ORDINANCE NO. 187

AN ORDINANCE OF THE TOWN OF ANNETTA, TEXAS, AMENDING THE ENGINEERING DESIGN MANUAL; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE OF ALL ORDINANCES; PROVIDING A SAVINGS CLAUSE; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY CLAUSE; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Annetta, Texas is a Type A general law municipality located in Parker County, created in accordance with the provisions of Chapter 6 of the Local Government Code and operating pursuant to the enabling legislation of the State of Texas; and

WHEREAS, the Town has previously adopted the Engineering Design Manual providing guidelines for designing streets and arterials, drainage facilities, water lines, wastewater lines, production facilities, other public improvements and for preparing construction plans for such facilities which are to be owned, operated and/or maintained by the Town; and

WHEREAS, the Town Council wishes to amend the Engineering Design Manual; and

WHEREAS, the Town Council does hereby deem it advisable and in the public interest to amend the Engineering Design Manual as described herein.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF ANNETTA TEXAS, THAT:

SECTION 1.

The Engineering Design Manual is hereby amended as referenced in Exhibit A attached hereto and incorporated herein.

SECTION 2.

This ordinance shall be cumulative of all provisions of ordinances of the Town of Annetta, Texas, as amended, except where the provisions of this ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

SECTION 3.

All rights and remedies of the Town of Annetta, Texas, are expressly saved as to any and all violations of the provisions of any other ordinances of the Town of Annetta which have accrued at the time of the effective date of this ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such ordinances, same shall not be affected by this ordinance but may be prosecuted until final disposition by the courts.

SECTION 4.

It is hereby declared to be the intention of the Town Council that the phrases, clauses, sentences, paragraphs and sections of this ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this ordinance shall be declared invalid or unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such invalidity or unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this ordinance, since the same would have been enacted by the Town Council without the incorporation in this ordinance of any such invalid or unconstitutional phrase, clause, sentence, paragraph or section.

SECTION 5.

Any person who commits an offense under this ordinance shall be guilty of a misdemeanor and shall be fined not more than Five Hundred Dollars ($500.00) for each offense. Each day any such violation shall be allowed to continue shall constitute a separate offense.

SECTION 6.

The Town Secretary of the Town of Annetta is hereby directed to publish in the official newspaper of the Town of Annetta, the caption, penalty clause, and effective date clause once as authorized by Chapter 52 of the Local Government Code.

SECTION 7.

This ordinance shall be in full force and effect from and after its passage and publication as required by state law and it is so ordained.

PASSED AND APPROVED on this 21st day of September, 2017.

TOWN OF ANNETTA

Bruce Pinckard, Mayor

ATTEST:

Jamee Long, Town Secretary

THE STATE OF TEXAS ★ TOWN OF ANNETTA ★

EXHIBIT A

Table of Contents was updated to reflect page number changes and to add "Appendix D" to reference "Standard Construction Details".

1. **Section 1.03 of the Engineering Design Manual is hereby amended to read as follows:** In addition to the guidelines contained in this manual, the Town maintains drawings entitled "Standard Construction Details", which are to be used in conjunction with the Design Manual in the preparation of engineering plans. Please see Appendix D for the Standard Construction Details.

2. **Section 1.04 of the Engineering Design Manual is hereby amended to read as follows:**

   Valves 16-inches and smaller shall be placed on or near street property lines and shall be spaced at a maximum of 800 feet apart in residential and 500 feet in all other districts. They shall be placed in such a manner as to require preferably two, but not more than three valves to shut down each Town block, or as may be required to prevent shutting off more than one fire hydrant. On cross-feed mains without services, a maximum of four valves shall be used to shut down each block. Also, valves shall be placed at or near the ends of mains in such manner that a shut-down can be made for a future main extension without causing loss of service on the existing main. If valves cannot be located for a shut-down, restrained joints shall be used. The location of valves larger than 16-inches will be as approved by the Town Engineer. Valves 16-inches and under shall be Resilient Seat Gate Valves (RSGV). All valves will be gate valves. Valves are to be placed within the same corner of intersection, as applicable.

3. **Section 1.05.b.1. of the Engineering Design Manual is hereby amended to read as follows:**

   1. All required fire hydrants shall be as required by the North Central Texas Council of Governments Specifications, Fourth Edition and Addenda and shall be placed on water mains of no less than six (6") inches in size. Fire hydrants shall be manufactured by one of the following companies, American Darling, Mueller Company, M&H, or approved equal.

4. **Section 1.11.a. of the Engineering Design Manual is hereby amended to read as follows:**

   a. Either 5/8 x 3/4" or one-inch single water services are required to serve all single-family residential lots. Combination meters with service connections to two residences are not allowed.

5. **Section 1.12 of the Engineering Design Manual is revised by adding a new subsection c to read as follows:**

c. Service connections shall be PVC. See Appendix D, Page W-6, Water Standard Details.

6. Section 2.04 of the Engineering Design Manual is hereby amended to read as follows:

2.04 WASTEWATER FLOWS, SIZE AND GRADES

Wastewater lines shall be designed to convey flows from all upstream areas based on ultimate development of the sewershed. Wastewater main sizes shall be obtained from the Town's Wastewater Master Plan. Subbasin flow shall be computed in accordance with the following formula:

$$Q = \frac{C^{0.89}}{295}$$

Where:

Q = Peak wastewater flow (million gallons per day)
C = Equivalent single family connections

This equation is graphically displayed in Figure IV-1. Equivalent single family connections are based on a density of 3.1 persons per dwelling unit. Densities for other residential uses shall be determined by the Town. Wastewater flow for non-residential uses shall be evaluated by the design engineer and submitted to the Town for approval.

Pipes should be placed on such a grade that the velocity when flowing full is not less than two feet or more than ten feet per second. Minimum grades shall be as follows:

6" - 0.50% 8" - 0.33% 10" - 0.25% 12 - 0.20%

15" - 0.14% 18" - 0.12%

All grades shall be shown to the nearest 0.01 foot with P.I. stationing. A manhole is required at all pipe slope changes. No vertical curves will be allowed in wastewater lines. Horizontal curves (meeting pipe manufacturer recommendations) to match changes in street direction will be allowed as approved by the Town.

Figure VI-1 remains unchanged.

7. Section 2.05 of the Engineering Design Manual is hereby amended to read as follows:

2.05 MANHOLES

a. The sizes shall be as designated on the Wastewater Standard Details. In general, manholes shall be placed at all four-way connections and three-

way connections. The diameter of a manhole constructed over the center of a sewer should vary with the size of the wastewater line. In floodplains, sealed manhole covers shall be used. Drop manholes shall be required when the inflow elevation exceeds the outflow elevation by more than 24 inches. All manholes shall have a minimum 30-inch rim opening.

TABLE IV-1
MINIMUM MANHOLE SIZES

Largest Main Size	Manhole Diameter
8"	4' 0"
12" – 24"	5' 0"
Greater than 24"	6' 0"

Manholes more than 8 feet deep shall be a minimum of 5 foot diameter.

Manholes shall be provided at all points of directional change (vertical and horizontal), "tees", and change in pipe size. Maximum spacing between manholes 21" and under shall be 500 feet. Maximum spacing for manholes larger than 21" shall be 800 feet.

b. A lift station is required when slopes and fall within manholes do not allow for minimum slope and/or fall. Design standards for lift stations shall include SCADA.

8. Section IV is added to the EDM

IV. GROUNDWATER REQUIREMENTS

All submittals to any regulatory agency regarding the Town of Annetta public water or wastewater system or any potential connection to the Town of Annetta water or wastewater connection requires **PRIOR** review and approval for submission.

4.01 GROUNDWATER WELL MINIMUM DESIGN REQUIREMENTS

The Town of Annetta requires all procedures, materials, methods utilized and final well completion to conform to AWWA A100-97 for Water Wells, and shall comply with 30 TAC §290.38-290.49, *Rules and Regulations for Public Water Supply Systems,* and 30 TAC §338, *Water Well Drillers,* and Chapter 33 of the Texas Water Code, *Water Well Pump Installers.*

All water well drillers for the Town of Annetta or one of its developments shall be licensed in the State of Texas under 30 TAC § 340. The Well driller shall have completed at least

five successful sand free potable water supply well of similar type, depth, and capacity as the well proposed.

All Town of Annetta groundwater production wells for potable use and proposed for connection to the Town of Annetta public water system shall be carbon steel meeting one, or more, of the following standards: AWWA C200, ASTM A53, ASTM A139, API Specification 5L, API Specification 5CT, API Specification 5B, ASTM A120, ASTM A211, ASTM A714, ASTM D1784, ASTM D2837, ASTM F480, NSF14, or NSF61. Mill certificates for all steel pipe used in the production well shall be furnished and be available at the drill site for inspection prior to running such materials. All slotted pipe shall be new stainless steel pipe of the same dimensions and specifications as the casing. The pipe shall be rod based wire wrapped. Welding of the steel well casing shall be done in accordance with the American Welding Society Specifications and the American Petroleum Institute Specifications. Welding stainless steel casing to mild steel casing will not be permitted.

The well casing shall be pressure cemented in place from bottom to top in accordance with 30 TAC Chapter 290.41(c)(3)(C). The driller shall utilize a pressure cementation method in accordance with the AWWA Standard for Water Wells (A100 06), Appendix C: Section C.2 (Positive Displacement Exterior Method); Section C.3 (Interior Method Without Plug); Section C.4 (Positive Placement, Interior Method, Drillable Plug); and Section C.5 (Placement Through Float Shoe Attached to Bottom of Casing) involving pumping grout, through a tremie pipe set inside the annulus, from the top of the bentonite plug up the outside of the casing to the surface, or an approved similar positive-displacement method. The cement used shall be Portland Class A cement with no more than 6 percent, by weight, bentonite and not more than 2 percent, by weight, calcium chloride added, or approved equal. The cement and bentonite shall be mixed with no more than 6.0 gallons of water per 94 pound sack and have a slurry weight of approximately 14.7 lb/gal (110 lb/ft^3). The volume of cement stocked on location shall be enough to fill the annular space plus at least 25 percent in excess.

Each well shall include a pump, motor, and associated equipment, following all instructions and directions supplied by the equipment manufacturers and in accordance with requirements of the Texas Water Well Driller's Board. Each well shall have a stainless steel safety cable of suitable strength to the pump in order to provide ease of pump removal for the entire length of the well, if necessary.

4.02 GROUND STORAGE TANK MINIMUM DESIGN REQUIREMENTS

Above Ground Storage Tank: Contractor shall meet or exceed AWWA D-103 specifications for new standard bolted steel tanks designed to meet and exceed fire flow needs with final approval by the Town of Annetta.

4.03 MISCELLANEOUS WATER APPURTENANCES

The Town of Annetta currently utilizes Regal Manufactured gas chlorination systems (REGAL Model 210).

Each production facility including any storage or production facilities shall be equipped with SCADA. The Town of Annetta utilizes RLC Controls, Inc. for all SCADA systems. The Town requires Scada Pak (Part No. P3341A20AD10), Square D transformer, uninterruptable power supply and all related power supply, surge protection, terminals, fuses, wire, etc. for the remote telemetry unit as well as the radio and tower required for communication. The Town of Annetta employs Freewave 900MHZ Radios (Part No. FGR2-CU) and tower kit (installation, foundation, antenna, lightning rod, etc.) with all required appurtenances as determine necessary via a radio telemetry survey for height requirements.

9. **Appendix D is revised as follows:**
    a. Cover page added to Reference "Appendix D"
    b. Page W-6 is amended to reference PVC service lines
    c. Page W-10 is amended to reference PVC service lines
    d. Page W-11 is amended to reference Domestic PVC
    e. Page WW-3 is amended to reference manholes shall be gasketed and lockable.