SEWER SYSTEM ORDINANCE

OF THE

TOWN OF CASTINE, MAINE

ENACTED BY THE TOWN IN MEETING ASSEMBLED

THE 24TH DAY OF MARCH 1997

(AND AS THEREAFTER AMENDED)

ATTEST: THIS IS A TRUE DOCUMENT. THE *SEWER SYSTEM ORDINANCE OF THE TOWN OF CASTINE, MAINE*, HAS BEEN IN EFFECT WITHOUT CHANGE FROM 24 MARCH 1997 TO THE DATE HEREOF, EXCEPT AS AMENDED THROUGH 07 JUNE 2025, AS SHOWN.

DATED: 07 JUNE 2025

SIGNATURE: _____ AFFIX SEAL

SUSAN M. MACOMBER
CASTINE TOWN CLERK

SEWER SYSTEM ORDINANCE OF THE TOWN OF CASTINE

TABLE OF CONTENTS

ARTICLE 1: DEFINITIONS

1.1 TERMS DEFINED

Unless the context specifically indicates otherwise, the meaning of terms used in this Ordinance will be as follows:

ACCESSIBLE: Having easy access to an appliance, plumbing fixture, or equipment, but which first may require the removal of an access panel or similar obstruction. [Am. #1; 08-23-04]

ACCESSORY DWELLING UNIT: A self-contained dwelling unit located within, attached to or detached from a single-family dwelling unit located on the same parcel of land. [Am. #2; 06-07-25]

BACKWATER VALVE: A device or valve installed in a building drain or a building sewer subject to a potential backflow that will prevent drainage or waste from backing into the building or into a fixture and causing an unsanitary or flooding condition. [Am. #1; 08-23-04]

BENEFITED PROPERTY OWNERS: Owners of real estate abutting a public right-of-way containing a public sewer, or having buildings within 200 feet of a public sewer, or who are connected to a public sewer.

BUILDING DRAIN: The lowest horizontal piping of a drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building sewer beginning eight (8) feet outside of the building wall. [Am. #1; 08-23-04]

BUILDING SEWER: The horizontal extension from the building drain to the public sewer or other place of disposal. [Am. #1; 08-23-04]

CODE ENFORCEMENT OFFICER (CEO): A person appointed by the Board of Selectmen to administer and to enforce this and other Town ordinances and State codes. Under this Ordinance, the CEO's responsibility extends downstream from the junction of the building sewer and the building drain. [Am. #1; 08-23-04]

DEVELOPER: Any person who undertakes (a) to construct simultaneously more than one housing unit on a given tract or land subdivision, or (b) to construct a structure containing three or more dwelling units.

GARBAGE: The animal and vegetable waste resulting from the handling, preparation, cooking, and consumption of food.

HEARING: Any regular or special meeting of the Utility Board at which a person has an opportunity to be heard on a specific matter that has been placed on the agenda for that meeting.

INDUSTRIAL WASTE: The high strength liquid or waste from industrial processes as distinct from domestic sewage.

INTERCEPTOR: A device designed and installed so as to separate and retain deleterious, hazardous or undesirable matter, from normal wastes, and permit normal sewage or liquid wastes to discharge into the disposal system. Examples of deleterious, hazardous or undesirable matter are grease, oil, corrosives, sand and gravel. [Am. #1; 08-23-04]

LOCAL PLUMBING INSPECTOR (LPI): A person appointed by the Board of Selectmen to enforce the State of Maine Internal Plumbing Rules, the Maine Subsurface Wastewater Disposal Rules and this Ordinance. Under this Ordinance, the LPI's responsibility extends upstream from the junction of the building sewer and the building drain. [Am. #1; 08-23-04]

OWNER: The person or persons having the right of legal title to, beneficial interest in, or a contractual right to purchase a lot or parcel of land. [Am. #1; 08-23-04]

PERSON: An individual, corporation, governmental agency, municipality, trust, estate, partnership association, two or more individuals having a joint or common interest, or other legal entity. [Am. #1; 08-23-04]

PUBLIC SEWER: A common sewer directly controlled by public authority. [Am. #1; 08-23-04]

SANITARY SEWER: A sewer which carries only sewage, and to which storm, surface and ground waters are not intentionally admitted.

SELECT~~MEN~~BOARD: Those duly elected municipal officers who exercise executive powers and are the approval authority for recommendations of the Utility Board, except where action by a Town meeting is legally required.

SEWAGE (WASTEWATER): Liquid and water-carried wastes from such places as residences, commercial buildings, industrial plants and institutions. [Am. #1; 08-23-04]

SEWER~~AGE~~ SYSTEM: All facilities including the treatment plant, mains, pumps, etc. for carrying, treating and disposing of sewage. [Am. #1; 08-23-04]

SLUG: Any substance released into the system at a discharge at a rate and/or concentration, which interferes with the operation of the wastewater treatment plant. [Am. #2; 06-07-25]

STATE PLUMBING CODE(S): The Maine Subsurface Wastewater Disposal Rules, 10-144 CMR 241 and the State of Maine Internal Plumbing Rules, 10-144 CMR 238. [Am. #1; 08-23-04]

STORM DRAIN OR DITCH: A pipe or conduit, which carries storm and surface waters and drainage, but excludes sewage and industrial wastes.

STUB: That section of the building sewer within the public right-of-way, extending from the sewer main to the property line at the edge of the public right-of-way. [Am. #1; 08-23-04]

SUPERINTENDENT: The Waste Water Treatment Plant (Pollution Control Facility) Operator, who has the responsibility for the day-to-day operation and maintenance of the municipal sewer system. [Am. #1; 08-23-04]

TEST-PITTING: The excavation of the junction between the sewer main and the building sewer to determine the condition of the building sewer and whether or not it conforms to this Ordinance and to other applicable regulations.

TOWN: The Town of Castine, Maine, or any of its legally elected or appointed officers, officials, or agents including the CEO, LPI, Superintendent, or the Town Engineer.

TOWN ENGINEER: An individual who is licensed to practice as a registered Professional Engineer in the State of Maine and is either employed or retained by the Town.

TOWN MANAGER: The individual appointed by the ~~Board of Selectmen~~ Castine Selectboard to perform that function. [Am. #1; 08-23-04]

UTILITY ACCESS HOLE: A "manhole" as commonly defined.

UTILITY BOARD: The Board created by the Town and appointed by the ~~Board of Selectmen~~ Castine Selectboard to administer the Sewer System Ordinance of the Town of Castine, Maine. [Am. #1; 08-23-04]

ARTICLE 2: GENERAL

2.1 SHORT TITLE, REPEAL OF PREVIOUS REGULATIONS

This regulation shall be known and may be cited as the Sewer System Ordinance of the Town of Castine, Maine, and will be referred to herein as "this Ordinance." This Ordinance hereby supersedes and repeals the Sewer Regulations of the Town of Castine, Maine including all previously adopted amendments and shall become effective upon passage. Any violation of the Sewer Regulations, which existed prior to the adoption of this Ordinance, shall be subject to the provisions of those Sewer Regulations.

2.2 CONFLICTING ORDINANCES OR LAWS

In general, this Ordinance is complementary to other Town Ordinances affecting the use of land. If a conflict occurs within this Ordinance or between this Ordinance and any other Federal, State or Local rule, regulation, ordinance, statute or other restriction, the more restrictive provision shall control.

2.3 VALIDITY

The invalidity of any section, clause, sentence, or provision of this Ordinance shall not affect the validity of any other part of this Ordinance, which can be given effect without such invalid part or parts.

2.4 LANGUAGE

"Shall" is mandatory, while "may" is permissive. Words used in the present tense include the future. Gender and number are inclusive and interchangeable. Where terms are not defined in this Ordinance, they will have the ordinary accepted meanings such as the context implies.

ARTICLE 3: USE OF PUBLIC SEWER REQUIRED

3.1 GENERAL

3.1.1 It is unlawful to dispose of any sewage, industrial wastes, or other polluted waters within the Town except where suitable treatment has been provided in accordance with Federal, State, and Local laws.

3.1.2 Every building or structure in which plumbing fixtures are installed shall be connected either to the public sewerage system or to an approved, private wastewater system. All construction, installations, and connections are to be in compliance with the rules and regulations of the Maine Department of Environmental Protection (DEP), the Maine Department of Health and Human Services (DHHS), and this Ordinance.

3.2 APPLICATIONS, PERMITS, PETITIONS, AND PROPOSALS

3.2.1 Before undertaking any construction or other activity governed by this Ordinance, an applicant shall apply to the ~~Town Manager's~~ CEO's office for all necessary approvals and pay all charges and fees. A permit will be issued if the reviewing authority finds that the application is in conformance with all applicable provisions of this Ordinance. The street opening permit (see Section 5.9) and the connection permit (see Section 5.5) may be issued by either the Town Manager or the Code Enforcement Officer (CEO). The applicant will be advised as to whether or not the proposed connection will require a review (as in the case of the artificial lifting of sanitary sewage) by the Utility Board. Other than in an emergency the Town Manager's and CEO's office shall be given not less than three (3) business days advance notice of the time and date the work is to be performed in a Town street.

3.2.2 A petition for a connection postponement, a connection exemption, or a sewer extension shall be submitted to the Town Manager, who shall place the request on the Utility Board's agenda for consideration. All such petitions must be received by the Town Manager at least ten (10) days prior to a Board meeting for consideration at that meeting. The Board shall issue a written response to the petitioner within forty-five (45) days following the hearing.

3.2.3 A proposal to discharge wastes of unusual volume, strength or character, or of a change in the wastes already being discharged into the sewerage system shall be submitted to the Town Manager, who shall place the request on the Utility Board's agenda for consideration. All such proposals must be received by the Town Manager at least ten (10) days prior to a Board meeting for consideration at that meeting. The Board shall issue a written response to the proposer within forty-five (45) days following the hearing.

3.3 CONNECTION TO PUBLIC SEWER REQUIRED

3.3.1 Every building that requires the disposal of sewage or in which plumbing fixtures are installed, which is located on premises which (a) abut on a street or public way containing a public sewer and (b) provided that the building to be served is within 200 feet of the public sewer, shall be connected to the public sewer at the owner's expense. Within ninety (90) days following receipt of a request from the Town, the owner shall cease to use any other method for the disposal of sewage unless a public health issue exists, whereupon connection to the public sewer shall be immediate.

3.3.2 Upon petition (see Section 3.2.2), the Utility Board may postpone the requirement for connection to the public sewer. The applicant must certify that the current wastewater disposal system is functioning properly and meets present State Plumbing Code standards for design and installation; or in the case of a licensed overboard discharge system, those of the Maine Department of Environmental Protection (DEP). A written report of compliance to this effect prepared by a licensed Site Evaluator or other professional approved by the Utility Board must be submitted with the postponement petition.

If the disposal system malfunctions or fails, the postponement shall be revoked and connection to the public sewer shall be required. Prior to any such revocation, however, the applicant shall be provided with written notice of such revocation and an opportunity for a hearing.

The maximum duration of a postponement will be two (2) years, after which time a renewal may be granted provided that a written certification that the system is still properly functioning is submitted.

3.4 CONNECTION EXEMPTION

The Utility Board may, upon petition (see Section 3.2.2) supported by documentation, grant an exemption from the requirement for connection where special circumstances exist. Such special circumstances may include, but are not limited to, the presence of ledge, a prohibition by State law or regulation against excavation, etc. Such exemption, however, shall not nullify existing Federal, State, or Local rule, regulation, ordinance, statute or other restriction. Any such exempted wastewater disposal system must meet State Plumbing Code or Maine Department of Environmental Protection (DEP)

requirements. Further, in granting n exemption, the Utility Board may impose additional conditions that will ensure that the purposes of this Ordinance shall be met.

ARTICLE 4: PRIVATE SEWAGE DISPOSAL

4.1 PUBLIC SEWER UNAVAILABLE; PRIVATE SYSTEM REQUIRED

Where a public sanitary sewer is not available under the provisions of Section 3.3, the building sewer shall be connected to a private sewage disposal system complying with the provisions of this Article; the Subsurface Wastewater Disposal Rules of the Maine Department of Human Services (DHS), administered by the Local Plumbing Inspector (LPI); or the Overboard Discharge Rules of the Maine Department of Environmental Protection (DEP); and the Zoning Ordinance for the Town of Castine.

4.2 SANITARY MAINTENANCE REQUIRED

The private sewage disposal system shall be operated and maintained, as specified in Section 4.1, at the owner's expense except for the disposal of septic wastes as provided for by law.

4.3 MALFUNCTIONING FACILITIES

A private sewage disposal system, which is not in compliance with the provisions of Section 4.1 shall be repaired or replaced. Failure to correct malfunctioning facilities may result in the Town's correcting the malfunction in accordance with the provisions of 30-A M.R.S.A. Section 3428.

4.4 AVAILABILITY OF PUBLIC SEWER

At such time as a public sewer becomes available, connection shall be made in accordance with the provisions of Section 3.3. To minimize safety hazards, any septic tank or cesspool which is abandoned shall be filled with sand or gravel after breaking open and removing the top.

ARTICLE 5: CONNECTION OF BUILDING SEWER TO PUBLIC SEWER

5.1 CONNECTION AND MAINTENANCE COSTS

The owner shall be responsible for the connection to the public sewer main. This responsibility includes the costs of installing, connecting, and maintaining the piping to the sewer main.

5.2 PROHIBITED CONNECTIONS

The owner shall not connect roof downspouts, exterior foundation drains, cellar drains, sump pumps, or other sources of surface runoff or ground water infiltration to a building

sewer or building drain, which in turn is connected directly or indirectly to a public sanitary sewer. The owner shall provide a separate drainage and disposal system for any surface water inflow or ground water infiltration either generated on or flowing from the owner's property.

5.3 SEPARATE BUILDING SEWERS REQUIRED

5.3.1 A separate and independent building sewer shall be provided for each building unless the Utility Board approves the installation of an approved private central collection system connected to the Town sewer through a utility access hole furnished and installed at the owner's expense.

5.3.2 A building sewer expected to require frequent maintenance, owing to the volume and/or character of the sewage it discharges, shall be connected to the public sewer through a utility access hole at the owner's expense. The location of this utility access hole and the building connection to it or to an existing utility access hole shall be as specified by the Superintendent.

5.3.3 ~~Where one building stands at the rear of another on an interior lot and no private sewer is available or can be constructed to the rear building, the building sewer from the front building may be extended to the rear building and the whole considered as one building sewer.~~
An accessory dwelling unit and primary residential structure will be served by separate utility services. [Am. #2; 06-07-25][Am. #2; 06-07-25]

5.3.4 New construction of an accessory dwelling unit(s) in the Castine Village I, II and III overlays (On Neck Castine) require Utility Board technical review to ensure Castine's sewer and water systems is adequate to meet the increased sewer and water demand. Technical Review approval by the Utility Board will precede the issuance of a Building Permit. [Am. #2; 06-07-25]

5.4 EXISTING BUILDING SEWERS

Existing building sewers may be connected to new buildings only if they are found, on examination by the Superintendent and technical review approval by the Utility Board, to meet all requirements of this Ordinance and no other feasible, economical or practical alternative exists. In review of applications the Utility Board shall consider existing potential load and the proposed additional load, public health considerations, environmental impact, and monetary cost. [Am. #2; 06-07-25]

5.5 CONNECTION SPECIFICATIONS AND DESIGN STANDARDS

5.5.1 The provisions of this Article shall be considered to supplement the provisions of the State Plumbing Code with respect to the building sewer and its connection to the public sewer. In the event of a conflict between this Article and the State Plumbing Code the more restrictive provision shall prevail.

5.5.2 The building sewer shall conform to the State Plumbing Code and to the specifications set forth in the *Guidelines For Design And Construction Of Sewers* which is found in Appendix A. Any deviation from the prescribed procedures and materials must be approved by the Town Engineer as being the equivalent of or superior to those specified before installation.

5.6 CONNECTION TO BUILDING

Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor or as close to the floor as possible. A building sewer shall be laid in such a direction or at such a safe distance that a bearing wall shall not be weakened. The depth shall be sufficient to afford protection from frost. The building sewer shall be laid at uniform grade, proper slope (see Appendix A.1.e.), and in straight alignment insofar as possible.

5.7 ARTIFICIAL LIFTING OF SANITARY SEWAGE

In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such drain shall be pumped and discharged into the building sewer. The Utility Board shall review at the time of application and in consultation with the Town Engineer the adequacy of the pump station design (see Section 3.2.1).

5.8 BACKWATER VALVES

Check valves shall be installed in all buildings connected to the Town sewerage system. Damages arising from the failure to install such valves are the liability of the owner. Valves shall be installed so that their working parts are readily accessible for service and repair.

5.9 SAFEGUARDS REQUIRED: EXCAVATIONS, RESTORATION, AND DAMAGES

All sewer related excavations are to be adequately guarded with barricades and lights so as to protect the public from harm. All streets, sidewalks, and other public property disturbed by the work shall be restored, at the owner's expense, to a condition that meets or exceeds the original condition as determined by the Town Manager or his authorized designee. The owner shall be liable for indemnifying the Town for a period of twelve (12) months, for any loss or damage to Town property that may directly or indirectly be occasioned by the installation of the building sewer line.

5.10 INSPECTION

The Superintendent shall be notified when the building is ready to be connected to the public sewer. Open trenches are not to be backfilled until inspected by the Superintendent or his authorized designee. Inspection shall not be unreasonably delayed.

5.11 DISCONNECTION OF BUILDING SEWER

Before dismantling or moving a building connected to a public sewer, the owner shall notify the Superintendent, who shall determine the serviceability of the building sewer. In a manner approved by the Town, the owner shall seal the entrance to a serviceable building sewer or shall remove any unserviceable building sewer and seal its entrance to the public sewer.

ARTICLE 6: REPLACEMENT OF AN EXISTING BUILDING SEWER, INCLUDING SEPARATION OF SEWAGE AND STORM WATER

6.1 AUTHORITY

Under the provisions of this Ordinance the Town has the authority to ensure that building sewers meet the minimum standards set forth in the Ordinance. Accordingly, the building owner shall maintain (see Section 5.1), by repair or by replacement, a malfunctioning or defective building sewer and/or shall install (see Section 5.2) such drains as shall be necessary to separate sewage from storm water.

6.2 REPLACEMENT OF DEFECTIVE BUILDING SEWERS

Upon excavation of the junction of a building sewer and the public sewer, if any of the following conditions is found a new building sewer shall be installed at the owner's expense:

6.2.1 Deteriorated pipe as indicated by cracks, holes and excessive rust;

6.2.2 Construction with nonconforming materials such as, but not limited to, vitrified clay and orangeburg; and

6.2.3 Ground water leakage into the building sewer.

The decision to replace a building sewer shall be made by the Town. All work shall be performed in accordance with the provisions of this Ordinance.

6.3 SEPARATION OF SEWAGE AND STORM WATER

Under the authority granted in Article 11 of this Ordinance the Town may inspect premises to ascertain compliance with the provisions of Sections 5.2 and 8.1 of this Ordinance. Upon a finding by the Town of combined sewage and storm drainage, separation of sewage and storm drainage in accordance with the provisions of this Ordinance shall be provided at the owner's expense.

6.4 TOWN BUILDING SEWER REPLACEMENT PROCEDURE

6.4.1 While the Town is replacing a sewer main, and building inspection and trenching indicate that a building sewer has deteriorated and/or is nonconforming, the Town shall replace the building sewer from the sewer main to the property line at the edge of the public right-of-way. The owner shall have sixty (60) days in which to install and connect a new building sewer to the stub provided by the Town. The total cost of the building sewer, including the cost of the stub, shall be borne by the owner. Further, the owner shall bear the expense of separating sanitary sewage from and disposing of any ground, surface, and/or storm water. All work must be performed in accordance with the provisions of this Ordinance. The owner may retain his own contractor or negotiate an agreement with the Town's contractor to replace the building sewer and/or storm drain. [Am. #1; 08-23-04]

6.4.2 The Town may utilize test-pitting and an inspection of the premises to determine whether or not it is necessary to replace the building sewer. Should replacement be necessary, the provisions noted above shall apply, except that the Town shall not provide a contractor for line replacement and that the owner shall have sixty (60) days in which to complete the necessary work. The cost of any test-pitting shall be borne by the Town. [Am. #1; 08-23-04]

6.4.3 Failure by the owner to correct a defective or malfunctioning building sewer shall result in the Town's correcting the malfunction in accordance with the provisions of Title 30-A M.R.S.A. Section 3428.

ARTICLE 7: SEWER EXTENSIONS

7.1 DESIGN, INSPECTION, APPROVAL, AND DOCUMENTATION

7.1.1 No sewer extension is to be constructed and connected to the Town's sewerage system without the express approval of the Utility Board (see Section 3.2.2). The Board's decision shall be governed by, but is not confined to, such criteria as the ability of the sewerage system to process existing potential load and the proposed additional load, public health considerations, environmental impact, and monetary cost.

7.1.2 All approved extensions to the sewerage system (mains and building sewers) shall be properly designed and constructed in accordance with this Ordinance (Article 5 and Appendix A) and with prevailing professional standards of practice and care. Before construction can proceed, plans and specifications shall be submitted to the Town Engineer for review and approval. The design of sewers shall anticipate and allow for flows from all possible future extensions or developments within the immediate drainage area.

7.1.3 The construction of the sewer extension shall be subject to periodic inspections by the Town Engineer. These inspections, along with the review and approval

procedure noted above, shall be paid for by the party requesting the sewer extension, except where the Town participates in the cost of constructing the extension. In such a case, agreement between the parties with respect to the prorating of costs shall be reached prior to the start of construction. The Town Engineer's decisions shall be final in matters of quality and methods of construction. Upon completion, and before final approval and acceptance (if constructed within a public right-of-way), reproducible as-built drawings shall be furnished to the Town.

7.2 ALLOCATION OF COSTS

7.2.1 The Utility Board may recommend to the Town the construction of, under public contract, a sewer extension including individual building sewers from the sewer main to the property line at the edge of the public right-of -way. The property owner shall be responsible for construction of the building sewer from the property line to the building and shall be responsible for the total cost of the building sewer.

7.2.2 If the Town does not elect to construct or to participate in the construction of a sewer extension, the developer or person requesting the extension may construct and shall pay for the extension, if such extension is approved by the Utility Board.

7.2.3 In accordance with the provisions of Title 30-A M.R.S.A. Sections 3441-3445, benefited property owners may be assessed up to one-half (1/2) the cost of the construction of the sewer extension. A higher assessment may be charged, however, if 75% or more of the benefited property owners petition the Town and agree to pay a higher assessment that is specified in their petition. Not withstanding the preceding, the Utility Board is under no obligation to approve the petitioned sewer extension.

7.3 TOWN PROPERTY

All sewer extensions constructed within a public right-of-way at private expense, after final approval by the Town Engineer and acceptance by the Utility Board on behalf of the Town, shall become the property of the Town and shall thereafter be maintained by the Town. Said sewers, after their acceptance by the Town shall be guaranteed against defects in material or installation for twelve (12) months. The guarantec shall be in a form provided for by the Town; at the sole discretion of the Town, a maintenance bond or certified check may be demanded as part of the guarantee.

7.4 PRIVATE PROPERTY

7.4.1 In addition to being constructed in accordance with the provisions of this Ordinance, sewer extensions and their ancillary building sewers located on private property shall be held to the same maintenance standards as those on public property.

7.4.2 No sewer extension presently located on private property shall be accepted by the Town and become the property of the Town unless and until it conforms to the provisions of this Ordinance.

ARTICLE 8: USE OF PUBLIC SEWER

8.1 DISCHARGE OF UNPOLLUTED DRAINAGE PROHIBITED

Storm water, cooling water, swimming pools, cellar drains, roof drains, and all such unpolluted drainage shall not be discharged into the Town's sewers.

8.2 OTHER PROHIBITED DISCHARGES

Except as hereinafter provided, no person shall discharge or cause to be discharged any of the following described waters or wastes into any public sewers:

8.2.1 Any liquid or vapor having a temperature higher than 150° Fahrenheit.

8.2.2 Any water or waste containing more than 100 parts per million, by weight, of fat, oil, or grease whether emulsified or not.

8.2.3 Any gasoline, benzene, naphtha, fuel oil, lubricating oils, or other flammable or explosive liquids, solids, or gases.

8.2.4 Any garbage that has not been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in the public sewer.

8.2.5 Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, or any other solid or viscous substance capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewage treatment plant.

8.2.6 Any waters or wastes having a pH lower than 6.0 or higher than 8.5, or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewer system or downstream treatment plant.

8.2.7 Any waters or wastes containing toxic or poisonous substances of any kind.

8.2.8 Any waters or wastes containing Total Suspended Solids (TSS) greater than 450 parts per million by weight or a five-day Biochemical Oxygen Demand (BOD) greater than 400 parts per million.

8.2.9 Any noxious and malodorous gas or substance capable of creating a public nuisance.

8.2.10 Any high strength process wastewater of industrial or heavy manufacturing origin.

8.2.11 Any wastewater from septic tanks, holding tanks, or chemical toilets.

8.2.12 Any wastewater containing medical wastes.

8.2.13 Any wastewater that has color or dye that cannot be removed by the treatment plant process and which consequently imparts color to the treatment plant's effluent.

8.2.14 Any waters or wastes containing substances which are not amenable to treatment or reduction by the waste treatment process employed; which may inhibit treatment plant processes, sludge quality, or sludge disposal; which, after treatment, may not meet the requirements of other governing agencies.

8.3 DILUTION OF DISCHARGE PROHIBITED

No discharger or user shall increase the use of potable or process water, in any way, for the purpose of diluting a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the standards set forth in this Ordinance.

8.4 INTERCEPTORS OR TRAPS

8.4.1 Interceptors or traps shall be installed by all owners, at their expense, for any flammable waste, sand, or other substances identified in Section 8.2.

8.4.2 In accordance with the State Plumbing Code, grease traps shall be installed in those "...establishments where grease may be introduced into the drainage or sewage system in quantities that can effect line stoppage or hinder sewage treatment or private sewage disposal." Such establishments include "...restaurants, cafes, lunch counters, cafeterias, bars and clubs, hotels, hospitals, sanitariums, factories, school kitchens or other establishments..." Such interceptors shall not be required for private living quarters or dwelling units unless a home occupation, as defined in the Zoning Ordinance for the Town of Castine, necessitates such an installation.

Not withstanding the preceding paragraph, the requirement that an interceptor be installed may be waived if it can be demonstrated, to the satisfaction of the Town, that such an installation is not needed. Any such determination is to be guided by, but not limited to, consideration of such factors as (1) the presence or absence of an observable and/or measurable grease or oil discharge, (2) the menu and type of food preparation, (3) the number of meals prepared and of dishes washed, and (4) the use of a pre-rinse sink or a pot-wash sink.

8.4.3 The Utility Board reserves the right to review the plans for any proposed interceptor installation. All interceptors shall be of a type and capacity approved by the Local Plumbing Inspector (LPI) and conforming to the State Plumbing Code. Interceptors shall be located so as to be readily and easily accessible for cleaning and inspection. Where installed, all grease, oil, and sand interceptors or traps shall be maintained by the owner, at the owner's expense, in continuously efficient operation at all times.

8.5 PUMP STATIONS AND THE ARTIFICIAL LIFTING OF SANITARY SEWAGE

Where a pump station is installed to lift sanitary sewage, steps shall be taken to minimize the possibility of introducing slug loads of septic sewage into the sewerage system. If the wet well is not to be used for a prolonged period (a month or more), solids shall be removed from the wet well and force main by flushing them with at least twice their water volume.

ARTICLE 9: PRETREATMENT FACILITIES

9.1 PRETREATMENT REQUIRED

9.1.1 Any waters or wastes discharged into the sewerage system exhibiting characteristics that do not meet the limits set forth in Section 8.2 or having an average daily flow greater than two (2%) percent of the average daily flow of the Town shall be subject to a review by the Utility Board. The review, at the expense of the person requesting the discharge, will be performed by the Board in consultation with the Town Engineer and, as appropriate, other knowledgeable authorities and/or experts.

9.1.2 The owner shall provide and bear the expense of such pretreatment as may be necessary to reduce objectionable characteristics or constituents to within the limits provided for in Section 8.2, and to control the quantities and rates of discharge of such waters or wastes into the sewerage system.

9.1.3 Plans, specifications, and any other pertinent information relating to proposed pretreatment facilities shall be submitted to the Utility Board for review, at the owner's expense, by the Town Engineer. No construction of pretreatment facilities shall begin until such a review has been completed.

9.2 MAINTENANCE OF PRETREATMENT FACILITIES

Where pretreatment facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner and at the owner's expense.

9.3 MONITORING OF DISCHARGES AND RECORD KEEPING

All persons with pretreatment requirements discharging into a public sewer shall install, use, and maintain such monitoring equipment as the Superintendent may reasonably require. In addition to recording and reporting the results of such monitoring to the Superintendent, records shall be made available upon request by the Superintendent to other agencies having jurisdiction over discharges to the receiving waters.

9.4 MEASUREMENT, TEST, AND ANALYSIS STANDARDS

All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in Section 8.2 shall be at the owner's expense and shall be in accordance with accepted methods and standards of waste and wastewater examination. All measurements and tests shall be taken at the control utility access hole provided for in Section 5.3.2, or at another suitable sampling location approved by the Superintendent.

9.5 UNUSUAL WASTES

9.5.1 Unusual wastes are characterized by their ability to adversely impact the sewerage system including the collection system, pump stations, treatment plant processes (both physical/chemical and biological), effluent, and final sludge quality.

9.5.2 Before the Town accepts any wastes of unusual volume, strength or character, the person concerned shall provide the Utility Board with a proposal (see Section 3.2.3) for pretreatment that will be satisfactory to both parties. The cost of reviewing any such proposal shall be borne by the person submitting the proposal.

9.5.3 The Utility Board reserves the right to determine which wastes it will accept, deny, or for which it will require pretreatment even if the waste's characteristics are not expressly limited in this Ordinance.

ARTICLE 10: PROTECTION FROM DAMAGE

10.1 PROHIBITED ACTIONS

No person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, or tamper with any structure, appurtenances, or equipment which is a part of the municipal sewerage system. Any person violating this provision shall be subject to prosecution to the full extent of the law.

10.2 LIABILITY INSURANCE

Prior to work being performed, a contractor shall present to the Town a certificate showing proof of liability insurance coverage and of such other construction insurance as workmen's compensation, etc. All types and amounts of insurance are to be as is

appropriate and customary as determined by the Town for the work being performed on the public sewerage system.

ARTICLE 11: POWER AND AUTHORITY OF INSPECTORS

11.1 AUTHORITY TO INSPECT

The Town reserves the right of reasonable access to all premises served by the public sewerage system, at reasonable and mutually convenient times, for the purpose of inspection, observation, measurement, sampling, and testing in accordance with the provisions of this Ordinance.

Inspections shall be performed by duly authorized individuals and/or employees of the Town bearing proper credentials and identification.

ARTICLE 12: ENFORCEMENT

12.1 NOTICE OF VIOLATION

Any person found to be violating any provision of this Ordinance (except Section 10.1) shall be advised by the Code Enforcement Officer (CEO) or the Local Plumbing Inspector (LPI), that a violation exists. If the violation is not corrected, the offender shall be notified in writing of the nature of the violation and a reasonable time limit to correct the violation. The offender shall, within the time stated in such notice, permanently cease all violations.

12.2 PENALTY

Any person who continues to violate any provision of this Ordinance after having received notice of such violation shall be subject to a fine recommended by the Utility Board and set by the Selectmen of not less than $100.00 and not more than $2,500.00 per violation. Each day of violation after notification shall constitute a separate offense with respect to each violation.

12.3 OTHER APPROPRIATE ACTION

To remedy any violation of this Ordinance, the proper authorities of the Town, may institute any appropriate action or proceeding, including an injunction to prevent any act, which violates this Ordinance.

12.4 LIABILITY TO THE TOWN

Any person violating any of the provisions of this Ordinance shall become liable to the Town for any expense, loss, or damage occasioned by the Town by reason of such violation.

ARTICLE 13: ADMINISTRATION

13.1 SEWER RATES, ASSESSMENTS, AND FEES

Sewer rates applied to metered water use, assessments, and fees are established by the Selectmen at the recommendation of the Utility Board and are listed in Appendix B of the Ordinance and shall be publicly available at the Town office. Rates may be changed from time to time and a special rate may be assigned to any property owner who contributes a significant quantity of unusual, atypical, or high strength waste into the sewerage system. Charges will be billed at a regular interval established by the Selectmen at the recommendation of the Utility Board. Collection shall be enforced in accordance with the provisions of 30-A M.R.S.A. Section 3406. [Am. #1; 08-23-04]

13.2 APPEALS OR REQUESTS FOR ABATEMENT

13.2.1 An appeal from a decision of the Code Enforcement Officer (COE) or the Local Plumbing Inspector (LPI) shall be filed with the Town Manager within thirty (30) days of that decision. A request for abatement from an assessment, bill, fee, or rate shall be filed with the Town Manager within thirty (30) days of whatever brought about the request.

13.2.2 Any such appeal or request for abatement shall be received by the Town Manager at least ten (10) days prior to a Utility Board meeting for consideration at that meeting.

13.2.3 An appeal from a decision of the Code Enforcement Officer (CEO) or the Local Plumbing Inspector (LPI), or a request for abatement occasioned by a bill shall be the responsibility of the Utility Board.

13.2.4 A request for abatement resulting from an assessment, fee, or rate shall be the responsibility of the Selectmen and shall be referred to them, by the Utility Board, along with a recommended ruling for disposition.

13.2.5 Any decision by the Utility Board or Selectmen to uphold, modify, or deny an appeal or a request for abatement shall (a) take into consideration the proviso that such a decision shall neither compromise the intent of this Ordinance nor lead to the impairment of the integrity, physical and financial, of the public sewerage system so as to endanger the health and welfare of the Town, (b) be supported by substantial evidence of record, and (c) be neither arbitrary nor capricious.

13.2.6 A written notice of a decision shall be sent to the applicant within forty-five (45) days following the hearing.

13.2.7 If dissatisfied, the aggrieved party may appeal the decision of the Utility Board or that of the Selectmen to the Superior Court as provided by the laws of the State of Maine.

13.3 ORDINANCE AMENDMENT

13.3.1 An amendment to this Ordinance may be initiated by the Utility Board, provided a majority of the Board has so voted; or by request of the Selectmen to the Utility Board; or by written petition of a number of voters equal to ten (10) percent of the number of votes cast, in the municipality, in the last gubernatorial election. Such amendment to this Ordinance shall be adopted by a majority vote at a regular or a special Town meeting and shall, unless otherwise specified, become effective upon passage.

13.3.2 Revisions of Appendix A, *Guidelines for Design and Constructions of Sewers* and Appendix B, *Schedule of Sewer Rates, Assessments and Fees* shall not be considered an amendment of the Ordinance. The Board of Selectmen upon the recommendation of the Utility Board may revise said appendices. [Am. #1; 08-23-04]

APPENDIX A

TOWN OF CASTINE
GUIDELINES FOR DESIGN AND CONSTRUCTION OF SEWERS

1. Sewer design including sewer collectors, interceptors, and building services shall be in accordance with the following minimum guidelines:

   a. Pipe material shall be PVC and manufactured in accordance with ASTM Specification D 3034, or cement lined ductile iron conforming to ASTM Specification A 746; or other material approved by the Superintendent.

   b. All joints shall be prepared and installed in accordance with the manufacturer's recommendations, and shall be gastight and watertight. Joint materials shall be as follows:

      (1) PVC - ASTM D 3212
      (2) Ductile Iron - AWWA C 111

   c. Minimum internal pipe diameter for gravity collectors and interceptors shall be eight (8) inches and shall be four (4) inches for building sewers.

   d. Branch fittings for house services shall be PVC wyes or tees, or PVC or ductile iron saddles, as appropriate, with stainless steel straps and "O-ring" seal set in mastic to affect a watertight connection.

      Fittings shall be of a style and material designed specifically for connection to sewer material that exists in public way. If, in the opinion of the Superintendent, an appropriate fitting is not available to properly connect the building sewer material to the public sewer material, the Superintendent may require an approved section of suitable sewer material to be spliced into the public sewer. Appropriate splicing connections, Fernco or equal, shall be used to connect the new fitting to either end of the existing public sewer which shall first be cut evenly and smoothly prior to installation of the spliced section. In no case will connection by hole cutting, pipe protrusion, and mortaring be allowed.

e. Minimum slope of sewer pipe shall be as in the following table:

	Pipe Diameter	Minimum Slope in Feet Per 100 Feet
Building services	4"	2.08 (1/4" per foot)
	6"	1.04 (1/8" per foot)
Sewer lines	8"	0.40
	10"	0.28
	12"	0.22
	14"	0.17
	15"	0.15
	16"	0.14

f. Sewer pipe shall be laid on a minimum 6" of screened gravel or crushed stone bedding material.

g. Screened gravel shall have the following gradation:

Sieve Size	% By Weight Passing
1 inch	100
3/4 inch	90 - 100
3/8 inch	20 - 55
#4 mesh	0 - 10
#8 mesh	0 - 5

h. 3/4" Crushed Stone: Durable, clean angular rock fragments obtained by breaking and crushing rock material. Sieve analysis by weight:

Sieve Size	% Passing by Weight
1"	100
3/4"	95 - 100
1/2"	35 - 70
3/8"	0 - 25
No. 200	0 - 2

i. The screened gravel bedding shall be brought to at least six (6) inches over the top of the pipe.

j. Backfill material shall then be placed and compacted. Suitable backfill material shall be the following or a combination of the following:

(1) Excavated material that will compact to the compaction requirements.

(2) Native material that does not contain rocks larger than 6" in any dimension.

(3) Dry clay backfill free from lumps.

(4) Wet clay that alone would pump, but when mixed with sand and/or gravel will be stable and will compact.

k. Compaction densities specified herein shall be the percentage of the maximum density obtainable at optimum moisture content as determined and controlled in accordance with ASTM D 698, depending on the material size. Field density tests shall be made in accordance with ASTM D 1556 (Sand-Cone Method), ASTM D 2167 (Rubber Balloon Method), or ASTM D 2922 (Nuclear Method). Each layer of backfill shall be moistened or dried as required, and shall be compacted to the following densities:

(1)	Pipe bedding material and trench sand	92%
(2)	Suitable backfill under paved or shoulder areas	95%
(3)	Gravel base:	
	(a) Under paved areas	95%
	(b) In shoulder areas	95%
(4)	Unpaved areas	90%
(5)	Beside structures: foundation walls, retaining walls, and tank walls	95%

l. A minimum pipe wall thickness of SDR 35 shall be used for all sewer lines and services. Minimum pipe thickness for deep burial or special applications shall be determined by methods outlined in ASCE Manuals and Reports on Engineering Practice - No. 60/WPCF Manual of Practice - No. FD-5 "Gravity Sanitary Sewer Design and Construction", latest edition.

Pipe thickness shall be calculated on the following criteria:

Safety Factor	2.0
Load Factor	1.7
Weight of Soil	120 lbs./cu. ft.
Wheel Loading	16,000 lbs.

m. All excavations required for the installation of sewer extensions shall be open trench work unless approved by the Superintendent. No backfill shall be placed until the work has been inspected.

n. Utility access holes shall be constructed at all changes in slope or alignment or at intervals not exceeding 400 linear feet, unless acceptable to the Superintendent, and shall be precast concrete.

(1) Precast utility access hole sections shall conform ASTM C 478; cement shall be Type II with a minimum compressive strength of 4,000 psi.

(2) Precast base and barrel sections shall have tongue and groove joints, with two strips of 1" diameter butyl rubber base joint sealant that permits installation in temperatures from -20°F to 120°F, as manufactured by Kent Seal or equivalent.

(3) Each section of the precast utility access hole shall have two (2) holes for the purpose of handling and setting. These holes shall be tapered and shall be plugged with nonshrink mortar or grout in combination with concrete plugs after installation.

(4) Pipe to utility access hole joints shall be Interpace CP Series, flexible utility access hole sleeve, manufactured to fit diameter and size of pipe without use of gaskets, "Link-Seal Century Line" Model CS100 by Thunderline Corporation with sleeve seal equal to "Link-Seal", or equivalent.

(5) All manholes shall be wrapped in a minimum of 4 layers of high grade polyethylene frost wrap 6 mils thick to a minimum depth of 7 feet.

(6) Dampproofing for concrete shall be semi-mastic type Horn "Dehydratine #4," "RIW Marine Emulsified Liquid" by Toch Bros., Inc., "Hydrocide 600" by Sonneborn, or equivalent.

(7) Utility access hole rungs shall be Aluminum alloy 6061-T6, reinforced plastic rungs, or polypropylene reinforced with steel rod, with a minimum width of 16", 12" on center. Aluminum to be cast into concrete must be coated with bituminous paint.

(8) After the excavation has been done and leveled, one (1) foot of bedding material shall be placed in the bottom of the excavation, leveled, and thoroughly compacted.

(9) Precast concrete utility access hole sections shall be set so as to be vertical and with sections in true alignment, 1/4-inch maximum tolerance to be allowed.

(10) The top of the precast reinforced concrete unit shall be set at a grade that will allow a minimum of one and a maximum of three precast concrete risers before setting the cast iron frame and cover.

(11) The inside and outside of the masonry work of all utility access holes shall be plastered with a 1:2 Portland cement mortar. The thickness of the mortar shall be one-half (1/2) inch, and the mortar shall be carefully

spread and thoroughly troweled, leaving a smooth, substantially water proof surface. The mortar shall be extended to completely cover the outside and inside surfaces of all masonry work.

(12) The concrete utility access holes shall have a channel passing through the bottom, which corresponds in shape with the lower two-thirds of the pipe. Inverts shall be cast in place or precast concrete, 3000 psi minimum strength. Side inverts shall be curved and main inverts (where direction changes) shall be laid out in smooth curves of the longest possible radius. The top of the shelf shall slope to drain towards the flowing through channel.

(13) Utility access holes shall be constructed as the sections of the pipelines between them are completed, and, unless this is done, the Superintendent shall have the authority to stop trenching and pipe laying until utility access hole construction is brought up properly. All ground water shall be kept away from any newly placed concrete or freshly laid masonry work until new cement has properly set and a watertight job is obtained.

(14) All surfaces to be dampproofed shall be clean, smooth, dry, and free from loose material. Brush the dampproofing onto the outside concrete utility access hole surface and fill all voids. Apply in two (2) coats and conform to the covering capacity of the material used in strict accordance with the manufacturer's recommendations and directions and applied by the manufacturer of the utility access holes. Contractor shall apply dampproofing to masonry. Do not apply dampproofing in freezing or wet weather.

(15) Iron castings for utility access hole frames and covers shall be the same as used on the Town's existing interceptor sewer system or equivalent.

(a) Utility access hole frames and covers shall be ductile iron free from cracks, holes, swells, and cold shuts. The quality shall be such that a blow from a hammer will produce an indentation on an edge of the casting without flaking the metal. Frames and covers shall be machine seated and provided with a gasket so as to provide a tight, even fit.

(b) Covers shall be solid and shall have the word "SEWER" (3" high) cast on the top. Frames and covers shall be certified as meeting H-20 loading and shall be compatible with existing frames and covers.

(c) Casting shall be given one (1) coat of cold-tar pitch varnish at the factory before shipment, and said coating shall be smooth and tough and not brittle.

(d) Frames shall be set concentric with the top of the masonry and in full bed of mortar so that the space between the top of the utility access hole masonry and the bottom flange of the frame shall be completely filled and made watertight. A thick ring of mortar extending to the outer edge of the masonry shall be placed all around and on top of the bottom flange. Mortar shall be smoothly finished and have a slight slope to shed water away from the frame.

2. All sewers shall satisfy requirements of a leakage test before they are accepted by the Town. The leakage test shall be as follows:

a. For each size of pipeline, an initial leakage test shall be made on the first section of the pipeline completed between two adjacent utility access holes. Thereafter, the leakage tests shall be made on sections of approved lengths of completed pipeline, which in no case shall exceed 1,000 feet.

b. Each section shall be tested upon its completion.

c. Air checking of sewer lines shall be as follows:

(1) After backfilling sewer line from utility access hole to utility access hole, the Contractor shall conduct an air leakage test in the presence of the Superintendent, using low pressure air.

(2) The equipment used shall meet the following minimum requirements:

(a) Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be inspected.

(b) Pneumatic plugs shall resist internal test pressures without requiring external bracing or blocking.

(c) All air used shall pass through a single control panel.

(d) Three individual hoses shall be used for the following connections:

(i) From control panel to pneumatic plugs for inflation.

(ii) From control panel to sealed line for introducing the low pressure air.

(iii) From sealed line to control panel for continually monitoring air pressure rise in the sealed line.

(3) Procedures:

(a) All pneumatic plugs shall be seal tested before being used in the actual test installation. One length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked. Air shall be introduced into the plugs to 25 psig. The sealed pipe shall be pressurized to 5 psig. The plugs must hold against this pressure without having to be braced.

(b) After a utility access hole to utility access hole reach of pipe has been backfilled and cleaned, and the pneumatic plugs are checked by the above procedure, the plugs shall be placed in the line at each utility access hole and inflated to 25 psig. Low pressure air shall be introduced into this sealed line until the internal air pressure reaches 4 psig greater than the average back pressure of any ground water that may be over the pipe. At least two minutes shall be allowed for the air pressure to stabilize.

(c) After the stabilization period (3.5 psig minimum pressure in the pipe), the air hose from the control panel to the air supply shall be disconnected. The portion of line being tested shall be termed "Acceptable" if the time required in minutes for the pressure to decrease from 3.5 to 2.5 psig (greater than the average back pressure of any groundwater that may be over the pipe) shall not be less than:

$$T = 0.085 \frac{(DK)}{(Q)}$$

Where:
- T = Shortest time, in seconds, allowed for the air pressure to drop 1.0 psig,
- K = 0.000419 DL, but not less than 1.0,
- Q = 0.0015 cubic feet/minute/square feet of internal surface,
- D = Nominal pipe diameter in inches
- L = Length of pipe being tested in feet.

Table 1 indicates the time required for various lengths and pipe sizes.

TABLE 1

SPECIFICATION TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP FOR SIZE AND LENGTH OF PIPE INDICATED FOR Q = 0.0015

2	3 Length	4

Pipe Diameter (in)	Minimum Time (min sec)	for Minimum Time (ft)	Time for Longer Length (sec)	Specification Time for Length (L) Shown (min:sec)							
				100 ft	150 ft	200 ft	250 ft	300 ft	350 ft	400 ft	450 ft
4	3:46	397	.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520 L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342 L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7.692 L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
21	19:50	114	10.470 L	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24	22:40	99	13.674 L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27	25:30	88	17.306 L	28:51	43:16	57:41	72:07	86:32	100:57	115:22	129:48
30	28:.20	80	21.366 L	35:37	53:25	71:13	89:02	106:50	124:38	142:26	160:15
33	31:10	72	25.852 L	43:05	64:38	86:10	107:43	129:16	150:43	172:21	193:53
36	34:00	66	30.768 L	51:17	76:55	102:34	128:12	153:50	179:29	205:07	230:46

(d) In areas where groundwater is known to exist, the contractor shall install a 1/2 inch diameter capped pipe nipple, approximately 10" long, through the utility access hole wall on top of one of the sewer lines entering the utility access hole. This shall be done at the time the sewer line is installed. Immediately prior to the performance of this leakage test, the groundwater shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground so as to clear it, and then connecting a clear plastic tube to the nipple. The plastic tube shall be held vertically and a measurement of the height in feet of water over the invert of the pipe shall be taken after the water has stopped rising in this plastic tube. The height in feet shall be divided by 2.3 to establish the pounds of pressure that will be added to all readings. (For example, if the height of water is 11.5 feet, then the added pressure will be 5 psig. This increases the 3.5 psig to 8.5 psig, and the 2.5 psig to 7.5 psig. The allowable drop of one pound and the timing remain the same.)

(e) If the installation fails to meet this requirement, the Contractor shall, at his/her own expense, determine the source of the leakage. He/she shall then repair or replace all defective materials and/or workmanship.

d. Utility access holes shall be tested by plugging the pipes and filling the utility access holes with water for an exfiltration test, or by an air vacuum test.

(1) Water exfiltration test:

(a) Fill utility access hole to allow for concrete absorption, and leave overnight.

(b) Following morning, fill utility access hole to a level no less than one (1) foot above the beginning of the utility access hole taper, and test for 8 hours.

(c) Water level shall be carefully marked, and at end of following 8-hour period, sufficient water shall be added to bring water level back to mark. Water added shall be supplied from a metered source and quantity so added shall be converted to gallons per day lost through utility access hole leakage.

(d) The loss of water shall be less than one (1) gallon per day per foot of depth of utility access hole.

(e) If the measured exfiltration exceeds the allowable rate, the necessary repairs shall be made by the Contractor, to reduce the leakage.

(f) In areas with a high groundwater table, the Superintendent may require a visual infiltration test rather than an exfiltration test. In this case, all leaks or weepings visible from the inside of the utility access hole shall be repaired, and the utility access hole made watertight.

(2) Air vacuum test:

(a) Utility access holes shall be tested by a vacuum test immediately after assembly of the utility access hole and connecting pipes and before any backfill is placed around the utility access holes, and again after backfilling.

(b) All lift holes shall be plugged with nonshrink grout and all pipes entering the utility access hole shall be plugged, taking care to securely brace the plugs and pipe.

(c) The test shall be made using an inflatable compression band, vacuum pump and appurtenances specifically designed for vacuum testing utility access holes. Test procedures shall be in accordance with the equipment manufacturer's recommendations.

(d) After the testing equipment is in place, a vacuum of 10" of Hg shall be drawn on the utility access hole. The utility access hole will be considered to have passed the test if the vacuum does not drop more than 1" of Hg in one minute.

(e) If the utility access hole fails the initial test, the Contractor shall locate the leakage and make proper repairs as directed by the Superintendent, and re-tested until a satisfactory test result is obtained.

APPENDIX B

SCHEDULE OF SEWER RATES, ASSESSMENTS AND FEES

Quarterly Base Rate.....$123.00 for first 800 cubic feet
Excess Rate.....$22.05 per 100 cubic feet above the 800 CF base usage

Assessments.....$0.00

Connection Fee.....$700.00
Appendix B added by [Am. #2; 12-16-08]