

# REGULATIONS FOR THE USE OF THE LISBON MUNICIPAL SEWERAGE SYSTEM

LISBON WATER POLLUTION CONTROL AUTHORITY  
TOWN OF LISBON, CONNECTICUT

Adopted: May 14, 2003

Effective: May 6, 2021

**RECEIVED**

*2 10:30 am*

**JUN 18 2021**

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TOWN OF LISBON

**REGULATIONS FOR THE USE OF THE  
LISBON MUNICIPAL SEWERAGE SYSTEM**

**Lisbon Water Pollution Control Authority**

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# REGULATIONS FOR THE USE OF THE LISBON MUNICIPAL SEWERAGE SYSTEM

## Lisbon Water Pollution Control Authority

### **Article I – AUTHORITY**

These Regulations for the use of the Lisbon municipal sewerage system are hereby established by the Lisbon Water Pollution Control Authority ("Authority") in accordance with provisions of Chapter 103, and specifically Section 7-247, of the Connecticut General Statutes.

### **Article II – Purpose**

#### **A. Compliance with Water Pollution Control Plan**

These Regulations are established to fulfill the objectives set forth in the Lisbon Water Pollution Control Plan adopted by the Authority on December 5, 2001 (the "Plan"). The Findings, Policies and Objectives set forth in that Plan are hereby adopted and are incorporated herein by reference.

#### **B. Sewer Avoidance Policy**

It is specifically the purpose of these Regulations to further the policy of sewer avoidance within the Town of Lisbon. The sewer avoidance policy seeks to preserve the character of the Town by recognizing and affirming that the residential development has historically been, and should continue to be, limited and controlled by the natural ability of local soils to accommodate subsurface sewerage disposal systems. Under the policy, sewers may not be used as a tool for residential development, but they may be used to alleviate existing community pollution problems and to provide, in appropriate areas, a tool for stimulating the development of commercial or industrial uses. Therefore, these Regulations provide for the extension of municipal sewers only to properties located within the Route 12 Sewer District, as established under Article III.

#### **C. Connection Standards, Fees and Assessments**

It is also the purpose of these Regulations to establish appropriate technical standards for the connection of privately-owned property to the municipal sewerage system, as well as a fair and consistent method of determining appropriate fees for such connections and of assessing private property for the opportunity to be connected to the municipal sewerage system.

## **ARTICLE III – ESTABLISHMENT OF SEWER DISTRICTS**

### **A. Establishment and Designation of Districts**

The Authority hereby establishes two sewer districts, to be known as the Route 12 Sewer District (the "Route 12 District") and the Versailles Sewer District (the "Versailles District"), respectively.

### **B. Description of Route 12 Sewer District**

The Route 12 District shall include only the following parcels:

1. Those parcels shown and designated as "EXISTING SEWER SERVICE AREA" and "FUTURE SEWER SERVICE AREA" on a map entitled, "LISBON WPCA SEWER SERVICE AREA MAP Lisbon, CT SCALE: 1" = 200' Project No. CLA-2998 Proj. Engineer R.A.D. Date 3/03 Sheet No. 1," prepared by CLA Engineers, Inc., of Norwich, Connecticut, which map is hereafter referred to as the "Route 12 District Map" and which is or will be filed in the office of the Lisbon Town Clerk, and to which reference may be made;
2. Any parcel of land that may be added to the Route 12 District pursuant to the provisions of Article VII of these Regulations; and
3. Any parcel of land that is required to be connected to the Town Facilities within the Route 12 District by lawful order, judgment or decree of the Connecticut Department of Energy and Environmental Protection (D.E.E.P.), any other state or federal governmental agency having jurisdiction to issue such an order, or state or federal court having jurisdiction to issue such an order, judgment or decree.

### **C. Description of Versailles Sewer District**

The Versailles District shall include only the following parcels:

1. Those parcels shown and designated as "EXISTING SEWER SERVICE AREA" on a map entitled, "LISBON WPCA SEWER SERVICE AREA MAP Lisbon, CT SCALE 1"=50' Project No. CLA-2998 Proj. Engineer R.A.D. Dated 3/03 Sheet No. 2," prepared by CLA Engineers, Inc., of Norwich, Connecticut, which map is hereafter referred to as the "Versailles District Map" and which is or will be filed in the office of the Lisbon Town Clerk, and to which reference may be made;
2. Any parcel of land that may be added to the Versailles District pursuant to the provisions of Article VII of these Regulations; and

3. Any parcel of land that is required to be connected to the Town Facilities within the Versailles District by lawful order, judgment or decree of the Connecticut D.E.E.P., any state or federal governmental agency having jurisdiction to issue such an order, or a state or federal court having jurisdiction to issue such an order, judgment or decree.

## **ARTICLE IV – AVAILABILITY OF SEWER CONNECTIONS**

### **A. Limitations on Availability of Sewer Connections**

The Town of Lisbon ("Town") does not have its own wastewater treatment facilities. Rather, it has entered into certain contracts and agreements with the Borough of Jewett City ("Borough") for the Route 12 District and with the Town of Sprague ("Sprague") for the Versailles District. These contracts and agreements provide for the treatment of wastewater collected by a system of sewerage pipes owned or to be owned and/or regulated by the Town and Authority ("The Town Facilities"). The Town's ability to use the Borough's and Sprague's wastewater treatment facilities, and the Town's wastewater disposal capacity, are limited by those contracts and agreements.

Therefore, in order to assure that the limited capacity available to the Town is used in a manner that maximizes the purpose of the Plan and of these Regulations, no connection to the Town Facilities that are located within the Route 12 District, shall be permitted, unless the parcel of land to which the connection would be made is included in the Route 12 District, as it may be amended pursuant to Article VII of these Regulations. Likewise, no connections to the Town Facilities that are located within the Versailles district, shall be permitted, unless the parcel of land to which the connection would be made is included in the Versailles District, as it may be amended pursuant to Article VII of the Regulations.

### **B. Legal and Technical Restrictions**

In addition to the requirements and limitations set forth in Section IV.A, above, no connection to the Town Facilities shall be permitted unless the Authority finds:

1. That the connection would be in accordance with the relevant terms of all contracts and agreements with the Borough or Sprague;
2. That there is sufficient excess capacity available to accommodate the additional wastewater flows; and
3. That the connections to and use of the Town Facilities would be in compliance with the Sewer Specifications set forth in Appendix A of these Regulations, which are adopted and incorporated herein by reference, and with any rules or regulations regarding allocation of capacity that may have been adopted by the Authority.

In order to protect the capacity and use of the Town Facilities, the Authority may limit the amount of wastewater that may be added to the system from any property and may establish reasonable rules and limitations for different categories of uses.

It is specifically the intention of the Authority and the purpose of these Regulations to prevent and exclude from connection to the sewerage system any individual properties not included in the categories set forth in this Article IV or described in Article VII, regardless of whether such excluded properties are proximate to, or contain any portion of, the sewer line.

### **C. Connection Expenses**

No connection may be made to the Town Facilities unless the owner of the property or operator of the use to be connected enters into a written agreement with the Authority specifying the terms and conditions of such connection. The owner or operator must agree to comply with all pertinent terms and conditions of these Regulations, including, but not limited to, the payment of all assessments and fees required pursuant to Articles V and VI. If the owner or operator undertakes any expansion or extension of the Town facilities, the Authority may, but shall not be obliged to, consider a reasonable offset of any assessments it is authorized to make against such properties pursuant to Section 7-249 of the Connecticut General Statutes. The Authority may also, but shall not be obliged to, consider a formula for reimbursement to such owner or operator, if future connections are allowed to any portion of the sewer main extended at the cost of such owner or operator, but the Authority shall have no obligation, under any circumstances, to make any offset or reimbursement agreement.

## **ARTICLE V – SEWER ASSESSMENTS**

### **A. Benefited Properties**

Sewer assessments shall be levied on all properties that are benefited by the municipal sewer system. Properties that are benefited include properties that are actually connected to the system and properties to which a connection has been made available pursuant to the Lisbon Sewer District Regulations.

### **B. Amount of Assessment**

The assessment charged against any benefited property shall be determined by the Authority and may be the lesser of:

1. The maximum amount lawfully permitted pursuant to Conn. Gen. Stat. § 7-249, as it may be amended; or
2. The amount determined by multiplying the total number of gallons of wastewater per day that the WPCA allows the affected property to discharge into the municipal sewerage system, times a rate established by the Authority at the time the assessment is levied.

### **C. Expanded Buildings**

Where buildings or structures are expanded or constructed after the initial assessment, the property containing the expanded buildings will be charged any additional assessment necessary to produce a total assessment for the property that is equivalent to the assessment that would have been charged if the new or expanded buildings or structures had existed at the time of the original assessment.

### **D. Payment of Assessments**

Assessments shall become due and payable at such time as is fixed by the Authority after a public hearing pertaining to such assessment. The due date, or due dates if installment payments are permitted by the WPCA, shall be identified on the sewer assessment notice. Each required payment must be made within 30 days of the relevant due date to avoid statutory interest and penalties.

## **E. Public Hearings**

A public hearing shall be provided for each landowner who may be affected by a proposed assessment to the extent required by law.

## **ARTICLE VI – SEWER CONNECTION FEES**

### **A. Benefited Properties**

Sewer connection fees shall be levied on all properties that are permitted to be connected to the municipal sewerage system in accordance with these Regulations on or after May 14, 2003.

### **B. Amount of Connection Fees**

The connection fees charged against any property that is permitted to be connected to the municipal sewerage system on or after May 14, 2003, shall be the sum of:

1. The charge the Town incurs or incurred to have the property appraised for purposes of determining the proper assessment to be paid pursuant to Article V, above, plus an administrative fee of fifteen percent (15%); plus
2. The actual costs and expenses incurred by the Town in connection with the physical connection of the property to the municipal sewerage system (including but not limited to engineering review and necessary consultants' fees), plus an administrative fee of fifteen percent (15%); plus
3. An amount determined by multiplying Five Dollars (\$5.00) times the maximum number of gallons of wastewater permitted to be discharged from the property each day.

### **C. Allowance of Additional Flows**

Whenever the WPCA permits any property to discharge more wastewater into the municipal sewerage system than the WPCA permitted at the time of the original connection, an additional connection fee shall be charged in accordance with Section B of this Article VI.

### **D. Payment of Connection Fees**

All connection fees levied pursuant to Section B of this Article VI must be paid prior to the physical connection of the property to the municipal sewerage system. All

connection fees levied pursuant to Section C of this Article VI must be paid prior to the discharge of the additional wastewater permitted to be discharged by the WPCA.

**E. Public Hearings**

A public hearing shall be provided for each landowner who may be affected by a proposed connection fee the extent required by law.

## **ARTICLE VII – ADDITION OF PROPERTIES TO DISTRICT**

As set forth in Article IV of these Regulations, it is the intention of the Authority that no properties other than those specifically identified in Articles III and IV be included within the Route 12 District or the Versailles District, regardless of whether such properties may be near, abut, or contain any portion of the Town Facilities. Nonetheless, the Authority may amend either District by adding other properties if, and only if, all of the applicable criteria in one or more of the following categories have been met:

### **A. First Category – Failing Systems**

Properties in this category may be added to either District if both of the following criteria are met:

- a. The Health Director of the Town of Lisbon, or his or her designee, certifies that a septic system has failed on the property, or that the physical condition of a septic system on the property is marginal (i.e., that the system is likely to fail in five (5) or fewer years); and
- b. The failed or marginal septic system must have been either (i) in existence on the date of adoption of these Regulations, or (ii) constructed after the date of adoption of the Regulations in accordance with all then-existing local, state and federal land-use, health, and environmental laws (including, but not limited to, statutes, ordinances, regulations and codes).

### **B. Second Category – Municipal Uses**

Properties that are used or to be used exclusively for municipal purposes, including uses that are incidental and accessory to a municipal use, may be added to either District.

### **C. Third Category- Nonresidential Uses**

Properties that have been designated as desirable for commercial or industrial development by the Planning and Zoning Commission may be added to the Route 12 District, but not to the Versailles District.

## **ARTICLE VIII – ORDERS TO CONNECT**

In accordance with Section 7-257 of the Connecticut General Statutes, the Authority may order the owner of any building to which the Town Facilities are available to connect such building to the Town Facilities. No such order shall be issued until after a public hearing with respect thereto after due notice in writing to such property owner. Any owner aggrieved by such an order may appeal in accordance with the provisions of the Connecticut General Statutes. If any owner fails to comply with an order to connect, the Authority shall cause the connection to be made and shall assess the expense thereof against such owner. It is the intention of the Authority that all properties that are located in Lisbon within 200 feet of any portion of the Town Facilities, and that have septic systems that have failed, be connected to the Town Facilities, if practicable, as determined by the Authority.

## **ARTICLE IX – PENALTIES FOR NONCOMPLIANCE**

If the Authority finds that any connection to or use of the Town Facilities has been made in violation of any provision of these Regulations, the Authority may order the disconnection of the noncomplying property from the Town Facilities or may issue such other orders or take such other actions as may be allowed by the law to bring such properties into compliance with these Regulations.

## **ARTICLE X – AMENDMENTS**

These Regulations may be amended by the Authority from time to time as it deems necessary.

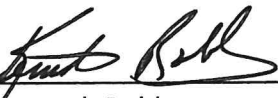
## **ARTICLE XI - VALIDITY**

If any section, paragraph, subdivision, clause or provision of these Regulations is adjudged invalid, such adjudication shall apply only to the section, paragraph, subdivision, clause or provision so adjudged, and the remainder of these Regulations shall be deemed valid and effective.

## ARTICLE XII – EFFECTIVE DATE

These regulations were adopted on May 14, 2003 and the date of adoption and the effective date of these Regulations, as amended, is May 6, 2021.

### LISBON WATER POLLUTION CONTROL AUTHORITY

By  \_\_\_\_\_  
Kenneth Robb  
Its Chairman  
Duly Authorized

## **APPENDIX A**

### **TOWN OF LISBON SANITARY SEWERS- SPECIFICATIONS**

#### **A. GENERAL**

1. All buildings connected to the Lisbon WPCA sanitary sewer system shall have their water supply, whether public or private, metered. The metered water usage will be utilized to evaluate the actual sewage flows from any building or use so connected to the Lisbon system.
2. The standards, specifications and details contained in these documents are intended to provide a uniform standard for everyone. However, situations may arise that have not been addressed within this document and these shall be addressed on a case by case basis subject to the approval of the Lisbon WPCA or its designated agent.

#### **B. PERMITS**

1. No person(s) shall uncover, make any connection with, alter, repair or disturb any public or private sewer main connected to the Lisbon WPCA pipe, or appurtenances unless a valid permit shall have been duly issued by the Lisbon WPCA.
2. Construction permits shall only be issued to: (i) A licensed Contractor holding a valid State of Connecticut license to perform the unsupervised installation of sewer mains, services and appurtenances; or, (ii) a person installing or repairing a sewer service pipe within the confines of a single-family residential lot owned and occupied by such person, as long as such person is the only one doing the work. Acceptable Contractor license categories shall be P-1, P-7 Plumbing and Piping contractor Licenses only.
3. No permit shall be issued, nor any connection made until a Developers Agreement has been approved and consummated with the Lisbon WPCA.
4. Prior to issuance of any construction permit, the Owner will be required to pay all outstanding fees, charges, assessments and other conditions applicable to the sewer installation. In addition, the permittee shall obtain a Connecticut Underground Utility Permit (Call Before You Dig) number (1-800-922-4455), and, when working outside the confines of private property, obtain an excavation permit from the proper regulatory agency.

5. Licensed contractors shall also be required to post with the Lisbon WPCA a Certificate of Insurance, surety Bond or \$5,000.00, for a period of one year, and a copy of their current Plumbing Contractor's License Certificate.
6. In all instances requiring that the permittee be a licensed Contractor, the Plumbing Contractor's License, Certificate of Insurance, and Surety Bond submitted to the Lisbon WPCA shall be those of the permittee only.
7. The Certificate of Insurance shall name the Town of Lisbon as additional insured. The minimum insurance requirements shall be for the Public Liability \$500,00.00/\$1,000,000.00 and for Property Damage insurance \$100,000.00/\$250,000.00. Workman's Compensation Insurance in the amount of statutory limits shall also be included in the insurance requirements. The insurance shall remain in force for at least 12 months from the date of Application for a Permit. Each insurance certificate and policy shall contain a statement by the insurance carrier not to cancel the policy except upon fifteen (15) days notice to the LWPCA.
8. All connections requiring easements and/or agreements must have such easements approved, executed, and recorded on the Land Record prior to issuance of a permit for connection to the LWPCA system.
9. No trench containing a sewer main, service pipe, or other appurtenance shall be backfilled until the LWPCA inspector or his duly authorized agent has completed an inspection and found the work to conform to the requirements of the LWPCA in all respects and to be satisfactory as to the quality of the workmanship and materials. The Permittee shall notify the Inspector twenty-four hours before starting any work authorized under the permit. It shall be the responsibility of the Permittee to comply with any applicable safety requirements concerning the installation or repair of sewer mains, services, and/or appurtenances, and to provide necessary safety equipment and conditions needed for inspection of such installations and/or repairs. The Inspector or his or her duly authorized agent may order all or any portion of the work to be halted, revoke such permit for the work, and/or refuse inspection for noncompliance with the applicable construction and/or safety requirements.
10. If any person who consults, installs, alters or repairs any sewer main, service pipe or appurtenance within the LWPCA's jurisdiction is in violation of any section of these Specifications and/or any other Regulations of the LWPCA or fails to give adequate notice to the Inspector for an inspection of the work, the Inspector may call all or any portion of the work to be halted and/or uncovered for inspection and approval.
11. Permits may be revoked and annulled by the LWPCA's authorized representative for any violation of the Regulations of the LWPCA, or suspended for a reasonable period of time, to permit the LWPCA to make an investigation to determine if there has been a violation of the Regulations.

12. Permits shall be valid for a period of thirty (30) days except in the event the property changes ownership before the work is completed or if another contractor is chosen to perform or complete the work, in which event the original permit shall become void and a new permit shall be obtained by the new parties in interest. In the event that the permit is for construction of a main line, the permit can be re-issued without additional fees upon expiration up to a maximum of eleven (11) renewals.
13. The issuance of a permit does not authorize the Contractor or Permittee to operate valves, curb stops, or other appurtenances connected to the LWPCA system.
14. The Contractor or Permittee is responsible for obtaining all State and Town road opening permits as required.

### **C. DESIGN CRITERIA – MAIN LINE SEWERS**

#### **1. Specifications for Sanitary Sewer Improvements**

All sanitary sewer construction materials and procedures shall conform to the requirements of Connecticut State Highway Department Standard Specifications for Roads, Bridges and Incidental Construction, Form 814A 1995 as amended, the Town of Lisbon Public Improvement Specifications, and Water Pollution Control Authority Regulations and Guidelines for the Design of Wastewater Treatments Works, TR-16, 1998 Edition as prepared by the New England Interstate Water Pollution Control Commission, and any amendments thereto.

#### **2. Special Sanitary Structures**

Details of special or unusual sanitary structures shall be submitted to the LWPCA, or its designated agent, for review and approval before construction.

#### **3. Sanitary Sewer Design Criteria**

- a. Average daily flow and peak flow for domestic, commercial and industrial generators are to be based on Engineering Documentation. Hydraulic design of the sewer shall be based on the Manning Formula for a pipe flowing 0.8 full at peak design flow capacity under open channel flow conditions at all points.

The following values of “N” roughness coefficient have been adopted for use with Manning Formula:

<u>Description</u>	<u>Roughness Coefficient "N"</u>	
New Sanitary Sewers	RCP	.015
	D1	.013
	PVC	.010
Existing Sewers	PVC	.011
	PVC	.011
	RCP	.015

- b. Minimum slopes shall insure that the velocity is greater than or equal to 2.0 fps with the pipe flowing full and/or 2.5 fps in the upper reaches of sewers. Building sewer shall be laid to a reasonable straight line and preferably at not less than 2% grade (1/4" per foot) except that where this is impractical or where a hardship would be created by such a grade the pipe may be laid to a grade of not less than 1% (1/8" per foot).
- c. Proposed sewers shall be designed to provide the required capacity (peak flow, infiltration and other wastewater) to handle all projected flow from upper waste shed based on current zoning. The design flows shall be based on an average daily per capita flow of sewage of not less than 100 gallons per day (this figure is assumed to cover normal infiltration amounts in new construction). For the existing portions of the collection system, additional allowances for inflow and infiltration may be required to account for actual flows in excess of this value. The capacity of the sewer shall be designed to accommodate a peak design flow of four (4) times the average daily flow at build-out of the drainage area based on the maximum density allowed by zoning, unless otherwise determined by the generally accepted ratios of peak to average daily flow and approved by the LWPCA.
- d. Sewers shall be laid at a minimum depth and no less than a minimum slope to insure that residences will receive basement service without the need for individual water pumps. Sewers located in the right-of-way or low use areas shall be constructed at depth with no less than four (4) feet of cover. Building sewers shall be constructed with a minimum of 3' 0" cover using PVC pipe. Special cases will be reviewed on a case by case basis.
- e. Manholes shall preferably be laid in the center of pavement when the sewer is under a Paved roadway. If installed in a paved gutter area of a road where no other suitable alternative is available, such as a shoulder area not subject to significant surface water flow, the manhole shall be provided with water tight frame and covers to exclude surface stormwater flows.
- f. Minimum size of pipe for sanitary sewer is eight (8) inches, inside diameter. Minimum size pipe for building sewers is six (6) inches, inside diameter. Pipe shall be as a minimum SDR 35 PVC pipe.

- g. Manholes shall be provided at all sewer junctions, changes in direction, and changes in grade.
- h. Manhole spacing shall not exceed 300 feet.
- i. Manholes not in pavement areas shall have locking rims set above grade a minimum of 2", and a maximum of 4", to avoid stormwater inflow. Water tight covers shall be used as directed by the LWPCA or its designated agent (See Standard detail). Vented manhole covers shall only be used at high point in sewer line and every 900 feet.
- j. Commercial/ Industrial Sites
  - 1) A manhole is required in the building sewer between the building and the main sanitary sewer line, located within the Town right-of-way, for all buildings in an Industrial or Commercial Zone.
  - 2) If the waste discharge is greater than 5,000 gallons per day, or if discharge involves industrial process wastewater, then a DEEP discharge permit shall be required.
  - 3) Use of public sewers, physical and chemical limitations are defined by the rules and regulations of the Lisbon WPCA.
- k. Pressure Sewer system
  - 1) Pipe utilized in pressure sewer systems shall be rated at a minimum of 60psi (SDR 26, SDR 21, Schedule 40).
  - 2) Cleanouts shall be spaced at every 400 to 1000 feet for straight sections and at every change in pipe direction.
  - 3) Pipe shall be placed below the frost line.
  - 4) Backup capability shall be provided with as a minimum a second pump with holding capacity.
  - 5) The pressure sewer system design shall be subject to the approval of the LWPCA or its designated agent.
- l. Sewer easements outside of street lines. Shall be a minimum of twenty (20) feet wide centered on the sanitary sewer main. For deep excavations (deeper than 8 feet from flow line), wider easements shall be required. It is the responsibility of the developer to acquire these easements. For a "cross country" sewer line, a "roadway" ten (10) feet wide shall be provided. This roadway shall consist of a gravel base a minimum of 8" deep with a filter fabric (where required) and shall provide sufficient support for typical

Town of Lisbon maintenance vehicles. Four inches of topsoil, seeded and fertilized, shall be placed on top of the gravel. When a raised manhole is located within the "roadway", the roadway shall be widened to provide sufficient room for vehicles to pass on both sides of the structure. This may require additional easement area beyond the minimum twenty (20) foot requirement.

4. **Connections to Existing Mains**

Any newly installed sanitary sewer systems connected to an existing sanitary sewer main shall be plugged and the plug chained to the stairs or otherwise secured until the following activities are accomplished:

- All air testing and mandrel testing meeting these standards have been completed
- An occupied facility is connected to the new line.
- The new line is cleaned out (flushing and removal of all construction debris and foreign material.

5. **Drop Inlets**

All drop inlets shall be outside drop inlets. No inside drop inlets shall be allowed.

6. **As-Built Drawings**

a. Reproducible as-built drawings shall be provided to the Town upon completion of the work. These shall be drawn to A-2 accuracy and shall have the original seal and signature of the Land Surveyor licensed in the State of Connecticut. The as-built drawing shall be a wash off fixed line or original plot mylar (sepia mylars are not acceptable).

b. Information Required

1) Plan (at same scale as approved plan)

- a) Any iron pins or monuments defining the Town's right of way or easement, including coordinates of the monuments.
- b) Easements, with distances, bearings and referral points, noting grantees and purpose.
- c) A-2 certification, LS seal and signature.
- d) Curb lines and pavement widths.
- e) Sanitary structures, with horizontal and vertical (i.e. top frame elevations, invert elevations) locations.

- f) Location of any laterals including invert elevations at both ends and ties to the stub. (Data on laterals need not be certified by LS but must have been inspected by the Town and location documented by Contractor).
  - g) Any other underground utilities if known.
- 2) Profile (at same scale as approved plan).
- a) Centerline profile of pavement indicating grades at (approximately) 50 foot intervals, and existing grades of ground, if sewer is "cross country".
  - b) If storm sewer is in pavement, show all catch basins, storm manholes, and all drainage lines between structures with all invert and top of frame elevations. Pipe size and materials shall be indicated.
  - c) Sanitary sewer manholes and main lines including top frame and invert elevations, sizes, lengths, type pipe and slopes must be shown.
  - d) Finish floor elevations of existing or proposed houses.
  - e) Any other underground utilities, if known.

## 7. Testing

### a. Manhole Testing

- 1) All new manholes shall be tested in the presence of a representative of the Lisbon WPCA prior to backfilling the manhole and shall meet the requirement of this section. Either water testing or vacuum testing shall be accomplished.
- 2) Water (Hydrostatic) Testing
  - a) The manhole shall be plugged at all pipe connections, the lift holes grouted and then filled with water.
  - b) The water shall remain in place for 24 hours at which time the drop in water level shall be measured.
  - c) Visual inspection of the exterior walls of the manhole shall be undertaken to determine if any leakage is observed.
  - d) The exfiltration rate shall not exceed one (1) gallon per vertical foot of manhole. (One gallon equals .1337 cubic feet)

- e) If the exfiltration rate exceeds the allowable, repairs or replacement of the manhole shall be accomplished and the manhole tested again.

### 3) Vacuum testing

- a) The manhole shall be plugged at all pipe connections and the lift holes grouted.
- b) Installation and operation of vacuum equipment and indicating devices shall be in accordance with manufacturer's recommendations.
- c) Testing shall be done by qualified personnel of an approved testing company.
- d) A vacuum of 10 inches of mercury (4.9 PSI) shall be drawn and the vacuum pump shut off. The test shall pass if the vacuum drop does not exceed 1 inch of mercury (.49 PSI) over the period of time as follows:

0 – 10 foot deep manholes	- 2 minutes
10 -15 foot deep manholes	- 2.5 minutes
Greater than 15 foot deep manholes	- 3 minutes
- e) If the manhole does not pass the test, repairs or replacement of the manhole shall be accomplished and the manhole tested again.

### b. Pipe Testing

- 1) Air testing of the sanitary sewer line shall be accomplished as described in this section.
- 2) In addition to air testing, a deflection test shall be performed. A mandrel shall be passed through the pipe to determine the amount of deflection existing. A maximum of 7 ½ % is allowed. If the pipe fails to meet this standard, the pipe shall be repaired or replaced as necessary. The sewer system will not be deemed acceptable until these standards are met. The mandrel used shall be a rigid "Go-No-Go" device.
- 3) Low Pressure Air Testing
  - a) General: Sewer lines shall be tested for leakage using low pressure air as specified herein. Tests will be made after the pipe installation is complete, including all laterals, manholes, and backfill in the trench has been placed and compacted or consolidated as required by the LWPCA or its designated agent.

This test shall be completed before bituminous pavement is in place and after all utilities under the roadway have been constructed.

The contractor shall be required to provide all equipment, test plugs in the required sizes, appurtenances, connecting hose or pipe, labor and materials necessary to conduct and control the low-pressure air test.

The tests may be conducted by the Contractor using his or her own equipment, if he or she is qualified, or a subcontractor approved by the LWPCA or its designated agent. All equipment proposed for use in conducting the low-pressure air test shall be subject to the approval of the LWPCA or its designated agent.

All test shall be conducted on the completed sewer pipeline between manholes. Testing of shorter sections of pipeline will only be permitted with the approval of the LWPCA or its designated agent.

All gauges, controls and appurtenances for equipment used to conduct the test will be located out of manholes.

No one will be permitted in a manhole containing a test plug while air is under pressure in the pipeline being subjected to the test.

- b) Procedure: The contractor shall determine the elevation of the ground water table in the area of the pipeline being subjected to the low-pressure air test.

When the prevailing groundwater is above the sewer being tested, test pressure shall be increased 0.50 psi for each foot that the water table is above the invert of the sewer.

After cleaning and flushing the line, test plugs will be installed in the pipeline being subjected to the low-pressure air test and braced as necessary to secure plugs in place.

Utilizing the approved equipment, air at low pressure will be slowly introduced into the pipeline until the pressure within the pipeline being tested increases to 4 PSIG above the back pressure due to the water table, or 4 PSIG if there is no back pressure to compensate for.

Disconnect the supply air hose from the source of air, and allow the air pressure within the pipe being tested to drop to 3.5 PSIG above the back pressure due to the water table (or 3.5 PSIG if there is no water table). At this point, start measuring the time for the pressure in the pipeline to drop 1 PSIG, (or to drop to 2.5 PSIG if there is no back pressure due to a water table).

The time necessary to drop 1 PSIG shall not be less than that indicated in Table 1 for the size and length of pipeline being tested. If the time is less than that indicated in Table 1, the line will be considered as having failed the test.

Any section of pipeline that fails to meet this test will be repaired or replaced as necessary by the contractor, and retested, at no additional expense to the Town.

No sewer line will be considered acceptable until it successfully passes the requirements of this test.

All testing will be conducted by the Contractor or his or her approved subcontractor in the presence of a representative of the WPCA. The Contractor or his or her subcontractor shall keep a written record that will show the results of the tests conducted. The records shall include sufficient data on length of line, pressure levels, time for pressure drop, and related features noted during the testing of each segment of the line. A copy of this record shall be given to the LWPCA.

**TABLE I**

**MINIMUM TIME REQUIRED FOR A PRESSURE DROP OF 1 PSIG AS  
REQUIRED IN LOW PRESSURE AIR TEST SPECIFICATION-  
MINUTES: SECONDS**

**(Based on 0:0015CFM/SQ FT of inside surface area of pipe)**

Specification Time for Length (L) shown (min: sec)

Pipe Diameter (in.)	100 feet	150 feet	200 feet	250 feet	300 feet
6	5:40	5:40	5:40	5:40	5:40
8	7:34	7:34	7:34	7:34	7:36
10	9:26	9:26	9:26	9:53	11:52
12	11:20	11:20	11:24	14:15	17:05
15	14:10	14:10	17:48	22:15	26:42
18	17:00	19:13	25:38	32:03	38:27
21	19:50	26:10	34:54	43:37	52:21
24	22:47	34:11	45:34	56:58	68:22

**Note:** If lateral sewers are included in the test, their lengths may generally be ignored in computing required test times. In the event a test section, having a total internal surface area less than 625 square feet, fails to pass the air test when lateral sewer have been ignored, the Engineer shall re-compute the test time including all lateral sewers.

## **D. CONSTRUCTION STANDARDS – MAIN LINE SEWERS**

### **1. Developers Agreement**

- a. No person or firm other than the Lisbon WPCA shall excavate, construct, install, lay, alter or remove any “public” or “private” sewer without such activity being authorized by a “Developers Agreement” duly signed and approved. (This requirement does not apply to individual single family house laterals).
- b. The Lisbon WPCA or its designated agent shall enter into a Developers Agreement with any person or firm developing a piece of land for any purpose. Such agreement may be on a standard form approved by the LWPCA.

### **2. Materials Specifications**

- a. Manholes shall be manufactured in accordance with ASTM C478. They shall consist of a precast reinforced concrete base section, riser section, and concentric top section. All section exteriors shall be waterproofed with a coal tar pitch coating applied in two coats. All precast products shall be cured a minimum of seven (7) days before being shipped to job site.
- b. Flexible manhole adapters shall be cast into the wall of the manhole sections in accordance with ASTM C443 or a flexible connector as approved by the Lisbon WPCA may be installed into a neatly cored opening in the section. For cored openings in existing brick manholes which, as determined by the Lisbon WPCA, are unsuitable for a flexible connector, utilize rubber ring water stop and non-shrink grout for the pipe to manhole connection.
- c. Manhole steps shall be shown on the standard detail.
- d. Manhole frames and covers located in pavement shall be standard. Manhole frames and covers not located in pavement shall be locking covers and those in areas subject to flooding shall be standard water tight (see details).
- e. All gravity sewer mains shall be polyvinyl chloride pipe SDR 35 with non-removable, integral, rubber compression gasket joints. No transition of pipe diameter or materials is allowed between manholes.
- f. All pipe and structure bedding materials and backfill materials shall be as indicated in the standard details.

- g. Any manhole that is greater than 20 feet in depth shall have a minimum of 5 foot inside diameter sections.

### 3. Installation Methods

- a. No sewer main shall be installed until an application form has been completed by the Owner and all necessary permits have been secured. If work is within a Town or State Road, an Encroachment Permit must be obtained and the construction requirements of that Permit must be followed.
- b. All trenching, excavation and maintenance of traffic shall be in strict accordance with all applicable Federal, State and Local Regulations.

The Permittee shall be responsible for the stability and safety of the trench and adjacent structures. The Permittee shall use such trench support and bracing as required by all applicable regulations, to ensure the stability and safety of all trenches.

The Permittee shall provide all equipment necessary to comply with Federal OSHA confined space regulations.

The Permittee shall comply with all Manual of Uniform Traffic Control Devices Standards for traffic safety including any amendments or update.

If a safe trench and work area are not maintained, Lisbon WPCA personnel or designated agents shall refuse to work in or make an inspection until the trench or area is made safe. This requirement does not in any way, relieve the Permittee of the responsibility and liability for maintaining a safe and adequate trench excavation at all times and at any depth.

The permittee shall maintain all excavations in proper condition for carrying on the work, and to this end, shall do all bailing, draining or pumping which may be necessary to keep the trenches or other excavations free of water, and shall not under any conditions allow groundwater to enter the pipe(s).

- c. The Permittee shall verify all elevation measurements before proceeding with the laying of any sewer main. All sewer mains shall be installed with the use of an approved laser beam system.
- d. All trenches shall be open cut and of sufficient depth to afford protection from frost. In general, such depth shall not be less than four feet below final, finished grade at all points.

When excavation is in rock, there shall be no projecting rock within twelve (12) inches of the outside of the pipe on the sides, top and bottom. The bottom twelve (12) inches of the trench shall be refilled with  $\frac{3}{4}$ " broken stone before the pipe is laid. All excavated rock shall be disposed of and the trench refilled with suitable bank run sand or gravel.

When the bottom of an excavation is in unsuitable or unstable soil, a special bedding material may be required as determined by the Inspector. Such material may include  $\frac{3}{4}$ " broken stone, filler fabric, sand, gravel or any combination thereof.

- e. All pipe, fittings and appurtenances shall be examined carefully for damage and other defects immediately before installation. No pipe, fitting or appurtenance shall be installed which is known to be defective.

Should any defective pipe or other casting be discovered after being laid, it shall be removed, and replaced or repaired to the satisfaction of the Inspector.

- f. During loading, transporting, and unloading, more than ordinary care shall be taken to prevent damage to the pipes and fittings. All pipe, fittings, manholes, etc., shall be handled in a proper manner using slings, hooks, pipe tongs and hoists. Under no circumstances shall material be dropped.

- g. All sewer mains shall be laid and maintained to lines and grades established by the plans and specifications. It shall be the responsibility of the Permittee to have properly staked, to the satisfaction of the Inspector, line and grade, lot lines and or lot corners, easement boundaries, etc., as needed to determine an accurate installation of the sewer main. The Permittee shall be responsible for the accuracy and maintenance of all line and grade stakes, as well as the installation of the sewer main. No work shall begin prior to the stakes being set.

- h. In accordance with the State of Connecticut Department of Public Utility Control Regulations, the Permittee shall notify "Call Before You Dig", (Telephone 1-800-922-4455) prior to start of any construction.

- i. The trenches shall be excavated to a depth of six inches below the invert of the proposed sewer main. The bottom six inches of the trench shall be refilled with  $\frac{3}{4}$ " broken traprock and leveled to grade before the pipe is laid. Once the pipe is laid and set to grade, a minimum of six inches of  $\frac{3}{4}$ " broken traprock shall be placed to the center line of the pipe, for the entire width of the trench. Where pipe is in groundwater, the traprock shall be placed to the top of the pipe. Sand shall be placed over the traprock to a depth of 12" over the top of the pipe. (See Standard Detail).

Pipe placed in groundwater shall have clay stops installed a maximum 100 feet apart in accordance with the Standard Detail.

The trench bottom shall be cut true and even to provide support for the full length of the pipe barrel, except that a slight depression may be provided to allow for withdrawal of pipe slings or other lifting tackle without damaging the pipe coating.

- j. Pipe cutting shall be done in a safe, workmanlike manner without creating damage to the pipe or cement-mortar lining. Cut ends and rough edges shall be ground smooth, and for push-on joint connections, the cut end shall be re-beveled using a suitable file or other approved means.
- k. At times when pipe laying is not in progress, the open ends of the pipe shall be closed with approved watertight plugs or caps. The water level in the trench shall be maintained at a level below the pipe before the plugs are removed and while pipe is being laid, and until such time as it has been inspected, approved, and back-filled. Care must be taken to prevent pipe flotation, should the trench fill with water.
- l. As soon as practicable after the sewer main has been laid and inspected the trenches shall be back filled. Backfill shall be placed in accordance with all Federal, State and Local Regulations. In no case shall stones larger than 6" in size, excavated rock, clay, loam, organic material, or silt be used as backfill.

Green plastic warning tape, a minimum of 2" in width and stating "Caution- Sewer Line Below", shall be placed in the sewer trench in accordance with "Call Before You Dig" requirements.

- m. Any roadway, driveway, parking lot, sidewalk, curbing, grass or landscaped area, fences, guide rails and other structures which are in any way disturbed by the work, shall be restored by the Permittee to as good or better condition than they were previous to the commencement of work.
- n. All gravity sewer mains and building lateral connections laid incidental to the sewer main shall be subjected to an air test as described in the design section of these regulations.

If any air test discloses leakage greater than specified, the Permittee shall, at his own expense, locate and make approved repairs as necessary, until leakage is within the specified allowance.

No pipe shall be placed into service prior to satisfactory completion of an air test and a mandrel test.

- o. All new sewer mains shall be cleaned and camera inspected before acceptance by the LWPCA. Acceptance of lines is to be decided upon reviewing the tapes.

## **E. Sanitary Lateral Connections**

### **1. Design Criteria**

- a. Minimum slope for a sanitary lateral pipe connected to the sanitary main shall be 2% (1/4 inch per foot). Where this is impractical because of a hardship, the pipe may be laid to a grade of not less than 1% (1/8 inch per foot) with the approval of the Town Engineer or local LWPCA Authority.
- b. Minimum size of pipe for a sanitary lateral pipe shall be 6". Pipe shall be as a minimum SDR 35 PVC pipe.
- c. Sanitary lateral pipe shall be constructed with a minimum of 3' 0" cover over the pipe.
- d. Low pressure pump systems shall be installed such that the pipe shall be placed below the frost line (42" minimum).
- e. When the sanitary lateral is to be placed closer than 10 feet to a water line, the pipe shall be water tight pipe SDR 26, SDR 21 or Schedule 40, and a pressure test shall be performed before the line is activated.
- f. All service connections shall be made to an existing capped lateral line or when necessary a main line or a manhole connection created by the Applicant subject to the approval and supervision of the LWPCA or its designated agent.
- g. All sewer connections constructed in seasonal high groundwater areas shall be air or water pressure tested to the satisfaction of the LWPCA or its representative.
- h. Where seasonal high groundwater is present, clay stops shall be installed, see standard detail.

### **2. Construction Criteria**

- a. Trench Requirements: When working within the pavement of a Town road, the initial pavement cut shall be made with a saw or jack hammered. Once the work is complete within the trench, the pavement shall be saw cut, prior to placing bituminous concrete with the area, if the initial cut was jack hammered. The trench backfill material shall be subject to approval by the Town and shall be compacted in maximum of 6" lifts for small widths or 12" lifts for widths wide

enough for a vibratory roller. Typical patch details are included in these procedures and shall be the basis for any work within the Town ROW. The trench repair shall be maintained by the permit holder for a period of 6 months, or at the end of one winter-spring cycle, at which time the permit holder shall saw cut one (1) foot beyond and around the entire circumference of the initial trench repair and remove all bituminous concrete within that area. The edges of the remaining bituminous concrete shall have a tack coat applied and the new bituminous concrete placed within the trench to the depth of the original pavement thickness or a minimum of 2 inches, whichever is greater.

- b. Backfilling: No backfilling shall occur until the new service connection is inspected and backfilling is authorized by the WPCA or its designated agent.
- c. Traffic Control: It is the responsibility of the permit holder to provide dedicated traffic control personnel whenever machinery or personnel are on the roadway. These personnel shall be trained in the proper techniques of traffic control as indicated in the Manual of Uniform Traffic Control Devices Millennium Edition or any new update.
- d. Restoration: The permit holder shall be responsible for restoring any non-pavement areas which were disturbed by the work or storage of equipment and material or damage caused by their equipment and/or personnel. This restoration shall include but not be limited to grading, topsoil, fertilizing, seeding, mulching or sodding, to bring the disturbed areas to the same condition as it was before the disturbance including installation and maintenance of necessary soil and erosion control measures including any additional measures requested by the Town.
- e. Control of the Work: Control of the work shall be the responsibility of the permit holder and shall be in accordance with the current Town of Lisbon specifications and requirements.
- f. Road Closure: Closure of any Town road shall be avoided if possible. Any town road closure shall have prior approval of the First Selectman, and notification shall have been given to the public at least five (5) days prior to closure. Signs notifying the traveling public shall be placed in conformance with the Town requirements and consistent with the Manual of Uniform Traffic Control Devices Millennium edition or any amendment made thereto.
- g. Erosion and Sedimentation Control: The permit holder shall be responsible to keep the work site from creating erosion and sedimentation problems at the work site and the area around the work site. Sediments shall not be allowed to be deposited beyond the work site and shall be cleaned up from the work site before the work is completed.

Proper erosion and sedimentation control measures shall be employed and shall conform to the "Guidelines For Soil Erosion and Sedimentation Control, Connecticut", published by the Connecticut Council of Soil and Water Conservation, latest edition, the Town of Lisbon Regulations, and current best management practices.

### **3. Permit Requirements**

- a. Before any connection to a Town sewer is made, a permit shall be obtained.
- b. Permits shall be issued by the Lisbon Water Pollution Control Authority or its designated agent.
- c. All required testing shall be conducted in the presence of and subject to the approval of the designated LWPCA agent.
- d. All backfilling after final inspection shall be conducted subject to the supervision and approval of the designated LWPCA agent.

### **F. Grease Trap Standards**

1. All establishments that prepare food or handle fats, oils or grease must install a grease trap.
2. All new establishments that prepare food or handle fats, oils or grease must install a grease trap prior to starting operation.
3. Customers who have been notified by mail to install a grease trap and do not comply within ninety (90) days shall be charged \$100.00 per month until the grease trap is installed.
4. If a grease trap is required, the grease trap will be pumped at intervals not exceeding 90 days for the first year. The LWPCA shall be notified at least 3 working days prior to pumping of the date and time of grease trap maintenance. Pumper reports shall be provided within 7 days of each pumping to the LWPCA. At the end of the first full year of use, the pumping frequency will be reviewed by the LWPCA and set for permanent grease trap pumping maintenance. Failure to do so will result in a monthly fine of \$550.00 per month until such reports are provided to the LWPCA.

Any user requesting a change to this policy must request in writing explaining reason for change to the LWPCA for approval.

5. The dimensions and configuration of the tank, inlet and outlet openings and access

openings shall be in accordance with the drawings entitled "Sanitary Sewer Grease Trap Tanks," which are incorporated as part of this specification.

6. The tank shall be sized to have static liquid volume equal to approximately one-third (1/3) of the proposed maximum daily flow through the tank, but in no case, shall the static liquid capacity be less than one thousand (1,000) gallons. In all cases, the depth of the static liquid volume shall be a minimum of forty-two inches (42") as measured from the floor of the tank to the invert of the outlet pipe ("static liquid level").
7. The tank shall be constructed of steel reinforced precast concrete and shall be designed to support HS-20-44 structural loading. The concrete mix shall be designed to achieve a minimum compressive strength of 4,000 psi at twenty-eight (28) days. Steel reinforcement shall be in accordance with ASTM A-615, Gr. 60.

The exterior of the tank, including the top and bottom surfaces, shall be coated with a coal tar pitch type damp proofing sealant ("Koppers" Super Service Black or approved equal).

8. The horizontal structural seam of the tank, if applicable, shall be located above the static liquid level and shall be sealed with a butyl rubber gasket ("Conseal" CS102 Butyl Resin Joint Sealant or approved equal).

After the installation of the top slab, if applicable, the remainder of the exterior joint space shall be filled in with a non-shrinking cement or "Water Plug" grout and then coated with asphaltic based waterproof sealant.

9. Openings for the inlet and outlet piping shall be cast or neatly cored in the precast concrete wall below the top slab structural seam. The inlet and outlet piping shall be connected to the tank with a flexible rubber compression "boot" or sleeve connector, ("KOR-N-Seal" II -Flexible Pipe to Manhole Connector, "Press-Seal" PSX Positive Seal Gasket System, "Press Seal" Press-Boot connector or an approved equal) set into the precast "Knockout" or cored holed in the wall of the tank.
10. The inlet piping shall not include any sources of domestic sewage. The outlet piping shall be connected to the sanitary sewer.
11. Inlet piping shall be four-inch (4") minimum. Outlet piping shall be six-inch (6") minimum but, in no case, smaller than the inlet pipe. All exterior piping, including the pipe which penetrates the walls of the separator, shall be PVC Schedule 40, Type I, ASTM D-2665, NSF-DMW, solvent weld pipe and fittings or approved equal. Flexible couplings as manufactured by Fernco, or approved equal, shall be provided on the inlet and outlet piping at the point of transition from the Schedule 40 PVC

interior tank piping and the exterior building sewer, at a point on the line one foot from the outside wall of the tank.

12. On grease trap tanks, the outlet pipe shall be fitted with a "tee-pipe" with a vertical drop pipe aligned with a manhole opening extended to grade. The top of the "tee-pipe" shall be sealed with a removable screw plug and the bottom of the drop pipe shall be terminated with a bevel cut end with the point of the pipe resting on the floor of the tank and the bevel cut open to a point twelve inches (12") above the floor.
13. Vent pipes shall be at a minimum one-half ( $1/2$ ) the diameter of the outlet discharge line, but, in no case, less than three-inch (3") diameter. Pipe and fittings shall be PVC Schedule 40, Type I, ASTM D-2665, NSF-DWV, solvent weld or approved equal and shall be sloped to drain into the separator. The vent stack shall extend eight feet (8') above finished grade and shall have a one hundred eighty degree ( $180^\circ$ ) bend or approved vent cap located at the top of the vent stack. The outlet shall be screened and the vent stack secured to the outside wall of the building.
14. Opening in the top slab for two (2) 24-inch (24") diameter access manholes as shown on print. Frames and covers shall be Standard (Campbell Foundry Pattern #1049 with covers marked "Sanitary Sewer"). Manhole extension may be constructed of brick or manhole block with mortar joints. The exterior of the manhole extension shall be coated with waterproof foundation sealant.
15. The tank shall set plumb and level on a bedding of  $3/4$ " broken stone, six inches (6") deep and extending one foot (1') beyond all sides. The  $3/4$ " stone shall be placed on thoroughly compacted subgrade or undisturbed soil.
16. Grease traps shall be inspected by LWPCA or its designated agent, prior to installation of the tank and after installation prior to placement of backfill material. Backfill materials shall be free from cinders, ashes, refuse, vegetable or organic material, boulder, rocks or stones, frozen soil, or other material that, in the opinion of the inspector is unsuitable.

**ESTIMATED SEWER CONNECTION COSTS AND FEES  
(TYPICAL)**

Assumptions

Allowable amount of flow: 200 gallons per day

I. ASSESSMENT

(Article V, Section B.2):  $200 \text{ gpd} \times \$36.07/\text{gpd} = \$7,214$

II. CONNECTION FEE

(Article VI, Section B):

1. Appraisal Fee: N/A if assessment is agreed to
2. Engineering inspection and review costs:  $\$1000 \times 1.5 = \$1150$
3.  $200\text{gpd} \times \$5/\text{gpd} = \$1000$

III. TOTAL ESTIMATED FEES AND COSTS

\$ 7214 Assessment

1150 Engineering review and inspection

1000 Supplemental connection fee

\$ 9,364 Total

## **DEVELOPER PERMIT AGREEMENT (SANITARY SEWER)**

In consideration of the following mutual promises and covenants, the TOWN OF LISBON, a municipal corporation chartered by the State of Connecticut, hereinafter designated the TOWN, acting by and through its WATER POLLUTION CONTROL AUTHORITY, hereinafter designated the LWPCA; and \_\_\_\_\_, hereinafter designated the DEVELOPER, covenant and agree as follows:

### **Recitals**

- A. The DEVELOPER is the owner of land (hereinafter designated the "Property") situated [**describe location of property**]
- B. The LWPCA is the authority charged by the TOWN ordinance and State law to manage and control municipal sanitary sewerage facilities within the Town.
- C. The LWPCA anticipates that the Town will acquire certain sewerage facilities located within and near State Route 12 within the Town of Lisbon (the "municipal sewerage facilities")
- D. Upon the acquisition by the Town of the municipal sewerage facilities, the DEVELOPER wishes to be permitted to connect the PROPERTY to those facilities.

### **Covenants and Agreements**

### General

1. The LWPCA shall allow the DEVELOPER, at the DEVELOPER'S own cost and expense, to connect the Property to the municipal sanitary sewerage system, subject to the further provisions in this Agreement. All improvements made or constructed by the DEVELOPER to connect the Property to the municipal sanitary sewerage system shall be referred to collectively hereinafter as the "SEWER". Although it is not currently anticipated that the TOWN will have any need or desire to acquire any portion of the SEWER, the TOWN may accept all, or any portion, of the SEWER located in any street or other state or municipal property or right-of-way, if it deems such portion to be useful or potentially useful to other users of the municipal sanitary sewerage system. Any such acquisition shall be made in accordance with the provisions of Paragraph 16 hereof.
2. The SEWER shall be made and constructed in accordance with a plan or set of plans approved by the LWPCA and entitled:
3. The SEWER shall be used to convey only sanitary sewerage, meaning such human waste products as may typically be expected to be produced from a residential dwelling. No other discharges or wastewaters shall be permitted unless expressly authorized in writing by the LWPCA in accordance with all applicable Town ordinances and regulations of the LWPCA, as they may be amended.
4. Any changes or modifications to the approved design plans referred to in Paragraph 2 hereof must be approved by the WPCA. The SEWER must be constructed in accordance with all applicable Town ordinances and regulations of the LWPCA, as they may be amended.
5. The DEVELOPER shall provide, at the DEVELOPER'S own expense, all necessary surveys to establish the location and grade of the SEWER in accordance with the plans referred to in Paragraph 2 hereof. The DEVELOPER shall obtain all permits necessary for the construction of the SEWER, and shall present copies of all such permits to the LWPCA, prior to commencing any work requiring permits.

6. It is mutually agreed that the TOWN may at any time construct and attach additional improvements to the SEWER for the purpose of extending the sanitary sewer system of the TOWN without any compensation or consideration being paid by the DEVELOPER.

#### **Performance and Maintenance Security; Town Fees and Expenses**

7. In accordance with the LWPCA'S sewer use regulations, the DEVELOPER shall be liable, and shall be obliged to reimburse the TOWN, for all costs, fees and expenses incurred by the TOWN, including, without limitation, those charged by any engineer or other consultant to the Town, and including allowances for fringe benefits, for review of the plans specified in Paragraph 2 hereof, and for inspection, supervisory engineering, measuring, and testing prior to or during construction, or during any required maintenance period, plus an administrative fee of fifteen percent, which shall be added to all such costs, fees and expenses billed to the TOWN. The DEVELOPER shall deposit with the LWPCA, before commencement of any work, or within six months from the date hereof, whichever occurs first, a sum deemed by the LWPCA to be sufficient to defray such anticipated costs, fees and expenses. The DEVELOPER shall also make additional deposits as directed by the LWPCA if the total sum on deposit proves to be insufficient at any time during the progress of the work.
8. Before starting work, the DEVELOPER shall furnish, if the LWPCA requires it, a Performance Bond or other security in favor of and acceptable to the LWPCA to insure proper completion and maintenance of the SEWER, including, without limitation, any necessary work to repair or restore TOWN facilities or property. The bond or security shall be in an amount not less than the estimated cost of the SEWER set forth in Paragraph 12 hereof.

9. The LWPCA agrees that, upon acceptance of the SEWER, any unexpended portion of the DEVELOPER's deposit shall be returned to the DEVELOPER.
10. In addition to those fees and charges set forth in paragraphs 7, 8 and 9 of this Agreement, the DEVELOPER shall pay the TOWN, in care of the LWPCA, all other connection fees and assessments established in the LWPCA's sewer use regulations. The DEVELOPER acknowledges having received a copy of those regulations and understanding the nature and extent of the fees and assessments to be charged thereunder.

#### **Indemnification**

11. The DEVELOPER agrees to at all times indemnify and save harmless the TOWN, the State of Connecticut and their respective employees, officers, agents and servants, on account of any and all claims, damages, losses, litigation, expenses, counsel fees and compensation arising out of injuries (including death) or property damage sustained by or alleged to have been sustained by the servants, employees, or agents of the TOWN or of the State of Connecticut, or of the DEVELOPER, any contractors employed by the DEVELOPER or any subcontractor or material supplier, or any one directly or indirectly employed by them or any of them, while engaged in the performance of any work covered by this Agreement and during any maintenance period specified herein or by any other government authority.

#### **Construction Estimates**

12. The DEVELOPER shall prepare all necessary plans, specifications, and a complete preliminary and final cost estimate for the SEWER at the DEVELOPER's own expense and in a form acceptable to the LWPCA. The preliminary cost estimate shall be submitted within thirty (30) days of execution of this Agreement.

#### **Insurance**

13. The DEVELOPER shall file with the LWPCA, and maintain at the DEVELOPER's own expense the following forms of insurance:

- (a) Owner's Protective Liability and Property Damage Insurance for and in the name of the TOWN and covering all claims against the TOWN arising out of this Agreement.
- (b) Public Liability and Property Damage Insurance, including coverage for acts of subcontractors, for all liability assumed under this Agreement, and, where applicable, coverage for use of explosives, for collapse of buildings and damage to underground properties, and coverage required by any law or municipal ordinance or regulation.
- (c) Automobile Liability and Property Damage Insurance, including coverage for hired and/or borrowed cars.
- (d) Worker's Compensation and Employer's liability Insurance.

The minimum amounts of all such insurance shall be not less than the following:

Property Damage (including automobile)	\$1,000,000
Each Accident	
Bodily Injury (including automobile)	
Each Accident	\$1,000,000
Each Person	\$1,000,000
Or, in lieu of above –	
Combined Single Limit	\$1,500,000
Worker's Compensation – as required by law.	

The above stipulation of minimum amounts or the acceptance by the LWPCA of certificates indicating the limits of coverage shall in no way limit the liability of the DEVELOPER to any such amounts. Acceptable certificates shall be submitted in duplicate before work is begun. Work shall not be continued after expiration of any of the above forms of insurance until the same has been renewed. If the WPCA so requires, original policies or certified copies thereof shall be submitted in lieu of certificates.

### **Time of Completion**

14. The DEVELOPER shall complete the work covered by this Agreement within 180 calendar days from the date of commencement of work, and no construction work shall be done thereafter, except that, at the option of the LWPCA and upon application of the DEVELOPER (with approval of Surety, if Surety has been required), this limit may be extended by the LWPCA.

### **Sewer Maintenance and Acceptance**

15. The DEVELOPER shall maintain the SEWER, at the DEVELOPER's own expense for a period of one (1) year following the issuance of a Certificate of Substantial Completion. The DEVELOPER shall repair any defect in the SEWER noted during that period, and any damage to any public street, highway, grounds or structure known to have been caused, during construction and during the one (1) year maintenance period, directly or indirectly by the construction, repair or maintenance or by any defect or failure of the SEWER. The DEVELOPER shall maintain those portions of the roadways, curbs, walks, and other surfaces and appurtenances within the highway limits that are disturbed by the construction or maintenance of the SEWER for any additional period that may be required by any governmental authority having jurisdiction. If the DEVELOPER fails in any way to carry out the DEVELOPER's maintenance obligations, the TOWN shall be reimbursed for any expense it incurs by direct payment from the DEVELOPER or the DEVELOPER's successors.
16. The DEVELOPER further agrees to continue to maintain any parts of the SEWER, at the DEVELOPER's own expense, to which the TOWN has not accepted title. The TOWN may accept and incorporate into the sanitary sewer system of the TOWN all or any parts of the SEWER that have been constructed in accordance with this Agreement in any state or municipal property or right-of-way. The TOWN's acceptance

of the SEWER or any part or parts thereof shall become effective only after verification by the LWPCA's engineering consultant or firm (i) that the DEVELOPER has fulfilled all the terms and conditions of this Agreement and has supplied final as-built drawings prepared on mylar; (ii) that the SEWER, or the designated part or parts thereof, has been completed in accordance with the plans, specifications and standards of the TOWN and the LWPCA; (iii) that the SEWER is in acceptable condition at the expiration of the one year maintenance period; (iv) that all roadways, curbs, walks and other surfaces and appurtenances disturbed by the work have been acceptably restored or that adequate security by bond or otherwise has been furnished to assure such restoration; and (v) that all necessary rights-of-way have been conveyed to the TOWN. The DEVELOPER shall thereafter be relieved of the maintenance obligations in this Paragraph 16 with respect to any portion the SEWER or parts thereof actually acquired by the TOWN, except that final acceptance of the roadways, curbs, walks, and other surfaces and appurtenances within any highway limits shall be in accordance with established procedures of the TOWN.

17. The DEVELOPER shall obtain and convey to the TOWN satisfactory rights-of way as shown on the approved plans prior to the TOWN's acceptance of any part of the SEWER. The terms of conveyance shall be subject to the approval of the TOWN's attorney.
18. The DEVELOPER hereby grants, and will under separate document set over and convey unto the TOWN, its successors and assigns forever, a right and easement to enter upon the DEVELOPER's land, as shown on the approved plans, for purposes of performing any activity described in this Agreement.
19. The DEVELOPER agrees to maintain and operate forever any portion of the SEWER which the DEVELOPER is permitted to build in connection with this Agreement, but to which the TOWN does not accept property title.
20. All proposed changes to any SEWER must be submitted to and approved by the WPCA prior to such change being made. The main

line will be pressure-tested as required in accordance with TOWN and LWPCA standards.

21. It is mutually agreed that the TOWN may at any time permit others than the DEVELOPER to connect to and regularly use the SEWER, provided, however, that any other user of the SEWER who causes damages thereto shall be responsible for its repair.

22. The DEVELOPER shall be liable for the work and conduct of any contractor the DEVELOPER employs in the discharge of the obligations imposed herein.

### Assessments

23. **{Alternate No. 1}** The DEVELOPER and the LWPCA hereby agree that an assessment of \$\_\_\_\_\_ shall be applied to the Property. This Agreement is made in lieu of the assessment procedures set forth in Chapter 103 of the Connecticut General Statutes, the requirement of which procedures is expressly waived by the DEVELOPER. The assessment may be paid by the DEVELOPER in twenty annual installments, the first such installment to be made no later than \_\_\_\_\_. Interest shall accrue on the unpaid balance of the assessment at the rate of \_\_\_\_\_ percent per annum (simple interest).

23a. **{Alternate No. 2}** The LWPCA shall establish an assessment for the Property pursuant to the provisions of Chapter 103 of the Connecticut General Statutes. The assessment may be paid by the DEVELOPER in twenty annual installments, the first such installment to be made no later than 90 days after the date the LWPCA renders its final decision on the assessment. Interest shall accrue on the unpaid balance of the assessment at the rate of \_\_\_\_\_ percent per annum (simple interest).

### Sewer Permit

24. Prior to construction of the SEWER, the DEVELOPER shall apply to the WPCA for a permit to connect to the sewer system. Such permit shall be granted provided that the DEVELOPER has complied with all obligations required by this AGREEMENT to be completed prior to construction.

**Binding Effect**

25. The DEVELOPER agrees that the obligations and privileges herein assumed by and granted to the DEVELOPER shall be obligations and privileges running with the land constituting the Property, and resting on or granted to the succeeding owners of that land, as well as on or to the parties described by name above. A notice of this AGREEMENT shall be filed upon the Lisbon Land Records.

26. This agreement shall be binding upon and inure to the benefit of the respective parties and their successors and assigns hereto.

**Miscellaneous**

27. If any portion of this Agreement is held invalid or unenforceable by a court of competent jurisdiction, the remainder of the Agreement shall be deemed to remain in effect to the extent feasible.

28. Captions used in the Agreement are for the convenience only and are not intended to limit, enlarge, modify or amend of any provisions of this Agreement.

Dated at Lisbon, Connecticut this       day of       ,       .

Witnesses:

WATER POLLUTION CONTROL AUTHORITY

\_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_  
Its Chairman

DEVELOPER {print name}

\_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_

[illegible]

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me. \_\_\_\_\_, the undersigned officer, personally appeared Kenneth Robb, who acknowledges himself to be the Chairman of the Water Pollution Control Authority of the Town of Lisbon, and that he, as such Chairman, being authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the Lisbon Water Pollution Control Authority by himself as Chairman.

In Witness Whereof, I hereunto set my hand.

Commissioner of the Superior Court  
Notary Public  
My Commission Expires:

[illegible]

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, \_\_\_\_\_, the undersigned officer, personally appeared \_\_\_\_\_, who acknowledged himself/herself to be the \_\_\_\_\_ of \_\_\_\_\_, and that he/she, as such \_\_\_\_\_, being authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of \_\_\_\_\_ by himself/herself as \_\_\_\_\_.

In Witness Whereof, I hereunto set my hand.

---

Commissioner of the Superior Court  
Notary Public  
My Commission Expires:

## Town of Lisbon WPCA Sanitary Sewer Connection Agreement

Date: \_\_\_\_\_

Address of property: \_\_\_\_\_

Property owner: \_\_\_\_\_

Address of property owner: \_\_\_\_\_

Property owner telephone number: \_\_\_\_\_

This agreement is entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ between \_\_\_\_\_ and the Lisbon WPCA for the connection to the sanitary sewer at the above named address.

By signing this agreement it is agreed that:

1. The sanitary sewer connection shall be completed in accordance with the Regulations for Use of the Lisbon Municipal Sewerage System, Lisbon Water Pollution Control Authority, including all testing procedures, and shall be subject to the supervision provided by the Authority and/or its Agent.
2. The owner and/or his contractor and/or subcontractors shall abide by all applicable local, State, and Federal laws and regulations.
3. The contractor shall supply a copy of the license of the State of Connecticut licensed person responsible for the installation of the sewer and a copy of a photo ID of that same person.
4. The owner is responsible to insure that all applicable permits and fees are in place prior to commencement of any construction activities.
5. Notice shall be given to the WPCA at least 48 hours before the commencement of construction and if construction is suspended, notice shall be given at least 24 hours prior to the resumption of work.
6. Notice will be given to the WPCA at least 24 hours prior to the commencement of any testing activities which shall be witnessed by the Authority's Agent.

7. No discharge of sewage into the municipal sewer system shall be permitted until a permit to discharge has been issued by the authorized Chairman or designated Agent.
8. All fees shall be paid in accordance with Articles V and VI of the Regulations.

Sewer Assessment: \_\_\_\_\_

Connection Fee: \_\_\_\_\_

\*\*Plan review fee (estimate): \_\_\_\_\_

\*\*Construction inspection fee (estimate): \_\_\_\_\_

\*\* Plan review and construction inspection fees will be billed to the property owner at the Authority's cost plus 15% per Article VI.

9. If the property served is serviced by a private water system, it will be the responsibility of the owner to install a standard water meter, provide quarterly water meter readings to the WPCA, and make arrangements for the WPCA Staff and/or Agent to read the water meter once annually.
10. If a grease trap is required, the grease trap will be pumped at intervals not exceeding 90 days for the first year. The WPCA shall be notified at least 3 working days prior to pumping of the date and time of grease trap maintenance. Pumper reports shall be provided within 7 days of each pumping to the WPCA. At the end of the first full year of use, the pumping frequency will be reviewed by the WPCA and set for permanent grease trap pumping maintenance.

By:

\_\_\_\_\_  
Signature of Owner

\_\_\_\_\_  
Signature of Second Owner

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title (if not an individual)

\_\_\_\_\_  
Title (if not an individual)

**TOWN OF LISBON  
SEWER CONSTRUCTION PERMIT APPLICATION**

FEE \$ \_\_\_\_\_

NAME OF FIRM \_\_\_\_\_

ADDRESS \_\_\_\_\_  
\_\_\_\_\_

NAME OF LICENSED DRAIN LAYER \_\_\_\_\_

DRAIN LAYER PERMIT NUMBER \_\_\_\_\_ TYPE \_\_\_\_\_

ADDRESS OF WORK \_\_\_\_\_ (P1 or P 7)

OWNER OF PROPERTY \_\_\_\_\_

DESCRIPTION OF WORK \_\_\_\_\_  
(Specify new or repair ) \_\_\_\_\_  
\_\_\_\_\_

CONNECTION CHARGE PAID ? \_\_\_\_\_ DATE \_\_\_\_\_

DATE START \_\_\_\_\_ TIME FOR COMPLETION \_\_\_\_\_

**SKETCH**

**TO BE FILLED OUT BY TOWN**

Insurance Expiration Date \_\_\_\_\_

Bond Amount Required \_\_\_\_\_

Bond Received ? \_\_\_\_ Yes \_\_\_\_ No

Signature of Applicant \_\_\_\_\_ Date \_\_\_\_\_

Signature of Applicant means commitment to following the Town of Lisbon Sanitary  
Sewer Regulations

**TOWN OF LISBON**  
**SEWER CONSTRUCTION PERMIT NUMBER \_\_\_\_\_**

ADDRESS OF WORK \_\_\_\_\_

\_\_\_\_\_

PERMIT HOLDER \_\_\_\_\_

ADDRESS \_\_\_\_\_

\_\_\_\_\_

This permit shall expire 30 days after the issue date. Permit holder is responsible for following the Sanitary Sewer Regulations of the Town of Lisbon.

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Issue Date

**INSPECTION REPORT**

DATE \_\_\_\_\_

DESCRIPTION OF WORK INSPECTED \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

by \_\_\_\_\_

Date Work Completed \_\_\_\_\_

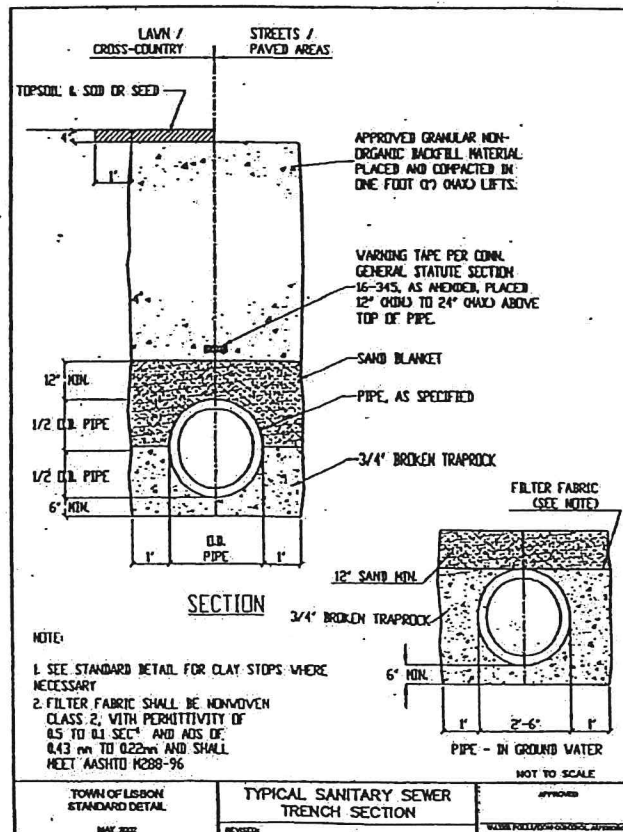
As Built Sketch Attached \_\_\_\_ Yes \_\_\_\_ No

REVERSE SIDE  
OF PERMIT

# LISBON SANITARY SEWERS

## CONDITIONS

1. This permit is issued under the express condition that every person acting under the same shall conform to the representations and conditions of the application therefor and shall conform to and be governed by the ordinances and regulations pertaining to sewers of the Town of Lisbon including amendments, thereto, and all other pertinent laws, resolutions, ordinances, rules, and regulations of the Town of Lisbon and/or its Water Pollution Control Authority.
2. This permit may be revoked at any time.
3. This permit shall be maintained at the site of any work being done under its authority and shall be shown upon request of any authorized person.
4. This permit does not authorize the doing of any acts in, upon or to private property without the consent of the owner thereof. The duty of obtaining such consent and complying with the conditions thereof rests solely on the drain layer and those for whom he acts.
5. This permit does not authorize any excavation in any public street, highway or grounds, or doing any work therein or the placing of any obstruction therein. Specific permission for such shall be obtained from the proper official having charge thereof.
6. The Town of Lisbon and its agents assume no responsibility that any representations in the application for this permit were correct and assume no responsibility for any information furnished or not furnished.
7. No sewer or appurtenance thereof may be cut into or connection made therewith, or any pipe laid, except in the presence of or under the direction of an Inspector from the Lisbon WPCA. At least 24 hours notice must be given to the Lisbon WPCA before such Inspector is needed on the work. In general, Inspectors will be available between the hours of 8:30 a.m. to 4:30 p.m. on Mondays to Fridays inclusive.
8. The Drain Layer agrees that he shall at all time indemnify and save harmless the Town and its officers, agents and servants, on account of any and all claims, damages, losses, litigation, expenses, counsel fees and compensation arising out of injuries (including death) sustained by or alleged to have been sustained by the public, any or all persons on or near the work, or by any other person or property, real or personal (including property of the Town), caused in whole or in part by the acts or omissions of the Drain Layer, any contractor employed by him or any subcontractor or material man or anyone directly or indirectly employed by them or any of them while engaged in the performance of any work covered by this permit and during any maintenance period specified in the aforementioned ordinance.
9. The Drain Layer and owner shall be responsible to see that only the type of wastes specifically permitted by this permit are allowed into the public sewer as a result of this permit.



**TOWN OF LISBON**  
**PERMIT TO DISCHARGE**  
**W.P.C.A SANITARY SEWER SYSTEM**

Street Address	Town	Subdivision
Owner		Telephone
Licensed Drain Layer		License Number

Specific Data

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Main Line Extension | <input type="checkbox"/> Repair to House Lateral | <input type="checkbox"/> New Industrial/Commercial Lateral       |
| <input type="checkbox"/> New House Lateral   | <input type="checkbox"/> Repair to Main Line     | <input type="checkbox"/> Repair to Industrial/Commercial Lateral |

Restrictions or Special Requirements

The sanitary main line or lateral connection to the Lisbon WPCA sanitary system has been constructed in accordance with the Lisbon Sanitary Sewer Specifications and approved plans provided to the WPCA. Proper operation and maintenance of this work is required. This Permit to Discharge shall not be construed as permission to create or maintain any sewage nuisance and in the issue of this Permit to Discharge the Town of Lisbon WPCA assumes no responsibility for the future operation and maintenance of any sanitary lateral.

Inspected by	Title
Date of Final Inspection	Issuance Date

ISSUED BY:

\_\_\_\_\_  
Title

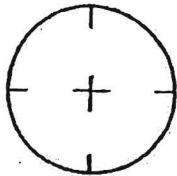
TOWN OF LISBON  
SANITARY SEWER LATERAL FIELD LOCATION

DATE OF CONSTRUCTION: \_\_\_\_\_

BUILDING ADDRESS: \_\_\_\_\_

STREET: \_\_\_\_\_

SUBDIVISION: \_\_\_\_\_



NORTH ARROW

[illegible]

**CONTRACTOR (PRINT)**

NAME OF CONTRACTOR'S SUPERVISOR (PRINT)

STREET ADDRESS

**SIGNATURE**

DATE \_\_\_\_\_

TOWN

STATE

ZIP

INSPECTED BY TOWN

DATE \_\_\_\_\_

TELEPHONE NUMBER

WHITE - TOWN

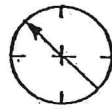
PINK - CONTRACTOR

**YELLOW - CONSULTING ENGINEER / DEVELOPER**

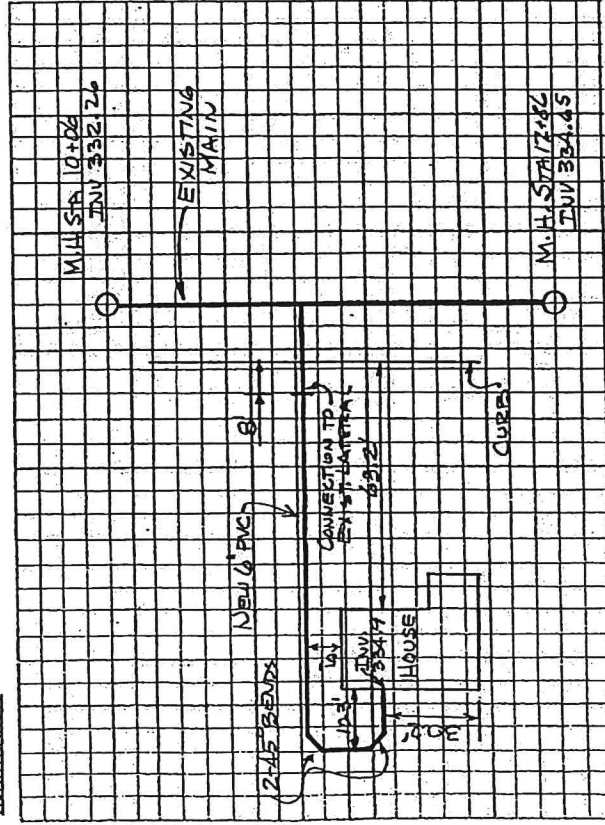
# EXAMPLE 1 - EXISTING BUILDING

TOWN OF LISBON  
SANITARY SEWER LATERAL FIELD LOCATION

DATE OF CONSTRUCTION: MAY 2, 2002  
BUILDING ADDRESS: #103  
STREET: WEST AVE  
SUBDIVISION: ---



NORTH ARROW



COVE CONSTRUCTION  
CONTRACTOR (PRINT)  
1030 SMITH AVE  
STREET ADDRESS  
ANY TOWN CT 06999  
TOWN STATE ZIP  
203-666-1122  
TELEPHONE NUMBER  
WATER TOWN  
FIRM CONTRACTOR  
NAME OF CONTRACTOR'S SUPERVISOR (PRINT)  
JACK JONES  
SIGNATURE  
5-2-02  
DATE  
INSPECTED BY TOWN  
DATE  
YELLOW CONSULTING ENGINEER/DEVELOPER

# REVERSE SIDE OF LATERAL LOCATION

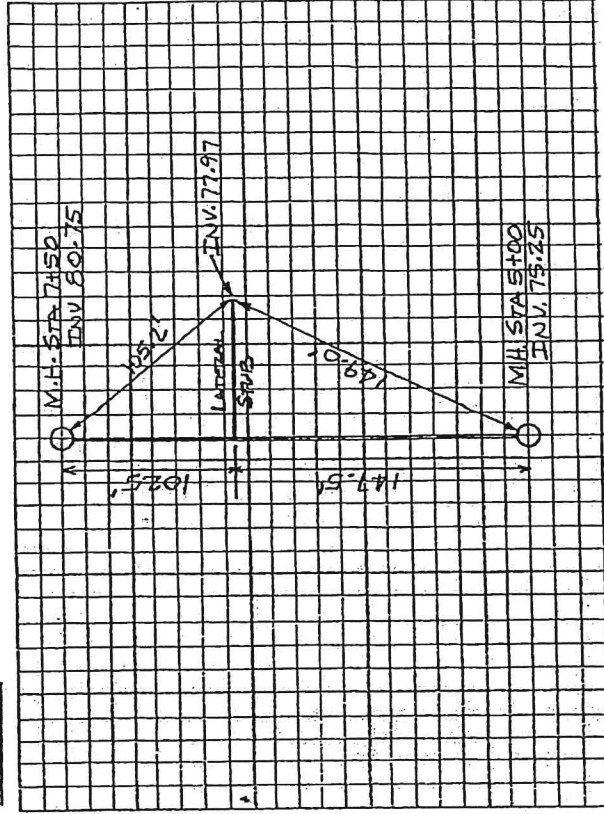
# EXAMPLE 2 - NO BUILDING EXISTING

TOWN OF LISBON  
SANITARY SEWER LATERAL FIELD LOCATION

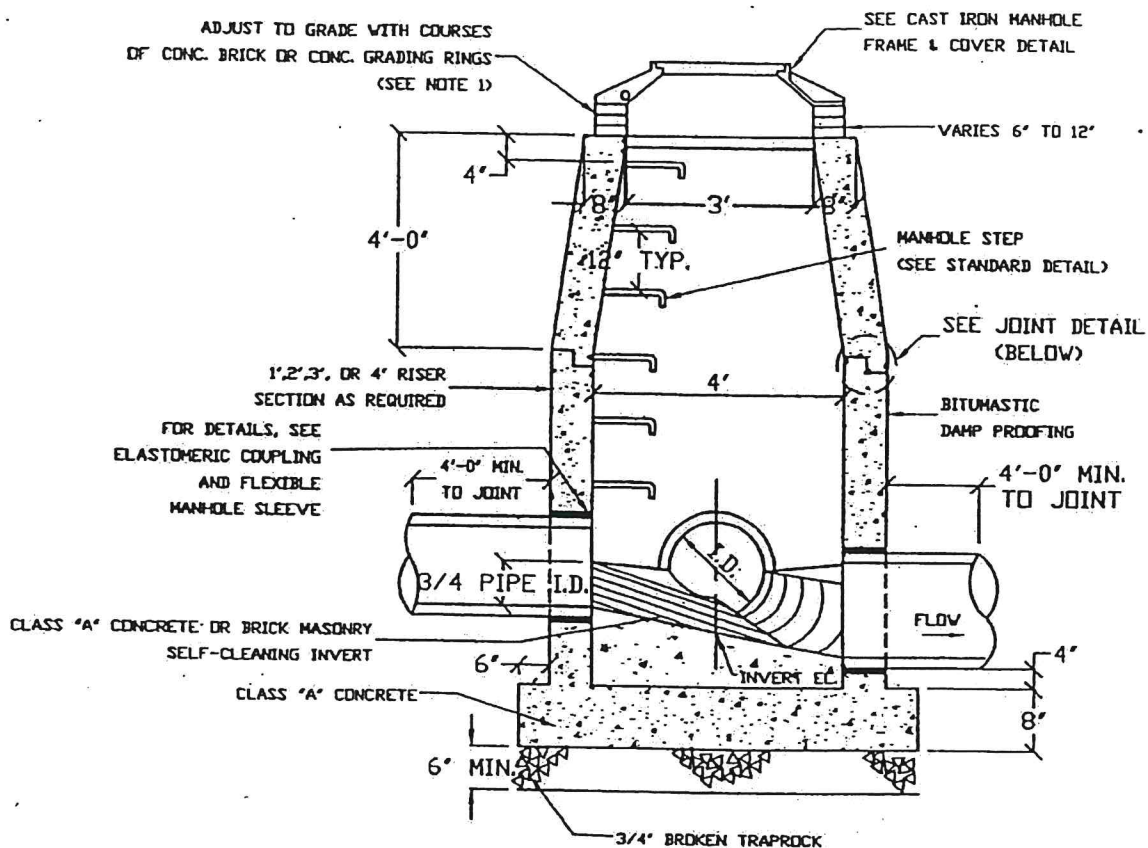
DATE OF CONSTRUCTION: MARCH 3, 2000  
BUILDING ADDRESS: LOT #6, #105  
STREET: EAST STREET  
SUBDIVISION: GLADSTONE ESTATES



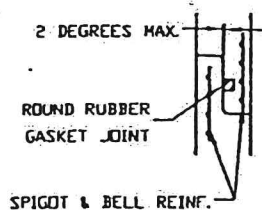
NORTH ARROW



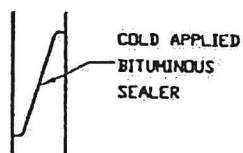
STAR EXCAVATING  
CONTRACTOR (PRINT)  
100 MAIN ST  
STREET ADDRESS  
ANY TOWN CT 06999  
TOWN STATE ZIP  
860-555-1212  
TELEPHONE NUMBER  
WATER TOWN  
FIRM CONTRACTOR  
NAME OF CONTRACTOR'S SUPERVISOR (PRINT)  
JIM CONN  
SIGNATURE  
3/3/00  
DATE  
INSPECTED BY TOWN  
DATE  
YELLOW CONSULTING ENGINEER/DEVELOPER



## ELEVATION



## GASKET JOINT



## ALTERNATE JOINT

## NOTES:

1. TOP STEP TO BE A MAXIMUM OF 12" BELOW TOP OF MANHOLE FRAME & COVER ELEVATION
2. IF TOTAL DEPTH IS TEN FEET OR GREATER, CERTIFICATION OF HS-20 LOAD BEARING CAPACITY SHALL BE SUBMITTED TO THE W.P.C.A. FOR APPROVAL PRIOR TO INSTALLATION.
3. SEE MISCELLANEOUS MANHOLE DETAILS SHEET.
4. ANY MANHOLE OVER 20 FEET DEEP, SHALL HAVE A MINIMUM INSIDE DIAMETER OF 5'-0".

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

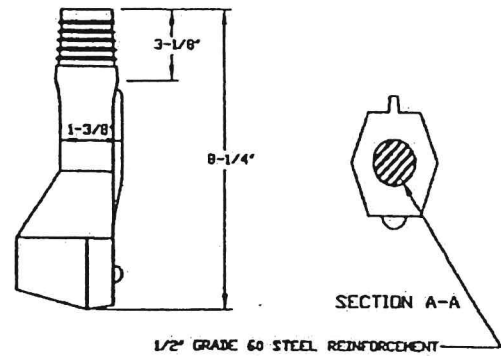
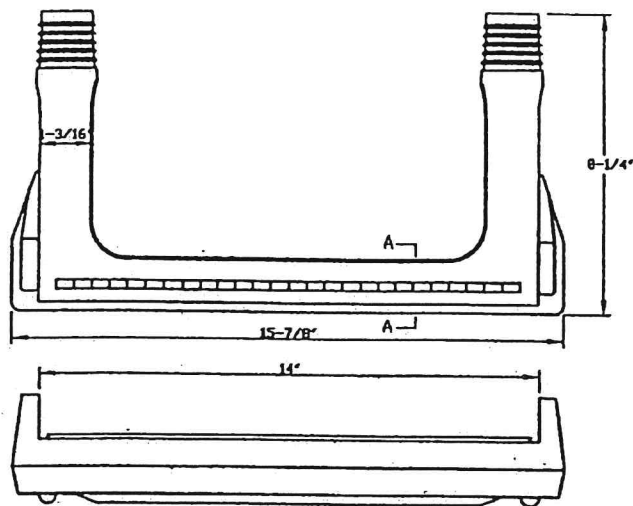
MAY, 2002

PRECAST REINFORCED  
CONCRETE MANHOLE

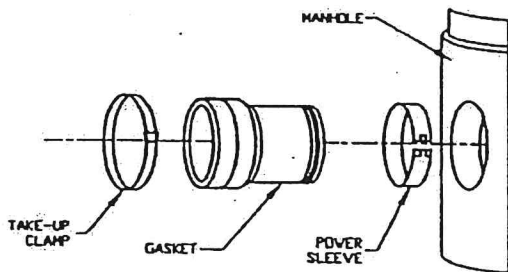
REVISED:

APPROVED

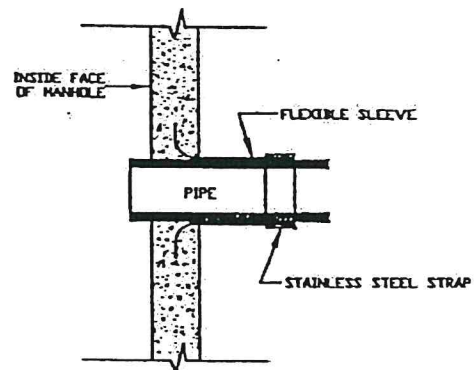
WATER POLLUTION CONTROL AUTHORITY



PLASTIC OR FIBERGLASS MANHOLE STEP



ELASTOMERIC MANHOLE COUPLING



FLEXIBLE MANHOLE SLEEVE

### MANHOLE PIPE CONNECTIONS

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

MAY, 2002

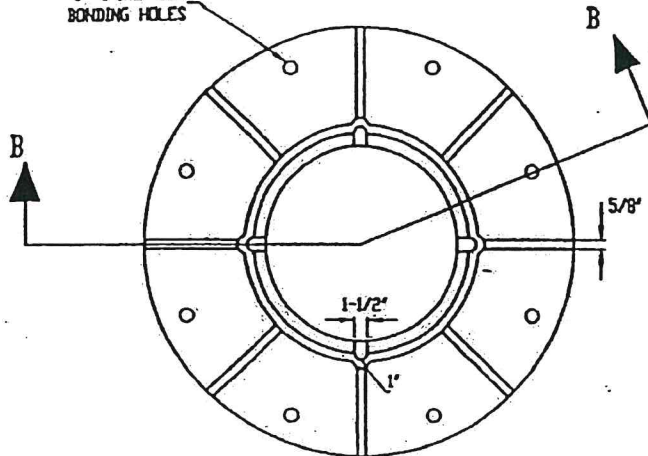
MISCELLANEOUS  
MANHOLE DETAILS

REVISED:

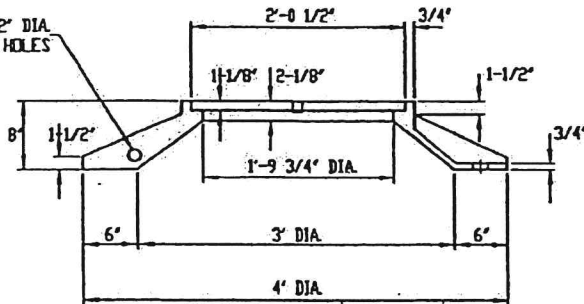
APPROVED

WATER POLLUTION CONTROL AUTHORITY

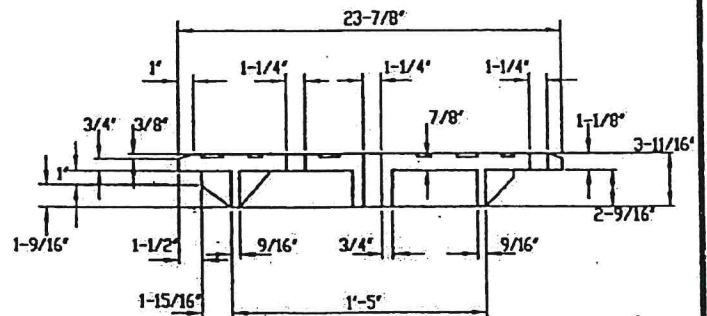
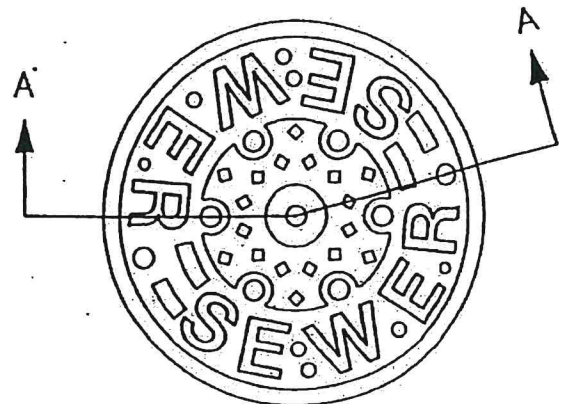
8- 1 1/2" DIA.  
BONDING HOLES



2- 1 1/2" DIA.  
HANDLING HOLES



SECTION B-B  
CAST IRON FRAME



SECTION A-A  
CAST IRON COVER

NOTES:

1. THE LOWER SURFACE OF THE COVER AND THE CORRESPONDING UPPER SURFACE OF THE FRAME SHALL BE MACHINE FINISHED TO PROVIDE A SMOOTH FLAT CONTACT OR FIT, WITHOUT ANY TENDENCY FOR THE COVER TO ROCK OR RATTLE.
2. SANITARY SEWER MANHOLES SHALL BE EQUIPPED WITH VENT HOLE IN CENTER.

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

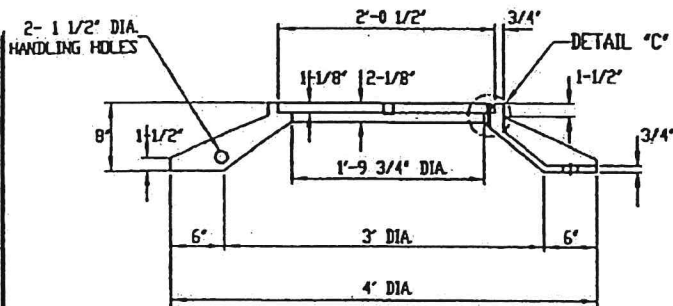
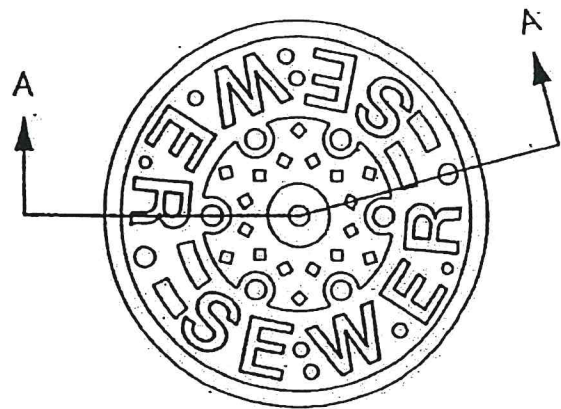
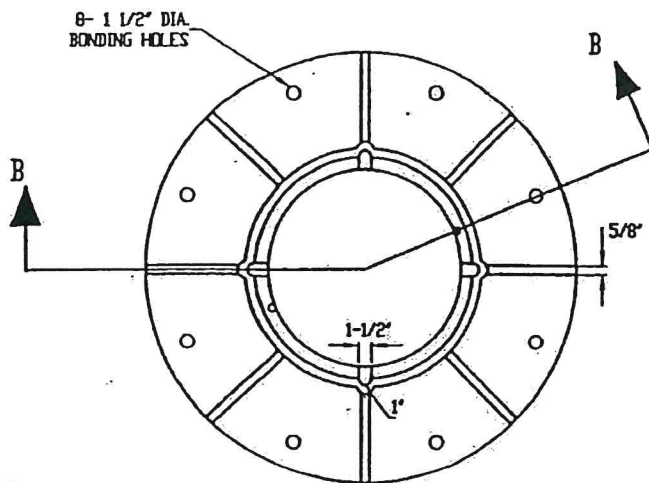
MAY, 2002

CAST IRON MANHOLE  
FRAME AND COVER

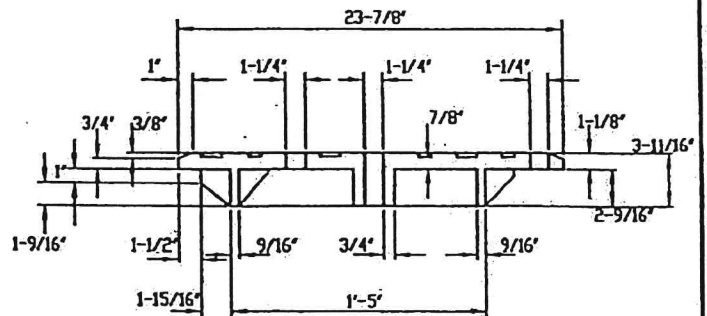
REVISED:

APPROVED

WATER POLLUTION CONTROL AUTHORITY



SECTION B-B  
CAST IRON FRAME



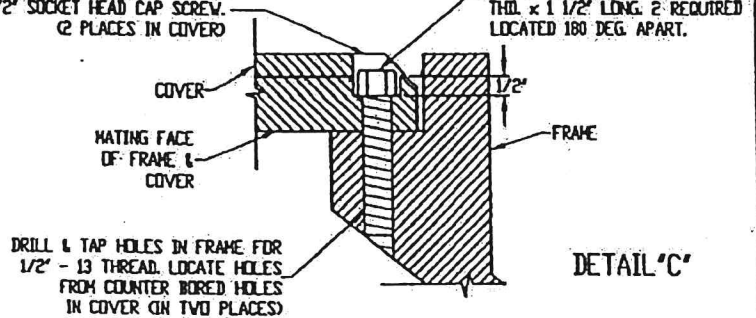
SECTION A-A  
CAST IRON COVER

NOTES:

1. THE LOWER SURFACE OF THE COVER AND THE CORRESPONDING UPPER SURFACE OF THE FRAME SHALL BE MACHINE FINISHED TO PROVIDE A SMOOTH FLAT CONTACT OR FIT, WITHOUT ANY TENDENCY FOR THE COVER TO ROCK OR RATTLE.
2. SANITARY SEWER MANHOLES SHALL BE EQUIPPED WITH VENT HOLE IN CENTER.

COVER DRILL & COUNTERBORE 1/2" DEEP FOR 1/2" SOCKET HEAD CAP SCREW. (2 PLACES IN COVER)

STAINLESS STEEL SOCKET HEAD CAP SCREW - 1/2" - 13 THD. x 1 1/2" LONG. 2 REQUIRED LOCATED 180 DEG. APART.



DRILL & TAP HOLES IN FRAME FOR 1/2" - 13 THREAD. LOCATE HOLES FROM COUNTER BORED HOLES IN COVER (IN TWO PLACES)

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

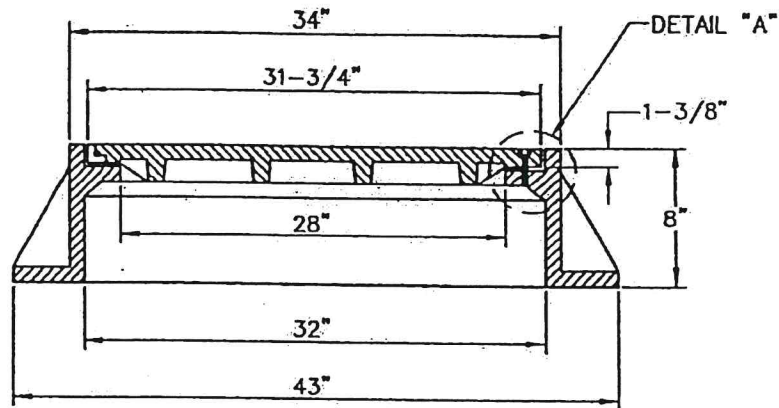
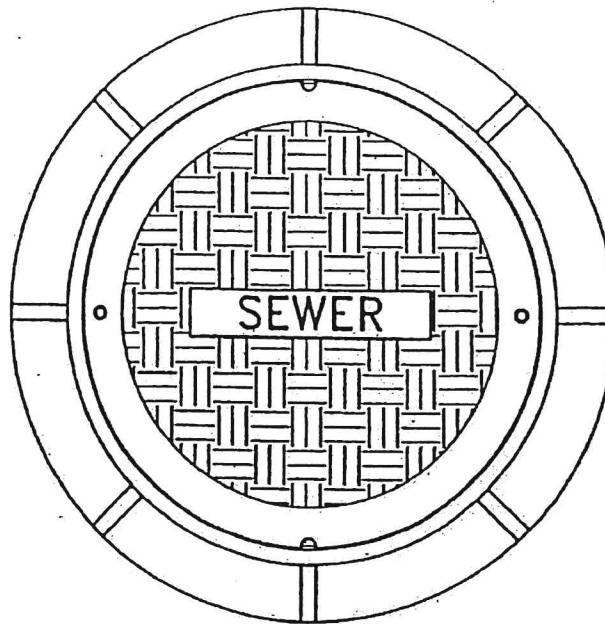
MAY, 2002

CAST IRON MANHOLE  
FRAME AND LOCKING COVER

REVISED:

APPROVED

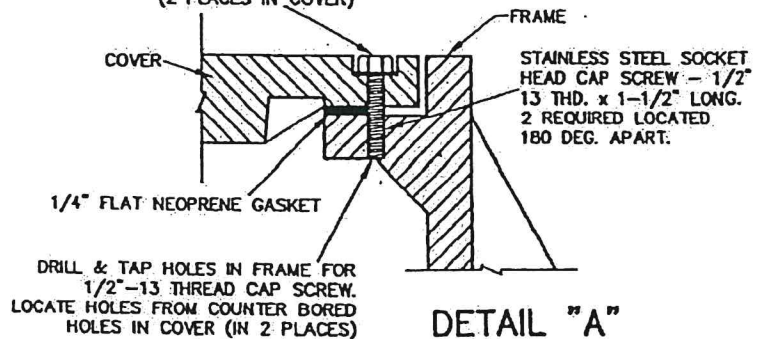
WATER POLLUTION CONTROL AUTHORITY



#### SPECIFICATIONS:

1. Pattern shall be no. 1012 WT manufactured by The Cambell Foundry Co. or approved equal.
2. AASHTO HS20-44 highway loading.
3. Material shall be gray cast iron which meets or exceeds ASTM A48-83, class 30B.
4. All castings supplied with:
  - Machined bearing surfaces
  - Non-penetrating pick holes
  - 1/4" flat neoprene gasket
  - 1/2" diameter stainless steel cap screws

COVER DRILL & COUNTERBORE 1/2" DEEP  
FOR 1/2" SOCKET HEAD CAP SCREW.  
(2 PLACES IN COVER)



DETAIL "A"

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

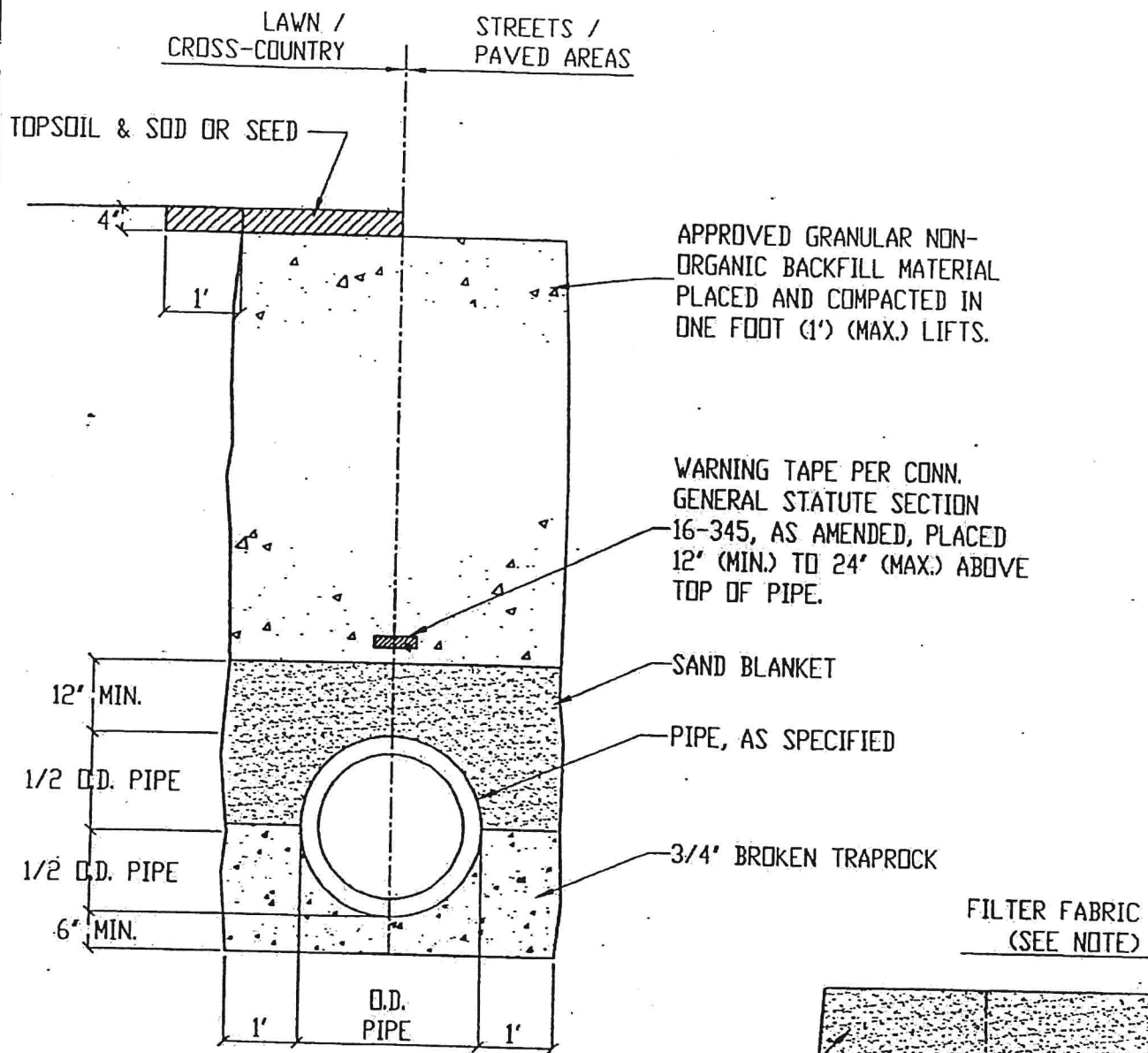
MAY, 2002

STANDARD WATERTIGHT  
MANHOLE FRAME & COVER

REVISED:

APPROVED

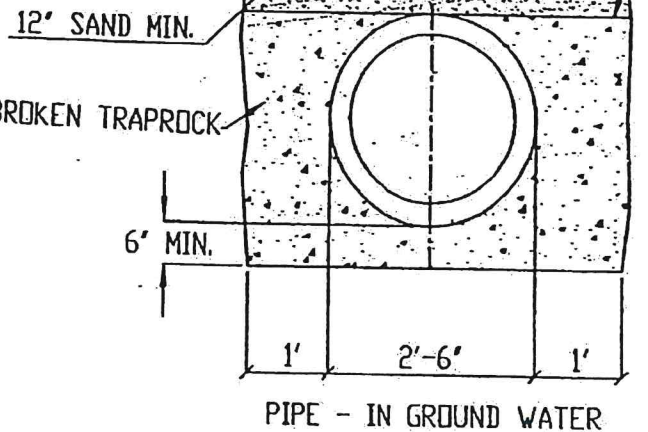
WATER POLLUTION CONTROL AUTHORITY



## SECTION

### NOTE:

1. SEE STANDARD DETAIL FOR CLAY STOPS WHERE NECESSARY
2. FILTER FABRIC SHALL BE NONWOVEN CLASS 2; WITH PERMITTIVITY OF 0.5 TO 0.1  $\text{SEC}^{-1}$  AND ADS OF 0.43 mm TO 0.22mm AND SHALL MEET AASHTO M288-96



NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

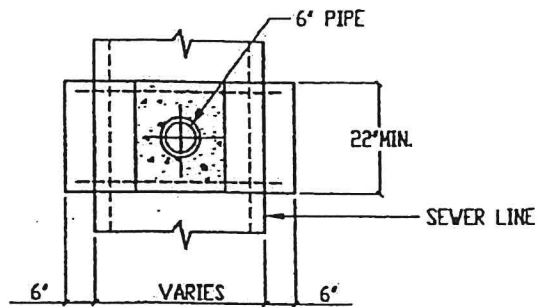
MAY, 2002

TYPICAL SANITARY SEWER  
TRENCH SECTION

REVISED:

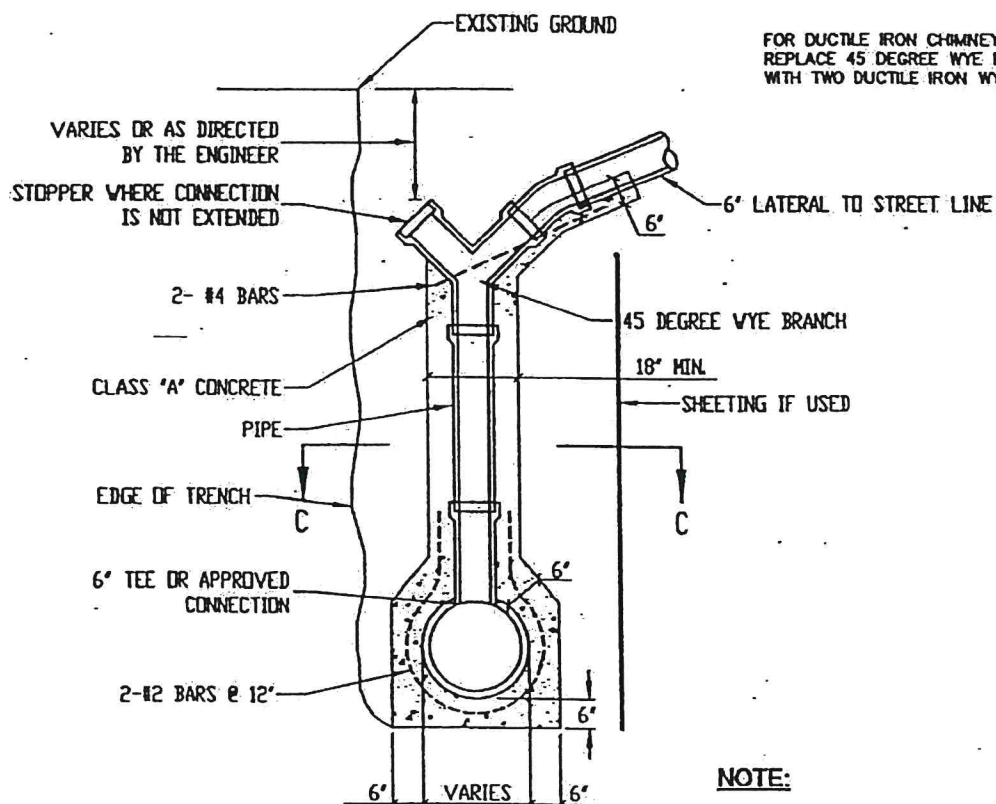
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WATER POLLUTION CONTROL AUTHORITY



SECTION C-C

LENGTH OF LATERAL AS SHOWN  
ON PLANS OR AS DIRECTED BY  
THE ENGINEER.



FOR DUCTILE IRON CHIMNEYS,  
REPLACE 45 DEGREE WYE BRANCH  
WITH TWO DUCTILE IRON WYES.

ELEVATION SECTION

**NOTE:**

PRECAST CHIMNEY - ARROW DOUBLE  
SEAL SEWER CHIMNEY OR EQUAL  
MAY BE USED UPON APPROVAL  
OF THE W.P.C.A..

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

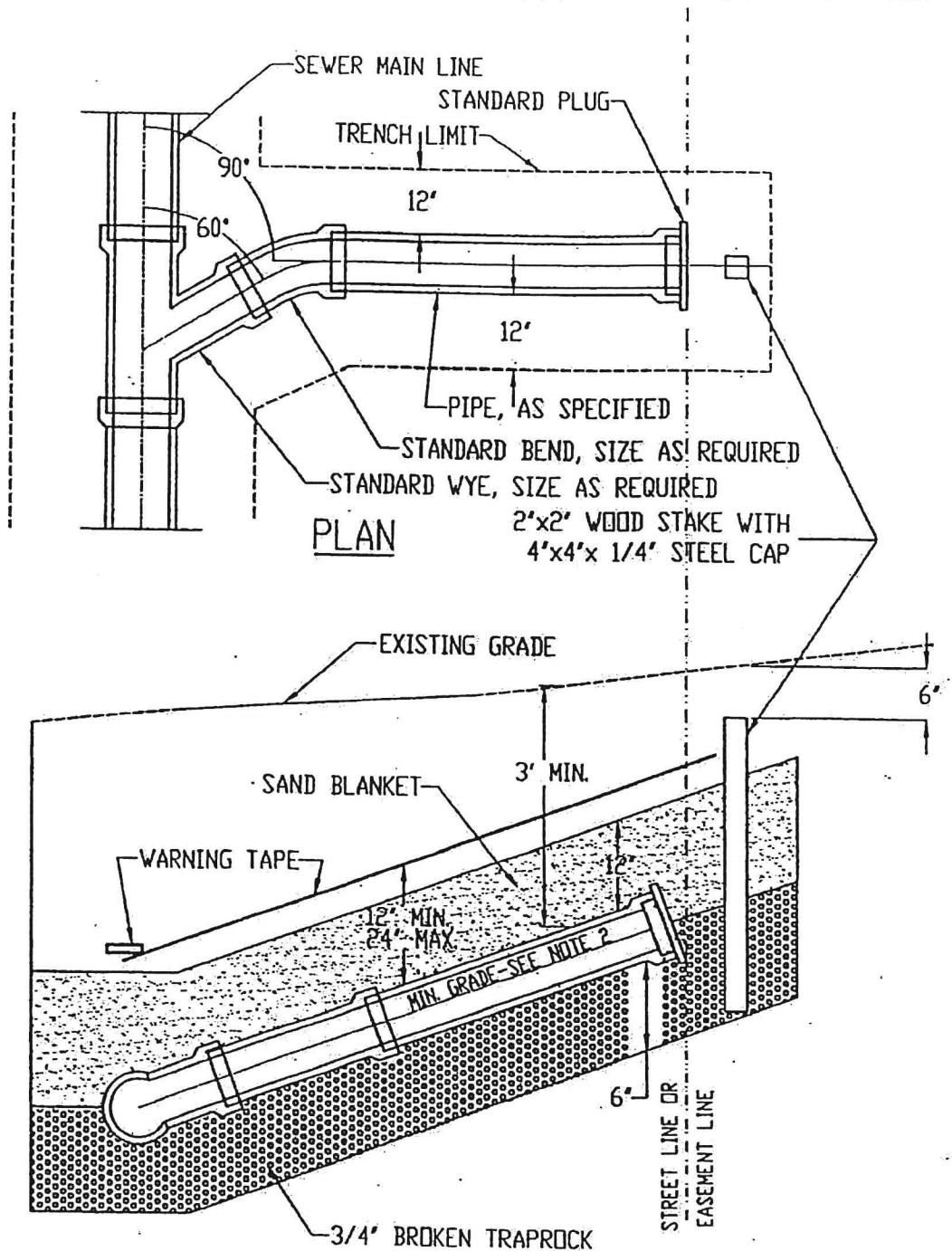
MAY, 2002

TYPICAL  
CHIMNEY CONNECTION

REVISED:

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WATER POLLUTION CONTROL AUTHORITY



NOTES:

1. FOR TRENCH REQUIREMENTS, SEE TYPICAL TRENCH SECTIONS DETAIL & SPECIFICATIONS.

PROFILE

2. PIPE SHALL BE LAID AT 2% SLOPE (MIN.) EXCEPT WHERE THIS IS IMPRACTICAL OR WHERE A HARDSHIP WOULD BE CREATED THEN PIPE MAY BE LAID TO A GRADE OF NOT LESS THAN 1%.

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

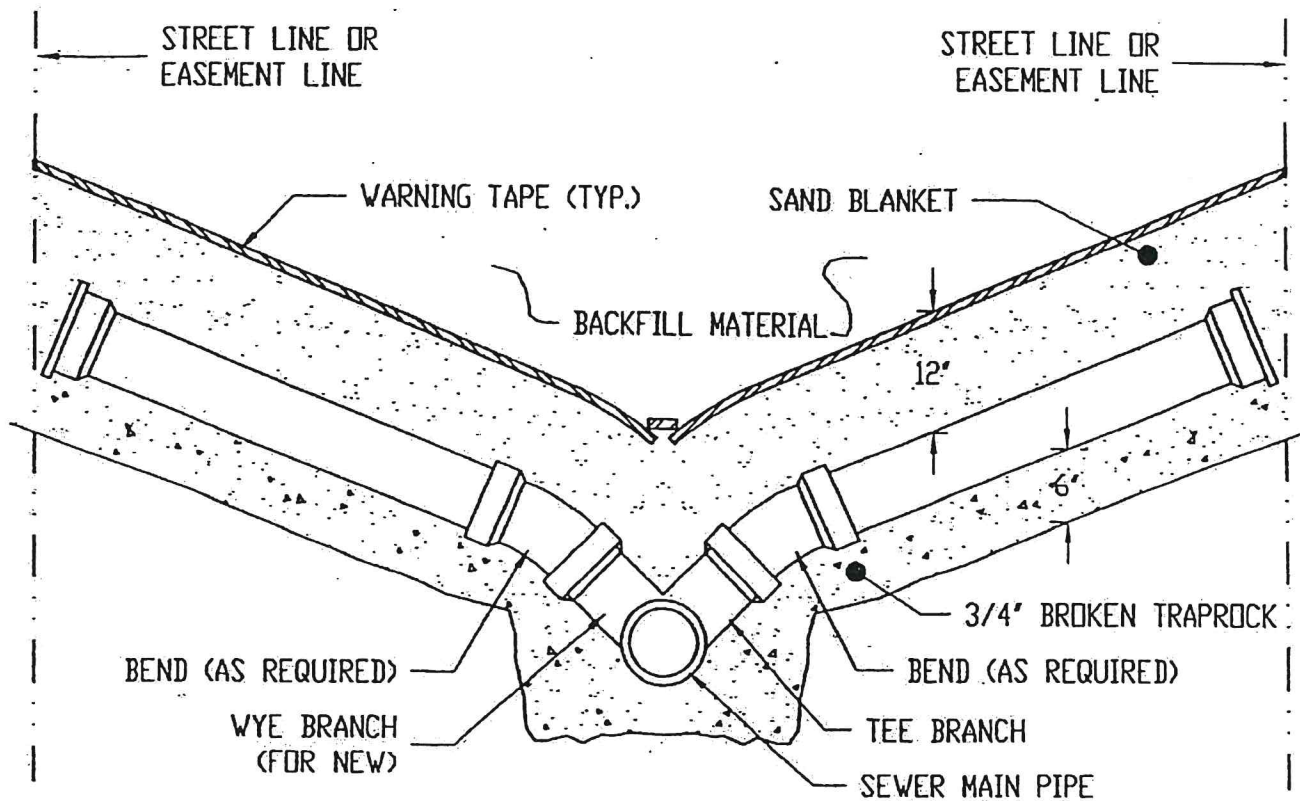
MAY, 2002

TYPICAL BUILDING SEWER

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WATER POLLUTION CONTROL AUTHORITY



### SECTION

#### NOTES:

1. SEE STANDARD DETAILS 'TYPICAL BLDG. SEWER' AND 'TYPICAL SANITARY SEWER TRENCH SECTION' FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

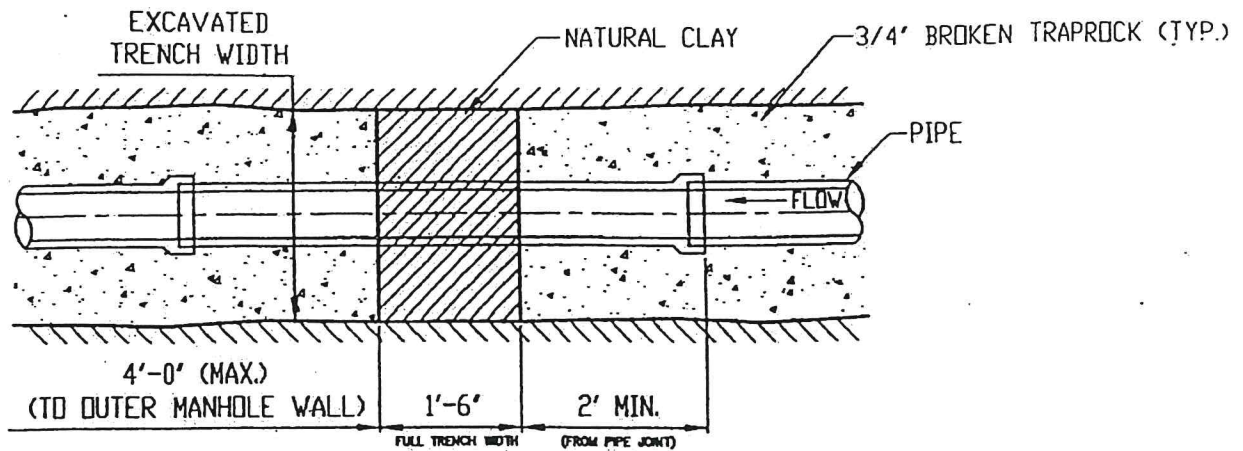
MAY, 2002

SERVICE CONNECTION  
FOR SHALLOW SEWER

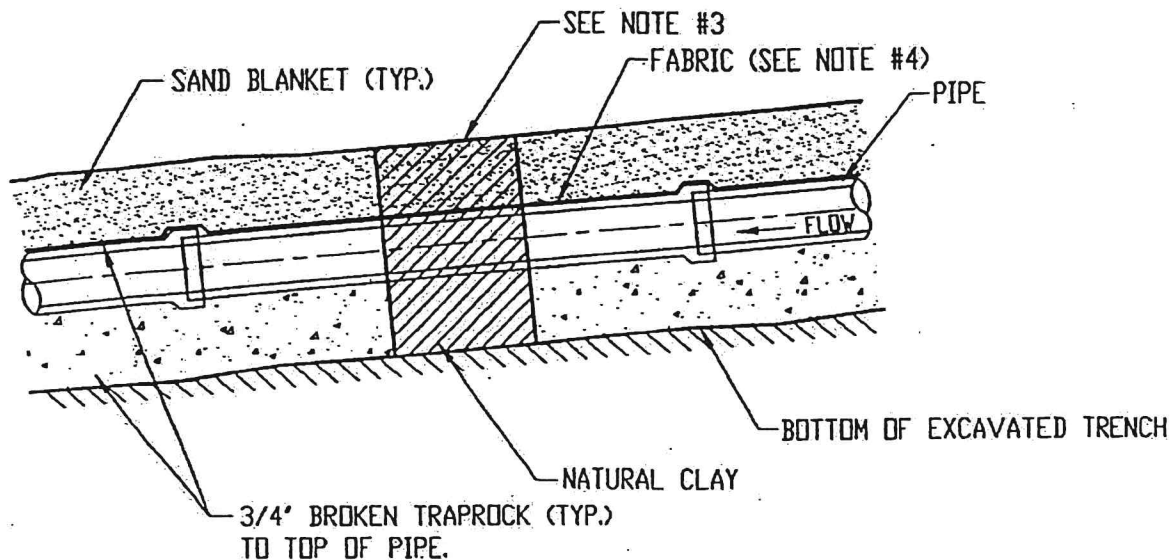
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PLAN VIEW



PROFILE VIEW

**NOTES:**

1. CLAY DRAINAGE STOPS TO BE LOCATED ON UPSTREAM SIDE OF MANHOLES, AND SPACED A MAXIMUM OF 100' +/- APART, OR AS DIRECTED BY THE TOWN ENGINEER.
2. WIDTH OF STOP SHALL EXTEND TO UNDISTURBED MATERIAL ON BOTH SIDES OF TRENCH.
3. WHERE ROCK IS ENCOUNTERED, HEIGHT OF STOP SHALL EXTEND TO THE TOP OF ROCK.

**NOTE#4:**

FILTER FABRIC SHALL BE NONWOVEN CLASS 2, WITH PERMITTIVITY OF 0.5 TO 0.1 SEC<sup>-1</sup> AND ADS OF 0.43 mm TO 0.22mm AND SHALL MEET AASHTO M288-96.

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

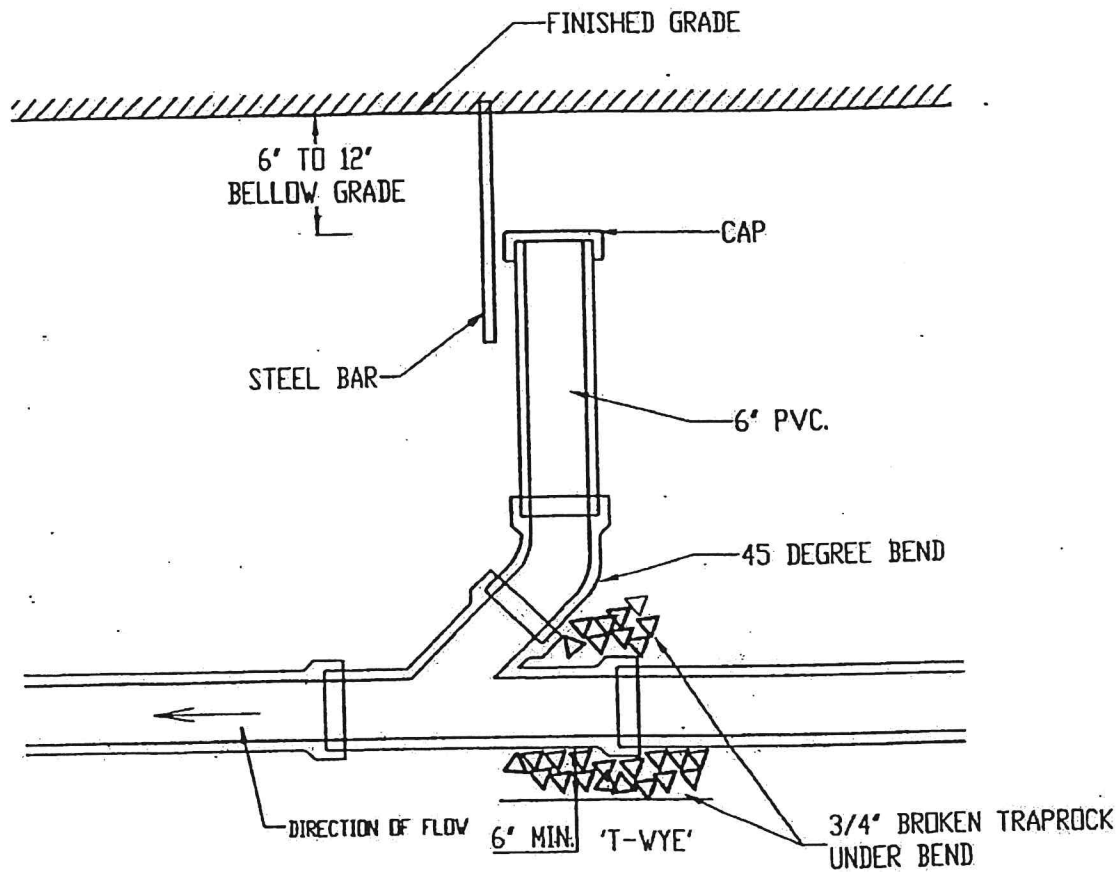
MAY, 2002

NATURAL CLAY  
DRAINAGE STOPS

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NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

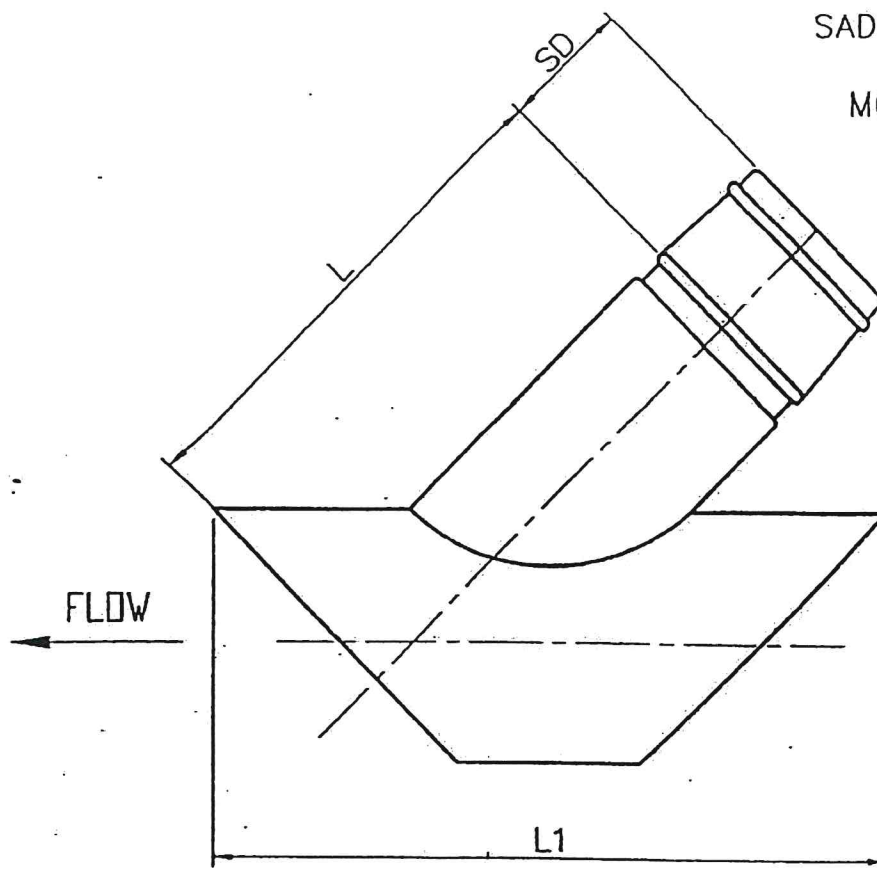
MAY, 2002

TYPICAL CLEANOUT

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WATER POLLUTION CONTROL AUTHORITY



SADDLE WYE CONNECTION

MOLDED SADDLE WYE  
GASKET BRANCH,  
GASKET SKIRT

FITTING SPECIFICATIONS			
SIZE	(SD)	( L )	( L1 )
6"X4'	2,750	10,125	13,375
8"X4'	2,750	11,625	13,500
8"X6'	3,750	13,375	13,500
10"X4'	2,750	13,125	13,500
10"X6'	3,750	14,875	13,500
12"X4'	2,750	14,375	13,500
12"X6'	3,750	16,125	13,500
15"X4'	2,750	16,375	13,500
15"X6'	3,750	18,125	13,500
18"X4'	2,750	18,875	13,500
18"X6'	3,750	20,625	13,500

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

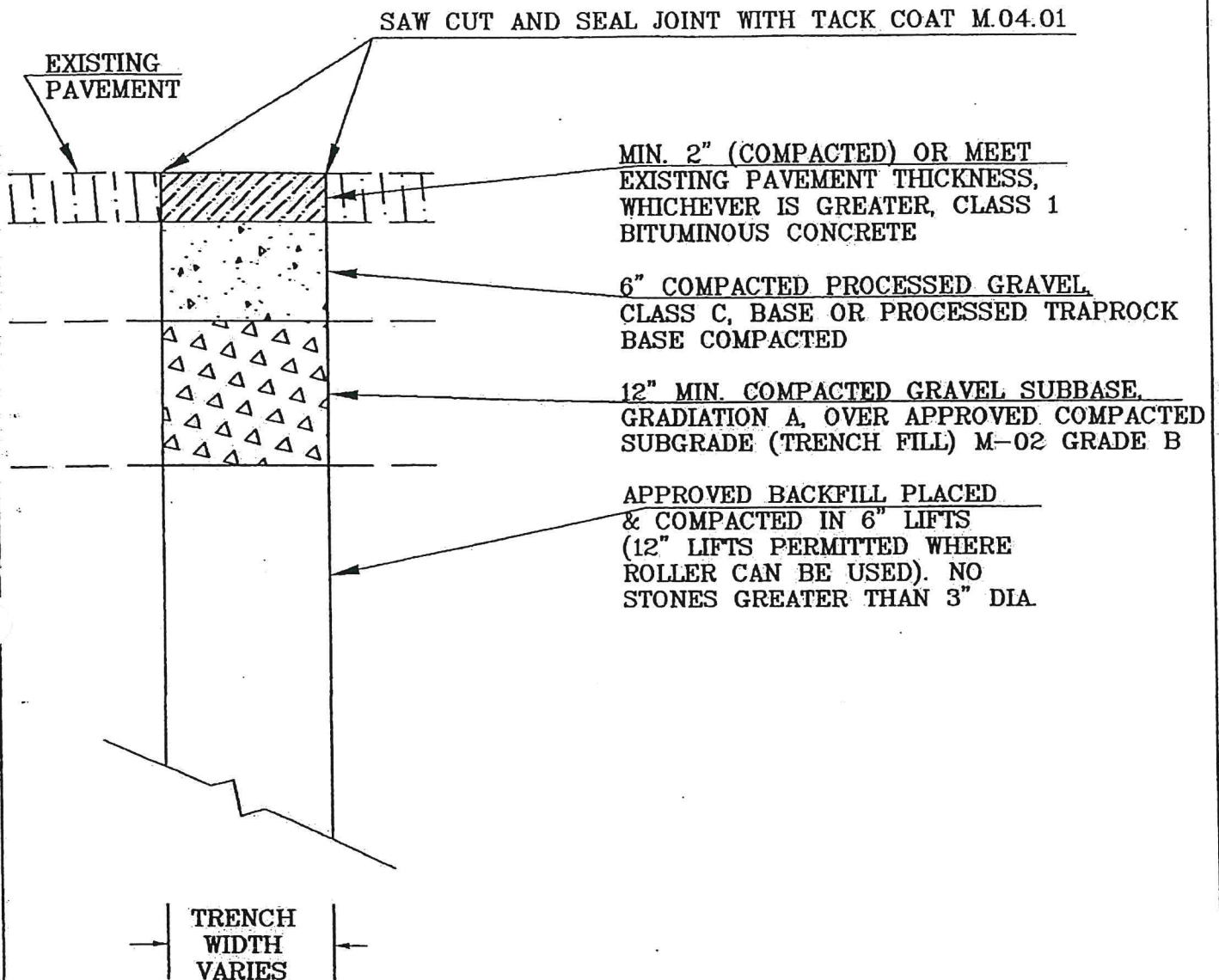
MAY, 2002

HOUSE SERVICE CONNECTOR  
TO SANITARY MAIN

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WATER POLLUTION CONTROL AUTHORITY



SECTION  
N.T.S

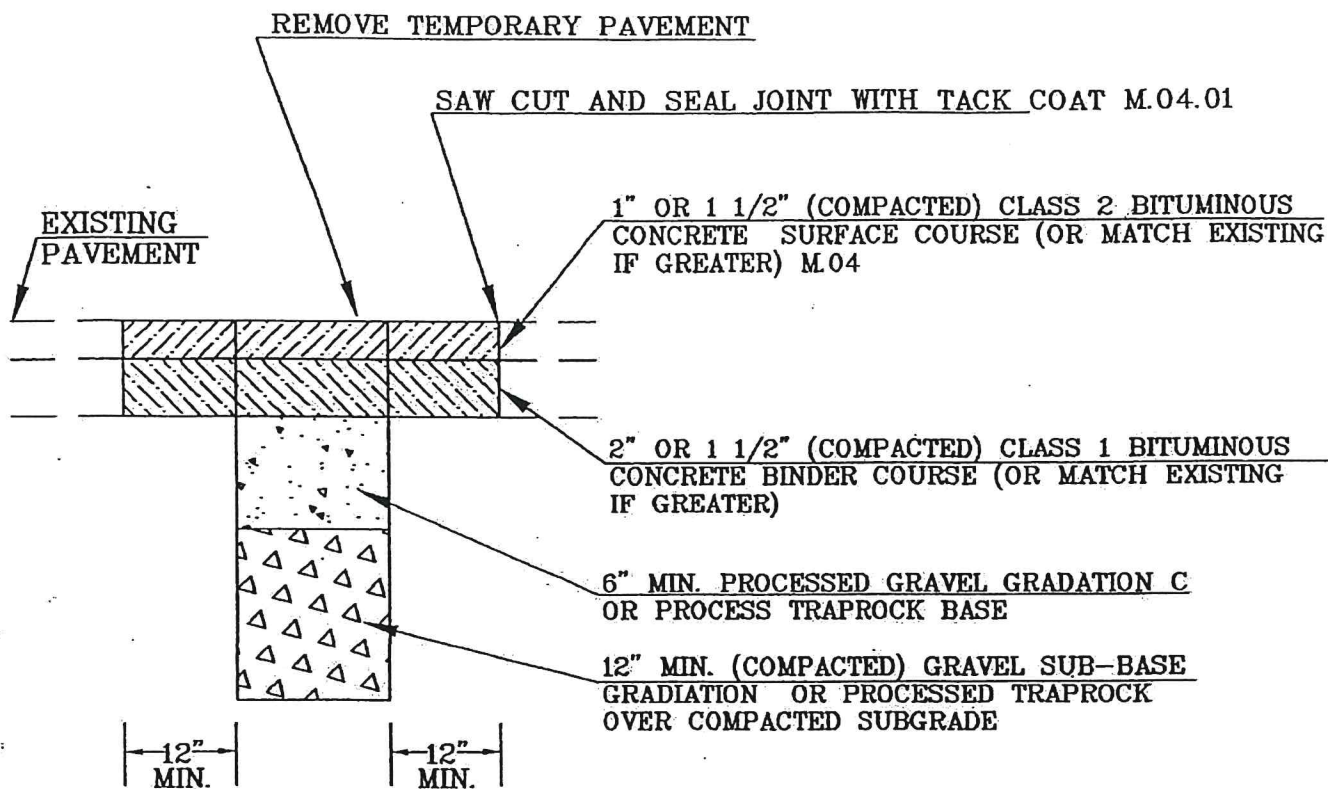
NOTES:

1. ALL PAVEMENT TO BE SAW CUT PARRALLEL WITH AND/OR PERPENDICULAR TO, THE CENTER-LINE OF PIPE OR TRENCH.
2. ALL MATERIALS SHALL MEET CT DOT FOR 814A, AS AMENDED

TOWN OF  
LISBON

TEMPORARY PAVEMENT  
PATCHING DETAIL

DATE:  
MAY 13, 2002



TRENCH  
WIDTH  
VARIES  
SEE  
TYPICAL  
TRENCH  
SECTION

SECTION  
N.T.S

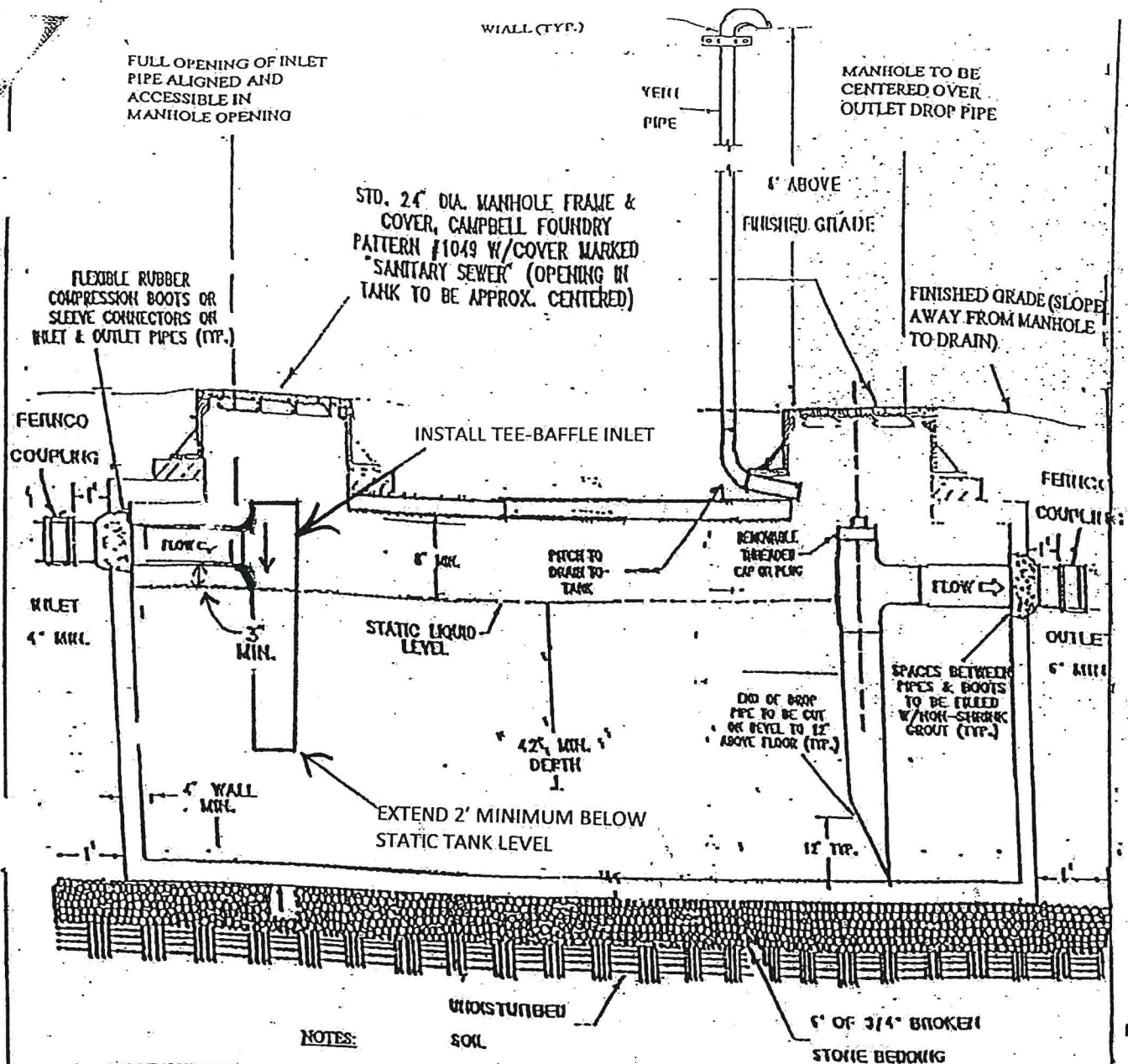
NOTES:

1. ALL PAVEMENT TO BE SAW CUT PARRALLEL WITH AND/OR PERPENDICULAR TO, THE CENTER-LINE OF PIPE OR TRENCH.
2. ALL MATERIALS SHALL MEET CT DOT FOR 814A, AS AMENDED

TOWN OF  
LISBON

PERMANENT PAVEMENT  
PATCHING DETAIL

DATE:  
MAY 13, 2002



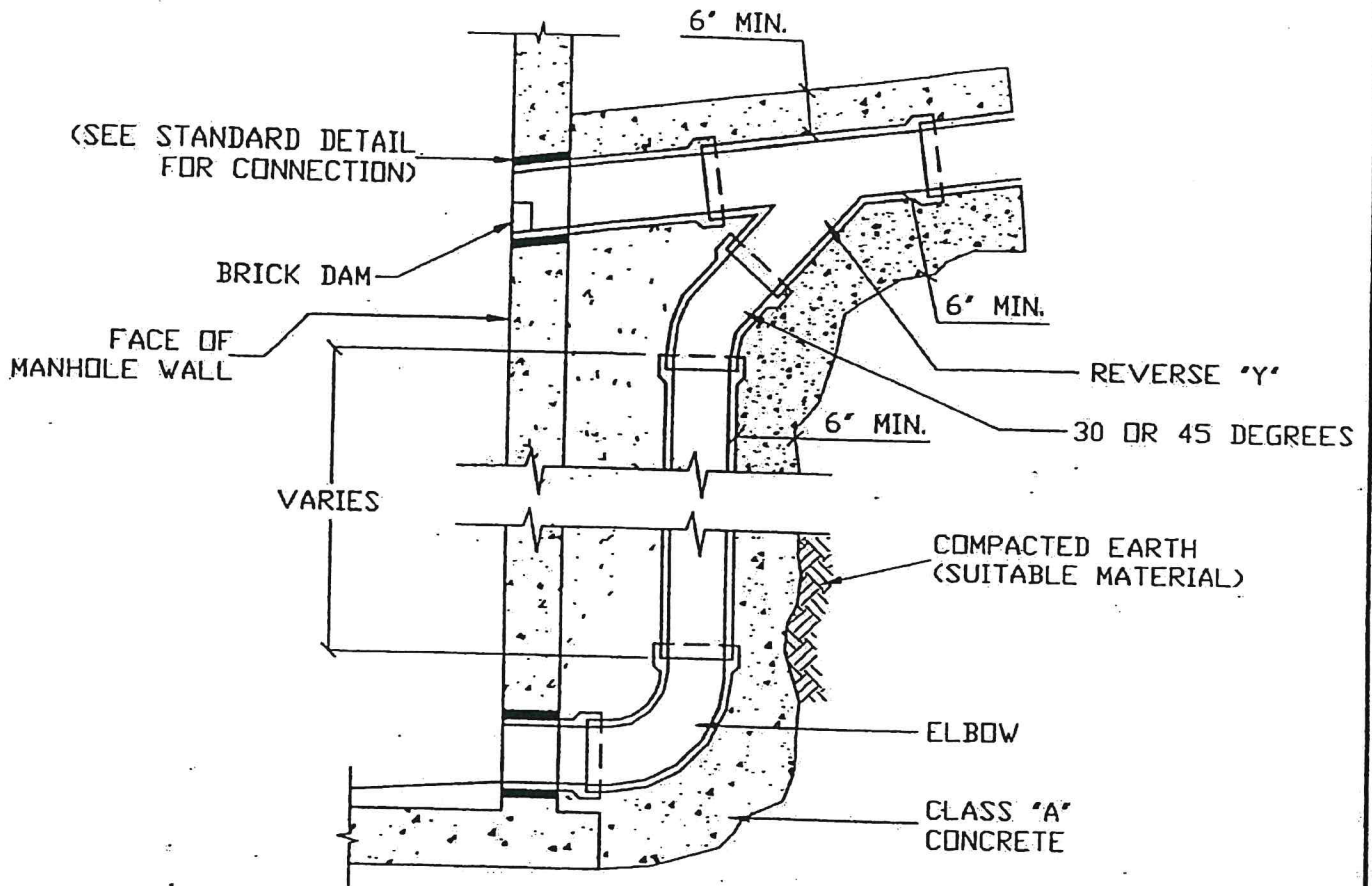
### LISBON WPCA GREASE TRAP DETAIL

BOROUGH OF JEWETT CITY  
DEPARTMENT OF PUBLIC UTILITIES  
SEWER DIVISION

SANITARY SEWER GREASE TRAPS

APPROVED

MAY 13, 2003



## ELEVATION SECTION

### NOTE:

PRECAST OUTSIDE DROPS MAY BE  
ACCEPTABLE UPON APPROVAL OF  
THE W.P.C.A.

NOT TO SCALE

TOWN OF LISBON  
STANDARD DETAIL

MAY, 2002

MANHOLE  
OUTSIDE DROP INLET

REVISED:

APPROVED

WATER POLLUTION CONTROL AUTHORITY