

MOUNTAIN GREEN SEWER IMPROVEMENT DISTRICT
5455 West Old Highway Road
Mountain Green, UT 84050
801-876-3416 / Fax 801-876-3558

SANITARY SEWER ORDINANCE
January 1, 2016 UPDATE

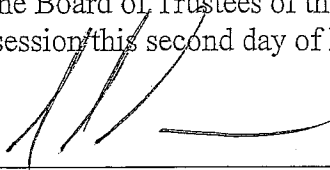
This Ordinance shall be known and may be cited as the "Mountain Green Sewer Use Ordinance" and will be referred to herein as "this Ordinance." Within this Ordinance, the Mountain Green Sewer Improvement District may be referred to as "MGSID" or as the "District".

The purpose of this Ordinance is to promote the health, comfort, public convenience and general welfare of the residents within the Mountain Green Sewer Improvement District by eliminating existing pollution, preventing further pollution and controlling sewerage systems through regulations and restrictions. This Ordinance shall restrict and regulate the accumulation, transportation, treatment and disposal of sewage in such a manner that the creation of any sewerage system, whether public or private, industrial or residential, shall not result in pollution, health hazards or other nuisances for the residents within the Mountain Green Sewer Improvement District.

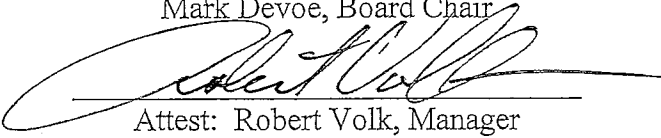
This Ordinance contains the rules and regulations adopted by the MGSID Board of Trustees to govern the Mountain Green Sewer System by authority granted under the provisions of Title 17A, Chapter 02, 'Independent Districts,' Utah Code Annotated as amended, and in all other applicable state statutes. The MGSID Board of Trustees shall have the authority granted under these provisions to administer, enforce, amend or repeal this Ordinance, or any clause or provision thereof, as may be necessary or desirable, in the judgment of the Board of Trustees, for the efficient operation of the sewerage system.

This Ordinance shall completely supersede all other sewer ordinances enacted by the MGSID prior to the date of the enactment of this Ordinance, which other ordinances are hereby repealed, except as otherwise noted herein. Hereafter, any person owning any building or structure within the MGSID District which is the source of sewage and / or industrial waste or who proposes to erect such building or structure, shall conform to the requirements of this Ordinance.

PASSED AND ADOPTED by the Board of Trustees of the Mountain Green Sewer Improvement District in regular session this second day of December 2, 2015 to become effective January 1, 2016.



Mark Devoe, Board Chair



Attest: Robert Volk, Manager

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SANITARY SEWER ORDINANCE

ARTICLE I – DEFINITIONS

Unless the context specifically indicates otherwise, the meaning of terms used in this Ordinance shall be as follows:

"Apartment, Accessory." A separate dwelling unit that is located within and subordinate to a single family detached dwelling.

"Backflow Preventer." A device designed to prevent backflow of wastewater into the home. The design of new homes shall include provisions for the installation and maintenance of a backflow preventer. If the homeowner elects to not install a backflow preventer, then that homeowner shall sign a form releasing the District of all liability in case of a backflow of wastewater into the home.

"Bed and Breakfast." A business establishment having nine (9) or fewer guest rooms in which lodging is offered to guests for compensation and meals may be offered for compensation only to the lodgers.

"BOD" (denoting Biochemical Oxygen Demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at 20 degrees Celsius, expressed in milligrams per liter.

"Board of Trustees." The duly elected or appointed Board of Trustees of the Mountain Green Sewer Improvement District.

"Building." Any structure arranged, designed, intended or used for the shelter, housing or enclosure of persons, animals, processes, equipment or property of any kind.

"Building Drain." That part of the lowest horizontal piping of a drainage system that receives the discharge of waste and other drainage pipes inside walls of the building and conveys it to the building sewer. The building drain extends eight (8) feet outside the inner face of the building wall.

"Building Sewer" or "Building Connection" is the extension from the building drain to the public sewer or other place of disposal, also sometimes referred to as the "house connection" or "lateral".

"Campground." A business establishment operated as a recreational site for tents, trailers, recreational vehicles or other forms of temporary shelter.

"Change of Use." The change from an existing use to another use, including without limitation, the addition of a new use to an existing use.

"Church." A building or group of buildings arranged, designed, intended or used for the conduct of religious services, and accessory uses associated therewith.

"Club." Any voluntary association of persons organized for fraternal, social, religious, benevolent, recreational, literary, patriotic, scientific, or political purposes whose facilities are open to members but not the general public, and which is principally engaged in activities that are not customarily carried on for pecuniary gain.

"Combined Sewer." A sewer intended to receive both wastewater and storm or surface water. There are no combined sewers in the District.

"Company." Any industrial or commercial establishment with a liquid waste discharge.

"Contractor." A firm or individual licensed and qualified to perform services for others as specified within a contract.

"District." Shall mean the Mountain Green Sewer Improvement District, a body politic of the State of Utah, created within the provisions of Title 17, Chapter 6, Utah Code Annotated (1953), as amended.

"Dwelling." Any building or structure or portion thereof containing one (1) or more dwelling units, but not including a motel, hotel, inn, or similar unit.

- A. Single-Family Dwelling – A building designed or intended to be used exclusively for residential occupancy by one family only and containing only one (1) dwelling unit, or one dwelling with an accessory apartment as permitted by the Morgan County Land Use Ordinance. A single-family dwelling and any accessory apartment located therein shall be constructed on one continuous foundation and under one continuous roof; no part of the dwelling unit shall be located in a detached building or structure.
- B. Two Family Dwelling – A building designed or remodeled to be used exclusively for residential occupancy by two (2) families living independently of one another and containing two (2) dwelling units. Each unit shall have not less than 650 square feet. The dwelling shall have only one (1) front entrance, and all other entrances shall be on the side or in the rear of the dwelling. An entrance leading to a foyer with entrances leading from the foyer to the two (2) dwelling units is permitted. One dwelling shall be subordinate in size. The subordinate unit shall not be permitted a Home Occupation. A two family dwelling shall be constructed on one continuous foundation and under one continuous roof; no part of the dwelling unit shall be located in a detached building or structure.

C. Multiplex Dwelling – A building designed or intended to be used exclusively for residential occupancy by three (3) or more families living independently of one another and containing three (3) or more dwelling units, including apartment buildings and condominiums, but excluding single-family dwellings with an accessory apartment permitted by the Morgan County Land Use Ordinance.

"Dwelling Unit." One or more habitable rooms arranged, designed or intended to be used, or used as a complete housekeeping unit for one or more individuals living together as a family with independent living, cooking, sleeping, bathing and sanitary facilities.

"Easement." An acquired legal right for the specific use of land owned by others.

"External Drain." An arrangement of piping intended to collect roof water, garage floor water, surface or subsurface water and to carry it away from the foundation of a building. An external drain shall NOT be connected to the sanitary sewer.

"Floatable Oil." Oil, fat or grease in a physical state such that it will separate by gravity from wastewater by treatment in an approved pretreatment facility. Wastewater shall be considered free of floating oil if it is properly pretreated and the wastewater does not interfere with the collection system.

"Foundation." The supporting substructure of a building or other structure including but not limited to basements, slabs, posts or frost walls.

"Frontage on the Sewer" shall exist if the public sewer line passes between the side lot lines of the property in question, as determined by drawing perpendicular lines across the roadway from the points of intersection of the property side lot lines.

"Garbage." Solid waste from the domestic and commercial preparation, cooking, and dispensing of food, and from the handling, storage, and sale of produce.

"Garbage, Properly Shredded." The wastes from the preparation, cooking and dispensing of foods that have been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half (1/2) inch (1.27 centimeters) in any dimension.

"Gas Station." A business establishment selling fuel and related products for motor vehicles.

"Hotel." A building or group of buildings having ten (10) or more guest rooms in which lodging, or meals and lodging, are offered for compensation, including motels, tourist courts, motor lodges and cabins.

"Industrial Wastes." The liquid waste from industrial manufacturing processes, trade, or business as distinct from domestic or sanitary sewage.

"Infiltration." Water entering the wastewater facilities, including service connections, from the ground through such means as, but not limited to, defective pipes, pipe joints, connections or manhole seams and walls.

"Inflow." Water discharged directly into the wastewater facilities including service connections, from such sources as, but not limited to, roof leaders, foundation drains, cooling water discharges, sump pumps, drains from springs or swampy areas, manhole covers, cross connections from storm sewers, catch basins, storm waters, surface runoff, street wash waters or drainage.

"Inn." A business establishment having nine (9) or fewer guest rooms in which lodging is offered to guests for compensation and meals may be offered for compensation only to lodgers and to the general public.

"Land Drain." A separate piping system installed around buildings and in development infrastructure that is designed to capture and channel excess surface water, runoff, irrigation, downspout flow and keep it separated from and out of the sewer system.

"Lateral." The segment of sewer or land drain pipe that connects the residence or commercial building to the main sewer line or land drain line.

"Lot." An area of land in one ownership, or one leaseholder with ascertainable boundaries established by deed or other instrument of record, or a segment of land ownership defined by lot boundary lines on a subdivision plan approved by the County Council and recorded in the Morgan County Recorder Office.

"Lot Frontage." The horizontal distance measured in a straight line connecting the intersection of the front lot line with the side lot lines.

"Lot Lines:" The property lines bounding a lot as defined below:

- A. Front Lot Line: On an interior lot the line separating the lot from the street or private road. On a corner or through lot, the line separating the lot from each street or right-of-way.
- B. Rear Lot Line: The lot line opposite the front lot line. On a lot point at the rear, the rear lot line shall be an imaginary line between the side lot lines parallel to the front lot line, not less than ten (10) feet long, lying farthest from the front lot line. On a corner lot, the rear lot line shall be opposite the front lot line of least dimension.
- C. Side Lot Line: Any lot line other than the front lot line or rear lot line.

"MGSID Agent." The administrator, operator, or inspector authorized to represent the Chair or MGSID Board of Trustees.

"Manager or Administrator." The manager or administrator of the Sewer System of the District or authorized deputy, agent or representative of the Board of Trustees.

"May." A permissive verb (see 'shall').

"Motel." See Hotel.

"Natural Outlet." Any outlet into a watercourse, pond, ditch, lake, or other body of surface or groundwater.

"Owner." The person or persons, natural or corporate, in whom for the time being title is vested in real property situated in the District, including persons having charge of or occupying any premises used for human occupancy, employment, recreation or other like purposes.

"Person." Any individual, firm, company, association, society, corporation or group.

"pH." The logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution. Neutral water, for example, has a pH value of 7.0 and thus a hydrogen ion concentration of $10E-7$ (one part in ten-million).

"Pollutant" shall include but is not limited to dredged spoil, solid waste, junk, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or by-products, heat, wrecked or discarded equipment, rock, sand, dirt, and industrial, municipal, domestic, commercial, or agricultural waste of any kind.

"Public Sewer." A common sewer in which all owners of abutting properties have equal rights and which is controlled by public authority. The term "public sewer" shall include the MGSID Wastewater Treatment Plant and Public Sewer System.

"Pre-Treatment System." A system installed at the source location, usually a commercial, manufacturing or restaurant business, in order to pre-treat the wastewater and remove all special, non residential, waste and chemicals before the discharge enters the main sewer system and treatment plant. Required for any entity connecting to and discharging into the Public Sewer System where the waste being discharged will have a detrimental effect on normal treatment plant operations, including fouling of machinery and alteration of the normal chemical and bacterial activity required to process wastewater.

"Restaurant." An establishment where food and drink are prepared and served to the public and where no food or beverages are served directly to the occupants of motor vehicles.

"Roomer." A person residing in and paying rent for a room in a single-family dwelling whether or not the person eats meals on the premises.

"Sanitary Sewer." A sewer that carries sewage and to which storm, surface, and ground waters are not intentionally admitted.

"Sewage." A combination of the water-carried wastes from residences, business buildings, institutions, and industrial establishments.

"Sewage Works." Facilities for collecting, pumping, treating, and disposing of sewage.

"Sewer." A pipe or conduit for carrying sewage.

"Sewer Extension." Any addition to the public sewers of the MGSID whether located in a public way or on private property and whether constructed at public or private expense.

"Shall" is mandatory; "may" is permissive.

"Slug." Any discharge of water, sewage, or industrial waste which, in concentration of any given constituent or in quantity of flow, exceeds for any period of duration longer than 15 minutes or more than two times the average 24-hour concentration of flows during normal operation.

"Storm Drain" or "Storm Sewer." A sewer that carries storm and surface waters and drainage, but excludes sewage and industrial wastes other than unpolluted cooling water.

"Sump." A structure located below the lowest level of a building intended to collect and remove groundwater before it can infiltrate the building. The sump shall be at least 16 inches in its smallest dimension and shall be plumbed with a minimum one-inch diameter pipe that carries sump water to be discharged outside the home.

"Sump Pump." A pump designed to drain water from a sump. The output from a sump pump SHALL NOT be connected to the sanitary sewer but shall be piped outside of and away from the building.

"Suspended Solids." Solids that either float on the surface of, or are in suspension in water, sewage, or other liquids, which are removable by laboratory filtering as prescribed in "Standard Methods for the Examination of Waste and Wastewater" published by the American Public Health Association and referred to as 'non-filterable residue'.

"Town." The Town of Mountain Green, County of Morgan, State of Utah.

"Trustees." The duly elected or appointed Board of Trustees of the Mountain Green Sewer Improvement District.

"Watercourse." A channel in which a flow of water occurs, either continuously or intermittently.

"Water Pollution Control Facility." The arrangement of devices and structures used for treating sewage and sludge.

End of Article I

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SANITARY SEWER ORDINANCE

ARTICLE II – GENERAL

PART ONE – BOARD OF TRUSTEES

1.01 The Board of Trustees (the 'Board') is authorized by Utah State Code Titles 17A and 17B to govern activities related to sewer operations within the Mountain Green Sewer Improvement District. The Board consists of seven members periodically elected by voters within the District or appointed by the County Council. The Board meets at least monthly at the District Office at 5455 West Old Highway Road at 7:00 pm or as posted in the local newspaper.

1.02 The Board shall, from time to time, enact by resolution regulations prescribing the payment of sewer Impact Fees, connection, inspection and permit fees and sewer service charges for the use of the Sewer System. The Board shall also establish rules and procedures for levying, billing, guaranteeing and collecting all fees and service charges.

1.03 The Board shall establish rules governing the manner of and materials to be used in making connections to the Sewer System, and such other rules and regulations for the management and control of sewage disposal as they shall deem fit. All such resolutions enacting regulations as provided herein shall be deemed a part of these Rules and Regulations and incorporated herein by reference.

1.04 The Board is authorized to make and enter into such contracts as may be necessary, convenient or proper with respect to the carriage and treatment of sewage for improved property outside the territorial limits of the District, and to establish fees and charges for such service, including without limitation, impact and connection fees, sewer service charges and surcharges justly related to, but not less than, the charges fixed within this document, provided, however, that no such contract shall impair the ability of the District to properly provide sanitary sewer services within the boundaries of the District.

1.05 The Board has authority to charge and collect impact and connection fees, inspection and permit fees, and sewer service charges and to take such steps and adopt such resolutions as may be necessary to assure the collection and enforcement of the same from all persons who, pursuant to and in accordance with the requirements of Morgan County's mandatory sewer connection ordinance.

1.06 The Board may assign a penalty to any customer who shall become delinquent in the payment of any charges due the District. As provided by law, any unpaid and

delinquent charges for sewer service shall be certified by the clerk or secretary of the District to the Treasurer or Assessor of Morgan County. The amount of delinquent charges, together with interest and penalties, shall immediately upon the certification become a lien on the delinquent premises on a parity with and collectible at the same time and in the same manner as general county taxes are a lien on the premises and are collectable. All methods of enforcement available for the collection of general county taxes, including sale of the delinquent premises, shall be available and shall be used in the collection of the delinquent sewer charges.

1.07 The Board is authorized to reduce, adjust, amend, abate or waive any fee that the Board is authorized to collect upon a finding of "unusual circumstances" including a finding of specific facts related to such unusual circumstances. The Board may also provide an offset or credit for a public facility for which an Impact Fee has been or will be collected if there is evidence provided by the developer that would justify the offset or credit so that the fees charged are fair. The Board is authorized to adjust the amount of an Impact Fee if the developer, including a church, school, or charter school, dedicates land for a system improvement, builds or dedicates all or part of a system improvement, or dedicates a public facility that the Board determines will reduce the need for a system improvement. The Board is authorized to adjust Impact Fees for low income housing, state or government facilities, school districts or a charter school, or other development with a broad public purpose if the Board can establish one or more sources other than Impact Fees to pay for such development. The Board is authorized to provide an adjustment that complies with U.C.A. 11-36-202 as amended.

PART TWO – WILL-SERVE LETTERS

2.01 The approval process for new developments consists of three phases, Concept, Preliminary and Final. After obtaining Concept Approval by the County Council, the Developer shall provide to the District concept plans and other documentation for the development and shall apply for a Conditional Will-Serve Letter.

2.02 After reviewing the concept plans and other documentation pertaining to the proposed development, the District issues a Conditional Will-Serve Letter establishing the conditions under which the District agrees to provide sanitary sewer service to the development. The Will-Serve Letter expires in the event that the Developer does not obtain Preliminary Approval within one year of the issuance date of the Will-Serve Letter, or in the event that the Developer does not obtain Final Approval within two years of the issuance date of the Will-Serve Letter. The Developer includes this Conditional Will-Serve Letter in the documentation required for Preliminary Approval by the County Council.

PART THREE – DISTRICT FEES

3.01 The Mountain Green Sewer Improvement District has established a sanitary sewer Impact Fee as the fair amount to charge a new equivalent residential unit (ERU) in order to pay for replacement of the capacity consumed, which is a proportionate cost for treatment facility expansion, and to recoup the proportionate cost for existing infrastructure. By agreement with Morgan County Planning and Zoning Department, building permits shall not be issued until the Department receives proof that the sanitary sewer Impact Fee has been paid.

3.03 The Board has set an inspection fee of \$100 for a new ERU to pay for District review of building plans and inspection of new sewer piping. The District must be satisfied that the piping meets all District requirements before the piping may be covered.

3.04 The Board has set a monthly service fee per ERU to pay the cost of operating and maintaining the wastewater treatment facility and associated collector and interceptor lines. This fee was approved in the December 2014 Public Hearing at the following rates for each year specified and may be periodically adjusted through another Public Hearing as operating costs change. 2015-\$36, 2016-\$38, 2017-\$40, 2018-\$42, 2019-\$44.

PART FOUR – CONTROL OF SEWERS AND CONNECTIONS

4.01 No person shall uncover, make any connection with or opening into or otherwise use, alter, open any manhole or disturb the Sewer System, or any appurtenance thereto without first obtaining permission from the District. No person shall maliciously, willfully or negligently break, damage, destroy, deface or tamper with any pipeline, manhole, pump station or other equipment or appurtenance that is a part of the Sewer System.

4.02 No person shall connect any roof downspout, foundation drain, areaway drain, garage floor drain, sump pump or any other sources of surface runoff or groundwater to a Building Sewer or Building Drain, which in turn is connected directly or indirectly to the Sewer System, unless such connection is first approved by the District; however, such a connection shall only be for the purpose of disposing polluted surface waters. See 4.12 for land drain lateral connections.

4.03 In order to reduce unauthorized discharge of infiltration waters into the Sewer System, new-construction basements or below-grade rooms shall be protected by a sump designed to drain water from underneath the lowest concrete floor and thus prevent water infiltration into the basement or below-grade rooms. The sump shall be at least 16 inches in its smallest dimension and shall be plumbed with a minimum one-inch diameter pipe that carries sump water through the foundation to discharge outside the home by connecting to an existing land drain system or daylighting the outlet downhill from the building. The District has authority to set aside this requirement where the home or structure is clearly not subject to water infiltration.

4.04 In order to reduce damage from backflow of wastewater into the home, the design of new homes below 5000 feet elevation shall include provisions for the installation and maintenance of a backflow preventer. If the homeowner elects to not install a backflow preventer, then that homeowner shall sign a form releasing the District of all liability in case of a backflow of wastewater into the home.

4.05 All plans and specifications for the construction of Building Sewers and all other additions to the Sewer System, including specifications for size, slope, alignment, building materials, and the methods to be used in connection with excavating, placement of pipe, jointing, testing, backfilling and compaction, shall in all respects conform with requirements of the Utah Plumbing Code and shall conform to the requirements of R-317.

4.06 All work on a Building Sewer shall be performed in accordance with the plans and specifications approved by the District and in accordance with the provisions of these Rules and Regulations. The entire length of the Building Sewer, including the connection to the Sewer System main line, shall be left fully exposed for inspection by the District. No backfilling shall be done until the inspection and testing is made and the work is accepted in writing by the District. In the event that the District finds that the construction work is incomplete, and if any required changes necessitate subsequent inspections and further testing, payment shall be made by the Owner to the District for each additional inspection and test as specified in this ordinance. The Owner of the premises, or his duly authorized contractor or agent, shall notify the District at least 24 hours prior to the time when the Building Sewer is to be ready for inspection and testing.

4.07 All costs and expenses incidental to the construction, connection and maintenance of the Building Sewer and lateral line shall be borne by the Owner. The Owner shall indemnify the District from any injury, loss or damage to persons or property, real or personal, that may directly or indirectly be occasioned by the construction and connection of the Building Sewer. All connections shall either be made personally by the homeowner or by a contractor licensed by the State of Utah to do that type of work.

4.08 A separate and independent Building Sewer shall be provided for every building, except that in those instances where one building stands at the rear of another on an interior lot, and no private sewer is available or can be constructed to the rear building through an adjoining alley, court, yard or driveway, the Building Sewer from the front building may be extended to the rear building and the whole considered as one Building Sewer, but the District does not and will not assume any obligation or responsibility for damage caused by or resulting from any such single connection for both buildings.

4.09 No connection shall be made with the Sewer System where plumbing fixtures in the Premises to be served are located at an elevation lower than the elevation of that part of the Sewer System to which the connection is to be made, without prior written agreement with the Board of Trustees.

4.10 The Contractor shall:

- A. Be solely responsible for the means, methods, techniques, sequences and procedures of construction;
- B. Be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the construction work;
- C. Take all necessary precautions for the safety of, and provide protection necessary to prevent damage, injury or loss to, all employees on the work and other persons who may be affected thereby, as well as to property located at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities;
- D. Restore any streets, curb / gutter, sidewalks, grassed areas, parkways, utilities, public or private property disturbed or damaged in the course of the work, in a manner satisfactory to the District and to the Owner thereof;
- E. Comply with all applicable laws, ordinances, rules and regulations and orders of any public body having jurisdiction;
- F. Notify owners of adjacent utilities when construction work may affect them;
- G. Indemnify and hold the District harmless from and against any and all damage, injury or loss to any person or property, real or personal, caused directly or indirectly, in whole or in part, by the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

4.11 The Contractor shall not allow his name to be used by any person, directly or indirectly, either for the purpose of obtaining a permit or to do any work under his license. Any licensed plumber or contractor who violates this provision shall be disqualified from thereafter performing the work and a new contractor shall be retained by the Owner to do the work in accordance with the requirements of these Rules and Regulations.

4.12 Any lot in a development where a land drain system has been installed and stubbed to the lot, will be required to install a lateral from the stub to the outside of the building foundation, with a cleanout above grade, at the same time that the sewer lateral is installed and inspected. The land drain lateral shall be 4" white pipe for connection to the foundation perimeter drain, runoff drains, garage floor drains, sump pumps and downspout drains to ensure that no surface and/or runoff water from the building is introduced into the sewer system.

PART FIVE – USE OF THE SEWER SYSTEM

5.01 No person shall discharge or cause to be discharged into the sanitary sewer any unpolluted waters such as storm-water, surface water, groundwater, roof runoff, subsurface drainage or cooling water, except that polluted water from limited areas may be discharged into the sewer under limited conditions as specified by the District.

5.02 Storm water, other than that exempted under paragraph 5.01 and all other unpolluted drainage waters, shall be discharged to such sewers as are specifically designated as storm sewers, or to a natural outlet approved by the District and other regulatory agencies having jurisdiction over such matters.

5.03 No person shall discharge or cause to be discharged into the sanitary sewer any of the following described water or wastes:

- A. Gasoline, benzene, naptha, fuel oil, paint thinner, oil-base paints or other flammable or explosive liquids, solids or gases;
- B. Waters containing toxic or poisonous solids, liquids or gases which either singly or by interaction with other wastes, may contaminate, injure or interfere with any sewage treatment process;
- C. Waters or materials that constitute a hazard to humans or animals, create a public nuisance, create any hazard or have an adverse effect on any waters receiving any discharge from the sewer system;
- D. Waters containing more than one gallon of milk per thousand gallons or containing any natural or artificial substance that in larger quantities may interfere with the normal wastewater treatment process;
- E. Waters or wastes having a pH lower than 5.5 or greater than 8.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment and personnel of the Sewer System or wastewater works;
- F. Solid or viscous substances, in quantities or of such size capable of causing obstruction to flow in the Sewer System or other interference with proper operation of the Sewer System, such as but not limited to ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, un-ground garbage, whole blood, paunch manure, hair and fleshings, entrails, animal wastes, paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.

5.04 The following described substances, materials, waters or waste shall be limited in their discharge into the Sewer System to only those concentrations or quantities that will not harm the Sewer System or the wastewater works and will not have an adverse effect on the receiving stream, or otherwise endanger life, limb, public property or constitute a nuisance. The Board may set limits lower than the limits established below if in their opinion more severe limits are necessary to meet the above objectives.

- A. Wastewater having a temperature greater than 140 degrees Fahrenheit (60 degrees Celsius);
- B. Wastewater containing more than 25 milligrams per liter of petroleum oil, non-biodegradable cutting oils, or products of mineral oil origin;
- C. Wastewater from commercial sources containing floatable oils, fats or grease;
- D. Garbage that has not been properly shredded;
- E. Waters or wastes containing compounds of iron, chromium, copper, zinc and similar objectionable or toxic substances to such degree that the effluent exceeds the limits established by state regulations;
- F. Waters or wastes containing odor-producing substances exceeding limits established by the District;
- G. Radioactive wastes or isotopes prohibited by state and federal regulations;
- H. Qualities of flow, concentrations or both that constitute a 'slug' as defined in Article I;
- I. Waters or wastes containing substances that are not amenable to treatment or reduction by the wastewater treatment processes employed, or that result in the effluent exceeding limits established by state regulations;
- J. Waters or wastes that, by interaction with other waters or wastes in the Sewer System, release obnoxious gases, form suspended solids that interfere with the Sewer System or create a condition deleterious to structures and treatment processes.

5.05 In the event that any waters or wastes are discharged or are proposed to be discharged into the Sewer System, that in the judgment of the District may have a deleterious effect upon the Sewer System, treatment processes, equipment or receiving waters, or that otherwise create a hazard to life or constitute a public nuisance, the District may:

- A. Reject the wastes;
- B. Require a Pre-treatment system to be installed and maintained at the building location at the expense of the entity that will bring the wastewater from this location to an acceptable condition prior to discharge into the Sewer System;
- C. Require control over the quantities and rates of discharge;
- D. Require additional payment from the discharger to cover the added cost of handling and treating the wastes not covered by existing sewer charges under the provisions of these Rules and Regulations.

5.06 When considering the foregoing alternatives, the District shall give consideration to the economic impact of each alternative on the discharger. If the District permits the pre-treatment or equalization of waste flows, the design and installation of the plant and equipment to be used therefore shall be subject to the review and approval of the District.

5.07 Grease, oil and sand interceptors or traps shall be provided when, in the opinion of the District, they are necessary for the proper handling of gritty or liquid wastes containing floatable grease or oil in amounts exceeding those specified in paragraph 5.04 above. All interceptors shall be of a type and capacity approved by the District and shall be located so as to be readily and easily accessible for cleaning and inspection. The

Owner shall be responsible for removal and disposal of the captive material and shall maintain records of the dates and means of disposal, all of which shall be subject to review by the District.

5.08 Where pretreatment or flow-equalizing facilities are provided or required for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation at the Owner's expense.

5.09 When required by the District, the Owner of any premises serviced by a Building Sewer carrying industrial wastes shall install a structure together with such meters and other appurtenances in the Building Sewer as may be necessary to facilitate observation, sampling and measurement of the wastes. Such structures, when required, shall be built in accordance with plans and specifications approved by the District. The aforesaid structure, meters and other facilities shall be installed at the Owner's expense and shall be maintained by the Owner so as to be safe and accessible at all times.

5.10 The District may require a user of sewer services to provide and deliver to the District information needed to determine compliance with these Rules and Regulations. This information may include:

- A. A record of wastewater peak discharge rates and volumes over a specified time period;
- B. Chemical analysis of wastewater;
- C. Information on raw materials, processes and products affecting wastewater volume and quantity.
- D. Quantity and disposition of specific liquids, sludges, oils, solvents or other materials important to sewer use control;
- E. A plat showing the location of any sewer or pretreatment facilities on the user's property;
- F. Details regarding wastewater pretreatment facilities;
- G. Details regarding systems to prevent and control the losses of materials through spills into the Sewer System.

5.11 All measurements, tests and analysis of the characteristics of waters and wastes to which reference is made in these Rules and Regulations shall be determined in accordance with the latest edition of Standard Methods for the Examination of Water and Wastewater, published by the American Public Health Association. Sampling methods, locations, times, durations and frequencies are determined on an individual basis subject to approval by the District.

5.12 No statement contained in this Article shall be construed as preventing any special agreement or arrangement between the District and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the District into the Sewer System.

PART SIX – POWER AND AUTHORITY OF DISTRICT AGENTS

6.01 Any person receiving sewer service from the District shall permit a duly authorized Agent of the District, bearing proper credentials and identification, to enter such user's property at all reasonable times, for the purpose of conducting any necessary inspection, observation, measurement, sampling and testing relative to the discharge of Sewage into the Sewer System.

6.02 Duly authorized Agents of the District are empowered to obtain, from industries receiving Sewer Service from the District, information concerning processes that have a direct bearing on the kind and source of discharge into the Sewer System. Any firm may withhold information considered confidential. However, the firm must establish that revelation to the public of the information in question might result in an unfair advantage to its competitors.

6.03 While performing necessary work on private properties referred to in paragraphs 6.01 and 6.02 above, Agents of the District shall observe all safety rules applicable to the premises of the firm being visited.

6.04 Agents of the District shall be permitted, at all reasonable times, to enter private properties through which the District holds a duly negotiated easement for the purpose of, but not limited to, inspection, observation, measurement, sampling, maintenance and repair of any portion of the Sewer System within said easement. Such entry and subsequent work, if any, by the District within said easement shall be done in full compliance with the terms of the duly negotiated easement pertaining to the private property involved.

PART SEVEN – PENALTIES

7.01 Any person or entity found to be in violation of any provision in these Rules and Regulations shall be served with a first written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease all violations described in said notice.

7.02 If any person or entity shall continue any violation beyond the time limit provided in the first written notice, the offender shall be served with a final written notice, wherein the offender shall be assessed a fine set by the Board of Trustees and shall be given opportunity to appear before the Board at the time and place described in the final notice, to show cause why the penalty assessed by the Board should not be paid. In the event the offender fails to appear before the Board, the Board shall request the fine to be appended to the County tax notice for that property.

7.03 Any person or entity violating any of the provisions of these Rules and Regulations shall become additionally liable to the District for any expense, loss or damage occasioned by reason of such violation, including court costs and attorney's fees.

End of Article II

MOUNTAIN GREEN SEWER IMPROVEMENT DISTRICT

5455 West Old Highway Road
Mountain Green, UT 84050
801-876-3416 / Fax 801-876-3558

SANITARY SEWER ORDINANCE

ARTICLE III – SITE PREPARATION

PART ONE – GENERAL

1.01 WORK INCLUDED

- A. Preparation
- B. Clearing and grubbing
- C. Topsoil removal
- D. Asphalt pavement removal
- E. Concrete removal
- F. Removal of fences and miscellaneous obstructions
- G. Disposal of waste materials

1.02 QUALITY ASSURANCE

- A. All tree trimming and removal shall be done in accordance with recognized tree surgery standards.

PART 2 – PRODUCTS

- A. Not used.

PART 3 – EXECUTION

3.01 SITE PREPARATION

- A. No clearing, demolition or removal of any kind shall proceed until all existing trees, improvements, etc. to be removed have been established and are inspected and documented by the District.
- B. Establish necessary clearing limits within the construction zone. Mark all trees, shrubs, structures, fences, concrete and other improvements to be removed.
- C. Within ten feet of clearing limits, inspect, photograph or video tape and record condition of concrete slabs, structures, landscaping and other features to remain which might be affected by work.

- D. All trees, shrubs and lawn areas to receive planting, rock outcroppings, fences, sprinklers and other improvements that are not to be removed shall be protected from damage or injury. If damaged or removed, they shall be restored or replaced in as nearly the original condition and location as is reasonably possible. Trees, shrubs and improvements not to be removed shall be marked in field by the District and / or shown on drawings.
- E. Give reasonable notice to the District to permit the salvage of plants, trees, fences, sprinklers and other improvements within the construction zone that may be destroyed because of the work.
- F. Notify interested utility companies to be present if disturbing ground in the vicinity of utilities.
- G. Protect active utility systems adjacent to or uncovered by any excavation during site preparation.
- H. Maintain benchmarks, monuments and other reference points and construction stakes.
- I. Prevent tree removal and / or pruning work of all improvements intended to remain within construction zone as well as all improvements outside the zone.

3.02 CLEARING AND GRUBBING

- A. Remove all surface vegetation to a depth necessary for complete removal of all roots and other deleterious materials from within the areas to receive structural fill or base course.
- B. All trees, stumps, roots, etc. to be removed within the construction zone shall be cut off, excavated or removed to a depth of not less than three feet below the existing ground surface.
- C. Branches of trees extending over the construction zone shall be trimmed to the boles to give a clear height of 20 feet above the existing ground surface. All trimming shall be done in accordance with recognized tree surgery standards. Remove additional tree branches under the direction of the District in such a manner that the tree will present a balanced appearance.

3.03 TOPSOIL REMOVAL

- A. Before any construction activity begins, remove topsoil to a maximum depth of one foot unless otherwise required by individual property owner, and stockpile on the same property from which topsoil was removed and stockpile where required by individual property owner.
- B. Topsoil shall be protected from contamination by weeds, debris, etc. and shall be replaced, graded and lightly compacted by Contractor at completion of project.
- C. Disposal of topsoil is not allowed.

3.04 ASPHALT PAVEMENT REMOVAL

- A. Asphalt shall be sawed to ensure the breakage of pavement along straight lines. A 'tee-cut' shall be employed such that the asphalt is cut at least one foot wider than the trench to allow new asphalt to be placed on an undisturbed surface, which provides a smoother transition over the disturbed trench soil.

3.05 CONCRETE REMOVAL

- A. Concrete shall be removed to neatly sawed edges with saw cuts made to a minimum depth of four inches.
- B. Concrete sidewalk or driveway to be removed shall be neatly sawed in straight lines either parallel to the curb or at right angles to the alignment of the sidewalk. No section to be replaced shall be smaller than 30 inches in either length or width.
- C. Unless otherwise shown on the drawings, if the saw cut would fall within 30 inches of a construction joint, expansion joint or edge, the concrete shall be removed to the joint or edge, except that where the saw cut would fall within 12 inches of a score mark, the saw cut shall be made in and along the score mark.
- D. Curb and gutter to be removed shall be sawed to a depth of 1-1/2 inches on a neat line at right angles to the curb face.

3.06 FENCES AND MISCELLANEOUS OBSTRUCTIONS

- A. No demolition or removal of fences or miscellaneous obstructions shall proceed until clearance is obtained from the property owner.

3.07 DISPOSAL OF WASTE MATERIALS

- A. Where salvage is not required or otherwise specified herein or as shown on the drawings, dispose of all removed materials at a suitable off-site location in accordance with applicable laws and ordinances.
- B. No burning shall be allowed.

END OF ARTICLE III

MOUNTAIN GREEN SEWER IMPROVEMENT DISTRICT
5455 West Old Highway Road
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SANITARY SEWER ORDINANCE

ARTICLE IV
EXCAVATING, BACKFILLING AND COMPACTION

PART ONE – GENERAL

1.01 WORK INCLUDED

- A. Preparation
- B. Excavation
- C. Backfilling
- D. Compaction
- E. Dewatering
- F. Field Quality Control
- G. Cleaning up

1.02 RELATED WORK

- A. Article V – System Installation
- B. Article VI – Restoration of Existing Improvements

1.03 QUALITY ASSURANCE

- A. Comply with federal, state and local codes and regulations.
- B. All working conditions shall be in accordance with the Utah Occupational Safety and Health Division publication Safe Practices for Excavation & Trenching Operations, latest edition, and other Laws and Regulations which apply.
- C. The contractor is responsible for understanding and complying with the applicable requirements of Utah Code Rule R317-3 'Design Requirements of Wastewater Collection, Treatment and Disposal Systems.' In cases where the requirements of this ordinance conflict with or are less stringent than those of Rule R317-3, the requirements of Rule R317-3 shall prevail.

1.04 REFERENCES

- A. Utah Occupational Safety and Health Division (UOSHD).
- B. American Society of Testing Methods (ASTM) Designation D1557.

1.05 SUBMITTALS

- A. Submit for approval the drawings and structural calculations for trench shoring to be utilized.

1.06 QUALITY ASSURANCE

- A. Local jurisdiction requirements shall govern for all work in road right-of-ways.
 - 1. All work shall conform to the applicable standards, regulations and requirements of the District or County for backfill and compaction above the pipe.
 - 2. Permits shall be secured from jurisdiction by the Contractor.

1.07 WARRANTY

- A. See Contract General Conditions for guarantee period.

1.08 SUBMITTALS

- A. If requested, submit descriptions of all materials to District.

PART TWO – PRODUCTS

2.01 FOUNDATION MATERIALS

- A. Sewer rock:
 - 1. Shall be hard, durable, broken stone or slag.
 - 2. Shall be graded within the following limits:

<u>Sieve Size</u>	<u>Percent Passing By Weight</u>
2"	100
1"	85-100
½"	20-40
#4	10-20

2.02 BEDDING MATERIALS

- A. Gravel Bedding Material:
 - 1. Shall be free from alkali, salt, roots, sod, limbs and other vegetative matter, slag, cinders, ashes, petroleum products or other material that in the opinion of the District may be objectionable or deleterious.
 - 2. Graded within the following limits

<u>Sieve Size</u>	<u>Percent Passing By Weight</u>
1-1/2"	100
1"	95-100
½"	25-60
#4	0-10

2.03 BACKFILL MATERIALS

A. Excavated Soil Backfill Material:

1. Shall be free from alkali, salt, roots, sod, limbs and other vegetative matter, slag, cinders, ashes, petroleum products or other material that in the opinion of the District may be objectionable or deleterious.
2. Shall be select material from excavation with no particle larger than three inches in diameter.
3. Use on-site materials only if specified compaction requirements can be met.

PART THREE – EXECUTION

3.01 PREPARATION

- A. It shall be the Contractor's sole responsibility to locate all (whether or not shown on the drawings) existing gas lines, electrical, telephone, water, sanitary sewer, storm drain and other underground utilities with their existing house service connections, and all other underground structures in order that no damage or loss of service will result from interference with existing lines.
- B. Contractor shall review all available drawings, notes and information on the location of these underground lines and structures in determining the location of existing facilities.
- C. Contractor shall have a pipe finder on the job at all times and mark all lines on the road ahead of the excavating machine.
- D. Blue Stakes Location Center (801-532-5000) shall be contacted 48 hours (two working days) before any excavation is commenced.
- E. Mark with paint any existing cracks on concrete along which work will take place, in order to determine after the construction is completed whether such damage was caused by the operations of the Contractor or had occurred previously. Any concrete showing unmarked cracks or damage upon completion of construction will be evidence of damage by the Contractor and shall be repaired or replaced to the satisfaction of the owner of the damaged concrete, at the Contractor's expense.
- F. All fences removed for excavation shall be returned to their original condition except that portions damaged by Contractor shall be replaced with new fencing at the Contractor's expense.
- G. Contractor shall obtain all required permits.

3.02 EXCAVATION

- A. All gas, sanitary sewer, storm drain, water and other pipelines, flumes and ditches of metal, wood or concrete, underground electrical conduits and telephone cable, and all walks, curbs and other improvements encountered in excavating trenches shall be carefully supported, maintained and protected

from injury or interruption of service until backfill is complete and settlement has taken place.

- B. If any existing facility is damaged or interrupted, and before performing any work affected thereby, Contractor shall immediately identify the owner of such existing facility and give written notice thereof to that owner and to the District. Contractor shall comply with other applicable requirements of the General Conditions of the Construction Contract and indemnify the District from any and all damages resulting from damaged facilities.
- C. Excavation for pipe lines, concrete valve boxes, manholes and appurtenant structures shall include the work of removing all earth, sand, gravel, quicksand, stone, loose rock, solid rock, clay, shale, concrete, hardpan, boulders and all other materials necessary to be moved in excavating. Trenches shall be stabilized by shoring, bracing and sheeting or well-pointing to prevent the sides of the trench from caving in while pipe laying is in progress, and all such stabilizing materials shall be removed from the trench after pipe has been laid, except when such removal will cause damage.
- D. Trench support system shall be suitable for the soil structure, depth of cut, water content of soil, weather conditions, superimposed loads and vibration. Contractor may select one of the following methods of ensuring the safety of workers in the trench, as approved by the Utah State Industrial Commission or its safety inspectors:
 - 1. Sloping sides of trench to the angle of repose at which the soil will remain safely at rest.
 - 2. Shoring trench sides by placing sheeting, timber shores, trench jacks, bracing, piles or other materials to resist pressures surrounding the excavation.
 - 3. Using a movable trench box built from steel plates and a heavy steel frame of sufficient strength to resist the pressures surrounding the excavation.
- E. All damage, injury or loss resulting from lack of adequate sheeting, bracing and shoring shall be solely the responsibility of the Contractor, and the Contractor shall effect all necessary repairs or reconstruction resulting from such damage.
- F. Trenches shall be of necessary width for proper laying of pipe. Care shall be taken not to over-excavate. The bottom of the trenches shall be accurately graded to provide uniform bearing and support for each section of pipe along the entire barrel of the pipe.
- G. Trenches shall be excavated to the depths shown on the Drawings, including any required allowances for the sewer rock foundation, when required, and for other pipe bedding requirements.
- H. Trench width, measured at the top of the pipe, shall be as narrow as possible but not wider than 15 inches on each side of the pipe.
- I. Excavation for manholes, concrete boxes, cleanouts and similar structures shall be sufficient to leave at least 12 inches in the clear between the outer surfaces and the embankment or timber that may be used to hold and protect the banks.

- J. Excess materials shall be hauled away from the construction site or otherwise disposed of by the Contractor at an appropriate site.

3.03 BACKFILLING AND TRENCH PLUGGING

- A. The trenches shall not be backfilled until the utilities systems, as installed, conform to requirements of the Drawings and Specifications. Where, in the opinion of the District, damage is likely to result from withdrawing sheeting, the sheeting shall be left in place.
- B. Trenches shall be backfilled to the proper surface with material as shown or specified. Trenches considered by the District to be improperly backfilled shall be reopened to the depth required for correction, then refilled and compacted as specified, or the condition shall be otherwise corrected as approved by the District.
- C. Pipe Bedding – unless otherwise specified:
 - 1. Consists of preparing an acceptable pipe foundation, excavating the pipe groove in the prepared foundation and backfilling from the foundation to the top of the pipe. All piping shall be protected, by adequate bedding, from lateral displacement and possible damage resulting from impact or unbalanced loading during backfilling operations.
 - 2. The pipe foundation shall consist of six inches of Gravel Bedding material in the bottom of the trench. Where the trench sub-grade material does not afford a sufficiently solid foundation to support the pipe and superimposed load, and where groundwater must be drained, the trench shall be excavated below the bottom of the pipe to such depth as may be necessary and this additional excavation shall be filled with sewer rock.
 - 3. A pipe groove shall be excavated in the pipe foundation to receive the bottom quadrant of the pipe so that the installed pipe will be true to line and grade. Bell holes shall be dug after the trench bottom has been graded. Bell holes shall be excavated so that only the barrel of the pipe bears on the pipe foundation.
 - 4. In bedding the pipe from pipe foundation to the top of pipe, Contractor shall deposit and consolidate gravel bedding materials concurrently and uniformly on both sides of the pipe. All bedding materials shall be placed in the trench with hand tools or other approved method in such a manner that they will be scattered alongside the pipe and not dropped into the trench in large quantities.
 - 5. A workman shall vigorously chink the gravel on both sides of the pipe using a shovel in a manner such that the gravel is tamped to support the underside of the pipe.
- D. Each lift shall be evenly spread and moistened or dried by disk harrowing or other means so that the required density will be produced.
- E. Gravel Bedding Material shall be used to backfill around cleanouts.
- F. Care shall be exercised so that, when backfilling is complete and settlement has taken place, all existing pipes, flumes, ditches, conduits, cables, walks, curbs and other improvements will be on the same alignment and grade as they were before work commenced.

G. Trench Plugs:

1. In order to retard water flowing through trench bedding and eroding sewer pipe support, trench plugs shall be located at a maximum of 200-foot intervals along the entire length of pipe, or as directed by the District.
2. Trench plugs shall be a minimum of 12 inches thick by a minimum of the full width of the trench. The plug must extend above the height of the gravel fill (at least 12 inches above top of pipe) and to the bottom of the trench (at least six inches below pipe).
3. Plugs may be clay compacted to 95% of maximum dry density or concrete of 1500 psi minimum strength with six-inch maximum slump.
4. Plugs shall be watertight for the entire trench width.

3.04 COMPACTION

- A. Compaction shall be the responsibility of the Contractor. He shall select the methods to be used and carefully perform the work of backfilling and compaction so as to prevent damage to new or existing piping. The Contractor shall replace, with new piping, any new or existing piping damaged by the work, as directed by the District.
- B. Backfill compaction shall meet the following requirements, unless otherwise specified by local jurisdictions:
 1. Under pavements or other surface improvements, the minimum density shall be 96% of laboratory maximum density, as determined by ASTM Designation D-1557.
 2. In unimproved areas the minimum density shall be 85% of laboratory maximum density as determined by ASTM D-1557.
 3. In landscaped areas the minimum density shall be 90% of laboratory maximum density as determined by ASTM D-1557.
- C. Methods of compaction include mechanical compaction (MC) only. Authorization by the District to use any method does not relieve the Contractor of his responsibility to meet the specified density requirements. Compaction shall be performed in strict accordance with the manufacturer's recommendations for each type of pipe.
- D. Mechanical compaction shall be accomplished by the use of sheep's-foot rollers, pneumatic tire rollers, vibrating rollers or other mechanical tampers of a size and type necessary to achieve the required degree of compaction.
- E. Water jetting shall not be allowed.

3.05 DEWATERING

- A. The Contractor shall do all pumping, shall build all drains and do all the work necessary to keep the trench and pipes free from water during progress of the work.

- B. In wet trenches, a channel shall be kept open alongside the pipe for conducting water to a sump hole, from which it shall be pumped out of the trench. No water shall be allowed to enter the pipe.

3.06 FIELD QUALITY CONTROL

- A. The Owner shall employ a testing laboratory to perform field and laboratory density tests as specified in the pipe zone and shall provide access to the work and all men and machinery necessary to aid the testing laboratory personnel in performing field density tests or taking samples for laboratory tests. In general, tests and samples shall be made as the work proceeds. The Contractor shall cooperate with the District to schedule and perform tests.
- B. The District will direct a testing laboratory to perform maximum density tests on materials to be compacted from samples submitted by the Contractor that are taken from locations selected by the District.
- C. The District will direct a testing laboratory to perform field density tests of compacted backfill materials. The approximate location and number of such tests shall be as shown on the drawings or as selected by the District. Field density tests shall be taken as follows or as otherwise selected by the District:
 - 1. In planted or unimproved areas:
 - a. 18 inches above the top of the pipe
 - b. Finished grade
 - 2. In streets, roads, parking lots or other paved areas:
 - a. 18 inches above the top of the pipe
 - b. 24 to 36 inches below the gravel road base
 - c. Gravel road base sub-grade
 - d. Top of gravel road base
 - e. Top of bituminous surface course
- D. Copies of test results prepared by the testing laboratory will be transmitted to the Contractor at the same time they are transmitted to the District.
- E. Successful performance of field density tests by the testing laboratory shall not relieve the Contractor of his responsibility to meet the specified density requirements for the complete project.
- F. Additional tests shall be made on samples take from locations selected by the District.

3.07 CLEANING UP

- A. The roadway including shoulders, slopes, ditches and borrow pits shall be smoothly trimmed and shaped by machinery or by other satisfactory methods, to the lines, grades and cross-sections as established by Drawing and Specifications, and shall be so maintained until accepted. Any surplus material not suitable for spreading along the road to widen the existing shoulder or raise the grade shall be hauled away or disposed of at a suitable site.

End of Article IV

MOUNTAIN GREEN SEWER IMPROVEMENT DISTRICT
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SANITARY SEWER ORDINANCE

ARTICLE V

SYSTEM INSTALLATION

PART ONE – GENERAL

1.01 WORK INCLUDED:

- A. Furnishing and installing pipe, fittings, manholes and service laterals;
- B. Adjusting sewer manhole rings to proper finish grade;
- C. Preparation and video inspection of line.

1.02 RELATED WORK

- A. Article IV – Excavation, Backfilling and Compaction
- B. Article VI – Restoration of Existing Improvements

1.03 QUALITY ASSURANCE

- A. Workmanship and methods employed in the handling, transporting, storage, bedding and laying of pipe, fittings, associated structures and accessories shall conform to the appropriate manufacturers' recommendations and / or ASTM recommendations.
- B. "The contractor is responsible for understanding and complying with the applicable requirements of Utah Code Rule R317-3 'Design Requirements for Wastewater Collection, Treatment and Disposal Systems.' In cases where the requirements of this ordinance conflict with or are less stringent than those of rule R317-3, the requirements of Rule R317-3 shall prevail.

1.04 SUBMITTALS:

- A. Submit manufacturer's specifications for all projects.
- B. As-constructed locations of all wyes, cleanouts and covered fittings shall be prepared by the contractor and submitted to the District.

1.05 DELIVERY AND HANDLING

- A. Loading, transporting and unloading of pipe, fittings and accessories shall be accomplished in a manner to avoid shock or damage.

PART TWO – PRODUCTS

2.0 PIPING

- A. Concrete pipe shall meet the requirements of ASTM C-14, Class III, with push-on gasket joints conforming to ASTM C-443. Cement for the pipe shall be Portland cement, Type V, conforming to ASTM C-150.
- B. Polyvinyl chloride (PVC) pipe shall meet requirements of ASTM D 3034 for SDR 35. The pipe shall have integral wall bell and spigot joints conforming to ASTM D 3212, with a solid cross-section rubber ring, factory assembled, securely locked in place to prevent displacement during assembly. The sewer pipe shall be colored green for in-ground identification as sewer pipe, and the land drain pipe shall be colored white for in ground identification as land drain pipe.
- C. Minimum pipe size for sewer laterals shall be four inches diameter. Minimum pipe size for sewer mains shall be eight inches diameter. Otherwise, minimum pipe size shall be determined using Manning's Formula with a coefficient of 0.012 and a peak flow per ERU of 0.7 gallon per minute.
- D. PVC pressure pipe shall conform to ASTM D2241 for working pressure of 100 psi. The pipe shall be either supplied with bell and spigot joints meeting ASTM F477 or solvent cement joints conforming to ASTM D2564.

2.02 MANHOLES

- A. Manholes shall be 48 or 60 inches in diameter conforming to ASTM C-478 with a concentric cone section of 48" x 30" x 36" and with integral, polymer-coated rust-resistant steps spaced no more than 18 inches apart. If the sewer main is 12 inches diameter or greater, or if more than three sewer main pipes connect to the manhole, the manhole shall be 60 inches in diameter or as specified by drawing.
- B. Manholes may be pre-cast, including the base section, standard sections and grade rings.
- C. Cement for manholes shall be Portland cement, Type V, or Type II-A complying with ASTM C-150.
- D. Manholes shall be watertight both in the floor and to the full height of the walls.
- E. Joints shall be made tight by the use of Kent-seal or equal and the internal periphery of all joints shall show evidence of 100 percent seal around the joint.

2.03 MANHOLE RING, COVER AND GRADE RINGS

- A. The manhole ring and cover shall be gray iron castings conforming to ASTM A-48, Class 30, with non-rocking, machined bearing surfaces between cover and frame.
 - 1. The cover shall have cast-in lettering of "SEWER" and shall be vented or non-vented such that every other manhole is vented and every subsequent

manhole is non-vented so that there is an approximate 50%/50% mix of vented and non-vented covers on every main line.

2. The cover shall be a nominal 30 inches in diameter and shall conform to ASTM C-4781.
 3. The ring and cover shall have a combined weight of not less than 350 pounds.
- B. Manhole grade rings shall be nominal 30-inch diameter conforming to ASTM C-478 for concrete sewer manholes.

2.04 CAST-IN-PLACE CONCRETE

- A. Cement shall be Type II-A or Type V complying with ASTM C-150.
- B. Coarse aggregates shall conform to ASTM C-33 using 3/4-inch coarse aggregate size and 3/8-inch minus fine aggregate size.
- C. Air entraining agent shall conform to ASTM C-175 and added at the mixer.
- D. Concrete mix shall be 6.5 sacks per cubic yard, 4000 psi 28-day compressive strength, 4-inch maximum slump and 5 to 6.5 percent air entrainment.
- E. The cast-in-place collar in paved areas shall be an annulus with a width of at least 12 inches and a thickness of at least 12 inches. The upper surface of the collar shall be 1/8 to 3/8 inch below the surface of the paving.

PART THREE - EXECUTION

3.01 PREPARATION

- A. When connections are to be made to any existing pipe or other improvement and the actual elevation or position cannot be determined without excavation, the Contractor shall excavate for and expose the existing improvement before laying any pipe.
- B. Preliminary qualifying test: If required by the District, the first section of pipe not less than 300 feet in length installed by each crew shall be tested in order to qualify the crew and / or material. Successful installation of this section shall be a prerequisite to further pipe installation by said crew.

3.02 PIPE INSTALLATION

- A. Trenching:
 1. Slope trench walls or use trench box to meet OSHA standards.
 2. Trench width at bottom shall be no greater than pipe OD plus 30 inches.
- B. Bedding:
 1. Bedding shall be prepared in accordance with Article IV – EXCAVATION, BACKFILLING AND COMPACTION and as shown on the plans.
 2. All pipes shall be laid on a firm bed, true to the line and grade, and the butt end and shoulder of each pipe shall be positioned against the other in such a manner that there is no unevenness of any kind along the bottom half of the pipeline.

3. A minimum of six inches bedding shall be under the pipe with additional sewer rock under the bedding as needed to afford a solid foundation.
- C. During all phases of pipe installation, dewater trench to prevent floating of pipe.
- D. Lay pipe in the uphill direction with the bell end pointing upgrade.
- E. Perform all work in strict accordance with the manufacturer's recommendations for the type of pipe being installed.
- F. Clean pipe joints just prior to connecting in accordance with manufacturer's instructions.
- G. Install a tight-fitting pneumatic or mechanical plug in the pipe that connects to the in-service main line and keep this plug in place until all construction, cleaning, video and pressure testing operations have been completed. Install a tight-fitting plug in the end of any open pipe at the end of the workday to ensure that trench flooding will not carry debris into the open pipe."
- H. Where water lines are parallel to sewer lines, maintain a minimum separation of 10 feet horizontal and / or a minimum vertical separation of 18 inches below the water line.
- I. Where water lines cross sewer lines, maintain a minimum vertical separation of 18 inches with the sewer line below the water line. Where this separation is impossible, a 20-foot length of PVC or D.I. pipe shall be centered under the water line so as to have no sewer pipe joint closer than 10 feet to the crossing. Joints near the crossing shall be of the solvent weld type.
- J. Take care to avoid contact between the pipe and compaction equipment. Compaction of bedding and backfill material should generally be done in such a way that compaction equipment is not used directly above the pipe until sufficient backfill has been placed to assure that the compacting operation will not damage the pipe or produce indentations in the pipe. NOTE: ANY INDENTATION OR ELLIPTICAL OUT OF ROUND CONDITION IN THE PIPE THAT IS VISIBLE IN THE VIDEO IS SUFFICIENT CAUSE FOR THE PIPE TO BE RE-BEDDED AT THE CONTRACTOR'S EXPENSE.
- K. Pipe transition into the manhole must be smooth and free of any pockets or indentations.
- L. Pipes entering or exiting from manholes shall be sealed from the outside to prevent groundwater infiltration. In addition, the bottom half of the pipe shall be grouted on the inside of the manhole to reduce buildup and to facilitate wastewater flow.
- M. Joining of new sewer lines to existing lines or laterals shall be accomplished using Mission Rubber Company coupler type MR02 XX ARC, where 'XX' represents the size of the pipe, or an equivalent coupler approved by the District.
- N. Minimum slope for eight-inch residential sewer lines shall be 0.50 percent.

3.03 MANHOLES

- A. All manholes shall be located in a public right-of-way, unless the District agrees that there are compelling reasons for locating them elsewhere. If the District agrees to locations not in a public right-of-way, the Developer must

agree to ensure permanent access to the manholes via a roadway at least 14 feet wide and a roadbed at least eight inches thick of road base compacted to at least 96% of laboratory maximum density, as determined by ASTM Designation D-1557.

- B. Excavation, bedding and backfill for manhole installation shall be in accordance with Article IV – EXCAVATING, BACKFILLING AND COMPACTION.
- C. Construct the manhole at the specific stations and grades shown on the drawings.
- D. A manhole is required on all sewer main stub ends where buildings will be connected.
- E. Set manholes so that the top of the manhole lid is level with the finished surface or grade except that lids in asphalt or concrete roadways shall be 1/8 to 3/8 inch below the asphalt or concrete roadway surface.
- F. Cast-in-place base and floor shall conform to requirements of standard details for layout and configuration.
- G. All lifting holes must be grouted watertight. Perforations shall be sealed with concrete from the outside with sufficient external reinforcement to resist being blown out or eroded by groundwater pressure.
- H. A bed of gravel or sewer rock at least 12 inches deep shall support the manhole base.
- I. The base shall be anchored into the base section using four, #4 re-bars placed with two at 90 degrees to the other two and spaced approximately two feet apart. Bars shall be at least one inch longer than the distance across the segment at the placement location and shall be inset at least one-half inch into each side of the base section at a height of eight inches from the bottom of the base.
- J. The bottom of the pipe shall be at least eight inches above the bottom of the base and the top of the base at the top of the pipe shall be flush to the top of the pipe. The top surface of the base shall have a minimum two percent slope upward from the pipe to the wall.
- K. Pipe boots are required at all connections to the manhole and a smooth transition is required between pre-cast manhole base and pipe.
- L. Open channels within the manhole base shall be sized to match outgoing pipe capacity. Side channels shall be curved to provide a smooth transition into the main flow across the manhole base.
- M. No pipe bell is permitted in the manhole.

3.04 LATERAL CONNECTIONS

- A. Install factory-made wyes for new sewer mains and saddle attachment, Romac style "CB", or approved equivalent, for nose-on to existing sewer main. The laterals must not protrude into the sewer main beyond what the attachment design calls for.
- B. Install the sewer lateral such that the angle between the centerline of the sewer lateral connects at an angle of at least 30 degrees (10 o'clock or 2 o'clock positions) above the centerline of the sewer main.

- C. The lateral piping shall be schedule 40 PVC and shall be green in color for sewer and white in color for land drain.
- D. The sewer lateral shall be separated from the water line at least three feet horizontally or at least 18" deeper than the water line.
- E. The lateral trench shall be open and the top of lateral shall be exposed to allow for slope measurement.
- F. The connections with the lateral stubs shall be open for visual inspection.
- G. Laterals shall have a minimum slope of 0.25 inch per foot.
- H. Laterals shall not run closer than two feet to a building after exiting and shall be at least four feet deep from final grade.
- I. Laterals must be laid in a bed of inch minus gravel at least three inches deep and chinked such that the lateral does not deflect when stepped on. After inspection by the District, the lateral shall be covered by a layer of inch minus gravel at least three inches deep before covering and compacting with soil.
- J. Lateral joints shall be gasketed or clearly well bonded. If not, a leak test may be required by the inspector.
- K. The house end of the laterals shall be temporarily capped to prevent infiltration, preferably by a solid cap.
- L. No sewer lateral connections shall be made to a manhole on a sewer main.
- M. A cleanout shall be installed near the building, or just inside the building. Outside cleanouts shall have a brass cap and shall not be buried but may be lowered to final grade.
- N. A cleanout shall be installed at least every 100 feet and whenever a change in direction of the sewer lateral exceeds 135 degrees.
- O. Ninety-degree elbows in the laterals are prohibited. Use forty-five degree or less elbows spaced at least one foot apart.

3.05 CLEANING AND FLUSHING OF SANITARY SEWER LINES

- A. Install a tight-fitting pneumatic or mechanical plug in the pipe that connects to the in-service main line and keep this plug in place until all construction, cleaning, video and pressure testing operations have been completed.
- B. Temporarily install a tight-fitting, reinforced basket screen in the lowest pipe section of the nearest existing manhole to prevent debris from entering the existing sewer line. No flushing shall commence without this screen being in place.
- C. Immediately after placement, thoroughly clean pipe lengths of all debris.
- D. At the end of the day's work, or at any time the work is closed down for any reason, plug all open ends of the pipe to prevent entrance of small animals and foreign material of any kind into the pipe.
- E. After all piping in a section is laid, thoroughly clean, flush and vacuum all debris from the new sewer mains.

3.06 VIDEO INSPECTION AND PRESSURE TESTING

- A. After the sewer lines have been cleaned and flushed, the contractor shall arrange for video inspection at the contractor's expense.

- B. Just prior to video inspection of a section of line, water shall be run into the section to ensure that low spots in the section will be revealed.
- C. All new sections shall be video inspected at a distance resolution and accuracy of no worse than 1 foot.
- D. The video camera shall pause at all laterals and wide joints and be rotated to scan the laterals and joints for defects.
- E. Improper lateral installation, wide joints, water pooling greater than one-inch depth or any noticeable bulges in the pipe wall shall be cause for the section to be excavated, re-bedded and re-inspected by video at the contractor's expense.
- F. A copy of the video and documentation shall be provided to the District within one week of completion of continuous videoing and at least one week prior to placing asphalt over the new line.
- G. Manhole to manhole segments shall be pressure tested in accordance with the ASTM F 1417 standard to ensure the integrity of main line joints and lateral connections and a report of this testing will be provided to the District at the same time as the inspection video.

End of Article V

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SANITARY SEWER ORDINANCE

ARTICLE VI
RESTORATION OF EXISTING IMPROVEMENTS

PART ONE – GENERAL

1.01 WORK INCLUDED

- A. Construction or repair of fences, driveways, walls, landscaping, roadways, curbs, sprinkler systems, walks or any other structure or improvement (surface or subsurface) removed or damaged pursuant to completing the contract requirements.

1.02 QUALITY ASSURANCE

- A. Use adequate number of skilled workmen who are trained and experienced in the type of construction required.
- B. The quality of the finished restored improvement, as determined by the District, shall be of equal or better quality than was said improvement prior to being damaged or removed.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. As required to complete the restoration of existing improvements.
- B. At least equal to original improvement at the time of damage or removal, as determined by the District and Owner, and matching in finish and dimension.
- C. Shall be in accordance with requirements for governing municipality.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Protect all public and private property adjacent to the work. Exercise due caution to avoid damage to such property.

3.02 RESTORATION

- A. Repair or replace all existing surface and subsurface improvements that were damaged or removed as a result of operations of work under this contract. In roads and driveways, the restored surface and base courses shall be at least equal in thickness to the existing.
- B. Restoration shall be of at least equal quality and identical in dimension to original improvement unless specified otherwise by the District or local jurisdiction having authority.

End of Article VI

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SANITARY SEWER ORDINANCE

ARTICLE VII
DISTRICT ACCEPTANCE OF DEVELOPMENT SEWERS

PART ONE – GENERAL

1.01 DEMONSTRATION PERIOD

- A. For a period of two years from the date of installation, the Developer shall be totally responsible for all maintenance of the sanitary sewer collectors and interceptors that they install to serve their developments.
- B. Within that two-year period, the Developer shall document all sewer system maintenance operations within the development (e.g., cleaning and videoing, line unplugging, line movement stabilization or replacement) and shall inform the District of these operations by FAX or by letter.

1.02 PRE-ACCEPTANCE REVIEW

- A. After the two-year demonstration period, the Developer shall schedule a review of the development sewer system and documentation with the District.
- B. Within 30 days prior to the scheduled review, the Developer shall clean and record a new video of the development sewer system that will be provided to the District as part of the review.
- C. In this review the District's technical staff shall review the new video provided by the Developer and identify all known or suspected items of concern such as potential blockage points or land movements, and shall identify key manholes and recommend a schedule to check for partial blockage, repairs and for additional cleaning and re-videoing.

1.03 ACCEPTANCE PROCEDURE

- A. If the District considers the Developer's documentation and maintenance operations to be adequate, the District shall confirm acceptance of the sewer system by letter to the Developer.
- B. If the District considers some items to be unreasonably expensive to maintain, the District may refuse to accept responsibility for those items until the Developer provides a satisfactory solution for those problem items.

End of Article VII