

## **Roads**

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§ 150.40 ADOPTION OF COUNTY SPECIFICATIONS

The Broward County "General Specifications for Road and Bridge Construction and Minimum Engineering and Construction Standards for Water and Sewer Installations and the General Specifications for Construction Methods and Procedures for Installation of Gas, Water, and Sewer Lines," now on file in the office of the City Clerk in compliance with F.S. § 165.19, is adopted by reference, subject to any amendments or deletions contained in this code, and to any provisions of this code inconsistent therewith.

§ 150.41 SUBSTITUTION OF CERTAIN TERMS, PENALTY

(A) Wherever the context permits in the specifications adopted by reference in § 150.40, there shall be substituted for the officers, boards, departments, and commissions mentioned therein comparable officers, boards, departments, and commissions of the city. Wherever the term "Broward County" is used therein, the term "City of Pembroke Pines" shall be substituted.

(B) Wherever a penalty is provided therein, there shall be substituted therefor the penalty as provided in § 10.99.

#### § 150.42 BUILDING PERMIT, FEE PAYMENT REQUIRED

No work or construction governed under the terms of this subchapter or for which a permit fee is assessed shall be commenced unless a permit for the same is obtained from the Building and Zoning Department of the city and a fee paid thereto in accordance with the schedule of fees in § 150.43.

#### § 150.43 PERMIT FEE SCHEDULE

The permit fees for public works construction in the city are available in the City Clerk's office.

#### § 150.44 IMPOSITION OF FINE, PENALTY NOT TO EXCUSE VIOLATION

The imposition of any fine or penalty for a violation of this subchapter shall not be construed as excusing or permitting the continuance of the violation.

#### § 150.90 REMOVAL OF MUCK, BUILDING MATERIALS, DEBRIS REQUIRED

(A) Upon completion of the proposed development, building, or construction, all muck, organic matter, clay, rock, and all other unsuitable materials, including, but not limited to previously-demolished buildings, building foundations, pipes, septic tanks, appurtenances, timberbrush, stumps, roots, rubbish,

debris, and all other obstruction resting on or protruding through the surfaces of the existing grounds and excavated areas shall be completely removed by any developer, builder, or permit holder from all building pads and surrounding public rights-of-way, underground utility easements, drainage ponds, and storm water disposal and retention areas without positive drainage systems.

(B) Organic matter may be left when properly certified by a registered engineer attesting to compliance with the South Florida Building Code.

(C) It shall be the responsibility of the developer to construct or improve, or to post a bond guaranteeing improvement to, all roadways adjacent to and within the property being developed. There shall be no requirement to bond improvements for private roadways on private property. All improvements for private roadways must be 100% complete prior to the issuance of certificate of occupancy. No certificate of occupancy shall be issued unless all private roadways are completed, or uncompleted portions guaranteed by posting bond.

(D) The term DEVELOPER shall include any party, including natural persons, partnerships, firms, corporations, or business entity conducting as a business demucking, excavation, fill, grading, subgrading, basecoursing, asphalt and concrete paving, sidewalk, swale, landscaping, irrigation, curbing, gutter, drainage system installation, pavement marking, or traffic sign, road sign, traffic signal, guardrail, or street lighting installation.

(E) The term ROADWAY shall include all public and private roads, highways, alleys, driveways, and parking areas, and other asphalt or concrete pavements.

(F) The IMPROVEMENT shall include, but not be limited to, demucking, excavation, fill, grading, subgrade, basecourse, asphalt and concrete paving, sidewalk, swale, landscaping, irrigation, curbing, gutter, drainage system, pavement marking, traffic sign, road sign, traffic signal, guardrail, and street lighting.

#### § 154.15 PERFORMANCE BOND

(A) No plat of lands shall be approved unless the person seeking the approval of the plat first furnishes the city with a good and sufficient performance bond, letter of credit, cash bond or subdivision

improvement agreement, in a form approved by the City Commission after review by the City Attorney (hereinafter referred to collectively as the "Security"). If a bond is selected as the form of security to be provided to the city the bond shall be executed by the owner and a corporate surety company, satisfactory to the city. The amount of the security shall be in a sum equal to, or greater than, the estimated cost of the improvement, as a guarantee bond, plus 10%, conditional upon the construction and paving of streets, alleys, and other improvements and rights-of way shown on the plat, the installation and furnishing of street markers, necessary fill, drainage wells, culverts, gutters, sewers, and other necessary drainage facilities in accordance with the specifications of the city and within such time as may be required by the City Commission.

#### § 154.16 COST OF STREET MARKERS

The party seeking approval of a plat shall pay the cost of necessary street markers and their installation. The street markers shall be required where two or more streets intersect and one street marker shall be required where the streets join in a "T".

#### § 154.45 PERMIT, FEE REQUIRED

The owner of the platted lands shall obtain a permit from the Engineering Department before commencing construction and paving of streets, and shall pay a permit fee in accordance with the schedule in § 150.43.

#### § 154.46 STREETS, ALLEYS, AND THE LIKE TO BE PAVED

The streets, alleys, and rights-of-way, however designated, shown on the plat, shall be paved in accordance with the city's specifications contained in § 150.40.

#### § 150.90 CRITERIA FOR PUBLIC ROAD IMPROVEMENT

(G) All improvements shall be done in accordance with the following basic criteria:

(1) Design criteria. As a minimum, all pavements shall be designed in accordance with the latest edition of "Manual of Minimum Standards for Design, Construction, and Maintenance for Streets and Highways" as published by the State of Florida, and the provisions of the Broward County Water Resources Management Division's "Grading and Drainage Regulations and Standards," except as modified herein, and the provisions of the city code of ordinances.

(2) Construction criteria. Construction materials and methods shall meet the requirements of the latest edition of the Florida Department of Transportation "Standard Specifications for Road and Bridge Construction" and supplements, except as modified herein, and the provisions of the city code of ordinances.

(3) Typical sections. Sketches of typical sections for various rights-of-way are attached to Ord. 792, which is on file in the office of the City Clerk and available for public inspection during the customary business hours.

(4) Subgrade. The entire width of the right-of-way shall be completely demucked before construction of the roadway begins. No material of classes A-5, A-7, or A-8 shall be allowed. All material supporting the roadway and shoulders shall be stabilized to have a minimum LBR of 40. Sub-grades shall be compacted to 95% of maximum density per AASHTO T-180.

(5) Basecourse. Limerock bases shall be 6 inches for driveways and parking areas, 8 inches for local subdivision public and private roads, and 12 inches (in two lifts) for arterial roads. Limerock of the Miami formation shall be used, and shall have a minimum carbonate content of 60% (70% for arterial roads), and a minimum LBR of 100. Base material shall be compacted to a density of not less than 98% of maximum density as determined by AASHTO T-180.

(6) Wearing (surface) courses.

(a) For all roads except arterial, the surface course is to be a minimum one and one-half (1-½") inch asphaltic concrete FDOT type S-III (in two lifts).

(b) For arterial roads, surface courses are to be of asphaltic concrete construction in two lifts as follows:

1. Bottom course -min. one-quarter (1-1/4") inch thick (D.O.T.) type S-1.

2. Top course -min. three-quarter (3/4") thick (D.O.T.) Type S-3. A tack coat shall be used between paving courses, and a prime coat shall be used on the finished rock base.

(7) Curb/gutter. All curb elements on arterial roads shall have a limerock foundation or "pad" of at least four-inch thickness, compacted to 98% of maximum density, per AASHTO T-180.

(8) Sidewalks. Sidewalks shall be of concrete with a minimum thickness of four inches, six-inch thickness required at driveways.

(9) Underground utilities. All underground utility mains and structures, for water, sewer, gas, drainage, telephone, power, cable TV, and others, must be installed, inspected, tested, and approved prior to any subgrade construction.

(10) Traffic engineering. The construction plans must include plans for traffic signs, street number signs, pavement markings, and street lighting.

(H) Detail plans must be reviewed and approved by the Engineering Department.

#### § 154.32 DESIGN STANDARDS FOR STREETS AND ALLEYS

(A) Conformity to trafficways plan. The location, direction, and width of all streets, roads, and highways shall conform to the official trafficways plan where such a plan is in existence and is applicable.

(B) Relation to existing street system. The arrangement of streets in new subdivisions shall make provisions for the proper extension of existing dedicated streets in existing subdivisions, where such extension is appropriate.

(C) Provisions for platting adjoining unplatted areas. The arrangement of streets in new subdivisions shall be such as to facilitate, and coordinate with, the desirable future platting of adjoining unplatted property of a similar character, and to provide for local circulation and convenient access to neighborhood facilities.

(D) Protection from through traffic. Minor and collector residential streets shall be laid out and arranged so as to discourage their use by through traffic. Residential streets shall not connect with industrial areas unless it is unavoidable.

(E) Arterial street frontage.

(1) Residential lots, zoned or intended to be zoned in an R-1A, R-1B, R-1C, R-1P, R-2P, R-2, R-2U, R-3, R-3A, or R-3U zoning district shall not be designed to front on an arterial street or trafficway. These lots shall be designed as reverse frontage lots with a planting strip at least ten feet in width on the rear end of the lots on the arterial street or trafficway. The planting strip shall be restricted against use for vehicular access to the arterial street or trafficway.

(2) The regulations provided in division (E)(2) shall apply to all areas of the city, except for areas lying within county territory or other incorporated municipalities. Where a residential subdivision or residential property abuts an existing or proposed arterial street, the Board may require marginal access streets, reverse frontage with screen planting contained in a nonaccess reservation along the rear property line, deep lots with or without rear service alleys, or any other treatment that may be necessary for adequate protection of residential properties and to ensure separation of through and local traffic.

(F) Plats adjacent to railroad or expressway right-of-way. Where a subdivision borders on or contains a right-of-way for a railroad, expressway, drainage canal, or waterway, the Board may require a street or a fence approximately parallel to and on each side of the right-of-way, at a distance suitable for the appropriate use of the intervening land. The distances shall be determined with due regard for the requirements of approach grades for future grade separations. All alleys must be paved.

(G) Reserve strips. Reserve strips controlling access to streets shall be prohibited, except where their control is definitely placed in the city under conditions approved by the Board.

(I) Half streets. New half or partial streets shall not be permitted, except where essential to reasonable subdivision of a tract in conformance with these regulations or where satisfactory assurance for dedication of the remaining part of the street is provided. Wherever a tract to be subdivided borders on an existing half or partial street, the other part of the street shall be dedicated and paved within the tract.

(J) Future resubdivision. If lots resulting from original subdivision are large enough to permit or require resubdivision, or if a portion of a tract is not subdivided, adequate street rights-of-way to permit further subdivision shall be provided as necessary.

(K) Dead-end streets. Dead-end streets shall be prohibited, except where appropriate as stubs to permit future street extension into adjoining unsubdivided tracts, or when designed as cul-de-sacs.

(L) Cul-de-sac streets.

(I) Cul-de-sacs, permanently designed as such, shall not exceed 400 feet in length, except on finger islands.

(2) Cul-de-sacs shall be provided at the closed end with a circular dedicated area not less than 80 feet in diameter for turnaround purposes, except that on finger islands the diameter of a turnaround may be reduced to 70 feet.

(M) Street rights-of way.

(1) Unless otherwise indicated or required by the trafficways plan, or for sufficient reasons shown that exceptions should be made in specific cases, street rights-of-way shall not be less than the following.

Right-of-Way

Street Type	Feet
Major arterial thoroughfare of through section-line road.	106
Secondary arterial thoroughfare or nonthrough section-line road.	80
Collector.	60
Minor, for apartments, business, industrial.	60
Minor, for one and two-family dwellings.	50
Marginal access.	40

(2) Additional right-of-way width may be required to promote public safety and convenience, or to ensure adequate access, circulation, and parking in high-density residential areas, commercial areas, and industrial areas.

(3) Where a subdivision abuts or contains an existing street of inadequate right-of-way width, additional right-of-way in conformance with the above standards may be required.

(N) Alleys.

(1) Alleys shall be provided to serve multiple-dwelling, business, commercial, and industrial areas. The Board may waive this requirement where some other definite and ensured provision is made for service access, off-street loading and unloading, and parking consistent with and adequate for the uses permissible on the property involved.

(2) The width of any alley shall be at least 20 feet.

(3) Changes in alignment of alleys shall be made on a center line radius of not less than 37 feet.

(4) Dead-end alleys shall be avoided where possible. However, if unavoidable dead-end alleys shall be provided with adequate turnaround facilities for service trucks at the dead end, but with the minimum external diameter of 94 feet, or as determined to be adequate by the Board.

(O) Easements.

(1) Easements across lots or centered on rear or side lot lines shall be provided for public utilities where necessary and shall be at least fifteen (15") feet in total width.

(2) Where the subdivision is traversed by a watercourse, drainageway, canal, or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the line of the watercourses, and such further width or construction, or both, as will be adequate, for the purpose. Parallel streets or parkways may be required in connection therewith where necessary for service or maintenance.

(3) Easements may be required for drainage purposes of such size and location as may be determined by the City Engineer.

(P) Street alignment.

(1) Curvilinear streets are recommended for residential, minor, and collector streets in order to discourage excessive vehicular speeds and to provide attractive vistas.

(2) Whenever a street changes direction, or connecting street lines deflect from each other, by more than ten degrees, there shall be a horizontal curve.

(3) To ensure adequate sight distance, minimum center line radii for horizontal curves shall be as follows.

Street Type	Feet
Minor streets	150
Collector streets	300
Secondary arterial streets and section-line roads	500
Major arterial thoroughfares.	750

(4) A tangent at least 100 feet long shall be provided between reverse curves on collector streets, and at least 250 feet long on major and secondary thoroughfares and section-line roads.

(Q) Street intersections.

(I) Streets shall be laid out to intersect as nearly as possible at right angles. No street shall intersect another at an angle of less than 60 degrees, except at a "Y" intersection of two minor streets.

(2) Multiple intersections involving the junction of more than two streets shall be prohibited, except where found to be unavoidable by the Board.

(3) "T" intersections of minor and collector streets are to be encouraged.

(4) As far as possible, intersections with arterial streets shall be located not less than 800 feet apart, measured from center line to center line.

(5) Streets entering opposite sides of another street shall be laid out directly opposite each other or with a minimum offset of 125 feet between their center lines.

(6) Property line radii at street intersections shall be 15 feet for minor streets. Where the angle of intersection is less than 60 degrees, a greater radii may be required by the Planning and Zoning Board.

(R) Excessive street widths. Streets shall not be platted to a width more than 150% of the minimum width specified in these regulations for the type of street involved. No street shall be platted for center island development, except where the center islands may be desirable or necessary for traffic.

(T) Minimum street grade and elevation. All roads in new subdivisions within the city shall have a minimum crown of road elevation of 6.0 feet M.S.L. The longitudinal slope criteria shall be 0.3% for valley-gutter sections and curb and gutter sections, and 0.5% for swale section. These minimum requirements shall also apply to nonplatted subdivisions which include private streets or ways.

(U) Review and approval of as-built road rock grades by the Engineering Department prior to paving shall be part of the inspection criteria.

#### § 154.32 CRITERIA FOR PRIVATE ROAD IMPROVEMENT

(H) Private roads in residential zoning districts shall be allowed in accordance with the following criteria:

(1) The term "roadway" shall include the driving lanes, curbing, landscaping strips, and sidewalks.

(2) Private roadway shall have a minimum width of 40 feet.

(3) The roadway width shall include minimum 24 feet of asphaltic pavement for vehicular traffic, curb and gutter along each edge of roadway pavement for drainage and four feet of concrete sidewalk along each side of roadway pavement for pedestrian traffic. Roadways, with a minimum width of 50 feet, shall not be required to have concrete curb and gutter for drainage. The City Commission may waive the

requirements for sidewalks along one or both sides of a private road. Curb and gutter shall not be required when sidewalks are not required, or where sidewalks are located outside the 40 foot roadway width.

(4) The roadway pavement shall be constructed of minimum 12 inches stabilized subgrade (minimum 40 LBR) minimum eight (8") inches compacted limerock basecourse and minimum 1½ inches asphaltic surface course (in two lifts). No muck or other organic material shall not be allowed in the roadway pavement.

(5) Where individual mail boxes are desirable, they shall be installed in a 2.5 foot wide grass strip to be provided between the curb and the sidewalk.

(6) All pavement markings and signage shall conform to "Broward County Traffic Engineering and "Manual of Uniform Traffic Control Devices" standards. All pavement markings shall be of thermoplastic material.

(7) No street names shall be allowed. Street number signs shall be provided at each intersection and other locations, and shall conform to Broward County Standards.

(8) Sod and irrigation shall be provided, as needed, in the 2½ foot strips in the 40-foot roadway. No trees shall be allowed.

(9) Street lighting shall be provided to deliver an illumination equal to that provided for public roads but not less than an average illumination of one-half footcandle within the roadway. The street light poles shall be made of concrete, fiberglass, or metal poles which meet the standards set forth below, and all cables and wires shall be underground. The poles and lines shall be located outside the roadway width.

(a) Standards for light poles. Light poles shall withstand wind load as required by South Florida Building Code, latest edition. The pole shall be non-conductive, non-corrosive, and shall be able to carry a minimum weight of 100 pounds at its top. Installation shall be done by direct burial. The pole material shall meet the following ASTM standards: D635, A153, A356, A319, A307.

(b) Design and style standards for light poles. The design and style of decorative light poles shall be reviewed by the Planning and Zoning Board in the same fashion as site development plans are currently reviewed under § 155.395 of this code.

(10) Sketches entitled "Typical Section for Private Roads shall be available in the engineering department for inspection and may provide guidance to builders of private roads.

(11) The city will not accept the conveyance and/or the maintenance responsibility for any private road unless the private road has been inspected by the city and found to comply fully with the city's standards for public roads existing at the time of acceptance as set forth in § 154.32. discourage excessive vehicular speeds and to provide attractive vistas.

#### § 154.38 ACCEPTANCE OF IMPROVEMENTS BY CITY; MAINTENANCE

(A) Approval of improvements by the City Inspector shall not be deemed acceptance by the city. Acceptance shall be only by action of the City Commission, and shall be contingent upon a favorable inspection report. The subdivider shall remain responsible for all maintenance of any improvements for a period of not less than 12 months following completion of construction of the improvement. The guarantee bond, as required in § 154.15, shall provide for reimbursement to the city for any maintenance expense incurred by the city in correcting or curing any defects in the improvements installed or constructed by the subdivider or upon the failure of the subdivider or his contractors to perform the work after due notice. The subdivider shall be allowed no less than 15 days after notice to comply with the notice. An improvement shall not be accepted until all improvement and maintenance work is complete.

(B) Acceptance of an improvement for the city shall be solely by a resolution of the City Commission upon recommendation of the various departments that the improvements are in good repair and in accordance to city standards and specifications.

(C) Acceptance of an improvement by appropriate City Commission action shall constitute release of the performance bond.

