

## Chapter 168

### SEWERS

#### ARTICLE I Connections

- § 168-1. Definitions.
- § 168-2. Use of sewers required.
- § 168-3. Use of other facilities prohibited; exceptions.
- § 168-4. Time limit for making connections.
- § 168-5. Permit required; fee.
- § 168-6. Responsibility for costs; requirements.
- § 168-7. Unlawful acts; prohibited discharges.
- § 168-8. Grease traps.
- § 168-9. Authority to disconnect unlawful connections.
- § 168-10. Opening of clogged sewers.
- § 168-11. Violations and penalties.

#### ARTICLE II Sewer Rental Fees

- § 168-12. Imposition of sewer rental charges.

§ 168-13. Payment of charges; penalty for late payment.

§ 168-14. Unpaid charges to constitute lien.

§ 168-15. Treatment of waste by special agreement with industrial concerns.

#### ARTICLE III

#### Building Sewer and Sanitary Sewer Lateral Installation

§ 168-16. Definitions.

§ 168-17. Permits.

§ 168-18. Inspection and testing.

§ 168-19. Protection during installation.

§ 168-20. Excavation and backfilling.

§ 168-21. Piping.

§ 168-22. Grinder pumps.

#### Sewer Detail Drawings

**[HISTORY: Adopted by the Borough Council of the Borough of Camp Hill as indicated in article histories. Amendments noted where applicable.]**

#### GENERAL REFERENCES

Building construction — See Ch. 79.  
Uniform Construction Code — See Ch. 90.  
Drainage facilities — See Ch. 100.

Stormwater management — See Ch. 174.  
Subdivision and land development — See Ch. 179.  
Zoning — See Ch. 200.

---

ARTICLE I  
Connections

[Adopted 7-22-1963 by Ord. No. 656, approved 7-23-1963]

**§ 168-1. Definitions.**

As used in this article, the following terms shall have the meanings indicated:

**CAPACITY-RELATED FACILITIES** — Includes but is not limited to treatment, pumping, trunk, interceptor and outfall mains, storage, sludge treatment or disposal, interconnection or other general system facilities that provide existing service. [Added 7-14-2004 by Ord. No. 1015, approved 8-5-2004]

**DESIGN CAPACITY** — With regard to residential customers, the permitted or rated capacity of facilities expressed in million gallons per day. Design capacity may not be expressed in terms of equivalent dwelling units. [Added 7-14-2004 by Ord. No. 1015, approved 8-5-2004]

**OWNER** — Any individual, partnership, company, association, society, trust, corporation or other group or entity within the Borough of Camp Hill. [Added 7-14-2004 by Ord. No. 1015, approved 8-5-2004]

**PERSON** — Includes any natural person, partnership, association, firm or corporation. The singular shall include the plural, and the masculine shall include the feminine and the neuter.

**RESIDENTIAL CUSTOMER** — Any person owning or occupying a residential property which is connected to or entitled to connect to the sanitary sewer system of the Borough of Camp Hill, and shall also include those persons developing property for residential dwellings that require multiple tapping fee permits. [Added 7-14-2004 by Ord. No. 1015, approved 8-5-2004]

**§ 168-2. Use of sewers required.** [Amended 12-9-1987 by Ord. No. 891, approved 12-9-1987]

It shall be unlawful for any person owning or occupying any property in the Borough of Camp Hill to dispose of any sewage or waste liquid from such premises otherwise than into and through the sanitary sewer system of the Borough. Such sewage disposal and the connections with the sanitary sewer system for the purpose thereof shall be governed strictly by the provisions of this article and shall conform to all the provisions and requirements set forth herein.

**§ 168-3. Use of other facilities prohibited; exceptions.** [Amended 12-9-1987 by Ord. No. 891, approved 12-9-1987]

It shall be unlawful for any person to use or maintain on any property owned or occupied by him in the Borough of Camp Hill any privy vault, cesspool or septic tank. As soon as any property shall be connected to the sewer system, the use of any other receptacle previously used for sewage disposal shall be discontinued, and such receptacle shall, within 90 days after notice from the Borough Council, be removed and/or filled up by the owner of the property in a manner satisfactory to the Board of Health of the Borough, in default of which the Borough

Council may direct the Board of Health to remove and/or fill up such receptacle and shall collect the cost of such removal and/or filling, with an additional amount of 10%, from the owner of such property in the manner provided by law.

**§ 168-4. Time limit for making connections.**

The owner of every property in the Borough, before occupying any building upon such property in the case of properties upon which buildings shall hereafter be constructed or within 90 days after notice from the Borough Council in the case of properties to which the sanitary sewer system of the Borough shall hereafter become available, shall cause such property to be connected to the sanitary sewer system as herein required, in default of which the Borough shall cause such connection to be made and shall collect the cost thereof, with an additional amount of 10%, from such property owner in the manner provided by law.

**§ 168-5. Permit required; fee. [Amended 8-8-1966 by Ord. No. 720, approved 8-8-1966; 12-9-1987 by Ord. No. 891, approved 12-9-1987; 6-8-1994 by Ord. No. 935, approved 6-8-1994]**

- A. No connection to the sanitary sewer system of the Borough shall be made until application for a permit therefor has been made by the owner of residential property or residential customer to the Borough Manager, and the permit shall not be issued until the applicable tapping fee established by resolution in accordance with the provisions of Act 57 of 2003, which shall be for the use of the Borough, shall have been paid to the Borough Manager. **[Amended 7-14-2004 by Ord. No. 1015, approved 8-5-2004]**
- B. A separate permit shall be required for every house connection. A separate house sewer shall be required for each individual building or house, whether constructed as a detached unit or as one of a pair or row, but a single house sewer shall be permitted to serve an apartment house or other permanently multiunit structure of which the individual apartments or units may not be subject to separate ownership. When necessary or advisable to make any alteration or repair to any lateral or house connection already in place, application shall be made to the Borough Manager in the same manner as for new connections, and the sum of \$2,000 shall be paid for the permit as in the case of a permit for a new connection.
- C. No connection to the sanitary sewer system of the Borough shall be made until application for a permit therefor has been made by the owner of commercial property to the Borough Manager, and the permit shall not be issued until the applicable tapping fee established by resolution in accordance with the provisions of Act 57 of 2003, which shall be for the use of the Borough, shall have been paid to the Borough Manager. **[Amended 7-14-2004 by Ord. No. 1015, approved 8-5-2004]**
- D. The tapping fee applicable to all connections to the sanitary sewer system of the Borough shall be based on the fee schedule duly adopted from time to time by resolution of the Borough Council. No permit shall be issued to an owner of property within the Borough until such time as the applicable tapping fee has been paid. **[Added 7-14-2004 by Ord. No. 1015, approved 8-5-2004]**

**§ 168-6. Responsibility for costs; requirements. [Amended 12-21-1965 by Ord. No. 711, approved 12-21-1965; 6-8-1994 by Ord. No. 935, approved 6-8-1994]**

The cost of connecting and maintaining the lateral line from a house or building to the sewer main, whether at the curb or beyond, shall be at the expense of the owner of the property, and all connections and lines made after the enactment of this article shall be made in accordance with the following regulations:

- A. Information as to where the lateral line may be connected shall be obtained from the Borough Manager, and such connection shall be made at such location.
- B. The lateral line shall not be covered or concealed, nor shall such line be connected to the Borough's sanitary sewer system, until after inspection and approval by the Borough Manager or his/her designated agent.
- C. Lateral sewer lines shall be not less than four inches in inside diameter and shall not be laid on a grade from the building to the curb of less than 2% or 1/4 inch per running foot.
- D. Lateral lines must be constructed of materials meeting specifications as from time to time adopted by action of the Borough Council and in effect at the time of construction, and no other.

**§ 168-7. Unlawful acts; prohibited discharges.**

The following shall be unlawful:

- A. Any connection which will permit roof water, stormwater, surface water or water from subsurface groundwater drainage pipes to enter the sanitary sewer system.
- B. Any connection from any cesspool, septic tank, well, privy vault or any other receptacle for sewage purposes to the sanitary sewer system, except that specially designed sump pumps or sewage wells in buildings of lower elevation than the sewer outside may be connected with such sewer.
- C. For any person, whether the owner or user of any property, to cause to be drained or to permit to flow into any part of the sanitary sewer system any corrosive, volatile, suffocating, flammable or explosive liquid, gas, vapor, substance or material of any kind.
- D. For any establishment from which oil, fibers, grease, silt or grit may be discharged to cause or permit to flow into the sanitary sewer any substance which may form a deposit tending to cause a stoppage or to injure in any way the sewers or the sewage treatment works or which would tend to interfere with the successful operation of the same, provided that any objectionable industrial wastes from any establishment shall be discharged into the laterals or sewers only after having been treated in a special treatment process, specifically approved in writing by the Borough Council, which will render the industrial waste or effluent nonobjectionable to either the sewer, the sewage treatment works or the successful operation thereof, and in case the industrial wastes from any establishment cannot be treated to produce effluent nonobjectionable to either the sewer, the sewage treatment works or the successful operation of the same, they shall be

excluded from the sewer entirely. Regardless of any approval by the Borough Council of special industrial waste treatment works, upon failure of said special treatment works to produce a nonobjectionable effluent or upon its causing a stoppage in the sewer or injury to any part of the sewers or sewage treatment works or tendency to interfere with the successful operation thereof, then the discharge therefrom shall be immediately discontinued or abandoned and said industrial wastes excluded from the sewers until such time as a successful special treatment process may be installed.

- E. To discharge or permit to enter the sewer system any garbage, scraps, vegetables, straw, shavings, ashes, rags or other material capable of causing obstruction, nuisance or injury to the sewer system; provided, however, that garbage disposal units approved by the Borough Manager may be used on any property.
- F. To discharge or permit to enter the sewer system any steam or hot water from boilers, steam bars or coffee heaters or any overflow or hot waste matter from steam heating systems or any saltwater from any establishment.

**§ 168-8. Grease traps.**

Every hotel, restaurant, boardinghouse or other public eating place shall install adequate grease traps, of the type and size approved by the Borough Manager, in their system of plumbing or piping, and such grease traps shall be cleaned at sufficiently frequent intervals to prevent grease from entering the sewer system.

**§ 168-9. Authority to disconnect unlawful connections.**

The Borough Manager shall have the authority to close up or disconnect from the sewer system any lateral or house connection used in violation of any of the provisions of § 168-6 or § 168-7 of this article and to order or require such connection to be made and such steps to be taken so that sewage and other waste shall be carried from such premises without violation of any of the provisions of this article.

**§ 168-10. Opening of clogged sewers.**

- A. In case of any obstruction or clogging of any lateral or house connection, the same may be opened by the employees of the Borough under the direction of the Borough Manager, upon application of the owner of the property to the Borough Manager, which application shall contain an agreement by such owner to reimburse the Borough for all expenses incurred in such opening, regardless of where the obstruction is located. Should replacement of part of the lateral be necessary, the Borough will be responsible for the cost of the replacement from the curblin to the sewer main, and the owner shall be responsible for the cost of the replacement from the curb to the house.
- B. Should the owner engage a private plumber to open a clogged sewer lateral or to repair a sewer lateral, the owner or said plumber shall notify the Borough office of the location and nature of the work to be done. This shall not relieve any person or firm from procuring any permit required by this article or any other ordinance.

**§ 168-11. Violations and penalties. [Amended 3-10-1970 by Ord. No. 774, approved 3-10-1970; 12-9-1987 by Ord. No. 891, approved 12-9-1987]**

Any person who shall violate or fail to comply with any of the provisions of this article or of any notice issued by the Borough by authority of this article shall, upon conviction thereof by the District Justice, be sentenced to pay a fine of not more than \$300 and costs of prosecution and, in default of payment of such fine and costs, to imprisonment in the county jail for not more than 30 days. Each day that a violation or failure to comply shall continue shall constitute a separate offense.

ARTICLE II  
**Sewer Rental Fees**  
[Adopted 6-8-1994 by Ord. No. 936, approved 6-8-1994]

**§ 168-12. Imposition of sewer rental charges.**

A. All owners of property connected or connecting with the sewer lines and the public sewage system, and all of the owners of property who may hereafter connect with and use the same, shall pay annual sewer rentals or charges in semiannual installments, as hereinafter provided, for the use of such sewage facilities based upon the following schedule of rates: [Amended 3-13-1996 by Ord. No. 949, approved 3-13-1996; 12-28-2005 by Ord. No. 1026, approved 12-28-2005]

- (1) Residential: for each single dwelling, \$170 per year for each occasion. (For the purposes of this section, each dwelling unit of a multiple dwelling shall be deemed a single dwelling, except rooming houses where each tenant occupies only one or two rooms using common toilet facilities.)
- (2) Commercial and industrial sanitary waste: for each connection, \$270 per year times the number of EDUs.
- (3) School: for each connection, \$100 per year times the number of EDUs.
- (4) Church: for each connection, \$100 per year times the number of EDUs.
- (5) Equivalent dwelling unit (EDU): shall mean water usage of 225 gallons per day.
- (6) Industrial waste: Additional charges for toxic or strong industrial waste shall be made from time to time as the Council of the Borough of Camp Hill may determine based upon analysis of waste.

B. As used in this section, the following terms shall have the meanings indicated:

EQUIVALENT DWELLING UNIT (EDU) — Water usage of 225 gallons per day.

**§ 168-13. Payment of charges; penalty for late payment.**

Sewer rentals or charges shall be paid semiannually in accordance with billings for sewage services, except that during the first half year that a residential, commercial or industrial user begins to discharge sewage into the public sewage system, said charges shall be based on a

per diem amount prorated from the time such sewer connection is made until the next following billing period. All charges for sewage service shall be subject to a penalty of 10% if not paid within 30 days after they are due. If not paid within 60 days after due, the net bill plus penalty shall bear interest at the rate of 1/2 of 1% per month or fraction thereof until paid.

**§ 168-14. Unpaid charges to constitute lien.**

Annual sewer rental charges shall be a lien on properties charged with payment thereof, from the effective date of this article, and if not paid after 30 days' notice may be collected in any manner provided by law. In the case where the Borough of Camp Hill has agreed to provide sewer service to a residential dwelling unit in which the owner does not reside, the Borough of Camp Hill shall notify the owner and the tenant within 30 days after the tenant's bill for that service first becomes overdue. Such notification shall be provided by first-class mail to the address of the owner, provided to the Borough of Camp Hill by the owner and provided to the billing address of the tenant, respectively.

**§ 168-15. Treatment of waste by special agreement with industrial concerns.**

No statement contained in this article shall be construed as to prevent any special agreement or arrangement between the Borough of Camp Hill and any industrial concern whereby an industrial waste of any strength or character may be accepted by the Borough of Camp Hill for treatment, subject to payment therefor by the industrial concern.

ARTICLE III

**Building Sewer and Sanitary Sewer Lateral Installation**  
**[Adopted 7-13-2005 by Ord. No. 1023, approved 7-13-2005]**

**§ 168-16. Definitions.**

Unless clearly stated otherwise, the meanings of terms used in this article shall be as follows:

**BUILDING SEWER** — The extension from the sewage drainage system of any structure to the lateral of a sewer serving the structure.

**IMPROVED PROPERTY** — Any property upon which there is erected a structure intended for continuous or periodic habitation, occupancy or use by human beings or animals and from which sanitary sewage shall or may be discharged.

**LATERAL** — The part of the sewer system extending from the main sewer in the street or right-of-way to the curblin or, if there shall be no curblin, to the property line, or if no such lateral shall be provided, then "lateral" shall mean that portion of, or place in, a sewer which is provided for connection of any building sewer.

**SANITARY SEWAGE** — The normal water-carried household and toilet wastes from any improved property.

SEWER SYSTEM — The sanitary system including the mains, pumping stations, and any and all appurtenances thereto, for collection, transport, treatment and disposal of wastewater, as owned by the Borough of Camp Hill for operation and use.

**§ 168-17. Permits.**

No connection shall be made nor shall construction or modification of a building sewer or lateral be commenced unless and until the owner of the property on which the work is to be done, or the contractor who is to do the work as the owner's representative, shall have applied for and obtained a sanitary sewer connection and repair permit from the Borough. Other permits that may be needed for the work, depending on the work scope, may include:

- A. Borough street cut permit: needed if the work will include excavation within a Borough street.
- B. Pennsylvania Department of Transportation highway occupancy permit: needed if the work will occur within the right-of-way of an existing state highway.

**§ 168-18. Inspection and testing.**

Sanitary sewage will be admitted to the sewer system only after satisfactory inspection of the building sewer and lateral by the Borough. The property owner or contractor shall give the Borough a minimum of 24 hours' advance notice of the date when work is scheduled to begin and a minimum of two hours' advance notice for an inspection. Inspections and tests shall only be performed during regular Borough business hours. The discharge of roof, storm, surface, or building foundation water or drainage into a building sewer or lateral is expressly prohibited.

- A. Testing equipment. The contractor will be responsible for providing all test equipment. Control valve and test gauge apparatus shall be located above grade during testing to allow for observation by the Borough. Testing apparatus must be equipped with necessary piping, control valves and gauges to control pressure within the piping test section and to monitor pressure throughout the test.
- B. Testing apparatus shall have an approved pressure-relief device set at 10 psi to prevent accidental overloading. The test gauge shall be recently calibrated and read in one-half-pound increments.
- C. Before tests are conducted, the pipeline must be cleaned until free of dirt, silt, and construction debris. A means to collect the debris during the cleaning of the pipeline must be provided.
- D. After the pipeline is cleaned and partially backfilled to the extent required to hold the pipe in place, but with the top of the pipe still visible, a low-pressure-air line acceptance test shall be performed in accordance with the following:
  - (1) Seal the pipeline at the connection to the main sewer or lateral end test tee, and at the property owner's structure, using pneumatic-type plugs. Test the seal plugs first on a short length of pipe outside the trench before performing the actual in-trench testing.

- (2) Introduce low-pressure air slowly into the sealed pipe until internal air pressure reads five psi. Introduce air until the pressure is stabilized, after which the test period should begin. A successful test is performed when no drop in air pressure is observed for a minimum of 180 seconds. The contractor may be required to hold the pipeline under test air pressure while performing the remainder of the backfilling. This requirement is at the discretion of the Borough to ensure that no leakage is produced during backfilling.
  - (3) If the installation does not pass the Borough's test, the contractor must identify the source of the leakage and make necessary repairs. After repairs are completed, the pipeline must be retested at the contractor's expense and repairs made to any defects found.
- E. The Borough will make a final inspection of the installed pipeline upon completion of surface restoration.
- F. Before the connection of any preexisting building sewer or lateral to the sewer system, the building sewer or lateral must pass all required tests to the satisfaction of the Borough.

**§ 168-19. Protection during installation.**

The contractor shall make every effort to protect the public during installation of the building sewer or lateral.

- A. Total obstruction of streets, roads, or highways is not allowed. Do not partially obstruct streets, roads, and highways unless the Borough or governing agency authorizes obstruction in writing. Employ all necessary measures to keep street, roads or highways open and safe for traffic. All work performed within state highways must meet the requirements of the latest edition of the Commonwealth of Pennsylvania, Pennsylvania Code, Title 67, Transportation, Chapter 459, Occupancy of Highway by Utilities. The regulations are made part of these specifications by reference. Materials and safety devices provided for the purpose of protecting the work and the safety of the public, and for maintaining and protecting traffic, shall conform to the requirements specified in Section 901 of the current edition of the Commonwealth of Pennsylvania Department of Transportation Specifications Publication 408, as supplemented. Safety devices shall also conform to the requirements specified in the current edition of the Pennsylvania Code, Title 67, Transportation, Chapter 203, Work Zone Traffic Control, which complements Section 901.
- B. The contractor shall pay the costs of inspection by personnel of the Commonwealth of Pennsylvania. When working within the Borough streets, the contractor is required to obtain a street cut permit from the Borough prior to the start of construction. Maintain a straight and continuous walkway on sidewalks and crosswalks, at least three feet wide and free of obstruction. Do not obstruct fire hydrants. At the shutdown of work at the end of the day, streets shall remain open and safely passable for both public and emergency access. Notify the Borough police of any road closure, whether it is daytime or nighttime.

- C. The contractor shall assume all risks pertaining to the presence of overhead or underground public utility and private lines, pipes, conduits and support work for the same, existing structures and property of whatever nature. Damages and expenses for direct or indirect injury to such structures or to any person or property by reason of them or by reason of injury to them by his/her work rests solely with the contractor. The contractor must comply with the provisions of the Underground Utility Line Protection Law, as amended. The Pennsylvania One Call System telephone number is 1-800-242-1776.
- D. The provisions of the Occupational Safety and Health Act of 1970 (OSHA) of the U.S. Department of Labor shall be complied with in the performance of the work pursuant to these specifications. Observance of and compliance with the act is the sole responsibility of the contractor, without responsibility whatsoever on the part of the Borough. The duty of enforcement of this act lies with the U.S. Department of Labor only.

**§ 168-20. Excavation and backfilling.**

The property owner and contractor are solely responsible for the conditions of excavation. The Borough assumes no legal or financial responsibility for excavation, caving or slipping, or damages to persons or property resulting from excavation and backfill activities.

- A. Temporary fences surrounding excavation shall be erected to prevent unauthorized persons entering the excavation area. Substantial barricades shall be furnished and erected by the contractor at crossings of the trench or along the trenches to prevent public access.
- B. Cover open excavation when work therein is suspended or left unattended, such as at the end of a workday. For such covers, use materials of sufficient strength and weight to prevent their removal by unauthorized persons.
- C. Blasting is not allowed in performance of excavation work. Remove rock by such mechanical means and methods as developed specifically for rock removal without blasting. Additionally, rock removal shall be performed in accordance with the requirements of state and local laws, rules, and regulations and utility owner requirements.
- D. Excavate trench banks to vertical lines and not less than the outside pipe diameter plus 12 inches from subgrade elevation to an elevation at least 12 inches above the top of the outside barrel of the pipe. Where shoring is required, the dimensions apply to the inside face of shoring. From a point 12 inches above the top of the outside barrel of the pipe, keep trench banks as nearly vertical as possible for trenches made in roadways. In no case shall the trench width exceed the outside pipe diameter plus 40 inches. Where pipelines are constructed in other than streets or roadways, the maximum trench width is at the discretion of the property owner, only if construction is kept entirely on the limits of the property line without damaging adjacent properties.
- E. On-site excavated soil or soil-rock mixed material free of topsoil, vegetation, lumber, metal, refuse, and rocks or hard objects larger than six inches in any dimension may be used for backfilling within the right-of-way or on private property. The rock to soil ratio

shall not exceed one part rock to three parts soil. Excavated materials that meet the requirements for backfilling should be separated and properly stored until backfilling begins. All other material should be disposed of properly in accordance with all applicable rules and regulation. Do not use materials such as house ash, putrescible refuse and other such materials considered unsatisfactory by the Borough for backfilling. Do not permit excavations to be used as dumping areas for refuse.

- F. Do not use frozen backfilling materials or place backfilling on frozen subgrade of trench surfaces. Should there be a deficiency of on-site backfilling material, provide acceptable material. Where the backfill is placed in other than street, place the backfill in six-inch compacted layers over the initial backfill in a manner that does not disturb the pipe. Replace topsoil to the approximate depth of existing topsoil.
- G. Where backfill is within the right-of-way of an existing state highway, the work is subject to inspection by representatives of the Commonwealth of Pennsylvania Department of Transportation (PDT) and must conform to all its requirements. General requirements include:
  - (1) Paved areas. Over initial backfill, place an aggregate backfill, select granular material (PDT2RC), which meets the requirements of the PDT, to the bottom of the temporary or permanent paving.
  - (2) Unpaved shoulders. Over initial backfill, place the aggregate backfill to existing grade.
  - (3) Unpaved areas. Over initial backfill, place aggregate backfill to the bottom of the topsoil. Replace topsoil to the approximate depth of existing topsoil and crown to such height as required by the PDT inspector.
- H. Where backfill is within existing and proposed Borough streets, perform backfill operations in accordance with the following:
  - (1) Over initial backfill, place an aggregate backfill, select granular material (PDT2RC), which meets the requirements of the PDT, to the bottom of the temporary or permanent paving.
  - (2) Unpaved shoulders. Over initial backfill, place the aggregate backfill to existing grade.
- I. All shoring materials and installations shall conform to federal (OSHA), state and local laws, rules, regulations, requirements, precautions, orders, and decrees. The responsibility for inspection and determination of compliance and enforcement lie with said agency and department and not with the Borough. Underground pipes or conduits exposed as a result of excavation shall be adequately supported for the entire length of their exposure. Supports shall be installed in a manner that exposed pipes and conduit not become dislodged or break during backfilling. Trenches should be kept free from water until pipe joints are secured and inspections and tests have been performed. Under no circumstances should pipe be laid in water or on bedding containing frost.

- J. Aggregate bedding. Use select granular material (2RC) conforming to the requirements of the Commonwealth of Pennsylvania Department of Transportation (PDT) Publication 408, Section 703.3. Slag aggregates are not allowed.
- K. Pipe zone bedding and initial backfill. Use coarse aggregate conforming to PDT Section 703.2 (AASHTO No. 8). Place bedding and initial backfill in a four-inch layer in such a method not to damage or disturb the pipe. The minimum height of the initial backfill shall be 12 inches above the pipe.
- L. Compacting. All backfill material must be properly compacted according to regulations of the appropriate authority. Such authority should approve mechanical compactors and tampers.
- M. Streets, sidewalks, curbs, and all other public property disturbed during construction shall be restored to as-new condition.
- N. Warning tape. Continuous warning tape shall be provided in all trenches for purposes of identification and early warning during future trenching or other excavations. The underground warning tape shall be a magnetic polyethylene tape, a minimum of three inches in width, with a minimum lettering of one inch. Tapes shall be buried at a depth of six inches below finished grade. In pavement, tapes shall be buried six inches below the bottom of the road subbase.

### **§ 168-21. Piping.**

Install piping in accordance with the detailed drawings attached hereto and made part of these specifications.<sup>1</sup> Provide a minimum depth of four feet of cover over pipelines for frost protection.

- A. Elastomeric materials used in pipelines shall be suitable for continuous contact with domestic sewage.
- B. Polyvinyl chloride (PVC) pipe. Schedule 40 PVC pipe with a diameter of four or six inches that is properly marked should be used for gravity installations. The pipe should have a hydrostatic design stress of 2,000 psi and designated PVC 1120.
- C. Ductile iron pipe (DIP). DIP shall be Class 50 with push-on or mechanical-style rubber gasket joints. All fittings shall be gray iron or ductile iron. Pipes and fitting should all be properly lined and coated. DIP should be used only when approved by the Borough in writing.
- D. Where new laterals are to be provided, the contractor shall only use materials approved by the Borough. Use fitting types as appropriate to the main sewer being connected to, unless otherwise instructed by the Borough.
- E. PVC saddles. PVC saddles should be correctly contoured for outside diameter of the pipe and incorporating ring gasket bell outlet for SDR-35 PVC pipe or Schedule 40 PVC

---

1. Editor's Note: Sewer detail drawings are included at the end of this chapter.

adapter or solvent weld outlet for PVC adapter (or solvent weld outlet for Schedule 40 PVC lateral pipe).

- F. Cast-iron saddles (for connection to other than plastic sewer mains). Use saddle correctly contoured for outside diameter of the pipe and incorporating a gasket and band assembly.
- (1) Saddle body shall be Class 35 cast iron and coated heavily inside and out with a heavy coat of black asphaltum-type paint.
  - (2) Gasket shall be a rubber compound (neoprene) tubular O-ring design.
  - (3) The band shall be made of Type C-304 stainless steel band assembled with two three-eighth-inch Type -304 stainless steel T-bolts, washers and hex nuts.
  - (4) Provide bell inlet saddle suitable for solvent weld connection of Schedule 40 PVC.
- G. Make connections to the main sewer incorporating a saddle connection. Core bore a hole in the sewer of proper size using a machine specifically designed for the purpose; no other means of making the hole is permitted. Notify the Borough of sewer main tap after the hole is cut for inspection.
- H. Pipe installation. Pipe shall be laid at a minimum grade of 1% with the best possible alignment. Pipe shall have maximum cover possible to protect the pipe from frost damage. All PVC solvent welds should be properly primed. All joints should be absolutely watertight. No transition from one pipe material to another is permitted without special manufactured adaptors designed specifically for that purpose. Pipeline bends shall not be greater than 45°, except with authorization from the Borough.
- I. Traps. A trap and air intake pipe must be provided for each building sewer, as shown on the attached drawings,<sup>2</sup> unless all plumbing fixtures within the structure to be served are properly trapped and vented. The top of the air intake pipe shall extend a minimum of six inches above the ground surface to prevent surface water from entering and shall be provided with a cap sufficient to prevent the entrance of precipitation.
- J. Building sewers shall not exceed 50 feet without having a cleanout installed. Cleanout shall include a riser of the same material and size of building sewer and lateral. Caps can either be of cast brass or PVC raised lug design.
- (1) If in a location of traffic, a cap protection casting shall be installed to protect the riser and cap from damage.
  - (2) Cleanout risers at connections to laterals and just outside the building wall shall be at grade but must remain visible.
  - (3) Cleanout risers located in all other areas, except at test tees at the street and building, may be capped with a watertight cap approximately two inches below grade. Install a short, six-inch-long piece of ten-inch steel well casing surrounding the cleanout cap to promote future detection of cap location.

---

2. Editor's Note: Sewer detail drawings are included at the end of this chapter.

**§ 168-22. Grinder pumps.**

Structures that cannot be served by gravity building sewers meeting the requirements specified in § 168-19 shall be provided with a complete grinder pump system to transport sewage to the sanitary sewer. The grinder pump system shall include a building sewer from the structure to the grinder pump basin, the grinder pump, motor, basin, control panel, and pressure lateral between the basin and point of connection to the lateral. (Refer to the detail drawing.<sup>3</sup>) The property owner shall maintain ownership of the grinder pump system and shall be fully responsible for its operation, maintenance, and repair.

- A. For new grinder pump systems not provided by the Borough, submit for approval completely dimensioned shop drawings, and submit catalog cuts or other data as required to show evidence of Underwriters Laboratories (UL) listings and approvals on the electric control panel and grinder pump. Also submit details of the antifoatation anchor indicating the size and weight required.
- B. Provide a completely watertight basin, of one-hundred-gallon capacity minimum, and designed to withstand the minimum depth of bury earth load at the proposed tank location. Grinder units shall be a minimum of two horsepower, cast iron, Class 30 motor, with hardened 440C stainless steel cutter and shredding ring, 416 stainless steel shaft, twelve-vane vortex cast iron impeller. The submersible grinder pump shall be designed to reduce all material found in normal domestic and light industrial sewage, including plastics, rubber, sanitary napkins, and disposable diapers, into a finely ground slurry. Acceptable manufactures to include Barnes Model Number SGV-2022L or equal, as approved by the Borough.
- C. Grinder pump units shall comply with the applicable requirements of the Pennsylvania Department of Environmental Protection and the National Sanitation Foundation. The unit must be set on subgrade deemed acceptable by the Borough. In no instance shall units be set on subgrade containing frost.
- D. Use discharge piping of one-and-one-fourth-inch diameter on the simplex unit and one-and-one-half-inch diameter on the duplex unit. Discharge pipe may be SDR 21 PVC (Pressure Class 200 psi.) conforming to ASTM D 2241, or Schedule 80 PVC manufactured from Class 12454-B rigid PVC compounds with a hydrostatic design stress of 13.8 MPa (2,000 psi designated as PVC 1120) and conforming to ASTM D 1785. Use a push-on or compression-type joint with a performance conforming to ASTM D 3139 and with a rubber gasket suitable for domestic sewage service and conforming to ASTM F 477.
- E. Include a check valve, true union ball valve, and hydraulically sealed discharge flange in pump discharge piping. Provide valves of the same type by the same manufacturer, suitable for intended service. Markings factory cast on the bonnet or body of each valve shall indicate the manufacturer's name or mark, year of valve casting, size valve, directional flow arrow and designation of working water pressure. Valve pressure-temperature rating of not less than the design criteria applicable to system components. Valves shall open to the left (counterclockwise). Provide extension stems

---

3. Editor's Note: Sewer detail drawings are included at the end of this chapter.

with bronze bushed stem guides where required. Provide a top support and one intermediate support unless the unsupported stem length exceeds four feet, in which case provide an additional support every two feet of valve stem length. Valve ends shall be threaded in accordance with ANSI B2.1.

- F. Use a ball check valve designed for minimum water working pressure of 150 psi and factory tested to double that pressure before shipment. Check valve bodies to provide excess area through the valves to assure full delivery of line capacity. Include with each unit one separate one-and-one-fourth-inch check valve for installation in the discharge line between the grinder pump and the sewer main. Double union type manufactured from PVC 12454-B conforming to ASTM D 1784 with Vitron O-ring seals.
- G. Provide the pump discharge with a factory-installed true union, manually operated shutoff ball valve. Ball valves shall be full ported, constructed of stainless steel, cast iron, or PVC, with rated pressure of 150 psi.
- H. Install units and associated piping and valving in strict accordance with the manufacturer's instruction and installation manual and in locations and in accordance with detailed drawings.<sup>4</sup> Install units on a six-inch-deep compacted layer of aggregate meeting all requirements. Install pipe zone bedding material as backfill up to the highest pipe connection. Form and pour antil flotation concrete anchors in accordance with all requirements. Use Class B (3,000 psi) concrete.
- I. Provide two-foot-minimum cover over underground electrical cables unless otherwise indicated on the drawings. Make electrical cable penetrations through the tank absolutely watertight. Perform grounding of electrical system and metal enclosures in accordance with Article 250 of the NEC. In addition, use approved grounding connectors only. Clean the surfaces involved in the made-grounds before connecting, and finish the installation with touch-up painting or other protective coating to prevent corrosion.
- J. Appropriately fasten control panel and cable to exterior of the building or post (for post-mounted) using screw-type corrosion-resistant fasteners correct for the particular material. Install the control panel such that the distance from the bottom of the panel to the existing grade measures four feet. If post mounts installation, provide a post of sufficient length to permit three feet of embedment in the ground and the four feet of clearance required.
- K. Perform both exfiltration and infiltration tank watertight tests. Fill the installed units with clear water to the highest tank wall. Allow one hour for stabilization before commencing a three-consecutive-day test. Measure and record the water level at the end and beginning of the test in the presence of the Borough Engineer. For a successful test, the water level must not go up or down in the three days.
- L. Determine a mutually acceptable time for inspections and tests with the unit manufacturer. Conduct the performance test prior to the property owner's electrical wiring and plumbing connections to the grinder pump. Tests shall be conducted as specified herein. Demonstrate to the satisfaction of the Borough the mechanical performance of each unit when operated in accordance with design intent and

---

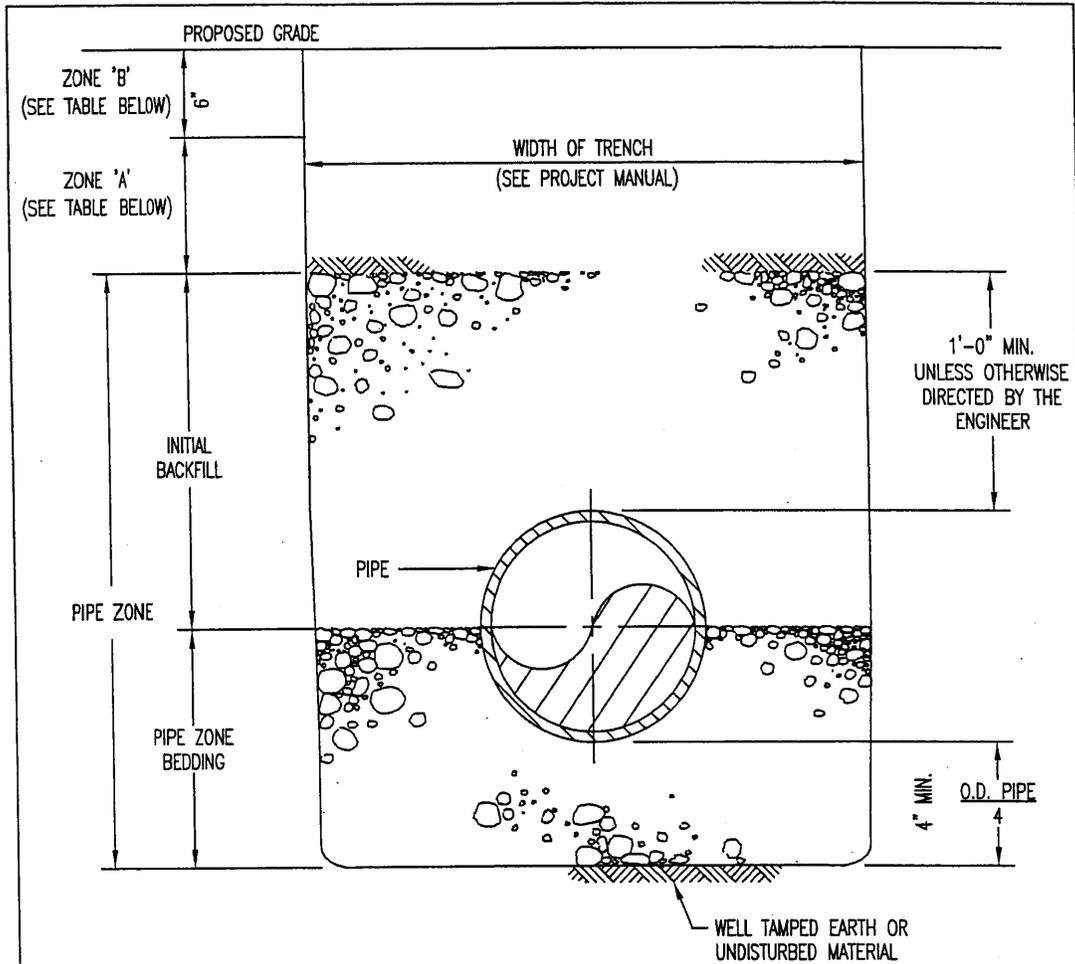
4. Editor's Note: Sewer detail drawings are included at the end of this chapter.

specifications. Upon satisfactory completion of tests in the presence of the Borough and the manufacturer, provide written documentation of test results to the Borough. Provide all necessary materials needed for tests.

- M. Electrical systems tests must be completed in the presence of the Borough. Electrical work must be inspected by an authorized inspection agency for compliance with the NEC. The entire installation must be rendered free from short circuit and improper grounds. In no case shall the insulation resistance be less than 100,000 ohms. Perform initial electrical system tests using meggers, ammeters, voltmeters, insulation resistance testers, and high-pot testers prior to placing electrical systems into complete operation. Use meggers with an adjustable 2.5/5.0 KV range, which will permit readings of 0.05 to 100,000 megohms. The minimum testing voltage obtained by adding 1,000 V to twice the rated voltage of the cable, device, apparatus or equipment in no case shall yield the resistance of less than one megohm. However, the recommended insulation resistance measurement of each test shall conform to the IEEE and ANSI standards.
- (1) Connect 120 V temporary power source to the alarm circuit at the control panel and fill the tank with sufficient water to test the high-level audible and visual alarms.
  - (2) Connect 24 V temporary power source to the power circuit at the control panel and run the unit through a minimum of three operation cycles to check pump operation and shutoff.
  - (3) The installer shall repair all deficiencies.



CAMP HILL CODE



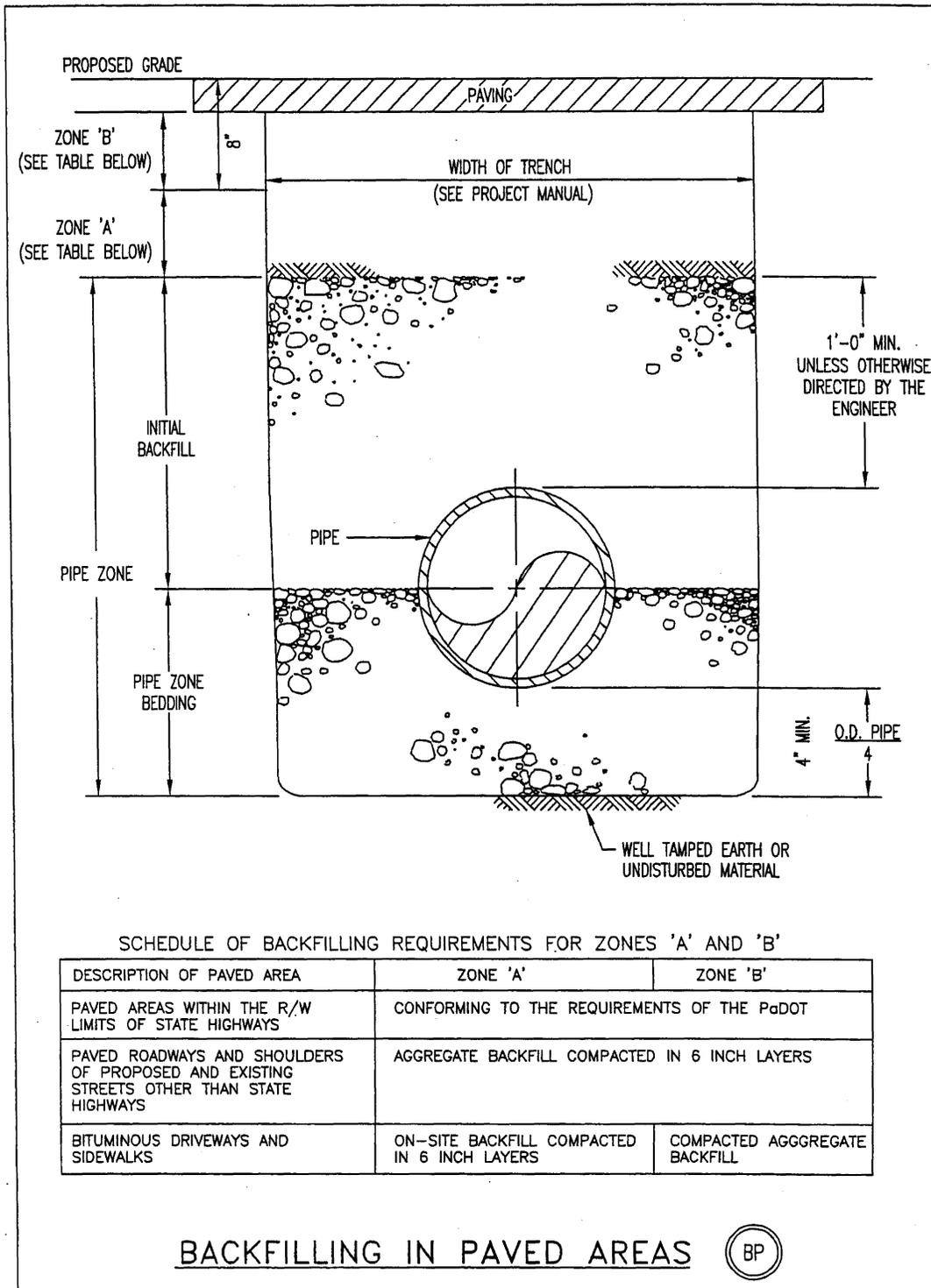
SCHEDULE OF BACKFILLING REQUIREMENTS FOR ZONES 'A' AND 'B'

| DESCRIPTION OF UNPAVED AREA  | ZONE 'A'   | ZONE 'B'                      |
|--|--|-------------------------------|
| UNPAVED AREAS OUTSIDE ROADWAYS   | ON-SITE BACKFILL COMPACTED IN 6" LAYERS TO BOTTOM OF TOPSOIL. REPLACE TOPSOIL TO APPROXIMATE DEPTH OF EXISTING AND CROWN TO SUCH HEIGHT AS REQUIRED BY THE ENGINEER. |                               |
| UNPAVED AREAS WITHIN R/W LIMITS OF STATE HIGHWAYS                            | CONFORMING TO THE REQUIREMENTS OF PaDOT  |                               |
| UNPAVED SHOULDERS OF PROPOSED AND EXISTING STREETS OTHER THAN STATE HIGHWAYS | ON-SITE BACKFILL COMPACTED IN 6 INCH LAYERS  | COMPACTED AGGGREGATE BACKFILL |
| STONE DRIVEWAYS AND PARKING AREAS  | ON-SITE BACKFILL COMPACTED ON 6 INCH LAYERS  | STONE SURFACE BACKFILL        |
| UNIMPROVED STREETS   | AGGREGATE BACKFILL COMPACTED IN 6 INCH LAYERS  |                               |

BACKFILLING IN UNPAVED AREAS  8 2007

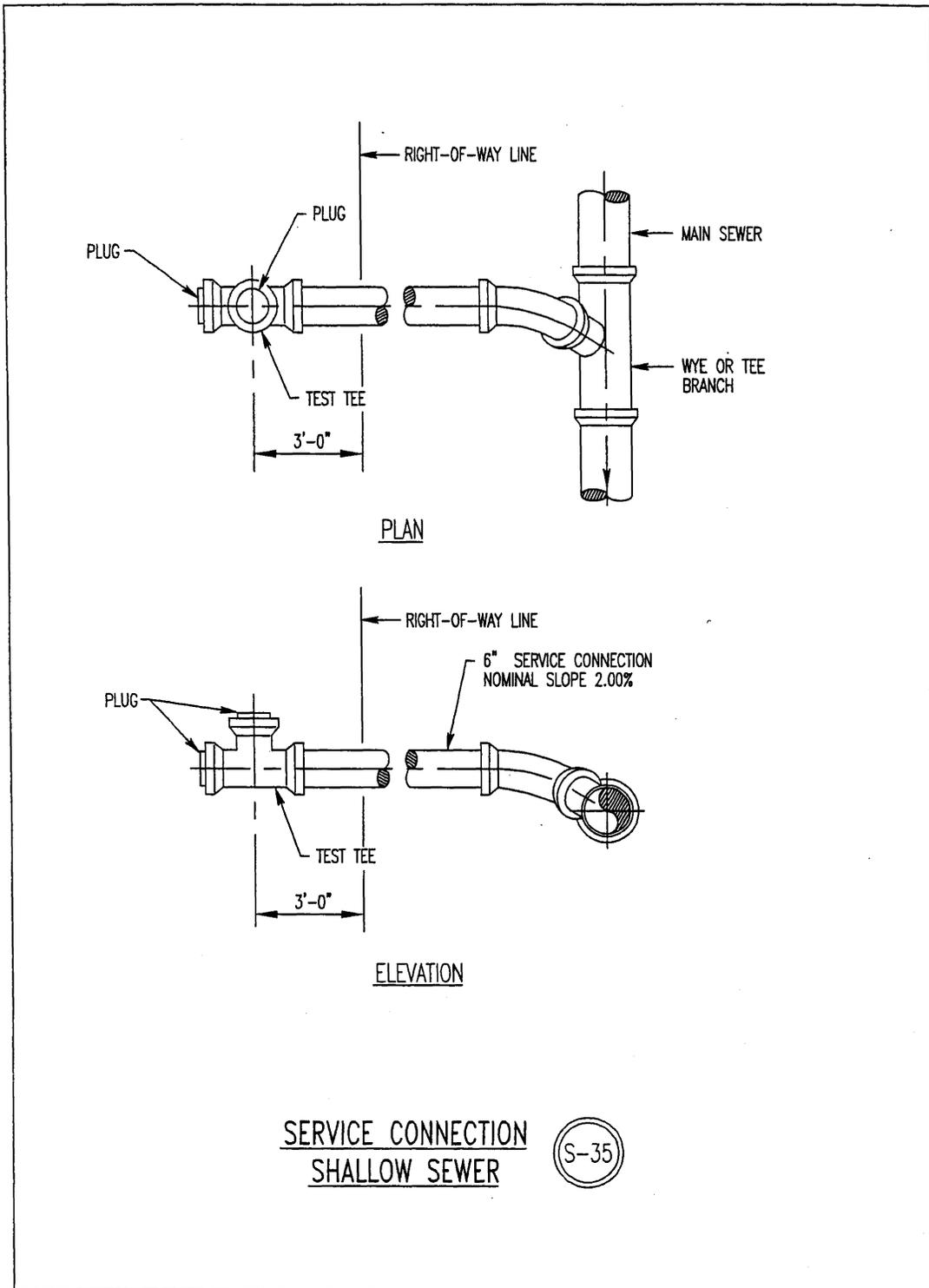
FILE: N:404\39943\018\BUP.DWG

# SEWERS



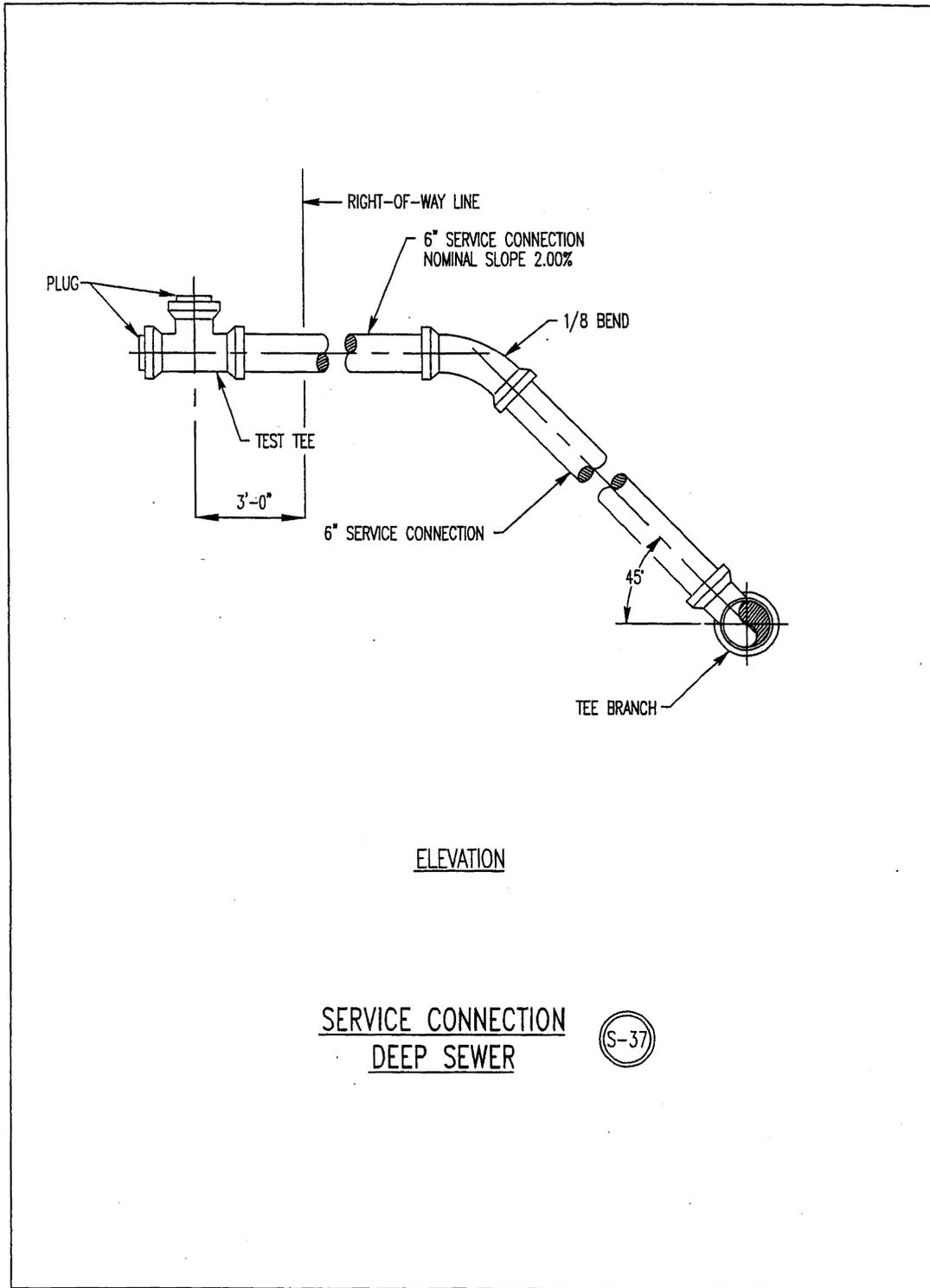
FILE: N:404\39943\018\BP.DWG

CAMP HILL CODE



FILE: N:\404\39943\018\S-35.DWG

SEWERS



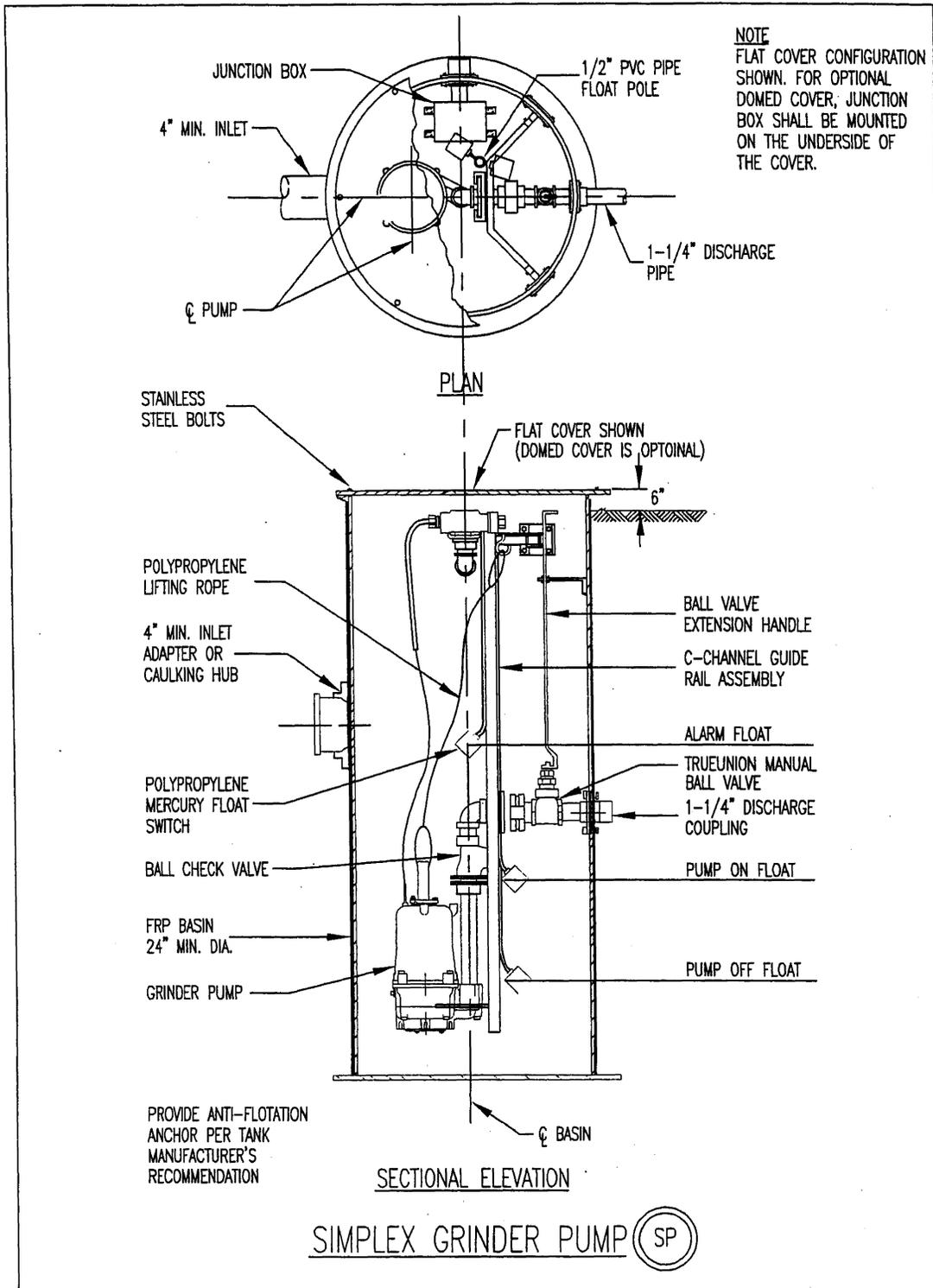
ELEVATION

SERVICE CONNECTION  
DEEP SEWER

(S-37)

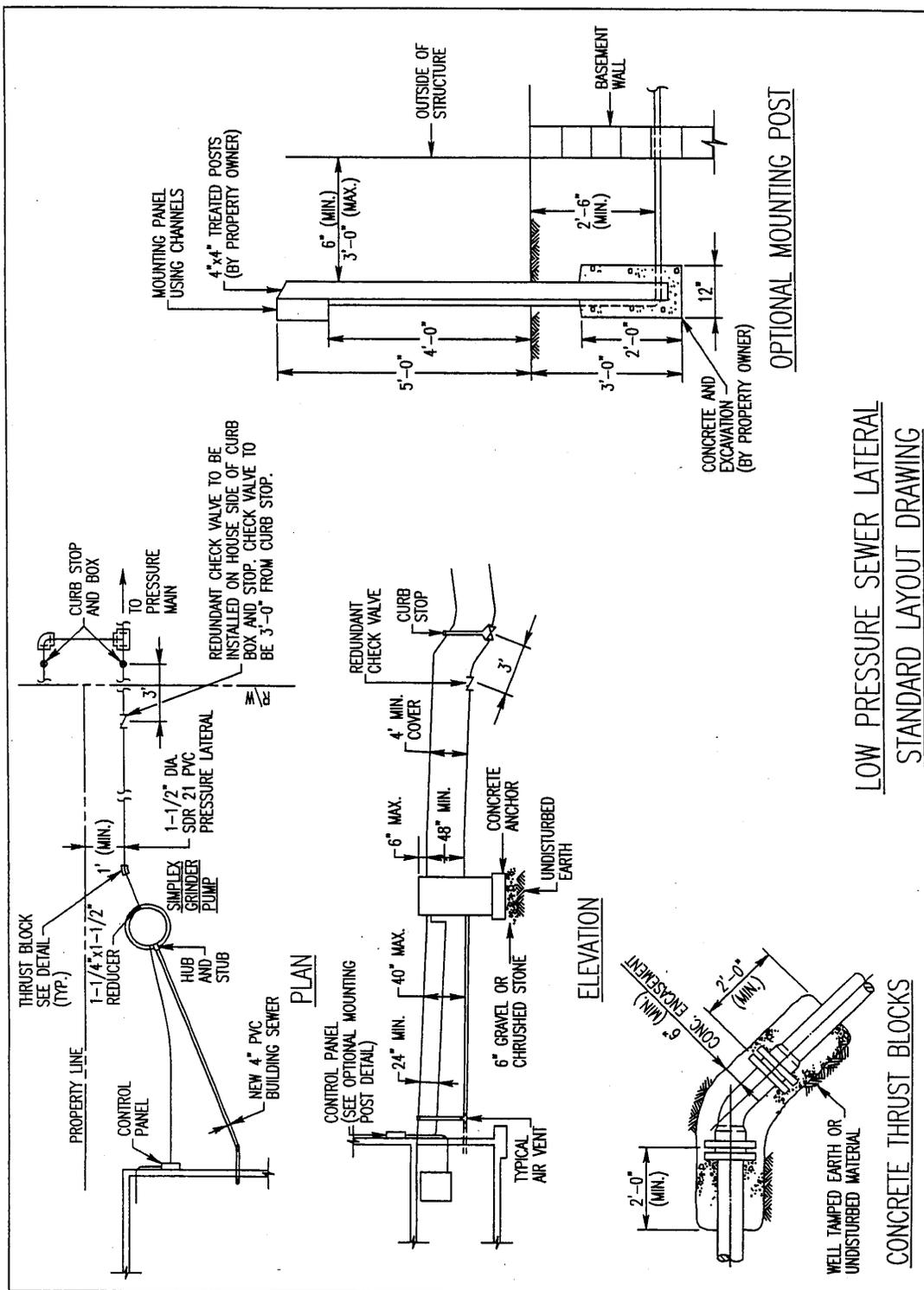
FILE: N:\404\39943\018\S-37.DWG

CAMP HILL CODE



FILE: N:\404\39943\018\SP.DWG

SEWERS



LOW PRESSURE SEWER LATERAL  
 STANDARD LAYOUT DRAWING

FILE: N:\404\39943\018\LPSC.DWG

JAN 08 2007

