CHAPTER 26

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PART 1

WATER CONNECTIONS

§101. Rules and Regulations.

Theses rules and regulations are a part of the contract with every person who takes water service and every such person by taking that service agrees to be bound hereby. These rules and regulations are not intended to conflict with any local, State or Federal legislation. Any provisions that are found to be in direct conflict with such legislation shall not be applicable.

(Ord. 683, 10/15/1987, §1; as amended by Ord. 829, 11/15/2001)

§102. Enforcement.

These rules and regulations shall become effective on the date of adoption of this Part for all properties then and after connection to the water system. All prior rules and regulations not consistent herewith are hereby repealed, provided, however, that all rights and fees due the Borough under such rules and regulations are preserved. The Borough reserves the right to amend these rules and regulations in such manner and at such time as, in its opinion, may be advisable.

(Ord. 683, 10/15/1987, §2)

§103. Definitions.

APPLICANT — a person, building owner or lot owner who applies for water services at a premises.

APPLICATION — form supplied by the Borough indicating the desire to connect to the water system.

BOROUGH — the Borough of Elizabethtown.

BOROUGH SERVICE LINE — the service pipe and appurtenances extending from the Borough's main including:

A. Water Service Line – the tee or tap in the main, the lateral pipe to a point at or near the property line, the curb stop or service valve and the curb box or valve box.

CONTRACTOR — a builder or other person who uses water on a temporary basis for construction purposes.

CROSS-CONNECTION — any connection direct or indirect that physically joins a customer's service line, or any piping extension thereof, to a nonpotable source of water; or to a water system other than that of the Borough.

CUSTOMER — any person who receives water service from the Borough.

CUSTOMER SERVICE LINE — that part of the water service pipe extending from the Borough's service line to the premises (except the water meter).

METER — a device(s) for measuring the quantity of water used which is a basis for determining charges for service to a customer.

OWNER — the person in whose name the deed for a property is designated.

PERMIT — Borough of Elizabethtown water and/ permit (including application form).

PREMISES — the property, building, or other site to which water service is furnished, including:

A. A building under one roof and occupied by one family or one business.

B. Each combination of buildings owned by one person, serviced by one service line, and occupied by one family or business.

C. Each side of a double house or each housing unit.

D. Each apartment, office, or suite of offices located in a building having several such apartments, offices, or suites of offices and using in common one or more means of entrance.

E. Any mobile home occupied by one family or business.

F. Any other type of dwelling unit or business requiring water usage as determined by the Borough.

TOWNSHIP — Mount Joy Township or West Donegal Township.

WATER SYSTEM – the Borough's water supply and distribution facilities, taken as a whole, or as any portion thereof.

(Ord. 683, 10/15/1987, §3; as amended by Ord. 829, 11/15/2001)

§104. Application Procedure.

1. Any applicant desiring water service from the Borough's main into his or her premises must first make a written application on the form furnished by the Borough.

2. The applicant must also demonstrate that the premises has received final subdivision or land development plan approval and recorded at the County level. If the applicant's premises is located within the Township, the applicant must also produce a letter from the Township stating that the lot(s) have received final plan approval and recordation as above mentioned.

3. The application, which must be signed by the owner or duly authorized agent, shall not be approved until the Borough receives full payment of all applicable service connection charges, tapping fees or other charges adopted by the Borough.

4. Separate service applications shall be made for each premises as defined by this Part.

5. The fact that an application may not exist, or may not be signed by the owner, shall not relieve the owner of his or her responsibility for ultimate payment of all service charges related to the premises.

6. Applications for service will be reviewed by the Borough and its consulting engineers. Completed applications shall be reviewed in order of date of submittal.

7. In the event that service connections are available on a limited basis only, applications will be reviewed and approved in order of date of submittal. A waiting list of approved applications will be on file at the Borough Office until new permits are issued.

8. In the event that a deposit is required, no interest will be paid by the Borough.

9. A permit shall be issued when the completed application has been approved by the Borough.

(Ord. 683, 10/15/1987, §4; as amended by Ord. 829, 11/15/2001)

§105. General Conditions.

1. No customer or any premises receiving water service shall be allowed to supply such service to other persons or other premises without written consent of the Borough.

2. Upon approval of the water service application, and payment of all applicable charges, the Borough will install its service lines. The location of the service line will be designated by the Borough.

3. All Borough property owners, customers or premises shall be connected to the Borough water service lines as of the effective date of this Part. A waiver of this provision may be granted only by Borough Council.

4. The Borough will be responsible for the maintenance and repair of its service line.

5. The customer's service line, beyond the Borough's service line, shall be installed and maintained by the customer at his expense.

6. The customer's service line shall be installed as a continuous length of pipe and shall meet Borough specifications.

7. When a customer desires to change in location or size of an existing service line, he shall bear the entire cost of the change, including the Borough's service line.

8. Although service line pressure may be undesirably low, the Borough shall be under no obligation to increase pressure by pumping or other means.

9. Each customer will be supplied through a separate metered service connection unless the Borough waives this requirement in written form.

10. In private developments, the Borough shall own and maintain the Borough water service line in the same manner as a publicly owned development.

11. No cross-connections of any type shall be allowed by the Borough.

(Ord. 683, 10/15/1987, §5)

§106. Meter Installation.

1. Each premises, prior to occupancy, shall install a water meter provided by the Borough. Failure to notify the Borough of occupancy, or failure to install a water meter, shall result in an additional charge of $5 per day for each premises.

2. Contractors shall install a meter in all premises prior to use of the sewer system. Failure to install the meter shall result in an additional charge of $5 per day for each premises.

(Ord. 683, 10/15/1987, §7)

§107. Residential Conversions.

Conversions of existing industrial or commercial structures to a residential use, provided that the previous use has not lapsed by more than 30 months, may average the previous metered usage towards the proposed residential use for the purpose of comput-

ing the connection fees. Future residential use shall be calculated at 12,000 gallons per quarter for each premises.

Example: An existing industrial structure consumed 480,000 gallons in the four quarters prior to closing its operation. An applicant seeks to renovate this structure or include 20 apartment units. The connection fee for water services would by calculated as follows:

A. 480,000 gallons ÷ four quarters = 120,000 gallons per quarter.

B. 120,000 gallons per quarter ÷ 12,000 gallons = 10 units.

C. 20 proposed units – 10 adjusted units = 10 units.

D. The applicant would pay $10,000 for water connections and $10,000 for connections.

(Ord. 683, 10/15/1987, §8; as amended by Ord. 829, 11/15/2001)

§108. Fee Adjustment.

Borough Council may, at its sole discretion, review and modify the water and/ connection fees for a particular property when such an adjustment is in the overwhelming public good.

(Ord. 683, 10/15/1987, §9)

PART 2

CONNECTION REQUIRED

§201. Definitions.

Unless the context specifically and clearly indicates otherwise, the meaning of terms and phrases used in this Part shall be as follows:

BOROUGH — the Borough of Elizabethtown, Lancaster County, Pennsylvania, political subdivision.

OWNER — any person vested with ownership, legal or equitable, sole or partial of any property.

PERSON — any individual, partnership, company, association, society, trust, corporation or other group or entity.

PROPERTY — any building, group of buildings or land within the Borough and designated or separate, distinct parcel on the real estate map of the Borough.

WATER SYSTEM — the water distribution facilities, including all related facilities to be constructed, installed or acquired by or for the Borough, including all property, real, personal and mixed, rights, powers, licenses, easements, rights-of-way, privileges, franchises and other property or interest in property of whatsoever natures used or useful in connection with such facilities, and together with all additions, extensions, alterations, improvements and betterments from time to time, by or for the Borough.

(Ord. 658, 10/4/1984, §1.1)

§202. Connection Required.

The owner of any property abutting upon any street in which there is a water main which is part of the water system, shall connect such property therewith, in such manner as the Borough may require, within 60 days after notice to such owner from the Borough to make such connection, for the purpose of conducting water to said property, subject to such limitations and restrictions as shall be established by the Borough from time to time.

(Ord. 658, 10/4/1984, §2.1)

§203. Notice to Connect.

The notice by the Borough to make a connection to the Water System, referred to in §202, shall consist of a copy of this Part, including any amendments at the time in effect, and a written or printed document requiring such connection in accordance with the provisions of this Part and specifying that such connection shall be made within 60 days from the date such notice is given. Such notice may be given at any time after a water main is in place which can be connected to the property and conduct water thereto. Such notice shall be served upon the owner either by personal service or by registered mail or by such other method as at the time may be provided by law.

(Ord. 658, 10/4/1984, §2.2)

§204. Method of Conducting Water.

In the event that it is determined by the Borough's employees or representatives that the owner's method of conducting water from the water system to the property, whether by piping, or otherwise, is defective, causing the water system to lose water and/or pressure, it shall be the obligation of the owner, within 10 days after notice to such owner from the Borough, to repair the defective condition.

(Ord. 658, 10/4/1984, §2.3)

§205. Notice to Repair Defective Condition.

The notice by the Borough to repair a defective condition, referred to in §204, shall consist of a written or printed document requiring the defective condition to be remedied within 10 days from the date such notice is given. Such notice shall be served upon the owner either by personal service or by registered mail or by such other method as at the time may be provided by law.

(Ord. 658, 10/4/1984, §2.4)

§206. Remedy of Defective Conditions.

If the owner of any property located in the Borough after 10 days notice from the Borough, in accordance with §§204 and 105 hereof, shall fail to correct and remedy the defective condition as required, the Borough may repair and remedy the defective condition and shall collect from such owner the costs and expenses thereof. In such case, the Borough shall forthwith, upon completion of the work, send an itemized bill of the costs of the repairs to the owner of the property upon which repairs have been so made, which bill shall be payable forthwith. In case of neglect or refusal by the owner of such property to pay said bill, the Borough shall file a municipal lien for said repairs, the same to be subject in all respects to the general law provided for the filing and recovery of municipal liens.

(Ord. 658, 10/4/1984, §2.5)

§207. Inspection.

The Borough, its employees or representatives shall have the right from time to time, as cause appears, to enter upon the premises of any owner for the purposes of inspecting such owner's property, for the purposes of enforcing any provision of this Part.

(Ord. 658, 10/4/1984, §2.6)

§208. Compliance.

No connection shall be made to the water system except in compliance with the ordinances and rules and regulations of the Borough. It shall be the responsibility of the owner of the property to connect to the water system in strict compliance with this Part and rules and regulations of the Borough. In the event the owner shall not so comply, the Borough shall have the same remedy hereunder as is set forth in §210 for failure to connect.

(Ord. 658, 10/4/1984, §3.1)

§209. Adoption of Additional Rules and Regulations.

The Borough reserves the right to adopt, from time to time, additional rules and regulations as it shall deem necessary and proper relating to connections with the water system, which additional rules and regulations, to the extent appropriate, shall be and shall be construed as a part of this Part.

(Ord. 658, 10/1/1984, §3.2)

§210. Failure to Connect.

If the owner of any property located in the Borough and whose property abuts upon any street in which there is a water main being part of the water system, after 60 days' notice from the Borough, in accordance with §202, shall fail to connect such property as required, the Borough may make such connection and shall collect from such owner the costs and expenses thereof. In such case, the Borough shall forthwith, upon completion of the work, send an itemized bill of the cost of the construction of such connection to the owner of the property to which connection has been so made, which bill shall be payable forthwith. In case of neglect or refusal by the owner of such property to pay said bill, the Borough shall file a municipal lien for said construction within six months of the date of the completion of the construction of said connection, the same to be subject in all respects to the general law provided for the filing and recovery of municipal liens.

(Ord. 658, 10/4/1984, §10)

§211. Violations and Penalties.

Any person who shall violate any provision of this Part shall, upon conviction thereof, be sentenced to pay a fine not exceeding $600 plus costs and, in default of payment of said fine and costs, to a term of imprisonment not to exceed 30 days. Each day that a violation of this Part continues shall constitute a separate offense.

(Ord. 658, 10/4/1984, §4.1; as amended by Ord. 829, 11/15/2001)

§212. Fines and Costs.

Fines and costs imposed under provisions of this Part shall be enforceable and recoverable in the manner at the time provided by applicable law.

(Ord. 658, 10/4/1984, §12)

PART 3

RATES AND CHARGES

§301. Short Title.

This Part shall be known and may be cited as the "Elizabethtown Borough Water Rates and Regulations ordinance."

(Ord. 812, 6/15/2000, §1)

§302. Definitions and Word Usage.

1. In the interpretation of this Part, the singular shall include the plural, and the masculine shall include the feminine and the neuter.

2. All words and phrases defined herein shall have the meaning set forth below:

   BOROUGH — the Borough of Elizabethtown, Lancaster County, Pennsylvania.

   CONSUMER — every separate family, person, business, institution, or other entity that occupies a single unit of occupancy and receives public water from the water system.

   COUNCIL — Borough Council of the Borough acting through its designated representatives.

   CUSTOMER — an owner of a property which contains a unit of occupancy that contracts for water service to such unit of occupancy.

   DWELLING UNIT — an improved property or portion thereof containing one room, a group of rooms, mobile home, building or other enclosure connected, directly or indirectly, to the water system and occupied or intended for occupancy as a separate living quarters by a family or any other group of persons living together or by a person or persons living alone. By way of example and not by way of limitation, a dwelling unit shall be considered each:

   A. Single family detached dwelling.

   B. Each side of a single family semi-detached or twin dwelling.

   C. Each house in a row of houses.

   D. Each apartment, condominium or cooperative unit in any structure containing more than one unit for residential purposes.

NONRESIDENTIAL UNIT — a separate unit in an improved property other than a dwelling unit. A nonresidential unit shall include, but not be limited to, each quarters for separate commercial, industrial or institutional customer.

OWNER — any person having an ownership interest, whether legal or equitable, sole or partial, in any property.

PERSON — any individual, association, partnership, public or private corporation whether for profit or not for profit, trust, estate, or other legally recognized entity. Whenever the term "person" is used in connection with any provision imposing duties, ordering action to comply with the terms of this Part, or providing for the imposition of a fine or penalty, the term "person" shall include the members of an association, partnership, or firm and the officers of any public or private corporation whether for profit or not for profit.

PROPERTY — any land upon which any structures are located which structure or structures are connected to the water system.

UNIT OF OCCUPANCY — each separate dwelling unit or separate nonresidential unit.

WATER SYSTEM — the water supply and distribution facilities, including all related facilities constructed, installed or acquired by or for the Borough and including all property, real, personal and mixed, rights, powers, licenses, easements, rights-of-way, privileges, franchises and other property or interests in property of whatsoever nature used or useful in connection with such facilities, together with all additions, extensions, alterations, improvements and betterments thereof or thereto which may be made, installed or acquired from time to time by or for the Borough.

(Ord. 812, 6/15/2000, §2)

§303. Rates and Charges.

1. All water shall be sold by meter only and shall be sold only to the owner of the property served. The Borough reserves the right to change the manner and/or frequency of billing at any time.

2. Effective for the quarterly billing covering the period commencing July 1, 2000, and thereafter, the water rates for each unit of occupancy receiving water from the water system for water consumed per quarter annum shall be as follows:

First 3,000 gallons or less	$21
3,001 to 7,000 gallons	$21 + ((gallons used – 3,000)/1,000 x $4.75)
7,001 to 25,000 gallons	$40 + ((gallons used – 7,000)/1,000 x $5.75)
25,001 to 49,000 gallons	$143.50 + ((gallons used – 25,000)/1,000 x $4)
49,001 to 5,000,000 gallons	$239.50 + ((gallons used – 49,000)/1,000 x $2.25)
greater than 5,000,000 gallons	$11,379.50 + ((gallons used – 5,000,000)/1,000 x $0.75)

3. If two or more units of occupancy are supplied from one connection, the water rates established in Subsection (2) above are hereby imposed for each separate unit of occupancy. The water consumption for each unit of occupancy shall be calculated by dividing the total water consumption metered for the single connection within the quarter by the number of units of occupancy served by the single connection. The customer shall pay for each separate unit of occupancy that charge calculated using the rates in Subsection (2) above for the water consumption calculated in accordance with this subsection.

4. The Borough hereby establishes the following fees and charges for items relating to the water system other than consumption of water:

   A. For the return of a check unpaid from a financial institution: $25

   B. For the resumption of service after water service has been discontinued to a unit of occupancy for any reason: $50

(Ord. 812, 6/15/2000, §3)

§304. Billings and Payments.

1. All rates and charges for the use of the water system shall be billed and customers shall make payment as follows:

   A. All water rates, together with any penalties thereon, shall be paid by the customer to the Borough for use of the Borough at the times and in the manner hereinafter specified.

   B. The water rates imposed shall be computed quarterly for calendar quarters beginning on January 1, April 1, July 1 and October 1 for each year. Water rates shall be billed for the preceding calendar quarter.

   C. Water rates shall be paid on or before the thirtieth day after the billing date indicated on the bill. If any water rate is not paid in full on or before that

date, a penalty of 5% on the amount due shall be added and paid by the customer in addition to the water rate due.

D. If any water rate or other charge is not paid in full within five days after the billing date, in addition to the penalty set forth in Subsection (1)(c) above, interest shall be imposed at the rate of 5% per annum.

E. Failure to receive a bill shall not exempt any customer from the obligation to pay the water rates or from the accruing of penalties or interest. The presentation of a bill to a customer is only a matter of accommodation and not a waiver of this Section.

F. Any customer who or which has reason to doubt the accuracy of a bill shall notify the Borough in writing within 10 days of the date of the bill as to the fact that the customer believes the bill to be inaccurate and the factors which support the customer's position.

G. Water rates, rents and charges imposed by this Part, to the maximum extent permitted by law, shall be a lien on the property connected to and served by the water system. Any such water rates, rents or charges which shall be delinquent, to the extent permitted by law, shall be filed as a lien against the property so connected and served by the water system, which lien shall be filed in the office of the Prothonotary of Lancaster County, Pennsylvania, and shall be collected in the manner provided by law for the filing and collecting of municipal claims.

(Ord. 812, 6/15/2000, §4)

§305. Use of Water; Service Interruptions; Meters

1. Water supplied by the Borough may be used for all residential, business, industrial, agricultural, public or other legal purposes; provided, however, that the Borough reserves the right to impose at any time such restrictions in the use of water as may be necessary due to accidents, breakdowns, shortages of water, temporary discontinuance of water service to make necessary repairs, removals or replacements or other unavoidable emergencies. The Borough shall make every effort to notify consumers before service is interrupted. However, no deduction in water rates shall be allowed for failure on the part of the Borough to supply water, and the Borough shall not be responsible for any losses due to an inability to supply water.

2. Each customer shall be required to install a water meter, if requested by the Borough, a remote reader, to measure the quantity of water consumed. Each such meter and remote reader shall be furnished by the Borough and shall be installed by the Borough or by the owner in accordance with rules and regulations to be adopted by the Borough. The Borough shall determine the location for all meters and remote readers. If the Borough determines that a meter is to be placed within

the customer's building, the customer will provide a readily accessible place (in the basement if a basement exists in such building) near the entrance of the water service pipes. All meters and remote readers shall remain the property of the Borough.

3. Each customer and each consumer shall at all time properly protect the meter and the remote reader from injury by frost or freezing or hot water or any other cause. If a meter or remote reader is damaged by frost or freezing or hat water or any other external cause, the customer shall pay the cost of repair the damaged meter and/or remote reader or the cost of a new meter and/or remote reader.

4. No person shall tamper or interfere with any meter or remote reader. No person shall take any action which shall result in the inaccurate metering of water provided to any unit of occupancy.

(Ord. 812, 6/15/2000, §5)

§306. Change in Ownership of Property.

1. When the ownership of a property changes from one person to another, the previous owner/customer shall notify the Borough in writing and in advance of the date of discontinuance of service under his ownership. Should the owner/customer fail to give such notice, he shall be responsible for all charges up to and including the date the new owner makes application for service. The new owner shall make application for service in the same manner as for a new service in accordance with the rules and regulations of the Borough.

(Ord. 812, 6/15/2000, §6)

§307. Responsibility of Property Owners.

1. The owner of any property connected to the water system shall be responsible for all tenants or other occupants of such property insofar as such acts shall be governed by provisions of this Part.

2. All connections, service lines and fixtures famished or owned by the owner shall be maintained by such owner in good order, and all valves, meters and appliances famished and owned by the Borough and on the property of the owner shall be protected properly and cared for by said owner. All leaks in the service line or any other pipe or fixture in or on the premises supplied must be repaired immediately by the owner.

3. The Borough shall not be responsible for maintaining any portion of the building water connection owned by the owner or for damage done by water escaping therefrom or from lines or fixtures on the owner's property, and the owner shall at all times comply with all ordinances and regulations with reference thereto and make

changes therein required on account of change of grade, relocation of mains or otherwise.

4. Consumers shall not turn the water on or off at any corporation stop or curb stop or disconnect or remove the meter or permit its disconnection or removal without the prior, written consent of the Borough.

5. Consumers shall not tamper with or permit tampering with in any other way cause or permit injury to any meter or any other property of the Borough.

(Ord. 812, 6/15/2000, §7)

§308. Rules and Regulations.

1. The Borough, from time to time, in accordance with law, by appropriate ordinance or resolution, may adopt such additional rules and regulations as, in the opinion of the Council, shall be desirable, beneficial or necessary for or in connection with the use and operation of the water system.

2. Any such rules and regulations so adopted by the Council shall be construed in conjunction with the provisions of this Part and shall become effective on the date fixed by the Council upon adoption thereof.

(Ord. 812, 6/15/2000, §8)

§309. Termination of Water Service.

The Borough may disconnect water service to any property or unit of occupancy for any of the following reasons:

A. Nonpayment of water rates or other charges imposed under this Part.

B. Nonpayment of sewer rates and charges.

C. Misrepresentation in an application for water service as to the property, number of units of occupancy, or the use to be made of the water or placement of false information on or omission of relevant information from an application for water service.

D. Waste of water through improper or imperfect pipes, lines, fixtures, beyond the connection to the Borough's water main.

E. Tampering with or damaging any water line, meter, remote reader, curb stop, seal or other appliance owned by the Borough.

F. Violation of any rule of the borough for the use of the water system.

G. Refusal to allow access to the property for the purpose of inspection or for the reading, maintenance or removal of a meter.

(Ord. 812, 6/15/2000, §9)

§310. Violations and Penalties.

1. It shall be a violation of this Part to commit or permit any other person to commit any of the actions set forth in §409 of this Part or to commit or permit any other person to commit any action prohibited by any provision of this Part or to fail to comply with any other provision of this Part.

2. Any person who violates or permits the violation of any provision of this Part shall be, upon conviction thereof, sentenced to a fine of not less than $100 nor more than $1,000 plus costs and, in default of payment of said fine and costs, to a term of imprisonment not to exceed 30 days. Each day that a violation continues and each section of this Part which is violated shall constitute a separate violation.

3. The Borough reserves the right to take any action necessary to collect any water rates or other charges and any penalties and interest imposed under this Part in addition to taking any enforcement action authorized by this Section.

(Ord. 812, 6/15/2000, §10; as amended by Ord. 829, 11/15/2001)

PART 4

DROUGHT CONTINGENCY PLAN

§401. Drought Contingency Plan.

1. The plan listed below provides the Borough with a set of drought indicators or triggers which will accurately identify the onset of drought occurrences in a manner that gives sufficient time and warning to respond appropriately.

2. The triggers and responses are staged with progressively stricter and more severe response measures with each stage.

STAGE I

Trigger Point	Demand Measures	Supply Measures
State declares a drought watch or warning for this area.	Voluntary restrictions on nonessential water use.	Systemwide leakage and loss reduction survey.

STAGE II

State declares a drought emergency for this area.	Implement mandatory restrictions on nonessential water use. If Stage III appears imminent, submit water rationing plan to the Pennsylvania Drought Coordinator for approval.	

STAGE III

Trigger Point	Demand Measures	Supply Measures
Groundwater and surface water sources are unable to meet the demand of the system.	Implement water rationing plan after the Governor declares the Elizabethtown service area a drought or water shortage emergency area, and the Commonwealth Drought Coordinator approves the plan. Notify State Water Plan Division (717) 787-5008.	Utilize emergency sources and equipment (list emergency sources and equipment necessary to utilize each source).

(Ord. 694, 1/18/1989, §1; as amended by Ord. 837, 9/19/2002, §1)

§402. Nonessential Use Ban.

PROHIBITED	EXCEPTIONS
Use of any water for watering grass.	1. Any sewage or stormwater treatment system that is utilizing spray irrigation if the system is approved by DEP prior to the emergency and the spray area is approved prior to or during the emergency. 2. Newly seeded or sodded grass areas can be watered during the hours of 5:00 p.m. to 9:00 a.m. by means of a bucket, can or handheld hose equipped with an automatic shutoff. 3. Newly seeded or sodded grass areas can be watered during the hours of 7:00 p.m. to 11:00 p.m. by any means designed and operated to ensure effective conservation. 4. A professional landscaper may water newly seeded or sodded grass areas during regular working hours by any means designed and operated to ensure effective conservation. 5. A professional landscaper or irrigation contractor can use water for testing newly installed or repaired irrigation equipment, not to exceed 15 minutes per zone. 6. Water can be used for grub control, not to exceed one application during the effective period of the Governor's emergency proclamation. 7. Water can be used to implement revegetation following earthmoving, where required under an erosion and sedimentation plan, in a manner that ensures effective conservation.
Use of any water for watering athletic fields.	1. Any sewage or stormwater treatment system that is utilizing spray irrigation if the system is approved by DEP prior to the emergency and the spray area is approved prior to or during the emergency. 2. Grass tennis courts can be watered by means of a bucket, can or handheld hose equipped with an automatic shutoff nozzle, or by means of an irrigation system designed and operated to restrict the timing or total volume of water, when applied between the hours of 5:00 p.m. and 9:00 a.m. in a manner that ensures effective conservation. 3. Athletic field grass areas, other than sand-based, can be watered between 5:00 p.m. and 9:00 a.m., one night per calendar week, in accordance with a schedule submitted to the Commonwealth Drought Coordinator, local law enforcement agency and, if applicable, to the public water supply agency.

PROHIBITED	EXCEPTIONS
	4. Sand-based athletic fields can be watered in accordance with a plan approved by the Commonwealth Drought Coordinator.
	5. Newly seeded or sodded grass can be watered by a means that ensures effective conservation.
	6. Athletic field nongrass areas can be watered to control dust in manner that ensures effective conservation, if necessary to protect public health or safety.
	7. Water can be used by professional landscapers or irrigation contractors for the purpose of testing newly installed or repaired irrigation equipment, not to exceed 15 minutes per zone.
Use of fresh water for irrigation and watering of out-door gardens, landscaped areas, trees, shrubs and other out-door plants.	1. Irrigation for the production of food and fiber or the maintenance of livestock and poultry.
	2. Water applied by means of a handheld hose equipped with an automatic shutoff nozzle, or an irrigation system designed and operated to restrict the timing or total volume of water and to restrict the application to specific plantings and that ensures effective conservation, when applied between the hours of 5:00 p.m. and 9:00 a.m.
	3. Water used by nurseries to maintain stock, by a means that ensures effective conservation.
	4. Water used by public gardens of national, state or regional significance or arboretums to preserve specimens by a means that ensures effective conservation.
	5. Water used by a professional landscaper or irrigation contractor during working hours, by a means that ensures effective conservation.
	6. Water can be used to implement revegetation following earthmoving, where required under an erosion and sedimentation plan, in a manner that ensures effective conservation.
Use of any water for watering of golf courses.	1. Greens, tees and fairways can be watered in accordance with a plan approved by the Commonwealth Drought Coordinator, between the hours of 5:00 p.m. and 10:00 a.m.
	2. Water can be used by means of a handheld hose equipped with an automatic shutoff nozzle, to syringe heat sensitive grasses on tees, greens and fairways, between the hours of 10:0 a.m. and 5:00 p.m., not to exceed 15 minutes on any grass area.
	3. Water can be used by professional landscapers or irrigation contractors to test newly installed or repaired irrigation equipment, not to exceed 15 minutes per zone.

PROHIBITED	EXCEPTIONS
Use of any water for washing paved surfaces, such as streets, roads, sidewalks, driveways, garages, patios, parking areas, tennis courts, decks and patios.	1. Water can be used for prewashing in preparation of recoating and sealing a paved surface. 2. Tennis courts composed of clay or similar materials can be watered by means of a bucket, can or handheld hose equipped with an automatic shutoff nozzle. 3. Water can be used for sanitation of the premises of raw or processed food, pharmaceutical or vaccine processing, storage or vending establishments, including restaurants and grocery stores. 4. Water can be used for sanitation of the premises of waste handling, storage and disposal facilities. 5. Water can be used to comply with permit conditions or other regulatory requirements.
Use of any water for ornamental purposes, including fountains, artificial waterfalls and reflecting pools.	1. Water can be used to perform the primary and necessary aeration function for a pond that supports fish life. 2. Water can be used to top off ornamental water gardens or fish ponds to the minimum extent necessary to maintain fish and aquatic life.
Use of any water for washing or cleaning of mobile equipment, including automobiles, trucks, buses, trailers, carts, wagons, railroad cars, campers and boats.	1. An individual may wash personally owned or leased vehicles with buckets or handheld hose equipped with an automatic shutoff nozzle for prerinse and rinse, not to exceed a total of two minutes spray time. Water use is limited to odd street addresses on first and third Saturdays of the month and even or no street addresses on second and fourth Saturdays of the month. 2. Water may be used by commercial car washes at the minimum rate necessary to ensure an effective wash. 3. Water may be used for cleaning of construction, emergency, public transportation or government vehicles if necessary to preserve the proper functioning and safe operation of the vehicle. 4. Water may be used for cleaning or sanitizing equipment used for hauling or vending raw or processed food, pharmaceuticals or vaccines, or for handling waste products. 5. Water may be used for the cleaning of new and used cars that are part of a dealer's sales inventory in accordance with restrictions contained in the regulations. 6. Water may be used by professional mobile wash businesses as part of normal business practices.

PROHIBITED	EXCEPTIONS
	7. Water may be used by nonprofit service organizations or clubs for fundraising activities by means of bucket or by handheld hose with automatic shutoff nozzle for prerinse and rinse, not to exceed a total of two minutes spray time per vehicle.
Serving water in eating or drinking places.	1. Water can be served only if requested by a customer.
Filling and topping off swimming pools	1. Water can be used for public swimming pools and residential swimming pools serving 25 or more dwelling units, if the pools have filtration equipment allowing for continued use and recycling of water over the swimming season.
	2. Water can be used for swimming pools operated by health care facilities used in relation to patient care and rehabilitation.
	3. Water can be used for other pools only if approved by the public water supply system from which the water is withdrawn. If water is obtained from other sources, permission from the owner of the source is required.
Use of any water that is not for a beneficial use.	No exceptions,

(Ord. 694, 1/18/1989, §2; as amended by Ord. 837, 9/19/2002, §1)

§403. Local Water Rationing Plan.

1. Purpose. This local water rationing plan is intended to establish measures for essential conservation of water resources, and to provide for equitable distribution of limited water supplies, in order to balance demand and limited available supplies and to assure that sufficient water is available to preserve public health and safety within the service area of the Borough of Elizabethtown in the event of a drought emergency as established by the Governor's office.

2. Authority. The Pennsylvania Emergency Management is authorized to promulgate, adopt and enforce a water rationing plan by virtue of Emergency Management Services Code 35, Pa. C.S. 7101 et seq., as implemented by the Drought Emergency Proclamation dated _____.

3. Definitions.

   BOROUGH — the Borough of Elizabethtown.

   EMERGENCY SERVICE AREA — the service area of the Borough of Elizabethtown.

EXCESS USE — the usage of water by a water customer in excess of the water allotment provided under the local water rationing plan for that customer, over any applicable period.

NONRESIDENTIAL CUSTOMER — commercial, industrial, institutional, public and all other users with the exception of hospitals and health care facilities.

RESIDENTIAL CUSTOMER — any customer who receives water services for a single or multi-family dwelling unit. The term "residential customer" does not include educational or other institutions, hotels, motels or similar commercial establishments.

SERVICE AREA — the territory and the customers serviced by the Borough of Elizabethtown.

SERVICE INTERRUPTION — the temporary suspension of water supply, or reduction of pressures below that are required for adequate supply to any customer, portion of a water supply system or any entire system.

SPECIAL EMERGENCY AREA — the area or areas within which the Governor has declared a state of drought and water shortage emergency.

WATER ALLOTMENT — the maximum quantity of water allowed for each customer over any applicable period as established pursuant to this Plan.

WATER CUSTOMER — any person who is connected to and receives water service from the Borough of Elizabethtown.

4. Scope. This local Water Rationing Plan shall apply to all water uses within the service area of the Borough of Elizabethtown, encompassing all or part of the Borough of Elizabethtown, Mount Joy Township, and West Donegal Township.

5. Objective of the Plan.

   A. It is imperative that water customers within the Emergency Service Area achieve an immediate and further reduction in the water use in order to extend existing water supplies and, at the same time, assure that sufficient water is available to preserve the public health and sanitation and provide fire protection service.

   B. The objective of this local water rationing plan is to effect an immediate 25% reduction in water usage.

   C. The immediate 25% reduction in water usage is another step along a continuum of responses to the present water supply crisis. Should drought conditions continue, further reductions in usage may be required. It must be emphasized that the 25% usage reduction in the emergency area is a valid and attainable figure reflective of the conditions which currently exist.

D. The plan provides for equitable reductions in water usage, and for equal sacrifice on the part of each water customer. The success of this plan depends on the cooperation of all water customers in the emergency service area.

6. Prohibited Nonessential Water Uses. The following water uses are declared nonessential and are prohibited within the Emergency Service Area.

A. The watering of lawns.

B. The watering of outdoor gardens, landscaped areas, trees, shrubs, and other outdoor plants, except between the hours of 5:00 p.m. and 9:00 a.m. by means of a bucket, or pail, at the minimum rate necessary.

C. The washing of automobiles and trucks except when required for safety and operational purposes.

D. The washing of streets, driveways and sidewalks.

E. The serving of water in restaurants, clubs or eating places unless specifically requested by the individual.

F. Ornamental water use, including but not limited to, fountains, artificial water-falls and reflecting pools.

G. The use of water for flushing sewers or hydrants by municipalities or any public or private individual or entity except as deemed necessary and approved in the interest of public health or safety by the municipal health officials.

H. The use of fire hydrants by fire companies for testing fire apparatus and for fire department drills except as deemed necessary in the interest of public safety and specifically approved by the Borough of Elizabethtown.

I. The use of fire hydrants by Borough road departments, contractors and all others, except as necessary for fire fighting or protection purposes.

J. The use of water to fill and top off swimming pools.

7. General Requirement for Water Use Reductions. Each and every water customer, regardless of whether residential, commercial, industrial, municipal, institutional or other type of user, shall achieve the water use reductions set forth in this local water rationing plan. In order to achieve the overall objectives of the Plan, the water use restrictions and limitations set forth in §§7-9 shall apply.

8. Water Use Restrictions for Residential Users.

A. Metered Residential Water Customers and Allotments.

(1) The number of permanent residents in each dwelling unit (household) will determine the amount of water that each household will be allowed.

(2) Each dwelling unit (household) shall be allotted 40 gallons per day for each resident of the household. Households with only one permanent resident will have a daily allotment of 55 gallons.

(3) Residential water customers are required to provide Borough personnel with reasonable access to read meters as necessary to implement this rationing plan. Where access is not readily available, the Borough shall make all reasonable efforts to contact customers in order to arrange for access to read meters. In the event a water customer does not allow Borough personal entry to read the meter, after the Borough has made reasonable efforts to arrange for such access, the dwelling unit (house-hold) allotment will be reduced to 55 gallons per day.

B. Exemptions and Variances.

(1) Where the residential water allotment provided under this §303 would create extraordinary hardship, as in the case of special health-related requirements, the water customer may apply to the Borough for any exemption or variance from these requirements. If the Borough finds that the allotment provided in this §303 would impose extraordinary hardship, the Borough may establish a revised allotment for the particular customer.

(2) Any person aggrieved by a decision relating to such an exemption or variance rendered by the Borough may file an appeal with the Lancaster County Court of Common Pleas in accordance with the provisions and procedures of the Local Agency Law, 2 Pa. C.S. §§551-555, §§751-754.

C. Suggested Conservation Measures. The Borough will provide residential water customers with suggested means for reducing water consumption in order to achieve the established allotment. These suggestions may include:

(1) Locate and repair all leaks in faucets, toilets and water-using appliances.

(2) Adjust all water-using appliances to use the minimum amount of water in order to achieve the appliance's purpose.

(3) Use automatic washing machines and dishwashers only with full loads. Preferably, wash dishes by hand.

(4) Take shorter showers and shallower baths.

(5) Turn off shower while soaping; turn off faucet while brushing teeth, etc.

(6) Install flow restrictors in showerheads and faucets.

(7) Reduce the number of toilet flushes per day. Each flush uses about five gallons. Reduce water used per flush by installing toilet tank displacement inserts.

(8) Use sink and tub stoppers to avoid wasting water.

(9) Keep bottle of chilled drinking water in refrigerator.

(10) Read the meter to determine the household's daily water use.

9. Water Use Restrictions for Nonresidential Water Customers.

A. Nonresidential customers include commercial, industrial, institutional, public and all other users, with the exception of hospitals and health care facilities.

B. Nonresidential water customers shall reduce their water usage by a minimum of 25% of use levels for the same quarter of the preceding year.

C. It is the primary responsibility of each nonresidential water customer to meet its mandated water use reduction goal in whatever manner possible.

D. The Borough will establish a water allotment for each nonresidential water customer, based upon a required 25% reduction of water usage from the rate of water used by the customer in the same quarter of the preceding year of the last recorded use level if no meter readings record the rate of the customer's use in the same quarter of the preceding year.

E. Each nonresidential water user shall provide access to Borough personnel for purposes of meter reading and monitoring of compliance with this plan. The Borough shall make all reasonable efforts to contact customers to arrange for access.

F. If the mandated 25% reduction in water usage cannot be obtained without imposing extraordinary hardship threatening health and safety, the nonresidential customer may apply to the Borough of Elizabethtown for a variance. For these purposes, "extraordinary hardship" means a permanent damage to property or economic loss which is substantially more severe than the sacrifices borne by other water users subject to this water rationing plan. If the Borough finds that the 25% reduction would cause extraordinary hardship or threaten health or safety, the Borough may grant a vari-

ance and establish a revised water use reduction requirement for the particular customer.

G. Any person aggrieved by a decision relating to such a variance rendered by the Borough may appeal the decision to the Commonwealth Drought Coordinator who shall render a final decision.

H. The Borough of Elizabethtown will supply each nonresidential customer with suggested means to reduce usage levels. These suggestions may include:

(1) Identify and repair all leaky fixtures and water-using equipment. Special attention is to be given to equipment connected directly to the water line, such as processing air conditioners and furnaces.

(2) Assure that the valves and solenoids, which control water flows, are shut off completing when the water-using cycle is not engaged.

(3) Adjust water-using equipment to use the minimum amount of water required to achieve its stated purpose.

(4) Shorten rinse cycles for laundry machines as much as possible; lower water levels should be implemented wherever possible.

(5) Temperature settings of hot water for showers should be set down at least 10° to discourage lengthy shower taking.

(6) Where plumbing fixtures can accommodate them, flow restricting or other water-saving devices should be installed.

(7) Review usage patterns to see where other savings can be made.

(8) For processing and cooling and other uses where possible, either reuse water or use from sources that would not adversely affect public water supplies.

(9) Advise employees, students, patients, customers and other users not to flush toilets after every use. Install toilet tank displacement inserts; place flow restrictors in showerheads and faucets; close down automatic flushes overnight.

(10) Adjust flushometers and automatic flushing valves to use as little water as possible or to cycle at greater intervals.

(11) Encourage water-consciousness by placing water-saving posters and literature where employees, students, patients and customers, etc., will have access to them.

I. Customers should read water meters on a frequent basis to determine consumption patterns.

10. Water Use Restrictions for Hospitals and Health Care Facilities.

A. Hospitals and health care facilities shall comply with all restrictions imposed on residential and nonresidential water customers as may be applicable to each individual institution, to the extent compliance will not endanger the health of the patients or residents of the institution.

B. Each hospital and health care facility shall survey its water usage patterns and requirements and implement such additional conservation measures as may be possible without endangering the health of patients or residents to achieve a 25% reduction in the institution's water usage.

C. The Borough will provide each hospital and health care facility with suggested means to reduce usage levels. These suggestions may include:

(1) Reduce laundry usage or services by changing bed linen, etc., only where necessary to preserve the health of patients or residents.

(2) Use disposable food service items.

(3) Eliminate, postpone or reduce, as may be appropriate, elective surgical procedures during the period of the emergency.

11. Enforcement of Water-Rationing Plan.

A. The Borough of Elizabethtown will have lead responsibility for the monitoring of compliance with this water rationing plan.

B. The following provisions shall govern the implementation of temporary service interruptions:

(1) In order to effectuate compliance with this plan, the Borough of Elizabethtown is hereby authorized and required to plan and implement temporary service interruptions to all or part of its water supply system, as the Borough may deem appropriate, when any and/or all of the following conditions are determined by the Borough to exist, as to its water supply system:

(a) A 25% reduction in systemwide water usage has not been achieved; and/or,

(b) The 25% reduction in systemwide water usage has been achieved, but has failed to have a significant impact in extending limited water supplies; and/or,

(c) Temporary service interruptions are necessary in order to further extend limited and/or dwindling water supplies.

(2) In the event that the Borough determines that temporary service interruptions are necessary, the Borough shall notify its customers through the public media (newspaper, radio, telephone, and television), at least one day prior to the temporary service interruptions, that a planned, temporary service interruption is to be imposed.

In addition, the Borough shall notify the Commonwealth Drought Coordinator, the local coordinator of emergency management, local public health authorities, the Pennsylvania Emergency Management Agency, and the regional office of the Department of Environmental Protection. Such notice shall:

(a) State the day or days when the planned, temporary service interruptions will occur;

(b) State the time(s) when such planned, temporary service interruptions will commence, and the time(s) such interruptions will cease;

(c) State whether the planned, temporary service interruptions are to be imposed on the entire system, or a part thereof, and, if only part(s) of the system will experience planned, temporary service interruptions, identify the geographical boundaries within which planned, temporary service interruptions will occur;

(d) Advise all customers within the areas affected by planned, temporary service interruptions how to treat any water received from the system, for human consumption, during the period(s) of planned, temporary service interruptions and for such additional time as may be necessary until full pressure is restored to the system.

(3) If the Borough imposes planned, temporary service interruptions as authorized and required by this Plan, it must provide for the continued delivery of water to health care facilities within the area(s) affected by such interruptions, by means of adequate, alternative delivery measures that may be necessary.

(4) If the Borough implements planned, temporary service interpretations, it must make provisions, by any means possible, for the continued delivery of such water, as may be necessary, for the proper operation of sewage collection, treatment and disposal systems and facilities.

C. Any residential or nonresidential water customer who exceeds the allotments established pursuant to this Water Rationing Plan will be subject to the following excess-use charge.

(1) The Borough of Elizabethtown is directed to collect an "excess use charge" based on the amount by which a customer's use exceeds the water allotments established pursuant to the Local Water Rationing Plan, computed in accordance with the following schedule:

Excess Usage Per Month	**Charge for Excess**
First 2,000 gallons or portions thereof	$7 per 1,000 gallons or portion thereof
Each 1,000 gallons or portion thereof thereafter	$15 per 1,000 gallons or portion thereof

(2) Any monies collected by the Borough through excess-use charges shall not be accounted for as income to the Borough but shall be placed by the Borough in a reserve account. Funds collected shall be disposed of in accordance with the directions of the Commonwealth Drought Coordinator.

D. In addition to the excess-use, noncompliance with the Water Rationing Plan will result in the following:

(1) For the first excess use, a warning of possible discontinuation shall be issued to the customer by the Borough.

(2) For the second or subsequent excess use, the Borough may interrupt or shut-off service to the customer for a period not to exceed 48 hours, or, if the customer provides access, the Borough may install a flow restriction in the customer's service line for the duration of the emergency. The cost incurred by the Borough to interrupt or shut-off and reinstate service, or to install and remove a flow restrictor, shall be assessed to the water customer by the Borough.

E. The Borough of Elizabethtown is authorized to alter meter reading schedules to assure adequate monitoring of compliance with this Plan.

F. Any customer or other person aggrieved by a decision or action by the Borough imposing an excess-use charge or other remedy for noncompliance with the requirements of this Plan may proceed in accordance with the following provisions:

(1) The Borough shall adopt procedures which provide an opportunity for the customer or aggrieved party to rebut the finding of a violation, or evidence of circumstances beyond the customer's control which resulted in the violation. The Borough shall keep a record of evidence

presented regarding disputed violations, and shall provide the customer or aggrieved party with a written notice of the Borough's final decision and action in such case.

(2) Any person aggrieved by the final decision or action of the Borough may file an appeal with the Lancaster County Court of Common Pleas, in accordance with the provisions and procedures of the Local Agency Law, 2 Pa.C.S. §§551-555, 751-754.

12. Penalties. Any person who violates the provisions of this Plan, who fails to carry out duties and responsibilities imposed by this Plan, or who impedes or interferes with any action undertaken or ordered pursuant to this Plan, shall be subject to the penalties provided by law under 35 Pa.C.S. §7707.

13. Savings Clause. Nothing in this Local Water Rationing Plan shall in any way limit or affect the power or authority of any political subdivision to adopt and enforce ordinances, rules, restrictions and orders for water conservation and protection of essential water supplies, provided that such ordinances, rules and restrictions are not inconsistent with the requirements of this Plan.

14. Amendment of Plan. The Borough of Elizabethtown may, at any time, submit to the Pennsylvania Emergency Management Agency proposed additions to or amendments of this Plan. Such amendments shall be expeditiously considered by the Emergency Management Council, and shall take effect upon adoption by the Council.

15. Implementation Period. These regulations shall be implemented upon declaration by the Governor of a drought or water shortage emergency, and shall remain in effect during the period of such emergency until terminated by action of the Governor, or by order of the Pennsylvania Emergency Management Council

(Ord. 694, 1/19/1989, §3; as amended by Ord. 829, 11/15/2001)

PART 5

TAP-IN FEES

§501. Definitions.

The following definitions shall be used in this Part:

BOROUGH — the Borough of Elizabethtown.

IMPROVED PROPERTY — any property located within the Borough's service area upon which there is erected a structure or structures, or renovation or improvement to existing structures intended for continuous or periodic habitation, occupancy or use by human beings or animals and from which structure or structures water is provided.

PERSON — any individual, partnership, company, association, society, corporation or other group or entity vested with ownership, legal or equitable, sole or partial, of any improved property.

OWNER — the person who has real title for the ownership of the land upon which a unit is located.

UNIT — the property, building or other site to which water service is furnished including:

A. A building under one roof and occupied by one family or one business.

B. Each combination of buildings owned by one person, serviced by one service line and occupied by one family or business.

C. Each side of a double house or each housing unit.

D. Each apartment, office or suite of offices located in a building having several such apartments, offices or suites of offices and using in common one or more means of entrance.

E. Any mobile home occupied by one family or business.

F. Any other type of dwelling unit or business requiring water service as determined by the Borough.

(Ord. 792, 2/18/1999, §1)

§502. Authorization.

The Borough hereby authorizes, imposes and enacts a tapping fee to recover costs for the capacity related facilities required to provide such water service. The tapping fee is hereby imposed against any improved property and against the owner of such improved property whenever owner hereafter shall connect such improved property with a water main constituting a portion of the water system owned by the Borough, or when there is an expansion, addition, conversion or other creation of a unit which results in an increase or potential for increase in the volume of water consumed for such property. Said fee shall be in the amount of $1,659 for each unit with, or the equivalent volume consumed, or in the case of an expansion, addition or change in use for each additional unit water consumed by such improved property regardless of whether the water mains are installed by the owner, developer or the Borough. In the case of residential uses having multiple units or uses therein, a separate fee shall be paid or each unit.

(Ord. 792, 2/18/1999, §2)

§503. Fees.

The fee imposed by §502, above, is based upon the use of the capacity related facilities and based on the cost of the facilities which provide existing service, and is determined by the replacement cost of said facilities as determined by the Borough as attached hereto and marked Exhibit "A" and incorporated herewith.[1]

(Ord. 792, 2/18/1999, §3)

§504. Permit Required.

No person shall connect any improved property with any part of the water system without first making application for and securing a permit from the borough. Such application shall be made on a form to be provided by the Borough. No permit shall be issued until all applicable customer facilities fees, connection fees and tapping fees have been paid and until a permit application processing fee in the amount of $175 has been paid.

(Ord. 792, 2/18/1999, §5; as amended by Ord. 829, 11/15/2001)

§505. Connection Fee.

A connection fee for each individual connection to the water system shall be paid for the actual cost incurred by the Borough for inspection of the physical connection to the water system. Said fee shall be in the amount of $150 for each unit.

(Ord. 792, 2/18/1999, §5)

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[1] **Editor's Note: Exhibit "A" is on file in the Borough office**

§506. Customer Facilities Fees.

All owners of improved properties shall pay to the Borough a customer facilities fee. The customer facilities fee shall reimburse the Borough for its costs relating to the provision of a water meter, a remote meter and other necessary metering facilities. The customer facilities fee shall be the actual cost of the water meter and associated facilities paid by the Borough plus the cost for the Borough to inspect the installation of the water meter, remote meter and other necessary metering facilities. Said fee shall be in the amount of $216 for each unit.

(Ord. 792, 2/18/1999, §6)

§507. Payment.

The customer facilities fee, connection fee, tapping fee and application processing fee, as applicable, shall be due and payable at the time application is made to the Borough to make any such connection to the water system.

(Ord. 792, 2/18/1999, §7)

§508. Determination of Fee.

The Borough hereby incorporates by reference the records of the Borough used to determine the fees and makes these available to public inspection.

(Ord. 792, 2/18/1999, §8)

§509. Administration.

The Borough is hereby authorized and empowered to enact rules, regulations and administration directives to implement the administration of the imposition and collection of the fees.

(Ord. 792, 2/18/1999, §9)

PART 6

WATER SYSTEM CONSTRUCTION SPECIFICATIONS

A. General Provisions

§601. Purpose.

1. This Part sets forth uniform requirements for water system construction in Elizabethtown Borough.

2. This Part defines certain terms and provides for the regulations of the construction or repair of water systems and appurtenances by others, by contract or agreement or any other means with the Borough. Except as otherwise provided herein, the Borough Manager shall administer, implement and enforce the provisions of this Part.

(Ord. 752, 2/7/1994, §I)

§602. Short Title.

The short title of this Part shall be the "Borough of Elizabethtown Water System Installation Specification Ordinance."

(Ord. 752, 2/7/1994, §II)

B. Rules and Regulations

§611. General.

1. Scope.

   A. These specifications cover the design and construction of water main extensions. They also cover, in a general manner, the design and construction of new separate water supply systems including the installation of portable water piping, valves, specials, etc.

   B. The persons or agencies referred to in these specifications are defined as follows:

      APPLICANT — any person or company who applies for water service.

      BOROUGH — the Borough of Elizabethtown.

CONTRACTOR — the builder of the water main extension or water supply facilities, whether under contract with the applicant or the Borough.

OWNER — the legal owner of real estate or other property.

C. When an applicant for water service wishes to design and construct a separate water supply system, the applicant shall consult with the Borough prior to design, to obtain approval and to establish design criteria.

D. All water service projects shall be done in accordance with Borough ordinances, rules, regulations and schedules of charges for water service and these general specifications.

E. An applicant for an extension of water service shall submit four sets of plans providing the following information:

(1) Water Demands.

(a) Number and type of housing units, with anticipated construction schedule.

(b) Estimated total population served.

(c) Average daily water demand.

(d) Maximum daily water demand.

(e) Maximum hourly water demand.

(f) Fire protection demand and duration (hours).

(g) Construction elevations (U.S.G.S. datum).

(2) Planimetric mapping showing existing and proposed streets, property and lot lines, and building locations at a scale of one inch equaling 50 feet.

(3) Topographic mapping showing vertical relationship of new system to the existing. (NOTE: Planimetric and topographic may be combined or overlaid on each other.)

(4) Existing and proposed utilities including location and sizes of mains, valves, hydrants, blow-offs and other facilities.

(5) Legend of symbols, scale and date.

(6) A note which states: “All water main construction shall conform to the Elizabethtown Borough general specifications for water system con-

struction, which shall take precedence over other notes on the drawings."

2. Design Criteria.

A. General. The following design criteria shall be used unless exceptions are approved in writing by the Borough. Where special design criteria are required, the applicant should consult with the Borough prior to preparation and submission of plans.

B. Water Demands.

(1) Population (new developments). Three persons per unit.

(2) Domestic Water Demand.

(a) Average Daily Demand. Fifty gallons per capita per day

(b) Maximum Daily Demand. Two times average daily demand

(c) Maximum Hourly Demand. Four times average daily demand

(3) Industrial or Special Water Demands. Established for each installation.

C. Water Pressures.

(1) General. New development will be evaluated on the basis of the ability of the system to supply a minimum of 40 psi at ground elevation and 20 psi during fire flow.

(2) Booster Pumping Stations. The necessity of design of and construction of booster pumping shall be subject to Borough approval.

D. Size of Mains.

(1) Main sizes shall conform to Borough ordinances, rules and regulations. Required minimum sizes are eight inch diameter Class 52 DIP with cement lining in residential areas, and 12 inch diameter Class 52 in employment center areas. Adequacy of main sizes is based on a total flow requirement of fire demand plus maximum daily demand plus special requirements. A maximum C value of 130 is permitted for new cement-lined ductile iron pipe. The Borough retains the right to reduce the size of the main when a reduction is warranted according to the Borough Engineer.

(2) Fire hydrant branches shall be not less than six inch diameter and no longer than necessary. The maximum permissible length is 50 feet

unless a longer length is approved by the Borough. The Borough reserves the right to increase or reduce the size main proposed when such a change is warranted as determined by the Borough Engineer.

E. Location of Mains.

(1) General.

(a) Mains shall normally be located within the right-of-way lines of public streets. If it is necessary to locate a main on private property, the applicant shall provide a water main easement in the name of the Borough. The easement shall consist of a 20 foot wide permanent easement, normally centered on the pipeline, and a additional 20 foot wide temporary construction easement.

(b) Distribution main networks shall be looped and dead-end mains shall be avoided. When dead-end mains cannot be avoided, hydrants shall be provided at the main ends.

(c) Distribution mains shall be located a minimum of 20 feet from the nearest structure, except as approved by the Borough.

(d) A safe and adequate separation shall be maintained between water mains and all other underground utilities.

(2) Water Mains Near Sewers.

(a) Water main installation near sewers shall conform to the Pennsylvania Department of Environmental Protection Water Supply Manual. Water mains shall be laid at least 10 feet, horizontally, from any existing or proposed drain line. If local conditions prevent a horizontal separation of 10 feet, the water main shall be laid in a separate trench, or on an undisturbed earth shelf located on one side of the sewer, such that the bottom of the water main is at least 18 inches above the top of the sewer. When it is impossible to obtain the horizontal and vertical separation stipulation above, both the water main and the sewer should be constructed of pressure pipe utilizing mechanical joints employing a rubber gasket to obtain a seal. Both the water main and the sewer shall be pressure-tested after backfilling to assure watertightness.

(b) When a water main crosses a sewer or storm drain, the bottom of the water main shall preferably be installed 18 inches above the top of the drain, and this vertical separation shall extend at least 10 feet horizontally on each side of the sewer. If a water main must cross under a sewer or drain, a full length of water main pipe shall be centered under the sewer, the vertical sepa-

ration shall be a minimum of 18 inches, and the sewer pipe shall be encased in concrete for a minimum of 10 feet on each side of the crossing.

(c) Water mains shall always cross above sewer force mains with a minimum vertical separation of 18 inches, and the sewer force main shall be encased in concrete for at least 10 feet on each side of the crossing. See concrete encasement detail.

(d) No water pipe shall pass through, or come into contact with, any part of a sewer manhole.

F. Cross Connections. No water source of any type, other than the Borough water supply, shall be connected to customer piping served from the Borough water system. All potential cross connections shall be eliminated and the Borough may require any customer to install a backflow prevention device in accordance with §612(28) on the Borough water service line.

G. Minimum Cover Over Pipes. The minimum depth of backfill over pipes shall be four feet, or 48 inches. When the minimum depth of cover cannot be provided, insulated construction approved by the Borough shall be employed.

H. Location of Valves.

(1) Generally, a minimum of three valves shall be used at crosses and two valves at tees. The Borough reserves the right, however, to require the installation of four valves at each cross and three valves at each tee. Valves shall be placed at least every 700 feet on arterial mains and minor distributors, or at other selected points throughout the distribution system as determined by the Borough.

(2) All water mains shall extend at least 40 feet beyond each valve located on a dead-end main, unless otherwise approved by the Borough.

(3) A valve shall be installed on each hydrant branch pipe between the main and the hydrant and near the end of any main which may be extended.

I. Air-Release and Vacuum Valves. May be required in certain situations as determined by the Borough.

J. Blow-offs, Not permitted.

K. Fire Hydrant. Fire hydrants are required and shall be installed at the applicant's expense. Hydrant spacing and locations shall be as required as follows:

(1) In low density single family residential areas, all parts of an existing or proposed building shall be within 300 feet of a hydrant.

(2) In high density residential or common commercial areas, each entire unit shall be within 300 feet of one hydrant and 500 feet of a second hydrant.

(3) Generally, a hydrant should be placed at each street intersection, and intermediate hydrants should be installed if the distance between intersections is excessive.

(4) In checking distances between hydrants and buildings, measurements should be made along public streets, except where private entrances or parking areas are available for access.

(5) On all high points on the distribution main.

L. Cathodic Protection. Water mains installed near utilities having cathodic protection shall themselves be protected. The method of protection, which may include insulating couplings, polyethylene encasement, electrical connectors, test stations, and other facilities, shall be subject to Borough approval. General specifications for cathodic protection are presented in §614(15).

M. Customer Metering. Each customer shall be metered.

N. Corporations. Corporations will be installed at the low and high points of the new water main to facilitate the hydrostatic and pressure tests.

3. Borough's Right of Inspection. The Borough shall have the right to inspect any water system construction being carried out by the applicant. Should the inspected work prove unsatisfactory, the cost of removing and replacing, renewing and making good the unsatisfactory work shall be borne by the applicant. No water service facility shall be placed in service until it has been successfully tested in the presence of an authorized Borough representative in accordance with §615.

4. Working Conditions. No night, Saturday or Sunday work subject to Borough inspection will be permitted except in cases of emergency and then only with written Borough consent. No work shall be done when, in the opinion of the Borough, the weather is unsuitable.

5. Contractor.

A. The word "contractor" as used in these specifications means any person constructing a water main in accordance with these specifications and the rules and regulations of the Borough.

B. Where the contractor is acting as an agent of the applicant, requirements of the contractor under these specifications shall also apply to the applicant and the Borough shall have recourse to either party. These specifications shall not, however, be construed to dictate the legal relationship between an applicant and his or her contractor.

6. Liability. The contractor shall be responsible for any and all damage, loss, or injury to persons or property that may arise, or be incurred, in or during the conduct or progress of the work.

7. Exploratory Test Pits. Test pits shall be dug in advance of trench excavation when necessary to determine the location and depth of existing utilities, rock, water levels or other conditions that might affect construction.

8. Standard Specifications. Standard specifications of societies, associations, institutes, etc., are referred to in these specifications unless otherwise noted.

9. Work Area Traffic Control and Maintenance.

A. Traffic in work areas shall be controlled to protect the public and workers, while minimizing the inconvenience to the public. Traffic control devices shall conform to the Pennsylvania Department of Transportation (PennDOT) Regulations Governing the Design, Location and Operation of all Traffic Designs, Signals and Markings on or along Highways within the Commonwealth of Pennsylvania; the current revision of Bulletin Nos. 15, 43 and 730; and the PennDOT Publication 112, Handbook for Work Area Traffic Control; except where specified herein.

B. When vehicles must be stopped for short periods, work shall be performed during other than peak traffic periods. Access to residential and business establishments shall be maintained, except when work is actually being performed in the area. Trenches across driveways, side streets, alleys, and entrances shall be maintained after backfilling.

10. Compliance with Provisions of Act No. 287. Pennsylvania General Assembly Act. No. 287 and Act No. 172 set forth requirements designed to protect underground utility lines from damage during excavation. Generally the acts require the contractor to ascertain the location and type of utility lines at the work site and to request detailed information from each user (utility owner or operator) not less than three working days before beginning work. The contractor must provide operators with the information and must inform any user of any damage made or discovered during construction. Utility notification number required for design and construction.

11. Special Requirements.

A. Construction of water mains and appurtenances shall conform to the requirements of the Occupational Safety and Health Act (OSHA).

B. All equipment used on roadways shall be equipped with rubber tires or treads. If other than rubber tires or treads are used, the pavement shall be protected by heavy rubber belting.

C. The contractor shall maintain existing water mains in service. If an existing water main is damaged or broken, the contractor shall expeditiously restore service at his or her expense.

D. The contractor shall not remove backfill material from the lines of work before the excavation is refilled, except with Borough approval. This provision shall not relieve the contractor of the obligation to remove and dispose of the excavated material at his expense.

E. The contractor shall protect the work from damage during storms.

F. The contractor shall authorize a competent person to be available in case emergency situations arise during nonworking hours.

G. The contractor shall inform the local police and fire departments of work schedule and of possible street obstructions.

12. Quality Assurance.

A. Piping and specials specified herein shall be essentially the standard products of manufacturers who have been regularly engaged in the successful production of high quality materials of this type for at least 10 years.

B. Defective piping or specials must be repaired or replaced.

C. Pressure Tests for Ductile Iron Pipe.

(1) All completed ductile iron pipe shall be tested for leakage between valves. Tests shall be conducted as directed by the owner and as noted below.

(2) Test piping over four inches in diameter after installation at 150 psi. The piping shall hold the test pressure for one hour without a pressure loss. Contractor must repair any visible leaks.

D. Pressure Tests for Copper Tubing.

(1) Test piping one inch and less in diameter after installation at 150 psi. The piping shall hold the test pressure for one hour without a pressure loss. Repair any visible leaks.

(2) Test piping 1 1/4 – two inches and less in diameter after installation at 150 psi. The piping shall hold the test pressure for one hour without a pressure loss. Repair any visible leaks.

13. Delivery, Storage and Handling.

A. Deliver, store and handle the piping, valves and specials in accordance with the manufacturer's recommendations, and as supplemented herein.

B. Pipe and related materials shall be loaded and unloaded by lifting with hoists or skidding so as to avoid shock or damage. Under no circumstances shall such material be dropped or skidded against piping already on the ground.

C. Pipe and related materials shall at all times be handled with care to avoid damage. The interior shall be kept free from dirt and foreign matter. All pipe, valves and appurtenances shall be carefully lowered or raised into place, with suitable equipment in a manner that will prevent damage to the material. Under no circumstances shall pipe or accessories be dropped or dumped.

D. Pipe, pipe linings, fittings, valves and all related materials shall be thoroughly inspected for defects prior to their being installed. Any defective, damaged or unsound material, as determined by the owner, shall be repaired or replaced as directed at no additional cost to the owner.

E. All lumps, blisters and excess coating shall be removed from the ends of each pipe. The joints shall be wire brushed and wiped clean and dry and free from oil and grease before the pipe is installed.

(Ord. 752, 2/7/1994, §I; as amended by Ord. 829, 11/15/2001)

§612. Materials.

1. Ductile Iron Pipe.

A. All ductile iron pipe shall conform to ANSI A21.51 (AWWA C151) and shall be cement-mortar lined in accordance with American Water Works Association AWWA C104. All ductile iron pipe should be double cement lined and seal-coated inside and bituminous-coated outside. All water mains four inch diameter and larger shall be ductile iron pipe, except that pipe in cathodic protection areas may be PVC.

B. Joints shall be the push-on or mechanical joint type, conforming to ANSI A21.11 specifications. Furnish joints will all required accessories.

C. The contractor shall submit to the Borough, in triplicate, a certificate from the manufacturer that the pipe furnished complies with all applicable requirements of ANSI A21.51. Minimum thickness of ductile iron pipe shall conform to ANSI A21.50 (AWWA C152).

2. Fittings.

A. Ductile iron fittings shall be accepted for all ductile iron pipe. Ductile iron fittings shall have a minimum pressure rating of 250 psi, and shall conform to ANSI A21.52 (AWWA C152).

B. Fittings used with ductile iron pipe shall be furnished with mechanical joint ends conforming to ANSI A21.11. Mechanical joint fittings shall be furnished Complete with either gray iron or ductile iron glands, bolts and nuts, and plain rubber gaskets. The use of compact mechanical joint fittings will not be acceptable.

C. Flanged fittings, for exposure piping or when specified on the Drawings, shall conform to ANSI A21.10 or ANSI B 16.1. All flanges shall be faced and drilled in accordance with ANSI B16.1. Machine bolts and nuts for flanged fittings shall be steel, conforming to ASTM Designation A307, Grade B. Dimensions of bolts and nuts shall conform to ANSI B 18.2. Threads of bolts and nuts shall conform to ANSI B 1.1, Coarse-Thread Series, Class 2A fit on bolts, and Class 2B fit on nuts. Dimensions of gaskets shall conform to ANSI B 16.21.

D. All fittings shall be cement-mortar lined, paint seal coated inside, and bituminous coated outside, conforming to AWWA C104. The contractor shall submit to the Borough, in triplicate, a certification from the manufacturer that all fittings comply with the ANSI Standards noted above.

3. Cement-Mortar Lining. Cement-mortar lining shall conform to ANSI A21.4 (AWWA C 104), except that the cement-mortar lining thickness shall not be less than 1/8 inch for four inch through 12 inch main sizes and 3/16 inch for 14 inch through 24-inch main sizes. Paint seal coat in accordance with ANSI A21.4.

4. Mechanical Joint Retainer Glands. Are not to be used in the Borough.

5. Valves.

A. General. Valves 14 inch and larger shall be butterfly valves as long as valve design pressures are not exceeded. Valves four to 12 inches shall be resilient seated gate valves (AWWA C509).

B. Butterfly Valves.

(1) Butterfly valves shall conform to AWWA CS04, except where otherwise specified herein. Butterfly valves shall be the tight-closing, rub-

ber-seated type. Valves shall be bubble tight at design pressure, and shall be satisfactory for valve operation after long inactive periods.

(2) Valves shall be the short body type with mechanical joint ends, constructed of ductile iron conforming to ASTM A 126, Class B. All valves bodies shall have two hubs for shaft bearing housings, cast integrally with the body. Body shell thicknesses shall conform to Table three of AWWA C504. Valves shall be painted in accordance with AWWA C504, §4.2.

(3) Valves shafts shall be one piece or two piece units securely attached to the valve disc. Valve shafts shall have a minimum diameter as specified in Table 4 of AWWA 504, and shall be 18-8 stainless steel, Type 304. Shaft seals shall conform to AWWA C504, §3.7. Valves bearings shall be nylon, reinforced Teflon or graphite bronze.

(4) Valve shafts shall provide leak-proof shutoff with design pressure on one side and zero pressure on the other side. Valve seats shall be the 90° type, and shall be bonded and/or mechanically secured to the valve body or disc. Valve discs shall be alloy cast iron conforming to ASTM A436, Type I or 2, or ASTM A439, Type D2, with a maximum lead content of 0.003%.

(5) Valve operators shall be worm gear or traveling nut type, fully enclosed, and fitted with a standard two inch square operating nut. Operators shall produce the required output torque with a maximum input torque of 150 foot pounds on the operating nuts. All valves shall open to the left.

(6) The contractor shall furnish manufacturer's certified shop drawings, in triplicate, to the Borough. Valves shall be U.S. Pipe, Mueller, Keystone, American- Darling or American Flow Control.

(7) The contractor shall furnish manufacturer's certified shop drawings, in triplicate, to the Borough for approval. The manufacturer shall also certify that the valves comply with AWWA C509.

C. Resilient Seated Gate Valves. Gate valves shall be four to 10 inch and shall be resilient seated, meeting or exceeding AWWA C509. Gate valves shall have mechanical joint ends and be equipped with two inch operating nuts and be suitable for buried applications. Valves shall open when turned to the left. Valve shall have fusion-bond epoxy coating on the inside and outside of the valve. The valve shall be as manufactured by American Darling, Kennedy, Clow or approved equal.

D. Tapping Sleeves and Valves.

(1) The contractor shall verify the type of existing pipe and the outside diameter of pipe on which the tapping sleeve is to be installed. The tapping sleeve shall have bell or caulked type ends. The sleeves shall be made in two halves which can be assembled and bolted around the main. Gaskets shall extend the entire length of the sleeve to form a watertight joint when the side bolts are properly tightened.

(2) The tapping valves shall have flanged inlets with mechanical joint outlets. All valves shall be vertical ductile iron body, bronze mounted, inside screw valves with two inch operating nuts, and double disc gates. The valves shall open to the left, and shall be fitted with O-ring seals. The tapping valves shall conform to the applicable section of AWWA Standard C500.

(3) The contractor shall furnish manufacturer's certified shop drawings, in accordance with §01340 specifications. In addition, the manufacturer shall furnish an affidavit that the tapping valves furnished comply with all applicable provisions of AWWA Standard C500.

(4) The interior surface of each valve shall receive two coats of asphaltic varnish in accordance with Federal Specification TT-V-5 I C. The exterior surface of each valve shall receive two coats of bituminous coating in accordance with AWWA Specifications. The tapping sleeves and valves shall be as manufactured by the Mueller Company or approved equal.

6. Valve Boxes. Underground valves shall have extension-type, roadway-type valve boxes. Valve boxes shall be cast iron material with a strong magnetic attraction, and shall have threaded construction. Valve boxes shall have 5 1/4 inch shafts, shall have covers marked "WATER", and shall be coated inside and out with a tar or asphalt compound. Manufactured by Bingham and Taylor, Tyler or an approved equal.

7. Extension Stems. Each underground valve whose operating nut is deeper than four feet shall be equipped with an extension stem that is one inch square solid steel and fitted over the valve operating nut. The stem shall have a two inch square top operating nut and a spacer or spyder. Each extension stem top shall be set in the range from three feet to six inches below ground surface and shall not interfere with the valve box cover.

8. Small Valves.

A. General. Small valves are defined as three inch or smaller valves and shall be ball valves, unless specified otherwise.

B. Gate Valves. Gate valves shall be the 125 pound double disc, parallel seat, rising stem type and be handwheel operated. Valve bodies shall be bronze and have screw ends. Valves shall be Crane Company or approved equal.

C. Globe Valves. Globe valves shall be the 125 pound bronze disc type with screw ends and shall be handwheel operated. Valve bodies shall be bronze. The valves shall be Crane Company or approved equal.

9. Plastic Water Service Tubing. Not permitted in the Borough. When existing plastic service lines need replacing, they will have to be replaced with copper, see §612(10). See §612(4) for explanation.

10. Copper Tube. Copper tube shall conform to the requirements of ASTM B-88, with Type K underground and Type L in exposed locations.

11. Fittings for Copper Tubing.

A. Fittings for underground copper tubing shall be compression type conforming to ANSI B 16.26, Cast Copper Alloy Fittings for Compression Copper Tubes. Fittings for exposed copper tube shall be 125 pound bronze screwed fittings, conforming to ANSI B16.15 or 250 pound fittings, conforming to ANSI B 16.17.

B. Fittings connecting copper to copper shall be three-part straight couplings and shall be Mueller Company H-15400 (no substitutes).

C. Straight couplings connecting copper to male iron pipe thread shall be Mueller Company H-15450 (no substitutes).

D. Straight couplings connecting copper to female iron pipe thread shall be Mueller Company H-15425 (no substitutes).

12. Corporation Stops.

A. Corporation stop and box shall be designed to AWWA C800.

B. For copper tubing, corporation stops shall be Mueller 110 Compression Connection Outlet (no substitutes allowed).

13. Curb Stops and Boxes.

A. Curb stop and box, designed to AWWA C800, should be all bronze construction, inverted key stop.

B. Curb stops should be Mueller 110 Compression Connection Outlet (no substitutes allowed).

C. Box must be extension type arch pattern base of two-piece cast-iron construction coated inside and out with tar base enamel and topped with cast iron lid secured with bronze bolt.

D. Curb boxes may be Tyler, Bingham Taylor or Gardner (no substitutes), however when the curb box is to be placed in concrete such as a sidewalk, only Gardner boxes will be permitted.

14. Clamping Devices. Socket clamps, anchor straps and tie rods, used to anchor pipe fittings, shall be as manufactured by the Grinnell Company, Inc., Stellar Clow Corporation or approved equal. The contractor shall submit a sketch for Borough approval for installations using clamping devices.

15. Fire Hydrants. Fire hydrants shall be compression type with a 5 1/4 inch main valve, and a six inch mechanical joint inlet. The hydrant shall have two 2 1/2 inch hose nozzles, and one 4 1/2 inch pumper nozzle, complete with nozzle cap chains. The hydrant shall be traffic type with breakable safety flange and stem coupling and shall open counter clockwise. The hydrant shall have a hexagon operating nut and shall be provided with National Standard threads on the hose and streamer nozzles. Hydrants shall conform to AWWA C502 and shall be leakproof at the design pressure. Hydrants shall be Mueller Centurion, Model A423 (no substitution).

16. Steel Encasement Pipe. All steel encasement pipe shall be either fabricator pipe or mill pipe, manufactured in accordance with AWWA C200, latest edition. Pipe shall have flame or machine cut plain ends, which shall be beveled for field welding and circumferential joints, and shall have a protective coating of Standard Mill Primer prior to shipment. Steel encasement pipe shall be the size and wall thickness specified in Part five of the American Railway Engineering Specifications for pipelines and shall have a minimum tensile strength of 60,000 psi and a minimum yield point of 35,000 psi. Pipe shall conform to ASTM Designation A 135, Grade B; A139, Grade B; or A252, Grade 2.

17. Mechanical Couplings.

A. Steel mechanical couplings of the gasket, sleeve type shall be furnished and installed where shown on the drawings or required. The coupling shall be of the proper diameter to make a tight joint. The coupling shall not have stops. All couplings shall be for 150 psi working pressure.

B. Each coupling shall consist of one middle ring of a thickness and length suitable for the proposed application and test pressures; two followers; two rubber compounded wedge section gaskets and sufficient trackhead bolts to properly compress the gaskets.

C. Couplings to be buried shall be coated on the inside and outside with two coats of asphaltic varnish in accordance with Federal specification TT-V-51c. Manufactured by Ford FC1.

18. Flanged Coupling Adapters. Flanged coupling adapters shall have a cast iron body and a malleable or ductile iron follower flange. The flange bolt circle, bolt size, and spacing shall conform to ANSI Standard B 16.1, Class 125. Flanged coupling

adapters shall have two anchor studs for up to eight inch pipe size and four anchor studs for 10 and 12 inch pipe sizes. Flange coupling adapters shall be Rockwell Product No. Type 912, or approved equal.

19. Pressure Regulating Valves.

    A. The installation of pressure regulating valves may be required by the Borough to prevent excessive pressures at customer services or other locations.

    B. Pressure regulating valves two inch and smaller shall be diaphragm-type with cast-bronze body and galvanized iron strainer. They shall be manufactured by Mueller Co., A. W. Cal Valve Mfg., Corp., Watson McDaniel Co., Inc., Watts Regulator Co., or approved equal.

    C. Pressure regulating valves 2 1/2 inch and larger shall be Golden-Anderson Model 45-D or approved equal.

20. Air Release Valves. Air release valves shall be combination air release valves as manufactured by Multiplex Manufacturing Company (Crispin Universal), Valve and Primer Corporation (APCO) Model 143C, or Golden-Anderson Valve Specialty Company (Model 1-CAV), or approved equal. Valves shall be sized in accordance with manufacturer's recommendations based on main size, main capacity and pressure.

21. Precast Reinforced Concrete Manholes. Manholes shall have a precast reinforced concrete manhole top section set on a cast-in-place concrete base. The top section shall comply with ASTM Designation C478, Specifications for Precast Reinforced Concrete Manhole Sections, and shall be an eccentric cone design with a minimum inside base diameter of four feet.

22. Concrete. Concrete shall conform to PennDOT Specifications, Form 408, §704, Cement Concrete and Ready-mixed Cement Concrete. Class B concrete used for Class B bedding, reaction backings, or pipe encasements shall have an average compressive strength of 3,000 pa at 28 days and a three inch maximum slump. No compressive strength shall be less than 2,500 psi.

23. Manhole Brick and Mortar. Brick shall conform to ASTM Designation C32, Grade NA, and mortar shall be one part cement, two parts sand and water. Commercially prepared masonry cement shall conform to ASTM Designation C91.

24. Manhole Frames and Covers. Manhole frames and covers shall conform to ASTM A48 for Class No. 30 and shall be Neenah Foundry Company No. R-1772-A or approved equal. The word "WATER" shall be east in two inch high letters on the cover.

25. Manhole Steps. Manhole steps shall be forged 6061-T6 aluminum alloy or Fiberglass reinforced plastic cast into the precast cement manhole top section, shall be

aligned vertically and spaced a maximum 12 inch apart on equal centers, and shall satisfy OSHA requirements.

26. Meters.

A. General.

(1) All meters will be supplied by the Borough at no cost to the owner. The owner must notify the Borough at least 60 days prior to the installation requesting the number of meters and their sizes.

(2) No meter by-pass lines will be accepted except in installations at emergency institutions (hospitals, etc.).

B. Residential Type (5/8 inch, 3/4 inch and one inch). The meters shall conform to the AWWA Standard for Cold-Water Meters – Displacement Type, C700, except as noted below. The capacity of the meters shall conform to Tables I and 2 of AWWA Standard, C700. The outer case of all meters shall be bronze composition and shall be frost protected. The intermediate gear train shall be included in the register box.

C. Commercial Type (1 1/2 inches and two inches). The meters shall conform to the Standard for Cold Water Meters – Displacement Type, C700. The meter case, measuring chamber, and register box and lid shall be bronze. All interior parts shall be movable without disturbing the connections to the connections to the pipeline.

D. Compound Meters (three inches through 12 inches). Meters shall conform to the AWWA Standard for Cold Water Meters -Compound Type, C702. Main case connections shall be flanged and measuring chambers shall be bronze.

E. Fire Service Meters. Fire service meters shall conform to the AWWA Standard for Cold Water Meters – Fire Service Type, C703. Measuring chambers shall be bronze.

F. Remote Registration Systems. Remote registration systems shall conform to the AWWA Standard for Direct Reading Remote Registration Systems for Cold-Water Meters, C706, and the AWWA Standard for Encoder-Type Remote-Registration systems for Cold-Water Meters, C707. The system shall visually register flow at the meter as well as at the remove register. The meter serial number shall be imprinted on the register. Wire or tubing shall be suitable for exposed mounting.

G. Catalogues. The manufacturer or vendor shall furnish the Borough, in triplicate, with catalogues and brochures describing the materials to be furnished. The information shall include repair parts lists and loss of head curves.

27. Meter Pits. Not permitted.

28. Backflow Prevention Devices.

A. General. A backflow prevention device shall be installed on all new water services.

B. Reduced Pressure Backflow Preventers. This device shall be used at connections where toxic chemicals, sewage or other substances determined by the Borough to be hazardous, might enter the distribution system. It shall conform to AWWA C506, shall be minimum 150 psi design pressure, and shall be equipped with suitable test cocks. The device consists of an automatic pressure differential relief valve located in the zone between two or more independently acting check valves, which in turn are located between two tightly closing shutoff valves. All reduced pressure backflow preventers for fire service connections shall be BEECO Model 6-U, or approved equal. All other reduced pressure backflow preventers shall be BEECO Model 12 or 6-C, CLA-VAL Co. Clayton Model RP-2 or RP-I, Watts Regulator Company Series 909 or approved equal.

C. Double Check Valve Assemblies. This device shall be used at connections where nuisance materials, such as foods and beverages, or other materials that do not constitute a health hazard, might enter the distribution system. It shall conform to AWWA C506, shall withstand a 150 psi design pressure, and shall be equipped with suitable test cocks. The device consists of an assembly of independently acting check valves located between two tightly closing shut-off valves but without a pressure differential relief valve. All double check valve assemblies shall be BEECO Model VC, Hershey No. 1, CLA-VAL Co. Clayton D, or approved equal.

(Ord. 752, 2/7/1994, §II)

§613. Excavation and Backfill.

1. General.

A. Excavation and backfill work shall conform to the AWWA Standard for Installation of Cast Iron Water Mains, C600, plus the changes and additions specified herein. The contractor shall conform to the regulations of all governmental agencies having jurisdiction over the work.

B. Standard details for trench excavations are attached to these specifications and are made a part thereof. These details cover earth trenches, rock trenches, trenches in unsuitable soil, trenches in roadway shoulders and trenches in paved areas.

C. The term “subgrade,” as used herein, shall have the following meanings:

(1) The planned bed of a trench prepared to receive bedding material.

(2) The area upon which the lower surface of roadway paving rests.

(3) The area upon which the planned bottoms of manholes rest.

2. Rock Excavation.

A. Unless otherwise approved by the Borough, rock shall be removed from the trench at least 25 feet in advance of pipelaying. Rock shall be excavated for the full specified width of the trench for a depth of eight inches below the outer bottom of the pipe.

B. Rock below the specified subgrade that is shattered and unfit for foundation in the Borough's opinion shall be removed and the area backfilled to the proper subgrade with Class B concrete or coarse aggregate subgrade material. Rock encountered at blank connections or stubs shall be excavated at least 10 feet from the blank connections in the direction of any proposed future extension, and the excavation shall conform to the requirements for the extension.

3. Explosives and Blasting.

A. Blasting procedures shall conform to Pennsylvania Department of Labor and Industry regulations, AWWA C600, §6.12, and NFPA 495. Rock within five feet of any existing water or gas main, sewer, electrical conduit, or other utility or structure shall be removed by means other than blasting. The Borough reserves the right to designate any other specific limits of the work in which rock shall be removed by means other than blasting.

B. A licensed blaster is required and a seismographic monitoring plan shall be implemented.

C. Where lines pass in vicinity of existing construction, the contractor shall be required to perform a preblast survey of the existing structures to established baseline conditions. This should be done by licensed engineer specializing in this work.

4. Removal of Pavement and Storage of Materials.

A. The contractor shall grub and clear the surface and remove all surface materials over the line of the trench; properly separate and classify the material removed; and store, guard, and preserve any materials required for backfilling or other purposes. All materials taken from the trenches shall be stored away from the street or highway, unless otherwise authorized by the Borough or PennDOT. The materials shall be placed or stored in a manner that will not obstruct any pipe, culvert, gutter, drain, ditch or waterway.

The width of existing pavement removed shall be no greater than the trench widths specified in §613(5), unless otherwise directed by the Borough. Pavement shall be cut into neat lines with a concrete saw or air spade in accordance with local government regulations.

B. In business districts, State highways, streets with heavy traffic, narrow streets, or any other locations where working space is limited, the excavated material shall, when required by the Borough, be removed as soon as excavated, contractor must comply with PennDOT 459 regulations when working on State highways. The contractor shall not cast excavated material beyond the curb or right-of-way lines, or on sidewalks or lawns. Excess excavated material shall be removed to the location provided by the contractor. The contractor may bring back this material for backfill or provide other suitable material. When soft or wet material must be hauled over streets, the contractor shall prevent spillage. All topsoil within the trench limits shall be removed prior to excavation and replaced after backfilling.

5. Width and Depth of Pipe Trenches. The width and depth of pipe trenches shall conform to the dimensions shown on the attached standard detail drawing. Trench sides shall be vertical, and dimensions shall apply to the inside faces of any required sheeting. The trench depth shall include a minimum depth of cover of four feet. The contractor shall not excavate below the depths specified, except where excavation of rock or unsuitable material is required. Trenches excavated beyond the specified depths without written approval of the Borough shall be backfilled with thoroughly tamped Class A bedding material at the contractor's expense.

6. Preparation of Pipe Trenches. Pipe trenches shall be uniformly graded to planned subgrade. If subgrade conditions are satisfactory, as determined by the Borough, Class A bedding material shall be furnished and placed as described below. If subgrade conditions are not suitable, the contractor shall excavate the unsuitable material and backfill in accordance with standard detail.

7. Bedding Material. Stone bedding shall be provided in all cases except where conditions require class bedding. Stone bedding shall consist of a six inch encasement of I B stone to be placed in two lifts. The first lift shall be filled 1/2 of the pipe barrel and chalked or vibrated underneath the pipe. The second lift is to be placed at a height of six inches above the pipe and leveled out.

8. Sheeting, Shoring and Bracing. Sheeting, shoring and bracing shall conform to Pennsylvania Department of Labor and Industry Regulations, OSHA regulations, and AWWA C600, §616(13), unless otherwise specified herein. Sheeting, bracing and shoring shall be designed by contractor. Sheeting, bracing and shoring shall be withdrawn and removed as the trenches are being backfilled; except where the Borough shall require that same be left in place, or where the Borough permits the contractor to leave same in place. Voids or holes left by the sheeting or sheet piling shall be filled with compacted approved material.

9. Backfilling Trenches.

A. Trench backfill shall conform to PennDOT 459 regulations, PennDOT highway occupancy permit regulations and AWWA C600, except as specified herein and on the standard trench details.

B. Backfill material shall be carefully placed in trenches according to specified layer thickness, and each layer shall be thoroughly compacted. The amount of compaction equipment and compaction effort is subject to Borough approval.

(1) Select Backfill. Select backfill material shall consist of clean, dry earth and shall not contain stones larger than one inches. Excavated material may be used if approved by the Borough.

(2) Ordinary Backfill. Ordinary backfill material shall consist of clean dry earth, and shall not contain stones larger than six inches. Excavated material may be used if approved by the Borough.

(3) Trenches Located on State Highways.

(a) All trench excavation and backfill on State highways shall conform to PennDOT requirements. The applicant shall pay all costs of PennDOT inspections.

(b) Backfill of transverse or longitudinal trenches under paved surfaces shall be refilled from a point six inches above the top of pipe to the pavement in four inch mechanically-compacted layers with coarse aggregate. The coarse aggregate shall be Pennsylvania No. 2RC, conforming to §677.2 of PennDOT Specifications, Form 408. The contractor shall remove excess excavated material at his or her expense. Backfill under unpaved shoulders shall be refilled from a point one foot above the top of pipe to a point 18 inches below the existing grade of the shoulder in four inch mechanically-compacted layers with approved backfill material. The backfill shall conform to §206.2 of PennDOT Specifications, Form 408.

(4) Trenches Located in Borough Streets and Alleys.

(a) Trenches located along Borough streets shall be refilled in 4-inch mechanically-compacted layers from a point six inches above the top of pipe to the pavement subgrade with suitable, approved ordinary backfill.

(b) Should the excavated ground be determined by the Borough not to be suitable, approved ordinary backfill, No. 2RC course aggregate will be substituted.

(5) Unpaved Areas Not Subject To Traffic. Trenches in unpaved areas not subject to traffic shall be refilled from a point six inches above the top of pipe to the existing grade in eight inch mechanically-compacted layers with approved ordinary backfill. In areas requiring seeding, the backfill shall be terminated four inches below the existing grade and the final four inches refilled with approved topsoil.

10. Dewatering. The contractor shall keep all excavations free from water. Contractor must comply with Lancaster County Soil Conservation District regulations.

11. Existing Underground Utilities or Obstructions.

A. The contractor shall conform to General Assembly Act No. 287 and Act No. 172.

B. The contractor shall be responsible for all damage to existing underground utilities due to operations. The contractor shall determine the correct location of utilities by means of exploratory test pits and information obtained from utility owners; and shall be responsible for all utilities and other obstructions, whether or not they are shown on the drawings or are located incorrectly. Any damage to existing utilities shall be repaired at the contractor's expense and to the satisfaction of the owner of the utility.

C. The contractor shall uncover and verify the location of utilities and other underground obstructions far enough in advance of the pipe laying to permit changes in pipe alignment or grade to bypass the obstructions without removing pipeline. If necessary, the contractor shall be responsible for removing and reinstalling the pipe at his own expense to avoid utilities.

D. The contractor shall support utility poles located at or near the trench line limits, and shall contact utilities for pole supports when necessary. If the utility poles are damaged, the contractor shall be responsible for repairs.

12. Removal of Obstruction.

A. Any removal, realignment or change in the position of any pipe, conduit, pole or other structure due to the construction shall be done at the contractor's expense and with the approval of the owner of the obstruction.

B. If fencing removed served as an enclosure for animals, the contractor shall prevent the escape of the animals. Trees and shrubs in rights-of-way shall not be damaged or cut down, unless authorized by the owner of the property and the Borough. Trees cut down shall have their stumps removed, and all resulting debris shall be removed and disposed of by the contractor at his or her expense. When the water main is completed, the contractor shall restore the temporary and permanent rights-of-way to their original condition at his or her own expense.

13. Change of Trench Location or Depth. The Borough reserves the right to require changes in the trench location or depth. If field conditions require the lowering of the pipe to a depth greater than that specified, the contractor shall obtain approval from the Borough to install the pipe at the lower depth. If the contractor installs the pipe at the lower depth without such approval, and the Borough determines that a different pipe class is required at the lower depth, the contractor shall excavate and remove the pipe of the lower class and shall install the pipe class required by the Borough at his or her own expense.

14. Length of Open Trench. The Borough reserves the right to limit the amount of trench opened in advance of pipelaying to not more than 100 feet and the amount of pipe laid in advance of backfilling not more than 50 feet. At the close of work at night or at the discontinuance of work, not more than 20 feet of trench shall remain open at any location and the Borough reserves the right to require the refilling of all open trenches.

15. Accommodation of Drainage. The contractor must comply with Lancaster County Conservation District requirements. The contractor shall keep gutters, sewers, drains, and ditches open at all times for surface drainage. The contractor shall direct water across or over pavements only through approved pipes or properly constructed troughs and shall do so at his or her own cost and expense. The ground surface shall be properly ditched to prevent water from running into the pipe trenches.

16. Accommodation of Traffic.

    A. These provisions supplement the requirements of §611(9). The contractor shall comply with PennDOT Publication 203 Work Zone Traffic Control standards. Streets shall not be unnecessarily obstructed, unless the contractor obtains permission in writing to close a street. The contractor shall take all necessary measures to keep the street or road open and safe for traffic. During shutdowns of work, the contractor shall insure that all streets affected by construction are open and can be safely traveled by vehicles.

    B. The contractor shall construct and maintain, without extra compensation, adequate and proper bridges over excavations for safe accommodation of pedestrians or vehicles. The contractor shall furnish and erect approved barricades at crossings of trenches or along the trench to protect the public.

    C. All stored materials and equipment which may be obstructions to traffic shall be protected by approved lights, lanterns, torches or guards. The contractor shall not obstruct fire hydrants.

17. Protection of Property and Structures.

    A. The contractor shall sustain in their places, and protect from direct or indirect injury, all poles, pipes, conduits, tracks, roadways, curbs, walks, walls,

buildings and other structures or property in the vicinity of his work. The contractor shall be responsible for any damages and assume all expense for direct or indirect injury, caused by his work, to any person, property or structure. The contractor must maintain access to all mailboxes.

B. Pipes and underground conduits exposed as a result of the contractor's operations shall be adequately supported by timber or planking, such that the anchorage of the supports will not be distributed or weakened during backfilling. Approved backfill material shall be carefully tamped under and around the supports, and all supports shall be left in place.

18. Permits and Licenses. The applicant, or the Borough if it elects to do so, shall obtain the necessary permit from PennDOT for the occupancy of State highways. The applicant or the Borough, depending on ultimate ownership, will submit the required data and execute agreements with the railroad companies for the installation of water mains on their rights-of-way. The contractor shall obtain and pay for any other permits required by local or other governmental agencies having jurisdiction over the streets to be opened. Prior to opening any excavation within the right-of-way of any railroad, state highway or borough street, necessary agreements must be executed and that all required permits must be obtained by the contractor, the applicant or the Borough.

19. Cleanup. As the trenches are backfilled, the contractor shall immediately remove and dispose of all surplus material. If the contractor fails or neglects to keep roads, sidewalks, and other areas free of surplus material after 24 hours, written notice to the contractor and the costs of said work shall be charged to the contractor. When the repaving is completed, all paved surfaces shall be swept clean, and if required by the Borough, shall be flushed with water. All such work shall be at the contractor's expense.

20. Maintenance of Unpaved Areas. The contractor shall maintain all backfilled excavations in all unpaved areas to the satisfaction of the owner for a period of one year from the date when the water main is accepted by the Borough.

21. Clearing and Grubbing.

A. Clearing includes the cutting and disposal of all trees, vegetation, and other objectionable material occurring within a width of the work area established prior to construction. Grubbing includes the removal and disposal of all stumps and root mats located within the established area. The method of disposal of waste material shall conform to all State and local laws, ordinances and regulations, including the Air Pollution Control Act, approved January 8, 1960, or as amended.

B. Shade trees, hedges, shrubbery, flowers and grass on private or public property shall not be cut or destroyed. The contractor shall protect and/or remove and replace shade trees, hedges, shrubbery and flowers along the water main and be responsible for establishment of firm growth of said trees

and other vegetation. The Borough reserves the right to designate the size and number of trees to remain in place and these trees shall be protected from damage. Any trees killed or damaged by the contractor's operations shall be replaced. Contractor must comply with Lancaster County Soil Conservation District requirements.

22. Pavement Restoration. If existing pavement is destroyed while installing water lines in the Borough, the following guidelines shall be followed:

A. Temporary Paving. At the end of each working day, the trench shall be temporarily paved with no less than a three inch thick, tamped layer of cold patch material. The contractor will be responsible for maintaining this temporary paving until such time that permanent paving-restoration occurs.

B. Permanent Paving.

(1) Permanent paving shall not occur until the entire water line project is completely in place. The cold patch material shall be removed and the trench edges shall be saw cut back a minimum of 12 inches on both sides. The contractor shall then match the types and thicknesses of existing pavement materials. However, under no circumstances shall there be anything less than two inches of BCBC and one inch of wearing course.

(2) Prior to placing any asphalt material in the trench, the sides of the existing asphalt shall be primed with AC-20.

(3) Upon completion of final compaction of the wearing course, the top edges will be sealed with AC-20.

(4) This paving specification applies to streets, alleys, parking lots, driveways and any other paved surface.

(Ord. 752, 2/7/1994, §III)

§614. Pipeline Installation.

1. General. This section covers the installation of the water mains, complete with all fittings, valves, reaction backings and/or harnessing, connections and appurtenances. The contractor shall conform to AWWA Standard for Installation of Cast Iron Water Mains, C600, except where otherwise specified herein.

2. Responsibility for Material. The contractor shall be responsible for all material, and shall replace at his own expense all such materials found defective in manufacture or damaged in handling, as determined by the Borough. Any materials found defective shall be promptly removed from the site. Defective pipe shall be classified as follows:

A. Damage to interior or exterior paint seal coats.

B. Damage to interior cement-mortar lining.

C. Insufficient cement-mortar lining thickness.

D. Poor quality interior paint seal coat causing a partial obstruction in the pipe round.

E. Pipe out of round.

F. Damaged pipe barrel area causing a reduction in effective pipe thickness.

G. Any material that is dropped during handling, regardless of its apparent condition.

3. Handling of Material. Pipe shall be so handled that the coating and lining is not damaged. If any part of the coating or lining is damaged, the repair shall be made by the contractor at his or her expense and to the satisfaction of the Borough. Valves and hydrants shall be stored and kept dry before installation. Any material that is dropped during handling is subject to rejection regardless of its apparent condition.

4. Alignment and Grade. Where the proposed pipeline route is on a curve, the contractor may deflect the pipe at the joints to published manufacturer tolerances. Where underground conditions require a change of alignment or grade, such change shall be made only with the written consent of the Borough. When a change in grade is indicated which will result in the pipe having more cover than originally anticipated, the class of pipe installed at the location shall withstand the new loadings. Except at predesignated points, no high points shall be established where air can accumulate. If field conditions necessitate a change in the pipe profile and, in the opinion of the Borough, the change requires the installation of a fire hydrant, the contractor shall install the same.

5. Lowering Water Main Material into Trench. The contractor shall conform to AWWA Specification C600, §7.

6. Cleaning Pipe and Fittings. All lumps, blisters and excess coating shall be removed from the end of each piece of pipe and fitting. The outside of the spigot, the inside of the bed and the gasket shall be thoroughly wiped clean and dry before the pipe is installed.

7. Laying Pipe.

A. Following trench excavation, pipe laying shall proceed upgrade with pipe laid carefully, hubs upgrade, spigot ends fully centered into adjacent hubs, and true lines and grades given.

B. Each section of pipe shall rest upon the pipe bed for the full length of its barrel, with recesses excavated to accommodate bells and joints. Each pipe shall be firmly held in position so that the invert forms a continuous grade with the invert of the pipe previously placed.

C. Under no conditions shall pipe be laid in water, on subgrade containing frost, and/or when trench conditions are unsuitable for such work. In all cases, water shall be kept out of the trench until concrete cradles, supports, encasement or saddles, where used, and materials in the joints have hardened.

D. Any pipe that has its grade or joint disturbed after laying shall be taken up and relaid. Any section of pipe already laid and found to be defective shall be taken up and replaced with new pipe without expenses to the owner.

E. Walking or working on top of the completed pipeline, except as may be necessary in backfilling or tamping, shall not be permitted until the trench has been backfilled to a height of at least two feet over the top of the pipeline.

F. At times when pipe laying is not in progress, the open ends of the pipe shall be closed by watertight plug.

G. All joints shall be made in accordance with the pipe supplier's specifications and in accordance with the following instructions:

(1) Push-on Type Joints.

(a) Cleaning and assembly of push-on joints shall conform to AWWA C600, §9c.3. The inside of the bell and the outside of the spigot end shall be thoroughly cleaned to remove oil, grit, excess coating, and other foreign matter. These parts shall be kept clean throughout assembly at the joint.

(b) The circular rubber gasket shall be flexed inward and inserted in the gasket recess of the bell socket. Care shall be taken to insure that the gasket is properly seated.

(c) A minimum amount of lubricant shall be evenly applied to the spigot end with a brush. Gasket lubricant shall be as supplied by the manufacturer.

(d) The spigot end shall be properly centered, and force shall be applied using a ratchet jack-type tool or a roller chair-type ratchet jack, until the white stripe at the spigot end is just visible at the face of the bell. Any required deflection shall be made only after the joint assembly has been made.

(e) Proper positioning of the gasket shall be checked with a "feeler" gauge after each joint is made.

(f) The edges of "field cut" pipe shall be touched up with a file or grinder so as to remove rough edges and facilitate assembly.

(2) Mechanical Joints. The cleaning, assembly, and bolting of the mechanical joint shall conform to AWWA C600, §§9b.3 and 9b.4.

(3) Bell-and-Spigot Joints.

(a) Bell-and-spigot joints shall conform to AWWA Specification C600, §9a.

(b) Thoroughly clean the bell and the spigot end of the pipe of all foreign matter and wash them with soapy water.

(c) Slip the gland and gasket over the plain end and seat the spigot end in the bell (the small end of the gasket and the lip on the gland shall face the bell).

(d) Push gasket into position with fingers, making sure it is evenly seated.

(e) Moved gland into position for bolting, insert bolts and make all nuts finger-tight, keeping the spigot centrally located within the bell.

(f) Bolts shall be tightened in accordance with the manufacturer's written instructions.

(g) If effective sealing is not obtained at the maximum torque indicated above, the joint must be disassembled and reassembled after thorough cleaning. Under no circumstances are bolts to be over stressed.

(4) Flanged Joints.

(a) Flanged joints shall not be used for buried service.

(b) Flanges shall be wiped clean with a solvent-soaked rag prior to installation. The gasket shall also be wiped clean.

(c) The pipe, fittings and valves shall be properly supported during installation.

(d) All flanges shall be properly aligned and checked with a spirit level horizontally along the pipe and vertically across the flange faces.

(e) With flanges secured in position, half the bolts shall be inserted at the bottom of the flange, the gasket inserted between the flanges and the remaining bolts inserted.

(f) The threads of the bolts shall be given a light coating of thread lubricant, and the nuts shall be installed on the bolts and turned up by hand. The nuts shall be tightened with a wrench by the crossover method to load the bolts evenly until the joints are tight.

(5) Mechanically Coupled Joints. Mechanical couplings shall be installed in strict accordance with the manufacturer's instructions, and in a manner to insure permanently tight joints under all reasonable conditions of expansion, contraction, shifting and settlement. The required torque ranges for the joint harness shall be as specified by the pipe manufacturer.

8. Setting Valves and Valve Boxes. All valves shall be provided with a valve box as detailed on the drawings. Unless otherwise directed by the Owner all valves shall be set with their stems truly vertical. The tops of the valve box shall be set neatly to the grade of the surface of the existing ground, unless directed otherwise by the Owner. The valve box shall not transfer shock or stress to the valve and shall be centered and plumb over the wrench nut of the valve.

9. Setting of Hydrants. Fire hydrants shall be installed as specified in AWWA C600, §11. Where there is no sidewalk or curb the hydrant shall be not less than six feet from the edge of the paved road surface. In no case will hydrants be located closer than 25 feet to a building except where building walls are blank firewalls. Hydrants shall not be located closer than three feet to any obstruction or in front of entrance ways. All hydrants shall stand plumb with the pumper nozzle facing the curb, and six inches behind it, and the hose nozzles parallel to the curb.

10. Anchorage.

A. All plugs, caps, tees, and bends (both horizontal and vertical) shall be provided with concrete reaction backings, or shall otherwise be anchored as authorized by the Borough. Sizes of required concrete reaction backings are shown on the attached standard detail drawing. Where the water mains must be tested before connections existing mains can be installed, temporary reaction backings or restrained type plugs shall be installed. Concrete for reaction backings shall be Class B cement concrete as specified in §612(26). Care should be taken to insure that all weep holes remain open and that no concrete covers any bolts or nuts or interferes with future repairs or replacement.

B. The contractor shall submit a sketch and obtain the Borough's approval for the anchorage of the pipe and fittings at each connection, or at any other locations designated by the Borough. The Borough reserves the right to require mechanical joint retainer glands in addition to concrete backings.

C. Hydrant bases shall be braced against undisturbed earth with reaction backings, or shall be restrained with tic rods, clamps or retainer glands, in a manner approved by the Borough. The approved hydrant installation is shown on the attached standard detail drawing.

11. Connections to Existing Water Lines. Connections shall be made to existing water mains at various points in the project. These connections shall be made in strict accordance with the requirements set forth by the Engineer, and as specified hereinafter.

A. General.

(1) Each connection to the existing water line shall be made under pressure with a tapping sleeve and valve. If this is not possible, then the following conditions must be met.

(2) The contractor shall take special precautions so as not to disturb in any way the functional operation of the existing water main; except on a preplanned scheduled basis, the time and date of which will be established in advance with the Engineer and owner. The contractor shall at no time operate water valves in the existing water system without the presence of a duly qualified representative of the owner.

(3) The contractor shall be responsible for working in coordination with the owner to insure that all customers that may be affected by the interruption of service are given adequate notice of the pending interruption of service. If the number of customers and length of interruption are such, in the opinion of the owner, to justify the need, the contractor shall place advertisements in the local newspaper a minimum of three times, prior to the scheduled interruption of service. The cost of such advertising shall be included in the price bid for the various connections.

B. Schedule of Work. The contractor shall follow the installation schedule as outlined below:

(1) In locations where new water mains are to be connected to existing water mains, the contractor will not be permitted to proceed with the construction of the connection until he has dug test pits and determined the exact location, elevation and type of existing pipe and its outside diameter. The contractor is reminded that old water main pipe may vary in roundness and outside diameter and consider this factor

in ordering materials for the connection. The cost of excavating, maintaining, and backfilling test pits shall be considered incidental to the earth excavation and backfill, and no separate payment will be made. Pits shall be protected and backfilled, if required, by the contractor.

(2) If the condition of the connection is regulated by geometry, as determined by data obtained from the excavation of the test pits, the contractor shall order any necessary additional materials.

(3) The contractor shall notify the owner at least five days in advance of the time he or she proposes to install the connection, and shall establish with the owner the procedures to be followed in installing the connection, including the day and time of the proposed shutdown, and establish a new date and time for the shutdown, based on the owner's knowledge of system conditions. The contractor is hereby warned that the owner reserves the right to require that any particular connection be made at night or on a Sunday.

(4) Before the start of the installation of a connection, the contractor shall do as much work in advance as possible prior to actually shutting down the main, and shall have all necessary tools, equipment, materials and labor on hand at the start of the work.

(5) Once the existing main is cut, work shall be continuous until water service is restored.

(6) When installing connections, estrained joints and tie rods and clamps shall be used to the maximum extent possible, in lieu of concrete thrust blocks when installing connections, unless shown otherwise on the drawings. If it is necessary to use concrete thrust blocks, the high early strength cement concrete shall be used.

12. Service Lines.

A. General. The sizing of customer service lines shall be subject to Borough approval and shall be based on the length of line and the water demand. Residential service lines shall normally be 3/4 inches in size. The service line shall normally consist of a corporation stop, copper pipe, curb stop and box.

B. Materials.

(1) Corporation Stops. See §612(12).

(2) Copper Tube. See §612(10).

(3) Fittings for Copper or Plastic Tubing. See §612(11).

(4) Curb Stops and Boxes. See §612(13).

(5) Steel Encasement Pipe. Steel pipe, three inches and smaller, for encasement of service pipes shall be Schedule 40 welded and seamless black steel pipe, conforming to ASTM Designation A120.

C. Construction Methods.

(1) When installing corporation stops, the main shall be tapped at a 45° angle with the horizontal. Service tubing shall be installed as a continuous length of pipe and shall have a minimum cover of four feet. Curb stops shall be vertical, with the top of the curb box a finished grade. Where grading may be still in progress, the curb box shall be marked by a high stake.

(2) Where service lines cross highways or streets, a 1 1/4 inch (for 3/4-inch service pipe) black steel casing pipe shall be installed across the street by boring, jacking, auguring or drilling, and the service line shall be inserted in the casing pipe. If underground conditions do not permit boring, pushing, or jacking, the contractor shall obtain authority approval before proceeding with an alternate method of installation. PennDOT normally requires that water mains crossing State highways be installed in a casing pipe which shall be bored, jacked or augured under the highway, as specified in §616, "Special Crossings." However, PennDOT may permit the open cutting of trenches across State highways as specified in §616.

13. Railroad and Creek Crossings. Pipeline crossings under railroad tracks and creeks shall be installed in accordance with §616, "Special Crossings."

14. State Highway and Street Crossings.

A. Maintenance and control of traffic shall be as specified in §611(9) and the accommodation of traffic as specified in §613(16).

B. All construction on state highway right-of-way shall be subject to inspection by PennDOT personnel. Contractor shall comply with PennDOT 459 Regulations and Highway Occupancy Permit Regulations. Streets under local jurisdiction may also be subject to inspection by the Borough Engineer.

15. Corrosion Control. Water mains that cross pipelines which are now, or may be in the future, cathodically protected shall be constructed using PVC pipe as specified herein. The PVC pipe shall extend a minimum distance of 20 feet from the crossing pipe on each side. The PVC pipe shall be suitable for direct connection to cast iron or ductile iron pipe, and shall conform to AWWA C900. The PVC pipe shall be Johns-Manville Blue-Brute Thickwall Ring-Tite PVC water pipe or approved equal.

16. Reaction Backings. Concrete reaction backings shall be provided for all tees, crosses, and bends, both horizontal and vertical. Concrete shall be Class A in accordance with PennDOT Form 408. Reaction backings shall be designed for 175 psi minimum; contractor shall submit design for approval.

(Ord. 752, 2/7/1994, §IV)

§615. Testing and Disinfection.

1. General.

   A. This section covers the testing and disinfection of the water mains. The contractor shall prepare a schedule and procedure for the testing and disinfection of the different parts of the work and shall submit the same to the Borough for approval two weeks before beginning the testing and disinfection. The contractor shall perform the testing and disinfection prompt and efficiently without interference to the system operation. The contractor shall give the Borough 24 hours notice before testing any main.

   B. The contractor shall begin testing and disinfection of the various sections of water mains promptly upon the completion of a section of work, unless the Borough approves otherwise. The Borough reserves the right to limit the amount of water main to be tested. The contractor shall close the section of water main to be tested by valves or temporary plugs and shall install temporary reaction backings where required.

2. Hydrostatic and Leakage Test.

   A. Hydrostatic pressure tests shall not be made until at least seven days after concrete reaction backings are installed. The contractor, at his option and expense, may use high early strength cement concrete for reaction backings, in which case hydrostatic pressure tests shall not be made until at least three days have elapsed.

   B. The contractor shall completely backfill the trench, or may partially backfill the trench with written approval of the Borough, prior to carrying out the pressure test.

   C. The section of water main being tested shall be filled with water a minimum of 48 hours before the main is tested. The contractor shall insure that air is expelled from the pipeline in accordance with AWWA C600, §4.1.3. Any taps necessary to release air or water from the main during testing shall be made at the contractor's expense, unless retained by the owner for other use.

   D. After the pipeline has been filled with water for 48 hours, the contractor shall conduct a hydrostatic or pressure test. The duration of the pressure test shall be at least two hours. Each section of water main shall be tested

under the design pressure specified in §611(2)(C)(2), measured at the low point of the section of main being tested. The proposed test pressure shall be approved by the Borough prior to testing, and the contractor shall not employ a test pressure which exceeds the allowable pressure of any installed pipe, valve or appurtenance.

E. In order to successfully pass the pressure test the line or section of line being tested cannot lose any pressure during the two hour test.

3. Disinfection.

A. General. Before being placed in service, all pipe installed under this contract shall be disinfected by chlorination in accordance with AWWA C60 1, except where specified otherwise in this Section.

B. Preliminary Flushing. Prior to disinfection, the sections of pipeline being disinfected shall be flushed thoroughly. If necessary, the line shall be opened up to flush as in a case where no hydrants are available.

C. Form of Chlorine for Disinfection. The contractor shall use either liquid chlorine or calcium hypochlorite solution for disinfection in accordance with AWWA C601, §6.

(1) Liquid Chlorine. A chlorine-gas water mixture shall be applied by means of a solution feed chlorinating device in combination with a booster pump for injecting the chlorine gas-water mixture into the main to be disinfected. This method shall be used only if the contractor can demonstrate to the Engineer that the person supervising the operation is thoroughly familiar with and experienced in the handling of chlorine gas, and that the equipment to be used is suitable, and that proper safety equipment is available.

(2) Calcium Hypochlorite Solution. A chlorine-water solution of 1% available chlorine shall be prepared, using granular calcium hypochlorite, and this solution shall then be injected or pumped into the pipeline. A chlorine water solution of 1% available chlorine may be prepared by mixing approximately one pound of calcium hypochlorite with 8.5 gallons of water.

D. Application of Chlorine. The hypochlorite solution shall be allied to the water main with a gasoline or electrically-pod chemical feed pump, designed for feeding chlorine solutions. For smaller applications, the solution may be prepared in a barrel, and then pumped into the main with a hand pump, such as a hydraulic test pump. The dosage rate shall be such that the chlorine concentration in the water in the pipe is a minimum of 50 p.p.m. available chlorine. The following table gives the amount of calcium hypochlorite and the quantity of 1% hypochlorite solution required to produce a 50 p.p.m. chlorine concentration in 100 feet of pipe:

Calcium Hypochlorite and Chlorine Solution Required to Produce 50 p.p.m. Concentration in 100 feet of Pipe

Pipe Size	Contents in a 100 foot Section			Amount of Calcium Hypochlorite		Chlorine Solution
Inches	Cub. Ft.	Pounds	Gallons	Ounces	Pounds	Gallons
6	19.60	1225	147	1 ½	0.091	0.73
8	34.90	2180	261	2 1/2	0.159	1.30
10	54.55	3405	408	4	0.252	2.06
12	78.55	4905	588	5 5/8	0.35	2.88
16	139.60	8725	1044	10	0.621	5.22

E. Point of Application. The point of application of the chlorinating agent shall be at the high end of the pipeline section, and through a corporation stop inserted in the top of the new pipe. If the water for the preparation of the chlorine solution is supplied from a tap on the existing pipeline, there shall be a physical break between the injector supply and the injector pump.

F. Rate of Application. The chlorine solution shall be pumped slowly into the new pipeline. Chlorine application shall not cease until the entire main is filled with the chlorine solution. If required by the Engineer, the chlorine residual shall be measured at several points along the section of main being tested to insure that the proper dosage and distribution of the chlorine solution is obtained.

G. Prevention of Reverse Flow. Great care shall be exercised in manipulating valves, so that the strong chlorine solution in the line being treated will not flow back into the adjoining water distribution system.

H. Retention Period and Chlorine Concentration. The chlorinated water shall be retained in the main for at least 24 hours, during which time all valves and hydrants in the section treated shall be operated, in order to disinfect the appurtenances. At the end of this 24 hour period, the treated water shall contain no less than 25 p.p.m. chlorine throughout the length of the main. Should the initial procedure fail to result in the conditions specified, the chlorination procedure shall be repeated until such results are obtained, at the contractor's expense.

(1) Point of Discharge. The contractor shall discharge the disinfecting solution from the mains through available outlets, or through taps in the main. The contractor shall exercise all due precautions in discharging the chlorine bearing water; since it is extremely toxic and, if allowed to flow into streams, can readily destroy aquatic life. If any damage to property or fish life occurs due to the disposal of the disinfecting solution, the cost of the damage shall be paid by the contractor. If the possibility of damage to aquatic life is such, in the opinion of the

Engineer, that special precautions are required, the contractor shall dechlorinate the disinfecting solution before it goes to waste. The chlorine solution may be neutralized by applying sodium thiosulfate in the ratio of two parts thiosulfate to one part chlorine at the point of discharge. Contractor shall comply with Lancaster County Soil Conservation District requirements.

J. Final Flushing. Following chlorination, the heavily chlorinated water shall be thoroughly flushed from the line at its extremities until the replacement water throughout its length, upon test, be proven comparable to the quality of water in the existing distribution system.

K. Flushing Water. Water for flushing will be provided by the owner, but at no time shall valves on the water distribution system be operated without the presence of a duly qualified representative of the owner.

L. Water for Testing. Water will be furnished by the owner for one hydrostatic test and disinfection procedure. If pipelines must be retested and disinfected, the cost for additional water will be borne by the contractor at a cost rate determined by the owner.

4. Disinfection of Water Main Connection. Since it may not be possible to disinfect the pipe, valves and fittings installed at certain connections in the manner specified above, the contractor shall proceed as follows:

A. Installation of Connection. Every precaution shall be observed during the installation of the connection to prevent foreign material and trench water from entering the pipe, fittings, and valves during their installation.

B. Disinfection. The interior of all pipe, fittings and valves shall be swabbed with a 5% hypochlorite solution. A 5% hypochlorite solution can be obtained by mixing approximately three pounds of granulated calcium hypochlorite with five gallons of water.

C. Flushing. After the pipe, fittings, and valves have been swabbed, they shall be thoroughly flushed with water.

5. Disposal of Water.

A. Again, the contractor is reminded that the chlorinated water must be disposed of in a manner such that no damage occurs to fish life of vegetation. If the Department of Environmental Protection has regulations for waste water disposal, it shall be the contractor's responsibility to follow the regulations to their end. Contractor shall comply with all Lancaster County Soil Conservation District requirements.

(Ord. 752, 2/7/1994, §V; as amended by Ord. 829, 11/15/2001)

§616. Special Crossings.

1. General.

   A. This section of the specifications covers the requirements for the construction of railroad, stream, and highway crossings.

   B. All work shall be performed as specified herein, or as otherwise required by the railroad company, the Pennsylvania Department of Environmental Protection, PennDOT, or other agencies having jurisdiction.

2. Materials.

   A. Water Main Pipe. All special crossings shall be constructed of ductile iron pipe, having mechanical joint ends.

   B. Steel Casing Pipe. Steel easing pipe shall conform to §612(16) and shall be installed at the locations specified by the Borough. Steel easing pipes shall be of the diameter and wall thickness approved by the Borough. However, the contractor, at his own expense, may install a larger diameter casing pipe than is specified, provided all necessary clearances under railroad tracks, highways, pipelines, and other structures are maintained. If the contractor elects to use a larger diameter steel casing pipe, the wall thickness shall be increased accordingly, as required by the Borough.

   C. Concrete. Concrete shall be as specified in §612(22).

3. Railroad Crossings.

   A. General. Railroad crossings shall be installed in accordance with the requirements of Part 5, Pipelines, Specifications for Pipelines for Conveying Flammable and Nonflammable Substances, published by the American Railway Engineering Association and with any additional or special requirements of the owner of the track. The applicant shall pay all charges imposed by the railroad for the crossing installation, including license agreement preparation fees and the cost of any personnel and insurance required by the railroad company during the crossing construction.

   B. Work on Railroad Right-of-Way.

      (1) The contractor shall inform himself of the terms and conditions of the work on railroad right-of-way and shall bear the costs which may arise therefrom. The contractor may not work on railroad property until fully executed copy of the agreement between the railroad company and the Borough has been on file for 30 days with the Public Utility Commission, provided that the Commission has not instituted proceedings affecting the validity of the agreement in that time. Work in

the railroad right-of-way shall conform to the agreement between the railroad company and the Borough.

(2) The contractor shall submit any plans of construction method and proposed materials in accordance with railroad regulations. The railroad company approval of plans and methods of doing the work will not be considered a release from responsibility for damage to the railroad company by the acts of the contractor or his employees.

(3) All costs to the railroad for flagging and protective personnel, engineering inspection, removal and replacement of tracks, repair to railroad facilities damaged by the contractor's operations, and other work shall be borne by the contractor or applicant.

4. Stream Crossings.

A. General. The Borough will obtain the necessary permits for stream crossings from the Pennsylvania Department of Environmental Protection. The contractor shall not perform any work in a stream channel, unless he has been notified that the required permit has been issued and informed himself of any special conditions. He shall not damage the stream channel and stream banks, erode the stream banks, deposit excess sediment in the stream, or otherwise harm the streams or the properties along the streams.

5. Highway Crossing.

A. General. The Borough will submit PennDOT Form 945-A, Application for Highway Occupancy Permit, for work on State highway right-of-way. Contractor shall comply with PennDOT 459 regulations. The contractor will pay all PennDOT fees in connection with the project.

B. Work on State Highway Right-of-Way.

(1) The contractor shall not start work on State highway right-of-way until the Borough has received the "opening-of-highway" agreement from PennDOT.

(2) The contractor shall notify the District Engineer having jurisdiction of the proposed date for starting work a minimum of two weeks prior to that date. The work carried out on State highway right-of-way shall be performed in accordance with the requirements set forth on Form 945-B, General Provisions and Specifications Regulating Occupancy of State Highway Right-of-Way, and such other special requirements as may be stipulated by PennDOT. Questions pertaining to work on State highway right-of-way should be directed to the District Engineer having jurisdiction. The work shall be done under the supervision of, and to the satisfaction of, PennDOT.

(Ord. 752, 2/7/1994, §VI; as amended by Ord. 829, 11/15/2001)

PART 7

PRIVATE WATER SYSTEMS

§701. Definitions.

For purposes of this Part, the following words shall have the meanings set forth thereafter:

BOROUGH — the Borough of Elizabethtown, County of Lancaster, Pennsylvania.

EAWA WATER — water provided through the municipal water system owned and/or operated by the Elizabethtown Area Water Authority.

EAWA WATER SYSTEM — the water system owned and operated by the Elizabethtown Area Water Authority.

PRIVATE WATER SYSTEM — any system designed to extract water from the ground, springs or other water source, which is not EAWA water or the EAWA water system, including but not limited to wells and springs.

(Ord. 875, 7/20/2006)

§702. Private Water Systems Prohibited.

Except where EAWA water is not available, it shall be unlawful to construct, reconstruct or repair any private water system which is designed or intended to provide water for drinking purposes. The owners of property that currently do not have EAWA water connections, have private wells and abut on or adjoin any street or highway in which an EAWA waterline is located shall connect such property therewith, in accordance with all applicable Borough ordinances, rules and regulations and EAWA rules and regulations (including the payment of all applicable fees) within 60 days after notice to such owner from the Borough. No private water system shall be used or maintained for drinking water purposes at any time upon property which has been connected to the EAWA water system or upon which EAWA water is available.

(Ord. 875, 7/20/2006)

§703. EAWA Water Required.

All new construction within the Borough shall connect to the EAWA water system, in accordance with all applicable Borough ordinances, rules and regulations and EAWA rules and regulations (including the payment of all applicable fees).

(Ord. 875, 7/20/2006)

§704. Registration of Private Water Systems.

All owners of property within the Borough that obtain water for drinking purposes upon the property from a private well system shall register such private water system with the Borough upon a form prepared by the Borough Manager or his/her designee. If the Borough Manager determines that such property can be served by EAWA water without the substantial extension of the existing EAWA water system or EAWA water becomes available to the property, the Borough Manager shall issue a notice to the property owner requiring such owner to connect to the EAWA water system within 60 days of the notice, in accordance with all applicable Borough ordinances, rules and regulations and EAWA rules and regulations, including the payment of all applicable fees, at the sole cost and expense of the property owner.

(Ord. 875, 7/20/2006)

§705. Closure of Private Wells.

All private wells located on properties served by EAWA water which do not meet the requirements set forth at Exhibit A, attached to this Part,[2] shall be filled and sealed, at the expense of the owner of the property upon which the private well is located, in accordance with all applicable laws, regulations and ordinances, within 120 days of the adoption of this Part or the provision of EAWA water to the subject property, whichever occurs later.

(Ord. 875, 7/20/2006)

§706. Notice.

Any notice provided by the Borough or any other official or employee pursuant to the terms of this Part shall be provided by any one of the following methods: personal service; certified mail, return receipt requested; first class mail and posting the property in question; any other method provided by law.

(Ord. 875, 7/20/2006)

§707. Violations and Penalties.

Any person, group, association or organization that violates any provision of this Part is guilty of a summary offense and shall pay a fine not less than $100 nor in excess of $1,000 for each successive day that the violation exists. In addition to any penalty provided hereunder, the Borough may seek injunctive relief to prevent the violation of this Part.

(Ord. 875, 7/20/2006)

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[2] Editor's Note: Exhibit A is on file in the Borough offices.