

CHAPTER 21**RESIDENTIAL SITE IMPROVEMENT STANDARDS****Authority**

N.J.S.A. 40:55D-40.4.

Source and Effective Date

R.1997 d.5, effective January 6, 1997 (operative June 3, 1997).
See: 28 N.J.R. 2671(a), 28 N.J.R. 3491(a), 29 N.J.R. 159(a).

Executive Order No. 66(1978) Expiration Date

Chapter 21, Residential Site Improvement Standards, expires on January 6, 2002.

Chapter Historical Note

Chapter 21, Uniform Standards Code for Mobile Homes, was adopted pursuant to authority of N.J.S.A. 52:2D-25.1 et seq. and was filed and became effective December 7, 1972, as R.1972 d.248. See: 4 N.J.R. 260(f), 5 N.J.R. 7(a). Chapter 21 was amended by R.1974 d.275, effective January 1, 1975. See: 6 N.J.R. 343(a), 6 N.J.R. 427(b); and R.1975 d.166, effective July 1, 1975. See: 7 N.J.R. 200(a), 7 N.J.R. 306(a). Chapter 21, Uniform Standards Code for Mobile Homes, was repealed by R.1982 d.7, effective February 1, 1982. See: 13 N.J.R. 717(a), 14 N.J.R. 142(a).

Chapter 21, Residential Site Improvement Standards, was adopted as R.1997 d.5, effective January 6, 1997 (operative June 3, 1997). See: Source and Effective Date.

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SUBCHAPTER 1. GENERAL GUIDELINES**Subchapter Historical Note**

The name of Subchapter 1, General Provisions, was changed to General Guidelines by Administrative Correction. See: 29 N.J.R. 2816(a).

5:21-1.1 Title; division into subchapters

(a) These rules shall be known as the "New Jersey Residential Site Improvement Standards" and are referred to herein as "the rules."

(b) This chapter consists of the following subchapters:

1. "General Provisions," which may be cited throughout the rules as N.J.A.C. 5:21-1 and when referred to in

subchapter 1 of this chapter, may be cited as “this subchapter.”

2. “Application and Review Procedures,” which may be cited throughout the rules as N.J.A.C. 5:21-2 and when referred to in subchapter 2 of this chapter, may be referred to as “this subchapter.”

3. “Exceptions, Waivers, and Special Area Standards,” which may be cited throughout these rules as N.J.A.C. 5:21-3 and when referred to in subchapter 3 of this chapter, may be referred to as “this subchapter.”

4. “Streets and Parking,” which may be cited throughout these rules as N.J.A.C. 5:21-4 and when referred to in subchapter 4 of this chapter, may be referred to as “this subchapter.”

5. “Water Supply,” which may be cited throughout these rules as N.J.A.C. 5:21-5 and when referred to in subchapter 5 of this chapter, may be referred to as “this subchapter.”

6. “Sanitary Sewers,” which may be cited throughout these rules as N.J.A.C. 5:21-6 and when referred to in subchapter 6 of this chapter, may be referred to as “this subchapter.”

7. “Stormwater Management,” which may be cited throughout these rules as N.J.A.C. 5:21-7 and when referred to in subchapter 7 of this chapter, may be referred to as “this subchapter.”

8. “Referenced Standards,” which may be cited throughout these rules as N.J.A.C. 5:21-8 and referred to in subchapter 8 of this chapter, may be referred to as “this subchapter.”

5:21-1.2 Authority

These rules are promulgated by the Commissioner of the Department of Community Affairs pursuant to the authority of P.L. 1993, c.32 (N.J.S.A. 40:55D-40.1 et seq.)

5:21-1.3 Intent and purpose

(a) It is the intent and purpose of these rules:

1. To reduce the multiplicity of standards for residential subdivisions and site improvements which currently exists in this State in order to eliminate unnecessary increases in the cost of housing where there are noncommensurate gains in the protection of public health and safety;

2. To avoid unnecessary cost in the construction process, and to provide site improvement standards that are both sound and cost effective;

3. To ensure predictability in the site improvement standards applicable to residential construction;

4. To provide for development reviews of residential projects that are based, to the greatest extent possible, upon sound objective site improvement standards rather than upon discretionary design standards;

5. To streamline the development approval process and improve the efficiency of the application process by providing a uniform set of technical site improvement standards for land development;

6. To provide the widest possible range of design freedom and promote diversity through performance-oriented site improvement standards; and

7. To separate the policy-making aspects of development review from the making of technical determinations.

5:21-1.4 Definitions and abbreviations

The following words, terms, and abbreviations, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise. Where a word or term is defined in this chapter and the Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.), then the definition of that word or term found in the Municipal Land Use Law shall govern. Words and terms found in the Municipal Land Use Law, and defined here for convenience, have been designated by the use of “(MLUL)” following their meaning.

“AASHTO” means American Association of State Highway and Transportation Officials.

“ABS” means acrylonitrile-butadiene-styrene.

“ACI” means American Concrete Institute.

“Administrative Officer” means the clerk of the municipality, unless a different municipal official or officials are designated by ordinance or statute. (MLUL).

“ADT” (see average daily traffic.)

“Aggressive Soils” means soils which may be corrosive to metallic pipe or tubing.

“Aisle” means the traveled way by which cars enter and depart parking spaces.

“Alley” means a service road that provides a secondary means of access to lots.

“ANSI” means American National Standards Institute.

“Applicant” means a developer submitting an application for development. (MLUL).

“Application For Development” means the application form and all accompanying documents required by ordinance for approval of a subdivision plat, site plan, planned development, conditional use, zoning variance, or direction of the issuance of a permit pursuant to the Municipal Land Use Law. (MLUL).

“Stormwater Detention” means a provision for temporary storage of stormwater runoff, and the controlled release of such runoff during and after a flood or storm.

“Stormwater Management Measures” means a broad term for structural and nonstructural control of stormwater runoff and nonpoint pollution.

“Stormwater Retention” means a provision for the permanent storage of a fixed volume of water.

“Street” means any street, avenue, boulevard, road, parkway, viaduct, drive, or other way which is an existing State, county, or municipal roadway, or which is shown upon a plat heretofore approved pursuant to law, or which is approved by official action as provided by the MLUL, or which is shown on a plat duly filed and recorded in the office of the county recording officer prior to the appointment of a planning board and the grant to such board of the power to review plats; and includes the land between the street lines, whether improved or unimproved, and may comprise pavement, shoulders, gutters, curbs, sidewalks, parking areas, and other areas within the street lines. (MLUL).

“Street Hardware” means the mechanical and utility systems within a street right-of-way such as hydrants, manhole covers, traffic lights and signs, utility poles and lines, parking meters, and the like.

“Street Hierarchy” means the conceptual arrangement of streets based upon function. A hierarchical approach to street design classifies streets according to function, from high-traffic arterial roads to streets whose function is residential access.

“Street, Loop” means a street that has its only ingress and egress at two points on the same street.

“Stub Street” means a street which is to be extended when the adjacent property is developed.

“Subdivision” means the division of a lot, tract, or parcel of land into two or more lots, tracts, parcels, or other divisions of land for sale or development. The following shall not be considered subdivisions within the meaning of these rules, if no new streets are created: divisions of land found by the planning board or subdivision committee thereof appointed by the chairman to be for agricultural purposes, where all resulting parcels are five acres or larger in size; divisions of property by testamentary or intestate provisions; divisions of property upon court order, including but not limited to judgments of foreclosure; consolidation of existing lots by deed or other recorded instrument; and the conveyance of one or more adjoining lots, tracts, or parcels of land owned by the same person or persons, all of which are found and certified by the administrative officer to conform to the requirements of the municipal development regulations, and are shown and designated as separate lots, tracts, or parcels on the tax map or atlas of the

municipality. The term “subdivision” shall also include the term “resubdivision.” (MLUL).

“Subdivision, Major” means any subdivision not classified as a minor subdivision. (MLUL).

“Subdivision, Minor” means a subdivision of land for the creation of a number of lots specifically permitted by ordinance as a minor subdivision, provided that such subdivision does not involve a planned development, any new street, or the extension of any off-tract improvement, the cost of which is to be prorated pursuant to N.J.S.A. 40:55D-42. (MLUL).

“Subgrade” means the prepared surface upon which pavements and shoulders are constructed.

“Surface Course” means the placement of the asphalt concrete material on a previously prepared base course.

“Swale” means a low lying or depressed land area commonly wet or moist, which can function as an intermittent drainage way.

“Topsoil” means:

1. The natural, undisturbed surface layer of soil having more organic matter than subsequent layers, a pH of 5.0 to 7.5, and suitable for satisfactory growth and maintenance of permanent, locally-adapted vegetation.

2. Where the original surface layer has been removed, the reapplication of soil material used to cover an area so as to improve soil conditions for establishment and maintenance of adapted vegetation. The reapplied material must be friable, loamy soil reasonably free of debris, objectionable weeds, and stones; have a natural pH of 5.0 to 7.5; have an organic matter content greater than 2.00 percent; and contain no toxic substances which may be harmful to plant growth.

“Traveled Way” means the portion of a cartway used for vehicular travel.

“Trip” means a single or one-way vehicle movement to or from a property or study area.

“ULI” means Urban Land Institute.

“USCGS (also USC&G and USC&GS)” means United States Coast and Geodetic Survey.

“Utility Area” means a flexible space within the right-of-way designated for the installation of utility lines and facilities.

“Utility Authority” means any “sewerage authority” as defined in N.J.S.A.40:14A-3 or any “municipal authority” as defined in N.J.S.A. 40:14B-3.

“Variance” means permission to depart from the literal requirements of a zoning ordinance, pursuant to N.J.S.A. 40:55D-40b., 70c., and 70d. (MLUL).

“Wet Pond” (see “retention basin”).

Administrative correction.
See: 29 N.J.R. 1296(a).

5:21-1.5 Scope and applicability

(a) These rules shall govern any site improvements carried out or intended to be carried out or required to be carried out in connection with any application for residential subdivision, site plan approval, or variance before any planning board or zoning board of adjustment created pursuant to the Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.); or in connection with any other residential development approval required or issued by any municipality or agency or instrumentality thereof.

(b) Except as is otherwise specifically provided, these rules shall control all matters concerning the construction, alteration, addition, repair, removal, demolition, maintenance, and use of any site improvements constructed by a developer in connection with residential development. The rules are to be interpreted as the minimum required to ensure public health and safety, and the maximum that may be required in connection with residential development.

(c) These rules shall apply to all site improvement work and appurtenant construction including streets, roads, parking facilities, sidewalks, drainage structures, grading, and utilities which are undertaken by a developer in connection with residential development or use.

1. Where both residential and commercial development are planned in a mixed-use development, these rules shall apply to the residential part or parts of such development where such residential part or parts are discrete and separate from planned commercial parts as evidenced by, for example, separate building(s), separate parking, and separate access features.

2. These rules shall apply to all utilities created by or deriving their authority from municipal ordinance to operate within a given jurisdiction.

3. Choice among options contained in these rules shall be the applicant's unless otherwise specified in these rules.

(d) Nothing contained in these rules shall be construed to limit the powers of any municipality to establish and enforce any requirement concerning:

1. Layout, arrangement, and location of improvements, shade trees, landscaping, or reservation of areas for public use, pursuant to N.J.S.A. 40:55D-38;

2. Preservation of existing natural resources; arrangement of physical elements for safe and efficient vehicular and pedestrian circulation, by, for example, traffic calming measures as described in “Residential Street Design and Traffic Control,” by W. S. Homburger et al. (Institute of Transportation Engineers, 1989), parking, and loading; screening, landscaping, and location of structures; or conservation of energy and use of renewable resources; pursuant to N.J.S.A. 40:55D-41; or

3. Use, bulk, height, number of stories, orientation, and size of buildings and other structures; the percentage of lot or development area that may be occupied by structures, lot sizes and dimensions, floor area ratios, or other measures to control development intensity; or the provision of adequate light and air pursuant to N.J.S.A. 40:55D-65.

(e) The provisions of these rules shall not preempt or in any way affect the exercise of any authority by the State or any county government with respect to site improvements conferred by any State law or any rule promulgated thereunder. Nor shall these rules be in any way interpreted to modify or otherwise affect rules promulgated pursuant to the Pinelands Commission Act, N.J.S.A. 13:18A-1 et seq. (N.J.A.C. 7:50). It is the intent of these rules to be consistent with all other applicable laws, rules and regulations. Where these rules and any other State or county laws, rules or regulations establish differing requirements, then the requirements of these rules shall govern, except where any such differing requirement is more restrictive.

(f) These rules shall not apply to driveways on private property held in fee-simple as individual residential lots outside of the public right-of-way, including common driveways established by easements shared by more than one dwelling unit on private property.

(g) These rules are intended to ensure the public health, safety, and welfare insofar as they are affected by site improvement work, and shall be so construed.

Administrative correction.
See: 29 N.J.R. 1296(a).

Case Notes

Storm water management regulation promulgated by Department of Community Affairs (DCA), which conflicted with storm water management regulation promulgated by the Department of Environmental Protection, was invalid. *New Jersey State League of Municipalities v. Department of Community Affairs*, 310 N.J.Super. 224, 708 A.2d 708 (A.D. 1998).

5:21-1.6 Development over limestone geologic formations

(a) A number of areas in northern New Jersey are underlain by solution-prone carbonate rocks (limestone, dolomite, and marble) which pose unusual and complex problems in relation to development activities. As such, these areas are quite sensitive to development improvements and may require special investigative, design, and construction techniques to protect both the eventual property owner as well as those in the immediate surroundings. It is not the intention of these site improvement standards to address such unusual subsurface conditions or to attempt to supersede definitive local ordinances addressing such concerns.

(g) The municipal approving authority's granting of a request for a de minimis exception shall be based on a finding that the requested exception meets the following criteria:

1. It is consistent with the intent of the Site Improvement Act;
2. It is reasonable, limited, and not unduly burdensome;
3. It meets the needs of public health and safety; and
4. It takes into account existing infrastructure and possible surrounding future development.

Administrative correction.
See: 29 N.J.R. 1296(a).

5:21-3.2 Waiver request

(a) A municipality or developer may, in connection with a specific development, request a waiver of any site improvement standard adopted under this chapter in accordance with N.J.S.A. 40:55D-40.4(c). A waiver request may also be made jointly by a municipality and a developer.

(b) The Site Improvement Advisory Board may approve a request for a waiver based on any danger to public health and safety that would be caused by adherence to a standard specified in this chapter.

(c) A waiver may be requested by a municipality or a developer, or the request may be made jointly. The waiver request shall consist of the following:

1. A copy of the development application as submitted to the municipal approving authority; and
2. A brief memorandum to the Commissioner of the Department of Community Affairs containing sufficient information upon which to base a determination, including:
 - i. A short description of the project in narrative form;
 - ii. A citation to the particular site improvement standard from which waiver is requested;
 - iii. A clear description of the condition(s) giving rise to the request;
 - iv. A clear description of the anticipated result if the standard were to be followed;
 - v. The name, address, and telephone number of a contact person for the developer; and
 - vi. The name, address, and telephone number of a contact person for the municipal approving authority.

(d) The party requesting the waiver shall send the request to the New Jersey Department of Community Affairs, Division of Codes and Standards, 101 South Broad Street, CN 802, Trenton, NJ 08625-0802.

(e) Where a waiver is requested by the developer, the developer shall send a copy of the request to the administrative officer of the municipality concerned. Where a waiver is requested by the municipality, the municipality shall send a copy of the request to the developer.

(f) A waiver may be requested by the developer or the municipal approving authority at any time during the pendency of a development application. The Site Improvement Advisory Board recommends submission of a waiver request early in the application process or prior to the submission of a formal development application. If the applicant or the municipal approving authority determines during the planning board review process that a waiver request is appropriate, the municipal approving authority shall give consideration whenever possible to the granting of an extension for the purpose of pursuing a waiver. In some cases it may be impracticable for the party requesting or appealing a waiver to complete the waiver process within the time guidelines of the Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.; see, for example, N.J.S.A. 40:55D-45.3, 46(c), 46.1, 47, 48 and 50). In such cases, the municipal approving authority may provide for the disposition of the waiver as a condition of its approval.

(g) There is no fee for requesting a waiver.

5:21-3.3 Waiver review

(a) The Commissioner shall review the waiver request to determine whether it appears on preliminary review that adherence to a particular standard would jeopardize the public health and safety.

1. If the waiver request on its face does not meet the requirements of this subsection, the Commissioner shall contact the requesting party within 20 days of receipt of the request and advise the requesting party of the waiver request rejection. Grounds for rejection shall be indicated in writing.

(b) Within 20 days of receipt of a waiver request, the Commissioner shall date and mark as justified for review each waiver request accepted for review. The Commissioner shall then direct each such waiver request to the Site Improvement Advisory Board's technical committee which consists of Board members representative of, respectively, the New Jersey Society of Professional Engineers; the New Jersey Society of Municipal Engineers; and the New Jersey Builders Association (see N.J.S.A. 40:55D-40.4(c)).

(c) The Commissioner shall send notice of the Commissioner's determination of justification to designated contacts at the same time as the waiver request is sent to the technical committee.

(d) The technical committee shall render a decision by resolution within 30 days of the Commissioner's determination that the waiver request is justified.

(e) A waiver resolution adopted by the committee shall specify the grounds for granting or denying the waiver request.

(f) The Commissioner shall promptly notify the developer and the municipal approving authority of the committee's decision, and shall provide a copy of the resolution memorializing such decision to those parties and to the Site Improvement Advisory Board.

5:21-3.4 Appeal of waiver decisions

(a) Any decision of the technical committee may be appealed to the Site Improvement Advisory Board, which shall hear appeals in public session at regularly scheduled or special meetings announced in compliance with the Open Public Meetings Act (see N.J.S.A. 10:4-6 et seq.).

(b) For each hearing, the Site Improvement Advisory Board shall designate, by simple majority of the members present, a voting member of the Board to serve as presiding officer.

(c) Any documents and materials constituting the appeal shall be available for public inspection at the Department of Community Affairs, Division of Codes and Standards during normal business hours at least 10 days before the date of the hearing. Other documents, records, or testimony may be produced at the hearing to clarify or supplement materials previously submitted.

(d) The hearings shall be informal. Rules of evidence shall not apply, but the presiding officer may exclude irrelevant, immaterial, or unduly repetitious evidence.

(e) The testimony of all witnesses in a waiver appeal shall be under oath or affirmation and shall be recorded verbatim either mechanically or stenographically. Transcripts may be obtained at the expense of the requesting party and shall be certified by the transcriber to be accurate.

(f) The Site Improvement Advisory Board shall render a final decision within 10 days of the hearing. The Board's decision shall be in writing, and shall contain findings and conclusions. The Board shall mail a copy of the decision to the developer and to the municipal approving authority.

5:21-3.5 Special area standards

(a) The Commissioner and the Site Improvement Advisory Board as a matter of policy recognize the need for preservation and/or enhancement of community character in New Jersey municipalities. This section is intended to provide a procedure whereby a municipal approving authority may develop and recommend to the Board supplementary and/or alternative standards in the form of municipal ordinances for review and amendment to this chapter. The Site Improvement Advisory Board shall solicit the input of the Department of Environmental Protection, the Office of State Planning, and the Department of Transportation and may solicit input from public or private organizations and individuals as it deems appropriate during the process of review of special area standards.

(b) A special area designation may be applied by ordinance by a municipality or group of municipalities to an area or areas of a municipality or municipalities exhibiting or planned to exhibit a distinctive character or environmental feature that the municipality or municipalities by ordinance have identified and expressed a desire to preserve and enhance. Examples of a special area may include:

1. Designated redevelopment areas pursuant to N.J.S.A. 40A:12A-1 et seq.;
2. Designated special improvement districts pursuant to N.J.S.A. 40:56-65 et seq.;
3. Designated historic districts pursuant to N.J.S.A. 40:55D-65.1;
4. Municipalities in the Metropolitan Planning Area (Planning Area 1), and Regional Centers, villages, hamlets, or other Centers identified by the State Development and Redevelopment Plan or designated by the State Planning Commission;
5. Infill areas in urban settings;
6. Planned unit and planned unit residential developments, and residential clusters pursuant to N.J.S.A. 40:55D-39;
7. Areas where environmental systems such as watersheds may require special environmental controls;
8. Designated scenic corridors, pursuant to the Intermodal Surface Transportation Efficiency Act or other similar State or local initiatives; and
9. Rural preservation areas including, but not limited to, designated Agricultural Development Areas, pursuant to N.J.S.A. 4:1C, and in support of the rural preservation policies of the State Development and Redevelopment Plan.

(c) The Site Improvement Advisory Board shall consider at its regular or specially-scheduled public meetings special area standards submitted for approval by a municipality or municipalities. The Board's review of special area ordinances shall take the form of an informal hearing. The Board shall provide the opportunity for the submission of information, both oral and documentary, by municipal government and any interested parties.

(d) The Site Improvement Advisory Board will review special area standards submitted for approval if:

1. The special area is delineated on the zoning map, adopted redevelopment plan, special improvement district ordinance, Center designation petition, or other duly authorized ordinance of the municipality or municipalities;
2. The special area is incorporated into the municipality's master plan;

3. Site improvement standards for use in the special area are consistent with the purposes of this chapter, deviations from the standards are identified, and a rationale is provided for each such deviation; and

4. Site improvement standards for use in the special area are adopted by ordinance. Municipalities may submit their existing codes and plans to satisfy these requirements.

(e) The application of the municipality for Site Improvement Advisory Board approval of its special area standards shall consist of:

1. The resolution required in (b) above;
2. The standards;
3. A copy of the ordinance adopting the standards;
4. An identification and narrative rationale for the deviations from the standards of this chapter; and
5. Any maps, exhibits, or supporting documentation.

(f) Developers, nonprofit groups, and other agencies may submit applications for special area status on behalf of the municipalities if duly authorized by the municipal governing body.

(g) The Site Improvement Advisory Board's decision on municipal special area standards shall be rendered in writing.

(h) The Site Improvement Advisory Board shall incorporate into its annual review of this chapter a review of approved municipal special area standards and shall recommend to the Commissioner any appropriate changes in the rules (see N.J.S.A. 40:55D-40.4(d)).

(i) The Site Improvement Advisory Board may approve or deny, in whole or in part, special area standards submitted for consideration by a municipality or municipalities.

(j) The Site Improvement Advisory Board's review is limited in scope to those areas within its purview pursuant to N.J.S.A. 40:55D-40.4, that is streets, off-street parking, water supply, sanitary sewers, and stormwater management in the context of residential development.

(k) The Board's review of a municipal special area standards ordinance shall be based on the following criteria. Standards set forth in an ordinance submitted for review by the Board:

1. Shall be consistent with the intent of the Site Improvement Standards Act,
2. Shall be reasonable and not unduly burdensome,
3. Shall meet the needs of public health and safety, and
4. Shall take into account existing infrastructure and surrounding development possibility.

Petition for Rulemaking: Notice of Receipt of a Petition for Rulemaking.
See: 29 N.J.R. 3900(a).

5:21-3.6 Agreement to exceed standards

(a) A standard set forth in these rules may be exceeded when both the developer and the municipal approving authority agree that such exceeding of a standard is desirable under the specific circumstances of a proposed residential development.

(b) Any agreement between developer and municipal approving authority to exceed a standard set forth in these rules shall be placed in writing by the developer.

(c) The developer shall transmit forthwith to the Department notification of each agreement with a municipal approving authority to exceed any of the standards set forth in these rules.

(d) The Department shall review each agreement between a developer and a municipal approving authority wherein they mutually agree to exceed a standard otherwise set forth in the Residential Site Improvement Standards. Each such agreement shall be reviewed for consistency with the intent and purpose of the Act and these rules.

(e) The Department shall apprise the Site Improvement Advisory Board periodically of all agreements to exceed the standards, together with a summary of the review described in (d) above for each such agreement.

SUBCHAPTER 4. STREETS AND PARKING

5:21-4.1 Street hierarchy

(a) Streets shall be classified in a hierarchy with design tailored to function. The street hierarchy definitions contained within this section are applicable only to local residential streets and are not to be considered related to the U.S. Department of Transportation, Federal Highway Administration's Functional Classification of Highways.

(b) The street hierarchy system shall be defined by road function and average daily traffic (ADT), calculated by trip generation rates from the current edition of "Trip Generation" by the Institute of Transportation Engineers, as indicated in Table 4.1 below. Trip generation rates from other sources may be used if the applicant demonstrates to the appropriate approving authority that these sources better reflect local conditions. In addition, the applicant shall investigate the opportunities for, and availability of, transit facilities and, if appropriate, consider their impact(s) on motor vehicle traffic trip generation rates per dwelling unit.

(c) Each residential street shall be classified and designed to meet the standards for one of the street types defined in Table 4.2 below.

(d) The municipality and the developer shall determine the highest order street required to be used in a given residential development, considering all of the following:

1. The size of the development (number and type of units). For example, using size to determine the highest order of street required, a development of up to 150 single-family detached units would not require any minor collectors or streets of a higher order;
2. The actual or potential development of adjacent sites (whether there is likely to be traffic passing through from neighboring developments). A "potential" development means a development having approvals granted, applications pending, or undergoing preliminary review; and
3. The streets proposed for that area, if any, as contained in the municipal master plan.

Source: Institute of Transportation Engineers, Trip Generation (Washington, D.C.: ITE, 1982), 3rd Edition. The exhibit was updated with data from the 5th Edition of the manual published by ITE in January 1991. The peak ADT rates take into consideration Saturday and Sunday rates, as well as weekday rates.

DEFINITIONS

Land use	Definition
Single-family detached housing	Any single-family detached home on an individual lot.
Residential condominium/townhouse	Condominiums or townhouses in single-family ownership units that have at least one other single-family-owned unit within the same structure.
High-rise residential condominium/townhouse	Condominiums or townhouses in buildings that have three or more levels (floors).
Apartment	A rental dwelling unit located within the same building with at least three other dwelling units
Low-rise apartment	Apartments (rental dwelling units) in rental buildings that have one or two levels (floors), such as garden apartments.
Mid-rise apartment	Apartments (rental dwelling units) in rental buildings that have more than two levels (floors) and less than ten levels
High-rise apartment	Apartments (rental dwelling units) in rental buildings with ten or more levels (floors) and most likely with elevators
Mobile home park	Generally trailers shipped, sited, and installed on permanent foundations and in areas that typically have community facilities, such as recreation rooms, swimming pools, and laundry facilities.
Retirement community	Residential units similar to apartments and condominiums usually restricted to adults or senior citizens, and located in self-contained villages. Special services such as medical, dining, and retail facilities may be available.
Recreational home	Dwellings usually located in a resort containing local services and complete recreational facilities. These are often second homes used by the owner or rented on a seasonal basis.

TABLE 4.1

AVERAGE DAILY MOTOR VEHICLE TRAFFIC TRIP GENERATION PER DWELLING UNIT

Land use	Peak rate
Single-family detached housing	10.2
Residential condominium/townhouse	5.9
High-rise residential condominium	4.3
Apartment	6.5
Low-rise apartment	7.2
Mid-rise apartment	5.5
High-rise apartment	5.0
Mobile home park	5.0
Retirement community	2.8
Recreational homes (owner occupied)	3.2

Note: The trip generation rates listed are guidelines only. The actual use of trip generation rates is derived by the use of regression analysis and should be computed only by professionals proficient in the use of the ITE Manual. The "Land Use" definitions are based on the ITE Manual with slight modifications to address inconsistencies contained within the ITE Manual.

TABLE 4.2

RESIDENTIAL STREET HIERARCHY DEFINITIONS

Street type	Description	Average daily traffic (maximum)
Residential Access†	Lowest order, other than rural street type, of residential streets Provides frontage for access to lots and carries traffic with destination or origin on the street itself. Designed to carry the least amount of traffic at the lowest speed. All, or the maximum number of housing units, shall front on this class of street.	

Street type	Description	Average daily traffic (maximum) 1,500†
Residential Neighborhood‡	<p>† Residential access streets of "loop" configuration, that is, two ways out, should be designed so no section conveys an ADT greater than 1500. Each half of a loop street may be classified as a single residential access street, but the total traffic volume generated on the loop street should not exceed 1500 ADT, nor should it exceed 750 ADT at any point of traffic concentration.</p> <p>A type of residential access street conforming to traditional subdivision street design, and providing access to building lots fronting on a street and parking on both sides of street.</p> <p>‡ Applicant may choose either the RESIDENTIAL ACCESS or the RESIDENTIAL NEIGHBORHOOD street type for new streets. See section 4.8(b) for specific right-of-way and cartway width requirements for new streets that are a continuation of an existing street.</p>	
Minor Collector	<p>Middle order of residential street. Provides frontage for access to lots and carries traffic of adjoining residential access streets. Designed to carry somewhat higher traffic volumes than lower-order streets such as rural and residential access streets, with traffic limited to motorists having origin or destination within the immediate neighborhood. Is not intended to carry regional traffic.</p> <p>Each half of a loop-configured minor collector may be classified as a single minor collector street, but the total traffic volume conveyed on the loop should not exceed 3,500 ADT, nor should it exceed 1750 ADT at any point of traffic concentration.</p>	3,500
Major Collector	<p>Highest order of residential streets. Conducts and distributes traffic between lower-order residential streets and higher-order streets—arterials and expressways. Carries the largest volume of traffic at higher speeds. Function is to promote free traffic flow; therefore, parking should be prohibited and direct access to homes from this level of street should be avoided. Collectors should be designed so they cannot be used as shortcuts by non-neighborhood traffic.</p>	7,500
Special Purpose Streets		
Rural	<p>When density is one dwelling unit per acre or lower, AND road primarily serves as access to abutting building lots, AND there is no on-street parking, AND lot-to-street access is designed so vehicles do not back out of lots onto the street.</p>	500
Rural residential lane	<p>A street serving a very low-density area (minimum two-acre zoning). The maximum ADT level limits the number of single-family units on this road to 20.</p>	200
Alley	<p>A service road that provides a secondary means of access to lots. On same level as residential access street, but different standards apply. No parking shall be permitted; alleys should be designed to discourage through traffic. ADT level shall not exceed that of a residential access street.</p>	500
Cul-de-sac	<p>A street with a single means of ingress and egress and having a turnaround, the design of which may vary. A divided-type entrance roadway to at least the first cross street with median of sufficient width to insure freedom of continued emergency access by lanes on one side, shall not be considered part of a cul-de-sac.</p>	250
Marginal access street	<p>A service street that runs parallel to a higher-order street and provides access to abutting properties and separation from through traffic. May be designed as residential access street or minor collector, according to anticipated daily traffic.</p>	1,500 (residential access total) 3,500 (minor collector total)

Street type	Description	Average daily traffic (maximum)
Divided street	Municipalities may require streets to be divided to provide alternate emergency access, protect the environment, or avoid grade changes. Design standards should be applied to the combined dimensions of the two street segments, as required by the street class.	
Parking loop	A street with perpendicular parking that provides circulation and direct vehicle access to parking from the travel lane.	

Administrative correction.
See: 29 N.J.R. 1296(a).

(c) Cartway widths for each street classification are as shown in Table 4.3 below.

5:21-4.2 Cartway width

(a) Cartway width for each street classification shall be determined by parking and curbing requirements that are based on intensity of development.

(d) Cartway width also shall consider possible limitations imposed by sight distances, climate, terrain, and maintenance needs.

(b) Intensity of development shall be based on dwelling units per gross acre as follows:

Intensity	Dwelling units per gross acre†
Low	Less than or equal to 4
Medium	More than 4 and less than or equal to 15
High	More than 15

Note: † In determining the intensity of development, the gross acreage shall not include dedicated common open space or other such areas restricted from future development.

**TABLE 4.3
CARTWAY AND RIGHT-OF-WAY WIDTHS**

Street type ^a	Total avg daily traffic	Traveled way	No. of parking lanes ^b	Parking lane width	Cartway width	Curb or shoulder ^h	Sidewalk or graded area ^j	Right-of-way width ⁱ
Residential Access	1,500 [†]							
Low intensity	†(loop-750 each half)	20 ft	1	8 ft	28 ft	none	1SW 1GA	50 ft
Medium		20 ft	1	8 ft	28 ft	curb	2 SW	50 ft
High (on-street parking)		20 ft	1	8 ft	28 ft	curb	2 SW	50 ft
High (off-street parking)		20 ft	0	0 ft	20 ft	none	2 SW	50 ft
Neighborhood (all intensities)	1,500	14 ft	2	16 ft	30 ft ^c	curb	2 SW	50 ft
Minor Collector	3,500							
Low intensity ^d with no parking		20 ft	0	0 ft	20 ft	none	1 SW 1GA	50 ft
Low with one parking lane		20 ft	1	8 ft	28 ft	curb	1 SW 1 GA	50 ft
Medium		20 ft	1	8 ft	28 ft	curb	2 SW	50 ft
High with one parking lane		20 ft	1	8 ft	28 ft	curb	2 SW	50 ft
High with two parking lanes		20 ft	2	16 ft	36 ft	curb	2 SW	60 ft
High with off-street parking		22 ft	0	0 ft	22 ft	curb or shoulder	2 SW	50 ft
Major Collector	7,500							
Low intensity		24 ft	0	0 ft	24 ft	none	2 SW	50 ft
Medium								

and High		24 ft	0	0 ft	24 ft	curb or shoulder	2 SW	50 ft if curb, 54 ft if shoulder
Special Purpose Streets								
Rural street ^k	500	20 ft	0	0 ft	20 ft	none	2 GA	40 ft
Rural lane ^k	200	18 ft	0	0 ft	18 ft	none	2 GA	40 ft
Alley (one way)					9 ft			11 ft
Alley (two way)		18 ft	0	0 ft	18 ft	none	2 GA	22 ft
Cul-de-sac (stem) ^e	250							
Marginal access street ^f								
Divided streets ^g								
Parking loop								
One-side parking		24 ft	1	18 ft		curb		42 ft
Two-side parking		24 ft	2	36 ft		curb		60 ft

- Notes: ^a See Table 4.2 for definitions of street hierarchy and N.J.A.C. 5:21-4.2 for definitions of low, medium, and high intensity of development
^b Parking lane refers to parallel parking; except in the case of parking loop, which is perpendicular parking.
^c The 30 foot cartway would accommodate two eight foot parking lanes and one 14 foot moving lane.
^d 20 foot minor collector cartways are permitted only when there is no direct building lot access to or from the street in question.
^e Cartway and right-of-way widths of cul-de-sac stems and right-of-way requirements should conform to standards of residential access or residential neighborhood streets. Cul-de-sac turnarounds shall have a minimum cartway radius of 40 feet and a minimum right-of-way radius of 48 feet.
^f Cartway and right-of-way widths of marginal access streets and right-of-way requirements should conform to standards of either residential access or minor collector streets, as dictated by average daily traffic. If the classification is a minor collector requiring a 36 foot cartway, cartway width may be reduced to 28 feet since frontage is restricted to one side of the street.
^g Cartway widths of divided streets should conform to standards of street classification, as dictated by anticipated average daily traffic, and be applied to aggregate dimensions of two street segments.
^h See N.J.A.C. 5:21-4.3(c) for additional requirements.
ⁱ Right-of-way width applies only to streets proposed for dedication.
^j See N.J.A.C. 5:21-4.5(b) for additional requirements.
^k Rural streets and rural lanes are permitted only within developments which do not exceed an average daily traffic count of 500 and 200, respectively.

Administrative correction.
 See: 29 N.J.R. 1296(a).

5:21-4.3 Curbs or curbs and gutters

- (a) Curbs or curbs and gutters shall be used for drainage purposes, safety, and delineation and protection of pavement edge. Where, based on stormwater management system design, there is determined to be a problem with runoff, curbs or curbs and gutters shall be used.
- (b) Curb requirements shall vary according to street hierarchy and intensity of development, in accordance with the requirements set forth in Table 4.3 in N.J.A.C. 5:21-4.2. Generally, curbs shall be required on streets with on-street parking.
- (c) Where curbing is not required, edge definition and stabilization shall be furnished for safety reasons, and to prevent pavement unraveling. Curbing may be required for: stormwater management, road stabilization, delineation of parking areas, 10 feet on each side of drainage inlets, intersections, corners, and tight radii.
- (d) Curb requirements may be waived by the appropriate municipal approving agency, and shoulders and/or drainage swales used when it can be shown that: shoulders are required by CAFRA; soil and/or topography make the use of shoulders and/or drainage swales preferable; and/or the community desires to preserve its rural character by using

shoulders and/or drainage swales instead of curbs. In cases of medium development intensity, the curbing requirement may be waived where front setbacks exceed 40 feet and it can be demonstrated that sufficient on-site parking exists.

(e) A municipality may designate a curb type by ordinance. Where curb type is not established by municipal ordinance, flexibility regarding curb type shall be permitted as long as the curb type accommodates the system of drainage proposed. Generally, curbs should be constructed of concrete or granite block. Curbing materials shall accommodate the purposes set forth in (c) above.

(f) Curbs shall be constructed according to the specifications set forth in N.J.A.C. 5:21-4.17.

(g) Curbing shall be designed to provide a curb ramp in compliance with the Americans with Disabilities Act or the Barrier Free Subcode of the New Jersey Uniform Construction Code (N.J.A.C. 5:23-7) at street intersections, as applicable.

5:21-4.4 Shoulders

(a) Shoulders and/or drainage swales should be used instead of curbs when:

1. Shoulders are required by CAFRA;

- 2. Soil and/or topography make the use of shoulders and/or drainage swales preferable; and/or
- 3. To preserve rural character.

(b) Shoulders shall be provided in accordance with the requirements in Table 4.3 in N.J.A.C. 5:21-4.2.

(c) Shoulders shall be four-feet wide, except for minor collector streets of high intensity with off-street parking; and major collector streets of medium and high intensity shall be six-feet and eight-feet wide respectively on each side for all streets, and located within the right-of-way as shown in the following street illustrations.

(d) Shoulders shall be constructed of materials such as stabilized earth, gravel, crushed stone, bituminous treatment, or other forms of pavement which provide for vehicle load support.

5:21-4.5 Sidewalks and graded areas

(a) Sidewalks and/or graded areas shall be required, depending on road classification and intensity of development, in accordance with the requirements set forth in Table 4.3 in N.J.A.C. 5:21-4.2.

(b) Sidewalks shall be provided where graded areas are specified in Table 4.3 when the conditions described in (b)1 or 2 below exist:

- 1. The net density of the development or project exceeds one dwelling unit per acre; and
 - i. The development or project is located within 2,500 feet of a train station, public or school bus route;
 - ii. The development or project is located within 2,500 feet of an existing recreational, business or retail use or a site where such use is permitted by existing zoning; or
 - iii. Where the proposed streets connect to or extend existing streets which have sidewalks on both sides; or
- 2. The net density of the development exceeds .5 dwelling unit per acre and the development is located within two miles of a school.

(c) Notwithstanding (b)1 and 2 above, sidewalks shall only be required on one side of rural streets or rural lanes and shall not be required in alleys.

(d) Sidewalks shall be placed parallel to the street, as shown in the street profile figures, unless an exception has been permitted to preserve topographical or natural features, or if required to provide visual interest, or unless the applicant shows that an alternative pedestrian system provides safe and convenient circulation (for example, in planned development).

(e) Pedestrian-way easements at least 10-feet wide may be required by the municipal approving authority through the center of blocks more than 600-feet long. In providing circulation or access to schools, playgrounds, shopping, adjoining residential areas, or other community facilities, the municipality shall consider and may require pedestrian-way easements.

(f) Sidewalk width shall be four feet; wider widths may be necessary near pedestrian generators and employment centers. Where sidewalks abut the curb and cars overhang the sidewalk, widths shall be six feet. In high-density residential areas when sidewalks abut the curb, a sidewalk/graded area of at least six feet in width shall be required.

(g) Sidewalks and graded areas shall be constructed according to the specifications set forth in N.J.A.C. 5:21-4.18.

ILLUSTRATIONS OF STREET LAYOUTS FOLLOW:

Note: The individual components shown in the non-travel-way portion of the right-of-way such as utility areas, sidewalks, and graded areas are indicated for illustrative purposes only. Municipalities may vary the placement and dimensions of these individual items, depending on utility company requirements and local practice and preferences. In addition, items such as shade trees may be accommodated within the total right-of-way widths indicated for each street type. Several street types are not illustrated because of the limited or various, as the case may be, design possibilities.