. The developer must keep and maintain records of all inspections and tests required to be performed during construction throughout the period of construction and for five years after completion of construction.

(3) *Permit application requirements.*

....

(v) All components of the SWPPP that involve the practice of engineering, as defined by Article 145 of the NYS Education Law, must be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York. The SWPPP must be submitted in an electronic format acceptable, to the department, as further detailed on the department's website. The SWPPP must contain all [the applicable elements required in the NYSDEC construction general permit and in this chapter, as determined by the Department, as follows:

....

[(12) *Recordkeeping.* The developer must keep and maintain records of all inspections and tests required to be performed during construction throughout the period of construction and for five years after completion of construction.]

§ 5. The appendix to chapter 19.1 of Title 15 of the Rules of the City of New York, titled "New York City Stormwater Manual", is amended to read as follows:

**APPENDIX  
 NEW YORK CITY STORMWATER MANUAL**

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**ACRONYMS**

- Aic: Area of new impervious cover
- A.S.T.M. The American Standards for the Testing of Materials, latest edition.
- BEPA: Bureau of Environmental Planning & Analysis or its successor.
- BMP: Best Management Practice
- BWSO: The Bureau of Water & Sewer Operations or its successor.
- CSO: Combined Sewer Overflow
- CSS: Combined Sewer System
- DEP: The New York City Department of Environmental Protection or its successor Agency.
- DO: Dissolved Oxygen
- DOB: The New York City Department of Buildings or its successor Agency.
- DOF: The New York City Department of Finance or its successor Agency.
- DOT: The New York City Department of Transportation or its successor Agency.
- ESC: Erosion and Sedimentation Control
- HCP: House Connection Proposal
- HSG: Hydrologic Soil Group
- IC: Impervious Cover
- MS4: Municipal Separate Storm Sewer System
- NNI: No Net Increase
- NOI: Notice of Intent
- NOT: Notice of Termination
- NYC SWM: New York City Stormwater Manual
- NYSDEC: The New York State Department of Environmental Conservation.
- NYS SWMDM: New York State Stormwater Management Design Manual
- O&M: Operations and Maintenance
- PC: Post-Construction
- POC: Pollutant of Concern
- PPGH: Pollution Prevention and Good Housekeeping
- ROW: Right of Way
- RR: Runoff Reduction
- RRv: Runoff Reduction Volume
- SCP: Site Connection Proposal
- sf: square feet
- SMP: Stormwater Management Practice

- SWPPP: Stormwater Pollution Prevention Plan
- SWPTS: Stormwater Permitting and Tracking System
- TN: Total Nitrogen
- Vv: Sewer Operations Volume
- WQ: Water Quality
- WQV: Water Quality Volume
- WRRF: Wastewater Resource Recovery Facility

**GLOSSARY**

- Agency: An agency of the City.
- Applicant: The person filing the online application for a stormwater construction permit or a stormwater maintenance permit. This may be the owner, developer, qualified professional, or other person that is a registered user in the online application system.
- Building: A structure having a specific Block and Lot (or tax sub-lot). In general, a structure will be considered a Building if it has a separate entrance from an outdoor area.
- City: The City of New York.
- Cleanout: Structure to allow access to subsurface pipes for cleaning.
- Cleanout Pipes: Pipes that provide a connection between the cleanout and internal pipes to allow for regular maintenance.
- Code: The Administrative Code of the City of New York.
- Combined Sewer: A sewer receiving a combination of sanitary and/or industrial wastewater and stormwater runoff.
- Combined Sewer Overflow (CSO): Sometimes, during heavy rain and snowstorms, a combined sewer system receives

higher than normal flows. NYC wastewater resource recovery facilities (WRRFs) are unable to handle flows that are more than twice their design capacity and when this occurs, a mix of excess stormwater and untreated wastewater discharges directly into the City's waterways at certain outfalls to prevent upstream flooding. This is called a combined sewer overflow.

**Combined Sewer System (CSS):** A sewer system used to convey both wastewater and stormwater in a single pipe to WRRFs.

**Commissioner:** The Commissioner of the New York City Department of Environmental Protection.

**Connection permit:** A written authorization issued by the DEP to connect to an existing sewer or drain or an approved outlet.

**Contractor:** An entity retained by the Owner/Applicant to construct a facility.

**Contributing (or contributory) drainage area:** A drainage area bounded by the ridgelines of the furthest boundaries from which flow reaches a point of discharge.

**Controlled-Flow Orifice:** Orifice located within the outlet control structure used to reduce the flow rate out of a practice.

**Conveyance Pipes:** Umbrella term used to describe pipes that convey stormwater, which can include yard drains, as well as SMP specific pipes, such as bypass pipes, overflow pipes, and intake pipes.

**Covered development project:** development activity that involves or results in an amount of soil disturbance greater than or equal to 20,000 square feet; or creation of 5,000 square feet or more of impervious surface; or [a] covered roadway maintenance [activity]. Such term includes development activity that is part of a larger common plan of development or sale involving or resulting in soil disturbance greater than or equal to 20,000 square feet or creation of 5,000 square feet or more of impervious surface.

**[Covered Maintenance Activity:** roadway maintenance activity that involves an area of 20,000 or more square feet.]

**Covered Roadway Maintenance:** Maintenance work that involves 20,000 sf or more in the municipal right of way (ROW) including milling and filling of existing asphalt pavements ("milling and paving") and replacement of concrete pavement slabs.

**CSO Outfall:** The physical point where a municipally owned or operated combined sewer discharges to surface waters of the state.

**Department:** The New York City Department of Environmental Protection (DEP).

**Designer:** A Qualified Professional.

**Detention System:** A system designed to slow and temporarily hold an accumulation of stormwater runoff and release it at a controlled rate.

**Developer:** A person that owns or leases land on which development activity that is part of a covered development project is occurring, or a person that has operational control over the plans and specifications for the development activity or covered roadway maintenance [activity's plans and specifications], including the ability to make modifications to the plans and specifications.

**Developed Storm Flow:** The developed average rate of storm runoff in cubic feet per second (cfs), which is computed using the "Rational Method." The "Rational Method" assumes a uniform block rainfall distribution over the entire tributary area, that the runoff hydrograph has the same shape with respect to time as the rainfall hydrograph, that the use of a weighted runoff coefficient for the tributary area is valid, and that the time of concentration of the tributary area is less than the duration of the rainfall event. It is used primarily for sewer design. For New York City areas of 10 square miles or less these assumptions are considered valid. For areas greater than 10 square miles, other modeling techniques may be more appropriate.

**Development Activity:** Creation of impervious surface and/or soil disturbance on a site including but not limited to land contour work, clearing, grading, excavation, demolition, construction, reconstruction, stockpiling activities or placement of fill. Clearing activities can include but are not limited to logging equipment operation, the cutting and skidding of trees, stump removal, and/or brush root removal. Such term does not include routine maintenance.

**Disturbance Threshold:** The minimum area of disturbed soil or created impervious surface as a result of development activities that triggers the need for a Stormwater Construction Permit.

**Discharge:** The introduction or release of any substance, whether known or unknown, accidental or otherwise, to a public sewer or private sewer connected to a public sewer or to waters of the State and shall include indirect discharges as defined herein.

**Drawdown:** The process of stormwater emptying a practice storage area (surface or subsurface) through one or more of infiltration, evapotranspiration, reuse, filtration, or an outlet pipe.

**Dual Function System:** Cases in which one stormwater management practice is configured to support runoff management via two, equally contributing functions.

**Erosion and Sediment Controls (ESC):** Stormwater management practices designed to minimize the discharge of pollutants during development activities including, but not limited to, structural erosion and sediment control practices, construction sequencing to minimize exposed soils, soil stabilization, dewatering control measures, and other pollution prevention and good housekeeping practices (PPGH) appropriate for construction sites.

**Evapotranspiration System:** A system designed primarily to capture stormwater for evaporation and/or transpiration back into the atmosphere.

**Filtration System:** A system designed primarily to remove pollutants from stormwater by trapping and separating particles in stormwater as it passes through a porous media.

**Floatables:** Manmade materials, such as plastics, papers, or other products which, when improperly disposed of onto streets or into catch basins, can ultimately find their way to waterbodies and may create nuisance conditions with regard to aesthetics, recreation, navigation, and waterbody ecology.

**Flow:** A continuous movement of storm water or wastewater.

**Forebay:** A separate segment within a stormwater basin used to trap sediment, chosen to facilitate maintenance and removal of the sediment. Use of a forebay is intended to facilitate sedimentation and thus protect other unit treatment processes.

**Fronting:** An existing sewer or drain abutting an existing or proposed development.

**Green Infrastructure (GI):** Also known as and referred to throughout this manual as stormwater management practices (SMPs), are designed to protect, restore, or mimic the natural water cycle within built environments by retaining, detaining, and/or treating stormwater runoff. Generally includes practices such as rain gardens, green or blue roofs, porous pavements, subsurface stormwater storage systems, and stormwater reuse systems.

**GreenHUB:** DEP's web-based application with data management capabilities that provides asset management for the green infrastructure practices citywide over their lifecycle, where designers upload the Project Tracking Spreadsheet.

**Groundwater:** Any existing water in subsoil strata, including water from springs and natural underground streams, but excluding water from wells used for the delivery of potable or processed water.

**Groundwater table:** The actual depth of ground water below surface.

**Head (Hydraulic Head):** Energy represented as a difference in elevation. In slow-flowing open systems, the difference in water surface elevation, e.g., between an inlet and outlet.

**House connection proposal (HCP):** A plan showing proposed Sewer connection(s) to a City sewer, a Private sewer, a Private drain, or an approved outlet to serve Fee Simple One (1), Two (2) or Three (3) Family Dwelling Units less than 20,000 square feet in total site area, connecting to a sewer that is fronting the site.

**Hybrid System:** Cases in which two or more stormwater management practices of the same function are integrated as one practice.

**Impaired Water:** Includes (i) a water body for which NYSDEC has established a total maximum daily load ("TMDL"), (ii) a water body for which NYSDEC expects that existing controls such as permits will resolve the impairment, and (iii) a

water body identified by NYSDEC as needing a TMDL. A list of impaired waters is issued by NYSDEC pursuant to section 303(d) of the federal water pollution control act, chapter 26 of title 33 of the United States code.

**Impervious Area (Cover):** All impermeable surfaces that cannot effectively infiltrate rainfall, including: This includes paved, concrete and gravel surfaces (e.g., parking lots, driveways, roads, runways and sidewalks); building rooftops; [and] miscellaneous impermeable structures such as patios, pools, and sheds; and any portion of the site of a covered development project from which impervious cover was removed within five (5) years before SWPPP submission to the Department.

**Impervious Surface:** Any surface that cannot effectively infiltrate rainfall: generally, rooftops, pavements, sidewalks, and driveways.

**Indirect discharge.** The term "indirect discharge" means a discharge from a private sewer to a public sewer, or a discharge to any street, gutter, pipe, channel, pumping station, catch basin, drain, waterway, or other conveyance leading to or connecting with a public sewer, including but not limited to the placement or abandonment of any substance which could reasonably enter a public sewer under the force of stormwater or other influence.

**Infiltration:** Process of water percolating through a porous media, mainly in a downward direction, due to gravity.

**Infiltration rate (or infiltration capacity)** is the maximum rate at which a soil in a given condition will absorb water.

**Infiltration System:** A system designed primarily to infiltrate stored or detained stormwater into soils below.

**Inlet:** Any structure that captures water which eventually drains to a practice, usually located at the low points of a site.

**Internal Pipes:** Perforated pipes inside the practice that can be used to evenly distribute or drain water in the stone base

**Invert:** The bottom elevation of a channel, pipe, or manhole.

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**Larger Common Plan of Development or Sale:** A contiguous area where multiple separate and distinct development activities are occurring, or will occur, under one plan. The term "plan" in "larger common plan of development or sale" is broadly defined as any announcement or piece of documentation including a sign, public notice of hearing, sales pitch, advertisement, drawing, permit application, uniform land use review procedure (ULURP) application, state environmental quality review act (SEQRA) or city environmental quality review (CEQR) application, application for a special permit, authorization, variance or certification pursuant to the zoning resolution, subdivision application, computer design, or physical demarcation (including boundary signs, lot stakes, and surveyor markings) indicating that development activities may occur on a specific plot. Such term does not include area-wide rezonings or projects discussed in general planning documents. For discrete development activities that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each activity can be treated as a separate plan of development or sale provided that any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

**Lot:** A tax lot as shown on the Tax map of the City.

**Maintenance Entity:** The entity identified by the owner that will be responsible for the long-term operation and maintenance of each post-construction stormwater management practice.

**MS4 Area:** Those portions of the city of New York served by separate storm sewers and separate stormwater outfalls owned or operated by the city of New York or areas served by separate storm sewers owned or operated by the city of New York that connect to combined sewer overflow pipes downstream of the regulator owned or operated by the city of New York, and areas in which municipal operations and facilities drain by overland flow to waters of the state, as determined by the department.

**MS4 Project:** Covered Development Project that is located in the MS4 area and has submitted a SWPPP to the SWPTS.

**Multi-sector general permit (MSGP):** The NYSDEC SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity, Permit No. GP-0-17-004 or its successor.

**Municipal Operations and Facilities:** Any operation or facility serving a New York city governmental purpose and over which the City of New York has operational control.

**No Net Increase (NNI):** A pollutant load analysis included in the SWPPP that demonstrates adequate controls are in place such that the change in pollutant loading will not result in a net increase.

**Notice of Intent (NOI):** For MS4 projects or industrial stormwater sources in the MS4 area, the document submitted to NYSDEC to obtain coverage under the NYSDEC construction general permit or the multi-sector general permit, respectively.

**Notice of Termination (NOT):** For MS4 projects or industrial stormwater sources in the MS4 area, the document submitted to NYSDEC to terminate coverage under the NYSDEC construction general permit or the multi-sector general permit, respectively. For non-MS4 area projects, the term "notice of termination" or "NOT" means the document submitted to DEP to terminate coverage under the DEP SW construction permit.

**NYC MS4 No Net Increase Calculator for Nitrogen:** Interactive spreadsheet tool developed by DEP to help developers calculate post-development nitrogen load increases and select SMPs to manage total nitrogen. The calculator takes pre- and post-development inputs from the user and outputs net runoff volume and nitrogen load changes.

**NYC MS4 Permit:** The SPDES permit for MS4s of New York city, SPDES No. NY-0287890 or its successor

**NYSDEC Construction General Permit (CGP):** The SPDES general permit for stormwater discharges from construction activities, Permit No. GP-0-15-002 or its successor.

**Observation Well:** Structure located within the footprint of a practice that allows monitoring of subsurface water levels.

**Outlet Control Structure:** Any structure that houses a controlled-flow device or weir that regulates drainage from a

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practice.

**Outlet Pipe:** A pipe that can drain water from a stormwater management practice before it is full, which typically connects the storage zone of the practice with a point of discharge.

**Owner (for purposes of Chapter 19.1):** A person having legal title to premises, a mortgagee or vendee in possession, a trustee in bankruptcy, a receiver, or any other person having legal ownership or control of premises.

**Owner (for purposes of Chapter 31):** Any individual, firm, corporation, company, association, society, institution or any other legal entity that owns the property, appurtenances, and easements comprising an existing or a proposed development.

**Pathogens:** disease-producing agents such as bacteria, viruses, or other microorganisms. Fecal coliform is a pathogen-related water quality parameter.

**Peak Runoff:** The maximum stormwater runoff rate (cfs) determined for the design storm, or design rainfall intensity.

**Person:** Means an individual, corporation, partnership, limited-liability company or other legal entity.

**Pollutant:** Dredged soil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, and agricultural waste discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the State in contravention of the standards or guidance values adopted as provided in 6 New York codes, rules and regulations ("NYCRR") section 750-1.2(a).

**Pollutant of Concern (POC):** Pollutants causing the impairment of an impaired water segment listed in Appendix I of the New York City MS4 permit, including nitrogen, phosphorus, pathogens, and floatables.

**Ponding Depth:** The depth of surface water within a practice.

**Post-Construction Stormwater Management Practice or Post-Construction Practice:** A stormwater management practice serving a developed site and consisting of technology or strategies designed to reduce pollutants in stormwater runoff or reduce runoff rate or volume from the developed site through infiltration, retention, detention, direct plant uptake, filtration, or other method or treatment. Such term includes, but is not limited to, detention systems and retention systems.

**Post-Development:** Relating to the site conditions such as land use, land coverage, topography, zoning, and

corresponding hydrologic functions that will exist following proposed development activities.

**Pre-Development:** Relating to the site conditions such as land use, land coverage, topography, zoning, and corresponding hydrologic functions that exist prior to proposed development activities.

**Qualified Inspector:** A person who is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), or a Registered Landscape Architect.

This term can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered

<sup>1</sup> The 2018 NYS 303(d) list and Appendix 1 (Impaired Water Segments [A] and Pollutants [O]) of Concern of the [pending renewal] of the 2022 MS4 Permit have replaced reference to "pathogens" with "fecal coliform" and reference to "floatables" with "garbage and refuse;" see also Table 2.4 of this manual.

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Landscape Architect shall receive four (4) hours of training every three (3) years. This term can also mean a person that meets the Qualified Professional qualifications in addition to the Qualified Inspector qualifications.

**Note:** Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

**Qualified Professional:** A person who is knowledgeable in the principles and practices of stormwater management and treatment such as a licensed professional engineer or a registered landscape architect or other NYSDEC endorsed individual(s).

Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by Article 145 of the NYS Education Law, shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

**Reuse System:** A system designed primarily to store or detain stormwater for onsite uses.

**Retention:** The process of holding or retaining runoff close to the source for infiltration, evapotranspiration, or reuse.

**Retention System:** A system designed to capture an accumulation of stormwater runoff on site through infiltration, evapotranspiration, storage for reuse, or some combination of these.

**[Roadway Maintenance:** Work in the right of way (ROW) including milling and filling of existing asphalt pavements ("milling and paving"), replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six inches of subbase material; or long-term use of equipment storage areas at or near highway maintenance facilities.]

**Routine Maintenance Activity:** A maintenance activity, including, but not limited to:

- Re-grading of gravel roads or parking lots
- Stream bank restoration projects (does not include the placement of spoil material);
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch;
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch);
- Placement of aggregate shoulder backing that makes the transition between the road shoulder and the ditch or embankment;
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or embankment; and
- Replacement of curbs, gutters, sidewalks, and guide rail posts; and
- Repairs made to SMPs to restore them to former condition or to operating order.

**Runoff:** Overland stormwater flow that is not absorbed into the ground.

**Runoff Coefficient:** The fraction of total rainfall (volume or rate) that appears as total runoff (volume or rate) for a given type of land cover.

**Separate Stormwater Outfall:** A point where stormwater from a storm sewer or other source of concentrated stormwater flow, owned or operated by the city of New York, is discharged into a water of the state or to a separate storm sewer system that requires coverage under the NYSDEC MS4 general permit.

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**Sewer:** A pipe or conduit for carrying sewage and/or stormwater. Except where otherwise specified or where the context clearly dictates otherwise, the term "sewer" must refer to a public sewer.

**Sewer Certification:** A house connection proposal application or site connection proposal application to certify the adequacy of the existing abutting sewer to receive site storm and sanitary discharge from a development.

**Sewer Connection:** That part of a sanitary, stormwater, or combined sewer disposal pipe, which extends from the property line to an existing City sewer, a Private sewer, a Private drain, or an approved outlet under the jurisdiction of the DEP.

**Site:** The area that is being developed.

**Site Connection Proposal (SCP):** A plan showing proposed Sewer connection(s) from existing or proposed developments other than a House Connection Proposal.

**Site Connection Proposal (SCP) Certification:** The Department's acceptance of a Site Connection Proposal.

**Slope:** Land gradient described as the vertical rise divided by the horizontal run expressed in percent.

**Storm Sewer:** A sewer, which conveys only stormwater.

**Stormwater or Stormwater Runoff:** The excess water running off the surface of a drainage area during, and immediately following, a period of precipitation. For the purposes of the stormwater construction permit, precipitation includes rain events or snowmelt.

**Stormwater Construction Permit:** A permit issued by the department authorizing development activity on land on which there is a covered development project with an approved SWPPP.

**Stormwater Maintenance Permit:** A permit issued by the department where maintenance is required of post-construction stormwater management practices by owners of real property benefited by such facilities.

**Stormwater Management Practice (SMP):** Measure to prevent flood damage or to prevent or reduce point source or nonpoint source pollution inputs to stormwater runoff and water bodies. Such term includes ESC, post-construction SMPs, and practices to manage stormwater runoff from industrial activities.

**Stormwater Permitting and Tracking System (SWPTS):** The Department's online system for submitting applications for a Stormwater Construction Permit or for checking the status of an existing application.

**Stormwater Pollution Prevention Plan (SWPPP):** (i) when used in connection with a covered development project, a plan for controlling stormwater runoff and pollutants during construction and, where required by these rules, after construction is completed, or (ii) when used in connection with an industrial stormwater source, a plan, which is required by the MSGP, for controlling stormwater runoff and pollutants.

**Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form:** The form used to indicate acceptance of a SWPPP by the Department.

**Stormwater Pollution Prevention Plan (SWPPP) Approval:** The Department's initial approval of the application for a Stormwater Construction Permit

**Stormwater Release Rate:** The rate at which stormwater is released from a site, calculated in terms of cubic feet per second (cfs)

**Subsurface Loaded Practices:** Practices designed to have stormwater enter the facility below-grade.

**Surface Loaded Practices:** Practices designed to have stormwater enter the facility through the surface.

**Surface Waters of the State or Waters of the State:** Lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private

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(except those private waters that do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

**Temporary Shutdown:** The suspension of development activity at a site with an approved stormwater construction permit.

**Time of Concentration (Tc):** The time for runoff to travel from the hydraulically most distant point of the drainage area to the watershed outlet or study point.

**Trained Contractor:** An employee of a contracting (construction) company, who has received four hours of NYSDEC-endorsed training in proper erosion and sediment control principles from a soil and water conservation district, or other NYSDEC-endorsed entity. After receiving the initial training, the trained contractor must receive four hours of training every three years. The term can also mean an employee of a contracting (construction) company who meets the qualifications required to be a qualified inspector. The trained contractor is responsible for the day-to-day implementation of the SWPPP during development activities.

**Tributary Drainage Area:** The amount of surface area that drains to a practice or point of study.

**Unified Stormwater Rule:** Chapters 19.1 and 31 of title 15 of the rules of the city of New York.

**Weighted Runoff Coefficient:** The fraction of total rainfall (volume or rate) that appears as total runoff (volume or rate) for a drainage area, calculated as an area-based, weighted average of the runoff coefficients for the various types of land cover present in the drainage area.

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## 1. INTRODUCTION

The New York City Department of Environmental Protection (DEP) is charged with preserving and enriching the environment and safeguarding public health for all New Yorkers. Stormwater management is a critical element of DEP's work, and with the promulgation of a Unified Stormwater Rule and release of this NYC Stormwater Manual (SWM) in 2022, NYC is entering a new era of stormwater management.

The Unified Stormwater Rule [updates and aligns] updated and aligned water quality requirements in the city's combined sewer drainage areas with water quality requirements in separately sewered drainage areas, providing a comprehensive, citywide stormwater management policy for public and private development. This NYC Stormwater Manual (SWM) provides technical guidance for developers, designers, and engineers who [will] work with DEP on stormwater permitting.

The Unified Stormwater Rule and the technical guidance within this Manual emphasize a retention-first, green infrastructure approach to stormwater management practice selection and design, applying lessons learned during more than ten years of implementing the NYC Green Infrastructure Program, through which DEP and partners have constructed over 11,000 distributed green infrastructure practices across the city.

Green infrastructure practices, also known as and referred to throughout this manual as *stormwater management practices (SMPs)*, are designed to protect, restore, or mimic the natural water cycle within built environments by retaining, detaining, and/or treating stormwater runoff. SMPs generally include practices such as rain gardens, green or blue roofs, porous pavements, subsurface stormwater storage systems, and stormwater reuse systems. These practices are [an] important and demonstrably effective tools for stormwater management in NYC, allowing stormwater to be managed where it falls and reducing, filtering and/or slowing the amount of stormwater entering the City's sewer system.

In NYC, SMPs are reducing Combined Sewer Overflows (CSOs), decreasing the amount of polluted stormwater runoff entering waterbodies, and increasing capacity within City infrastructure. When coupled with vegetation or other siting goals, SMPs provide benefits beyond stormwater

management; increased urban greening, reduced urban heat island, minimized urban flooding, and improved habitats for birds and pollinators.

The Unified Stormwater Rule [brings] brought together two DEP stormwater regulation programs: Site/House Connection Proposal Certification and Stormwater Construction/Stormwater Maintenance Permitting ("Stormwater Permitting"). This unification [allows] has allowed applicants and designers to approach projects with a clear understanding of the individual permit objectives and the technical requirements for compliance. It also, for the first time, creates a consolidated technical approach for applicants [that] seeking to implement SMPs to meet both application objectives.

This NYC SWM provides the technical guidance necessary for compliance with the Unified Stormwater Rule, providing the core benefits summarized below:

- Consistent approach to water quality and sewer operation objectives across combined sewer system (CSS) and Municipal Separate Stormwater Sewer System (MS4) areas;
- A retention-first SMP hierarchy that requires a feasibility assessment of implementation of retention-based practices to reduce the amount of stormwater entering City sewers and to maximize SMP benefits;
- Increased on-site detention requirements to reduce loading rates on City sewers; and
- Prioritization of green, vegetated SMPs to provide co-benefits to NYC residents and to align with the sustainable roofing requirements of the Climate Mobilization Act of 2019.

This chapter provides more information on NYC's stormwater management regulatory framework, the purpose and scope of this Manual, and an overview of the other chapters and technical guidance included.

### 1.1. Background

Like other ultra-urban cities, NYC is faced with increasing challenges from managing stormwater runoff from impervious surfaces. Unmanaged stormwater runoff overburdens the City's sewer system and wastewater resource recovery facilities, contributes to CSOs and increases pollutant loads into receiving waterbodies. Development offers an opportunity to improve on-site

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stormwater management on properties that were developed at a time when stormwater management best practices were not well-understood or widely implemented and current stormwater management regulations were not yet in place.

The NYC Charter gives DEP authority over and responsibility for the city's drainage plan and stormwater management. Through DEP approval of sewer certifications (approval that the city sewer can accept the development's proposed discharge) and subsequent sewer connection permits (authorization to connect to a sewer), DEP limits the flow from developed lots to ensure adequate capacity in the sewer system. NYC's 2012 house/site connection stormwater rule had the goal of

NYC's 2017 stormwater rule required stormwater management controls for construction projects to reduce the flow of stormwater runoff and water borne pollutants into sewers that empty directly into the waters of the state or that overflow into such waters because of rain or snowmelt events that exceed the design capacity of wastewater resource recovery facilities. The revisions to that rule incorporated in the Unified Stormwater Rule [will extend] extended [citywide] to the CSS area DEP's permitting, inspection, and enforcement program, including requirements for construction and post-construction stormwater controls and standards for such controls.

Specifically, the Unified Stormwater Rule [brings] brought together and [updates] updated these existing stormwater

reducing the adverse impacts on City sewers from runoff during rainstorms more severe than combined sewers are designed to handle. Sewer overflows, floods, and sewer backups can occur when excessive stormwater from impervious surfaces enters the sewer system too quickly.

The 2012 rule set forth a new performance standard, which applied to development in combined sewer areas of the City, allowing the City to more effectively manage stormwater runoff by prescribing standards for the permitting, construction and inspection of sewer connections to the City's combined sewer system. The revised performance standard provided a mechanism to reduce peak discharges to the city's sewer system during rain events by requiring greater on-site storage of stormwater runoff and slower release to the sewer system.

DEP, pursuant to the MS4 permit the NYS Department of Environmental Conservation (NYSDEC) issued to the City in [2015] 2022, is also responsible for administering a construction/post-construction program equivalent to the state's NYS SPDES General Permit for Stormwater Discharges from Construction Activity. Through approval of Stormwater Construction and Stormwater Maintenance permits, including approval of Stormwater Pollution Prevention Plans (SWPPPs) for all applicable construction projects, DEP requires owners and developers to implement measures in the MS4 areas of the City to reduce pollution in stormwater runoff from developments with the goal of protecting and improving water quality in the City's waterbodies.

a clear and consolidated approach for meeting stormwater management requirements that, when followed, results in successful and streamlined project implementation. However, please note that while the water quality criteria presented in the NYC SWM align with water quality criteria of NYSDEC SWMDM, meeting the NYC SWM criteria does not obviate the need for a full review of and compliance with [all] NYSDEC SWMDM requirements, as applicable.

The SWM [replaces] replaced the Guidelines for the Design and Construction of Stormwater Management Systems (2012), the Criteria for Detention Facility Design (2012), and the NYC Stormwater Design Manual (2018). In addition, this SWM provides the information needed to complete and submit applications for Stormwater Permits in NYC. Application guidance and materials for Sewer Certification and Sewer Connection Permitting are not a part of this manual and are available on DEP's website <https://www1.nyc.gov/site/dep/about/sewer-connections.page>.

management requirements by:

- Increasing on-site stormwater detention requirements and updating release rate requirements for CSS and establishing new release rate requirements for MS4 areas for Sewer Certification and Sewer Connection Permitting;
- Expanding the Stormwater Permitting requirements citywide to include CSS areas; reducing the soil disturbance threshold from 1 acre to 20,000 square feet; adding the creation of 5,000 square feet of impervious area as an additional trigger; and including covered roadway maintenance [activities] as a trigger;
- Requiring a retention-first approach to SMP design for Stormwater Permitting requirements; and
- Providing a clear technical path for using SMPs constructed under Stormwater Permitting requirements to satisfy requirements for SMPs under Sewer Certification and Sewer Connection Permitting.

Users of this manual are encouraged to review Chapters 31 and 19.1 of Title 15 of the Rules of the City of New York for the requirements of the Unified Stormwater Rule.

1.2. Manual Purpose and Scope

The NYC SWM provides a comprehensive overview of NYC stormwater management requirements, and design guidance for developers of and design professionals on projects that must comply with the requirements of the DEP Sewer Certification/Sewer Connection Permitting and Stormwater Permitting. The intent of the SWM is to provide

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Table 1.1 Chapters in this SWM and the purpose of each.

Chapter	Purpose
Chapter 1 Introduction	Provides an overview of the NYC Stormwater Manual and the Sewer Certification/Sewer Connection Permitting and Stormwater Permitting Programs.
Chapter 2 Stormwater Management Requirements	Details NYC stormwater management requirements and how to determine applicability.
Chapter 3 City Development & Review Process	Provides an overview of the review process for projects that trigger either Sewer Certification/Sewer Connection Permitting or Stormwater Permitting or both and step-by-step instructions for submitting projects that trigger Stormwater Permitting Program.
Chapter 4 Stormwater Management Practice (SMP) Selection & Design	Defines SMP types and functionalities and provides guidance on how to select and design an appropriate SMP.
Chapter 5 Post-Construction Stormwater Management Requirements	Provides SMP operation and maintenance procedures and requirements for Stormwater Maintenance Permits.
Chapter 6 Right-of-Way Stormwater Management Requirements	Provides guidance for right-of-way covered development projects that trigger Stormwater Construction Permits.
Chapter 7 Roadway Maintenance Stormwater Management Requirements	Provides guidance for roadway maintenance projects, including practices required for both milling and paving operations.
Appendix A Stormwater Management Practice Hierarchy Checklist	Lists SMPs by implementation tier, function type, and practice type and indicates which constraints would impact SMP feasibility. Also indicates which SMPs can be used toward sewer operations criteria.
Appendix B Nitrogen No-Net-Increase Calculator Guide	Provides an example for NYC MS4 No-Net Increase Calculator for Nitrogen.
Appendix C Stormwater Management Practice Siting Criteria	Provides SMP siting criteria for on-site projects.
Appendix D Stormwater Management Practice Sizing Examples	Provides example SMP sizing calculations for each practice function.
Appendix E Site Design Example	Provides an example design for an entire site.
Appendix F Controlled-Flow Pump Workbook	An Excel-based workbook, which includes a template for controlled-flow pump calculations and a design example.
Appendix G Detention in Series Workbook and Examples	An Excel-based workbook available to assist designers with detention in series calculations.
Appendix H Right-of-Way Guidance Materials	Supplemental guidance materials referenced in Chapter 6.

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2. STORMWATER MANAGEMENT REQUIREMENTS

The Unified Stormwater Rule linked[s] and enhanced[s] two [previously unconnected] rules[. T]he first rule aims to improve water quality through a Stormwater Construction Permitting program[. T]he second rule aims to manage flow rates in City sewers through a Site/House Connection Proposal Certification program. [Together, these rules and permits make up the Unified Stormwater Rule, as further described in this Manual.] Between the two rules, there are a total of five stormwater management requirements that may apply to projects in NYC. In addition to bringing these requirements under one umbrella, the Rule updated[s] several requirements to help meet the City's stormwater management goals.

This chapter [will] cover the applicability of each permit (Section 2.1), the applicability of requirements within those permits (Section 2.2), the criteria for meeting each requirement (Section 2.3), and the requirements for geotechnical investigations (Section 2.4).

2.1. Permit Applicability

Stormwater Construction Permit  
In accordance with Chapter 19.1 of Title 15 of the Rules of the City of New York, the Stormwater Construction Permit applies to all covered development projects. A covered development project is any development in New York City, public or private, that meets one or [more] both of the following criteria:

- Disturbs 20,000 sf or more of soil; OR
- Creates 5,000 sf or more new impervious area; OR
- Is a covered maintenance activity).

[Covered maintenance activities apply only to Right of Way projects. For discussion of Right-of-Way projects, refer to Chapter 6.]

There are several types of activities that are not considered covered development projects per Chapter 19.1 of Title 15 of the Rules of the City of New York. Examples of projects not considered covered development projects are listed below, but readers should refer to the rules noted above for the most up-to-date list of exclusions and definitions:

- Routine maintenance activities

In general, house or site connection proposals are required when one or more of the following are true:

- Project proposes a new sewer connection
- DOB requires a house or site connection proposal
- Applicant agency's process requires a house or site connection proposal

Readers are encouraged to refer to Chapter 31 of Title 15 of RCNY for the latest details on when house and site connection proposals are required.

For projects that require a house or site connection proposal, the house connection proposal (HCP) shall be used for 1-3 family (fee simple) residential homes that do not meet the definition of covered development project. All other projects shall use a site connection proposal (SCP).

Before proceeding to the specific requirements of each permit, it is worth noting that the criteria set forth in the Unified Stormwater Rule supersede the 2012 NYC Stormwater Rule and the 2012 NYC BWSO Criteria for Detention Facility Design.

In all other cases, the Unified Stormwater Rule does not obviate the need for compliance with any existing city, state, or federal permit that may be otherwise required for the covered development project. The owner is responsible for identifying and complying with all other rules applicable to that development activity, including, but not limited to, any applicable NYC DOB construction code regulations.

2.2. Permit Requirements

For projects that require a Stormwater Construction Permit, a stormwater pollution prevention plan (SWPPP) must be prepared that meets up to four stormwater management requirements:

- Erosion and sediment control (ES) – aims to minimize the discharge of pollutants during construction activities.
- Water quality (WQ) – aims to manage runoff from small, frequent storm events that can significantly impact the quality of receiving waters in both MS4 and CSS areas.
- Runoff reduction (RR) – aims to maintain a minimum level of runoff reduction during small storms to preserve natural hydrologic functions.

- Emergency activities that are immediately necessary for the protection of life, property, or natural resources

Soil Disturbance  
Disturbed area is the area of soil disturbed by development activities, such as building, demolition, renovation, replacement, restoration, rehabilitation, or alteration of any structure or road; or land clearing, land grading, excavation, filling or stockpiling.

Activities that do not disturb soils, such as interior renovations, and surface markings of paved areas, are not considered in the estimation of disturbed areas.

There are two important clarifications to consider when determining the disturbed area. First, all soil disturbances, even those outside the bounds of the developed property, are counted as part of the disturbed area. Second, if an individual project disturbs less than the soil disturbance threshold but is part of a larger common plan of phased development or sale that will exceed the soil disturbance threshold, the individual project is also considered a covered development project.

Impervious Area  
An impervious surface is any surface that cannot effectively infiltrate rainfall: generally, impervious hardscapes such as rooftops, pavements, sidewalks, and driveways. Impervious surfaces can also include miscellaneous structures such as patios, pools, and sheds. In addition, pervious hardscapes such as gravel roadways, parking lots, driveways, and sidewalks are also considered impervious surfaces unless a geotechnical investigation indicates that the permeability rate of underlying soils is sufficient for reducing runoff. More specifically, underlying soils must have a permeability rate of at least 0.5 in/hr.

An increase (or decrease) in impervious area is calculated as the difference in total impervious area from pre-to-post development. The pre-development case must represent the least amount of impervious surface for the disturbed area within the last 5 years prior to proposed development. When possible, photos, plans, and/or satellite images should be used to determine the appropriate pre-development impervious area.

House/Site Connection Proposals

2-1

- No net increase (NNI) – aims to reduce pollutants of concern in MS4 areas that discharge to an impaired waterbody.

For projects that require a House/Site Connection Proposal, the proposal must meet the following stormwater management requirement:

- Sewer operations (Vv) – aims to manage runoff from larger storm events to maintain optimal flow rates in the City's sewer system and, in turn, improve overall sewer operations.

The applicability of each stormwater management requirement is shown in Table 2.1; such applicability is based on several factors including soil disturbance area, new impervious area, activity type, sewershed type, receiving water body, and whether a house or site connection proposal is required. A brief description of how to determine the applicability of each requirement is provided in the following paragraphs.

Table 2.1 Applicability criteria for each stormwater management requirement.

SWM	Applicable Projects
Erosion & Sediment Control (ESC)	Covered development project
Water Quality (WQ)	Covered development project Except for activities listed in Table 2.2
Runoff Reduction (RR)	Covered development project Except for activities listed in Table 2.2
No-net increase (NNI)	Project area of 20,000 sf or more AND Project located in MS4 area AND Discharges to an impaired water body AND Increases impervious area
Sewer Operations (Vv)	Project requires a house connection proposal OR Project requires a site connection proposal

The ESC requirement applies to all covered development projects. The WQ and RR requirements apply to all covered development projects that are not listed in Table 2.2. While not exhaustive, a list of typical development projects that require WQ and RR requirements is included in Table 2.3.

In the case of highly complex projects, such as those with irregular site conditions, significant drainage areas, complex drainage systems, or complex SMPs, additional

2-2

criteria or submittals not described in this Manual may be required at the discretion of DEP.

2-3

Table 2.2. Covered development projects that require the preparation of a SWPPP that includes only erosion and sediment control (ESC) requirements.

Covered Development Activity
Installation of underground, linear utilities such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects
Pond construction
Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover
Cross-country ski trails and walking/hiking trails
Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;
Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path.
Slope stabilization projects
Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
Spoil areas that will be covered with vegetation
Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that alter hydrology from pre- to post-development conditions.
Athletic fields (natural grass) that do not include the construction or reconstruction of impervious area and do not alter hydrology from pre to post development conditions
Demolition project where vegetation will be established, and no redevelopment is planned
Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with impervious cover
Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete
Road reconstruction projects where the total soil disturbance from all activities is less than 1-acre

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Table 2.3. Covered development projects that require the preparation of a SWPPP that includes ESC requirements, as well as WQ and RR requirements.

Covered Development Activity
Single family home directly discharging to one of the impaired segments listed in Appendix 2 of the MS4 Permit
Single family home that disturbs five (5) or more acres of land
Single family residential subdivisions directly discharging to one of the impaired segments listed in Appendix 2 of the MS4 Permit
Single family residential subdivisions Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
Airports
Amusement parks
Breweries, cideries, and wineries, including establishments constructed on agricultural land
Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or alter the hydrology from pre to post development conditions
Commercial developments
Churches and other places of worship
Golf courses
Institutional development; includes hospitals, prisons, schools and colleges
Industrial facilities; includes industrial parks
Landfills
Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
Office complexes
Playgrounds that include the construction or reconstruction of impervious area
Sports complexes
Racetracks; includes racetracks with earthen (dirt) surface
Road construction, including roads constructed as part of the covered development projects listed in Table 2.2
Road reconstruction, except as indicated in Table 2.2 when the total soil disturbance from all activities is less than 1-acre
Parking lot construction or reconstruction, including parking lots constructed as part of the covered development projects listed in Table 2.2
Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or alter the hydrology from pre to post development conditions
Athletic fields with artificial turf
Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with impervious cover, and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
All other covered development projects that include the construction or reconstruction of impervious area or alter the hydrology from pre to post development conditions, and are not listed in Table 2.2

2-5

The NNI requirement is applicable only when all four of the following conditions are met:

- Disturbed area is 20,000 sf or more?
- Project is located in an MS4 area
- Project discharges to an impaired waterbody, and
- Project results in an increase in impervious area.

A project is located in the MS4 area if stormwater drains from the project to surface waters through a separate storm sewer, high-level storm sewer, or bluebelt owned or operated by the City that is connected to either an MS4 outfall or combined sewer overflow (CSO) outfall downstream of a regulator. Projects involving NYC municipal operations and facilities where stormwater drains from the project directly to surface waters are also considered to be in the NYC MS4 area. Non-municipal projects that drain directly to surface waters follow separate guidance from NYSDEC (see <https://www.dec.ny.gov/chemical/43133.html>).

The MS4 Interactive Map ([www.nyc.gov/dep/ms4map](http://www.nyc.gov/dep/ms4map)) is available to assist applicants in locating outfalls and drainage areas that are part of the NYC MS4 area. Applicants should recognize that all projects that require house/site connection proposal approval for connection to a DEP storm sewer are likely located in the MS4 area. The interface of the MS4 Interactive Map is shown in Figure 2.1 for illustrative purposes. However, readers should refer to the website for the latest maps and to help determine the sewershed status of their project.

An impaired waterbody is one that does not meet water quality standards for its intended use in accordance with the Clean Water Act. Impairments can be due to several pollutants of concern (POCs), including fecal coliform, garbage and refuse, phosphorus, and nitrogen. Impaired waterbodies in and around NYC are identified in Appendix I of the NYC MS4 Permit, which is provided in Table 2.4 for ease of reference.

The MS4 Interactive Map can also be used to help determine whether a project ultimately discharges to an impaired waterbody. By selecting the MS4 area associated with a project, the map brings up a table of additional details that include the name of the receiving waterbody,

<sup>2</sup> Except in ROW, where threshold is 1 acre or more. See Chapter 6 of this Manual.

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Figure 2.1. Interface of the MS4 Interactive Map for NYC.



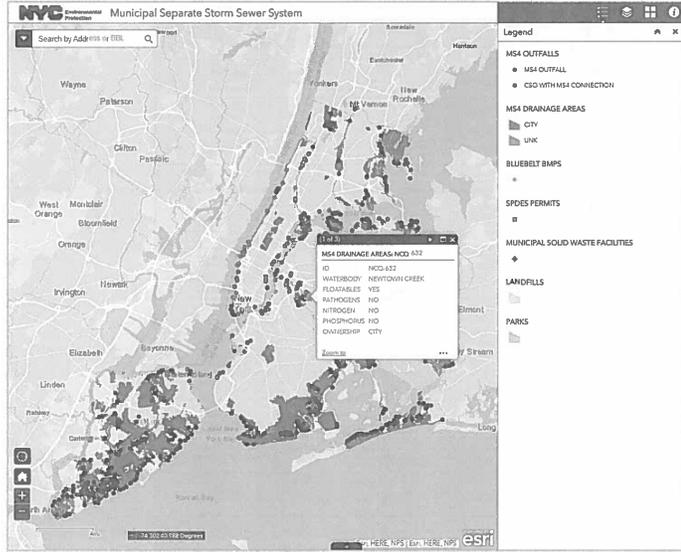
2-7

as well as a "yes or no" indication about whether the waterbody is impaired by each POC (Figure 2.2).

Increases in impervious area are determined by comparing the total area of impervious surfaces for the project from pre- to post-development. The pre-development case must represent the least amount of impervious surface for the disturbed area within the last 5 years prior to proposed development. Section 2.1 includes definitions of impervious surfaces and suggested resources for selecting the appropriate pre-development case.

The sewer operations requirement is applicable to all projects that require a house or site connection proposal, as described in Section 2.1.

Figure 2.2. Using the MS4 Interactive Map to identify impaired waterbodies in and around NYC.



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Table 2.4. Impaired Water Segments and Pollutants of Concern in and Around NYC (Source: Final 2018 NYS 303(d) list, which is the basis for Appendix I of (the pending renewal of) the 2022 NYC MS4 Permit NY0287890).

Waterbody Name	Waterbody Identification Number (WIN)	Pollutant
Alley Creek/Little Neck Bay Trib	(MM2.5) ER/LIS-LNB-19 thru 20	Fecal Coliform
Arthur Kill (Class 1) and minor tribs	(MM1.2) SI (portion 1)	Garbage & Refuse
Arthur Kill (Class SD) and minor tribs	(MM1.2) SI (portion 2)	Garbage & Refuse
Atlantic Ocean Coastline	(MM0.0) AO (portion 1)	Fecal Coliform
Bergen Basin	(MM8.5a) JB-247	Fecal Coliform
Bergen Basin	(MM8.5a) JB-247	Nitrogen
Bergen Basin	(MM8.5a) JB-247	Garbage & Refuse
Bronx River, Lower	(MM2.4) ER-3	Fecal Coliform
Bronx River, Lower	(MM2.4) ER-3	Garbage & Refuse
Bronx River, Middle, and tribs	(MM2.4) ER-3	Fecal Coliform
Bronx River, Middle, and tribs	(MM2.4) ER-3	Garbage & Refuse
Coney Island Creek	(MM1.1) LB/GB-253	Fecal Coliform
Coney Island Creek	(MM1.1) LB/GB-253	Garbage & Refuse
East River, Lower	(MM2.1) ER (portion 1)	Garbage & Refuse
East River, Upper	(MM2.3) ER (portion 2)	Garbage & Refuse
East River, Upper	(MM2.3) ER (portion 3)	Garbage & Refuse
Flushing Creek/Bay	(MM2.5) ER-LI-12	Fecal Coliform
Flushing Creek/Bay	(MM2.5) ER-LI-12	Garbage & Refuse
Gowanus Canal	(MM1.3) UB-EB-1	Garbage & Refuse
Grasmere Lake/Brady's Pond	(MM1.2) SLP1039,P1051,P1053	Phosphorus
Harlem Meer	(MM2.2) ER-P1036	Phosphorus
Harlem River	(MM2.3) ER-1	Garbage & Refuse
Hendrix Creek	(MM8.6) JB-249a	Fecal Coliform
Hendrix Creek	(MM8.6) JB-249a	Nitrogen
Hendrix Creek	(MM8.6) JB-249a	Garbage & Refuse
Hutchinson River, Lower, and tribs	(MM3.2) LIS-2	Garbage and Refuse
Jamaica Bay, Eastern, and tribs (Queens)	(MM8.5b) JB	Fecal Coliform
Jamaica Bay, Eastern, and tribs (Queens)	(MM8.5b) JB	Nitrogen
Jamaica Bay, Eastern, and tribs (Queens)	(MM8.5b) JB	Garbage & Refuse
Kill Van Kull	(MM1.2) SI (portion 4)	Garbage & Refuse
Kissena Lake	(MM2.5) ER-LI-12-P76	Phosphorus
Little Neck Bay	(MM2.5) ER/LIS-LNB	Fecal Coliform
Meadow Lake	(MM2.5) ER-LI-12-100a	Phosphorus
Mill Basin and tidal tribs	(MM8.6a) JB-250b	Garbage & Refuse
Newark Bay	(MM1.2) SI (portion 3)	Garbage & Refuse
Newtown Creek and tidal tribs	(MM2.1) ER- LI- 4	Fecal Coliform
Newtown Creek and tidal tribs	(MM2.1) ER- LI- 4	Garbage & Refuse
Paerdegat Basin	(MM8.6a) JB-250a	Garbage & Refuse
Prospect Park Lake	(MM8.6a) JB-P0009	Phosphorus
Raritan Bay(Class SA)	(MM1.2) RB (portion 1)	Fecal Coliform
Shellbank Basin	(MM8.5a) JB-248a	Nitrogen
Spring Creek and tribs	(MM8.5a) JB-249	Garage & Refuse
The Lake in Central Park	(MM2.2) ER P1029	Phosphorus
Thurston Basin	(MM8.5a) JB-241a	Fecal Coliform
Thurston Basin	(MM8.5a) JB-241a	Garbage & Refuse
Van Cortlandt Lake	(MM2.3) ER-1-5-P1043	Phosphorus
Westchester Creek	(MM2.4) ER-4	Garbage & Refuse
Willow Lake	(MM2.5) ER-LI-12-100f	Phosphorus

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A three-step flowchart was created to further assist readers in determining which requirements and procedures are applicable to their projects (Figure 2.3). Each step is described further in the following paragraphs.

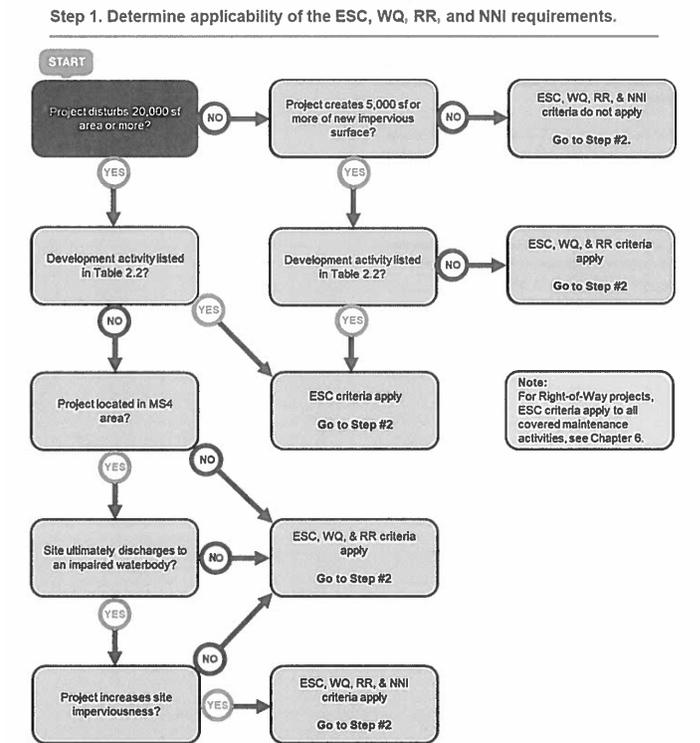
Step 1 of the flowchart asks a series of questions to help determine the applicability of the ESC, WQ, RR and NNI requirements.

Step 2 of the flowchart asks a series of questions to help determine the applicability of the sewer operations criteria. Readers are again encouraged to refer to Chapter 31 of Title 15 of RCNY for the latest details on when HCP and SCP are required.

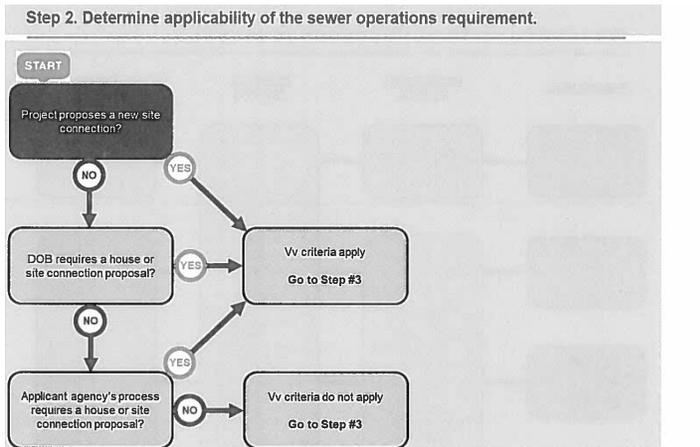
Finally, step 3 of the flowchart shows readers where they can find details on the requirement criteria, submittal process, and design criteria for each applicable stormwater management requirement.

2-10

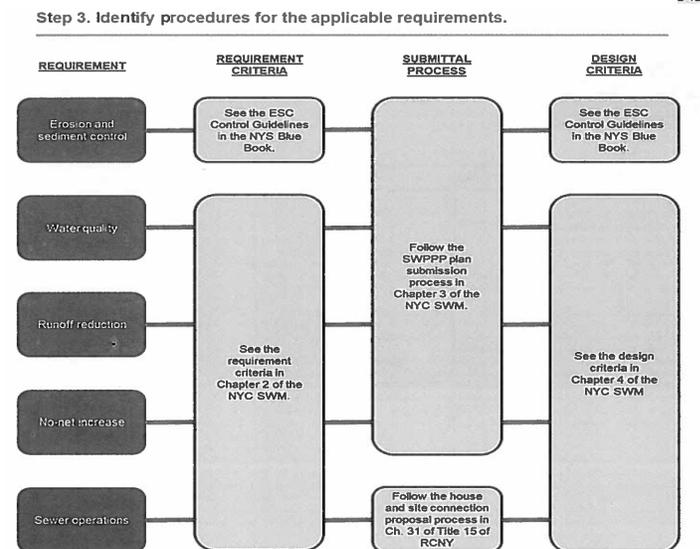
Figure 2.3. Flowchart to help determine applicable stormwater management requirements and procedures.



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**2.3. Requirement Criteria**

This subsection outlines the specific criteria that must be met for each stormwater management requirement applicable to a project.

**Erosion and sediment criteria**

Erosion and sediment control (ESC) refers to stormwater management practices (SMPs) that are designed to minimize the discharge of pollutants during construction activities.

ESC measures can include, but are not limited to, structural controls (e.g., sediment barriers), intentional sequencing of construction to minimize exposed soils, soil stabilization measures, dewatering control measures, and other pollution prevention and good housekeeping (PPGH) measures that are appropriate for construction sites.

All covered development projects must implement ESC measures in accordance with the NYS Standards and Specifications for Erosion and Sediment Control (The Blue Book), dated November 2016 or its successor (<https://www.dec.ny.gov/chemical/29066.html>).

**Water quality criteria**

The water quality (WQ) requirement aims to manage runoff from small, frequent storm events that can significantly impact the quality of receiving waters in both MS4 and CSS areas.

In MS4 areas, runoff from these events tends to contain higher pollutant levels. Therefore, retention and treatment of small storm runoff in MS4 areas help to remove those pollutants and, in turn, improve WQ.

In CSS areas, these events trigger the majority of CSO events. Therefore, retention and detention of small storm runoff in CSS areas helps to reduce CSOs and, in turn, improves water quality.

The WQ criterion is met by managing runoff from the applicable small storm design event. NYS DEC defines this design event as the 90<sup>th</sup> percentile rain event. In New York City, the 90<sup>th</sup> percentile rain event is 1.5 inches of rainfall (Figure 4.1 of the [see NYS SWMDM](#)).

The volume of runoff from the 90<sup>th</sup> percentile rain event, which must be managed by SMPs, is also referred to as

where:

- Aic: total area of new impervious cover (sf)
- S: specific reduction factor, see Table 2.5

Sites that meet the WQv using only retention practices will, by default, also meet the RR criteria. All other cases must check that the RR criterion is met.

The specific reduction factor used to calculate RRv will depend on the hydrologic soil group (HSG) of soils underlying the project site, as defined in Part 630 of the National Engineering Handbook (NRCS 2007). As indicated in the handbook, there are four HSG categories based on saturated hydraulic conductivity, depth to water impermeable layer, and/or depth to high water table. Designers may classify soils based on results of the geotechnical investigation or refer to the NRCS web soil survey for data on HSGs by location.

Changes in the specific reduction factor for each HSG reflect differences in the underlying soils' ability to infiltrate water. Refer to Table 2.5 for specific reduction factor values by category.

Table 2.5. Specific reduction factors based on hydrologic soil group (HSG).

S	Description
0.55	HSG-A
0.40	HSG-B
0.30	HSG-C
0.20	HSG-D

The total area of new impervious cover (Aic) is determined by comparing the total area of impervious surfaces for the project from pre-to-post development. The pre-development case must represent the least amount of impervious surface for the covered development project within the last 5 years prior to proposed development. Section 2.1 includes definitions of impervious surfaces and suggested resources for selecting the appropriate pre-development case.

<sup>3</sup> The current NYS 303(d) list and Appendix I of the [pending renewal of the]2022 MS4 Permit NY0287890 have replaced references to "pathogens" with "fecal coliform." Fecal coliform is a pathogen-related water quality parameter; see also Table 2.4 of this manual.

Floatables are manmade materials, such as plastics, papers, or other products that, when improperly disposed of onto streets or into catch basins, can ultimately find their way to local waterbodies.

The NYS SWMDM contains provisions for floatables control in the design of SMPs. These provisions include pretreatment, settling or filtration, outlet controls and

the water quality volume (WQv). The following equation can be used to calculate the WQv:

EQ2.1:

$$WQv = \frac{1.5^3}{12} + A \cdot Rv$$

where:

- WQv: water quality volume (cf)
- A: contributing area (sf)
- Rv: runoff coefficient relating total rainfall and runoff Rv: 0.05 + 0.009(I),
- I: percent impervious cover

The SWPPP must show how the WQv is managed at the practice and site levels. This requirement means that the contributing area, runoff coefficient, and WQv must be determined for each individual practice – and that, in total, the practices must manage the WQv across the entire site. It is also important to note that the contributing area includes all tributary areas, even those which may be outside the covered development project area.

SMPs used to meet WQv must be selected in accordance with the SMP hierarchy (Section 4.2). Refer to Chapter 4 for details on the sizing and design of SMPs.

**Runoff reduction criteria**

The runoff reduction (RR) requirement aims to [maintain a minimum] maximize the level of RR during small storms in order to preserve natural hydrologic functions. Runoff is considered reduced when it is retained by SMPs for infiltration, evapotranspiration, or reuse. Ideally the entire WQv will be reduced by SMPs when the SMP Hierarchy is followed (Section 4.2), however if site constraints are such that reducing the entire WQv is not possible, the application must demonstrate that the minimum RRv has been met.

In no case shall the runoff reduction volume (RRv) of SMPs be less than the minimum RRv resulting from the newly constructed impervious areas, determined by the following equation:

EQ2.2:

$$RRv_{min} = \frac{1.5^3}{12} + 0.95 \cdot Aic \cdot S$$

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In most cases, using the SMP hierarchy (Section 4.2) to meet the WQ requirement, will also result in the project meeting the RR requirement. Refer to Chapter 4 for details on the sizing and design of SMPs.

**No net increase criteria**

The NNI requirement aims to reduce POCs in MS4 areas that discharge to an impaired waterbody. POCs can include:

- Pathogens<sup>3</sup> – disease-producing agents such as bacteria, viruses, or other microorganisms
- Floatables<sup>4</sup> – manmade materials such as plastics, papers, or other products, which have made their way to a waterbody
- Phosphorus – a nutrient that can lead to algae blooms that deplete oxygen in the water, which can kill aquatic life
- Nitrogen – another nutrient that can lead to algae blooms that deplete oxygen in the water, which can kill aquatic life

**Pathogens**

Pathogens are disease-producing agents such as bacteria, viruses, or other microorganisms. Most pathogens found in stormwater runoff are from human and animal fecal matter. The presence of fecal indicator bacteria, such as fecal coliform, can provide evidence of fecal contamination and the potential presence of pathogenic organisms.

To meet the NNI requirements for pathogens, BMPs must be implemented as provided in the post-construction O&M manual to mitigate potential sources of pathogens present at the developed site. Table 2.6 lists examples of BMPs that may address pathogen sources per land use. This list is not exhaustive or prescriptive, and applicants may propose additional BMPs to mitigate site-specific pathogen sources.

**Floatables**

<sup>4</sup> The current NYS 303(d) list and Appendix I of the [pending renewal of the]2022 MS4 Permit NY0287890 have replaced reference to "floatables" with "garbage and refuse." The meanings of the terms are analogous; see also Table 2.4 of this manual.

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maintenance that will effectively capture and remove floatables and settleable trash and debris prior to discharge.

To meet the NNI requirements for floatables, refer to [Chapter 4 of] the NYS SWMDM to determine the required garbage and refuse removal features of post-construction SMPs.

**Phosphorus**

Phosphorus is a nutrient that is a natural part of aquatic ecosystems and supports the growth of algae and aquatic plants. However, excess phosphorus can cause nuisance algae blooms and aquatic weed growth, which reduces water clarity and dissolved oxygen (DO) and can harm aquatic life. Sources of phosphorus include lawn/plant fertilizer, illicit discharges of sanitary waste, pet and wildlife waste, and leaves, branches, and grass clippings.

Part II.B.1.b.ii of the NYC MS4 Permit states, "For phosphorus-limited waterbodies, compliance with Chapter 10 of the NYS SWMDM [(January 2015)] will satisfy the No Net Increase requirement." To meet the NNI requirements for phosphorus, refer to [Chapter 10 of] the NYS SWMDM to design SMPs.

**Nitrogen**

Nitrogen is a nutrient that occurs naturally in aquatic ecosystems but can be harmful in high concentrations. Sources of nitrogen in stormwater are the same as those described above for phosphorus.

Projects in MS4 areas that discharge to nitrogen-impaired waters must provide calculations to demonstrate NNI in total nitrogen (TN) loading from existing conditions to post-development conditions. If the project will increase the TN load, excess nitrogen must be removed through the implementation of SMPs. Procedures for completing these calculations are detailed in Appendix B.

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Table 2.6. BMPs for pathogen removal by land use.

BMP	Source of Pathogen	Applicable Land Use
Install signs, distribute public education and outreach materials, and implement trainings to support pathogen reduction programs.	All	All
Inspect and clean areas where animal waste may be present (e.g., dumpsters, grease storage, waterfowl congregation areas, and dog parks).	Pets and Wildlife	All
Discourage free-range pets. Adopt rules within a development to pick up pet wastes. Offer bags and waste receptacles to make it easy for pet owners to pick up and dispose of waste products. Distribute educational materials and signage to support program.	Pets	Residential, Open Space & Outdoor Recreation, Commercial & Office Buildings (pet stores, veterinarians)
Identify areas with high bird populations and evaluate deterrents, habitat modifications, and other measures.	Wildlife	Open Space & Outdoor Recreation, Residential (common areas in a development), Vacant Lots
Reduce food sources accessible to urban wildlife (e.g., manage restaurant dumpsters/grease traps and residential garbage).	Wildlife	Residential, Commercial & Office Buildings (restaurants, groceries), Public Facilities & Institutions, Industrial
Use latched or heavy-lidded trash containers to deter wildlife.	Wildlife	Open Space & Outdoor Recreation, Residential, Commercial & Office Buildings (restaurants, groceries), Public Facilities & Institutions, Industrial
Increase collections and waste disposal for private haulers.	Wildlife	Commercial & Office Buildings (restaurants, groceries)
Reduce attractive odors that may draw wildlife.	Wildlife	Residential, Commercial & Office Buildings (restaurants, groceries)
Introduce strategies to reduce food, shelter, and habitats for overpopulated urban wildlife.	Wildlife	All
Inhibit access to open water by managing vegetation growth, limit food sources-seeds, and discourage feeding wildlife, especially on impervious surfaces, near open water, or near practices that discharge directly to open waters. Provide educational materials to support program.	Wildlife	Open Space & Outdoor Recreation, Residential (common areas in a development)
Inspect and clean catch basins regularly and distribute educational materials to support program.	Wildlife	Residential, Commercial & Office Buildings, Parking
Monitor for illegal dumping into catch basins.	Human and Pet	All
Monitor illicit connections by tenants to storm sewer. Look for dry weather flows in storm sewer system.	Human	All
Minimize stormwater runoff that is directly connected to the system from impervious areas.	All	All
Clean main sewer line that connects to building, pump septic tank, or flushing pit. Pressure test or inspect sewer main or septic tank for leakage once every five years.	Human	Residential, Commercial & Office Buildings, Industrial, Public Facilities & Institutions
Locate portable toilets away from storm drains or open water.	Human	All (especially during construction and temporary public events)

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**Sewer operations criteria**

The sewer operations volume (Vv) requirement aims to manage runoff from larger storm events in order to maintain optimal flow rates in the City's sewer system and, in turn, improve overall sewer operations. Compliance with this requirement is usually achieved by detention practices, but some retention practices may also be used as part of the Unified Stormwater Rule and as clarified by this Manual (see Chapter 4).

There are two elements to the sewer operations criteria; a volume (Vv) that must be provided to temporarily store water – and a maximum release rate (Q<sub>DRR</sub>) that must be maintained via flow control systems. This volume (Vv) is consistent with the stormwater management volume in Chapter 31 of Title 15 of RCNY but will be referred to hereafter as the sewer operations volume for clarity in the context of this Manual. The two elements (Vv and Q<sub>DRR</sub>) work in tandem to manage peak flow rates from the site. Please note that compliance with the sewer operations criteria does not obviate full review of and compliance with all NYSDEC SWMDM requirements, as applicable.

Consistent with previous Bureau of Water and Sewer Operations (BWSO) rules for the connections to the City's sewer, sites must manage the peak rate of runoff for the 10YR rainfall event. The following equation can be used to determine the sewer operations volume (Vv):

$$EQ2.3: V_v = \frac{R_o}{12} * A * C_w$$

where:  
 V<sub>v</sub>: sewer operations volume (cf)  
 R<sub>o</sub>: rainfall depth (in)  
 A: contributing area (sf)  
 C<sub>w</sub>: weighted runoff coefficient relating peak rate of rainfall and runoff

The rainfall depth (R<sub>o</sub>) used to calculate V<sub>v</sub> will vary based on sewershed type and connection proposal type for the project, as shown in Table 2.7. This variation in applied rainfall depth reflects the different operational goals between CSS and MS4 areas, as well as a reduction in requirements for small, residential lots that apply for HCPs. As before, the contributing area includes all tributary

While there is no hierarchy for the selection of SMPs to meet the sewer operations criteria, the SMP hierarchy checklist (Appendix A) does include SMPs that can be used toward this goal. Refer to Chapter 4 for details on the sizing and design of SMPs.

In cases where two detention practices are proposed in series, the upstream detention system may reduce the effective C<sub>w</sub> value used to determine V<sub>v</sub> for the downstream system. Technical notes on the design of detention systems in series are provided in Section 4.11.

The second element of the sewer operations criteria, the maximum release rate, will also vary based on sewershed type. This variation again reflects the different operational goals between MS4 and CSS areas. Values for the maximum release rate per acre (q) are shown in Table 2.9 and defined in Chapter 31 of Title 15 of RCNY.

Table 2.9. Maximum release rate per acre (cfs/acre) by sewershed type.

q (cfs/acre)	Description
1.0	MS4 areas
0.1	CSS areas

The maximum release rate per acre (q) can then be used to calculate the maximum release rate for the contributing area (Q<sub>DRR</sub>) using the following equation:

$$EQ2.5: Q_{DRR} = q \left( \frac{cfs}{acre} \right) * A (sf) = \frac{q}{43560 \frac{sf}{acre}} * A (sf) \text{ or } 0.046 \text{ [whichever is greater]}$$

Q<sub>DRR</sub>: maximum release rate, site (cfs)  
 q: maximum release rate, per acre (cfs/acre)  
 A: contributing area (sf)

The equation above includes a conversion factor from square feet to acres. All house or site application proposals for the sewer operations criteria must be in units of square feet, not acres.

The maximum release rate must be maintained using flow control systems, such as an orifice or other controlled-flow device, such that the maximum rate is not exceeded when

areas, even those which may be outside the disturbed area.

Table 2.7. Applied rainfall depth by sewershed type and connection proposal type.

R <sub>o</sub>	Description
1.85	CSS areas with SCP
1.50	CSS areas with HCP
1.50	MS4 areas with SCP
1.10	MS4 areas with HCP

The runoff coefficient is based on surface type, where values for common surfaces are provided in Table 2.8.

Table 2.8. C values for various surface types.

C	Surface Description
0.95	Roof areas
0.85	Paved areas
0.70	Green roof with min. 4 in. growing media
0.70	Porous asphalt/Porous Concrete <sup>a</sup>
0.70	Synthetic turf fields <sup>a</sup>
0.65	Gravel parking lot
0.30	Undeveloped areas
0.20	Grass, bio-swales, or landscaped areas

<sup>a</sup> Using a C value of 0.7 for the indicated surface types typically requires the use of an outlet pipe, with approval at the discretion of DEP.

In cases where the contributing area includes more than one surface type, the area weighted runoff coefficient across all surface types shall be used in the calculation of V<sub>v</sub>, which may be calculated as follow:

$$EQ2.4: C_w = \frac{(C_1 A_1 + C_2 A_2 + \dots etc.)}{A_t}$$

where:  
 C<sub>w</sub> = weighted runoff coefficient relating peak rate of rainfall and runoff  
 C<sub>1</sub> = runoff coefficient for surface type 1  
 A<sub>1</sub> = area of surface type 1 (sf)  
 C<sub>2</sub> = runoff coefficient for surface type 2  
 A<sub>2</sub> = area of surface type 2 (sf)  
 A<sub>t</sub> = total area (sf)

the sewer operations volume is being provided. Technical notes on the design of flow controls can be found in Section 4.10.

When the sewer operations requirement is applicable, projects must meet both the volume (Vv) and maximum release rate (Q<sub>DRR</sub>) criteria. Specifically, the sewer operations volume (Vv) is applied in circumstances where the developed storm flow exceeds the maximum release rate. The developed flow, or the average rate of storm runoff in cfs is computed using the "Rational Method" by the equation:

$$Q_{dev} = C_{ws} A_s / 7.320$$

where:  
 Q<sub>dev</sub> = the developed site average storm runoff rate of flow in cfs, based on a rainfall event with a 5 yr. return period, and a 6 minute, (min.), time of concentration  
 C<sub>ws</sub> = the weighted runoff coefficient for the site  
 A<sub>s</sub> = the site area in ft<sup>2</sup>  
 7.320 = 43,560 ft<sup>2</sup>/ac divided by 5.95 inches per hour, (in/hr), the average rainfall intensity for the event with a 5 yr. return period and a 6 min. time of concentration

In addition, the proposal must show how the Vv and Q<sub>DRR</sub> criteria are met at the practice and site level. Therefore, the contributing area, weighted runoff coefficient, and maximum release rate must be determined for each individual practice, and, in total, the practices must meet the criteria across the entire site. It is also important to note that the contributing area includes all tributary areas, even those which may be outside the disturbed area.

In circumstances where design constraints require the system release at a rate lower than 0.046 cfs, DEP may require that additional volume be provided in accordance with accepted hydraulic design principles. In these cases, use the equations outlined in Section 4.11 Special Cases of this manual to calculate the required volume.

**2.4. Geotechnical Investigation**

An understanding of subsurface conditions is needed to determine the feasibility of using various SMP types.

This is illustrated by the SMP hierarchy in Section 4.2, which indicates the potential for soil and subsurface constraints to impact the selection of SMPs.

Therefore, unless otherwise directed by DEP, a limited geotechnical investigation is required to characterize subsurface conditions of the site. The limited geotechnical investigation shall include soil borings and permeability tests to, at a minimum, determine the following:

- Soil characteristics and texture
- Depth to groundwater (if encountered)
- Depth to bedrock (if encountered)
- Infiltration rate of soils at specified depths
- Any potential contamination concerns (if encountered)

**Procedures**

Geotechnical investigations shall be conducted in accordance with the NYS SWMDM procedures [(Appendix D: Infiltration Testing Requirements)]. The minimum number of soil boring and permeability tests, collectively referred to as B/PTs, is based on the footprint area of the proposed SMP, as follows:

- SMPs with areas less than 1000sf: at least one B/PT per SMP
- SMPs with areas of 1000sf or more, but less than 5000 sf: at least two B/PT per SMP
- SMPs with areas of 5000sf or more: at least two B/PTs plus an additional B/PT for every 5000 sf of SMP area

Additionally, the designer must make a reasonable determination as to whether additional tests may be needed based on field conditions, such as soil textural classifications and the standard penetration tests. This determination is particularly critical in areas of fill soils where characteristics will vary greatly over small distances.

The owner is responsible for obtaining all applicable permits and approvals related to conducting the geotechnical investigation.

**3. CITY DEVELOPMENT AND REVIEW PROCESS**

Two DEP offices review NYC stormwater management permit applications. Bureau of Water and Sewer Operations (BWSO) reviews Site and House Connection Proposals and Bureau of Environmental Planning & Analysis (BEPA) reviews Stormwater Construction Permits. This chapter predominantly provides application guidance for projects that require a Stormwater Construction Permit and outlines the process through which applications will be submitted to and reviewed by DEP's BEPA. However, because some projects may trigger both permitting requirements, section 3.2 provides an overview of the joint review process in place for such projects. Prior to using Chapter 3, the applicant must review the stormwater regulations and project applicability requirements described in Chapter 2.

**3.1. Projects that Require Site or House Connection Proposals Only**

As noted above, this Chapter predominantly provides application guidance for projects that require a Stormwater Construction permit. For Site and House Connection Proposal applications and associated guidelines, see DEP's website: <https://www1.nyc.gov/site/dep/about/sewer-connections.page>.

Refer to other chapters of this Manual for technical requirements and stormwater management practice (SMP) design guidance for projects that trigger a Site or House Connection Proposal.

**3.2. Projects that Require both Site Connection Proposal and Stormwater Construction Permit**

Some projects will require both a Site Connection Proposal and a Stormwater Construction Permit. For projects that trigger both requirements, this section outlines that process through which the applications will be reviewed by the respective bureaus responsible for enforcing the requirements and how the reviews will be coordinated. An applicant may submit the applications in any sequence or simultaneously, as appropriate to the project timeline. Two DEP offices (as noted above, BWSO for the Site

Connection Proposal and BEPA for the Stormwater Construction Permit) will review these applications.

As part of the BWSO review process, the initial application for a sewer connection from the property is the Site Connection Proposal (SCP), and BWSO's acceptance of that proposal is the SCP Certification. The main DEP BWSO office at LeFrak in Queens issues the SCP Certification, though other BWSO offices may review and issue certifications, especially for House Connection Proposals, depending on the circumstances. The SCP Certification is required under all circumstances in which: (1) the applicant proposes a new connection, (2) DOB requires the certification, or (3) the applicant agency's process includes the requirement. Before making the physical site connection, applicants must also obtain a Sewer Connection Permit. BWSO's local offices issue the Sewer Connection Permits.

As part of the BEPA review process, the initial application for stormwater management compliance includes the Stormwater Pollution Prevention Plan (SWPPP), and BEPA's approval of that plan is known as SWPPP Acceptance. In addition to the SWPPP Acceptance, covered development projects must also obtain a Stormwater Construction Permit and a Stormwater Maintenance Permit from BEPA, as further detailed below.

For projects that require both the Site Connection Proposal and Stormwater Construction Permit, the Site Connection Proposal Certification, Sewer Connection Permit, SWPPP Acceptance, and Stormwater Construction Permit are inter-related as follows:

- The Site Connection Proposal Certification and SWPPP Acceptance are required before BEPA issues the Stormwater Construction Permit, which is required before a shovel goes into the ground.
- BWSO does not issue the Sewer Connection Permit until the connection to a City sewer is necessary. The Site Connection Proposal Certification includes a condition that BWSO will not issue the Sewer Connection Permit until the applicant obtains the Stormwater Construction Permit.
- BEPA will not issue a Stormwater Maintenance Permit until BWSO issues the Sewer Connection Permit.

Figure 3.1 illustrates how each submission, approval, and/or permit is inter-related. Overall, the order of the DEP process can be summarized in four steps:

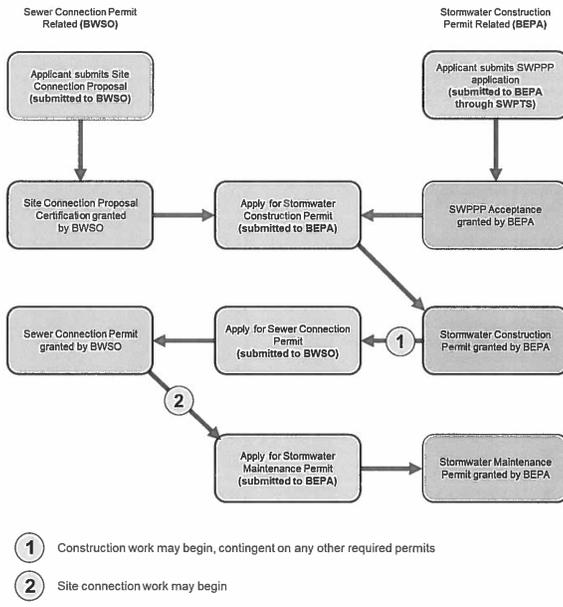
- Step 1 – Submit Site Connection Proposal and Stormwater Construction Permit Application/SWPPP, which may be done in parallel
- Step 2 – Site Connection Proposal Certification and SWPPP Acceptance required for issuance of the Stormwater Construction Permit
- Step 3 – Stormwater Construction Permit required for construction to begin and for issuance of the Sewer Connection Permit
- Step 4 – Sewer Connection Permit required for sewer connection work to begin and issuance of the Stormwater Maintenance Permit

For Site and House Connection Proposal applications and guidelines, see DEP's website <https://www1.nyc.gov/site/dep/about/sewer-connections.page>.

For projects that require a Stormwater Construction Permit, see section 3.3 for submittal requirements, review processes, and the Stormwater Permitting and Tracking System (SWPTS).

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Figure 3.1. Flowchart outlining the inter-relation of BWSO and BEPA submissions, approvals, and permits.



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**3.3. Projects that Require Stormwater Construction Permit (All)**

To simplify the submittal and approval process, DEP has created an online project application system, the Stormwater Permitting and Tracking System (SWPTS), (<https://deppermits.microsoftrmportals.com/>), which [will] enables applicants to submit a SWPPP and Stormwater Construction Permit application, as well as to follow the status of DEP's review.

The SWPTS [will] allow DEP to confirm that each permit application meets the requirements for erosion & sediment control, water quality, runoff reduction, and no net increase, as applicable. The review time for the DEP SWPPP approval process is forty-five (45) days. Applicants should note that DEP Stormwater Construction Permits and DEP Stormwater Maintenance Permits issued under the requirements of Title 15, Chapter 19.1, do not obviate the need for obtaining any other existing city, state or federal permit that may be required for the covered development project.

A user-friendly template for SWPPP applications can be found on DEP's website [www.nyc.gov/dep/stormwaterpermits](http://www.nyc.gov/dep/stormwaterpermits). The template is an editable document file where text, tables, and figures can be added or removed as needed. In total, the template includes eight sections and 14 appendices, with instructions on what information is needed for each. For ease of reference, the following sections are included in the SWPPP template:

- Contact Information / Responsibilities
- Site Evaluation, Assessment, and Planning
- Erosion and Sediment Controls
- Construction Inspection
- Post Construction Stormwater Controls
- Certification and Notification

As part of the SWPTS, DEP has identified roles and responsibilities for people involved with the development project, as provided below and in Table 3.1. While in some instances the roles and responsibilities may overlap, the following major roles are identified in the SWPTS and used throughout the following sections of this manual.

**Owner** – Owner of the property undergoing development is the individual, corporation, partnership, limited-liability company or other legal entity having legal title to premises, a mortgagee or vendee in possession, a trustee in bankruptcy, a receiver, or any other person having legal ownership or control of premises. Owners must certify that they are aware of the development activity and understand their role under RCNY Title 15 Chapter 19.1. The owner may also be the Developer.

**Developer** – Primary project contact, is the person who owns or leases land on which development activity that is part of a covered development project is occurring, or a person who has operational control over the development or maintenance activity's plans and specifications, including the ability to make modifications to the plans and specifications. Developers must certify that they have overseen the SWPPP development and that the project has been completed as designed. The Developer may also be the Owner.

**Applicant** – Fills in applications and uploads reports, plans and other documentation to the SWPTS.

**SWPPP Preparer** – Must be a qualified professional. Creates the SWPPP for review and submittal to the SWPTS. The SWPPP Preparer, who typically works for the Developer, must certify that the SWPPP was prepared in accordance with RCNY Title 15 Chapter 19.1.

- Retention of Records
- Required Drawings

For projects in MS4 areas, upon receiving DEP SWPPP Acceptance, the applicant may proceed to request coverage under the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (CGP) for the covered development project.

typically works for the developer must certify that all ESC SMPs are constructed and removed in accordance with the SWPPP.

**Contractor** – Responsible for construction of project and implementation of SWPPP. Contractors must certify that they will agree to comply with the SWPPP as well as all applicable permits, including the NYC Stormwater Construction Permit and/or the CGP. The Contractor reports to the Developer.

**Trained Contractor** – Responsible for daily inspection, implementation and maintenance of ESC. Reports to Contractor and must be an employee of the Contractor.

**Qualified Professional (Construction)** – Responsible for inspection and certification of installed SMPs. Qualified Professional (Construction), who typically works for the Developer, must certify that all SMPs have been constructed in accordance with the SWPPP.

**Qualified Inspector** – Responsible for inspection and certification that final stabilization has been achieved at the site. Performs weekly inspections of erosion and sediment control (ESC) practices. The Qualified Inspector, who

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Table 3.1. Roles and responsibilities in the SWPTS.

Role	Responsibility	Minimum Professional Registration/ Certification	Signoff/ Certification Required for Plan Approval/ Construction Permitting?	Signoff/ Certification Required for Construction Closeout/ Maintenance Permitting?
<b>Applicant</b>	Fills in application and uploads reports and plans to the SWPTS.	N/A	N/A	N/A
<b>Contractor</b>	Responsible for construction of project and implementation of SWPPP.	NYC DOB	Yes	N/A
<b>Developer</b>	Primary project contact, responsible for payments and project staff. May be the same entity as Owner.	N/A	Yes	Yes
<b>Owner</b>	Must provide permission for work to occur on property. May be liable for all fees and fines.	N/A	Yes	N/A
<b>Owner/Developer</b>	See 'Owner' and 'Developer'.	N/A	Yes	Yes
<b>Qualified Inspector</b>	Responsible for weekly (bi-weekly) inspections. Reports to Developer.	NYS PE or RLA or works under the direct supervision of same or CPESC.	N/A	Yes
<b>Qualified Professional (Construction)</b>	Responsible for inspection and certification of installed SMPs. Reports to Developer. May also serve as the SWPPP Preparer or Qualified Inspector.	NYS PE or RLA	N/A	Yes
<b>SWPPP Preparer</b>	Responsible for creating the SWPPP for review and approval. Works for Developer. May also serve as the Qualified Professional (Construction) or Qualified Inspector.	NYS PE, RLA or CPESC (EASC Plan only)	Yes	N/A
<b>Trained Contractor</b>	Responsible for daily inspection, implementation and maintenance of ESC. Reports to Contractor and must be an employee of Contractor.	NYSDEC 4-hour ESC Class	N/A	N/A

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**3.4. DEP SWPPP Submittal and Review Process**

Figure 3.2 details, from start to finish, the complete DEP SWPPP submittal, review, and approval process for a covered development project. The responsible party for each step in the process is designated by color, with decision points for approvals and other actions noted accordingly.

As part of the SWPPP approval and stormwater construction permitting process, all users [will be required to] must register in the SWPTS to use the system. Users include the owner, applicant, developer, contractor, etc. Each responsible party [will be required to] must provide requested information in the SWPTS to be able to submit an application and receive DEP approval.

An in-depth, step-by-step description of the process is provided in Section 3.5. DEP encourages SWPPP preparers, developers, and applicants to read Chapter 3 in its entirety to understand the entire submittal and review process along with the associated requirements and decision points. During development of the SWPPP, SWPPP preparers, developers, and applicants should also review Chapters 2 and 4 and make sure they understand what is required in order to develop a SWPPP that will obtain DEP approval.

- Visit the DEP SWPTS website at <https://deppermits.microsoftrmportals.com/>
- Email the DEP SWPPP Review and Inspection Staff at [stormwaterpermits@dep.nyc.gov](mailto:stormwaterpermits@dep.nyc.gov)

SWPPP preparers and applicants may request discussions with DEP to address site challenges and proposed innovative stormwater management approaches. Each project will be assessed on a case-by-case basis to determine if the concerns require an in-person meeting. All questions or requests for in-person meetings should be emailed to [stormwaterpermits@dep.nyc.gov](mailto:stormwaterpermits@dep.nyc.gov).

Parties requesting an in-person meeting [will] need to provide a project description, preliminary site plan, a description of the issues/concerns that need to be discussed and three (3) preferred dates and times to meet with DEP within two (2) weeks of the meeting request submittal. DEP staff [will] determine the final meeting date and time based on availability.

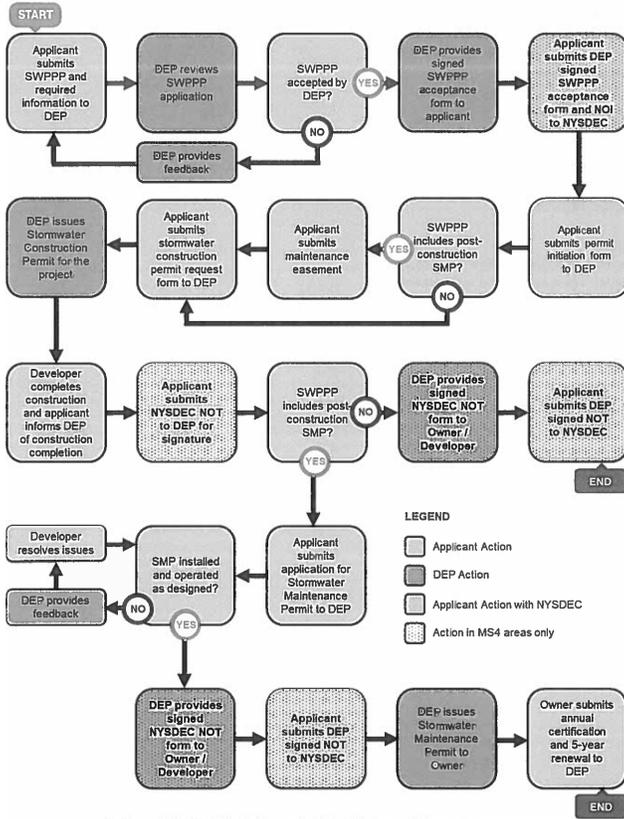
**Electronic Submissions**

The SWPPP and all associated application information must be submitted electronically using the SWPTS. All required information except for the SWPPP document itself [will] must be entered directly into the SWPTS using the online input forms. The complete SWPPP, including all drawings and associated materials, must be uploaded into the SWPTS as a pdf. If issues arise during the upload of the SWPPP document, contact NYCSWPTSAdmin@dep.nyc.gov to request direction on how to submit the application.

**Contacting DEP Staff**

DEP encourages SWPPP preparers and applicants to contact the DEP SWPPP Review and Inspection Team for assistance at any point during development of the SWPPP and/or the submittal and review process. For additional information and answers to frequently asked questions, SWPPP preparers and applicants can:

Figure 3.2 Detailed NYC Stormwater Permit Submission, Review, and Approval Process.



**3.5. SWPPP Submission, Review and Approval Details**

The following sections provide detailed information about the specific phases of the DEP SWPPP submittal and approval process shown in Figure 3.2.

**SWPPP Submission Materials**

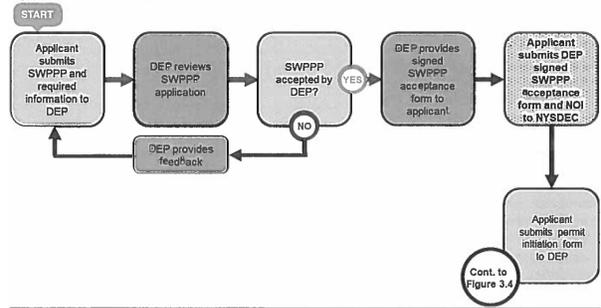
- To begin the DEP submittal and approval process, the applicant for the covered development project must:
- Complete the online application in the SWPTS;
  - Upload a complete SWPPP in the SWPTS; and
  - Pay the associated permit fees.

**SWPPP Acceptance**

If DEP disapproves the submitted SWPPP application, as shown in Figure 3.3, it [will] provide the applicant with a notice identifying the deficiencies within the SWPPP that [will need to] must be addressed in order to obtain DEP approval. A new application [will] then [have] has to be submitted to DEP for review and approval.

If DEP approves the submitted SWPPP application, DEP [will] provide the applicant with a signed SWPPP Acceptance Form for the project. For projects in MS4 areas, the applicant then includes the signed SWPPP Acceptance Form with the NYSDEC Notice of Intent (NOI) when applying to obtain coverage for the proposed project under the CGP.

Figure 3.3. SWPPP Acceptance Decision Point



**SWPPPs without Post-Construction SMP(s)**

If the SWPPP does not require a post-construction SMP, the Permit Initiation Form may be submitted in the SWPTS without a stormwater maintenance easement, as shown in Figure 3.4.

DEP [will] issue a Stormwater Construction Permit for the project once all the required information in the Permit Request Form has been submitted and approved. Once the DEP Stormwater Construction Permit has been issued, construction may begin. DEP may conduct inspections at any time during the construction process.

After the completion of construction, the applicant will inform DEP of construction completion. For projects in MS4 areas, the applicant will submit the NYSDEC Notice of Termination (NOT) to DEP for the MS4 acceptance signature, as shown in Figure 3.5. DEP may inspect the project site and, if satisfied, will provide the signed NOT to the applicant. The applicant will then submit the signed NOT to NYSDEC.

Figure 3.4. Permit Initiation Form and Maintenance Easement Requirements

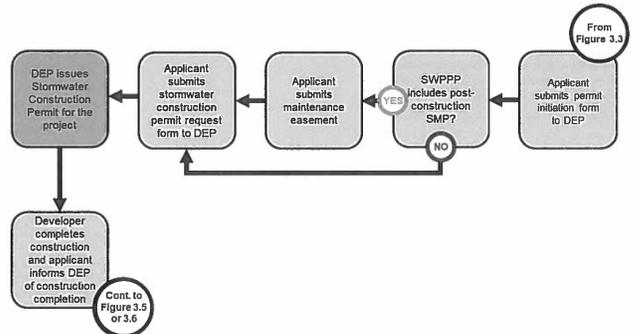
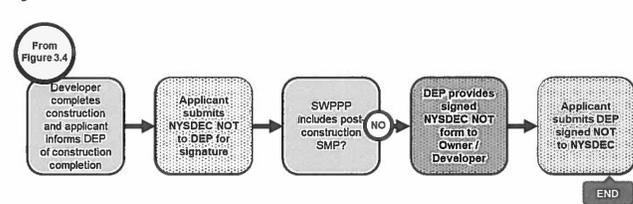


Figure 3.5. SWPPP Does Not Include Post-Construction SMP Decision Point



**SWPPP with Post-Construction SMP(s)**

If a SWPPP includes one or more post-construction SMPs, the applicant must obtain a maintenance easement. A copy of the maintenance easement and the information required on the Permit Initiation Form must be submitted via SWPTS as shown in Figure 3.4. DEP [will] issue a Stormwater Construction Permit for the project once all the required information in the Permit Request Form has been submitted and approved. Once the DEP Stormwater Construction Permit has been issued, construction may begin.

Once construction is completed, the applicant must also submit the application for a Stormwater Maintenance Permit to DEP as shown in Figure 3.6. The Stormwater Maintenance Permit application shall consist of the following:

- NOT;
- As-built plan;

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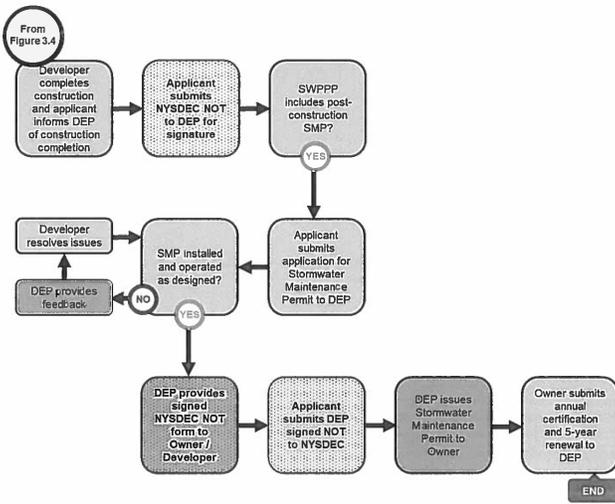
- Operation and maintenance manual that designates the entity responsible for the long term maintenance;
- Fee specified in the DEP Stormwater Rule.

An electronic version of the NOT is available on the SWPTS. As-built plans and a final Operation and Maintenance Manual [will] need to be uploaded in a PDF or other acceptable format. The Operation and Maintenance plan should be finalized based on the installed SMP(s), reflecting any changes that were made during the construction period.

DEP may inspect the SMP(s) at any time. If the SMP is not installed or operating as designed, DEP will provide feedback and the applicant must resolve the issue(s). Once the SMP(s) is installed and operating as designed, DEP will provide the acceptance signature for the NOT and issue the Stormwater Maintenance Permit. For projects in MS4 areas, the applicant will then submit a signed NOT to NYSDEC.

The owner must submit an annual certification for the SMP as well as a 5-year permit renewal to DEP via the SWPTS. Requirements for inspection schedules as well as typical SMP operation and maintenance requirements are detailed in Chapter 5.

Figure 3.6. SWPPP Does Include Post-Construction SMP Decision Point



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3.6. Expiration Policy

SWPPP Acceptances expire if a permit is not requested within 2 years of the plan approval date. A Stormwater Construction Permit [will] expire if the commencement of development activities does not take place within one year or is not completed by a date specified in the permit. Furthermore, a Stormwater Construction Permit [will] expire if the permitted work is suspended or abandoned for a continuous period of 12 months unless such permit expires earlier. Expired permits [will] require reapplication as detailed in the permit conditions.

3.7. Partial Shutdowns

If a covered development project requires temporary shutdown for less than 12 months, the developer must notify DEP a minimum of seven days before the shutdown and submit documentation showing that the site is stable and that all SMPs are operational. The developer [will be] responsible for having a qualified inspector visit the site and inspect it at least once every 30 days during the shutdown. In addition, all permits must be kept current during the suspension of development activity.

If a covered development project requires a planned shutdown with partial project completion for 12 months or longer, the owner or developer must submit a completed NOT to DEP for sign-off prior to submitting the NOT to NYSDEC. The department [will] review the completed NOT to ensure that the following conditions have been met:

- All soil disturbance has ceased;
- All areas disturbed as of the project shutdown date have achieved final stabilization;
- All temporary structural ESC measures have been removed; and
- Any post-construction SMPs required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

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4. SMP SELECTION AND DESIGN

This chapter covers the following topics:

- Section 4.1 – Overview of SMP functions and surface types used for classification
- Section 4.2 – Selecting SMPs using the SMP hierarchy
- Section 4.3 – Methods for sizing SMPs to meet applicable stormwater management requirements
- Section 4.4-4.8 – General design criteria for SMPs by function
- Section 4.9 – Process for approval of other, innovative systems
- Section 4.10 – Specific design criteria for each SMP component
- Section 4.11 – Calculations for special cases

4.1. Practice Types

SMPs are systems that are designed to protect, restore, or mimic the natural water cycle within built environments by retaining, detaining, and/or treating stormwater runoff. In this manual, SMPs are categorized in two ways: first, by their primary function and second, by their surface type.

SMP Functions

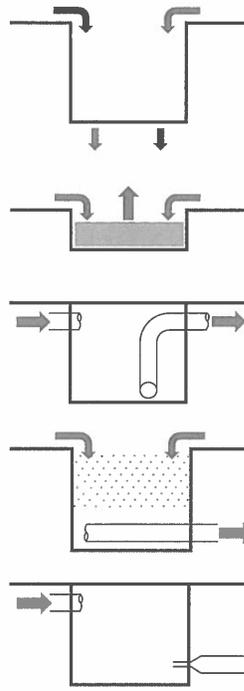
Runoff that enters an SMP is typically managed via one or more of the following physical processes:

- Infiltration – water is captured and infiltrated into the underlying soils (sometimes referred to as exfiltration).
- Evapotranspiration (ET) – water is captured and evaporated or transpired back into the atmosphere.
- Reuse – water is captured and reused for purposes other than SMP irrigation (which can reduce water storage potential of other SMPs).
- Filtration – water passes through a filtration medium to remove various pollutants.
- Detention – water is temporarily stored and released at a lower flow rate.

SMPs may support more than one process, but there is usually one primary function for which the system was designed. For example, a bioretention system that is constructed on permeable soils is designed to manage runoff primarily by infiltration, since ET accounts for a smaller portion of managed runoff. However, a bioretention system with an outlet pipe is designed to manage runoff

Vegetated practices can provide a number of added co-benefits beyond stormwater management, such as air filtration, reduction of heat island effects, ecological benefits, and amenity. Non-vegetated practices often lack most co-benefits but may be necessary for highly constrained sites. A major goal of the Unified Stormwater Rule, and therefore this manual, is to increase the use of vegetated practices in order to realize additional co-benefits for NYC residents.

Figure 4.1. SMP function diagrams.



Infiltration

Description: water is captured and infiltrated into the underlying soils, which is sometimes referred to as exfiltration. Design: Relies on sufficient permeability rates of underlying soils. Practices do not use outlet pipes to drain water. Example: Bioretention system, no outlet pipe

Evapotranspiration

Description: Water is captured and evaporated or transpired back into the atmosphere. Design: Relies on ET occurring between rainfall events. Practices are usually shallow and have no or limited ability to infiltrate water. Example: Green roof

Reuse

Description: Water is captured and reused for non-irrigation purposes. Design: Relies on continuous reuse of water. Practices can be integrated into existing non-potable and non-contact water uses. Example: Reuse in cooling tower

Filtration

Description: Water passes through a filtration media to remove various pollutants. Design: Relies on steady flow of water through the filtration media. Practices have an outlet pipe to support filtration. Example: Sand filter

Detention

Description: water is temporarily stored and released at a lower flow rate. Notes: Relies on ability to control release rate. Practices have a controlled-flow device, such as an orifice. Example: Detention tank

primarily by filtration, since most runoff will exit the practice and enter the sewer system once it has been filtered.

While one primary function is most common, some SMPs may be configured to support runoff management via two, equally contributing functions, e.g., detention systems that are also designed with components to filter runoff as it flows through the practice. These types of SMPs are referred to as dual function systems, which are described further in the Innovative Systems section (Section 4.9).

Among the five primary functions, infiltration, ET, and reuse SMPs are considered retention-based practices because they aim to eliminate or reduce the total volume of runoff leaving the site. The other two functions, filtration SMPs and some extended detention SMPs, are considered treatment-based practices because they aim to remove pollutants from runoff before it ultimately leaves the site. The distinction between retention-based practices and treatment-based practices is important when selecting an SMP to meet water quality goals, discussed further in Section 4.2.

In this manual, the primary SMP function, or dual functions for some systems, will be used to help categorize SMPs. This does not mean that secondary processes are to be neglected during the SMP design but allows for a straightforward means for grouping and crediting SMPs. As indicated in the earlier examples for bioretention systems, SMPs can take on different functions depending on how they are designed, and this framework provides flexibility for a wide range of potential configurations that may be necessary to accommodate various site constraints. An illustration of the physical process for each function type is shown in Figure 4.1, along with a brief description and example SMP.

SMP Surface Types

In addition to primary function, SMPs can be further categorized by one of two surface types:

- Vegetated SMPs – practices with a planting media that supports vegetation.
- Non-vegetated SMPs – practices without vegetation, such as permeable hardscapes, permanent ponds, enclosed systems, or subsurface systems.

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**4.2. Selecting an appropriate system**

Designers must select and design practices to meet all applicable stormwater management requirements outlined in Chapter 2. This subsection includes guidance on selecting practices to meet the water quality criterion (WQv), runoff reduction criterion (RRv), and no net increase criterion (NNI). This guidance follows an SMP hierarchy based on several guiding principles.

The ESC criteria should be met using best practices in accordance with the NYS Standards and Specifications for Erosion and Sediment Control (The Blue Book). The sewer operations criterion (Vv) does not require the use of the SMP hierarchy, although DEP encourages the use of vegetated infiltration practices, where feasible, because of their potential co-benefits.

The SMP hierarchy was created with two goals: first, to create a clear and consistent approach for the selection of SMPs throughout the City and second, to guide designers toward practices that are most effective at meeting the City's goals for stormwater management and co-benefits. The SMP hierarchy follows three logical steps:

- Step 1 (CSS & MS4) – use vegetated retention practices to meet requirements, or up to the maximum extent practicable.
- Step 2 (CSS & MS4) – use non-vegetated retention practices to meet requirements, or up to the maximum extent practicable.
- Step 3 (CSS) – meet any remaining requirements using either vegetated or non-vegetated detention practices.
- Step 3 (MS4) – meet any remaining requirements using either vegetated or non-vegetated treatment practices.

These steps reflect several principles that were discussed in Chapter 2. For example, the principle that improving water quality in CSS areas is largely achieved by limiting CSO volume and occurrence. In this case, retention practices are preferred, while detention practices are a secondary option. Alternatively, improving water quality in MS4 areas is largely achieved by managing pollutants in runoff. In this case, retention practices are preferred, while treatment practices, such as filtration systems and some extended detention systems, are a secondary option. Finally, the SMP hierarchy also reflects that vegetated practices are generally preferred over non-vegetated

practices due to the valuable co-benefits the former can provide for NYC residents.

The SMP hierarchies for CSS areas and MS4 areas are shown in Figures 4.2 and 4.3, respectively. Each hierarchy shows five groups of SMPs based on their function and/or surface type, as previously defined in Section 4.1. The CSS hierarchy includes groups for retention systems (vegetated and non-vegetated), detention systems (vegetated and non-vegetated), and reuse systems. The MS4 hierarchy is similar, except detention systems are replaced with treatment systems. Within each group are a list of applicable practices. Since some SMPs can be configured for multiple functions, they may appear in more than one group.

These SMP groups are shown in a grid that is arranged by their order of preference, with more preferred practices at the top-left and least preferred practices at the bottom-right. Reuse systems, which are also recognized as retention systems, appear as a standalone group that is optional, but can be used at any time. This placement reflects that reuse applications are not practical for all sites, but are among the high-priority SMP types, when appropriate.

The priority level of each SMP group is indicated by tiers with different colors, where the darker shades of green (CSS) or blue (MS4) indicate higher tier SMPs. These priority levels reflect the three logic steps of the SMP hierarchy. Designers must assess and implement SMPs in higher tiers to the maximum extent practicable before moving to lower tier systems. In this case, the maximum extent practicable is defined as the greatest extent to which site constraints allow.

Figure 4.3. SMP hierarchy for MS4 areas.

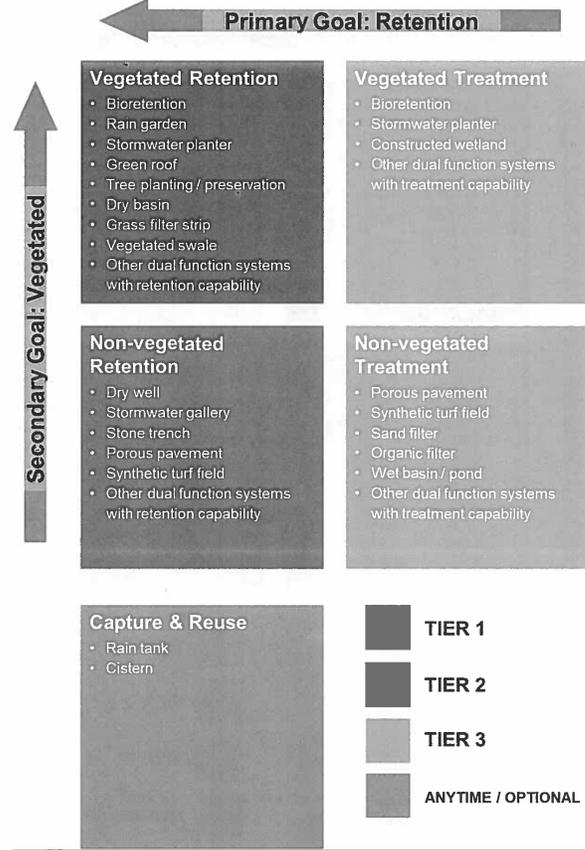
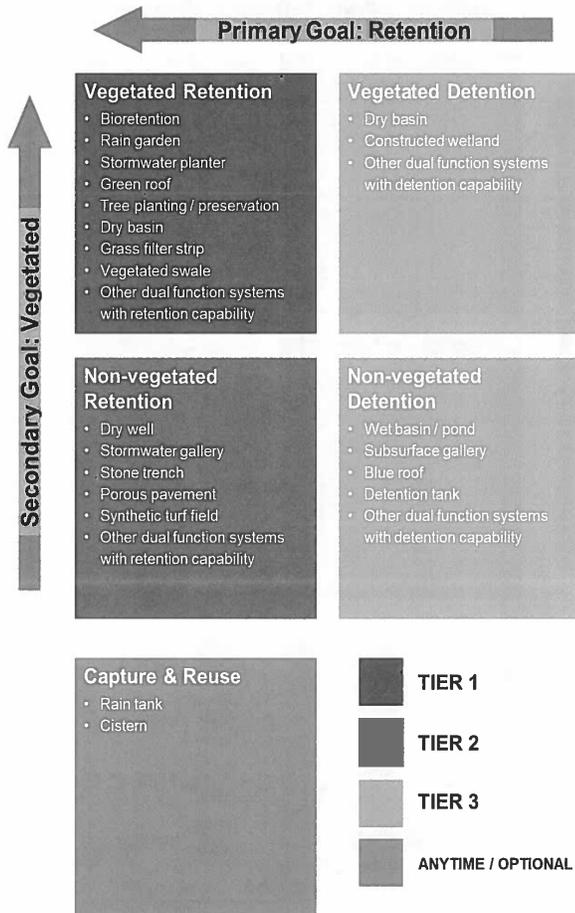


Figure 4.2. SMP hierarchy for CSS areas.



There are five potential site constraints that may impact the feasibility of SMPs, defined as follows:

- **Soil constraints** – permeability tests indicate that soil infiltration rates are less than 0.5 in/hr, limiting the use of infiltration practices.
- **Subsurface constraints** – boring tests indicate that the bottom of practice would be less than three feet from the groundwater table or bedrock, limiting the use of most practices, except those enclosed in concrete with adequate anchoring, as determined by an engineer.
- **Hotspot constraints** – land use or soil conditions increase the risk of runoff contamination, limiting the use of infiltration practices, or those without liners. (see criteria below).
- **Surface constraints** – regulations require the use of paved surfaces, limiting the use of vegetated practices. As an example, regulations for parking and/or egress requirements.
- **Space constraints** – required setbacks from structures, utilities, property lines, existing trees, or other site features limits the use of practices at the ground level. General siting criteria for on-site projects can be found in Appendix C.

- Soil is characterized as hazardous waste as defined in 6 NYCRR 360 or 40 CRF 261
- Groundwater exceeds standards, guidance values and/or limits described in NYSDEC AWQS in 6 NYCRR 703 or TOGS1.1.1

The checklist includes one row for each SMP type, with fields that indicate the practices: tier, function type, and practice name, along with markers to show which constraints would impact that SMP's feasibility. For example, "X" markers in the checklist are used to indicate the site constraints that would prevent each practice from being used. Designers are required to use the SMP selection checklist to determine which practices should be used on a site-by-site basis. This can be done in three steps:

- Determine what, if any, site constraints are applicable for the site, or portions of a site
- Eliminate practices that are not feasible given the applicable site constraints
- Meet the water quality criterion by exhausting all remaining SMP opportunities from higher tiers, before moving to lower tiers

Keep in mind, that some constraints may be limited to one portion of the site, rather than impacting the entire site. For this reason, it is important that designers consider how constraints may vary across the site when demonstrating that SMPs are used to the maximum extent practicable. To assist designers in following the SMP hierarchy, an SMP hierarchy checklist was created which shows how each constraint impacts the feasibility of specific SMPs in CSS and MS4 areas (Appendix A).

When SMPs are eliminated due to site constraints, the designer must provide the appropriate documentation that demonstrates each constraint (see Chapter 3). In addition, whenever a tier 2 or tier 3 SMP has been proposed, the designer must provide written justification for how higher tier practices have either been eliminated due to site constraints or used to the maximum extent practicable. All documentation for constraints and justification for use of lower tier practices are subject to review and approval by [NYC] DEP.

Hotspot constraints may be caused by either land uses or soil conditions. Land uses that cause stormwater hotspots are [listed in Table 4.3 of referenced in the NYS SWMDM]. Soil conditions that cause stormwater hotspots are listed below, which may be demonstrated through environmental assessments or as part of a regulatory program (e.g., NYSDEC Spills and Remediation Programs) documentation:

- Presence of grossly contaminated soil or non-aqueous phase liquid (NAPL) as defined in NYSDEC DER-10
- Soil exceeds the groundwater protection objectives of NYSDEC 6 NYCRR 375

Once selected, SMPs must be designed in accordance with all applicable design criteria outlined in Sections 4.4-4.11.

4.3. SMP Sizing

SMPs shall be sized so that the total volume of water that can be stored in the practice meets or exceeds the volume of runoff that must be managed to meet the stormwater management requirement. Procedures for computing the SMP storage volume are outlined in this subsection, along with how that volume is applied towards meeting the stormwater management requirements.

It is important to note that the following sizing methods are applicable to volume-based stormwater management requirements and SMPs. Designers seeking a deviation from the sizing methods or design criteria in this chapter must submit a stormwater model that demonstrates SMPs will meet the goals of each applicable stormwater criterion, subject to approval by DEP. Models must assess storage, routing, and drawdown for the design event(s) of interest. Acceptable stormwater models include HydroCAD and EPA SWMM.

Volume-based stormwater management requirements include water quality, runoff reduction, sewer operations, and NNI for Nitrogen removal. Other NNI requirements and the ESC requirement are criteria-based and should be met by following all relevant guidelines outlined in Chapter 2.

Volume-based SMPs include all practices except grass filter strips, vegetated swales, and tree preservation, which are criteria-based. As an example, the design criteria for grass filter strips and vegetated swales are intended to promote contact time between surface runoff and the vegetated surface for infiltration, rather than to use a storage element. These practices shall be designed to meet all relevant guidelines outlined in Sections 4.4-4.10.

The storage volume of a practice is the volume of water that can be stored at the surface or within the voids of the system itself. Internal voids can include those of any media (e.g. engineered soil or crushed stone), as well as voids of any internal structures (e.g. chambers or pipes). To be counted, the storage volume must fall within the active storage zone of the practice, which spans the distance from the lowest elevation from which water exits the storage zone up to the elevation of an overflow device that allows water to exit or bypass a practice once full.

For infiltration, the bottom of the active storage zone is simply the bottom of the practice. For ET systems, the bottom of the active storage zone is the bottom of the soil media layer. For reuse systems, the bottom of the active storage zone is the lowest elevation of usable water. For filtration and detention systems, the bottom of the active storage zone corresponds to the invert elevation of the outlet pipe.

The volume of the active storage zone can be calculated by adding up the volume of voids for each storage component. Therefore, a general formula for the calculation of storage volume is as follows:

EQ4.1:

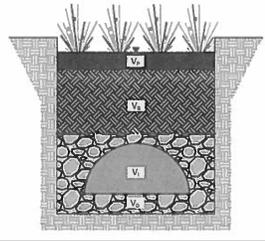
$$V_{SMP} = V_p + V_s + V_i + V_d$$

where:

- $V_{SMP}$  = storage volume of SMP (cf)
- $V_p$  = volume of surface ponding (cf)
- $V_s$  = volume of voids in the soil media layer (cf)
- $V_i$  = volume of voids created by internal structures such as chambers or pipes (cf)
- $V_d$  = volume of voids in the drainage media (cf)

One benefit of this general formula is that it is applicable to all storage based SMPs, regardless of function type or geometry. As an example, Figure 4.4 shows each of the four storage components for a bioretention system that uses a subsurface chamber. Methods for calculating the storage volume of each term in the general formula will be discussed first, followed by a consolidated formula that may be used for common practices with simple geometry.

Figure 4.4. Illustration of storage areas for a bioretention system with surface ponding ( $V_p$ ), soil media ( $V_s$ ), internal structure ( $V_i$ ), and drainage media ( $V_d$ ).



EQ4.3:

$$V_p = \frac{1}{3} (A_{P1} + \sqrt{A_{P1} \cdot A_{P2}} + A_{P2}) \cdot D_p$$

where:

- $V_p$  = volume of surface ponding (cf)
- $A_{P1}$  = area at the base of surface ponding zone (sf)
- $A_{P2}$  = area at the top of surface ponding zone (sf)
- $D_p$  = depth of ponding (ft)

For ponding areas with complex geometry, the designer shall create a stage-area curve that relates the depth of ponding to the area of ponding at regular intervals. The volume of each interval may then be calculated using the equation above by inputting the area at the top and bottom of the interval. The volume of surface ponding can then be calculated as the sum of all intervals.

Finally, in cases where there is no surface ponding, or the surface ponding area is above the elevation of an overflow device, the surface ponding volume is zero.

Soil Media

The volume of voids in the soil media layer is calculated as the total volume of soil times the porosity of soil:

EQ4.4:

$$V_s = A_{SMP} \cdot D_s \cdot n_s$$

where:

- $V_s$  = volume of voids in the soil media layer (cf)
- $A_{SMP}$  = area of the SMP (sf)
- $D_s$  = depth of soil media layer (ft)
- $n_s$  = available porosity of soil media (cf/cf)

Available porosity is defined as the percent of soil volume that is available for water storage at the onset of a rainfall event, on an average annual basis. The available porosity of soil media shall be set to 0.2 cf/cf. This value is less than the total porosity of a typical engineered soil used for SMPs, which reflects a reduction in storage capacity due to residual soil moisture.

The soil media storage equation assumes the sides of the practice are vertical, which means that the volume of soil may be calculated as the volume of a rectangular box. Where the sides of the practice are sloped, this method

should be adjusted to use the equation for the volume of a truncated pyramid.

Internal Structures

The volume of voids created by internal structures is calculated based on the type of structure. For modular structures, such as chambers, tanks, cisterns, crates, or other pre-cast units, the volume is calculated as the interior volume of one modular structure times the number of units:

EQ4.5:

$$V_i = V_M \cdot N_M$$

where:

- $V_i$  = volume of voids created by internal structure (cf)
- $V_M$  = interior volume of one modular structure (cf)
- $N_M$  = number of modular structures (unit less)

For voids created by internal pipes, the volume is calculated as the interior area of the pipe times the total length of pipe:

EQ4.6:

$$V_i = A_p \cdot L_p$$

where:

- $V_i$  = volume of voids created by internal structure (cf)
- $A_p$  = area of pipe (sf)
- $L_p$  = total length of pipe (ft)

Outlet and overflow pipes may not be counted towards the storage volume of a practice. In addition, any portion of structures above the elevation of an overflow device must be excluded from the calculated volume.

In cases where more than one type of modular system or more than one pipe size is used, the volume of voids may be calculated for each system and summed together to determine the total volume of voids.

Drainage Media

The volume of voids in the drainage media is calculated as the total volume of the drainage media, excluding the volume of any internal structures in this layer, multiplied by the porosity of drainage media:

EQ4.7:

$$V_d = (A_{SMP} \cdot D_d - V_{i,d}) \cdot n_d$$

where:

- $V_d$  = volume of voids in the drainage media (cf)
- $A_{SMP}$  = area of the SMP (sf)
- $D_d$  = depth of the drainage media (ft)
- $V_{i,d}$  = volume of voids created by internal structures within the drainage media (cf)
- $n_d$  = porosity of drainage media (cf/cf)

The porosity of stone base and sand shall be set based on media composition, with a maximum value of 0.4 cf/cf, unless otherwise approved by DEP. If there are internal structures within the drainage media, then the volume of voids for those structures must be subtracted to avoid double counting. Since the active storage zone for ET practices is only the soil media layer, the volume of storage in drainage media is excluded for these systems.

Like the calculation for soil media, this equation assumes the sides of the practice are vertical, allowing us to calculate the volume of the drainage media as the volume of a rectangular box. Where the sides of the practice are sloped, this method should be adjusted to use the equation for the volume of a truncated pyramid.

If more than one type of drainage media is used, the volume of voids may be calculated for each layer and summed together to determine the total volume of voids. DEP may request that the volume occupied by walls of internal structures also be subtracted from total volume of the drainage layer. This would be limited to instances where the volume of walls is significant due to wall thickness or large number of structures, at the discretion of NYCDPEP.

Meeting Requirements

As noted earlier, SMPs must be sized so that the total storage volume of the SMP meets or exceeds the volume of runoff that must be managed for the applicable stormwater management requirement. Rather than design separate systems to meet each stormwater management requirement individually, the USWR framework allows designers to apply each SMP towards meeting multiple objectives.

As an example, an infiltration system may be sized to store the water quality volume, but that storage may also help

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reduce the peak rate of runoff for larger events towards meeting the sewer operations requirement. The percentage of storage volume that may be applied to each stormwater management requirement will depend on the function of the system, as shown in Table 4.1.

Table 4.1. Percent of SMP volume that may be applied to SW management criteria by SMP function.

SMP Function	Percent of SMP Volume Applied to Requirement ( $F_A$ )		
	WQv	RRv	Vv
Infiltration	100	100	50
Evapotranspiration	100	100	0
Reuse <sup>A</sup>	100	100	50
Filtration	100 <sup>B</sup>	40 <sup>C</sup>	0
Detention	100 <sup>D</sup>	0	100

<sup>A</sup> Designers must demonstrate continuous and reliable capacity throughout the year (see Section 4.11)

<sup>B</sup> Applies to MS4 areas only

<sup>C</sup> Applies to practices with engineered soils only

<sup>D</sup> Applies to CSS areas and select detention practices with treatment abilities in MS4 areas

In all cases, the entire storage volume can be applied toward WQv because the practice will fully retain, filter, or detain the WQ event by design, as appropriate for CSS and MS4 areas.

The percentage of total volume that can be applied toward RRv reflects the portion of the runoff that may be retained by the practice. This is 100% for infiltration, ET, and reuse practices and 40% for bioretention used as filtration practices, as specified in the NYS SWMDM.

Detention practices that are designed to meet the Vv event will have 100% of their volume applied to meeting the Vv criterion. Any other practices that are designed to infiltrate or reuse the WQv event can apply up to 50% of their volume towards the Vv criterion as well, which accounts for several factors related to differences between the WQv and Vv events. To apply reuse volume towards stormwater management requirements, designers must demonstrate that the system will have continuous and reliable capacity throughout the year, approved at the discretion of

BEPA/BWSO (see Section 4.11). The application of volumes for dual function systems are covered in Section 4.9 on Innovative Systems.

Generally, it is recommended that designers size practices to meet the WQv as a first step. Once the WQv requirement is met, designers can compute the volume that may be applied to other requirements to determine whether any additional practices are needed.

Note that when retention practices alone are used to meet the WQ requirement, this will typically result in meeting the RR and NNI for nitrogen requirements as well. Alternatively, in cases where only the sewer operations requirement is applicable to a site, designers may size practices to meet Vv as a first step.

The following equation can be used to compute the SMP volume that may be applied to each stormwater management requirement:

EQ4.8:

$$V_A = V_{SMP} \cdot F_A$$

where:

- $V_A$  = storage volume that may be applied to relevant stormwater management requirement (cf)
- $V_{SMP}$  = storage volume of SMP (cf)
- $F_A$  = percentage of storage volume that may be applied to the stormwater management requirement (%)

Values for the percentage of storage volume that may be applied to the stormwater management requirement ( $F_A$ ) are provided in Table 4.1. In total, the storage volume that may be applied to each criterion ( $V_A$ ) must equal or exceed the required storage volume of each criterion.

SMPs must meet all design criteria outlined in the following sections for their volume to be applied towards the applicable stormwater management requirements. In addition, there are Special Cases that do not follow the general percentages listed in Table 4.1, which are marked as "SC" on the SMP selection checklist. An example sizing calculation for each practice function can be found in Appendix D, while an example design for an entire site can be found in Appendix E.

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**Simple Systems**

When the geometry of the SMP is relatively simple, equations to calculate the volume of individual components can be substituted into Equation 4.1 to create a streamlined formula for sizing. In cases where the ponding surface is flat, the sides of the SMP are vertical, and voids created by internal structures are all located in the drainage layer, then the simplified formula becomes:

EQ4.9:  

$$V_A = [A_{SMP}(D_p + D_s + n_s + D_D + n_D) + V_i(1 - n_D)] * F_A$$

where:

- V<sub>A</sub> = storage volume that may be applied to relevant stormwater management requirement (cf)
- A<sub>SMP</sub> = area of the SMP (sf)
- D<sub>p</sub> = depth of ponding (ft)
- D<sub>s</sub> = depth of soil media layer (ft)
- n<sub>s</sub> = porosity of soil media (cf/cf)
- D<sub>D</sub> = depth of the drainage media (ft)
- n<sub>D</sub> = porosity of drainage media (cf/cf)
- V<sub>i</sub> = volume of voids created by internal structures such as chambers or pipes (cf)
- F<sub>A</sub> = percentage of storage volume that may be applied to the relevant stormwater management requirement (%)

Looking at each parameter of Equation 4.9 in more detail leads to several additional simplifications. For example, the available porosity of soil media (n<sub>s</sub>) is set to the specified value of 0.20 cf/cf. Similarly, the porosity of the drainage layer (n<sub>D</sub>) shall be set based on media composition, with a maximum value of 0.40 cf/cf. In addition, the percentage of storage volume that may be applied towards the stormwater management requirement (F<sub>A</sub>) will be referenced from Table 4.1 based on the SMP function and the applicable stormwater management requirement.

This leaves the area of the SMP (A<sub>SMP</sub>), depth of ponding (D<sub>p</sub>), depth of soil media (D<sub>s</sub>), depth of drainage media (D<sub>D</sub>), and the volume of internal structures (V<sub>i</sub>) as design elements of the system. The area of the practice is bounded by the maximum allowable ratio between the SMP area and the contributing TDA area, as detailed in Sections 4.4-4.8. Similarly, the depths of various media are constrained by the maximum allowable drawdown time, which can be evaluated using the following methods.

**Drawdown Time – Infiltration SMPs**

The drawdown time for infiltration SMPs is calculated by dividing the volume of the practice by the average flow rate out of the system via infiltration. In this case, the flow rate via infiltration is field measured, which also relies on the principles of Darcy's law. Drawdown time is calculated as:

EQ4.11:  

$$dt_{SMP} = \frac{V_{SMP}}{\left(\frac{i}{12}\right) * A_{INF}}$$

where:

- dt<sub>SMP</sub> = drawdown time of infiltration SMP (hr)
- V<sub>SMP</sub> = volume of infiltration SMP (cf)
- i = field measured infiltration rate (in/hr)
- A<sub>INF</sub> = area of infiltrating surface at the bottom of SMP (sf)

The denominator uses two terms to estimate the flow rate, which are the field measured infiltration rate and the area of infiltrating surface at the bottom of practice. As a factor of safety, the field measured infiltration rate used to calculate drawdown time shall be capped at 5 in/hr.

Designers shall confirm that the drawdown time of the infiltration SMP does not exceed 48 hours, where applicable.

**Drawdown Time – ET SMPs**

The soil media of ET systems releases water back to the atmosphere as evaporation and transpiration occur over time. Given the variable nature of ET throughout the year, ET systems are designed to avoid long periods of ponded water by using shallow ponding depths, small loading ratios (practice-to-contributing area), and a means to drain excess water. For these reasons, there is no drawdown calculation for ET SMPs.

**Drawdown Time – Filtration SMPs**

The drawdown time for filtration SMPs is typically calculated by dividing the volume of the practice by the average flow rate through the filtration media. In this case, drawdown time can be calculated similar to surface ponding, which is based on the principles of Darcy's law. Drawdown time is calculated as:

**Drawdown Time – Surface Ponding**

The drawdown time for surface ponding is calculated by dividing the volume of ponding by the average flow rate through the surface media. In this case, the flow rate is calculated based on the principles of Darcy's law. Drawdown time is calculated as:

EQ4.10:  

$$dt_p = \frac{V_p}{\left(\frac{K_s}{12}\right) * \left(1 + \frac{0.5D_{M2}}{D_M}\right) * \left(\frac{A_{P1} + A_{P2}}{2}\right)}$$

where:

- dt<sub>p</sub> = drawdown time of surface ponding (hr)
- V<sub>p</sub> = volume of surface ponding (cf)
- K<sub>s</sub> = saturated hydraulic conductivity of media below the surface ponding area (in/hr)
- D<sub>p</sub> = maximum depth of ponding (ft)
- D<sub>M</sub> = depth of media below surface ponding area (ft)
- A<sub>P1</sub> = area at the base of surface ponding zone (sf)
- A<sub>P2</sub> = area at the top of surface ponding zone (sf)

Hydraulic conductivity shall be set based on media type, as follows:

- Engineered soil: 0.5 in/hr
- Sand filter media: 1.75 in/hr
- Peat/sand filter media: 1.0 in/hr

The denominator of the surface ponding drawdown time equation uses three terms to estimate the flow through rate which account for, from left to right, the hydraulic conductivity of the surface media, average hydraulic gradient through the surface media, and average area of surface ponding zone (area of percolation).

For infiltration SMPs, designers must confirm that the flow rate of infiltration through the bottom of practice is not more restrictive than the flow rate through surface media. This is done by comparing the denominator of surface ponding drawdown time with the denominator of infiltration drawdown time equation. The lesser of the two values should be used to compute surface drawdown time.

Designers shall confirm that the drawdown time of the surface ponding area does not exceed the maximum allowable for that the proposed practice (see Sections 4.4-4.8), which is commonly 12-hours.

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EQ4.12:

$$dt_{SMP} = \frac{V_{SMP}}{\left(\frac{K_s}{12}\right) * \left(1 + \frac{0.5D_{M2}}{D_I}\right) * A_I}$$

where:

- dt<sub>SMP</sub> = drawdown time of filtration SMP (hr)
- V<sub>SMP</sub> = volume of filtration SMP (cf)
- K<sub>s</sub> = saturated hydraulic conductivity of filtration media (in/hr)
- D<sub>M2</sub> = maximum depth of ponding above filtration media (ft)
- D<sub>I</sub> = depth of filter media (ft)
- A<sub>I</sub> = area of filter bed (sf)

Hydraulic conductivity shall be set based on media type, as follows:

- Engineered soil: 0.5 in/hr
- Sand filter media: 1.75 in/hr
- Peat/sand filter media: 1.0 in/hr

The denominator uses three terms to estimate the flow rate which account for, from left to right, the hydraulic conductivity of the filtration media, average hydraulic gradient through the filtration media, and area of the filter bed (area of percolation).

If the flow rate through the filtration media is greater than the flow rate through any outlet pipes or controlled-flow devices, then the drawdown time is not governed by the filtration media and must be determined by the most flow restrictive component. Where a level outlet pipe or controlled-flow device restricts flow, the drawdown time may be calculated using the equation for detention SMPs.

Where sloped outlet pipes restrict flow, the Manning's equation may be used to estimate the outlet flow rate, which replaces the denominator in the drawdown time calculation.

If outlet pipes are connected to an internal pipe or network of pipes, designers must ensure that the perforations in the internal pipes are adequate to not restrict flow.

Designers shall confirm that the drawdown time of the filtration SMP does not exceed 48-hours, where applicable.

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**Drawdown Time – Reuse SMPs**

The drawdown time for reuse SMPs is calculated by dividing the volume of the practice by the average flow rate out of the system via the water reuse application. In this case, drawdown time is simply calculated as:

EQ4.13:  

$$dt_{SMP} = \frac{V_{SMP}}{Q_{RU}}$$

where:

- dt<sub>SMP</sub> = drawdown time of filtration SMP (hr)
- V<sub>SMP</sub> = volume of filtration SMP (cf)
- Q<sub>RU</sub> = flow rate of reuse application (cf/hr)

Designers shall confirm that the drawdown time of the reuse SMP does not exceed 48 hours, where applicable. In cases where the reuse application alone does not meet this requirement, controlled-flow devices can be used in tandem to achieve the desired drawdown time.

**Drawdown Time – Detention SMPs**

The drawdown time for detention SMPs is calculated by dividing the volume of the practice by the average flow rate out of the system via a controlled-flow device. In this case, the system can be treated as a tank with an orifice, where the flow rate is derived from the Bernoulli equation. Drawdown time is calculated as:

EQ4.14:  

$$dt_{SMP} = \frac{V_{SMP}}{0.5C_D A_o \sqrt{2gH}} * \frac{1}{3600}$$

where:

- dt<sub>SMP</sub> = drawdown time of filtration SMP (hr)
- V<sub>SMP</sub> = volume of filtration SMP (cf)
- C<sub>D</sub> = coefficient of discharge; 0.61 (flush), 0.52 (re-entrant), or 0.73 (long re-entrant)
- A<sub>o</sub> = area of the orifice (ft<sup>2</sup>)
- g = acceleration due to gravity, 32.2 (ft/s<sup>2</sup>)
- H = maximum hydraulic head above the centerline of the orifice (ft)

Designers shall confirm that the drawdown time of the detention SMP does not exceed the maximum permitted, which varies by practice type (Section 4.8).

4-14

**4.4. Infiltration Systems**

Infiltration is the process whereby water passes through a porous media, mainly in a downward direction, due to gravity. SMPs that primarily manage runoff via infiltration of water into underlying soils are classified as infiltration systems. Infiltration systems are also considered retention systems because their primary function reduces runoff.

There are several features that are common to all infiltration systems:

- Underlying soils have adequate hydrologic conductivity for infiltration
- Underlying soils are not constrained by high groundwater, bedrock, or contamination
- Have no liner or other impermeable material at the bottom (i.e. has a permeable bottom)
- Have no outlet pipe or have an outlet pipe that is permanently capped

An outlet pipe is any pipe that can drain water from the practice before it is full. Typically, this would be a pipe that connects the storage zone of the practice with a point of discharge, such as a sewer, site drainage system, or structure with a controlled-flow orifice. For infiltration systems, outlet pipes must be permanently capped, except during maintenance, to prevent water from exiting the system.

Components used for infiltration systems vary, but may include surfacing mulch for moisture retention, engineered soil used to support vegetation, surface area used for ponding, stone base used to store water, geotextiles, and internal structures or pipes used to help distribute or store water. The total volume of water that can be stored in the practice must meet or exceed the volume of runoff calculated for the stormwater management requirement (Section 2.3). Further details on SMP sizing can be found in Section 4.3.

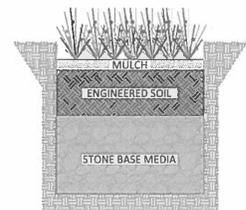
Infiltration systems provide a range of stormwater management benefits, which include runoff reduction, peak flow mitigation, groundwater recharge, and treatment of pollutants from runoff. Vegetated systems may provide several added co-benefits such as heat island mitigation, ecologic function, community amenity, and removal of airborne pollutants.

The feasibility of infiltration systems can be limited by soil constraints, subsurface constraints, hotspot constraints, and space constraints. In addition, surface constraints may limit the use of vegetated infiltration practices. A description of each constraint may be found in Section 4.2. Readers should refer to the SMP Selection Hierarchy (Appendix A) for details on how various constraints impact the use of specific SMPs.

**Infiltration SMPs**

SMPs that can be configured to function as infiltration systems include bioretention, rain gardens, stormwater planters, tree plantings, dry basins, grass filter strips, vegetated swales, dry wells, synthetic turf fields, porous pavements, stone trenches, and stormwater galleries. In addition to these systems, other innovative systems may also qualify as infiltration practices, as described in Section 4.9. A brief description of each infiltration SMP is provided below, along with an example cross section. Please note that the cross sections are for illustrative purposes only and are not meant to show all required components. Further, systems described in this manual may differ from those used as part of the ROW green infrastructure program.

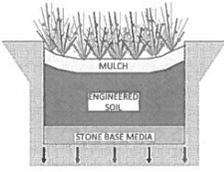
Bioretention - landscaped shallow depression that captures surface runoff. Typically used in dense urban areas. Similar to rain gardens, but components are designed to manage runoff from large areas. Commonly consists of a surface ponding area, mulch layer, engineered soil with vegetation, and stone base.



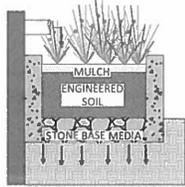
Rain garden - landscaped shallow depression that captures surface runoff. Typically used in residential applications. Similar to bioretention, but components are

4-15

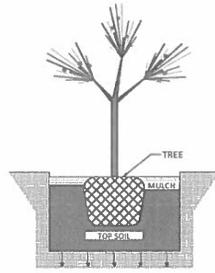
designed to manage runoff from small areas. Commonly consists of a surface ponding area, mulch layer, engineered soil with vegetation, and a shallow stone base to improve infiltration.



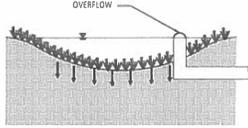
Stormwater planter - self-contained planter box with a permeable bottom. Commonly consists of a surface ponding area, mulch layer, engineered soil with vegetation, and stone base.



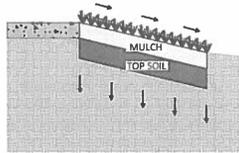
Tree planting (or preservation) - standalone trees (planted or preserved) that capture surface runoff. Commonly consists of a shallow surface ponding area and topsoil for tree planting. In the case of plantings, may also include a shallow drainage layer. This practice is counted towards a reduction of impervious area when calculating the runoff coefficient, rather than towards a required storage volume.



Dry basin - earthen depression that is typically planted with grasses and functions as one large surface ponding area. Usually constructed on naturally pervious soils that do not require the layering of engineered materials.



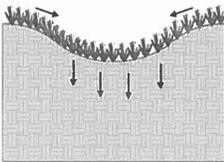
Grass filter strip - strip of grass that infiltrates sheet flow as it passes over its surface. Commonly consists of a shallow topsoil that is planted with short grasses



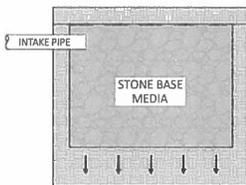
Vegetated swale - open, shallow channels with short vegetation along bottom and sides that infiltrates water as it is conveyed along swale. Commonly consists of a

4-16

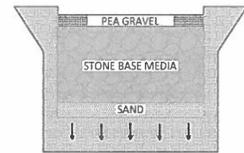
shallow topsoil that is planted with short grasses and may also have check dams to regulate flow within the channel.



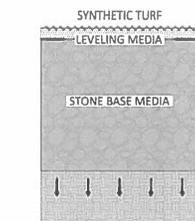
Dry well - subsurface shaft (circular) that is typically excavated or augured and then filled with a stone base or a prefabricated structure used to store water. When the depth of a dry well is greater than its diameter, which is common, an EPA injection well permit may be required (visit [epa.gov/iuc](http://epa.gov/iuc) for more details).



Stormwater gallery - subsurface area (typically rectangular) that is excavated and then filled with stone base, prefabricated structures, chambers, or pipes used to store water. Usually larger than a typical dry well system and, as a result, may treat larger drainage areas.



Stone trench - an excavated trench (typically linear) that is filled with stone base or internal pipes used to store water. Similar to a dry well, except the stone trench length is usually greater than its depth and it receives runoff via an exposed stone surface.



Synthetic turf field - synthetic turf material that allows runoff to percolate into underlying layers. Common underlying layers include a shock absorbing pad, leveling course, and a stone base. Due to their size, many synthetic turf fields also include internal pipes to help spread water evenly across the entire storage area.

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Porous pavement - pavements that contain voids which allow runoff to percolate into underlying layers. The surface of these systems can either be entirely porous pavement or a grid of pavers and porous materials, such as grass or gravel. Common underlying layers include a leveling course and a stone base.



**Design Requirements**

A comparison of general design requirements for each infiltration system is shown in Table 4.2. Additional requirements, specific to each SMP component, are provided in Section 4.10. Designers must ensure that requirements for all applicable components are met via their design drawings, notes, and specifications. Example sizing calculations can be found in Appendix D.

**Maintenance Requirements**

Post-construction maintenance requirements for various systems are detailed in Chapter 5.

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Table 4.2. General design requirements for infiltration SMPs.

Design Parameter <sup>a</sup>	Bioretention	Rain garden	Stormwater planter	Tree planting / preservation	Dry basin
MAX loading ratio, practice-to-contributing area	1:20	1:5	1:20	1:4	1:40
MAX contributing area	5 acre	1000 sf	15000 sf	400 sf	5 acre
MIN. infiltration rate of underlying soils	0.5 in/hr	0.5 in/hr	0.5 in/hr	0.5 in/hr	0.5 in/hr
Vertical separation from groundwater / bedrock <sup>b</sup>	3' MIN	3' MIN	3' MIN	-	3' MIN
Surface ponding depth	12" MAX <sup>c</sup>	12" MAX	12" MAX <sup>c</sup>	-	-
Media layers	Mulch Eng. Soil Stone base	Mulch Eng. Soil Stone base	Mulch Eng. Soil Stone base	Mulch Topsoil	Native soils or Topsoil
Surfacing media depth	2-3" TYP	2-3" TYP	2-3" TYP	Varies	-
Leveling media depth	-	-	-	-	-
Planting/filter media depth	2.5' MIN 4' MAX	1' MIN 2' MAX	1.5' MIN	Varies	-
Stone base depth	12" MIN	6" MIN 12" MAX	12" MIN	-	-
Slope of practice surface	1:3 MAX	1:3 MAX	No Slope	-	1:3 MAX
Slope of practice bottom	No Slope	No Slope	No Slope	-	3% MAX
MAX Drawdown time	Surface = 24hr Total = 48hr	Surface = 24hr Total = 48hr	Surface = 24hr Total = 48hr	-	Surface = 48hr

<sup>a</sup>SMPs in MS4 areas shall follow any additional criteria set forth in the NYS SWMDM for all parameters or components that are not already defined in the NYC SWM  
<sup>b</sup>Minimum vertical separation from the top of groundwater table in sole source aquifers is increased to 4 feet.  
<sup>c</sup>Storage in surface ponding area above planting media must be 75% of WQv to prevent bypass. This requirement is waived for infiltration practices when a connection is made between the surface ponding area and drainage course to increase rate of storage.

4-19

Table 4.2. General design requirements for infiltration SMPs. (Cont.)

Design Parameter <sup>a</sup>	Grass filter strip	Vegetated swale	Dry well	Stormwater gallery	Stone trench	Porous pavement	Synthetic turf field
MAX loading ratio, practice-to-contributing area	1:3 (Pv) 1:1.25 (Imp.)	-	-	-	-	-	-
MAX contributing area	10,000 sf	5 acre	1 acre	5 acre	5 acre	5 acre	5 acre
MIN. infiltration rate of underlying soils	0.5 in/hr	0.5 in/hr	0.5 in/hr	0.5 in/hr	0.5 in/hr	0.5 in/hr	0.5 in/hr
Vertical separation from groundwater / bedrock <sup>b</sup>	3' MIN	3' MIN	3' MIN	3' MIN	3' MIN	3' MIN	3' MIN
Surface ponding depth	-	4" MAX	-	-	-	-	-
Media layers	Native soils or Topsoil	Native soils or Topsoil	Stone base	Stone base	Pea gravel Stone base Sand filter	Leveling media Subbase <sup>d</sup> Stone base	Leveling media Subbase <sup>d</sup> Stone base
Surfacing media depth	-	-	-	-	6" TYP	-	-
Leveling media depth	-	-	-	-	-	2-4" TYP	2-4" TYP
Planting/filter media depth	-	-	-	-	6" MIN	-	-
Stone base depth	-	-	12" MIN	12" MIN	12" MIN	12" MIN	12" MIN
Slope of practice surface	15% MAX 8% MAX (AVG.)	1:3 MAX <sup>e</sup>	-	-	-	5% MAX	-
Slope of practice bottom	-	0.5% MIN 4% MAX	No Slope	No Slope	No Slope	-	No Slope
MAX Drawdown time	-	-	Total = 48hr	Total = 48hr	Total = 48hr	Total = 48hr	Total = 48hr

<sup>a</sup>SMPs in MS4 areas shall follow any additional criteria set forth in the NYS SWMDM for all parameters or components that are not already defined in the NYC SWM  
<sup>b</sup>Minimum vertical separation from the top of groundwater table in sole source aquifers is increased to 4 feet.  
<sup>c</sup>Maximum depth of water in the vegetated channel  
<sup>d</sup>In cases where geosynthetic do not provide adequate separation and stability, subbase may be added between leveling course and stone base in accordance with manufacturer's recommendation  
<sup>e</sup>Maximum cross slope of the vegetated channel

4-20

**4.5. Evapotranspiration (ET) Systems**

ET occurs when water moves [is the process of water being transferred] from the land to the atmosphere via the combination of evaporation from land surfaces and transpiration from plants. SMPs that primarily manage runoff by capturing it and slowly releasing it back into the atmosphere over time via ET are classified as ET systems. ET systems are also considered retention systems because their primary function reduces runoff.

There are several features that are common to all ET systems:

- Limited or no ability to infiltrate water due to the composition of underlying soils or physical barriers.
- Receive only direct rainfall or surface runoff (i.e., surface loading only)
- Shallow depth practice composed of mostly soil media, which promotes the natural wicking of moisture to the surface for ET.
- Means of draining excess runoff through outlet pipes, weep holes, drainage course, or other method

An outlet pipe is any pipe that can drain water from the practice before it is full. Typically, this would be a pipe that connects the storage zone of the practice with a point of discharge, such as a sewer, site drainage system, or structure with a controlled-flow orifice. For ET systems, outlet pipes can be used as a means to drain excess runoff, which is required to prevent ponding over long periods.

Components used for ET systems vary, but may include surfacing mulch for moisture retention, engineered soil used to support vegetation, surface area used for ponding, drainage media, and geotextiles. The total volume of water that can be stored in the practice must meet or exceed the volume of runoff calculated for the stormwater management requirement. Further details on SMP sizing can be found in Section 4.3.

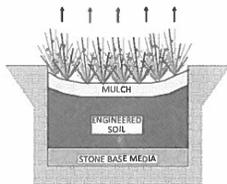
ET systems provide a range of stormwater management benefits, which include runoff reduction, peak flow mitigation, and treatment of pollutants from runoff. Vegetated systems may provide several added co-benefits such as heat island mitigation, ecologic function, community amenity, and removal of airborne pollutants.

The feasibility of ET systems can be limited by subsurface constraints and space constraints. In addition, surface constraints may limit the use of some vegetated ET practices. A description of each constraint may be found in Section 4.2. Readers should refer to the SMP Hierarchy Checklist (Appendix A) for details on how various constraints impact the use of specific SMPs.

**ET SMPs**

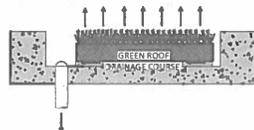
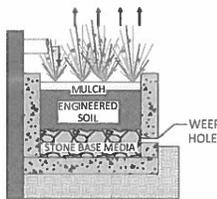
SMPs that can be configured to function as ET systems include rain gardens, stormwater planters, tree plantings, and green roofs. In addition to these systems, other innovative systems may also qualify as ET practices, as described in Section 4.9. A brief description of each ET SMP is provided below, along with an example cross section. Please note that the cross sections are for illustrative purposes only and are not meant to show all required components. Further, systems described in this manual may differ from those used as part of the ROW green infrastructure program.

**Rain garden** - landscaped shallow depression that captures surface runoff. Typically used in residential applications. Similar to bioretention, but components are designed to manage runoff from small areas. Commonly consists of a surface ponding area, mulch layer, engineered soil with vegetation, and a shallow stone base for drainage.



**Stormwater planter** - self-contained planter box with a concrete bottom. Commonly consists of a surface ponding area, mulch layer, engineered vegetation, and a stone base drainage layer. May also have weep holes to help drain excess water.

4-21



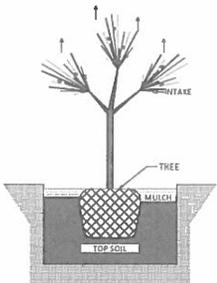
**Design Requirements**

A comparison of general design requirements for each ET system is shown in Table 4.3. Additional requirements, specific to each SMP component, are provided in Section 4.10. Designers must ensure that requirements for all applicable components are met via their design drawings, notes, and specifications. Example sizing calculations can be found in Appendix D.

**Maintenance Requirements**

Post-construction maintenance requirements for various systems are detailed in Chapter 5.

**Tree planting (or preservation)** – standalone trees (planted or preserved) that capture surface runoff. Commonly consists of a shallow surface ponding area and topsoil for tree planting. In the case of plantings, may also include a shallow drainage layer. This practice is counted towards a reduction of impervious area when calculating the runoff coefficient, rather than towards a required storage volume.



**Green roof** – series of built-up layers on a rooftop that supports vegetation. Commonly consists of a green roof media and drainage course. Some systems include other specialized layers for enhanced storage, filtration, or detention capabilities.

4-22

Table 4.3. General design requirements for ET SMPs.

Design Parameter <sup>a</sup>	Rain garden	Stormwater planter	Tree planting/preservation	Green roof
MAX. loading ratio, practice-to-contributing area	1:5	1:5	1:4	1:1
MAX. contributing area	1000 sf	15000 sf	400 sf	-
MIN. infiltration rate of underlying soils	-	-	-	-
Vertical separation from groundwater / bedrock <sup>b</sup>	3' MIN	3' MIN	-	-
Surface ponding depth	3" MAX	3" MAX	-	2-4" MAX <sup>c</sup>
Media layers	Mulch Eng. Soil Stone base <sup>e</sup>	Mulch Eng. Soil Stone base <sup>e</sup>	Mulch	Green roof media Stone base <sup>e</sup>
Surfacing media depth	2-3" TYP	2-3" TYP	Varies	-
Leveling media depth	-	-	-	-
Planting/filter media depth	1' MIN 2' MAX	1.5' MIN	Varies	4" MIN <sup>d</sup>
Surface base depth	Varies	Varies	-	Varies
Slope of surface media	1:3 MAX	No Slope	-	Varies <sup>g</sup>
Slope of bottom of practice	No Slope	No Slope	-	Varies <sup>g</sup>
MAX. Drawdown time	-	-	-	-

<sup>a</sup>SMPs in M54 areas shall follow any additional criteria set forth in the NYS SWMDM for all parameters or components that are not already defined in the NYC SWM.  
<sup>b</sup>[Minimum vertical separation from the top of groundwater table in sole source aquifers is increased to 4 feet.] Vertical separation requirements are waived for practices enclosed in concrete with adequate anchoring to withstand uplift pressures.  
<sup>c</sup>Evapotranspiration practices must allow drainage of excess water via outlet pipe, weep hole, or other equivalent measure. Geosynthetics can be used as a drainage course instead of stone base, where appropriate, in accordance with manufacturer's specifications.  
<sup>d</sup>Green roof media depth of 6-inches is preferred.  
<sup>e</sup>Configuration of green roof systems varies widely, see manufacturer's specifications.  
<sup>f</sup>Ponding is permitted on a green roof when controlled flow roof drains are installed.  
<sup>g</sup>Varies

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**4.6. Reuse Systems**

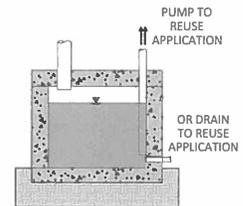
Reuse is the process of collecting rainfall or runoff and storing it for eventual reuse in other applications. SMPs that primarily manage runoff by capturing it and reusing it over time, in this case for non-potable and non-irrigation purposes, are classified as reuse systems. Reuse systems are also considered retention systems because their primary function reduces runoff.

meant to show all required components. Further, systems described in this manual may differ from those used as part of the ROW green infrastructure program.

**Rain tank** – container that is used to store runoff at or above grade. Typically connected to a system that will automatically and continuously reuse water over time.

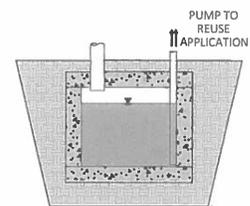
There are several features that are common to all reuse systems:

- Enclosed containment area to hold runoff
- Connection with (or manual application to) a system that will reuse stormwater for non-potable and non-irrigation purposes
- Dewatering device



A dewatering device may be needed to empty the container for regular maintenance or cleaning. Common dewatering devices include a valve that releases water or a pump that discharges water. Components of reuse systems commonly include a watertight storage container, secure cover, screen for debris and mosquitoes, access hatch, and the dewatering device. The total volume that can be stored in the structure must meet or exceed the volume of runoff calculated for the stormwater management requirement. Further details on SMP sizing can be found in Section 4.3.

**Cistern** – container that is used to store runoff below grade. Typically connected to a system that will automatically and continuously reuse water over time.



Reuse systems provide runoff reduction and peak flow mitigation through the capture of runoff. In addition, reuse systems help to reduce the demand on potable water.

The feasibility of reuse systems is usually based on the availability of a suitable reuse application, rather than the typical site or space constraints that limit other SMPs. Nonetheless, readers should still refer to the SMP Hierarchy Checklist (Appendix A) when assessing the suitability of various SMPs for the overall project.

**Reuse SMPs**

SMPs that can be configured to function as reuse systems include rain tanks and cisterns. In addition to these systems, other innovative systems may also qualify as reuse practices, as described in Section 4.9. A brief description of each reuse SMP is provided below, along with an example cross section. Please note that the cross sections are for illustrative purposes only and are not

**Design Requirements**

Rain tanks and cisterns are typically manufactured products, available in a wide range of potential materials, sizes, and geometries. As such, designers shall meet all manufacturer recommendations for the installation, use, and maintenance of the system. Additional requirements, specific to each SMP component, are provided in Section 4.10. Designers must ensure that requirements for all applicable components are met via their design drawings,

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notes, and specifications. Example sizing calculations can be found in Appendix D.

**Maintenance Requirements**

Post-construction maintenance requirements for various systems are detailed in Chapter 5.

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**4.7. Filtration Systems**

Filtration is the process of passing a liquid through a porous medium to trap and separate solids from the liquid. SMPs that primarily manage runoff by filtering out pollutants are classified as filtration SMPs. Filtration SMPs are not considered retention SMPs because they often provide limited runoff reduction. As indicated in Appendix A, filtration practices may not be used towards meeting the water quality stormwater management requirement in CSS areas.

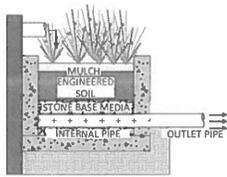
There are several features that are common to all filtration systems:

- Contains a filtration medium that runoff is passed through, which is deep enough to facilitate pollutant removal
- Have an outlet pipe that promotes the continuous filtration of runoff

An outlet pipe is any pipe that drains water from the practice before it is full. In filtration systems, the outlet pipe is located beneath the filtration medium to continuously remove water from the system after it has been filtered. This outlet pipe would typically be a pipe that connects the drainage media of the practice with a point of discharge, such as a sewer, site drainage system, or structure with a controlled-flow orifice.

Components used for filtration systems vary but may include a filtration medium (such as engineered soil, sand, or sand/peat blend); temporary storage area above the filtration medium (can be surface or subsurface); stone base to promote drainage; geotextiles; and an outlet pipe. The total volume of water that can be stored in the practice must meet or exceed the volume of runoff calculated for the stormwater management requirement. Further details on SMP sizing can be found in Section 4.3.

Filtration systems, mainly targeting the treatment of pollutants from runoff, are more limited in stormwater management benefits in comparison to other systems. However, some peak flow reduction may occur where temporary storage areas are used, and some runoff reduction may occur where engineered soils are used as filtration media. Vegetated systems may provide several added co-benefits such as heat island mitigation, ecologic function, community amenity, and removal of airborne pollutants.

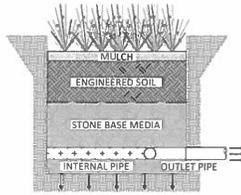


The feasibility of filtration systems can be limited by subsurface constraints and space constraints. In addition, surface constraints may limit the use of vegetated infiltration practices. A description of each constraint may be found in Section 4.2. Readers should refer to the SMP Hierarchy Checklist (Appendix A) for details on how various constraints impact the use of specific SMPs.

**Filtration SMPs**

SMPs that can be configured to function as filtration systems include bioretention, stormwater planters, porous pavements, synthetic turf fields, sand filters, and organic filters. In addition to these systems, other innovative systems may also qualify as filtration practices, as described in Section 4.9. A brief description of each filtration SMP is provided below, along with an example cross section. Please note that the cross sections are for illustrative purposes only and are not meant to show all required components. Further, systems described in this manual may differ from those used as part of the ROW green infrastructure program.

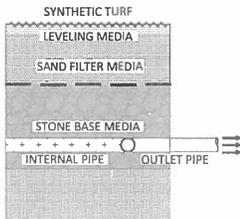
**Bioretention** - landscaped shallow depression that captures surface runoff. Typically used in dense urban areas. Similar to rain gardens, but components are designed to manage runoff from large areas. Commonly consists of a surface ponding area, mulch layer, engineered soil with vegetation, and stone base to promote drainage.



**Stormwater planter** - self-contained planter box with a permeable or lined bottom. Commonly consists of a surface ponding area, mulch layer, engineered soil with vegetation, and stone base.

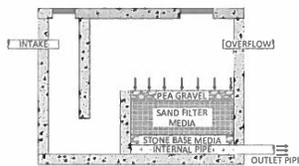
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**Synthetic turf field** - synthetic turf material that allows runoff to percolate into underlying layers. Common underlying layers include a shock absorbing pad, leveling course, sand filter media, and a stone base. Due to their size, many synthetic turf fields also include internal pipes to help spread water evenly across the entire storage area.

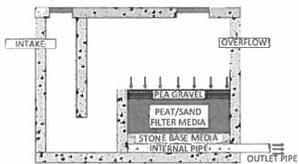


**Porous pavement** - pavements that contain voids which allow runoff to percolate into underlying layers. The surface of these systems can either be entirely porous pavement or a grid of pavers and porous materials, such as grass or gravel. Common underlying layers include a leveling course, sand filter media, and a stone base.

**Sand filter** - typically a prefabricated chamber that contains a filter bed of sand. The chamber also facilitates the temporary storage of water above the filter bed as it percolates through the sand filter.



**Organic filter** - typically a prefabricated chamber that contains a filter bed of organic media. The chamber also facilitates the temporary storage of water above the filter bed as it percolates through the organic media filter.



**Design Requirements**

A comparison of general design requirements for each filtration system is shown in Table 4.4. Additional

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requirements, specific to each SMP component, are provided in Section 4.10. Designers must ensure that requirements for all applicable components are met via their design drawings, notes, and specifications. Example sizing calculations can be found in Appendix D.

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Table 4.4. General design requirements for filtration SMPs.

Design Parameter <sup>a</sup>	Bioretention	Stormwater planter	Porous pavement	Synthetic turf field	Sand filter	Organic filter
MAX. loading ratio, practice-to-contributing area	1:20	1:20	1:60	1:60	1:60	1:30
MAX. contributing area	5 acre	15000 sf	5 acre	5 acre	10 acre	10 acre
MIN. infiltration rate of underlying soils	-	-	-	-	-	-
Vertical separation from groundwater / bedrock <sup>b</sup>	3' MIN	3' MIN	3' MIN	3' MIN	3' MIN	3' MIN
Surface ponding depth <sup>c</sup>	6' MIN 12' MAX	6' MIN 12' MAX	Varies	Varies	6' MIN	6' MIN
Media layers	Mulch Eng. Spoil Stone base	Mulch Eng. Spoil Stone base	Leveling media Subbase <sup>d</sup> Sand filter Stone base	Leveling media Subbase <sup>d</sup> Sand filter Stone base	Pea gravel <sup>e</sup> Sand filter Stone base	Pea gravel <sup>e</sup> Sand filter Stone base
Surfacing media depth	2-3" TYP	2-3" TYP	-	-	Varies <sup>e</sup>	Varies <sup>e</sup>
Leveling media depth	-	-	2-4" TYP	2-4" TYP	-	-
Planting/filter media depth	2.5' MIN	1.5' MIN	1.5' MIN	1.5' MIN	1.5' MIN	1.5' MIN
Stone base depth	12" MIN	12" MIN	12" MIN	12" MIN	6" MIN	6" MIN
Slope of surface media	1:3 MAX	No Slope	5% MAX	-	-	-
Slope of bottom of practice	No Slope	No Slope	-	No Slope	-	-
MAX. Drawdown time	Surface = 24hr Total = 48hr	Surface = 24hr Total = 48hr	Total = 48hr	Total = 48hr	Total = 48hr	Total = 48hr

<sup>a</sup>SMPs in MS4 areas shall follow any additional criteria set forth in the NYS SWMMOM for all parameters or components that are not already defined in the NYC SWM.  
<sup>b</sup>Minimum vertical separation from the top of groundwater table in sole source aquifers is increased to 4 feet. Vertical separation requirements are waived for practices enclosed in concrete with adequate anchoring to withstand uplift pressures.  
<sup>c</sup>Storage in ponding areas above filtration media must be 75% of IWCv to prevent bypass. This requirement cannot be waived for filtration practices.  
<sup>d</sup>In cases where geosynthetics do not provide adequate separation and stability, subbase may be added between leveling course and stone base in accordance with manufacturer's recommendation.  
<sup>e</sup>Surfacing media type and depth for protection of filtration media varies. Other types of surfacing media can include debris screens and topsoil.

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**4.8. Detention Systems**

Detention is the process of temporarily holding back stormwater so that it may be released in a controlled manner at a lower rate. SMPs that primarily manage runoff by detaining runoff to reduce the peak flow rate felt by downstream systems are classified as detention SMPs. Detention SMPs are not considered retention SMPs because they often provide limited runoff reduction.

There are several features that are common to all detention systems:

- Device which controls the flow rate of runoff that exits the practice, such as an orifice
- Temporary storage zone that can fill-up when the inflow rate is greater than the release rate
- Hydraulic connection between the controlled-flow device and temporary storage zone, usually via an outlet pipe

An outlet pipe is any pipe that drains water from the practice before it is full. In detention systems, the outlet pipe typically connects the drainage layer of the practice with a structure that contains a controlled-flow orifice.

The temporary storage zone of detention systems is usually either a surface area for ponding, enclosed container, or subsurface stone base. Other common components can include engineered soil used to support vegetation, geotextiles, controlled-flow orifice, and internal structures or pipes used to help distribute or store water. The total volume of water that can be stored in the practice must meet or exceed the volume of runoff calculated for the stormwater management requirement. Further details on SMP sizing can be found in Section 4.3.

Detention systems, mainly targeting the reduction of peak flow rates, are more limited in stormwater management benefits compared to other systems. However, some runoff reduction may occur in systems where soil media are used. Vegetated systems may provide several added co-benefits such as heat island mitigation, ecologic function, community amenity, and removal of airborne pollutants.

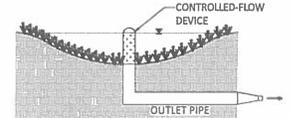
The feasibility of detention systems can be limited by subsurface constraints and space constraints. In addition, surface constraints may limit the use of vegetated detention practices. A description of each constraint may

be found in Section 4.2. Readers should refer to the SMP Hierarchy Checklist (Appendix A) for details on how various constraints impact the use of specific SMPs. As indicated in Appendix A, only select detention practices with treatment abilities may be used towards meeting the water quality stormwater management requirement in MS4 areas.

**Detention SMPs**

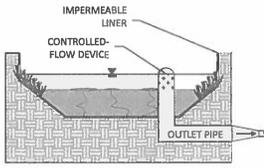
SMPs that can be configured to function as detention systems include dry basins, constructed wetlands, wet basins (or ponds), stormwater galleries, blue roofs, and detention tanks. In addition to these systems, other innovative systems may also qualify as detention practices, as described in Section 4.9. A brief description of each detention SMP is provided below, along with an example cross section. Please note that the cross sections are for illustrative purposes only and do not show all potential components. Further, systems described in this manual may differ from those used as part of the ROW green infrastructure program.

**Dry basin** - earthen depression that is typically planted with grasses and functions as one large surface ponding area. May be constructed on pervious or non-pervious soils when used as a detention system.

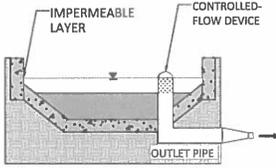


**Constructed wetlands** - an artificial wetland that is created using impervious soils or liners, within which vegetation and a permanent pool of water are used to treat stormwater. These systems allow for additional, temporary storage above the permanent pool.

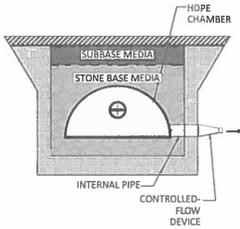
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Wet basins/ponds – a permanent pool of water used to treat stormwater, usually underlain by impervious soils or a liner. These systems allow for additional, temporary storage above the permanent pool.

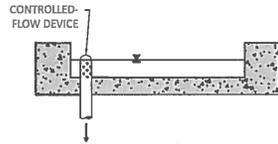


Stormwater gallery – subsurface area (typically rectangular) that is excavated and then filled with stone base, prefabricated structures, chambers, or pipes used to store water. Usually larger than a typical dry well system and, as a result, may treat larger drainage areas.



Blue roof – any rooftop that is outfit with a system that temporarily holds back water on the roof surface. Common

systems include check-dams, modular storage units, or roof drain restriction devices.



Detention tank – enclosed tank with a device that controls the release rate of water. Common devices include a controlled-flow orifice or pump.

**Design Requirements**

A comparison of general design requirements for each detention system is shown in Table 4.5. Additional requirements, specific to each SMP component, are provided in Section 4.10. Designers must ensure that requirements for all applicable components are met via their design drawings, notes, and specifications. It is essential that designers configure the detention system to maintain the appropriate maximum release rate for either CSS or MS4 areas, as specified in Equation 2.5. Example sizing calculations can be found in Appendix D.

Table 4.5. Basic design requirements for detention SMPs.

Design Parameter*	Dry basin	Constructed wetland†	Wet basin/pond†	Stormwater gallery	Blue roof	Detention tank
MAX. (MIN.) loading ratio, practice-to-contributing area	1:40	(1:100)	(1:100)	-	-	-
MAX. (MIN.) contributing area	5 acre	(25 acre)	(25 acre)	5 acre	-	-
MIN. infiltration rate of underlying soils	-	-	-	-	-	-
Vertical separation from groundwater / bedrock‡	3' MIN	3' MIN	3' MIN	3' MIN	-	3' MIN
Has a permanent pool?	No	Yes	Yes	No	No	No
Slope of surface media	1:3 MAX	1:3 MAX	1:3 MAX	-	-	-
Slope of bottom of practice	3% MAX	3% MAX	3% MAX	No Slope	-	-
MAX. Drawdown time	Temp. Storage Area = 48hr	Temp. Storage Area = 48hr	Temp. Storage Area = 48hr	Temp. Storage Area = 24hr	Temp. Storage Area = 48hr	Temp. Storage Area = 72hr

\*SMPs in MS4 areas shall follow any additional criteria set forth in the NYS SWMDM for all parameters or components that are not already defined in the NYS SWMDM.  
 †Minimum vertical separation from the top of groundwater table in sole source aquifers is increased to 4 feet. ‡Vertical separation requirements are waived for practices enclosed in concrete with adequate anchoring to withstand uplift pressures.

**4.9. Innovative Systems**

SMP technologies are constantly evolving as innovations are made in their components and configurations. As such, new and innovative systems may not conform to the standard practices or common functions outlined in the previous sections. [NYC] DEP supports the use of innovative practices through several pathways for the approval of proprietary, hybrid, and dual function technologies. This section outlines the approval process for these systems.

**Proprietary Systems**

Proprietary systems encompass a broad range of manufactured SMPs that are made available by commercial vendors. These systems can vary widely in terms of components and intended function. Some examples of common proprietary systems include:

- Hydrodynamic separators – flow-through structures that use the dynamics of moving water to separate and deposit pollutants such as sediment and floatables. Typically, this system involves creating a centrifugal flow and/or movement through a series of baffles.
- Alternative media filters – systems that filter runoff using an alternative medium, such as fabrics, activated carbon, perlite, zeolite, or other blended media.
- Modular infiltration systems – prefabricated structures with proprietary components that facilitate the storage and infiltration of runoff.

For application in MS4 areas, proprietary systems must be evaluated and approved via one of the processes outlined in the NYS SWMDM. [These processes include the US EPA Environmental Technology Verification Program (ETV), the state of Washington Technology Assessment Protocol – Ecology (TAPE), or the Technology Acceptance Reciprocity Partnership Protocol (TARP).] Proprietary systems that are verified or certified by [the ETV, TAPE, or TARP process] one of the processes outlined in the NYS SWMDM as meeting the treatment criteria detailed in the NYS SWMDM are approved for use in MS4 areas.

Proprietary systems that are approved via the NYS SWMDM processes may also be used in CSS areas. In addition, [NYC] DEP may also evaluate and approve proprietary systems for application in CSS areas on a case-by-case basis. For approval from [NYC] DEP, designers must demonstrate that the proprietary system will either achieve the desired level of infiltration, ET, reuse, or detention; or result in an equivalent reduction of CSC volume. Depending on the type of proprietary system, this may involve showing that:

- Infiltration and ET systems have an active storage zone that is sufficient to fully capture the water quality event and recharge that capacity in a timely manner.
- ET systems with alternative storage methods (e.g., non-soil storage) will achieve sufficient ET either by wicking to the green roof media layer or by direct evaporation.

- Enhanced green roofs – green roofs that manage stormwater using proprietary media other than soils, such as retention fabrics, detention meshes, and modular storage components.

This list of common proprietary systems is not meant to be exhaustive, and, in fact, new systems will continue to become available over time. In general, the use of proprietary systems must be approved when one or more of the following are true:

- The system does not meet the design criteria of standard practices outlined in this chapter
- The system function does not correspond to the standard functions outlined in this chapter
- The system seeks a variance in the methods used for determining storage capacity

components, configuration, installation, operation, and maintenance. In addition, designers must ensure that any requirements related to setbacks, subsurface conditions, inflow/outflow rates, bypass, overflow, accessibility, maintenance, or safety issues are addressed.

**Hybrid Systems**

Hybrid systems refer to cases where two or more SMPs of the same function are integrated as one practice. Typically, hybrid systems involve the use of two infiltration systems that share a single storage zone. For example, a bioretention and porous pavement system that are located adjacent to one another and drain into a shared stone base (Figure 4.5).

Figure 4.5. Illustration of a hybrid system that incorporates bioretention and porous pavement features (image courtesy of SCAPE).



If each SMP of the hybrid system meets all applicable design criteria, then no special approvals are required for their use. When this is not the case, hybrid systems must gain approval through the same processes identified for proprietary systems. While most hybrid systems are

In cases where one or both of these conditions are not met, dual function filtration/detention systems must gain approval through the same processes identified for proprietary systems.

If a release rate of 0.1 cfs/acre would require an orifice less than one-inch, a one-inch orifice with a smaller inner diameter may be accepted, at the discretion of [NYC] DEP, when another detention system is located downstream].

With regards to storage volume, the active storage zone for both filtration and detention practices are the same. The bottom of the active storage zone is the invert elevation of the outlet pipe, while the top is the elevation at which water may overflow or bypass the system. Therefore, the volume of the practice used for both functions is the same.

Filtration/detention practices may apply 100% of their volume towards the water quality criterion (WQv) and 50% towards the sewer operations criterion (Vv). Finally, if the filtration / detention system uses an engineered soil media filter, 40% of the volume may be applied towards the runoff reduction criterion (RRv).

**Infiltration / Detention Systems**

Dual function systems for infiltration/detention are designed with an outlet pipe that is raised above the bottom of the practice and drains water to a controlled-flow device. This means that water below the outlet pipe is captured and infiltrated, while water above the invert of the outlet pipe is detained.

- Reuse systems do not rely on water uses that would impair another systems stormwater management capability.
- Filtration systems and other flow-based practices are able to treat the water quality event without bypass. Designers should refer to [Appendix B of] the NYS SWMDM for flow calculation methods.
- Detention systems are able to maintain a maximum release rate of 0.1 cfs/acre for the sewer operations event.

Approved technologies must be sized to manage runoff from contributing areas for the appropriate design event. Storage-based practices may be sized in accordance with the storage volume methods of Section 4.3. Designers are responsible for meeting all design criteria, guidelines, and recommendations provided by the manufacturer for that system, including, but not limited to, structural integrity,

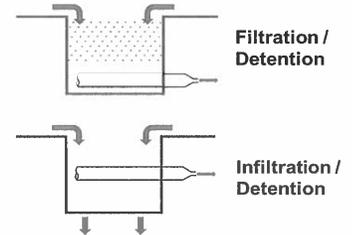
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anticipated to be infiltration systems, other types may be feasible at the discretion of [NYC] DEP.

**Dual Function Systems**

Dual function systems refer to cases where one SMP is configured to support runoff management via two, equally contributing functions. The two most common types of dual function systems are ones with filtration/detention systems and infiltration/detention systems, as illustrated in Figure 4.6.

Figure 4.6. Illustration of the two most common dual function systems.



While these are the most common types, other dual function systems may be possible. A brief description and examples of the two common dual function systems are presented in the following paragraphs.

**Filtration/Detention Systems**

Dual function systems for filtration/detention are designed to allow water to pass through a filtration media, which then drains to a controlled-flow device for slow release. These systems rely on both the steady flow of water and the ability to control the release rate.

Any of the standard filtration practice may be designed with a controlled-flow device to facilitate detention. No special approvals are required when the SMP meets all of the design criteria for filtration systems and has a controlled-flow device with a maximum release rate of 0.1 cfs/acre in combined areas or 1 cfs/acre in separate areas.

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If a release rate of 0.1 cfs/acre would require an orifice less than one-inch, a one-inch orifice with a smaller inner diameter may be accepted, at the discretion of [NYC] DEP, when another detention system is located downstream].

The calculation of drawdown time and application of volumes is more complex for infiltration / detention systems since their storage volumes are defined differently. The volume that functions as infiltration is only the volume below the invert elevation of the outlet pipe, whereas the volume that functions as detention is the volume above the invert elevation of the outlet pipe up to the elevation that either overflow or bypass occurs. With that in mind, two drawdown times must be computed. One for the drawdown time of the infiltration volume and another for the drawdown time of the detention volume.

Of the volume that functions as infiltration, 100% may be applied towards the WQv and RRv, while 50% may be applied towards the Vv. Of the volume that functions as detention, 100% may be applied towards the WQv in CSS areas and 50% may be applied to the Vv. However, if the practice does not have any planting or filtration media (e.g., stormwater gallery), then 100% of the volume that functions as detention may be applied toward the Vv. The storage volumes for each function of infiltration/detention systems must be clearly identified in section view as part of permit applications.

Any standard infiltration practice with a stone base may be designed with a controlled-flow device to facilitate detention, except for rain gardens. No special approvals are required when the SMP meets all of the design criteria for infiltration systems and also has a controlled-flow device with a maximum release rate of 0.1 cfs/acre in combined areas or 1 cfs/acre in separate areas. In cases where one or both of these conditions are not met, dual function filtration/detention systems must gain approval through the same processes identified for proprietary systems.

**4.10. SMP Components**

SMPs are designed as systems with several components that work together to ensure the functionality of the practice. This section provides guidance and requirements for the design of each common SMP component. Designers must ensure that requirements for all applicable components are met via their design drawings, notes, and specifications. The designer may propose systems with components that are not mentioned here, subject to approval by [NYC] DEP.

**Pre-treatment**

Pre-treatment refers to systems that help remove sediment, floatable debris, hydrocarbons, and/or other contaminants commonly found in stormwater runoff before they enter an SMP.

All inlets that ultimately drain to a subsurface practice must have pre-treatment systems that help to remove sediments and floatables. This requirement helps protect the SMP against the reduction of storage capacity, clogging of internal pipes, and/or loss of infiltration that sedimentation can cause over time. Designers should refer to the inlet component subsection for more details.

Beyond the required pre-treatment systems for inlets, designers shall consider other measures in cases where sedimentation risks are increased due to land uses, topography, or high permeability of underlying soils (greater than 2 in/hr). In these cases, additional pre-treatment measures, such as a forebay, vegetated swales, filter strips or hydrodynamic separators may be required, at the discretion of [NYC] DEP.

Pretreatment may be of particular importance for industrial maintenance facilities where pollutants of concern include, salt, oils, and grease. In addition to the measures described above, pre-treatment devices such as media filters and sorbents have been shown to be effective at removing oils and grease (CWP 2007, Pitt et al. 1999). Salt, however, is highly soluble and is not readily removed by structural management practices, including media filters. Pollution prevention, such as covering salt storage areas or placing impermeable barriers around salt piles is the most effective method of reducing salt transport via stormwater runoff (WDNR 1994, MPCA 2000).

permanent pools that help to treat runoff through sedimentation and biological processes.

SMPs with permanent pools require a 25-foot buffer area between the point of maximum water surface elevation and any site features. Trees in the buffer area should be preserved during construction. Warning signs must be posted around SMPs with permanent ponds, which prohibit swimming, wading, and skating; warn of possible contamination or pollution of pond water; and indicate the maximum depth of the pond. In addition, designers shall also consider barriers and/or other safety measures to mitigate public hazards.

The perimeter of all permanent pools with depths of 4ft or more must have an aquatic bench and a safety bench. In these cases, the boundary of the permanent pool will have four distinct zones, each with its own slope requirement:

- Aquatic bench – extends from the edge of the normal water level, 15ft inwards towards the basin floor. Maximum slope of 1V:10H.
- Pool slope – extends from the aquatic bench to the basin floor. Maximum slope of 1V:2H.
- Safety bench – extends from the edge of the normal water level, 15ft outwards towards the edge of the practice. Maximum slope of 1V:15H.
- Toe slope – extends from the safety bench to the edge of the practice. Maximum slope of 1V:3H.

Each permanent pool must have an outlet pipe that, when activated, can drain the pond within 24 hours. In addition, the outlet pipe shall have an elbow or protected intake to prevent sediment deposition within the pipe.

**Vegetation**

Establishing vegetation is essential to the functionality of a vegetated practice. Plants should be chosen based on their hardness, soil and light conditions, root structure, and ability to adapt to wet and dry conditions. The

**Ponding Area**

Ponding areas are used to temporarily store runoff at the surface of an SMP. Most SMPs with ponding areas allow depths of up to 12-inches, except for ET SMPs which allow up to 3-inches, as well as a few specific practices that temporarily store all their volume at the surface (e.g., dry basins). Ponding areas must drawdown within 24-hours to mitigate the risk of mosquito breeding, except for dry basins which are allowed 48-hours to drawdown. Drawdown time calculations are provided in Section 4.3.

Most practices that filter water through a planting or filtration media must be able to temporarily hold 75% of the WQv above the filter media to avoid bypass of the WQ event (see design criteria). This is typically done in the ponding area but may also be achieved by an equalization structure. For infiltration practices, this requirement is waived when a hydraulic connection is made between the ponding area and stone base, such as a riser pipe or stone gabion. Designers must consider measures to reduce the sedimentation risks of hydraulic connections, such as raising the connection above the lowest ponding elevation, providing screens, or other alternatives.

A minimum 3 inches of freeboard (i.e., depth between maximum surface ponding and adjacent grade) is required for all ponding areas. Overflow devices shall be used to control the maximum surface ponding depth. Typical overflows consist of a riser pipe and domed grate.

In cases where the surface of an SMP is not level, the ponding depths may vary across the practice, but the minimum and maximum allowable values must be followed. When graded slopes are used to create ponding areas, a maximum side slope of 1V:3H shall be used.

Other considerations for the design of the ponding depth may include adjacent land use, site constraints, and the potential need for public safety measures. Specifically, in cases where ponding area design may present public hazards, designers shall consider signage, barriers, and/or other safety measures to mitigate such hazards.

**Permanent Pool**

Unlike ponding areas, a permanent pool is a surface area where water is permanently held. Typically, permanent pools are underlain by an impermeable soil or liner to prevent them from draining. Wetlands and wet ponds have

receives surface water from a rooftop drain pipe, energy dissipation measures must be used to limit erosion (see energy dissipation components).

Given that landscaping is critical to the performance of vegetated SMPs, a landscaping plan must be provided for these systems. Guidance on the selection and planting of SMP vegetation can be found in the Native Species Planting Guide for New York City, which is available online at the NYC DPR publications webpage ([www.nycgovparks.org/greening/natural-resources-group/publication/](http://www.nycgovparks.org/greening/natural-resources-group/publication/)). In general, considerations for the development of landscaping plans include:

- Vegetation should be selected that are capable of withstanding frequent cycles of inundation and drought.
- Native plant species should be specified over non-native species.
- The prevalence of wet, dry, sunny, or shady zones within the SMP should be considered as part of the landscaping plans.
- Where trees are proposed, an understory of shrubs and herbaceous materials should be provided.
- Woody vegetation should not be specified at inflow locations.
- For on-site facilities, a tree spacing of approximately 10 feet on-center is recommended.
- The recommended spacing for shrubs is 5 feet on-center for large container sizes (5gal or more), 3 feet on center in standard applications, and 1.5 foot on-center for small rain gardens.
- The recommended spacing for herbaceous vegetation is 2 feet on-center for grasses and 1.5 feet for perennials.

**Media**

Most SMPs consist of a series of built-up media layers that work together to manage stormwater. A wide range of

vegetative cover and root systems should promote infiltration within the engineered soil, provide an aesthetic benefit, and help prevent erosion, particularly on surface side slopes.

In cases where runoff enters a practice via a vegetated surface, the entrance velocity of runoff may not exceed erosive velocities. If the grading of adjacent areas cannot be modified to prevent erosive velocities, or the practice

- Pea gravel – used on the surface of filters or other media to reduce direct contact or scour
- Engineered soil – default soils to be used for planting areas, except for special cases
- Topsoil – specialized soils for standalone tree plantings or soil amendments that have more fine and nutrient content
- Green roof media – specialized soils for green roofs that are lightweight and fast draining
- Sand filter media – sand media that is intended to filter percolating water
- Peat/sand filter media – peat/sand media blend that is intended to filter percolating water
- Stone base media – default media to be used for storage and/or drainage layers
- Leveling media – used under porous pavements and synthetic turf fields to increase contact area and allow leveling
- Subbase media – may be used as a transition between the leveling media and stone base media for added separation and stability

The design criteria tables in Sections 4.4-4.8 indicate which media are appropriate for each practice type, along with their required depths. Guidance on the composition for each media type are provided in Table 4.6. Practices that are not constructed in accordance with these media guidelines may be rejected, at the discretion of [NYC] DEP.

Wherever trees are used, practices must have at least 2.5 feet depth of soil media, which would be topsoil for standalone tree plantings and engineered soil for other practices. All other vegetation requires at least 1 foot depth of soil media, with a depth of 2 feet being preferred.

The installation of stone base should be done in lifts of 6-8 inches, with care taken not to over-compact the subgrade or stone base layers. Over-compaction can result in lower than anticipated storage potential and a reduction in infiltration rates. Any practice that uses a subsurface stone base must include an observation well or other means of observing the subsurface water level (see the Observation Well component subsection).

media types have been developed for SMPs, which have an equally wide range of naming conventions and compositions. Table 4.9 includes standard names and compositions for ten media types, which are to be used for SMP design. A general description for each media type is as follows:

- Mulch – used on the surface of soils for moisture retention and nutrients

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Table 4.6. Composition guidance for the ten SMP media types.

Media Name	Composition	Additional Guidance
Mulch (Surfacing Media)	Shredded hardwood	Aged 6-months minimum
Pea gravel (Surfacing Media)	ASTM D 448 No. 6	Clean and free of fines Rounded bank run gravel
Engineered soil, CSS areas	By weight: Gravel (> 2.0mm) 0-8% Sand (0.05-2mm) 80-85%, of which: Course Sand (0.5-1mm) 0-5% Medium Sand (0.25-0.5mm) 55-75% Fine Sand (0.1-0.25mm) 20-40% Silt (0.002-0.05mm) 5-10% Clay (<0.002mm) 3-8% Organic Matter 1-5-4%	pH 5.0-7.0 Kjeldahl N - 0.05 - 0.25% (NO-3 < 20ppm) Phosphorous - 80 - 100 lbs/acre Potassium - 100 - 300 lbs/acre Acid-producing Soil Test pH > 4.5  Free of refuse, hard clods, woody vegetation, stiff clay, construction debris (of any kind), boulders, stones greater than 1-1/2 inch, chemicals, or other deleterious material toxic to any vegetation used on this project
Engineered soil, MS4 areas	By volume: Sand (0.05-2mm) 35-60% Silt (0.002-0.05mm) 30-55% Clay (<0.002mm) 10-25% Organic Matter 1.5-4%	pH 5.2-7.0 Phosphorous > 75 lbs/acre Potassium > 85 lbs/acre Magnesium > 35 lbs/acre  Free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds.
Topsoil media	By weight: Gravel (> 2.0mm) < 20% Sand (0.05-2mm) 65-70% Silt (0.002-0.05mm) 10-30% Clay (<0.002mm) < 10% Organic Matter 5-9%	pH 6.0-7.5
Green roof media	By weight: Silt (0.002-0.05mm) ≤ 10% Clay (<0.002mm) ≤ 2% Organic Matter ≤ 8%	pH 6.0-8.5 Maximum water holding capacity 35-65%
Sand filter media	Clean AASHTO M-6 or ASTM C-33 concrete sand	Sand substitutes such as diabase and graystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. "Rock dust" cannot be substituted for sand.
Peat/Sand filter media	By volume: 80% Reed-sedge hemic peat 50% Clean AASHTO M-6 or ASTM C-33 concrete sand	Sand guidance: see above Peat guidance: Ash Content <15% pH 4.9-5.2 Loose bulk density 0.12-0.15 g/cc Shredded, uncompacted, uniform, and clean
Stone base media	ASTM No. 57 Stone	Clean and free of fines Maximum wash loss of 0.5% Maximum abrasion of 10% for 100 revolutions and 50% for 500 revolutions
Leveling media	ASTM No. 89 Stone	
Subbase media	ASTM No. 2 Stone	Clean and free of fines

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**Subgrade (Underlying Soils)**

Subgrade refers to the native soils that are underneath the base of an SMP. Prior to the installation of SMPs, the subgrade must be evaluated in accordance with the NYS SWMDM procedures [(Appendix D: Infiltration Testing Requirements)]. Only subgrades with an infiltration rate of 0.5 in/hr or more are suitable for infiltration practices. Alternatively, when the permeability rate is 2.0 in/hr or greater, additional pre-treatment measures may be needed to reduce the risk of contaminant transport.

Wherever possible, SMPs should be designed with a permeable bottom between the SMP base and the subgrade to help facilitate infiltration, even in cases where the practice is not considered an infiltration practice (i.e., permeability rates are low). However, SMPs may not have a permeable bottom in the following cases:

- land uses may result in contaminated runoff,
- geotechnical tests indicate that native soils may be contaminated, or
- water table or bedrock are within three feet of the bottom of the practice

After SMP excavation, particular care should be taken not to compact the subgrade prior to placement of the stone base or other components. In cases where compaction could not be avoided, the subgrade shall be restored via tilling or aerating prior to placement of the stone base or other components.

In addition, the subgrade surface should be scarified prior to the placement of any infiltration practices. In cases where erosion of the subgrade has resulted in an accumulation of fine materials at the proposed base of an SMP, remove these materials to a depth of 6 inches and replace with engineered soil.

It is recommended that the stone base and other components are placed immediately after subgrade preparation to prevent the accumulation of debris or sediment.

**Internal Structures**

Internal structures refer to any interior container that is used to store water, typically located within the drainage layer of the SMP. Internal structures include modular systems, such as chambers, tanks, cisterns, crates, or other pre-cast units, as well as storage pipes.

beneath the bottom of the practice and shall cover the full width of the excavation.

All geomembranes shall be made of high-density polyethylene. The geomembrane liner shall be sufficiently anchored along the upper edge to prevent slipping and shall not extend to the surface where it would be visible. Specific material requirements for geomembranes include the following:

- ASTM D751 (30 mm thickness)
- ASTM D412 (tensile strength 1,100 lb, elongation 200%)
- ASTM D624 (tear resistance 150 lb/in)

**Inlets**

An inlet is any structure that captures water which eventually drains to an SMP. They are usually located at the low points of a site. Common types of inlets include yard drains, catch basins, and manholes with a slotted frame. All inlets must include where appropriate:

- A minimum 1-foot sump to allow for sediment collection and removal
- Hood or baffle to allow for containment of floatable debris
- ADA (Americans with Disabilities Act) compliant grates, if placed over pedestrian surfaces
- H-20 loading grates, if placed in locations with vehicular traffic

To prevent flooding, inlets shall include a means of bypassing the practice once it is full. This is often a bypass pipe that connects to a drainage system downstream of the practice. The invert of the bypass shall match or exceed the maximum storage elevation of the SMP. In cases where a bypass pipe is not feasible, designers must show that flow rates to the inlet will not cause surcharge within 6 inches of the inlet surface when the practice is full.

Pre-treatment components, such as the sump and the hood or baffle, are particularly important for reducing the amount of sediment and debris that are conveyed to the SMP. This requirement helps protect the SMP against the reduction of storage capacity, clogging of internal pipes, and loss of infiltration that sediment and debris can cause over time.

Hoods and baffles are typically installed around the pipe that exits the inlet to prevent floatable debris from being

In the case of modular systems, designers must follow all manufacturer guidelines for their design and installation. This may include, but is not limited to, guidelines for setbacks, spacing, cover, base depth, hydraulic connections, and maintenance access. In the case of storage pipes, refer to the internal pipe component subsection.

**Geotextile**

Geotextile fabrics should be used along the sides and top of the drainage layer, where the drainage layer interfaces with native soils, engineered soils, and filtration media. Geotextile fabrics should not be used at the base of practices, as the fabric is more likely to become clogged and impede infiltration. In addition, geotextile fabrics should not be used around perforated pipes, when they are within the drainage layer of an SMP, to help reduce the potential for clogging.

Non-woven geotextile fabrics are the most appropriate type for allowing and sustaining infiltration. It is critical that the geotextile fabric does not impede flow rates, and designers shall specify materials accordingly. Heat-bonded nonwoven fabrics are not recommended, because they tend to clog very quickly. Designers should review manufacturer's recommendations to avoid placement that would void the warranty.

Adjacent strips of geotextile filter fabric shall overlap a minimum of 16 inches and shall be secured at least 4 feet outside of bed until all bare soils contiguous to beds are stabilized and vegetated.

**Geomembranes**

SMPs must be completely lined with a geomembrane in the following cases:

- land uses may result in contaminated runoff, or
- geotechnical tests indicate that native soils may be contaminated

Geomembranes may also be used along the sides of practices to reduce the risk of water intrusion when SMPs cannot meet setback requirements from structures, at the discretion of [NYC] DEP. In this case, the impervious liner shall extend from the top of the freeboard to 12 inches

conveyed downstream. The hood or baffle must extend at least four inches below the exiting pipe's invert and must project away from the pipe opening enough not to restrict flow. In the case of proprietary hoods and baffles, all manufacturers' guidelines must be followed.

Additional pre-treatment measures, such as filter bags and baskets, can help to further reduce sediment and floatable debris that are conveyed to the SMP. While these measures are typically optional, they may be required in areas where risk of sedimentation and floatable debris is high.

Filter bags and baskets are inserts that are situated under the inlet grate to capture floatable debris and sediments as water enters the inlet. Filter bags are typically made of permeable fabrics, while baskets are usually made of more rigid materials with openings. The level of pre-treatment provided by filter bags and baskets is related to the size of openings in the materials; where smaller openings will capture more sediments but require more frequent maintenance to prevent clogging. The size of openings should be set to capture the most sediment and debris possible without resulting in a flow restriction when the bag or basket is partially full. Designers should also consider the likely frequency of maintenance when setting the size of openings.

**Energy Dissipation**

Energy dissipation and/or armoring measures are required when the velocity of runoff entering an SMP may result in erosion.

Energy dissipation is often achieved by some form of level spreader which reduces the velocity of runoff by creating sheet flow across a larger surface area. Other, proprietary, energy dissipation methods usually involve sending water through a matrix where eddies and friction work to slow the velocity of water. Common types of armoring, to protect against erosive velocities, include inlet aprons of hard materials and crushed stone ballasts or channels.

**Manholes**

Manholes are structures that serve as junction points of the drainage system, used where pipes change elevation, change direction, or at each 300 ft interval of pipe to allow access and maintenance. Whenever feasible, manholes should be designed so that they do not require confined

space entry but can easily be accessed by a vactor truck attachment. Generally, manholes:

- Shall be a minimum of 4 feet in diameter when there are two or more inlet pipes
- Shall not have more than three pipe connections at the same elevation; additional connections shall be separated by at least 1 foot vertically
- Shall be located at least 3 feet above the groundwater table, or be properly anchored, to prevent potential groundwater infiltration into the system
- Require a minimum concrete leg of 6 inches between the manhole block-outs for adjacent pipes.

**Observation Wells**

Observation wells must be installed in all practices with a subsurface stone base. As an alternative, inspection ports may be installed in cases where chambers are used. Other suitable alternatives may also be considered that allow observation of the subsurface water level. The observation well or inspection port is key to monitoring the water levels in the practice and determining the need for maintenance. One observation well or other means of observation is required for each 5,000 sf of SMP area.

Observation wells shall consist of a minimum four-inch diameter polyvinyl chloride (PVC) pipe, extending from the surface of the practice to the bottom of the drainage layer, with perforations along the entire drainage layer. The observation well must be anchored in place, which is commonly done using a concrete collar. The top of the observation well must be capped with a lockable top lid. In locations with pedestrian access, the cap of the observation well must be flush with the surface to avoid a tripping hazard.

**Pipes**

Given the wide range of pipe functions and naming conventions, the Unified Stormwater Rule defines four types of pipes for clarity, as follows:

- Conveyance pipes – umbrella term used to describe yard drains, bypass pipes, overflow pipes, and intake pipes
- Internal pipes – perforated pipes inside the practice that can be used to evenly distribute or drain water in the stone base

- Have 8-inch or greater diameter and be made of high-density polyethylene (HDPE) meeting the requirements of ASTM D3350
- Be perforated with perforations meeting AASHTO Class II specifications
- Have cleanouts that may be used to access every 75 feet of straight pipe runs
- Have endcaps at the ends of all segments that do not connect to a cleanout
- Use 1/8 (45 degree) elbows for bends (does not apply to pipe networks). For example, 90-degree bends should be made using two 1/8 (45 degree) elbows and separated by at least 1 foot of straight pipe
- Have a minimum of 6 inches of stone on all sides

The contractor should follow the engineering design documents and manufacturer's installation instructions when installing perforated pipes. The spacing between parallel pipes should be at least 12 inches for pipes with internal diameters less than 24 inches, and at least equal to half of the internal pipe diameter for pipes larger than 24 inches.

**Cleanouts**

At least one cleanout must be provided when internal pipes are used. In cases where cleanouts are installed in engineered soils, the top of the cleanout must be anchored in place, which is commonly done using a concrete collar. The top of the cleanout well must be capped with a lockable top lid. In locations with pedestrian access, the cap of the cleanout must be flush with the surface to avoid a tripping hazard. In addition, cleanouts shall:

- Be 8-inch diameter or greater high-density polyethylene (HDPE) meeting the requirements of ASTM D3350
- Use 1/8 (45 degree) elbows for transition from vertical to horizontal
- Have caps placed above the freeboard elevation in areas with surface ponding and permanent pools
- Be placed within 75 feet of and in-line with each outlet pipe
- Be placed at the end of any standalone internal pipe used for distribution
- Be placed at the ends of an internal pipe network along primary pathways

- Cleanout pipes – pipes that provide a connection between the surface (vertical) and internal pipes (horizontal) to allow for regular maintenance
- Outlet pipes – any pipe that can drain water from the practice before it is full, which typically connects the active storage zone of the practice with a point of discharge

Specific requirements for each type of pipe are described in the subsections below. It is important to note that a pipe connecting the on-site drainage system to the City sewer is called a site connection. While the Unified Stormwater Rule includes stormwater management requirements for obtaining site/house connection permits, this manual does not prescribe the design of site connection pipes themselves, which is regulated separately by BWSO.

Any pipes used to convey stormwater inside of buildings must be designed in accordance with the latest NYC DOB Plumbing Codes for Storm Drainage systems. Any pipes used to convey stormwater outside of buildings, except for site connections, must be designed for a minimum 3 in/hr rainfall intensity for the associated drainage area, or as required by the NYC DOB Plumbing Code in special cases where pipes convey both primary and secondary rooftop drains. Designers may also consider larger events, as appropriate, to provide additional drainage capacity.

**Conveyance Pipes**

A bypass or overflow device shall be provided to safely convey runoff away from all practices once they are full, sized in accordance with the above guidance. In addition, conveyance pipes shall:

- Have 6-inch or greater diameter and use materials that can be joined to existing site infrastructure, consistent with NYC Plumbing Code.
- Have a minimum slope of 0.5% and a maximum slope of 10%.
- Have a minimum full-flow velocity of 3.5 feet per second.

**Internal Pipes**

Typically, internal pipes have no slope and rely on conveyance pipes and outlet pipes to convey water into and out of the practice, respectively. In larger systems, a grid of connected internal pipes can be used to form an internal pipe network. Internal pipes shall:

- Be placed outside of any play fields or high traffic areas
- Give consideration to site constraints and maintenance equipment access

**Outlet pipes**

Outlet pipes shall be installed in all filtration practices, as well as detention practices that are not self-contained, unless directed otherwise by DEP. In cases where outlet pipes are used in infiltration practices for maintenance purposes, the outlet pipe must have a permanent cap that is only removed when maintenance is being performed. ET practices must have a means of draining excess runoff, using either outlet pipes, weep holes, drainage course, or other method. In addition, outlet pipes shall:

- Be 6-inch diameter or greater HDPE meeting the requirements of ASTM D2729
- Have a minimum slope of 0.5% and a maximum slope of 10%
- Use 1/8 (45 degree) elbows for bends. For example, 90-degree bends should be made using two 1/8 (45 degree) elbows and separated by at least one foot of straight pipe. Designers should make every effort to avoid using bends in outlet pipes
- Be accessible on both ends, either by a cleanout or drainage structure (e.g., outlet control structure)
- Avoid having an open connection to surface features when conveyed to a controlled-release device to prevent entry of sedimentation and trash
- Have base and embedding material, as appropriate, to prevent pipe damage

**Outlet Control Structures**

An outlet control structure (OCS) is any structure that houses a controlled-flow device or weir that regulates drainage from a practice. These structures serve as an access point for maintenance and typically include other measures to manage sediments or allow overflow once the practice is full.

OCSs are required for all detention practices except for blue roofs, where the controlled-flow device is already accessible from the roof surface. Note that detention tanks are themselves an OCS and do not require a separate facility. OCSs may also be used for infiltration practices, as an access point for maintenance, when the outlet pipe is

capped or a weir is provided to prevent water from draining the practice before it is full.

Several OCS configurations are acceptable if the following requirements are met:

- Connected to the SMP via an outlet pipe (does not apply for detention tanks)
- Provides an overflow for discharge of captured runoff in excess of the design volume
- Provides a controlled-flow device for the slow release of water (applies to detention systems only)
- Provide, for the collection of debris, a 12-inch minimum sump below the invert of the outlet pipe or controlled-flow orifice, whichever is lower
- Allows access to the controlled-flow device and sump for regular maintenance
- Discharge only to an on-site drainage structure, such as a manhole or inlet, rather than directly to a City sewer (does not apply to detention tanks)

**Controlled-Flow Orifice**

A controlled-flow orifice is a small opening used to regulate drainage from a practice. Detention practices must have a controlled-flow device, which includes controlled-flow orifices. Controlled-flow orifices shall:

- Be sized to drain the practice in accordance with the appropriate maximum release rate for the contributing area (see Chapter 2)
- Be easily accessible and have appropriate protection to prevent clogging
- Drain the practice within the required maximum drawdown time (see design criteria tables in Section 4.4-4.8)
- Be set at or above the invert elevation of connection to the on-site drainage system (minimum 3-inch drop preferred)

Detention practices with controlled-release orifices may be used to manage the water quality volume in CSS areas when higher tier practices have been exhausted and the maximum release rate complies with the sewer operations requirement in Chapter 2 (i.e., 0.1 cfs/acre). The maximum release rate of the controlled-flow orifice should be calculated as follows:

EQ4.15:

$$Q_o = C_D * A_o * \sqrt{2gH}$$

where:

- Q<sub>o</sub> = maximum release rate of orifice (cfs)
- C<sub>D</sub> = coefficient of discharge; 0.61 (flush), 0.52 (re-entrant)[, or 0.73 (long re-entrant)]
- A<sub>o</sub> = area of orifice (ft<sup>2</sup>)
- g = acceleration due to gravity, 32.2 (ft/s<sup>2</sup>)
- H = maximum hydraulic head above the centerline of the orifice (ft)

Controlled-flow orifice size should never be smaller than 1-inch diameter for practices. Practices with orifice sizes less than 2-inches shall include pre-treatment measures to prevent clogging.

Eq. 4.15 may be simplified and converted into the following two equations, Eq. 4.16 and Eq. 4.17, which may be used to determine the approximate maximum storage depth for a particular release rate and orifice.

Compute the maximum storage depth in ft. of a detention facility with a Re-entrant orifice tube outlet, S<sub>DR</sub>, with a C<sub>D</sub> of 0.62, by the equation:

EQ4.16

$$S_{DR} = 1.930(Q_{DRR})^2 / (d_o)^4 + d_o / 24$$

where:

- S<sub>DR</sub> = the maximum storage depth in ft. for a Re-entrant orifice tube outlet
- Q<sub>DRR</sub> = the detention facility maximum release rate in cfs
- d<sub>o</sub> = the nominal dia. of the orifice tube outlet in in.

Compute the maximum storage depth in ft. of a detention facility with a Flush orifice tube outlet, S<sub>DF</sub>, with a C<sub>D</sub> of 0.61, by the equation:

EQ4.17

$$S_{DF} = 1.400(Q_{DFR})^2 / (d_o)^4 + d_o / 24$$

where:

- S<sub>DF</sub> = the maximum storage depth in ft. for a Flush orifice tube
- Q<sub>DFR</sub> = the detention facility maximum release rate in cfs

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d<sub>o</sub> = the nominal dia. of the orifice tube outlet in in.

Controlled-flow orifices within outlet control structures should provide flexibility to modify SMPs in the future with minimal changes to the practice. Adjustments to the system can be made to account for actual performance by either opening or closing the orifice.

**Controlled-Flow Pumps**

A controlled-flow pump is a small pump used to regulate drainage from a practice, which are typically reserved for cases where site elevations prevent the use of a controlled-flow orifice that drains by gravity. These circumstances can include, but are not limited to:

- Sites that drain to shallow sewers, where roof detention is insufficient or infeasible.
- Sites that require deeper practices, where the outlet would be too low for gravity drainage

Such systems must still maintain the required maximum release rates outlined in Chapter 2 using a controlled-flow pump system. Controlled-flow pump systems require the following components, which must be shown on a section view of the proposed system:

- A detention facility where water may be stored, with dimensions
- At least one pump and one backup pump. If other pumps are to be used as "primary pumps," such as when pumps are to be used in parallel, a backup pump is required for each primary pump
- An intake, outlet (a "force main"), and an overflow, shown on a section view, with dimensions

The dimensions provided on the section view must be to scale and match the proposed configuration specified in the pump analysis calculations.

Design methods for controlled-flow orifices differ from controlled-flow pumps. For example, the design goal of a controlled-flow orifice is to ensure that the release rate does not exceed maximum rate for the facility, at the time when the volume is being provided. However, for controlled-flow pumps, the design goal is to ensure that the average release rate does not exceed the maximum rate for the facility, at the time when the volume is being provided.

The analysis to determine if the controlled-flow pump meets the release rate criterion is substantially more complex than the analysis that must be done for a controlled-flow orifice. For this reason, a controlled-flow pump workbook is available in Appendix F, which includes a template for calculations and a design example. In addition, the following paragraphs include details on the calculation methods and criteria for using controlled-flow pumps.

The average pump rate for the system is determined by taking the maximum and minimum pump rates for the system and averaging these. The maximum and minimum rates are determined by finding the operation point for each rate, respectively. The operation point is defined as the point where the system head curve intersects with the pump curve. There will be two system curves, one corresponding to the maximum rate, and the other corresponding to the minimum rate, and each will have a corresponding amount of head loss.

There are a number of methodologies that are used to generate a system head curve for a particular type of pump system, but the one that DEP uses for analysis is the "equivalent length." So regardless of the methodology that the applicant uses, DEP requires the following inputs to do an analysis of equivalent length:

1. The fittings that are proposed, specified by the number of each type of fitting. Each fitting has an equivalent length and should be shown diagrammatically on the section view. See Appendix F for more information about the types of fittings that can cause head loss.
2. The elevation of water where the pump system is designed to turn on. [This is typically near the top of the tank.] This must be above the elevation where the pump is designed to turn off.
3. The elevation of water where the pump system is designed to turn off. This is typically near the bottom of the tank.
4. The elevation at which the proposed force main will discharge by gravity only (where it is no longer under pressure). The nature of this elevation requires that it be above the sewer.
5. The required detention volume, in cubic feet (cf) calculated for the system. The required detention volume for singular detention systems can be computed using equations in Chapter 2, while the

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required detention volume of systems in series can be computed using equations in Section 4.11.

6. The area of the detention tank, in square feet (sf), which in conjunction with item (5), will determine the elevation of the maximum storage volume.
7. The force main pipe diameter, in inches (in)[, minimum of 2-inches and provided in half-inch increments].
8. The force main length, in feet (ft), not including any equivalent lengths provided in item (1).
9. The proposed maximum pump rate that the pump will operate at, in gallons per minute (GPM). This should be the operation point for when the pressure head is the lowest.
10. The proposed minimum pump rate at which the pump will operate, in gallons per minute (GPM). This should be the operation point for when the pressure head is the highest.
11. The proposed Hazen-Williams coefficient, typically 130 for new wrought or cast iron, steel, ductile iron, or vitrified clay pipes.

The above inputs will allow for the following outputs to be calculated:

1. The minimum static lift, in feet (ft)
2. The maximum static lift, in feet (ft)
3. The provided storage depth, in feet (ft)
4. The minimum head loss, in feet (ft)
5. The maximum head loss, in feet (ft)
6. The maximum pump rate, in cubic feet-per-second (cfs)
7. The minimum pump rate, in cubic feet-per-second (cfs)
8. The maximum pump rate, in cubic feet-per-second (cfs), which is the average of item (6) and (7)

The process of finding the actual pump behavior requires testing a proposed maximum and minimum pump rate (items 9 and 10 in the inputs), against the minimum and maximum head losses (items 4 and 5 in the outputs), iterating until each operation point is found. Once each operation point is found, their average is used as the actual release rate of the pump system. If this is lower than the maximum release rate, then the pump system is acceptable.

**4.11. Special Cases**

There are several special cases (SC) where the methods for sizing and applying SMP volume, as outlined in Section 4.3, do not apply. These cases are marked as "SC" on the SMP Hierarchy Checklist (Appendix A). There are three general types of special cases:

- Criteria-based practices used to meet water quality goals, where storage volume is either not provided or cannot be computed
- Reuse systems used to meet sewer operations goals, where the amount of volume that may be applied varies by system operation
- Detention systems in series, where the upstream detention system modifies the volume to be managed in the downstream system

The following subsections include methods for determining how these special case systems may be applied to meet stormwater management requirements.

**Criteria-Based Practices**

Criteria-based practices include grass filter strips, vegetated swales, and standalone trees (planted or preserved). These are special cases because either the SMP has no storage volume or, in the case of tree preservation, it often cannot be computed due to unknown conditions. Criteria-based practices must meet all special design criteria to facilitate the desired stormwater management requirement. When all criteria are met, these systems reduce a set percentage of the WQv that falls on the contributing area.

Grass filter strips can manage 100% of the WQv that falls on the contributing area when the following supplementary design criteria are met:

- Minimum width of 50 feet for slopes of 0% to 8%, 75 feet for slopes of 8% to 12% and 100 feet for slopes of 12% to 15%
- Maximum contributing length (i.e., length of flow path to the grass filter strip) shall be 150 feet for pervious surfaces and 75 feet for impervious surfaces
- For a combination of impervious cover (IC) and pervious cover (PC), use the following to determine the maximum length of each contributing area:
  - o 150 – IC = contributing length of PC (maximum IC = 75, maximum PC = 150)

- Maximum slope of the first ten feet of filter is less than 2%
- Average contributing slope is 3% maximum unless a flow spreader is used

Vegetated swales can manage 20% of the water quality volume that falls on the contributing area when the following supplementary design criteria are met:

- Receive WQv flow rates from the contributing area that are 3 cfs or less
- Convey the peak discharge for water volume flow (3 cfs or less):
  - o at a velocity of < 1.0 fps, and
  - o at a flow depth of 4 inches or less
- Provide sufficient length (minimum 100 ft) to retain the computed treatment volume for 10 minutes in a swale that receives runoff as a point discharge at the inlet, or an average of 5 minutes of retention time for a swale receiving sheet drainage or multiple point discharges along its length
- Have a trapezoidal or parabolic shape, with a bottom width minimum of 2' and no greater than 6'
- Provide 4 inches of topsoil
- Apply recommended seed mixes (or sod) per the table from NYS SWMDM below:

TABLE 5.3			
	Minimum	Rate per Acre (gpm/ft)	Rate per 1,000 square feet (gpm/ft)
A. Perennial ryegrass	30	0.43	
Tall fescue or smooth bromegrass	30	0.43	
Redtop	2	0.05	
OR			
B. Kentucky bluegrass	25	0.40	
Crested red fescue	30	0.50	
Perennial ryegrass	40	0.20	

\* Use this mixture in areas which are mowed frequently. Crested red fescue may be added if desired and seeded at 8 pounds/acre (0.2 pound/1,000 square feet).

Calculations for peak runoff rates, design flows, and retention times should be done in accordance with small storm hydrology methods [(NYS SWMDM Appendix B)], conventional hydrology methods [(NYS SWMDM Chapter 8)], or Manning's equations for open channel flow, as appropriate (see NYS SWMDM). For hydraulic calculations, variable n values should be used corresponding to flow depths, from 0.15 down to 0.03 [(NYS SWMDM Appendix L)].

Tree planting and preservation refers to standalone trees, rather than trees planted as part of larger bioretention

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practices. A standalone tree (planted or preserved) may be counted as a reduction in impervious area when calculating the runoff coefficient (Rv) in the WQv equation. The amount of impervious reduction that may be applied is based on the size of the tree, which reflects the increased stormwater management benefits of a larger canopy and root system.

Standalone trees may reduce the impervious area used to calculate Rv by half the tree canopy area, up to 100 sf. This means that trees with canopies of 16-foot diameter or less will count half their canopy area, while larger canopies will be capped at 100 sf reduction. In order for standalone trees to apply this reduction, the following supplementary design criteria must be met:

- New trees planted must be planted within 10 feet of ground-level, directly connected impervious areas.
- New deciduous trees must be at least 2-inch caliper and new evergreen trees must be at least 6 feet tall to be eligible for the reduction.
- For new trees, the average slope for the contributing area, including the area under the canopy must not be greater than 5%.

**Reuse Systems**

Reuse systems may be eligible toward meeting the sewer operations volume requirement, when designers can demonstrate that reuse application will be automated and continuous throughout the year. In this case, designers must submit documents that indicate the intended reuse application, the anticipated reuse for each month of the year, and the systems and logic that will automate the reuse process. Eligible reuse systems will be able to apply 50% of their total volume towards the sewer operations volume requirement, subject to approval by [NYC] DEP BWSO.

**Detention Systems in Series**

Common examples of detention systems in series include a blue roof system with a downstream detention tank, or where two detention systems are used on separate floors of a building due to space constraints. These are special cases because the volume and release rates of the detention systems may vary, requiring alternative calculations.

release rate of the upstream system must be increased until the required storage volume is equal to or less than actual storage volume.

The upstream detention system will reduce the peak flow rate for its tributary area which will, in turn, reduce the effective runoff coefficient for that area. The effective runoff coefficient for the tributary area of the upstream system may be calculated as:

$$EQ4.18: C_{EU} = 311 \cdot Q_{DRR} \cdot \frac{(t_U + 15)}{A_U}$$

- where:
- $C_{EU}$  = effective runoff coefficient for the area tributary to the upstream detention system
  - $Q_{DRR}$  = maximum release rate of the upstream detention system (cfs)
  - $t_U$  = duration of sewer operations event where the upstream detention system is filling (min)
  - $A_U$  = site area tributary to the upstream detention system (ft<sup>2</sup>)

The effective runoff coefficient for the area tributary to the upstream detention system ( $C_{EU}$ ) may then be used to calculate the area weighted runoff coefficient of the downstream detention system. Note, that unless the area tributary to the upstream and downstream systems is the same, designers may not use  $C_{EU}$  directly as the weighted runoff coefficient for the downstream system. Instead, designers must consider the runoff coefficients of all other areas that may be tributary to the downstream detention system, weighted by area.

The weighted runoff coefficient of the downstream detention system is then used to calculate the required volume for that system, using the sizing methods in Section 4.3. A detention in series workbook is available in Appendix G, which includes a template for calculations and design examples to assist designers.

For example, where the downstream system is designed to maintain the 0.1 cfs/acre maximum release rate, the upstream system may be designed with a release rate up to 2 cfs/acre. In this case, the upstream system would require less volume to maintain the release rate compared to the sewer operations volume calculation. In addition, the downstream system may also require less volume, if the upstream system provides meaningful flow reductions.

The volume required for the upstream detention system is a function of its maximum release rate, which can be computed using the following two equations:

$$EQ4.16: V_U = \left[ \frac{0.19 \cdot C_W \cdot A_U}{(t_U + 15)} - 40Q_{DRR} \right] \cdot t_U$$

where:

- $V_U$  = required detention volume of the upstream detention system (cf)
- $C_W$ : weighted runoff coefficient relating peak rate of rainfall and runoff
- $A_U$  = site area tributary to the upstream detention system (ft<sup>2</sup>)
- $t_U$  = duration of sewer operations event where the upstream detention system is filling (min)
- $Q_{DRR}$  = maximum release rate of the upstream detention system (cfs)

$$EQ4.17: t_U = 0.27 \cdot \sqrt{\frac{C_W \cdot A_U}{Q_{DRR}}} - 15$$

where:

- $t_U$  = duration of sewer operations event where the upstream detention system is filling (min)
- $C_W$ : weighted runoff coefficient relating peak rate of rainfall and runoff
- $A_U$  = site area tributary to the upstream detention system (ft<sup>2</sup>)
- $Q_{DRR}$  = maximum release rate of the upstream detention system (cfs)

The actual storage volume of the upstream system, determined using methods of Section 4.3, must be equal to or greater than the required storage volume calculated above. In cases where this is not feasible, the maximum

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**5. POST-CONSTRUCTION STORMWATER MANAGEMENT REQUIREMENTS**

SMPs that are constructed as part of a covered development project must be regularly maintained and inspected in accordance with this Chapter to ensure continued performance as designed. This chapter outlines the requirements for:

- SMP Maintenance Procedures (Section 5.1);
- SMP Operation and Maintenance Plan Requirements (Section 5.2); and
- SMP Inspection, Reporting, and Re-certification Requirements (Section 5.3).

Non-structural best management practices (BMPs) used to meet NNI requirements in the NYC MS4 area must also be continuously maintained.

Maintenance of SMPs and BMPs is the responsibility of the property owner and is required per the issued Stormwater Maintenance Permit. The Stormwater Maintenance Permit requires ongoing maintenance and periodic inspections to assess the condition and functionality of each SMP and BMP and to assess any adjustments to maintenance frequencies and tasks that may be needed to maintain performance over time. Furthermore, owners must provide an annual certification that SMPs and BMPs have been inspected and properly maintained. Every fifth year, a certification from a registered qualified professional must be provided with the maintenance permit renewal. Owners are subject to random DEP inspections and must renew their Stormwater Maintenance Permit(s) every five years.

DEP recommends that the maintenance and inspection procedures outlined in this Chapter are also followed for SMPs constructed as part of non-covered development projects.

**5.1. Maintenance Procedures**

Maintenance procedures contained in this section consist of recommended tasks and associated frequencies for routine maintenance activities, as well as general guidance on common problems. While maintenance procedures

generally apply to SMPs, the continued implementation of BMPs may also require maintenance practices.

Maintenance comprises those activities that occur on a set frequency or that are otherwise periodically required for SMP upkeep. These activities include tasks such as weeding, watering, sediment, and trash removal for bio-retention SMPs that can often be accomplished during pre-set routine maintenance cycles.

Occasionally, SMPs require non-scheduled maintenance to address performance issues that may arise and cannot be adequately addressed through pre-set maintenance activities. These activities may include replanting, erosion control, and structural repairs and may require specialized equipment and/or skilled expertise to properly implement. The alteration or modification of an approved SMP or of the approved operation and maintenance of SMPs will require prior review and approval of DEP.

**Routine Maintenance**

Routine maintenance consists of tasks that are performed on a set schedule or undertaken periodically based on the results of the annual inspections. Routine tasks are intended to maintain system performance under normal operating conditions, assuming SMPs have been appropriately sited, designed, and constructed.

Routine maintenance tasks and suggested frequencies are specified by SMP type in Tables 5.2 to 5.14. To help streamline, readers can refer to Table 5.1 for an overview of the applicable maintenance table for each SMP. Suggested frequencies are guidelines based on normal operating conditions. Generally, frequencies for many tasks will need to increase for high sediment loading and highly exposed SMPs (i.e., SMPs sited adjacent to commercial driveways, parking lots, or other areas with heavy vehicular traffic that receive direct runoff from these surfaces) and may be decreased for lower sediment loading and/or less exposed SMPs (i.e., SMPs sited adjacent to areas of low or no vehicular traffic and receive primarily roof runoff). Frequencies should be adjusted over time based on the results of ongoing and annual SMP inspections.

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Table 5.1. Overview of the applicable maintenance table for each SMP type.

Vegetated	
Bioretention	Table 5.2
Rain garden	Table 5.2
Stormwater planter	Table 5.2
Tree planting	Table 5.3
Tree preservation	Table 5.3
Green roof	Table 5.4
Grass filter strip	Table 5.5
Vegetated swale	Table 5.5
Dry basin	Table 5.5
Constructed wetland	Table 5.6
Non-vegetated	
Rain tank	Table 5.7
Cistern	Table 5.7
Dry well	Table 5.8
Subsurface gallery	Table 5.8
Stone trench	Table 5.9
Synthetic turf field	Table 5.10
Porous pavement	Table 5.11
Sand filter	Table 5.12
Organic filter	Table 5.12
Wet basin / pond	Table 5.13
Blue roof	Table 5.14
Detention tank	Table 5.7

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Table 5.2. Routine Maintenance Tasks and Frequencies for Bioretention, Rain Gardens and Stormwater Planters

Task	Description	Frequency
Watering	Watering of new plantings during the first two years of establishment	During extended dry periods of no significant precipitation within 7 days, or as needed based on plant condition
Weeding	Removal of non-native or undesirable vegetation	Quarterly at minimum during the growing season or more frequently based on ongoing inspections
Mulching	Mulching of planting beds	Once annually for the first two growing seasons or until beds have filled in
Vegetation Management	Cutting and trimming of detrital herbaceous vegetation from the previous growing season to four to six inches above the ground	Annually in late winter or early spring prior to break in dormancy
Sediment Removal	Removal of accumulated sediment and debris from practice areas	Twice per year or more frequently if needed based on ongoing inspections (note: leaves and other natural materials can be left in place if they do not impede conveyance)
Pipe Cleaning	Hydraulic cleaning of inflow, outflow and underdrain piping	As warranted based on video pipe inspections conducted every three years
Inlet Filter Cleaning	Emptying of inlet filter bags and/or baskets	Minimum quarterly or more frequently based on ongoing inspections
Inlet Cleaning	Vacuum cleaning of accumulated sediment and debris within inlets, sumps and hoods	Minimum annually or more frequently if debris accumulation is rapid based on ongoing and annual inspections
Outlet Cleaning	Removal of accumulated sediment and debris from risers (vacuum cleaning), trash racks, and spillways and clearing sediment from orifices and outlet control structures to prevent clogging	Annually at minimum or more frequently based on ongoing and annual inspections
Erosion Control	Stabilization of eroded soil areas with vegetative or mechanical means	As warranted based on ongoing inspections

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Table 5.3. Routine Maintenance Tasks and Frequencies for Trees

Task	Description	Frequency
Watering	Watering of new plantings during the first two years of establishment	During extended dry periods of no significant precipitation within 7 days, or as needed based on plant condition
Weeding	Removal of non-native or undesirable vegetation	Quarterly at minimum during the growing season or more frequently based on ongoing inspections
Mulching	Mulching around root flare to suppress weeds and regulate temperature	Minimum annually or as needed based on ongoing inspections
Pruning (Small)	Removal of dead, damaged or diseased wood under 2" diameter	As observed throughout the year
Pruning (Large)	Removal of dead branches over 2" in diameter or selective removal for proper form	During the dormant season as warranted
Sediment Removal	Removal of accumulated sediment and debris from practice areas	Twice per year or more frequently if needed based on ongoing inspections (note: leaves and other natural materials can be left in place if they do not impede conveyance)

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Table 5.4. Routine Maintenance Tasks and Frequencies for Green Roofs

Task	Description	Frequency
Watering	Watering of new plantings during the first two years of establishment	During extended dry periods of no significant precipitation within 7 days, or as needed based on plant condition
Weeding	Removal of non-native or undesirable vegetation	Quarterly at minimum during the growing season or more frequently based on ongoing inspections
Vegetation Management	Removal of detrital herbaceous vegetation from the previous growing season	Annually or as needed depending on the type of green roof vegetation
Fertilization	Use of slow-release fertilization capsules to supply plant nutrients; may only be done in the first year of establishment	As necessary based on visual observation of plant health or soil fertility testing
Outlet Cleaning	Removal of sediment from drain outlets including rooftop drains, gutters, downspouts and secondary overflows	Twice a year or as needed based on ongoing inspections
Erosion Control	Stabilization of eroded soil areas via vegetative or mechanical means	During the growing season for plant materials and as warranted for mechanical methods based on annual and ongoing inspections

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Table 5.5. Routine Maintenance Tasks and Frequencies for Grass Filter Strips, Vegetated Swales and Dry Basins

Task	Description	Frequency
Watering	Watering of new plantings during the first two years of establishment	During extended dry periods of no significant precipitation within 7 days, or as needed based on plant condition
Weeding	Removal of non-native or undesirable vegetation	Quarterly at minimum during the growing season or more frequently based on ongoing inspections
Mowing/Trimming	Mowing and/or trimming of detrital herbaceous material to four to six inches above the ground	Annually for non-lurf grass type vegetation or more frequently for turf grasses during period of active growth (all clippings should be removed)
Vegetation Management	Delthatching and soil conditioning for turf grasses	Annually or as warranted based on ongoing inspections
Sediment Removal	Removal of accumulated sediment and debris from practice areas	Twice per year or more frequently if needed based on ongoing inspections (note: leaves and other natural materials can be left in place if they do not impede conveyance)
Pipe Cleaning	Hydraulic cleaning of inflow, outflow and underdrain piping	As warranted based on video pipe inspections conducted every three years
Inlet Filter Cleaning	Emptying of inlet filter bags and baskets	Minimum quarterly or more frequently if debris accumulation is rapid based on ongoing inspections
Inlet Cleaning	Vacuum cleaning of accumulated sediment and debris within inlets, sumps and hoods	Minimum annually or more frequently if debris accumulation is rapid based on annual and ongoing inspections
Outlet Cleaning	Removal of accumulated sediment and debris from risers (vacuum cleaning), trash racks, and spillways and clearing sediment from orifices and outlet control structures to prevent clogging	Annually at minimum or more frequently based on ongoing and annual inspections
Erosion Control	Stabilization of eroded soil areas with vegetative or mechanical means	During the growing season for plant materials and as warranted based on ongoing inspections

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Table 5.6. Routine Maintenance Tasks and Frequencies for Constructed Wetlands

Task	Description	Frequency
Watering	Watering of new plantings during first two years of establishment	During extended dry periods of no significant precipitation within 7 days, or as needed based on plant condition
Weeding	Removal of non-native or undesirable vegetation	Quarterly at minimum during the growing season or more frequently based on ongoing inspections
Woody Vegetation Removal	Removal of woody vegetation from berms and embankments	Annually during the dormant season when present
Sediment Removal	Removal of accumulated sediment and debris from forebay and open water areas	Every 5 years or when 50% of capacity has been lost
Pipe Cleaning	Hydraulic cleaning of inflow and outflow and underdrain piping	As warranted based on video pipe inspections conducted every three years
Inlet Filter Cleaning	Emptying of inlet filter bags and/or baskets	Minimum quarterly or more frequently if debris accumulation is rapid based on ongoing inspections
Inlet Cleaning	Vacuum cleaning of accumulated sediment and debris within inlets, sumps and hoods	Minimum annually or more frequently if debris accumulation is rapid based on ongoing and annual inspections

Outlet Cleaning	Removal of accumulated sediment and debris from risers (vacuum cleaning), trash racks, and spillways and clearing sediment from orifices and outlet control structures to prevent clogging	Annually at minimum or more frequently based on ongoing and annual inspections
Erosion Control	Stabilization of eroded soil areas via vegetative or mechanical means	During the growing season for plant materials and as warranted for mechanical methods based on annual and ongoing inspections

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Table 5.7. Routine Maintenance Tasks and Frequencies for Rain Barrels, Cisterns and Detention Tanks

Task	Description	Frequency
Sediment Removal	Vacuum cleaning of accumulated sediment from primary storage tank(s)	As warranted based on annual inspections
Intake Cleaning	Cleaning of sediment from intake screen, hose and/or pipe	Quarterly at a minimum or as warranted based on ongoing inspections
Pipe Cleaning	Hydraulic cleaning of inflow and outflow piping	As warranted based on video pipe inspections conducted every three years
Outlet Cleaning	Cleaning of gutters, downspouts and first flush chambers	Twice a year or more frequently based in ongoing and annual inspections
Inlet Cleaning	Vacuum cleaning of accumulated sediment within inlet hoods and sumps	Minimum annually or more frequently if debris accumulation is rapid based on ongoing and annual inspections

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Table 5.8. Routine Maintenance Tasks and Frequencies for Dry Wells and Subsurface Galleries

Task	Description	Frequency
Pipe Cleaning	Hydraulic cleaning of inflow, distribution and outflow piping	As warranted based on video pipe inspections conducted every three years
Sediment Removal	Vacuum cleaning of accumulated sediment and debris within internal structures	As warranted based on video inspections of subsurface galleries conducted every three years
Inlet Filter Cleaning	Emptying of inlet filter bags and/or baskets	Minimum quarterly or more frequently if debris accumulation is rapid based on ongoing inspections
Inlet Cleaning	Vacuum cleaning of accumulated sediment and debris within inlets, sumps and hoods	Minimum annually or more frequently if debris accumulation is rapid based on ongoing and annual inspections
Outlet Cleaning	Removal of accumulated sediment and debris from risers (vacuum cleaning), trash racks, and spillways and clearing sediment from orifices and outlet control structures to prevent clogging	Annually at minimum or more frequently based on ongoing and annual inspections

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Table 5.9. Routine Maintenance Tasks and Frequencies for Stone Trenches

Task	Description	Frequency
Sediment Removal	Removal of accumulated sediment from permeable surface	Twice per year or more frequently for high loading systems based on ongoing and annual inspections
Pipe Cleaning	Hydraulic cleaning of inflow, outflow and underdrain piping	As warranted based on video pipe inspections conducted every three years
Inlet Filter Cleaning	Emptying of inlet filter bags and/or baskets	Minimum quarterly or more frequently if debris accumulation is rapid based on ongoing inspections
Inlet Cleaning	Vacuum cleaning of accumulated sediment and debris within inlets, sumps and hoods	Minimum annually or more frequently if debris accumulation is rapid based on ongoing and annual inspections
Outlet Cleaning	Removal of accumulated sediment and debris from risers (vacuum cleaning), trash racks, and spillways and clearing sediment from orifices and outlet control structures to prevent clogging	Annually at minimum or more frequently based on ongoing and annual inspections

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Table 5.10. Routine Maintenance Tasks and Frequencies for Synthetic Turf

Task	Description	Frequency
<b>Weeding</b>	Removal of any vegetation from synthetic turf area	Year-round as observed during on ongoing inspections
<b>Raking</b>	Raking of the synthetic turf to keep grass fibers upright and to loosen and evenly distribute the infill layer	As needed based on manufacturer's/ installer's specifications
<b>Sediment Removal</b>	Vacuuming or removal of small, loose debris using a blower	Twice per year or more frequently based on level of use
<b>Pipe Cleaning</b>	Hydraulic cleaning of inflow, outflow and underdrain piping	As warranted based on video pipe inspections conducted every three years
<b>Inlet Filter Cleaning</b>	Emptying of inlet filter bags and/or baskets	Minimum quarterly or more frequently if debris accumulation is rapid based on ongoing inspections
<b>Inlet Cleaning</b>	Vacuum cleaning of accumulated sediment and debris within inlets sumps and hoods	Minimum annually or more frequently if debris accumulation is rapid based on ongoing and annual inspections
<b>Outlet Cleaning</b>	Removal of accumulated sediment and debris from risers (vacuum cleaning), trash racks, and spillways and clearing sediment from orifices and outlet control structures to prevent clogging	Annually at minimum or more frequently based on ongoing and annual inspections

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Table 5.11. Routine Maintenance Tasks and Frequencies for Porous Pavements

Task	Description	Frequency
<b>Sediment Removal</b>	Vacuuming of porous asphalt or concrete surfaces with regenerative air sweeper or commercial vacuum sweeper (pavement washing systems and compressed air units are not recommended)	Twice per year or more frequently based on ongoing and annual inspections
<b>Weeding</b>	Removal of non-native or undesirable vegetation from vegetated pavement systems	Quarterly at minimum during the growing season or as warranted based on ongoing inspections
<b>Mowing</b>	Mowing of vegetative material to four to six inches above the ground	As needed based on rate of vegetative growth during the growing season (all clippings should be removed)
<b>Pipe Cleaning</b>	Hydraulic cleaning of inflow, outflow and underdrain piping	As warranted based on video pipe inspections conducted every three years
<b>Inlet Filter Cleaning</b>	Emptying of inlet filter bags and/or baskets	Minimum quarterly or more frequently if debris accumulation is rapid based on ongoing inspections
<b>Inlet Cleaning</b>	Vacuum cleaning of accumulated sediment and debris within inlets sumps and hoods	Minimum annually or more frequently if debris accumulation is rapid based on ongoing and annual inspections

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Table 5.12. Routine Maintenance Tasks and Frequencies for Sand and Organic Filters

Task	Description	Frequency
<b>Media Raking</b>	Raking of sand or organic filter media to remove trash and debris from control openings	As warranted based on annual inspections
<b>Surface Media Replacement</b>	Removal, cultivation, and replenishment of sand or organic filter media to sufficient depths to achieve unclogged media	As warranted based on annual inspections
<b>Sediment Removal</b>	Vacuum cleaning of accumulated sediment from filter bed within sedimentation chambers	Annually or when the sediment accumulation within the sedimentation chamber reaches a depth of 6 inches
<b>Pipe Cleaning</b>	Hydraulic cleaning of inflow and outflow piping from subsurface systems	As warranted based on video pipe inspections conducted every three years
<b>Inlet Filter Cleaning</b>	Emptying of inlet filter bags and/or baskets	Minimum quarterly or more frequently if debris accumulation is rapid based on ongoing inspections
<b>Inlet Cleaning</b>	Vacuum cleaning of accumulated sediment and debris within inlets sumps and hoods	Minimum annually or more frequently if debris accumulation is rapid based on ongoing and annual inspections
<b>Outlet Cleaning</b>	Removal of accumulated sediment and debris from risers (vacuum cleaning), trash racks, and spillways and clearing sediment from orifices and outlet control structures to prevent clogging	Annually at minimum or more frequently based on ongoing and annual inspections

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Table 5.13. Routine Maintenance Tasks and Frequencies for Wet Basins and Ponds

Task	Description	Frequency
<b>Weeding</b>	Removal of non-native or undesirable vegetation from vegetated pavement systems	Quarterly at minimum during the growing season or as warranted based on ongoing inspections
<b>Mowing/Trimming</b>	Mowing and/or trimming of detrital herbaceous material to four to six inches above the ground	Annually for non-turf grass type vegetation or more frequently for turf grasses during period of active growth (all clippings should be removed)
<b>Woody Vegetation Removal</b>	Removal of woody vegetation from berms and embankments	Annually during the dormant season when present
<b>Sediment Removal</b>	Removal of accumulated sediment and debris from forebay, basin and open water areas	Every five years or when 50% of capacity has been reached
<b>Pipe Cleaning</b>	Hydraulic cleaning of inflow and outflow piping	As warranted based on video pipe inspections conducted every three years
<b>Inlet Filter Cleaning</b>	Emptying of inlet filter bags and/or baskets	Minimum quarterly or more frequently if debris accumulation is rapid based on ongoing inspections
<b>Inlet Cleaning</b>	Vacuum cleaning of accumulated sediment and debris within inlets sumps and hoods	Minimum annually or more frequently if debris accumulation is rapid based on ongoing and annual inspections
<b>Outlet Cleaning</b>	Removal of accumulated sediment and debris from risers (vacuum cleaning), trash racks, and spillways and clearing sediment from orifices and outlet control structures to prevent clogging	Annually at a minimum or more frequently based on ongoing and annual inspections
<b>Signage Maintenance</b>	Damage repair and clearing of visual obstructions to keep posted signage in good and legible conditions	As warranted based on ongoing inspections

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Table 5.14. Routine Maintenance Tasks and Frequencies for Blue Roofs

Task	Description	Frequency
<b>Sediment and Debris Removal</b>	Removal of sediment and debris from roof storage area(s), behind check and/or slotted dams, and from drain outlets including roof drains, gutters, downspouts, secondary overflows and drain screens	Monthly during the first year after installation to determine maintenance frequency, and minimum twice per year based on ongoing inspections or as needed
<b>Ice Removal</b>	Break-up and removal of ice formations around outlet and overflow structures	As warranted based on inspections during wintertime
<b>Repair Leaks</b>	Repair of roofing materials for damages and leaks	As warranted based on ongoing inspections

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**Additional Maintenance Activities**

Additional maintenance activities include those activities intended to repair or remediate SMPs that are not functioning properly. Additional maintenance activities are usually identified during the course of an annual inspection or during informal visual assessments. Additional maintenance activities that result in a modification to the stormwater management practice require review and approval of the department.

*Differential Settlement*

Differential settlement occurs where portions of the ground surface become depressed relative to surrounding areas. Some minor settlement is common after construction, but more severe settlement could indicate the presence of soft soils or improperly compacted subgrade. Monitoring areas of settlement once they are identified is critical for assessing the need for excavation and repair.

The need for additional maintenance activities may indicate an underlying performance issue that may require additional investigation and analysis, particularly if the performance issues are recurring. The assistance of a qualified professional will likely be required in order to perform diagnostic activities needed to properly remediate recurrent problems. Examples of some common problems addressed via additional maintenance activities are provided below.

Diagnostic activities to assess the soil and subsurface conditions in areas of settlement include ground penetrating radar scans or other geophysical methods, soil borings, and dye testing. Potential remedial activities could include excavation of poorly compacted underlying soils and replacement with suitable compactable backfill. Major settlement issues often require a qualified professional to perform an evaluation and determine the correct solution.

*Erosion Problems*

Erosion issues are common at the system inflow points for vegetated SMPs such as areas downslope of curb cuts conveying flow into a stormwater planter system. Erosion problems can typically be remedied by either replanting the area with an extended term erosion blanket or turf reinforcement matting or by adding structural measures such as rip-rap or river stone.

*Sedimentation and Clogging*

Routine maintenance activities involve removal of sediment from SMPs, particularly inlet areas and forebays. However, in some cases, rates of sedimentation may be excessive and may lead to performance issues such as clogging and planting failure. In these situations, it is important to assess the contributing drainage area to identify any areas of bare soil, active construction, or other activities that may be the source of high rates of sediment delivery to the SMP. Cessation of these activities or the implementation of temporary or permanent erosion control measures can help to lower rates of sediment delivery and reduce the frequency of sediment removal from the SMP.

*Poorly Performing Plantings*

Vegetation health is integral to any vegetated SMP, such as bioretention systems and green roofs. Poorly performing plantings may be an indication of one or more underlying problems, particularly if plantings fare poorly in the same location within the SMP on a recurring basis. Poor plant performance commonly results from improper plant selection and can be effectively addressed by replanting with an adjusted plant palette that is more appropriate for the soil and moisture conditions in the area.

Remediation of severe sedimentation and clogging conditions may require a qualified professional to identify where the removal and replacement of some or all storage/filtration media is required. Adequate pre-treatment and routine maintenance can help to extend SMP service life and reduce the frequency of storage/filtration media replacement.

Plantings can also be negatively affected by various other external factors including erosion, sedimentation, poor soil conditions, disease, shade, road salt, and foot traffic compaction. A landscape or horticultural qualified professional can help diagnose areas and causes of poor plant performance and recommend a combination of adjusted plantings and/or soil amendments, among other remedies.

*Structural Defects*

Structural defects can cause a wide array of performance issues and most commonly include broken or cracked hydraulic control structures and/or piping and damaged concrete edging or metal edge restraints around structures such as stormwater planters. Areas of surface wear on porous pavement also fall into this category. Depending on

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the issue, inspection by a qualified structural professional may be warranted to determine if and how a structure can be safely repaired.

**5.2. Operations and Maintenance Plan**

All permitted SMPs that are constructed as part of a covered development project must have an operations and maintenance (O&M) plan that sets forth a specific plan for operation and maintenance of each permitted SMP. Submission and approval of the O&M plan is a prerequisite to Stormwater Maintenance Permit issuance.

At minimum, the O&M plan must contain the following:

- List of SMPs to be maintained;
- Copy of the as-built plans showing locations and elevations of SMPs;
- Location map depicting SMPs to be maintained;
- Contact information for responsible party;
- Information regarding whether the maintenance will be performed by the responsible party and/or contracted to an outside party;
- Table of maintenance tasks and frequencies for each SMP type;
- Inspection form with list of maintenance checks and fields for recording observations;
- Schedule of proposed self-inspections; and
- Copy of the Stormwater Maintenance Permit issued by DEP.

In addition, if the permitted project is subject to NNI requirements for pollutants of concern, the O&M plan must contain a list of BMPs to address the applicable pollutant of concern sources. The list should also be included as an inspection form or checklist to be submitted as annual certification that BMPs have been implemented and maintained. See Table 2.6 for an example list of BMPs for pathogen removal by land use.

**5.3. Inspection, Reporting, and Recertification Requirements**

**Property Owner Inspections**

Property owners are responsible for conducting periodic inspections of SMPs to ensure that the systems are working properly, to reassess routine maintenance frequency, and to identify additional maintenance work required to address any condition or performance deficits. Routine maintenance and frequency recommendations

presented in Tables 5.2 through 5.14 for specific types of practices present general guidelines for when inspections should occur.

Table 5.15 provides types and frequencies of inspections as a guideline for developing an ongoing SMP inspection program. Property owners are also responsible for maintaining BMPs to continue to meet the WQV requirements and NNI requirements for pollutants of concern.

In addition to the inspection tasks outlined in Table 5.15, the property owner or maintenance personnel should perform periodic, quick visual assessments of SMP function when performing routine maintenance. For example, observation wells should be checked for standing water during dry periods, which may be an indication that the system is not functioning properly. Similarly, green and blue roof membranes can be checked for leaks and defects.

Some proprietary practices such as green and blue roof may have recommended frequencies for inspections per manufacturer's or installer's specifications that should be followed.

**Inspection forms**

All inspections must be logged and recorded on an inspection form. The owner must keep and maintain copies of all inspection records and tests for five years after performance of such inspections or tests.

**Annual Certification**

Property owners are responsible for providing an Annual Certification attesting that any permitted SMPs and BMPs have been properly inspected and maintained. The Annual Certification must be submitted via the SWPPS.

Table 5.15. Routine Inspection Frequency Summary Table

Type of Inspection	Purpose	Applicable Components or SMPs	Suggested Frequency
Video pipe inspection	To identify accumulated sediment and defects in piping systems	Inflow, outflow and underdrain piping	Every three years

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**Permit Renewal**

DEP rules require that Stormwater Maintenance Permits be renewed every 5 years. Permit renewal requires a certification from a qualified professional, depending on the type of professional that signed and sealed the original construction drawings. Permit renewal applications must be filed on the SWPPS.

Video subsurface internal storage inspection	To identify accumulated sediment and defects in internal storage and detention structures	Subsurface internal structures	Every three years
Annual vegetation inspection	To assess the health and condition of vegetation	Vegetated SMPs	Annually during the growing season
Annual structural inspection	To identify areas of differential settlement or structural concern	Structural components including concrete structures, piping, fencing	Annually
Drawdown test	To assess the drawdown time of the practice	Infiltration practices	As needed, based on changes in permeability of infiltrating surfaces
Surface infiltration test following ASTM C1701 or other approved method	To assess the infiltration capabilities	Porous pavement surfaces	Twice per year or more based on changes in permeability of porous pavement surface

**DEP Inspections**

As the permitting agency, DEP reserves the right to perform periodic inspections of permitted SMPs. DEP inspectors will typically perform a visual assessment of key components to check for issues such as poor plant cover, erosion, sedimentation, clogging, or structural damage. DEP inspectors may also ask to see inspection and maintenance records, which must be kept up-to-date and available on premises. DEP inspections may be more frequent immediately following construction to ensure that property owners are effectively transitioning to an active O&M phase.

**Deficiencies**

If DEP inspections reveal deficiencies in the SMPs, DEP will issue a deficiency notice and the property owner must initiate a remedial action plan to address any noted deficiencies. Annual certification and permit renewal will depend on the resolution of any outstanding deficiencies. Deficiencies that are not resolved in a timely manner as determined by DEP may result in Notices of Violation and, ultimately, fines.

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**6. RIGHT-OF-WAY STORMWATER MANAGEMENT REQUIREMENTS**

Guidance included in this Chapter is applicable only to Right-of-Way (ROW) projects [triggering applicability requiring permitting] in either the Combined Sewer (CSS) areas or Municipal Separate Storm Sewer (MS4) areas. All other projects, including new road construction, shall refer to Chapters 2-5 or, for covered roadway maintenance, Chapter 7, for relevant information. This chapter covers the following topics:

- Section 6.1 – Overview of criteria for applicability of stormwater construction permit
- Section 6.2 – Stormwater Pollution Prevention Plan (SWPPP) requirements based on development activity type and other factors
- Section 6.3 – Technical requirements for meeting stormwater management objectives
- Section 6.4 – Guidance for selecting, siting, and sizing of Post-Construction (PC) Stormwater Management Practices (SMPs)
- Section 6.5 – Geotechnical requirements for ROW SMPs
- Section 6.6 – Additional resources for SWPPP application development

**6.1. Permit Applicability**

A ROW project must apply for a stormwater construction permit, which includes a SWPPP, when the project meets one or (more) both of the following criteria:

- Disturbs 20,000 sf or more of soil; OR
- Creates 5,000 sf or more new impervious area; OR
- Is a covered maintenance activity]

Disturbed area is the area of soil disturbed by development activities such as building, demolition, renovation, replacement, restoration, rehabilitation, or alteration of any structure or road; or land clearing, land grading, excavation, filling or stockpiling.

Activities that do not disturb soils, such as surface markings of paved areas are not considered in the estimation of the extent of the disturbed area.

It is important to note that linear utility work that results in soil disturbance counts toward the overall soil disturbance threshold. In cases where linear utility work, or any other

development activity, is carried out in phases, the project may be considered a common plan of development for which the total disturbed area across all phases results in the need for a stormwater construction permit.

**[callout box]**

All soil disturbances that are part of a common plan development must be considered toward the soil disturbance threshold and the need for a stormwater construction permit.

**[end callout box]**

An impervious surface is any surface that cannot effectively infiltrate rainfall. Such surfaces generally include rooftops, pavements, sidewalks, and driveways. In addition, pervious hardscapes such as gravel roadways and gravel sidewalks are also considered impervious surfaces unless a geotechnical investigation indicates that the permeability rate of underlying soils is sufficient for reducing runoff. More specifically, underlying soils must have a permeability rate of at least 0.5 in/hr.

The increase (or decrease) in impervious area is calculated as the difference in total impervious area from pre- to post-development. The pre-development case must represent the least amount of impervious surface for the disturbed area within the last 5 years prior to development. When possible, photos, plans, and/or satellite images should be used to determine the appropriate pre-development impervious area.

Covered roadway maintenance [activity is] as defined [as roadway maintenance that involves 20,000 sf or more. Roadway maintenance activities occur in the ROW and include milling and filling of existing asphalt pavements ("milling and paving"), replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six inches of subbase material; or long-term use of equipment storage areas at or near highway maintenance facilities] herein is addressed in Chapter 7.

**6.2. SWPPP Requirements**

For projects that have been determined to require a stormwater construction permit and a SWPPP, the next step is to determine what stormwater management measures must be included in the SWPPP. The following guidance can be used to make that determination.

ROW projects that require a stormwater construction permit, but disturb less than one acre of soil, [including covered maintenance activities.] will require a SWPPP with only erosion and sediment controls (ESC).

ROW projects that require a stormwater construction permit and disturb one acre of soil or more will have varying SWPPP requirements based on the type of development activity. More specifically, covered development projects listed in Table 2.2 (Chapter 2) will require a SWPPP with only ESC, while all other covered development projects will require both ESC and PC SMPs.

For ease of reference, common activities related to ROW work and their associated requirements are included in the table below.

Table 6.1: ROW Project Scenarios and SWPPP Requirements.

Project Scenarios	Type of SWPPP Required
1. Private utility move-outs – coordinated with city agency to support agency work	ESC
2. Water/sewer mains trench work only	ESC
3. Road reconstruction**	ESC and PC SMPs
4. Road reconstruction with water/sewer mains work**	ESC and PC SMPs
5. Roadway maintenance	ESC

\*\*PC SMPs are required only when the project disturbs one acre or more of soil

**Project Scenario Definitions:**

- Private Utility Move-out – Installation of underground utilities, such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains.
- Water/Sewer Mains Trench Work Only – Installation or rehabilitation of water/sewer mains where soils are disturbed only within the trench width required for utility work.
- Road Reconstruction – Full depth roadway replacement from curb to curb that results in exposure of subbase or disturbance of soils.

- Road Reconstruction with Water/Sewer Mains Work – Full-depth roadway replacement that occurs in conjunction with the installation or rehabilitation of water/sewer mains, which results in exposure of subbase or disturbance of soils outside of trench width required for utility work. [
- Roadway Maintenance – includes milling and filling of existing asphalt pavements ("milling and paving"), replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six inches of subbase material; or long-term use of equipment storage areas at or near highway maintenance facilities.]

Projects that include development activities across multiple blocks or locations may use control measures appropriate for each area. For example, using ESC and PC SMPs in areas with roadway reconstruction, while using ESC only in areas with water/sewer main trench work.

For projects that require a SWPPP with ESC, the ESC measures shall be designed in accordance with the NYS Standards and Specifications for Erosion and Sediment Control (The Blue Book), dated November 2016, or its successor (<https://www.dec.ny.gov/chemical/29066.html>).

For projects that require a SWPPP with PC SMPs, see sections 6.3 and 6.4 for technical requirements and design guidance on PC SMPs, respectively.

In addition to identifying required ESC and PC SMPs, practitioners must determine whether No Net Increase (NNI) criteria are applicable to the project. The NNI requirement is applicable in the ROW when all four of the following conditions are met:

- Disturbed area is 1 acre or more
- Project is located in an MS4 area
- Project discharges to an impaired waterbody, and
- Project results in an increase in impervious area

When NNI is applicable, designers shall refer to Chapter 2 for specific criteria.

The remaining sections in this chapter provide guidance on ROW projects that require PC SMPs.

**6.3. Technical Requirements**

6-1

6-2

**Projects without new impervious area**

ROW projects that do not cause an increase in impervious area have the following options for meeting water quality goals:

- Option 1 – Reduce the existing *impervious area* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.5 of the NYSDEC SMMDM must be applied to all newly created pervious areas; or
- Option 2 – Manage a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of PC SMPs; or
- Option 3 – Apply a combination of 1 and 2 above that provides a weighted average of at least two of the above methods.

In addition, if there is an existing PC SMP located on the site that captures and treats runoff from the *impervious area* being disturbed, then the condition and size of the PC SMP shall be evaluated by the designer. If the PC SMP is able to manage the appropriate WQv as-is, then use of that practice may be continued. Otherwise, designers need to consider additional practices or changes to the existing practice to meet the requirements above. Additional details on each option are provided in the following sections.

**Option 1 – Reduce impervious area**

As a first step, designers must seek to reduce existing impervious area by a minimum of 25% of the total disturbed, impervious area. The designer must demonstrate that impervious area reduction was thoroughly analyzed and implemented to the maximum extent practicable before proceeding to Option 2. Agencies should include this analysis in the planning stage. DEP will review submitted supporting documentation in making its determination about whether an impervious area reduction is infeasible.

Impervious area can be reduced by replacing existing impervious surfaces with pervious surfaces. Some specific examples include:

- Vegetated medians – a vegetated area that separates opposing or merging lanes of traffic.
- Curb strip – a strip of grass, plants, or trees, located between a roadway curb and a sidewalk.

**[callout box]**

This equation is only applicable to ROW projects. All other projects should refer to guidance in Chapters 2-5. **[/end callout box]**

The SWPPP must show how the WQv is managed at the practice and site level, i.e., the disturbed, impervious drainage area, runoff coefficient, and WQv must be determined for each individual practice, and, in total, the practices must manage the WQv across the entire project.

ROW projects have a limited number of PC SMPs that may be used to manage the WQv due to several unique challenges of working in the ROW. For more information on suitable PC SMPs for ROW projects refer to Section 6.4. Guidance on delineating the disturbed, impervious drainage area is also provided in Section 6.4.

Finally, designers must also ensure that runoff from any additional contributing areas, beyond the disturbed, impervious drainage area itself, can safely bypass the PC SMP without adversely impacting the practice or surrounding areas. A note should be included on the SWPPP to indicate that safe bypass of runoff was considered and that any water in excess of WQv will continue along the gutter to catch basins, as intended.

**Option 3 – Combination Approach**

This option proposes a combination of impervious cover (IC) reduction and PC SMPs that results in an equivalent management of stormwater runoff compared to either method individually. The total combination is calculated using the following equation:

EQ6.2:  
25% = % IC reduction + % WQv managed by PC SMPs

Below are examples of how the water quality goals can be met using the combined method in each disturbed drainage area:

- 5% IC reduction, 20% WQv with PC SMPs
- 10% IC reduction, 15% WQv with PC SMPs
- 15% IC reduction, 10% WQv with PC SMPs
- 20% IC reduction, 5% WQv with PC SMPs

<sup>5</sup> As of the release of this version of the guidance NYC DOT is evaluating porous technologies for use in bike lanes. Future versions of this guidance document may

- Street trees – a tree that is growing in the city ROW between the sidewalk and the curb.

Street trees should be designed in accordance with all applicable criteria from the NYC DPR tree planting standards ([www.nycgovparks.org/trees/street-tree-planting](http://www.nycgovparks.org/trees/street-tree-planting)) and [Section 5.3.4 of] the NYS SWMDM. Note that vegetated medians may be used either as a means to reduce impervious cover, if configured as a simple greenspace, or as a PC SMP, if designed with the standard practices identified in Section 6.4. If reducing impervious area by 25% is not feasible, then PC SMPs are required to meet water quality goals.

**Option 2 – Capture and treat the WQv**

The water quality requirement aims to manage runoff from small, frequent storm events that can significantly impact the quality of receiving waters.

In MS4 areas, runoff from these events tends to contain higher pollutant levels. Therefore, retention and treatment of small storm runoff in MS4 areas help to remove those pollutants and, in turn, improve water quality.

In CSS areas, these events trigger the majority of CSO events. Therefore, retention and detention of small storm runoff in CSS areas helps to reduce CSOs and, in turn, improves water quality.

The water quality criteria are met by managing runoff from an appropriate small storm design event. NYSDEC defines this design event as the 90<sup>th</sup> percentile rain event. In New York City, the 90<sup>th</sup> percentile rain event is 1.5 inches of rainfall ([Figure 4.1 of] [see the NYS SWMDM](#)).

The volume of runoff from the 90<sup>th</sup> percentile rain event, which is the target to be managed by PC SMPs, is also referred to as the water quality volume (WQv). The following equation can be used to calculate 25% of the WQv, which needs to be managed by PC SMPs:

EQ6.1:  
$$WQ_v = \frac{1.5}{12} \cdot A \cdot 0.95 \cdot 0.25$$

where:  
WQv: water quality volume (cf)  
A: disturbed, impervious drainage area (sf)

Note that areas where impervious surfaces have been changed to pervious can be counted EITHER towards the IC reduction to reduce the percent of WQv that needs to be treated, OR to reduce the runoff coefficient (Rv) when calculating WQv. New pervious areas cannot be counted twice as both a percent IC reduction and a reduction of Rv.

**Projects with new impervious area**

ROW projects that cause an increase in impervious area must manage 100% of the WQv from the newly created impervious areas. The remaining disturbed areas may be managed using one of the three options above.

**Projects that cannot meet technical requirements**

After following the guidance in this Chapter, projects that cannot meet the above technical requirements must schedule a consultation with DEP before proceeding with the SWPPP application. As part of the meeting, DEP and the designers will review opportunities and other potential considerations for meeting water quality objectives.

**6.4. ROW SMP Selection, Siting, and Sizing**

Designers must ensure that proposed PC SMPs meet the WQv requirements detailed in Section 6.3. This section provides guidance on the selection, siting, and sizing of PC SMPs for ROW projects to meet this objective.

**SMP Selection**

ROW projects have a limited number of PC SMPs that may be used to manage the WQv due to several unique challenges of working in the ROW.

Table 6.2 Applicable ROW PC SMPs

SMP Function	SMP Types (in order of preferred hierarchy)
Infiltration	ROW Precast Porous Concrete Panels <sup>5</sup>
	ROW Bioswales with Type D inlet
	ROW Infiltration Basins
	ROW Bioswales

include additional porous technologies to facilitate implementation.

All of these practices are considered infiltration practices, because they capture and infiltrate runoff into the underlying soils (sometimes referred to as exfiltration). Infiltration practices may only be used in areas where geotechnical tests indicate that soils are adequate for infiltration.

Designers should refer to the latest DEP Standard Designs and Guidelines for Green Infrastructure Practices for the layout and configuration of each system (<https://www1.nyc.gov/site/dep/water/green-infrastructure.page>).

In accordance with these standards, porous concrete panel systems should be designed to look continuous across the entire length of the block. In places where valves or other street features prevent the use of pre-cast panels, poured-in-place concrete (non-porous) may be used to achieve a continuous concrete system. Refer to the casting detail in the green infrastructure standard designs for the required dimensions of poured-in-place concrete around valves and other castings to prevent cracking.

Note that the PC SMPs listed in Table 6.2 above are ordered in a preferred practice hierarchy. Designers should evaluate the feasibility of PC SMPs in the order in which they are listed. However, each location must be assessed for its unique siting constraints in order to select the appropriate SMP. When feasible, designers may consider placing these standard practices in the ROW median. Finally, designers should evaluate adjacent publicly-owned properties for SMP implementation if necessary.

**SMP Siting**

There are five site constraints that may limit the feasibility of PC SMPs:

- Soil constraints – permeability tests indicate that soil is not suitable for infiltration. See Appendix H for more information on soil permeability.
- Subsurface constraints – boring tests indicate that the bottom of the practice would be too close to groundwater table or bedrock for proper function.
- Hotspot constraints – land use or soil conditions increase the risk of runoff contamination, limiting the use of infiltration practices (see criteria below).

**SMP Sizing**

PC SMPs must be sized to manage the appropriate WQv from the disturbed, impervious drainage area, as described in Section 6.3. The SWPPP must show 1) how the WQv is managed at the practice and project level: the disturbed drainage area, runoff coefficient, and WQv must be determined for each individual practice; and 2) that, in total, the practices manage the WQv across all areas that require PC SMPs.

For ROW projects, designers can determine the disturbed, impervious drainage area and appropriate SMP size in five steps, using the following guidance.

**Step 1. Gather Data**

The delineation of disturbed, impervious drainage areas will require the following data:

- Surface elevation data for the project area to determine roadway flow directions
- Locations of any existing or proposed catch basins in the project area to determine drainage points
- Locations of property lines around the ROW project area to delineate drainage areas
- Information on existing surface cover types

In cases where a topographic survey has been conducted for the project area, these data should be used to identify runoff flow directions and cover types.

When topographic survey is unavailable, digital elevation maps and property lines may be downloaded from the NYC Open Data online portal (<https://opendata.cityofnewyork.us/>). In addition, catch basin data can be requested from DEP BWSO using a Request for Records form, which can be found online (<https://www1.nyc.gov/site/dep/about/request-records.page>).

Please note that practitioners should account for any catch basins that will be added or removed as part of the proposed project.

**Step 2. Evaluate Roadway Flow Directions**

Using the surface elevation data, practitioners should identify the direction of runoff flow along each roadway within the project area. When using digital elevation maps, it is recommended that contours are generated to assist

- Surface constraints – regulations require the use of paved surfaces, which limit the use of vegetated practices, e.g., regulations on parking and/or egress requirements.
- Space constraints – required setbacks from structures, utilities, property lines, existing trees, or other site features limit the use of practices at the ground level.

Keep in mind, that some constraints may not impact the entire site, but may be limited to one portion of the site. In such cases, it is important that, when demonstrating that SMPs are used to the maximum extent practicable, designers consider how constraints may vary across the site.

Hotspot constraints may be caused by either land uses or soil conditions. Land uses that cause stormwater hotspots [may be found in Table 4.3 of] [are referenced in the NYS SWMDM](#). Listed below are soil conditions that cause stormwater hotspots, which may be demonstrated through environmental assessments or as part of regulatory program (e.g., NYSDEC Spills and Remediation Programs) documentation:

- Presence of grossly contaminated soil or non-aqueous phase liquid (NAPL) as defined in NYSDEC DER-10
- Soil exceeds the groundwater protection objectives of NYSDEC 6 NYCRR 375
- Soil is characterized as hazardous waste as defined in 6 NYCRR 360 or 40 CRF 261
- Groundwater exceeds standards, guidance values and/or limits described in NYSDEC AWQS in 6 NYCRR 703 or TOGS1.1.1

The latest siting criteria for ROW projects can be found online at the DEP green infrastructure webpage ([www1.nyc.gov/site/dep/water/green-infrastructure.page](http://www1.nyc.gov/site/dep/water/green-infrastructure.page)). Note that the siting criteria in Appendix C are meant for on-site projects and do not include all ROW siting criteria. The ROW siting criteria may be used to determine where SMPs cannot be placed within the ROW project area, due to space constraints: for example, the required clearances between PC SMPs and street furnishings such as utility poles, street signs, and parking meters.

with this analysis. Spot elevations should be consulted for any flat or difficult to evaluate areas.

In cases where one portion of the roadway flows in a different direction from the other, the location of any high points should be marked and a flow direction for each portion of the roadway should be assigned. An example of the roadway flow direction analysis is shown in Figure 6.1 below.

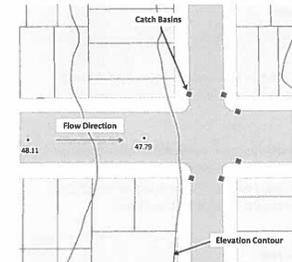


Figure 6.1. Example roadway flow direction analysis.

**Step 3: Delineate the disturbed, impervious drainage area of each catch basin**

To delineate the disturbed drainage area of each catch basin, first draw the boundary of the disturbed area. Then add lines that reflect the hydraulic boundaries between separate drainage areas. Hydraulic boundaries can include the crown of the roadway, catch basins, and high points. See the following paragraphs for example delineations.

Figure 6.2 shows delineations after drawing the boundary of the disturbed area and adding separation lines for the crown of roadway and catch basins. When catch basins are located at the corner of an intersection, draw a boundary that connects the center of the intersection, with the corner of the disturbed area boundary. When catch basins are located mid-block, draw a boundary perpendicular to the street centerline at the location of the catch basin.

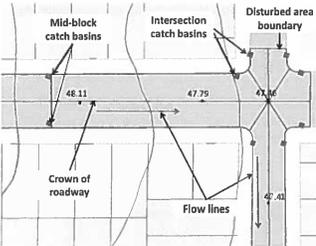


Figure 6.2. Example delineation of disturbed drainage areas with separation lines for the crown of roadway and catch basins.

Figure 6.3 shows updated delineations when separation lines are added for high points along the roadway. Similar to mid-block catch basins, the boundary for a high point is drawn perpendicular to the street centerline.

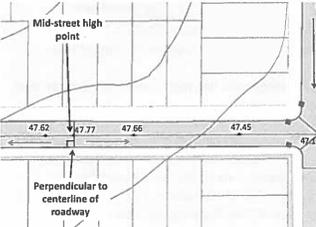


Figure 6.3. Example delineation of disturbed drainage areas with added separation lines at high points.

Perform this process until the disturbed drainage areas for each catch basin within the project area have been identified. Once completed, then identify the portion of each disturbed drainage area that is impervious using available information on existing surface types. The resulting disturbed, impervious drainage areas can be used to determine the required WQv within the applicable project area.

**Step 4: Delineate the disturbed, impervious drainage area of each SMP**  
 Once the disturbed, impervious drainage areas of catch basins are known, these areas can be further delineated into drainage areas for each SMP. To do this, designers should draw another boundary perpendicular to the street centerline at the inlet location of each individual practice, as shown in the figure below.

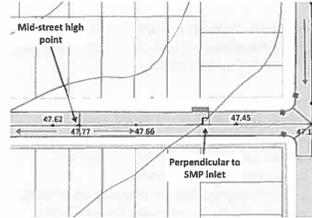


Figure 6.4. Example boundaries at inlets of PC SMPs.

The resulting areas can be used to calculate the WQv that must be managed by each practice.

**Step 5: Size PC SMPs to manage the WQv**  
 PC SMPs must be sized to manage the associated WQv from their disturbed, impervious drainage area. In addition, PC SMPs must be sited in a way that manages the total WQv across the entire ROW project.

Note that when two or more PC SMPs are located in the same catch basin drainage area, the downstream PC SMPs may be used to manage any WQv that could not be managed by upstream practices.

Designers should refer to Chapter 4 for guidance on determining the storage volume for each PC SMP and for sizing accordingly to meet the WQv requirement.

**6.5. Geotechnical Requirements**  
 Guidance on geotechnical investigations for ROW projects is provided in Appendix H. Note that on-site projects must refer to [Appendix D of] the NYSDEC SWMDM for geotechnical requirements.

**6.6. Additional Resources**

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For more information on how to submit stormwater construction permit applications, refer to Chapter 3.

A ROW SMP Data Tracking Form is required for SWPPPs that include both ESC and PC SMPs. See Appendix H for this form and associated guidance.

PC SMPs in ROW areas will require an O&M plan as part of the stormwater construction permit; refer to Chapter 5 for individual SMP maintenance requirements.

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**7. ROADWAY MAINTENANCE STORMWATER MANAGEMENT REQUIREMENTS**

Guidance included in this Chapter is applicable to covered roadway maintenance.

**7.1 General Requirements**

Measures identified in this chapter are to be implemented during the two phases, milling and paving, of the roadway maintenance work. Between each phase, all practices must be removed, and the roadway must be opened to traffic for safety and to mitigate street flooding.

**ORDER OF OPERATIONS**

**MILLING**

1. Identify NYC drainage assets including standard assets such as manholes and catch basins, or green infrastructure assets such as rain garden/bioswales, infiltration basins, and porous concrete panels in ROW where work is to commence.

2. Mark all headers and aprons that must be protected during milling by placing white lines perpendicular to the curb.

3. Protect NYC drainage assets during milling operations:

- a. Rain Garden: Block inlets and outlets with filter sock, or equivalent.
- b. Infiltration Basin: Cover infiltration inlet with filter sock, or equivalent.
- c. Catch Basin: Cover all catch basin crates with metal plates, wood panels or equivalent. Curb inlets must be blocked with filter sock or other similar material to prevent materials from entering the catch basin infiltrator.
- d. Porous Concrete Panels:

- i. Place traffic barrels along the panels for visibility.

- 5. The machine operator should be able to position the milling machine around NYC drainage assets to remove the asphalt without damaging hardware or concrete. If necessary, use hand picks or other light equipment to remove old pavement from sensitive or hard-to-reach areas.

- 6. Use mechanical ripper and hand picks to separate any areas between the asphalt pavement and the concrete components such as aprons, headers, Mill the old pavement.

- 7. Where applicable, use hand sweeping and/or debris blower on any remaining loose material to move it away from NYC drainage assets and into milled roadway.

- 8. Use machine vacuum sweeper to sweep all milled roadway areas.

- 9. Remove all protections from NYC drainage assets when milling is completed.

- 10. Open the roadway to traffic.

**PAVING**

- 1. Identify NYC drainage assets such as catch basins, rain garden/bioswales, infiltration basins, and porous concrete panels in ROW where work is to commence.

- 2. Mark all headers and aprons that must be protected during paving by placing white lines perpendicular to the curb.

- 3. Protect NYC drainage assets during paving operations:

  - a. Rain Garden: Block inlets and outlets with filter sock, or equivalent.
  - b. Catch Basin: Cover all catch basin crates with metal plates, wood panels or equivalent based on standards provided.
  - d. Porous Concrete Panels:

- i. Place traffic barrels along the panels for visibility.
- ii. Do not drive dump trucks or other heavy-duty equipment

- ii. Do not drive dump trucks and other heavy-duty equipment over the panels
- iii. Run the milling machine no closer than 2-4 inches from the edge of the concrete header
- iv. Use a mechanical ripper to carefully remove asphalt along the concrete header
- v. Clear loose millings off panels using either a handheld blower or broom

4. Avoid storing milling debris or tools (e.g., shovels, brooms, and rakes) in or on top of NYC drainage assets.

- v. Clear loose asphalt off panels using either a handheld blower or broom.

- 4. Avoid storing asphalt or tools (e.g., shovels, brooms, and rakes) in or on top of NYC drainage assets.

- 5. Apply tack coat to milled and swept roadway using a mechanical spraying method with tank truck distribution system (tack coat spraying truck).

- 6. When using an Asphalt Paving Machine (APM), place new asphalt pavement over milled and coated surface.

  - a. The machine operator should be able to position the APM around the NYC drainage assets without causing damage.

- 7. When necessary, use a hand rake, broom, or a debris blower on any loose material to move it away from NYC drainage assets and into paved roadway.

- 8. While the asphalt pavement is still hot, use a Mechanical Roller to compact the new pavement.

  - a. The machine operator must not position the Roller over green infrastructure, but should be able to position the Roller over other NYC drainage assets without causing damage.

- 9. When necessary, remove excess, loose material away from NYC drainage assets and out of roadway.

- 10. Remove all protections from NYC drainage assets when paving is completed.

- 11. Open the roadway to traffic.

- over the panels
- iii. Use a temporary liner to protect panels from foot traffic contamination (i.e., tracking tack and asphalt onto the panel)
- iv. Shift the temporary liner as crew advances along the panel

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violation of the water quality standards during the milling and paving phases. The selection, installation, implementation, and maintenance of these control measures must meet the standards set forth in section 7.3 of this chapter.

**Pollution Prevention Measures**

Employ the following pollution prevention methods as needed to prevent discharges of pollutants during the milling and paving phases of the work.

- 1. Use mobile fuel tank trucks, refuel milling and paving equipment away from DEP drainage assets, as operationally feasible.

- 2. Ensure that granular absorbents are available to absorb discharges of oils, coolants, solvents or other harmful materials from equipment breakdowns or other accidental discharges.

- 3. If a spill is beyond the limits of the granular absorbents, engage a third-party contractor for cleanup. If a spill is released into any NYC drainage asset, notify NYC DEP HAZMAT at (718)-595-4646. For oil or petroleum spills, notify NYSDEC at (800)-457-7362 unless all the following conditions are met:

**The spill**

- is less than 5 gallons;
- is contained and under the control of the spiller;
- has not reached/impacted land or water; and
- is cleaned up within two hours of discovery

- 4. Appropriately store and dispose of asphalt collected as waste.

- 5. Install practices during both the milling and paving operations to keep all asphalt out of NYC drainage assets.

**7.2 Practices Required for Milling and Paving Operations**

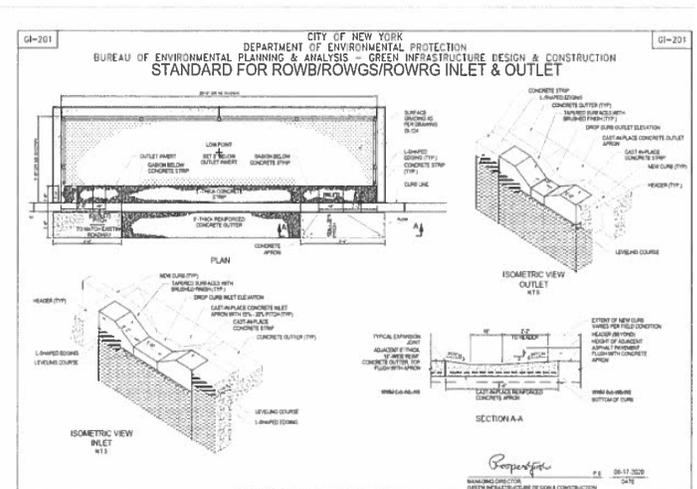
**Erosion and Sediment Control Requirements**

Select, install, implement, and maintain control measures to minimize the discharge of pollutants and prevent a

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**Standard for Rain Garden Protection**

Specifications	
Style	Around the Drain
Use With	Storm Drains, Culverts, Slope Pipe Perimeter, Dumpster Perimeter, Roof Drains, Downspouts and Trench Drains
Dimensions	12.75" W x 6" L x 3" H
Recycled Content	85% Post-Consumer Recycled Synthetic Fibers
Absorbency	Up to 2.25 gal.
Brand	P.C.
Color	Blue
Drain Shape	Round, Square, Rectangular
Max Flow Rate	10 gal./Minute
Substance Filtered	Oil, Sediment, Debris, Trash
UV Resistant	Yes
Distributor Part Number	49485
Sold as	1 each



**Standard for Filter Socks**

All filter socks must be placed to block inlets and curb inlets to all drainage infrastructure. Filter socks must meet the minimum material specifications.

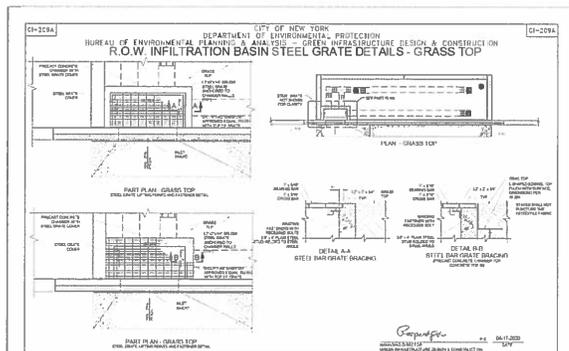
**Minimum Material Specification Filter Socks**

Recycled Content	Up to 85%
Absorbency	Up to 2.25 US Gallons
Height	Minimum 3"
Width	Minimum 12.5"

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Length	As needed for inlet protection
Maximum Flow Rate	10 Gal/Min
Substances filtered	Oil, sediment, debris and trash
UV Resistant	Yes

**Standard for Open Grate Protection**



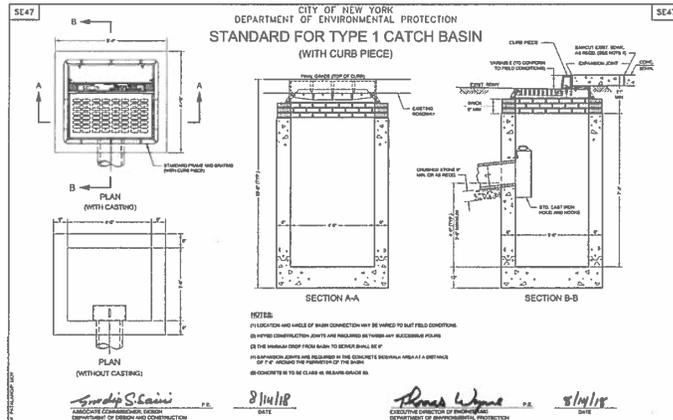
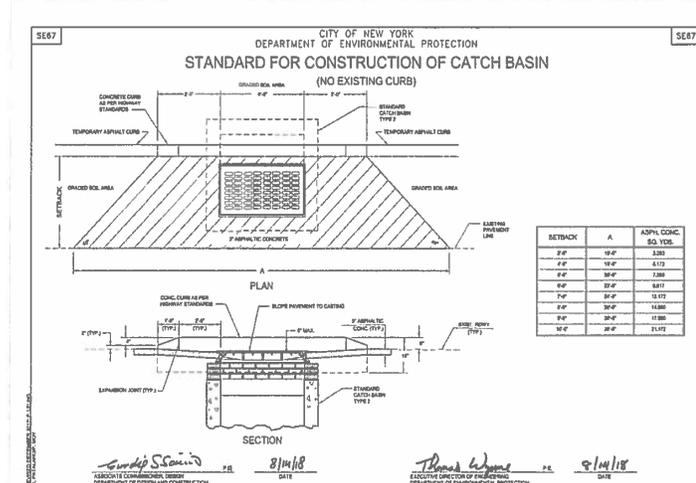
- At grade Inlet Protection for open grates must meet the following minimum requirements:
1. Must cover the entire inlet including curb opening; filter socks may be used to block curb opening.
  2. Must allow stormwater to flow freely into the inlet up to 92 gallons/square foot /minute.
  3. Must not remove grate to install.
  4. Material must meet or exceed the material specifications for open grates.

**Material Specifications for Open Grate Covers**

Property	ASTM Test	Value
Mass per unit area (oz./yd <sup>2</sup> )	D 3776	5.2
Grab Tensile, MDxCD	D 4632	297x223
Grab Elongation, MDxCD (%)	D 4632	58/59
Trapezoid Tear, MD x CD (lbs)	D 4533	81x75
Puncture (lbs)	D 4833	99
Burst Strength (psi)	D 3786	940
Permittivity (sec <sup>-1</sup> )	D 4491	2.60
A.O.S. (U.S. sieve no. - mm)	D 4751	60
Water Flow Rate (gpm/ft <sup>2</sup> )	D 4491	192

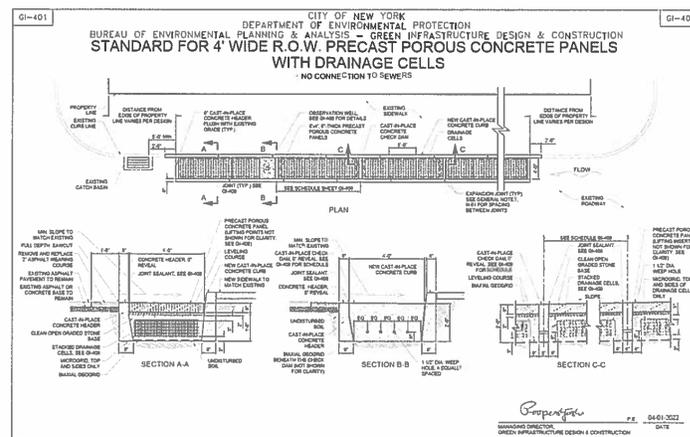
7-3

**Standard for Catch Basin Protection**



7-4

**Porous Concrete Practice Protections & Order of Operations**



7-5

NEW YORK CITY MAYOR'S OFFICE OF OPERATIONS  
253 BROADWAY, 10<sup>th</sup> FLOOR  
NEW YORK, NY 10007  
212-788-1400

CERTIFICATION / ANALYSIS  
PURSUANT TO CHARTER SECTION 1043(d)

RULE TITLE: Amendment of Rules Governing Management of Construction and Post-Construction Stormwater Sources

REFERENCE NUMBER: DEP-97

RULEMAKING AGENCY: Department of Environmental Protection

I certify that this office has analyzed the proposed rule referenced above as required by Section 1043(d) of the New York City Charter, and that the proposed rule referenced above:

- Is understandable and written in plain language for the discrete regulated community or communities;
- Minimizes compliance costs for the discrete regulated community or communities consistent with achieving the stated purpose of the rule; and
- Does not provide a cure period because it does not establish a violation, modification of a violation, or modification of the penalties associated with a violation.

/s/ Francisco X. Navarro  
Mayor's Office of Operations

May 31, 2023  
Date

NEW YORK CITY LAW DEPARTMENT  
 DIVISION OF LEGAL COUNSEL  
 100 CHURCH STREET  
 NEW YORK, NY 10007  
 212-356-4028

CERTIFICATION PURSUANT TO  
 CHARTER §1043(d)

RULE TITLE: Amendment of Rules Governing Management of Construction and Post-Construction Stormwater Sources

REFERENCE NUMBER: 2023 RG 029

RULEMAKING AGENCY: Department of Environmental Protection

I certify that this office has reviewed the above-referenced proposed rule as required by section 1043(d) of the New York City Charter, and that the above-referenced proposed rule:

- (i) is drafted so as to accomplish the purpose of the authorizing provisions of law;
- (ii) is not in conflict with other applicable rules;
- (iii) to the extent practicable and appropriate, is narrowly drawn to achieve its stated purpose; and
- (iv) to the extent practicable and appropriate, contains a statement of basis and purpose that provides a clear explanation of the rule and the requirements imposed by the rule.

/s/ STEVEN GOULDEN  
 Senior Counsel

Date: May 31, 2023

NEW YORK CITY MAYOR'S OFFICE OF OPERATIONS  
 253 BROADWAY, 10<sup>th</sup> FLOOR  
 NEW YORK, NY 10007  
 212-788-1400

CERTIFICATION / ANALYSIS  
 PURSUANT TO CHARTER SECTION 1043(d)

RULE TITLE: Amendment of Rules Governing Management of Construction and Post-Construction Stormwater Sources

REFERENCE NUMBER: DEP-97

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I certify that this office has analyzed the proposed rule referenced above as required by Section 1043(d) of the New York City Charter, and that the proposed rule referenced above:

- (i) Is understandable and written in plain language for the discrete regulated community or communities;
- (ii) Minimizes compliance costs for the discrete regulated community or communities consistent with achieving the stated purpose of the rule; and
- (iii) Does not provide a cure period because it does not establish a violation, modification of a violation, or modification of the penalties associated with a violation.

/s/ Francisco X. Navarro  
 Mayor's Office of Operations

May 31, 2023  
 Date

NEW YORK CITY LAW DEPARTMENT  
 DIVISION OF LEGAL COUNSEL  
 100 CHURCH STREET  
 NEW YORK, NY 10007  
 212-356-4028

CERTIFICATION PURSUANT TO  
 CHARTER §1043(d)

RULE TITLE: Amendment of Rules Governing Management of Construction and Post-Construction Stormwater Sources

REFERENCE NUMBER: 2023 RG 029

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I certify that this office has reviewed the above-referenced proposed rule as required by section 1043(d) of the New York City Charter, and that the above-referenced proposed rule:

- (i) is drafted so as to accomplish the purpose of the authorizing provisions of law;
- (ii) is not in conflict with other applicable rules;
- (iii) to the extent practicable and appropriate, is narrowly drawn to achieve its stated purpose; and
- (iv) to the extent practicable and appropriate, contains a statement of basis and purpose that provides a clear explanation of the rule and the requirements imposed by the rule.

/s/ STEVEN GOULDEN  
 Senior Counsel

Date: May 31, 2023

**Notice of Public Hearing and Opportunity to Comment on Proposed Rules**

**What are we proposing?** The Department of Environmental Protection (DEP or the Department) is promulgating rules that would establish requirements for control devices to reduce emissions from cook stoves at restaurants in existence prior to May 6, 2016.

**When and where is the hearing?** DEP will hold a public hearing on the proposed rule online. The public hearing will take place at 11 am on July 27, 2023. To participate in the public hearing, please follow these instructions:

Microsoft Teams meeting

**Join on your computer, mobile app or room device**

**Click here to join the meeting**

Meeting ID: 269 016 144 204  
 Passcode: WgP5uJ

Download Teams | Join on the web

**Or call in (audio only)**

**+1 347-921-5612,,635833693#**

Phone Conference ID: 635 833 693#

**How do I comment on the proposed rules?** Anyone can comment on the proposed rules by:

- **Website.** You can submit comments to DEP through the NYC rules website at <http://rules.cityofnewyork.us>.
- **Email.** You can email written comments to [nycrules@dep.nyc.gov](mailto:nycrules@dep.nyc.gov).
- **Mail.** You can mail written comments to the Department of Environmental Protection, Bureau of Legal Affairs, 59-17 Junction Boulevard, 19<sup>th</sup> Floor, Flushing, NY 11373.
- **Fax.** You can fax written comments to DEP's Bureau of Legal Affairs, at 718-595-6543.
- **By speaking at the hearing.** Anyone who wants to comment on the proposed rules at the public hearing must sign up to speak. You can sign up before the hearing by calling 718-595-6531. You can speak for up to three minutes.

**Is there a deadline to submit written comments?** Yes, you must submit written comments by July 27, 2023.

**What if I need assistance to participate in the hearing?** You must tell DEP's Bureau of Legal Affairs if you need a reasonable accommodation because of a disability at the hearing. You must tell us if you need a sign language interpreter. You can tell us by mail at the address given above, or by telephone at 718-595-6531. Advance notice is requested to allow sufficient time to arrange the accommodation. Please tell us by July 20, 2023.

**Can I review the comments made on the proposed rules?** You can review the comments made online on the proposed rules by going to the website at <http://rules.cityofnewyork.us/>. A few days after the hearing, a transcript of the hearing and copies of any written comments will be available to the public.

**What authorizes the department to make this rule?** Section 1043 of the City Charter and sections 24-149.5 and 24-105 of the City Administrative Code authorize the Department to make this proposed rule. This proposed rule was included in the Department's regulatory agenda for this fiscal year.

**Where can I find the department's rules?** The Department's rules are in title 15 of the Rules of the City of New York.

**What rules govern the rulemaking process?** The Department must meet the requirements of Section 1043(c) of the City Charter when creating or changing rules. This notice is made according to the requirements of Section 1043(b) of the City Charter.

#### Statement of Basis and Purpose

Local Law Number 38 for the year 2015 amended Title 24 of the Administrative Code of the City of New York, the "Air Code," by adding a new Section 24-149.5, which provides that cook stoves used at food-service establishments must have an emission control device for odors, smoke, and particulates that meets the requirements of rules established by the Department.

DEP is proposing these rules, as required by Section 24-149.5, to reduce particulate matter released into the environment, which is a known cause of asthma and other respiratory complications. In accordance with Section 24-105 of the Administrative Code, an advisory committee has been consulted in the development of these rules. The committee includes representatives from the restaurant and related industries, representatives of the environmental protection and environmental justice communities, and experts in the health effects of pollutants associated with cooking devices. In addition, and also pursuant to Section 24-105, the Department considered the availability and cost of emissions control devices when developing these proposed rules.

Cook stoves that were installed after Section 24-149.5 took effect in May 2016 are subject to the rules set forth at 15 RCNY Chapter 38, which were promulgated in May 2017. This proposed rule governs cook stoves that were installed prior to May 6, 2016. Section 24-149.5 required this rule to be promulgated before January 1, 2020. The advisory committee and DEP were unable to finalize a rule in that timeframe due to the difficulty of crafting a rule to manage technical and cost concerns that are attendant to the installation of emission control devices. For example, costs for controls for existing cook stoves can be difficult to manage as the spaces in which these cook stoves operate are often aging structures that were not designed to accommodate emission control devices. In addition, many of the locations where existing cook stoves are used are not owned by the operators of the cook stoves, and changes required to install such devices require obtaining the landlord's permission. The advisory committee took additional time to consider these practical concerns in the process of crafting the proposed rule. The rulemaking was further delayed due to the difficulty of convening the advisory committee during the Covid-19 pandemic.

The proposed rule provides that the operators of cook stoves that were installed prior to May 6, 2016 must hire a professional engineer or registered architect to assess the feasibility of installing emission controls on the cook stove to achieve a 75% reduction in particulate emissions. If this assessment concludes that a reduction of 75% or more cannot be achieved, or that no emissions controls can be installed, the assessment must identify any emission controls that could provide a reduction of at least 25% or an explanation for why no emission controls can be installed.

Finally, the proposed rule makes an amendment to the definition of the term "cook stove" in section 38-01 of title 15 of the Rules of the City of New York.

Consistent with the above, DEP promulgates the following new Rule, to be found at 15 RCNY Chapter 62.

The Rule is authorized by Section 1043 of the Charter of the City of New York and sections 24-105 and 24-149.5 of the Administrative Code.

The text of the Rule follows.

Section 1. The definition of "cook stove" in section 38-01 of title 15 of the Rules of the City of New York is amended to read as follows:

**Cook stove** means any wood fired or anthracite coal fired appliance used [primarily for cooking food for onsite consumption at a food service establishment, as such term is defined in 24 RCNY Health Code § 81.03] for the preparation of food intended for onsite consumption or retail purchase.

§2. Title 15 of the Rules of the City of New York is amended by adding a new Chapter 62, to read as follows:

#### Chapter 62

#### Emissions Reduction Technologies for Existing Cook Stoves

##### §62-01 Definitions

**Access Point** means that which enables a device, appliance or equipment to be reached by ready access or by a means that first requires the removal or movement of a panel, door or similar obstruction.

**Air Filtration Device** means a device composed of fibrous materials which removes solid particulates.

**CFM** means cubic feet per minute.

**Cook Stove** means any wood fired or anthracite coal fired appliance used for the preparation of food intended for onsite consumption or retail purchase.

**Discharge Point** means the point at which particulate matter is released from a stack into the open air.

**Electrostatic Precipitator (ESP)** means a filtration device that removes fine particles, such as dust and smoke, from a flowing gas using the force of an induced electrostatic charge minimally impeding the flow of gases through the unit. An ESP is a type of emissions control device.

**Emissions Control Device** means any equipment used for collecting or confining particulate matter for the purpose of preventing or reducing the emission of such particulate matter into the open air.

**Existing** means installed before May 6, 2016.

**New** means installed on or after May 6, 2016.

**NFPA** means National Fire Prevention Association.

**Optical Particle Counter (OPC)** means an instrument based on the principle of light scattering from particles. It is a real time instrument that is used to measure particles above 0.05 µm in diameter.

**Particulate Matter (PM)** means a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. PM 10 describes inhalable particles, with diameters that are generally 10 micrometers and smaller.

**Peak Load** means twenty percent additional solid fuel is added to the amount of fuel that is normally used for cooking in the cook stove.

**RH Correction Function** refers to relative humidity correction. When this function is enabled, the particle growth effect due to high humidity is corrected by computing the mass concentration based on the original dry environment particle population.

**Smoke** means small gas-borne and airborne particulate matter arising from a process of combustion in sufficient number to be visible.

**Stack** means any duct, control equipment exhaust or similar apparatus, which vents gases and/or PM into the open air.

**Test Port Plate (TPP)** means a template cover that is designed to prevent any of the air stream from escaping when the existing access plate is removed and which has an opening for the test probe to fit securely through the material (e.g. cardboard or plexi-glass).

**Total Suspended Particulates (TSP)** means small airborne particles such as dust, fume and smoke with diameters less than 100 µm.

**Treated firewood** shall have the same meaning as set forth in paragraph 13 of section 192.5 of title 6 of the New York Code Rules and Regulations.

**Underwriters Laboratories (UL)** means an American worldwide safety consulting and certification company.

**Wet Scrubber System** means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from an indirect heat exchanger to control emissions of particulate matter (PM).

#### § 62-02 Assessment to Determine Control Technology for Existing Cook Stoves

(a) No person shall operate an existing cook stove that was installed prior to May 6, 2016, without hiring a professional engineer or

registered architect licensed under Sections 7202 or 7302 of the Education Law to conduct and submit an assessment of the feasibility of installing an Emissions Control Device as set forth in this section to reduce such cook stove's total PM emissions by 75 percent or more. Such assessment must be submitted to DEP within one year of the effective date of this rule and must detail the Emission Control Devices, if any, that can be installed.

(b) Except as otherwise provided in this section, if the assessment submitted pursuant to subdivision (a) of this section determines that one or more Emission Control Devices can be installed to reduce an existing cook stove's total PM emissions by 75 percent or more, the Emission Control Device, or Emission Control Devices if more than one is required, must be installed within 180 days of the date on which such assessment is submitted to DEP. Any Emission Control Device that is installed must be certified by DEP in accordance with section 62-07 of this chapter and installed in accordance with the requirements of this chapter.

(c) If the assessment submitted pursuant to subdivision (a) of this section concludes that one or more Emission Control Devices can be installed to reduce an existing cook stove's total PM emissions by at least 25 percent but less than 75 percent, such assessment must describe the Emissions Control Devices that can be installed to achieve such reduction, and such Emissions Control Devices shall be installed prior to operation of the cook stove in accordance with the requirements of this chapter. After installation of such Emission Control Devices, the operator must conduct another assessment in accordance with subdivision (a) of this section within two years of the date on which the Emission Control Devices were installed to determine if additional Emission Control Devices can be installed to reduce such existing cook stove's total PM emissions by at least 75 percent.

(d) If the assessment concludes that no Emission Control Device can be installed on an existing cook stove or that any Emission Control Devices that can be installed cannot achieve a reduction of the existing cook stove's total PM emissions by at least 25 percent, the assessment must include an explanation for this conclusion, and the applicant must submit a variance petition in accordance with the procedures set forth in Section 24-110 of the Administrative Code of the City of New York.

#### **§ 62-03 Control Devices to Reduce Emissions from Existing Cook Stoves**

The following are the approved technologies that may be used to achieve a 75 percent reduction in PM 10:

(a) Wet Scrubbers Systems and Air Filtration Devices must comply with UL 1978 (2010) and be correctly sized for the cooking appliance as specified by the manufacturer of the cook stove.

(b) Electrostatic Precipitators must comply with UL 867 (2011) or UL 710 (2012), must have a certificate of approval from the Fire Department, and must be correctly sized for the cooking appliance as specified by the manufacturer.

#### **§ 62-04 Compliance Requirements:**

(a) Existing cook stoves that are solid fuel-fired ovens must be certified in accordance with UL 2162 (2001), "Outline of Investigation for Commercial Wood-Fired Baking Ovens-Refractory Type" and comply with the New York City Construction Codes.

(b) Fans that are used in conjunction with an Emissions Control Device must be listed and labeled in accordance with UL 762 (2010) and UL 705 (2004).

(c) Where a Type I hood, as defined in the New York City Construction Code, or other approved type of exhaust system acceptable by the Department of Buildings, is installed, the exhaust system must be designed and constructed so that the CFM rate of exhaust is equal to or greater than:

(1) The manufacturer's UL listed exhaust rate for the extra heavy duty class of appliance; and

(2) The lowest acceptable ventilation rate for the UL listed appliance exhaust requirement.

(d) A Type I hood must comply with Section 507 of the New York City Mechanical Code (2022). Listed and labeled UL solid fuel-fired ovens that are constructed of solid masonry or reinforced Portland or refractory cement concrete, that are vented by natural draft or a power chimney system in accordance with NFPA 211 (2013) and that are installed in accordance with the manufacturer's instructions and NFPA 96 (2013) are exempt from using a Type I hood.

(e) Only treated firewood, as defined in this rule, shall be used if the fuel source is for the cook stove is wood.

#### **§ 62-05 Testing Requirements for Emission Control Devices**

Testing must be performed on any Emissions Control Device before it can be used to reduce admissions from an existing cook stove. This

one-time testing may be performed in the field using the following procedures described in this paragraph or in the laboratory as specified in paragraph two of this section.

#### **(a) Field Testing:**

(1) *Emissions Reduction Standard.* Field test data must show that the Emissions Control Device has reduced the existing cook stove's total PM emissions by 75 percent or more except as set forth in subdivision (a) of section 62-02 of this chapter.

(2) *General Requirements.* Field testing must be performed during peak load, using an OPC for TSP. Peak load assumes that unburnt wood or anthracite coal is introduced at the start of the testing and that the same composition of unburnt wood or coal and embers is maintained during the testing. Sampling must be performed with the Emissions Control Device on and off.

#### **(3) Air Filtration Devices and Electrostatic Precipitators:**

(A) For AFDs or ESPs, when taking samples while the unit is on, readings must be taken from within the clean out Access Point downstream of the device, or at the Discharge Point. When taking samples while the unit is off, samples must be taken upstream of the Emissions Control Device.

(B) A field tester must remove the access plate and replace with a Test Port Plate and place the sampling probe inside a precut hole, or place the probe directly within the Discharge Point.

(C) Samples must be taken using the OPC, and must be taken for ten minutes at two liters per minute pump speed, twice with the unit on and twice with the unit off. If the OPC is equipped with a filter assembly, a new glass fiber filter must be used for each test. If the OPC is equipped with RH correction function, it should be enabled when the humidity is expected to exceed 50 percent.

#### **(4) Wet Scrubbers Systems:**

(A) For Wet Scrubbers Systems, samples must be taken from within the clean out Access Point or Discharge Point.

(B) A field tester must remove the access plate and replace with a Test Port Plate and place the sampling probe inside through a cutout hole, or place the sampling probe directly within the Discharge Point.

(C) A 20 liter sample must be drawn into a 37mm glass fiber filter. The sample should be drawn for ten minutes at two liters per minute pump speed, twice with the unit on and twice with the unit off. Filters should be changed for each test.

(D) Samples must be taken in accordance with the following sections of NIOSH Method 0500, Issue 2, August 15, 2004: "Equipment" section (except that a 37mm glass fiber filter should be used), "Preparation of Filters" section, "Sampling" section (except that the total sample volume must be 20 liters), and "Sample Preparation" section.

(E) The filters must then be collected and the weight of the filters must be determined by an Industrial Hygienist in an EPA accredited laboratory.

(b) *Laboratory Testing.* Laboratory testing must be performed in a National Environmental Laboratory Accreditation (NELAC) or New York State Department of Health Environmental Laboratory Approval Program (ELAP) certified Laboratory and must follow, EPA Method 5, Appendix A-3 to 40 CFR Part 60 or Method 202, Appendix M to 40 CFR Part 51, for particulate matter. During each test, samples must be collected from the outlet of the control device. Laboratory test data must show that the Emissions Control Device has reduced the cook stove's total PM emissions by 75 percent or more, except as set forth in subdivision (b) of section 62-02 of this chapter.

#### **(c) Reporting Requirements:**

(1) The results of the testing required by this section must be submitted on forms prescribed by the Department available on the Department's website and must include the following information:

(A) Name and address of the manufacturer of the existing cook stove, brand name, trade name, model number of the cook stove, any additional equipment installed to enhance or support the operation of the Emissions Control Device, the maximum air flow rate, and other relevant operating conditions during the test, as specified by the department.

(B) A description of the Emissions Control Device used on the existing cook stove model being certified.

(C) A statement that testing has been conducted in accordance with the requirements of this section.

(2) Additional reporting requirements for field testing conducted in accordance with paragraph one of subdivision (c) of this section. For AFDs and ESPs, the installer of the Emissions Control Device must submit a printout to the Department with the readings of TSP, and also submit pictures of the filter with the unit on and off. For Wet Scrubber Systems, complete laboratory results must be submitted to the Department to document the reduction in PM.

**§ 62-06 Emissions Control Device and Cooking Exhaust System Maintenance**

(a) Any Emissions Control Device installed or operated under this chapter must be operated, cleaned, and maintained in accordance with the manufacturer's specifications.

(b) Every Emissions Control Device installed or operated pursuant to this chapter must be inspected, cleaned and serviced in accordance with Section 609.5.3 of the New York City Fire Code (2022) by a person holding a FDNY Certificate of Fitness as a Commercial Kitchen Exhaust & Precipitator Cleaning Technician.

(c) The cooking exhaust system must be inspected, cleaned and serviced in accordance with Section 609.5.3 of the New York City Fire Code (2022) by a person holding a FDNY Certificate of Fitness as a Commercial Kitchen Exhaust System Cleaning Technician.

**§ 62-07 Emissions Control Device Certification**

(a) The manufacturer of an Emissions Control Device may seek Department certification by submitting documentation that field testing has been conducted in accordance with the procedures in subdivision (a) of section 62-05 of this chapter and that such device meets the requirements of section 62-02 of this chapter. Such documentation must be submitted in accordance with the requirements of subdivision (c) of section 62-05 of this chapter.

(b) Additionally, the manufacturer or owner of an Emissions Control Device may seek Department certification by submitting documentation from an independent testing laboratory that tests in accordance with an EPA accredited laboratory testing method that the Emissions Control Device has been tested in accordance with the procedures set forth in subdivision (b) of section 62-05 of this chapter and that such device meets the requirements of section 62-02 of this chapter. Such documentation must be submitted in accordance with the requirements of subdivision (c) of section 62-05 of this chapter.

(c) The Department will maintain a list of approved certified Emissions Control Devices for use with particular models of cook stoves on the department's website and will update the list periodically as necessary.

**§ 62-08 Records**

(a) Recordkeeping:

(1) On or after the effective date of this rule, any person who owns or operates an existing cook stove must maintain records showing all maintenance work performed on the Emissions Control Device, including the date, time, and a brief description of maintenance work performed.

(2) On or after the effective date of this rule, any person who owns or operates an existing cook stove must maintain records regarding the date of installation and replacement of any Emissions Control Device installed to abate emissions from the cook stove.

(3) For purposes of this subdivision, maintenance includes, but is not limited to, preventative maintenance, breakdown repair, and cleaning performed on the Emissions Control Device.

(b) Retention of Records. All records required by this section must be retained for at least one year and must be made available to the Department upon request.

**NEW YORK CITY MAYOR'S OFFICE OF OPERATIONS  
253 BROADWAY, 10<sup>th</sup> FLOOR  
NEW YORK, NY 10007  
212-788-1400**

**CERTIFICATION / ANALYSIS  
PURSUANT TO CHARTER SECTION 1043(d)**

**RULE TITLE: Reduction of Emissions from Restaurant Cook Stoves Existing Before May 16, 2016  
REFERENCE NUMBER: DEP-94  
RULEMAKING AGENCY: Department of Environmental Protection**

I certify that this office has analyzed the proposed rule referenced above as required by Section 1043(d) of the New York City Charter, and that the proposed rule referenced above:

- (i) Is understandable and written in plain language for the discrete regulated community or communities;
- (ii) Minimizes compliance costs for the discrete regulated community or communities consistent with achieving the stated purpose of the rule; and
- (iii) Does not provide a cure period because it does not establish a violation, modification of a violation, or modification of the penalties associated with a violation.

/s/ Francisco X. Navarro  
Mayor's Office of Operations

June 8, 2023  
Date

**NEW YORK CITY LAW DEPARTMENT  
DIVISION OF LEGAL COUNSEL  
100 CHURCH STREET  
NEW YORK, NY 10007  
212-356-4028**

**CERTIFICATION PURSUANT TO  
CHARTER §1043(d)**

**RULE TITLE:** Reduction of Emissions from Restaurant Cook Stoves Existing Before May 16, 2016

**REFERENCE NUMBER:** 22 RG 096

**RULEMAKING AGENCY:** Department of Environmental Protection

I certify that this office has reviewed the above-referenced proposed rule as required by section 1043(d) of the New York City Charter, and that the above-referenced proposed rule:

- (i) is drafted so as to accomplish the purpose of the authorizing provisions of law;
- (ii) is not in conflict with other applicable rules;
- (iii) to the extent practicable and appropriate, is narrowly drawn to achieve its stated purpose; and
- (iv) to the extent practicable and appropriate, contains a statement of basis and purpose that provides a clear explanation of the rule and the requirements imposed by the rule.

/s/ STEVEN GOULDEN  
Senior Counsel

Date: June 8, 2023

← j23

**PROCUREMENT POLICY BOARD**

**■ NOTICE**

**Notice of Adoption of Rule**

Pursuant to the authority vested in the Procurement Policy Board (PPB) by Section 311 of the New York City Charter and in accordance with the requirements of Section 1043 of said Charter, the PPB has adopted amendments to Chapter 1 of Title 9 of the Rules of the City of New York.

**Statement of Basis and Purpose of Final Rule**

This Procurement Policy Board Rule (PPB) amendment updates the provisions of the PPB Rules relating to subscription purchasing to account for modern technologies and changes in industry practices.

This rule amendment streamlines the process for agencies to purchase physical and electronic subscriptions, by clarifying and broadening the definition of subscriptions, thereby allowing agencies to purchase necessary books, periodicals, training, and training materials outside of the procedures set forth in the PPB Rules.

On April 27, 2023, the PPB voted to initiate the rulemaking process under the Citywide Administrative Procedure Act for this rule amendment. A proposed version of this amendment was published in the *City Record* on May 3, 2023. A public hearing was held on June 7, 2023.

The PPB did not receive either written comments or oral testimony at the public hearing. In the absence of comments and in consideration of the PPB's discussions during the April public meeting, the PPB adopted the amendment on June 14, 2023.

The PPB's authority to promulgate this rule is found in section 311 of the New York City Charter.

"Shall" and "must" denote mandatory requirements and may be used interchangeably in the rules of this department, unless otherwise specified or unless the context clearly indicates otherwise.

**SECTION 1. PARAGRAPH (5) OF SUBDIVISION (f) OF SECTION 1-02 OF TITLE 9 OF THE RULES OF THE CITY OF NEW YORK IS AMENDED TO READ AS FOLLOWS:**

(5) subscriptions[, including] to research databases; paper or electronic subscriptions[,] for magazines, [and] newspapers, other periodicals, [orders for] or books [and “] ;off-the-shelf[”] training

[videotapes,] materials including, but not limited to, webcasts, courses, programs, videos, and assessments; and attendance at standard commercially-available training seminars or subscriptions to organizations providing such seminars.

◀ j23

**SPECIAL MATERIALS**

**CITYWIDE ADMINISTRATIVE SERVICES**

■ NOTICE

**OFFICIAL FUEL PRICE (\$) SCHEDULE NO. 9192  
FUEL OIL AND KEROSENE**

CONTR. NO.	ITEM NO.	FUEL/OIL TYPE	DELIVERY	VENDOR	CHANGE (\$)	PRICE (\$) EFF. 6/19/2023
4287148	1	#2DULS	CITYWIDE BY TW	GLOBAL MONTELLO	0.0445 GAL.	2.6654 GAL.
4287148	2	#2DULS	RACK PICK-UP	GLOBAL MONTELLO	0.0445 GAL.	2.5484 GAL.
4287148	3	#2DULS <b>Winterized</b>	CITYWIDE BY TW	GLOBAL MONTELLO	0.0445 GAL.	2.7036 GAL.
4287148	4	#2DULS <b>Winterized</b>	RACK PICK-UP	GLOBAL MONTELLO	0.0445 GAL.	2.5866 GAL.
4287149	5	#2DULS	CITYWIDE BY TW	SPRAGUE	0.0445 GAL.	2.9500 GAL.
4287149	6	#2DULS <b>Winterized</b>	CITYWIDE BY TW	SPRAGUE	0.0445 GAL.	3.1630 GAL.
4287149	7	B100	CITYWIDE BY TW	SPRAGUE	0.0596 GAL.	5.3970 GAL.
4287149	8	#2DULS	RACK PICK-UP	SPRAGUE	0.0445 GAL.	2.8000 GAL.
4287149	9	#2DULS <b>Winterized</b>	RACK PICK-UP	SPRAGUE	0.0445 GAL.	3.0130 GAL.
4287149	10	B100	RACK PICK-UP	SPRAGUE	0.0596 GAL.	5.2470 GAL.
4287149	11	#1DULS	CITYWIDE BY TW	SPRAGUE	0.0391 GAL.	3.3110 GAL.
4287149	12	B100	CITYWIDE BY TW	SPRAGUE	0.0596 GAL.	5.4210 GAL.
4287149	13	#1DULS	RACK PICK-UP	SPRAGUE	0.0391 GAL.	3.1610 GAL.
4287149	14	B100	RACK PICK-UP	SPRAGUE	0.0596 GAL.	5.2710 GAL.
4287149	15	#2DULS	BARGE DELIVERY	SPRAGUE	0.0445 GAL.	2.6994 GAL.
4287149	16	#2DULS <b>Winterized</b>	BARGE DELIVERY	SPRAGUE	0.0445 GAL.	2.7654 GAL.
4287149	17	#2DULSB50	CITYWIDE BY TW	SPRAGUE	0.0445 GAL.	3.5742 GAL.
4287149	18	#2DULSB50	CITYWIDE BY TW	SPRAGUE	0.0596 GAL.	5.0112 GAL.
4287149	19	#2DULSB50	RACK PICK-UP	SPRAGUE	0.0445 GAL.	3.4242 GAL.
4287149	20	#2DULSB50	RACK PICK-UP	SPRAGUE	0.0596 GAL.	4.8612 GAL.
4287126	1	JET	FLOYD BENNETT	SPRAGUE	-0.0084 GAL.	3.5857 GAL.
Non-Winterized		Apr 1 - Oct 31				
4287149		#2DULSB5 95% ITEM 5.0 5% ITEM 7.0	CITYWIDE BY TW	SPRAGUE	0.0453 GAL.	3.0724 GAL.
4287149		#2DULSB10 90% ITEM 5.0 10% ITEM 7.0	CITYWIDE BY TW	SPRAGUE	0.0460 GAL.	3.1947 GAL.
4287149		#2DULSB20 80% ITEM 5.0 20% ITEM 7.0	CITYWIDE BY TW	SPRAGUE	0.0475 GAL.	3.4394 GAL.
4287149		#2DULSB5 95% ITEM 8.0 5% ITEM 10.0	RACK PICK-UP	SPRAGUE	0.0453 GAL.	2.9224 GAL.
4287149		#2DULSB10 90% ITEM 8.0 10% ITEM 10.0	RACK PICK-UP	SPRAGUE	0.0460 GAL.	3.0447 GAL.
4287149		#2DULSB20 80% ITEM 8.0 20% ITEM 10.0	RACK PICK-UP	SPRAGUE	0.0475 GAL.	3.2894 GAL.

4287149	#2DULSB50	50% ITEM 17.0 50% ITEM 18.0	CITYWIDE BY TW	SPRAGUE	0.0520 GAL.	4.2927 GAL.
4287149	#2DULSB50	50% ITEM 19.0 50% ITEM 20.0	RACK PICK-UP	SPRAGUE	0.0520 GAL.	4.1427 GAL.
Winterized		Nov 1 - Mar 31				
4287149	#2DULSB5	95% ITEM 6.0 5% ITEM 7.0	CITYWIDE BY TW	SPRAGUE	0.0453 GAL.	3.2747 GAL.
4287149	#2DULSB10	90% ITEM 6.0 10% ITEM 7.0	CITYWIDE BY TW	SPRAGUE	0.0460 GAL.	3.3864 GAL.
4287149	#2DULSB20	80% ITEM 6.0 20% ITEM 7.0	CITYWIDE BY TW	SPRAGUE	0.0475 GAL.	3.6098 GAL.
4287149	#2DULSB5	95% ITEM 9.0 5% ITEM 10.0	RACK PICK-UP	SPRAGUE	0.0453 GAL.	3.1247 GAL.
4287149	#2DULSB10	90% ITEM 9.0 10% ITEM 10.0	RACK PICK-UP	SPRAGUE	0.0460 GAL.	3.2364 GAL.
4287149	#2DULSB20	80% ITEM 9.0 20% ITEM 10.0	RACK PICK-UP	SPRAGUE	0.0475 GAL.	3.4598 GAL.
Non-Winterized / Winterized		Year-Round				
4287149	#1DULSB20	80% ITEM 11.0 20% ITEM 12.0	CITYWIDE BY TW	SPRAGUE	0.0432 GAL.	3.7330 GAL.
4287149	#1DULSB20	80% ITEM 13.0 20% ITEM 14.0	RACK PICK-UP	SPRAGUE	0.0432 GAL.	3.5830 GAL.
4287149	#1DULSB5	95% ITEM 11.0 5% ITEM 12.0	CITYWIDE BY TW	SPRAGUE	0.0401 GAL.	3.4165 GAL.
4287149	#1DULSB5	95% ITEM 13.0 5% ITEM 14.0	RACK PICK-UP	SPRAGUE	0.0401 GAL.	3.2665 GAL.

OFFICIAL FUEL PRICE (\$) SCHEDULE NO. 9193  
FUEL OIL, PRIME AND START

CONTR. NO.	ITEM NO.	FUEL/OIL TYPE	DELIVERY	VENDOR	CHANGE (\$)	PRICE (\$) EFF. 6/19/2023
4287030	1	#4B5	MANHATTAN	UNITED METRO	0.0128 GAL.	2.5007 GAL.
4287030	2	#4B5	BRONX	UNITED METRO	0.0128 GAL.	2.5207 GAL.
4287030	3	#4B5	BROOKLYN	UNITED METRO	0.0128 GAL.	2.4607 GAL.
4287030	4	#4B5	QUEENS	UNITED METRO	0.0128 GAL.	2.4907 GAL.
4287031	5	#4B5	RICHMOND	APPROVED OIL COMPANY	0.0128 GAL.	2.6807 GAL.
4187014	1	#2B5	MANHATTAN	SPRAGUE	0.0453 GAL.	2.7793 GAL.
4187014	3	#2B5	BRONX	SPRAGUE	0.0453 GAL.	2.7313 GAL.
4187014	5	#2B5	BROOKLYN	SPRAGUE	0.0453 GAL.	2.7443 GAL.
4187014	7	#2B5	QUEENS	SPRAGUE	0.0453 GAL.	2.7523 GAL.
4187014	9	#2B5	STATEN ISLAND	SPRAGUE	0.0453 GAL.	2.8312 GAL.
4187014	11	#2B10	CITYWIDE BY TW	SPRAGUE	0.0460 GAL.	2.8257 GAL.
4187014	12	#2B20	CITYWIDE BY TW	SPRAGUE	0.0475 GAL.	2.9728 GAL.
4187015	2	#2B5	MANHATTAN (RACK PICK-UP)	APPROVED OIL COMPANY	0.0453 GAL.	2.5446 GAL.
4187015	4	#2B5	BRONX (RACK PICK-UP)	APPROVED OIL COMPANY	0.0453 GAL.	2.5446 GAL.
4187015	6	#2B5	BROOKLYN (RACK PICK-UP)	APPROVED OIL COMPANY	0.0453 GAL.	2.5446 GAL.
4187015	8	#2B5	QUEENS (RACK PICK-UP)	APPROVED OIL COMPANY	0.0453 GAL.	2.5446 GAL.
4187015	10	#2B5	STATEN ISLAND (RACK PICK-UP)	APPROVED OIL COMPANY	0.0453 GAL.	2.5446 GAL.

OFFICIAL FUEL PRICE (\$) SCHEDULE NO. 9194  
FUEL OIL AND REPAIRS

CONTR. NO.	ITEM NO.	FUEL/OIL TYPE	DELIVERY	VENDOR	CHANGE (\$)	PRICE (\$) EFF. 6/19/2023
20211200451	1	#2B5	All Boroughs (Pickup Under Delivery)	APPROVED OIL	0.0453 GAL	2.9587 GAL.
20211200451	2	#4B5	All Boroughs (Pickup Under Delivery)	APPROVED OIL	0.0128 GAL	2.7511 GAL.

OFFICIAL FUEL PRICE (\$) SCHEDULE NO. 9195  
GASOLINE

CONTR. NO.	ITEM NO.	FUEL/OIL TYPE	DELIVERY	VENDOR	CHANGE (\$)	PRICE (\$) EFF. 6/19/2023
4387063	1.0	REG UL	CITYWIDE BY TW	GLOBAL MONTELLO	0.0104 GAL	2.8074 GAL.
4387063	2.0	PREM UL	CITYWIDE BY TW	GLOBAL MONTELLO	-0.0035 GAL	3.1601 GAL.
4387063	3.0	REG UL	RACK PICK-UP	GLOBAL MONTELLO	0.0104 GAL	2.7052 GAL.
4387063	4.0	PREM UL	RACK PICK-UP	GLOBAL MONTELLO	-0.0035 GAL	3.0629 GAL.
3787121	5.0	E85	<b>Non-Winterized</b> CITYWIDE BY DELIVERY	UNITED METRO	0.0377 GAL	3.0179 GAL.
3787121	6.0	E70	<b>Winterized</b> CITYWIDE BY DELIVERY	UNITED METRO	0.0323 GAL	3.0661 GAL.

**NOTE:**

1. Federal excise taxes are imposed on taxable fuels, (i.e., gasoline, kerosene, and diesel), when removed from a taxable fuel terminal. This fuel excise tax does not include Leaking Underground Storage Tank (LUST) tax. LUST tax applies to motor fuels for both diesel and gasoline invoices. Going forward, LUST Tax will appear as an additional fee at the rate of \$0.001 per gallon and will be shown as a separate line item on your invoice.
2. The National Oil Heat Research Alliance (NORA) has been extended until February 6, 2029. A related assessment of \$.002 per gallon has been added to the posted weekly fuel prices and will appear as a separate line item on invoices. This fee applies to heating oil only and since 2015 has included #4 heating oil. All other terms and conditions remain unchanged.
3. Items 1 - 4 on contract 4287148 and 5 - 20 on contract 4287149 are effective as of June 1st, 2022.
4. Items 1 - 4 on contract 4387063 are effective as of December 19, 2022.
5. Federal Superfund Tax is included in the DCAS weekly pricing schedule, and it should not show as an additional fee.

**ATTENTION: NYC Agencies:**

Be advised of the following:

1. Sprague's biodiesel tank for rack pick-ups will be offline for two weeks, **starting 6/21/23 through 7/5/23** due to mandatory EPA inspection.
2. As an alternative for heating and diesel fuel, B5 blended product will be made available.
3. Agencies are advised to top of their tanks before **6/21/23**.
4. If there are any substantial changes to these dates, agencies will be notified asap.

**REMINDER FOR ALL AGENCIES:**

All entities utilizing DCAS fuel contracts are reminded to pay their invoices **on time** to avoid interruption of service. Please send inspection copy of receiving report for all gasoline (E70, UL PREM) delivered by tank wagon to OCP/Bureau of Quality Assurance (BQA), 1 Centre Street, 18th Floor, New York, NY 10007.

◀ j23

**COMPTROLLER**

■ NOTICE

**NOTICE OF ADVANCE PAYMENT OF AWARDS PURSUANT TO THE STATUTES IN SUCH** cases made and provided, notice is hereby given that the Comptroller of the City of New York, will be ready to pay, at 1 Centre Street, Room 629, New York, NY 10007, on 6/27/2023, to the person or persons legally entitled an amount as certified to the Comptroller by the Corporation Counsel on damage parcels, as follows:

Damage Parcel No.	Block	Lot
382A	4064	46
383A	4064	45
384A	4064	60
385A	4064	40
387A	4064	35
388A	4065	28
389A	4065	27
397A	4065	15
398A	4065	14
399A	4065	13
400A	4065	12
401A	4067	29
402A	4067	27
403A	4067	24
404A	4067	22

Acquired in the proceeding entitled: ROMA AND HETT subject to any liens and encumbrances of record on such property. The amount advanced shall cease to bear interest on the specified date above.

BRAD S. LANDER  
Comptroller

j13-26

**NOTICE OF ADVANCE PAYMENT OF AWARDS PURSUANT TO THE STATUTES IN SUCH** cases made and provided, notice is hereby given that the Comptroller of the City of New York, will be ready to pay, at 1 Centre St., RM 629, New York, NY 10007 on **7/6/2023** to the person or persons legally entitled an amount as certified to the Comptroller by the Corporation Counsel on damage parcels, as follows:

Damage Parcel No.	Block	Lot
406A	4067	18
407A	4067	16
408A	4067	14
409A	4067	10
410A	4069	42
411A	4069	40
412A	4069	36
413A	4069	35
415A	4069	134
416A	4069	133
417A	4069	33
418A	4069	31

419A 4069 30  
420A 4069 29

Acquired in the proceeding entitled: **ROMA AND HETT** subject to any liens and encumbrances of record on such property. The amount advanced shall cease to bear interest on the specified date above.

BRAD S. LANDER  
Comptroller  
j21-jy5

**HOUSING PRESERVATION AND DEVELOPMENT**

■ NOTICE

**REQUEST FOR COMMENT  
REGARDING AN APPLICATION FOR A  
CERTIFICATION OF NO HARASSMENT**

Notice Date: **June 15, 2023**

To: **Occupants, Former Occupants, and Other Interested Parties**

Property:	Address	Application #	Inquiry Period
	2291 Third Avenue, Manhattan	28/2023	May 3, 2020 to Present
	326 Greene Avenue, Brooklyn	29/2023	May 5, 2020 to Present
	64 Downing Street, Brooklyn	30/2023	May 9, 2020 to Present
	208 West 15 <sup>th</sup> Street, Manhattan	34/2023	May 4, 2020 to Present
	315 93 <sup>rd</sup> Street, Brooklyn	35/2023	May 8, 2020 to Present
	421 West 146 <sup>th</sup> Street, Manhattan	36/2023	May 25, 2020 to Present
	3 Hamilton Terrace, Manhattan	51/2023	May 19, 2020 to Present
	613 West 146 <sup>th</sup> Street, Manhattan	52/2023	May 30, 2020 to Present
	31 West 71 <sup>st</sup> Street, Manhattan	53/2023	June 1, 2020 to Present

Authority: **SRO, Administrative Code §27-2093**

Before the Department of Buildings can issue a permit for the alteration or demolition of a single room occupancy multiple dwelling, the owner must obtain a "Certification of No Harassment" from the Department of Housing Preservation and Development ("HPD") stating that there has not been harassment of the building's lawful occupants during a specified time period. Harassment is conduct by an owner that is intended to cause, or does cause, residents to leave or otherwise surrender any of their legal occupancy rights. It can include, but is not limited to, failure to provide essential services (such as heat, water, gas, or electricity), illegally locking out building residents, starting frivolous lawsuits, and using threats or physical force.

The owner of the building identified above has applied for a Certification of No Harassment. If you have any comments or evidence of harassment at this building, please notify HPD at **CONH Unit, 100 Gold Street, 6<sup>th</sup> Floor, New York, NY 10038** by letter postmarked not later than 30 days from the date of this notice or by an in-person statement made within the same period. To schedule an appointment for an in-person statement, please call **(212) 863-5277 or (212) 863-8211**.

For the decision on the Certification of No Harassment Final Determination please visit our website at [www.hpd.nyc.gov](http://www.hpd.nyc.gov) or call **(212) 863-8266**.

**PETICIÓN DE COMENTARIO  
SOBRE UNA SOLICITUD PARA UN  
CERTIFICACIÓN DE NO ACOSO**

Fecha de notificación: **June 15, 2023**

Para: **Inquilinos, Inquilinos Anteriores, y Otras Personas Interesadas**

Propiedad:	Dirección:	Solicitud #:	Período de consulta:
	2291 Third Avenue, Manhattan	28/2023	May 3, 2020 to Present

326 Greene Avenue, Brooklyn	29/2023	May 5, 2020 to Present
64 Downing Street, Brooklyn	30/2023	May 9, 2020 to Present
208 West 15 <sup>th</sup> Street, Manhattan	34/2023	May 4, 2020 to Present
315 93 <sup>rd</sup> Street, Brooklyn	35/2023	May 8, 2020 to Present
421 West 146 <sup>th</sup> Street, Manhattan	36/2023	May 25, 2020 to Present
3 Hamilton Terrace, Manhattan	51/2023	May 19, 2020 to Present
613 West 146 <sup>th</sup> Street, Manhattan	52/2023	May 30, 2020 to Present
31 West 71 <sup>st</sup> Street, Manhattan	53/2023	June 1, 2020 to Present

Autoridad: **SRO, Código Administrativo §27-2093**

Antes de que el Departamento de Edificios pueda conceder un permiso para la alteración o demolición de una vivienda múltiple de ocupación de cuartos individuales, el propietario debe obtener una "Certificación de No Acoso" del Departamento de Preservación y Desarrollo de la Vivienda ("HPD") que indique que tiene no haber sido hostigado a los ocupantes legales del edificio durante un período de tiempo especificado. El acoso es una conducta por parte de un dueño de edificio que pretende causar, o causa, que los residentes se vayan o renuncien a cualquiera de sus derechos legales de ocupación. Puede incluir, entre otros, no proporcionar servicios esenciales (como calefacción, agua, gas o electricidad), bloquear ilegalmente a los residentes del edificio, iniciar demandas frívolas y utilizar amenazas o fuerza física.

El dueño del edificio identificado anteriormente ha solicitado una Certificación de No Acoso. Si tiene algún comentario o evidencia de acoso en este edificio, notifique a HPD al **CONH Unit, 100 Gold Street, 6<sup>th</sup> Floor, New York, NY 10038** por carta con matasellos no mas tarde que **30 días** después de la fecha de este aviso o por una declaración en persona realizada dentro del mismo periodo. Para hacer una cita para una declaración en persona, llame al **(212) 863-5277 o (212) 863-8211**.

Para conocer la decisión final sobre la Certificación de No Acoso, visite nuestra pagina web en [www.hpd.nyc.gov](http://www.hpd.nyc.gov) o llame al **(212) 863-8266**.

j15-23

**MAYOR'S OFFICE OF ENVIRONMENTAL  
COORDINATION**

■ NOTICE

**Notice for Environmental Review  
Determinations of Significance**

CND Project Name Borough	CEQR CD	Date
2560 Boston Road Rezoning Bronx	22DCP184X BX11	03/27/2023
<b>Negative Declaration</b>		
Project Name Borough	CEQR CD	Date
2435 Pacific Street Brooklyn	23HPD003K BK16	02/16/2023
1233 57th Street Rezoning Brooklyn	23DCP041K BK12	02/27/2023
1400 Story Avenue (York Studios) Bronx	22DCP189X BX09	02/13/2023
1421 86th Street Rezoning Brooklyn	23DCP024K BK11	02/27/2023
1656 West 10th Street Rezoning Brooklyn	23DCP014K BK11	02/13/2023
180 East 125th Street FRESH II Certification Manhattan	23DCP058M MN11	02/13/2023
189-10 Northern Boulevard Commercial Overlay	22DCP018Q	01/03/2023

Queens	QN11		Webster Avenue Safe Haven Project Bronx	22DHS023X BX06	03/24/2023
23 West 106th Street Manhattan	22DHS025M MN07	03/22/2023			
42-18 31st Avenue Rezoning Queens	22DCP174Q QN01	03/27/2023	<b><u>Negative Declaration (Revised)</u></b>		
56 William Avenue Staten Island	23DCP032R SI03	02/27/2023	<b>Project Name</b>	<b>CEQR CD</b>	<b>Date</b>
589 Fulton Street (Curb Cut Authorization) Brooklyn	23DCP030K BK02	03/27/2023	Marlboro Agriculture Education Center Brooklyn	22CHA001K BK13	01/31/2023
7120 New Utrecht Avenue Rezoning Brooklyn	23DCP002K BK11	01/30/2023	<b><u>Positive Declaration</u></b>		
893 Eagle Avenue Rezoning Bronx	20DCP076X BX03	02/13/2023	<b>Project Name</b>	<b>CEQR CD</b>	<b>Date</b>
Arena Text Amendment Manhattan	23DCP100M MN05	02/13/2023	Bedford Stuyvesant Restoration Corporation Brooklyn	23DCP076K BK03	01/17/2023
Broad Channel Volunteer Fire Department Headquarters Queens	23DME007Q QN14	03/17/2023	Lenox Hill Hospital Manhattan	23DCP079M MN08	01/30/2023
Brooklyn Army Terminal Pier 4 Ferry Landing Rehabilitation Brooklyn	22SBS002K BK07	03/17/2023	MSK Pavilion Manhattan	23DCP118M MN08	03/28/2023
Christopher Court Bronx	23DCP004X BX01	01/30/2023	Willetts Point Phase II Development Queens	23DME005Q QN07	03/01/2023
Con Edison Staten Island Installation of New 138KV Solid Dielectric Feeders Staten Island	23DOS004R SI02 SI03	03/15/2023			
Downtown Manhattan Heliport Freight NYC Project Manhattan	22SBS006M MN01	02/06/2023			
DSNY BX7 Swing Space at 2383 Blackrock Avenue Bronx	23DOS006X BX09	02/28/2023			
HELP Glenmore Single Adults Assessment Project Brooklyn	21DHS046K BK05	03/23/2023			
Homeport Pier and Sub-Station Staten Island	21SBS004R SI01	03/03/2023			
Kings Highway Self Storage Brooklyn	22DCP073K BK17	01/30/2023			
Marriott Marquis Cogeneration Facility Manhattan	22DEP037M MN05	02/06/2023			
MOCJ Emergency and Transitional Housing Program - 381 Rockaway Avenue Facility Brooklyn	23OOM005K BK16	02/28/2023			
MOCJ Emergency and Transitional Housing Program 757 Dawson Street, Bronx Bronx	23OOM007X BX02	01/13/2023			
Ocean Crest Rezoning Queens	23DCP042Q QN14	01/30/2023			
Pink Houses - Domestic Hot Water and Boiler Plant Upgrades Brooklyn	23CHA003K BK05	01/13/2023			
Tallman Island Western Cribwall Replacement Queens	20DEP007Q QN07	02/16/2023			
Victory Boulevard Pump Station Staten Island	17DEP039R SI02	01/20/2023			
Waldorf Astoria Combined Heat and Power System Manhattan	22DEP056M MN05	02/06/2023			
Waunner Street Commercial Development Staten Island	22DCP147R SI03	01/30/2023			
			<b>Environmental Impact Statement</b>		
			<b><u>DEIS &amp; Notice of Completion</u></b>		
			<b>Project Name</b>	<b>CEQR CD</b>	<b>Date</b>
			1160 Flushing Avenue Brooklyn	21DCP199K BK04	02/10/2023
			<b>Notifications of Commencement</b>		
			<b><u>Lead Agency Letter</u></b>		
			<b>Project Name</b>	<b>CEQR CD</b>	<b>Date</b>
			2435 Pacific Street Brooklyn	23HPD003K BK16	01/31/2023
			1450 Madison Avenue- Mt. Sinai Manhattan	23BSA015M MN11	02/15/2023
			1727 Amsterdam Avenue Manhattan	23HPD032M MN09	03/07/2023
			180 East 125th Street FRESH II Certification Manhattan	23DCP058M MN11	02/10/2023
			230 Kent Avenue Rezoning Brooklyn	23DCP075K BK01	01/05/2023
			2386 Jerome Avenue Bronx	23BSA014X BX05	02/07/2023
			250 86th Street Rezoning Brooklyn	23DCP110K BK10	03/28/2023
			253 Richmond Valley Road Staten Island	23DCP115R SI03	03/14/2023
			27-24 College Point Boulevard Commercial Overlay Queens	23DCP106Q QN07	02/21/2023
			290 East 149th Street Bronx	23HPD050X BX01	03/28/2023
			321 Avenue T Brooklyn	23BSA013K BK11	01/25/2023
			37-42 30th Street FRESH Cert and Authorization Queens	23DCP103Q QN01	02/22/2023
			49-39 Van Dam Street Demapping Queens	23DCP071Q QN02	01/03/2023
			872 Bronx Park South Bronx	23HPD038X BX06	03/20/2023
			Arena Text Amendment Manhattan	23DCP100M MN05	02/10/2023
			Bedford Stuyvesant Restoration Corporation	23DCP076K	01/17/2023

Brooklyn	BK03		Queens Botanical Garden - New Education Building	23CLA002Q	02/10/2023
Broad Channel Volunteer Fire Department Headquarters	23DME007Q	03/17/2023	Queens	QN07	
	QN14		Reconstruction of Street Ends of Swaim Avenue and Huguenot	23DOT003R	01/27/2023
Con Edison Staten Island Installation of New 138KV Solid Dielectric Feeders	23DOS004R	03/20/2023	Staten Island	SI03	
	SI02 SI03		Reconstruction of Street Ends of Swaim Avenue and Huguenot	23DOT003R	01/27/2023
Cross Island Parkway Waters Edge Drive Playground	23DPR003Q	03/24/2023	Staten Island	SI03	
Queens	QN07		Reconstruction of Street Ends of Swaim Avenue and Huguenot	23DOT003R	01/27/2023
DSNY BX7 Swing Space at 2383 Blackrock Avenue	23DOS006X	02/28/2023	Staten Island	SI03	
Bronx	BX09		Reconstruction of Street Ends of Swaim Avenue and Huguenot	23DOT003R	01/27/2023
East 94th Street Rezoning	22DCP186M	01/18/2023	Staten Island	SI03	
Manhattan	MN08		Special Lincoln Square District Extension: West 66	23DCP126M	03/29/2023
Giles Manor	23DHS005M	03/24/2023	Manhattan	MN07	
Manhattan	MN06		Tallman Island Western Cribwall Replacement	20DEP007Q	01/11/2023
Grace Houses	23DCP108K	03/22/2023	Queens	QN07	
Brooklyn	BK05		Tompkinsville Esplanade	20SBS003R	02/02/2023
Lenox Hill Hospital	23DCP079M	01/30/2023	Staten Island	SI01	
Manhattan	MN08		Transitional Housing Program – La Quinta Inn, 9-02 38th Avenue, Long Island City,	23OOM010Q	01/13/2023
Light House Family Residence Families with Children Shelter	23DHS004Q	03/06/2023	Queens	QN01	
Queens	QN01		Queens	QN01	
Marriott Marquis Cogeneration Facility	22DEP037M	01/05/2023	Waldorf Astoria Combined Heat and Power System	22DEP056M	01/05/2023
Manhattan	MN05		Manhattan	MN05	
Melvin Avenue Pumping Station	17DEP038R	03/14/2023	Whitestone Lanes Rezoning	23DCP104Q	02/14/2023
Reconstruction	SI02		Queens	QN07	
Staten Island	SI01		Willetts Point Phase II Development	23DME005Q	02/17/2023
Mersereau Avenue Pumping Station	21DEP033R	01/20/2023	Queens	QN07	
Upgrade	SI01		Willetts Point Phase II Development	23DME005Q	02/17/2023
Staten Island	SI01		Queens	QN07	
MOCJ Emergency and Transitional Housing Program – 1209 Washington Avenue Facility	23OOM008X	01/05/2023	<b>Lead Agency Letter (Revised)</b>		
Bronx	BX03		<b>Project Name</b>	<b>CEQR CD</b>	<b>Date</b>
MOCJ Emergency and Transitional Housing Program – 1211 Washington Avenue Facility	23OOM009X	01/05/2023	23 West 106th Street	22DHS025M	03/13/2023
Bronx	BX03		Manhattan	MN07	
MOCJ Emergency and Transitional Housing Program - 1522 Bryant Washington Avenue Facility	23OOM004X	01/05/2023	<b>Scoping</b>		
Bronx	BX03		<b>Draft Scope of Work</b>	<b>CEQR CD</b>	<b>Date</b>
MOCJ Emergency and Transitional Housing Program - 381 Rockaway Avenue Facility	23OOM005K	01/05/2023	Bedford Stuyvesant Restoration Corporation	23DCP076K	01/17/2023
Brooklyn	BK16		Brooklyn	BK03	
MOCJ Transitional Housing Program – Wyndham Garden	OOM012Q	03/20/2023	Lenox Hill Hospital	23DCP079M	01/30/2023
Queens	QN08		Manhattan	MN08	
Morris Houses Sol on Park	23CHA002X	01/31/2023	MSK Pavilion	23DCP118M	03/28/2023
Bronx	BX03		Manhattan	MN08	
MSK Pavilion	23DCP118M	03/28/2023	Willetts Point Phase II Development	23DME005Q	03/01/2023
Manhattan	MN08		Queens	QN07	
New Green Willets	23DME006Q	03/24/2023	<b>Final Scope of Work</b>		
Queens	QN07		<b>Project Name</b>	<b>CEQR CD</b>	<b>Date</b>
New Green Willets	23DME006Q	03/24/2023	1160 Flushing Avenue	21DCP199K	02/10/2023
Queens	QN07		Brooklyn	BK04	
New York Hall of Science Parking Access and Safety Improvements	23DPR004Q	03/22/2023			
Queens	QN04				
Noguchi Museum Campus	23CLA001Q	01/19/2023			
Queens	QN01				