

(d) The cost of such maintenance by the NJMC shall be assessed against the property maintained and shall become a lien on said property. The NJMC at the time of entering upon the open space for the purpose of maintenance, shall file a notice of such lien in the Office of the County Clerk upon the property affected by such lien.

SUBCHAPTER 4. ADMINISTRATION

19:4-4.1 Purpose

The purpose of this subchapter is to establish the administrative procedures for the development, redevelopment and management of properties in the District.

Case Notes

Storage of trucks, tractors and trailers in rear portion of premises was lawful preexisting nonconforming use. *T & S Tire Service, Inc. v. Hackensack Meadowlands Development Com'n.* 91 N.J.A.R.2d 1 (HMD).

19:4-4.2 Zoning certificates

(a) Unless and until a zoning certificate is obtained from the NJMC in accordance with N.J.A.C. 19:4-4.5:

1. No construction, moving, remodeling or reconstruction of any structure or addition thereto shall be commenced, except for building demolition and maintenance;
2. No use shall be commenced or changed; and
3. No site work, including the improvement of land and the placement of fill, shall be commenced.

(b) No zoning certificate shall be issued until such time as any required special exception or variance has been granted pursuant to these regulations.

(c) Any zoning certificate issued in conflict with the provisions of these regulations shall be null and void.

19:4-4.3 Application for zoning certificate; administrative completeness

(a) All applications for zoning certificates shall be filed with the NJMC.

(b) An application for a zoning certificate shall contain the following:

1. A complete application form, signed by the applicant and the property owner, containing the following major components:
 - i. Applicant information;
 - ii. Property location and ownership information; and
 - iii. Proposed tenant/use;

2. The required fee, in accordance with N.J.A.C. 19:4-11; and

3. Three copies of the site plan and any other plans, reports or certifications required by these regulations.

(c) Upon receipt of an application, the items submitted shall be reviewed to determine that the essential elements of the application have been submitted.

(d) If the application is deemed administratively complete, the NJMC shall review the application for technical completeness, in accordance with N.J.A.C. 19:4-5.

(e) If the application is deemed administratively incomplete, the NJMC shall advise the applicant of the deficiencies within two working days.

19:4-4.4 Application for zoning certificate; technical requirements

(a) Zoning certificate applications for new buildings and additions, and in other instances where required by the NJMC staff, shall include a valid survey of the tract, signed and sealed by a New Jersey-licensed professional land surveyor, including, at minimum:

1. Bearings and distances of all property lines;
2. Block and lot designations;
3. Acreage of the site to the nearest tenth of an acre;
4. Adjacent property lines and the names of the adjacent property owners within 200 feet of the subject property; and
5. All areas claimed by the State of New Jersey as riparian, now or formerly, including any grants or releases.

(b) All plans and professional reports submitted in conjunction with an application for a zoning certificate shall be submitted in triplicate and shall be signed and sealed by a New Jersey-licensed professional engineer, professional land surveyor, professional planner, or registered architect, as required by law. All landscape plans and open space plans for sites with an area greater than five acres shall be signed and sealed by a New Jersey certified landscape architect.

(c) General site plan requirements are as follows:

1. All site plans or sets thereof shall be based on a valid survey as specified in paragraph (a) above, drawn to scale, and contain the following:

- i. The name and address of the property owner;
- ii. The address and block and lot designation of the subject property and areas within 200 feet;
- iii. The zoning designation of the subject property, including the location of the zone line where applicable;

iv. All existing physical features, including topography, the location of any watercourses and environmentally sensitive areas, the mean high water line, and any drainage facilities on or within 200 feet of the subject property;

v. The building footprint, dimensions, height, setbacks, lowest floor elevation, and the location of exit doors for all existing structures;

vi. The location and configuration of vehicular use areas; and

vii. The location, configuration, and dimension of streets, ROWs, easements, utility lines, sidewalks, alleys and curbs.

(d) The application shall include such other additional information as required below, based on the specific type of application, to determine compliance with these regulations, including:

1. Requirements for new buildings and additions:

i. In addition to the requirements of (c) above, the site plan shall include the following:

(1) The building footprint, dimensions, height, setbacks, lowest floor elevation (NGVD), and the location of exit doors for all proposed structures;

(2) The existing and proposed floor area, itemized in square footage by use;

(3) The existing and proposed lot coverage and floor area ratio (FAR) calculations;

(4) The proposed topography of the site;

(5) Delineation of wetlands;

(6) Circulation patterns (auto, truck, and pedestrian) and the location and design of vehicular use areas, including the layout of parking and loading areas and sidewalks;

(7) The location of all utilities and the location and screening of utility structures;

(8) An open space plan prepared in accordance with N.J.A.C. 19:4-8.8;

(9) A landscape plan prepared in accordance with N.J.A.C. 19:4-8.9;

(10) A lighting plan prepared in accordance with N.J.A.C. 19:4-8.13, including illumination level plot or footcandle trace and design details of poles and fixtures;

(11) The location and screening of all refuse and recycling areas;

(12) The location of existing and proposed signage, including dimensions, height, setback, and illumination;

(13) Design details, including pavement, curbing, safety islands, fencing, and drainage facilities;

(14) Details sufficient to determine the site's compliance with the NJ UCC Barrier Free Subcode, N.J.A.C. 5:23-7;

(15) Building elevations, including details of facade materials; and

(16) A zoning summary table; and

ii. Other plans and reports to be submitted:

(1) Drainage plans and calculations prepared in accordance with N.J.A.C. 19:4-8.6.

2. Requirements for site improvements:

i. In addition to the requirements of (c) above, the site plan shall include the following:

(1) The proposed topography of the site;

(2) Delineation of wetlands;

(3) Circulation patterns (auto, truck, and pedestrian) and the location and design of vehicular use areas, including the layout of parking and loading areas and sidewalks;

(4) The location of all utilities and the location and screening of utility structures;

(5) An open space plan prepared in accordance with N.J.A.C. 19:4-8.8;

(6) A landscape plan prepared in accordance with N.J.A.C. 19:4-8.9;

(7) A lighting plan prepared in accordance with N.J.A.C. 19:4-8.13, including illumination level plot or footcandle trace and design details of poles and fixtures;

(8) The location and screening of all refuse and recycling areas;

(9) Design details, including pavement, curbing, safety islands, fencing, and drainage facilities;

(10) Details sufficient to determine the site's compliance with the NJ UCC Barrier Free Subcode, N.J.A.C. 5:23-7; and

(11) A zoning summary table; and

ii. Other plans and reports to be submitted:

(1) Drainage plans and calculations prepared in accordance with N.J.A.C. 19:4-8.6.

3. Requirements for a change in use:

i. In addition to the requirements of (c) above, the site plan shall include the following:

(1) An outline of the location within the building footprint where the change in use is proposed;

6. Proof of submittal to other agencies having jurisdiction and copies of all other agency approvals obtained by the applicant; and

7. Other such information from a specific applicant as may be required by the NJMC.

(f) The technical requirements of (a) through (e) above may be waived by the Chief Engineer upon written request in accordance with the following:

1. A request for a waiver shall specify the provision in (a) through (e) above from which the waiver is requested and the reason(s) for the request.

2. The Chief Engineer may grant waivers from the technical submittal requirements, in writing, upon finding that conformance with the NJMC rules may be determined without the specific submittal.

3. The Chief Engineer shall have 10 business days to render a decision on the waiver request.

4. Upon a substantive change of an application or unforeseen circumstance, the NJMC reserves the right to require the submittal of a waived technical requirement when deemed necessary by the Chief Engineer to determine conformance with the NJMC rules.

19:4-4.5 Review and approval of application for zoning certificate

(a) Within 10 working days after receipt of a zoning certificate application that is administratively complete per N.J.A.C. 19:4-4.3, the NJMC shall review the items submitted as specified in N.J.A.C. 19:4-4.4, and determine if the application is technically complete and in compliance with the applicable regulations.

(b) If the application is deemed to be technically incomplete, the NJMC shall advise the applicant, in writing, of the deficiencies.

(c) The site plan, and any report(s) submitted in support of the application, shall be reviewed to determine if the proposal complies with the following, unless relief has otherwise been previously granted:

1. The application and the development proposed therein comply with the applicable requirements of these regulations;

2. The traffic circulation system, both on site and off site, and parking and loading facilities are adequate for the proposed use and designed to promote maximum safety, including the provision of adequate and efficient access to existing roadways and for emergency equipment;

3. The proposed drainage system will be adequate for the proposed development; and

4. The development will not adversely affect any adjoining existing or potential development.

(d) If the application is not in compliance with (c) above, the NJMC shall advise the applicant, in writing, of the deficiencies.

(e) If the application is in compliance with (c) above, the NJMC shall approve the application by issuing a zoning certificate signed by the Chief Engineer. The zoning certificate shall be sent to the applicant with a copy to the municipality in which the development is located.

(f) The zoning certificate so issued shall be deemed to incorporate the approved application, and any violation or departure from the approved application during construction of the facilities and structures therein shown shall be deemed a violation of these regulations as provided in N.J.A.C. 19:4-4.21. A substantial departure from the approved application as depicted on as-built plans when required by N.J.A.C. 19:4-4.7 shall also be deemed a violation of these regulations.

(g) As a condition precedent to the granting of approval of the application for a zoning certificate, an escrow deposit may be required and such deposit may be used in accordance with N.J.A.C. 19:4-4.20.

19:4-4.6 Period of validity

A zoning certificate shall become null and void one year after the date on which it is issued, unless within such one year period, the site work, construction, moving, remodeling, reconstruction or change in use of a structure, or addition thereto, is commenced. Extensions, not exceeding one year each, may be granted by the Chief Engineer upon written application. No more than five such extensions shall be granted.

19:4-4.7 Certificate of completion

(a) Upon completion of any project subject to NJMC approval, and prior to the issuance of occupancy certification where required by N.J.A.C. 19:4-4.8, the applicant shall inform the NJMC of the project's completion and shall certify to the NJMC that all improvements have been completed in accordance with the approved plans. The NJMC staff shall inspect the premises to ensure the project was completed in accordance with the approved plans.

(b) An as-built survey completed in accordance with the specifications of N.J.A.C. 19:4-4.4(a) shall be required for all new buildings, additions, site improvements, fill applications, and in other cases deemed necessary by the NJMC. If the NJMC suspects that a project in progress may not be proceeding in accordance with the approved plans, the NJMC may require an interim as-built survey at any time.

(c) If the project is deemed in compliance with the approved application, the NJMC shall issue a certificate of completion for the project, and occupancy certification where required by N.J.A.C. 19:4-4.8.

19:4-4.8 Occupancy certification

No structure or addition thereto constructed, moved, remodeled or reconstructed shall be occupied or used for any purpose; no land vacant shall be used for any purpose; no use of land or structure shall be reoccupied or changed to any other use; and no occupancy, except in the case of residential dwelling units, shall be changed, unless occupancy certification shall first have been obtained from the NJMC certifying that the proposed use or occupancy complies with the applicable provisions of these regulations.

19:4-4.9 Application for occupancy certification; administrative completeness

(a) Every application for occupancy certification shall be filed with the NJMC.

(b) An application for occupancy certification shall comply with the requirements of N.J.A.C. 19:4-4.10(a).

(c) Upon receipt of an application, the items submitted shall be reviewed to determine that the essential elements of the application have been submitted.

(d) If the application is deemed administratively complete, the NJMC shall review the application for technical completeness, in accordance with N.J.A.C. 19:4-4.10.

(e) If the application is deemed administratively incomplete, the NJMC shall advise the applicant of the deficiencies within two working days.

19:4-4.10 Application for occupancy certification; technical completeness

(a) An application for occupancy certification shall contain the following:

1. A complete application form, signed by the applicant and the property owner, containing the following elements:

- i. Applicant information;
- ii. Property location and ownership information; and
- iii. Proposed tenant/use;

2. The required fee, in accordance with N.J.A.C. 19:4-11;

3. One copy of a site plan, including the following:

- i. Property lines with distance and bearings;
- ii. Block, lot and municipality information;
- iii. Location of all existing structures;
- iv. Location of existing parking, loading and drive aisles, and traffic circulation patterns; and
- v. Location of any watercourses, ditches and drainage structures;

4. A key plan for multi-tenanted facilities indicating the exact location of the proposed change of occupancy;

5. Information sufficient to show compliance with the applicable performance standards in N.J.A.C. 19:4-7;

6. Information sufficient to show compliance with all applicable building code requirements, including:

- i. Submittal of Material Safety Data Sheets; and
- ii. Submittal of any required certifications or reports;

7. A description of the proposed occupant's use of the property, including the following:

- i. The number of employees;
- ii. The number of vehicle parking stalls;
- iii. A description of any proposed construction; and
- iv. A description of the former occupant's use of the property; and

8. Such other information as may be required from a specific applicant by the NJMC.

(b) The submittal requirements of (a) above may be waived by the Chief Engineer upon written request in accordance with the following:

1. A request for a waiver shall specify the provision in (a) above from which the waiver is requested and the reason(s) for the request.

2. The Chief Engineer may grant waivers from the submittal requirements, in writing, upon finding that conformance with NJMC rules may be determined without the specific submittal.

3. The Chief Engineer shall have 10 business days to render a decision on the waiver request.

4. Upon a substantive change of an application or unforeseen circumstance, the NJMC reserves the right to require the submittal of a waived requirement when deemed necessary by the Chief Engineer to determine conformance with NJMC rules.

(c) For the initial occupancy of a structure or addition thereto constructed, moved, remodeled, or reconstructed, information sufficient to show compliance with the approved zoning certificate shall be provided.

(d) No occupancy certification for a structure or addition thereto constructed, moved, remodeled, or reconstructed after February 17, 2004 shall be issued until such work has been completed and the premises and site inspected and certified by the NJMC to be in compliance with the conditions and specifications upon which the zoning certificate was issued, all applicable provisions of the building code, and the subdivision regulations pertaining to the lot or lots containing the land or structure to be occupied, except as otherwise provided by N.J.A.C. 19:4-6.1 pertaining to non-conforming structures.

68.	Truck rental facility	One space per employee; 2.5 spaces per 1,000 sq. ft. of enclosed floor area; and 0.33 spaces per 1,000 sq. ft. of open lot vehicle storage area	One loading space; 12 feet x 60 feet
69.	Truck repair facility	One space per employee but not fewer than five employee parking spaces; two spaces per service bay; and five spaces per 1,000 sq. ft. of floor area of accessory retail, but no fewer than five spaces	One loading space; 12 feet x 30 feet
70.	Truck sales	One space per employee; 2.5 spaces per 1,000 sq. ft. of enclosed floor area; 0.33 spaces per 1,000 sq. ft. of open lot vehicle storage area; and two spaces per service bay	One loading space; 12 feet x 60 feet
71.	Truck stop	Cumulative parking requirement per use	One loading space; 12 feet x 60 feet
72.	Truck terminal	One space per loading door or one space per employee on the shift of maximum employment, whichever is greater; and one space per facility vehicle	One loading space; 12 feet x 60 feet
73.	Truck wash (full-service)	One space per two employees; and one per vacuum	One loading space; 12 feet x 30 feet
74.	Truck wash (self-service)	One space per employee; and one per vacuum	One loading space; 12 feet x 30 feet
75.	Warehouse and distribution facility	One space per 1,500 sq. ft. of floor area	Two loading spaces (12 feet x 60 feet) for structures up to and including 40,000 sq. ft.; three loading spaces (12 feet x 60 feet) for structures over 40,000 sq. ft. and up to and including 100,000 sq. ft.; and one loading space (12 feet x 60 feet) per additional 100,000 sq. ft. over 100,000 sq. ft.
76.	Wholesale establishment	One space per 1,500 sq. ft. of floor area	Two loading spaces (12 feet x 60 feet) for structures up to and including 40,000 sq. ft.; three loading spaces (12 feet x 60 feet) for structures over 40,000 sq. ft. and up to and including 100,000 sq. ft.; and one loading space (12 feet x 60 feet) per additional 100,000 sq. ft. over 100,000 sq. ft.

(b) Minimum parking and loading requirements for uses not listed in this section shall be provided in accordance with the determination of the NJMC.

Administrative correction.
See: 36 N.J.R. 1955(a).

19:4-8.5 Line-of-sight triangle

(a) Line-of-sight triangles shall be provided in accordance with established American Association of State Highway and Transportation Officials (AASHTO) design recommendations for intersection sight distances/sight triangles as found in the AASHTO manual, "A Policy on Geometric Design of Highways and Streets," Fourth Edition, 2001, incorporated herein by reference, as amended and supplemented, and shall be indicated on the site plan.

(b) Line-of-sight triangles shall be provided at the intersection of a driveway and a street or other public ROW, or at the intersection of two or more streets or public ROWs.

(c) Unless more stringent requirements are provided in these regulations, at the intersection of two or more streets or the intersection of a driveway and one or more streets, no hedge, planting, fence, screening or wall higher than 30 inches above curb level, nor any obstruction to a motorist's line of vision, other than a post not exceeding one foot in diameter, shall be permitted on any property within the line-of-sight triangle.

(d) Property within the line-of-sight triangles shall be maintained, trimmed and/or cleared of any material that could obstruct vision within the line-of-sight triangle.

19:4-8.6 Drainage

(a) General requirements for drainage are as follows:

1. Drainage plans shall be signed and sealed by a New Jersey-licensed professional engineer or other professional authorized to prepare drainage plans.

2. All vehicular use areas shall be drained so as to direct surface water runoff to a stormwater drainage system for eventual subsurface or stream disposal.

3. A watershed runoff hydrograph that displays and compares the peak discharge rate and volume shall be prepared for both pre-and post-development conditions. Runoff volume calculations shall be used to determine the sizing of detention facilities, if necessary.

4. The receiving stormwater drainage system (pipe flow or open channel flow) shall be analyzed to ensure that it has the additional capacity necessary to handle any increase in stormwater flow using the Manning equation in Figure 8-3 in (b)4i below. If the receiving stormwater drainage system is at or over capacity, detention facilities shall be provided in order to maintain site runoff at pre-development levels.

5. The size of the drainage area shall include on-site and off-site lands contributing stormwater to the discharge point.

6. Water quality basins or other structures or water quality methodologies approved on a case-by-case basis by the NJMC shall be provided.

7. A maintenance plan for stormwater drainage systems shall be provided to ensure proper function and operation of the system.

(b) Design requirements for drainage are as follows:

1. The applicant shall provide information sufficient for the NJMC to determine compliance with the applicable sections of N.J.A.C. 7:8, NJDEP's Stormwater Management rules.

2. All drainage systems shall be designed for a 25-year storm event.

3. Runoff estimation:

i. The Rational Method, utilizing the rational formula listed in Figure 8-2 below, shall be used for computing the runoff of any drainage area up to 20 acres for each discharge point. For areas larger than 20 acres, the U.S. National Resources Conservation Service (NRCS), Technical Release No. 55 (TR-55), "Urban Hydrology for Small Watersheds," incorporated herein by reference, as amended and supplemented, or equivalent approved by the NJMC, shall be used, a copy of which may be obtained from the New Jersey Natural Resources Conservation Service, 51 Gibraltar Drive, Suite 2E, Morris Plains, NJ 07950; and

Figure 8-2

Rational Formula

$$Q = ciA$$

where:

- Q = Peak flow in cubic feet per second (cfs)
- c = Runoff coefficient (weighted)
- i = Rainfall intensity in inches per hour (in/hr)
- A = Drainage area in acres (ac)

ii. The runoff coefficients (c) listed in Table 8-2 below shall be used in the rational formula:

Table 8-2
Coefficient of Runoff Values

Land Use	Description	Hydrologic Soils Group					
		A	B	C	D		
Cultivated Land:	Without conservation treatment	0.50	0.70	0.80	0.90		
	With conservation treatment	0.30	0.45	0.65	0.70		
Pasture:	Poor condition	0.40	0.65	0.75	0.85		
	Grassland or Range Land	—	0.25	0.50	0.65		
	Meadow	—	—	0.40	0.60		
Wood or Forest Land:	Poor cover; thin stand, no mulch	—	0.35	0.60	0.70		
	Good cover	—	—	0.45	0.60		
Open Space:	Poor condition (grass cover < 50 percent)	—	0.65	0.70	0.85		
	Lawns, Parks, Golf Courses, etc.	—	0.45	0.60	0.75		
	Good condition (grass cover > 75 percent)	—	0.25	0.50	0.65		
Urban Areas:	Commercial and Business	0.85	0.90	0.90	0.95		
	Industrial	0.65	0.80	0.90	0.90		
Residential:	Average Lot Size (acres):	Average percent impervious:					
		1/4	65	0.60	0.75	0.85	0.90
		1/3	38	0.30	0.55	0.70	0.80
		1/2	30	—	0.50	0.70	0.80
		3/4	25	—	0.45	0.65	0.75
		1	20	—	0.40	0.65	0.75

Impervious Areas:	Parking lots, roofs, driveways, etc.	0.99	0.99	0.99	0.99
Paved	Streets and roads	0.99	0.99	0.99	0.99
Gravel	Streets and roads	0.60	0.75	0.85	0.90
Dirt	Streets and roads	0.50	0.70	0.80	0.85

Note: Hydrologic Soil Groups texture descriptions are the following:

- A Sand, loamy sand, or sandy loam
- B Silt loam or loam
- C Sandy clay loam
- D Clay loam, silty clay loam, sandy clay, silty clay, or clay.

iii. The time of concentration (Tc) used in the rational method shall be calculated using the NRCS TR-55 methodology or other method approved on a case-by-case basis by the NJMC.

4. Stormwater drainage collection system design requirements are as follows:

i. The design of pipes and conduits shall use Manning's equation, listed in Figure 8-3 below, to determine capacity.

Figure 8-3

Manning's Equation

$$Q = (1.486/n)AR^{2/3}S^{1/2}$$

where:

- Q = Flow, cubic feet per second (cfs)
- n = Manning's roughness coefficient
- A = Cross-sectional area of flow in square feet (sf)
- R = Hydraulic radius in feet, $R=A/P$, where P is the wetted perimeter, measured in feet and defined as the length of the line of contact between the flowing water and the channel (ft)
- S = Slope of energy grade in feet per foot (ft/ft)

ii. Pipe sizes shall be determined using the design runoff, conduit entrance conditions and hydraulic capacity.

iii. Design velocities in pipes shall be a minimum of two feet per second, or as otherwise approved on a case-by-case basis by the NJMC, to allow for self-cleaning and a maximum of 15 feet per second to prevent scouring of pipes, manholes, and inlets and erosion at points of discharge.

iv. The materials used in the construction of storm sewers shall be reinforced concrete, ductile iron, corrugated polyethylene, or other as approved by NJMC. Corrugated metal and steel shall not be permitted.

v. The Manning's roughness coefficient "n" for circular cross section, nonporous concrete pipe shall be 0.013. Other cross sections or pipe materials shall have commensurate friction factors.

vi. All transitions in pipe slopes, junctions and changes in pipe sizes shall be confined to manholes, catch basins, or other accessible structures designed for one or more of these purposes.

vii. Where a drainage system discharges to a tidal waterway, tide gates, constructed of cast iron or other corrosion-proof material, shall be provided at every discharge point.

viii. Where a drainage system starts at or discharges into a stream, ditch or other body of water, a concrete headwall with wing-walls and a rip-rap apron pad, or other as approved by the NJMC, shall be constructed.

ix. Roof runoff shall be conveyed via roof leaders to an underground drainage system, where feasible.

5. Detention basin design requirements are as follows:

i. Underground detention basins may be provided utilizing solid material pipe or perforated pipe. If perforated pipe is utilized, the percolation rate of the underlying material shall be adequate to ensure that the water table is at an elevation that allows the detention system to empty.

ii. Detention basins shall accommodate site runoff generated from 25-year design storm events so that pre-development peak flow rates at the critical time of concentration are not increased.

iii. Detention basins shall be analyzed for a 100-year storm event to ensure stability of downstream structures and stormwater management systems.

iv. In order to address water quality, detention basins shall be designed for the water quality design storm of 1.25 inches of rainfall falling uniformly in two hours, such that no more than 90 percent will be discharged prior to 36 hours, or 18 hours for residential development.

v. Detention basins shall be equipped with water control structures consisting of orifice and/or weir control devices. The minimum diameter of any outlet orifice shall be two and one-half inches.

vi. The sides of a detention basin shall not exceed a slope of 3:1, unless otherwise approved by the NJMC. In order to control erosion, the sides of the detention basin shall be planted with suitable landscape material.

vii. Detention basins shall be maintained to prevent clogging and/or siltation. A maintenance plan shall be submitted to the NJMC for review and approval.

6. Stormwater pollutant removal requirements are as follows:

- i. Install best management practices (BMP) to provide total suspended solids (TSS) load removal to the maximum extent feasible for post-construction runoff.
- ii. Acceptable BMPs include extended detention basins, manufactured treatment devices, sand filters, constructed stormwater wetlands, infiltration systems, pervious pavement, wet ponds, and others, as approved by the NJMC.

Administrative correction.
See: 36 N.J.R. 1955(a).

19:4-8.7 Buffers

(a) Waterway buffers shall be provided as follows:

1. There shall be a minimum 50-foot-wide landscaped buffer measured from the mean high water line or top of bank where any development borders the Hackensack River, tributaries, or streams located in the District.
2. At man-made watercourses, the location and measured dimension of the buffer shall be determined by the NJMC.
3. No fill, structures, or impervious pavement shall be permitted within the waterway buffer, unless required by other agencies having jurisdiction for the purpose of environmental remediation.
4. Stormwater management facilities are permitted within the waterway buffer.
5. Water dependent aspects of marinas are exempt from this section.

(b) Residential buffers shall be provided as follows, measured from the property line:

1. Where an industrial use is proposed abutting a residential use or zone, a 25-foot landscaped buffer shall be provided in accordance with N.J.A.C. 19:4-8.9.
2. Where a commercial use is proposed abutting a residential use or zone, a 15-foot landscaped buffer shall be provided in accordance with N.J.A.C. 19:4-8.9, except in the Neighborhood commercial zone.

19:4-8.8 Open space

(a) General requirements for open space are as follows:

1. Open space shall be required on all developed sites in the District in accordance with the bulk regulations of the applicable zone in which the property is located.
2. An open space plan shall be submitted in conjunction with all applications for new construction, additions and site improvements, or as otherwise required by these regulations, in accordance with of N.J.A.C. 19:4-4.4.
3. The following areas shall fulfill open space requirements:

i. Landscaped and natural areas at grade level which meet the minimum open space dimensions, in accordance with the following:

(1) Open space areas that have a minimum dimension of five feet in any direction and a minimum area of 50 square feet.

(2) Landscaped safety islands within parking lots equal or greater than five feet dimension in any direction;

ii. Hardscape areas at grade level having a minimum of 20 percent of the total hardscape area planted, inclusive of permanent landscaped planters;

iii. Stormwater management areas that are at least 50 percent vegetated; and

iv. Sidewalks provided within an open space area.

4. The following areas shall not fulfill open space requirements:

i. The overhang area for parking stalls in accordance with N.J.A.C. 19:4-8.2(c)10; and

ii. Vehicular use areas including all parking, loading, access drives, accessory trailer parking; outdoor storage; tower foundations; refuse and recycling areas; and foundations for satellite antennas exceeding a diameter of six feet.

(b) Open space plan requirements are as follows:

1. The open space plan shall indicate the location and area of open space proposed on a site with hatch patterns.

2. An open space summary table shall be included on the open space plan indicating the total area of the lot, open space, and vehicular use areas.

19:4-8.9 Landscaping

(a) A landscape plan shall be submitted with all applications for new construction, additions and site improvements, or as otherwise required by these regulations, in accordance with N.J.A.C. 19:4-4.4.

(b) The landscape plan shall include the following:

1. Proposed plantings, hardscape areas, stormwater management areas, and items requiring screening;
2. Existing trees with a six-inch caliper or greater;
3. All trees to be preserved or relocated;
4. A plant schedule indicating botanical and common names, quantity, size at time of planting and maturity, and spacing of all proposed plantings; and
5. Construction details and notes for plantings.

(c) Plant standards for landscaping are as follows:

7. Recycling and refuse areas shall be placed adjacent to each other and loading areas, where feasible. Their location shall provide safe, clean, and efficient servicing. No containers shall be stored outside of the defined area at any time.

8. Recycling and refuse areas shall be screened from adjacent properties and public ROWs, and from within the site, where feasible. Screening and fencing shall be provided in accordance with N.J.A.C. 19:4-8.9(d)6iv and 8.10. No element of these areas, including materials contained therein, shall be higher than the surrounding screening, and in no case greater than eight feet.

9. The recycling and refuse areas shall be well lit, and shall be safely and easily accessed by users of the site and collection vehicles.

10. Where regular access to recycling or refuse areas by residents or users of the site is required, walkways shall be provided to these areas.

11. Signs clearly identifying the recycling and refuse areas and the materials accepted therein shall be posted adjacent to all points of access to the area.

12. The recycling and refuse areas and the containers therein shall be designed to provide protection against adverse environmental conditions. All containers shall have lids.

(g) An accessory area for the temporary storage of equipment and materials related to snow and ice removal shall be permitted pursuant to an approved site plan, in accordance with the following:

1. General requirements are as follows:

i. Such area shall be permitted to be utilized only between the months of November and April. The area shall remain vacant at all other times.

ii. Such area may include temporary outdoor storage of snow removal and de-icing equipment and materials, including salt and sand.

iii. Such area shall be utilized only in conjunction with the treatment or removal of snow and ice on-site or within a development where properties are under common ownership. The storage of equipment and materials related to such operations on other properties is prohibited.

2. Location requirements are as follows:

i. Such area shall meet all applicable setbacks for the zone in which it is located.

ii. Such area shall be located in the rear yard to the extent practicable. Where this is not feasible due to technical reasons related to site layout, such area may be located in a side yard. In no case shall such area shall be located in a front yard.

iii. Such area shall not be located within a required parking area.

3. Design requirements are as follows:

i. The surface of such area shall be paved and adequate drainage and water quality measures shall be implemented in order to prevent infiltration and contamination of surrounding areas.

ii. Such area shall be screened in accordance with N.J.A.C. 19:4-8.9.

iii. Materials within such area shall be stored no higher than 8 feet, and shall be covered with a tarp or otherwise protected from adverse environmental conditions.

iv. Such area shall not exceed 100 square feet per acre of property or development serviced, and in no case shall the total area exceed one-half acre.

19:4-8.16 Fill, excavation, regrading and surcharge standards

(a) No filling, excavation, regrading or surcharging of land shall commence without having first obtained approval from the NJMC. Such approval shall be granted as follows:

1. All filling, excavation, regrading or surcharge operations directly related to the construction of any structure shall be considered approved only if such filling, excavation and grading operations are clearly indicated with approximate quantities on the approved plans for the proposed structure.

2. A zoning certificate for filling, excavation, regrading or surcharge operations may be issued by the NJMC if a schematic site plan showing the envisioned ultimate use of the property is submitted. This plan shall meet all applicable use and bulk regulations.

(b) Prior to the issuance of any zoning certificate that involves filling operations, a detailed geotechnical investigation report, prepared by a geotechnical engineer, shall be submitted for approval. This report shall be prepared in accordance with the requirements of N.J.A.C. 19.4-4.4(d)6iii(3).

(c) All fill or excavation operations shall comply with the recommendations of the approved geotechnical investigation report.

(d) Fill which does not conform with the NJDEP Solid Waste Management definition of "clean fill," per N.J.A.C. 7:26-1.4, shall not be used unless the NJMC grants a waiver from this requirement. The applicant shall show just cause for a waiver of this requirement based on engineering constraints. This waiver shall not relieve the applicant from obtaining all other federal, state, or local permits which may be required to utilize such fill material.

(e) Nothing in this section shall be construed to allow the filling of wetlands without the required approvals of the governmental authorities with jurisdiction.

(f) A copy of a Soil Erosion and Sediment Control Certification issued by the governing Soil Conservation District shall be submitted to the NJMC prior to the start of earthwork operations.

SUBCHAPTER 9. FLOOD PLAIN MANAGEMENT

19:4-9.1 Title

This subchapter shall be known and may be referred to as the Flood Plain Management Regulations of the Hackensack Meadowlands District.

19:4-9.2 Purposes

This subchapter sets forth procedures, and engineering and planning standards, in accordance with which the Commission shall review and approve or disapprove applications for the development or use of land within the District. It is designed to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed: to protect human life and health; to minimize expenditure of public money for costly flood control projects; to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; to minimize prolonged business interruptions; to minimize damage to new and existing construction; to minimize damage to public and private facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard; to help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas; to insure that potential buyers are notified that property is in an area of special flood hazard; to ensure that those who own or occupy the areas of special flood hazard assume responsibility for their actions; and generally to provide for the exercise of the powers regarding the review and regulation of land use and development conferred upon the Commission by Chapter 404 of the Laws of 1968. In order to accomplish its purpose, this subchapter includes methods and provisions for: restricting or prohibiting uses which are dangerous to health, safety and property due to water hazards, or which result in damaging increases in flood heights; requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; controlling the alteration of natural flood plains, stream channels, and natural protective barriers which help accommodate or channel flood waters; controlling filling, grading, dredging and other development which may increase flood damage; and preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

19:4-9.3 Words and phrases defined

Unless specifically defined in N.J.A.C. 19:4-2 or below, words or phrases used in this subchapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

“Area of shallow flooding” means a designated AO or VO Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident.

“Area of special flood hazard” means the land in the flood plain within a community subject to a one percent or greater change of flooding in any given year.

“Base flood” means the flood having a one percent chance of being equaled or exceeded in any given year. The base flood is also described as the 100-year flood.

“Base flood elevation” means the height of the base flood in relation to the National Geodetic Vertical Datum (NGVD) of 1929, as determined by the National Geodetic Survey of the National Ocean Service, incorporated herein by reference, as amended and supplemented, for which information is available at NGS Information Services, NOAA, N/NGS12, National Geodetic Society, SSMC-3, #9202, 1315 East-West Highway, Silver Spring, MD 20910-3282.

“Basement” means any area of the building having its floor subgrade (below ground level) on all sides.

“Breakaway wall” means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or supporting foundation system.

“Development” means any man-made change to improved or unimproved real estate, including, but not limited to, building or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations within the area of special flood hazard.

“Elevated building” means a non-basement building that is:

1. In the case of a building in an area of special flood hazard, built to have the top of the elevated floor; or in the case of a building in a coastal high hazard area, built to have the bottom of the lowest horizontal structural member of the elevated floor elevated above the ground level by means of piling, columns (posts and piers), or shear walls parallel to the flow of the water; and

2. Adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood.

3. In an area of special flood hazard, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters. In areas of coastal high hazard, "elevated building" also includes a building otherwise meeting the definition of "elevated building" even though the lower area is enclosed by means of breakaway walls.

"Expansion to an existing mobile home park or mobile home subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the mobile homes are to be affixed (including the installation utilities, either final site grading or pouring of concrete or the construction of streets).

"Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland or tidal water; and/or
2. The unusual and rapid accumulation or runoff of surface waters from any source.

"Flood Insurance Rate Map" (FIRM) means the official map on which the Federal Emergency Management Agency (FEMA) has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

"Flood insurance study" means the official report provided in which the FEMA has provided flood profiles, as well as the FIRM's and the water surface elevation to the base flood.

"Manufactured home" means a structure, transportable in one or more sections, which is at least eight feet or more in width, or 40 body feet or more in length, or, when erected on site, is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air conditioning and electrical systems contained therein; except that such term shall also include any structure which meets all of the requirements of this paragraph except the size requirements and with respect to which the manufacturer has voluntarily filed a certification required by the Secretary of the United States Department of Housing and Urban Development and complies with the standards established under 42 U.S.C. §§ 5401 et seq. For flood plain management purposes, the term "manufactured home" also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes, the term "manufactured home" does not include park trailers, travel trailers and other similar vehicles.

"Manufactured home park or manufactured home subdivision" means a parcel, or contiguous parcels, of land

divided into two or more manufactured home lots for rent or sale.

"New construction" means structures for which the "start of construction" commenced on or after February 17, 2004.

"New mobile home park or mobile home subdivision" means a parcel (or contiguous parcels) of land divided into two or more mobile home lots for rent or sale for which the construction of facilities for servicing the lot (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed on or after February 17, 2004.

"Start of construction" for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. 97-348), includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site such as the pouring of a slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearings, grading, and filling, nor does it include the excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on property of accessory buildings, such as garages or sheds not occupied as dwelling units or not as part of the main structure.

"Structure" means a walled and roofed building, a manufactured home or a gas or liquid storage tank that is principally above ground.

"Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

1. Before the improvements or repair is started; or
2. If the structure has been damaged and is being restored, before the damage occurred.

For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either:

1. Any project for improvement of a structure to comply with existing State or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or
2. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

19:4-9.4 Lands to which this subchapter applies

This subchapter shall apply to all areas of special flood hazards within the boundaries of the District.

19:4-9.5 Basis for establishing the areas of special flood hazard

The areas of special flood hazard identified by FEMA in a scientific and engineering report entitled "Flood Insurance Study, Hackensack Meadowlands District, New Jersey, Bergen and Hudson Counties," dated June 15, 1982, with accompanying FIRM, Number 340570, is hereby incorporated by reference, as amended and supplemented, and declared to be a part of this chapter. The Flood Insurance Study is on file at the Offices of the New Jersey Meadowlands Commission, One DeKorte Park Plaza, Lyndhurst, New Jersey 07071.

19:4-9.6 Fees

(a) Any requests for flood hazard certification or variances and appeals shall be submitted to the NJMC and accompanied by such fee as set forth in N.J.A.C. 19:4-11.2.

(b) Any requests for copies of the regulations, study, or maps submitted to the NJMC shall be accompanied by a copying fee as specified in N.J.S.A. 46:1A-1 et seq.

19:4-9.7 Penalties and enforcement

Penalties and enforcement of these regulations shall be enforced as per N.J.A.C. 19:4-4.21.

19:4-9.8 Other permits

No building permit, zoning certificate, occupancy certification, subdivision plat approval, or implementation plan approval shall be issued by any official or agency of the NJMC on any land, or portion thereof, that is within an area of special flood hazard until there has been compliance with these regulations. Any approvals issued in conflict with this subchapter shall be null and void.

19:4-9.9 Abrogation and greater restrictions

This subchapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this subchapter and other regulations conflict or overlap, whichever imposes the more restrictive regulation shall prevail.

19:4-9.10 Warning and disclaimer of liability

The degree of flood protection required by this subchapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the NJMC, any officer or employee thereof, or the FEMA for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

19:4-9.11 Development permit required

No structure or land shall be constructed, moved, located, extended, converted or altered after February 17, 2004 within any area of special flood hazard established in N.J.A.C. 19:4-9.5 unless a zoning certificate, construction permit, occupancy certification, subdivision approval, sanitary landfill approval or other development permit approvals as required by Chapter 404 of the Laws of 1968 (N.J.S.A. 13:17-1 et seq.) shall first have been obtained from the NJMC certifying that the proposed construction, use or development complies with these regulations.

19:4-9.12 Administration

The administration and implementation of this subchapter in accordance with its provisions is vested in the Chief Engineer, except for the granting of variances pursuant to N.J.A.C. 19:4-4.14(a).

19:4-9.13 Duties and responsibilities of the Chief Engineer

(a) The Chief Engineer shall administer the provisions of this subchapter in the manner set forth herein and in furtherance of such authority, shall, but not be limited to:

1. Maintain permanent and current records with respect to this section, including amendments thereto;
2. Review and approve or disapprove all development permits after determining that the requirements of this regulation have or have not been satisfied;
3. Review all development permits to determine if the proposed development adversely affects the flood carrying capacity of the area of special flood hazard.
 - i. If it is determined that there is no adverse effect, then the permit shall be granted consistent with the provisions of this section;
 - ii. If it is determined that there is an adverse effect, then flood damage mitigation measures shall be made a condition of the permit; if such mitigation cannot be accomplished, the permit shall be denied;
4. Maintain for public inspection all records pertaining to development permits, including: obtaining and recording the actual elevation (in relation to mean sea level) of the lowest habitable floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement; verifying and recording the actual elevation (in relation to mean sea level) and maintaining flood proofing certifications for all new or substantially improved flood proofed structures;
5. Notify adjacent communities and the State Coordinating Agency for the National Flood Insurance Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA; require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished;

6. When base flood elevation data has not been provided in accordance with N.J.A.C. 19:4-9.5, Basis for establishing the areas of special flood hazard, the Chief Engineer shall obtain, review, and reasonably utilize any base flood data available from a Federal, State, or other source, in order to administer N.J.A.C. 19:4-9; and

7. Make interpretations where needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in N.J.A.C. 19:4-4.19.

19:4-9.14 Variances from floodplain management regulations

(a) In cases in which there is exceptional hardship in carrying out the literal provision of this chapter, whether because of conflicting requirements or otherwise, the Executive Director may authorize a variance from such provision. In passing upon requests for variances, the Executive Director shall consider all technical evaluations; all relevant factors and standards specified in other sections of this chapter; and the following:

1. The danger that materials may be swept onto other lands, to the injury of others;
2. The danger to life and property due to flooding or erosion damage;
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage to the individual owner;
4. The importance of the services provided by the proposed facility to the community;
5. The necessity to the facility of a waterfront location, where applicable;
6. The availability of alternative locations for the proposed use that are not subject to flooding or erosion damage;
7. The compatibility of the proposed use with existing and anticipated development;
8. The relationship of the proposed use to the comprehensive plan and flood plain management program of that area;
9. The safety of access to the property in times of flood for ordinary and emergency vehicles;
10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
11. The costs of providing governmental services during and after flood conditions, including maintenance and

repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

(b) The procedure to be followed in an application for a variance from this chapter shall be the same as the procedure specified in N.J.A.C. 19:4-4.14.

19:4-9.15 Standards for the granting of variances

(a) Variances may be issued for new construction and substantial improvements to be erected on a lot contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the items in N.J.A.C. 19:4-9.14(a) have been fully considered.

(b) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.

(c) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(d) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(e) Variances shall only be issued upon:

1. A showing of good and sufficient cause;
2. A determination that failure to grant the variance would result in exceptional hardship to the applicant; and
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public as identified in N.J.A.C. 19:4-9.14(a) or conflict with existing local laws or ordinances.

(f) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

19:4-9.16 Conditions

Upon consideration of the factors of N.J.A.C. 19:4-9.14(a) and the purposes of this chapter, the Chief Engineer may attach such conditions to the granting of variances as it deems necessary to reduce or minimize any potentially injurious effect of such variance upon other property in the neighborhood, and to carry out the general purpose and intent of this chapter. Failure to comply with any of the conditions or restrictions placed on a variance shall constitute a violation of this chapter.

19:4-9.17 Written decision and records

A written decision on an application for a variance shall be rendered within eight weeks of the date of the public hearing. The Chief Engineer shall maintain complete records of all actions with respect to applications for variances, including technical information, and shall report any variances to the Federal Emergency Management Agency upon request.

19:4-9.18 Appeals

An appeal from an adverse decision of the Chief Engineer or Executive Director made pursuant to this subchapter may be made in accordance with the provisions of N.J.A.C. 19:4-4.17.

19:4-9.19 Scope

In all areas of special flood hazards, the standards in this subchapter are required.

19:4-9.20 Buildings

(a) Residential construction: New construction and substantial improvement of any residential structure shall have the lowest floor elevated to a minimum of one foot above the base flood elevation.

(b) Non-residential construction: New construction and substantial improvement of any commercial, industrial or other non-residential structure shall either have the lowest floor elevated a minimum of one foot above the base flood elevation, or together with utilities shall:

1. Be floodproof, so that below the elevation equal to one foot above the base flood elevation, the structure is water tight with walls impermeable to the passage of water;
2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy; and
3. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of this subsection. Such certification shall be provided to the Chief Engineer.

(c) Manufactured homes shall be anchored in accordance with N.J.A.C. 19:4-9.23. All manufactured homes shall be anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

(d) All manufactured homes to be placed or substantially improved within an area of special flood hazard shall be elevated on a permanent foundation such that the top of the lowest floor is elevated to a minimum of one foot above the base flood elevation.

19:4-9.21 Building sites

(a) All building site construction, including, but not limited to, parking lots, driveways, sidewalks, truck maneuvering areas, and landscaped areas, shall be consistent with the need to minimize flood hazards and damage.

(b) All building site construction shall have public utilities and facilities such as sewer, gas, electric, and water systems located and constructed to minimize flood hazards and damage.

(c) Base flood elevation data shall be provided for building site proposals which contain at least three acres.

19:4-9.22 Subdivision improvements

(a) All subdivision proposals, including roads, culverts, bridges, and tide gates, shall be consistent with the need to minimize flood hazards and damage.

(b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electric, and water systems located and constructed to minimize flood hazards and damage.

(c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

(d) Base flood elevation data shall be provided for subdivision proposals which contain at least three lots or three acres (whichever is less).

19:4-9.23 Anchoring

(a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

(b) All manufactured homes shall be anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

19:4-9.24 Construction material and methods

(a) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

19:4-9.25 Utilities

(a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

(b) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

(c) On-site water disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(d) Electrical, heating, ventilation, plumbing and air-conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

19:4-9.26 Enclosure openings

(a) For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

1. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;
2. The bottom of all openings shall be no higher than one foot above grade; and
3. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of flood waters.

SUBCHAPTER 10. PROJECT IMPACT ASSESSMENT

19:4-10.1 Purpose

The purpose of a project impact assessment (PIA) is to provide information to allow the NJMC to assess the probable effects of a proposed project. In particular, the PIA shall consider the project's impact with respect to land, water, air, solid wastes, aquatic and terrestrial wildlife, social and economic conditions and aesthetics at the project site, as well as on the surrounding region.

19:4-10.2 Applicability

(a) The following projects shall require the submission of a PIA:

1. All retail development greater than 75,000 square feet;
2. All office and other commercial development, excluding retail, greater than 100,000 square feet;

3. All residential development over 25 dwelling units;
4. All industrial, warehouse/distribution or intermodal development over 15 acres in size; and
5. Any project that, in the opinion of the Chief Engineer, may have a substantial impact on the environment.

19:4-10.3 Form of PIA

(a) The applicant shall prepare and submit a PIA in the form and manner as set forth in this subchapter.

(b) The PIA shall be prepared by qualified professionals. The qualifications of the persons who prepared each element shall be identified in the appendix of the PIA.

(c) All maps, plans, and aerial photographs shall specify a north arrow, graphic scale, project name, location, name of preparer, date of preparation, and sources of information.

(d) If the applicant believes that specific elements of the PIA are not applicable to the proposed development, the applicant shall indicate "not applicable" under the appropriate heading and explain the reason why the information is not applicable. It is suggested that the applicant discuss the PIA requirements with the NJMC staff prior to its submission.

19:4-10.4 Content of PIA

(a) Each component of the PIA shall analyze existing conditions, proposed conditions, impacts, and mitigating factors. The following shall be the required components of the PIA:

1. Project summary: A detailed project description, including information sufficient to understand the nature of the proposed use;
2. Land use:
 - i. A description of the surrounding land uses within 500 feet of the project site and details of how the proposed use will affect the viability of the surrounding area and adjoining properties;
 - ii. A zoning summary statement, including a description of the project's degree of compliance with the regulations of the zone(s) in which it is located and any variances requested thereto;
 - iii. A topographic survey meeting the requirements of N.J.A.C. 19:4-4.4(c)1 for areas inclusive of the subject property and within 500 feet thereof; and
 - iv. A brief description of the visual character of the project site and how the proposed project affects the visual quality of the site and the surrounding environs;
3. Wetlands:
 - i. A delineation of existing wetlands and open water areas in accordance with Federal and State wetland delineation criteria;

- ii. A discussion of off-site and on-site alternatives to the proposed wetland fill. The methodology for off-site alternatives analysis shall be discussed with the NJMC staff prior to conducting this study; and
 - iii. A discussion of the compensatory program for the loss of wetland function in conjunction with the proposed development;
4. Floodplain areas: The established 100-year flood plain delineation as determined by FEMA;
5. Riparian lands: All areas of riparian claim on the property and a discussion of how these claims will impact the site development, including the status of any actions of the New Jersey Bureau of Tidelands relative thereto;
6. Drainage and water quality:
- i. A hydrologic and hydraulic study of the impacts of the proposed project, including existing drainage patterns; surface water hydrology and structure analysis tributary to and downstream of the project site; storm-water calculations for pre-and post-development conditions and a plan and discussion of storm water management practices to accommodate both storm water quantity and quality; and
 - ii. An assessment of the impact of the proposed development on water quality from effluent discharge or other sources;
7. Habitats:
- i. An assessment of the impacts on wildlife and vegetation, including threatened and endangered species; and
 - ii. An assessment of the impacts on wildlife and vegetation using accepted ecological principles and scientific literature on each species. Both direct and indirect impacts of the proposed development shall be considered;
8. Transportation: A traffic impact analysis in accordance with N.J.A.C. 19:4-7.10;
9. Air quality:
- i. An analysis of the impact on air quality from stationary sources to determine the effects of the proposed development on the ambient air quality;
 - ii. An analysis of the impact on air quality from mobile sources. An assessment of the effects of the project on regional and local ambient air quality, including the concentration of carbon monoxide emissions on adjacent roadways and within proximity of adjacent land uses shall be provided; and
 - iii. An analysis of short term impacts on air quality due to construction activities;
10. Noise:
- i. An analysis of the noise generated at the project site;
 - ii. An analysis of the noise generated by the construction of the proposed project at the project site and at adjacent properties; and
 - iii. Comparison for the predicted noise levels with accepted standards, guideline levels, and noise evaluation criteria, including the performance standards of N.J.A.C. 19:4-7.3;
11. Site remediation:
- i. Results of a historical records search of the former uses on the property;
 - ii. An assessment of any environmental and/or contamination issues on soil, air and groundwater; and
 - iii. An assessment of the feasibility of the site for the proposed use as well as a discussion of next steps with regard to remediation;
12. Cultural and historical resources: An analysis of historical landmarks and aspects of archeological importance in or adjacent to the site in consultation with the New Jersey State Historic Preservation Office;
13. Public services: Documentation from the agency or company responsible for utility service determining if sufficient capacity exists to accommodate the proposed development. This shall include wastewater treatment, water supply, energy supply and solid waste; and
14. Fiscal impact:
- i. Demographics of the appropriate municipality and county, including population, age distribution, employment and income levels as provided in the appropriate census reports and/or other published sources;
 - ii. The current municipal and county budgets and the current municipal school budget, together with information on existing per capita costs and service levels in such areas as fire protection, police protection, governmental services, and schools;
 - iii. Evaluation of the projected ratables, estimated taxes, and municipal and school budget increases due to the proposed development. A calculation shall be made, in cooperation with NJMC staff, of the projects revenue/cost balance and its benefits in terms of its impacts on the Intermunicipal Tax Sharing Formula; and
 - iv. An estimate of the demands for services such as energy, solid waste, sanitary waste, potable water, transit, school children and schools, police, fire, emergency medical services and recreation and their impacts on municipal and/or county budgets.