

TOWN OF NARRAGANSETT

INFRASTRUCTURE IMPROVEMENT

REGULATIONS

**Town of Narragansett Engineering Department
June 1998**

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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.

APPENDIX A
INFRASTRUCTURE IMPROVEMENTS - REQUIRED SUBMITTALS
PLANS AND SUPPORTING DOCUMENTATION

All infrastructure improvements proposed within the Town, including but not limited to, sanitary sewers, storm drains, paving and curbing, water lines and all associated appurtenances, shall be designed and constructed in accordance with Town of Narragansett standards. As a minimum, plans of the proposed improvement(s) are required for review prior to the issuance of any applicable permits.

The required information to be presented on the plans includes the following. The Town of Narragansett reserves the right to require additional information on a project-by-project basis.

GENERAL (Required information pertaining to all plans)

- A. A minimum of two (2) copies of each sheet are required; the Town reserves the right to require additional sets depending on the nature of the project and the expected review process.
- B. Plan sheets are to be 24" x 36" in size (maximum), with the plan view drawn to a scale of 1" = 40' (horizontal).
- C. Each sheet is to include the following information:
 - Title of drawing, including name and address of applicant and person who prepared the drawing.
 - Professional Engineer and/or Registered Land Surveyor stamp, as applicable (licensed within Rhode Island). All plans must be prepared under the direction of and stamped by either of the above.
 - North arrow, scale, date of drawing, legend and sheet number.
 - Reference to all adjoining streets (match lines, stationing).
 - Benchmarks and datum used in plan preparation.
 - Assessor's Plat and Lot (if more than one (1) lot is shown, label each lot individually) designations for adjoining properties.
 - Location, widths and purpose of all existing rights-of-way and easements within and adjacent to the project site.
 - All delineation between existing and proposed improvements is to be clear and concise, and should be so noted in the legend.

1. **NATURAL FEATURES**

- Existing and proposed contours, at two (2) foot intervals.
- Existing and proposed natural site drainage patterns, including swales, kettleholes, wetlands and water courses.
- Location of rock outcroppings, wooded areas, trees with a diameter of ten (10) inches or more, measured at a point four (4) feet above the base of the trunk and other significant physical features.
- Flood plain boundaries and elevations.

- Surveyed boundaries of any coastal features, including beaches, dunes, cliffs, bluffs, embankments, rocky shores and manmade shorelines.

2. EXISTING IMPROVEMENTS (On and within two hundred (200) feet of the site)

- Boundaries and dimensions of existing platted lots.
- Location and widths of all existing streets, sidewalks, vehicular drives and parking areas.
- Location, description and dimensions of existing structures.
- Location, dimensions, grades and flow direction of existing sanitary sewers, storm drains, culverts and water mains.
- Location of existing utility lines and pipes (gas, telephone, power, cable TV, etc.)
- Location of existing service lines for all utilities.
- Location of existing street lights, utility poles (and numbers), hydrants, street and traffic signs, and permanent monuments.

3. PROPOSED IMPROVEMENTS

- Indicate stationing for all proposed improvements at fifty (50) foot intervals.
- Boundaries and widths of proposed drainage and utility easements.
- Proposed alterations or relocations of any utility of infrastructure, including sanitary sewers, storm drains, water mains, watercourses and individual services.
- Indicate temporary environmental protection devices (staked hay bales, etc.).

a) SANITARY SEWERS

- Identify manhole locations, proposed pipe diameter(s) and length of pipe between manholes and/or length to be installed.
- Identify any proposed service connection line and cleanouts.
- Label proposed pipe material.

b) WATER DISTRIBUTION SYSTEM

- Label all valves, hydrants, blow-offs, and other appurtenances.
- Identify proposed pipe diameter(s) and length of pipes between hydrants and/or length to be installed.
- Label proposed pipe material.
- Identify any proposed service connection lines.

c) STORM DRAINAGE

- Identify catch basin, drop inlet, storm manhole and related structures and locations, proposed pipe diameter(s) and lengths of pipe to be installed.
- Identify type of grate for all catch basins and drop inlets (identify by RIDOT designation).

d) PAVING AND CURBING

- Identify lengths, widths, grades of proposed street rights-of-way, pavement areas, driveways, sidewalks and curbs. Indicate curve data (vertical and horizontal) where appropriate.

4. PROFILE REQUIREMENTS

- On each sheet with a plan view, an appropriate profile section is to be drawn and aligned such that the stationing on the view matches (numerically and visually) with the profile. Identify the vertical scale.
- Show all existing and proposed elevations and grades, including, but not limited to, paving and curbing elevations, utility elevations and grades, rims and inverts on all catch basins, crop inlets and manholes, and critical pavement design elevations.
- Label profile as necessary (i.e. along centerline, etc.).
- Indicate service line locations (existing and proposed for all utilities).

5. STANDARD DETAILS AND NOTES

- Attach current, appropriate Town of Narragansett Standard Details to the plans (maintain 24" x 36" overall sheet size).
- Include all applicable construction notes.

6. SUPPORTING DOCUMENTATION

- Provide an overall location/vicinity sketch (showing major streets) as a part of a plan sheet.
- If requested by Town, provide calculations and supporting documentation including, but not limited to:
 - a) Sewage load calculations; pipe sizing calculations.
 - b) Storm drainage calculations (TR-55) and supporting pipe size calculations.
 - c) Water distribution system sizing calculations.
 - d) Pavement grading calculations (for checking vertical and horizontal curves).
- All calculations are to be stamped by a Professional Engineer and/or a Professional Land Surveyor (licensed within Rhode Island).
- Provide soils borings, classifications, results of test pits.
- If requested by the Town, provide a detailed cost estimate for each major element (paving and curbing, storm drains, sanitary sewers, water distribution system, etc.), with said estimate prepared by a Professional Engineer and/or Professional Land Surveyor (licensed within Rhode Island).
- Requirements for sewage pump stations and forcemains will be addressed on an individual case basis.

- Provide State DEM Order of Approval (sanitary sewers), DEM Wetlands Permits), as applicable, and CRMC Assent(s) as applicable.

The Town of Narragansett may, from time to time, issue specific guidelines for submittals referenced herein or elsewhere. It is the responsibility of the applicant to use the current requirements/guidelines for his/her submittal.

SAMPLE - TO BE ISSUED ON BANK/CREDIT UNION LETTERHEAD

IRREVOCABLE LETTER OF CREDIT NO.:

EXPIRATION DATE: _____

Payable to the Town of Narragansett up to the aggregate amount of:

ACCOUNT PARTY:

GENTLEMEN:

We hereby issue our Irrevocable Letter of Credit in your favor available by your drafts at sight drawn on _____ accompanied by the following documents:

- 1) This original Credit No. _____.
- 2) A letter from the Town of Narragansett signed by an authorized individual on behalf of _____ the Town of Narragansett, certifying that _____ has failed to complete _____ the required work relative to _____ and the accompanying sight _____ draft is for costs necessary to complete such work.

Drafts drawn under this Credit must bear on their face the clause "Drawn Under _____, N.A. Letter of Credit No. _____ dated _____.

This Letter of Credit sets forth in full the terms of our undertaking and such undertaking shall not in any way be modified, amended or amplified by reference to any document, instrument, agreement or other writing referred to herein or in which this Letter of Credit is referred to or to which this Letter of Credit relates and any such reference shall not be deemed to incorporate herein by reference any document, instrument, agreement or other writing. Provided that this Letter of Credit may be modified, amended or amplified by an instrument signed by you, the Account Party, and Us.

We hereby engage with you that any draft drawn under and in compliance with this Letter of Credit, accompanied by the documents specified above, will be duly honored, if presented to us at _____ on or prior to the expiry date.

Partial drawings are permitted. This Letter of Credit is not transferable or assignable. All communications relative hereto should be addressed to the attention of _____ and bear a notation referring to this Letter of Credit No. _____.

(Signed by)

(Title)

(Date)

ATTEST:

INFORMATION PACKAGE FOR
TOWN OF NARRAGANSETT SANITARY SEWER
AND/OR
WATERLINE EXTENSIONS AND CONNECTIONS
June 1998

The following and attached information details the requirements for sanitary sewer and waterline extensions and/or connections within the Town of Narragansett.

- 1) The attached "Sewer/Water Extension or Connection Inquiry" form is to be filled out for all request as follows:
 - A. Sanitary sewer extensions (all cases).
 - B. Sanitary sewer connections ("non-typical" cases).
 - C. Waterline extensions (all cases).

2) SEWER

The Engineering Office will review each inquiry form relative to the Town's current Sewer Policy and provide an answer accordingly in writing to the applicant. If the answer is affirmative, the applicant can fill out an "Application for a Sewer Extension", and/or an "Application For A Sewer Connection" as appropriate. All proposed connections to any extension (existing or proposed) will require a separate "Application For A Sewer Connection". All application forms are available within the Wastewater Division Office at Town Hall.

WATER

The Engineering Office will review each inquiry form and provide an answer accordingly in writing to the applicant. If the answer is affirmative, the applicant should contact Edward Sylvia, Water Superintendent, at 789-1044 to review the extension process.

- 3) The applicant must then retain the services of a professional engineer to design the sewer and/or water extension (this is not required just for sewer connections). Design criteria, specifications, standard details, and construction installation procedures will be made available to the engineer by this office.
- 4) After the design plans have been approved in writing by the Town, the design engineer must provide this office with a detailed written estimate of the extension.
- 5) After the estimate has been approved in writing by the Town, the applicant must provide surety to the Town in the full value of the estimate, in the form of a Letter of Credit (sample attached), cash, or certified check. The surety is to be forwarded to this office.
 - A. The sample Letter of Credit form is to be used for all surety submitted in this format. No language changes will be allowed.

- B. If the applicant provides surety via a certified check, that check shall be made out to the Town of Narragansett, and the Town shall deposit same. At the successful completion of the job, the Town will issue a refund check to the applicant. Any interest earned on the deposited amount shall remain with the Town.
- 6) Upon approval of the surety and payment of all applicable fees, the actual permits will be issued.
- 7) Road opening permits/surety requirements are handled by RIDOT for States roads and the Narragansett Department of Public Works for local roads.

**TOWN OF NARRAGANSETT
SEWER AVAILABILITY INQUIRY**

PLAT: _____ LOT(S): _____ MERGED: _____ DATE OF INQUIRY: _____

LOCATION: _____

OWNER'S NAME: _____

ADDRESS: _____

TELEPHONE NO. _____ FAX. NO. _____

INQUIRY MADE BY (IF NOT OWNER): _____

COMPANY: _____

ADDRESS: _____

TELEPHONE NO. _____ FAX. NO. _____

Please return this form to:
The Town of Narragansett
Engineering Department
25 Fifth Avenue
Narragansett, RI 02882

DEPARTMENT USE ONLY

	<u>Paid</u>
SLDF _____	<input type="checkbox"/>
Assessment _____	<input type="checkbox"/>

- 1) Prior Inquiries on file? Yes No
(If yes, attach a copy)
- 2) Sewer Policy Area? Yes No
- 3a) Tributary to Regional WWTF? Yes No 3b) Existing Frontage? Yes No
- 4a) Tributary to Scarborough WWTF? 4b) Existing Frontage/within 350 feet? Yes No
- 5) Town road reconstructed within the last three (3) years? Yes No Date: _____
- 6) Existing extension installed and accepted prior to 4/18/95? Yes No
(See Section 3c of Sewer Policy) Name & Date of File: _____
- 7) Type of available sewer? Gravity
 Low Pressure (Requires grinder Pump)

Information supplied by: _____ Date: _____