

TOWN OF NARRAGANSETT

INFRASTRUCTURE IMPROVEMENT REGULATIONS

Town of Narragansett Engineering Department
June 1998

1.00 INTRODUCTION

- 1.10 This document details the specific administrative and design criteria for infrastructure improvements (sanitary sewer, water, road, and storm drainage systems) within the Town of Narragansett. The requirements set forth herein are applicable regardless of the final ownership disposition of the system in question. Additional requirements may be imposed from time to time by the Town as conditions warrant, and it is the responsibility of the applicant to insure that he/she has the current standards.
- 1.20 All criteria referenced herein relates to the Town's administrative technical design, and installation elements only , and compliance herewith does not imply approval by any other body or under any policy, ordinance, or regulation which may have authority or jurisdiction over the design and installation of said infrastructure within the Town.

2.00 SUBMITTAL INFORMATION

- 2.10 *Plans, specifications, and calculations:* Specific submittal information can be found within Appendix A of this document, entitled "Infrastructure Improvements - Required Submittals; Plans and Supporting Documentation." Once the Town has completed its review of all items submitted in accordance with the above-referenced document, one (1) set of all items (plans, specifications, calculations, engineer's estimate, etc.) will be returned to the applicant with comments provided to the Town for a second review. Under no circumstances will any permits be issued, inspections scheduled, or work be authorized, until approved plans are on file with the Town.
- 2.20 *Easements:* Any and all easements required for the proposed construction shall be so noted on the plans. Two (2) copies of the draft easement plan and legal description, as prepared by a surveyor licensed to practice within the State of Rhode Island, shall be provided to the Town for review along with the required plans and other supporting documents. Acceptance of all easements is subject to Town Council approval, and will be placed on an Agenda for a regularly-scheduled Council meeting, for action after review and recommendation by the Town staff. All such easements must be approved by the Town and recorded in the Office of the Town Clerk, prior to the issuance of any extension permits. It should be noted that all utilities shall be designed so that as much of the system as practical shall be installed within existing public rights-of-way. Sample easements (to show general form and language) will be provided on a project-by-project basis.

- 2.30 Surety: Specific surety submittal information can be found within the document entitled "Information Package for Town of Narragansett Sanitary Sewers and/or Waterline Extensions and Connections" (copy attached). Refer to the Code of Ordinances, Chapter 17 "Streets, Sidewalks, and Other Public Places", Division 3 Permits for specific information relative to road surety work. Refer to the Town of Narragansett Zoning Ordinances for surety requirements for new subdivisions.
- 2.40 Permits: The applicant shall secure all necessary Federal, State, and local permits as may be appropriate, and shall submit one (1) copy of each to the Town, along with the other required submittals. The Town reserves the right to require that all other permits be secured before any Town permits are issued.

3.00 DESIGN CRITERIA - SANITARY SEWERS

- 3.10 Unless otherwise specified herein or in other Town documents, all sanitary sewer designs shall be in accordance with the "Guides for the Design of Wastewater Treatment Works" 1998 Edition (TR-16) as prepared by the New England Interstate Water Pollution Control Commission (contact the New England Interstate Environmental Training Center at (207) 767-2539 for copies).
- 3.20 Gravity Sanitary Sewer Design
- 3.21 Minimum Size: The minimum size for gravity sanitary sewer mains (those sewers servicing three (3) or more units within a cluster-type development, two (2) or more individual units that are a part of any other development, or any extension of an existing system) shall be eight (8) inches in diameter. In all cases, however, the size of the sewer shall be subject to the review and approval of the Town, and may exceed the minimum size noted above, depending upon the overall potential area to be serviced.
- 3.22 Depth: In general, sanitary sewers are to be installed at a depth sufficient to receive sewage from basements (if appropriate) and to prevent freezing. The minimum depth (as measured from the top of the pipe to the finished grade) shall be four (4) feet. Extensions to existing sewers shall match inverts and continue at the same slope as the existing sewer, unless otherwise specified by the Town. In the event that ground conditions or other obstructions would interfere with an installation at the required depth, the applicant's engineer shall submit calculations as to recommended insulation procedures for the affected pipe.

- 3.23 Slope: All sanitary sewers shall be designed and constructed to give mean velocities, when flowing full, of not less than two (2) feet per second, based on Mannings formula, using an "n" value as recommended by the pipe manufacturer. The minimum slope for eight (8) inch pipe (PVC - Mannings "n" = 0.013) shall be 0.004 feet/foot.

Sewers shall be designed with a uniform slope between manholes. Slopes shall be selected so that drop manholes are not necessary, unless under extreme or unusual conditions and as approved by the Town.

- 3.24 Manholes: Manholes shall be designed at: the termination of each line; all changes in grade, pipe diameter, or alignment; all intersections; and at distances not greater than three hundred and fifty (350) feet. The Town reserves the right to require manholes at other locations, and will address each situation on a case-by-case basis.

3.30 Low Pressure Sanitary Sewer Design

- 3.31 General: All low pressure/grinder pump sanitary sewers shall be designed in accordance with the technical report entitled "Low Pressure Sewer Systems Using Environment One Grinder Pumps", February 1995, as prepared by the Environmental One Corporation (or such later editions that might apply). This type of system will only be allowed where conventional gravity-type sewers cannot physically be installed, and will be subject to the approval of the Town.

3.40 Pump Stations, Lift Stations, and Forcemains

- 3.41 General: Design criteria for pump stations, lift stations, and forcemains will be reviewed with the applicant on a case-by-case basis. Each such item shall be designed to accommodate the appropriate service area as defined within the Town Sewer Policy or within the Town Facilities Plan for Wastewater Management.

- 3.50 All sanitary sewer extensions shall be designed and installed so that the entire frontage of the property in question shall be sewerred, regardless of the actual internal piping scheme that is developed for the parcel. The Town reserves the right to order the applicant to install wyes and/or laterals to the property line for all platted lots that are fronted by any new extension. Should an existing line already provide frontage to a property, without extending across the entire frontage of said parcel, the Town reserves the right to require an applicant for a connection permit to extend the main line across the remainder of the property frontage.

- 3.60 Specific technical specifications, testing, and installation procedures can be found within the document entitled "Town of Narragansett Sanitary Sewer System - General Specifications and Construction Installation Procedures", issued March 21, 1997, as revised. The authority for this section can be found in the Code of Ordinances, Chapter 20 "Utilities", Article III, Sewers.

4.00 DESIGN CRITERIA - WATER MAINS

- 4.10 Unless otherwise specified herein or in other Town documents, all water system designs shall be in accordance with the latest adopted standards of the American Water Works Association.
- 4.20 Water Main System Design
- 4.21 Minimum size: The minimum size for water mains shall be six (6) inches in diameter. In all cases, however, the size of the main shall be subject to the review and approval of the Town, and may exceed the minimum size noted above, depending upon the overall potential area to be serviced.
- 4.22 Depth: All water mains and services shall have a minimum cover between the top of the pipe and the finished grade of four and one-half (4½) feet.
- 4.23 Separation: No water mains or services shall be installed in the same trench with any other utility. The minimum horizontal distance between water mains or services and sanitary sewers, waste lines, or septic tanks shall be ten (10) feet and between such water mains or services and Individual Sewage Disposal Systems (ISDS's) shall be twenty-five (25) feet. The Town reserves the right to order concrete encasement where the minimum separation cannot be obtained.
- 4.24 Hydrants: Hydrants shall be located at intervals not to exceed five hundred (500) feet in residential and commercial areas and three hundred fifty (350) feet in industrial areas. The final layout and number of hydrants shall be subject to the approval of the Town, depending upon the service area, main size, and available pressure.
- 4.30 All water main extensions shall be designed and installed so that the entire frontage of the property in question shall be serviced, regardless of the actual internal piping scheme that is developed for the parcel. The Town reserves the right to order the applicant to install tees

and valves for future main extensions as well as service connections to the property line for all platted lots that are fronted by any new extension. Should an existing line already provide frontage to a property, without extending across the entire frontage of said parcel, the Town reserves the right to require an applicant for a connection permit to extend the main line across the remainder of the property frontage.

- 4.40 Specific technical specifications, testing, and installation procedures can be found within the document entitled "Town of Narragansett Water Distribution System - General Specifications and Construction Installation Procedures", issued March 25, 1997, as revised. The authority for this section can be found in the Code of Ordinances, Chapter 20 "Utilities", Article II, Water.

5.00 DESIGN CRITERIA - ROADS AND STORM DRAINS

- 5.10 Unless otherwise specified herein or in other Town documents, all road design shall be in accordance with the latest edition of the "Standard Specifications for Road and Bridge Construction", as published by the State of Rhode Island Department of Transportation. Signage and markings shall be designed in accordance with the latest edition of the "Manual on Uniform Traffic Control Devices", as published by the U.S. Department of Transportation, Federal Highway Administration.
- 5.20 Unless otherwise specified herein or in other Town documents, all storm drainage design (including drains, culverts, ditches, detention ponds, and other related facilities) shall be in accordance with the requirements of Chapter 587 "Zoning", Section 6.9 Supplemental Drainage Requirements of the Code of Ordinances.
- 5.30 All roads and storm drainage facilities shall be designed and installed so that the entire frontage of the property in question shall be serviced.
- 5.40 Specific technical specifications, testing, and construction procedures can be found within the document entitled "Town of Narragansett Highway Division - General Specifications and Construction Installation Procedures", issued April 1997. The authority for this section can be found in the Code of Ordinances, Chapter 17, "Streets, Sidewalks, and Other Public Places".

6.00 SURVEYING MARKERS

- 6.10 Permanent survey markers (bounds) are required within all new subdivisions in accordance with the following criteria:

- a) Bounds shall be granite or concrete; six (6) inches by six (6) inches by forty-eight (48) inches, with a dimple or drill-hole in the top. All bounds are to be set under the direct supervision of a Registered Land Surveyor.
 - b) Bounds are to be set on one (1) side of the street (where practical), with at least one (1) bound per intersection.
 - c) Bounds are also to be set at angle points, points of curves, and points of tangency. The maximum distance between bounds on tangents shall not exceed five hundred (500) feet.
 - d) All proposed bounds are to be shown on the subdivision plans, with the number and location of same to be subject to the approval of the Town.
 - e) All bounds are to be set before any building permits are issued.
- 6.20 In the case of roads to be publicly accepted, the developer shall be responsible for maintaining the integrity of the bounds until said roads are accepted as a part of the Town's public road system.
- 6.30 In the case of roads that are to remain private, the homeowner's association shall be responsible to maintain the integrity of the bounds.

7.00 TOWN OPERATION AND MAINTENANCE

- 7.10 Acceptance: The Town will accept new infrastructure components for operation and maintenance provided that:
- a) The infrastructure (sanitary sewers, water, road, and storm drainage systems) was installed consistent with the Town's policies, ordinances, and regulations governing same; and
 - b) The Town has inspected all work and witnessed all tests, with written documentation of same on file; and
 - c) All of the provisions of Section 2.00 have been met; and
 - d) A letter of assignment has been provided to the Town from the applicant, transferring all title and rights to the project to the Town, notwithstanding the guarantee conditions set forth herein; and
 - e) One (1) complete set of reproducible mylar drawings have been received by the Town reflecting the as-built conditions. These as-built drawings are to be prepared and stamped by a Professional Engineer or Land Surveyor licensed to practice in the

State of Rhode Island.

- f) No connection permits will be issued until each item above has been completed.

7.20 Guarantee: After the completion, testing as necessary, and acceptance of all work by the Town, the applicant may apply to the Town for the full release of the surety as noted in Item 2.30. The Town reserves the right to withhold up to ten (10) percent of the value of the surety for a period of up to one (1) year as a guarantee against future defects in the work. After that period, the applicant may apply for the release of the balance of the surety. The Town reserves the right to utilize the funds within the ten (10) percent retainage to correct any deficiencies that are not corrected by the applicant in a timely manner when so notified by the Town. Based on the severity of the deficiency, the Town reserves the right to set the time limit for a timely response. Please refer to the Code of Ordinances, Chapter 17, Division 3 "Permits" for specific information relative to road improvement surety.