

Upper Thompson Sanitation District

Rules and Regulations



Amended: January 2016

Price: \$15.00

Environmental Protection Through Wastewater Collection and Treatment

UPPER THOMPSON SANITATION DISTRICT

RULES AND REGULATIONS

The Upper Thompson Sanitation District (District) hereby declares that the following Rules and Regulations have been prepared and adopted to provide for the construction, administration and operation of the wastewater collection system within the District.

The District hereby expressly reserves the right to make any lawful addition and/or revision in these Rules and Regulations when and as they may become advisable to properly manage the District and to promote the peace, health, safety and welfare of the customers of the District. These Rules and Regulations are supplementary to, and are not to be construed as, any abridgement of any lawful rights of the District as outlined in the Colorado Revised Statutes governing special districts, including, but not limited to, the right to disconnect or to refuse permission to connect any sewer service for violation of these Rules and Regulations or the International Plumbing Code.

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SECTION 1 GENERAL

1.1 AUTHORITY

The Upper Thompson Sanitation District is a governmental enterprise corporation and a political subdivision of the State of Colorado. The District is organized under, and pursuant to, Colorado Revised Statutes (C.R.S.), Title 32, for the purpose of providing wastewater collection and treatment for the greater Estes Park area.

The District is governed by a Board of Directors, which consists of five members. The members must be eligible electors of the District as defined by state law. District members are elected to staggered four-year terms.

1.2 SCOPE

These Rules and Regulations are adopted and promulgated pursuant to the power granted to the Board of Directors to adopt, amend and enforce Rules and Regulations not in conflict with the constitution and laws of the State of Colorado for carrying on the business, objects and affairs of the Board and of the District, Section 32-1-1001(1)(m), C.R.S.

1.3 POLICY

It is hereby declared that the Rules and Regulations hereinafter set forth will serve a public use and are necessary to ensure and protect the health, safety, prosperity, security and general welfare of the customers of the District.

1.4 PURPOSE

The purpose of these Rules and Regulations is to provide for the orderly financing, control, construction, management and operation of wastewater collection, wastewater treatment and septage / vault waste receiving systems, including any additions, extensions and connections thereto within the District.

1.5 INTENT

It is intended that these Rules and Regulations shall be liberally construed to affect the general purposes set forth herein, and that each and every part thereof is separate and distinct from all other parts. No omission or additional material set forth in these Rules and Regulations shall be construed as an alteration, waiver or deviation from any grant of power, duty or responsibility, or limitation or restriction, imposed or conferred upon the District by virtue to statutes now existing or subsequently amended, or under any contract or agreement existing between the District and any other governmental entity. Nothing contained herein shall be so construed as to prejudice or affect the right of the District to secure the full benefit and protection of any law which is now enacted and may subsequently be enacted by the Colorado General Assembly pertaining to the governmental or proprietary affairs of the District.

When used in these Rules and Regulations, the term “shall” denotes that the action referred to is mandatory, and the term “may” denotes that the action referred to is permissive.

1.6 AMENDMENT

It is specifically acknowledged that the District shall retain the power to amend these Rules and Regulations as it deems appropriate and that such amendments shall be entered in the minutes of the District's meeting, and further evidenced by a written resolution of the District, and periodically incorporated in printed copies of these Rules and Regulations. Prior notice of these amendments shall not be required to be provided by the District when exercising its amendment powers pursuant to this Section.

1.7 VIOLATIONS

Any person who violates any of the provisions of these Rules and Regulations shall be liable to the District for any expense, loss or damage caused by reason of such violation. The District has the power, for and on behalf of such District, to assess reasonable penalties as set forth in Appendix A for delinquency in the payment of rates, fees, tolls, or charges or for any violations of these Rules and Regulations, together with interest on delinquencies from any date due at the rate of one percent per month or fraction thereof, and to shut off or discontinue sanitation service for such delinquencies and delinquencies in the payment of taxes or for any violation of these Rules and Regulations, and to provide for the disconnection from the facilities of this District.

Until paid, all such fees, rates, tolls, penalties, or charges shall constitute a perpetual lien on and against the property served, and any such lien may be foreclosed by the District in the same manner as provided by the laws of the State of Colorado for the foreclosure of mechanic's liens.

In addition to any other means provided by law, if the District so elects by resolution at a public meeting held after receipt of notice by the affected property owner, to have delinquent fees, rates, tolls, penalties, charges, or assessments made or levied solely for sewer services, certified to the Treasurer of the District to be collected and paid over by the Treasurer of the County in same manner as taxes are authorized to be collected and paid over pursuant to Section 39-10-107, C.R.S.

The District may also file an action in civil court against any person who intentionally or negligently violates any of the provisions of these Rules and Regulations or the conditions set forth in any permit duly issued by the District or damages incurred as a result of such negligence or intentional violation of these Rules and Regulations.

1.8 MEETINGS AND NOTICES

The District's regular monthly meeting is held each month in the Board Room of the Upper Thompson Sanitation District Administrative Office located at 2196 Mall Road, Estes Park, Colorado, 80517. The date and time of the monthly meeting is posted at the following locations:

Town of Estes Park
Municipal Building
170 MacGregor Avenue
Estes Park, CO 80517

Larimer County Clerk and Recorder
1601 Brodie Avenue
Estes Park, CO 80517

Library
335 East Elkhorn Avenue
Estes Park, CO 80517

Contact the District at (970) 586-4544 for the current schedule.

1.9 ABBREVIATIONS AND DEFINITIONS

The following abbreviations shall have the designated meanings:

BOD – Biochemical Oxygen Demand
CDPHE – Colorado Department of Public Health and Environment
CFR – CDPHE - Code of Federal Regulations
COD – Chemical Oxygen Demand
EDU – Equivalent Dwelling Unit
EPA – United States Environmental Protection Agency
FUV – Fixture Unit Value
FOG – Fats, Oils and Grease
gpd – gallons per day
gpm – gallons per minute
LEA – Line Extension Agreement
LEL – Lower Explosion Limit
mgd – million gallons per day
mg/L – milligrams per liter
MSC – Monthly Service Charge
NCPS – National Categorical Pretreatment Standard
NPDES – National Pollutant Discharge Elimination System
PE – Professional Engineer
PIF – Plant Investment Fee
PLS – Professional Land Surveyor
POTW – Publicly Owned Treatment Works
RCRA – Resource Conservation and Recovery Act
SIC – Standard Industrial Classification
SIU – Significant Industrial User
SFE – Single Family Equivalent
SWDA – Solid Waste Disposal Act
TSS – Total Suspended Solids
USC – United States Code
UTSD – Upper Thompson Sanitation District or “the District”
WWTF – Wastewater Treatment Facility

Act or the Act – The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended.

Approval Authority – The District Manager, a District-designated agent or representative.

As-Builts – The surveyed data and final detailed drawings of the actual construction of installed wastewater collection system or other construction.

Authorized Representative – Any representative of an industrial user who meets the signatory requirements as set forth in 40 C.F.R., Part 403.12.

Backfill – Excavated dirt or soil used to refill a trench or excavation.

Bedding – Material that surrounds a pipe after installation.

Biochemical Oxygen Demand (BOD or BOD₅) – The quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure for five (5) days at twenty (20) degrees Celsius grade expressed in terms of milligrams per liter (mg/L).

Biosolids – Solid, semisolid, or liquid residues generated during primary, secondary, or advanced treatment of domestic sewage through one or more controlled processes that reduce pathogens and attractiveness to vectors.

Categorical Industry – One of the industries for which the EPA has established or is in the process of establishing categorical pretreatment standards.

Chemical Oxygen Demand (COD) – The oxygen equivalent of that portion of organic matter in a wastewater sample that is susceptible to oxidation by a strong chemical oxidant, expressed in terms of milligrams per liter (mg/L).

C.F.R. – Code of Federal Regulations as amended.

Clean Outs – Access points to a pipe system, typically on lateral sewers.

Combined Sewer – Wastewater combined with, but not limited to, storm water or groundwater.

Commercial – Any customer using the services of the District while engaging in a business. May also be referred to as a non-residential customer. Commercial customers are typically metered and if metered, subject to the metered customer allocation.

Composite Sample – A representative flow-proportioned or time-proportioned sample, collected within a twenty-four (24) hour period composed of a minimum of four (4) individual samples collected at equally spaced intervals and combined according to flow or time.

Contractor – Any person, firm or corporation approved by the District to perform work on and to furnish materials to District facilities.

Cooling Water – Water to which the only pollutant added is heat.

Control Authority – Shall refer to the District Manager or his/her designated agents or representatives.

Critical Industry – A significant user, a categorical industry or a user that is required to report the storage of hazardous materials pursuant to the requirements of these Rules and Regulations. This includes both significant and potential contributors.

Customer – Existing or potential property owners or developers that discharge or will discharge to the wastewater collection system or will have temporary individual disposal facilities located within the District’s service area.

Deficiency List – A list of corrective actions needed on a construction project. Also commonly known as a punch list.

Deflection Test – A test that is conducted by pulling a solid pointed mandrel with a diameter equal to 95% of the pipe diameter through the completed pipeline.

Direct Discharge – The discharge of treated or untreated wastewater directly to the waters of the State of Colorado.

District – As used in these Regulations, the word District shall mean the Upper Thompson Sanitation District and all owned facilities, the Board of Directors of the Upper Thompson Sanitation District, or a person designated by the District to act on behalf of and for the District.

Domestic or Sanitary Sewage or Wastewater – Liquid waste from: (a) the noncommercial preparation, cooking and handling of food; (b) containing by-products of washing, laundry and household cleaning found in a normal household; or, (c) containing only human excrement and similar matter from the sanitary conveniences of dwellings, commercial buildings, industrial facilities, and institutions or combination thereof.

Enzymes – Components such as, but not limited to, lipase (an enzyme that breaks down grease and fat), protease (an enzyme that breaks down waste), amylase (an enzyme that breaks down the starches) used for protein, starch, cellulose, detergent, fat, grease, and oil digestion.

Equivalent Dwelling Unit (EDU) – See Single Family Equivalent.

Existing User – An industrial user, which is in operation at the time of promulgation of categorical pretreatment standards.

Extension – Any pipeline construction that adds to or extends or lengthens an existing District sewer main, including interceptor sewers.

Fats, Oil or Grease (FOG) - Any hydrocarbons, fatty acids, soaps, fats, waxes, oils and any other material that is extracted by Freon solvent, as specified in 40 C.F.R. Part 136.3.

Fees – All fees, rates, charges, penalties or surcharges for services or facilities and which are imposed by the District pursuant to these Rules and Regulations, state statutes, contractual agreements or by District action.

Final Acceptance – Occurs when the two (2) year warranty expires and the District assumes responsibility of a facility.

Fixture Unit Value (FUV) – Represents the total wastewater load of a plumbing fixture on the wastewater collection and treatment system. Fixture unit values vary depending upon the type of fixture. A table summarizing the fixture unit values of varying types of fixtures is provided in Appendix A.

Food Service Establishments – Customers serving food daily or seasonally with a commercial kitchen. All food service establishments will be considered as commercial customers by the District.

Garbage – Food waste from domestic and commercial preparation, cooking and dispensing of food and from handling, storage, and sale of produce. Properly ground garbage shall mean the wastes from the preparation, cooking, and dispensing of foods that have been ground to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers and with no particles greater than one-half (1/2) inch in any dimension. Plastics and paper are not considered as garbage.

Grab Sample – A sample that is taken on a one-time basis with no regard to the flow in the stream and without consideration of time.

Grease Interceptor or Grease Trap – A passive interceptor located outside or inside the building. This device separates and retains fats, oil, grease and other solids from the wastewater while permitting wastewater to discharge to the sewer.

Groundwater – Underground water. Also commonly referred to as the water table.

Harmful Waste – Any solid, liquid, or gaseous substances that would violate the prohibitions contained in these Rules and Regulations.

Holding Tank – Any tank that is used for temporary storage of sewage.

Indirect Discharge – The discharge or the introduction of non-domestic pollutants from any source regulated under Clean Water Act Section 307(b), (c), or (d) of the Act into the District's wastewater treatment facility (including vault waste discharged into the system).

Industrial User – A source of indirect discharge, which contains non-domestic wastes.

Industrial Wastewater – The liquid wastes from industrial manufacturing processes, trades or businesses as distinct from domestic or sanitary wastes. This wastewater may contain pollutants, elements and compounds such as, but not limited to, petroleum products, acids, solvents, salts and metals.

Infiltration – Groundwater, storm water or other sources of water that leak through the walls of the sewer or manhole and drains into the wastewater collection system.

Inflow - Water that enters the wastewater collection system from sources such as roof leaders, basement and yard drains, and cross connections with drainage lines (i.e., surface or rainwater).

Initial Acceptance – That point in time when sewer lines have been tested, cleaned, videoed, approved and accepted by the District. The two (2) year warranty period also begins at this time.

Inspector – Shall be the District's duly authorized representative(s).

Interceptor – Refers to any grease interceptor, grease trap, oil interceptor or sand interceptor.

Interceptor Sewer – Shall mean a pipe or conduit and manholes that receive wastewater from two or more sewer mains.

Interference – The inhibition or disruption of the District’s wastewater treatment processes or operations that contributes to a violation of any requirement of the District’s NPDES permit. The term includes prevention of sewage sludge use or disposal by the District in accordance with the Clean Water Act, Section 405, or any criteria, guidelines, or regulations developed pursuant to the Solid Waste Disposal Act (SWDA), the Clean Air Act, the Toxic Substances Control Act, or more stringent state criteria (including those contained in any state sludge management plan prepared pursuant to SWDA Title IV) applicable to the method of disposal or use employed by the District.

Lateral Sewer – A sewer pipe intended for discharging wastewater into the District’s wastewater treatment facility and commencing at a structure or facility and terminating at a sewer main. Lateral sewers may discharge directly to interceptor sewers under special conditions. Lateral sewers shall be constructed and maintained by the customer. This term is also commonly referred to as service connection, service line or building sewer.

Lateral Sewer Appurtenances – Include, but are not limited to, grease traps, grease interceptors, cleanouts, and other such items.

Line Extension Agreement (LEA) – Written legal document between the District and a customer that pertains to off-site sewer construction that brings sewer service to a legal parcel.

Local Facilities - Shall mean all pipes and manholes constructed by the customer for collecting of wastewater from customer’s properties or subdivisions. Local facilities include sewer system extensions required for serving new customers that upon completion and acceptance will be deeded or dedicated to the District. In some cases, the term local facilities refer to the lateral connection in addition to the sewer system.

Long Term Rental – Multi-family residential unit, such as apartment, condominium, townhome or similar facility in the same complex, which is to be rented for a minimum one month per rental agreement.

Manhole Vacuum Testing – A test of a manhole to check the ability to hold vacuum.

National Categorical Pretreatment Standard (NCPS) or Pretreatment Standard – Any regulation containing pollutant discharge limits promulgated by the EPA in accordance with the Clean Water Act, Section 207 (b) and (c), which applies to a specific category of industrial users.

National Pollutant Discharge Elimination System (NPDES) – The program for issuing, conditioning, and denying permits for the discharge of pollutants from point sources into navigable waters of the contiguous zone and the oceans pursuant to the Clean Water Act, Section 402.

National Pollution Discharge Elimination System Permit or NPDES Permit – A permit issued pursuant to the Clean Water Act, Section 402.

National Prohibitive Discharge Standard or Prohibitive Discharge Standard – Any regulation developed under the authority of the Clean Water Act, Section 307(b) and 40 C.F.R., Part 403.5.

New Source – Any building and/or construction of which commenced after the publication of proposed pretreatment standards under the Clean Water Act, Section 307 (c), of which will

be applicable to such source if such standards are thereafter promulgated in accordance with that section, provided that:

- A. The building, structure, facility, or installation is constructed at a site at which no wastewater source is located, or
- B. The building, structure, facility, or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source, or
- C. The production of wastewater generating processes of the building, structure, facility, or installation is substantially independent of an existing wastewater source of the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is engaged in the same general type of activity as the existing source will be considered. Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, or installation meeting the criteria of paragraph (A) above but otherwise alters, replaces, or adds to existing process or production equipment. Construction of a new source as defined under this paragraph has customer has:
 1. Begun or caused to begin as part of a continuous onsite construction program:
 - a. Any placement, assembly, or installation of facilities or equipment, or
 - b. Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities, which are necessary for the placement, assembly, or installation of new source facilities or equipment.
 2. Entered into a binding contractual obligation for the purchase of facilities or equipment, which are intended to be used in its operation within a reasonable time. Options to purchase or contracts, that can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

Non-Residential – Facilities that include but are not limited to commercial, industrial, schools, churches, hotels, motels, governmental buildings and all other building uses except for permanent residences.

Oil Interceptor – A device that separates and retains oil, grease and flammable wastes while permitting wastewater to discharge to the sewer.

Or Equal – If in the District’s sole discretion an item of material or equipment proposed by the Contractor is equivalent to or better than the product named in function, performance, reliability, quality, operation and maintenance cost, general configuration, size, weight and appearance to that named and sufficiently similar so that no change in related work will be required, it may be considered by the District as an “or equal” item. Whenever an item of material or equipment is specified or described in the Rules and Regulations by using the name of a proprietary item or the name of a particular manufacturer or supplier, the specification or description is intended to establish type, function and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent or “or equal” item is permitted, other items of material or equipment or material or equipment of other manufacturers or suppliers may be accepted by the District as an “or equal” item.

Outfall Sewer – Shall mean a pipe or conduit that carries the effluent from the wastewater treatment facility to a point of final disposal or direct discharge.

Outside Drop Manhole – A vertical pipe on the outside of a manhole that conveys wastewater when the grades of the pipe are more than eighteen (18) inches vertical separation.

Permit – Shall mean written permission from the District to connect to a sewer that is under the jurisdiction of the District pursuant to the Rules and Regulations of the District. May also be referred to as a tap or service connection permit.

Person – Shall mean any individual, firm, company, association, society, corporation, organization, group or any other entity recognized by the District.

pH – The logarithm (base 10) of the reciprocal of the concentration of hydrogen ions expressed in mols per liter of solution.

Plant Investment Fee (PIF) – That amount of money, as determined by the District, which allows the payer to connect to a District line for one residential single family equivalent (SFE) unit service. The PIF has two components: (1) an asset share, and (2) costs of treatment capacity. The fee is reviewed periodically by the District and subject to change.

Point Repair – A repair to a damaged sewer at one particular point.

Pollutant – Includes, but is not limited to, any dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, explosives, chemical wastes, corrosive substances, biological materials or nutrients, radioactive materials, heat, malodorous substances, wrecked or discharged equipment, rock, sand, slurry, cellar dirt, untreatable waste or industrial, municipal, and agricultural waste discharged into water or with water.

Pollution – Includes, but is not limited to, the manmade or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

Potential Contributor – Industries, that may be classified as categorical industries and the nature of their processes are such that priority pollutants are not discharged under normal operations. This includes anyone storing hazardous materials as defined in this section.

Pressure Test – A test performed on the pipe to check the ability to withstand pressure when charged with air.

Pretreatment or Treatment – The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into a wastewater treatment facility. The reduction or alteration may be obtained by physical, chemical or biological processes or other means.

Pretreatment Requirements – Any substantive or procedural requirement related to pretreatment, other than categorical pretreatment standard imposed on an industrial user and shall include conditions of a wastewater discharge permit (NPDES).

Pretreatment Standards – All applicable federal rules and regulations implementing the Clean Water Act, Section 307, as well as any non-conflicting state or local standards. In cases of differing standards or regulations, the more stringent standard or regulation shall apply.

Priority Pollutants – Any of the various toxic compounds that can reasonably be expected in the discharges from industries as determined by the EPA, pursuant to the Clean Water Act, Section 307(a).

Private Sewage Disposal System – Any sewage disposal system other than public facilities including, but not limited to, privies, privy vaults, septic tanks, soil absorption systems, cesspools, chemical toilets, vaults, package treatment facilities, or similar facilities which receive or are intended to receive wastewater and which are not connected to the District's wastewater treatment facility. This term shall not include any treatment facility having a valid NPDES permit.

Publicly Owned Treatment Works (POTW) – A treatment works as defined by Clean Water Act, Section 212 of the Act, which is owned in this instance by the District. This definition includes any sewers that convey wastewater to the District's wastewater treatment facility, but does not include pipes, sewers or other conveyance not connected to a facility providing treatment. POTW shall also include any sewers that convey wastewater to the District's wastewater treatment facility from persons outside the District who are, by contract or agreement with the District, users of the District's wastewater treatment facility. This term is also commonly referred to as sewage treatment facility or wastewater treatment facility.

Raw Sewage – Wastewater and other wastes generated and discharged into the wastewater system by the users of the District facilities. This term is interchangeable with wastewater and sewage.

Receiving Waters – Any lake, river, stream, or other surface or subsurface watercourse, that receives treated or untreated wastewater.

Receiving Water Quality Requirements – The requirements for the wastewater treatment facility's effluent established by applicable state or federal requirements shall include effluent limitations, and waste discharge standards, requirements, limitations, or prohibitions, which may be established or adopted at the District's discretion.

Recreational Vehicle (RV) - a utility vehicle used for recreational purposes, as camping, and often equipped with living facilities. RVs shall not be permanently or temporarily connected to District's wastewater collection system.

Residential - Any customer using the services of the District not engaging in a business (for profit or not for profit), not renting, not leasing, and/or not generating revenue from the use of the property. Residential customers are typically non-metered and if non-metered, subject to the non-metered customer allocation.

Rules and Regulations – Refers to this document, and includes all appendices, attachments and references contained herein.

Sand Interceptor or Sand Trap – A device that separates and retains heavy solids while permitting wastewater to discharge to the sewer.

Sanitary Sewer – A combination of pipes and manholes which carries wastewater and to which storm, surface and ground water are not intentionally admitted, including the pipe or conduit system and appurtenances for the collection, transportation, pumping, and treatment of wastewater. This term is also commonly referred to as public sewer, sewer system, and sewer.

Septic Tank – Private sewage disposal system that receives wastewater and is not connected to the District’s wastewater treatment facility.

Septage – Shall mean wastewater and its decomposed products removed from a septic tank.

Service Charge – The amount deemed collectible by the District for providing wastewater collection and treatment service to the customer.

Sewage – Wastewater and other wastes generated and discharged into the wastewater system by the users of the District facilities. This term is interchangeable with wastewater and raw sewage.

Sewer – Shall mean a pipe or conduit for carrying wastewater.

Sewer System – Shall mean all facilities including, but not limited to, pipes and manholes owned and/or operated by the District and used for collecting, treating and disposing of wastewater.

Sewer Main – That portion of the wastewater collection system used for the collection and transportation of wastewater to treatment facilities and which has been installed for the express purpose of allowing lateral sewers to be made thereto. Shall mean a pipe or conduit and manholes that receives wastewater from one or more lateral sewers, and has no other sewer main discharging into it.

Shall - Is mandatory.

Short Term Rental – Multi-family residential unit, such as apartment, condominium, townhome or similar facility in the same complex, which is to be rented for a maximum of up to one month per rental agreement.

Significant Industrial User (SIU) – Any industrial user of the wastewater collection system that is subject to categorical pretreatment standards, or (a) has a discharge flow of twenty-five thousand (25,000) gallons per average work day or more process wastewater to the collection system (excluding sanitary, non-contact cooling and boiler blow-down wastewater), or (b) has a flow greater than five (5%) percent of the average dry-weather hydraulic or organic capacity of the wastewater treatment facility, or (c) has in the discharge toxic pollutants as defined pursuant to the Clean Water Act, Section 307, of State Statutes and Rules, or (d) is designated as such by the control authority, Colorado Department of Public Health and Environment (CDPHE), or the EPA on the basis that the industrial user has a reasonable potential for adversely affecting the wastewater treatment facility operation or for violating any pretreatment standard or requirement.

Single Family Equivalent (SFE) - Shall represent the average hydraulic and chemical characteristics of the discharge of a single-family home in the District’s service area. The details of these characteristics may be changed from time to time as additional data is obtained to define the "Single Family Equivalent." Some of the more important characteristics of the Single Family Equivalent Unit are as follows:

1. One SFE = 24 Fixture Unit Values (FUV)
2. Average Occupancy per SFE = 2.2 persons
3. Average Daily Wastewater Flow per Person = 70 gallons per day

4. Average Daily Wastewater Flow per SFE = 154 gallons per day
5. Peak Month Wastewater Flow per SFE = 200 gallons per day

For purposes of these Rules and Regulations, non-single family uses shall be converted to the equivalent number of SFE units. This conversion shall be determined by the District on the basis of the characteristics that are common to both single-family and non-single-family uses, e.g., offices, etc. Where more than one characteristic is common to both uses, a weighting factor may be used to establish the relative importance of these characteristics on the wastewater collection system.

Slug Load – Any pollutant, including oxygen demanding pollutants, released in a wastewater discharge at a flow rate and/or polluted concentration, which will cause interference with the wastewater treatment facility.

Small Significant Industrial User (SSIU) – A user which is classified as a significant industrial user and who has a process discharge flow of less than seventeen (17) gallons per minute per average work day.

Smoke Test – A test that may be required to determine the extent and location of leaks on a pipeline.

Special Service Contract – A contract between the District and customer that provides wastewater collection service to a customer located outside the District's service area.

Squeegee – Quarter inch size bedding for pipe, mainly used for lateral sewers.

Standard Industrial Classification (SIC) – A code representing a category within the Standard Industrial Classification System administered by the Statistical Policy Division of the U.S. Office of Management and Budget. The system was established to classify all industries in the U.S. economy. A two-digit code designates each major industry group, which is coupled with a second two-digit code representing subcategories.

Standard Methods – Any procedures described in the latest edition of Standard Methods for the Examination of Water and Wastewater as published by the American Public Health Association.

Standby Fee – Fee billed monthly to each customer having purchased a service connection and having not connected to the wastewater collection system for twelve (12) months from the date of purchase.

Storm Sewer – A sewer that carries only storm, surface and/or groundwater drainage.

Storm Water – Any flow occurring during or following any form of natural precipitation and resulting from and including, but not limited to, water from roofs, streets and other areas.

Stub-Out – A length or segment of pipe extended from a manhole, interceptor sewer, sewer main, or lateral sewer that has no discharger connected to it and is for a future wastewater collection system connection.

Subdivision – Shall be defined as any single parcel of land which subsequently divided into two or more parcels for the purpose of constructing dwelling units or other use on any of the smaller parcels.

Tap – The right to connect a lateral sewer from a dwelling or structure to the sewer main or interceptor sewer of the District and to discharge wastewater equal to one single family equivalent unit. May also be referred to as a permit.

Tapping – The physical act of connecting the lateral sewer from the structure or dwelling to the sewer mains or interceptor sewers of the District.

Permit Fee – The fee associated with the physical act of connecting the lateral sewer from the structure or dwelling to the sewer mains or interceptor sewers of the District.

Technical Review Fee – A fee to be set by the District for any technical review that is required as part of an application for service.

Total Suspended Solids (TSS) – The total matter that floats on the surface of, or is suspended in water, wastewater or other liquids, and which is removable by laboratory filtering and referred to as suspended residue in 40 C.F.R, Part 136.

Toxic Pollutant – Any pollutant or combination of pollutants listed as toxic in regulations promulgated by the Clean Water Act, Section 307(a), or other acts.

Unauthorized Connection – Any connection to any District facility without all District permits required by these Rules and Regulations.

Unauthorized Connection Fee – A fee assessed by the District for a connection to any District facility without all District permits required by these Rules and Regulations.

Underdrains – A pipe system that conveys groundwater to a pond, ditch or other collection area.

User – Any person or entity who contributes, causes, or permits the contribution or introduction of wastewater into the District’s wastewater treatment facility.

Vault – Any tank that is used for temporary storage of sewage.

Vault Waste – Any waste from holding tanks including but not limited to vessels, chemical toilets, campers, trailers, septic tanks, and vacuum-pump tank trucks. Also commonly referred to as holding tank waste.

Wastewater – The combination of the liquid and water-carried industrial or domestic waste from facilities including, but not limited to, residences, commercial buildings, industrial facilities, and institutions including cooling water, which is contributed into or permitted to enter the wastewater treatment facility. This term is interchangeable with sewage and raw sewage.

Wastewater Collection System – Shall mean the combination of all lateral sewers, sewer mains, interceptor sewers, force mains, lift stations and manholes that are used to convey wastewater to the District’s wastewater treatment facility.

Wastewater Discharge Permit – See tap or permit.

Wastewater Treatment Facility – Shall mean the area and facility used to remove or alter the objectionable constituents of the wastewater. This term is also commonly referred to as POTW or sewage treatment facility.

Waterways – Water conveyances that include, but are not limited to, streams, creeks, rivers, canals or irrigation ditches.

SECTION 2 OWNERSHIP AND OPERATION OF WASTEWATER COLLECTION SYSTEM

2.1 POLICY

The Upper Thompson Sanitation District is an organization formed to provide wastewater collection and treatment to residents, businesses and other facilities within the District's recorded service area. Inclusion into the District does not guarantee that wastewater collection service will be immediately available nor that it will be available at a specific time or when requested by a property owner. However, it is the goal of the District to:

- A. Consider for inclusion into the District all petitioning properties located within the service area;
- B. Build and maintain facilities to adequately supply service to all customers included in the District, provided that it is practical and feasible to do so;
- C. Provide wastewater collection service in a cost efficient manner, consistent with local, County, State, and Federal laws to customers of the District.

2.2 RESPONSIBILITIES

- A. Responsibilities of the District.** It is the District's responsibility to plan, finance, design, and construct all designated facilities. After construction and acceptance of the construction by the District, the District will be responsible for the maintenance, operation and replacement of all designated facilities except for lateral sewers and/or building drains owned by the customer or as provided during the two-year warranty period.

- B. Responsibilities of the Customer.** It is the responsibility of the customer to pay the actual cost of and to construct all local facilities (including lateral sewers). The local facilities (including lateral sewers) shall be constructed in accordance with the Rules and Regulations, and shall be inspected and approved by the District prior to use. Customers shall be responsible for the construction, maintenance, and replacement of all lateral sewers from the point of connection with the District's sewer main to the customers connected structures as shown in Detail 2000 – Lateral Sewer Connection.

2.3 LIMITATION OF LIABILITY OF DISTRICT

The District hereby reserves any and all rights contained within and not expressly waived by the C.R.S. Governmental Immunity Act, Title 24-101-100, *et seq.* The District reserves the right to temporarily discontinue service to any customer, at any time, for any reason deemed necessary or appropriate by the District to operate or maintain the wastewater collection and treatment systems or to secure the health, safety and welfare of customers and residents within the District's service area. The District shall not be liable or responsible for inadequate wastewater treatment or interruption of any services brought about by circumstances beyond the District's control.

2.4 OWNERSHIP OF FACILITIES

All existing and future regional facilities and local facilities (with the exception of lateral sewers) connected with and forming an integral part of the wastewater collection and treatment systems and accepted for operation and maintenance pursuant to these Rules and Regulations shall become and are the property of the District, unless a contract between the District and a customer provides otherwise. Said ownership will remain valid whether such facilities are constructed, financed, paid for or otherwise acquired by the District, or by other persons.

That portion of all existing or future lines (lateral sewers) extending from a sewer main or interceptor sewer to each unit or building for each customer that is connected with and forms an integral part of the wastewater collection and treatment systems shall become and is the property of the customer. This principal shall not be changed by the fact that the District might construct, finance, pay for, repair, maintain or otherwise affect the customer's lateral sewer. The construction of the connection of any lateral sewer shall be done in compliance with these Rules and Regulations. The customer's ownership of the lateral sewer shall not entitle the customer to make unauthorized uses of the wastewater collection system once the lateral sewer has been connected to a sewer main. All uses of the lateral sewer at any time after the initial connection to any of the wastewater collection system shall be subject to these Rules and Regulations.

2.5 RIGHT OF ENTRY

The manager, inspector, officers and employees of the District, or other person so designated by the District, bearing proper credentials and identification, shall be permitted without notice to enter upon all properties, that are receiving service from the District or have applied for the same, for the purpose of inspection, observation, measurement, sampling and testing, in accordance with the provisions of these Rules and Regulations. The granting of right of entry by the customer and occupant is a condition precedent and a condition subsequent to the provision of wastewater collection service.

Should emergencies arise, the District reserves the right of immediate access to District easements and rights-of-way for performance of any and all construction, maintenance, and repairs deemed necessary. Appropriate precautions will be taken by the District in order to lessen the impact to the affected customers. The District is not liable for disruption of commerce, suspension of service, or damages to customer property resulting from the District's access, maintenance, and repair of the sewer system.

2.6 MODIFICATION, WAIVER AND SUSPENSION OF RULES

The District shall have the sole authority to waive, suspend or modify these Rules and Regulations. Such waiver, suspension or modification may be made upon any condition deemed necessary or appropriate by the District. Such waiver, suspension or modification must be in writing and signed by the District. Any such waiver shall not be deemed an amendment of these Rules and Regulations. Further, no waiver of any one section of these Rules and Regulations shall be deemed a continuing waiver of any other section of these Rules and Regulations.

2.7 CONTRACTOR REQUIREMENTS

All contractors that perform construction, maintenance, or other services on District-owned equipment, property, within 10-feet of District sewer system, and/or in easements or rights-of-way that are the responsibility of the District, shall notify, pay appropriate fees, and obtain approval from the District prior to the start of work. All work shall be completed in accordance with the District's Rules and Regulations.

Any contractor or company that performs construction, maintenance or other services on District-owned equipment, property, within 10-feet of District sewer system, and/or in easements or rights-of-way that are the responsibility of the District, shall comply with the requirements set forth in Appendix G.

**SECTION 3
USE OF WASTEWATER COLLECTION SYSTEM**

3.1 WASTEWATER COLLECTION SYSTEM

The wastewater collection system is for the disposal of water containing biodegradable wastes. No customer shall make connection of roof downspouts, exterior foundation subdrains, areaway drains, surface drains or other sources of surface runoff or groundwater to a lateral sewer or building drain which in turn is connected directly or indirectly to the wastewater collection system. In order to protect the wastewater collection system from damage, destruction, deterioration, misuse or malfunction and to guard against health hazards and the creation of public nuisance, the following regulations shall apply relative to the discharge of wastewater containing deleterious wastes. A private sewage disposal system may not be utilized within the service area unless a waiver pursuant to Section 2.6 is obtained from the District.

A. Specially Regulated Wastes

- 1. Industrial Wastes.** No customer shall discharge or cause to be discharged any industrial waste of any type into the wastewater collection system unless written permission is received from the District.
- 2. Inflow/Infiltration.** No customer shall discharge or cause to be discharged into the wastewater collection system, storm drainage from ground surface, roof ladders, catch basins or any other source, or sub-surface drainage or groundwater.
- 3. Other Wastes.** Industrial cooling water, unpolluted process waters, bakery/restaurant wastes, car washing wastes, brewery waste, swimming pool drainage and floor drainage from enclosed and covered areas may be connected to the wastewater collection system only by a special permit from the District. The application for such a permit, in addition to information normally required for a permit application, shall include the following:
 - Name and address of the customer
 - Location of the property for which the request is made
 - Description of the facility or operation requested for connection
 - Estimated quantities and qualities of the waste to be discharged including maximum rates, loadings, pH, chemical properties, and constituents including cleaning chemicals
 - Plans and specifications of related waste-generating processes and any pretreatment processes

Such permits issued by the District may contain the following conditions:

- The construction of flow measuring and/or sampling devices and sampling location points (i.e. access cleanouts and/or manholes)
- The construction of valves or gates to stop flows on an emergency basis
- The construction of grease, oil or sand interceptors, or other pretreatment facilities, including screening, aeration, neutralization chemicals, and holding and treatment vaults/tanks
- The District may place other restrictions on the permit as reasonably required under the circumstances. Nothing in this Section shall prohibit the District from

denying an application for a permit if the District determines that the demand on the wastewater collection system impairs the District's existing system.

B. Prohibited Wastes. Toxic or non-biodegradable waste or any other waste which results in effluent not being within state standards after providing conventional treatment shall not be discharged into the wastewater collection system. No drain accepting discharge from vehicle wash racks, filling stations, restaurants or other lateral sewers as specified by the District shall be connected to any sewer main or interceptor sewer unless the discharge first passes through an acceptable grease, oil or sand interceptor. Except as provided herein, no customer shall discharge or cause to be discharged any of the following described waters or wastes to the wastewater collection system:

1. Any liquid or vapor having temperatures higher than one hundred and four degrees Fahrenheit (104° F)
2. Any water or waste which may contain more than one hundred parts per million (100 ppm) by weight of animal or vegetable fat, oil or grease
3. Any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquid, solid, gas, oil or grease
4. Any garbage that has not been properly shredded to less than one-half inch (½") in the largest dimension
5. Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastic, wood, paunch manure or any other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper and normal operation of the wastewater collection system.
6. Any waters or wastes having pH lower than 6.5 or higher than 9.0, or having any other corrosive or toxic property capable of causing damage or hazard to structures, equipment or personnel of the wastewater collection system.
7. Any water or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with any wastewater treatment process, constitute a hazard to humans, animals or fish, or create any hazard in the receiving waters of the wastewater treatment facility effluent.
8. Any waters or wastes containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials at the wastewater treatment facility.
9. Any noxious substances or malodorous waste, waters, gases or substance capable of creating a public nuisance, either in the wastewater collection system or at the wastewater treatment facility.
10. A five (5) day BOD concentration greater than two hundred thirty parts per million (230 ppm).
11. A suspended solids concentration great than two hundred thirty parts per million (230 ppm).
12. Concentrated wastes from private sewage disposal systems.
13. A peak flow rate greater than four (4) times the average flow rate.
14. Any chemicals having a twenty-four (24) hour proportionate composite sample concentration at the point of discharge in excess of the following:
 - Cadmium: 0.10 mg/L
 - Chromium: 5.0 mg/L

- Copper: 3.0 mg/L
- Cyanide: 2.0 mg/L
- Iron: 15.0 mg/L
- Phenol: 10.0 mg/L
- Hydrogen Sulfide: 1.0 mg/L
- Zinc: 2.0 mg/L

15. Chemical, thermal or bacteriological agents (enzymes) that alter the contents of grease interceptors.

C. **Preliminary Treatment.** Where necessary, as determined by the District, whose determinations shall be final, the customer shall provide, at its sole cost and expense, such preliminary treatment as may be deemed necessary. Where preliminary treatment facilities are provided for any wastewater, they shall meet with the approval of the District for adequacy of design, and once built, shall be maintained continuously in satisfactory and effective operation by the customer. When required by the District, the customer of any property served by a lateral sewer carrying industrial wastes shall install a suitable control manhole or monitoring point in the lateral sewer to facilitate observation, sampling and measurement of the industrial wastes. Such manhole or monitoring point shall be accessible and safely located, and constructed in accordance with plans and specifications approved by the District. The manhole or monitoring point shall be installed and maintained by the customer at its expense. In addition to the foregoing requirements, the customer shall also provide to the District, the information requested in the application attached hereto as Appendix D and shall abide by any additional requirements imposed by the District due to the nature of the commercial or industrial use requested.

D. **Sump Pumps and Illegal Devices.** No plumbing fixture, device, construction or plumbing system shall be installed within any building or improvement which will provide a connection between the wastewater collection system, directly or indirectly, or with a lateral sewer for the purpose of draining ground or surface waters into the wastewater collection system, and no physical connections shall be permitted whereby a lateral sewer is connected in such a manner so that through either the manipulation of valves, the lack of back pressure valves, or as a result of any other arrangement or connection, it is possible to drain, flood, or overflow storm water or groundwater directly or indirectly into the wastewater collection system. Any customer having connected, or permitting to be connected, such a system to a lateral sewer or a sewer main in violation of this Section, may be given notice to immediately disconnect such device or pumping system at that customer's cost, and upon failure to do so, the District may forthwith disconnect any lateral sewer from the property containing such a forbidden device or pumping system at the sewer main. The cost of such disconnection shall be a lien and charge against the property involved. No lateral sewer shall thereafter be connected to the wastewater collection system without payment of the reconnection fee to the District, and all costs and expenses of the District relative thereto and positive proof that such improper and illegal connection or device has been removed and will not thereafter be reconnected to the wastewater collection system.

E. Grease, Oil or Sand Interceptors

1. **General:** Grease, oil and sand interceptors shall be provided and installed at the sole cost and expense of the customer when, in the judgment of the District, an interceptor is necessary for the proper handling of liquid wastes containing greases, oil, or solids, or any flammable wastes, sand or other harmful ingredient which may be harmful to, cause obstruction of, or interfere with the operation of the wastewater collection system and/or wastewater treatment facility. All newly constructed or existing food service establishments shall install an approved external grease interceptor. External begin defined as outside of building and accessible without entry to business or building. Existing food service establishments shall also install an external grease interceptor. Food service establishments that do not install a grease interceptor will be subject to a higher non-compliance surcharge as provided in Appendix A. All interceptors shall be constructed in accordance with the District's Rules and Regulations as provided in Appendix B. All service drains from kitchen, food preparation, and dishwashing areas shall be connected to an interceptor. Fixtures that must be connected include, but are not limited to, scullery sinks, pot and pan sinks, dishwashing machines, soup kettles, and floor drains located in areas where materials containing grease may exist. Garbage disposals (garbage grinders) shall also be connected to an approved interceptor. All waste shall enter the interceptor through the inlet pipe only. Toilets, urinals, and similar fixtures shall not be connected to the interceptor. Upon prior approval by the District, installation of an interceptor will not be required for facilities where food is served but not cooked at the facility, and/or no equipment or utensils associated with preparation or service of cooked foods are washed at the facility.

All interceptors shall be located as to be readily available and accessible for cleaning and inspection. Grease, oil or sand interceptors shall be in an accessible location for maintenance and inspection and shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. Interceptors shall be watertight, and, if necessary, as determined by the District, gastight and vented.

2. **Maintenance and Inspection.** The responsibility of cleaning and maintaining an interceptor in efficient operating condition shall be the customer's responsibility. Grease, oil and sand interceptors shall be readily accessible and shall be inspected on a periodic basis by the District. The customer will make all repairs and improvements deemed necessary by the District during the inspection, and the customer will be responsible for all costs of such repairs and improvements. All grease, oil, and sand interceptors must be cleaned by power washing and pumped every quarter, or as approved by the District. Cost of cleaning and pump-out shall be at customer's expense. Improperly cleaned interceptors require more frequent cleaning and will result in increased costs to the customer. Cleaning shall be completed by a District approved cleaning company. The District will provide a list of approved cleaning vendors. Vendors approved for cleaning of interceptors have demonstrated their ability to clean, pump, and dispose to the satisfaction of the District. The District retains the right to inspect all interceptors during regular business hours, without prior

notice, to determine whether the interceptor is operating properly and is being adequately maintained on a regular basis. Record of maintenance shall be on approved forms and kept on the customer's premises. No chemical, thermal or bacteriological agents (enzymes) may be used to alter the contents of the interceptor without prior written approval of the District. In the event the customer is in violation of these requirements, the customer shall be liable for payment of a penalty in an amount as set forth in Appendix A for the violation of these Rules and Regulations. The cost of the District's inspections shall be billed directly by the District to the customer at the rate set forth in Appendix A and, in addition, shall include all other costs incurred by the District in inspecting the interceptor.

- F. **Swimming Pools.** No public or private swimming pool shall be connected to the wastewater collection system without first obtaining a special permit from the District. Such permit shall define and specify the hours during which water may be discharged from such pools into the wastewater collection system and prescribe the fees and charges thereof.

3.2 AUTHORIZED USERS

Wastewater collection service will be furnished subject to the District's Rules and Regulations and only to properties within the District's boundaries. An exception to this rule requires a special service contract approved by the District.

All new and existing buildings with plumbing facilities shall connect to the District's system when a District sewer main or interceptor sewer is capable of furnishing service, is available within four hundred (400) feet of the property and is required to meet the requirements and specifications of applicable local and state laws. All extensions and connections shall be in accordance with the practices and conditions hereinafter contained and as shown in Detail 1000 – Example Sewer System Extension. Customers will be required to plan, design, construct and finance sewer system extensions as required to serve a customer's property. A sewer main extension will be required to be constructed to the customer's property line if more than one lateral sewer is proposed to be connected to the sewer main at the time of connection or in the future.

If one lateral sewer will be connected to the sewer main, a sewer system main extension will be required if the distance to the sewer main that a customer will connect to (measured from the intersection of the customer property boundary and lateral location on the customers property boundary and the location of lateral connection to the District's sewer main – 'L') is greater than the neighboring property owner's property boundary length (as measured along the neighbors property boundary, between the customer's property and the lateral connection to the District's sewer main – 'P'). If the distance to the sewer main that the customer will connect to 'L' is greater than the distance of the neighboring property boundary 'P' and only one sewer lateral will be connected at the time of connection or in the future, than the customer shall extend the sewer main to within half the distance of the neighboring property boundary '1/2 P' (as measured from the intersection of the customer property boundary and lateral location on the customers property boundary and the extended sewer main). The maximum length of "L" shall be 200-feet.

No new buildings with plumbing facilities of any nature shall be constructed within the District's service area unless connected to the wastewater collection system, except that the District may permit the customer to install a temporary private sewage disposal system, providing that the customer's situation meets all four of the following conditions:

- A. Extension to the District's wastewater collection system would create an unreasonable financial burden on the customer.
- B. A private sewage disposal system is constructed meeting all County Health Department and CDPHE requirements.
- C. The customer deposits with the District the appropriate fees and charges required by these Rules and Regulations.
- D. The customer agrees by written agreement to extend a lateral sewer and completed main extensions as required to connect to the wastewater collection system at a time and/or condition agreed on between the District and customer. In any case, the customer must connect to the wastewater collection system when a sewer main or interceptor sewer is within four hundred (400) feet of a customer's property. Such connection will require no additional plant investment fee other than as provided above (unless required by change in usage).

3.3 RESPONSIBILITIES OF THE CUSTOMER

No customer shall discharge or cause to be discharged into the wastewater collection system any storm water, surface water, groundwater, roof runoff, subsurface drainage, cooling water or unpolluted industrial process water.

No customer shall discharge or cause to be discharged to the wastewater collection system, any substance which may be harmful or deleterious to the District's facilities or processes. Wastewater discharges shall conform to the requirements of these Rules and Regulations. Wastewater other than domestic wastewater shall be pretreated by the customer. Pretreatment shall be provided by the customer to the satisfaction of the District before the wastewater is allowed to enter the wastewater collection system.

Each customer shall be responsible for constructing and maintaining the entire length of their lateral sewer. A customer shall develop a plan for repair for leaks or breaks in a customer's lateral sewer within seventy-two (72) hours from discovery of a leak/break and/or notification of such conditions by the District. Leaks or breaks in the lateral sewers shall be repaired by the customer within two (2) weeks from the time of notification of such condition by the District. If satisfactory progress toward repairing the leak is not made, the District shall terminate the lateral sewer or have the lateral sewer repaired/replaced at the District's discretion. The District shall bill the customer all resulting costs thereof, including, but not limited to, tapping, permitting fees, inspection fees, legal fees, design fees, construction fees, administrative fees, and fines.

In addition to the other fees noted above, customers constructing new lateral sewers will be required to pay a permit fee as noted in Appendix A. Relocation, replacement, or repair of an existing lateral sewer that involves a connection with the sewer main will require payment of a permit fee equivalent to a new lateral sewer. Relocation, replacement, or repair of an existing

lateral sewer that does not require connection to the sewer main will require payment of a \$75.00 permit fee.

Each customer is responsible to verify compliance with all applicable Larimer County, Estes Valley Development, and Town of Estes Park Planning and Zoning Laws. Revocation of a building permit, denial of proposed property use or abandonment of construction due to non-compliance, as determined by Larimer County or the Town of Estes Park, may not be construed as entitlement to refund of fees paid to the District. Fees paid to the District may not be transferred or refunded and no adjustment appeal will be considered.

3.4 APPLICATION FOR WASTEWATER COLLECTION SERVICE

Any customer desiring wastewater collection service from the District shall apply to the District for the same. Such application for service shall be filed with the District and accompanied by the appropriate fees prior to any action to connect to the wastewater collection system. Only upon authorized approval of the application and a receipt thereafter, may a connection to the wastewater collection system be made.

Lateral sewer connections generally fall into three categories: (1) a single tap; (2) a subdivision; (3) multiple taps other than a subdivision. The procedures to be followed in each of these categories are as follows:

- A. Single Tap** - A single tap may be purchased by making application to the District at its office and obtaining a determination from the District if it is feasible, practical, and desirable to serve the property. If it is so found, the tap may be purchased by payment of the permit fee, plant investment fee and any other applicable fees, and the customer shall then make arrangements to have the lateral sewer installed by a contractor that is approved by the District. Once the lateral sewer is installed from the structure or dwelling to the line of the District, the District's sewer main shall be tapped as set forth in Appendix B. A single tap shall serve only one single family equivalent (SFE) unit.

- B. Subdivision** - In order to obtain taps for a subdivision, the customer must make formal application to the District. This application will be reviewed by the District and its technical advisors to determine if service to a particular location is feasible, practical, and desirable. This application shall include plans, signed and sealed by a Professional Engineer registered in the State of Colorado, in a form satisfactory to the District and which are detailed enough to determine the location of service required, number of taps required and physical features which may affect service. The application shall also be accompanied by payment of a technical review fee, which is set by the District. Provided the District determines that service to a particular location is feasible, practical, and desirable, the customer may be required to enter a contractual arrangement with the District and pay certain sums of money as required in the contract.

- C. Multiple Taps Other Than a Subdivision** - More than one tap may be purchased from the District if the purchase is for use on dwellings and structures which do not fall into the subdivision category. The limit on the number of taps which shall be sold to any given location without that location being deemed a subdivision shall be made by the District. Purchase of these taps shall be handled the same as that of a single tap.

For all applications for service:

1. All plan sets which provide for foundation construction shall address cross connection controls, including sizes, types and locations, and shall have the following disclaimer note placed on the cover sheet immediately adjacent to the District approval block: "The Upper Thompson Sanitation District does not assume any ownership, liability or maintenance responsibility for the foundation subdrains".
2. A diagram of the lateral sewer connection location shall be included in each application for service. Should any information disclosed by the customer making the application prove at any time to be false, or should such customer omit any information, the District shall have the right to: (1) reassess the plant investment fees originally charged at the rate current at the time discovery is made by the District of the false or omitted information; (2) disconnect the customer from the wastewater collection system; (3) back-charge the customer for service fees that may be due and owing; and/or (4) charge any additional fees or penalties specified in these Rules and Regulations. Any reassessment shall be due and payable, together with any penalties or additional fees charged, and together with interest at the maximum legal rate on the entire balance, upon and from the date of the original application.
3. If a private sewage disposal system is used, a diagram and design calculations for the system shall be included. Approval from the County Health Department and CDPHE shall be obtained and included.

3.5 DENIAL OF APPLICATION

The District reserves the right to deny an application for service when, in the opinion of the District, the service applied for would create an excessive seasonal, or other excessive demand on the wastewater collection system. Denial may also be based upon an unresolved obligation between the District and the customer, inadequate documentation of easements for lateral sewers that serve the property, and/or a review of the specific circumstances of the application by the District.

3.6 CANCELLATION OF APPLICATION

For any violation of these Rules and Regulations, the District reserves the right to revoke any prior approval of an application before wastewater collection service has been provided, and thereafter.

3.7 MOVED OR DESTROYED BUILDINGS

When buildings are moved or destroyed, the original lateral sewer connection authorization shall terminate and no credit shall be given for plant investment fees paid previously with respect to said building. However, the original lateral sewer connection shall remain in good standing, provided that uninterrupted payment of the District's minimum service charge is made. If payment of the minimum service charge ceases for any reason, said lateral sewer connection shall be in violation of these Rules and Regulations and the lateral sewer connection shall be revoked. Non-payment within thirty (30) days of the billing shall be considered cessation of payment of the minimum service charge. If the original lateral sewer connection for the building remains in good standing, additional plant investment fees shall not be required, unless a change

in equipment, service or use occurs, which requires additional plant investment fees as specified in these Rules and Regulations.

3.8 CHANGE IN CUSTOMER'S EQUIPMENT, SERVICE OR USE OF PROPERTY

No change in the customer's equipment, service or use of property served shall be made without the prior notification and written approval of the District. Any such change which, in the opinion of the District, will increase the burden placed on the wastewater collection system by the customer shall require a redetermination of the plant investment fees and service charge, and a payment by the customer of any additional plant investment fees and service charge resulting from the change in use. Plant investment fees previously paid with respect to the property in question shall be credited against the redetermined plant investment fees so that only the unpaid portion of any redetermined plant investment fees shall be due; however, if the redeterminations result in a conclusion that the plant investment fees, if assessed currently, would be in an amount less than that originally paid, the customer shall not receive a refund or credit of any kind.

A. Unauthorized Connection Fee. Any violation of Section 3.8 shall result in the assessment of an unauthorized connection fee, and the District shall take those steps authorized by these Rules and Regulations and Colorado law regarding the collection of said fee.

B. Changes to Equipment, Service or Use of Property. Any customer believed to have changed the equipment, service or use of property connected to the wastewater collection system in violation of this Section shall be notified of the District's intent to assess additional plant investment fees, service charges or unauthorized connection fee, and shall be afforded ten (10) business days in which to respond to the District's notice. Failure to respond as required herein within the ten (10) business day period shall be deemed to establish such change of use, and such additional plant investment fees, service charges and unauthorized connection fee as are deemed appropriate by the District shall be assessed against the property in question and shall be collected as provided under these Rules and Regulations and Colorado law. To defer the collection of said fees, and as a prerequisite to the right to a hearing as provided for and described in Section 5 of these Rules and Regulations, any response by the customer, in addition to being provided within ten (10) business days, shall include permission by the customer to make such inspection of the property in question as the District deems necessary to clearly establish the nature of the equipment, service and use of the property.

3.9 UNAUTHORIZED CONNECTIONS AND FEES

No customer within the service area shall be allowed to connect to the wastewater collection and treatment systems, or to enlarge or to otherwise change equipment, service or use of property, without the prior payment of plant investment fees, approval of application for service, and adequate supervision and inspection of the lateral sewer and lateral sewer connection construction by the District. Any such connection, enlargement or change shall be deemed an unauthorized connection. Upon the discovery of an unauthorized connection, the then-current plant investment fees shall become immediately due and payable, and the property shall automatically be assessed an unauthorized connection fee. The District shall send written notice to the customer(s) of the property benefited by such unauthorized connections stating that an

unauthorized connection has been made between the customer's property and the wastewater collection system. The customer shall then have ten (10) business days from the date of the notice to pay the then-current plant investment fees. If that fee is paid within the ten (10) business day period, the unauthorized connection fee shall be waived by the District. In the event the then-current plant investment fees are not paid within the ten (10) business day period, a notice of revocation of service to the property shall be sent and the lateral sewer shall be disconnected pursuant to Section 4 of these Rules and Regulations. Once discontinued, service may be returned to the property only upon receipt by the District of both the unauthorized connection fee and the then-current plant investment fees, and any reconnection fee, service charges or any other charges that may be due.

3.10 REVOCATION OF TAP RIGHTS

The right to connect to the wastewater collection system for service shall be revocable by the District upon non-payment of any District fees owed to the District and remaining unpaid for a period of ninety (90) days, whether or not the customer owning the right to connect has actually connected to the wastewater collection system. Such revocations shall be conducted in accordance with Section 4. If the right to connect to the wastewater collection system is revoked, the customer may reacquire such right only by reapplying for service in accordance with these Rules and Regulations and after paying all fees due and owing the District the then-current plant investment fees charged by the District under these Rules and Regulations.

3.11 DISCONNECTION AND RECONNECTION OF SERVICE

All disconnection and reconnection to the wastewater collection system of a lateral sewer that has been connected to the wastewater collection and treatment systems pursuant to a permit issued by the District shall be performed only by the District, regardless of the ownership of the lateral sewer and regardless of the circumstances regarding the disconnection or reconnection. The District shall assess a reconnection fee in an amount as set forth in Appendix A for any such disconnection and reconnection performed, except there shall be no charge when the service is performed for customers requiring maintenance to their lateral sewer. Except for those disconnections and reconnections specifically provided for by these Rules and Regulations, the District will provide this service only for: (1) a lateral sewer connection for new construction, one time prior to the occupancy of the customer served, and (2) for customers requiring service to be disconnected for maintenance of a lateral sewer. All other requests for a disconnection and/or reconnection of District service may be granted or denied by the District after a review of the specific circumstances of the situation. Violation of this Section and/or failure to pay the reconnection fee shall result in an assessment against the property served of a penalty as set forth in Appendix A, in addition to the reconnection fee, and in addition to the penalties provided for unauthorized tampering with the wastewater collection system.

3.12 FAILURE TO CONNECT

The customer's right to connect to the wastewater collection system for new lateral connections shall terminate and any plant investment fees paid shall be forfeited if the lateral sewer connection is not made within twelve (12) months of the payment of the plant investment fees unless the customer begins to pay and continues to pay the standby fees imposed for that lateral

sewer connection for each billing period, commencing with the first billing cycle after the twelve (12) month period has passed.

3.13 LATERAL SEWER CONNECTIONS

If approved sewer mains are to be constructed within subdivisions, stub-outs shall be made from under the streets so that subsequent cutting of the streets is not required. These stub-outs shall be plugged, located, inspected and approved in writing by the District. An as-built drawing or map in a form satisfactory to the District shall be provided to the District. Actual costs incurred by the District for such inspections shall be reimbursed by the customer.

Each lateral sewer shall be connected to the District's sewer mains separately using individually purchased lateral sewer connections. Connecting multiple lateral sewers to one lateral sewer connection is forbidden. No lateral sewer connections shall be made during non-business hours without the specific, written approval of the District. Lateral sewer connections shall conform to Appendix B of these Rules and Regulations. The District will not approve or allow lateral sewer connections to be transferred from one location or dwelling to another.

3.14 COMMENCEMENT OF SERVICE CHARGES

Periodic service charges as provided in Section 7 and Appendix A become due and payable when the customer purchases a lateral sewer connection.

3.15 TEMPORARY USE

A customer may seek a temporary connection to the wastewater collection system by leasing capacity in lieu of paying a plant investment fee. This approach is intended for temporary situations with prior approval of the District. Leased capacity, when approved, will be determined at the time of agreement. This leased capacity charge is in addition to the regular service charge.

3.16 VOLUNTARY TERMINATION OF WASTEWATER COLLECTION SERVICE

Any customer may request a voluntary termination of wastewater collection service and request the District void the lateral sewer connection providing such service. Any such action will be at the discretion of the District and in accordance with the Rules and Regulations of the District, the County Health Department and the Colorado Department of Public Health and Environment. If such a termination is accepted, the following conditions shall apply:

- A. All current and past due fees and charges shall be paid by the customer.
- B. The plant investment fees and permit fees paid are not refundable to the customer.
- C. Any connection to the system that is to be voided or terminated shall be capped at the sole expense of the customer. All work relating to the disconnection and capping shall be inspected by the District. Failure of the customer to comply with this action will subject the customer to penalties and additional costs incurred to excavate the tap for inspection by the District as provided for in of these Rules and Regulations.
- D. If the customer desires to reconnect the "voided" lateral sewer connection to the system at some point following the disconnection, the customer shall make a formal application

with the District and remit to the District all applicable fees in effect at the time the reconnection application is requested.

3.17 UNAUTHORIZED TAMPERING

- A. No unauthorized persons shall uncover, use, alter, disturb or make any connection with, or opening onto, the wastewater collection system without first obtaining a permit from the District. Unauthorized uses of the wastewater collection system include, but are not limited to, an unauthorized disconnection or reconnection of wastewater collection service, unauthorized recreational vehicle (RV) dumping, and unauthorized vault waste dumping.
- B. No customer shall maliciously, willfully or negligently, break, damage, destroy, uncover, deface or tamper with any portion of the wastewater collection system.
- C. Any customer who violates the provisions of this Section shall be prosecuted to the full extent of Colorado law and the customer shall be assessed an unauthorized tampering/use fee as the same is set forth in Appendix A.

3.18 ENFORCEMENT

- A. The District will initiate procedures against the customer responsible for the grease, sand or oil interceptor to obtain compliance with these Rules and Regulations, if the District discovers the grease, sand or oil interceptor is not properly maintained.
- B. Discharge of wastewater in any manner in violation of these Rules and Regulations shall be corrected or abated as directed by the District.
- C. Whenever a discharge of wastewater or the operation of a grease, sand or oil interceptor is in violation of the provisions of these Rules and Regulations or otherwise causes or threatens to cause a condition of contamination, pollution or nuisance, the District will issue written notice to correct the practice within seventy-two (72) hours of the notice. If the practice is not corrected within such time, the District may notify CDPHE and effect disconnection of the lateral sewer from the wastewater collection system until such time as the District has received adequate assurances that any and all violations of the Rules and Regulations will cease and will not occur in the future. In addition, all of the costs of the aforementioned proceedings shall be charged against the property and, until paid shall constitute a perpetual lien against the property.
- D. When a discharge of wastes causes an obstruction, damage or any other impairment to the District's facilities, the District may assess a charge against the customer for the work required to clean or repair the facility and add such charge to the customer's service charge, and the District shall have such remedies for the collection of such costs as it has for the collection of service charges, which until paid shall constitute a perpetual lien against the property.
- E. In order to affect its powers, the District may enter upon private property for the purpose of inspection and maintenance of sanitary and waste disposal facilities and may terminate service to property in which a violation of any of these Rules and Regulations is found to exist pursuant to the procedures set forth herein.
- F. The prohibitions against unauthorized discharge of wastes proscribed in this Section include the dumping or pumping of wastes directly into the District's manholes without the prior written consent of the District.

3.19 ACCEPTANCE OF BIOSOLIDS

- A. The District will receive biosolids from acceptable sources with prior approval from the District. The District's fee for acceptance of biosolids shall be in accordance with Appendix A.
- B. The cost of testing of biosolids shall be paid by the generator in accordance with Appendix A. Biosolids shall be tested for the following parameters:
 - 1. BOD₅
 - 2. CBOD
 - 3. TSS
 - 4. Oil and Grease
 - 5. pH
 - 6. Alkalinity
- C. The District may not accept biosolids for any reason at any time.
- D. Biosolids shall be discharged to the District's wastewater treatment facility at a point to be determined by the District at the time of discharge.
- E. The generator of biosolids shall bear all hauling, testing, disposal, transfer, pumping and miscellaneous costs.

3.20 WASTE HAULERS

- A. Waste haulers shall pay for and obtain a permit from the District prior to discharge to the District sewer system or wastewater treatment facility. The permit is valid for one year from date of issuance.
- B. The waste hauler shall bear all hauling, testing, disposal, transfer, pumping and miscellaneous costs.
- C. The waste haulers shall provide documentation of the source of the waste including the different sources of residential wastes that may be combined into one load.
- D. Waste haulers shall provide documentation of liability insurance, with minimum coverage of \$1,000,000.00 commercial general liability.
- E. Waste haulers shall provide photocopies of driver's licenses for all employees that discharge to the District.
- F. Waste haulers shall have a letter of credit payable to the Upper Thompson Sanitation District for the amount of \$500.00 on file at the District office. The letter of credit will provide reimbursement to the District for repair of District facilities damaged by a waste hauler or for any unpaid charges owed to the District by the waste hauler.
- G. All waste haulers must provide safety data sheets (SDS) copies of all the chemicals used with hauled portable toilet waste.
- H. The District will confirm the quantity of material discharged to the District and will determine the total hauled waste charge.
- I. The District's fee for acceptance of hauled wastes shall be in accordance with Appendix A.
- J. The cost of testing of hauled wastes shall be paid by the generator in accordance with Appendix A. Hauled wastes shall be tested for the following parameters:
 - 1. BOD₅
 - 2. CBOD
 - 3. TSS
 - 4. Oil and Grease

- 5. pH
- 6. Alkalinity
- K. The District will bill the waste hauler for all charges with payment due no later than 30 days following the date of billing. If the waste hauler's account is delinquent, the District will cash the letter of credit and waste hauler discharge privileges will be suspended.
- L. The District may not accept hauled wastes for any reason at any time.
- M. The District will only accept residential or domestic hauled wastes from locations within the Big Thompson Watershed. A copy of the Big Thompson Watershed Boundary is included in Appendix J.
- N. Prior approval is required for all hauled loads originating from non-residential establishments. The District may accept wastes from non-residential, industrial, or commercial establishments within the Big Thompson Watershed if the waste hauler demonstrates that the waste is domestic and does not contain process or industrial wastewater. Steps for approval of domestic waste loads from industrial or commercial sources are as follows:
 - The District must be notified at least two (2) weeks prior to the desired hauling date by contacting the District Plant Supervisor at (970) 586-5389. The generator of the waste will be required to complete a wastewater questionnaire which will provide information to the District on the industrial or commercial process at the waste source and waste generation and disposal methods.
 - The District will review the information submitted with the questionnaire and determine if further information, which may include a facility inspection and waste sample, is required. If a sample and an inspection are considered necessary, a laboratory fee will be added to the basic discharge fee to recover analytical costs incurred by the District.
 - The District's fee for acceptance of non-residential waste shall be determined by the District prior to discharge.
 - The District will notify the waste hauler of the decision and fee at least one (1) week in advance of the desired hauling date.
 - Different sources and types of wastes may not be combined into one load.
 - Oil/Grease trap wastes and sand trap wastes are prohibited.
- O. Waste hauler agrees to follow District discharge requirements and procedures including:
 - Sampling will be conducted on a periodic basis and at any time.
 - The discharge of hauled waste will be conducted Monday through Friday, 7:00 am to 3:30 pm, excluding District holidays.
 - Hauled waste loads may be accepted on Saturday by appointment and for special circumstances only.
 - Waste haulers shall report all malfunctions of equipment or facility damage immediately to the District.
 - Waste haulers and their employees shall not be under the influence of illegal drugs or alcohol while on District property.
- P. The waste hauler procedures for use of the dump station at the wastewater treatment facility include:
 - Hauled wastes shall be discharged to the District's wastewater treatment facility at a location and flow rate to be determined by the District at the time of discharge.
 - Complete the waste ticket completely and legibly at the sign-in area.

- Inspect the receiving station and report any damage or spills to the District prior to discharge of waste.
 - Carefully back into the dump station ensuring that the truck discharge is well within the containment area.
 - Allow District staff to collect waste samples as necessary.
 - Connect waste discharge hose to hauler tank and slowly open hauler tank discharge valve.
 - When discharge is completed unhook hose, clean out hose inside with spray water, and hose any spills to the drain.
 - Hosing dirt or mud off the hauler's truck while at the wastewater treatment facility is prohibited.
 - District costs for removal of sand and mud from the containment area or drain system will be charged to the waste hauler that is responsible for the dirt and mud accumulation.
 - Check that the discharge hose is properly stowed; inspect site for further clean up; and if acceptable, carefully pull out of dump station.
- Q. All waste haulers are expected to understand this policy and fulfill all requirements. All forms and records shall be completed accurately and legibly. Falsification of any records or log sheets or the discharge of any unacceptable wastes, e.g., industrial wastes, sand or grease trap wastes, hauled wastes from outside of Big Thompson Watershed, etc. will result in the immediate revocation of discharge privileges. Failure to comply with any section of this policy shall be grounds for revocation of discharge privileges.
- R. This policy may be revised by the District as deemed necessary.

SECTION 4 REVOCATION OF SERVICE

4.1 FOR VIOLATION OF RULES AND REGULATIONS

The District shall have the right to revoke service to any property for violation of these Rules and Regulations in accordance with the procedure set forth in this Section.

4.2 FOR NON-PAYMENT OF FEES

- A. Service shall be revocable by the District upon nonpayment of any valid fees or charges owing to the District. The following procedure will be used for non-metered and metered customer non-payment of fees:
- **1st Notice** - If at any time a customer's account becomes 15 calendar days past the due date, the District shall prepare and deliver a past due statement (bill card) stating that finance charges will begin to be applied at 1% per month.
 - **2nd Notice** - If at any time a customer's account becomes 30 calendar days past the due date, the District shall prepare and deliver a statement with finance charges applied and Disconnect Notice with a disconnect date of 62 calendar days from the due date.
 - **3rd Notice** - If at any time a customer's account becomes 45 calendar days past the due date, the District shall prepare and deliver via certified mail a statement with finance charges applied and Disconnect Notice with a disconnect date of 62 calendar days from the due date.
 - **4th Notice** - Five (5) calendar days prior to a customer's account becoming 62 calendar days past the due date, the District will post a disconnect notice on the customer's door and stake the customer's property showing where the sewer line will be disconnected. The District will also notify Larimer County of the date for disconnection of the customer.
 - If at any time, a customer's account becomes 62 calendar days past the due date, the District will disconnect the customer from the sanitary sewer system and hand deliver or post a statement on the customer's property that the property has been disconnected.
- B. Each of the notices described above is provided in Appendix F.
- C. The District shall impose a reconnection fee and the customer will be required to pay such fee, in addition to all other fees and charges owing, before service will be restored.
- D. There exists the opportunity for a hearing in accordance with Section 5 of these Rules and Regulations for non-payment of fees.

4.3 PROCEDURE

Prior to the revocation of service by the District, for reasons other than non-payment of fees, the District shall prepare and deliver via certified mail to the customer a notice stating:

- A. the reason for revocation of service;
- B. that the customer has the right to contact the District regarding the revocation;
- C. the manner in which the District may be contacted;
- D. that there exists the opportunity for a hearing in accordance with Section 5 of these Rules and Regulations; and
- E. that the customer's service will be disconnected ten (10) calendar days from the date of the notice unless the reason for revocation is resolved in a manner satisfactory to the District.

4.4 EMERGENCY

In the event of an emergency, the District may terminate or suspend service without prior notice; provided, however, the District shall provide subsequent notice of the termination or suspension which states the reason for such action.

SECTION 5 HEARING AND APPEAL PROCEDURES

5.1 APPLICATION

The hearing and appeal procedures established by this Section shall apply to all complaints concerning the interpretation, application, or enforcement of the Rules and Regulations of the District, and contracts related thereto, as they now exist or may hereafter be amended. The hearing and appeal procedures established by this Section shall not apply to the following complaints:

- A. Complaints that arise with regard to personnel matters. These complaints shall be governed exclusively by the District's personnel rules.
- B. Any other complaint which does not concern the interpretation, application, or enforcement of the Rules and Regulations of the District, or contracts related thereto.

5.2 INITIAL COMPLAINT RESOLUTION

Complaints concerning the interpretation, application, or enforcement of Rules and Regulations must first be presented to the District, or a designated representative. Upon receipt of a complaint, the District or the designated representative shall make a full and complete review of the allegations contained in the complaint, and shall take such action and/or make such determination as may be warranted. The complainant shall be notified of the action or determination by mail within twenty (20) days after receipt of the complaint.

5.3 HEARING

In the event the decision of the District or the designated representative is deemed unsatisfactory by the complainant, a written request for appeal and a hearing may be submitted to the Board of Directors within twenty (20) days from the date written notice of the action or determination of the District or the designated representative was mailed. The request for an appeal and a hearing shall set forth, with specificity, the facts or exhibits upon which the complainant relies and shall contain a brief statement of the complainant's reasons for the appeal. The District or the designated representative shall submit information concerning the action or determination made in response to the initial complaint and may submit additional written comments that further clarify such action or determination in response to the request for appeal and a hearing.

If receipt of the request for appeal and a hearing is timely and if all other prerequisites prescribed by these Rules and Regulations have been met, the Board of Directors shall conduct a hearing at the District's convenience. Every effort will be made to conduct the hearing within a reasonable period after the receipt of the request, but no longer than ninety (90) days. The hearing shall be conducted in accordance with and subject to all pertinent provisions of these Rules and Regulations.

5.4 CONDUCT OF HEARING

At the hearing, the Chairman of the Board of Directors or appointed hearing officer shall preside. The complainant and representatives of the District shall be permitted to appear in person, and the complainant may be represented by any person of his choice, including legal counsel.

The complainant or his representative and the District representatives shall have the right to present evidence and arguments; the right to cross examine any person; and the right to oppose any testimony or statement that may be relied upon in support of or in opposition to the matter complained. The Chairman of the Board of Directors or hearing officer may receive and consider any evidence which has probative value commonly accepted by reasonable and prudent persons in the conduct of their affairs. The Chairman of the Board of Directors or hearing officer or any member of the Board of Directors may ask questions of the complainant or any representative in order to clarify further an issue relevant to the complaint.

The Board of Directors shall determine whether clear and convincing grounds exist to alter, amend, defer, or cancel the interpretation, application, and/or enforcement of the Rules and Regulations that are the subject of the complaint. The decision shall be based upon evidence presented at the hearing. The burden of showing that the required grounds exist to alter, amend, defer, or cancel the action shall be upon the complainant.

5.5 FINDINGS

Subsequent to the hearing, the Board of Directors shall make written findings and an order disposing of the matter and shall mail the findings and order to the complainant no later than twenty (20) days after the date of the hearing. The Board of Directors' findings and order shall be final.

5.6 NOTICE

A complainant shall be given notice of any hearing before the Board of Directors by mail at least ten (10) days prior to the date of the hearing, unless the complainant requests or agrees to a hearing in less time, or to a waiver of formal notice. Notice is deemed given when placed in regular, postage prepaid U.S. mail.

SECTION 6 SERVICE EXTENSION POLICIES

6.1 GENERAL POLICY

New wastewater collection service will be furnished only after all of the following conditions are satisfied:

- A. The proposed area for which service is requested is included within the service area and District boundary.
- B. All local facilities needed to serve the proposed area are in place and have had design and construction approval by the District.
- C. The lateral sewers for the proposed area have been installed in accordance with District standards and their construction inspected and approved by the District. No private sewage disposal systems shall be planned or constructed within the boundaries of the service area without the express written consent of the District, the County, and CDPHE.
- D. The applicable permits have been applied for and approved and all required plant investment fees and plan review fees have been paid.

6.2 REGIONAL FACILITIES

Customers desiring service to new areas within the service area shall keep the District informed and provide adequate lead time to permit the reasonable construction of any needed regional facilities. The District may require financial commitments from customers in order to incur the expense of planning and constructing required regional facilities. Subject to the availability of funds, a determination of economic feasibility by the District, and a determination by the District that the best interests of the District is thereby served, the District will construct, on such terms and conditions as it deems appropriate, the regional facilities.

6.3 LOCAL FACILITIES

- A. Ownership.** Unless specifically exempted by the District in writing, lateral sewers located within the service area shall be owned and maintained by the customer. The District's ownership ends and the customer's ownership starts at the location where the lateral sewer connection is made into a sewer main or interceptor sewer.
- B. Responsibility for Construction and Costs.** As set forth in Section 2.2.B, it is the customer's responsibility to finance, design and construct all local facilities. Such local facilities shall be constructed in accordance with plans and specifications approved by the District, and in accordance with minimum standards adopted by the District. The customers shall pay the actual cost of all local facilities.
- C. Line Sizing.** Local facilities shall be sized adequately to serve the development tract for which they are designed. Where the local facilities also have a transmission function serving areas outside of the subject tract, as determined by the customer, then the District may require that the local facilities be oversized. In no case shall sewer mains of eight-inch (8") diameter or less be considered as having a transmission function.

D. Preliminary Design Procedures. Systems planning may be accomplished by the District or by a Professional Engineer registered in the State of Colorado, at the customer's option. All preliminary plans and final designs must be approved by the District. In all cases, the District shall perform the prescribed inspection services. After preliminary review and approval of the design by the District, the customer may proceed with final design. Normally, during the preliminary design phase, oversize requirements, if any, will be established.

E. Pre-Application Meeting. Reserved.

F. Application and Deposit. An application for service shall be submitted to the District along with an initial deposit, to cover the costs incurred by the District in association with the review of the development project. The deposit shall be held by the District in a non-interest bearing escrow account. The amount of this initial deposit is provided in Appendix A. The District shall have the right and authority to make disbursements from said escrow account at its sole discretion to cover the District's costs for planning and engineering review services, attorney and other consultant fees, and other costs and expenses incurred with regard to the application. Any balance remaining in the escrow account following approval, denial or withdrawal of the application, shall be returned to the customer without interest. In the event that the initial deposit is exhausted before final disposition of the application, the customer shall make a supplemental deposit to the escrow account to cover future costs and expenses resulting from the application. Failure to make such necessary supplemental deposits shall cause the application review process to cease until the required deposits are made. The District, upon good cause shown to the District's satisfaction, may reduce the amount of the initial deposit; however, the customer shall remain responsible for the actual costs incurred by the District associated with the application.

G. Easements/Rights-of-Way. All sewer mains and interceptor sewers shall be installed in trenches containing no other conduits. The alignment and depth of such installations shall be determined by the District. The topography and alignment of such rights-of-way shall be suitable for the installation of lateral sewers, sewer mains and interceptor sewers as determined by the District. Preliminary and final planning shall be such that adequate space and easement reservations for sewer mains and interceptor sewers shall be made permanently available to the District without charge, as approved by the District. Easements shall be dedicated for District materials and District use only. Easements shall not be shared with other utilities.

The District requires immediate access to District easements and rights-of-way for maintenance. Building structures (including buildings, sheds, garages, and other structures), landscaping (including timbers, trees, shrubs, boulders, rocks, and other features), storage (including materials, equipment, and snow), and impounding of water is not permitted within District easements and rights-of-way. Fences located in District easements and rights-of-way shall be constructed to allow for immediate District access for maintenance. The District will attempt to notify customers/property owners prior to work completed in easements and rights-of-way that is planned in advance. An attempt to

notify customers/property owners by the District may not be provided in advance of emergency work completed in easements and rights-of-way. All costs associated with the removal, repair, and/or relocation of non-District appurtenances located in a District easement, whether for planned or emergency work, will be the sole responsibility of the customer and/or property owner.

H. Final Design. The application and final design documents will be furnished to the District for review and approval. The submittal shall include construction drawings, specifications and other contract documents. These documents shall be prepared by a Professional Engineer registered in the State of Colorado and acceptable to the District. In all cases, any contract documents must be reviewed and approved by the District. Plan and profile drawings shall be on a horizontal scale one inch equals forty feet (1"=40') (other scales may be accepted, as determined by the District). All elevations must be United States Geographical Survey datum. Where practical, elevations of existing District facilities shall be field verified in the final design. Plans and specifications must include the provisions included in Appendix B with other detailed provisions as required by good engineering practice, all subject to the District's approval.

Designs for service extensions shall be submitted to the District for review at least thirty (30) days before approval is required. Plans, specifications and easements submitted for District approval shall not be considered until they are complete and have been approved by a Professional Engineer registered in the State of Colorado.

Design approvals are valid for twelve (12) months from the date of District approval unless otherwise specifically noted in the approval. If construction is not substantially complete by that time, resubmittal of the plans may be required and new construction may not be initiated without the District's specific approval.

I. Construction Phase. The customer shall construct service extensions in strict accordance with the approved design. Contractor changes to design and materials that were previously submitted and approved in the final design submittal shall be resubmitted to the District for review and approval prior to start of the construction. The District will inspect the construction to assure good quality construction and installation materials and practices in general conformity with the approved plans and specifications. The District will not handle, nor be responsible for, other construction phase inspection related services (e.g., staking the easement and/or lateral sewers, sewer mains and interceptor sewers locations, measuring quantities, preparing pay estimates, and administrative or management-type relations with the contractor), unless a specific contract for such services is executed between the District and the customer. The customer shall schedule a pre-construction conference with the District prior to construction. The customer shall notify the District at least five (5) business days prior to beginning construction, and thereafter shall keep the District informed of the construction schedule. No work may be covered, hidden or completed without the District's presence and approval. Any District time or expense caused by the customer's contractor failing to work according to the proposed schedule shall be charged to the project as part of the actual cost.

Construction staking shall be completed prior to the installation of the lateral sewers, sewer mains and interceptor sewers. All staking shall be maintained throughout the installation of lateral sewers, sewer mains and interceptor sewers. Staking shall include easement or rights-of-way stakes and cut/offset stakes (fifty feet (50') maximum spacing unless otherwise approved).

- J. As-Built Drawings.** Accurate "as-built" drawings showing adequate ties to physical facilities shall be provided at the completion of work by the customer's engineer. The District shall be provided with: (1) a reproducible set of "as-built" drawings on mylar which may be the original tracings or photographic reproducibles and (2) a set of the "as-built" drawings in a digital format. As-built drawings shall furnish information in a manner approved by the District.
- K. GIS Data.** Accurate GIS database information shall be provided including northing, easting, and vertical elevation of each surface feature installed (manholes, clean-outs, etc.); size, material, slope, elevations, and date installed (manholes, pipes, clean-outs, laterals, etc.); and acceptable coordinate system for all provided information. GIS data shall be furnished in a manner approved by the District.
- L. Maintenance.** The customer shall be responsible for operating and maintaining all lateral sewers. The District shall be responsible for operating and maintaining sewer mains and interceptor sewers which have been completed, finally accepted by and deeded or dedicated to the District, except that the customer shall provide for a two (2) year warranty period, beginning at the time of preliminary acceptance by the District.

6.4 PERMITS REQUIRED

The right to discharge wastewater through the wastewater collections system shall exist only under a permit, and no physical connection may be made or modified to any such facilities or to any privately-owned or publicly-owned extension thereof for any purpose unless a permit shall have first been obtained authorizing the use for which such a connection is to be made. Notwithstanding the issuance of a permit, the District reserves the full power and authority to determine all matters in connection with the discharge of wastes into the wastewater collection system.

- A. Separate Permits.** No customer shall allow discharge of wastes generated from offsite property to a lateral sewer located on his property. A separate permit is required for each and every building discharging wastewater. The lateral sewers to any structure served by the District must be independent of the lateral sewers to any other structure, except where the structures involved comprise an undivided unit with no potential for separate ownership.
- B. Increased Service for Existing Customers.**
 - 1. **Wastewater Demand.** Any customer expanding his building or otherwise increasing wastewater flows so that the number of SFE's will be increased, must apply for a modified permit, whether or not the actual lateral sewer size is increased.

2. **Increased Plant Investment Fees.** In those cases where the District determines that there will be an increase in demand, the customer shall pay incremental plant investment fees at the rate in effect at the time the modified permit is issued. Incremental plant investment fees shall be computed by assessing the current plant investment fees for the new usage, minus the current plant investment fees applicable for the previous usage.

C. Transfer of Permits. Permits attach to the designated premises only and may not be sold separate from the premises. Permits are not affected by changes in the ownership of the permitted premises and are usable only in accordance with the terms of the permit. Neither permits nor the associated plant investment fees are transferable to other properties.

6.5 PERMIT ISSUANCE

A permit may only be issued under the following conditions:

A. Application. The customer or his agent shall submit a signed, written application for service to the District which shall contain the following information:

1. A description of the premises to be served under the permit by reference to parcel number, land survey, or by designation of lot and block, or other legal description adequate to define the area to be served by convenient references.
2. A description of the building, or buildings, to be constructed and their purpose. If the buildings are to be used for commercial or industrial purposes (any use other than domestic residential) then the customer shall furnish an estimate of expected peak and average flow loads, with calculations and information as required by the District.
3. An acknowledgment and agreement by the customer that use under the permit must be as limited and defined by applicable law and these Rules and Regulations.
4. If a use is proposed which could result in high rate service loads, then the District may require that the customer submit additional information regarding load rates.

B. Payment of District Fees. Prior payment of:

1. Inspection fees
2. Plant investment fees for the appropriate number of SFE's. Normally, simultaneous payment of all applicable District fees will be required. To assure the receipt of plant investment fees on a predetermined schedule, the District may require that any customer enter into an agreement with the District prior to the issuance of any permits to connect to the wastewater collection system. The District will not issue confirmation of a commitment to serve a customer unless, under these circumstances, such an agreement is signed.

C. Payment of Permit Fees. Prior payment of permit fees which are administratively set to cover the cost of lateral sewer and lateral sewer connection inspection by the District, and for any materials furnished by the District.

D. Pre-purchase of Plant Investment Fees. A customer may pre-purchase plant investment fees pursuant to an agreement with the District. The rights derived by payment of such fees shall be as set forth in the agreement and as stated on the certificate.

SECTION 7 FEES AND CHARGES

7.1 GENERAL

The District has established plant investment fees (PIF), permit fees, service charges and other fee schedules. The current fee rates are set forth in Appendix A. These fees may be increased or decreased by the District at any time.

7.2 PERMIT FEES

Permit fees are set to cover the actual cost incurred by the District in the installation of lateral sewer connections. If multiple lateral sewer connection installations are required because of poor scheduling on the part of the contractor, the District may charge additional fees based on actual costs, hourly rates and expenses incurred.

7.3 INSPECTION FEES

Inspection fees are set to cover the actual cost incurred by the District in the inspection of lateral sewer installations and records processing for the same. If multiple inspections are required because of poor installation or poor scheduling on the part of the contractor, the District may charge additional fees based on actual costs, hourly rates and expenses incurred.

7.4 NON-METERED AND METERED FIXTURE UNIT VALUE (FUV) AND SINGLE FAMILY EQUIVALENT (SFE) UNIT SCHEDULES

For the setting of certain fees, the District has found it convenient to establish SFE schedules. The basis for this schedule is an average detached single-family residence, or its equivalent, as defined in Section 1.9. The SFE value of a non-metered customer shall be based on the summation of fixture unit values (FUV) at the customer's residence. The minimum non-metered SFE value for a customer shall be 1.00. A non-metered FUV inventory schedule and an SFE value schedule are provided in Appendix A. The minimum SFE value of a metered customer shall be 1.00. A metered SFE value schedule is provided in Appendix A. Generally, non-metered customers are non-commercial customers and metered customers are commercial customers.

7.5 PLANT INVESTMENT FEE

This is a one-time fee designed to provide recovery of capital investment attributable to the wastewater treatment facility and wastewater collection system. The plant investment fee shall be assessed based on the SFE value of the customer, using the SFE schedule and the unit rate, as provided in Appendix A. The plant investment fee shall be in addition to all other fees or charges relating to wastewater treatment and collection service. The plant investment fee shall be due at time of approval. In no case shall the plant investment fee be rebated under any circumstance.

7.6 SERVICE CHARGES

Wastewater collection and treatment system operating revenues are primarily derived from service charges. Service charges shall be based on a flat rate schedule, using the appropriate SFE value as provided in Appendix A. Other service charges shall incorporate a base charge to cover billing and a portion of fixed overhead costs.

A. High Strength Wastewater. The service charges set forth in Appendix A are based on wastewater strength similar to normal domestic wastes. For any commercial water use where high strength wastes may be expected (above 230 mg/L BOD and 230 mg/L TSS), the District reserves the right to require the installation of a sampling point, and to charge an additional high strength wastewater fee. Such additional high strength wastewater fee shall be determined by the District based on current treatment costs plus the administrative costs of sampling, testing and billing.

B. Service Charge Waiting Period.

1. Service charges for new construction and conversion of septic tanks / vaults to the sewer system will begin to be billed, when one of the following conditions are met:
 - a. on the first day of wastewater discharge to the sanitary sewer, if within one year of purchase of a PIF,
- OR**
- b. 120 days following physical lateral connection to the sanitary sewer.
 2. Service charges for remodeled, relocated, and re-allocated lateral connections will begin 90 days following purchase of the PIF.

C. Service Charge Account Billing Address.

1. Service charges for all accounts will be invoiced directly to the recorded customer account as established in the Plant Investment Fee and Tap Agreement and will be based on Larimer County and Town of Estes Park recorded property owner's name. Services charges will not be invoiced directly to renters for rental properties. Name changes are not allowed without a power of attorney (POA).

7.7 DISCONNECTION FEE

If service is to be disconnected, a disconnection fee, in the amount set forth in the fee schedule in Appendix A, will be assessed to the customer.

7.8 RECONNECTION FEE

If service is disconnected, a reconnection fee, in the amount set forth in the fee schedule in Appendix A, will be assessed to the customer. Service to the property will not be reconnected until the customer has paid the reconnection fee plus any outstanding past due charges, including unpaid disconnection fees.

7.9 SHARED FACILITY IMPROVEMENTS

In circumstances where a customer is required to construct and invest in facilities which can partially benefit future development, the District may decide to plan, design, finance, and construct the facilities at the District's expense with reimbursement of the costs from prorated fees collected from future customers. The District has no obligation to plan, design, finance, and construct the facilities at the District's expense.

- A. Adjacent Developments, Lateral Sewers, Benefited Properties, and Oversizing of Mains
If the District decides to install sewer mains in a right of way or easement bordering the customer's tract which would allow future customers to directly obtain service through the sewer main, the cost of planning, design, financing, construction, and associated costs of the sewer main will be determined following construction and the cost assigned to all current and future customers served by the facilities on a prorated basis. All current and future customers applying to make a lateral sewer connection to such sewer main shall pay the applicable prorated unit cost (in addition to plant investment and permit fees) to the District prior to making a connection.
- B. The actual cost shall be as approved by the District. In case of disputed eligibility of costs, the District's decision will be final. In case of disputed method of prorating the costs, a rational proposal shall be prepared by the District; the District's decision shall be final.
- C. Interest on prorated costs charged to future customers will be calculated using prime plus 1 ½ %. Interest charges will begin to accrue at the completion of construction through the date of future customer connection to the sewer main.

7.10 TRANSFER OF FEES

No plant investment fees paid on behalf of one property, or any portion thereof, may be transferred to any other property.

7.11 PENALTY FOR LATE PAYMENT

If at any time, a customer's account becomes over five (5) calendar days past due, the District shall have the right to assess the customer a past due charge of \$5.00. Further, the District shall have the right, in its sole discretion, to terminate service to any customer pursuant to Section 4.2 of these Rules and Regulations. If service is terminated, a reconnection fee, in the amount set forth in Appendix A, will be assessed to the customer. Service to the property will not be reconnected until the customer has paid the reconnection fee plus any outstanding past due charges. Further, the District has the right to assess to any customer who is overdue in payment of his account, all legal, court and other costs necessary to or incidental to the collection of said account.

7.12 PENALTIES FOR FORECLOSURE PROCEEDINGS

At any time it becomes necessary for the District, following efforts to collect overdue payments of any fee or charge assessed by the District under these Rules and Regulations and/or Colorado law, to initiate foreclosure proceedings as allowed by C.R.S Section 32-1-1001.1(j), the District

shall in each such case assess a foreclosure fee against the subject property in an amount as set forth in Appendix A, which fee shall be payable in full upon assessment and shall be included in the amount then being foreclosed. Payment of said foreclosure fee and any and all other fees outstanding against the subject property shall be a precondition to the resumption of service to that property.

APPENDIX A

SCHEDULE OF RATES AND FEES

A-1 PERMIT FEE. This fee is intended to cover the cost of the District's installation of the lateral sewer connection, entering the lateral sewer connection location on the District's as-built drawing set, video inspection of the completed lateral installation, and other ancillary services needed in connection with a new lateral sewer connection. If repeat inspections are required due to improper scheduling, then the District will charge additional fees based on hourly rates and expenses incurred.

PERMIT FEE SCHEDULE

LATERAL SEWER DIAMETER	PERMIT FEE
All Diameters	\$500.00 per installation, plus subject to actual time and materials
All Diameters	\$75.00 per partial repair and/or replacement of laterals, plus subject to actual time and materials

A lateral sewer connection may be made by a District-approved contractor under supervision of the District at the lateral sewer owner's expense.

A-2 PLANT INVESTMENT FEES. These fees are a one-time contribution required of new customers (or existing customers having change of use) to be used for capital investment in regional facilities.

CLASSIFICATION OF CUSTOMER	PLANT INVESTMENT FEE
All Customers	\$8,700.00 / SFE

A-3 NON-METERED FIXTURE UNIT VALUE (FUV) AND SINGLE FAMILY EQUIVALENT (SFE) SCHEDULE. A non-metered Fixture Unit Value (FUV) inventory list used to determine a non-metered customer's total FUV is provided in Table A-1, and a non-metered SFE value schedule based on the total number of FUV's is provided in Table A-2. In no case shall a non-metered customer's SFE value be less than the following:

NUMBER OF BEDROOMS	MINIMUM NUMBER OF SFE'S
Up to 3	1.00
4	1.33
5	1.66
6	2.00

**TABLE A-1
NON-METERED FIXTURE UNIT VALUE (FUV) INVENTORY SCHEDULE**

TYPE OF NON-METERED FIXTURE	FUV	QUANTITY	SUBTOTAL
New Bathroom Group Consisting of Water Closet, Lavatory and Bathtub or Shower Stall, (Tank Type Closet)	6		
Old Bathroom Group Consisting of Water Closet, Lavatory and Bathtub or Shower Stall, (Tank Type Closet)	7		
New Toilets – 1.6 gpf or Less			
Water closet, Tank Operated	3		
Water closet, Valve Operated	3		
Old Toilets – Greater than 1.6 gpf			
Water Closet, Tank Operated	4		
Water Closet, Valve Operated	4		
Automatic Clothes Washer (2" standpipe)	3		
Bar Sink	1		
Bathtub (with or without Overhead Shower)	2		
Aspersions, Affusions, and Immersion Baptismal Fonts	1		
Bidet	1		
Dishwasher, Domestic	2		
Drinking Water Fountain	1		
Hot Tub	2		
Kitchen Sink, Domestic with 1 ½" Trap	2		
Kitchen Sink, Domestic, with Food Waste Grinder, 1 ½" Trap	3		
Lavatory with 1 ¼" Trap	1		
Shower Stall, Domestic	2		
Shower (Group), per 2" Head	2		
Urinal, Pedestal	2		
Urinal, Wall Lip	2		
Mop Sink /Laundry Tub	2		
Fixtures not Listed Above (Photo Lab, Waterfall, Pool, etc.):			
Trap Size - 1 ¼"	1		
Trap Size - 1 ½"	2		
Trap Size - 2"	3		
Trap Size - 2 ½"	4		
Trap Size - 3"	6		
TOTAL OF ALL NON-METERED FUV'S =			

Notes:

1. New – Defined as toilets less than or equal to 1.6 gallons per flush (gpf)
2. Old – Defined as toilets greater than 1.6 gpf.

**TABLE A-2
NON-METERED SINGLE FAMILY EQUIVALENT (SFE) SCHEDULE**

NON-METERED FUV INVENTORY	RESIDENTIAL SFE VALUE
24	1.00
25	1.04
26	1.08
27	1.13
28	1.17
29	1.21
30	1.25
31	1.29
32	1.33
33	1.38
34	1.42
35	1.46
36	1.50
37	1.54
38	1.58
39	1.63
40	1.67
41	1.71
42	1.75
43	1.79
44	1.83
45	1.88
46	1.92
47	1.96
48	2.00

A-4 METERED SINGLE FAMILY EQUIVALENT (SFE) SCHEDULE. A metered customers SFE value is determined using Table A-3.

**TABLE A-3
METERED SINGLE FAMILY EQUIVALENT (SFE) SCHEDULE**

TYPE OF METERED CUSTOMER	METERED SFE VALUE FOR PLANT INVESTMENT FEE	METERED SFE VALUE FOR SERVICE CHARGES
Multiple Dwelling		
Apartment (per apartment)	1.00	1.00
Condominium Apartments (per apartment)	1.00	1.00
Mobile Home Park (per mobile home)	1.00	1.00

**TABLE A-3
METERED SINGLE FAMILY EQUIVALENT (SFE) SCHEDULE**

TYPE OF METERED CUSTOMER	METERED SFE VALUE FOR PLANT INVESTMENT FEE	METERED SFE VALUE FOR SERVICE CHARGES
Town House (per town home)	1.00	1.00
Motel / Hotel	1.00 per room	1.00 per room
Motel Cottage (per cottage)	1.00	1.00 per cottage
Bed and Breakfast (rented on a per room or per cabin basis, 2 person per room maximum capacity)	1.00 per room or cabin	1.00 per room or cabin
Campground and RV Park	1.00 for first site and/or RV and 0.30 additional per site and/or RV	0.30 per site and/or RV
Family Retreat Cabins / Structures (Non-residential building with multiple bedrooms – rooms rented as a unit/cabin, not individually)		
2 bedroom cabin / structure (2 bathroom maximum and 2 - 4 person maximum capacity)	1.00 per cabin / structure	1.00 per cabin / structure
3 bedroom cabin / structure (3 bathroom maximum and 7 person maximum capacity)	2.00 per cabin / structure	2.00 per cabin / structure
4 bedroom cabin / structure (4 bathroom maximum and 10 person maximum capacity)	3.00 per cabin / structure	3.00 per cabin / structure
6 bedroom cabin / structure (6 bathroom maximum and 22 person maximum capacity)	4.00 per cabin / structure	4.00 per cabin / structure

**TABLE A-3
METERED SINGLE FAMILY EQUIVALENT (SFE) SCHEDULE**

TYPE OF METERED CUSTOMER	METERED SFE VALUE FOR PLANT INVESTMENT FEE	METERED SFE VALUE FOR SERVICE CHARGES
8 bedroom cabin / structure (8 bathroom maximum and 40 person maximum capacity)	8.00 per cabin / structure	8.00 per cabin / structure
Any other Family Retreat Cabin / Structure not specifically covered above.	Shall be established on an individual basis by the District Manager.	Shall be established on an individual basis by the District Manager.
Store	1.00	1.00
Store with Living Quarters	2.00	2.00
Service Station	2.60	2.60
Car Wash – Automatic	1.00 for car wash plus 1.50 per stall	1.50 per stall
Car Wash – Do It Yourself	1.00 for car wash plus 1.00 per stall	1.00 per stall
Swimming Pools - Private	1.00 for pool plus 1.00 per 1,000 square feet of pool	1.00 per 1,000 square feet
Swimming Pools - Public	1.00 for pool plus 3.00 per 1,000 square feet of pool	3.00 per 1,000 square feet
Laundromat	1.00 for laundromat plus 0.065 per washer	1.00 per washer
Laundromat with Water-Saver Washers (30 gallons or less)	1.00 for laundromat plus 0.065 per washer	0.50 per washer
Restaurant	1.00 for restaurant and 0.015 per additional seat	0.20 per seat
Dry Service Restaurant	1.00 for restaurant and 0.009 per additional seat	0.10 per seat
Church with One Office	1.10 plus 0.33 for each additional office and/or additional 1-3 employees	1.10 plus 0.33 for each additional office and/or additional 1-3 employees
Church with One Office and Kitchen	1.50 plus 0.33 for each additional office and/or additional 1-3 employees	1.50 plus 0.33 for each additional office and/or additional 1-3 employees
Church with One Office, Kitchen and School	1.50 plus 0.33 for each additional 1-3 kids	1.50 plus 0.33 for each additional 1-3 kids
Fraternal Lodge with One Office	1.10 plus 0.33 for each additional office and/or additional 1-3 employees	1.10 plus 0.33 for each additional office and/or additional 1-3 employees
Fraternal Lodge with One	1.50 plus 0.33 for each	1.50 plus 0.33 for each

**TABLE A-3
METERED SINGLE FAMILY EQUIVALENT (SFE) SCHEDULE**

TYPE OF METERED CUSTOMER	METERED SFE VALUE FOR PLANT INVESTMENT FEE	METERED SFE VALUE FOR SERVICE CHARGES
Office and Kitchen	additional office and/or additional 1-3 employees	additional office and/or additional 1-3 employees
Fraternal Lodge with One Office, Kitchen and School	1.50 plus 0.33 for each additional 1-3 kids	1.50 plus 0.33 for each additional 1-3 kids
Bar	1.00 for bar and 0.009 per additional seat	0.02 per seat
Office	1.00 for office (1 – 8 employees) plus 0.33 per additional office and/or additional 1-3 employees	1.00 plus 0.33 per additional office and/or additional 1-3 employees
Public Restroom / Lavatory	1.00 for restroom / lavatory (< 11 employees or < 39 public visitors per day) plus 0.08 SFE per additional employee per day or 0.03 SFE per additional public visitor per day	1.00 for restroom / lavatory (< 11 employees or < 39 public visitors per day) plus 0.08 SFE per additional employee per day or 0.03 SFE per additional public visitor per day

Single Family Equivalents (SFE) shall be established on an individual basis by the District Manager for all users other than those identified in Tables A-1, A-2, and A-3. Each customer will be charged a minimum of 1 SFE for purposes of establishing fixed costs. Industrial users will be subject to the requirements of the Environmental Protection Agency as those requirements pertain to assessment of users charges and cost recovery (refer to 40 C.F.R., Part 35).

A-5 BIOSOLIDS AND WASTE HAULING CHARGES. Charges according to the following schedule are applicable for receipt and testing of biosolids and hauled wastes.

SERVICE CHARGE TYPE	UTSD CUSTOMER CHARGE	NON-UTSD CUSTOMER CHARGE
Vault Waste / Portable Toilet Waste	\$85 / 1,000 gallons	\$130 / 1,000 gallons
Septic Waste	\$190 / 1,000 gallons	\$285 / 1,000 gallons
Sewage Waste	\$55 per 1,000 gallons	\$80 per 1,000 gallons
Pit Toilet Waste	\$720 / 1,000 gallons	\$1,080 / 1,000 gallons
RV / Tour Bus Waste	\$80 / Vehicle	\$120 / Vehicle
Biosolids	\$190 / 1,000 gallons	\$285 / 1,000 gallons
Testing and Land Application Analysis	Actual Cost Plus 10%	(Actual Cost Plus 10%) X 1.5

A-6 SERVICE CHARGES. Service charges for wastewater collection and treatment services are billed quarterly.

CLASSIFICATION OF CUSTOMER	SERVICE CHARGE
All Non-Metered Customers	\$487.00 / year / SFE
All Metered Customers	\$8.66 / 1,000 gallons plus \$5.70 per Tap per month

1. High strength waste charges to be determined by the District based on estimated extra costs of treatment.

A-7 STANDBY FEES. Standby fees are billed quarterly to each customer having purchased a lateral sewer connection and having not connected to the wastewater collection and treatment systems for twelve (12) months from the date of purchase of such tap. (Note: This fee does not apply to pre-purchased lateral sewer connections where no specific commitment to serve is made by the District.)

CLASSIFICATION OF CUSTOMER	STANDBY FEE
All Customers	\$487 / year / SFE In addition, each customer shall pay the difference between the PIF per SFE charged at the time of purchase and the PIF per SFE applicable at the time of connection to the wastewater collection and treatment system.

A-8 MISCELLANEOUS FEES AND SURCHARGES.

FEE TYPE	FEE
Service Extension Application Deposit	3% of Engineer's Opinion of Probable Construction Cost or Minimum of \$1,500.00
Unauthorized Connection Fee	Twice the then-current Plant Investment Fees
Unauthorized Tampering/Use Fee	\$500.00 per incident
Reconnection Fee	\$300.00 minimum based on contractor costs, plus lien filed on the property and a release of a lien
Disconnection Fee	\$300.00 minimum based on contractor costs, plus lien filed on the property and a release of a lien
Inspection Fee	Hourly rate of \$25.00 per hour plus expenses; minimum one half hour per inspection

FEE TYPE	FEE
Formal Hearing Fee	\$100.00 per application (plus all engineering and attorney's fees)
Penalty for Violation of Rules and Regulations	\$1,500.00 per incident (in addition to all other penalties and charges)
Foreclosure Fee	\$2,000.00 per incident (plus all engineering and attorney's fees)
Transfer of Ownership	\$25.00 per terminated account
Returned Check	\$30.00 plus bank charges
Filing and Release of a Lien	\$66.00 plus publishing and legal costs
Petition for Inclusion Fees	\$500.00 plus publishing and legal costs
Petition for Exclusion Fees	\$200.00
Conversion Fees	\$150.00 per unit converted from commercial account into residential condominium accounts
Easements/Joint Use Easements Fees	\$50.00 plus \$6.00 for the first sheet and \$5.00 for each additional sheet
Sewer Jet Service	\$175.00/hour with one operator
Dump Truck Service	\$125.00/hour with one operator
TV Truck Service	\$150.00/hour with one operator
Sewer Jet and TV Truck Service	\$200.00/hour with two operators
Sewer Jet and Tank Truck Service	\$250.00/hour with two operators
4-inch Line TV Inspection for District Customers	\$100.00 per hour, minimum two hours per inspection
4-inch Line TV Inspection for non-District Customers	\$150.00 per hour, minimum two hours per inspection
Smoke Testing of Mains and Laterals for District Customers	\$100.00 per hour, minimum two hours per inspection, plus expenses
Smoke Testing of Mains and Laterals for non-District Customers	\$150.00 per hour, minimum two hours per inspection, plus expenses
Dye Testing of Mains and Laterals for District Customers	\$100.00 per hour, minimum two hours per inspection, plus expenses
Dye Testing of Mains and Laterals for non-District Customers	\$150.00 per hour, minimum two hours per inspection, plus expenses

FEE TYPE	FEE
Plan Review Fee	Current hourly District rate plus expenses; \$300.00 minimum per submittal
Grease Interceptor Maintenance Penalty	Current hourly District rate for Inspection plus expenses; \$200.00 minimum per Event
Grease Interceptor Non-Compliance Surcharge	Tier 1 - Year 1 – 50% of Annual User Rate Tier 2 – Year 2 – 75% of Annual User Rate Tier 3 – Year 3 through Compliance – 100% of Annual User Rate

**APPENDIX B
LATERAL SEWER SPECIFICATIONS**

B-1 GENERAL. The sizing of lateral sewers shall be the responsibility of the customer and shall be sized in accordance with applicable plumbing codes. When requested by the District, the customer shall, at his expense, furnish data, plans, calculations or other information as required for the evaluation of the lateral sewer size. Lateral sewers shall connect to the wastewater collection system in a public street or similar place where the District has a free right of access and which is otherwise suitable. The customer for a service connection shall notify the District when the lateral sewer is ready for connection to the sewer main. Where parallel or approximately parallel to a structural wall, the lateral sewer shall be at least five feet (5') from the wall. Penetrations through structures shall be approximately at right angles and shall provide flexibility such that the lateral sewer will not be damaged by settlement of the structures. Penetrations through structures shall be in accordance with the latest code requirement for the location of the work (Town or County).

All existing utilities shall remain in service during and after construction. Existing utilities shall be field located, protected and supported as required during lateral sewer construction. Any damage to existing utilities shall be repaired to the satisfaction of the District and the utility owner. When a lateral sewer crosses beneath existing utilities, the lateral sewer embedment material shall extend from beneath the lateral sewer to an elevation of six inches (6") above the crossed utility.

Lateral sewers are to be constructed in accordance with applicable codes, generally accepted good construction practices, and the minimum standards and details contained in this Appendix. The details are provided for standardization purposes only, and represent minimum design standards which may require upgrading for specific applications.

B-2 LATERAL SEWER DESIGN STANDARDS.

B-2.1 Size and Slope. The size and slope of the lateral sewers shall be subject to the approval of the District, but in no event shall the diameter of a gravity service lateral sewer be less than four inches (4") or greater than six inches (6"). Laterals larger than six inches (6") require a sewer main extension in accordance with Appendix C. Minimum grade and slopes shall be as follows:

Lateral Sewer Diameter	Minimum Slope
4 inches	2.00%
6 inches	2.00%

The maximum number of units that may be connected to lateral sewers for multiple dwellings are as follows:

Lateral Sewer Diameter	Maximum No. of Units (cabins, structures, condos, apartments, etc.)
4 inches	6
6 inches	12

B-2.2 Lateral Sewer Connection. No connection between the wastewater collection system and the lateral sewer of the customer may be made except in a public street or in a similar place to which the District has as a free right of access as it would have in a public street. The customer shall notify the District twenty four (24) hours in advance when the lateral sewer requires inspection and/or is ready for connection to the sewer main, and the connection to said sewer main shall not be made until after inspection and approval of the lateral sewer by the District. The connection to the sewer main shall be made by qualified District personnel or by District-approved contractors who are authorized to make connections onto the District's sewer mains. All permit fees and plant investment fees shall be paid before a connection is made. Pre-installed wye fittings shall be used for all new connections and, if practical, all connections to existing mains. If determined to be impractical by the District, the connection of the lateral sewer to the sewer main shall be made using a rubber tee saddle on the sewer main.

The lateral sewer connection shall conform to Standard Detail 02000. The District representative making the lateral sewer connection has the right to refuse to perform a lateral sewer connection if they determine the excavation is unsafe to enter.

B-2.3 Lateral Sewer Materials. Lateral sewers shall be PVC, with a thickness not less than SDR 35. Lateral sewers shall be green or other acceptable color, as approved by the District. Lateral sewers may be Class 51 or 53 ductile iron pipe if approved by the District.

B-2.4 Lateral Sewer Installation. The lateral sewer shall be water tight and on a constant grade in a straight line, and not closer than five feet (5') from any bearing wall. Double cleanouts, where required, shall conform to Standard Detail 02621. Double cleanouts are required five (5) feet from the customers' structure and at intervals no greater than one hundred feet (100') from the first double cleanout. Lateral sewers shall have a minimum bury depth of 36-inches to the top of the pipe, and a minimum of 48-inches of cover if installed beneath a road. If less than minimum bury depth is pre-approved by District; provide a layer of 2-inch foam board insulation when distance from pipe crown to surface is less than minimum bury depth. Insulation is not required on encased pipe. Install foam insulation for full width of trench, no less than 6-inches above crown of pipe. The bells of the lateral sewers and associated fittings shall be oriented uphill. Vertical bends and 90-degree horizontal bends, except as located at the connection to the sewer main, are not allowed on any lateral sewer.

B-2.5 Excavation, Bedding and Backfill. All excavations for lateral sewer installations shall be adequately guarded with barricades and lights so as to protect the public from hazard per existing governmental requirements. Street, sidewalks, parkways and other public or private property disturbed in the course of work shall be restored to their original condition in a manner satisfactory to the District and any governmental entity or agency having jurisdiction over the surface or subsurface. No lateral sewers shall be backfilled until inspected and approved by the District. The lateral sewers shall be bedded and backfilled in accordance with Standard Details 2220A, as applicable. Tracer wire #14 solid shall be installed by the contractor/developer/homeowner per Standard Detail 2240.

Lateral sewers shall have a ten feet (10') minimum horizontal separation from water lines, raw water lines and water structures. Where lateral sewers cross above or less than 18 inches below water lines, raw water lines or water structures, one length of new lateral sewer at least 18 feet long shall be centered over the water line, raw water line or water structure such that both joints are as far as possible from the water line, raw water line or water structure. Joints between the new lateral sewer and the water line, raw water line or water structure shall be concrete encased in accordance with Standard Detail 2525, with the encasement extending at least six inches (6") on each side of the joint(s). Where this separation is impractical, the District may permit pipe encasement or concrete encasement of the lateral sewer, in accordance with CDPHE standards and Standard Detail 2525. Lateral sewers shall also have a three feet (3') minimum horizontal separation from gas lines, and a five feet (5') minimum horizontal separation from all other utilities.

All excavations required for the installations of lateral sewers shall be open-trench work unless otherwise approved by the District. No excavation shall remain open for more than forty-eight (48) hours, and all District sewer mains are required to be covered overnight, unless approved by the District. No excavation shall remain open overnight if the ambient air temperature falls below 40 degrees Fahrenheit. Open trench outside buildings, units, and structures shall be no more than the distance between two cleanouts, structures, or 100 lineal feet, whichever is greater. Trenching limitations may be field adjusted with prior approval by the District as weather conditions dictate. Trenching within buildings, units, or structures shall be limited to no more than 100 lineal feet at any one time.

B-2.6 Shared Lateral Sewers. All customers are required to have a dedicated lateral sewer when connecting to a sewer main. There are, however, situations where customers have shared a lateral sewer. This "shared lateral sewer" is a customer-owned and maintained line and is not the responsibility of the District. In the event a dedicated line cannot be built, the following conditions must be achieved:

- (1) A "Joint Sewer Maintenance Agreement" (see Appendix E) must be signed between all customers sharing the lateral sewer. If the lateral sewer crosses private property and is outside a dedicated public utility easement, a "Joint Sewer Maintenance and Easement Agreement", (see Appendix E) must be signed by all customers sharing the lateral sewer. A recording fee must be paid to the District. The District will have the agreement recorded at Larimer County and a recorded copy will be placed in each customer's file at the District and a recorded copy will be mailed to each customer.

B-2.7 Abandonment of Facilities.

Private Sewage Disposal Systems: At such time as the wastewater collection system becomes available to a customer served by a private sewage disposal system, a direct connection can be made to the wastewater collection system in compliance with this Appendix. Before connection to the District collection system, the customer shall contact the Larimer County Health Department concerning the current regulations pertaining to the abandonment of private sewage disposal systems.

Lateral Sewers: Lateral sewers that no longer service a home or any structure with wastewater collection service will be abandoned by disconnecting as close to the sewer main as possible all unused portions of the lateral sewer. If the unused lateral sewer is intended for future use, the lateral sewer shall also be disconnected as close as possible to the sewer main.

Removed Structures: A lateral sewer will be considered abandoned upon removal of a building or if a building is destroyed by fire or rendered uninhabitable. The customer will have ten (10) days from such time to close the lateral sewer. The closure shall be inspected by the District. After ten (10) days, the District will have the right to close such lateral sewer and bill the customer for all costs incurred.

B-2.8 Private Lift Stations. The District will allow the construction and use of a private lift station if the customer or the engineer or representative working on behalf of the customer has exhausted all avenues of providing a gravity lateral sewer. In the event a private lift station is installed, the private lift station is the sole responsibility of the customer. Expenses associated with operating and maintaining the lift station shall be the responsibility of the customer. In the event that a lift station is used for forced service, the private lift station shall conform to Standard Detail 2730.

B-2.9 Grease, Oil and Sand Interceptors.

General: All service drains from kitchen, food preparation, and dishwashing areas shall be connected to an interceptor. Fixtures that must be connected include, but are not limited to, scullery sinks, pot and pan sinks, dishwashing machines, soup kettles, and floor drains located in areas where materials containing grease may exist. Garbage disposals (garbage grinders) shall be connected to an approved interceptor. All waste shall enter the interceptor through the inlet pipe only. Toilets, urinals, and similar fixtures shall not be connected to the interceptor. Upon prior approval by the District, installation of an interceptor will not be required for facilities where food is served but not cooked at the facility, and/or no equipment or utensils associated with preparation or service of cooked foods are washed at the facility.

Approval: The size, type and location of each interceptor shall be approved and inspected by the District. Except where otherwise specifically permitted, no wastes other than those requiring separation shall be discharged into any interceptor. Four (4) sets of plans, including complete mechanical and plumbing sections, shall be submitted to the District for approval prior to construction. Such plans shall include the size, type and location of each interceptor.

Design: All interceptors for grease and heavy solids shall be designed and located so that they are readily accessible for cleaning and shall have a water seal of not less than 6 inches. Interceptors shall be constructed in accordance with the specifications contained in these Rules and Regulations, shall be approved by the District, and shall have a minimum of two (2) compartments with fittings designed for grease, oil and/or sand retention. There shall be at least two (2) manholes lids for each interceptor to provide access for cleaning and inspection of all fixtures and compartments, and manhole lids shall be at a minimum of one (1) manhole per ten (10) feet of interceptor length. In the case of smaller or circular interceptors, where it is not practical to install two (2) manholes, a single manhole shall be located to permit entrance to the

first compartment, and inspection of the second. All areas of the second compartment shall be accessible for cleaning.

Location: All interceptors shall be readily accessible for inspection and servicing, and shall be maintained in proper working condition. If a ladder must be used or heavy equipment moved out of the way in order for the District to inspect or service interceptors, the interceptors will not be considered readily accessible. All interceptors shall be located outside of the facility served. Interceptors may not be installed in any part of a building where food is handled. Interceptors will not be allowed in drive-through driveways or next to main entranceways. Location of all interceptors shall be approved by the District, and shall be shown on the approved final development plan. All interceptors shall conform to Standard Details 2750 or 2900, as applicable.

Sizing Criteria: The volume of an interceptor shall be determined by multiplying the total rate of flow in gallons per minute from each fixture required to be connected to the interceptor times a minimum retention time of not less than 15 minutes, the resulting volume expressed in gallons. The minimum acceptable volume shall be not less than 750 gallons. The flow rate from each fixture is provided in the following schedule:

TYPE OF FIXTURE	RATE OF FLOW (GPM)
Floor drain/sink	10
Restaurant kitchen sink	15
Single compartment scullery sink	20
Three compartment sinks	35
Two single compartment sinks	25
Two double compartment sinks	35
Restaurant dishwasher:	
up to 30 gallon water capacity	15
30 to 50 gallon water capacity	25
50 to 100 gallon water capacity	40
Garbage disposal/grinder	35

Shoppette/Strip Mall Buildings: Each shoppette/strip mall shall have a common grease drain, which is sized to collect future potential flows from fixtures that can be expected to introduce grease from food preparation and/or dishwashing into the wastewater collection system. These fixtures shall include, but are not limited to: garbage disposals, food preparation sinks, floor sinks, dishwashers, scullery sinks, soup kettles and other fixtures of these types. The common kitchen grease waste drain shall be routed to the exterior building to a grease interceptor. Wastewater flows will not be allowed into the kitchen grease waste drain. The grease interceptor shall be constructed in accordance with the District’s Rules and Regulations. The grease interceptor shall be vented and access covers shall be gas tight with an opening dimension of a minimum of twenty-four (24) inches.

The number of potential seats in any shoppette/strip mall shall be determined by dividing 25% of the interior building square footage by the occupant load factor (15 SF/person).

$$0.25 \times \text{Total Building Square Footage} / 15 \text{ SF per person} = \text{Potential Restaurant Seating}$$

To size the common grease interceptor, the following formula will be used: Volume = # Seats x 6 (Waste Flow Rate) x 2.5 (Retention Time) x Storage Factor. The Storage Factor is as follows:

HOURS OF OPERATION	STORAGE FACTOR
8	1
16	2
24	3

In no case will any grease interceptor for a shoppette/strip mall be less than 1,500 gallons.

Any establishment that will produce an overload on this design will be required to make any necessary corrections/alterations to assure compliance with the District's Rules and Regulations. Grease, oil and sand interceptor sizing for other use is as follows:

- (1) Parking Garage – Forty-five (45) gallons plus eight (8) gallons per ten (10) vehicles;
- (2) Repair Garage, Warehouse – Forty-five (45) gallons plus eight (8) gallons per one hundred (100) square feet of building area.

APPENDIX C WASTEWATER COLLECTION SYSTEM SPECIFICATIONS

C-1 GENERAL. Local facilities are considered to be engineered improvements which are designed for specific applications. All designs, drawings and specifications must be prepared by, or under the direction of a Professional Engineer registered in the State of Colorado, whose seal must be on a record set of documents. The standard details and specifications contained herein are minimum design standards which the District will accept in order to facilitate perpetual operation and maintenance procedures. In addition, the engineer must also design in accordance with the minimum standards of other regulatory agencies, including the Colorado Department of Public Health and Environment (CDPHE) Design Criteria for Wastewater Treatment Works. Review and approval of the design of local facilities by the District shall not relieve the engineer of record from responsibility for adequate design.

The District reserves the right to impose different requirements for sewer mains than those set forth herein. Any such determination by the District shall be made by the District, in its sole discretion, and shall be based upon the totality of circumstances regarding the situation presented. All trees are required to be planted outside of all sewer main easements that are granted to and maintained by the District. Waivers may be granted by the District on an individual basis for smaller trees.

C-2 DRAWINGS. Unless otherwise approved by the District, all design drawings shall be on twenty-four inch by thirty-six inch (24" x 36") mylar, using ink for all background information and permanent work. Drawing scale for area plans shall be one inch equal to forty feet (1" = 40'). The cover sheet for each drawing set shall have an approval block. The original mylars shall be delivered to the District prior to final acceptance. Prior to the construction or installation of any local facilities, the customer shall submit design documents to the District for review and approval. Each construction drawing set shall have an "approval block" affixed thereto which provides for the signatures of authorized representatives of the District. The customer shall also provide a complete set of as-built drawings for the local facilities. The as-built drawings shall show adequate dimensioned ties to surface features for all buried facilities to allow for future locating. The as-built drawings shall be provided to the District on mylar transparencies suitable for blue line reproductions and in a digital format, suitable for use with AutoCAD. The District will provide the minimum AutoCAD version at the time of submittal.

C-3 REQUIRED EASEMENTS. Where local facilities are to be located out of the public right-of-way, the customer shall be responsible for obtaining easements required for the construction, maintenance and operation of the local facilities. The legal description for the easements shall be prepared by a Professional Land Surveyor registered in the State of Colorado. Easements shall be in a form acceptable to the District and shall be shown on the construction drawings. The District will not approve the construction until all required easements have been deeded to the District. The District will record all final easements, unless the District approves recording of easements by the customer. All costs associated with recording easements will be paid for by the customer including the District's fees outlined in Appendix A. In general, the minimum width of easements shall be twenty feet (20') for sewer mains centered over the sewer main. The easement width shall provide 10-feet of easement on either side of the sewer main. Temporary

construction easements shall have a minimum width of thirty feet (30'). Wider easements may be required for deep sections of sewer mains, multiple sewer mains, or where otherwise required by the District.

C-4 WASTEWATER COLLECTION SYSTEM.

C-4.1 Minimum Sewer Design Criteria. Wastewater collection system design is intended to provide for all gravity service. The wastewater collection system shall be designed to carry not less than the projected peak flow rates flowing half full (safety factor = 2.0), unless otherwise approved by the District. The minimum size of sewer mains shall be eight inches (8") in diameter. Sewer mains shall generally be designed with sufficient depth to serve basements by gravity. The minimum cover shall be four feet (4') from top of the sewer to finished grade. Manholes shall be located at a maximum spacing of four hundred feet (400') center-to-center and also at changes in alignment and/or grade and at the end of each sewer main. Sewer mains shall be laid with uniform slope between manholes. The wastewater collection system shall be so designed and constructed to give mean velocities, when flowing full, of not less than two feet per second (2.0 ft/sec).

C-4.2 Minimum Lift Station Design Criteria. Wastewater lift stations will not be permitted unless specifically authorized by the District. If authorized by the District, lift stations shall comply with the following minimum design criteria:

1. A minimum of two pumps shall be provided, with the lift station being capable of pumping the maximum hourly flow rate with the largest pump out of service.
2. Provision shall be made for emergency storage of raw wastewater or portable pumping in the event of an extended power outage or electrical or mechanical failure.
3. Pump sizing should allow for a flow velocity of at least two feet per second (2.0 ft/sec) in the force main.
4. Pumps should be capable of passing spheres of at least 3 inches in diameter unless other equipment is provided to prohibit such solids from entering the suction side of the pump.
5. Adequate ventilation shall be provided for all pump stations.
6. Power supply must be available from at least two independent generating sources, or emergency power equipment shall be provided.
7. Alarm systems shall be provided for all lift stations. The alarm shall be activated in case of power failure, pump failure, or any cause of lift station malfunction. An audiovisual device shall be installed at the lift station for external observation unless disallowed by local ordinance.
8. All submerged equipment shall be capable of withstanding extended exposure to wastewater.

C-4.3 Materials.

Sewer Mains. Sewer mains and fittings shall be PVC, SDR 35 minimum thickness conforming to ASTM D3034. Joints shall be of the "slip on" type with integrally cast bell having an elastomeric gasket. Sewer mains shall be green in color (or other District-approved color). Sewer mains may be Class 51 or 53 ductile iron pipe if approved by the District. Minimum grade and slopes shall maintain a minimum velocity of 2 feet per second and shall be as follows:

Sewer Diameter	Minimum Slope (feet per 100-feet)
8 inches	0.40
10 inches	0.28
12 inches	0.22
14 inches	0.17
15 inches	0.15
16 inches	0.14
18 inches	0.12
21 inches	0.10
24 inches	0.08
27 inches	0.067

1. **Manhole Structures:** Manholes shall be precast concrete units. Manholes shall be constructed and installed in accordance with Standard Details 2610, 2611, or 2612, as applicable, and in accordance with the following specifications.

- a. Minimum drop through manholes shall be as follows:

Flow Through Manhole	Minimum Drop (feet)
Straight	0.20
Bend	0.30

- b. Manhole sections. Provide manhole sections reinforced in compliance to ASTM C478. Provide a minimum section wall thickness of 5 inches. Adjust final minimum 6 inches to maximum 18 inches distance to grade by using precast adjuster rings. Provide the following components for each manhole structure:
 - i. Precast manhole bases
 - ii. Precast Bottom Section
 - iii. Precast Barrel Section(s)
 - iv. Precast Transition Section (Concentric or Eccentric)
 - v. Precast or HDPE Adjuster Ring(s)
- c. Provide manhole section with minimum 60-inches in diameter for lines 12-inches to 30-inches in diameter, and provide manhole sections with a minimum 48-inches in diameter for lines 10-inches in diameter and smaller.
- d. Cast-In-Place Manhole Bases meeting the following minimum requirements may be acceptable under certain conditions with prior approval by the District.
 - i. 28-day Compressive Strength: 3000 psi

- ii. Type II, per ASTM C150, Modified Sulfate Resistant Concrete, tricalcium aluminate content limited to 4% or less.
 - iii. Cast-in-place manhole bases shall have a minimum of 6 inches of concrete below all pipes and 3 inches above all pipes.
 - e. Frames and Cover
 - i. The manhole covers shall be per Standard Detail 2609.
 - ii. Manhole frames and covers shall be cast iron with “UTSD” and “Sewer” cast on the cover.
 - iii. Provide cast or ductile iron frame and covers made of material meeting ASTM A48, Class 35 (minimum).
 - iv. Use only cast or ductile iron of best quality, free from imperfections and blow holes.
 - v. Furnish frame and cover of heavy-duty construction, a minimum total weight of 400 pounds.
 - vi. Machine all horizontal surfaces.
 - vii. Furnish unit with solid non-ventilated lid with concealed pickholes. Coordinate lettering for covers with Owner.
 - viii. Ensure minimum clear opening of 24-inch diameter.
 - ix. Buried manholes: Neenah R1915 series or equal, bolted lid with neoprene gasket. Place layer of 8-mil polyethylene over manhole cover prior to backfill.
 - x. Exposed manholes: Neenah R1915 series or equal, bolted lid with neoprene gasket. Provide anchor bolt holes and anchor bolts. Anchor bolts shall be Hilti series HVA, 1/2-inch diameter, 4.25 inch minimum embedment.
 - f. Manhole Steps
 - i. Provide each manhole with extruded aluminum manhole steps with a safety tread. Furnish spacing and dimensions of steps complying to OSHA requirements for fixed ladders. Copolymer polypropylene coated steel steps (MA Industries Model PS-2-PF) are also acceptable.
 - ii. Ensure maximum distance from surface to first rung is not greater than 16 inches and that maximum spacing on remaining steps is 12 inches on center. Locate step such that center of rung is nominal 6 inches clear of wall.
 - iii. Minimum step width of 14 inches and minimum cross section of 0.875 inch of solid material.
 - iv. Embed a minimum of 3 inches and anchor integrally into manhole or structure walls.
 - g. Flexible Pipe-to-Manhole Connector
 - i. A flexible pipe-to-manhole connector shall be used in the connection of pipes to precast manholes.
 - ii. The connector shall be Kor-N-Seal as manufactured by NPC Inc., or equal.
 - iii. Internal expander assembly and external pipe clamp shall be Type 316 stainless steel.
 - iv. O-ring shall be EPDM.
 - h. Coating
 - i. Coat the exterior of all manholes with Conseal Sealants, Inc., C5-55 or approved equal.

2. **Granular Bedding Material.** Graded aggregate product (Pea Gravel) which will all pass a 3/8 inch sieve and not more than 3 percent of which will pass a No. 200 sieve shall be required at a minimum. Gravel bedding (1 1/2-inch or 3/4-inch) may be used for all bedding materials. Gravel bedding (1 1/2-inch) shall be required for areas of high ground water and other wet areas as determined by the District during construction.
3. **Backfill Material.** Free of rock cobbles, roots, sod or other organic matter, and frozen material. No material larger than 6 inches in diameter shall be allowed. Moisture content at time of placement to be as follows:
 - a. Under roadway crossings or pavements, moisture content to be 3 percent plus/minus of optimum moisture content.
 - b. In all other areas of trench construction, the moisture content will be adjusted by either the drying of the material or wetting of the material to a percentage required to obtain the compaction as specified.
 - c. On site materials may be used for backfill if it meets these requirements.
4. **Crushed Stone.** Material shall conform to ASTM C33 No. 467 and exhibit the following gradation:

Sieve Size	Percent Finer (by weight)
2 inch	100
1-1/2 inch	95-100
3/4 inch	35-70
#4	0-5

5. **Special Considerations.** Water and road crossings may require the use of: pipe encasement (Detail 2525); cut-off walls (Detail 2530); impervious clay barriers (Detail 2618); and bore casings (Detail 2625). Steep grades may require the use of reinforced concrete slope anchors (Detail 2740).
6. **Tracer Wire.** Tracer wire #14 solid shall be installed on all new mains as shown on Detail 2220A and Detail 2240.
7. **Marking Tape.** Provide marking tape on all new mains meeting the following minimum requirements:
 - a. Plastic: Inert polyethylene, impervious to known alkalis, acids, chemical reagents, and solvents likely to be encountered in soil.
 - i. Thickness: Minimum 4 mils.
 - ii. Width: 6 inches.
 - iii. Identifying Lettering: Minimum 1-inch high, permanent black lettering imprinted continuously over entire length.
 - iv. Manufacturers and Products:
 - a) Reef Industries: Terra Tape.
 - b) Allen; Markline.

- b. Metallic: Solid aluminum foil, visible on unprinted side, encased in protective high visibility, inert polyethylene plastic jacket.
 - i. Foil Thickness: Minimum 5.5 mils.
 - ii. Width: 4 inches.
 - iii. Identifying Lettering: Minimum 1-inch high, permanent black lettering imprinted continuously over entire length.
 - iv. Joining Clips: Tin or nickel-coated, furnished by tape manufacturer.
 - v. Manufacturers and Products:
 - a) Reef Industries: Terra "D".
 - b) Allen; Detectatape.

- c. Color: In accordance with APWA Uniform Color Code for Temporary Marking of Underground Facilities.

Color ^a	Facility
Red	Electric power lines, cables, conduit, and lighting cable
Orange	Communicating alarm or signal lines, cables, or conduit
Yellow	Gas, oil, steam, petroleum, or gaseous materials
Green	Sewers and drain lines
Blue	Water, irrigation, and slurry lines
^a As specified in ANSI Z53.1, Safety Color Code.	

C-4.4 Installation. The wastewater collection system shall be installed in accordance with the design documents that have been approved by the District. The minimum bedding and backfill requirements shall be as shown on Standard Details 2220A or 2220B, as applicable. Sewer mains shall have a ten feet (10') minimum horizontal separation from water lines, raw water lines and water structures. Where sewer mains cross above or less than 18 inches below water lines, raw water lines or water structures, one length of new sewer main at least 18 feet long shall be centered over the water line, raw water line or water structure such that both joints are as far as possible from the water line, raw water line or water structure. Joints between the new sewer main and the water line, raw water line or water structure shall be concrete encased in accordance with Standard Detail 2525, with the encasement extending at least six inches (6") on each side of the joint(s). Where this separation is impractical, the District may permit concrete encasement of the sewer main, in accordance with CDPHE standards and Standard Detail 2525. Sewer mains shall also have a three feet (3') minimum horizontal separation from gas lines, and a five feet (5') minimum horizontal separation from all other utilities.

All existing utilities shall remain in service during and after construction. Existing utilities shall be field located, protected and supported as required during construction. Any damage to existing utilities shall be repaired to the satisfaction of the District and the utility owner. When a sewer main crosses beneath existing utilities, the sewer main embedment material shall extend from beneath the sewer main to an elevation of six inches (6") above the crossed utility. Sewer mains shall be installed a minimum of twelve inches (12") below storm sewers. Insulation shall also be provided between the storm sewer and sewer main to prevent freezing of the sewer mains as necessary.

The contractor shall flush the sewer main, as the work progresses by means that are in accordance with good practice, to insure that earth, sand, rocks or other foreign materials are removed from the interior of the sewer main. During the construction of the manholes, the contractor shall, in accordance with good practice, insure that no earth, sand, rocks or other foreign material exists on the joint surface during assembly of the sections.

1. Trench Excavation.

- a. Excavate trenches by open cut method to depth necessary to accommodate work.
- b. Open trench outside buildings, units, and structures shall be no more than the distance between two manholes, structures, units, or 400 lineal feet, whichever is greater. Trenching limitations may be field adjusted by District as weather conditions dictate. Trenching within buildings, units, or structures shall be limited to no more than 100 lineal feet at any one time.
- c. Do not open greater length of trench than can be effectively utilized under existing conditions. Schedule work and order materials so that trenches are not left open for a longer period than is reasonably necessary. Any trench or portion of trench, which is opened and remains idle for two calendar days, or longer, as determined by the District, may be directed to be immediately refilled, without completion of work. Said trench may not be reopened until District is satisfied that work associated with trench will be prosecuted with dispatch.
- d. Observe following trenching criteria
 - 1) Trench size. Excavate only sufficient width to accommodate free working space with a minimum clearance of 6 inches on each side of the pipe. In no case shall trench width at top of pipe or conduit exceed outside diameter of utility service by the following dimensions.

<u>Overall Diameter of Sewer</u>	<u>Excess Dimension</u>
Less than 8 inches	12 inches
8 inches to 32 inches	16 inches
More than 33 inches	24 inches

- 2) Where soil conditions permit, cut trench walls vertically from bottom of trench to 1 foot above top of pipe, conduit, or utility service.
- 3) Keep trenches free of water.
- 4) Brace and sheet trenches as soil conditions dictate and in full compliance with OSHA requirements. Do not remove sheeting until backfilling has progressed to the stage that no damage to piping, utility service, or conduit will result due to removal.
- 5) Brace trenches running near walls or columns, to prevent any settlement or other disturbance of walls or columns.

2. Preparation of Foundation For Pipe Laying.

- a. If over-excavation occurs, backfill with bedding material.

- b. In case of rock excavation, carry excavation minimum of 6 inches below required grade and backfill to required grade with granular bedding material. Form bell holes in trench such that only barrel of pipe is supported by bedding material.
- c. Stabilization: Provide stabilization when required due to unstable trench bottom in accordance with these specifications. Observe the following requirements when unstable trench bottom materials are encountered.
 - 1) Notify District when unstable materials are encountered and define by drawing station locations and limits. District will evaluate the trench conditions and determine the quantity of stabilization.
 - 2) Remove unstable trench bottom and replace with stable material.

3. Backfilling

- a. Do not backfill until tests to be performed on system show system is in full compliance to specified requirements.
- b. Material greater than 3 inches in diameter shall not be placed within 1 foot of the pipe.
- c. Methods: Provide backfill and compaction methods of following types.
 - 1) Bedding (pipe zone) material. Furnish compacted bedding up to 12 inches above top of pipe or conduit. Comply with the following:
 - (a) Place backfill in lifts not exceeding 6 inches (loose thickness).
 - (b) Hand place, shovel slice, and pneumatically tamp all bedding (pipe zone) material.
 - (c) Observe specific pipe or conduit manufacturer's recommendations regarding methods of backfilling and compaction.
 - (d) Ensure compaction of each lift to requirements stated in these specifications.
 - 2) Compacted backfill. Perform remaining backfill in accordance with the following:
 - (a) Place backfill in lift thicknesses capable of being compacted to densities specified.
 - (b) Observe specific pipe or conduit manufacturer's recommendations regarding methods of backfilling and compaction.
 - (c) Exercise extreme care in backfilling operations to avoid displacing joints and appurtenances or causing any horizontal or vertical misalignment, separation, or distortion. Repair damages, distortions or misalignments to full satisfaction of District.
 - (d) Water flushing for consolidation will not be permitted.

4. Compaction

- a. Compaction requirements: Place and ensure backfill and fill materials to achieve an equal or "higher" degree of compaction than undisturbed native materials adjacent to the work; however, in no case shall degree of compaction be less than "Minimum Compaction" specified.
- b. Unless noted otherwise on drawings or specified by other sections of these specifications, comply with following trench compaction criteria.

MINIMUM COMPACTION REQUIREMENTS

LOCATION	DENSITY
1. Bedding (pipe zone) materials - all areas	95 percent of maximum dry density by ASTM D698
2. Compacted Backfill: Under pavements, roadways surfaces, within highway right-of-ways	95 percent of maximum dry density by ASTM D698
Under turfing, sodded, plant seeded, non-traffic areas.	90 percent of maximum dry density by ASTM D698
Around structures	95 percent of maximum dry density by ASTM D698

- c. Perform in place moisture density tests to ensure trench backfill complies with specified requirements. Where backfill compaction does not meet moisture density test requirements and after backfill has been removed and situation corrected, perform additional tests until compaction meets or exceeds requirements.
 - 1) Moisture density tests are to be taken at a minimum of one test every 24 inches lift per 75 lineal feet of trench.

C-4.5 Testing.

- 1. **General.** During the preliminary design approval process, the contractor shall request that the District provide the testing protocol required for sewer system improvements. Testing shall be conducted by one of two methods as follows:
 - A. District Performed Testing: The District will perform the following testing procedures to determine if the sewer main meets the District's minimum quality standards. The District will inform the contractor regarding acceptable methods of repair in the event one or more sections fail to pass any test.
 - 1. Sewer Mains: District staff will televise the sewer main upon notification by the contractor that the sewer main is complete and ready for testing.
 - 2. Manholes: The District shall visually check each manhole, both exterior and interior, for flaws, cracks, holes or other inadequacies which might affect the operation or watertight integrity of the manhole. Should any inadequacies be found, the contractor shall make any repairs deemed necessary by the District. District staff will test all manholes for leakage upon notification by the contractor that the manholes are complete and ready for testing. The leak test shall be conducted in the following manner:
 - a. All sewer mains leading into or out of the manhole shall be tightly plugged.

- a. The manhole shall be filled with water to a level at least two inches (2") above the uppermost step. The water shall be allowed to stand for two (2) hours to allow for normal water absorption into the manhole material. At the end of the two (2) hour stabilization period, if the water level in the manhole has dropped below the top step, additional water will be added to bring the level above the step as before. A one (1) hour test period shall then commence. Any visible external leakage or drop in water level noted within the one (1) hour test period shall constitute failure and the contractor shall repair or replace the defective work and retest.
- B. Contractor Performed Testing: The contractor will perform all or a portion of the following testing procedures, as determined by the District, to determine if the sewer main meets the District's minimum quality standards.
1. Alignment and Grade. Sewer mains will be checked by both the District and contractor to determine whether any displacement of the sewer main has occurred after the trench has been bedded. The test shall be as follows:

A light shall be flashed between manholes, or if the manholes have not as yet been constructed, between the locations of the manholes, by means of a flashlight or by reflecting sunlight with a mirror. If the illuminated interior of the sewer main shows poor alignment, displaced pipe, earth or other debris in the pipe, or any other kinds of defects, the defects, determined by the District, shall be remedied by the contractor. The test will be repeated following completion of backfilling and any poor alignment, displaced pipe or other defects, determined by the District, shall be corrected by the contractor.
 2. Pressure Testing. Types of pressure testing and inspection to be employed include hydrostatic pressure testing, for pressure pipes and low pressure air testing and hydrostatic exfiltration/infiltration testing for gravity pipes. Pressure testing forms for hydrostatic pressure testing and low pressure air testing are included at the end of this Appendix.
 - a. Hydrostatic pressure testing for pressure pipes.
 - 1) Perform testing after backfill and proper compaction of trenches. Where lines are installed under roadways and parking areas, perform tests after completion of final grade preparation and prior to application of surface courses. Notify District at least 48 hours prior to testing. Provide temporary restraints for expansion joints for additional pressure load under test. Isolate equipment in piping system with rated pressure lower than pipe test pressure by valves or blind flanges.
 - 2) The allowable leakage of buried piping systems shall be determined as follows:

- (i) Polyvinyl chloride (PVC) pressure pipe systems: Test PVC pressure pipe in accordance with the latest version of AWWA C605. Per AWWA C605, the allowable leakage in gallons per hour from buried PVC pressure pipe systems shall be less than the number of joints in the length of pipeline tested, times the nominal diameter of the pipe in inches, times the square root of the average test pressure during the leakage test in pounds per square inch (gauge), divided by 7,400. The duration of each leakage test shall be two hours. The equation for computing the allowable leakage is:

$$L = \frac{ND\sqrt{P}}{7,400}$$

Where :

L = allowable leakage , in gallons per hour

N = number of joints in the length of the pipeline tested

D = nominal diameter of the pipe, in inches

P = average test pressure during the leakage test , in psi

- (ii) Ductile iron pipe systems: Test ductile iron pipe in accordance with the latest version of AWWA C600. Per AWWA C600, the allowable leakage in gallons per hour from buried ductile iron pipe systems shall be less than the length of pipeline tested in feet, times the nominal diameter of the pipe in inches, times the square root of the average test pressure during the leakage test in pounds per square inch (gauge), divided by 133,200. The duration of each leakage test shall be two hours. The equation for computing the allowable leakage is:

$$L = \frac{SD\sqrt{P}}{133,200}$$

Where :

- L = allowable leakage , in gallons per hour
- S = length of the pipe tested, in feet
- D = nominal diameter of the pipe, in inches
- P = average test pressure during the leakage test, in psi

(iii) Unless otherwise specified, the allowable leakage in gallons per hour from other buried liquid piping systems shall be less than the length of pipeline tested in feet, times the nominal diameter of the pipe in inches, times the square root of the average test pressure during the leakage test in pounds per square inch (gauge), divided by 133,200. The duration of each leakage test shall be two hours. The equation for computing the allowable leakage is:

$$L = \frac{SD\sqrt{P}}{133,200}$$

Where :

- L = allowable leakage , in gallons per hour
- S = length of the pipe tested, in feet
- D = nominal diameter of the pipe, in inches
- P = average test pressure during the leakage test, in psi

- b. Low pressure air test for gravity pipes
 - 1) Check pneumatic plugs for proper sealing.
 - 2) Place plugs in line at each manhole and inflate to 25 PSIG.
 - 3) Introduce low pressure air into sealed line segment until air pressure reaches 4 PSIG greater than ground water that may be over the pipe. Use test gauge conforming to ANSI B40.1 with 0 to 15 PSI scale and accuracy of 1 percent of full range.
 - 4) Allow 2 minutes for air pressure to stabilize.
 - 5) After stabilization period (3.5 PSIG minimum pressure in pipe) discontinue air supply to line segment.
 - 6) Acceptable time for loss of 0.5 PSIG of air pressure in plastic pipe shall be as follows:

Pipe Size	Minimum Time for 0.5 PSIG Loss in Plastic Pipe (minutes:seconds)								
	≤ 100 Feet	150 Feet	200 Feet	250 Feet	300 Feet	350 Feet	400 Feet	450 Feet	500 Feet
8"	3:47	3:47	3:47	3:47	3:48	4:26	5:04	5:42	6:20
10"	4:43	4:43	4:43	4:57	5:56	6:55	7:54	8:54	9:53
12"	5:40	5:40	5:42	7:08	8:33	9:58	11:24	12:50	14:14
15"	7:05	7:05	8:54	11:08	13:21	15:35	17:48	20:02	22:16
18"	8:30	9:37	12:49	16:01	19:14	22:26	25:38	28:51	32:03
21"	9:55	13:05	17:27	21:49	26:11	30:32	34:54	39:16	43:38
24"	11:24	17:57	22:48	28:30	34:11	39:53	45:35	51:17	56:59
27"	14:25	21:38	28:51	36:04	43:16	50:30	57:42	64:54	72:07
30"	17:48	26:43	35:37	44:31	53:25	62:19	71:13	80:07	89:02

NOTE: If there has been no (zero psi) drop after 1 hour of testing, the test section shall be accepted and the test complete.

- 7) For pipe lengths not shown in the above table, use the two nearest pipe lengths to estimate the minimum time necessary for a 0.5 PSIG loss.
- c. Hydrostatic Exfiltration/Infiltration Test for gravity pipes
- 1) Hydrostatic Exfiltration Test (groundwater level is below the top of pipe)
 - (a) Leakage rate: 50 gallons per inch diameter per mile of pipe per day.
 - 2) Hydrostatic Infiltration Test (groundwater level is above the top of pipe)
 - (a) Allowable leakage rate: 50 gallons per inch diameter per mile of pipe per day.
3. Dielectric Testing Methods and Criteria. Provide electrical check between metallic non-ferrous pipe or appurtenances and ferrous elements of construction to assure discontinuity has been maintained. Wherever electrical contact is demonstrated by such test, locate the point or points of continuity and correct the condition. Check the integrity of each cadwelding connection using a light hammer blow at a 45 degree angle.
 4. Mandrel Test. No sooner than 30 days after placement and compaction of backfill, but prior to placement of permanent surface materials, clean and mandrel each line to detect obstructions (deflections, joint offsets, lateral pipe intrusions, etc.). Use a rigid mandrel with diameter of at least 95% of the pipes specified average inside diameter and a length of the mandrel circular portion at least equal to the nominal pipe diameter. Pull the mandrel through the pipe by hand. All pipe exceeding the 5% deflection shall be relaid or replaced by the contractor.

5. Testing Manholes.

- a. Visual Examination. The District shall visually check each manhole, both exterior and interior, for flaws, cracks, holes or other inadequacies which might affect the operation or watertight integrity of the manhole. Should any inadequacies be found, the contractor shall make any repairs deemed necessary by the District.
- b. Leakage Test. All manholes shall be tested for leakage and all tests shall be witnessed by the District. The leakage test shall be conducted prior to backfilling around the manhole and shall be carried out in the following manner:
 - 1) All sewer mains leading into or out of the manhole shall be tightly plugged.
 - 2) The manhole shall be filled with water to a level at least two inches (2") above the uppermost step. The water shall be allowed to stand for two (2) hours to allow for normal water absorption into the manhole material. At the end of the two (2) hour stabilization period, if the water level in the manhole has dropped below the top step, additional water will be added to bring the level above the step as before. A one (1) hour test period shall then commence. Any visible external leakage or drop in water level noted within the one (1) hour test period shall constitute failure and the contractor shall repair or replace the defective work and retest.
- c. Vacuum Testing. At the option of the contractor, vacuum testing of the installed manholes may be used instead of the leakage test. All vacuum tests shall be witnessed by the District. All sewer mains entering and exiting the manhole shall be temporarily plugged, taking care to securely brace the sewer mains and plugs to prevent them from being drawn into the manhole. The test head shall be placed at the top of the manhole and the seal inflated in accordance with the manufacturer's recommendation. A vacuum of 10-inches of mercury shall be drawn on the manhole, the valve on the vacuum line of the test head shall be closed, and the vacuum pump shut-off. The time shall be measured for the vacuum to drop to 9-inches of mercury. The manhole will be declared unacceptable if the time to drop from 10- inches of mercury to 9- inches of mercury is less than the time shown in the following table:

**VACUUM TESTING OF MANHOLES:
MINIMUM TIME REQUIRED FOR 1-INCH OF MERCURY PRESSURE DROP**

DEPTH (feet) (Vertical Length of Manhole)	TIME (seconds)		
	48" Diameter	60" Diameter	72" Diameter
8	20	26	33
10	25	33	41
12	30	39	49
14	35	46	57
16	40	52	67
18	45	59	73
20	50	65	81
22	55	72	89
24	59	78	97
26	64	85	105
28	69	91	113
30	74	98	121

6. Alternative procedures meeting or exceeding the intent of these procedures, as determined by the District, are acceptable. In any case, however, alternative testing procedures must be included in the design plans and specifications. The contractor shall notify the District, no less than forty-eight (48) hours prior to the desired test time. The District shall witness all tests and verify the accuracy and acceptability of the equipment utilized. The District will inform the contractor regarding acceptable methods of repair in the event one or more sections fail to pass any test. The following general notes apply to all testing procedures:

- a. Isolate equipment which may be damaged by the specified test conditions.
- b. Perform testing using calibrated pressure gauges and calibrated volumetric measuring equipment to determine leakage rates. Select each gauge so that the specified test pressure falls within the upper half of the gauge's range.
- c. Completely assemble and test new piping systems prior to connection to existing pipe systems.
- d. Acknowledge satisfactory performance of tests and inspections in writing to District prior to final acceptance.
- e. Provide all necessary equipment and perform all work required in connection with the tests and inspections.

GRAVITY SEWER AIR TEST RESULTS

Project Name: _____

Project Number : _____

Date: _____

Pipe Location: From: _____

To: _____

Pipe Size: _____ Inches

Pipe Length: _____ Feet

Test Pressure: 0.5 psi 1.0 psi

Test Data

Start Time (hr:min:sec)	Beginning Pressure (psi)	End Time (hr:min:sec)	Ending Pressure (psi)	Actual Pressure Loss (psi)	Test Duration (min:sec)	Allowable Time to Lose Test Pressure

Note: The line passed if the test duration is less than the allowable time to lose test pressure

Observations: _____

This test was in accordance with testing procedure in:

ASTM F1417 (PVC)
 ASTM C924 (RCP)
 _____ (Other)

Test Status: **Passed** **Failed**

We hereby certify that the testing completed on the above referenced pipeline(s) is in accordance with the requirements of the Rules and Regulations.

Test Performed By: _____

_____ (Company)

Witnessed By: _____

_____ (Company)

HYDROSTATIC PIPELINE LEAKAGE TEST FOR DIP

(Based on AWWA C-600)

Project Title: _____

Project Number: _____

Date of Test: _____

Pipeline Service: _____

Pipeline Description: _____

Test Point: _____

Test Duration: _____ hour(s) Test Pressure (P) : _____ psi

Pipe Diameter (D): _____ Inches Pipe Length (S) : _____ feet

Allowable Leakage (L): _____ gal/hr $L = \frac{(S)(D)\sqrt{P}}{133,200}$

Test Data

Time	Pressure (psi)	Meter Reading (gal)	Water Added (gal)	Comments

Actual Loss: _____ gals/hr or _____ ounces/hr

Test Status: **Passed** **Failed**

Was this Test in accordance with AWWA C600 testing procedures? Yes No

We hereby certify that the testing completed on the above referenced pipeline(s) is in accordance with the requirements of the Rules and Regulations.

Test Performed By: _____
 _____ (Company)

Witnessed By: _____
 _____ (Company)

APPENDIX D

APPLICATION FOR SERVICE FOR INDUSTRIAL/COMMERCIAL CUSTOMERS

A. DESCRIPTION OF PREMISES TO BE SERVED (please attach a locating map)
(_____parcel number) (_____land survey) (_____Lot and Block) (_____ other)

B. DESCRIPTION AND PURPOSE OF BUILDING/PROPERTY

_____ Commercial

_____ Industrial

_____ Other

C. EXPECTED FLOWS

Please attach calculations and information on expected flows, (both inside and outside) and describe proposed fire protection service. Customer should provide average day, maximum day, and peak hour demands.

C.1 Wastewater Collection:

Wastewater Collection: ___gpd average day ___ gpd max. day ___ gpd peak hour

C.2. Proposed Number of Service Taps (Listed for each size lateral sewer)

_____ Wastewater Collection

C.3 Expected Organic and Chemical Loading

_____ mg/L Biochemical Oxygen Demand (BOD)

_____ mg/L Total Suspended Solids (TSS)

_____ Other (please describe)

D. PROHIBITED WASTES/PRETREATMENT

Please provide expected loadings of the prohibited wastes on the attached list. For those wastes which exceed acceptable levels, please provide a description of the pretreatment program proposed to reduce wastes to within acceptable standards.

E. AGREEMENT

The customer agrees and acknowledges that use under the permit must be as limited and defined by applicable law and the Upper Thompson Sanitation District Rules and Regulations.

Customer Name and Title

Date

F. AUTHORIZATION/FEES (To be filled in by the District)

- 1. Single Family Equivalent (SFE) Unit Rating (non-metered to be determined based on FUV inventory, as provided in Appendix A of the Rules and Regulations)
_____ SFE
- 2. Permit Fee
\$ _____
- 3. Plant Investment Fee
\$ _____
- 4. The District authorization:
_____ authorized
_____ not authorized
_____ authorized with the attached limitations

Upper Thompson Sanitation District

Date

APPENDIX E
AGREEMENTS AND FORMS

JOINT SEWER MAINTENANCE AGREEMENT

(Revised 3/1/95)

THIS AGREEMENT made this _____ day of _____, 20_____, between the UPPER THOMPSON SANITATION DISTRICT, a duly organized and special district under the laws of the State of Colorado, hereinafter called "**The District**", and _____ hereinafter called "**The Customers**" is made upon the following terms and conditions.

The following statements of fact are a material part of this agreement:

A. **The District** provides wastewater collection service within the boundaries of **the District** and to **the Customers** and parcels of land hereinafter described in Schedule "A" attached hereto and incorporated here by this reference.

B. **The Customers** each own the respective parcels of land described opposite their names in said Schedule "A".

C. The parcels described above are served by a private sewer, which is connected to a **District** owned sewer.

D. **The Customers** desire to enter into an agreement for the repair, maintenance and replacement of the private line and further to clarify the relative rights of the parties and **the District** in the event of the failure of any owner to pay **the District's** annual service charges.

NOW, THEREFORE, in consideration of the mutual covenants herein contained the parties agree as follows:

1. The cost and expenses of repair, maintenance and replacement of any part of the private sewer shall be divided by the number of parcels sharing the use and benefit of that portion of the private sewer to the place of its connection to a **District** owned line. **The Customers** of each of these parcels shall be responsible for and shall pay their proportionate share as determined above. In the event that the repaired or replaced private sewer is used by only one parcel, then **the Customers** of that parcel shall be solely responsible for the entire cost thereof.

2. A majority of all **Customers** shall have the right to decide upon the need to make any such repairs or replacement, and that decision shall be binding upon all of **the Customers**, their heirs, grantees and assigns. In the event that the portion of the private sewer to be repaired is shared only by two parcels, and in the event that **the Customers** thereof cannot agree whether repair or replacement is needed, **the District** shall then have the right to examine the sewer and decide whether or not such repairs or replacement should be made. The decision of **the District** in that case shall be binding on **the Customers** or the affected parcels, their heirs, grantees and assigns. **The Customers** hereby release any and all claims against **the District** for exercising its discretion and judgment in determining whether repair or replacement should be made as above provided.

3. **The Customers** of all parcels acknowledge that the private sewer is connected to the **District** and that **the District** is therefore serving all of the parcels described herein with wastewater collection services through the use of the one private sewer. **The Customers** further acknowledge that **the District** has a statutory right to disconnect the sewer of any **Owner** who fails to pay annual service charges in accordance with procedures adopted by **the District** and as permitted by the statute authorizing termination of services. **The Customers** further acknowledge that **the District** does not have a duty to serve two or more parcels through a private sewer and that the arrangement herein is an accommodation to the parties. **The Customers** further acknowledge that **the District** is willing to thus accommodate them only if **the District** retains the right to terminate services if any one of **the Customers** defaults.

4. This agreement may be enforced by any of the parties hereto by filing appropriate legal proceedings in a court of competent jurisdiction. The prevailing party in any such enforcement proceedings shall be entitled to recover its or their reasonable attorney's fees incurred in the enforcement proceedings or the defense thereof.

5. **The Customers** shall identify the locations of all easements with legal descriptions and location improvement certificates suitable for recording.

6. The rights herein contained shall apply only to the parcels of land described in said Schedule "A", and shall be deemed covenants running with the land.

7. The terms and covenants herein contained shall extend to the heirs, devisees, grantees, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have signed this agreement the day and year first above written.

UPPER THOMPSON SANITATION DISTRICT

By: _____

CUSTOMERS:

STATE OF)
) ss
COUNTY OF)

The foregoing document was acknowledged before me this _____ day of _____, 20____, by _____ and _____.

Witness my hand and office seal.

My commission expires: _____

NOTARY PUBLIC

Attachments: Schedule A

JOINT SEWER MAINTENANCE AND EASEMENT AGREEMENT

(Revised 3/1/95)

THIS AGREEMENT made this _____ day of _____, 20_____, between the UPPER THOMPSON SANITATION DISTRICT, a duly organized and special district under the laws of the State of Colorado, hereinafter called "**The District**", and _____ hereinafter called "**The Customers**" is made upon the following terms and conditions.

The following statements of fact are a material part of this agreement:

- A. **The District** provides wastewater collection service within the boundaries of **the District**.
- B. **The Customers** each own the respective parcels of land described opposite their names in said Schedule "A" attached to this agreement and incorporated herein by this reference.
- C. **The Customers** jointly share a sewer in and across the said parcels of land described in Schedule "A" which attaches to the line of **the District**.
- D. The parties desire to enter into an agreement for the repair and maintenance of the sewer.

NOW, THEREFORE, in consideration of the mutual covenants herein contained the parties agree as follows:

- 1. **The Customers** shall each pay proportionately the cost of maintenance and repair of the sewer jointly shared by them to the point of connection to the sewer of **the District**. The proportion to be paid shall be the percentage, which the length of sewer in each parcel of property bears to the total of all sewers so shared to the point of its connection to the line of **the District**.
- 2. A majority of all **Customers** shall have the power to decide upon the need to make any such repairs and that decision shall be binding upon all of **the Customers**, their heirs, grantees and assigns.
- 3. **The Customers** hereby grant to each other a reciprocal easement for the joint use of said common sewer for purpose of repairing, replacing, maintaining and operating said common sewer as it exits upon each parcel of land. The easement hereby granted are described in Schedule "A" attached hereto and made a part hereof by this reference. The grant of easement herein is perpetual. The surface of the land shall be restored to substantially the same condition, which existed prior to any repair, maintenance or installation work, except that trees or shrubs need not be replaced.
- 4. Each **Owner** shall have the right to enjoy and use the surface of the easement premises provided that such use shall not interfere with the rights herein granted,

**ASSUMPTION AGREEMENT OF ADDITIONAL PARTIES TO
JOINT SEWER MAINTENANCE AND EASEMENT AGREEMENT**
(Revised 3/1/95)

THIS AGREEMENT made this _____ day of _____, 20_____, between the UPPER THOMPSON SANITATION DISTRICT, a duly organized and special district under the laws of the State of Colorado, hereinafter called "**The District**", and _____ hereinafter called "**Original Customers**" and _____ hereinafter called "**Additional Customers**", is made upon the following terms and conditions.

Whereas, the **Original Customers** entered into an agreement between themselves and **the District** concerning the joint use and maintenance of a private sewer connecting to the sewer of **the District** which was dated _____ and which was filed to record in the office of Larimer County Clerk & Recorder under Reception No.(s) _____, Book _____ at Pages _____, _____, _____, _____, and _____.

Whereas, **Additional Customers** desire to connect to said sewer and to confirm their agreement to reimburse the **Original Customers** for a proportionate share of the cost of installation of said sewer and to agree to the proportionate cost of maintenance and repair thereof. **Additional Customers** are the owners of parcels of land described in Exhibit _____ attached hereto and incorporated herein by this reference.

Wherefore, in consideration of the mutual promises and covenants contained herein, the parties agree as follows:

1. **The Original Owners** hereby consent that said **Additional Customers** may connect to said sewer and hereby acknowledge receipt of reimbursement of **Additional Customers'** proportionate share of the original cost of installation of said sewer.
2. **The Additional Customers** hereby assume and agree to perform their respective share of all of the obligations as outlined in the original Joint Sewer Maintenance and Easement Agreement above described including maintenance, repair and further confirm the granting herein of reciprocal easements as provided in the original agreement.
3. **The Additional Customers** acknowledge the right of **the District** as contained in the original agreement to terminate wastewater collection services and to disconnect the sewer of any owner failing to pay annual service charges.

EASEMENT

THIS EASEMENT is made this ____ day of _____, 20__, by and between _____ (hereinafter referred to as "Grantor"), _____ successors and assigns, and _____ DISTRICT, a quasi municipal corporation of the State of Colorado within the County of _____ (hereinafter referred to as "District").

WITNESSED:

That for and in consideration of the sum of _____ Dollars (\$_____) and other good and valuable consideration paid by District to Grantor, the receipt of which is hereby acknowledged, the Grantor does hereby grant and convey unto the District, its successors and assigns, a perpetual easement and right to construct, install, remove, replace, add to, maintain, repair, operate, change or alter underground sewer lines and appurtenances, together with any and all sewer lines and manholes situate therein, all necessary rights-of-way for convenient ingress and egress thereto and therefrom, and the right to occupy and use, from time to time, as much of the adjoining land of the Grantor as may be reasonably necessary for any of the aforesaid purposes, over, under and across the following described premises, situate in the County of _____, State of Colorado, to wit:

[Property description]

Grantor warrants that the Grantor has the lawful right to grant such easement, rights-of-way, and sewer lines and that the Grantor, and any successors and assigns, will, at no time, permit any building, landscaping, or other permanent improvement to be hereafter constructed within such easement.

Following the completion of the purpose of any entry by the District upon such easement for any of the aforesaid objects, the District shall restore the premises to substantially the same condition existing at the time of the entry thereon, except for trees, shrubs, plants, sidewalks, driveways or parking areas thereon located or damaged thereby.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals the day and year first above written.

GRANTOR:

By _____

STATE OF COLORADO)
) ss.
COUNTY OF _____)

Subscribed and sworn to before me this _____ day of _____, 20____ by
_____ as _____ of _____.

Witness my hand and official seal.

My commission expires: _____

Notary Public

ACCEPTED by the _____ District this _____ day of _____, 20__.

_____ DISTRICT

By _____
, Chairman

Attest:

, Secretary

APPLICATION FOR SEWER ACCEPTANCE FORM

I/We, hereby request the acceptance of Sewer Number _____

_____ (total footage) _____

Constructed by _____ in accordance with the Upper
(Contractor)

Thompson Sanitation District's specifications, at a total cost of \$_____. As the customer of the above subdivision, I do certify that said sewer line and all appurtenances are free of all debts, liens, or mortgages, and that all costs for the construction of said line are paid in full. I also certify that _____

(Customer)

Are the sole and only owners of the above described sewer lines. I further certify that _____

(Customer)

has made no contracts with any persons relating to future work to be done on the sewers or on the easement premises.

Date

Customer

Sewer Number _____

_____ (total footage) _____ L.F. and all

appurtenances such as manholes, tapping wye's and stubouts have been inspected by the Upper Thompson Sanitation District and are found to conform to the District's specifications for the construction of sewers. By acceptance of said sewer, the District assumes ownership and full responsibility of said sewer, including all maintenance from this date forth.

The Upper Thompson Sanitation District hereby accepts Sewer Number _____

_____ (total footage) _____ L.F. and its
appurtenances.

Date

Upper Thompson Sanitation District

WARRANTY

_____ guarantees all
(Contractor)
materials and work performed for a period of two (2) years ending _____, 20____
in regard to the installation of a sewer in the _____
(Sewer Location)
area, in accordance with our agreement.

_____ also
(Contractor)
warrants and guarantees for a period of two (2) years ending _____, 20____, that
the completed system is free from all defects due to faulty materials or workmanship, and the
contractor shall promptly make such corrections as may be necessary by reason of such defects,
including the repairs of any damage or other parts of such defects, including the repairs of any
damage or other parts of the system resulting from such defects. The Upper Thompson
Sanitation District will give notice of observed defects with reasonable promptness. In the event
that _____ should fail to make such repairs, adjustments, or
(Contractor)
other work that may be necessary by such defects, the Upper Thompson Sanitation District may
do so and charge _____ the cost there incurred.
(Contractor)

Contractor

Upper Thompson Sanitation District

Date

Date

This formed approved by UTSD Board of Directors

9/96



P.O. Box 568 • Estes Park, CO 80517
Ph: 970-586-4544 • Fax: 970-586-1049
www.utsd.org

Liquid Waste Hauling Application Form

The undersigned hereby makes application for Liquid Waste Hauling privileges in compliance with the Rules and Regulations of Upper Thompson Sanitation District. I/We understand prior approval must be obtained from Upper Thompson Sanitation District before hauled waste will be accepted.

1. Liquid Waste Hauling Company Name _____

Applicant's Name _____

Billing Address _____

Business Phone _____ Fax _____

Business email _____

2. Payment of the non-refundable annual License Fee in the amount of \$25.00 to be enclosed with this application. The Liquid Waste Hauling License is non-transferable and shall be valid for the period ending December 31, 20____.

3. A copy of the Liquid Waste Hauler's Liability Insurance, with minimum coverage of \$1,000,000.00 commercial general liability, to be attached to this application.

4. I/We have reviewed the Rules and Regulations of Upper Thompson Sanitation District which are available at www.utsd.org. Applicant agrees to operate in compliance with the applicable Rules and Regulations including, but not limited to:

Section 3.19 *Acceptance of Biosolids*

Section 3.20 *Waste Haulers*

Table A-5 *Biosolids and Waste Hauling Charges*

The District expressly reserves the right to make any lawful addition and/or revision in the Rules and Regulations when and as they may become advisable to properly manage the District.

5. The District may refuse disposal of waste and suspend the Liquid Waste Hauler's license for any violation of the District's Rules and Regulations.
6. Liquid Waste Haulers in violation of any provision of the District's Rules and Regulations shall be liable to the District for any expense, loss or damage caused by reason of such violation.
7. I am familiar with the Upper Thompson Sanitation District Rules and Regulations and all declarations above and hereby apply for license as Liquid Waste Hauler.

Signature of Applicant: _____

Liquid Waste Hauling Company Name _____

Date _____

UTSD Administration Office:

Account # _____

Annual License Fee payment of \$25.00 received _____, 20

Check # _____

Copy of valid Liability Insurance has been received by District office

Comments: _____

Application approved by: _____, District Manager

_____ Date



P.O. Box 568 • Estes Park, CO 80517
Ph: 970-586-4544 • Fax: 970-586-1049
www.utsd.org

SERVICE REQUEST FORM

Date Received: _____
Initials: _____

REQUESTING PARTY:

Contractor/Applicant: _____ Phone: _____

Company Name: _____

Mailing Address: _____
(City) (State) (Zip Code)

Email Address: _____

PROPERTY OWNER: (If Different From Above)

Owner Name: _____ Phone: _____

Mailing Address: _____
(City) (State) (Zip Code)

Email Address: _____

PROPERTY INFORMATION:

Property Address: _____

Parcel Number: _____

Subdivision: _____ Filing: _____ Block: _____ Lot: _____

TYPE OF PROPOSED DEVELOPMENT: (Check All That Apply)

- | | |
|--------------------------------------------------|------------------------------------------------------------------------------------|
| <input type="checkbox"/> New Construction | <input type="checkbox"/> Addition/Remodel to Existing Structure |
| <input type="checkbox"/> Residential | <input type="checkbox"/> Commercial |
| <input type="checkbox"/> Single Family Residence | <input type="checkbox"/> Platted Single Family Residence, Multi-Family Subdivision |
| <input type="checkbox"/> Apartment/Condo Complex | |

Other: _____

Proposed development intent or service being requested:

Identify alternate plan that may be considered:

Please furnish a set of plans for review and calculation of fixture unit values. These plans will be retained by the District.

ADDITIONAL INFORMATION REQUESTED:

_____ **Locate Main Line**

_____ **Locate existing service line**

_____ **Identify easements you may need**

_____ **Other**



P.O. Box 568 • Estes Park, CO 80517
Ph: 970-586-4544 • Fax: 970-586-1049
www.utsd.org

PLANNING CODE AND ZONING LAW COMPLIANCE

It is the responsibility of the property owner to comply with all Larimer County, Estes Valley Development and Town of Estes Park Planning Codes and Zoning Laws. Upper Thompson Sanitation District is not responsible to verify the property owner’s investigation of and compliance with code and zoning regulations.

Revocation of a building permit, denial of proposed property use or abandonment of construction due to non-compliance, as determined by county or town officials, may not be construed as entitlement to refund of fees paid to Upper Thompson Sanitation District. Fees paid to UTSD for the provision of service to this property may not be transferred or refunded and no adjustment appeal will be considered.

Therefore, I verify that property owned by _____

located at _____

(Physical Address)

_____, _____

(Parcel Number)

(Legal Address)

is in compliance with Larimer County, Estes Valley Development and Town of Estes Park Planning Codes and Zoning Laws. I understand Upper Thompson Sanitation District is not responsible for investigation of code and zoning compliance for the above mentioned property. I am aware I have no entitlement for service or refund of any fees hereto paid to UTSD should it be determined this property is in violation of code or zoning regulations.

(Name - Printed)

(Signature)

(Check One)

_____ **Property Owner**

_____ **Contractor Designated by Property Owner as Official Representative**
(I certify I have been granted this authority by the property owner.)



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CAMERA REQUEST for PRIVATE SERVICE LATERAL LOCATE

DATE: _____

TIME: _____

LOCATION: _____

OWNER or OWNER REPRESENTATIVE: _____
(Please print)

I/We, the undersigned, request UTSD camera services to locate a private service lateral. I understand, while based upon current information available to the District, the accuracy of a private service lateral locate cannot be guaranteed. I hereby agree that Upper Thompson Sanitation District, its Directors and employees shall not be held liable for any damages or expenses incurred by the property owner or owner representative due to any inaccuracy in the locate of a private service lateral.

I am aware of the UTSD charges as indicated in the Rules and Regulations.

If requested, a DVD of the inspection will be prepared at a cost of \$5.00 per DVD.

Inspection video option: please select **YES or NO**

SIGNATURE: _____
Property Owner or Owner Representative

Billing Address



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www.utsd.org

DYE TEST REQUEST for PRIVATE SERVICE LATERAL

DATE: _____

TIME: _____

LOCATION: _____

OWNER or OWNER REPRESENTATIVE: _____
(Please print)

I/We, the undersigned, request UTSD dye test services for a private service lateral. I understand, while based upon current information available to the District, the accuracy of a private service lateral dye test cannot be guaranteed. I hereby agree that Upper Thompson Sanitation District, its Directors and employees shall not be held liable for any damages or expenses incurred by the property owner or owner representative due to any inaccuracy in the dye testing of a private service lateral.

I am aware of the UTSD charges as indicated in the Rules and Regulations.

SIGNATURE: _____
Property Owner or Owner Representative

Billing Address



P.O. Box 568 • Estes Park, CO 80517
Ph: 970-586-4544 • Fax: 970-586-1049

www.utsd.org

SMOKE TEST REQUEST for PRIVATE SERVICE LATERAL

DATE: _____

TIME: _____

LOCATION: _____

OWNER or OWNER REPRESENTATIVE: _____

(Please print)

I/We, the undersigned, request UTSD smoke test services for a private service lateral. I understand, while based upon current information available to the District, the results of a private service lateral smoke test cannot be guaranteed. I hereby agree that Upper Thompson Sanitation District, its Directors and employees shall not be held liable for any damages or expenses incurred by the property owner or owner representative due to any inaccuracy in the smoke testing of a private service lateral.

I am aware of the UTSD charges as indicated in the Rules and Regulations.

SIGNATURE: _____

Property Owner or Owner Representative

Billing Address

**ORDER BY BOARD OF DIRECTORS OF THE
UPPER THOMPSON SANITATION DISTRICT
FOR INCLUSION OF REAL PROPERTY**

WHEREAS, there was filed with the Board of Directors of the Upper Thompson Sanitation District (“District”) a duly acknowledged Petition, a copy of which is attached hereto as Exhibit A and incorporated herein by this reference, signed on behalf of _____, one hundred percent (100%) fee owner of the real property described in the Petition attached hereto, and requesting that the Board of Directors include such property within the District; and

WHEREAS, the Petition was heard at an open meeting of the Board of Directors of the District on _____, 20__, at the hour of _____ .m., at _____, Estes Park, Colorado, after publication of notice of the filing of such Petition, and the place, time and date of such meeting, the name of the Petitioner and a general description of the property to be included, in the Estes Park Trail-Gazette on _____, 20__, which proof of publication is attached hereto as Exhibit B and incorporated herein by this reference; and

WHEREAS, the subject property is capable of being served by the District facilities; and

WHEREAS, it is deemed to be in the best interests of the District and the taxpaying electors thereof that such Petition be granted.

IT IS THEREFORE ORDERED that such Petition be granted as to the real property described herein; that the boundaries of the District shall be enlarged by the inclusion of the real property described herein, subject to the terms and conditions of the Inclusion Agreement dated _____ between Petitioner and District; and that the Larimer County District Court, in which Court an Order was entered establishing this District, be requested to enter an Order that the real property described herein be included within the District.

I certify that the foregoing Order was unanimously passed at a meeting of the Board of Directors of the Upper Thompson Sanitation District, duly called and held on _____, 20__, at the hour of _____ .m. and that the undersigned is the duly acting and authorized Chairman of the District.

UPPER THOMPSON SANITATION DISTRICT

By: _____
Chairman

ATTEST:

By: _____
Secretary

- **EXHIBIT A TO ORDER BY BOARD OF DIRECTORS (petition for inclusion)**
- **EXHIBIT B TO ORDER BY BOARD OF DIRECTORS (Proof of Publication)**

PETITION FOR INCLUSION

IN THE MATTER OF UPPER THOMPSON SANITATION DISTRICT

TO THE BOARD OF DIRECTORS OF THE DISTRICT:

The undersigned Petitioner, being the fee owner of 100% of the real property hereinafter described, hereby prays that such property be included within the Upper Thompson Sanitation District, as provided by law, and for cause, states:

1. That such property is capable of being served with facilities of the District.
2. That assent to the inclusion of such property in the District is hereby given by the undersigned, who constitutes the fee owner of 100% of such property.
3. That there shall be no withdrawal from this Petition after consideration by the Board, nor shall further objections be filed thereto by the Petitioner.
4. That the inclusion of such property into the District shall be subject to any and all terms and conditions established by the Board and accepted by Petitioner, and to all duly promulgated rules, regulations and rates of the District.
5. That the inclusion of such property into the District shall be subject to an Inclusion Agreement to be executed by the Petitioner and the District.
6. That the property owned by Petitioner and sought to be included in the District is described as follows:

See Exhibit A attached hereto and incorporated herein by reference.

PETITIONER:

By: _____

Print Name: _____

Print Address: _____

STATE OF COLORADO)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____,
20____ by _____ as _____ of
_____.

Witness my hand and official seal.

My commission expires: _____

Notary Public

- **EXHIBIT A (LEGAL DESCRIPTION OF PROPERTY TO BE INCLUDED)**

INCLUSION AGREEMENT

THIS INCLUSION AGREEMENT is made this _____ day of _____, 20____, between the UPPER THOMPSON SANITATION DISTRICT, a quasi-municipal corporation of the State of Colorado (hereinafter referred to as “District”), and _____ (hereinafter referred to as “Owner”).

WHEREAS, District is located in the County of Larimer and was organized to provide sanitation services and other public and private purposes by any available means and all necessary facilities, equipment and appurtenances thereto to its residents and the owners of real property within the jurisdictional boundaries of the District; and

WHEREAS, Owner is the fee owner of the subject real property, more particularly described in Exhibit A attached hereto and incorporated herein by reference (hereinafter referred to as the “Property”), situated outside the jurisdictional boundaries of the District and capable of being served by the sanitation services subject to the terms and conditions hereinafter set forth; and

WHEREAS, District may agree to furnish sanitation service to real property situate outside the District’s jurisdictional boundaries subject to the inclusion of such land into the District, pursuant to the provisions of Part 4 of Article 1, Title 32, C.R.S., but is under no obligation or duty to do so; and

WHEREAS, District, in exercising its statutory powers, may enter into contracts and agreements with owners of real property seeking to include their land into the District and may, in its discretion, impose specific conditions for such inclusion; and

WHEREAS, Owner has filed or will file with the Board of Directors of the District a petition for the inclusion of the Property into the District and desires to obtain the benefits of in-District sanitation service from the District, subject to the terms and conditions hereinafter set forth, which Owner knowingly declares to be fair, equitable and reasonably commensurate with the burden placed on District’s wastewater system by reason of such inclusion; and

WHEREAS, the provision of wastewater service by the District to the Property in accordance with the terms of this Inclusion Agreement will be in the public interest and in the best interest of the Owner and the Property.

NOW, THEREFORE, in consideration of the mutual covenants, understandings and agreements hereinafter set forth, District and Owner agree as follows:

Prior to the approval of the inclusion of the Property into the District by the Board of Directors of the District, Owner shall fully comply with all District regulations governing the inclusion of real property into the District and shall pay (a) inclusion fees therefor in the amount of \$500.00; and (b) all administrative costs, including publication expenses and attorney fees, incurred by the District to include the Property into the District; and (c) the main extension deposit specified herein. Further, a Petition for Inclusion and this Inclusion Agreement duly signed by the Owner shall be submitted to the District. All such inclusion fees, and a deposit for the estimated administrative cost, and the main extension deposit shall be paid to the District on or before the date set for the public hearing on such inclusion.

After the public hearing on this inclusion, approval of this Inclusion Agreement by the Board of Directors of the District, and the entry of an order of inclusion by the District Court pursuant to Section 32-1-401(1), C.R.S., the Property shall be included into the District subject to the terms and conditions hereinafter set forth, the duly promulgated rules and regulations of the District, and the laws of the State of Colorado pertaining to all

matters set forth herein, whether now existing or subsequently amended. If this inclusion is denied by the Board of Directors of the District for any reason, the inclusion fees paid to the District shall be refunded to Owner less any balance due for the administrative costs incurred in connection herewith.

After entry of the order of inclusion by the District Court, Owner may connect any improvements upon the Property to the wastewater system of the District. In the event that Owner elects to receive wastewater service from the District, Owner shall pay all fees and charges for connection permits and plant investment fees set forth under the rules and regulations of the District prior to time of connection to the wastewater system.

At the time of submission of the Petition for Inclusion and the Inclusion Agreement, Owner is responsible for the extension of service lines from the main to serve the Property in accordance with the rules, regulations and procedures of the District. Such service line extensions shall be planned, engineered and installed by the District, or its agents and contractors, in accordance with such rules, regulations and procedures. Owner shall be allowed to review such engineering plans in advance of construction. The District may, in its discretion, elect to install such service line extensions in phases in order to expedite the provision of wastewater service to the Property while concurrently reviewing options for providing service to the general area in which the Property is situate.

Owner hereby releases, discharges and holds the District harmless from any obligation or liability to provide service to the Property, except in accordance with the terms and conditions set forth herein and the rules and regulations of the District and subject to the same terms and conditions under which service is generally provided to all users within the District.

The terms and conditions set forth in this Inclusion Agreement shall be binding upon and inure to the benefit of the District and Owner, their respective personal representatives, heirs, transferees, successors and assigns.

The terms and conditions set forth in this Inclusion Agreement shall be and remain covenants running with the Property.

If any provision of this Inclusion Agreement shall, for any reason, be held to be invalid or unenforceable, the invalidity or unenforceability of such provision shall not affect the validity or enforceability of the other provisions hereof.

This Inclusion Agreement may be amended, from time to time, by agreement between the parties hereto. No amendment, modification or alteration hereof shall be binding upon the parties hereto unless the same is in writing and duly approved by the authorized representatives of each party.

This Inclusion Agreement constitutes the entire agreement between the parties hereto concerning the subject matter herein, and all prior negotiations, representations, contracts, understandings and agreements pertaining to such matter are merged into and superseded by this Agreement.

IN WITNESS WHEREOF, the parties have caused this Inclusion Agreement to be executed the day and year above written.

UPPER THOMPSON SANITATION DISTRICT

By: _____
Chairman

ATTEST:

By: _____
Secretary

OWNER _____

STATE OF COLORADO)
) ss.
COUNTY OF LARIMER)

The foregoing Inclusion Agreement was acknowledged before me this ____ day of _____, 20____, by _____ as Chairman and _____ as Secretary of the Upper Thompson Sanitation District.

Witness my hand and official seal.
My commission expires: _____

Notary Public

STATE OF COLORADO)
COUNTY OF _____)

The foregoing Inclusion Agreement was acknowledged before me this ____ day of _____, 20____, by _____ (Owner).

Witness my hand and official seal.
My commission expires: _____

Notary Public

PUBLIC RECORDS REQUEST

PLEASE PRINT

Name: _____ Date of Request: _____

Address: _____ City _____ State: _ Zip: _____

Phone: Day: _____ Evening: _____

Email address: _____

Indicate the information you desire and/or list each requested document. Please be as specific as possible. Allow 3 working days for a search of the records.

By: _____
SIGNATURE

TO BE COMPLETED BY DISTRICT:

Charges: _____ copies @ \$.25 per page = _____

Research: _____ hours x \$20.00 = _____

Total: \$ _____

Request completed by: _____

Date: _____

**UPPER THOMPSON SANITATION DISTRICT
PLANT INVESTMENT FEE AND TAP AGREEMENT**

Account No. _____

THIS AGREEMENT made this _____ day of _____, 20__ by and between the **Upper Thompson Sanitation District**, hereinafter referred to as "District" and _____ hereinafter collectively referred to as "Owner", is made upon the following terms and conditions:

WHEREAS, the District is a legally constituted Sanitation District in Larimer County, Colorado,

WHEREAS, the owner holds fee simple title to the real estate described below:

Parcel# _____, (Legal Address) _____

WHEREAS, Owner is desirous of making a sewer plant investment for the uses and purposes hereinafter set forth.

THEREFORE, in consideration of the payments hereinafter provided and the mutual promises and covenants herein contained, the adequacy and receipt of which is hereby acknowledged, it is agreed as follows:

1. Owner hereby pays to the District a plant investment fee of \$ _____ represents _____ SINGLE FAMILY EQUIVALENT(S) (SFEs) as the same from time to time is defined by the District in its policies. The District hereby acknowledges receipt of payment of the said plant investment fee (s).

2. By making payment of the said plant investment fee, the Owner shall be entitled to physically tap onto the District's system at a point to be designated by the District, but such right shall be subject to the provisions of this Agreement and to the policies, rules, regulations and Bylaws of the District as the same may be in force from time to time hereafter. All costs of making such connections, installing, and maintaining the service line from such point to the Owner's building connection, shall be borne by Owner.

3. The rights to tap onto the District's system as above provided, are subject however to the following:

(a) All physical connections, whether for existing dwellings or structures or for any dwelling or structure to be constructed, shall be constructed in the manner and within the time required by the policies of the District as the same may be in force from time to time hereafter. District Rules and Regulations are available at the District's Administration office or District website www.utsd.org. Owner acknowledges policies in force as of the date hereof and agrees to perform Owner's obligations therein contained. Owner acknowledges that the District may, from time to time hereafter, change or amend such policies, and that it is the responsibility of the Owner to inquire as to the existence and terms of those policies in force before commencement of the connection process.

(b) If the property above described is vacant property, the Owner acknowledges that approved building plans have been presented for review and acceptance by the District in determining the amount of the plant investment fee as above set forth, in conformity with the rate structures as adopted by the District. The District has relied thereon in determining whether to accept the fees and grant the rights herein set forth.

No connection shall be made for any dwelling or structure to be constructed after the date hereof if there is any change in the approved plans, unless revised plans have been submitted to and approved by the District and any additional fees which might be due or payable, by reason of increased fixture unit values for the proposed construction, all as defined by the District, are paid.

(c) The Owner hereby authorizes the Town of Estes Park to provide the District with the monthly water consumption meter readings. The Owner, furthermore, grants the District access to Owners property to obtain or monitor the water meter or other water consumption recording devices, used to determine the amount of water consumed by the Owner.

(d) If the above described property has not been physically connected to the District's collection system within the time required, as per **Section 3.12, FAILURE TO CONNECT**, of the District Rules and Regulations, the customer's right to connect to the wastewater collection system shall terminate and any plant investment fees paid shall be forfeited, **unless** the customer begins to pay and continues to pay the standby fees imposed for that lateral sewer connection for each billing period, commencing with the first billing cycle after the twelve (12) month period has passed.

4. The rights granted under this Agreement shall apply only to the above described property and to none other, and the right to tap onto the District's system may not be transferred or sold for use on any other property. However, if the above described property is sold, the rights hereunder may be transferred to the new Owner, but such transfer shall not be effective until a written assignment or transfer has been signed, delivered and accepted by the District. The transfer or assignment shall be on forms acceptable to the District.

5. The Owner agrees to be bound by all policies, rules, regulations or Bylaws established from time to time by the District, and to pay promptly as the same become due, all rates and charges for services and any other matters as established by the District. If any such payments are not made, then the District, in addition to any other remedies available to it for collection of delinquent fees or for enforcement thereof by foreclosure of lien or otherwise, may also terminate all sanitation services to the Owner and the above described property.

6. The Owner further acknowledges that any rights granted herein by reason of paying the plant investment fee are solely limited to the property above described.

IN WITNESS WHEREOF, this Agreement has been signed by the parties hereto on the day and year first above written; and the parties hereto acknowledge that this Agreement shall extend to

and be binding upon the undersigned, their heirs, personal representatives, successors in interest, assigns and grantees.

UPPER THOMPSON SANITATION DISTRICT

By _____
District Board Chairman

PLANT INVESTMENT FEEHOLDER

PLANT INVESTMENT FEEHOLDER

MAILING ADDRESS
of Plant Investment Fee Holder

PLANT INVESTMENT FEE BALANCE PAID IN FULL THE ___ day of ___, 20__
CHECK# ___ BY _____

APPENDIX F

NOTICES

UPPER THOMPSON SANITATION DISTRICT
Post Office Box 568
Estes Park, CO 80517
970-586-4544

DATE

CUSTOMER NAME
CUSTOMER ADDRESS
CUSTOMER CITY, COMPANY STATE COMPANY ZIP

**NOTICE OF DELINQUENT ACCOUNT AND
TERMINATION OF WASTEWATER COLLECTION SERVICES**

You are hereby notified that your account with the Upper Thompson Sanitation District has been delinquent for more than **30** days. There is now due **<CUSTOMER BALANCE>**. As permitted by statute, the balance will be charged interest at 12% per annum from the date of delinquency until paid.

WASTEWATER COLLECTION SERVICE WILL BE TERMINATED ON _____
AT 10:00 A.M. UNLESS THE ACCOUNT IS PAID IN FULL BY THAT TIME.

THE DISTRICT WILL ASSESS ANY AND ALL DISCONNECTION AND RECONNECTION CHARGES TO THE CUSTOMER. ALL CHARGES, FINES AND FEES MUST BE PAID IN FULL BEFORE SERVICE WILL BE RECONNECTED.

You are also notified that the District has a perpetual lien against your property for the unpaid charges, interest and expenses under Colorado Revised Statutes 32-1-1001(II)(j)(I). The District will file a statement of this lien with the Larimer County Clerk & Recorder, and the costs of recording the statement and its release will be added to the above charges.

IF YOU HAVE PAID THIS ACCOUNT, PLEASE DISREGARD THIS NOTICE.
THANK YOU!!

**UPPER THOMPSON SANITATION DISTRICT
Post Office Box 568
Estes Park, CO 80517
970-586-4544**

DATE

CUSTOMER NAME
CUSTOMER ADDRESS
CUSTOMER CITY, COMPANY STATE COMPANY ZIP

**FINAL NOTICE OF DELINQUENT ACCOUNT AND
TERMINATION OF WASTEWATER COLLECTION SERVICES**

You are hereby notified that your account with the Upper Thompson Sanitation District has been delinquent _____. There is now due <**CUSTOMER BALANCE**>. As permitted by statute, the balance will be charged interest at 12% per annum from the date of delinquency until paid.

WASTEWATER COLLECTION SERVICE WILL BE TERMINATED ON _____
AT 10:00 A.M. UNLESS THE ACCOUNT IS PAID IN FULL BY THAT TIME.

You are also notified that the District has a perpetual lien against your property for the unpaid charges, interest and expenses under Colorado Revised Statutes 32-1-1001(II)(j)(I). The District will file a statement of this lien with the Larimer County Clerk & Recorder, and the costs of recording the statement and its release will be added to the above charges.

THE DISTRICT WILL ASSESS ANY AND ALL DISCONNECTION AND RECONNECTION CHARGES TO THE CUSTOMER. ALL CHARGES, FINES AND FEES MUST BE PAID IN FULL BEFORE SERVICE WILL BE RECONNECTED.

cc: Larimer County Health Department

**UPPER THOMPSON SANITATION DISTRICT
Post Office Box 568
Estes Park, CO 80517
970-586-4544**

FINAL DISCONNECT NOTICE

DATE

CUSTOMER NAME

CUSTOMER ADDRESS

CUSTOMER CITY, COMPANY STATE COMPANY ZIP

**YOU ARE HEREBY NOTIFIED THAT THIS PROPERTY WILL BE
DISCONNECTED FROM PUBLIC SEWER ON _____ AT 10:00 A.M.**

**THIS NOTICE WILL GIVE YOU A 5 DAY NOTICE TO PAY YOUR PAST
DUE ACCOUNT OF <<CUSTOMER BALANCE>>.**

**THE LARIMER COUNTY HEALTH DEPARTMENT HAS BEEN NOTIFIED
OF THE PENDING DISCONNECTION FROM PUBLIC SEWER.**

UPPER THOMPSON SANITATION DISTRICT

cc: Larimer County Health Department

**UPPER THOMPSON SANITATION DISTRICT
Post Office Box 568
Estes Park, CO 80517
970-586-4544**

DATE

AS OF _____

AT 10:00 A.M.

**THIS PROPERTY HAS BEEN
DISCONNECTED FROM
THE WASTEWATER COLLECTION
SYSTEM.**

**UPPER THOMPSON SANITATION
DISTRICT**

**THE LARIMER COUNTY HEALTH DEPARTMENT HAS BEEN NOTIFIED OF
THE DISCONNECTION.**



P.O. Box 568 • Estes Park, CO 80517
Ph: 970-586-4544 • Fax: 970-586-1049
www.utsd.org

NOTICE OF REVOCATION OF SERVICE

DATE

CUSTOMER NAME

CUSTOMER ADDRESS

CUSTOMER CITY, COMPANY STATE, COMPANY ZIP

Service Address:

YOU ARE HEREBY NOTIFIED THAT THIS PROPERTY WILL BE DISCONNECTED FROM PUBLIC SEWER ON _____, 20__, AT 10:00 A.M. FOR UNAUTHORIZED SECONDARY LATERAL CONNECTION FROM _____. YOU MAY CONTACT THE DISTRICT MANAGER AND/OR YOU HAVE OPPORTUNITY FOR A HEARING WITH THE BOARD OF DIRECTORS OF THE DISTRICT PURSUANT TO SECTION 5 OF THE DISTRICT RULES AND REGULATIONS.

THIS NOTICE WILL GIVE YOU A 10 DAY NOTICE TO VOLUNTARILY DISCONNECT THE UNAUTHORIZED LATERAL CONNECTION PURSUANT TO DISTRICT INSPECTION AND PAY THE DISCONNECTION/INSPECTION FEE OF \$300.00 FOR SUCH VOLUNTARY DISCONNECTION AND INSPECTION. THE DISCONNECTION MUST BE ACCOMPLISHED ACCORDING TO DISTRICT REQUIREMENTS AND COMPLETED TO DISTRICT SATISFACTION IN ORDER TO AVOID THE ABOVE REVOCATION OF SERVICE.

THE LARIMER COUNTY HEALTH DEPARTMENT HAS BEEN NOTIFIED OF THE PENDING DISCONNECTION FROM PUBLIC SEWER.

UPPER THOMPSON SANITATION DISTRICT

cc: Larimer County Health Department

APPENDIX G CONTRACTOR REQUIREMENTS

Any contractor or company that performs construction, maintenance or other services on District-owned equipment, property, within 10-feet of District sewer system, and/or in easements or rights-of-way that are the responsibility of the District, shall provide the District with the following documents and comply with the following requirements:

1. Certificate of Insurance specifying liability coverage and naming the District as an additional insured, where the limit is \$1,000,000 each occurrence/aggregate.
2. Certificate of Insurance specifying Minimum State Statute Workers Compensation coverage.
3. Proof of insurance on equipment and trucks.
4. Where needed or required, OSHA-approved safety equipment shall be utilized at all times and the proper number of personnel required for the safe operation of the equipment shall be utilized in the operation of this safety equipment at all times. Examples include, but are not limited to, accessing manholes, open cut trenches and electrical cabinets.
5. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs.
6. Contractor shall comply with all applicable laws and regulations of any public body have jurisdiction, including the District.

**APPENDIX H
SELECTED RESOLUTIONS**

UPPER THOMPSON SANITATION DISTRICT

RESOLUTION REGARDING MANAGEMENT OF EASEMENTS

WHEREAS, the Upper Thompson Sanitation District (“District”) is a quasi-municipal corporation and political subdivision of the State of Colorado; and as such has obtained certain easements over parcels of property located within the District in order to provide for access to and maintenance of District-owned public infrastructure located within, on and/or inside of such easement locations (“District Easements”); and

WHEREAS, the District has determined it is necessary, and in the interest of preserving public health, safety and welfare, to adopt a Policy which allows the public to know the guidelines under which the District Easements will be managed; and

WHEREAS, in developing this Policy, the District has attempted to incorporate the needs and desires of owners of property adjacent to District Easements.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Upper Thompson Sanitation District that the following Easement Management Policy shall direct and control the operation and maintenance of District Easements:

1. It is the intent of the District that District Easements shall be maintained as an area of land that is primarily undeveloped, natural, or pastoral in character, with limited, easily removed encroachments only, in order to best preserve the public health, safety and welfare and allow access, maintenance and support to important District infrastructure, including but not limited to sewer mains and main lines.
2. To that end, it is the policy and direction of the Board that the District maintenance of the District Easements shall be proactive, protecting the easement area from encroachment of unwanted trees and other natural and man-made obstructions with the potential to cause damage and/or to impair the District’s ability to access or maintain District infrastructure. No dumping of trash or vegetation shall be allowed on District Easement property. It shall be the policy of the District to enforce its Rules and Regulations regarding encroachments on District Easements to the maximum extent possible, while maintaining good working relationships with the public.
3. The District retains the right to perform such maintenance, plant removal, trimming of vegetation and similar activities as is deemed necessary by staff to the proper functioning of District facilities located within or on all of its recorded easements. A property owner not being aware of the location and extent of the easement shall not constitute waiver of this policy. This is true whether the property owner is specifically aware of the

easement through title disclosure or has acquired the subject property by non-traditional means (i.e., donation from a relative, etc.).

4. The District recognizes that § 38-41-101(2), C.R.S. prohibits private parties from gaining any prescriptive rights over public property.
5. District staff is directed to enforce the District's rights granted through its Easements as staff determines to be most efficient to the operation of the District's sanitation system.

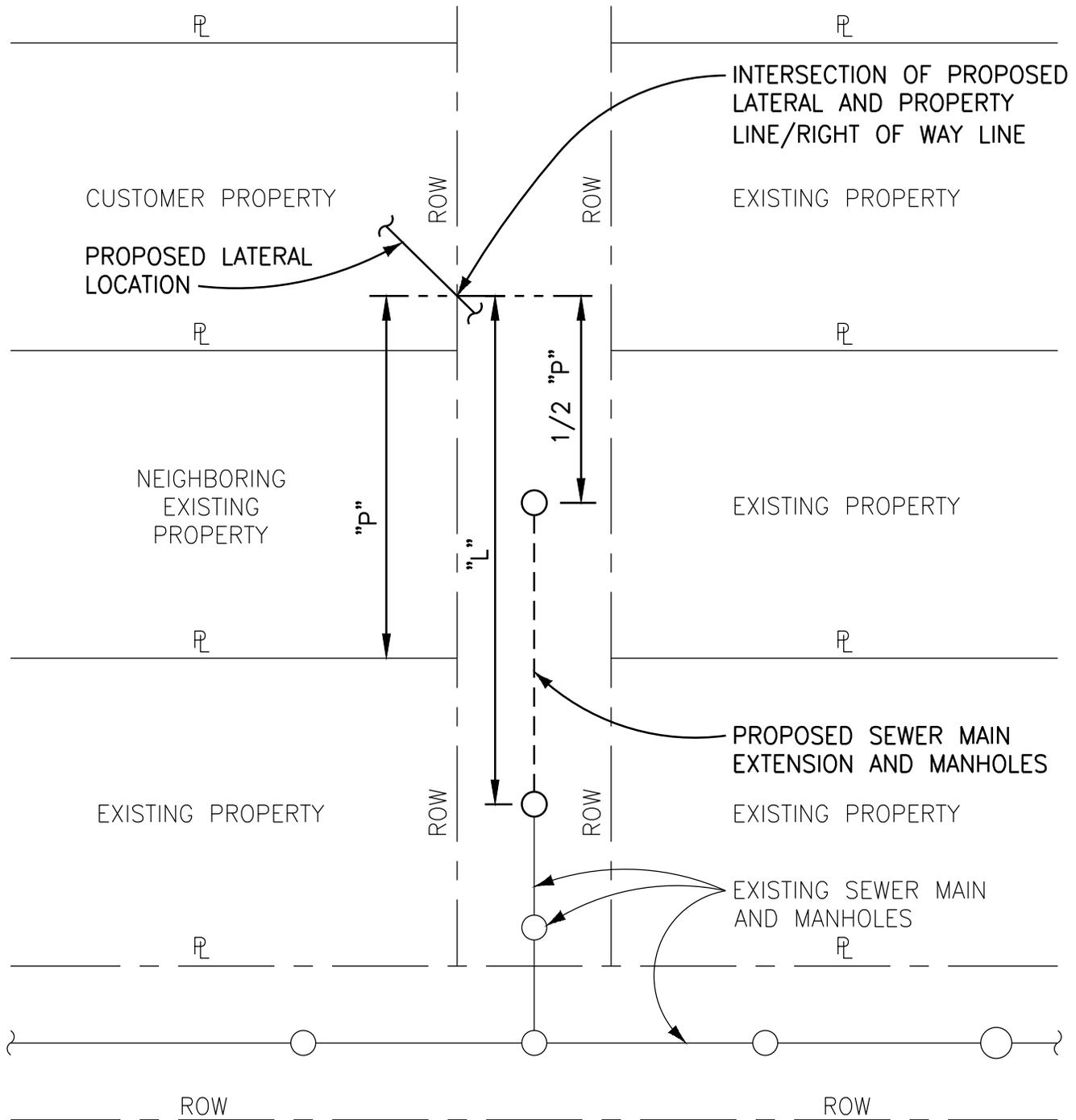
ADOPTED this 20th of August, 2013, by a vote of 5 in favor and 0 opposed.

Upper Thompson Sanitation District

By:  _____
Larry Pettyjohn, Chairman

Attest:  _____

**APPENDIX I
STANDARD DETAILS**



NOTES:

1. IF "L" > "P", A SEWER MAIN EXTENSION IS REQUIRED. THE SEWER MAIN SHALL BE EXTENDED TO WITHIN A MINIMUM OF 1/2 "P".
2. "L" MAXIMUM = 200 FEET.

ROW—RIGHT OF WAY
 PL —PROPERTY LINE

1000

REV. DEC 2013

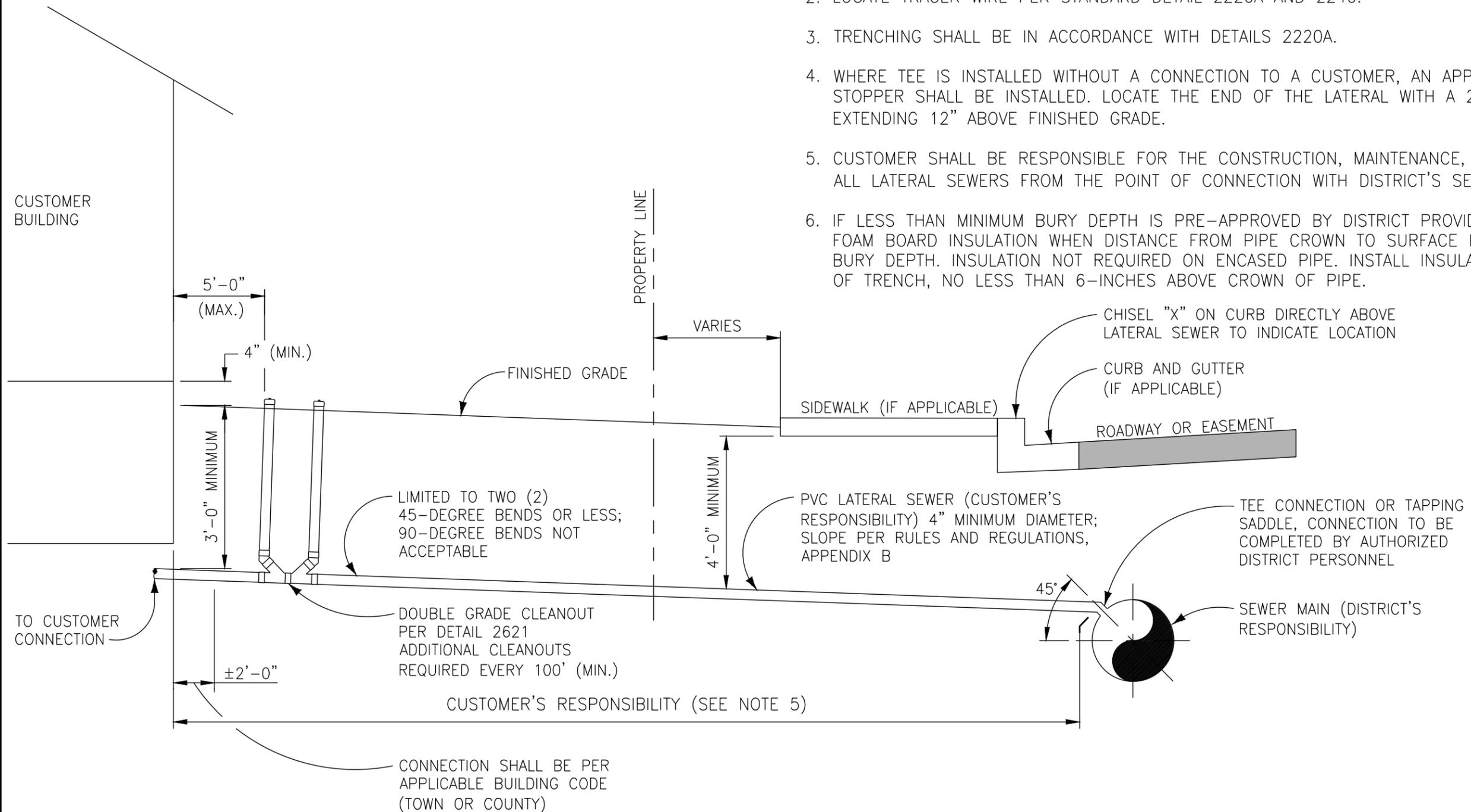
**UPPER THOMPSON
 SANITATION DISTRICT**
 EXAMPLE SEWER SYSTEM EXTENSION
 STANDARD DETAIL NO. 1000



Upper Thompson Sanitation District
 2196 Mall Road
 Estes Park, Colorado 80517
 Phone: 970.586.4544

NOTES:

1. LOCATE DOUBLE GRADE CLEANOUTS PER LATERAL SEWER SPECIFICATIONS, AND PER DETAIL 2621.
2. LOCATE TRACER WIRE PER STANDARD DETAIL 2220A AND 2240.
3. TRENCHING SHALL BE IN ACCORDANCE WITH DETAILS 2220A.
4. WHERE TEE IS INSTALLED WITHOUT A CONNECTION TO A CUSTOMER, AN APPROVED CAP, PLUG, OR STOPPER SHALL BE INSTALLED. LOCATE THE END OF THE LATERAL WITH A 2x4 REDWOOD STAKE, EXTENDING 12" ABOVE FINISHED GRADE.
5. CUSTOMER SHALL BE RESPONSIBLE FOR THE CONSTRUCTION, MAINTENANCE, AND REPLACEMENT OF ALL LATERAL SEWERS FROM THE POINT OF CONNECTION WITH DISTRICT'S SEWER MAIN.
6. IF LESS THAN MINIMUM BURY DEPTH IS PRE-APPROVED BY DISTRICT PROVIDE A LAYER OF 2-INCH FOAM BOARD INSULATION WHEN DISTANCE FROM PIPE CROWN TO SURFACE IS LESS THAN MINIMUM BURY DEPTH. INSULATION NOT REQUIRED ON ENCASED PIPE. INSTALL INSULATION FOR FULL WIDTH OF TRENCH, NO LESS THAN 6-INCHES ABOVE CROWN OF PIPE.

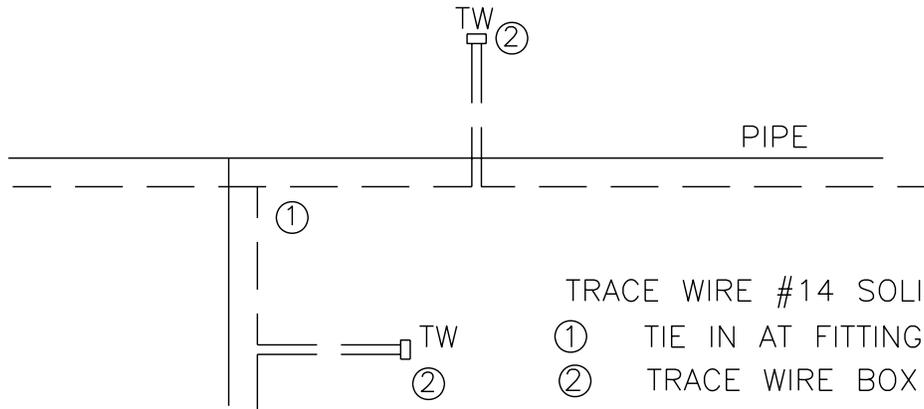


LATERAL SEWER CONNECTION

NOT TO SCALE

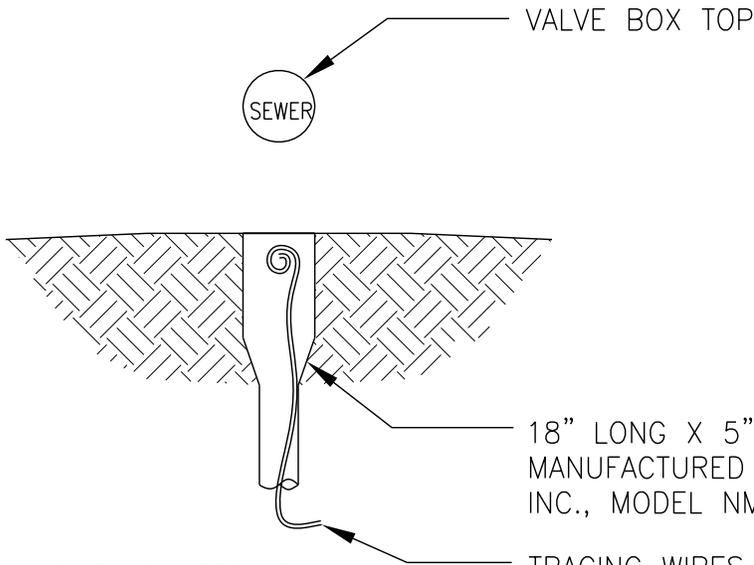
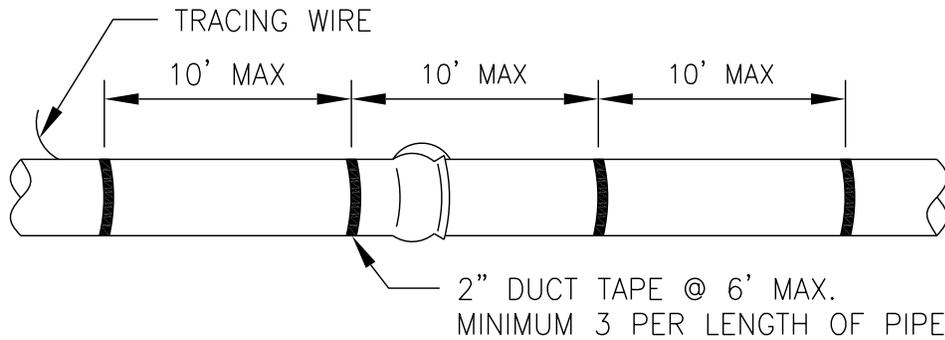
2000

REV. DEC 2014



TRACE WIRE #14 SOLID

- ① TIE IN AT FITTING
- ② TRACE WIRE BOX



NOTE:

PROVIDE @ 600 LF (MAX)
AND AT ALL VALVES AND
ENDS OF PIPE

NOTE:

A CLEAN-OUT LOCATED AT
THE CURB LINE MAY BE
USED IN LIEU OF A TRACE
WIRE BOX.

TRACING WIRES SHALL HAVE A MINIMUM 24"
OF SLACK LOOSELY COILED IN THE BOX

TRACER WIRE DETAIL
NOT TO SCALE

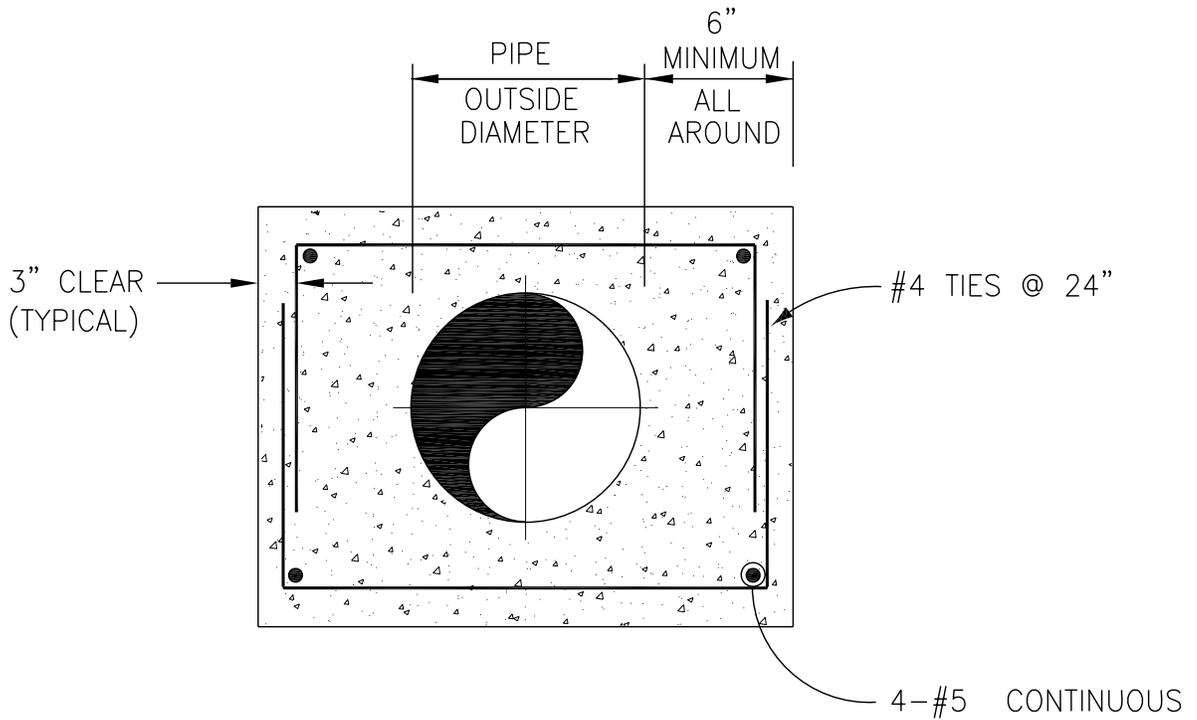
2240

REV. MAY 2010

UPPER THOMPSON
SANITATION DISTRICT
TRACER WIRE DETAIL
STANDARD DETAIL NO. 2240



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
Phone: 970.586.4544



NOTE:

1. EXTEND ENCASEMENT AT PIPE CROSSINGS 10 FEET IN EACH DIRECTION.

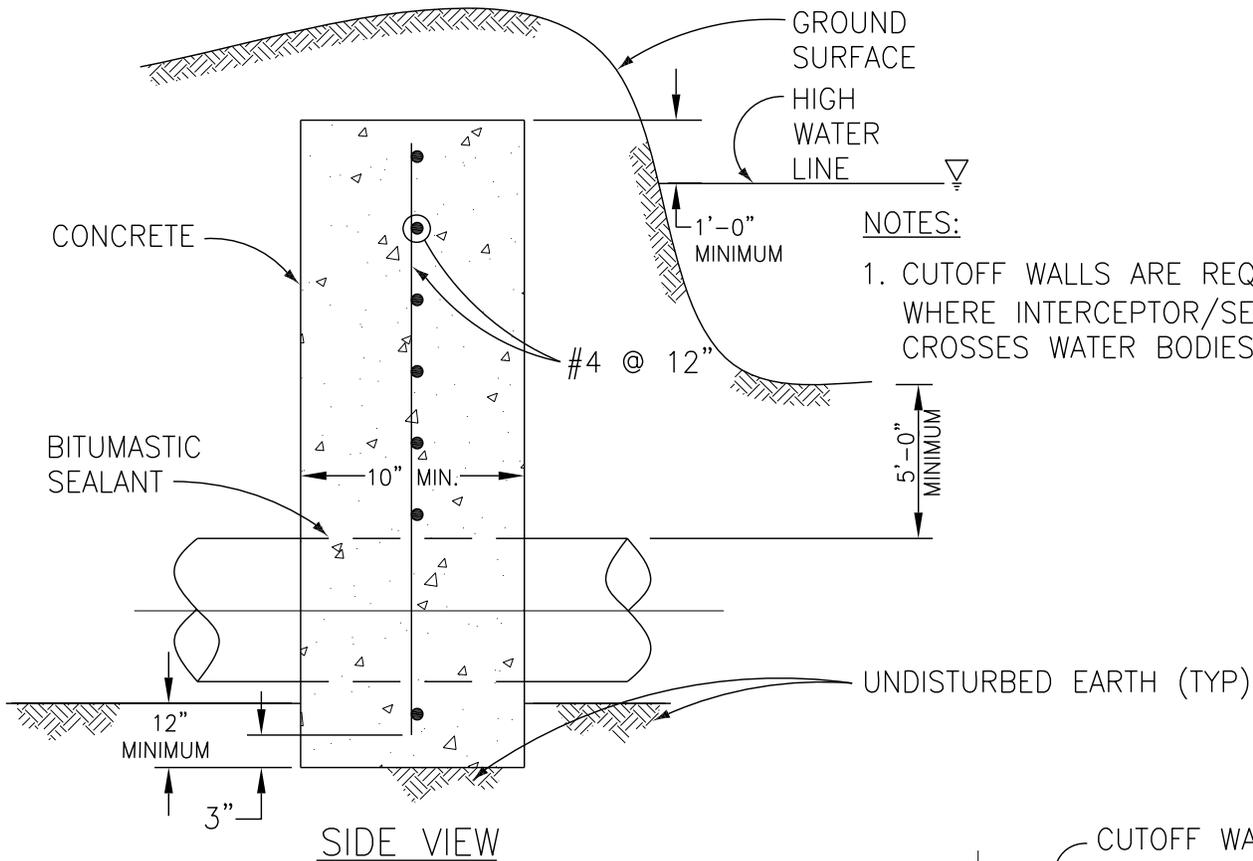
PIPE ENCASEMENT
NOT TO SCALE

2525

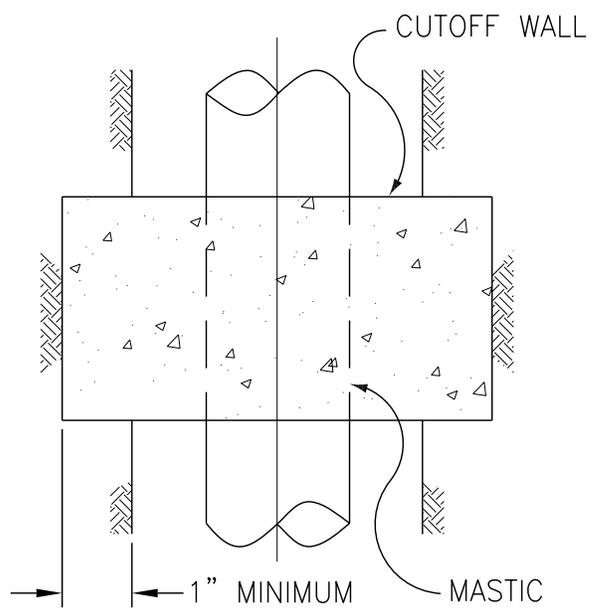
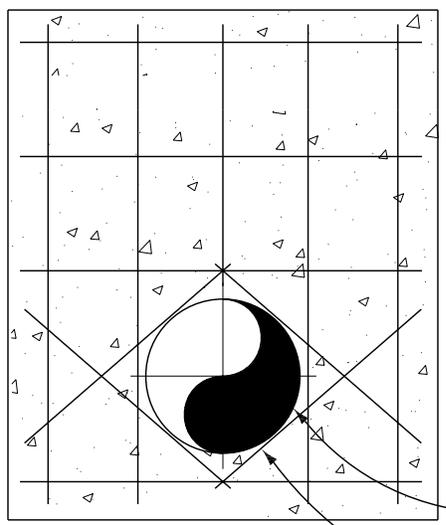
UPPER THOMPSON
SANITATION DISTRICT
PIPE ENCASEMENT
STANDARD DETAIL NO. 2525



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
Phone: 970.586.4544



NOTES:
 1. CUTOFF WALLS ARE REQUIRED WHERE INTERCEPTOR/SEWER CROSSES WATER BODIES.



NOTE:
 REINFORCEMENT NOT SHOWN IN TOP VIEW.

2530

CUT-OFF WALL AT WATER CROSSING
 NOT TO SCALE

REV. FEBRUARY 2008

**UPPER THOMPSON
 SANITATION DISTRICT
 CUT-OFF WALL AT WATER CROSSING
 STANDARD DETAIL NO. 2530**



Upper Thompson Sanitation District
 2196 Mall Road
 Estes Park, Colorado 80517
 Phone: 970.586.4544

TABLE 1 – BEARING AREA OF THRUST BLOCKS IN SQUARE FEET
(HORIZONTAL BENDS & VERTICAL UPWARD BENDS)

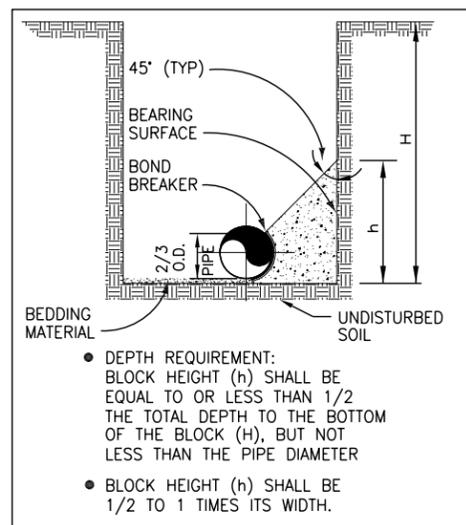
FITTING SIZE (IN)	A ₁	A ₂			
	TEE, WYE PLUG OR CAP (SF)	90° BEND (SF)	45° BEND (SF)	22 1/2° BEND (SF)	11 1/4° BEND (SF)
4	1.4	2.0	1.1	1.0	1.0
6	3.2	4.5	2.4	1.2	1.0
8	5.7	8.0	4.3	2.2	1.1
10	8.8	12.5	6.8	3.4	1.7
12	12.7	18.0	9.7	5.0	2.5
14	17.3	24.5	13.3	6.8	3.4
16	22.6	32.0	17.3	8.8	4.4
18	28.6	40.5	21.9	11.2	5.6
20	35.3	50.0	27.1	13.8	6.9
24	50.9	72.0	39.0	19.9	10.0

TABLE 2 – VOLUME OF THRUST BLOCK IN CUBIC YARDS
(VERTICAL DOWNWARD BENDS)

FITTING SIZE (IN)	V ₁			ROD SIZE	EMBEDMENT (FT)
	45° BEND (CY)	22 1/2° BEND (CY)	11 1/4° BEND (CY)		
4	0.5	0.3	0.1	#6	2.5
6	1.1	0.6	0.3	#6	2.5
8	2.0	1.1	0.5	#6	2.5
10	3.1	1.7	0.9	#6	2.5
12	4.4	2.4	1.2	#6	2.5
14	6.1	3.3	1.7	#8	3.0
16	7.9	4.3	2.2	#8	3.0
18	10.0	5.4	2.8	#8	3.0
20	12.3	6.7	3.4	#8	3.0
24	17.8	9.6	4.9	#8	3.0

GENERAL:

- FOR ALL BURIED PIPING EXCEPT FLANGED, SCREWED, SOCKET WELD PVC, OR WELDED STEEL PIPE SPECIFIED TO BE PRESSURE TESTED, ALL FITTINGS SHALL BE PROVIDED WITH CONCRETE THRUST BLOCKS AT ALL DIRECTION CHANGES UNLESS OTHERWISE NOTED.
- IN ADDITION TO THRUST BLOCKS, ALL FITTINGS AND VALVES SHALL BE RESTRAINED FOR AT LEAST 40 FEET IN ALL DIRECTIONS. MEGALUGS MAY BE USED ON DIP AND PVC PIPE FOR RESTRAINT EXCEPT IN LOCATIONS WHERE FLEXIBLE JOINTS ARE REQUIRED.
- CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH OR STRUCTURAL BACKFILL.
- KEEP CONCRETE CLEAR OF JOINT, BOLTS, NUTS, CLAMPS, AND OTHER ACCESSORIES.
- THRUST BLOCKS SHALL NOT BE LOCATED OR SIZED TO ENCASE ADJACENT PIPES OR FITTINGS.
- A BOND BREAKER SHALL BE PLACED BETWEEN THE PIPE AND THRUST BLOCK. BOND BREAKER SHALL BE POLYETHYLENE ENCASUREMENT OR SIMILAR MATERIAL SUITABLE TO PROHIBIT BOND BETWEEN PIPE MATERIAL AND THRUST BLOCK.



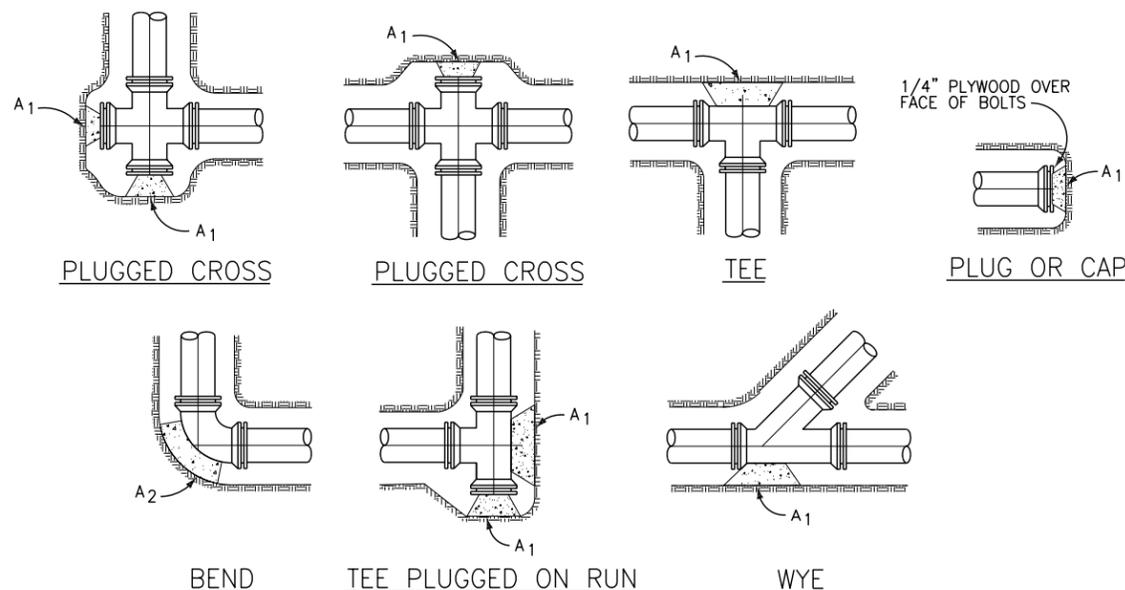
TYPICAL CROSS SECTION

HORIZONTAL BENDS AND VERTICAL UPWARD BENDS:

- BEARING AREAS (TABLE 1) BASED ON TEST PRESSURE OF 150 PSI, AN ALLOWABLE SOIL BEARING PRESSURE OF 2,000 PSF AND A SAFETY FACTOR OF 1.5, TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING PRESSURES, USE THE FOLLOWING EQUATION:

$$\text{BEARING AREA} = (\text{TEST PRESSURE} / 150 \text{ psi}) \times (2,000 / \text{SOIL BEARING PRESSURE psf}) \times (\text{TABLE 1 VALUE})$$

- UNLESS OTHERWISE NOTED ON THE GENERAL DRAWINGS IN THE GENERAL NOTES OR SPECIFICATIONS, USE SOIL BEARING PRESSURE = 2000 PSF FOR THIS PROJECT.
- BEARING AREA OF THRUST BLOCK SHALL NOT BE LESS THAN 1.0 SQUARE FOOT.
- IF THE DEPTH REQUIREMENT (SEE TYPICAL CROSS SECTION) CAN NOT BE ACHIEVED, THE DISTRICT SHALL BE NOTIFIED.



THRUST RESTRAINTS-TYPE A
NOT TO SCALE

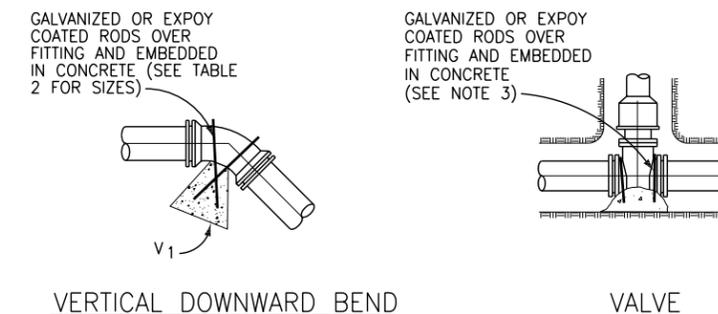
VERTICAL DOWNWARD BENDS:

- VERTICAL BENDS THAT REQUIRE A THRUST BLOCK VOLUME EXCEEDING 5 CUBIC YARDS REQUIRE SPECIAL BLOCKING DETAILS. SEE DRAWINGS FOR VOLUMES SHOWN TO LEFT OF HEAVY, BOLD LINE IN TABLE 2.

- THRUST BLOCK VOLUMES (TABLE 2) FOR VERTICAL DOWNWARD BENDS HAVING UPWARD RESULTANT THRUSTS ARE BASED ON TEST PRESSURE OF 150 PSI, THE WEIGHT OF CONCRETE = 4050 LBS/CUBIC YARD, AND A SAFETY FACTOR OF 1.5. TO COMPUTE VOLUMES FOR DIFFERENT TEST PRESSURES AND CONCRETE WEIGHTS, USE THE FOLLOWING EQUATION:

$$\text{VOLUME} = (\text{TEST PRESSURE} / 150) \times (4,050 / \text{CONCRETE WEIGHT}) \times (\text{TABLE 2 VALUE})$$

- VOLUME OF THRUST BLOCK IN CUBIC YARDS FOR VALVES SHALL BE THE SAME VOLUME USED FOR 11 1/4 BENDS.



VERTICAL DOWNWARD BEND

VALVE

2600A

REV. FEBRUARY 2008

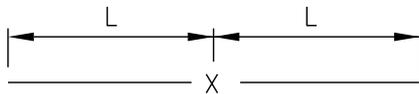
LENGTH OF RESTRAINED PIPE

PIPE SIZE	FITTING	90° BEND, TEE, PLUG, OR VALVE	45° BEND	22 1/2° BEND	11 1/4° BEND
4"	L	30'	9'	1'	–
6"	L	45'	13'	4'	–
8"	L	60'	18'	5'	1'
12"	L	90'	25'	7'	2'
14"	L	100'	28'	7'	2'
16"	L	110'	32'	8'	2'
20"	L	130'	39'	10'	3'
24"	L	160'	45'	12'	3'

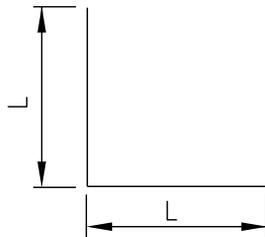
NOTES:

1. LENGTH OF RESTRAINED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
2. BASED ON 100 PSI INTERNAL PRESSURE.
3. LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE TIED TOGETHER.
4. FOR LENGTH OF RESTRAINED PIPE AT DIFFERENT TEST PRESSURES, USE THE FOLLOWING EQUATION:

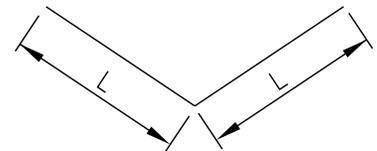
$$\text{LENGTH OF RESTRAINED PIPE} = (\text{TEST PRESSURE}/100 \text{ PSI}) \times (\text{TABLE VALUE})$$



TEE OF VALVE



90° BEND



BENDS

THRUST RESTRAINTS—TYPE B

NOT TO SCALE

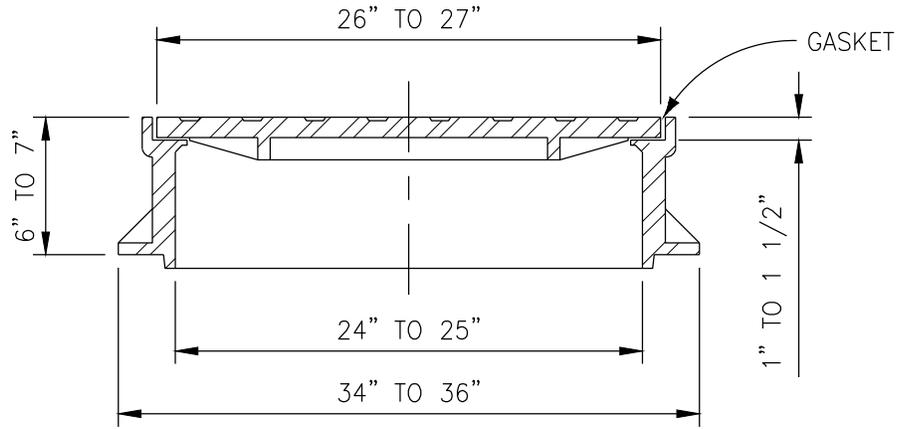
2600B

**UPPER THOMPSON
SANITATION DISTRICT
THRUST RESTRAINT—TYPE B
STANDARD DETAIL NO. 2600B**

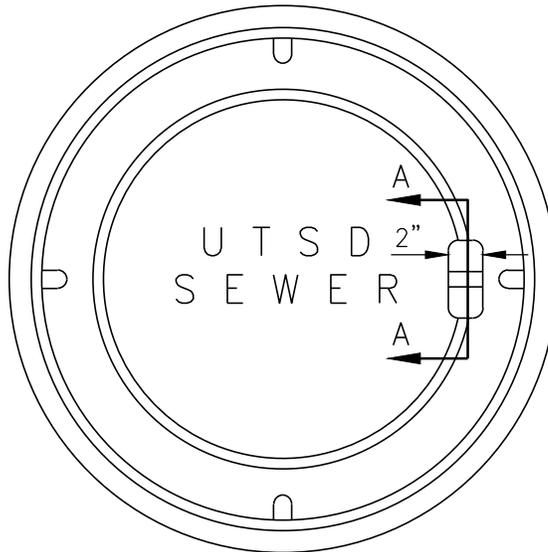


Upper Thompson Sanitation District
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Phone: 970.586.4544

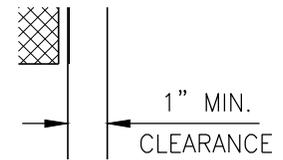
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ELEVATION



PLAN



SECTION A-A

NOTES:

1. LETTERING SHALL BE AS SHOWN. LETTERS SHALL BE EQUALLY SPACED AND BALANCED.
2. MANHOLE COVER AND FRAME SHALL BE DESIGNED TO WITHSTAND TRAFFIC LOADING (H2O TRUCK).
3. ALL MANHOLE COVERS SHALL BE WATER-TIGHT WITH LIFTING SLOT AND RECESSED HANDLES, UNLESS APPROVED OTHERWISE BY THE DISTRICT. LIFTING SLOTS SHALL NOT EXTEND THROUGH COVER (SEE SECTION A-A ABOVE).
4. FRAME AND COVER SHALL CONFORM TO ASTM A 48 CLASS 30. FRAME AND COVER SHALL BE CAST IRON, NEENAH R1915 OR APPROVED EQUAL.

MANHOLE FRAME AND COVER
NOT TO SCALE

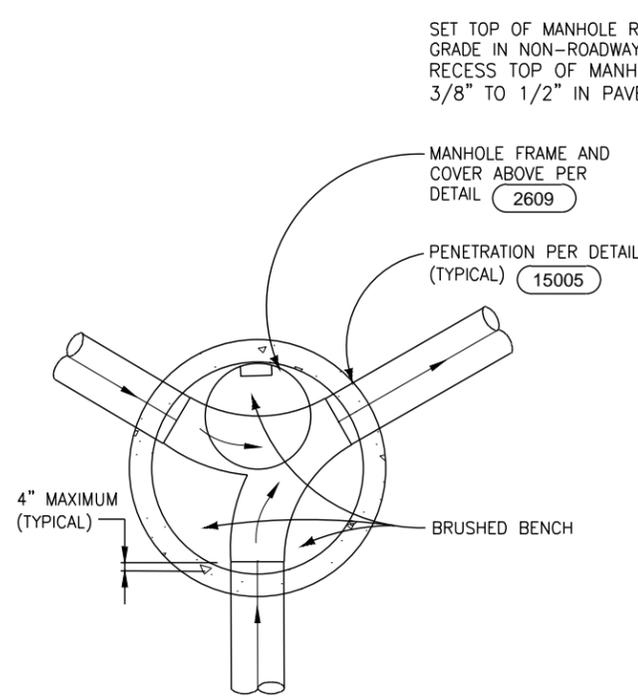
2609

REV. DEC 2013

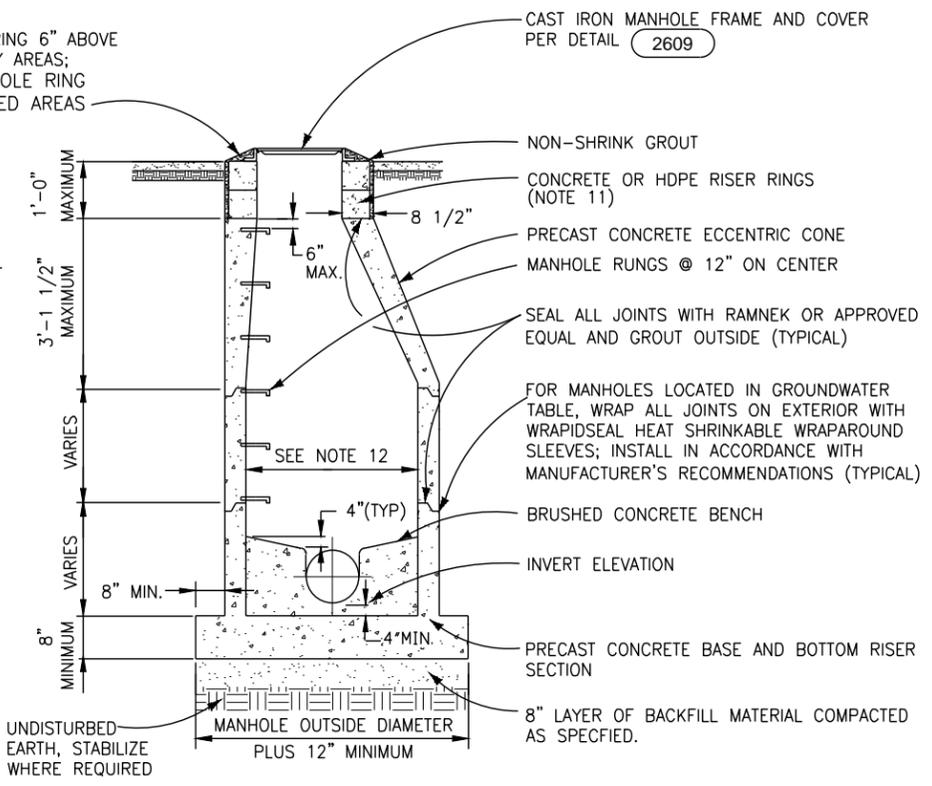
**UPPER THOMPSON
SANITATION DISTRICT
MANHOLE FRAME AND COVER
STANDARD DETAIL NO. 2609**



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
Phone: 970.586.4544



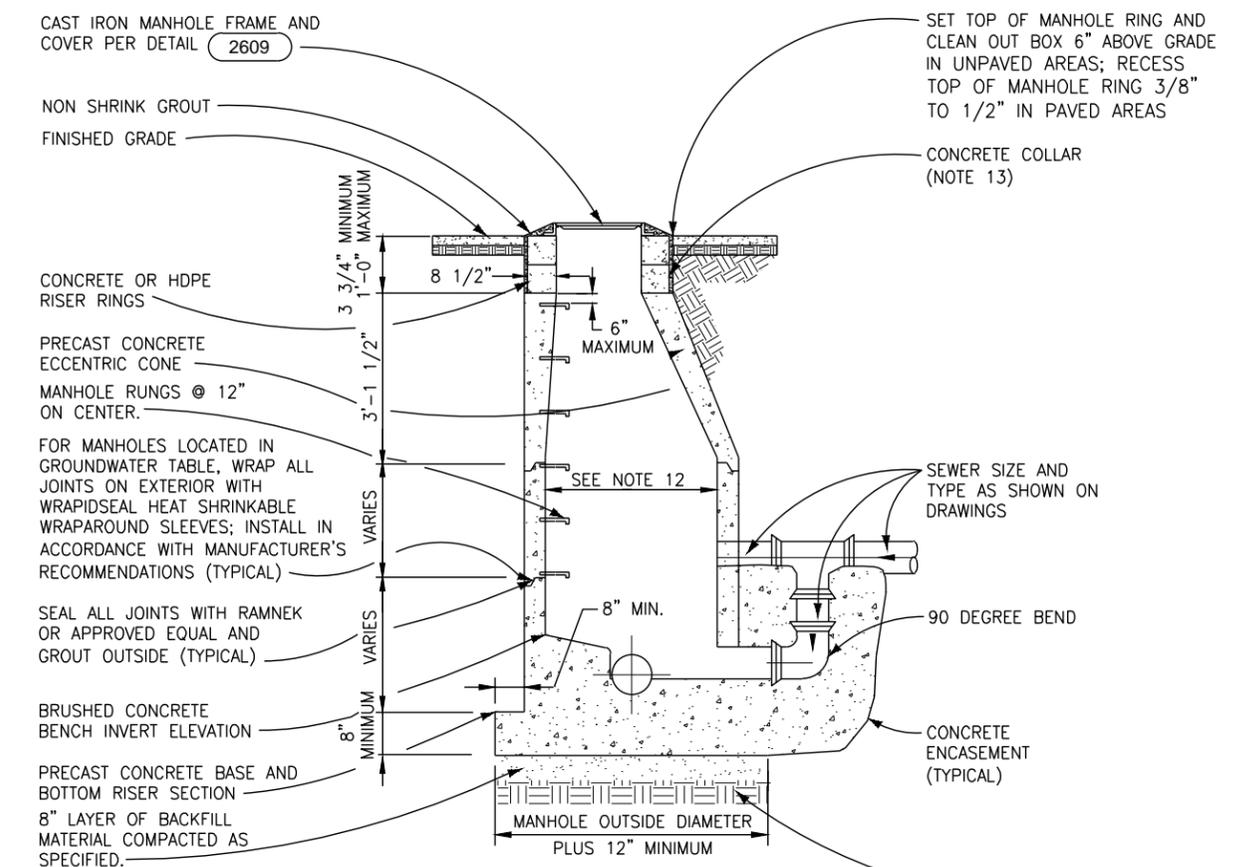
TYPICAL PLAN



STANDARD MANHOLE

PIPE DIAMETER	MANHOLE FRAME AND COVER DIAMETER
12" OR LESS	24"
14" TO 30"	30"

MANHOLE WITH FORMED BENCH
NOT TO SCALE



DROP MANHOLE

UNDISTURBED EARTH, STABILIZE WHERE REQUIRED

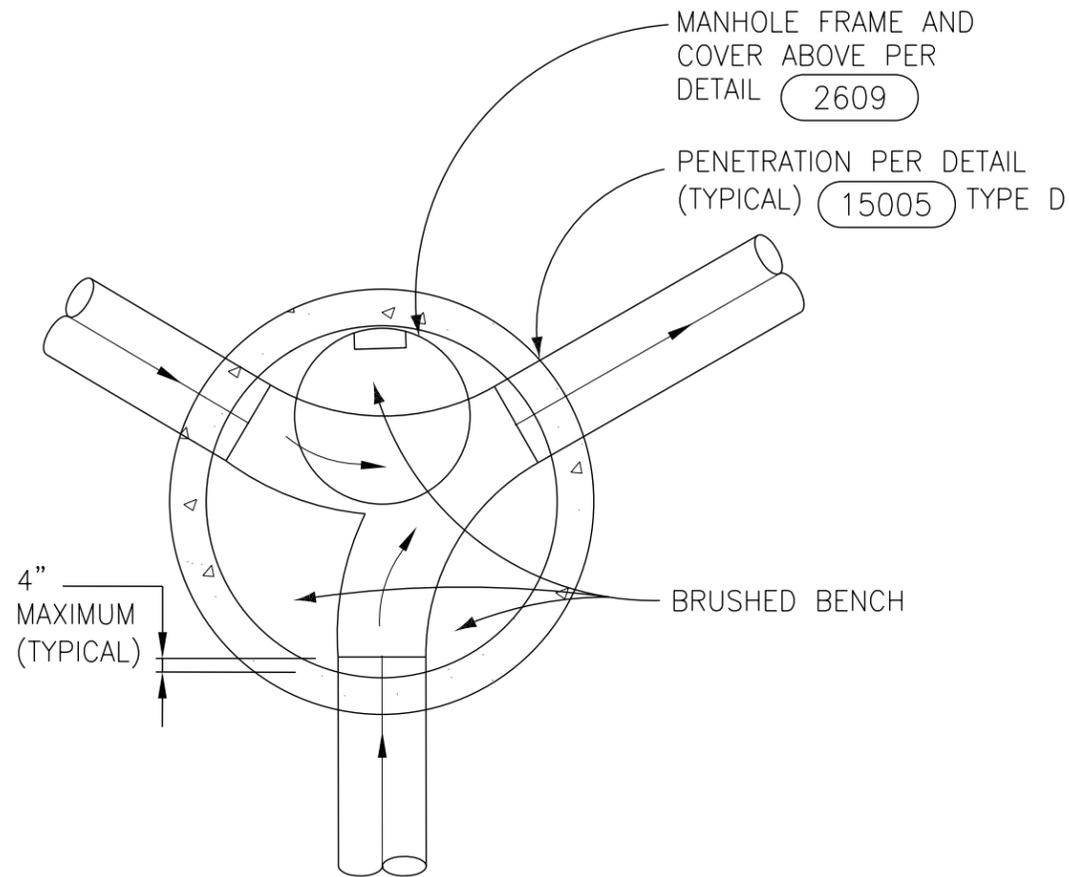
NOTES:

- ALL COMPONENTS SHALL BE CAPABLE OF HS-20 LOADING.
- INSTALL ALL PIPES INTO MANHOLES WITH RUBBER BOOT CONNECTOR ASSEMBLIES. SEE DETAIL 15005 TYPE D.
- DROP MANHOLE SHALL BE USED FOR ALL SITUATIONS WHERE PIPES ENTER MANHOLE AT 24" OR HIGHER ABOVE BENCH.
- DIMENSIONS MAY VARY FOR CAST-IN-PLACE CONCRETE BASES. PROVIDE SUBMITTAL TO DISTRICT FOR REVIEW AND APPROVAL OF ALL CAST-IN-PLACE CONCRETE BASES.
- PIPES SHALL BE LAID WITH END SQUARE INTO MANHOLE BASE.
- MANHOLE COVER SHALL BE CENTERED OVER THE DOWNSTREAM PIPE.
- ALL OPENINGS INTO MANHOLE SHALL BE CORE DRILLED, OR BY ALTERNATIVE METHOD APPROVED BY THE DISTRICT.
- IF UPSTREAM PIPE DIAMETER IS LESS THAN DOWNSTREAM PIPE DIAMETER, MATCH THE PIPE CROWN ELEVATIONS.
- REINFORCING IS REQUIRED FOR ALL CAST-IN-PLACE MANHOLES. REINFORCING SHALL BE GRADE 40 OR 60. MATERIALS SHALL BE CONSISTENT WITH CURRENT ASTM STANDARDS.
- DETAILS 15005 AND 15015 ARE APPLICABLE TO ALL MANHOLES.
- HDPE RISER RINGS SHALL BE BY LADTECH, INC OR APPROVED EQUAL. SURFACES BETWEEN RISER RINGS AND OTHER RINGS OR CONCRETE, OR FRAMES, SHALL BE SEALED WITH RAMNECK.
- SEE APPENDIX C OF RULES AND REGULATIONS FOR MANHOLE SECTION DIAMETER.
- INSTALL CONCRETE COLLAR FLUSH WITH RIM ON ALL NEW MANHOLES. EXTEND TO A MINIMUM OF 6-INCHES BELOW TOP OF CONE SECTION. MINIMUM 6-INCH WIDTH FOR FULL CIRCUMFERENCE. COLLARS NOT REQUIRED ON RING AND COVERS LOCATED IN ASPHALT AND/OR CONCRETE.

2610

REV. DEC 2014

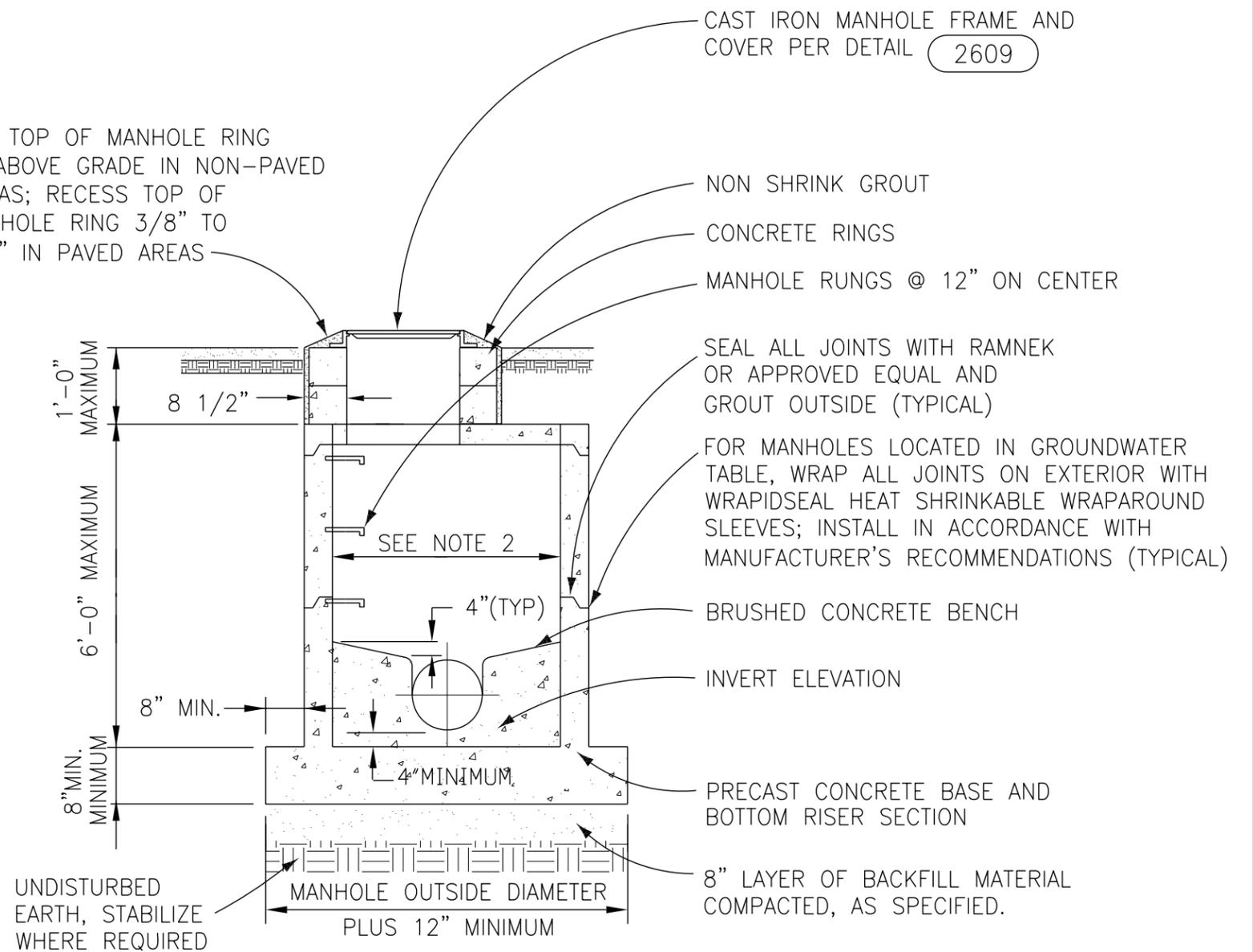




TYPICAL PLAN

TABLE 1	
PIPE DIAMETER	MANHOLE FRAME AND COVER DIAMETER
12" OR LESS	24"
14" TO 30"	30"

SET TOP OF MANHOLE RING 6" ABOVE GRADE IN NON-PAVED AREAS; RECESS TOP OF MANHOLE RING 3/8" TO 1/4" IN PAVED AREAS



NOTE:

1. SEE DETAIL 2610 FOR ADDITIONAL MANHOLE DETAILS
2. SEE APPENDIX C OF RULES AND REGULATIONS FOR MANHOLE SECTION DIAMETER.

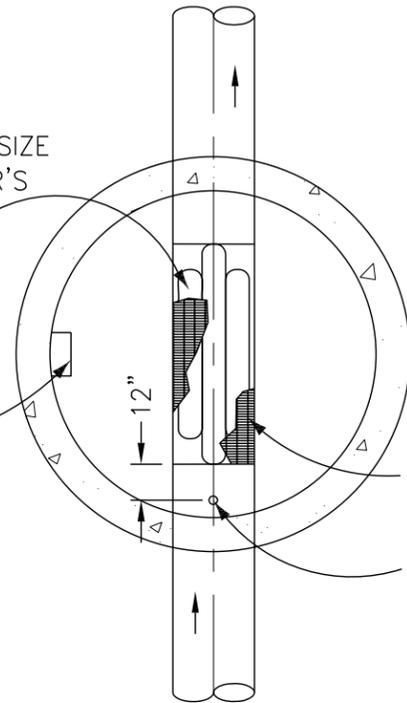
SHALLOW MANHOLE
NOT TO SCALE

2612

REV. MAY 2010

INSERTABLE PALMER-BOWLUS FLUME, AS MANUFACTURED BY PLASTI-FAB OR APPROVED EQUAL; SIZE PER MANUFACTURER'S RECOMMENDATIONS

MANHOLE RUNGS AT 12" ON CENTER



ALUMINUM GRATING (TYPICAL)

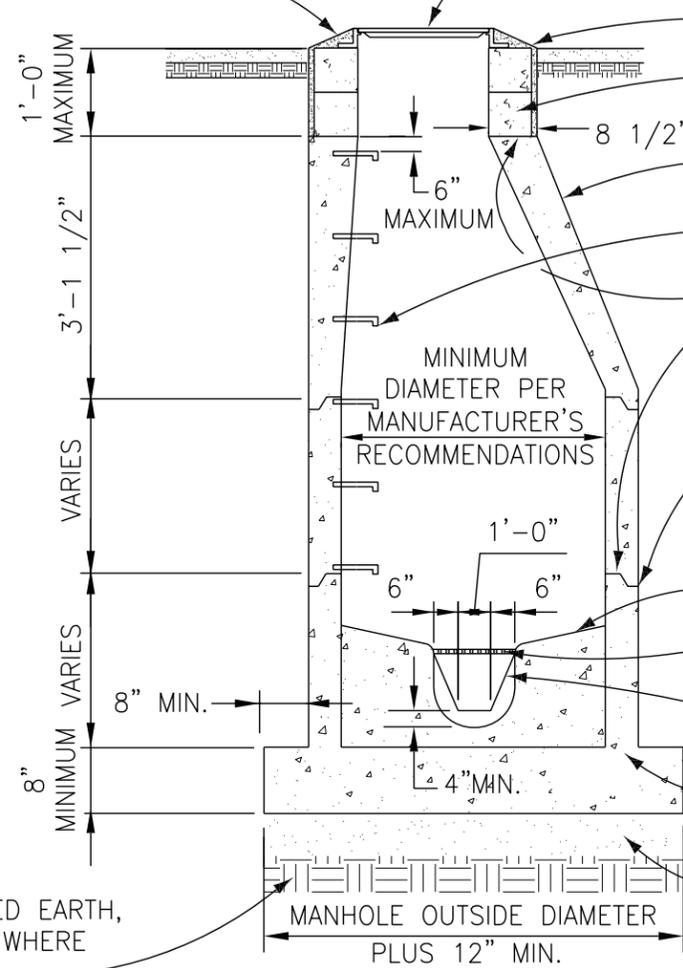
LEVEL SENSOR

PLAN

NOTES:

1. PROVIDE DETAILS REGARDING POWER SUPPLY, AND CONNECTION TO DISTRICT'S EXISTING SCADA SYSTEM.
2. SEE DETAIL 2610 FOR ADDITIONAL MANHOLE DETAILS.

SET TOP OF MANHOLE RING 6" ABOVE GRADE IN NON-PAVED AREAS; RECESS TOP OF MANHOLE RING 3/8" TO 1/4" IN PAVED AREAS



UNDISTURBED EARTH, STABILIZED WHERE REQUIRED

SECTION

CAST IRON MANHOLE FRAME AND COVER PER DETAIL 2609

NON SHRINK GROUT

CONCRETE RINGS

PRECAST CONCRETE ECCENTRIC CONE

MANHOLE RUNGS AT 12" ON CENTER

SEAL ALL JOINTS WITH RAMNEK OR APPROVED EQUAL AND GROUT OUTSIDE (TYPICAL)

FOR MANHOLES LOCATED IN GROUNDWATER TABLE, WRAP ALL JOINTS ON EXTERIOR WITH WRAPIDSEAL HEAT SHRINKABLE WRAPAROUND SLEEVES; INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (TYPICAL)

BRUSHED CONCRETE BENCH

ALUMINUM GRATING (TYPICAL)

INSERTABLE PALMER-BOWLUS FLUME

PRECAST CONCRETE BASE AND BOTTOM RISER SECTION

8" LAYER OF BACKFILL MATERIAL COMPACTED AS SPECIFIED.

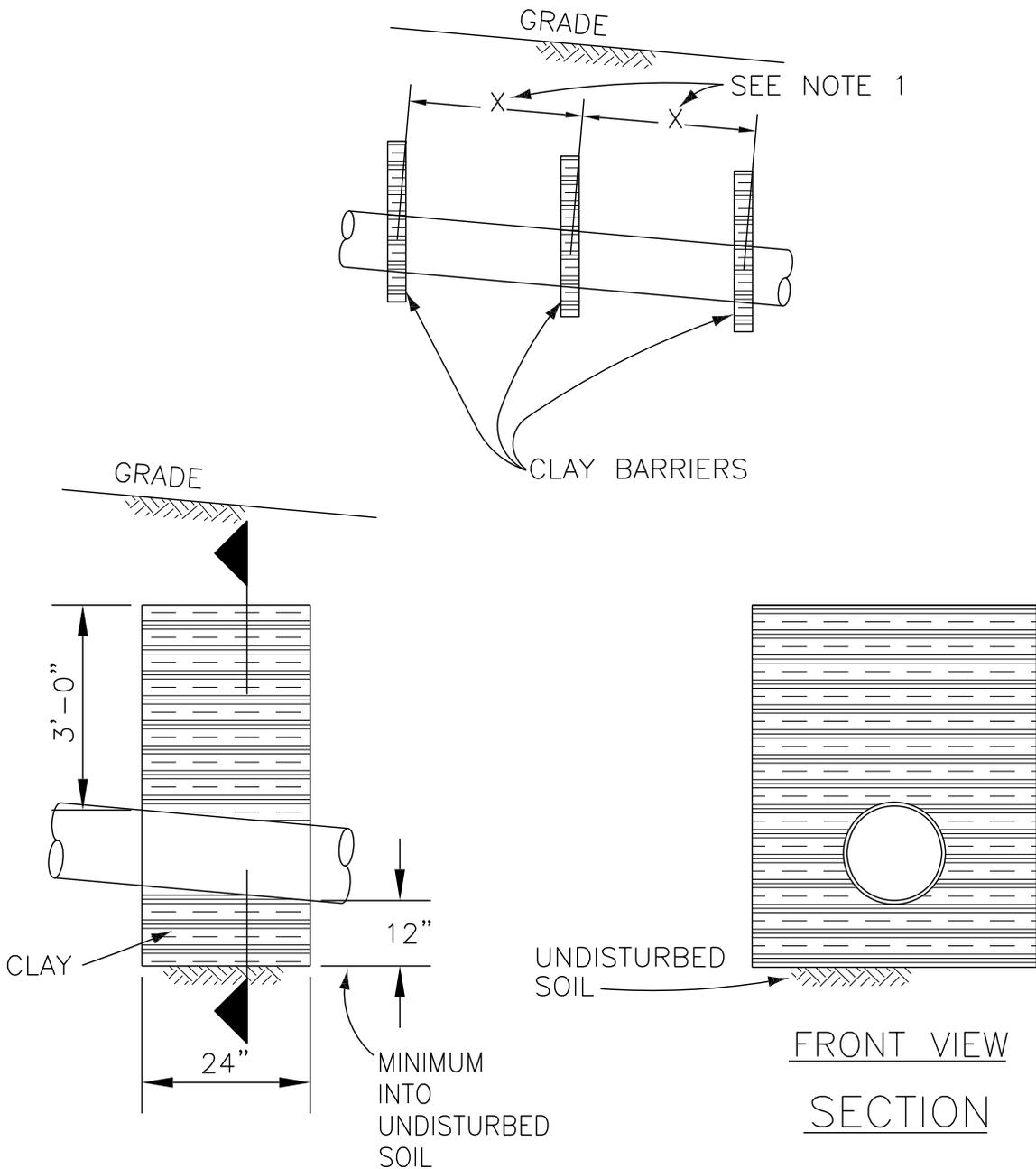
FLOW METERING AND SAMPLING STATION

NOT TO SCALE

2613

REV. MAY 2010





NOTE:

1. PROVIDE IMPERVIOUS CLAY BARRIERS ON ALL PIPE, CULVERT AND CONDUIT AT ALL WETLAND AREAS. PROVIDE CLAY BARRIERS AT A MAXIMUM SPACING OF 200', AND AT THE INTERSECTION OF ALL WETLAND CROSSINGS.

IMPERVIOUS CLAY BARRIER DETAIL
NTS

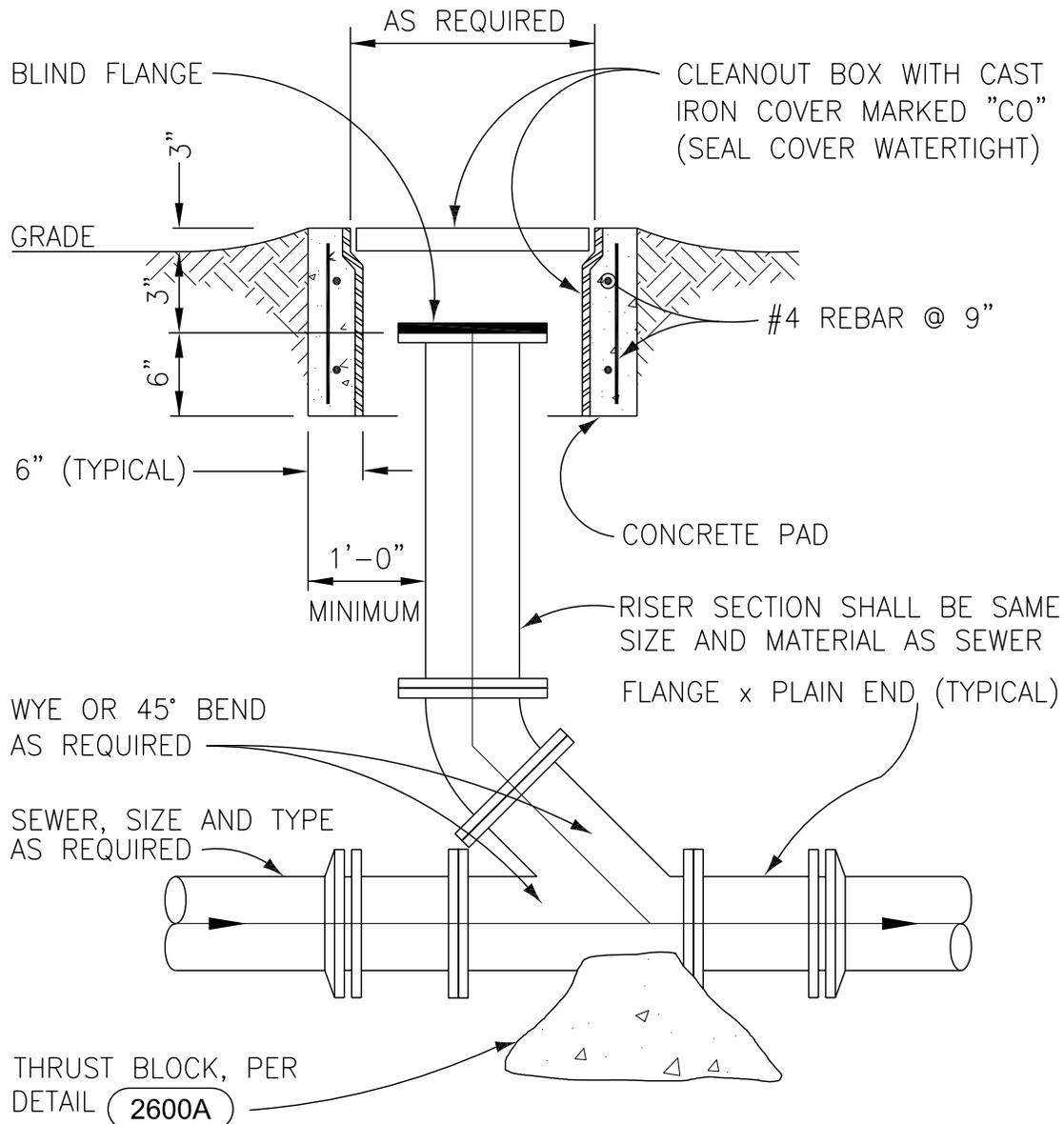
2618

REV. FEBRUARY 2008

UPPER THOMPSON
SANITATION DISTRICT
IMPERVIOUS CLAY BARRIER
STANDARD DETAIL NO. 2618



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
Phone: 970.586.4544



NOTES:

1. VERTICAL PIPE MATERIAL SHALL MATCH FORCEMAIN MATERIAL
2. PROVIDE ALL CHANGES IN FORCEMAIN DIRECTION

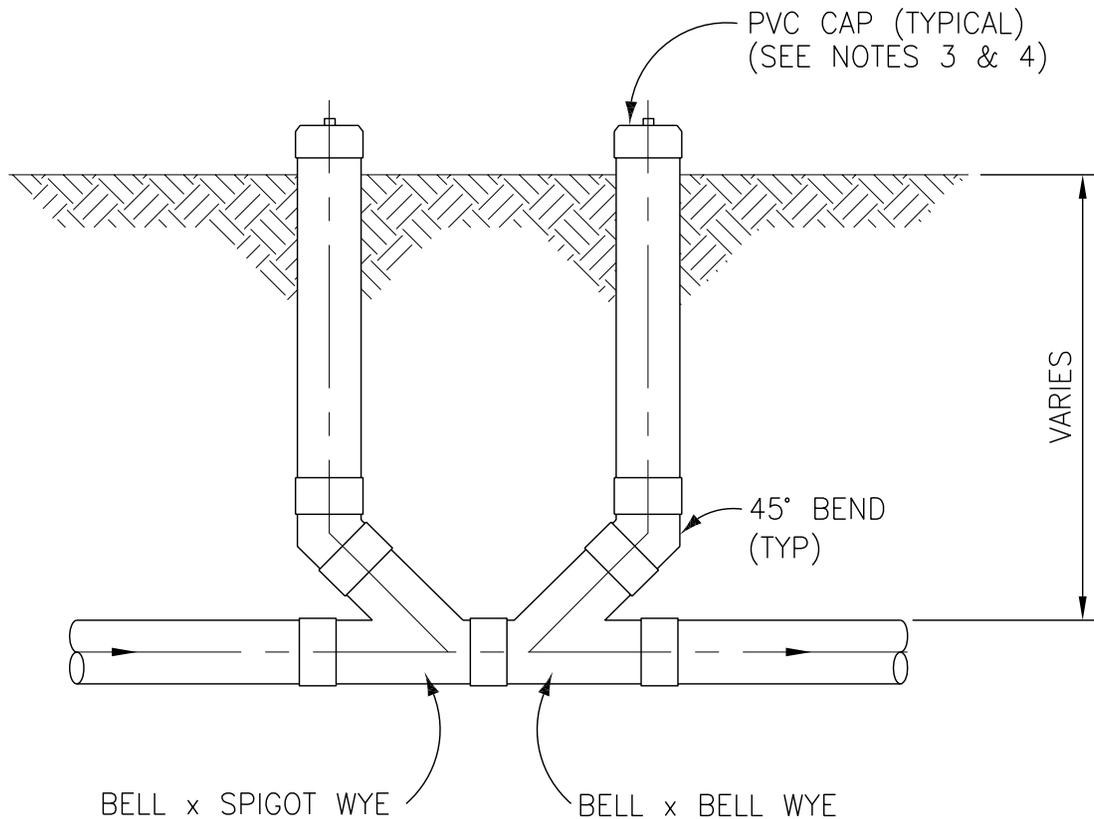
FORCEMAIN GRADE CLEANOUT
NOT TO SCALE

2620

UPPER THOMPSON
SANITATION DISTRICT
FORCEMAIN GRADE CLEANOUT
STANDARD DETAIL NO. 2620



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
Phone: 970.586.4544



NOTES:

1. VERTICAL PIPE AND FITTINGS MATERIAL SHALL MATCH GRAVITY SEWER MATERIALS
2. LOCATE PER LATERAL SEWER SPECIFICATIONS.
3. FOR CLEANOUTS IN ROADWAYS ON 4-INCH SEWER LINES, PROVIDE 16-INCH LONG SLIP TOP VALVE BOX AS MANUFACTURED BY DL FOUNDRY MODEL NO. M-8058, WITH CAST IRON COVER MARKED "SEWER." PROVIDE REINFORCED CONCRETE PAD IN ACCORDANCE WITH DETAIL (2635). THE TOP OF THE PVC CAP SHALL BE LOCATED 6 INCHES BELOW THE TOP OF THE COVER.
4. FOR CLEANOUTS IN ROADWAYS ON SEWER LINES LARGER THAN 4 INCHES, PROVIDE CLEANOUT BOX WITH CAST IRON COVER MARKED "SEWER" AND A REINFORCED CONCRETE PAD, AS SHOWN ON STANDARD DETAIL (2620). THE TOP OF THE PVC CAP SHALL BE LOCATED 6 INCHES BELOW THE TOP OF THE COVER.

GRAVITY SEWER DOUBLE GRADE CLEANOUT

NOT TO SCALE

2621

REV. MAY 2010

UPPER THOMPSON
SANITATION DISTRICT
GRAVITY SEWER DOUBLE GRADE CLEANOUT
STANDARD DETAIL NO. 2621



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
Phone: 970.586.4544

1/2" OF GROUT OVER
FOUR INCH BRICK
COURSE AT EACH
END OF CASING

PUSH-ON
SINGLE
GASKET OR
MECHANICAL
JOINT PVC
OR DUCTILE
IRON
CARRIER
PIPE

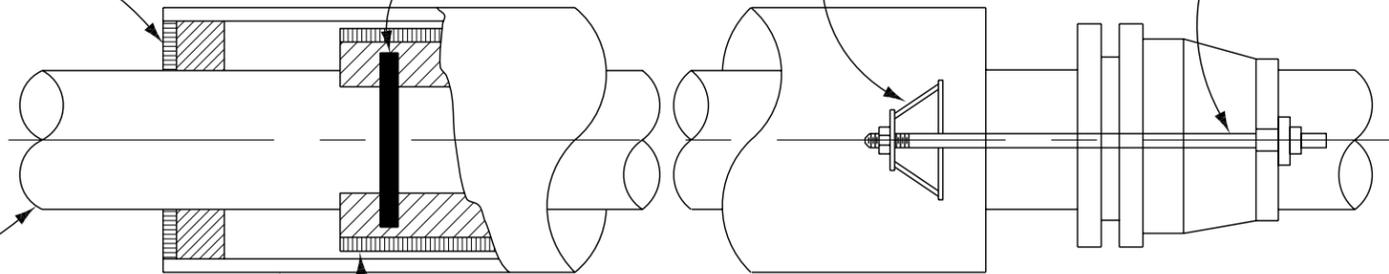
STEEL CASING PIPE
(SEE TABLE BELOW
FOR SIZE AND WALL
THICKNESS)

1" STEEL BAND

NEOPRENE OR PVC
RUNNER (TYP)

HARNES LUGS
WELDED TO CASING
BOTH ENDS, IN
ACCORDANCE WITH
AWWA C206

TIE RODS
AND CLAMPS



SLED DETAIL

NOTES:

1. RUNNER LENGTH TO BE 75% OF LAYING LENGTH.
2. HARNES LUGS TO BE INSULATED FROM DUCTILE IRON PIPE.

CARRIER PIPE NOMINAL DIAMETER	CASING PIPE		MINIMUM RUNNER SIZE
	MINIMUM OUTSIDE DIAMETER	MINIMUM WALL THICKNESS	
4"	12"	0.188"	2" x 4"
6"	16"	0.250"	2" x 4"
8"	18"	0.282"	2" x 4"
12"	22"	0.344"	2" x 4"
16"	28"	0.406"	2" x 6"
20"	32"	0.469"	2" x 6"

NOTES:

1. TREATED REDWOOD RUNNERS MAY BE USED AS AN ALTERNATIVE TO NEOPRENE OR PVC.
2. TRENCH LAID CASINGS SHALL BE DESIGNED AND INSTALLED TO CONDUIT STANDARDS.
3. RUNNERS SHALL BE PROVIDED TO MAINTAIN MINIMUM DESIGNED PIPE SLOPE.
4. THE SPACE BETWEEN THE OUTSIDE OF THE CARRIER PIPE AND THE INSIDE OF THE CASING SHALL BE FILLED WITH CLEAN DRY BLOWN SAND.

OVERALL PIPE
JOINT DIMENSION

CARRIER PIPE

1" STEEL BANDS
(3 PER SLED)

90°

90°

90°

STEEL CASING PIPE

NEOPRENE OR
PVC RUNNERS
(TYP)

PIPE CASING SECTION

2625

BORE CASING
NOT TO SCALE

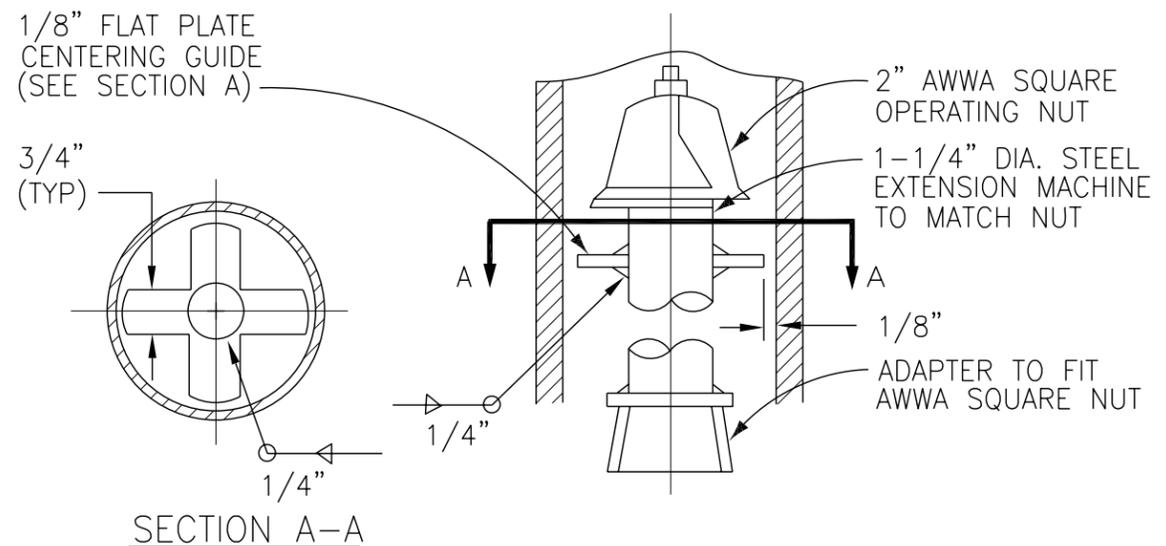
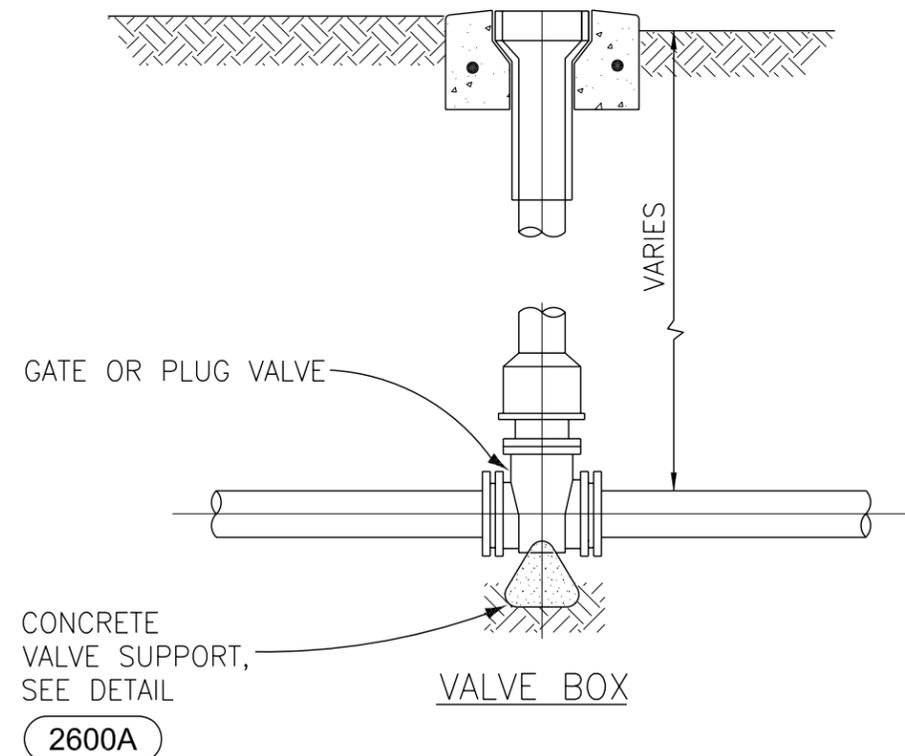
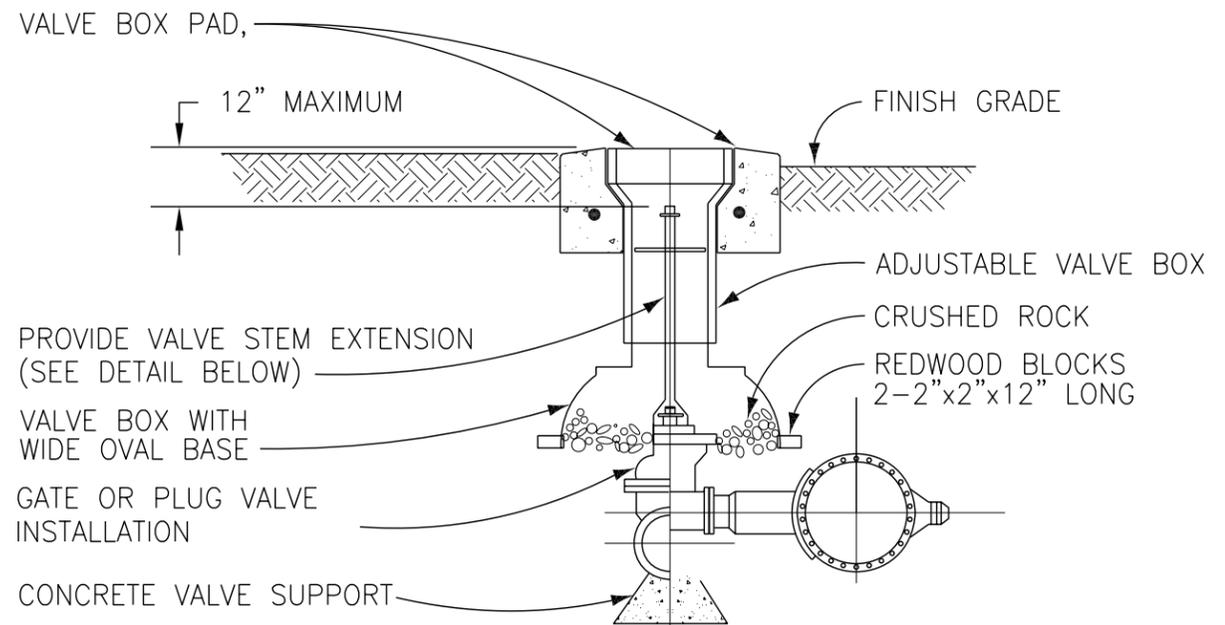
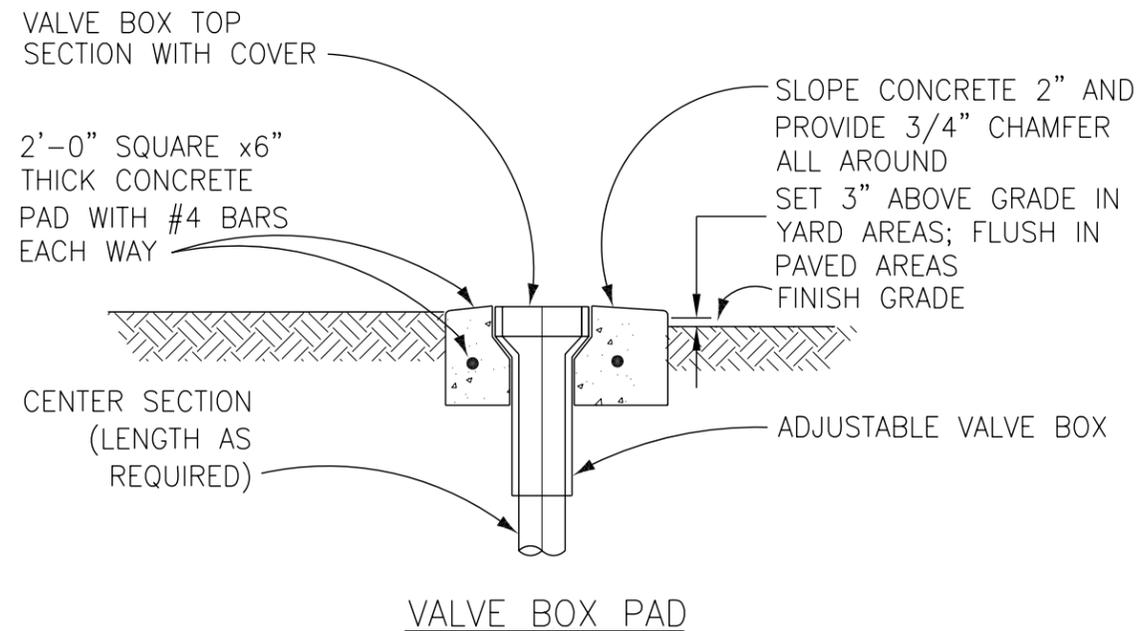
UPPER THOMPSON SANITATION DISTRICT

BORE CASING

STANDARD DETAIL NO. 2625



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
Phone: 970.586.4544

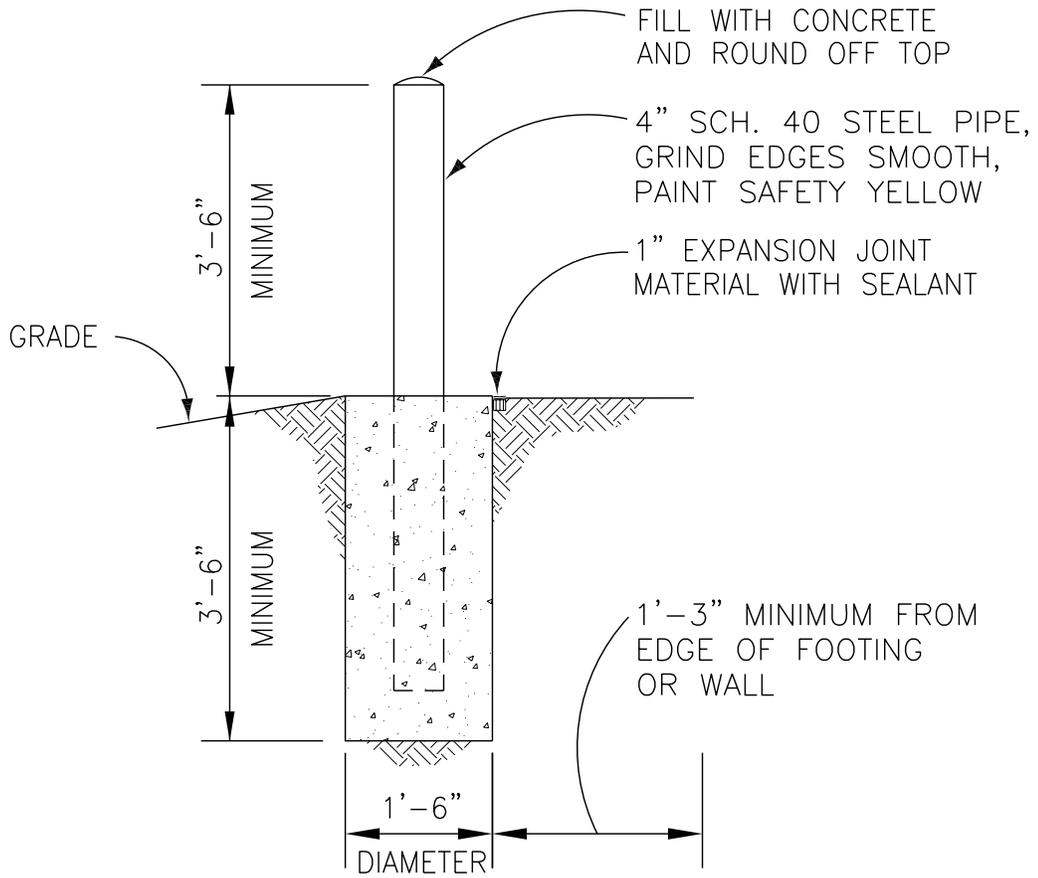


NOTES:
 1. PROVIDE PROTECTIVE COATING TO EXTERIOR SURFACES OF VALVE BODY, VALVE BOX, EXTENSION STEM AND APPURTENANCES.
 2. SEE DETAIL 2660 FOR VALVE MARKER.

BURIED VALVE INSTALLATION

BURIED VALVE
 NOT TO SCALE

2635



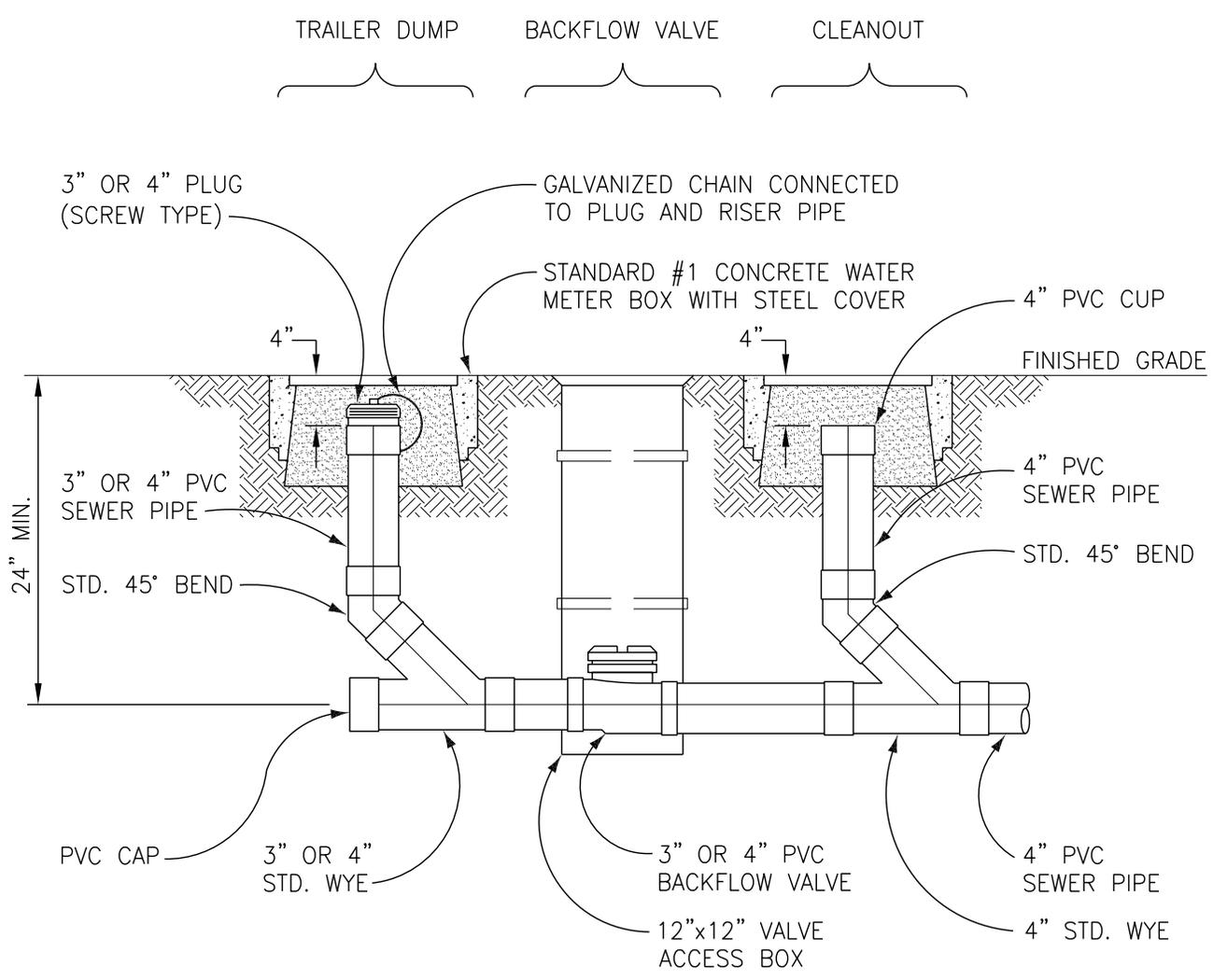
BOLLARD
NOT TO SCALE

2670

UPPER THOMPSON
SANITATION DISTRICT
BOLLARD
STANDARD DETAIL NO. 2670



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
Phone: 970.586.4544



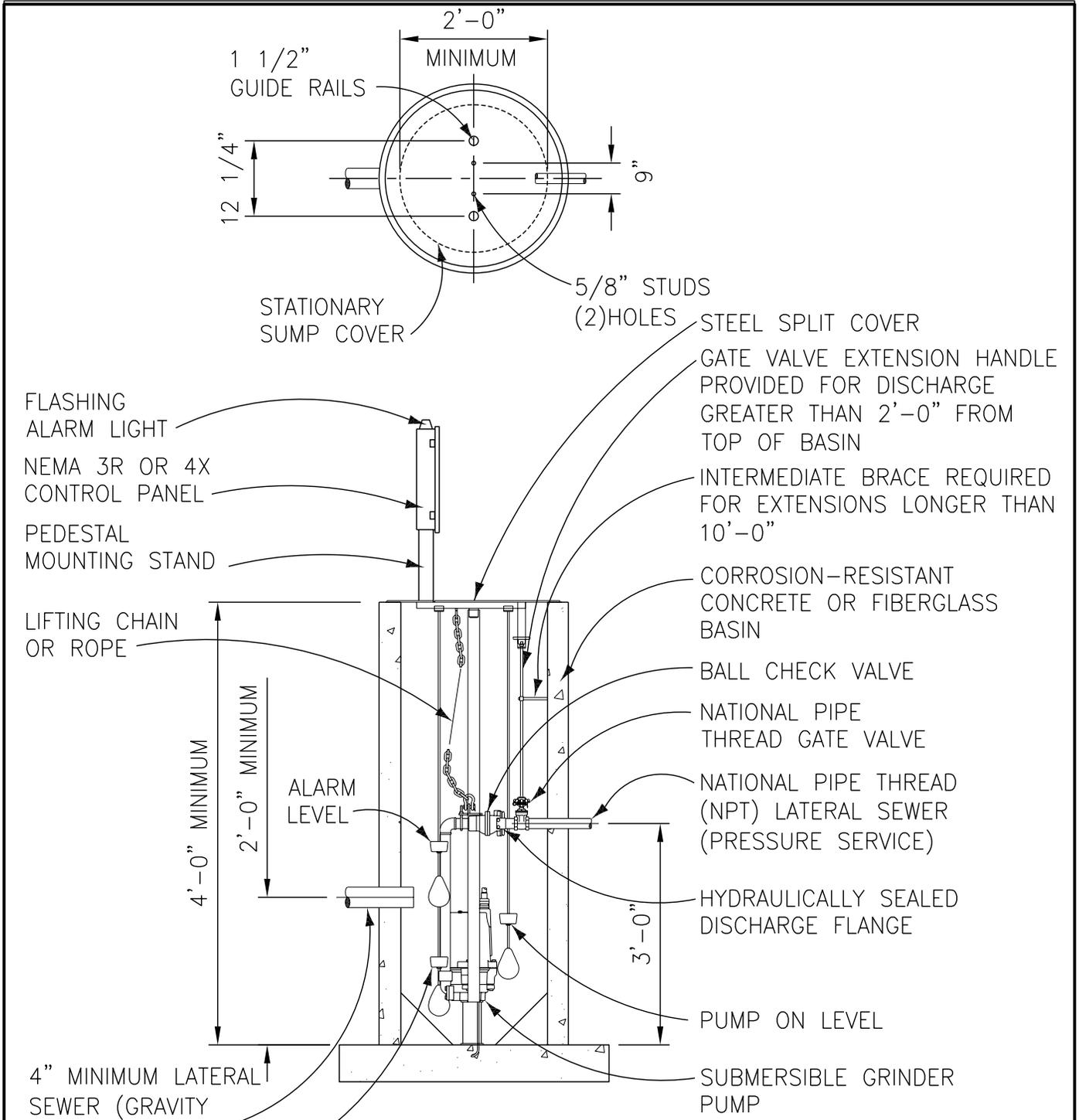
TRAVEL TRAILER DUMP STATION
NOT TO SCALE

2725

UPPER THOMPSON
SANITATION DISTRICT
TRAVEL TRAILER DUMP STATION
STANDARD DETAIL NO. 2725



Upper Thompson Sanitation District
2196 Mall Road
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FLASHING
ALARM LIGHT
NEMA 3R OR 4X
CONTROL PANEL
PEDESTAL
MOUNTING STAND

LIFTING CHAIN
OR ROPE

4'-0" MINIMUM
2'-0" MINIMUM

ALARM
LEVEL

4" MINIMUM LATERAL
SEWER (GRAVITY
SERVICE)

PUMP OFF LEVEL

5/8" STUDS
(2) HOLES

STEEL SPLIT COVER
GATE VALVE EXTENSION HANDLE
PROVIDED FOR DISCHARGE
GREATER THAN 2'-0" FROM
TOP OF BASIN

INTERMEDIATE BRACE REQUIRED
FOR EXTENSIONS LONGER THAN
10'-0"

CORROSION-RESISTANT
CONCRETE OR FIBERGLASS
BASIN

BALL CHECK VALVE

NATIONAL PIPE
THREAD GATE VALVE

NATIONAL PIPE THREAD
(NPT) LATERAL SEWER
(PRESSURE SERVICE)

HYDRAULICALLY SEALED
DISCHARGE FLANGE

PUMP ON LEVEL

SUBMERSIBLE GRINDER
PUMP

NOTES:
1. PRIVATE LIFT STATION PROVIDED FOR
GUIDANCE ONLY. FINAL DESIGN TO BE
COMPLETED BY CUSTOMER.

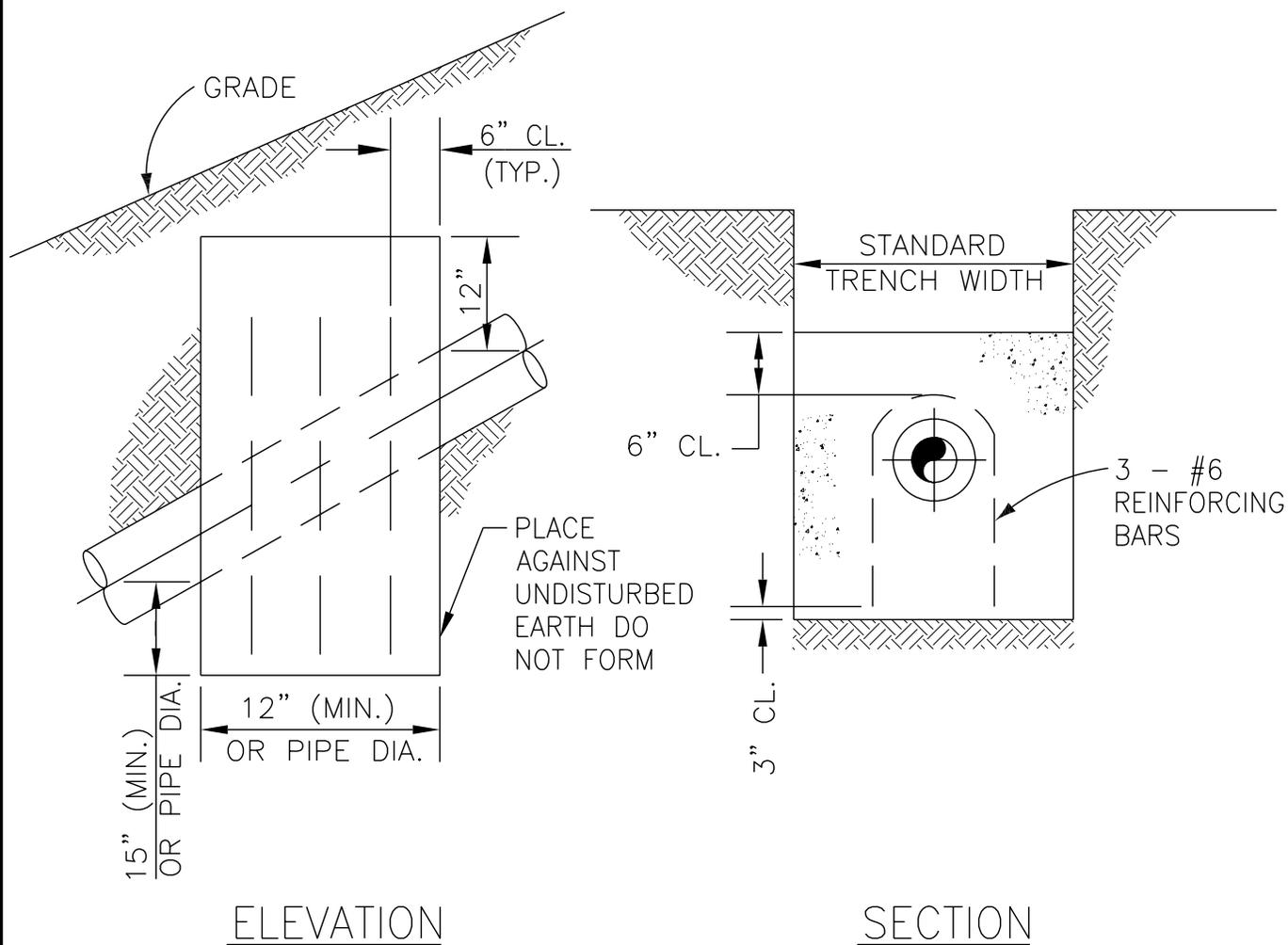
PRIVATE LIFT STATION
NOT TO SCALE

2730

UPPER THOMPSON
SANITATION DISTRICT
PRIVATE LIFT STATION
STANDARD DETAIL NO. 2730



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
Phone: 970.586.4544



ELEVATION

SECTION

MAXIMUM SPACING	
36' CENTER TO CENTER	20% TO 35% SLOPES
24' CENTER TO CENTER	35% TO 50% SLOPES
16' CENTER TO CENTER	50% OR GREATER SLOPES

REINFORCED CONCRETE SLOPE ANCHORS
NTS

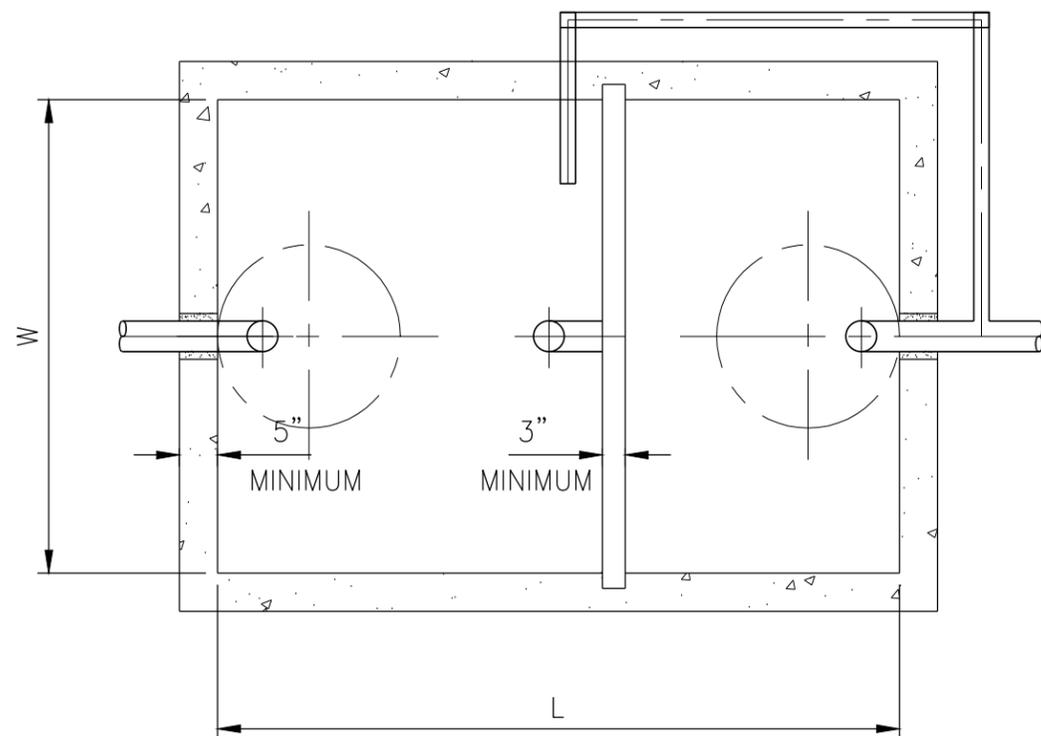
2740

REV. FEBRUARY 2008

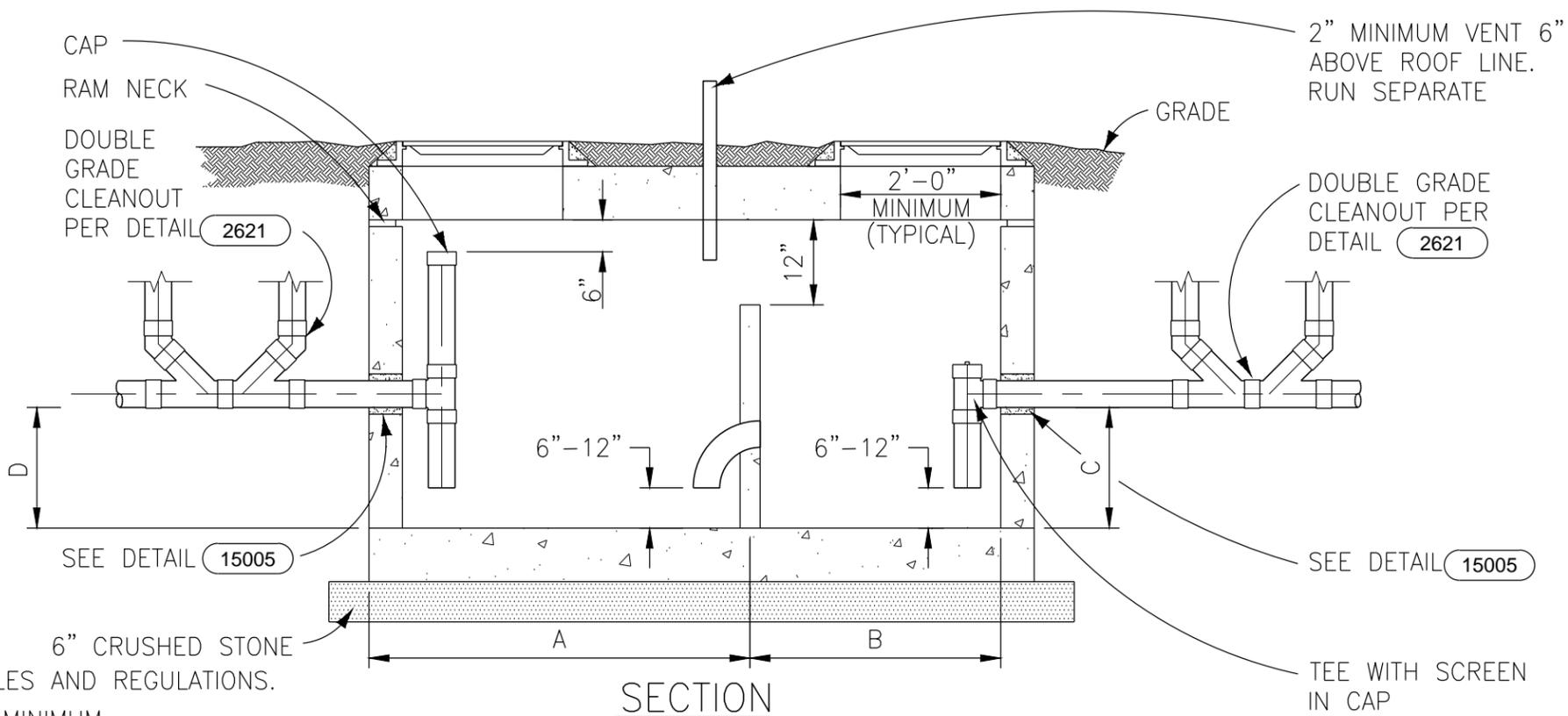
UPPER THOMPSON
SANITATION DISTRICT
REINFORCED CONCRETE SLOPE ANCHORS
STANDARD DETAIL NO. 2740



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
Phone: 970.586.4544



PLAN



SECTION

NOTES

1. SIZE GREASE INTERCEPTOR PER APPENDIX B OF THE DISTRICT'S RULES AND REGULATIONS.
2. EXTERIOR PIPE AND FITTINGS SHALL BE SDR-35 PVC, 4" DIAMETER MINIMUM.
3. SMALL COMPARTMENT HAS 1/3 TOTAL CAPACITY.
4. WALL AND BOTTOM REINFORCED THROUGH OUT WITH 2x6 6/10 REMESH.
5. COVERS SHALL BE REINFORCED LONGITUDINALLY WITH #6 REBAR ON 6" CENTERS, #4 REBAR ON 6" CENTERS WIDTHWISE, AND #8 REBAR DIAGONALLY AROUND ACCESS HOLES.
6. CLEAN OUT SHALL BE PVC.
7. VENT PIPE SHALL BE PVC TO A POINT 6" ABOVE GROUND.
8. MANHOLE RING AND COVER SHALL BE J MARK NO.1161 OR APPROVED EQUAL, AS DETERMINED BY DISTRICT.
9. CHECK WITH SUPPLIER FOR EXACT DIMENSIONS.
10. BOLT DOWN COVERS NOT ALLOWED UNLESS APPROVED BY THE DISTRICT.
11. SEE DETAIL 2610 FOR FRAME AND COVER REQUIREMENTS.
12. FIBERGLASS TANKS ARE ACCEPTABLE AS ALTERNATE TO CONCRETE.
13. BACKFILL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS; NO BACKFILL MATERIAL SHALL BE 3" OR GREATER IN DIAMETER.
14. FINAL STRUCTURAL/REINFORCING DESIGN OF PRECAST STRUCTURE TO BE COMPLETED BY MANUFACTURER OR PROFESSIONAL ENGINEER LICENSED IN THE STATE OF COLORADO.
15. INTERIOR PIPING SHALL BE GLUED SCHEDULE 40 PVC, 4" DIAMETER MINIMUM.
16. MINIMUM INTERCEPTOR SIZE SHALL BE 750 GALLONS.

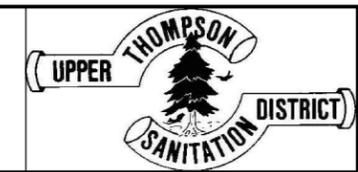
TOTAL WATER CAPACITY APPROXIMATE (GALLONS)	GREASE CAP APPROXIMATE (CUBIC FEET)	DIMENSIONS (INCHES)					
		W	L	A	B	C	D
1,190	61	72	96	64	32	40	42
1,600	84	72	144	96	48	40	42
1,840	103	72	144	96	48	46	48
2,080	117	72	144	96	48	52	54
2,560	150	72	144	96	48	64	68
3,040	183	72	144	96	48	76	78
3,280	202	72	144	96	48	82	84
3,520	216	72	144	96	48	88	90

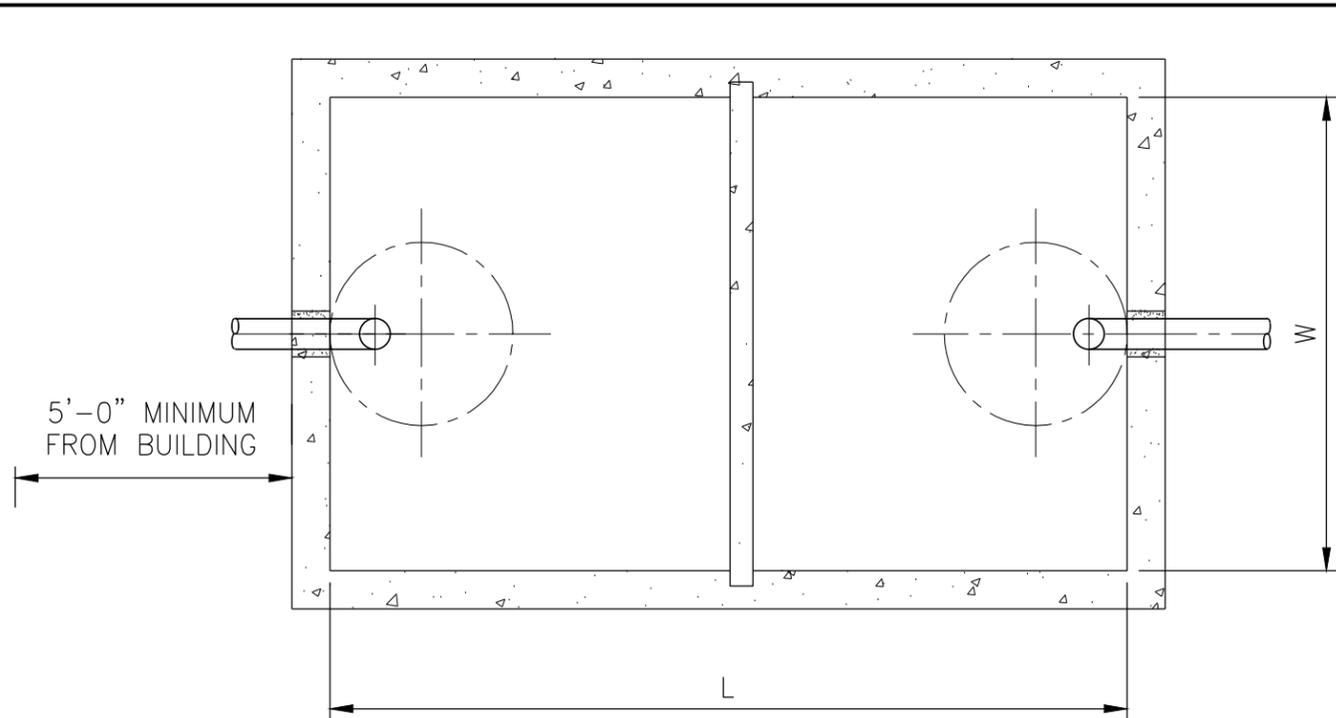
GREASE INTERCEPTOR

NOT TO SCALE

2750

REV. DEC 2013





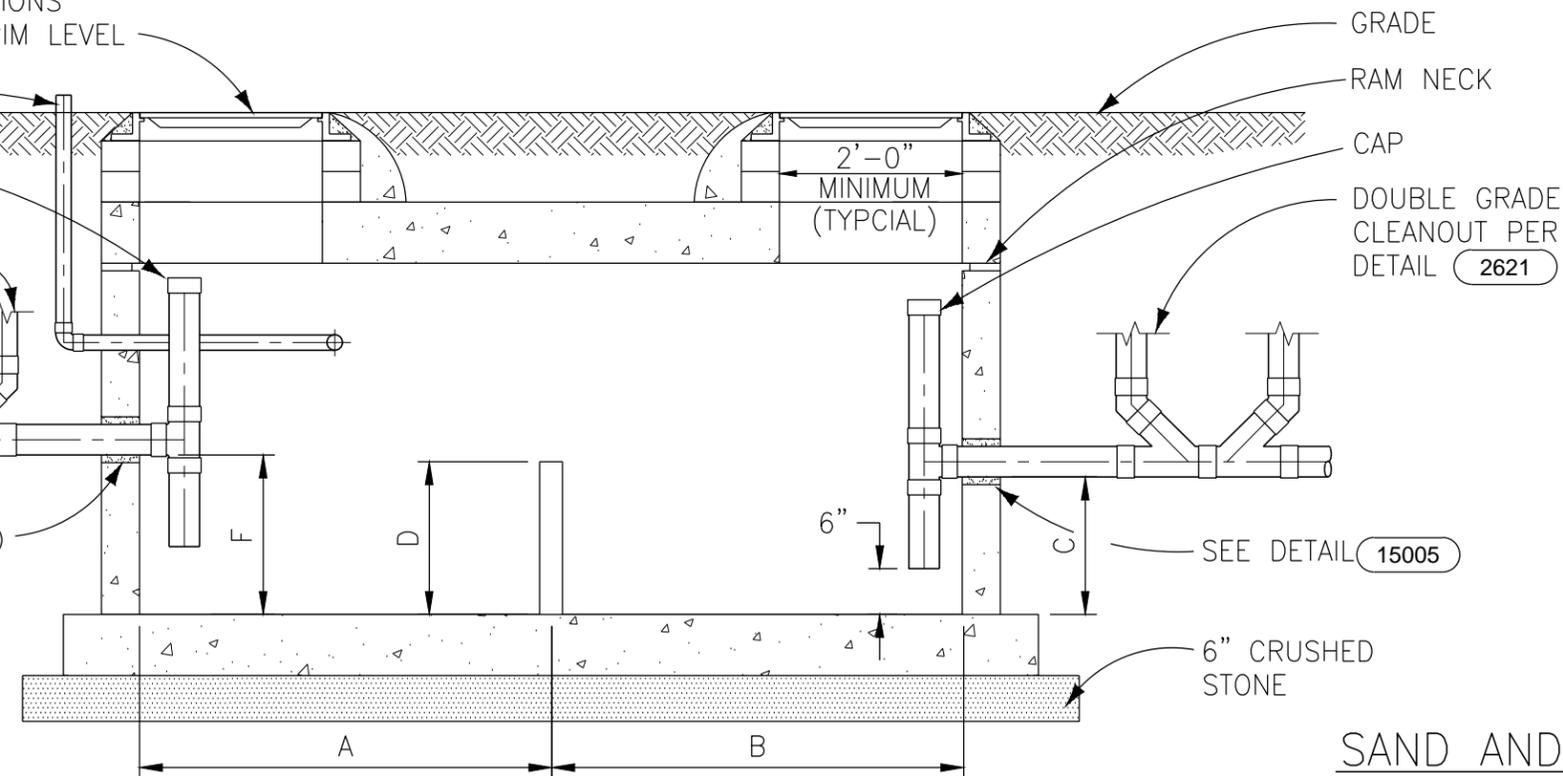
RATED CAPACITY	L	W	A	B	C	D	E
300 GALLONS	72"	48"	24"	24"	21"	14"	7"
750 GALLONS	96"	48"	32"	32"	38"	25"	13"
1,000 GALLONS	108"	72"	36"	36"	30"	20"	10"
1,500 GALLONS	120"	72"	40"	40"	40"	27"	13"

NOTE
F=C+2"

24" CAST IRON MANHOLE RING & COVER LID MAY HAVE NO PROTRUSIONS ABOVE MANHOLE RIM LEVEL

2" VENT
CAP
DOUBLE GRADE CLEANOUT PER DETAIL 2621

SEE DETAIL 15005



NOTES:

1. TOP OF VAULT BELOW FINISHED GRADE OR AT GRADE. IF BELOW GRADE, RING AND COVER SHALL BE ADJUSTED TO FINAL GRADE USING A MINIMUM OF 4" GRADE RING(S) AND A MAXIMUM OF 12" GRADE RING(S). FOR DEPTHS OVER 12", A MAN HOLE BARREL SECTION WILL BE REQUIRED. WITH A FLAT TO FOR DEPTHS OF 4" OR LESS AND A ECCENTRIC CONE TOP FOR DEPTHS GREATER THAN 4'.
2. SEE DETAIL 2610 FOR FRAME AND COVER REQUIREMENTS.
3. FIBERGLASS TANKS ARE ACCEPTABLE AS AN ALTERNATIVE TO CONCRETE.
4. BACKFILL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS; NO BACKFILL MATERIAL SHALL BE 3" OR GREATER IN DIAMETER.
5. FINAL STRUCTURAL/REINFORCING DESIGN OF PRECAST STRUCTURE TO BE COMPLETED BY MANUFACTURER OR PROFESSIONAL ENGINEER LICENSED IN THE STATE OF COLORADO.
6. INTERIOR PIPING SHALL BE GLUED SCHEDULE 40 PVC, 4" DIAMETER MINIMUM.
7. EXTERIOR PIPING SHALL BE SDR-35, 4" DIAMETER MINIMUM.

SAND AND OIL INTERCEPTOR

NOT TO SCALE

2900

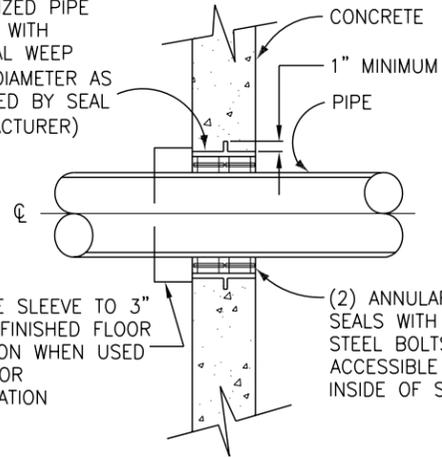
REV. DEC 2013

UPPER THOMPSON SANITATION DISTRICT
SAND AND OIL INTERCEPTOR
STANDARD DETAIL NO. 2900



Upper Thompson Sanitation District
2196 Mall Road
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Phone: 970.586.4544

SCHEDULE 40 GALVANIZED PIPE SLEEVE WITH INTEGRAL WEEP RING (DIAMETER AS REQUIRED BY SEAL MANUFACTURER)



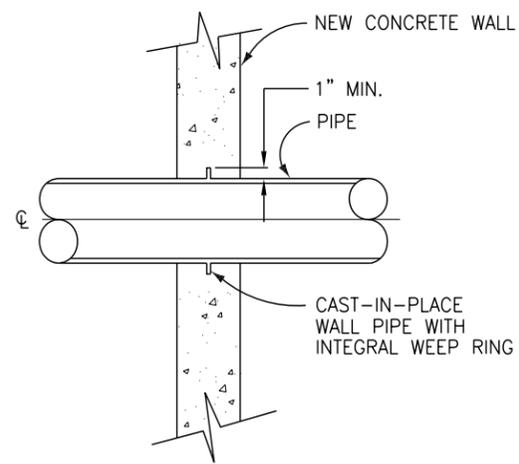
PROVIDE SLEEVE TO 3" ABOVE FINISHED FLOOR ELEVATION WHEN USED AS FLOOR PENETRATION

(2) ANNULAR WALL SEALS WITH STAINLESS STEEL BOLTS & NUTS. ACCESSIBLE FROM INSIDE OF STRUCTURE

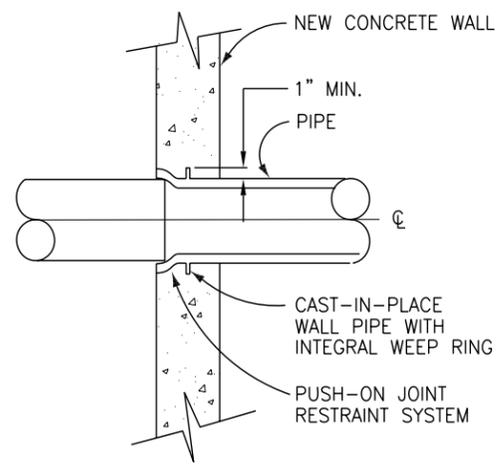
NOTE:

WHEN WALL/FLOOR IS EXISTING, CORE DRILL (SIZE AS REQUIRED BY SEAL MANUFACTURER) AND PROVIDE TWO ANNULAR SEALS W/ STAINLESS STEEL BOLTS AND NUTS AS SHOWN ABOVE.

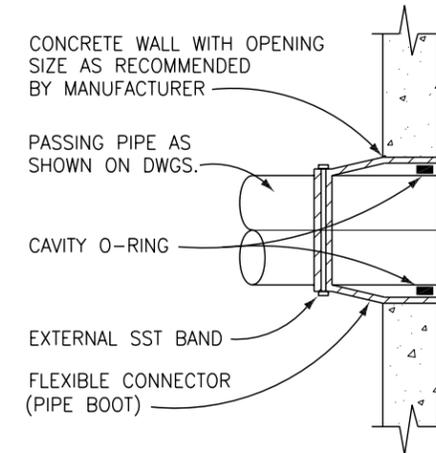
TYPE "A"



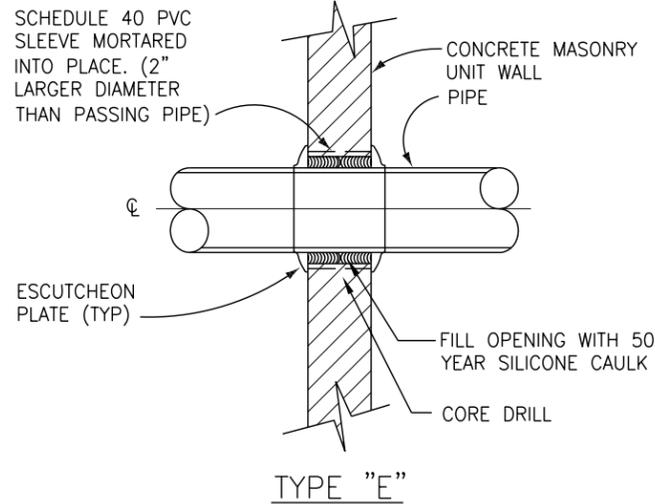
TYPE "B"



TYPE "C"



TYPE "D"



TYPE "E"

GENERAL NOTES FOR ALL TYPES :

- PENETRATIONS SHALL CONFORM TO THE PENETRATION TABLE FOR THE CONDITION INDICATED, UNLESS OTHERWISE APPROVED BY THE DISTRICT.
- COAT ALL REBAR AND STEEL EXPOSED FROM CORE DRILLING WITH EPOXY.
- COAT EMBEDDED WALL AND FLOOR PIPES WITH APPROPRIATE PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.
- DO NOT ALLOW PIPE SLEEVES TO COME IN CONTACT WITH REINFORCING STEEL.
- ALL HARDWARE IN SUBMERGED OR WET AREAS SHALL BE STAINLESS STEEL.
- ALL EXTERIOR PENETRATIONS SHALL HAVE 2 (MINIMUM) FLEXIBLE CONNECTIONS AT 2 FEET AND 6 FEET FROM BUILDING FACE.
- ANNULAR WALL SEALS:
 - UNLESS NOTED OTHERWISE, PROVIDE LINK-SEAL TYPE M OR EQUAL.
 - WHERE NOTED OR FOR SERVICES WHERE FLUID TEMPERATURE EXCEEDS 250 DEGREES FARENHEIT, PROVIDE LINK-SEAL TYPE F OR EQUAL.
- UNLESS OTHERWISE SHOWN, ALL ANNULAR SPACES BETWEEN PASSING PIPE AND SLEEVES SHALL BE SEALED AS FOLLOWS:
 - ANNULAR SPACES IN PENETRATIONS OF FIRE RATED WALLS SHALL MEET FIRE CODE REQUIREMENTS OF APPLICABLE LOCAL AND STATE JURISDICTIONS.
 - FOUNDATION FLOOR SEALS SHALL BE SEALED WITH NONSHRINK GROUT. WRAP PIPE WITH POLYETHYLENE BAGGING INSIDE SLEEVE.
 - INTERIOR WALLS BETWEEN HEATED AND UNHEATED SPACES SHALL BE SEALED WITH RUBBER SEALANT AND BACKER ROD.
- SEE RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS.

PENETRATION TABLE

LOCATION	CONSTRUCTION	MEDIA	TYPE	
			ABOVE GRADE	BELOW GRADE
BUILDING WALLS (DRY) INTERIOR WALLS EXTERIOR WALLS CEILING, SUSPENDED CEILING	CONCRETE	PIPES	A,B,C,E	A,B,C
	CMU	ALL	E	-
TANK WALLS, FLOOR WATER HOLDING	CONCRETE	PIPES	A,B,C	A,B,C
VAULTS (DRY)	CONCRETE	PIPES	-	A,C,D
MANHOLES	CONCRETE	PIPES	-	D
SLAB ON GRADE	CONCRETE	PIPES	-	A,B,C

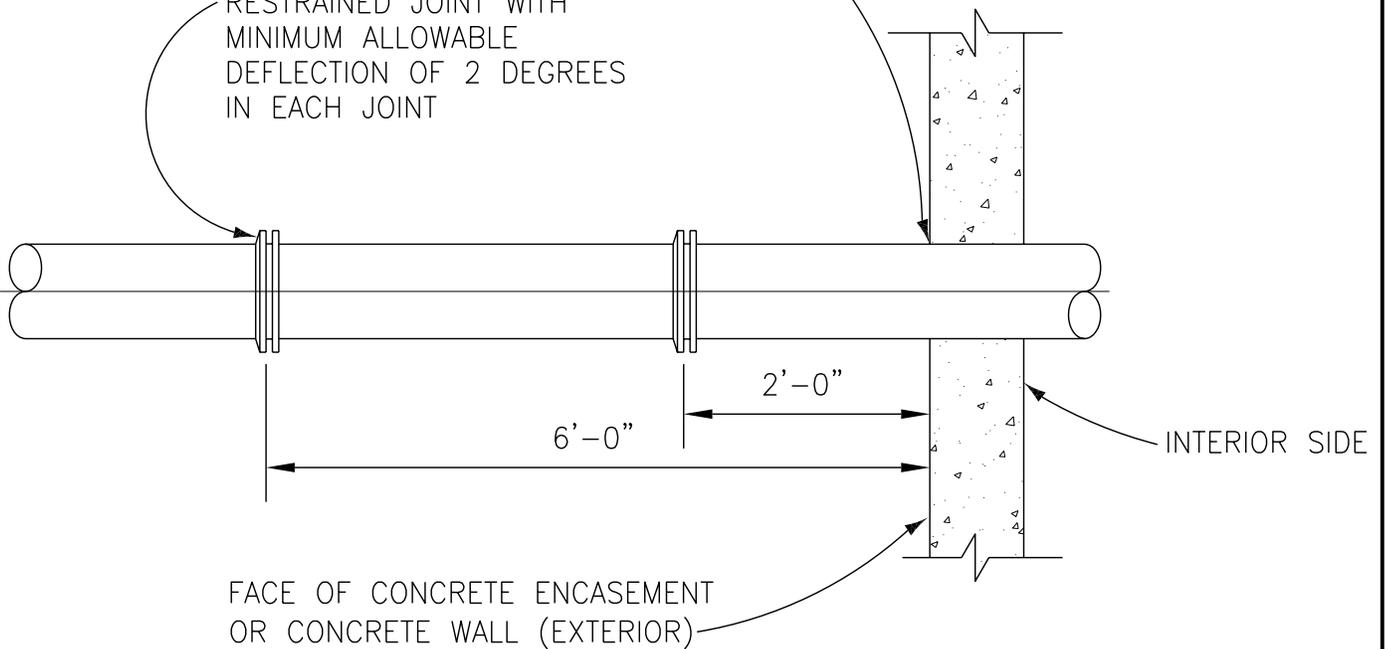
OPENINGS AND PENETRATIONS
NOT TO SCALE

15005



PIPE PENETRATION,
SEE DETAIL **15005**

RESTRAINED JOINT WITH
MINIMUM ALLOWABLE
DEFLECTION OF 2 DEGREES
IN EACH JOINT



NOTE:

ASSEMBLY SHALL BE WRAPPED WITH 8 MIL POLYETHYLENE

HARNESSED FLEXIBLE JOINT

NOT TO SCALE

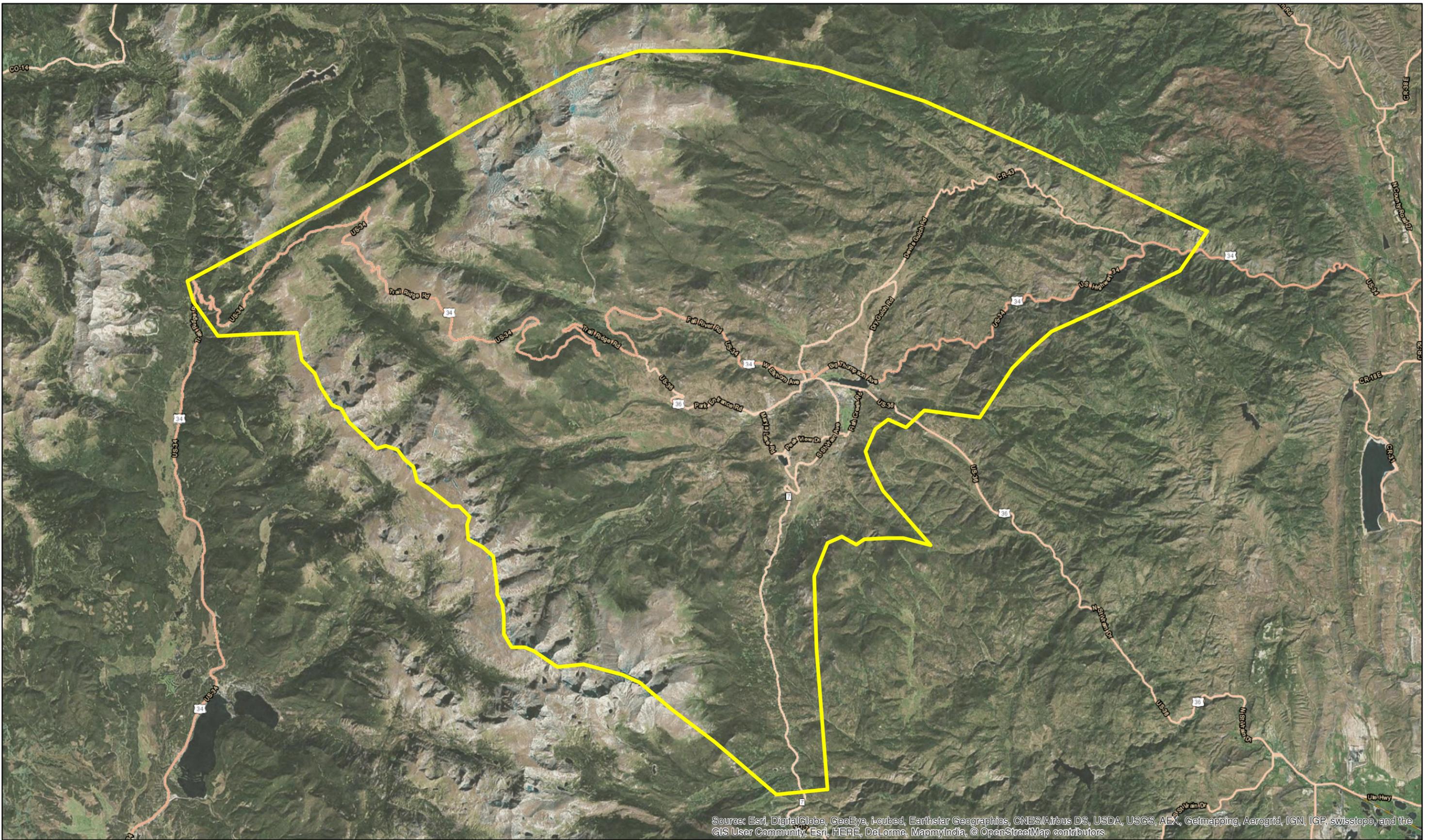
15015

UPPER THOMPSON
SANITATION DISTRICT
HARNESSED FLEXIBLE JOINT
STANDARD DETAIL NO. 15015



Upper Thompson Sanitation District
2196 Mall Road
Estes Park, Colorado 80517
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APPENDIX J
BIG THOMPSON WATERSHED BOUNDARY



Appendix J - Big Thompson Watershed Boundary Upper Thompson Sanitation District



 Boundary

