

30-309.6 Final Site Plan Plat Standards.

The final plan shall include all data required on the preliminary site plan plat drawn to incorporate all changes required as a condition of preliminary approval and drawn by persons and to specifications as required to the preliminary site plan, the Approving Authority may waive the filing of a final site plan and may treat the preliminary as the final. The final plat shall reflect all changes on the site from that shown on the preliminary plat, including "as built" as to any improvements to the site done before final approval.

30-310 RESERVED.**30-311 INTERPRETATION REQUESTS.**

Per N.J.S.A. 40:55D-70b, an applicant may apply to the Board for formal hearing for the Board to determine an interpretation of the zoning map or ordinance or for decision or refusal made by an administrative officer based on or made in the enforcement of the zoning ordinance. The Applicant shall provide the following information as part of application:

- a. Applicant shall submit formal application to the Board and include payment of required application fee and escrow fees per Chapter 30 Article 11.
- b. Applicant shall include submittal of proof that property taxes and assessments for the subject property are current certified by the responsible Borough official.
- c. Applicant shall include a written statement describing the nature of request and supporting data for their request.
- d. Applicant shall include supporting plans, surveyor, tax map and/or exhibits to enable the Board to understand location of subject property in relation to the zoning map and surrounding area. The map should also include sufficient detail for the Board to determine the interpretation request.
- e. Application must be submitted at least 10 days before hearing.

30-312 VARIANCE REQUESTS.

Applicant seeking approval of variance hardship/bulk or "C" Variance (N.J.S.A. 40:55-70c) or Use or "D" Variance (N.J.S.A. 40:55-70d) shall also apply for minor site plan and/or major site plan/subdivision. The variance application will require submitting variance application and then a minor or major site plan/ subdivision application. All applications for variance will require public notice for meetings and notification provided to property owners within 200' based on certified list provided by Borough Official.

ARTICLE 4 SOIL EROSION AND SEDIMENTATION CONTROL
(Ord. No. 642 ; readopted by Ord. No. 2020-1235)

30-401 PURPOSE.

The purpose of this chapter is to control and regulate soil removal, erosion and sedimentation in the Borough of Manville by requiring adequate provisions for the retention of topsoil and subsoil whenever necessary, to prevent erosion and sedimentation, exposed soil surfaces and such other harmful and objectionable conditions as are detrimental to the safety, health and general welfare of the citizens of the Borough of Manville.

30-402 DEFINITIONS.

The following definitions shall apply to the interpretations and enforcement of this chapter, unless otherwise specifically stated:

APPLICANT

A person, partnership, corporation or public agency requesting permission to engage in soil removal or land disturbance activity.

APPLICATION FOR DEVELOPMENT

A proposed subdivision of land, site plan, conditional use, zoning variance, construction permit or planned development permit.

CERTIFICATION

A written endorsement of a plan for soil erosion and sediment control by the Somerset-Union Soil Conservation District which indicates that the plan meets the standards promulgated by this chapter and P.L. 1975, c. 251.

CRITICAL AREA

A sediment-producing land area or highly erodible or severely eroded land area.

DISTURB

To dig, dredge, excavate, remove, deposit, grade, clear, level, fill or alter or change the location or contour of land or otherwise cause land to be exposed to the dangers of erosion.

EROSION

Detachment and movement of soil or rock fragments by water, wind, ice or gravity.

EXCAVATION or CUT

Any act by which soil or rock is cut into, dug, quarried, uncovered, removed, displaced or relocated.

LAND

Any ground, soil or earth, including marshes, swamps, drainageways and areas not permanently covered by water, within the municipality.

MAN-MADE STRUCTURE

Any artificial improvements to land, including but not limited to buildings of any type, parking lots, driveways and sidewalks, fences, storm culverts, swimming pools, tennis courts, towers, telephone or utility poles, roads and paths of any type.

MULCHING

The application of plant residue or other suitable organic materials to the land surface to conserve moisture, hold soil in place and aid in establishing plant cover.

PERMIT

A certificate issued to perform work regulated under this chapter.

PERSON

Any individual, corporation, association, partnership, joint venture or organization, as well as any federal, state, county or municipal government or body, authority or board and any department, agency or subdivision thereof or any combination of the above.

REMOVE

To physically transfer soil from any location on a site to any other location not on the same site, regardless of whether the sites are contiguous or of common ownership.

SEDIMENT

Solid material, both mineral and organic, that is in suspension, is being transported or has been moved from its site of origin by water, wind, ice or gravity as a product of erosion.

SEDIMENT BASIN

A barrier or drain built at suitable locations to retain rock, sand, gravel, silt or other sedimentary material.

SITE

Any plot, parcel or parcels of land, including, by way of illustration, the smallest of lots as shown on the tax maps of the Borough of Manville, a subdivided lot as approved by the Planning Board or an individual tract as set forth in the deed conveying title to the owner.

SOIL

All unconsolidated mineral and organic material, such as earth, sand, clay, loam, gravel, humus, sludge, rock or dirt of any origin.

SOIL EROSION AND SEDIMENT CONTROL PLAN

A detailed plan indicating necessary land treatment measures, including a schedule of the timing of their implementation that will effectively minimize soil erosion and sedimentation. Such measures shall meet or exceed the standards.

STANDARDS

Standards for Soil Erosion and Sediment Control in New Jersey as promulgated by the State Soil Conservation Committee.

STRIPPING

Any activity which disturbs vegetation or otherwise stabilized soil surfaces, including clearing and grubbing operations.

30-403 PERMIT REQUIRED.

- a. No land area shall be disturbed by any person, partnership, corporation or public agency nor shall any permit be issued unless the applicant has first obtained a permit or a waiver in accordance with the provisions of this chapter.
- b. No person, partnership, corporation or public agency shall excavate or otherwise remove soil in excess of 10 cubic yards for any use other than on the premises from which the soil shall be taken, without first obtaining a permit in accordance with the provisions of this chapter.
- c. No person, partnership, corporation or public agency shall import any soil into the Borough without first obtaining a permit for same. The permit fee for said import shall be determined by the Somerset-Union Soil Conservation District. A soil certification must accompany the permit for import of said soil.

30-404 DATA REQUIRED PRIOR TO ISSUANCE OF PERMIT.

- a. Soil erosion and sediment control. The applicant must submit a separate soil erosion and sediment control plan for each noncontiguous site where land disturbance will take place. Such plans shall contain:
 1. The location and description of natural and man-made features on and around the site, including topography and soil characteristics.
 2. The location and description of any proposed changes to the site.
 3. Measures for soil erosion and sediment control which must meet standards.
 4. A schedule of the sequence of installation of planned soil erosion and sediment control measures as related to the progress of the project being undertaken.
 5. Any information as may be reasonably required by the Somerset-Union Soil Conservation District in order to adequately evaluate the application.

- b. Soil removal. The applicant must submit a description and plan, if required, for removing soil from any site within the Borough of Manville. The following information shall be provided:
- - 1. The location and existence of natural and man-made features, including existing and proposed topography, if required.
 - 2. The quantity and method of removing soil from the site.
 - 3. The destination and route of delivery of soil to be removed.
 - 4. The proposed date of commencement.
 - 5. Any other information as may be reasonably required by the Somerset-Union Soil Conservation District in order to adequately evaluate the request for soil removal.

30-405 PROCEDURE FOR ISSUANCE OF PERMIT.

The applicant shall make all applications to the Somerset-Union Soil Conservation District, which shall have complete jurisdiction of the application, and the application can be obtained from the Somerset-Union Soil Conservation District. The applicant shall consult with the Somerset-Union Soil Conservation District in order to obtain the permit and in order to determine what procedures must be followed in order to obtain the issuance of that permit.

30-406 GENERAL DESIGN AND PROCEDURAL REQUIREMENTS.

- a. Soil erosion and sediment control.
- 1. Stripping of vegetation, grading or other soil disturbance shall be done in a manner which will minimize soil erosion.
 - 2. Whenever feasible, natural vegetation shall be retained and protected.
 - 3. The extent of the disturbed area and the duration of its exposure shall be kept within practical limits.
 - 4. Either temporary seeding, mulching or other suitable stabilization measures shall be used to protect exposed critical areas during construction or other land disturbance.
 - 5. Drainage provisions shall accommodate increased runoff, resulting from modified soil and surface conditions, during and after development or disturbance. Such provisions shall be in addition to all existing requirements.
 - 6. Water runoff shall be minimized and retained on site wherever possible to facilitate groundwater recharge.
 - 7. Sediment shall be retained on site to the maximum extent feasible.
 - 8. Diversions, sediment basins and similar required structures shall be installed prior to any on-site grading or disturbance.
 - 9. Any other recommendations of the Somerset-Union Soil Conservation District shall be followed by the applicant.
- b. Soil removal.

1. Soil erosion and sediment control practices will be required in conjunction with the removal of any soil.
2. Sufficient topsoil shall be retained on site and shall be respread and seeded after completion of the soil removal.
3. The applicant shall be required to follow the route prescribed by the Construction Official and shall be responsible for keeping the streets free from dirt resulting from soil removal work.
4. Generally, topsoil shall not be permitted to be removed from the Borough.

30-407 MAINTENANCE.

- a. Soil erosion and sediment control. It shall be the duty of the person, persons or legal entity from time to time owning or controlling the land which has been disturbed in accordance with an approved soil erosion and sediment control plan to adequately maintain the same according to the grades approved by said plan and to maintain all of the measures, devices and plantings provided for in said plan in effective condition.
- b. Soil removal. It shall be the duty of the applicant to provide such maintenance as is required by the conditions of the permit issued. All public roadways utilized in the transportation of soil shall be kept free of dirt and other spillage which may result from the soil removal operation.

30-408 INSPECTION AND ENFORCEMENT.

- a. The applicant shall have an approved copy of the soil erosion and sediment control plan at the construction site at all times. The requirements of this chapter shall be enforced by representatives from the Somerset-Union Soil Conservation District. Representatives from the Somerset-Union Soil Conservation District shall inspect the site in order to confirm compliance at such times as may be deemed necessary. If the Somerset-Union Soil Conservation District officials find existing conditions not in accordance with the permit issued, the District may refuse to approve future work and may require immediate remedy by the applicant. Under such conditions, the Construction Official is also empowered to place a stop-work notice and to seek other penalties as provided for in this chapter in the bylaws of the State of New Jersey.
- b. No certificate of occupancy for a project shall be issued by the Construction Official unless there has been compliance with a certified permit and plan as issued under the provisions of this chapter.

30-409 FEE.

Upon each application for a permit, the applicant shall pay to the Somerset-Union Soil Conservation District a fee as prescribed by their rules and regulations.

30-410 VIOLATIONS AND PENALTIES.

- a. Any person convicted of violating any of the provisions of this chapter shall be liable for the payment of a fine of not less than \$25 nor more than \$3,000, to be collected in a summary proceeding pursuant to the Penalty Enforcement Law (N.J.S.A. 2A:58-1 et seq.). The Superior Court, County Court, County District Court or Municipal Court shall have jurisdiction to enforce said Penalty Enforcement Law. If the violation is of a continuing nature, each day during which it continues shall constitute an additional separate and distinct offense.
- b. The building permit of any person who, after notice of a violation hereunder, fails to correct a violation shall be subject to revocation by the Construction Official.
- c. Nothing in this section shall be construed to prevent the Borough of Manville from seeking injunctive relief to enforce the provisions of this chapter.

- d. Remedy. If any person violates any of the provisions of this chapter or any standards promulgated pursuant to this chapter or fails to comply with the provisions of a certified plan, the municipality may institute a civil action in the Superior Court for injunctive relief to prohibit and prevent such violation or violations and said court may proceed in a summary manner. The Borough may proceed either by injunctive relief or by invoking the penalty provisions of this chapter.

30-411 EXEMPT ACTIVITIES.

The following activities are specifically exempt from this chapter:

- a. Reserved.
- b. Use of land for gardening primarily for home consumption.
- c. Agricultural use of land when such use will not cause excessive erosion and sedimentation.
- d. Land disturbance of less than 5,000 square feet.
- e. Soil removal of less than 10 cubic yards; provided, however, that land disturbance is less than 5,000 square feet.

ARTICLE 5 ENVIRONMENTAL IMPACT STATEMENT (Ord. No. 642; readopted by Ord. No. 2020-1235)

30-501 INTENT AND PURPOSE.

It is the intent and purpose of this Ordinance to provide proper guidelines and requirements for the Environmental Impact Statement to be filed with certain applications for land disturbance and development in the Borough of Manville, to preserve and enhance the quality of the natural environment, to promote the general health, safety and welfare, to recognize the existence in the Borough of Manville of certain critical areas, and to provide a coordinated approach to development and changes and thereby improve the Borough of Manville and prevent adverse environmental impact.

30-502 DEFINITIONS.

ENVIRONMENT. The conditions and influences, both natural and man-made, that affect the general health, safety, and welfare of the Borough of Manville.

ENVIRONMENTAL IMPACT STATEMENT. The Environmental Impact Statement is a separate written description and analysis of all possible direct and indirect effects development will have on the site itself as well as adjacent and non-contiguous areas with particular reference to the effect of the project on the public safety, health and welfare, the protection of public and private property and the protection, preservation and enhancement of the natural environment.

SITE. Any plot, parcel or tract of land.

CRITICAL AREA:

- a. Any land within a flood hazard area (floodway or flood fringe area) as delineated by the Department of Environmental Protection, State of New Jersey, or
- b. Any land which contains slopes exceeding twelve (12) percent grade, or

- d. Remedy. If any person violates any of the provisions of this chapter or any standards promulgated pursuant to this chapter or fails to comply with the provisions of a certified plan, the municipality may institute a civil action in the Superior Court for injunctive relief to prohibit and prevent such violation or violations and said court may proceed in a summary manner. The Borough may proceed either by injunctive relief or by invoking the penalty provisions of this chapter.

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- b. Any land which contains slopes exceeding twelve (12) percent grade, or

- c. Any land where the water table or surface waters cause particular problems of development, or where development is likely to cause damage to the ground water system.

30-503 APPLICABILITY.

No site shall be disturbed by any person, partnership, corporation, public agency, or entity within the municipality unless Environmental Impact Statement has been reviewed and the proposed development has been approved by the Borough Planning Board in accordance with the specifications and procedures required by this Ordinance. Exemptions from this ordinance are only as listed below:

- a. Applications for a construction permit in a residential district for a single-family residence, where the Construction Official, Zoning Officer, or Borough Engineer has determined that no part of the property in question falls in a critical area as defined herein, provided that this exemption shall not apply wherever three (3) or more dwelling units are proposed to be constructed under common ownership or control on contiguous lots or on lots within a major subdivision.
- b. Applications for a single use, business or industrial, where the property is one acre or less and where no part of the property is in a critical area as defined herein.
- c. Sign permits as required under Chapter 31, Zoning Ordinance.

30-504 DATA REQUIRED.

The Environmental Impact Statement shall contain information and analysis with respect to the following:

- a. The location of the project and a description of the project specifying what is to be carried out, including:
 - 1. Reason for the project,
 - 2. The detailed plans for proposals and any alternative mapped and/or described,
 - 3. Parks, recreational sites, wildlife, refuges and historic sites mapped and described,
 - 4. Existing land use, zoning and master plan delineation of project mapped and described.
- b. An Inventory of existing environmental conditions at the project site and in the surrounding region (i.e., any area that might be affected by the proposal) which shall describe contours (at intervals not exceeding five feet), air quality, water quality, water supply, hydrology, geology, soils, topography, vegetation, wildlife, aquatic organisms, ecology, demography, land use, aesthetics and history.
- c. A listing of all licenses, permits or other approvals as required by Municipal, County or State law and the status of each.
- d. An assessment of the probable impact of the project, both adverse and beneficial, on the topics described in paragraph b.
- e. Any probable adverse environmental effects which cannot be avoided, including:
 - 1. Water quality,
 - 2. Air quality,
 - 3. Noise,
 - 4. Undesirable land use patterns,
 - 5. Damage and destruction of significant plant or wildlife systems or other resources,
 - 6. Aesthetic values,

7. Displacement of people and business,
 8. Displacement of viable farms,
 9. Employment and property tax,
 10. Destruction of man-made resources,
 11. Disruption of desirable community and regional growth,
 12. Health, safety and well-being of the public,
 13. Traffic.
- f. A thorough discussion of the steps to be taken, during and after construction, both at the project site and in the surrounding area, to minimize the adverse environmental effects as described in paragraph e.
- g. Alternatives to the proposed project, including:
1. That of no project,
 2. Description of alternatives with an objective evaluation of the alternatives that might avoid some or all of the adverse environmental effects with the rationale for acceptability or nonacceptability of each alternative,
 3. An analysis of the costs and social impact of the alternatives.
- h. Implications of the proposed action for population distribution or concentration should be estimated and an assessment made of the effect of any possible change in population patterns upon the resource base, including land use, water and public service of the area impacted.
- i. The relationship between local short-term uses of the environmental and the maintenance and enhancement of long-term productivity, assessing the project for each generation as a trustee of the environment for future generations.
- j. A reference list of pertinent published information relating to the project, project site and surrounding area.
- k. Particular data is required as to:
1. Sewerage disposal facilities. Applicant must show:
 - (a) Estimated sewage to be generated in gallons per day together with the provision for connection to the public sewer system.
 - (b) Compliance with State Department of Environmental Protection regulations, where applicable.
 - (c) Compliance with the rules and regulations of the treatment authority into which sewerage will flow.
 2. Water Supply. Applicant must show:
 - (a) Compliance with State and local regulations.
 - (b) Location and depth of all private and public water supplies within five hundred (500) feet of the realty improvement.
 - (c) Location and adequacy of public water supplies to serve the proposed realty improvement.
 3. Drainage: storm water control. Applicant must show:

- (a) Estimated existing surface water runoff and volume.
 - (b) Compliance with State regulations.
 - (c) Compliance with local ordinances relating to drainage and surface water control.
 - (d) Submission of an erosion and sediment control plan reviewed by the Somerset-Union Soil Conservation District (see Article 4 of this Ordinance).
4. Solid Waste Disposal. Applicant must submit a statement of the character and estimated tons per week of solid waste to be generated together with a plan for the disposal of solid wastes in compliance with State Sanitary Code.
5. Air Pollution. Applicant must show that the proposal will have no deleterious effects to the ambient air quality or that no visible smoke or deleterious chemical changes will be produced in the atmosphere by any heating, air conditioning, or incinerating devices or by processing of material.
6. Critical Impact Area. These areas include, but are not limited to: stream corridors, steams, wetlands, estuaries slopes greater than twelve (12%) percent high acid and highly erodible soils, area of high water table and aquifer recharge and discharge areas. Applicant must show:
- (a) A statement of impact on critical impact areas and of adverse effects which cannot be avoided.
 - (b) Environmental protective measures, procedures and schedules to minimize danger to critical impact areas.

30-505 REVIEWS AND INSPECTIONS.

Six (6) copies of the Environmental Impact Statements shall be submitted at the time of submission of the Preliminary Plat, when a major subdivision shall be involved, or upon submission of the site plan for site plan review, where no subdivision shall be involved. Copies of the same shall be furnished by the Secretary of the Planning Board to the following:

- a. To the Borough Engineer.
- b. To the Borough Environmental Commission.
- c. To the Planning Consultant, if deemed advisable by the Planning Board.

A copy of such Statement shall also be submitted to the Somerset County Planning Board in any case where the County Planning Board shall have subdivision or site plan review jurisdiction.

The Borough Engineer and Borough Environmental Commission (and Borough Planner, where applicable) shall have the authority to seek from the applicant additional data where required to make a proper review and recommendation. The respective reports shall be made to the Planning Board within a reasonable time, recognizing that each should have at least thirty (30) days for such review. Such reports shall be made part of the record at any public hearing required in connection with Planning Board action.

The cost of review by the Borough Engineer and Borough Planner (where applicable) shall be deemed part of the cost of development and shall be borne by the applicant and paid to the Borough of Manville in accordance with fees established therefor by the governing body on file in the offices of the Borough Clerk. In any case where it appears that the services of another type of expert consultant shall be required, the applicant shall be required to bear the cost of such expert; in any case the applicant shall be notified in advance and shall deposit with the Borough Clerk the estimated costs for such consultant and such deposit shall be used for the payment by the Borough of such consultant.

30-506 CONDITIONS OF APPROVAL.

In addition to the requirements of other applicable ordinances and conditions which may be imposed thereunder, the Planning Board. In making determinations relative to environmental impact, may condition approval upon compliance with recommendations contained in the reports of the Borough Engineer, Environmental Commission, County Planning Board, and Somerset-Union Soil Conservation District and may impose conditions and safeguards reasonably designed to promote the purpose of this Ordinance. Time limits for completion of work shall be included in any resolution of approval.

30-507 RESERVED.

30-508 EXEMPTIONS.

The Planning Board shall have the power to exempt an application, otherwise subject to this Ordinance, from the requirements of a full environmental impact statement, provided that following factors are taken into consideration and the Planning Board determines that a full impact statement is not required because of the nature of the specified application:

- a. Stability of the soil during and after the proposed alteration
- b. Drainage patterns and effect on surface water runoff
- c. Effects on springs
- d. Potential effect on animals and significant plant species
- e. Potential air and water pollution, especially any increase in siltation
- f. Effect on any construction plans or other environmental changes on critical slope areas or sewage disposal systems
- g. Problems related to rock removal
- h. Amount of resulting non-agricultural displacement of soil
- i. Potential noise pollution
- j. Increase in amount of industrial waste
- k. Increase problems of industrial or non-industrial waste disposal (subject to review of such problems by the Board of Health)
- l. Circumstances or conditions that are peculiar to site or to the application under consideration, that are not generally applicable to site or applications in the same general locality, and that would result in imposition of an undue burden on the applicant if an environmental impact statement were required.

30-509 BOARD OF ADJUSTMENT AS APPROVING AUTHORITY.

Whenever the term "Planning Board" is used in this Article, the same shall be taken to include the term "Board of Adjustment" wherever the Board of Adjustment is acting as the Approving Authority under the Land Development Ordinance.

ARTICLE 6 STORMWATER MANAGEMENT PROGRAM

(Ord. No. 642; Ord. No. 2006-1031; Ord. No. 2007-1059; readopted by Ord. No. 2020-1235)

30-601 SCOPE AND PURPOSE

In addition to the requirements of other applicable ordinances and conditions which may be imposed thereunder, the Planning Board. In making determinations relative to environmental impact, may condition approval upon compliance with recommendations contained in the reports of the Borough Engineer, Environmental Commission, County Planning Board, and Somerset-Union Soil Conservation District and may impose conditions and safeguards reasonably designed to promote the purpose of this Ordinance. Time limits for completion of work shall be included in any resolution of approval.

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30-601 SCOPE AND PURPOSE

a. Policy Statement

Flood control, groundwater recharge, and pollutant reduction through nonstructural or low impact techniques shall be explored before relying on structural BMPs. Structural BMPs should be integrated with nonstructural stormwater management strategies and proper maintenance plans. Nonstructural strategies include both environmentally sensitive site design and source controls that prevent pollutants from being placed on the site or from being exposed to stormwater. Source control plans should be developed based upon physical site conditions and the origin, nature, and the anticipated quantity or amount of potential pollutants. Multiple stormwater management BMPs may be necessary to achieve the established performance standards for water quality, quantity, and groundwater recharge.

b. Purpose

It is the purpose of this Article 6 to establish minimum stormwater management requirements and controls for “major development,” as defined in Section 30-602.

c. Applicability

1. This Article shall be applicable to all site plans and subdivisions for the following major developments that require preliminary or final site plan or subdivision review:

(a) Non-residential major developments; and

(b) Aspects of residential major developments that are not pre-empted by the Residential Site Improvement Standards at N.J.A.C. 5:21.

2. This Article shall also be applicable to all major developments undertaken by the Borough of Manville.

3. Stormwater improvements included as part of developments that are not defined as major developments under this Article, will be required to be designed if proposed by applicant or requested by Board to address site conditions to be based on guidance documents listed in this article. Exemptions from such standards will only be as approved by the Borough Engineer. The Applicant would not be required by the Borough to obtain approval from NJDEP for such exemptions for developments that are not major developments.

d. Compatibility with Other Permit and Ordinance Requirements

Development approvals issued for subdivisions and site plans pursuant to this Article are to be considered an integral part of development approvals under the subdivision and site plan review process and do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable code, rule, act, or ordinance. In their interpretation and application, the provisions of this Article shall be held to be the minimum requirements for the promotion of the public health, safety, and general welfare. This Article is not intended to interfere with, abrogate, or annul any other ordinances, rule or regulation, statute, or other provision of law except that, where any provision of this Article imposes restrictions different from those imposed by any other ordinance, rule or regulation, or other provision of law, the more restrictive provisions or higher standards shall control.

30-602 DEFINITIONS.

Unless specifically defined below, words or phrases used in this Article shall be interpreted so as to give them the meaning they have in common usage and to give this Article its most reasonable application. All words and phrases in this section shall have the same definitions as found in the Stormwater Management Rules at N.J.A.C. 7:8-1.2 with the exemption to definition of major development shall be as noted below as permitted by N.J.A.C 7:8-4.2(a), and any successor rules or regulations thereto.

DEVELOPMENT. The division of a parcel of land into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any building or structure, any mining excavation or landfill, and any use or change in the use of any building or other structure, or land or extension of use of

land, by any person, for which permission is required under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq. In the case of development of agricultural lands, development means: any activity that requires a State permit; any activity reviewed by the County Agricultural Board (CAB) and the State Agricultural Development Committee (SADC), and municipal review of any activity not exempted by the Right to Farm Act. N.J.S.A 4:1C-1 et seq.

MAJOR DEVELOPMENT. Any “development” that provides for ultimately disturbing one or more acres of land. Disturbance for the purpose of this rule is the placement of impervious surface or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation.

30-603 GENERAL STANDARDS.

- a. Design and Performance Standards for Stormwater Management Measures.
 1. Stormwater Management Measures shall be designed and constructed per New Jersey Department of Environmental Protection (NJDEP) publications including NJ Stormwater Best Practices Manual (BPM) and related Stormwater Operation and Maintenance Guidelines (latest editions). These documents shall be understood as a standard and not a guidance document.
 2. Stormwater management measures for major development shall be developed to meet the erosion control, groundwater recharge, stormwater runoff quantity, and stormwater runoff quality standards in Section 30-604. To the maximum extent practicable, these standards shall be met by incorporating nonstructural stormwater management strategies into the design. If these strategies alone are not sufficient to meet these standards, structural stormwater management measures necessary to meet these standards shall be incorporated into the design.
 3. The standards in this Article apply only to new major development and are intended to minimize the impact of stormwater runoff on water quality and water quantity in receiving water bodies and maintain groundwater recharge. The standards do not apply to new major development to the extent that alternative design and performance standards are applicable under a regional stormwater management plan or Water Quality Management Plan adopted in accordance with Department rules.

30-604 STORMWATER MANAGEMENT REQUIREMENTS FOR MAJOR DEVELOPMENT.

- a. The development shall incorporate a maintenance plan for the stormwater management measures incorporated into the design of a major development in accordance with Section 30-610.
- b. Stormwater management measures shall avoid adverse impacts of concentrated flow on habitat for threatened and endangered species as documented in the Department’ Landscape Project or Natural Heritage Database established under N.J.S.A. 13:1B-15.147 through 15.150, particularly *Helonias bullata* (swamp pink) and/or *Clemmys muhlenbergi* (bog turtle).
- c. The following linear development projects are exempt from the groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of Sections 30-604f and g.
 1. The construction of an underground utility line provided that the disturbed areas are revegetated upon completion;
 2. The construction of an aboveground utility line provided that the existing conditions are maintained to the maximum extent practicable; and
 3. The construction of a public pedestrian access, such as a sidewalk or trail with a maximum width of fourteen (14) feet, provided that the access is made of permeable material.
- d. A waiver from strict compliance from the groundwater recharge, stormwater runoff quantity, and stormwater runoff quality requirements of Sections 30-604f. and g. may be obtained for the enlargement of an existing public roadway or railroad; or the construction or enlargement of a public pedestrian access, provided that the following conditions are met:

1. The applicant demonstrates that there is a public need for the project that cannot be accomplished by any other means;
2. The applicant demonstrates through an alternatives analysis, that through the use of nonstructural and structural stormwater management strategies and measures, the option selected complies with the requirements of Sections 30-604f. and g. to the maximum extent practicable;
3. The applicant demonstrates that, in order to meet the requirements of Sections 30-604f. and g. existing structures currently in use, such as homes and buildings, would need to be condemned; and
4. The applicant demonstrates that it does not own or have other rights to areas, including the potential to obtain through condemnation lands not falling under paragraph d.3. above within the upstream drainage area of the receiving stream, that would provide additional opportunities to mitigate the requirements of Sections 30-604f. and g. that were not achievable on-site.

e. Nonstructural Stormwater Management Strategies.

1. To the maximum extent practicable, the standards in Sections 30-604f. and g. shall be met by incorporating nonstructural stormwater management strategies set forth at Section 30-604e. into the design. The applicant shall identify the nonstructural measures incorporated into the design of the project. If the applicant contends that it is not feasible for engineering, environmental, or safety reasons to incorporate any nonstructural stormwater management measures identified in paragraph e.2. below into the design of a particular project, the applicant shall identify the strategy considered and provide a basis for the contention.
2. Nonstructural stormwater management strategies incorporated into site design shall:
 - (a) Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss;
 - (b) Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces;
 - (c) Maximize the protection of natural drainage features and vegetation;
 - (d) Minimize the decrease in the "time of concentration" from pre-construction to post construction. "Time of concentration" is defined as the time it takes for runoff to travel from the hydraulically most distant point of the watershed to the point of interest within a watershed;
 - (e) Minimize land disturbance including clearing and grading;
 - (f) Minimize soil compaction;
 - (g) Provide low-maintenance landscaping that encourages retention and planting of native vegetation and minimizes the use of lawns, fertilizers and pesticides;
 - (h) Provide vegetated open-channel conveyance systems discharging into and through stable vegetated areas;
 - (i) Provide other source controls to prevent or minimize the use or exposure of pollutants at the site, in order to prevent or minimize the release of those pollutants into stormwater runoff. Such source controls include, but are not limited to:
 - (1) Site design features that help to prevent accumulation of trash and debris in drainage systems, including features that satisfy Section 30-604 e.3 below.
 - (2) Site design features that help to prevent discharge of trash and debris from drainage systems;

- (3) Site design features that help to prevent and/or contain spills or other harmful accumulations of pollutants at industrial or commercial developments; and
 - (4) When establishing vegetation after land disturbance, applying fertilizer in accordance with the requirements established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., and implementing rules.
3. Site design features identified under Section 30-604e.2(i)(2) above shall comply with the following standard to control passage of solid and floatable materials through storm drain inlets. For purposes of this paragraph, "solid and floatable materials" means sediment, debris, trash, and other floating, suspended, or settleable solids. For exemptions to this standard see Section 30-604e.3(c) below.
 - (a) Design engineers shall use either of the following grades whenever they use a grate in pavement or another ground surface to collect stormwater from that surface into a storm drain or surface water body under that grate:
 - (1) The New Jersey Department of Transportation (NJDOT) bicycle safe grate, which is described in Chapter 2.4 of the NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines (April 1996); or
 - (2) A different grate, if each individual clear space in that grate has an area of no more than seven (7.0) square inches, or is no greater than one-half (0.5) inches across the smallest dimension.

Examples of grates subject to this standard include grates in grate inlets, the grate portion (non-curb-opening portion) of combination inlets, grates on storm sewer manholes, ditch grates, trench grates, and grates of spacer bars in slotted drains. Examples of ground surfaces include surfaces of roads (including bridges), driveways, parking areas, bikeways, plazas, sidewalks, lawns, fields, open channels, and stormwater basin floors.
 - (b) Whenever design engineers use a curb-opening inlet, the clear space in that curb opening (or each individual clear space, if the curb opening has two or more clear spaces) shall have an area of no more than seven (7.0) square inches, or be no greater than two (2.0) inches across the smallest dimension.
 - (c) This standard does not apply.
 - (1) Where the review agency determines that this standard would cause inadequate hydraulic performance that could not practicably be overcome by using additional or larger storm drain inlets that meet these standards;
 - (2) Where flows from the water quality design storm as specified in Section 30-604g.1. are conveyed through any device (e.g., end of pipe netting facility, manufactured treatment device, or a catch basin hood) that is designed, at a minimum, to prevent delivery of all solid and floatable materials that could not pass through one of the following:
 - (i) A rectangular space four and five-eighths inches long and one and one-half inches wide (this option does not apply for outfall netting facilities); or
 - (ii) A bar screen having a bar spacing of 0.5 inches.
 - (3) Where flows are conveyed through a trash rack that has parallel bars with one-inch (1") spacing between the bars, to the elevation of the water quality design storm as specified in Section 30-604g.1.;
 - (4) Where the New Jersey Department of Environmental Protection determines, pursuant to the New Jersey Register of Historic Places Rules at N.J.A.C. 7:4-7.2(c), that action to meet this standard is an undertaking that constitutes an encroachment or will damage or destroy the New Jersey Register listed historic property.

4. Any land area used as a nonstructural stormwater management measure to meet the performance standards in Sections 30-604 f. and g. shall be dedicated to a government agency, subjected to a conservation restriction filed with the appropriate County Clerk's office, or subject to an approved equivalent restriction that ensures that measure or an equivalent stormwater management measure approved by the reviewing agency is maintained in perpetuity.
5. Guidance for nonstructural stormwater management strategies is available in the New Jersey Stormwater Best Management Practices Manual. The BMP Manual may be obtained from the address identified in Section 30-607 or found on the Department's website at www.njstormwater.org.
- f. Erosion Control, Groundwater Recharge and Runoff Quantity Standards.
 1. This subsection contains minimum design and performance standards to control erosion, encourage and control infiltration and groundwater recharge, and control stormwater runoff quantity impacts of major development.
 - (a) The minimum design and performance standards for erosion control are those established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq. and implementing rules.
 - (b) The minimum design and performance standards for groundwater recharge are as follows:
 - (1) The design engineer shall, using the assumptions and factors for stormwater runoff and groundwater recharge calculations at Section 30-605, either:
 - (i) Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100 percent of the average annual pre-construction groundwater recharge volume for the site; or
 - (ii) Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater runoff volume from pre-construction to post-construction for the 2-year storm is infiltrated.
 - (2) This groundwater recharge requirement does not apply to projects within the "urban redevelopment area," or to projects subject to paragraph (3) below.
 - (3) The following types of stormwater shall not be recharged:
 - (i) Stormwater from areas of high pollutant loading. High pollutant loading areas are areas in industrial and commercial developments where solvents and/or petroleum products are loaded/unloaded, stored, or applied, areas where pesticides are loaded/unloaded or stored; areas where hazardous materials are expected to be present in greater than "reportable quantities" as defined by the United States Environmental Protection Agency (EPA) at 40 CFR 302.4; areas where recharge would be inconsistent with Department approved remedial action work plan or landfill closure plan and areas with high risks for spills of toxic materials, such as gas stations and vehicle maintenance facilities; and
 - (ii) Industrial stormwater exposed to "source material." "Source material" means any material(s) or machinery, located at an industrial facility, that is directly or indirectly related to process, manufacturing or other industrial activities, which could be a source of pollutants in any industrial stormwater discharge to groundwater. Source materials include, but are not limited to, raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels, and lubricants, solvents, and detergents that are related to process, manufacturing, or other industrial activities that are exposed to stormwater.
 - (4) The design engineer shall assess the hydraulic impact on the groundwater table and design the site so as to avoid adverse hydraulic impacts. Potential adverse

hydraulic impacts include, but are not limited to, exacerbating a naturally or seasonally high water table so as to cause surficial ponding, flooding of basements, or interference with the proper operation of subsurface sewage disposal systems and other subsurface structures in the vicinity or downgradient of the groundwater recharge area.

- (c) In order to control stormwater runoff quantity impacts, the design engineer shall, using the assumptions and factors for stormwater runoff calculations at Section 5, complete one of the following:
 - (1) Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction runoff hydrographs for the two, 10, and 100-year storm events do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storm events;
 - (2) Demonstrate through hydrologic and hydraulic analysis that there is no increase, as compared to the pre-construction condition, in the peak runoff rates of stormwater leaving the site for the two, 10, and 100-year storm events and that the increased volume or change in timing of stormwater runoff will not increase flood damage at or downstream of the site. This analysis shall include the analysis of impacts of existing land uses and projected land uses assuming full development under existing zoning and land use ordinances in the drainage area;
 - (3) Design stormwater management measures so that the post-construction peak runoff rates for the 2, 10 and 100 year storm events are 50, 75 and 80 percent, respectively, of the pre-construction peak runoff rates. The percentages apply only to the post-construction stormwater runoff that is attributable to the portion of the site on which the proposed development or project is to be constructed. The percentages shall not be applied to post-construction stormwater runoff into tidal flood hazard areas if the increased volume of stormwater runoff will not increase flood damages below the point of discharge; or
 - (4) In tidal flood hazard areas, stormwater runoff quantity analysis in accordance with paragraphs (c)(1), (c)(2) and (c)(3) above shall only be applied if the increased volume of stormwater runoff could increase flood damages below the point of discharge.

2. Any application for a new agricultural development that meets the definition of major development at Section 30-602 shall be submitted to the appropriate Soil Conservation District for review and approval in accordance with the requirements of this section and any applicable Soil Conservation District guidelines for stormwater runoff quantity and erosion control. For the purposes of this section, “agricultural development” means land uses normally associated with the production of food, fiber and livestock for sale. Such uses do not include the development of land for the processing or sale of food and the manufacturing of agriculturally related products.

g. Stormwater Runoff Quality Standards.

1. Stormwater management measures shall be designed to reduce the post-construction load of total suspended solids (TSS) in stormwater runoff by 80 percent of the anticipated load from the developed site, expressed as an annual average. Stormwater management measures shall only be required for water quality control if an additional 1/4 acre of impervious surface is being proposed on a development site. The requirement to reduce TSS does not apply to any stormwater runoff in a discharge regulated under a numeric effluent limitation for TSS imposed under the New Jersey Pollution Discharge Elimination System (NJPDES) rules, N.J.A.C. 7:14A, or in a discharge specifically exempt under a NJPDES permit from this requirement. The water quality design storm is 1.25 inches of rainfall in two hours. Water quality calculations shall take into account the distribution of rain from the water quality design storm, as reflected in Table 1. The calculation of the volume of runoff may take into account the implementation of non-structural and structural stormwater management measures.

Table 1: Water Quality Design Storm Distribution			
Time	Cumulative	Time	Cumulative

(Minutes)	Rainfall (Inches)	(Minutes)	Rainfall (Inches)
0	0.0000	65	0.8917
5	0.0083	70	0.9917
10	0.0166	75	1.0500
15	0.0250	80	1.0840
20	0.0500	85	1.1170
25	0.0750	90	1.1500
30	0.1000	95	1.1750
35	0.1330	100	1.2000
40	0.1660	105	1.2250
45	0.2000	110	1.2334
50	0.2583	115	1.2417
55	0.3583	120	1.2500
60	0.6250		

2. For purposes of TSS reduction calculations, Table 2 below presents the presumed removal rates for certain BMPs designed in accordance with the New Jersey Stormwater Best Management Practices Manual. The BMP Manual may be obtained from the address identified in Section 30-607, or found on the Department's website at www.njstormwater.org. The BMP Manual and other sources of technical guidance are listed in Section 30-607. TSS reduction shall be calculated based on the removal rates for the BMPs in Table 2 below. Alternative removal rates and methods of calculating removal rates may be used if the design engineer provides documentation demonstrating the capability of these alternative rates and methods to the review agency. A copy of any approved alternative rate or method of calculating the removal rate shall be provided to the Department at the following address: Division of Watershed Management, New Jersey Department of Environmental Protection, PO Box 418 Trenton, New Jersey, 08625-0418.
3. If more than one BMP in series is necessary to achieve the required 80 percent TSS reduction for a site, the applicant shall utilize the following formula to calculate TSS reduction:

$$R = A + B - (AXB)/100$$

Where

R = total TSS percent load removal from application of both BMPs, and

A = the TSS percent removal rate applicable to the first BMP

B = the TSS percent removal rate applicable to the second BMP

Table 2: TSS Removal Rates for BMPs	
Best Management Practice	TSS Percent Removal Rate
Bioretention Systems	90
Constructed Stormwater Wetland	90
Extended Detention Basin	40-60
Infiltration Structure	80
Manufactured Treatment Device	See Section 6.C
Sand Filter	80
Vegetative Filter Strip	60-80
Wet Pond	50-90

4. If there is more than one onsite drainage area, the 80 percent TSS removal rate shall apply to each drainage area, unless the runoff from the subareas converge on site in which case the removal rate can be demonstrated through a calculation using a weighted average.
5. Stormwater management measures shall also be designed to reduce, to the maximum extent feasible, the post-construction nutrient load of the anticipated load from the developed site in stormwater runoff generated from the water quality design storm. In achieving reduction of nutrients to the maximum extent feasible, the design of the site shall include nonstructural strategies and

structural measures that optimize nutrient removal while still achieving the performance standards in Sections 30-604 f. and g.

6. Additional information and examples are contained in the New Jersey Stormwater Best Management Practices Manual, which may be obtained from the address identified in Section 30-607.
7. In accordance with the definition of FW1 at N.J.A.C. 7:9B-1.4, stormwater management measures shall be designed to prevent any increase in stormwater runoff to waters classified as FW1.
8. Special water resource protection areas shall be established along all waters designated Category One at N.J.A.C. 7:9B, and perennial or intermittent streams that drain into or upstream of the Category One waters as shown on the USGS Quadrangle Maps or in the County Soil Surveys, within the associated HUC14 drainage area. These areas shall be established for the protection of water quality, aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, and exceptional fisheries significance of those established Category One waters. These areas shall be designated and protected as follows:
 - (a) The applicant shall preserve and maintain a special water resource protection area in accordance with one of the following:
 - (1) A 300-foot special water resource protection area shall be provided on each side of the waterway, measured perpendicular to the waterway from the top of the bank outwards or from the centerline of the waterway where the bank is not defined, consisting of existing vegetation or vegetation allowed to follow natural succession is provided.
 - (2) Encroachment within the designated special water resource protection area under Subsection (1) above shall only be allowed where previous development or disturbance has occurred (for example, active agricultural use, parking area or maintained lawn area). The encroachment shall only be allowed where applicant demonstrates that the functional value and overall condition of the special water resource protection area will be maintained to the maximum extent practicable. In no case shall the remaining special water resource protection area be reduced to less than 150 feet as measured perpendicular to the top of bank of the waterway or centerline of the waterway where the bank is undefined. All encroachments proposed under this subparagraph shall be subject to review and approval by the Department.
 - (b) All stormwater shall be discharged outside of and flow through the special water resource protection area and shall comply with the Standard for Off-Site Stability in the "Standards for Soil Erosion and Sediment Control in New Jersey," established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq.
 - (c) If stormwater discharged outside of and flowing through the special water resource protection area cannot comply with the Standard For Off-Site Stability in the "Standards for Soil Erosion and Sediment Control in New Jersey," established under the Soil Erosion and Sediment Control Act, N.J.S.A. 4:24-39 et seq., then the stabilization measures in accordance with the requirements of the above standards may be placed within the special water resource protection area, provided that:
 - (1) Stabilization measures shall not be placed within 150 feet of the Category One waterway;
 - (2) Stormwater associated with discharges allowed by this section shall achieve a 95 percent TSS post-construction removal rate;
 - (3) Temperature shall be addressed to ensure no impact on the receiving waterway;
 - (4) The encroachment shall only be allowed where the applicant demonstrates that the functional value and overall condition of the special water resource protection area will be maintained to the maximum extent practicable;

- (5) A conceptual project design meeting shall be held with the appropriate Department staff and Soil Conservation District staff to identify necessary stabilization measures; and
 - (6) All encroachments proposed under this section shall be subject to review and approval by the Department.
- (d) A stream corridor protection plan may be developed by a regional stormwater management planning committee as an element of a regional stormwater management plan, or by the Borough of Manville through an adopted municipal stormwater management plan. If a stream corridor protection plan for a waterway subject to Section 30-604 g.8. has been approved by the Department of Environmental Protection, then the provisions of the plan shall be the applicable special water resource protection area requirements for the waterway. A stream corridor protection plan for a waterway subject to Section 30-604 g.8. shall maintain or enhance the current functional value and overall condition of the special water resource protection area as defined in Section 30-604 g.8(a)(1) above. In no case shall a stream corridor protection plan allow the reduction of the Special Water Resource Protection Area to less than 150 feet as measured perpendicular to the waterway subject to this subsection.
- (e) Section 30-604 g.8. does not apply to the construction of one individual single-family dwelling that is not part of a larger development on a lot receiving preliminary or final subdivision approval on or before February 2, 2004, provided that the construction begins on or before February 2, 2009.

30-605**CALCULATION OF STORMWATER RUNOFF AND GROUNDWATER RECHARGE.**

- a. Stormwater runoff shall be calculated in accordance with the following:
1. The design engineer shall calculate runoff using one of the following methods:
 - (a) The USDA Natural Resources Conservation Service (NRCS) methodology, including the NRCS Runoff Equation and Dimensionless Unit Hydrograph, as described in the NRCS National Engineering Handbook Section 4 - Hydrology and Technical Release 55 - Urban Hydrology for Small Watersheds; or
 - (b) The Rational Method for peak flow and the Modified Rational Method for hydrograph computations.
 2. For the purpose of calculating runoff coefficients and groundwater recharge, there is a presumption that the pre-construction condition of a site or portion thereof is a wooded land use with good hydrologic condition. The term "runoff coefficient" applies to both the NRCS methodology at Section 30-605 a.1(a) and the Rational and Modified Rational Methods at Section 30-605 a.1(b). A runoff coefficient or a groundwater recharge land cover for an existing condition may be used on all or a portion of the site if the design engineer verifies that the hydrologic condition has existed on the site or portion of the site for at least five years without interruption prior to the time of application. If more than one land cover has existed on the site during the five years immediately prior to the time of application, the land cover with the lowest runoff potential shall be used for the computations. In addition, there is the presumption that the site is in good hydrologic condition (if the land use type is pasture, lawn, or park), with good cover (if the land use type is woods), or with good hydrologic condition and conservation treatment (if the land use type is cultivation).
 3. In computing pre-construction stormwater runoff, the design engineer shall account for all significant land features and structures, such as ponds, wetlands, depressions, hedgerows, or culverts, that may reduce pre-construction stormwater runoff rates and volumes.
 4. In computing stormwater runoff from all design storms, the design engineer shall consider the relative stormwater runoff rates and/or volumes of pervious and impervious surfaces separately to accurately compute the rates and volume of stormwater runoff from the site. To calculate runoff from unconnected impervious cover, urban impervious area modifications as described in the NRCS Technical Release 55 - Urban Hydrology for Small Watersheds and other methods may be employed.

5. If the invert of the outlet structure of a stormwater management measure is below the flood hazard design flood elevation as defined at N.J.A.C. 7:13, the design engineer shall take into account the effects of tailwater in the design of structural stormwater management measures.

b. Groundwater recharge may be calculated in accordance with the following:

1. The New Jersey Geological Survey Report GSR-32 A Method for Evaluating Ground-Water Recharge Areas in New Jersey, incorporated herein by reference as amended and supplemented. Information regarding the methodology is available from the New Jersey Stormwater Best Management Practices Manual; at <http://www.state.nj.us/dep/njgs/>; or at New Jersey Geological Survey, 29 Arctic Parkway, P.O. Box 427 Trenton, New Jersey 08625-0427; (609) 984-6587.

30-606 STANDARDS FOR STRUCTURAL STORMWATER MANAGEMENT MEASURES.

a. Standards for structural stormwater management measures are as follows:

1. Structural stormwater management measures shall be designed to take into account the existing site conditions, including, for example, environmentally critical areas, wetlands; flood-prone areas; slopes; depth to seasonal high water table; soil type, permeability and texture; drainage area and drainage patterns; and the presence of solution-prone carbonate rocks (limestone).
2. Structural stormwater management measures shall be designed to minimize maintenance, facilitate maintenance, and repairs, and ensure proper functioning. Trash racks shall be installed at the intake to the outlet structure as appropriate, and shall have parallel bars with one-inch (1") spacing between the bars to the elevation of the water quality design storm. For elevations higher than the water quality design storm, the parallel bars at the outlet structure shall be spaced no greater than one-third (1/3) the width of the diameter of the orifice or one-third (1/3) the width of the weir, with a minimum spacing between bars of one-inch and a maximum spacing between bars of six inches. In addition, the design of trash racks must comply with the requirements of Section 8.D.
3. Structural stormwater management measures shall be designed, constructed, and installed to be strong, durable, and corrosion resistant. Measures that are consistent with the relevant portions of the Residential Site Improvement Standards at N.J.A.C. 5:21-7.3, 7.4. and 7.5 shall be deemed to meet this requirement.
4. At the intake to the outlet from the stormwater management basin, the orifice size shall be a minimum of two and one-half inches in diameter.
5. Stormwater management basins shall be designed to meet the minimum safety standards for stormwater management basins at Section 30-608.

b. Stormwater management measure guidelines are available in the New Jersey Stormwater Best Management Practices Manual. Other stormwater management measures may be utilized provided the design engineer demonstrates that the proposed measure and its design will accomplish the required water quantity, groundwater recharge and water quality design and performance standards established by Section 30-604 of this Article.

c. Manufactured treatment devices may be used to meet the requirements of Section 30-604 of this Article, provided the pollutant removal rates are verified by the New Jersey Corporation for Advanced Technology and certified by the Department.

30-607 SOURCES FOR TECHNICAL GUIDANCE.

- a. Technical guidance for stormwater management measures can be found in the documents listed at 1 and 2 below, which are available from Maps and Publication, New Jersey Department of Environmental Protection, 428 East State Street, P.O. Box 420, Trenton, New Jersey, 08625; telephone (609) 777-1038.

1. Guidelines for stormwater management measures are contained in the New Jersey Stormwater Best Management Practices Manual, as amended. Information is provided on stormwater management measures such as: bioretention systems, constructed stormwater wetlands, dry wells, extended detention basins, infiltration structures, manufactured treatment devices, pervious paving, sand filters, vegetative filter strips, and wet ponds.
 2. The New Jersey Department of Environmental Protection Stormwater Management Facilities Maintenance Manual, as amended.
- b. Additional technical guidance for stormwater management measures can be obtained from the following:
1. The “Standards for Soil Erosion and Sediment Control in New Jersey” promulgated by the State Soil Conservation Committee and incorporated into N.J.A.C. 2:90. Copies of these standards may be obtained by contacting the State Soil Conservation Committee or any of the Soil Conservation Districts listed in N.J.A.C. 2:90-1.3(a)4. The location, address, and telephone number of each Soil Conservation District may be obtained from the State Soil Conservation Committee, P.O. Box 330, Trenton, New Jersey 08625; (609) 292-5540;
 2. The Rutgers Cooperative Extension Service, 732-932-9306; and
 3. The Soil Conservation Districts listed in N.J.A.C. 2:90-1.3(a)4. The location, address, and telephone number of each Soil Conservation District may be obtained from the State Soil Conservation Committee, P.O. Box 330, Trenton, New Jersey, 08625, (609) 292-5540.

30-608 SAFETY STANDARDS FOR STORMWATER MANAGEMENT BASINS.

- a. This section sets forth requirements to protect public safety through the proper design and operation of stormwater management basins. This section applies to any new stormwater management basin.
- b. Requirements for Trash Racks, Overflow Grates and Escape Provisions.
1. A trash rack is a device designed to catch trash and debris and prevent the clogging of outlet structures. Trash racks shall be installed at the intake to the outlet from the stormwater management basin to ensure proper functioning of the basin outlets in accordance with the following:
 - (a) The trash rack shall have parallel bars, with no greater than six (6) inch spacing between the bars.
 - (b) The trash rack shall be designed so as not to adversely affect the hydraulic performance of the outlet pipe or structure.
 - (c) The average velocity of flow through a clean trash rack is not to exceed 2.5 feet per second under the full range of stage and discharge. Velocity is to be computed on the basis of the net area of opening through the rack.
 - (d) The trash rack shall be constructed and installed to be rigid, durable, and corrosion resistant, and shall be designed to withstand a perpendicular live loading of 300 lbs./ft sq.
 2. An overflow grate is designed to prevent obstruction of the overflow structure. If an outlet structure has an overflow grate, such grate shall meet the following requirements:
 - (a) The overflow grate shall be secured to the outlet structure but removable for emergencies and maintenance.
 - (b) The overflow grate spacing shall be no less than two inches across the smallest dimension.
 - (c) The overflow grate shall be constructed and installed to be rigid, durable, and corrosion resistant, and shall be designed to withstand a perpendicular live loading of 300lbs./ft sq.

3. For purposes of this paragraph b.3., escape provisions mean the permanent installation of ladders, steps, rungs, or other features that provide easily accessible means of egress from stormwater management basins. Stormwater management basins shall include escape provisions as follows:
 - (a) If a stormwater management basin has an outlet structure, escape provisions shall be incorporated in or on the structure. With the prior approval of the reviewing agency identified in Section 30-608c. a free-standing outlet structure may be exempted from this requirement.
 - (b) Safety ledges shall be constructed on the slopes of all new stormwater management basins having a permanent pool of water deeper than two and one-half feet. Such safety ledges shall be comprised of two steps. Each step shall be four to six feet in width. One step shall be located approximately two and one-half feet below the permanent water surface, and the second step shall be located one to one and one-half feet above the permanent water surface. See Section 30-608d. for an illustration of safety ledges in a stormwater management basin.
 - (c) In new stormwater management basins, the maximum interior slope for an earthen dam, embankment, or berm shall not be steeper than 3 horizontal to 1 vertical.
- c. Variance or Exemption from Safety Standards.
 1. A variance or exemption from the safety standards for stormwater management basins may be granted only upon a written finding by the Borough of Manville that the variance or exemption will not constitute a threat to public safety.
- d. Illustration of Safety Ledges. Illustration on file at the Borough Offices.

30-609 REQUIREMENTS FOR A SITE DEVELOPMENT STORMWATER PLAN.

- a. Submission of Site Development Stormwater Plan.
 1. Whenever an applicant seeks municipal approval of a development subject to this Article, ordinance, the applicant shall submit all of the required components of the Checklist for the Site Development Stormwater Plan at Section 30-609c. below as part of the submission of the applicant's application for subdivision or site plan approval.
 2. The applicant shall demonstrate that the project meets the standards set forth in this Article.
 3. The applicant shall submit copies of the materials listed in the checklist for site development stormwater plans in accordance with Section 30-609c. of this Article.
- b. Site Development Stormwater Plan Approval.

The applicant's Site Development project shall be reviewed as a part of the subdivision or site plan review process by the municipal Board or Official from which municipal approval is sought. That municipal Board or Official shall consult the engineer retained by the Planning Board to determine if all of the checklist requirements have been satisfied and to determine if the project meets the standards set forth in this Article.

- c. Checklist Requirements.

The following information shall be required:

1. Topographic Base Map.

The reviewing engineer may require upstream tributary drainage system information as necessary. It is recommended that the topographic base map of the site be submitted which extends a minimum of 200 feet beyond the limits of the proposed development, at a scale of 1" = 200' or greater, showing 2-foot contour intervals. The map as appropriate may indicate the following: existing surface water drainage, shorelines, steep slopes, soils, erodible soils, perennial or intermittent streams that drain into or upstream of the Category One waters, wetlands and flood plains along with their appropriate

buffer strips, marshlands and other wetlands, pervious or vegetative surfaces, existing man-made structures, roads, bearing and distances of property lines, and significant natural and manmade features not otherwise shown.

2. Environmental Site Analysis.

A written and graphic description of the natural and man-made features of the site and its environs. This description should include a discussion of soil conditions, slopes, wetlands, waterways and vegetation on the site. Particular attention should be given to unique, unusual, or environmentally sensitive features and to those that provide particular opportunities or constraints for development.

3. Project Description and Site Plan(s).

A map (or maps) at the scale of the topographical base map indicating the location of existing and proposed buildings, roads, parking areas, utilities, structural facilities for stormwater management and sediment control, and other permanent structures. The map(s) shall also clearly show areas where alterations occur in the natural terrain and cover, including lawns and other landscaping, and seasonal high ground water elevations. A written description of the site plan and justification of proposed changes in natural conditions may also be provided.

4. Land Use Planning and Source Control Plan.

This plan shall provide a demonstration of how the goals and standards of Section 30-603 through 30-606 are being met. The focus of this plan shall be to describe how the site is being developed to meet the objective of controlling groundwater recharge, stormwater quality and stormwater quantity problems at the source by land management and source controls whenever possible.

5. Stormwater Management Facilities Map.

The following information, illustrated on a map of the same scale as the topographic base map, shall be included:

- (a) Total area to be paved or built upon, proposed surface contours, land area to be occupied by the stormwater management facilities and the type of vegetation thereon, and details of the proposed plan to control and dispose of stormwater.
- (b) Details of all stormwater management facility designs, during and after construction, including discharge provisions, discharge capacity for each outlet at different levels of detention and emergency spillway provisions with maximum discharge capacity of each spillway.

6. Calculations.

- (a) Comprehensive hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in Section 30-604 of this Article.
- (b) When the proposed stormwater management control measures (e.g., infiltration basins) depends on the hydrologic properties of soils, then a soils report shall be submitted. The soils report shall be based on onsite boring logs or soil pit profiles. The number and location of required soil borings or soil pits shall be determined based on what is needed to determine the suitability and distribution of soils present at the location of the control measure.

7. Maintenance and Repair Plan.

The design and planning of the stormwater management facility shall meet the maintenance requirements of Section 30-610.

8. Waiver from Submission Requirements.

The municipal Official or Board reviewing an application under this ordinance may, in consultation with the Municipal Engineer, waive submission of any of the requirements in Sections 30-609C.1.

through 30-609C.9. when it can be demonstrated that the information requested is impossible to obtain or it would create a hardship on the applicant to obtain and its absence will not materially affect the review process.

30-610 MAINTENANCE AND REPAIR.

a. Applicability.

1. Projects subject to review as in Section 30-601C. shall comply with the requirements of Sections 30-610b. and c.

b. General Maintenance.

1. The design engineer shall prepare a maintenance plan for the stormwater management measures incorporated into the design of a major development.
2. The maintenance plan shall contain specific preventative maintenance tasks and schedules; cost estimates, including estimated cost of sediment, debris, or trash removal; and the name, address, and telephone number of the person or persons responsible for preventative and corrective maintenance (including replacement). Maintenance guidelines for stormwater management measures are available in the New Jersey Stormwater Best Management Practices Manual. If the maintenance plan identifies a person other than the developer (for example, a public agency or homeowners' association) as having the responsibility for maintenance, the plan shall include documentation of such person's agreement to assume this responsibility, or of the developer's obligation to dedicate a stormwater management facility to such person under an applicable ordinance or regulation.
3. Responsibility for maintenance shall not be assigned or transferred to the owner or tenant of an individual property in a residential development or project, unless such owner or tenant owns or leases the entire residential development or project.
4. If the person responsible for maintenance identified under Section 30-610b.2. above is not a public agency, the maintenance plan and any future revisions based on Section 30-610b.7. below shall be recorded upon the deed of record for each property on which the maintenance described in the maintenance plan must be undertaken.
5. Preventative and corrective maintenance shall be performed to maintain the function of the stormwater management measure, including repairs or replacement to the structure; removal of sediment, debris, or trash; restoration of eroded areas; snow and ice removal; fence repair or replacement, restoration of vegetation; and repair or replacement of nonvegetated linings.
6. The person responsible for maintenance identified under Section 30-610b.2. above shall maintain a detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspections and copies of all maintenance-related work orders.
7. The person responsible for maintenance identified under Section 30-610b.2. above shall evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan and the deed as needed.
8. The person responsible for maintenance identified under Section 30-610b.2. above shall retain and make available, upon request by any public entity with administrative, health, environmental, or safety authority over the site, the maintenance plan and the documentation required by Section 30-610b.6 and b.7.
9. The requirements of Sections 30-610b.b.3. and b.4. do not apply to stormwater management facilities that are dedicated to and accepted by the Borough of Manville or another governmental agency.
10. In the event that the stormwater management facility becomes a danger to public safety or public health, or if it is in need of maintenance or repair, the Borough of Manville shall so notify the

responsible person in writing. Upon receipt of that notice, the responsible person shall have fourteen (14) days to effect maintenance and repair of the facility in a manner that is approved by the municipal engineer or his designee. The Borough of Manville, in its discretion, may extend the time allowed for effecting maintenance and repair for good cause. If the responsible person fails or refuses to perform such maintenance and repair, the Borough of Manville or County may immediately proceed to do so and shall bill the cost thereof to the responsible person.

- c. Nothing in this section shall preclude the Borough of Manville in which the major development is located from requiring the posting of a performance or maintenance guarantee in accordance with N.J.S.A. 40:55D-53.

30-611 PENALTIES.

Any person who erects, constructs, alters, repairs, converts, maintains, or uses any building, structure or land in violation of this ordinance shall be subject to the following penalties, as specified in the Borough of Manville Code Chapter 1, Section 1-5.

30-612 RESERVED.

ARTICLE 7 DESIGN AND PERFORMANCE STANDARDS (Ord. No. 642; readopted by Ord. No. 2020-1235)

30-701 GENERAL.

30-701.1 Development Objectives.

Any development shall demonstrate conformance to design standards that will encourage sound development patterns within the Borough. Where either an Official Map or Master Plan has been adopted, the development shall conform to the proposals and conditions shown thereon. The streets, drainage rights-of-way, school sites, public parks and playgrounds, scenic sites, historic sites and flood control basins shown on the officially adopted Master Plan or Official Map shall be considered in approval of development plans. In accordance with good design practices, extreme deviations from rectangular lot shapes and straight lot lines shall not be allowed unless approved in accordance with the Municipal Land Use Law. All improvements shall be installed and connected with existing facilities or installed in required locations to enable future connections with approved systems or contemplated systems and shall be adequate to handle all present and probable future development.

30-701.2 Character of the Land.

Land which the Approving Authority finds to be in areas identified in the Natural Resources Inventory as having severe or moderate soil characteristics particularly as the land relates to flooding, improper drainage, steep slopes, rock formations, soil conditions, adverse topography, utility easements, or other features which can reasonably be expected to be harmful to the health, safety and general welfare of the present or future inhabitants of the development, and/or its surrounding areas, shall not be subdivided and site plans shall not be approved unless adequate and acceptable methods are formulated by the developer to solve the problems by methods meeting this ordinance and all other regulations.

30-701.3 Plats Straddling Municipal Boundaries.

Whenever a development abuts or crosses a municipal boundary, access to those lots within this Borough shall be from within this Borough as a general rule. Whenever access to a development is required across land in an adjoining community as the exception, the Approving Authority may require documentation that such access is legally established, and that the access road is adequately improved.

30-701.4 Development Name.