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RULES AND REGULATIONS

PUBLIC WATER SUPPLY 0940015

CERTIFICATES OF CONVENIENCE AND NECESSITY

NO. 10297 (WATER) and 21086 (WASTEWATER)

HAYS, GUADALUPE, COMAL and CALDWELL COUNTIES, TEXAS

Amended July 28, 2022
Effective Date October 1, 2022

Table of Contents

SECTION A: ADOPTION & AUTHORITY.....	5
SECTION B: STATEMENTS.....	6
SECTION C: DEFINITIONS.....	8
SECTION D: GEOGRAPHIC AREA SERVED CERTIFICATE OF CONVENIENCE AND NECESSITY (CCN).....	12
WATER.....	13
WASTEWATER.....	15
SECTION E: SERVICE RULES AND REGULATIONS.....	18
1. Service Entitlement.....	18
2. Application Procedures and Requirements.....	18
3. Activation of Standard Service.....	20
4. Activation of Non-Standard Service.....	21
5. Changes in Service Classification.....	21
6. Owners and Tenants.....	21
7. Refusal of Service.....	21
8. Applicant's Recourse.....	22
9. Deferred Payment Agreement.....	22
10. Charge Distribution and Payment Application.....	22
11. Due Dates, Delinquent Bills, and Service Disconnection Date.....	22
12. Rules for Disconnection of Service.....	23
13. NSF/Return Payment/Check Policy.....	25
14. Billing Cycle Changes.....	26
15. Back-Billing.....	26
16. Disputed Bills.....	26
17. Grievance Procedures.....	27
18. Inoperative Meters.....	28
19. Bill Adjustment Due to Meter Error.....	28
20. Leak Adjustment Policy.....	28
21. Damage to District Facilities.....	29
22. Meter Relocation.....	29
23. Prohibition of Multiple Connections to a Single Tap.....	29
24. Customer Responsibilities.....	30
25. Prohibited Plumbing Practices.....	31
26. Excluded Flow and Waste.....	31
27. Water Service Connections.....	31
28. Standards for Water Service Lines.....	32
29. Wastewater Service Connections.....	33

30. Standards for Wastewater Service Lines.....	34
31. Standards Details for Service Facilities.....	34
32. Penalties and Enforcement.....	35
SECTION F: DEVELOPMENT, SUBDIVISION AND NON-STANDARD SERVICE REQUIREMENTS.....	36
1. District Limitations.....	36
2. Purpose.....	36
3. Application of Rules.....	36
4. Feasibility Study Service Application Process.....	37
5. Facilities Design.....	37
6. Prepayment of Certain Fees Required.....	38
7. Non-Standard Service Agreement.....	39
8. Property and Easement Acquisition.....	40
9. Contractor Selection and Qualification.....	40
10. Construction.....	41
11. Dedication and Acceptance of Service Facilities.....	41
12. Service within Subdivisions.....	42
SECTION G: RATES AND SERVICE FEES.....	43
1. Classes of Users.....	43
2. Capacity/Engineer/Feasibility Study Fee.....	43
3. Deposits.....	44
4. Easement Fee.....	45
5. Connection Fee.....	45
6. Water Acquisition Fee.....	46
7. Reservation Fee.....	46
8. Monthly Charges.....	46
9. Standby Fee.....	47
10. Late Payment Fee/Payment Arrangement Fee.....	47
11. Returned Check Fee.....	48
12. Service Trip Fee.....	48
13. Equipment Damage Fee.....	48
14. Customer History Report Fee.....	48
15. Meter Installation Fee.....	49
16. Meter Test Fee.....	49
17. Meter Relocation Fee.....	49
18. Temporary Service Charges.....	49
19. Non-Disclosure Fee.....	49
20. Information Disclosure Fee.....	49

21. Transfer Fee.....	49
22. Franchise Fee Assessment.....	50
23. Additional Assessments.....	50
24. Other Fees.....	50
25. Voluntary Surrender Fee.....	50
26. Non-payment Fee.....	50
27. Customer Service Inspection Fee.....	50
28. Backflow Prevention Assembly Test Fee.....	50
29. Non-refundable Administrative Fee.....	51
30. After Hours Reconnect Fee.....	51
31. Developer Inspection Fee.....	51
32. Easement Administration Fee.....	51
33. Rates and Service Fees Table.....	52
 SECTION H: WATER CONSERVATION PLAN.....	 56
 APPENDIX A: SAMPLE FORMS.....	 59
 APPENDIX B: RELATED DOCUMENTS LINKS.....	 60

SECTION A: ADOPTION & AUTHORITY

1. **Effective Date.** These Rules and Regulations were originally adopted by the Board of Directors of the Crystal Clear Special Utility district on June 23, 2015, pursuant to Tex. S.B. 1116, 83rd Leg., R.S. (2013). These Rules and Regulations, as amended from time to time, supersedes all utility service policies, rates, rules and tariffs adopted or passed by the Board of Directors prior to the date of adoption of these Rules and Regulations. These Rules and Regulations shall take effect immediately upon approval.
2. **Pre-Existing Tariff.** The District adopted these Rules and Regulations to replace and supersede the tariff that was in effective prior to, and carried forward after, the conversion of Crystal Clear Water Supply Corporation to Crystal Clear Special Utility District prior to the effective date of the adoption of these Rules and Regulations.
3. **Pre-Existing Penalties and Vested Rights.** The adoption of these Rules and Regulations shall not affect any offense or act committed or done, or any penalty or forfeiture incurred, or any contract or vested right established or accrued prior to the effective date or adoption of these Rules and Regulations.
4. **Official Copy Available.** An official copy of the Rules and Regulations shall be available to the customers of the District during regular office hours of the District. Requests for copies shall be subject to reproduction charges. The reproduction charge shall be \$25.00. The Human Resources Manager of the District shall maintain the original copy as approved, and clearly exhibit all additions, deletions and amendments hereto.
5. **Conflicts.** Rules and Regulations of state and federal agencies having applicable jurisdiction, promulgated under any applicable state or federal law, shall supersede all terms of the Rules and Regulations that directly conflict with such State and Federal rules or regulations. If any section, paragraph, sentence, clause, phrase, word or words of these Rules and Regulations are declared unconstitutional or in violation of law, the remainder of the Rules and Regulations shall not be affected thereby and shall remain in full force and effect.

Mike Cox, Board President

Donald A. Bosworth, Board Secretary

Date

Date

SECTION B: STATEMENTS

1. **Organization.** The District was created pursuant to TEX. S.B. 1116, 83rd Leg., R.S. (2013), further codified in TEX. SPEC. DIST. LOC. LAWS CODE Chapter 7206, enacted under the authority granted to the Texas Legislature in TEX. CONST. art. XVI, § 59. The District exists for the purpose of furnishing potable water and wastewater utility service. The District was organized on January 18, 2013, following the confirmation election by the voters within the geographic area as specified by Senate Bill 1116. The District is managed by the Board of Directors, the members of which are elected by qualified voters residing within the District's boundaries.
2. **Non-Discrimination Policy.** Service is provided to all Applicants that comply with the provisions of these Rules and Regulations regardless of race, creed, color, national origin, sex, disability or marital status.
3. **Policy and Rule Application.** These policies, Rules and Regulations apply to the water and wastewater services provided by the District. Failure on the part of a customer or Applicant to observe these policies, Rules and Regulations gives the District the authority to deny or discontinue service.
4. **Fire Protection.** It is not a primary responsibility of the District to provide "fire flows" from the District's water system. As the District's system grows from a rural system to an urban system, the District's facilities will accommodate "fire-flows" as required by Municipal or County regulations for future developments or projects. All hydrants and flush valves are for the operation and maintenance of the system. Fire hydrants may be used for refill only by authorized fire departments and/or those entities with written approval from the District. The District reserves the right to remove any hydrant due to improper use or detriment to its water system, as determined by the District, at any time without notice, refund or compensation to the contributors unless such hydrants are installed pursuant to the terms of a Non-Standard Service Contract, in which event the terms and conditions of the contract shall apply.
5. **Damage Liability.** Pursuant to State Law, the District is not liable for damages caused by service interruptions due to waterline breaks or equipment failure, tampering by third persons or customers of the District, normal system failures, system maintenance or repairs, or other events beyond the District's control, or for damages caused by negligent acts of the District, its employees, designated representatives and contractors.
6. **Public Information Disclosure.** The records of the District shall be kept at the District's office at 2370 FM 1979, San Marcos, Texas 78666. All information collected, assembled or maintained by or for the District shall be disclosed to the public in accordance with the Texas Public Information Act. An individual customer may request in writing that the District keep the customer's name, address, telephone number or social security number confidential. Such confidentiality does not prohibit the District from disclosing this information to an official or employee of the state or a political subdivision of the state acting in an official capacity or an employee of the District acting in connection with the employee's duties. A reasonable charge as established pursuant to the Texas Public Information Act may be assessed to any person requesting copies of District records.
7. **Notice of Change in Rates.** The District will give written notice of a change to monthly rates by publication or mail to all affected customers at least thirty (30) days prior to the effective date of the new rate. The notice shall contain the old rates, new rates, effective date of the new rates, date of Board

authorization, and the name and telephone number of the District representative designated to address inquiries about the rate change. Failure of the District to give the notice shall not invalidate the changed rate or any change based on the changed rate.

8. **Customer Service Inspections.** The District requires that a customer service inspection certificate from a licensed inspector, assigned by the District, be completed prior to providing water service to completed new construction and for all new customers, as well as, any change of property ownership as part of the activation services. Customer service inspections are also required on any existing service when the District has reason to believe that cross-connections or other potential contaminant hazards exist, or after any material improvement, correction or addition to the customers' water distribution facilities. This inspection is limited to the identification and prevention of cross connections, potential contaminant hazards and illegal lead materials. [30 TAC § 290.46(I-j)].
9. **Public Works Standards.** The District adopts applicable sections of the most current edition of the Standard Specifications for Public Works Construction, as amended as guidance in the design, installation and maintenance of line extensions and service facilities. In addition to the aforementioned guidance document, all work will be designed, installed, and maintained in accordance with the TCEQ or successor agencies' regulations, local and State standards and applicable plumbing codes in effect at the time work is performed.
10. **Sub metering Responsibility.** Sub metering and non-sub metering by Master Metered Accounts may be allowed in the District's water/wastewater system provided the Master Metered Account customer registers with the TCEQ or successor agencies and complies with its rules on sub metering at Title 30, Chapter 291, Subchapter H of the Texas Administrative Code. The District has no jurisdiction over or responsibility to tenants receiving water under a Master Metered Account, and such tenants are not considered customers of the District. Any interruption or impairment of water service to the tenants is the responsibility of the Master Metered Account customer. Any complaints regarding sub metering should be directed to the TCEQ or successor agencies.
11. **District Forms Policy.** The sample forms in Appendices A and B of these Rules and Regulations are the same or similar in form to those used by the District and are attached hereto for informational purposes only. The District reserves the right to amend, revise and discontinue use of any of the attached forms, and to create and use new forms, at its sole discretion, for purposes that include, without limitation, complying with federal and state laws and regulations, improving District administrative efficiency, providing better service to customers, fulfilling the unique and facilities needs of sub-dividers, Applicant/Assignee and nonstandard service Applicants, and meeting the future system demands of the District.
12. **Threats to Utility Personnel or Property.** Threats to utility personnel or other actions which prevent the lawful conduct of utility business on utility property, easements or right of entry shall result in immediate discontinuance of utility service until the condition is corrected or the threat is permanently removed. Threats to or assaults upon utility personnel shall result in criminal prosecution.

SECTION C: DEFINITIONS

The following words and terms, when used in these Rules and Regulations, shall have the following meanings unless the context clearly indicates otherwise:

Applicant/Assignee — A person applying to the District for water and/or wastewater service(s).

Board of Directors (or) Board — The governing body of the District elected by qualified voters residing within the District's boundaries in accordance with applicable election laws.

Capacity Study (Residential) - a non-refundable fee of \$150.00 for residential units for one (1) meter, paid to the District at the time of filing the standard service application for the purpose of determining water capacity to the location of the Applicant's residential unit. If determined no capacity exists an engineer study would be required at additional cost. Refer to "Engineer Study" below.

Certificate of Convenience and Necessity (or) CCN — The authorization granted under Chapter 13, Subchapter G, of the Texas Water Code for the District to provide water and/or wastewater service within a defined territory. The District has been issued Certificate Nos. 10297 and 21086 to provide water and wastewater service.

Certificated service areas (or) service areas — see Section D, Certificated Service Area Maps.

Customer — Any person directly receiving water and/or wastewater services from the District.

Designated representative (or) district representative — The General Manager of the District or a representative or employee of the District engaged in carrying out the terms of or performing services prescribed by these Rules and Regulations pursuant to either general or specific authorization to do so from the General Manager or the Board of Directors.

Developer — Any person that subdivides land, requests two (2) or more water or wastewater service connections on a single contiguous tract of land or who is developing a non-residential project that has a water demand that cannot be served through a standard 5/8 inch water meter. [See Texas Water Code § 13.2502(e) (1)].

Disconnection of service — The discontinuance of water and/or wastewater service to a location in the District.

District — The Crystal Clear Special Utility District.

Easement — A private perpetual dedicated right-of-way for the installation of water and/or wastewater service lines and facilities that allows access to property for future operation, maintenance, replacement, facility upgrades, and/or installation of additional pipelines (if applicable), and may include restrictions on the adjacent area to limit installation of other pipelines and/or structures that would restrict the District's use of any area of the easement.

Engineer Study (Residential) - a non-refundable fee of \$200.00 for residential units for one (1) meter, paid to the District at the time of filing the standard service application for the purpose of determining the feasibility and capability of the system of providing service to the location of the Applicant's residential

unit. This fee covers administrative, legal fees and engineering expenses incurred by the District at the time of application. After review of the application, the Engineer will provide an estimate of the cost of necessary infrastructure to provide water to the Applicant's residential unit. The customer will be notified of any additional fees to be paid before the application/investigation will be finalized.

Feasibility Study (Commercial, Industrial, and Development) — A non-refundable fee in the amount to be determined by Consulting Engineers for developments, paid to the District at the time of filing a Feasibility Study Service Application for the purpose of determining the feasibility of providing service to a proposed project. This fee covers administrative, legal fees engineering expenses incurred by the District at the time of application. After review of the application, the Engineer will provide an estimate of the cost of necessary infrastructure to provide water to the Applicant's project. The customer will be notified of any additional fees to be paid before the application/investigation will be finalized.

Final plat — A complete and exact plan for the subdivision and/or development of a tract of land which has been approved by all local governments having jurisdiction pursuant to Chapters 212 or 232 of the Texas Local Government Code. The District shall determine if a plat submitted under these Rules and Regulations qualifies as a final plat. [See 30 TAC § 291.85].

General Manager — The General Manager of the District appointed by the Board of Directors.

Hazardous condition — A condition that jeopardizes the safety, health and/or welfare of District customers or employees, as determined by the District or any other regulatory authority with jurisdiction.

Low Pressure Wastewater System (or) LPWS — The wastewater collection system installed by or on behalf of the District.

Non-Payment Fee – A fee assessed when a customer's account is in default for non-payment, in full, by the 7:00AM. CST deadline on Disconnect Day.

Person — Any natural person, firm, corporation, cooperative, limited liability company, partnership, unincorporated association, public agency or governmental entity, or any other public or private organization or entity of any type or character.

Proof of Ownership—Texas Water Code 67.016(d) gives authority to the District to require ownership of real estate designated to receive service as a condition of becoming a customer and receiving service. For the purpose of these Rules and Regulations, Applicants for service shall provide proof of ownership by deed of trust, warranty deed, or other recordable documentation of fee simple title to real estate to be served. Tenants/Non-owners may receive service only through owner of the property to be served.

Public Utility Commission of Texas (PUC) — The state regulatory agency that generally regulates water and sewer utilities' rates and CCN matters.

Re-Service — Providing service to an Applicant at a location at which service previously existed and at which there is an existing facility for a meter. Costs of such re-servicing shall be as established in these Rules and Regulations or based on justifiable expenses in connection with such re-servicing.

Septic Tank Effluent Pumping Unit (STEP Unit) — The individual facility located at each building or residence which is owned, and maintained by the District as part of the District's Low Pressure

Wastewater System. The STEP Unit includes a pump, treatment/tank, controls, control panel, valves, piping, electric wiring and related facilities.

Service — Any act performed, anything furnished or supplied, and any facilities used by the District in the performance of its duties under the Texas Water Code, the Texas Administrative Code, or applicable Municipal ordinance or Commissioner’s Court Order to its customers, employees, other retail public utilities, and the public, as well as the interchange of facilities between the District and one or more retail public utilities.

Service application and agreement (or) service agreement (Standard and Non-Standard) — A written agreement on the current service application and agreement form between an Applicant and the District defining the specific type of service requirements requested, and the responsibilities of each party regarding the service to be provided.

Service classification/unit — The type of water service required by an Applicant as may be determined by the District based on specific criteria such as usage, meter size, demand, type of application, and other relevant factors related to the Applicant’s request. The base service unit of residential water service used by the District in facilities design and rate making in these Rules and Regulations is a 5/8inch water meter.

Subdivide — To divide the surface area of land into lots or tracts of land. [See Local Gov’t Code § 232.021(11)].

Subdivider – An individual, firm, corporation, or other legal entity that directly or indirectly subdivides land into lots for sale or lease as part of a common promotional plan in the ordinary course of business. [See Local Gov’t Code § 232.021(12)].

Subdivision — An area of land that has been subdivided into lots or tracts for sale or lease. [See Local Gov’t Code § 232.021(13)].

Temporary service — The classification for water service assigned to any Applicant that is in the process of constructing a residential or commercial structure or any location that has changed ownership. These conditions are subject to a Customer Service Inspection (CSI) certification prior to consumption. The District may also apply this classification to other nonpermanent service uses. The District may provide temporary water service for up to six (6) months from the date of application for temporary service. Temporary service may be extended upon request and approval of the District on a case-by-case basis.

Texas Commission on Environmental Quality (TCEQ) — The State regulatory agency having jurisdiction of water and wastewater service utilities and appellate jurisdiction over the regulations regarding the health and safety of operating water and wastewater services in the state.

Wastewater System – The wastewater collection, disposal and treatment facilities operated by or constructed by or for the District, and any wastewater system extensions, improvements or facilities that may be built within the District’s boundaries or service area in the future.

Water system – The water production, treatment, supply, storage and distribution facilities operated by or constructed by or for the District, and any water system extensions, improvements or facilities that may be built within the District’s boundaries or service area in the future.

SECTION D: GEOGRAPHIC AREA SERVED CERTIFICATE OF CONVENIENCE AND NECESSITY (CCN)

WATER

To Provide Water Service Pursuant to the Texas Water Code, the Public Utility Commission of Texas, and/or the Texas Commission on Environmental Quality Rules

Certificate No. 10297

1. Certificate Holder

Name: Crystal Clear Special Utility District
Address: 2370 FM 1979
San Marcos, TX 78666

2. General Description and Location of Service Area:

Comal County, Guadalupe County, Hays County and Caldwell County

3. Certificated Service Area Maps:

The certificate holder is authorized to provide water service in the area identified on the Public Utility Commission of Texas' official service area map maintained in the offices of the Public Utility Commission of Texas, William B. Travis Bldg., 1701 N. Congress Avenue, 7th Floor, Austin, TX 78701.

This certificate, as amended from time to time, has been issued pursuant to applications of the District and is subject to the rules and orders of the TCEQ or successor agencies, the laws of the State of Texas and conditions contained in the certificate. The certificate is valid until amended or revoked by the TCEQ or successor agencies.

The following two (2) pages contain a copy of Certificate No. 10297 and a map of the District's water service area.



Public Utility Commission of Texas

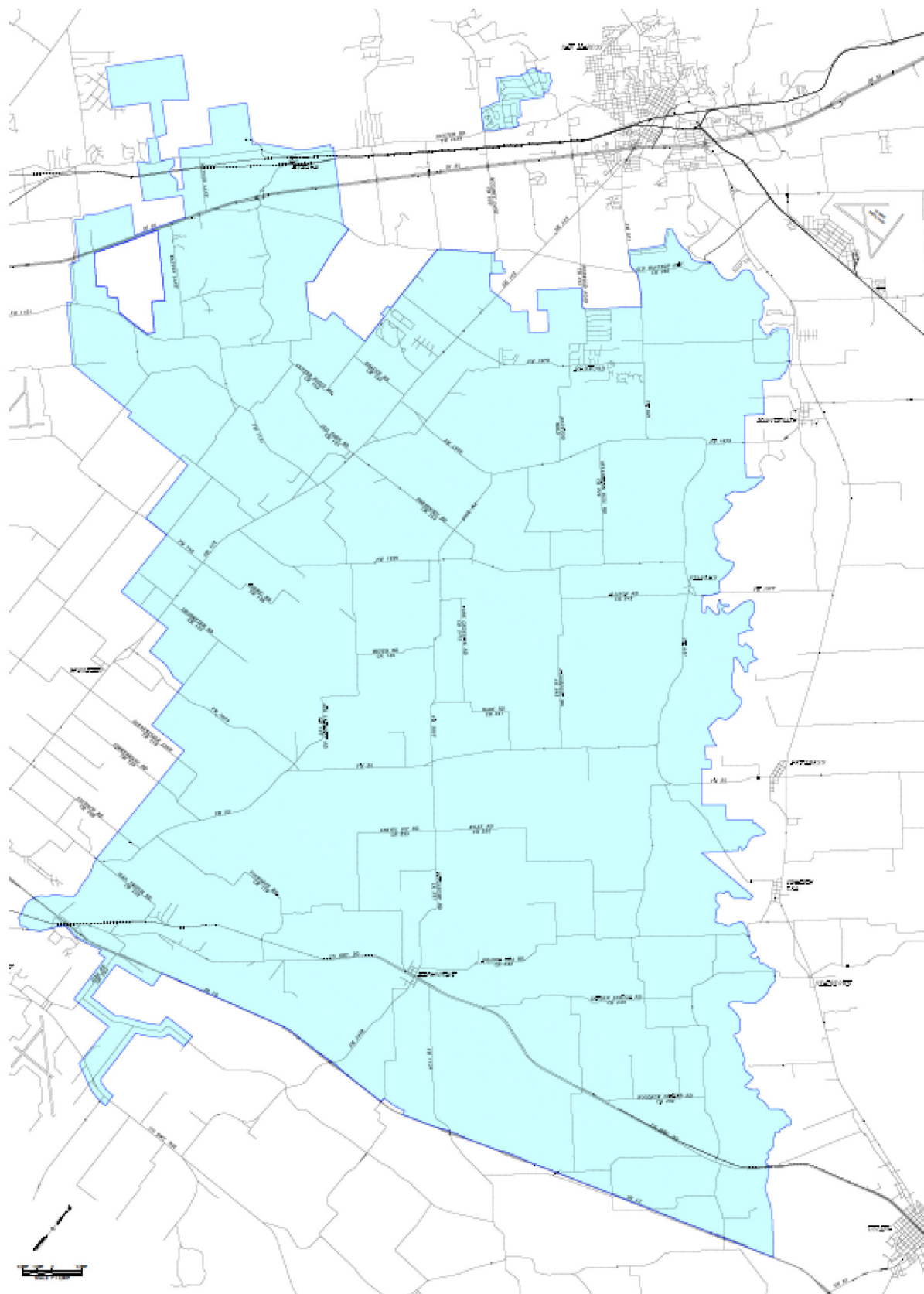
By These Presents Be It Known To All That Crystal Clear Special Utility District

having obtained certification to provide water utility service for the convenience and necessity of the public, and it having been determined by this Commission that the public convenience and necessity would in fact be advanced by the provision of such service, Crystal Clear Special Utility District is entitled to and is hereby granted this

Certificate of Convenience and Necessity No. 10297

to provide continuous and adequate water utility service to that service area or those service areas in Comal, Guadalupe and Hays Counties as by Senate Bill 1116 enacted by the 83rd Texas Legislature and the election results filed in Project No. 45326 on file at the Commission offices in Austin, Texas; and are a matter of official record available for public inspection; and be it known further that these presents do evidence the authority and the duty of Crystal Clear Special Utility District, to provide such utility service in accordance with the laws of this State and Rules of this Commission, subject only to any power and responsibility of this Commission to revoke or amend this Certificate in whole or in part upon a subsequent showing that the public convenience and necessity would be better served thereby.

Issued at Austin, Texas, the 22 day of January 2016.



WASTEWATER

To Provide Wastewater Service Pursuant to the Texas Water Code, the Public Utility Commission of Texas, and/or the Texas Commission on Environmental Quality Rules

Certificate No. 21086

1. Certificate Holder

Name: Crystal Clear Special Utility District
Address: 2370 FM 1979
San Marcos, TX 78666

2. General Description and Location of Service Area:

Comal County

3. Certificated Service Area Maps:

The certificate holder is authorized to provide wastewater service in the area identified on the Public Utility Commission of Texas' official service area map maintained in the offices of the Public Utility Commission of Texas, William B. Travis Bldg., 1701 N. Congress Avenue, 7th Floor, Austin, TX 78701.

This certificate, as amended from time to time, has been issued pursuant to applications of the District and is subject to the rules and orders of the TCEQ or successor agencies, the laws of the State of Texas and conditions contained in the certificate. The certificate is valid until amended or revoked by the TCEQ or successor agencies.

The following two (2) pages contain a copy of Certificate No. 21086 and a map of the District's wastewater service area.

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Public Utility Commission Of Texas

By These Presents Be It Known To All That

CRYSTAL CLEAR WSC

having duly applied for certification to provide sewer utility service for the convenience and necessity of the public, and it having been determined by this Commission that the public convenience and necessity would in fact be advanced by the provision of such service by this Applicant, is entitled to and is hereby granted this

Certificate of Convenience and Necessity No. 21086

to provide continuous and adequate sewer utility service to that service area or those service areas in Comal County as by final Order or Orders duly entered by this Commission, which Order or Orders resulting from Docket No. 44695 are on file at the Commission offices in Austin, Texas; and are matters of official record available for public inspection; and be it known further that these presents do evidence the authority and the duty of the Crystal Clear WSC to provide such utility service in accordance with the laws of this State and Rules of this Commission, subject only to any power and responsibility of this Commission to revoke or amend this Certificate in whole or in part upon a subsequent showing that the public convenience and necessity would be better served thereby.

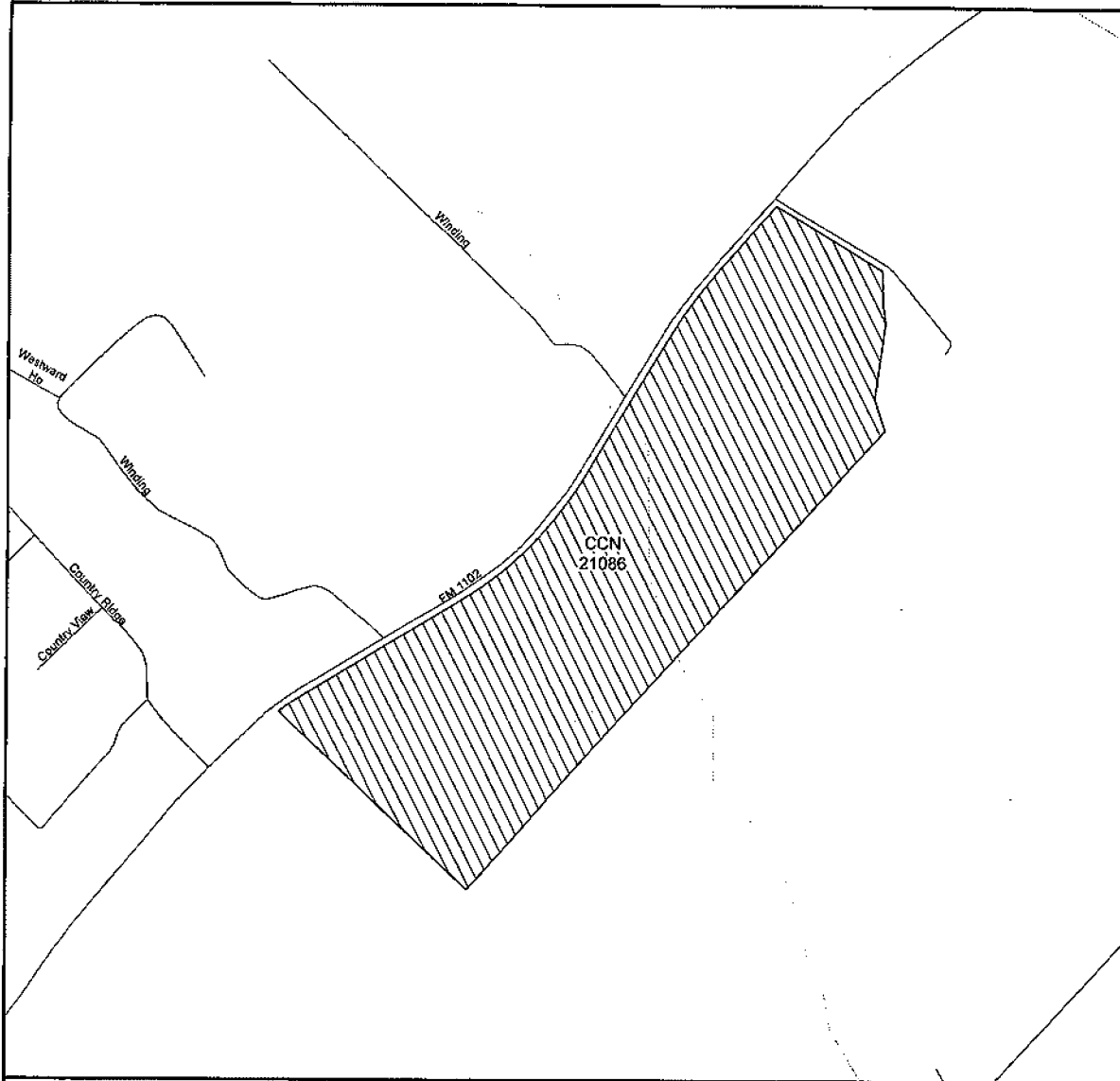
Issued at Austin, Texas, this 12th day of FEBRUARY 2016.

CERTIFIED TO BE A TRUE AND CORRECT
COPY OF THE ORIGINAL ON FILE WITH THE
PUBLIC UTILITY COMMISSION OF TEXAS
CENTRAL RECORDS DIVISION

BY: [Signature]
DATE: 3-10-16



Crystal Clear WSC
Sewer Service Area
CCN No. 21086
PUC Docket No. 44695
Obtained New CCN in Comal County



Public Utility Commission of Texas
1701 N. Congress Ave
Austin, TX 78701

CCN Sewer Service Area



21086 - Crystal Clear WSC

0 350 700
Feet



Map by: Komal Patel
Date created: November 16, 2015
Project Path: n:\finalmapping\44695CrystalClearWSC.mxd

SECTION E: SERVICE RULES AND REGULATIONS

1. Service Entitlement

An Applicant requesting service to real property located within the District's service area shall be considered qualified and entitled to water and/or wastewater service when a proper and complete application packet has been filed with the District, the terms and conditions of service have been met and continue to be met, and all fees have been paid as prescribed. An Applicant requesting service to real property located outside the boundaries of the District's service area and/or political boundaries may be considered for service in accordance with current District policies on providing service outside the District's service area.

2. Application Procedures and Requirements

(A) **Service Classifications** - Applications to the District for service shall be divided into the following two (2) classes:

- (1) **Standard Service** - Defined as service from an existing service line where line or service facility extensions are not required and special design and/or engineering considerations are not necessary in the District's discretion. Standard water service is provided through a 5/8-inch meter set on an existing water line. Standard wastewater service is provided via minimum 1 1/4 inch wastewater tap connected to Low Pressure Force Main collection lines three (3) feet in depth in a properly bedded trench.
- (2) **Non-Standard Service** - Defined as any service request that requires a larger than 5/8inch meter for service, temporary water service, service to a Master Metered Account pursuant to Section E.2(C)(4) below, or an addition to or extension of the District's water system or wastewater system. Except for temporary service Applicants, a non-standard service Applicant must comply with the service requirements prescribed by Section F of these Rules and Regulations prior to receiving service.

(B) **Requirements for Mandatory Wastewater Connection.**

- (1) Effective June 23, 2015, the Board of Directors adopted the following requirements for mandatory wastewater connections:
 - a. The installation of any private on-site wastewater treatment or holding facility on land within the District's certificated service area and less than three hundred feet (300') from the nearest wastewater collection point of the District's wastewater system (measured from boundary line of the land along public right-of-way or utility easements) may be prohibited and the District may provide wastewater service to any such property.
 - b. All new developments and subdivisions on land within the District's certificated service area shall be required to connect to the District's wastewater system when feasible and in the District's discretion. The provision of water service by the District to any new subdivision or development without requiring wastewater collection facilities to be constructed therein shall be considered an exception, requiring compelling evidence that the public health and environment will be protected for the long term.

- c. The District may require an owner of land located within the District's certificated service area to connect to the District's wastewater system, when feasible and in the District's discretion, even if an on-site wastewater holding or treatment facility was installed on said land prior to January 18, 2014, provided the District's wastewater collection system is contiguous or adjacent to the boundary of said land.
- (2) All costs for connecting to the District's wastewater system in excess of the standard costs required under Section G below must be paid for by the wastewater service Applicant, regardless of CCSUD co-Applicant involvement. The District must review and approve all plans and specifications for any connection to the wastewater system prior to construction. [Texas Water Code § 65.201(a) and Texas Water Code § 49.277].

(C) Requirements for Standard and Non-Standard Service.

- (1) Standard Service, the Applicant shall file a proper and complete application packet and provide deed or proof of ownership as applicable. Non-Standard Service, the Applicant shall file a completed Feasibility Study Service Application and subsequent Non-Standard Service Agreement (NSSA) as applicable.
- (2) As a condition for service, the Applicant(s)/Assignee(s) for Standard service and/or Non Standard service shall complete and execute an Easement and Right-of-Way, Sanitary Control Easement and/or such other easement form(s) required by the District to obtain a dedicated easement(s) to allow the District a right of access to construct, install, maintain, replace, upgrade, inspect or test any infrastructure and/or facility necessary to serve the Applicant's/Assignee's, as well as the District's, purposes in providing system-wide service. [See Tex. Water Code § 49.218]. This requirement may be delayed for non-standard service Applicants/Assignees. New meters shall be located within a utility easement at or near the boundary line (usually nearest a road) of the property designated for service.
- (3) At the request of a property owner or an owner's authorized agent, the District shall install an individual Master Meter owned by the District in an apartment house, manufactured home rental community, multiple use facility, or condominium on which construction begins after June 23, 2015, unless the District determines that the installation of an individual Master Meter is not feasible. If the District determines that installation of individual Master Meter is not feasible, the property owner or manager shall install a plumbing system that is compatible with the installation of individual meters. The District shall be entitled to the payment of reasonable costs to install individual meters pursuant to 30 TAC § 291.122(d) and Section F of these Rules and Regulations. The cost of individual meter installations shall be prepaid by the property owner as well as the cost of any additional facilities or system improvements required to satisfy the total water/ wastewater service demand of the property at full occupancy, as determined under applicable provisions of Section F. The District shall consider Master Metering and/or non-standard wastewater service to apartments, condos, trailer/RV parks, or business centers and other similar type enterprises at an Applicant's request provided the total number of units to be served are all:
 - a. Owned by the same person, partnership, cooperative, corporation, agency, or public or private organization of any type, but not including a family unit;
 - b. Directly inaccessible to a public right-of-way; and
 - c. Considered a commercial enterprise (i.e., for business, rental or lease purposes).

- (4) Notice of application approval and costs of service as determined by the District shall be presented to the Applicant in writing and shall remain in effect for a period not to exceed ninety (90) days for Non Standard Service application. The Applicant must re-apply for service, unless a NSSA is Board approved and fully executed within the ninety (90) days and all other conditions set forth in the NSSA and/or WVNSSA are met as agreed. [See 30 TAC § 291.81(a) (1)].
- (5) The Applicant shall provide proof of ownership to property for which service has been requested in a manner acceptable to the District. Proof of ownership shall consist of warranty deed, deed of trust or other recordable documentation of fee simple title to the real estate designated to receive service. (Texas Water Code 13.002 (11) and 67.016(d)).
- (6) If a water main has been located in the public right-of-way and is adjacent to Applicant's property, prior to receiving the requested service, the Applicant shall grant an easement as required under these Rules and Regulations. In addition to the normally required fees for new customer service, the Applicant may be asked to pay such sums as are reasonably necessary to remove or cap the existing water main in the public right-of-way and to construct the appropriate line or lines within that easement for the District's system-wide service [Texas Water Code § 49.212(a) and Texas Water Code § 65.205].
- (7) If a transferee fails to provide all documentation or information required at the time of application, the District will not accept, as CCSUD does not accept incomplete applications. This provision applies to both standard and non-standard service requests.

3. Activation of Standard Service

- (A) New Service Connection. The District shall charge a Connection Fee and other applicable fees as required under Section G of these Rules and Regulations at the time of application of new service request. The Connection Fee and other fees shall be quoted in writing to the Applicant. The Connection Fee is non-refundable. Other applicable fees may be refundable dependent upon type of fee; see Section G of these Rules and Regulations.

An Applicant must pay all fees as a condition to consideration for service. Upon initiation of account (Service Application completed and all applicable fees paid), the customer will begin receiving a monthly bill. Services applications will not be accepted without payment from the customer and all required documents.

- (B) Re-Service. On property where service previously existed, the District may charge a deposit and all fees applicable to restoration of service. In addition, the District may charge accumulated Reserved Service Fees which have been assessed to the inactive account on a monthly basis. This will allow the District to recover the costs of reserving capacity to the location for which re-service has been requested. If restoration of service is not requested, this fee will accumulate monthly until the total balance of the Reserved Service Fees equals the amount of the connection fee initially paid for new service to the property. After this time the service equipment may be removed by the District and any future request for service to the property shall be treated as an application for new service.
- (C) Performance of Work. The District shall install all taps and equipment necessary to provide service within thirty (30) working days after approval and receipt of payment of all quoted fees and charges. This time may be extended for installation of facilities and equipment necessary to serve a request for non-standard service or due to weather or other emergencies. As it pertains to initial activation of service, the District may not install a water meter, unlock a water meter or otherwise establish or re-establish water service to any property without the owner of such property or other person who has

management or control of the subject property being physically present at the time that water service is established in order to inspect or observe the property for possible water leaks or water usage that, if left unattended, could cause water or other damage to the property.

- (D) Customer Service Inspections. The District shall require a Customer Service Inspection (CSI) of an Applicant's property and private water distribution facilities to ensure compliance with state required Minimum Acceptable Operating Practices for Public Drinking Water Systems as promulgated by the Texas Commission on Environmental Quality or successor agency. [see Section B.8]. A CSI Fee will be charged at the time of the inspection per Section G of these Rules and Regulations. As a result of a CSI, the District may require at the customer's expense that a backflow prevention device be installed, inspected, tested, and provide all required documentation to the District prior to activation of service. [see 30 TAC § 290.46(j)]. Thereafter the homeowner shall have annual inspections performed by a qualified person which will be responsible for reporting the results of the inspection and recertification through the third party vendor assigned by CCSUD. Should the homeowner fail to provide proof of testing and recertification after proper notice from the District, the District may schedule the testing and recertification. The homeowner shall be billed, on their monthly water/wastewater bill, the applicable fees per Section G.

4. Activation of Non-Standard Service

- (A) Activation of non-standard service shall be conducted pursuant to Section F of these Rules and Regulations.
- (B) Re-Service. The provisions applicable to standard re-service requests under the previous subsection 3(B) shall also apply to non-standard re-service requests.

5. Changes in Service Classification

If at any time the District determines that the service classification of a customer has changed from that originally applied for and that additional or different facilities are necessary to provide adequate service, the District shall require the customer to re-apply for service under the terms and conditions of these Rules and Regulations. Customers failing to comply with this provision shall be subject to Disconnection with Notice under subsection 12(A) below.

6. Owners and Tenants

The owner of property designated to receive service according to the terms of these Rules and Regulations is responsible for all fees and charges due the District for service provided to such property. If an owner has an existing billing agreement for rental accounts, the District may bill a tenant for service as a third party, but the owner remains fully responsible. No new alternate billing agreements will be allowed.

7. Refusal of Service

- (A) The District may refuse to serve an Applicant for the following reasons:
- (1) Failure of an Applicant to complete all required easement forms and pay all required fees and charges;
 - (2) Failure of an Applicant to comply with the rules, regulations and policies of the District, including but not limited to the failure to pay amounts due the District for another location in the District.

- (3) Existence of a hazardous condition at the Applicant's property which would jeopardize the welfare of other customers of the District upon connection;
- (4) Failure of an Applicant to provide representatives or employees of the District reasonable access to property, for which service has been requested;
- (5) Failure of Applicant or Transferee to provide proof of ownership, to the satisfaction of the District, of property for which the tap has been requested;
- (6) Failure of an Applicant to comply with all of the District Rules and Regulations on file with the state regulatory agency governing the service applied for by the Applicant; or
- (7) The District has determined that the Applicant's service facilities are known to be inadequate or of such character that satisfactory service cannot be provided.

8. Applicant's Recourse

In the event the District refuses to serve an Applicant under the provisions of this section, the District shall inform the Applicant in writing of the basis of its refusal and that the Applicant may file a written complaint pursuant to the District's grievance procedures. See Section 17 of this Section E.

9. Deferred Payment Agreement

The District may enter into a Deferred Payment Agreement, not to exceed a term of six (6) months.

These payment arrangements must be set up prior to 5PM on the due date (10th) for the month when the payment is due. These payment arrangements may be made for water consumption only.

The customer must pay the base rate and applicable fees prior to a Deferred Payment Agreement being initiated. There will be a \$10 per month administrative fee for each month the arrangement exists. There is no penalty for paying the arrangement off early. All Deferred Payment Agreement payments and the current bill must be paid before 5PM on the due date (10th monthly) or the agreement will be considered broken and all applicable amounts will be due or the customer will be subject to disconnect immediately.

10. Charge Distribution and Payment Application

- (A) Base Rate. The applicable Base Rate shall be charged for the billing period from the first day of the billing cycle to the last day of the billing cycle. Charges may be prorated for meter installations and service terminations falling during the billing period. Billings for this amount shall be mailed on or about the twenty-eighth (28th) day of the month preceding the month for which this charge is due. All active service connections shall be subject to this charge whether or not there is use of service.
- (B) Consumption Charge. A Consumption Charge shall be billed at the rate specified in Section G and shall be calculated to the gallon. Charges for water and wastewater usage are based on monthly meter readings and are calculated from reading date to reading date. The District shall take all meter readings used in calculating billing.
- (C) Posting of Payments. All payments shall be posted against previous balances prior to posting against current billings.

11. Due Dates, Delinquent Bills, and Service Disconnection Date

- (A) Billing Cycle. The District shall mail all bills and/or send e-bill notifications no later than the twenty-eighth (28th) day of the month. All bills shall be due and payable upon receipt and are past due after 5:00PM on the 10th day of the month or the next business day after a weekend or District Holiday,

after which time a penalty shall be applied pursuant to Section G. Payment for utility service is delinquent if the full payment, including the late fees and regulatory assessments, are not received by 5:00PM on the due date regardless of the payment method. Payment made using the District's online service or phone payment (IVR) must post by 5:00PM on due date in order to be considered paid by due date. If the twenty-eighth falls on a weekend or holiday, bills shall be mailed no later than preceding workday.

- (B) Delinquent Billing Cycle. Delinquent notices shall be mailed after the payment due date (10th of each month) allowing approximately ten (10) additional days for payment prior to disconnection. The disconnect date shall generally be during the fourth week of the month. A schedule of all disconnection dates will be posted on the District's website, at the administrative offices and on at least one billing statement. A non-payment fee shall be applied and service shall be subject to disconnection if payment is not received at the District office before **7:00AM CST** on the day of disconnect indicated on the delinquent bill. Payments made, regardless of payment method, must post before **7:00AM CST** on the day of disconnect to avoid disconnection and non-payment fee.

12. Rules for Disconnection of Service

The following describes the rules and conditions for disconnection of service. For the purpose of disconnecting wastewater service under these policies, water service will be terminated in lieu of disconnecting wastewater service. In instances of non-payment of wastewater service charges or other wastewater service violations by a customer that does not receive water service from the District, the District has the option to disconnect the wastewater tap or take other appropriate actions as determined by the District.

- (A) Disconnection with Notice. Water service may be disconnected after proper notice for any of the following reasons:
- (1) Failure to pay a delinquent account for utility service provided by the District, failure to timely provide a deposit, or failure to comply with the terms of a Deferred Payment Agreement;
 - (2) Violation of the District's rules pertaining to the use of service in a manner which interferes with the service of others;
 - (3) The operation of non-standard equipment, if a reasonable attempt has been made to notify the customer and the customer is provided with a reasonable opportunity to remedy the situation;
 - (4) Failure to comply with the terms of a service agreement, Non-Standard Service Contract or these Rules and Regulations;
 - (5) Failure to provide District personnel or designated representatives access to a meter or to property at which water service is received for purposes of inspecting and verifying the existence of potentially hazardous conditions or policy violations;
 - (6) Any misrepresentation of fact by an Applicant or customer on any form, document or agreement required by the District;
 - (7) Or failure to re-apply for service upon notification by the District that customer no longer meets the service classification originally applied for under the original service application.
- (B) Disconnection Without Notice. Water service may be disconnected without prior notice for the following reasons:
- (1) Where a known dangerous or hazardous condition exists for which service may remain disconnected for as long as the condition exists, including but not limited to a violation of

Chapter 341 of the Health and Safety Code and regulations adopted pursuant thereto, or where the District has reason to believe a dangerous or hazardous condition exists and the customer refuses to allow access for the purpose of confirming the existence of such condition and/or removing the dangerous or hazardous condition [see Sections E.3(d), E.22; 30 TAC § 290.46 (j)];

- (2) Where service is connected without authority by a person who has not made application for service or has been approved for service;
- (3) Where service has been reconnected without authority, including but not limited to, following termination of service for nonpayment; or
- (4) In instances of tampering with the District's meter or equipment, by-passing the meter or equipment, or other diversion of service.
- (5) A threat to perform or actual performance of: (a) bodily injury to any District employee, agent or representative or (b) damage to any District property. The display of any firearm or other weapon in a confrontational, menacing or threatening manner shall be deemed to be a threat to perform bodily injury regardless of the condition of said firearm or weapon.

Service shall be discontinued without further notice when installations of new facilities or repair of existing facilities are found to be in violation of this regulation until such time as the violation is corrected.

(C) Disconnection Prohibited. Utility service may not be disconnected for any of the following reasons:

- (1) Failure to pay for merchandise or charges for non-utility service provided by the District, unless there is an agreement whereby the customer guaranteed payment of non-utility service as a condition of service or the District has a contract with another governmental unit to collect for services rendered to the customer by such other government unit such as water, wastewater, or solid waste services, etc.;
- (2) Failure to pay for a different type or class of utility service unless a fee for such service is included in the same bill;
- (3) Failure to pay charges arising from an under billing due to any misapplication of rates more than six (6) months prior to the current billing;
- (4) Failure to pay the account of another customer as guarantor thereof, unless the District has in writing the guarantee as condition precedent to service;
- (5) Failure of the customer to pay charges arising from an under billing due to any faulty metering, unless the meter has been tampered with or unless such under billing charges are due under subsection 18 below (Inoperative Meters);
- (6) Failure of the customer to pay estimated bill other than a bill rendered pursuant to an approved meter reading plan, unless the District is unable to read the meter due to circumstances beyond its control; or
- (7) In response to a request for disconnection by an owner of rental property where the tenant is billed directly by the District as authorized by the owner, and the renter's account is not scheduled for disconnection under the rules for disconnection of service in these Rules and Regulations.

(D) Disconnection on Holidays and Weekends. Unless a dangerous condition exists or the customer requests disconnection, service shall not be disconnected on a day, or on a day preceding a day, when District personnel are not available to the public for the purpose of making collections and reconnecting service.

- (E) Disconnection Due to Utility Abandonment. The District may not abandon a customer or a certificated service area without written notice to its customers and all similar neighboring utilities, and obtained approval from the TCEQ or successor agencies. However, any customer whose service has been cut for failure to pay a delinquent account for utility service for 30 days or more will be considered to have permanently surrendered that meter (forced surrender). The meter will be pulled, the deposit applied, and the account closed. Any outstanding balances may go to collections. CCSUD may engage a third-party collector to pursue outstanding balances and credit reporting as applicable. Any attempt to reestablish the account will start over with an application and payment of all fees and charges required of a new customer, including Connection Fees if none were paid for the previous meter. If the prior owner is the Applicant, all past fees, penalties and charges must be made current.
- (F) Disconnection Due to Illness or Disability. The District may not discontinue service to a delinquent residential customer permanently residing in an individually metered dwelling unit when that customer establishes that discontinuance of service will result in some person at that residence becoming seriously ill or more seriously ill if service is discontinued. To avoid disconnection under these circumstances and waiver of the late fee, the customer must provide an original written statement from a treating physician to the District the day prior to the due date (10th of the month). Service may be disconnected in accordance with subsection 12 (A & B) of section E if the next month's bill and the past due bill are not paid by the due date of the next month's bill, unless the customer enters into a Deferred Payment Agreement with the District.
- (G) Disconnection of Master-Metered Accounts. When a bill for service to a master-metered account customer is delinquent, the following shall apply:
- (1) The District shall send a notice to the customer as required. This notice shall also inform the customer that notice of possible disconnection will be provided to the customer's tenants or occupants of the master metered property in five (5) days if payment is not rendered before that time.
 - (2) At least five (5) days after providing notice to the customer, and at least five (5) days prior to disconnection, the District shall post notices stating "Termination Notice" in public areas of the master-meter property to notify tenants or occupants of the scheduled date for disconnection of service. The tenants or occupants may pay the District for any delinquent bill on behalf of the customer/account to avert disconnection or to reconnect service to the master-meter property.
- (H) Disconnection of Temporary Service. When an Applicant with temporary service fails to comply with the conditions stated in the service agreement or provisions of these Rules and Regulations, the District may terminate temporary service with notice.
- (I) Payment During Disconnection. District employees or designated representative in the field are not allowed to accept/collect payment of a bill.

13. NSF/Return Payment/Check Policy

Crystal Clear Special Utility District (CCSUD) does not accept post-dated checks. Payment by check and/or bank draft which has been rejected for insufficient funds, closed account, or for which a stop payment order has been issued is not deemed to be payment to the District. The District shall call the phone number or send an email to the contact information on file in an attempt to resolve the matter. The District may also mail, via the U.S. Postal Service, notice that the returned instrument must be redeemed and an additional returned check fee and any applicable fees, including but not limited to late fees or non-payment fee paid at the District office within ten (10) days of the date of the notice or the District shall

file charges with the County District Attorney. Redemption of the returned instrument and payment of the returned check fee shall be made by credit card, cash, money order, or certified check. Failure to meet these terms shall result in disconnection of service. A customer shall be considered a bad credit risk for having an instrument returned as insufficient or non-negotiable for any reason for any two billing periods within a 12-month period, and shall be placed on a “cash-only” basis for a 12-month period during which the District will only accept payment by means of a credit card, certified check, money order or cash.

In the event that a payment by check which has been rejected for insufficient funds, closed account, or for which a stop payment order has been issued was presented to avoid disconnection or to reconnect a disconnected account, the water service shall be disconnected unless the customer can be contacted and the matter resolved within one business day.

14. Billing Cycle Changes

The District reserves the right to change its billing cycles if the workload requires such practice. After a billing period has been changed, bills shall be sent on the new change date unless otherwise determined by the District.

15. Back-Billing

If a customer was undercharged, the District may back bill the customer for the amount which was under billed. The back billing shall not exceed six (6) months unless such undercharge was the result of meter tampering, bypass, or diversion of service by the customer as defined in subsections 21 and 22 below. If the under billing is \$25 or more, and the undercharge was not the result of tampering, the District shall offer to enter into a Deferred Payment Agreement with such customer for the same length of time as that of the under billing. In cases of meter tampering, bypass, or diversion of service, the District may, but is not required to, offer a customer a deferred payment plan.

16. Disputed Bills

In the event of a dispute between a customer and the District regarding any monthly bill, the dispute shall be resolved or disposed of in accordance with the Grievance Procedures set forth in the following Subsection 17, except as follows:

- (A) Notice of the bill dispute must be submitted to the District, in writing within 30 days of the statement date, and a payment equal to the customer’s average monthly usage at current rates must be received by the District prior to the due date posted on the disputed bill.
- (B) The customer shall not be required to pay the disputed portion of a bill which exceeds the amount of that customer’s average monthly usage at current rates pending the completion of the determination of the dispute. For purposes of this subsection, the customer’s average monthly usage shall be the average of the customer’s usage for the preceding 12-month period. Where no previous usage history exists, consumption for calculating the average monthly usage shall be estimated on the basis of usage levels of similar customers under similar conditions.
- (C) Notwithstanding any other section of these Rules and Regulations, a utility customer’s service shall not be subject to discontinuance for nonpayment of that portion of a bill under dispute pending the completion of the determination of the dispute. The customer is obligated to pay any billings not

disputed as established in subsection 12 of these Rules and Regulations (relating to Disconnection of Service).

17. Grievance Procedures

The District's standard policy for any and all claims filed is that the District is a political subdivision of the State of Texas and as such enjoys immunity from suit and liability for alleged claims; the District does not intend to waive its immunity protections beyond and waiver pursuant to the Texas Tort Claims Act. In addition to the procedure provided in sections 101.101-101.107 of the Texas Civil Practice and Remedies Code, any aggrieved party will have an opportunity to voice concerns or grievances to the District by the following means and procedures:

- (A) The aggrieved party must first submit written notice to the authorized staff member stating the concern or grievance and the requested result within 30 days of the alleged occurrence. The authorized staff member shall investigate the matter and provide a response to the aggrieved party within fourteen (14) business days after receipt of the written notice of grievance. In the event that the aggrieved party is not satisfied with the resolution, the aggrieved party may proceed with the next step of this procedure.
- (B) The aggrieved party must submit a written appeal stating the concern or grievance and the desired result to the Office Manager within seven (7) days after receipt of the response from the authorize staff member as stated in (A). The Office Manager shall investigate the matter and provide a response to the aggrieved party within fourteen (14) business days after receipt the written appeal. If the aggrieved party is not satisfied with the resolution provided by the Office Manager, the aggrieved party may appeal to the General Manager in writing stating the concern or grievance and the desired result within seven (7) days after the receipt of the response from the Office Manager.
- (C) If the General Manager does not resolve the grievance to the satisfaction of the aggrieved party, the party may appeal the General Manager's decision, in writing, to the President of the Board of Directors for disposition. The written notice of appeal must be submitted to the District within seven (7) days after the date of the General Manager's written response to the notice of grievance.
- (D) Upon receipt of an appeal, the President of the Board of Directors shall review the request and determine the best means by which the grievance shall be resolved. The President may direct that a grievance be heard by the Board of Directors for final disposition, or initially by District staff appointed by the President and serving in an advisory capacity to the Board of Directors. The President shall also determine a reasonable time and place for the grievance to be heard by the Board of Directors, but such hearing shall take place within sixty (60) days of the date that the President received the written notice of appeal. Final disposition by the Board of Directors shall be reported to the aggrieved party in writing.
- (E) If under this subsection an aggrieved party contests a charge or fee as sole or partial basis of a grievance, the contested charge or fee shall be suspended until such time as the grievance is satisfactorily resolved by the General Manager, the deadline for delivering an appeal to the President of the Board of Directors has passed, or the Board of Directors has rendered its final disposition of the dispute. This provision does not apply to disputed monthly bills pursuant to subsection 16 above.

18. Inoperative Meters

Water meters found inoperative will be repaired or replaced by the District within a reasonable time. If a meter is found not to register for any period, unless by-passed or tampered with, the District shall make a charge for units used, but not metered, for a period not to exceed three (3) months, based on amounts used under similar conditions during the period preceding or subsequent thereto, or during corresponding periods in previous years.

19. Bill Adjustment Due to Meter Error

The District shall test any customer's meter upon written request of the customer. In the event the meter tests within the accuracy standards of The American Water Works Association, a meter test fee as prescribed in Section G of this Order shall be imposed. In the event the test results indicate that the meter is faulty or inaccurate (has over charged the customer), the test fee shall be waived, the meter shall be calibrated or replaced, and a billing adjustment may be made as far back as six (6) months. The billing adjustment shall be made to the degree of the meter's inaccuracy as determined by the test.

20. Leak Adjustment Policy

In the event that the amount of a customer's monthly bill is higher than normal due to leakage, the customer may submit a written leak adjustment request to the District. The District may choose to bill for leakage at an adjusted rate. An account is only allowed one (1) singular adjustment during a continuous 12 month billing cycle, and the adjustment shall be for one (1) single month's billing cycle only, regardless of the duration of the leak. Leak adjustments are per account, and only the affected account is eligible for consideration of a leak adjustment. The following conditions apply:

- (A) The amount of excess water usage reflected in the contested bill must be at least two (2) times the average monthly usage for that customer;
- (B) The customer must submit documentary evidence that the leak has been repaired, such as a statement from a plumber and/or receipt(s) for parts purchased to repair the leak; and
- (C) The customer has not received a leak adjustment during the twelve (12) months prior to the request, regardless of the number of meters serving the customer's property or properties.

Meter Tampering and Diversion of Service

All meters connected to the District's water system are the sole property of the District and shall be provided, owned, installed and maintained by the District. Meter tampering, bypassing a meter or service equipment, and diversion of service are prohibited. Meter tampering, bypass, or diversion shall be defined as tampering with a meter or service equipment causing damage or unnecessary expense to the District, bypassing a meter or service equipment, or other instances of diversion of service, such as:

- (A) Installing a meter or service equipment without written authorization from the District;
- (B) Removing or altering locks or shut-off devices installed by the District to discontinue service;
- (C) Removing, altering or physically disorienting a meter or service equipment; inserting or attaching objects to a meter or service equipment to bypass or divert service;

- (D) Other electrical and/or mechanical means of tampering with, by-passing, or diverting service;
- (E) Connecting or reconnecting service without District authorization; or connecting to the service line of an adjacent customer of the District.

In addition to any other penalties or remedies provided for in these Rules and Regulations or under Texas civil law, persons who tamper with meters or divert service and unauthorized users of District services may be prosecuted to the extent allowed by law under Texas Penal Code § 28.03 (Criminal Mischief) or § 31.04 (Theft of Service) as appropriate.

21. Damage to District Facilities

- (A) Damage to Meter and Appurtenances. No person other than a duly authorized employee or agent of the District shall be permitted to tap or make any connection to the water distribution lines of the District's water system, except for emergency fire-fighting purposes, or make any repairs or additions to or alterations in any meter, meter box, tap, pipe, cock or other fixture connected with the water system, or any manhole, main, trunk or appurtenance of the District's wastewater system. The District reserves the right, immediately and without notice, to remove the meter or disconnect water service to any Customer whose meter has been tampered with and to assess an equipment damage fee to the Customer under Section G of these Rules and Regulations.
- (B) Right to Repair. The District reserves the right to repair any damage to the water and wastewater systems without prior notice and to assess against any Customer causing the damage such penalties as is provided for by law and these Rules and Regulations, in addition to those charges necessary to repair system damage.

22. Meter Relocation

The District shall permit the relocation of meters or services provided that:

- (A) The relocation is limited to the requesting customer's existing property designated to receive service;
- (B) A current easement for the proposed location has been granted to the District;
- (C) Service capacity is available at the proposed location; and
- (D) The customer pays a Meter Relocation Fee and any additional costs that may be incurred by the District to relocate the meter. [see Section G]. In order to improve the operations of the District, the District may relocate a meter at any time at no cost to the customer.

23. Prohibition of Multiple Connections to a Single Tap

No more than one (1) residential, commercial or industrial service connection is allowed per meter per Texas Administrative Code (30 TAC) [291.44(d)(4)]. The District may require the owner of an apartment building, mobile home/RV park or other commercial account to apply for a single meter as a "Master Metered Account" pursuant to Section E.2(C)(3) of these Rules and Regulations. Any unauthorized sub metering or diversion of service shall be considered a "multiple connection" and subject to disconnection of service. If the District has sufficient reason to believe a multiple connection exists, the District shall discontinue service under the Disconnection with Notice provisions in subsection 12(A) above.

24. Customer Responsibilities

- (A) District Access to Meters. Customers shall allow District employees and designated representatives access to meters for the purpose of reading, testing, installing, maintaining and removing meters and using utility cutoff valves. If access to a meter is hindered so that the District is prevented from the reading of the meter, an estimated bill shall be rendered to the customer for the month and a notice of the hindrance shall be sent to the customer. If access is denied for three (3) consecutive months after notice to the customer, then service shall be discontinued and the meter removed with no further notice. [see Section E.3 (D)].
- (B) Compliance with On-Site Service and Plumbing Requirements for Water. Customers shall be responsible for complying with all District, local, state and federal codes, requirements and regulations concerning on-site service and plumbing facilities.
- (1) All connections shall be designed to ensure against back-flow or siphonage into the District's water system. In particular, livestock water troughs shall be plumbed above the top of the trough with an air space between the discharge and the water level in the trough. [30 TAC § 290.46].
 - (2) The use of pipe and pipe fittings that contain more than 0.25% lead or solder and flux that contain more than 0.2% lead is prohibited for any plumbing installation or repair of any residential or non-residential facility providing water for human consumption and connected to the District's facilities. Customer service pipelines shall be installed by the Applicant. [30 TAC § 290.46].
- (C) Compliance with On-Site Service and Plumbing Requirements for Wastewater. Each Development has its own unique design, engineering needs and requirements. Therefore, the Requirements for Compliance with the Specific Development's On-Site Service and Plumbing are contained in Exhibit B of these Rules and Regulations.
- (D) Payment on Multiple Accounts. A customer owning more than one service connection shall keep all payments current on all accounts. Failure to maintain current status on all accounts shall be enforceable as per the Service Application and Agreement executed by the customer.
- (E) Extent of District Ownership and Maintenance. The District's ownership and maintenance responsibility of water distribution and metering equipment shall end at a customer's meter nipple. Therefore, all water usage registering upon and/or damages occurring to the metering equipment owned and maintained by the District shall be subject to charges pursuant to these Rules and Regulations.
- (F) Cut-off Valve Requirement. The District shall require each customer to have a cut-off valve on the customer's side of the meter for purposes of isolating the customer's service pipeline and plumbing facilities from the District's water pressure. The valve shall meet AWWA standards (a ball valve is preferred). The customer's use of the District's curb stop or other similar valve for such purposes is prohibited. A customer shall be subject to charges for any damage to the District's meter or other service equipment. A cut-off valve may be installed as a part of the original meter installation by the District.

25. Prohibited Plumbing Practices

- (A) No direct connection between the public drinking water supply and a potential source of contamination is permitted. Potential sources of contamination will be isolated from the public water system by an air gap or an appropriate backflow prevention device.
- (B) No cross-connection between the water supply and a private water system is permitted. These potential threats to the public drinking water supply must be eliminated at the service connection by the installation of an air-gap or a reduced pressure-zone backflow prevention device.
- (C) No connection which allows water to be returned to the public drinking water supply is permitted.
- (D) No pipe or pipe fitting which contains more than two-tenths of one percent (0.02%) lead may be used for the installation or repair of plumbing at any connection which provides water for human use.
- (E) No solder or flux which contains more than two-tenths of one percent (0.02%) lead can be used for the installation or repair of plumbing at any connection which provides water for human use.
- (F) District added latest version of unified plumbing code or locality rules.

26. Excluded Flow and Waste

- (A) No waste material, which is not biologically degradable, will be permitted to be discharged into the district's facilities, including mud and debris accumulated during service line installation.
- (B) No industrial wastes other than domestic sewage shall be discharged into the District's wastewater system unless approved in writing by the Board of Directors. No toxic wastes, backwash wastes from water softener(s), wastes which would damage the collection and treatment facilities or wastes which would interfere with the waste treatment process shall be discharged into the District's wastewater system.
- (C) Industrial wastes shall not be discharged into the District's wastewater system. No cooling water shall be discharged into the District's wastewater system.
- (D) No downspouts, yard or street drains, or gutters will be permitted to be connected into the District's wastewater system.
- (E) No ground water drains, water softener drains, foundation drains, or other subsurface drains shall be connected in the District's wastewater system.
- (F) No effluent drains from existing and/or abandoned septic tanks or field lines will be permitted to remain in service.

27. Water Service Connections

- (A) Applications for water service connections shall be filed with the District on approved forms. Applicants shall meet all District requirements for service, including the grant of any necessary water and wastewater easements (as determined by the District) and the installation of a cut-off valve at the expense of the service Applicant.
- (B) No person, other than District employees or designated representatives, shall be permitted to tap or make any connection with the mains or service lines of the District's water system, or make any

repairs or additions to or alterations in any tap, pipe, cock or other fixture connected to a water service line.

- (C) A customer must allow his or her property to be inspected for possible cross-connections and other undesirable plumbing practices. These inspections will be conducted by the District prior to initiating service and may be conducted periodically thereafter. All inspections will be conducted during the District's normal business hours. The customer must, at the customer's expense, properly install a backflow prevention device as required by the District.
- (D) All costs to extend or oversize District water mains or service lines to serve any residential or commercial user or any undeveloped area within the District shall be the sole responsibility of the property owner and/or Applicant/Assignee requesting service.

28. Standards for Water Service Lines

The following standards govern the installation of customer service lines for water service to residences or commercial buildings within the District:

- (A) All new residential or commercial connections to the District's water system shall be made in accordance with previous subsection 28 and the Rules and Regulations for Public Water Systems issued by the TCEQ or successor agencies as set forth in Subchapter D, Chapter 290, Title 30 of the Texas Administrative Code. In the event of a conflict between the provisions of subsection 29 and the TCEQ's or successor agencies' Rules and Regulations for Public Water Systems, the more stringent shall apply.
- (B) Water service lines shall be of Type "K" copper or polyvinyl chloride PVC DR 18 as approved by the District. Fittings used with Type "K" copper service lines shall be of the flared or compression type. Fittings used with PVC service lines shall be in accordance with the pipe manufacturer's specifications.
- (C) Separation distances between water and wastewater service lines shall be in accordance with 30 TAC §290.44(e).
- (D) Installation of water and wastewater service lines in a "shared" trench is prohibited.
- (E) A minimum of four feet (4') of Type "K" soft copper pipe shall be installed at the end of the water service line at the connection to the water meter.
- (F) Water service lines shall be bedded with a minimum of 6" of well graded crushed stone or pea gravel below the pipe. The trench bottom and walls shall be cleared of all protruding rocks which could damage the pipe before the crushed stone bedding is placed.
- (G) A District-owned water meter and a District-approved meter box shall be installed by the District or its designated representative.
- (H) Potable water supply piping, water discharge outlets, backflow prevention devices, or similar equipment shall not be located so as to make possible the submergence of such equipment in any contaminated or polluted substance.
- (I) Lawn sprinkling systems, swimming pools with an auto-fill device, and/or a well(s) shall be equipped with an approved reduced pressure zone (RPZ) device installed on the customers' side. After

installation, The District will require a passing backflow test and customer service inspection which must be submitted through VEPO.

- (J) The District's water system shall be protected from swimming pools being filled by a hose. A vacuum breaker must be installed on the hose bib used to fill the pool.
- (K) Upon the installation of a service line, a request for inspection shall be made to the District's office, and the line shall not be back-filled or placed into service until the District has inspected and approved of the installation. The District shall perform the inspection within forty-eight (48) hours of receiving the request, under normal conditions.
- (L) Back filling of service line trenches must be accomplished within twenty-four (24) hours of inspection and approval, and no debris will be permitted in any service line trench.

29. Wastewater Service Connections

- (A) Applications for wastewater service connections shall be filed with the District on approved forms. All Applicants for wastewater service shall grant an easement to the District which shall own and maintain the "on property" wastewater facilities, and associated discharge piping from the Septic Tank Effluent Pump (STEP) station to the wastewater low pressure force main or service line. The property owner or Applicant/Assignee shall be required to construct the customer service line from the foundation of the residence or commercial building to the STEP station "on property" wastewater facilities.
- (B) The Property Owner or Applicant/Assignee shall construct all wastewater service facilities from the "on property" STEP station of a residence or commercial building to the District's wastewater service line, which installation shall include the all-necessary equipment necessary to properly collect, treat, and discharge the wastewater stream received from the property.
- (C) The Applicant shall grant an easement to the District and such access to the property designated to receive service as may be reasonably necessary for the District to maintain the "on property" STEP station and low-pressure wastewater connection to the force main to serve the residential or commercial building thereon. The District shall designate the locations of the "on property" wastewater facilities on the property.
- (D) The District may remove all grass, bushes, shrubs, soil and other fixtures necessary to maintain the "on property" wastewater facilities. The District shall have no obligation to repair, replace or replant any grass, bushes, shrubs, soil or fixtures removed or damaged during maintenance of the "on property" wastewater facilities.
- (E) The District shall inspect all physical connections of a residence or commercial building to the District's wastewater system prior to release for service. Pursuant to these Rules and Regulations, a property owner or Applicant/Assignee requesting service shall be responsible for payment of the following fees and charges relative to the connection of wastewater lines:
 - (1) all costs for the acquisition and/or installation of the "on property" wastewater facilities located at each property to the District's main wastewater line, located within an easement granted by the property owner to the District, including but not limited to wastewater pumps, tanks, fittings, valves, piping and electrical service;

- (2) the monthly electrical service costs to provide electrical service to the “on property” wastewater facilities, said electrical costs are included in the monthly Operations and Maintenance Base Rate per Section G; and
 - (3) a tap inspection fee per Section G for connection of the “on property” wastewater facilities to the District’s main wastewater line, which inspection shall be made solely by the District or the District’s designated representative.
- (F) “On property” wastewater facilities shall be placed within fifty feet (50’) of the foundation of the residence or commercial building to be served. The District shall make a reasonable attempt to consult with each property owner about locations for the “on property” wastewater facilities; however, the final location of the “on property” wastewater facilities shall be made solely by the District in consultation with the property owner or Applicant/Assignee, based on the practical limitations of construction.
- (G) All costs to extend or oversize District wastewater mains or service lines to serve any residential or commercial user or any undeveloped area within the District shall be the sole responsibility of the property owner and/or Applicant/Assignee requesting service. From and after June 23, 2015, all new customers of the District shall connect to wastewater facilities that are available within three hundred feet (300’) of the property of any new customer. In addition, such new customer is prohibited from the installation of private on-site wastewater holding or treatment facilities.
- (H) From and after June 23, 2015 all new developments within the District’s service area shall be required to connect to the District’s wastewater collection system, when feasible and appropriate. Providing water service to any new subdivision or development by the District without requiring wastewater collection facilities to be constructed therein shall be considered an exception, requiring compelling evidence that the public health and environment will be protected for the long term.
- (I) A property owner that has already installed an on-site wastewater holding or treatment facility on land within the District’s service area is required to connect to the District’s wastewater collection system when the District’s wastewater collection system is contiguous or adjacent to the property owner’s property line. Costs for any and all modifications or changes to the existing on-site wastewater holding or treatment system to accommodate the District’s wastewater treatment facility shall be the responsibility of the property owner and/or Applicant/Assignee.

30. Standards for Wastewater Service Lines

All new residential or commercial connections to the District’s wastewater system shall be made in accordance with previous subsection 30 and the Rules and Regulations for Public Water Systems issued by the TCEQ or successor agencies as set forth in Subchapter D, Chapter 217, Title 30 of the Texas Administrative Code. In the event of a conflict between the provisions of subsection 30 and the TCEQ’s or successor agencies’ Rules and Regulations for Public Water Systems, the more stringent shall apply.

31. Standards Details for Service Facilities

All water and wastewater service facilities shall be constructed in accordance with the Water Standard Details and Wastewater Standard Details attached to these Rules and Regulations in incorporated herein by reference. In the event of a conflict between these standard details and any other provision of these Rules and Regulations, the standard details shall apply. In the instance that a standard detail is required for a portion of the installation of a water or wastewater service facility, the District or District’s authorized representative shall be notified and such standard detail shall be provided.

32. Penalties and Enforcement

- (A) Penalties. Any person violating any provision of this Section E, as amended, may be subject to a fine of \$500.00 or more for each violation. Each day that a violation of this Section E is permitted to exist shall constitute a separate violation. A penalty under this section is in addition to any other penalty or remedy provided by the laws of the State of Texas or these Rules and Regulations [Texas Water Code § 49.004(a) and Texas Gov't Code § 27.03)a(1)].
- (B) Liability for Costs. Any person violating any provision of this Section E shall become liable to the District for any expense, loss or damage occasioned by the District by reason of such violation and the District's enforcement thereof. If the District prevails in any suit to enforce these Rules and Regulations, it may, in the same action, recover any reasonable fees for attorneys, expert witnesses, and other costs incurred by the District before the court.
- (C) No Waiver. The failure on the part of the District to enforce any section, clause, sentence, or provision of these Rules and Regulations shall not constitute a waiver of the right of the District later to enforce any section, clause, sentence, or provision of these Rules and Regulations.

SECTION F: DEVELOPMENT, SUBDIVISION AND NON-STANDARD SERVICE REQUIREMENTS

1. District Limitations

All Applicants/Assignees shall recognize that the District must comply with state and federal laws and regulations as promulgated from time-to-time, and with covenants of current indebtedness. The District is not required to extend retail utility service to any Applicant requesting standard service to a lot or tract in a subdivision where the Applicant/Assignee responsible for the subdivision has failed to comply with the requirements of the District's subdivision service extension policies and non-standard service requirements set forth in this section.

2. Purpose

It is the purpose of this section to define the process by which the specific terms and conditions for service to subdivisions and other kinds of non-standard service are determined, including the non-standard service Applicant's and the District's respective costs. For purposes of this section, the term "Applicant/Assignee" shall refer to a developer or person that desires to secure non-standard service from the District. The Applicant/Assignee must be the same person or entity that is authorized to enter into a contract with the District setting forth the terms and conditions pursuant to which non-standard service will be furnished to the property. In most cases, the Applicant/Assignee will be the owner of the property for which non-standard service is sought. An Applicant/Assignee other than the property owner must furnish evidence to the District that the Applicant/Assignee has authority to request non-standard service on behalf the owner, or that it otherwise has authority to request non-standard service for the property.

3. Application of Rules

This section is applicable to subdivisions, additions to subdivisions, commercial, industrial and governmental developments, and any situation where additional service facilities are required to serve a single tract of property. Examples of non-standard service to a single tract of land include, without limitation, service requests that require road bores, extensions to the District's Production System, service lines exceeding two inches (2") internal diameter in size, service lines exceeding twenty feet (20') in length, or which require a meter larger than 5/8 inch for service. Most nonresidential service applications will be considered non-standard by the District at its sole discretion. For purposes of these Rules and Regulations, applications subject to this section shall be defined as "non-standard." This section may be altered or suspended for facility expansions constructed by the District at its expense. The District's General Manager shall interpret, on an individual basis, whether or not an Applicant's service request shall be subject to all or part of the conditions of this section. For purposes of this section the term "project" includes subdivisions, additions to subdivisions, and commercial, industrial and governmental developments.

This section sets forth the general terms and conditions pursuant to which the District will process non-standard service requests. The specific terms and conditions pursuant to which the District will provide non-standard service in response to any request will depend upon the nature of such request and may be set forth in a contractual agreement to be entered between the District and Applicant/Assignee. Unless

specifically approved by the District's Board of Directors, a non-standard service contract may not contain any terms or conditions that conflict with these Rules and Regulations.

4. Feasibility Study Service Application Process

- (A) Project Packet. The Applicant/Assignee contacts the District to receive planning requirements for water and/or wastewater service and general information about the District's service capability. The Applicant/Assignee will receive a Feasibility Study Service Application packet.
- (B) Application Submission and Fees. The Applicant/Assignee submits its completed Feasibility Study Service Application packet, supporting documentation, and non-refundable payment for feasibility study to the District office. All plans and re-submittals shall only be delivered to the District offices or via email to the District. Under no circumstance shall the Applicant/Assignee deliver plans directly to the District consulting engineer. The District reserves the right to increase the review payment for non-typical applications requiring additional administrative, engineer or legal review, as the initial payment is used for work product. CCSUD will send an invoice once additional funds are necessary.
- (C) Staff Review. The District staff and the District consulting engineers will review the nonstandard service application together with plans, schedules, data or other materials filed with the District supporting the application and provide feedback to the Applicant/Assignee regarding service capability, development fees within Rules and Regulations, and any necessary changes in plans. The Applicant/Assignee should expect at least 30 days for this process.
- (D) Non-Standard Service Agreement or ("NSSA"). Following the completion of staff review, the District's Board of Directors may review and vote on approval of the NSSA during a public meeting of the District Board of Directors. Construction of water and/or wastewater improvements shall not commence until the District approves the Applicant's/Assignee's NSSA and all fees required to be paid pursuant to the NSSA are paid to the District. The balance of all applicable fees shall be paid as agreed upon in the NSSA.
- (E) District Water Use Prohibition. Under no circumstances shall the District provide any water to the project for construction, testing, or other purposes until the District has approved a NSSA for the project, and the Applicant/Assignee has paid all fees and costs then due and payable pursuant to these Rules and Regulations and the NSSA.

5. Facilities Design

Design Requirements. Upon receipt of a completed Feasibility Study Service Application packet and Feasibility Study Fee, the District shall study the design requirements of the Applicant's/Assignee's required facilities before preparing a NSSA in accordance with the following:

- (A) The District's consulting engineer may design, or review and approve, plats and plans for all on-site facilities for the Applicant's/Assignee's requested service in accordance with the District's specifications and any applicable municipal or other governmental codes and specifications. The consulting engineer shall notify the Applicant/Assignee in writing of any necessary changes to Applicant's/Assignee's proposed plats and/or plans. Allow a minimum of thirty (30) days for the review process. Any off-site facilities will be designed by the District's consulting engineer as well as storage facilities, tanks, booster facilities as outlined in the NSSA.
- (B) The Applicant's/Assignee's consulting engineer shall ensure that all on-site facilities to be constructed by the Applicant/Assignee meet the demands for service as requested by the

Applicant/Assignee. The District reserves the right to upgrade and/or oversize the planned service facilities to meet future customer demands. The method of compensation is in the sole discretion of the District as outlined in the NSSA.

- (C) Water and wastewater line size and location will be determined by the District, whose determination is final.
- (D) All potable water distribution systems including pump stations, mains and both ground and elevated storage tanks, shall be designed, installed and constructed in accordance with applicable regulatory agency standards and current American Water Works Association (AWWA) standards with reference to materials to be used and construction procedures to be followed. In the absence of AWWA standards, commission review may be based upon standards of the American Society for Testing and Materials (ASTM), commercial and other recognized standards utilized by licensed professional engineers.
- (E) All newly installed pipes and related products must conform to the American National Standards Institute/National Sanitation Foundations (ANSI/NSF) Standard 61 and must be certified by an organization by the ANSI.
- (F) All plastic pipe for use in public water systems must also bear the National Sanitation Foundation Seal of Approval (NSF-pw) and have an ASTM design pressure rating of at least 150 pounds per square inch (psi) or a standard dimension ratio of 18 or less.
- (G) Any water line extensions constructed by an Applicant/Assignee shall be constructed completely across (property line to property line) the side of the subdivision or development which is contiguous and adjacent to the road or street on which the main entrance to the project is located.
- (H) The water system shall be designed to afford effective circulation of water with a minimum of dead ends. All dead-end mains shall be provided with acceptable flush valves and discharge piping, and all temporary dead-ends should have flush valves. The District may permit dead ends when necessary, as a stage in the growth of the water system, but they shall be located and arranged to ultimately connect the ends to provide circulation. [30 TAC § 290.44(d)(6)].

6. Prepayment of Certain Fees Required

An Applicant/Assignee for non-standard service shall pre-pay certain fees in accordance with the following:

- (A) On or before the date that a NSSA is executed for the construction of service facilities required to provide service to the Applicant's/Assignee's project or a phase thereof, the Applicant/Assignee shall pay the District a sum of money equal to the following: one-half ($\frac{1}{2}$) of the Connection Fee, required by Section G of these Rules and Regulations, multiplied by the total number of Living Unit Equivalents (LUEs) to be developed or located in the project or phase, as applicable or as outlined in the NSSA. Payment of the foregoing sum is a mandatory prerequisite to the commencement of construction of the water and/or wastewater infrastructure of the project.
- (B) Before the Applicant's/Assignee's project or a phase thereof is approved and accepted by the District, the Applicant/Assignee shall pay to the District the remaining fees due the District which have not been paid by the Applicant/Assignee, including without limitation the remaining balance of the

Connection Fees due under the previous subsection (A). This requirement is a mandatory prerequisite to the initiation of water and/or wastewater service to the project pursuant to a NSSA.

- (C) Subsequent purchasers of individual lots shall pay a meter installation fee, administrative fee, a deposit and other applicable fees as required under Section G of these Rules and Regulations upon applying to the District for activation of service to individual lots.

7. Non-Standard Service Agreement

Applicants/Assignees requesting or requiring non-standard service shall be required to execute a written NSSA. The District shall prepare and deliver the NSSA to the Applicant/Assignee within a reasonable time period as determined by the complexity of the project. The NSSA shall define the terms of service prior to construction of required service facilities for the project and may include, without limitation, provisions for the following:

- (A) Payment of all costs associated with required administration, design, construction and inspection of facilities for water and/or wastewater service to the project;
- (B) Procedures by which the Applicant/Assignee shall accept or deny a contractor's bid, thereby committing to continue or discontinue the project;
- (C) Amount and payment of capital contributions required by the District in addition to other costs required under this section;
- (D) Reservation of service capacity for the Applicant/Assignee and duration of reserved service with respect to the impact the Applicant's/Assignee's service demand will have upon the District's system capability to meet other service requests;
- (E) Terms by which the Applicant/Assignee shall indemnify the District from all third-party claims or lawsuits arising from or related to the project;
- (F) Terms by which the Applicant/Assignee shall dedicate all constructed service facilities to the District and by which the District shall assume operation and maintenance responsibility, including any enforcement of warranties related to construction of the service facilities;
- (G) Terms by which the Applicant/Assignee shall grant title or easements to the District for right-of-ways, constructed service facilities, and service facility sites, and/or terms by which the Applicant/Assignee shall provide for the securing of required right-of-ways and sites;
- (H) Terms by which the District shall review and approve any applicable NSSA, Three-Way Contract or any other contract related to the project pursuant to current rules, regulations and policies of the District; and
- (I) Terms by which the District shall administer the Applicant's/Assignee's project with respect to:
 - (1) The design of the Applicant's/Assignee's service facilities;
 - (2) Securing and qualifying bids;
 - (3) Execution of the contract;
 - (4) Selection of a qualified bidder for construction;
 - (5) Dispensing advanced funds for construction of facilities required for the Applicant's/Assignee's service;

- (6) Inspecting construction of facilities; and
- (7) Testing facilities and closing the project.

The District and Applicant/Assignee must execute a NSSA before construction of service facilities for the project is commenced. In the event that the Applicant/Assignee commences construction of any such facilities prior to execution of the contract, the District may refuse to provide service to the Applicant/Assignee (or require full costs of replacing/repairing any facilities constructed without prior execution of the contract from any person buying a lot or home from Applicant/Assignee), require that all facilities be uncovered by the Applicant/Assignee for inspection by the District, require that any facilities not approved by the District be replaced, or take any other lawful action determined appropriate by the Board of Directors.

8. Property and Easement Acquisition

With regard to construction of facilities, the District shall require private utility easements on private property as per the following conditions:

- (A) If the District determines that easements or facility sites outside the Applicant's/Assignee's property are required, the Applicant/Assignee shall use all due diligence to secure easements or facility sites in behalf of the District. All easements and property titles shall be researched, validated, and recorded by the District at the expense of the Applicant/Assignee.
- (B) All costs associated with facilities that must be installed in public right-of-ways on behalf of the Applicant/Assignee, due to the inability of the Applicant to secure private utility easements, shall be paid by the Applicant/Assignee. The District reserves the right to secure utility easements or facility sites by eminent domain on its own initiative. The Applicant/Assignee shall pay all costs, including legal and other professional fees and the condemnation award in the event the District determines that a public necessity exists to secure private utility easements or facility sites in order to provide service to the Applicant's/Assignee's project through eminent domain proceedings.
- (C) The District shall require an exclusive dedicated utility easement on the Applicant's property (as required by the size of the planned facilities and as determined by the District) and title to property required for other on-site facilities.
- (D) Easements and facilities sites shall be prepared by the Applicant for the construction of the District's pipeline and facility installations in accordance with the District's requirements and at the expense of the Applicant/Assignee.

9. Contractor Selection and Qualification

(A) Selection.

Applicants/Assignees shall choose one of the following methods for selection of a contractor to construct water and/or wastewater facilities required by the District to serve a project:

- (1) The Applicant/Assignee may select a qualified contractor. The District reserves the right to reject any contractor selected by the Applicant/Assignee in accordance with the criteria set forth in the following subsection 9 (B); or
- (2) The District's consulting engineer shall advertise for bids for the construction of the Applicant's/Assignee's proposed facilities in accordance with generally accepted practices

including, but not limited to, the use of electronic posting for bidding purposes and related notifications. The Applicant/Assignee shall provide the District with a sufficient number of plans and specifications, without charge, for prospective bidders. The District reserves the right to reject any bid or contractor, the District shall generally award the contract to the lowest and best bidder in accordance with the criteria set forth in the following subsection (B). After the Applicant/Assignee has executed the NSSA, the Applicant shall pay to the District all costs necessary for completion of the project's service facilities prior to construction and in accordance with the terms of the NSSA.

(B) Qualification Criteria.

- (1) The Applicant/Assignee shall sign the NSSA noting Applicant's/Assignee's willingness to proceed with the project and shall pay all costs in advance of construction associated with the project.
- (2) The contractor shall provide an adequate bid bond under terms acceptable to the District;
- (3) The contractor shall secure adequate performance and payment bonding for the project under terms acceptable to the District;
- (4) The contractor shall supply favorable references acceptable to the District;
- (5) The contractor shall qualify with the District as competent to complete the work; and
- (6) The contractor shall provide adequate certificates of insurance as required by the District.

10. Construction

- (A) All road work shall be completed in accordance with applicable state, county and/or municipal standards prior to construction of project service facilities to avoid future problems resulting from road right-of-way excavation and completion. Subject to approval of the requisite authority, road sleeves may be installed prior to road construction to avoid road damage during construction of Applicant's service facilities.
- (B) The District shall, at the expense of the Applicant, inspect the service facilities to ensure compliance with District standards. If the District determines that water and/or wastewater facilities are not being constructed in accordance with the plans and specifications approved by the District or the District's standards, then the District reserves the right to stop construction until the defective work has been corrected or replaced.
- (C) Construction plans and specifications shall be strictly adhered to, but the District reserves the right to revise any specifications by change-order due to unforeseen circumstances during the design phase or to better facilitate construction and/or operation of the project service facilities. All change order amounts shall be charged to the Applicant/Assignee.

11. Dedication and Acceptance of Service Facilities

Upon proper completion and testing of an Applicant's/Assignee's on-site and off-site service facilities, final inspection and approval thereof by the District, and Applicant's/Assignee's payment to the District of all required fees and charges in connection therewith, the Applicant/Assignee shall dedicate the service facilities to the District by an appropriate legal instrument approved by the District's attorney, and the District shall accept the dedication. The District shall thereafter own the service facilities subject to Applicant's maintenance bond in an amount of not less than twenty percent (20%) of the total

construction cost of the service facilities and for a term of not less than two (2) years. The maintenance bond is subject to prior approval by the District's attorney.

12. Service within Subdivisions

The District's obligation to provide service to any customer located within a project governed by this Section F is limited to the service specified in the NSSA. The Applicant/Assignee is responsible for paying for all costs necessary to provide non-standard service to a project as determined by the District under the provisions of these Rules and Regulations, and in particular, the provisions of this section and the NSSA. Should the Applicant fail to pay these costs, the District has the right to require payment of these costs by any one or more of the persons purchasing lots within such subdivision before the District is obligated to provide water and/or wastewater service to the subdivision. Applicant/Assignee is required to notify respective buyers in writing of its failure to pay these costs. In addition, the District may elect to pursue any remedies provided by the NSSA and the laws of Texas.

SECTION G: RATES AND SERVICE FEES

(UNLESS SPECIFICALLY DEFINED IN THESE RULES AND REGULATIONS, ALL FEES, RATES, AND CHARGES AS STATED SHALL BE NON-REFUNDABLE.)

1. Classes of Users

(A) All users of the District's water and wastewater services shall be grouped into the following classes:

- (1) Standard, which consists of Residential users located within the District or served by the District on an existing pipeline where pipeline or service facility extensions are not required and special design and/or engineering considerations are not necessary.
- (2) Non-Standard, which consists of any Residential user whose service is not referenced in (1) above, and Developments, Commercial and Industrial users located within the District or served by the District and to which service to a non-residential structure is provided or existing standard users whose condition of service has caused their condition to be changed to Non-Standard per Section E.5.

(B) The intent of the billing is to assess water charges in such a manner that each class of users generally pays its share of debt service and operation and maintenance expenses for water service. The District may create additional classes of users in the future at its discretion.

(C) All classes of users may be grouped into sub-classes according to the meter size provided to their residence and/or commercial/Industrial establishment.

2. Capacity/Engineer/Feasibility Study Fee

The District shall conduct a service investigation for each service application submitted to the District. An initial determination shall be made by the District as to whether the request is for standard or non-standard service. An investigation shall then be conducted by the District and the results reported under the following terms:

(A) Standard Service Requests. All standard service requests shall be investigated with a charge based on all applicable costs for providing service and shall be quoted in writing to the Applicant within ten (10) working days of application. Applicant/Assignee shall pay a fee which is dependent and determined by the depth of the study required as well as an administration fee due at time of submitting an application. Quote will contain Study fee and time to complete study.

(B) Non-Standard Service Requests. All non-standard service requests shall be investigated with a charge based on all applicable costs for providing service and shall be quoted in writing to the Applicant within fifteen (15) working days of application. Applicant/Assignee shall pay a fee which is dependent and determined by the depth of the study required as well as an administration fee due at time of submitting an application. The quote will contain Study fee and time to complete study.

- (1) Providing cost estimates of the project for off-site infrastructure, storage tanks, booster pumps or other appurtenances;
- (2) Presenting detailed plans and specifications as per final plat;

- (3) Advertising and accepting bids for the project if the District is responsible for bidding the project;
- (4) Preparing a NSSA between the District and Applicant/Assignee; and
- (5) Providing other services as required by the District for such investigation.

The Study Fee is to cover the District's expenses related to a service application, including but not limited to, District staff time and legal and engineering expenses. Any costs related to a Feasibility Study Service Application that exceed the initial Study Fee paid will be billed to the Applicant/Assignee with payment due within 30 days from the date of invoice. Any costs incurred by the District arising from the District's use of independent consultants (including, but not limited to engineers and attorneys acting on behalf of the District) to review, approve or prepare a NSSA and any supporting plans and specification will be billed to the Applicant/Assignee at the District's actual cost plus an administrative fee equal to 15% of such actual costs. All such fees, costs or expenses of the District will be due and payable by the Applicant/Assignee within 30 days following the District's date of invoice.

3. Deposits

- (A) Initial Payment and Amount. At the time an application for service is approved, the Applicant shall pay a Deposit to be held by the District, without interest, until settlement of the customer's final bill. The Deposit will be used to offset unpaid charges or bills.

(1) Residential Service Applicants.

- a. The Deposit for residential water service connection is determined by meter size.

CCSUD customers may be subject to a deposit increase once their account has been charged a third (3rd) non-payment fee within a consecutive 24-month period. The increase will be incremental depending on the meter size.

The customer may be required to pay this increased deposit prior to restoring water service.

- b. The Deposit for residential wastewater service connection is determined by the service unit.

(2) Commercial and Nonresidential Service Applicants

- a. The Deposits for commercial and nonresidential water and/or wastewater service, including Master Metered Accounts, shall be based on the equivalent to a residential water service connection or meter equivalent as determined by the District.
- b. If actual monthly billings of a commercial or nonresidential customer are more than twice the amount of the estimated billings at the time service was established, a new deposit amount may be calculated and an additional deposit may be required to be made within thirty (30) days after the issuance of written notice.

- (B) Re-establishment of Deposit. Every service Applicant who has previously been a customer of the District whose service has been discontinued for nonpayment of bills, meter tampering, bypassing of meter or failure to comply with applicable state regulations or regulations of the District shall be required, before service is resumed, to pay all amounts due the District and/or execute a payment agreement, if offered by the District, and shall be required to pay a deposit.
- (C) Refund of Deposit. If service is not connected, or after disconnection of service, the District shall refund the Landowner's deposit, if any, within 45 days provided the customer has given the District written notice of a forwarding address and after the entire balance has been satisfied. All requests for Deposit refunds shall be made in writing and must be delivered to the District within ninety (90) days of termination of service. In the event that an outstanding balance exists, the District shall attempt to collect the outstanding balance by all lawful means available. Any outstanding balances may go to collections. CCSUD may engage a third-party collector to pursue outstanding balances and credit reporting as applicable.

4. Easement Fee

When the District determines that private way utility easements and/or easements for facility sites are necessary to provide service to an Applicant/Assignee, the Applicant/Assignee shall be required to secure such easements on behalf of the District and/or pay all costs incurred by the District to validate, clear and obtain such easements, including but not limited to legal fees, acquisition fees, and court costs, in addition to tap fees otherwise required pursuant to the provisions of these Rules and Regulations and/or as stated in the NSSA. [See Sections E.2(C)(2) and F.7(G)].

5. Connection Fee

A charge or assessment imposed by the District against new development and/or new accounts for each LUE to generate revenues to pay debt services and/or recoup the costs of existing and/or new water sources. These fees are non-refundable, non-transferable to another property and/or project, will not be collected by the District from customers to reimburse to the Applicant/Assignee or previous account holder(s), are not grandfathered, and will not be in any way a part of the calculations for infrastructure/construction reimbursement/credit.

(A) Standard Service:

- (1) Water Connection Fees are assessed on a per LUE (Living Unit Equivalent) bases. One (1) LUE = 300 gallons per day of demand.
- (2) In addition to the charges assessed herein, the District may charge the Applicant for any extraordinary expenses including but not limited to expenses such as, the cost of water meters larger than 5/8-inch, road bores, street crossings, line extensions, system improvements, and/or pipeline relocations under Section E.2(C)(6) of these Rules and Regulations.
- (3) Wastewater Connection Fees are based on standard wastewater service plus the actual costs of all labor, materials for construction, installation, inspection of a tap, and/or connection to the District's wastewater collection system.

(B) Non-Standard Service.

- (1) The Connection Fee for non-standard water service which, for the purpose of this section and all sections where Non-Standard Service or NSSA term is stated, is defined to be retail water service by the District to land that is deemed as Non-Standard by the District as described in Sec.G.1.A.(2) or being developed pursuant to the Texas Local Government Code that at the time of platting was not being provided with water service by the District or any Commercial or Industrial customer, shall be determined by LUE count and/or as determined by the District based on all relevant factors including but not limited to the supply, pumping, storage and treatment capacity required for the Development compared to the amount of unrestricted capacity available in the District's system.
- (2) The Wastewater Connection Fee for non-standard wastewater service in an area developed or being developed that at the time of platting was not being provided with wastewater service by the District, shall be: based on all relevant factors including but not limited to the supply, pumping, storage and treatment capacity required for the Development compared to the amount of unrestricted capacity available in the District's system.
- (3) Prior to the installation of any facilities to which Non-Standard Connection Fees will apply, the Applicant/Assignee shall execute a NSSA/WWNSSA (as applicable) with the District.

6. Water Acquisition Fee

A charge or assessment imposed by the District against new development and/or new accounts for each LUE to generate revenues to pay debt services and/or recoup the costs of existing and/or new water sources. These fees are non-refundable, non-transferable to another property and/or project, will not be collected by the District from customers to reimburse to the Applicant/Assignee or previous account holder(s), are not grandfathered, and will not be in any way a part of the calculations for infrastructure/construction reimbursement/credit.

7. Reservation Fee

A charge or assessment imposed by the District to reserve water capacity for a short period of time only and at the discretion of the District. The Reservation Fee may not eligible for credit against any other fees assessed by the District, is non-refundable, is not grandfathered, will not be collected by the District from customers to reimburse to the Applicant/Assignee or previous account holder(s), and will not in any way be part of the calculations for infrastructure/construction reimbursement. Implementation of the Reservation Fee is solely at the discretion of the District and the terms would be defined in a document executed by all parties as applicable.

8. Monthly Charges

(A) Water Service. The District shall assess monthly charges for water service:

- (1) Base Rate. The Base Rate is that portion of a customer's monthly bill which is paid for the opportunity of receiving utility service, excluding standby fees and reserved service charges, which do not vary due to changes in service consumption.
- (2) Consumption Charge. In addition to the Base Rate, customers shall be assessed a Consumption Charge for water usage during any one billing period.

(B) Wastewater Service. The District shall assess monthly charges for wastewater service:

- (1) Base Rate. The Base Rate is that portion of a customer's monthly bill which is paid for the opportunity of receiving utility service, excluding standby fees and reserved service charges, which do not vary due to changes in service consumption.
- (2) Consumption Charge. In addition to the Base Rate, customers shall be assessed a Consumption Charge for wastewater service during any one billing period.

(C) Regulatory Assessment. In accordance with TCEQ or successor agencies regulations, the District shall collect from each customer a regulatory assessment equal to 0.5% of the monthly charges for water and wastewater service. [See 30 TAC § 291.76(d)(3)].

(D) Credit/Debit Card and/or ACH Payment Fee. All customers who use a credit/debit card, regardless of whether one time or a recurring auto-payment online or through the IVR to pay CCSUD, will be subject to a convenience fee charged by the processing merchant. This fee will be solely the customers' responsibility and non-refundable by CCSUD. Any person that does not have or is not establishing an account with CCSUD, using a credit/debit card to pay for services or fees with CCSUD, will be subject to a convenience fee charged directly by CCSUD for processing the credit/debit card payment per Texas State Code Sec. 49.2121.

(E) CRWA Bond Fee. A monthly fee assessed per customer account and paid to the Canyon Regional Water Authority by the District to fund, in part, the long-term water supply for CCSUD.

(F) R&R Depreciation Fee. A monthly fee assessed per customer account to fund, in part, repair and replacement of assets of the District.

(G) Debt Service. A monthly fee assessed per customer account to pay, in part, the District's debts to TWDB, USDA and CoBank.

(H) Texas Commission on Environmental Quality (TCEQ) Regulatory Compliance Fee. A monthly fee assessed per customer account to pay for, in part, costs incurred by the District to comply with TCEQ regulations and testing requirements.

9. Standby Fee

The Standby Fee is a monthly charge imposed on undeveloped property (a tract, lot or reserve in the District to which no water or wastewater connections have been made and for which water or wastewater facilities and services are available). The District may charge a Standby Fee to owners of undeveloped property.

10. Late Payment Fee/Payment Arrangement Fee

A late charge shall be applied to past due balances, if any, on each customer's monthly statement per customer account.

When a payment agreement is executed, the late fees are suspended, and there will be a per month fee for each month that the agreement exists. There is no penalty to pay early; amount must be paid on time with current bill(s) during the entire term of the payment arrangement/agreement. [See Section E. 9.]

11. Returned Check Fee

In the event a check, draft, or any other similar instrument is given by any person for payment of services provided for in these Rules and Regulations, and the instrument is returned by the bank or other similar institution as insufficient or non-negotiable for any reason, the account for which the instrument was issued shall be assessed a return check charge.

12. Service Trip Fee

The District may charge a Service Trip Fee for any service call or trip to a customer's tap as a result of a request by the customer/tenant/owner/property management company, unless the service call concerns damage to District equipment or facilities, or for the purpose of disconnecting due to non-payment (addressed in the non-payment fee section).

The following are examples of but are not limited to:

- If a customer contacts CCSUD regarding an issue and is unwilling or unable to verify that the issue is not on the customer's side of the meter, a CCSUD operator may be dispatched and a Service Trip Fee may be charged.
- If a customer contacts CCSUD regarding an issue and advises that the problem is not on the customer's side, and a CCSUD operator is dispatched, then the issue is later determined to be on the customer's side of the meter, a Service Trip Fee may be charged.
- If a request is made by the customer/tenant/owner/property management company for a CCSUD operator to visit the account location for any reason, a Service Trip Fee may be charged. This may include locating a meter/meter box, turning off the CCSUD curb stop, and/or an investigation for a customer requested meter relocation.
- If CCSUD finds it necessary to inspect a location for damages, a Service Trip Fee may be charged.

Each Service Trip may incur a fee per trip.

13. Equipment Damage Fee

The District may charge a service fee in addition to all labor, material, equipment, and all other actual costs necessary to repair or replace all equipment damaged due to negligence, meter tampering or bypassing, reconnecting service without authority or other service diversion, or the discharge of wastes which the District's wastewater system cannot properly treat. The utility may charge for all actual costs necessary to correct service diversion or unauthorized taps where there is no equipment damage, including incidents where service is reconnected without authority. An itemized bill of such charges shall be provided to the customer. In cases of meter tampering or service diversion, the District may disconnect the service of a customer refusing to pay damage charges. [See 30 TAC § 291.87(n)].

14. Customer History Report Fee

A fee shall be charged to provide a copy of the customer's record of past water purchases in response to a customer's request for such a record.

15. Meter Installation Fee

The Meter Installation Fee shall include all labor and installation for a single meter and the cost will be based on the meter size.

16. Meter Test Fee

The District shall test a customer's meter upon written request of the customer. A Service Trip Fee plus actual test charges shall be imposed on the affected account, if the meter is determined to be within the accuracy limits (per AWWA Standards).

17. Meter Relocation Fee

The fee for moving a meter from one location to another under the terms of Section E.24 shall be the actual costs incurred by the District plus administrative charges.

18. Temporary Service Charges

(A) Hydrant Meter Rental

A non-refundable rental fee shall be charged for temporary water service issued for use of a hydrant meter. Applicants shall also pay water rates defined in Section G 6. (A.) (2) and all other applicable fees or charges set forth in these Rules and Regulations

(B) Hydrant Meter Deposit

At the time an application for service is approved, the Applicant shall pay a Deposit to be held by the District, without interest, until settlement of the customer's final bill. The Deposit will be used to offset unpaid charges/bills and/or damages.

19. Non-Disclosure Fee

A fee may be assessed, to the extent allowed by law, to any customer requesting in writing that personal information under the terms of these Rules and Regulations not be disclosed to the public.

20. Information Disclosure Fee

All public information except that which has been individually requested as confidential shall be available to the public for a fee to be determined by the District based on the level of service and costs to provide such information, but not to be inconsistent with the terms of the Texas Publication Information Act: Chapter 552, Texas Government Code.

21. Transfer Fee

The District shall charge a Transfer Fee when applicable to cover administrative costs.

Applicants/Assignees obtaining service due to Transfer, Merger or Acquisition of CCN Territory from an adjoining public utility's CCN shall not be charged a deposit upon the approval by the appropriate state agency of such Sale, Transfer or Merger (STM). No deposit or transfer fee shall apply as long as the account is and remains in good credit standing. However, should the account go into default for any reason and/or should service to the account be discontinued due to non-payment of water charges, the account must complete a new service application and pay all customer deposit fees in order to reinstate service to the property.

22. Franchise Fee Assessment

A fee as determined and contractually agreed upon by and between the District and the municipality and/or other government entities empowered to do so, of the amount billed for water service will be assessed each customer whose meter is located inside the corporate limits of a municipality that imposes a franchise tax on the District.

23. Additional Assessments

In the event any federal, state or local government imposes on the District a per meter fee or an assessment based on a percent of water/wastewater charges, this fee or assessment will be billed and collected as a “pass through” charge to the customer.

24. Other Fees

- (A) All services outside the normal scope of utility operations that the District may be compelled to provide at the request of a customer shall be charged to the recipient based on the cost of providing such service.
- (B) If an existing customer subdivides its property or otherwise transfers a portion of the customer's property to another, whether according to an approved plat or otherwise, the customer must notify the District. If the transferee of such property seeks service, the transferor customer shall pay all actual costs for the District to install a minimum 6" distribution line and road bore from the District's supply main if requested by the District. Customers failing to comply with this provision shall be subject to Disconnection with Notice under Section E.12.(A).
- (C) If the District determines that an Applicant's property is subdivided or otherwise transferred to the Applicant from a single property tract within five years prior to making a standard service connection request, whether according to an approved plat or otherwise, the Applicant must pay all actual costs for the District to install a minimum 6" distribution line and road bore from the District's supply main if requested by the District as a condition for standard service.

25. Voluntary Surrender Fee

The District shall charge a Voluntary Surrender Fee to cover administrative costs when water service is not needed for location/address.

26. Non-payment Fee

The District shall charge a Non-Payment Fee when the account is not paid before 7AM on the disconnection day.

27. Customer Service Inspection Fee

The District shall charge a Customer Service Inspection Fee to cover inspection costs.

28. Backflow Prevention Assembly Test Fee

The District may charge a Backflow Prevention Assembly Test Fee to cover testing fees which are required annually. The District allows the customer to purchase private inspections from qualified sources.

In the event that a customer has a new meter installed, CCSUD may put in a shut off valve at the time of connection directly at the customer's side of the meter at no additional charge to the customer. This is a one-time occurrence. At any time that the valve quits working or becomes damaged, any further installation/replacement of this valve is solely at the customer's cost and responsibility.

If the customer touches the meter/meter box/CCSUD shut off or any other components of the meter equipment, and damage occurs, any costs associated with that damage are payable to CCSUD by the customer. These charges may be added to the customer's account and failure to pay the damages could result in disconnection of the customer's CCSUD provided services.

Installation of pressure reducers on the customer's side are solely the cost and responsibility of the customer.

29. Non-refundable Administrative Fee

A non-refundable administrative fee may be charged to all customers as applicable for all applications and studies. CCSUD does not accept incomplete applications.

30. After Hours Reconnect Fee

The District may charge a After Hours Reconnect Fee for any service call or trip to a customer's tap as a result of a request by the customer/tenant/owner/property management company to be reconnected after normal business hours. (This charge only applies to the After Hours Reconnect Fee as a result of non-payment disconnection.)

31. Developer Inspection Fee

The District shall charge a Developer Inspection Fee for each trip to cover inspection costs, unless otherwise stated as part of a Non-Standard Service Agreement.

32. Easement Administration Fee

The District may charge an Easement Administration Fee plus third-party costs as applicable to cover the cost of recording new easements in the land records of the county.

33. Rates and Service Fees Table

	<u>Description</u>	<u>Amount</u>
1.	Classes of Users	N/A
2.	Capacity/Engineer/Feasibility Study Fee	TBD
3.	Water Deposits	
	5/8" (Standard)	\$300
	3/4"	\$450
	1"	\$750
	1 1/2"	\$1,500
	2"	\$2,400
	3"	\$10,500
	4"	\$19,500
	6"	\$42,000
	<i>once an account has been charged a third (3rd) non-payment fee within a consecutive 24-month period</i>	
	5/8" (Standard)	\$450
	3/4"	\$675
	1"	\$1,125
	1 1/2"	\$2,250
	2"	\$3,600
	3"	\$15,750
	4"	\$29,250
	6"	\$63,000
	Wastewater Deposit	\$100
4.	Easement Fee	TBD
5.	Connection Fee	
	Water	
	5/8" (Standard)	\$2,500
	3/4"	\$3,750
	1"	\$6,250
	1 1/2"	\$12,500
	2"	\$20,000
	3"	\$87,500

	4"	\$162,500
	6"	\$350,000
	Wastewater	\$2,500
6.	Water Acquisition Fee	
	5/8" (Standard)	\$2,600
	3/4"	\$3,900
	1"	\$6,500
	1 1/2"	\$13,000
	2"	\$20,800
	3"	\$91,000
	4"	\$169,000
	6"	\$364,000
7.	Reservation Fee	TBD
8.	Monthly Charges	
	Base Rate	
	5/8" (Standard)	\$48.07
	3/4"	\$66.77
	1"	\$111.28
	1 1/2"	\$222.55
	2"	\$356.08
	3"	\$1,557.85
	4"	\$2,893.15
	6"	\$6,231.41
	Consumption Charge	
	GALLONS	Cost per 1,000 GALLONS
	1 to 5000	\$5.94
	5000.1 to 10000	\$6.53
	10000.1 to 20000	\$7.77
	20000.1 to 50000	\$10.50
	50000.1 to 70000	\$13.41
	More than 70000	\$14.00
	Wastewater Services	
	Base Rate	\$35.32

	Water usage > or = 5,000 gallons	60% at \$5.11/1,000
	Water usage < 5,000 gallons	60% at \$4.65/1,000
	<i>Regulatory Assessment</i>	0.5% of monthly charges
	<i>CRWA Bond Fee</i>	\$9.00
	<i>R&R Depreciation Fee</i>	\$6.95
	<i>Debt Service</i>	\$13.00
	<i>TCEQ Regulatory Compliance Fee</i>	\$1.32
9.	Standby Fee	TBD
10.	Late Payment Fee	\$20.00 or 15.0% (whichever is greater)
	Payment Arrangement Fee	\$10
11.	Returned Check Fee	\$30
12.	Service Trip Fee	\$125
13.	Equipment Damage Fee	TBD
14.	Customer History Report Fee	\$10
15.	Meter Installation Fee	
	5/8" (Standard)	\$700
	3/4"	\$700
	1"	\$1,075
	1 1/2"	\$1,400*
	2"	\$1,650*
	3"	TBD
	4"	TBD
	6"	TBD
	*Plus cost of additional parts required	
16.	Meter Test Fee	\$125+ Third party cost
17.	Meter Relocation Fee	\$300
18.	Temporary Service Charges	
	<i>Hydrant Meter Rental</i>	\$500
	<i>Hydrant Meter Deposit</i>	\$1,600
19.	Non-Disclosure Fee	\$5
20.	Information Disclosure Fee	TBD
21.	Transfer Fee	\$50
22.	Franchise Fee Assessment	TBD
23.	Additional Assessments	TBD

24.	Other Fees	TBD
25.	Voluntary Surrender Fee	\$100
26.	Non-payment Fee	\$150
27.	Customer Service Inspection Fee	\$150
28.	Backflow Prevention Assembly Test Fee	\$125
29.	Non-refundable Administrative Fee	\$50
30.	After Hours Reconnect Fee	\$100
31.	Developer Inspection Fee	\$70
32.	Easement Administration Fee	\$70+ Third party cost

SECTION H: WATER CONSERVATION PLAN

Water supply has always been a key issue in the development of Texas. In recent years, the growing population and economic development of North Central Texas has led to increasing demands for water. Additional supplies to meet higher demands will be expensive and difficult to develop. Therefore, it is important that we make efficient use of our existing supplies to minimize the number of new resources needed.

Effective water conservation can postpone or reduce the need for development of new water supplies, minimize the associated environmental impacts, and reduce the high cost of water supply development. Nonetheless, to respond to the growing population of our area, the planning for new water resources must continue. Crystal Clear considers water conservation an integral part of this planning process.

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (“TCEQ”) has announced guidelines and requirements governing the development of water conservation plans for Public Water Suppliers. Crystal Clear has prepared this Water Conservation Plan (the “Plan”) following the TCEQ guidelines, recommendations from UTRWD and certain best management practices by the TWDB.

The objectives of this Plan include:

- To reduce water consumption from levels that would prevail without conservation efforts;
- To reduce the loss and waste of water, as evidenced by per capita use;
- To improve efficiency in the use of water;
- To extend the adequacy of current water supplies by reducing the pace of per capita annual growth and demand water.

1.2 Texas Commission on Environmental Quality Rules

TCEQ rules governing the development of water conservation plans for Public Water Suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, and Rule 288.2 of the Texas Administrative Code. The rules define a water conservation plan as:

“A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water.”

(A) Minimum Water Conservation Plan Requirements: The minimum requirements for water conservation plans for municipal uses by Public Water Suppliers required by TCEQ are summarized below:

Utility Profile: Includes information regarding population and customer data, water use data, water supply system data, and wastewater system data. (Section 2.0)

Goals: Specific quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use, in gallons per capita per day (GPCD). The goals established by a Public Water Supplier are not enforceable under this subparagraph. (Section 3.0)

Accurate Metering Devices: TCEQ requires that metering devices have an accuracy of plus or minus five percent (5%) for measuring water diverted from the source of supply. (Section 4.1)

Universal Metering, Testing, Repair and Replacement: TCEQ requires that there be a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement. (Section 4.2)

Determination and Control of Unaccounted-for Water: Regulations require specific measures to determine and control unaccounted-for water. The measures may include periodic visual inspections along distribution pipelines, periodic audits of the water system for illegal connections or abandoned services. (Section 4.3)

Continuing Public Education Program: A continuing public education and information program regarding water conservation is required as part of the Plan. (Section 4.4)

Non-Promotional Water Rate Structure: Chapter 288 requires a water rate structure that is not “promotional”; that is, rates that discourage waste and excessive use of water such as increasing block rate instead of volume discounts. (Section 4.5)

Reservoir Systems Operational Plan: If applicable, this requirement is to provide a coordinated operational structure for operation of reservoirs owned by the water supply entity within a common watershed or river basin in order to optimize available water supplies.

Coordination with Regional Water Planning Group: Crystal Clear SUD is required to document that the Plan has been coordinated with the Regional Water Planning Group to insure consistency with the appropriate approved regional water plan. (Section 7.0)

Means of Implementation and Enforcement: The regulations require a strategy for implementing and enforcing the provisions of this Plan, as evidenced by an ordinance, resolution, or tariff, and a description of the authority by which the Plan is enforced. (Section 8.0)

- (B) Additional Requirements for Larger Public Water Suppliers: Water conservation plans covering municipal uses by Public Water Suppliers that: (1) currently serve a population of 5,000 or more; or (2) a projected population of 5,000 or more within ten (10) years from the effective date of this Plan; or, (3) provide potable water service to 3,300 or more connections, are required to include the following additional strategies.

Program for Leak Detection & Repair, and Water Loss Accounting: The Plan must include a description of a program of leak detection and repair, and water loss accounting for the water transmission, delivery, and distribution system. (Section 5.1)

Record Management System: The Plan must include a record management system to record water pumped, water delivered, water sold and water lost, which allows for the desegregation of water sold and used into user classes (residential, commercial, public and institutional, and industrial). (Section 5.2)

Wholesale Customer Requirements: If applicable, the Plan must include a requirement that every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of Title 30 TAC Chapter 288. (Section 5.3)

- (C) Additional Water Conservation Program Strategies: Landscape Water Management Measures are a strategy that can be used to reduce discretionary water use during summer months. It is an optional strategy within the TCEQ regulations. However, it is recommended that Crystal Clear implement a landscape water management ordinance as part of the Plan.

Landscape Water Management Measures: These regulations are minimal measures to reduce waste in landscape irrigation and peak water demand within the water distribution system. (Section 6.1)

Crystal Clear may also incorporate any or all of the following additional conservation strategies, **which are optional**, as needed to achieve the conservation goals stated in this Plan:

Adoption of ordinance, plumbing codes or rules requiring water-conserving fixtures (Section 6.3);

A program for replacement or retrofit of water-conserving plumbing fixtures in existing structures;

Reuse and/or recycling of wastewater and/or gray water (Section 6.2);

A program for pressure control and/or reduction in distribution system and/or customer connections;

A program for landscape water management (Section 6.1); or,

A method for monitoring the effectiveness and efficiency of the Plan.

This Plan sets forth a program of long-term measures under which Crystal Clear can improve the overall efficiency of water use and conserve its water resources. Short-term measures that respond to specific water management conditions (i.e., periods of drought, unusually high-water demands, unforeseen equipment or system failure, or contamination of a water supply source) are provided in Crystal Clear's Drought Contingency Plan.

Crystal Clear reserves the right to update and/or amend the plan as needed.

APPENDIX A: SAMPLE FORMS

New Customer Application:

https://crystalclearsud.org/documents/296/New_Customer_Application-Fillable_2.23.2022.pdf

Hydrant Meter Application:

https://crystalclearsud.org/documents/296/Hydrant_Meter_Application.pdf

Service Availability Request Form:

https://crystalclearsud.org/documents/296/Service_Availability_Request_Form_Fillable.pdf

Feasibility Study Service Application:

https://crystalclearsud.org/documents/296/FEASIBILITY_STUDY_SERVICE_APPLICATION_4-2022.pdf

Service Cancellation & Meter Surrender Request

https://crystalclearsud.org/documents/296/Updated_SURRENDER_REQUEST_FORM.pdf

Bank Draft Form

https://crystalclearsud.org/documents/296/Bank_Draft_Form_-_Fillable_4-2022.pdf

Bank Draft Cancellation Form

https://crystalclearsud.org/documents/296/Bank_Draft_Cancellation_Form_Fillable.pdf

Billing Agreement for Rental Account

https://crystalclearsud.org/documents/296/UPDATED_OWNER_TO_TENANT_FORM.pdf

APPENDIX B: RELATED DOCUMENTS LINKS

WATER DETAILS:

https://crystalclearsud.org/documents/296/_CCSUD_Water_Details-03232022.pdf

WATER SPECIFICATIONS:

https://crystalclearsud.org/documents/296/_CCSUD_TECHNICAL_SPECIFICATIONS_05102022.pdf

WASTEWATER DETAILS:

https://crystalclearsud.org/documents/296/_CCSUD_WW_Details-03232022.pdf

STANDARD WATER MAIN NOTES:

https://crystalclearsud.org/documents/296/CCSUD_STANDARD_WATER_MAIN_NOTES.pdf

STANDARD WASTEWATER NOTES:

https://crystalclearsud.org/documents/296/CCSUD_STANDARD_WASTEWATER_NOTES.pdf

WATER CONSERVATION AND DROUGHT CONTIGENCY AND PLAN:

https://crystalclearsud.org/documents/296/CCSUD_WCP_DCP_2019.pdf

ORENCO STEP SYSTEM SPECIFICATIONS AND DETAILS:

https://crystalclearsud.org/documents/296/ORENCO_STEP_SYSTEM_SPECS_AND_DETAILS_4-22-2021.docx.pdf



TECHNICAL SPECIFICATIONS

Approved Equipment List (AEL)

Section 00500 - Submittals

Section 00510 - Operation and Maintenance Data

Section 01000 - Mobilization

Section 01005 - Demolition

Section 01100 - Site Preparation

Section 01140 - Dewatering

Section 01230 - Excavation and Backfill

Section 01240 - Trench Excavation Safety

Section 01350 - Hydrotesting and Disinfection

Section 01410 - Testing Laboratory Services

Section 01500 - Concrete for Structures

Section 01510 - Concrete Admixtures

Section 01600 - Concrete Encasement, Cradles, Caps and Seals

Section 01700 - Site Restoration

Section 01720 - Gravel or Chip Seal Driveway

Section 02300 - Directional Drilling

Section 02400 - Valves and Appurtenances

Section 02440 - Combination Air Release Valve

Section 02500 - Abandonment of Water Infrastructure

Section 02640 - Fire Hydrant Assembly

Section 02650 - PVC For Water Mains

Section 02660 - Ductile Iron Pipe

Section 02665 - HDPE Pipe

Section 02670 - Ductile Iron Fittings

Section 02675 - Pipe Encasement

Section 02680 - Joint Restraints and Thrust Blocking

Section 02700 - Water Main Tie-Ins

Section 02710 - Water Services

Section 03000 - Bypass Pumping

Section 03100 - Sanitary Sewer Main

Section 03120 - Sewer Services Laterals

Section 03200 - Sanitary Sewer Manholes

Section 03210 - Frames, Grates, Rings, and Covers

Section 03220 - Bulkheads

Section 03400 - Sanitary Sewer Main TV Inspection

Section 03410 - Sanitary Sewer Testing

Section 03500 - WW Design Criteria

Section 03600 - WWTP

Section 04000 - Electrical Design Criteria

ADOPTED TxDOT SPECIFICATIONS

TxDOT Item 00164 - Seeding for Erosion Control

TxDOT Item 00169 - Soil Retention Blankets

TxDOT Item 00340 - Dense-Graded Hot-Mix Asphalt (Small Quantity)

TxDOT Item 00506 - Sediment Control Specs



Crystal Clear SUD

Approved Equipment List (AEL)

Below is a list of Crystal Clear SUD (CCSUD) approved brands for use in the Distribution and Collection system.

Brands

Air Relief Valves: Empire, Valmatic, Apco, Mueller Company.

Corporation Stops: Ford

Curb Stops: Ford

Fire Hydrants: American, Mueller Company, EJ.

Gate Valves: Mueller Company, American, EJ.

Pipe Type: High Density Polyethylene, C900 Series.

Restraining Joints: EBAA Iron Inc. – Megalug

Saddles: Smith Blair, Ford, Mueller

Tapping Sleeves: Smith Blair, Ford, Mueller, JCM Industries

Tapping Valves: American, Mueller

Meters: Kamstrup

Meter Boxes: DFW Plastics, NDS Meter Boxes.

VFD: Yaskawa

Vertical Turbine Pump: HydroFlo

Motors: TECO or US Motor

Any equipment to be installed in the CCSUD Distribution or Collection systems must come from the list above. Any equipment installed that is not listed above must be approved by the CCSUD inspector or a CCSUD Manager or the installation is subject to a failed inspection until the correct brand can be installed. If you have any questions about these procedures please contact the CCSUD Inspector.

SECTION 00500

SUBMITTALS

PART 1 - GENERAL

1.1 SCOPE

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:
 - 1. Contractor's construction schedule.
 - 2. Submittal schedule.
 - 3. Shop drawings.
 - 4. Product data.
 - 5. Quality assurance and quality control submittals, including calculations, mix designs and substantiating test results.
- B. Each item provided shall be provided and submitted in PDF format only.
- C. Submittals shall meet requirements within this Section. Submittals that don't allow for thorough review will result in rejection at the Contractor's responsibility.

PART 2 – EXECUTION

2.1 SUBMITTAL PROCEDURES

- A. Coordination
 - 1. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid the need to delay installation because of the time required to process submittals. Allow sufficient time for submittal review, including times for resubmittals.
 - 2. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 3. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals or resubmittals concurrently. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
- B. Processing
 - 1. Allow fourteen (14) calendar days for initial review. Allow additional time if the Engineer must delay processing to permit coordination with subsequent submittals.
 - 2. If an intermediate submittal is necessary, process the same as the initial submittal.

3. Allow fourteen (14) calendar days for processing each resubmittal.
 4. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the Work to permit processing.
 5. The Contractor is to review shop drawings, product data and samples prior to submission to determine and verify the following.
 - a. Field measurements
 - b. Field construction criteria
 - c. Conformance with the Specifications
 6. Each shop drawing, working drawing sample and catalog data submitted by the Contractor shall have the following Certification Statement affixed to it, signed by the Contractor:
 - a. "By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract Document requirements."
 - b. All Submittals without the Certification Statement will not be reviewed and will be returned to the Contractor for proper submission.
 7. No portion of the Work requiring a shop drawing, sample or catalog data is to be started nor any materials be fabricated or installed prior to the approval or qualified approval of such item. Fabrication performed, materials purchased, or on-site construction accomplished which does not conform to the approved shop drawings and data to be at Contractor's risk. The Owner shall not be liable for any expense or delay due to corrections or remedies to accomplish conformity.
 8. Notify the Engineer in writing, at the time of submittal, of any deviations in the submittal(s) from the requirements as specified within the Contract Documents.
 9. The review and approval of submittals by the Engineer does not relieve the Contractor from his responsibility about the fulfillment of the terms of the Contract. All risks of error and omission in submittals prepared by Contractor are assumed by the Contractor and the Engineer shall have no responsibility, therefore.
- C. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
1. Provide a space on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.
 2. Include the following applicable information on the label for processing and recording action taken.
 - a. Project name.

- b. Date.
 - c. Name and address of the Contractor.
 - d. Name and address of the supplier.
 - e. Name of the manufacturer.
 - f. Number and title of appropriate Specification Section.
 - g. Drawing number and detail references, as appropriate.
- D. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Engineer using a transmittal form. The Engineer will not accept submittals received from sources other than Contractor.
 - 1. Number transmittals in sequence for each Series of the Specifications thus: SD-xxxx. The number after the dash indicates the Section of the Specification. For example, the first item submitted related to Section 01230 – Excavation and Backfill would be labeled **SD-01230**. Identify resubmittals with numbering identification such as SD-xxxx-1, SD-xxxx-2, etc. For example, the first resubmittal submitted for Section 01230 – Excavation and Backfill would be labeled **SD-01230-1**.
 - 2. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including variations and limitations. Include Contractor's certification that information complies with the Drawing's requirements.

2.2 CONSTRUCTOR'S PROGRESS SCHEDULE

- A. Submit the Progress Schedule in accordance with the Contract Documents under the General Conditions.

2.3 SCHEDULE OF VALUES

- A. Submit the Schedule of Values in accordance with the Contract Documents under the General Conditions.

2.4 SUBMITTAL SCHEDULE

- A. Concurrently with the development of the Contractor's Progress Schedule, prepare a complete schedule of submittals. Submit the initial Submittal Schedule along with the Progress Schedule, at, or prior to, the Pre-construction Conference. Provide copies to Engineer, Owner, subcontractors, and other parties required to comply with submittal dates indicated.
 - 1. Submit the Submittal Schedule in accordance with the Contract Documents under the General Conditions.
 - 2. Coordinate Submittal Schedule with the list of subcontractors, Schedule of Values, and the list of products as well as the Contractor's Progress Schedule.
- B. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule

concurrently with the report of each meeting, or as requested by the Engineer.

2.5 SHOP DRAWINGS

- A. Submit newly prepared information drawn accurately to scale. Highlight, circle, or otherwise indicate deviations from the Specifications. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Drawings is not a Shop Drawing.
- B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates, and similar drawings. Include the following information:
 - 1. Dimensions;
 - 2. Identifications of products and materials include by sheet and detail number;
 - 3. Compliance with specified standards;
 - 4. Notation of coordination requirements; and
 - 5. Notation of dimensions established by field measurement.
 - 6. Sheet size: Except for templates, patterns, and similar full-size Drawings, submit Shop Drawings on sheets 8-1/2 inches by 11 inches.
 - 7. Do not use Shop Drawings without an appropriate stamp indicating action taken.

2.6 PRODUCT DATA

- A. Collect product data into a single submittal for each element of construction or system. Product data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, applicable certifications, and performance curves.
 - 1. Mark each copy to show applicable choices and options. Where printed product data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations;
 - b. Compliance with trade association standards;
 - c. Compliance with recognized testing agency standards;
 - d. Application of testing agency labels and seals;
 - e. Notation of dimensions verified by field measurement; and
 - f. Notation of coordination requirements.
 - 2. Do not submit product data until compliance with requirements of the Contract Documents has been confirmed.

2.7 QUALITY ASSURANCE AND QUALITY CONTROL SUBMITTALS

- A. Submit quality assurance and quality control submittals, including design data,

certifications, manufacturer's instructions, manufacturer's field reports, materials test results, field testing and inspection reports, and other quality-control submittals as required under other Sections of the Specifications.

- B. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a certification from the manufacturer or responsible Engineer certifying compliance with specified requirements.
 - 1. Mark Signature: Certification shall be signed by an officer of the corporation or other individual authorized to sign documents on behalf of the company.
- C. Calculations: When required in the Specifications, calculations shall be prepared and stamped by a Professional Engineer registered in the State of Texas.
- D. Concrete, Controlled Low Strength Material, Asphalt Stabilized Base and Hot Mix Asphaltic Concrete Mix Designs and Substantiating Test Data. Requirements for submittal of mix designs and substantiating test data are specified in the applicable Technical Specification Section. Each separate batch plant supplying ASB, HMAC and/or concrete shall submit mix designs to the Engineer for review.

2.8 ENGINEER'S ACTION

- A. Except for submittals, for the record, or for information where action and return is not required, the Engineer will review each submittal, mark to indicate action taken, and return within the time frame specified in Paragraph 2.1.B of this Section.
- B. Action Stamp: The Engineer will provide its Submittal Review template and mark the stamp appropriately to indicate the action taken, as follows:
 - 1. Engineer's Review
 - a. Approved
 - b. Approved as Noted
 - c. Rejected
 - 2. Required Response
 - a. Confirm
 - b. Revise
 - c. Resubmit
- C. Unsolicited Submittals: The Engineer will return unsolicited submittals to the sender without action.

END OF SECTION

SECTION 00510
OPERATION AND MAINTENANCE DATA

PART 1 – GENERAL

1.1 SCOPE

- A. Provide operation and maintenance data in the form of instructional manuals for use by the OWNER'S personnel for:
1. All equipment and systems as specified in the respective specifications for that equipment. May include but are not limited to:
 - a. Pumps
 - b. Motors
 - c. Valves (Gate, Air Release, Check, Butterfly, etc.)
 - d. Flowmeters
 - e. Electrical Interface Items (SCADA, Telemetry, etc.)
 - f. Electrical Switches, Relays, Transmitters, Displays, Cabinets
- B. Definition: Operation and Maintenance Data
1. The term "operation and maintenance data" includes all product related information and documents which are required for preparation of the plant operation and maintenance manual. It also includes all data which must accompany said manual as directed by current regulations of any participating government agency.
 2. Operation and Maintenance Data shall include, but may not be limited to:
 - a. Name, address and phone number of manufacturers, manufacturer's local service representative, and Subcontractor or installer.
 - b. Recommended spare parts lists and local sources of supply for parts.
 - c. Copy of warranty bond and service contract as applicable as well as contact info for warranty claims.
 - For every piece of equipment that has its own warranty
 - For warranty on workmanship of the entire project as agreed to by the Contractor in contract documents.
 - d. Complete, detailed written operating instructions for each product or piece of equipment including equipment function; operating characteristics; limiting conditions; operating instructions for startup, normal, and emergency conditions; regulation and control; and shutdown.
 - e. Complete, detailed written preventive maintenance instructions as defined below.

- f. Written explanations of all safety considerations relating to operation and maintenance procedures.
 - g. Copy of all approved Shop Drawings.
- C. Definition: Preventive Maintenance Instructions:
 - 1. The term "preventive maintenance instructions" includes all information and instructions required to keep a product or piece of equipment properly lubricated, adjusted and maintained so that the item functions economically throughout its full design life. This shall include, but are not limited to the following:
 - a. A written explanation with illustrations for each preventive maintenance task.
 - b. Recommended schedule for execution of preventive maintenance
 - c. Trouble shooting instructions.
 - d. List of required maintenance tools and equipment.
- D. Submittals:
 - 1. General: Submit operations and maintenance data to the ENGINEER within 90 days after approval of Shop Drawings.
 - a. Submit a full Operations and Maintenance Manual at project close to include all pieces as described in this specification combined into one complete document.
 - 2. Number of Copies: 2 physical copy (compiled into one or more binders as specified below) and 2 USB sticks
 - 3. Format Requirements:
 - a. Use 8½-inch by 11-inch paper of high rag content and quality. Larger drawings or illustrations are acceptable if neatly folded to the specified size in a manner which will permit easy unfolding without removal from the binder. Provide reinforced punched binder tab or provide fly-leaf for each product.
 - b. All text must be legible typewritten, machine printed originals or high quality copies of same.
 - c. Each page shall have a binding margin of approximately 1½ inches and be punched for placement in a three ring loose leaf or triple post binder. Provide binders. Identify and organize each binder with the following:
 - Title "OPERATING AND MAINTENANCE INSTRUCTIONS".
 - Title of Project.
 - Identity of equipment or structure as applicable.
 - Identity of general subject matter covered.
 - Expected Organization
 - Table of Contents

- Contacts for Contractor and each piece of equipment as well as contact information for warranty claims (if different)
 - Operation / Installation / Shop Drawings / Preventive Maintenance Data per piece of equipment
- d. Use dividers and indexed tabs between major categories of information such as operating instructions, preventive maintenance instructions, or other. When necessary, place each major category in a separate binder.
 - e. Provide a table of contents for each binder if more than one is required.
 - f. Identify products by their functional names in the table of contents and at least once in each chapter or Section. Thereafter, abbreviations and acronyms may be used if their meaning is explained in a table in the back of each binder. Use of model or catalog numbers or letters for identification is not acceptable.
 - g. CONTRACTOR shall furnish required O&M Manuals with complete information and accuracy in order to achieve required approval within two submittals or be subject to back charge fees from the OWNER.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 – MEASUREMENT AND PAYMENT

- 4.1 MEASUREMENT: Unless shown on the construction plans or called out within the technical specifications as a pay item, operation and maintenance data preparation activities described herein are for informational purposes only. No separate measurement of operation and maintenance data preparation activities will be made by the Contractor for this Work.
- 4.2 PAYMENT: Unless specified as a pay item, operation and maintenance data preparation activities performed and materials furnished in accordance with this Specification Section will not be paid for directly but are considered to be subsidiary to the pertinent items associated with construction activities. No separate payment will be made to the Contractor for this Work.

END OF SECTION

SECTION 01000 MOBILIZATION

PART 1 - GENERAL

1.1 SCOPE

- A. The Contractor shall mobilize all materials, labor, equipment, and incidentals in preparation for beginning, with subsequent cleanup, of Work performed under the Contract.
- B. Work includes, but is not necessarily limited to: mobilization of personnel, equipment, supplies, and incidentals to the project site; establishment of the Contractor's onsite facilities, safety precautions, scaffolding and/or lifting methods; any other facilities necessary for work on the project; construction submittals; fees for bonds and insurance; obtaining all required permits; coordination with the Owner for the scheduling of all construction activities; disposal and hauling of cleared, grubbed material, debris, surplus excavated material including all existing pipe and appurtenances to be abandoned (where specified in the Drawings), tree protection, coordinating with other utilities for locating buried cables and other utilities during construction, repairing and replacing fences, cleaning and, any other items required for beginning work, but not included explicitly in other bid items.

PART 2 – PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

PART 4 – MEASUREMENT AND PAYMENT

- 4.1 MEASUREMENT: The lump sum price for Mobilization shall not exceed ten percent (10%) of the subtotal of all other base bid items, excluding this item.
- 4.2 PAYMENT: Partial payments directed towards the "Lump Sum" bid for Mobilization will be structured as follows:

Payment for this item will be payable will be limited to 75% of the contract lump sum price in the first partial payment; and, the balance payable after cleanup and demobilization.

END OF SECTION

SECTION 01005 DEMOLITION

PART 1 - GENERAL

1.1 SCOPE

- A. The Contractor shall provide all labor, materials, equipment, and incidentals as shown, specified, and required for demolitions, removal, and disposal of Work.
- B. Included, but not limited to: demolition and removal of existing materials, equipment, or demolition work necessary to install the new Work as shown and specified and to connect same with existing work in an approved manner. Demolition includes structural concrete, foundations, walls, doors, windows, structural steel, metals, roofs, masonry, attachments, appurtenances, piping, electrical and mechanical equipment, paving, curbs, walks, fencing, and similar existing facilities.
- C. Demolitions and removals which may be specified under other Sections shall conform to requirements of this Section.

1.2 RELATED SECTIONS

- A. Section 01100, Site Preparation

1.3 SUBMITTALS

- A. Schedule: Submit for approval proposed methods, equipment, and operating sequences. Include coordination for shut-off, capping, temporary services, continuation of utility services, and other applicable items to ensure no interruption of Owner's operations.

1.4 JOB CONDITIONS

- A. Protection:
 - 1. Perform all demolition and removal Work to prevent damage or injury to structures, occupants thereof and adjacent features which might result from falling debris or other causes, and so as not to interfere with the use, and free and safe passage to and from adjacent structures.
 - 2. Closing or obstructing of roadways, sidewalks, and passageways adjacent to the Work by the placement or storage of materials will not be permitted, and all operations shall be conducted with a minimum interference to traffic on these ways.
 - 3. Erect and maintain barriers, lights, sidewalk sheds, and other necessary protective devices.

4. Repair damage to facilities to remain, or to any property belonging to the Owner or occupants of the facilities.
 5. Protect all reference points, benchmarks and monuments from dislocation or damage. Replace or repair immediately any points damaged, destroyed, or dislocated. Protect and maintain all conduits, drains, inlets, sewers, pipes, and wires that are to remain on the property.
- B. Scheduling:
1. Carry out operations to avoid interference with Owner's operations and work in the existing facilities.
- C. Existing Conditions
1. Do not work or store materials or equipment on public or adjacent property.
 2. Do not allow material and debris to accumulate on the site.
- D. Damage:
1. Contractor shall be responsible for repair of any damage to streets, curbs or other property not specifically called for as an item to be demolished.
- E. Notification:
1. At least 48 hours prior to commencement of a demolition or removal, notify Engineer in writing of proposed schedule therefor. Owner will inspect the existing equipment and mark for identification those items which are to remain the property of the Owner. Do not start removals without the permission of the Engineer and Owner.
- F. Explosives:
1. No explosives will be used for demolition.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 GENERAL

- A. All materials and equipment removed from existing work shall become the property of Contractor, except for those which Owner has identified and marked for his use, in accordance with the Summary of Work. All materials and equipment marked by the Owner to remain his shall be carefully removed by the Contractor, so as not to be damaged, and shall be cleaned and stored on or adjacent to the site in a protected place specified by the Engineer or loaded onto trucks provided by the Owner.
- B. Contractor shall dispose of all demolition materials, equipment, debris, and all other items not marked by the Owner to remain as his, off the site and in conformance with all existing applicable laws and regulations.

- C. Surfaces of walls, floors, ceilings, or other areas which are exposed by any of the removals specified herein, and which will remain as architecturally finished surfaces shall be repaired and re-finished by the Contractor with the same or matching materials as the existing adjacent surface or as may be otherwise approved by the Engineer.
- D. Pollution Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level. Comply with governing regulations pertaining to environmental protection.
 - 1. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.
 - 2. Clean adjacent structures, facilities, and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to conditions existing prior to the start of the Work.
- E. Building Demolition:
 - 1. Unless otherwise approved by Engineer, proceed with demolition from the top of the structure to the ground. Complete demolition work above each floor or tier before disturbing supporting members of lower levels.
 - 2. Demolish concrete and masonry in small sections.
 - 3. Remove structural framing members and lower to ground by means of hoists, derricks, or other suitable methods.
 - 4. Break up and remove foundations and slabs-on-grade, unless otherwise shown to remain.
 - 5. Locate equipment used for demolition work, and remove demolished materials, to not impose excessive loads on supporting walls, floors or framing to remain after demolition.

3.2 STRUCTURAL REMOVAL

- A. Remove structures to the lines and grades shown unless otherwise directed by the Engineer. Where no limits are shown, the limits shall be 4 inches outside the item to be installed. The removal of masonry beyond these limits shall be at the Contractor's expense and these excess removals shall be reconstructed to the satisfaction of the Engineer with no additional compensation to the Contractor.
- B. All concrete, brick, tile, concrete block, roofing materials, reinforcement, structural or miscellaneous metals, plaster, wire mesh and other items contained in or upon the structure shall be removed and taken from the site, unless otherwise approved by the Engineer. Demolished items shall not be used in backfill adjacent to structures or in pipeline trenches.
- C. After removal of parts or all of masonry walls, slabs and like work which tie into new Work or existing work, the point of junction shall be neatly repaired to leave only finished edges and surface exposed.
- D. The jambs, sills and heads of any new windows, passageways, doors, or

other openings cut into new Work or existing work, shall be dressed with new masonry, concrete or metal to provide a smooth, finished appearance.

- E. Where new anchoring materials including bolts, nuts, hangers, welds and reinforcing steel, are required to attach new Work to the existing work they shall be included under this Section, except where specified elsewhere.
- F. Demolished reinforced concrete shall be disposed in an approved and licensed location by the Contractor. Contractor shall provide demolition, transport, and landfill disposal fees as part of the Work. Alternately, the Contractor may pulverize concrete to remove reinforcing steel and dispose of concrete debris and reinforcing steel in an approved off-site location.

3.3 MECHANICAL REMOVALS

- A. Mechanical removals shall consist of dismantling and removing of existing piping, pumps, motors, equipment, and other appurtenances as specified, shown, or required for the completion of the Work. It shall include cutting, capping, and plugging as required, except that the cutting of existing piping for the purpose of making connections thereto.
- B. Existing process, water, chemical, gas, fuel oil and other piping not required for the new Work shall be removed where shown or where it will interfere with new Work. Piping not indicated to be removed or which does not interfere with new Work shall be removed to the nearest solid support, capped, and left in place. Chemical fuel lines and tanks shall be purged and made safe prior to removal or capping. Where piping that is to be removed passes through existing walls, it shall be cut off and properly capped on each side of the wall.
- C. When underground piping is to be altered or removed, the remaining piping shall be properly capped. Abandoned underground piping may be left in place unless it interferes with new Work or is shown or specified to be removed. Removed pipe trenches shall be restored to grade with ordinary compaction methods.
- D. Waste and vent piping shall be removed to points shown. Pipe shall be plugged with cleanouts and plugs. Where vent stacks pass through an existing roof that is to remain, they shall be removed and the hole in the roof properly patched and made watertight.
- E. Any changes to potable water piping and other plumbing and heating system work shall be made in conformance with all applicable codes and under the same requirements as other underground piping. All portions of the potable water system that have been altered or opened shall be pressure tested and disinfected in accordance with Section 01350 of these Specifications and local codes. Other plumbing piping and heating piping shall be pressure tested only.

3.4 ELECTRICAL REMOVALS

- A. Electrical removals shall consist of the removal of existing transformers, distribution switchboards, control panels, motors, conduits and wires, poles and overhead wiring, panelboards, lighting fixtures, and miscellaneous

electrical equipment all as shown, specified, or required to perform the Work.

- B. All existing electrical equipment and fixtures to be removed shall be removed with such care as may be required to prevent unnecessary damage, to keep existing systems in operation and to keep the integrity of the grounding systems.
- C. Distribution switchboards shall be removed or modified as shown. Switchboards to be removed shall be disconnected and dismantled, and all components shall be disposed of off the site. Circuit breakers and other control equipment on modified switchboards that will no longer be used shall be removed unless otherwise shown or specified. All new openings cut into the modified switchboard panels shall be cut square and dressed smooth to the dimensions required for the installation of the new equipment.
- D. Motors shall be disconnected and removed where shown or specified. Motors not designated by the Owner to be salvaged shall be removed from the site. Motors or other electrical gear designated for reuse shall be stored in enclosed, heated storage.
- E. Conduits and wires shall be abandoned or removed where shown. All wires in abandoned conduits shall be removed, salvaged, and stored. Abandoned conduits concealed in floor or ceiling slabs, or in walls, shall be cut flush with the slab or wall at the point of entrance. The conduits shall be suitably plugged, and the area repaired in a flush, smooth, approved manner. Exposed conduits and their supports shall be disassembled and removed from the site. Repair all areas of work to prevent rust spots on exposed surfaces.
- F. Where shown or otherwise required, wiring in underground duct banks shall be removed. All such wiring shall be salvaged and stored as specified. Contractor shall verify the function of all wiring before disconnecting and removing it. Ducts which are not to be reused shall be plugged where they enter buildings and made watertight.
- G. Where shown, direct-burial cable shall be removed.
- H. Poles and overhead wiring shall be removed as shown and specified. Existing substation and poles owned by the power company will be removed by the power company. Poles not owned by the power company shall be completely removed from the site by the Contractor. Contractor shall perform this work after the new service has been completed and energized, and in accordance with the approved schedule. Contractor also shall make all the necessary arrangements with the power company for the removal of their transformers and metering equipment after the new electrical system has been installed and energized.
- I. Panelboards where shown shall be removed and disposed of off the site. Where shown or specified, they shall be replaced with new panelboards at the same or adjacent locations. All cutting and patching necessary for the removal and replacement of panelboards shall be performed.
- J. Lighting fixtures shall be removed or relocated as shown. Fixtures not relocated shall be removed from the site. Relocated fixtures shall be

carefully removed from their present location and rehung where shown.

- K. Wall switches, receptacles, starters, and other miscellaneous electrical equipment shall be removed and disposed of off the site as required. Care shall be taken in removing all equipment to minimize damage to architectural and structural members. Any damage incurred shall be repaired.

3.5 ALTERATIONS AND CLOSURES

- A. Alterations shall conform with all applicable Specifications, the Drawings, and the directions and approvals of the Engineer.
- B. Where alterations require cutting or drilling into existing floors, walls, and roofs, the holes shall be repaired in an approved manner. The Contractor shall repair such openings with the same or matching materials as the existing floor, wall, or roof or as otherwise approved by the Engineer. All repairs shall be smoothly finished unless otherwise approved by the Engineer.
- C. Openings in existing concrete slabs, ceilings, masonry walls, floors and partitions shall be closed and sealed as shown or otherwise directed by the Engineer and Owner. New Work shall be keyed into the existing Work in an acceptable manner.
- D. New reinforcing steel shall be welded to the existing reinforcing. Welding shall conform to AWS D12.1, Reinforcing Steel Welding Code. In general, use the same or matching materials as the existing adjacent surface. The finished closure shall be a smooth, tight, sealed, permanent closure acceptable to the Engineer.

3.6 CLEANUP

- A. Contractor shall remove from the site all debris resulting from the demolition operations as it accumulates. Upon completion of the Work, all materials, equipment, waste, and debris of every sort shall be removed, and premises shall be left, clean, neat, and orderly, and graded to plan.
- B. Demolished reinforced concrete shall be disposed at an approved and licensed disposal site at Contractor's expense. Alternately, the Contractor may pulverize concrete to remove reinforcing steel and dispose of concrete debris and reinforcing steel at an approved off-site location.

PART 4 – MEASUREMENT AND PAYMENT

- 4.1 MEASUREMENT: Unless shown on the Drawings or called out within the Specifications as a pay item, demolition activities described herein are for informational purposes only. No separate measurement of demolition activities will be made by the Contractor for this Work.
- 4.2 PAYMENT: Unless specified as a pay item, demolition activities performed, and materials furnished in accordance with this Section will not be paid for directly but are subsidiary to the pertinent items associated with construction activities. No separate payment will be made to the Contractor for this Work.

END OF SECTION

SECTION 01100
SITE PREPARATION

PART 1 - GENERAL

1.1 SCOPE

- A. The Work included in this Section shall consist of preparing the designated easements and/or right-of-way as necessary for construction operations.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 CLEARING

- A. The surface of the ground, for the area to be cleared and grubbed, shall be completely cleared of all timber, brush, stumps, roots, grass, weeds, rubbish, topsoil and vegetation removal, and all other objectionable obstructions resting on, or protruding through, the surface of the ground.
- B. Trees and shrubs designated for preservation shall be carefully trimmed as directed and shall be protected from scarring, barking, or other injuries during construction. Exposed ends of pruned limbs shall be treated with an approved pruning material. Tree protection shall be installed as necessary per the Drawings.
- C. Clearing operations shall be conducted so that the Contractor shall not damage the existing structures and installations, or those structures under construction. Clearing shall be conducted in a manner that provides for the safety of employees and others.
- D. Clearing away structures shall consist of removing remains of houses or other structures not completely removed previously (by the Contractor or others), foundations, floor slabs, concrete, brick, lumber, plaster, cisterns, septic tanks, basements, abandoned utility pipes or conduits, equipment or other foundations, fences, retaining walls, outhouses, shacks and all other debris, as well as buried concrete slabs, curbs, gutters, driveways and sidewalks.

3.2 GRUBBING

- A. Grubbing shall consist of the complete removal of all stumps, roots larger than 1-1/2 inches in diameter, matted roots, brush, timber, logs and any other organic or metallic debris not suitable for foundation purposes, resting on, under or protruding through the surface of the ground to a depth of 18 inches below the subgrade.
- B. All depressions excavated below the original ground surface for, or by the removal of, such objects, shall be refilled with suitable materials and compacted to a density conforming to the surrounding ground surface.

PART 4 – JOB CONDITIONS

4.1 STRIPPING

- A. In areas so designated, topsoil shall be stockpiled. Stockpiled topsoil shall be protected until it is placed as specified.
- B. Any topsoil remaining after all Work is in place shall be removed and disposed of by the Contractor in accordance with local, state and federal regulations.

4.2 DISPOSAL OF CLEARED AND GRUBBED MATERIAL

- A. Dispose of all material and debris from the clearing and grubbing operation by hauling such material and debris away to an approved facility.
- B. Disposal by burning or burial will not be permitted.
- C. The cost of disposal (including hauling) of cleared, grubbed material, debris, surplus material shall be considered a subsidiary obligation of the Contractor.

4.3 FENCES

- A. Unless shown otherwise in the Contract Documents, all fences along the proposed route and Right-Of-Way which are damaged or removed temporarily by the Contractor shall be replaced by the Contractor to an equal or better condition.

4.4 HOLES

- A. Holes remaining after removal of structures, objectionable materials, etc., shall be backfilled and the entire area shall be bladed to prevent ponding of water and to provide adequate drainage of storm water.

4.5 HAZARDOUS MATERIAL

- A. If the Contractor encounters hazardous substances, industrial waste, or other environmental pollutants, underground storage tanks, or conditions conducive to environmental damage, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner in writing.
- B. The Contractor shall not be responsible for, or be required to conduct, any investigation, site monitoring, containment, cleanup, removal, restoration or other remedial work of any kind or nature under any applicable state or federal law, regulation, ordinance, or any judicial order.

PART 5 – MEASUREMENT AND PAYMENT

- 5.1 No direct measurement or payment will be made for the work to be done or the equipment to be furnished under this item but shall be considered subsidiary to the particular items of work for which unit prices are required in the proposal.

END OF SECTION

SECTION 01140

DEWATERING

PART 1 - GENERAL

1.1 SCOPE

- A. The Work included in this Section consists of furnishing all equipment, fuel, materials, and labor necessary for dewatering, along with the necessary control and disposal of groundwater, on a continual basis during construction.

1.2 DESCRIPTION OF REQUIREMENTS

- A. Dewatering shall include the lowering of the groundwater table to relieve any hydrostatic head that could cause a decrease in the stability of the excavated subgrade. Remove and dispose of water and provide siltation settling basins for all discharges from dewatering systems.
- B. Dewatering also shall include the intercepting of seepage which could otherwise emerge from the slope or sides of excavations which could cause a decrease in the stability of the excavated subgrade or the slopes or sides of the excavations.
- C. The Contractor shall assume full responsibility and expense for the adequacy of the dewatering system with no additional contract time or cost allowance for performance.

1.3 REFERENCE STANDARDS

- A. The drilling, operation, and abandonment of all dewatering wells used in the dewatering system shall comply with regulations of the Texas Commission on Environmental Quality (TCEQ), and the Texas Water Well Drillers Association.

1.4 SUBMITTALS

- A. Submit construction plans of dewatering well point system, settling basins and discharge facilities for review by the Owner/Engineer prior to dewatering system installation.

PART 2 – PRODUCTS

2.1 EQUIPMENT AND MATERIALS

- A. Selection of equipment and materials is at the option of Contractor as necessary to achieve desired results for dewatering.
- B. Eductors, well points, or deep wells, where used, shall be furnished, installed and operated by an experienced Subcontractor who is engaged regularly in ground water control system design, installation and operation.
- C. All equipment must be in good repair and operating order.
- D. Sufficient standby equipment and materials shall be kept available to ensure continuous operation, where required.

PART 3 - EXECUTION

3.1 DEWATERING

- A. The dewatering system shall be capable of providing an excavated subgrade that is relieved of any hydrostatic pressure that could cause a decrease in the stability of the excavated subgrade, and which will provide the necessary groundwater control for the proper performance required to complete the Work described within the Project Specifications.
- B. As part of his request for review of a dewatering system, the Contractor shall demonstrate the adequacy of the proposed system and well point filter sand by means of a test installation at the jobsite. Discharge water shall be clear, with no visible soil particles contained within a one-quart sample.
- C. Dewatering shall at all times be conducted in such a manner as to preserve the natural undisturbed bearing capacity of the subgrade soils at proposed bottom of excavation.
- D. The Contractor shall provide for the disposal of the water removed from the excavation in such a manner as to not cause injury to the public health, private or public property, or to any portion of the work completed or in progress, to the surface of the streets, or cause any impediment to the reasonable use of the site by other contractors.
- E. The dewatering system shall not cause damage to newly constructed or existing buildings, utilities, and other work due to the loss of support from incompletely drained soils or from removal of soil particles resulting from the dewatering system operation.
- F. If the dewatering system utilized by the Contractor causes or threatens to cause damage to new or existing facilities, the dewatering system shall be modified to prohibit such damage at no additional cost to the Owner.
- G. Dispose of subsurface water collected in the manner which conforms to all applicable local and state ordinances, statutes and laws.
- H. Maintain continual and complete effectiveness of the dewatering system operation to provide a firm, stable, and excavated subgrade at all times as required for proper performance of Work.
- I. Provide dewatering necessary to maintain the groundwater table below the level of backfill as it is being placed.
- J. Provide dewatering necessary to maintain the groundwater table below the level of backfill as requested by the Owner. The Contractor's proposed method of dewatering shall include a minimum of two operating groundwater observation wells or piezometers at each proposed structure and one observation well at each manhole to be used to determine the water level during construction of the structures. Locations of the observation wells shall be at structures and along pipelines as approved by the Owner prior to their installation. The observation wells shall be extended to 6 inches above finished grade, topped with screw-on caps, protected by a 4-inch thick, 24-inch x 24-inch square concrete base, and left in place at the completion of the project.
- K. The Contractor shall maintain log readings of the dewatering system documented at least daily. The Contractor shall submit these readings to the Inspector for

review, if requested.

PART 4 – JOB CONDITIONS

4.1 EROSION CONTROL

- A. Provide adequate protection from erosion that may be caused by any of the dewatering operations utilized during the course of the construction. Any damage, disruption or interference to newly constructed work or existing properties, buildings, structures, utilities and/or other work resulting directly or indirectly from dewatering operations conducted under this Contract shall be remedied by the Contractor, at no additional cost to the Owner.

4.2 TREATMENT OF DEWATERING OPERATIONS DISCHARGES

- A. Provide such additional treatment devices as may be required to meet the provisions of the Contract. This may include the construction of sumps and/or settling basins, stone rip-rap, silt fences or other requirements. The treatment devices shall be removed afterwards and/or filled in with acceptable backfill material and restored to original conditions once they are no longer needed, at no additional cost to the Owner.

4.3 NOISE CONTROL

- A. When dewatering operations continue between the hours of 6 PM and 8 AM, the Contractor shall control the noise to meet local standards.

PART 5 – MEASUREMENT AND PAYMENT

- 5.1 MEASUREMENT: Dewatering operations are considered to be subsidiary to Section 01230 – Excavation and Backfill, and no separate measurement will be made by the Contractor for this Work.
- 5.2 PAYMENT: Dewatering operations are considered to be subsidiary to Section 01230-Excavation and Backfill, and no separate payment will be made to the Contractor for this Work.

END OF SECTION

SECTION 01230
EXCAVATION AND BACKFILL

PART 1 - GENERAL

1.1 SCOPE

- A. The Work included in this Section shall consist of furnishing all labor, materials, equipment, and incidentals necessary to perform all excavation (unclassified), backfill, fill, grading and slope protection required for completing the structural and/or utility piping work and/or other work shown within the Drawings and specified herein.
- B. The item shall include, but not necessarily be limited to: manholes, vaults, duct conduit, pipe, and roadways and paving; all backfilling, fill and required borrow; grading; dewatering, sheeting, shoring, bracing, water handling, and all other work incidental and specified herein.
- C. Trench excavation shall be in accordance with the Typical Trench Backfill Standard Detail as shown within the Drawings.
- D. Where references are made to other standards and codes, unless specific date references are indicated, the latest edition of said standard or code shall govern.

1.2 QUALITY ASSURANCE

- A. Required Tests:
 - 1. The Owner will engage the services of a qualified testing laboratory to make tests and determine acceptability of the fill or materials as listed below.
 - 2. Required tests:
 - a. Select Fill Samples: Gradation, ASTM D422.
 - b. Compacted Select Fill: Compaction, ASTM D1556, ASTM D1557, and ASTM D2922.
- B. Permits and Regulations:
 - 1. Obtain all necessary permits for work in roads, rights-of-ways, railroads, etc.
 - 2. Obtain permits as required by local, state and federal agencies for discharging water from excavations.
 - 3. Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction.

1.3 RELATED SECTIONS

- A. Section 01140, Dewatering
- B. Section 01240, Trench Excavation Safety
- C. Section 01410, Testing Laboratory Services
- D. Section 02650, PVC Pipe for Water Main

- E. Section 02660, Ductile Iron Pipe
- F. Section 02680, Ductile Iron Fittings
- G. Section 03100, Sanitary Sewer Mains
- H. Section 03200, Sanitary Sewer Manholes

1.4 REFERENCE STANDARDS

- A. Comply with the applicable provisions and recommendations of the following except as otherwise shown or specified; latest revision thereof shall apply.
 - 1. ASTM A36 - Specification for Structural Steel.
 - 2. ASTM A328 - Specification for Steel Sheet Piling.
 - 3. ASTM D422 - Method for Particle-Size Analysis of Soils.
 - 4. ASTM D1556 - Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - 5. ASTM D1557 - Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft³ 16/cu ft) (2,700 KN-m/cu m).
 - 6. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 7. AISC Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings.
 - 8. Occupational Safety and Health Administration (OSHA) Standards, Title 29, Code of Federal Regulations, Part 1926, Section .650 (Subpart P-Excavations).

1.5 SUBMITTALS

- A. Drawings shall be prepared by a licensed Texas Professional Engineer recognized as an expert in the specialty excavation and backfill activities involved. Drawings shall be submitted to the Engineer for review and record purposes only. Calculations shall not be submitted for review, unless requested by the Engineer. Drawing submittals will not be checked and will not imply approval by Engineer of the work involved. The Contractor shall be solely responsible for designing, installing, operating and maintaining whatever system is necessary to satisfactorily accomplish all necessary sheeting, shoring, bracing, protection, cofferdams, underpinning and dewatering.
- B. Test Reports - Borrow, Backfill, and Grading:
 - 1. Owner's testing laboratory will submit copies of the following reports directly to Engineer, with a copy to the Contractor:
 - a. Tests on borrow material.
 - b. Tests on footing subgrade.
 - c. Field density tests.

- d. Optimum moisture - maximum density curve for each soil type used for backfill.
 - e. Tests of actual unconfined compressive strength or bearing tests of each strata.
- C. The Contractor shall submit samples of all select fill, gravel and base materials as required.
 - 1. Deliver samples to Owner.
- D. Compaction equipment and proposed methods.
- E. Erosion and sedimentation control plan.

1.6 TRENCH EXCAVATION SAFETY

- A. Trench Excavation Safety shall conform to requirements contained within Section 01240 of these Specifications.

1.7 SITE PREPARATION

- A. Site preparation shall be completed in accordance with Section 01100 of these Specifications.

1.8 DEWATERING

- A. Dewatering shall be conducted in accordance with Section 01140 of these Specifications.

1.9 JOB CONDITIONS AND SAFETY

- A. The Contractor shall examine the site and review the available test borings or undertake his own soil borings prior to submitting his bid, taking into consideration all conditions that may affect the work.
- B. The Owner will not assume responsibility for variations of sub-soil quality or conditions at locations other than places shown at the time the subsurface investigation was made. Boring log data and soil samples may be available for examination by the Contractor upon request.
- C. Existing Structures: The Drawings may show certain surface and underground structures adjacent to the Work. This information has been obtained from existing records. It is not guaranteed to be correct or complete and is shown for the convenience of the Contractor. Contractor shall explore ahead of the required excavation to determine the exact location of all structures. They shall be supported and protected from damage by Contractor. If they are broken or damaged during construction, they shall be restored immediately by Contractor at the Contractor's expense.
- D. Existing Utilities: Locate existing underground utilities in the areas of work. If utilities are to remain in place, provide adequate means of protection during earthwork operations.

1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult the Owner of such piping or utility immediately for directions on how to proceed with construction activities.
 2. Cooperate with the Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of the Owner.
 3. Demolish and completely remove from site all existing underground utilities indicated within the Contract Documents to be removed.
- E. Protection of Persons and Property: Barricade open excavations occurring as part of this Work and post with warning lights. Operate warning lights as recommended by authorities having jurisdiction.
1. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.
- F. Use of Explosives:
1. The use of explosives at the job site will not be permitted.
- G. Dust Control:
1. Conduct all operations and maintain areas of activity, including sweeping and sprinkling of roadways adjacent to the work area, to minimize creation and dispersion of dust. Calcium chloride may be used to control serious or prolonged dust problems, subject to approval of Engineer.

1.10 CODES, ORDINANCES, AND STATUTES

- A. The Contractor shall be familiarized and comply with all applicable codes, ordinances, statutes, and bear sole responsibility for any penalties imposed for noncompliance.

1.11 SHORING, SHEETING, BRACING, AND SLOPING

- A. The Contractor shall provide shoring, sheeting, bracing, or sloping as required to protect excavations. All shoring, sheeting, bracing, and sloping will be installed and maintained in accordance with OSHA standards and other applicable laws.
- B. For trench sheeting for pipes, no sheeting is to be withdrawn if driven below mid-diameter of any pipe, and no wood sheeting shall be cut off at a level lower than one (1) foot above the top of any pipe unless otherwise instructed by the Owner. If during the progress of the Work the Owner decides that additional wood sheeting should be left in place, he may instruct the Contractor in writing. If steel sheeting is used for trench sheeting, removal shall be as specified above, unless written approval is given for an alternate method of removal.
- C. All sheeting and bracing not left in place shall be carefully removed in such a manner as not to endanger the construction or other structures, utilities, existing piping, or property. Unless otherwise approved or indicated in the Drawings, all sheeting and bracing shall be removed after completion of the substructure, care being taken not to disturb or otherwise injure the finished masonry. All voids left or caused by withdrawal of sheeting shall be immediately refilled with sand by ramming with tools

especially adapted to that purpose, by watering or otherwise as may be required.

- D. Owner has the right to instruct the Contractor with regard to sheeting and bracing to be left in place shall not be construed as creating any obligation on his part to issue such instructions, and his failure to exercise his right to do so shall not relieve the Contractor from liability for damages to persons or property occurring from or on the work occasioned by negligence or otherwise, growing out of a failure on the part of the Contractor to leave in place sufficient sheeting and bracing to prevent any caving or moving of the ground.
- E. The Contractor shall construct cofferdams and sheeting outside the neat lines of the foundation unless indicated otherwise to the extent he deems it desirable for his method of operation. Sheeting shall be plumb and securely braced and tied in position. Sheeting, bracing, and cofferdams shall be adequate to withstand all pressures to which the structure will be subjected. Pumping, bracing, and other work within the cofferdam shall be done in a manner to avoid disturbing any construction of the masonry enclosed. Any movement or bulging which may occur shall be corrected by the Contractor at his own expense so as to provide the necessary clearances and dimensions.

1.12 EROSION AND POLLUTION CONTROLS

- A. The Contractor shall provide silt barriers, hay bales or other approved devices to prevent erosion or siltation of waterways and drainage courses, in accordance with the Drawing details.

PART 2 – PRODUCTS

2.1 SOIL MATERIALS

- A. General:
 - 1. Materials for use as base, fill and backfill shall be as described below.
 - a. Satisfactory soil materials are defined as those complying with American Association of State Highway and Transportation Officials (AASHTO) M-145, soil classification Groups A-1, A-2-4, A-2-5 and A-3.
 - b. Unsatisfactory soil materials are those defined in AASHTO M-145 soil classification Groups A-2-6, A-2-7, A-4, A-5, A-6, and A-7 along with peat and other highly organic soils.
- B. Structural Fill:
 - 1. Structural fill material shall be well graded soil material consisting of coarse aggregate to medium to fine grain sized sand, free of organic, deleterious and/or compressible material. Rock in excess of 3-1/2 inches in diameter shall not be used in the fill material. Structural fill shall not contain hardpan, stones, rocks, cobbles or other similar materials.
- C. Select Common Fill:
 - 1. Select common fill material shall be satisfactory soil material containing no more than 15 percent by weight finer than No. 200 mesh sieve. It shall be free from organic matter, muck, marl, and rock exceeding 3-1/2 inches in

diameter. Select common fill shall not contain broken concrete, masonry, rubble or other similar materials.

2. Material falling within the above referenced specification, encountered during the excavation, may be stored in segregated stockpiles for reuse. All material which, in the opinion of the Owner, is not suitable for reuse shall be spoiled as specified herein for disposal of unsuitable materials.

D. Backfill:

1. Sanitary Sewer Backfill

- a. Bedding Material

- i. The bedding material shall extend up the sides of the main sufficient to embed the lower quadrant of the main.
 - ii. The bedding material shall be composed of well-graded, crushed stone, or gravel conforming to the requirements of Table 1 unless modified by the Engineer in writing.

Table 1	
Sanitary Sewer Backfill Materials	
Sieve Size	Tolerance (%)
1-1/2"	0
1"	0-5
1/2"	40-75
#4	90-100
#8	95-100

2. Water Main Backfill

- a. Bedding Material

- i. The bedding and initial backfill materials for ductile iron pipe (DI), Polyvinyl Chloride Pipe (PVC), High Density Polyethylene Pipe (HDPE) Pipe, and Wrapped Steel (WS) Pipe in all nominal diameters shall be composed of well graded crushed stone or gravel conforming to the requirements of Table 2 unless notified by the Engineer in writing.

Table 2		
Potable Water Backfill Materials		
Sieve Size	Avg. Retained (%)	Tolerance (%)
1/2"	0	0
3/8"	0	0-5
#4	30	20-45
#8	90	90-100
#16	95	95-100
#30	98	98-100

E. Secondary and General Backfill:

1. Provide approved soil materials for backfill and fill, free of clay, rock, or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetable and other organic matter and other deleterious materials. Previously excavated materials meeting these requirements may be used for backfill.

F. Backfill under Existing or Future Pavement Structures

1. No heavy equipment will be used for soil backfilling operations until sufficient cover has been placed and compacted over all pipes and other existing utilities that may be damaged by such equipment. Testing of the completed backfill in streets and under and around structures shall meet the specified density requirements. Initial testing shall not be at Contractor's expense and shall conform to the General Conditions.
2. When soil backfill is to be placed under existing or future pavement structures and within 2 feet of any structures, the backfill shall be compacted to the required density using any method, type and size of equipment, which will give the required compaction without damaging adjacent pipe or bedding. The depth of layers, prior to compaction, shall depend upon the type of sprinkling and compacting equipment used and the test results thereby obtained. Prior to and in conjunction with the compaction operation, each layer shall be brought to the moisture content necessary to obtain the required density and shall be kept level to insure uniform compaction over the entire layer. Testing for density shall be in accordance with Test Method Tex-114-E and Test Method Tex-115-E.
3. Each layer of soil backfill must provide the density as required herein. Swelling soils (soils with plasticity index of 20 or more) shall be sprinkled as required to provide not less than optimum moisture nor more than 2 percent over optimum moisture content and compacted to the extent necessary to provide not less than 95 percent nor more than 102 percent of the density as determined in accordance with Test Method Tex-114-E. Non-swelling soils (soils with plasticity index less than 20) shall be sprinkled as required and compacted to the extent necessary to provide not less than 95 percent of the density as determined in accordance with Test Method Tex-114-E.
4. After each layer of soil backfill is complete, tests may be made by the Owner's designated representative. If the material fails to meet the density indicated, the course shall be reworked as necessary to obtain the indicated compaction and the compaction method shall be altered on subsequent Work to obtain indicated density.
5. At any time, the Owner's designated representative may order proof rolling to test the uniformity of compaction of the backfill layers. All irregularities, depressions, weak or soft spots that develop shall be corrected immediately by the Contractor.
6. Should the soil backfill, due to any reason, lose the required stability, density or finish before the pavement structure is placed, it shall be recompacted and refinished at the sole expense of the Contractor. Excessive loss of moisture in the subgrade shall be prevented by sprinkling, sealing or covering with a subsequent backfill layer or granular material. Excessive loss of moisture shall be construed to exist when the subgrade soil moisture content is more than 4

percent below the optimum of compaction ratio density. Backfill shall be placed from the top of the bedding material to the existing grade, base course, subgrade or as otherwise indicated. The remainder of the street backfill shall be Flexible Base, Concrete or Hot Mix Asphalt Concrete as indicated or to be replaced in kind to the surface removed to perform the Work.

G. Topsoil

1. Topsoil shall be reasonably free from subsoil, stumps, roots, brush, stones (2 inches or more in diameter), clay lumps, or similar objects.
2. The topsoil and or soil mixture, unless otherwise specified or approved, shall have a PH range of approximately 5.5 to 8.0.
3. The organic compound of topsoil shall be not less than 1%.

2.2 WATER

- A. Water used in compaction shall be clean and free from oil and grease. It shall not contain any organic matter or any other deleterious substances.

2.3 COMPACTION EQUIPMENT

- A. Compaction equipment shall be of suitable type and adequate to obtain the densities specified and shall provide satisfactory breakdown of materials to form a dense fill. Compaction equipment shall be operated in accordance with the Manufacturer's instructions and recommendations.
- B. Equipment shall be maintained in such condition that it will deliver the manufacturer's rated compaction effort. If inadequate densities are obtained, larger and/or different types of additional equipment shall be provided by the Contractor. Hand-operated equipment shall be capable of achieving the specified densities.

2.4 MOISTURE CONTROL EQUIPMENT

- A. Equipment for applying water shall be of a type and quality adequate for the work, shall not leak, and shall be equipped with a distributor bar or other approved device to assure uniform application. Equipment for mixing and drying out material shall consist of blades, discs, or other approved equipment.

PART 3 – EXECUTION

3.1 GENERAL

- A. Material shall be furnished, as required, from off site sources and hauled to the site.
- B. The Contractor shall take all the necessary precautions to maintain the work area in a safe and workable condition.
- C. The Contractor shall protect his work at all times by flagging, marking, lighting and barricading. It shall also be the Contractor's responsibility to preserve and protect all above and underground structures, pipelines, conduits, cables, drains or utilities which are existing at the time he encounters them. Failure of the Contract Documents to show the existence of these obstructions shall not relieve the

Contractor from this responsibility. The cost of repair of any damage which occurs to these obstructions during or as a result of construction shall be borne by the Contractor without additional cost to the Owner.

3.2 INSPECTION

- A. Provide the Resident Inspector with sufficient notice and with the means to examine the areas and conditions under which excavating, filling, and grading are to be performed. The Resident Inspector will notify the Owner and the Engineer if conditions are found that may be detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in an acceptable manner.

3.3 EXCAVATION

- A. Excavation of all trenches required for the installation of pipes and electrical ducts shall be made to the depths indicated in the Contract Documents. Excavate in such manner and to such widths as will give suitable room for laying the pipe or installing the ducts within the trenches, for bracing and supporting, and for pumping and drainage facilities. The trench width at the top of the pipe shall not exceed the allowable value as determined by the depth of cut and indicated in the Contract Documents.
- B. Rock shall be removed to a minimum 4-6 inches clearance around the bottom and sides of all the pipe or ducts being laid as shown in the Contract Documents.
- C. The bottom of the excavations shall be firm, dry and acceptable to the Owner. Excavate unsatisfactory soil material from the bottom of the trench to a depth determined by the Owner/Engineer and replace with rock or shell bedding.
- D. Where pipe or ducts are to be laid in bedding or encased in concrete, the trench may be excavated by machinery to, or just below, the designated subgrade provided that the material remaining in the bottom of the trench is no more than slightly disturbed.
- E. Where the pipes or ducts are to be laid directly on the trench bottom, the lower part of the trenches shall not be excavated to the trench bottom by machinery. The last of the material being excavated shall be done manually in such a manner that will give a flat bottom true to grade so that pipe or duct can be evenly and uniformly supported along its entire length on undisturbed material or bedding rock. Bell holes shall be made as required manually so that there is no bearing surface on the bells and pipes are supported along the barrel only.
- F. The Contractor shall abide by the following schedule of criteria concerning interferences with other utilities. In no case shall there be less than 0.33 feet (4 inches) between any two pipelines or between pipelines and structures.
- G. Concrete encasement shall be provided in accordance with the Concrete Encasement standard detail drawing shown within the Drawings.

3.4 BACKFILLING

- A. Backfilling over pipes shall begin as soon as practicable after the pipe has been laid,

jointed, and inspected and the trench filled with suitable bedding material.

- B. Backfilling over ducts shall begin not less than three days after placing concrete encasement.
- C. All backfilling shall be prosecuted expeditiously and as detailed in the Contract Documents.
- D. Select granular bedding material shall meet the required measurements.
- E. The remainder of the trench shall be filled with compacted backfill, free from stones having a diameter greater than 2 inches and thoroughly compacted with a tamper as fast as placed.
- F. The filling shall be carried up evenly on both sides with at least one person tamping for each person shoveling material into the trench.
- G. The remainder of the trench above the compacted backfill, as just described above, shall be filled and thoroughly compacted with topsoil with mechanical equipment. The topsoil shall be mound over the original ground surface to permit passage of vehicles to allow for future settling. There shall be 4 inches of topsoil on the trench supplied from the stockpiled topsoil.
- H. In locations where pipes pass through building walls, the Contractor shall take the following precautions to consolidate the refill up to an elevation of at least 1 foot above the bottom of the pipes:
 - 1. Place structural fill in such areas for a distance of not less than 3 feet either side of the center line of the pipe in level layers not exceeding 6 inches in depth.
 - 2. Wet each layer to the extent requested and thoroughly compact each layer with a power tamper.

3.5 GRADING

- A. Grading shall be performed at such places as are indicated in the Contract Documents, to the lines, grades, and elevations shown or as approved by the Owner/Engineer and shall be made in such a manner that the requirements for formation of embankments can be followed. All unacceptable material encountered, of whatever nature within the limits indicated, shall be removed and disposed of as requested. During the process of excavation, the grade shall be maintained in such condition that it will be well drained at all times. Temporary drains and drainage ditches shall be installed to intercept or divert surface water which may affect the prosecution or condition of the work.
- B. If at the time of excavation, it is not possible to place any material in its proper section of the permanent structure, it shall be stockpiled in approved areas for later use. No extra payments will be considered for the stockpiling or double handling of excavated material.
- C. The right is reserved by the Owner to make minute adjustments or revisions in lines or grades if found necessary as the work progresses, due to discrepancies in the Contract Documents or in order to obtain a satisfactory construction outcome.
- D. Stones or rock fragments larger than 1-1/2 inches in their greatest dimensions will not be permitted within the top 12 inches of the subgrade line of all dikes, fills or

embankments.

- E. All fill slopes shall be uniformly dressed to the grade, cross-section and alignment shown in the Contract Documents, or as approved in writing by the Owner.
- F. In cuts, all loose or protruding rocks on the back slopes shall be jarred loose or otherwise removed to line or finished grade of slope. All cut and fill slopes shall be uniformly dressed to the grade, cross-section and alignment shown in the Contract Documents or as approved in writing by the Owner.
- G. No grading is to be done in areas where there are existing pipelines that may be uncovered or damaged until such lines which must be maintained are relocated, or where lines are to be abandoned, all required valves are closed and drains plugged at manholes.
- I. The Contractor shall replace all pavement that is cut or otherwise damaged during the progress of the work as specified elsewhere herein.

3.6 FIELD QUALITY CONTROL

- A. Quality Control Testing During Construction: Owner's testing service may inspect and approve subgrades and fill layers before construction work is performed thereon. Tests of subgrades and fill layers may be taken as follows:
 - 1. Footing Subgrade: For each strata of soil on which footings will be placed, at least one test will be made to verify required design bearing capacities. Subsequent verification and approval of each footing subgrade may be based on a visual comparison of each subgrade with related tested strata, when acceptable to Engineer.
 - 2. Tank and Building Slab Subgrade: At least one field density test of subgrade will be made for every 2,000 square feet of tank subgrade or building slab, but in no case less than 3 tests will be made per tank or building structure. In each compacted fill layer, one field density test will be made for every 2,000 square feet of overlaying building slab or tank subgrade, but in no case less than 3 tests will be made.
- B. If testing service reports or field inspections show subgrade or fills are below specified density, the Contractor shall provide additional compaction at no additional expense to the Owner.

PART 4 – MEASUREMENT AND PAYMENT

- 4.1 MEASUREMENT: Unless shown on the Drawings or within these Specifications as a pay item, the structural and/or utility excavation and backfill quantities shown or described are for informational purposes only. No separate measurement of excavation and backfill quantities will be made by the Contractor for this Work.
- 4.2 PAYMENT: Unless specified as a pay item, structural and/or utility excavation and backfill performed and materials furnished in accordance with this Specification Section will not be paid for directly, but is considered to be subsidiary to the pertinent items associated with construction activities. No separate payment will be made to the Contractor for this Work.

END OF SECTION

SECTION 01240 TRENCH EXCAVATION SAFETY

PART 1 - GENERAL

1.1 SCOPE

- A. The Work included in this Section consists of furnishing all materials, equipment, and labor necessary to perform construction of all trench excavation protection systems to be utilized within the project as shown in the Drawings and specified within.

1.2 RELATED SECTIONS

- A. Section 02650, PVC Pipe for Water Mains
- B. Section 02660, Ductile Iron Pipe
- C. Section 02665, HDPE Pipe
- D. Section 02675, Pipe Encasement
- E. Section 02680, Ductile Iron Fittings
- F. Section 02690, Tapping Sleeves and Valves

1.3 REFERENCE STANDARDS

- A. Latest provision of Part 1926, Subpart P- Excavations, Trenching, and Shoring of the Occupational Safety and Health Administration (OSHA) Standards and Interpretations, or the most applicable approved equal provision.

1.4 SUBMITTALS

- A. Excavation Plan: Prior to start of excavation operations, submit a written plan to Engineer for review to demonstrate Contractor's compliance with OSHA Standard 29 CFR Part 1926.650 and Section 01240 of these Specifications. At a minimum, excavation plan shall include:
 - 1. Name of competent person to be placed in charge of excavation and trenching operations.
 - 2. Excavation method(s) or trench protective system(s) to be used.
 - 3. Copies of "manufacturer's data" or other tabulated data if protective systems(s) are designed on the basis of such data.

PART 2 - PRODUCTS

Not Used.

PART 3 – EXECUTION

- 3.1 Trench excavation safety protection shall be accomplished as required by the latest provision of OSHA Standards, or the most applicable approved equal provision.

3.2 SHORING, SHEETING, BRACING, AND SLOPING

- A. The Contractor shall provide shoring, sheeting, bracing, or sloping as required to protect excavations. All shoring, sheeting, bracing, and sloping will be installed and maintained in accordance with OSHA standards and other applicable laws.
- B. For trench sheeting for pipes, no sheeting is to be withdrawn if driven below mid-diameter of any pipe, and no wood sheeting shall be cut off at a level lower than one (1) foot above the top of any pipe unless otherwise instructed by the Owner. If during the progress of the Work the Owner decides that additional wood sheeting should be left in place, he may instruct the Contractor in writing. If steel sheeting is used for trench sheeting, removal shall be as specified above, unless written approval is given for an alternate method of removal.
- C. All sheeting and bracing not left in place shall be carefully removed in such a manner as not to endanger the construction or other structures, utilities, existing piping, or property. Unless otherwise approved or indicated in the Drawings, all sheeting and bracing shall be removed after completion of the substructure, care being taken not to disturb or otherwise injure the finished masonry. All voids left or caused by withdrawal of sheeting shall be immediately refilled with sand by ramming with tools especially adapted to that purpose, by watering or otherwise as may be required.
- D. Owner has the right to instruct the Contractor with regard to sheeting and bracing to be left in place shall not be construed as creating any obligation on his part to issue such instructions, and his failure to exercise his right to do so shall not relieve the Contractor from liability for damages to persons or property occurring from or on the work occasioned by negligence or otherwise, growing out of a failure on the part of the Contractor to leave in place sufficient sheeting and bracing to prevent any caving or moving of the ground.
- E. The Contractor shall construct cofferdams and sheeting outside the neat lines of the foundation unless indicated otherwise to the extent he deems it desirable for his method of operation. Sheeting shall be plumb and securely braced and tied in position. Sheeting, bracing, and cofferdams shall be adequate to withstand all pressures to which the structure will be subjected. Pumping, bracing, and other work within the cofferdam shall be done in a manner to avoid disturbing any construction of the masonry enclosed. Any movement or bulging which may occur shall be corrected by the Contractor at his own expense so as to provide the necessary clearances and dimensions.

PART 4 – MEASUREMENT AND PAYMENT

- 4.1 MEASUREMENT: Trench Excavation Safety labor and materials are considered to be subsidiary to other pay items. No separate payment will be made to the Contractor for this Work.
- 4.2 PAYMENT: Trench Excavation Safety labor and materials are considered to be subsidiary to other pay items. No separate payment will be made to the Contractor for this Work.

END OF SECTION

SECTION 01350 HYDROTESTING AND DISINFECTION

PART 1 – GENERAL

1.1 SCOPE

- A. The Contractor shall furnish all labor, materials, equipment, appurtenances, and services required to clean, flush, disinfect, and hydrostatically test all interior surfaces of water main pipelines in accordance with these Specifications.
- B. All structures containing water, including treatment units not subject to disinfection, shall be cleaned in accordance with Paragraph 3.3 of this Specification Section.
- C. Water for initial hydrostatic testing and disinfecting will be furnished by the Owner.
- D. Contractor shall provide all temporary piping, hoses, valves, appurtenances, pumps, and services as required.
- E. Where references are made to other standards or codes, unless specific date references are indicated, the latest edition of said standard or code shall govern.

1.2 RELATED SECTIONS

- A. Section 02400, Valves and Appurtenances
- B. Section 02440, Combination Air Valve
- C. Section 02640, Fire Hydrant Assembly
- D. Section 02650, PVC Pipe for Water Mains
- E. Section 02660, Ductile Iron Pipe
- F. Section 02665, HDPE Pipe
- G. Section 02670, Ductile Iron Fittings
- H. Section 02690, Tapping Sleeves and Valves
- I. Section 02700, Water Main Tie-Ins

1.3 REFERENCE STANDARDS

- A. Comply with the following applicable provisions and recommendations; the revision in effect at time of the bid opening shall apply.
 - 1. AWWA C600 - Installation of Ductile Iron Mains and Their Appurtenances
 - 2. AWWA C605 - Underground Installation of Polyvinyl Chloride (PVC) and Molecularly Oriented Polyvinyl Chloride (PVCO) Pressure Pipe and Fittings

3. AWWA C604 - Installation of Buried Steel Water Pipe- 4 In. and Larger
4. AWWA C651 - Disinfecting Water Mains
5. AWWA C652 - Disinfection of Water Storage Facilities
6. AWWA C653 - Disinfection of Water Treatment Plants

1.4 SUBMITTALS

- A. Submit for approval the following:
 1. Hydrostatic testing and disinfection procedures, methods, coordination, and schedules.
 2. Related impacts on coordination with Owner's operations and Work Sequence.

PART 2 – PRODUCTS

2.1 DISINFECTANT

- A. Before disinfection for use with potable water, the water main pipeline shall be filled to eliminate air pockets and flushed to remove particulates. The flushing velocity in the main shall not be less than 2.50 feet/second unless the Owner determines that conditions do not permit the required flow rate.
- B. The Contractor shall disinfect all installed water mains in accordance with the requirements of AWWA C651.
- C. Liquid chlorine, sodium hypochlorite or calcium hypochlorite shall be used in accordance with AWWA C652 and AWWA C653.
- D. Liquid chlorine shall be used only where gas-flow chlorinators and injectors are installed for treatment applications. Portable or makeshift gas chlorination equipment is not acceptable.
- E. Disinfectant chemicals and materials shall be furnished by the Contractor.
- F. All disinfection of water mains and piping shall be done under general supervision of the Inspector.

PART 3 - EXECUTION

3.1 FLUSHING

- A. Immediately upon completion of water main installation or repair Work, the Contractor shall flush all mains affected by the scope of the Work.
- B. This flushing shall consist of completely filling sections of main between valves and then displacing such initial volumes of water by introducing clear water from existing facilities into and through the main to the point of discharge from the main being flushed.
- C. The flow-through shall continue until it is determined all dust, debris, or foreign matter that may have entered during pipe laying operations has been flushed out.