

Lakeside County Water & Sewer District

ENGINEERING STANDARDS

Lakeside, Montana

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Lakeside County Water and Sewer District Engineering Standards

TABLE OF CONTENTS

CHAPTER 1: GENERAL REQUIREMENTS	2
1.1 Introduction.....	2
1.2 Applicable Laws and Indemnification of the LCWSD	2
1.3 Contractor Bonding	2
1.4 Warranty Bond	2
1.5 Liability Insurance.....	2
1.6 Easements	3
1.7 Variances and Appeals	3
1.8 Developer Extension Agreements	3
1.9 Pre-Construction Conference	3
1.10 Road Permits	3
1.11 General Policies.....	3
1.12 Encroachment Permit Requirements.....	6
1.13 Testing and Inspection Requirements.....	7
CHAPTER 2: WATER SYSTEMS.....	10
2.1 Design Requirements	10
2.2 Design Report.....	10
2.3 Booster Pump Stations.....	10
2.4 Water Service Area	10
2.5 Offsets	10
2.6 Water Mains	11
2.7 Valves	12
2.8 Valve Boxes.....	12
2.9 Fire Hydrants	13
2.10 Water Service	13
2.11 Tapping District Water	14
2.12 Pipe Bedding.....	15
2.13 Warning Tape.....	15
2.14 Tracer Wire	15
2.15 Marker Posts	16
2.16 Sanitary Connections.....	16
2.17 Couplings	16
2.18 Irrigation.....	16
2.19 Public Water Supply Sources.....	16
CHAPTER 3: SANITARY SEWER SYSTEMS	20
3.1 Design Requirements	20
3.2 Design Report.....	20
3.3 Wastewater Service Area.....	20
3.4 Sanitary Sewer Main.....	20
3.5 Manholes.....	21
3.6 Sanitary Sewer Main Materials	21
3.7 Installation	22
3.8 Water Line Crossings	22
3.9 Sanitary Sewer Service Lines.....	22
3.10 Non-Sanitary Connections to Sanitary Sewer Main.....	23
3.11 Tapping	23
3.12 Metering When Not on District Water	23
3.13 Lift Stations	23
3.14 Pretreatment Requirements.....	26

STANDARD DRAWINGS

NEW WATER SERVICE	FIGURE 01
FIRE HYDRANT INSTALLATION	FIGURE 02
WATER MAIN VERICAL ADJUSTMENT.....	FIGURE 03
WATER SERVICE ENTRANCE CONFIGURATIONS	FIGURE 04
VALVE SETTING	FIGURE 05
STANDARD MANHOLE	FIGURE 06
DROP MANHOLE.....	FIGURE 07
MANHOLE COVER, COLLAR & ADJUSTMENT.....	FIGURE 08
SANITARY SEWER SERVICE LINE INSTALLATION.....	FIGURE 09
CLEANOUT AND COVER.....	FIGURE 10
CONCRETE COLLAR.....	FIGURE 11
TRENCH PLUG.....	FIGURE 12
UTILITY TRENCH	FIGURE 13
UTILITY TRENCH DETAILS.....	FIGURE 13A
THRUST BLOCKING.....	FIGURE 14
18-INCH DIAMETER COIL TANDEM METER PIT	FIGURE 15
TYPICAL EXTERIOR GREASE INTERCEPTOR	FIGURE 16
SAMPLE PORT.....	FIGURE 17
TYPICAL INTERIOR GREASE INTERCEPTOR	FIGURE 18
STANDARD WATER & SEWER SERVICE CONNECTION	FIGURE 19
ALTERNATE WATER & SEWER SERVICE CONNECTION	FIGURE 20

APPENDICES

APPENDIX A.....	LCWSD NEW SERVICE PERMIT
APPENDIX B	PETITION FOR ANNEXATION OF LAND TO LCWSD
APPENDIX C.....	LABOR AND MATERIAL PAYMENT BOND
APPENDIX D.....	PERFORMANCE BOND
APPENDIX E.....	SERVICE AGREEMENT
APPENDIX F.....	DEVELOPER EXTENSION AGREEMENT
APPENDIX G.....	PRE-CONSTRUCTION CONFERENCE
APPENDIX H.....	TRANSFER AGREEMENT
APPENDIX I.....	ENCROACHMENT APPLICATION AND PERMIT

ACRONYMS

ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
BMP	Best Management Practice
DEQ	Montana Department of Environmental Quality
HDPE	High Density Polyethylene Pipe
LCWSD	Lakeside County Water and Sewer District
MDT	Montana Department of Transportation
MPWSS	Montana Public Works Standard Specifications
PVC	Polyvinyl Chloride Pipe

CHAPTER I

GENERAL REQUIREMENTS

CHAPTER 1: GENERAL REQUIREMENTS

1.1 Introduction

- A. Lakeside County Water & Sewer District assembled this information to assist its customers, their engineers, and contractors in planning for and obtaining water and sewer service. The information presented here is intended to supplement the ordinances of the Lakeside County Water & Sewer District, Montana State Plumbing Code, and all other Federal or State codes, regulations, laws, and ordinances. It is the customer's responsibility to abide by these and all other codes, regulations, laws and ordinances at the time of construction. If there is a conflict in this information and higher legal authority, then the higher authority shall take precedence.
- B. This document has been prepared with the understanding that the latest edition of the Montana Public Works Standards Specifications shall be used as a minimum standard for items not specifically discussed in this document.

1.2 Applicable Laws and Indemnification of the LCWSD

- A. Contractors performing water and sewer system work in the LCWSD shall give all notices and comply with all federal, state, and local laws, ordinances, and regulations affecting the conduct of the work, and shall indemnify and hold harmless the LCWSD against any claim or liability arising from, or based on, the violation of any such law, ordinance, regulation, etc., whether by themselves or their employees.

1.3 Contractor Bonding

- A. Three bonds will be required for contractors and/or developers performing main line extension work that will ultimately fall under the ownership of the LCWSD.
 - a. Labor and Material Bond
 - b. Performance Bond
 - c. Warranty Bond
- B. Labor and Material and Performance Bonds shall be 100% of the estimated construction cost and expire not sooner than one year past final acceptance of the project.
- C. Developers must provide LCWSD with lien release documentation from suppliers before service on the extended facilities commences.

1.4 Warranty Bond

- A. A warranty bond shall be supplied to the LCWSD before service is allowed to any extended water or sewer main line or any installation to be owned by the LCWSD. The warranty bond shall be valid for two years from the date the LCWSD takes over the operation of the installation. The bond amount shall be 35% of the actual or estimated cost of construction.

1.5 Liability Insurance

- A. During the construction period, contractors shall procure and maintain, at their own expense, General Public Liability and Property Damage Insurance including vehicle coverage issued to the contractor protecting him from all claims for personal injury, including death, and all claims for destruction or

damage to property arising out of or in connection with any operations covered by the contract documents, whether such operations are conducted by himself or any subcontractor under him, or anyone directly or indirectly employed by the contractor or by a subcontractor under him.

- B. Insurance shall be written with a limit of liability not less than \$750,000 for each claim and \$1,500,000 for each occurrence. Contractors shall hold harmless, indemnify, and defend the LCWSD and each of its agents and each of their officers and employees from any and all liability claims, losses, or damages arising or alleged to arise from performance of the work described herein, but not including the sole negligence of the LCWSD or its representatives. Each policy or certificate shall bear an endorsement or statement waiving the right of cancellation or reduction in coverage without ten (10) days written notice being delivered by certified mail to the LCWSD.

1.6 Easements

- A. Properly recorded easements 20 feet wide shall be recorded by the developer with the Flathead County Clerk and Recorder in the name of the LCWSD for all extended main line facilities. Proof of such recorded easements shall be provided to the District before any construction can begin on the section of the main line in need of the easement.

1.7 Variances and Appeals

- A. Should an application for service or any other problem arise in regard of the LCWSD's ordinances or these Engineering Standards, the applicant or affected party may appeal in writing within ten (10) days to the LCWSD Board of Directors and request a variance or appeal a decision by the manager.
- B. The LCWSD Board of Directors shall review and make known their decision within thirty (30) days of receipt of the request.

1.8 Developer Extension Agreements

- A. If a developer bears the costs of extending services and utilities, a Developer's Extension Agreement for a specified period not to exceed 10 years may be signed between the developer and the LCWSD.

1.9 Pre-Construction Conference

- A. Before commencement of line extension construction, a pre-construction conference will be conducted by the LCWSD and its engineer. Project ground rules will be disseminated, and individual responsibilities established at this meeting.

1.10 Road Permits

- A. A Flathead County Road Permit and/or Encroachment Permit or a Montana State Highway Department Encroachment Permit is required for all construction activity on or within the roadway right-of-way.

1.11 General Policies

The following general policies shall be pursued for all properties proposed to be developed within or outside the boundaries of the LCWSD.

- A. For all properties lying outside the boundaries of the LCWSD, petitions of annexation into the District or a waiver of the right to protest annexation must accompany all service permit applications.
- B. For developments or subdivisions, a contract or Service Agreement may be required before commitment for service is obtained. Service Agreements define the terms and conditions of such commitment when system capacity availability issues are involved.
- C. It will be the developer's or property owner's responsibility to construct or establish water pump stations, sewer systems, and right-of-ways in accordance with the Extension of Services Plan, described herein, and LCWSD standards for design and construction.
- D. The system shall be designed to provide adequate capacity for the planned development. Where a development may create impacts requiring off-site improvements, such as at the treatment/disposal site and/or lift stations for sewer or storage, supply, and/or pressure improvements for water, the District may require the developer to wholly or partially bear the costs of such improvements.
- E. All proposed extensions will require a written engineering report along with appropriate fees to be delivered electronically to the District addressing the impacts on existing system components.
- F. Whenever a proposed development necessitates greater sewage capacity than the existing LCWSD lines can transmit, the developer or property owner shall, at their expense, construct facilities or additional lines to meet LCWSD standards and requirements. Any deviations shall be approved by the LCWSD Board of Directors and the District's Engineer.
- G. The owner or owners of any undeveloped property shall be responsible for the costs of preparing an extension of services plan.
- H. Extension of Service Process:
 - present and proposed boundaries of the District;
 - present streets and other utilities and the proposed sewer and/or water line extension;
- a. **Plan Review** – LCWSD has contracted with an engineer to review all plans submitted for water and sewer main extensions, lift stations, wells, pressure systems, and related infrastructure.

To ensure compliance of these policies, all necessary engineering services related to any new replacement or remodel of the system components proposed to be owned and/or operated by LCWSD shall be reviewed by the District's Engineer. All costs related to the research, survey, design, construction, inspection, preparation of 'as-built' drawings, certification, and installation of sewer facilities shall be borne by the developer or property owner(s). Costs incurred by LCWSD related to the project, such as engineering or legal professional fees and applicable review fees, shall be added to the normal plant investment fees and inspection fees assessed the developer as determined by the ordinances of the District.

Once the District Engineer has reviewed the plans, LCWSD will inform the developer of any recommended modifications. LCWSD will issue a will-serve letter after any and all changes are agreed to and implemented (assuming available capacity).

If capacity is not available, LCWSD will deny the request or give the developer the opportunity to pay for or participate in the improvements needed to accommodate the request.

- b. **Approvals** – Developer will inform LCWSD when County approval is obtained. Developer agrees to annex the proposed service area into the District and completes the Annexation documents, if necessary.

The developer will then complete the LCWSD Service Agreement and pay the Plant Investment Fees.

- c. **Project Closeout** – At the close out of any project that will be or is owned by LCWSD a close out document shall be prepared including but not limited to:

- field notes, copy of the inspector's log;
- operation and maintenance manuals;
- certification of completion from design engineer;
- three (3) 11x17 paper copies of the "as-built" drawings;
- one electronic copy of the "as-built" drawings in ACAD format;
- lien release from all suppliers;
- copies of all applicable bonds;
- copy of the contract between LCWSD and contractor;
- final walk through notes and items to complete;
- any other project-related information;
- copy of recorded easement; and
- transfer agreement.

I. Policies for Service Extension to Undeveloped Areas
(General Policy – Extension of Service Process Applies)

- a. Each development shall be conceived as an integral part of the comprehensive services plan of the LCWSD. Therefore, any subdivision or development within the growth areas shall be designed and constructed in accordance with the LCWSD standards for design and construction.
- b. Any subdivision or residential development proposed outside the LCWSD limits, but within the District's growth boundary, shall be reviewed and approved by the LCWSD Board of Directors and the District's Engineer. The LCWSD shall recommend to the Flathead County Health Department and the Montana State Department of Environmental Quality - Water Quality Division the standards and improvements to be provided in such subdivision, in accordance with the services plan included herein.
- c. Where construction of water and/or sewer systems are being considered, the future drainage basin shall be established, and main lines sized for potential development based on zoning or probable use of the area.
- d. It will be the developer's or property owner's responsibility to construct water and/or sewer mains with adequate capacity for projected flows.
- e. The developer shall provide for all required improvements, including right- of-ways and roadways, at their own cost.

J. Policies for Services in Existing Developed Areas

- a. In general, properties within the service or planning area with existing utilities and facilities shall be required to upgrade their facilities to conform with LCWSD standards for design and construction as a prerequisite to receiving new District services or any additional District services. The following policies shall apply to such situations.

Prior to making water and/or sewer services available to existing developed areas, the LCWSD may require a report describing the following:

- approximate year or period when the existing area was developed;
- location, size, and condition of existing water/sewer mains or system;
- condition and location of the existing system including size, material, depth, and grades for sewer, if any;
- size and location of existing right-of-ways and easements;
- type of surfacing condition and width of roadways;
- existing storm drainage into and out of the area; and
- TV inspection of the existing sewer, at the owner's expense.

The report shall include the estimated cost to correct the deficiencies and improve the existing conditions to meet LCWSD standards. The report shall also include an estimated replacement cost of the physical plant that, after annexation, will be maintained and replaced by the LCWSD, together with the estimated life of each component based on District policy. The LCWSD may require such a report to be prepared by a professional engineer and reviewed by the District's Engineer. The cost of preparing the report shall be borne by the property owner(s).

- b. If the property is to be annexed, the LCWSD Ordinance of Annexation shall specifically state the method, areas of responsibility, and time frame for bringing the existing conditions into compliance with the LCWSD standards for design and construction.
- c. If LCWSD services are to be extended without annexation, the developer or property owner shall sign a waiver of right to protest future annexation and waiver to protest participation in the formation of any special improvement district that may be formed to improve the existing services, utilities, streets, and other such improvements.

1.12 Encroachment Permit Requirements

- A. In addition to the Encroachment permit found in Appendix I the following must be satisfied at minimum:
- B. Brush and trees are to be removed from the County road right-of-way on each side of the encroachment for a distance of _____ feet (full length of property) and a setback of _____ feet from the shoulder of the road. This will facilitate improved roadway maintenance and safety.
- C. Trenching / Plowing - non-shrink backfill material must be used to fill all trenches within the County right-of-way. Vibration and/or compaction may be required to fill voids in specific areas. This requirement will reduce the potential for future settlement of the trench backfill resulting in settled trenches across the roadway.

D. Gravel Roads - a 6-inch layer of compacted crushed gravel must overlay the non-shrink backfill and be graded even with the original road surface.

E. Paved Roads:

- a. Pavement must be saw-cut a minimum of 24 inches from each side of the trench prior to trenching. This will reduce the possibility of damage to the adjacent pavement during construction.
- b. Pavement must be replaced within 48 hours after the beginning of trenching. Replacement pavement shall consist of hot mix asphalt that matches the original pavement thickness or a minimum thickness of 3 inches, whichever is greater.

F. Pushing / Boring - push pit areas within 5 feet of the shoulder of the road must be filled with non-shrink backfill. The remainder of the push pit must be filled with select material and compacted in 6- to 8-inch lifts to 95 percent of maximum density at the optimum moisture content. This will reduce damage to relatively new or good paved roads and road shoulders due to settlement.

For the exemption of this requirement, proof of extenuating circumstances not allowing pushing must be provided to the County Road Department.

G. All areas within the County right-of-way disturbed during construction must be re-seeded within 14 days. A 4-inch layer of topsoil must be spread over all disturbed areas of the right-of-way prior to re-seeding. Re-seeding will reduce the potential for growth of noxious weeds on the County right-of-way, as well as the adjacent private property.

H. The County Road Department must be contacted to schedule a post-construction inspection.

1.13 Testing and Inspection Requirements

A. Extended Facilities Acceptance Testing:

- a. Facility acceptance tests required by the LCWSD shall include but not be limited to air/water tests, deflection tests, and televised inspections.
- b. These policies may be reviewed and revised by the LCWSD Board of Directors when deemed necessary.

B. Television Inspection Requirements:

- a. The LCWSD shall inspect all underground utility systems by the use of a television camera prior to final acceptance. The LCWSD will perform the initial inspection at no cost to the contractor. Any deficiencies shall be corrected at the contractor's expense. The cost of any sewer line cleaning or additional television inspection shall be billed to the contractor. The video tape verification of the inspection shall be held by the LCWSD and shall be the sole property of the District.

C. Construction Inspection:

- a. All development work designed by an engineer shall be certified and inspected by that engineer for conformance to plans and specifications. It is the contractor's responsibility to notify the LCWSD of the work requiring inspection at least 24 hours in advance so the LCWSD may schedule such inspection.
- b. All installed utilities to be owned and/or operated by the LCWSD shall be inspected by the design engineer and or district engineer for 100 percent of the time the contractor is on the project site. All cost for the inspection time of the design engineer and district engineer shall be the responsibility of the contractor or developer.

CHAPTER II

WATER SYSTEMS

CHAPTER 2: WATER SYSTEMS

2.1 Design Requirements

- A. Water systems shall be designed, constructed, and tested in accordance with the current editions of Circular DEQ-1 – Montana Department of Environmental Quality –Standards for Water Works and the Montana Public Works Standard Specifications (MPWSS).

2.2 Design Report

- A. Design reports must be prepared by or reviewed by a professional engineer licensed in the state of Montana.
- B. Engineering Design and Design Report shall meet the minimum requirements of *MDEQ Circular 1*.
- C. Design Report shall include design fire flow requirements, average day demand, max day demand, and system pressures.
- D. As-built drawings shall include GPS locations of installed infrastructure in state plane coordinates.

2.3 Booster Pump Stations

- A. Booster pumps are not allowed in any residential service from the public water supply mains in accordance with MDEQ Circular 1.
- B. New residential developments shall be pressurized by a storage tank. Booster pump stations will only be permitted in special circumstances and must be approved by the LCWSD on a case-by-case basis.

2.4 Water Service Area

- A. The official water service area for the District is that area of the County within the boundaries of the District and currently served by District Water, any areas presently served outside the District and any subsequently approved amendments thereto.
- B. All lots created within LCWSD shall be served by LCWSD water supply system. All other water supply systems shall be approved before construction.
- C. Requests for service to properties lying outside the boundaries of the LCWSD must also be accompanied by a Petition for Annexation, before such requests are considered.
 - 1. The Board of directors must act on each Petition for Annexation, i.e., “out of district” service requests.

2.5 Offsets

- A. Water mains and appurtenances shall maintain horizontal and vertical offsets as required in MDEQ Circular
 - 1. Horizontal offset shall be a minimum of 10 feet from outside edge to outside edge. Vertical offset shall be a minimum of 18 inches from outside edge to outside edge.

- B. All underground electrical, gas, phone, fiber, and cable lines must be installed at least three (3) feet horizontally and one (1) foot vertically from water mains and services.

2.6 Water Mains

- A. Hydraulic Analysis – The design of all water mains shall be based on a hydraulic analysis showing demands and pressures, unless otherwise approved. Water mains shall maintain a minimum normal working pressure of 45 psi and a minimum pressure under all flow conditions of 45 psi.
- B. The developer or builder will be responsible for installing a pressure reducing valve (PRV) when system pressures are at or exceed 90 psi. The PRV shall be installed on the main where possible. The method and design of the PRV system shall be approved by the District on an individual basis.
- C. Fire Flows – Water mains shall be designed to provide adequate fire flows unless otherwise approved. Fire flow requirements shall be determined by ISO or fire flow requirements should be a minimum of 1,500 gpm for two hours, whichever value is greater.
- D. Diameter – the minimum size of a water main providing fire protection and serving fire hydrants shall be 8- inches in diameter (fire hydrant leads shall be a minimum of 6-inches in diameter). Larger mains may be required to meet fire flow and minimum pressure requirements.
- E. Cover
 - 1. The minimum cover for all water mains shall be 6 ½' from finished grade to top of pipe unless otherwise approved on a case-by-case basis.
 - 2. Rigid insulation may supplement less than 6 ½' of cover in certain cases where the section requiring insulation is less than 50 lineal feet.
 - 3. At all storm sewer crossings with water mains and water service piping where less than 6' of clear distance between the pipes will be provided, two (2) inches of rigid insulation shall be installed between the water and storm sewer.
- F. Piping
 - 1. PVC – DR18 (Pressure Class 235 psi) pipe conforming to AWWA C-900 Standards.
 - 2. Ductile Iron – Shall meet current MPWSS material and construction requirements.
 - 3. HDPE – DR11 (Pressure Class 160 psi)
 - a. Shall only be used in directional drill applications.
 - b. Directionally drilled HDPE shall incorporate engineered expansion and contraction restraints, approved.
 - 4. Other – Only use as approved.
 - 5. Water main materials shall remain constant through all phases of a project or development, unless otherwise approved.
- G. Joints
 - 1. Shall be push-on.
 - 2. Use nitrile gaskets for areas with hydrocarbon contamination.
 - 3. Pipe shall be oversized to meet or exceed the inside diameter of connecting pipes.

H. Fittings

1. Shall be Ductile Iron.
2. Shall be MJ.
3. Shall meet AWWA C-153 and be Class 350.
4. Provide thrust blocks in accordance with the MPWSS.

I. Mechanical Joint Restraints

1. Shall be Megalug, or approved equal.
2. Mechanical joint restraints shall be provided in addition to MPWSS thrust blocking requirements for all water main fittings, including valves, tees, crosses, caps, plugs, reducers and bends equal to or greater than 1 1/4°.

2.7 Valves

A. Spacing

1. Valves shall be installed at each intersection branch, or
2. A maximum of 800' intervals.

B. Gate Valves

1. Shall be used for installations 12 inches and smaller.
2. Shall be Mueller Resilient Wedge Gate Valves, or an approved equal, conforming to AWWA C-509 Standards.
3. Tapping valves shall be MJ x FL for connection to the tapping sleeve.
4. Shall be Mueller resilient seat tapping valve, or equal approved.

C. Butterfly Valves

1. Shall be used for installations larger than 12 inches.
2. Shall be Class 250B MJ x MJ Mueller Lineseal Butterfly Valves, or equal, conforming to AWWA C-504 Standards.

D. Valves shall close in the clockwise direction.

E. All other valves shall be MJ x MJ.

2.8 Valve Boxes

A. Shall be cast iron, slip type adjustment.

1. Tyler 6855, 6860 or 7126 series; or
2. Equal as approved by LCWSD.

B. Extensions with a centering donut shall be provided and installed for valves on mains with more than 7-foot of bury.

2.9 Fire Hydrants

- A. Shall be installed with the pumper nozzle facing the pavement.
- B. Shall be installed a minimum of 3'-6" behind the pavement edge.
- C. Shall close in the clockwise direction.
- D. Shall be covered until placed in service.
- E. Shall be Mueller Super Centurion 200, 5-1/4", 3-way.
- F. See Standard Drawings, Figure 2 for more information.

2.10 Water Service

- A. Service Pipe
 - 1. Shall be SDR 7 (200 psi) polyethylene pipe conforming to AWWA C-901 (up to 1 inch in diameter) or;
 - 2. Shall be SDR 9 (200 psi) polyethene tubing conforming to AWWA C-901 (from above 1 inch to 2 inches)or;
 - 3. Shall be DR-18 PVC pipe conforming to AWWA C-900 (greater than 2 inches in diameter).
- B. Service Saddles
 - 1. Service saddles shall be Mueller Brass, Smith Blair, Romac; or equal approved.
- C. Curb Stop Valves
 - 1. Curb stops shall not be located in sidewalks, driveways, or within 5 feet of approaches.
 - a. Curb stops shall be Mueller, or equal approved.
- D. Corporations
 - 1. The corporation shall be tapped at a 45-degree vertical angle on the pipe, measured from the horizontal, see Figure 1 for more details.
 - a. Corporations shall be Mueller; or equal approved.
- E. Service Fittings
 - 1. Shall be Mueller Insta-Tite or 110 Series compression fittings, or equal approved.
 - 2. If larger than 1-inch and smaller than 4-inch, stainless steel inserts shall be used if recommended by manufacturer.
- F. Curb Boxes
 - 1. Shall be 6-inch diameter, round irrigation valve box with green lid labeled "WATER SERVICE".
 - 2. Shall be installed 1'-0" from the property line.

G. Water Meters

1. Shall be Metron-Farnier (up to 1-inch diameter water service).
2. Shall be purchased from the District office.
3. May be installed where approved.
4. For new or reconstructed services up to 1-inch in nominal size:
 - a. Mueller Thermo-coil meter pits with side-locking composite lids and insulation pads.
5. For new or reconstructed services 1.25-inch to 2-inch in nominal size:
 - a. Mueller EZ Vault or approved equal with side-locking composite lids and insulation pads shall be used for new 1.25-inch and 2-inch. Meters shall have travel to within 18 inches of the surface.
6. For new or reconstructed services larger than 2-inch in nominal size:
 - a. Meters will require a custom meter pit sized appropriately to accommodate the isolation valves, meter(s), and pertinent backflow prevention device(s). The proposed meter pit design shall include steps and shall be submitted for review and approval prior to construction.
7. Maintenance bypass lines or other branches shall not be installed before the meter.
8. Backflow preventers shall meet the requirements of the latest version of the Uniform Plumbing Code and be placed downstream of meters.
9. Installation Location:
 - a. Shall be located 3 to 5 feet inside of the property line.
 - b. Shall not be located in driveways, sidewalks, or within 5 feet of approaches.
 - c. No obstructions shall be placed within a 3-foot minimum radius around the meter pit to ensure access to the pit.
10. The developer or builder shall install a meter pit with a pressure relief valve (PRV) when the water main pressures are at or exceed 90 PSI. PRVs shall be installed on water mains where feasible and only on service meter pits when necessary. Once installed, the LCWSD will inspect the meter and approve service.

2.11 Tapping District Water

A. Water Main Extension

1. Contractors or developers extending an existing water main will be required to pay all costs included with extending the main.
2. The district reserves the right to further extend the water or sewer main installed by a Developer or individual. The district also reserves the right to charge future Developers, beyond those areas outlined in the Extension Agreement, for their share of the district's cost for the over-sizing of water or sewer mains.
3. The Developer is required to turn over all ownership rights of main line extensions to the district without compensation from the District. The Developer is also required to grant easements to these extensions without further compensation.
4. Water main extensions must be extended all the way to the property line for future tapping opportunities.

B. Tapping Water Mains

1. Service Tapping Charge

- a. Any service tapping shall be approved by LCWSD, and contractors or developers will be required to pay for the LCWSD uniform permit/inspection fee and all costs with tapping the main, but with no additional fee will be required by LCWSD.

2. Fire Sprinkler Systems

- a. Are required to have their own service tap on the water mainline pipe.

3. Permitting and Insurance

- a. Any person wanting to tap into the district water system for service shall apply for the uniform permit/inspection prior to laying any service or other water pipe, obtained from LCWSD facilities.
- b. The uniform permit/inspection fee is \$100.00 and shall be collected by the District Clerk in advance of any tapping.

4. Tapping Sleeves

- a. Shall be Power seal stainless steel model 3490AS conforming to AWWA C-223., or equal approved.
- b. Bolts for flange connection on tapping sleeves shall be stainless steel.

2.12 Pipe Bedding

- A. Shall be placed in accordance with the LCWSD Standard Drawings, Figure 13.
- B. Shall be a Type 1 Bedding meeting MPWSS requirements.

2.13 Warning Tape

- A. Shall be a minimum of 5 mils thick.
- B. Shall be 3 inches wide.
- C. Shall conform to APWA colors.
- D. Shall be buried 12 to 24 inches below the final grade.

2.14 Tracer Wire

- A. Shall be 12 AWG TW direct-bury solid copper wire with cross-linked polyethylene insulation.
- B. Shall be approved for direct bury.
- C. Shall be taped every 5 feet to the top of the water main.

2.15 Marker Posts

- A. Shall be used when a main is located outside a paved surface.
- B. Shall be APWA compliant Rhino TriView™1, or approved equal.
- C. Shall be installed at a maximum spacing of 150 feet.
- D. Shall be installed at every valve or valve cluster and every change in direction.

2.16 Sanitary Connections

- A. Defined as a section of new main connecting back to an existing main which cannot be pressure tested or bacteriologically tested.
- B. Restraining couplings shall not be used at connections to existing cast iron pipe.
- C. The length of sanitary connections shall be limited as much as possible in length and shall be submitted for review and approval prior to construction.

2.17 Couplings

- A. Romac Macro series, or equal shall be submitted and approved.
- B. Restrained couplings shall not be used when connecting to cast iron pipe.

2.18 Irrigation

A. Backflow Prevention

- 1. Standard Drawings, Figure 15 provides information on backflow preventers. Backflow prevention shall meet the requirements of the latest version of the Uniform Plumbing Code.

B. Irrigation Meter Pits

- 1. The District may require irrigation meter pits.
- 2. Shall be precast manholes with monolithic base. Manholes shall meet ASTM C478.
- 3. Shall have a cast iron frame and cover.
- 4. Shall include pipe supports installed inside the meter pit vault.
- 5. No obstruction shall be located within 4' of the meter pit to allow for access.
- 6. See Standard Drawings, Figure 15 for more details.

2.19 Public Water Supply Sources

A. Storage Tanks

- 1. New Water Storage Tanks should be added as needed, they shall meet minimum requirements of *MDEQ Circular 1*.

2. Materials

- a. New water storage tanks shall be pre-stressed concrete or composite for elevated tanks.
- b. Shall be watertight.

3. Sizing

- a. Tanks minimums shall be designed to equal average daily flow conditions, as well as fire flow demands.
- b. Size and design shall be approved by LCWSD, before construction is to commence.
- c. Shall be used to facilitate daily consumption to prevent water stagnation.

4. Protection

- a. New tanks must have watertight roofs
- b. Installation of appurtenances must ensure no damage to the tank in any way.

5. Protection From trespassers

- a. A fence must be constructed around the tank and its facilities, fence must be approved by LCWSD.
- b. All gates and facilities are to be locked to prevent vandalism.

6. Drains

- a. A drain must be included in the design of a storage tank for cleaning and maintenance.
- b. Drain must not cause pressure loss in the distribution system.

7. Overflow

- a. All storage tanks must be designed with a overflow system, design shall be approved by LCWSD.

8. Access

- a. All storage tanks shall have multiple watertight access hatches.

9. Venting

- a. All storage tanks shall have venting that keeps any foreign objects out of the tank, vent design shall be approved by LCWSD.

10. Freezing

- a. Storage tanks must be designed to prevent freezing which could interfere with the system's operations.

B. New Well

1. Pumps

- a. Vertical turbine pumps will be used for wells that are no deeper than 350 feet;
- b. Horizontal submerged pumps will be used for wells that are deeper than 350 feet.

2. Pump House Building Requirements:

- a. 2x4 framing;
- b. Metal siding (inside, outside and roofing);
- c. Gabled roof;
- d. HVAC system with ventilation and heating;
- e. On-site backup generator.

3. Chlorination Requirements

- a. A chlorination system is not required at this time, but a separate room in new pump houses shall be constructed for future needs of a chlorination system.
- b. Chlorination room minimum size shall be, 80 sq ft, 8 ft x 10 ft room.

CHAPTER III

SANITARY SEWER SYSTEMS

CHAPTER 3: SANITARY SEWER SYSTEMS

3.1 Design Requirements

- A. Sanitary sewer systems shall be designed, constructed, and tested in accordance with the current editions of *Circular DEQ-2* – Montana Department of Environmental Quality – Design Standards for Wastewater Facilities and the Montana Public Works Standard Specifications (MPWSS).

3.2 Design Report

- A. Design reports must be prepared by or reviewed by a professional engineer licensed in the state of Montana.
- B. Engineering Design and Design Report shall meet the minimum requirement of *MDEQ Circular 2*.
- C. Design Report shall include average daily flows, peak hour flow criteria, wastewater flow rates, peaking factors, pipe slopes, pipe sizes, and velocities.
- D. As-built drawings shall include GPS locations of installed infrastructure in state plane coordinates.

3.3 Wastewater Service Area

- A. The official wastewater service area for the District is that area of the County within the boundaries of the District and currently served by District sewer, any areas presently served outside the District and any subsequently approved amendments thereto.
- B. All lots created within the District shall be served by the District public sanitary sewer system. All other sewer systems shall be approved before construction.
- C. Requests for service to properties lying outside the boundaries of the LCWSD must also be accompanied by a *Petition for Annexation*, before such requests are considered.
 - 1. The Board of directors must act on each *Petition for Annexation*, i.e., “out of district” service request.
- D. Available system capacity will always be a consideration when out-of-district parcels request sewer service. Also, in-district “over-density” service requests will trigger the same consideration.
- E. Capacity for land within the bounds of the original District (1987) has been allocated on the basis of one equivalent user (average household/single family equivalency) per one-half acre on vacant land or one equivalent user on small buildable parcels already platted in 1987.
- F. Therefore, large capacity service requests in or out of the District may require a Service Agreement between the LCWSD and the developer requesting service. The Service Agreement will define the terms and conditions necessary to secure a commitment for service.

3.4 Sanitary Sewer Main

- A. Slope – Gravity sewer mains shall be installed with slope adequate to maintain flow velocities of at least 2.0 feet per second (fps) when depth of flow is at or below 0.3 of the sewer main inside diameter, based on Manning’s equation with an “n” value of 0.013. Recommended minimum pipe slopes listed

in Section of *MDEQ Circular 2* will be considered adequate.

- B. Capacity – Public sanitary sewers and appurtenances shall be designed to accommodate peak hourly flows, while flowing no more than half full when no additional connections are possible and a quarter full when future growth is anticipated. The development must upsize the existing mains if the capacity of the sewer main is calculated to be three quarters full. The District may require, at its discretion, the capacity of the sewer to be increased.
- C. Diameter – Gravity sewer mains shall have a minimum diameter of 8 inches. Increasing the diameter in order to meet the minimum pipe slope requirements will not be allowed.
- D. Flow Direction – All sewer pipes shall be labeled as to the flow direction on all construction drawings.
- E. Sanitary sewer mains shall be flushed and TV inspected prior to LCWSD acceptance.

3.5 Manholes

- A. Diameter
 - 1. Shall be a minimum of 48-inch diameter for manholes where the rim elevation to lowest invert elevation is less than 13 feet.
 - 2. Shall be a minimum of 60-inch diameter for where the rim elevation to lowest invert elevation is greater than 13 feet.
- B. All manholes shall be precast concrete meeting ASTM C478. Structural strength shall withstand H-20 design load. All manholes installed on lines 15 inches or larger in diameter must have a polyurea liner, or equal as approved by the District's Engineer, installed to protect against hydrogen sulfide gas.
- C. All sanitary sewer manholes shall be installed in accordance with the LCWSD Standard Drawings, Figure 06 and applicable MPWSS Drawings.
- D. Manhole covers shall be labeled "SANITARY SEWER", in accordance with the LCWSD Standard Drawings, Figure 08.

3.6 Sanitary Sewer Main Materials

- A. Gravity sanitary sewer pipe 8 inches to 15 inches in diameter shall be:
 - 1. PVC meeting ASTM D3034, SDR-35 for bury depths up to 14 feet. For bury depths greater than 14 feet, PVC meeting ASTM D3034, SDR-26.
- B. Gravity sanitary sewer pipe 18 inches and larger in diameter shall be:
 - 1. PVC meeting ASTM D679, PS46 or ASTM F794 for bury depths up to 14 feet. For bury depths greater than 14 feet, PVC meeting ASTM D679, PS115 or ASTM F794.
- C. Force main materials shall be HDPE SDR-11 (160 psi rating).
- D. Other pipe materials shall be approved by LCWSD.

3.7 Installation

- A. Alignment and Grade – Public sanitary sewers shall be installed with a straight alignment and grade between manholes as required in MPWSS.
- B. Location – Wastewater system facilities shall be designed and constructed so that all such facilities are readily accessible for maintenance and repair. In addition, such facilities shall be situated so as to preclude the entrance of surface water into said facilities. All sewer mains shall be centered in the right-of-way or easement to the greatest extent possible.
- C. Depth – Sanitary sewers shall be buried to a depth sufficient to prevent freezing and shall have a minimum depth of 4 feet. Shallower depths may be allowed by the LCWSD if suitable pipe insulating provisions have been made.
- D. Extension - Any extension of an existing sanitary sewer main must be extended through the entire frontage length of the property to be served, with a standard manhole located at the terminus of the new sewer main. Sewer main extensions shall include all manholes, clean-outs and appurtenances deemed necessary by LCWSD.

3.8 Water Line Crossings

- A. Vertical Separation at Crossings
 - 1. A minimum of 18" vertical separation is required when a sanitary sewer main crosses above or below a water main, measured outside to outside of pipe.
 - 2. Less than 18" vertical separation may be allowed with specific authorization from the Montana Department of Environmental Quality and the LCWSD.
 - 3. No exception of the minimum 18" vertical separation requirement is permitted when the sewage pipe is a force main.
- B. Parallel Separation of Sanitary Sewer Mains and Water Mains
 - 1. A minimum of 10 feet of horizontal separation is required when a sanitary sewer main and water main are installed parallel, measured from outside of pipe to outside of pipe.
 - 2. Less than 10 feet of horizontal separation may be allowed with specific authorization from the Montana Department of Environmental Quality and the LCWSD.

3.9 Sanitary Sewer Service Lines

- A. Gravity sewer service piping shall be:
 - 1. PVC meeting ASTM D3034, SDR-35 & -26;
 - 2. PVC Schedule 40 – Solvent Weld or SBR Gasket Joint for normal installations;
 - 3. PVC Schedule 40 for water main or water service crossing;
 - 4. PVC Schedule 40 with acrylonitrile butadiene (NBR) gaskets for installations in areas of hydrocarbon contamination.
- B. Pressure sewer service piping shall be:
 - 1. PVC Pressure Pipe, ASTM D2241, Class 200 SDR-21.

C. Installation

1. All sanitary sewer service lines must be so arranged that the discharge from each separately owned house premises, or buildings on separate lots is a separate service line that connects to the main.
2. The owner of each house or premises is liable for the charges for the wastewater service provided by the District to that owner's house or premises.
3. Service connection to sewer main:
 - a. Service connections to new sewer main shall utilize a PVC in-line wye unless the sewer main is greater than 12 inches in diameter then an "Inserta-Tee" is acceptable.
 - b. Service connections to existing sewer main of any size may utilize an "Inserta-Tee".
4. All sewer service lines shall be installed in accordance with MPWSS with a minimum of 4 feet of cover from the top of service pipe to final finished grade.
5. All service line crossings under existing curbs by tunneling are prohibited.

3.10 Non-Sanitary Connections to Sanitary Sewer Main

- A. Residential floor drains connecting to sanitary sewer mains shall meet all MDEQ requirements. Residential floor drains not connecting to sanitary sewer mains shall drain to daylight outside of the building. Residential subsurface floor drains are not permitted.
- B. Commercial floor drains shall be reviewed and approved by LCWSD on a case-by-case basis.

3.11 Tapping

A. Existing Mains

1. Taps on existing sewer mains should be in the upper quadrant of the pipe in the 10 o'clock or 2 o'clock positions with an "Inserta-Tee."
2. The party wishing to tap the sewer main shall be responsible for all costs associated with tapping the main, unless otherwise approved by the LCWSD.

3.12 Metering When Not on District Water

- A. For new District sewer services or extensions which do not use the District's water system or whose water consumption or wastewater discharge is not otherwise metered, LCWSD shall require the installation of a metering device purchased from LCWSD and installed in a meter pit in order to determine an equitable charge for sewer services.

3.13 Lift Stations

A. Preconstruction Requirements

1. Lift Stations are to meet the design requirements of MDEQ Circular 2.
2. A written report shall be submitted for any project that will create a new sewage lift station or will contribute to an existing sewage lift station. The report for a new sewage lift station shall contain, but not be limited to, the following:
 - a. description of the proposed wet well, pumping station, and force main;
 - b. capacity of the recommended pump and potential for upgrading;
 - c. map showing the potential lift station service area (service area beyond the initial installation);
 - d. average and peak design flows for the proposed project and potential service area;

- e. hydraulic capacity of the force main;
- f. reserve capacity of the lift station when the proposed project is on-line at full capacity;
- g. pump run and cycle times for the average and peak design flows;
- h. strategies for improvements that may be necessary to accommodate future sewer extensions, i.e., increased storage, pumping or auxiliary power capacity;
- i. statement of the pump selection process including the engineer's calculations for the total dynamic head, total discharge head, net positive suction head, and other pertinent pump selection criteria; and
- j. designed pump operating curve plotted on a manufacturer's pump performance chart with the designed operating point clearly identified.

B. Construction Requirements

1. Manufacturer

- a. Gorman Rupp;
- b. or Equal as approved by the LCWSD General Manager;
 - i. Design Engineer shall provide all necessary information to justify the product as equal
 - ii. Design Engineer shall submit a list of 3 lift stations of the type proposed which have been in operation at least 5 years;
 - iii. And the Lakeside County Water and Sewer District reserves the right to accept or reject the proposed lift station.

2. Pump Type:

- a. Self-Priming Centrifugal
 - i. Model: Gorman Rupp Super T Series with Eradicator Solids Management System

3. Redundancy

- a. Duplex Systems
 - i. Minimum requirement for all systems.
- b. Triplex systems
 - i. May be required for large lift stations or lift stations requiring variable flow

4. Each Motor shall include Allen Bradley VFD.

5. Influent Pipe

- a. Spigot end shall extend 6-inches beyond interior of wet well wall.

6. Access Road

- a. 12-Foot minimum width paved for access by sewer maintenance vehicles.
- b. Access approach from street.

7. Bypass

- a. Shall have dedicated valve.
- b. Shall connect downstream of the lift station check valves.
- c. Provide a cam-lock style connection with cap.

8. Electrical Wiring

- a. Shall be water resistant inside the lift station and enclosure.
- b. On-site generator required.
 - i. Make of generator shall be Cummins power generation.
 - ii. Generator shall be natural gas where available. Diesel fuel is permitted where natural gas is unavailable.
 - iii. Noise emissions not to exceed 65 dbA at 20 feet from the power supply.
 - iv. Shall be installed inside building.
 - v. Shall include an appropriately sized transfer switch, manufactured by the same manufacturer as the generator.
 - vi. Shall include an O&M manual Manufacturer shall perform training at startup.

c. Alarms

- i. Pump shall be integrated into the existing SCADA system with use of mission control compatible with the existing system.
- ii. Alarm conditions;
 - a. High water;
 - b. Low water;
 - c. Seal failure (if applicable);
 - d. Power interruption;
 - e. High motor temp;
 - f. Running on back-up power; and
 - g. VFD fail (each pump);

d. Controls

- i. Each pump shall have
 - a. Hour meter; and
 - b. Discharge pressure gauge tap valve.
- ii. Pump run alternator.
- iii. Amperage meter on each leg of electrical wiring.
- iv. Lightning protection for the power supply.
- v. Level control:
 - a. Primary control – Pressure transducer.
 - b. Backup control – float switch system.
 - i. Shall be installed and function if primary control is lost.
- vi. Transfer switch and control panels shall be placed in building.

- e. Lighting
 - i. Exterior illumination shall be provided and connected to the power supply.
 - ii. Street lighting shall not be considered adequate to meet this requirement.
9. Enclosures
- a. Building
 - i. Shall have 2x4 framing.
 - b. WALLS
 - i. 8-foot floor to ceiling height (min)
 - ii. The interior and exterior walls shall be finished with metal liner panels.
 - c. ROOF
 - i. Shall be gable style
 - ii. Trusses spaced at 24 inch OC (max)
 - iii. Designed to meet snow load requirements
 - iv. 5/8-inch OSB sheathing
 - v. Metal roofing sheeting
 - d. OTHER
 - i. Steel doors with a deadbolt lock
 - ii. Ceiling mounted industrial lights
 - iii. Heating and air circulation systems
 - iv. Wastewater processing pipe shall be painted gray.

3.14 Pretreatment Requirements

- A. Grease, oil, and sand interceptors shall be provided when, in the opinion of the District Manager, they are necessary for the proper handling of liquid wastes containing floatable grease in excessive amounts of any flammable wastes, sand, or other harmful ingredients.
- B. All interceptors shall be of a type and capacity approved by the District Manager and shall be located as to be readily and easily accessible for cleaning and inspection.
- C. Pretreatment Requirements for Inside Hydromechanical Grease Interceptor
 - 1. Sizing shall comply with current Uniform Plumbing Code requirements and utilize the formula that uses fixture capacities. (Minimum size allowed is 20 gpm.)
 - 2. Design shall comply with "Pretreatment Standard Details for Inside Hydromechanical Grease Interceptors", see Figure 18.
 - 3. The interceptor shall be properly vented and utilize a vented flow restrictor on the inlet line to the interceptor.
 - 4. Interceptors shall have a sample port installed on the effluent line from the interceptor.
 - 5. Interceptor to be located in an area that allows for easy cleaning and inspection.
 - 6. Food preparation sinks, dishwashing sinks and floor drains shall discharge into the interceptor.
 - 7. Water entering the interceptor shall not exceed 140°F.

8. Enzymes and drain maintenance chemicals are prohibited.

D. Pretreatment Requirements for Exterior Gravity Grease Interceptor

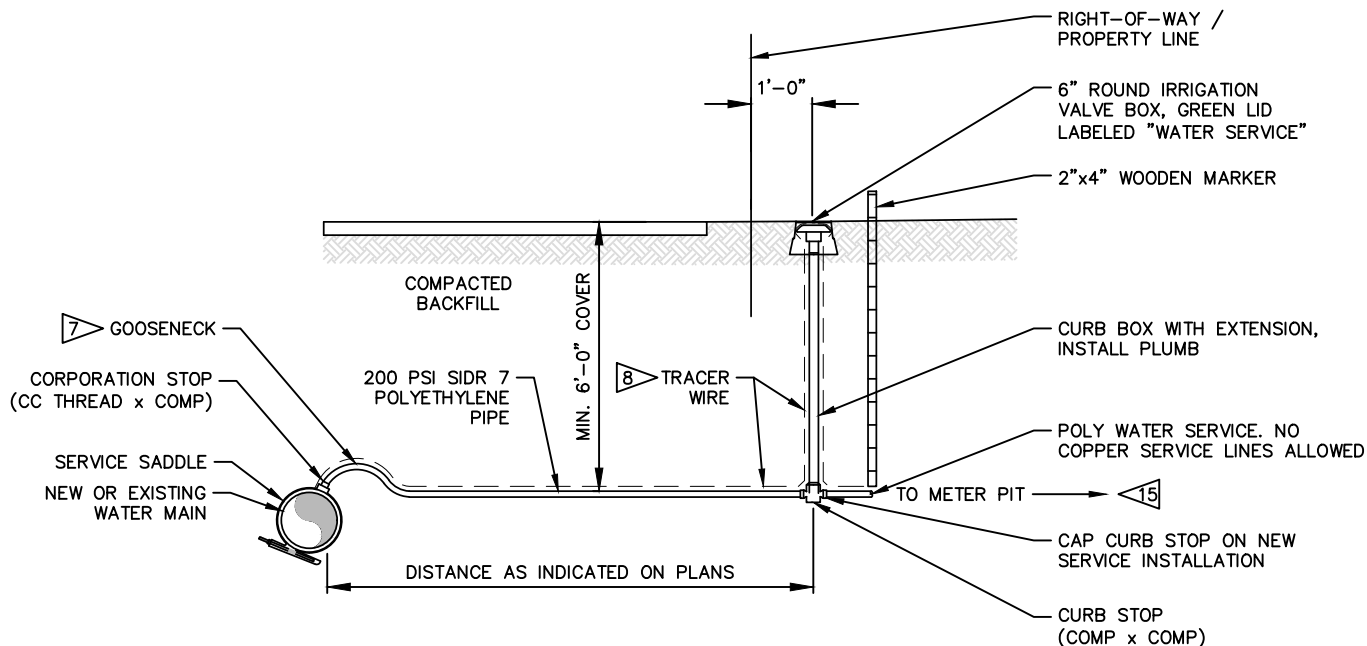
1. Food preparation sinks, dishwashing sinks, dishwashers, mop sinks, floor drains, and any other fixture or equipment that produces grease-laden waste shall discharge into the interceptor.
2. Sizing shall comply with current Uniform Plumbing Code requirements.
3. Design shall comply with "Pretreatment Standard Detail for Exterior Grease Interceptor and Sample Port Installation", see Figures 16 and 17.
4. Exterior gravity grease interceptors shall be equipped with a sample port.
5. Exterior gravity grease interceptors shall be properly vented.
6. Interceptor shall be located in an area easily accessible for inspection and cleaning.
7. Lids must be installed in a manner that allows for easy removal during inspection and cleaning.
8. Low temperature, sanitizing rinse, and/or mechanical dishwashers are recommended.
9. Water entering the interceptor shall not exceed 140°F.
10. Enzymes and drain maintenance chemicals are prohibited.

E. Pretreatment Requirements for Sample Ports

1. All interceptors are to be installed with a sampling port that receives flow from the interceptor's effluent.
2. Tee piping on the interceptor's interior will not suffice as a sample port.
3. Sample ports must be located in areas protected from vehicle traffic.
4. Sample ports are to be cleaned and inspected during routine interceptor pumping.
5. Sample ports will have a minimum 10-inch diameter access cover.
6. Sample ports will have a minimum 6-inch drop between inlet and discharge piping.
7. Sample ports must drain completely and not hold water. Bottom shall be grouted and sloped.
8. Inlet pipe penetration must extend 1 inch past the inside wall of the sample port. Penetrations are to be sealed to prevent leaks.

STANDARD DETAILS

**IF NO STANDARD DRAWING IS PROVIDED IN THE LAKESIDE COUNTY WATER AND
SEWER DISTRICT ENGINEERING STANDARDS, THE MONTANA PUBLIC WORKS
STANDARD DRAWINGS SHALL APPLY.**



NOTES:

1. CORPORATION STOPS SHALL BE MUELLER.
2. CURB STOPS SHALL BE MUELLER.
3. THIS DETAIL APPLIES TO SERVICES THAT ARE 2" IN DIAMETER OR SMALLER. SERVICE LINES OVER 2" ARE INSTALLED SIMILAR TO WATER MAINS.
4. WATER SERVICE LINES SHALL BE CONNECTED/INSTALLED WHERE SHOWN ON THE DRAWINGS OR AS SPECIFIED.
5. BEDDING MATERIAL WITHIN 6-INCHES OF THE SERVICE LINE SHALL BE TYPE 1 PIPE BEDDING.
6. THE CURB BOX SHALL BE INSTALLED 1'-0" FROM THE PROPERTY LINE.
7. THE GOOSENECK IN THE SERVICE LINE AT THE CONNECTION TO THE CORPORATION STOP SHALL BE MADE IN THE HORIZONTAL PLANE.
8. TRACER WIRE TO EXTEND FROM MAIN TO STRUCTURE WATER SERVICE ENTRANCE.
9. CURB STOPS SHALL NOT BE LOCATED IN SIDEWALKS, DRIVEWAYS, OR WITHIN 5'-0" OF APPROACHES.
10. THE CORPORATION SHALL BE TAPPED AT 45° VERTICAL ANGLE ON THE PIPE (MEASURED FROM THE HORIZONTAL).
11. CONCRETE AND/OR PAVEMENT REMOVAL AND REPLACEMENT SHALL BE PROVIDED AS NECESSARY.
12. MINIMUM 6'-0" COVER SHALL BE MAINTAINED ALONG THE ENTIRE SERVICE LINE.
13. NO EXTENSION RODS ALLOWED IN CURB BOX.
14. SERVICE CONNECTIONS MUST BE INSPECTED BY LCWSD PERSONNEL.
15. METER PIT SHALL BE LOCATED WITHIN 3' OF CURB STOP.

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SCALE: NONE

SHEET TITLE

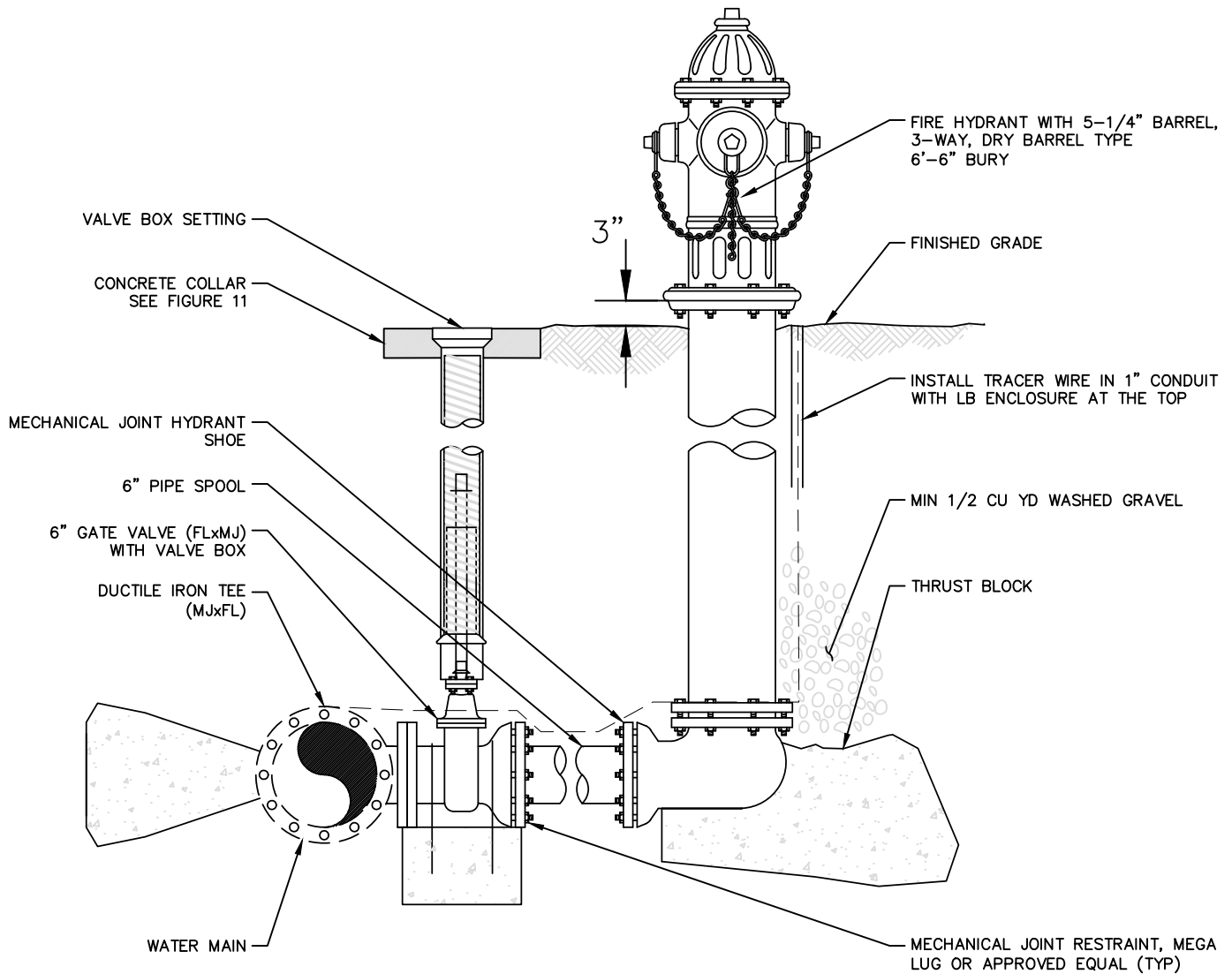
**NEW WATER
SERVICE**

PROJECT TITLE

STANDARD DRAWINGS
*Lakeside County Water and
Sewer District*

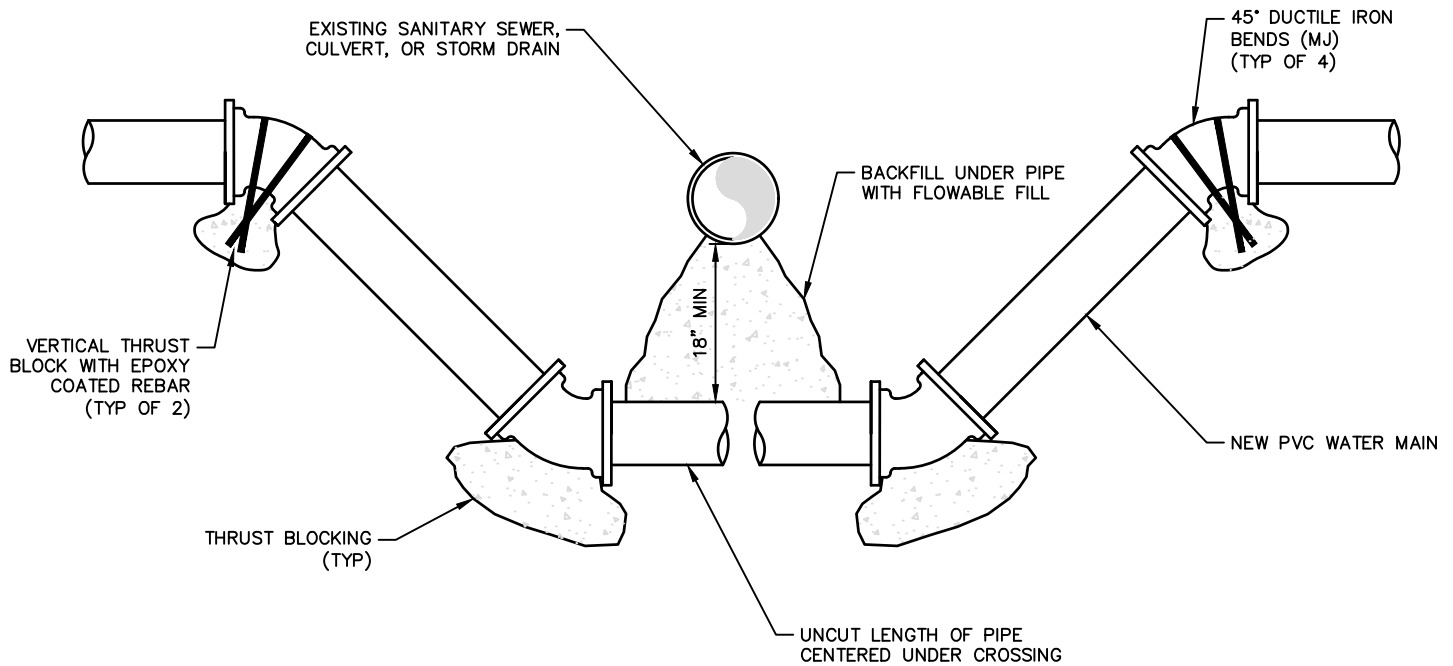
FIGURE

01



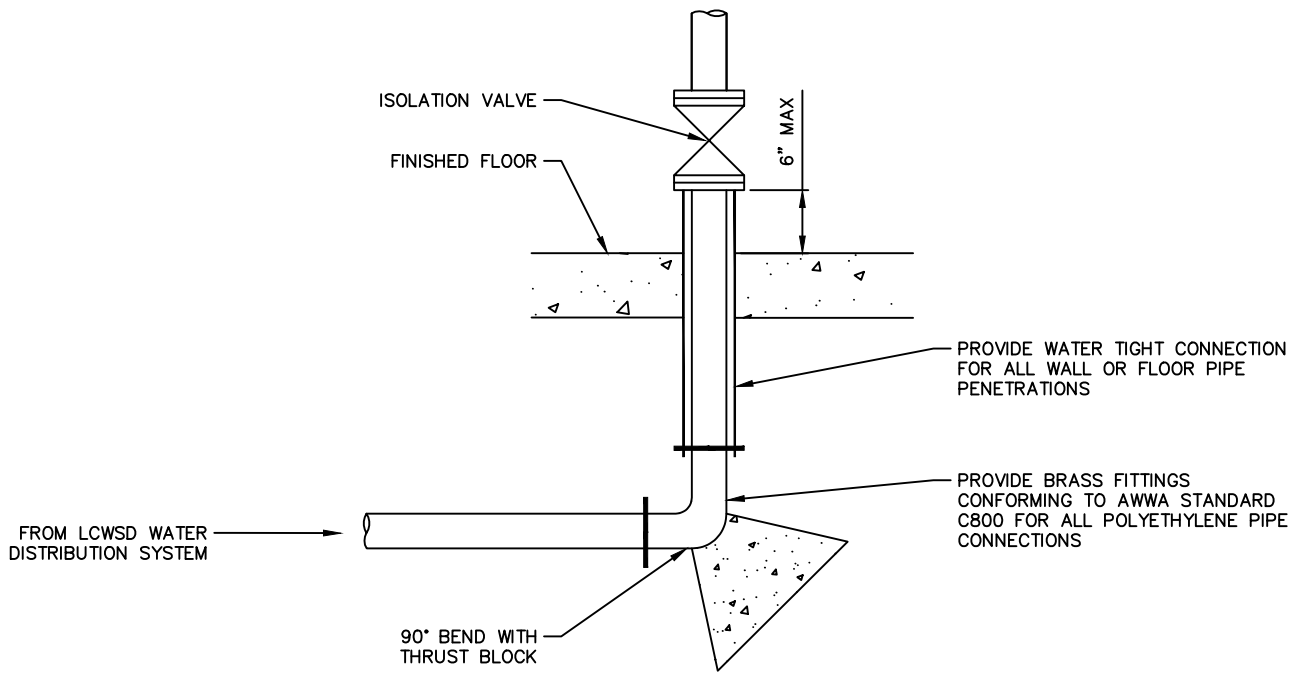
NOTES:

1. INSTALL HYDRANT WITH PUMPER NOZZLE FACING THE PAVEMENT.
2. THRUST RESTRAINTS SHALL BE PROVIDED IN THE FORM OF CONVENTIONAL CONCRETE THRUST BLOCKS ON THE VALVE & HYDRANT.
3. HYDRANT SHALL BE INSTALLED A MIN OF 3'-6" BEHIND THE EDGE OF ASPHALT.
4. HYDRANTS SHALL CLOSE IN THE CLOCKWISE DIRECTION.
5. HYDRANTS TO BE MUELLER CENTURION.

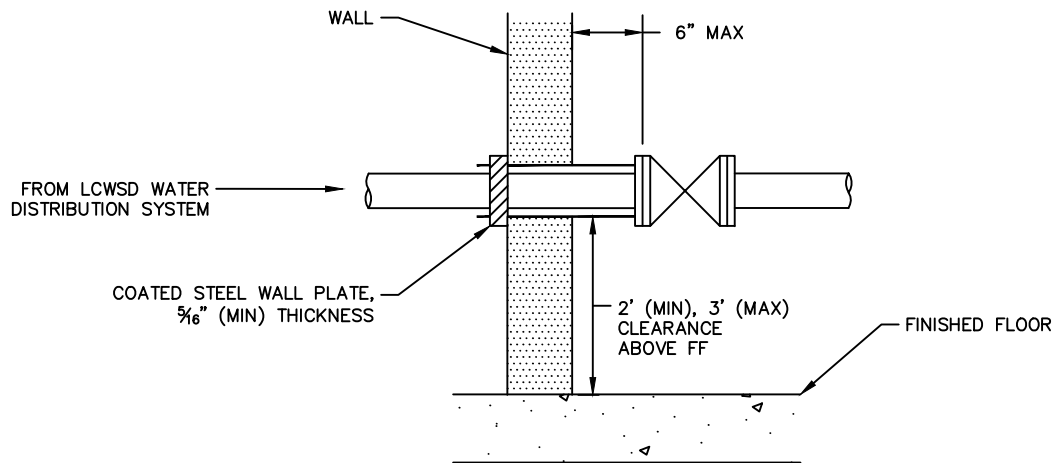


NOTES:

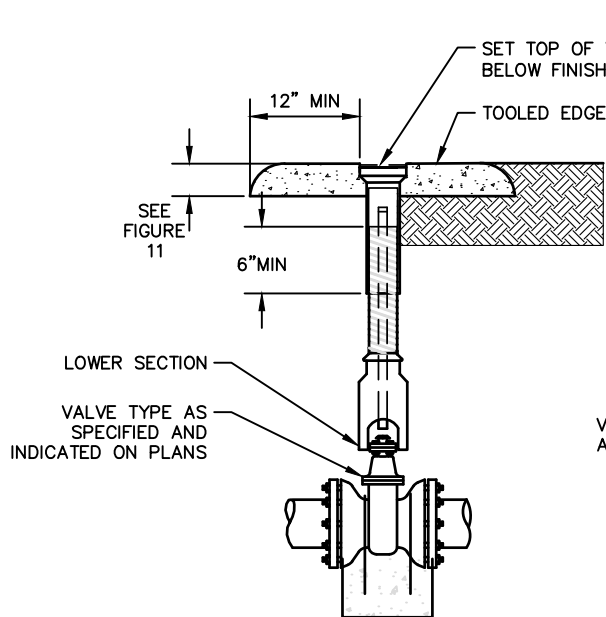
1. DURING CROSSINGS, STRUCTURAL SUPPORT OF THE SEWER OR STORM DRAIN SHALL BE PROVIDED TO PREVENT DAMAGE TO ANY EXISTING PIPES.



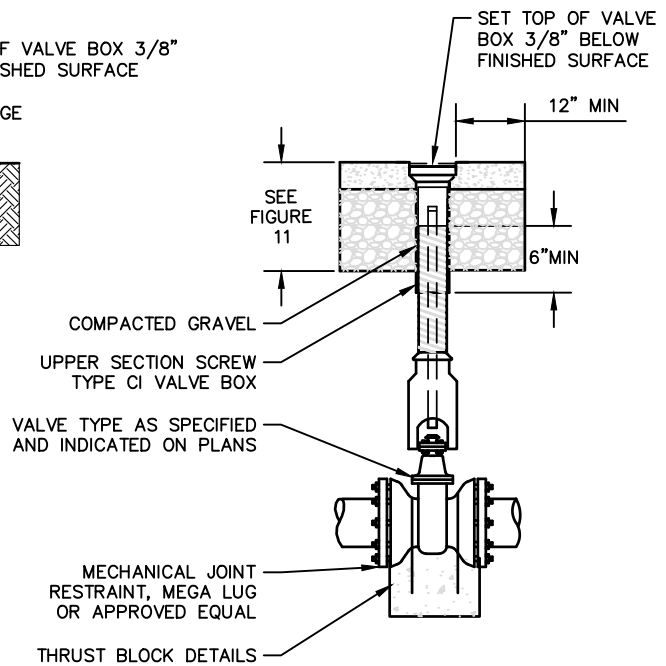
FLOOR PENETRATION



WALL PENETRATION



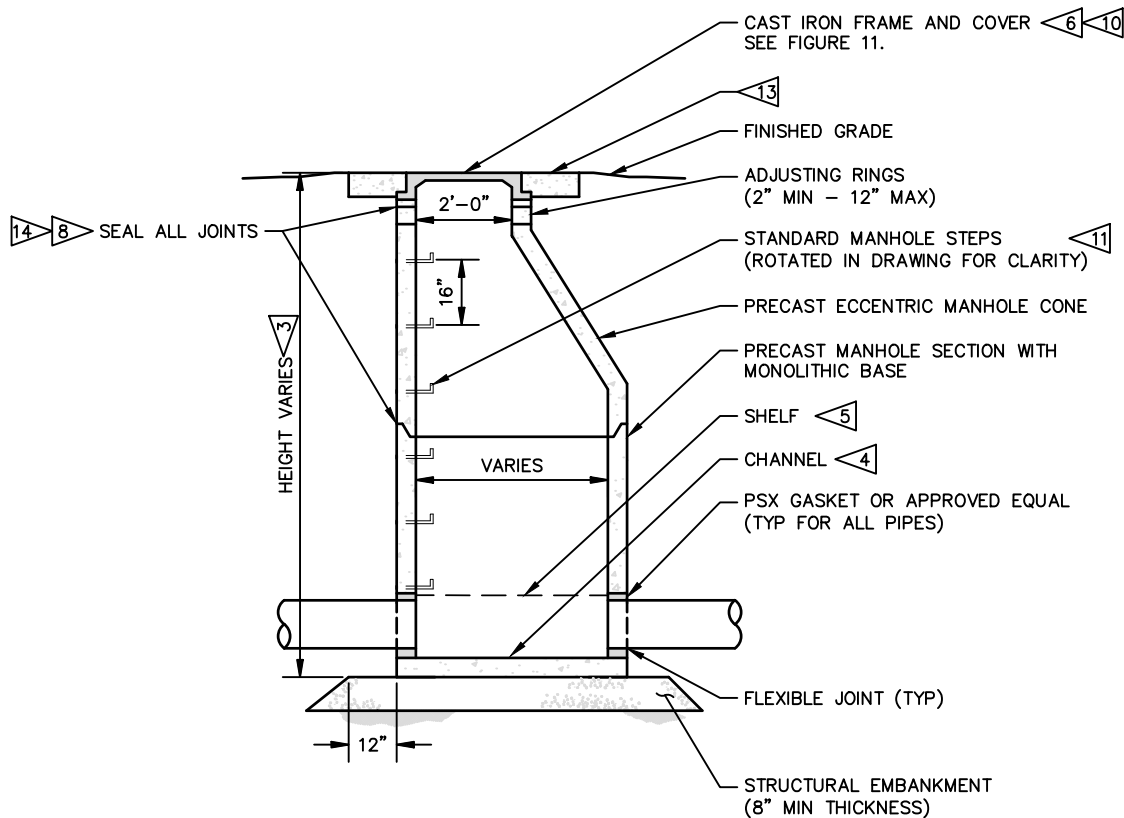
SHOULDER OR DIRT ROAD



PAVED/ UNIMPROVED AREAS

NOTES:

1. ADJUST VALVE BOXES UPWARD OR DOWNWARD AS REQUIRED.
2. CONCRETE COLLARS SHALL BE POURED IN PLACE AT EACH WATER VALVE. IN PAVED AREAS CONCRETE COLLARS SHALL BE POURED AFTER PAVING. SEE FIGURE 11 FOR CONCRETE COLLAR DETAILS.
3. COMPACT ALL BACKFILL AROUND THE VALVE BOX UPPER SECTION BY MEANS OF HAND TAMPING.
4. ANY VALVE BOX UNCOVERED BY FINAL GRADING OPERATION SHALL BE PROVIDED WITH A CONCRETE COLLAR AS PER ABOVE DETAIL.
5. VALVES SHALL CLOSE IN THE CLOCKWISE DIRECTION.



CONSTRUCTION NOTES:

1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478.
2. PROVIDE 3" GROUT SPACE AROUND ALL PIPE. ALL JOINTS SHALL BE GROUTED WATERTIGHT.
- 3 IF MANHOLE IS LESS THAN 6'-0", OMIT ECCENTRIC CONE AND PROVIDE PRECAST STANDARD STRAIGHT MANHOLE WITH FLAT LID, RISER SECTION, AND COVER.
- 4 CHANNEL SHALL BE HALF THE DIAMETER OF THE PIPE. CONSTRUCT PER MPW.
- 5 CONCRETE SHELVES SHALL SLOPE TOWARD THE CHANNEL AT 1" PER FOOT.
- 6 MANHOLE COVER SHALL BE MARKED "SEWER" FOR THE WASTEWATER MANHOLES.
7. NEW MANHOLES SHALL BE COATED WITH AN EXTERIOR DAMPPROOFING; BITUMINOUS COAT OR COAL TAR EPOXY.
- 8 JOINT MATERIAL SHALL BE "RUBBER-NEK" OR APPROVED EQUAL.
9. FINISHED MANHOLES SHALL BE IN COMPLIANCE WITH LATEST EDITION OF MPWSS STANDARD SPECIFICATIONS.
- 10 FIELD SET COVER FLUSH W/ PAVEMENT, CONCRETE AND GRASS OR LAWN SURFACE. FIELD SET COVER 3" BELOW GRADE IN GRAVEL SURFACE.
- 11 STEPS SHALL BE PLACED AT 90° TO THE LINE OF SEWER PIPE WHERE APPLICABLE.
12. PROVIDE ALL SHORING NECESSARY TO PROTECT EXISTING STRUCTURES AND INFRASTRUCTURE.
- 13 INSTALL 12" COLLAR (6" THICK) AROUND COVER. INSTALL 2 REBAR HOOPS (#4 BAR).
- 14 WRAP EXTERIOR MANHOLE JOINTS WITH HIGH STRENGTH, WATERTIGHT ADHESIVE TAPE. ADHESIVE TAPE SHALL BE EZ-WRAP OR APPROVED EQUAL.

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SCALE: NONE

SHEET TITLE

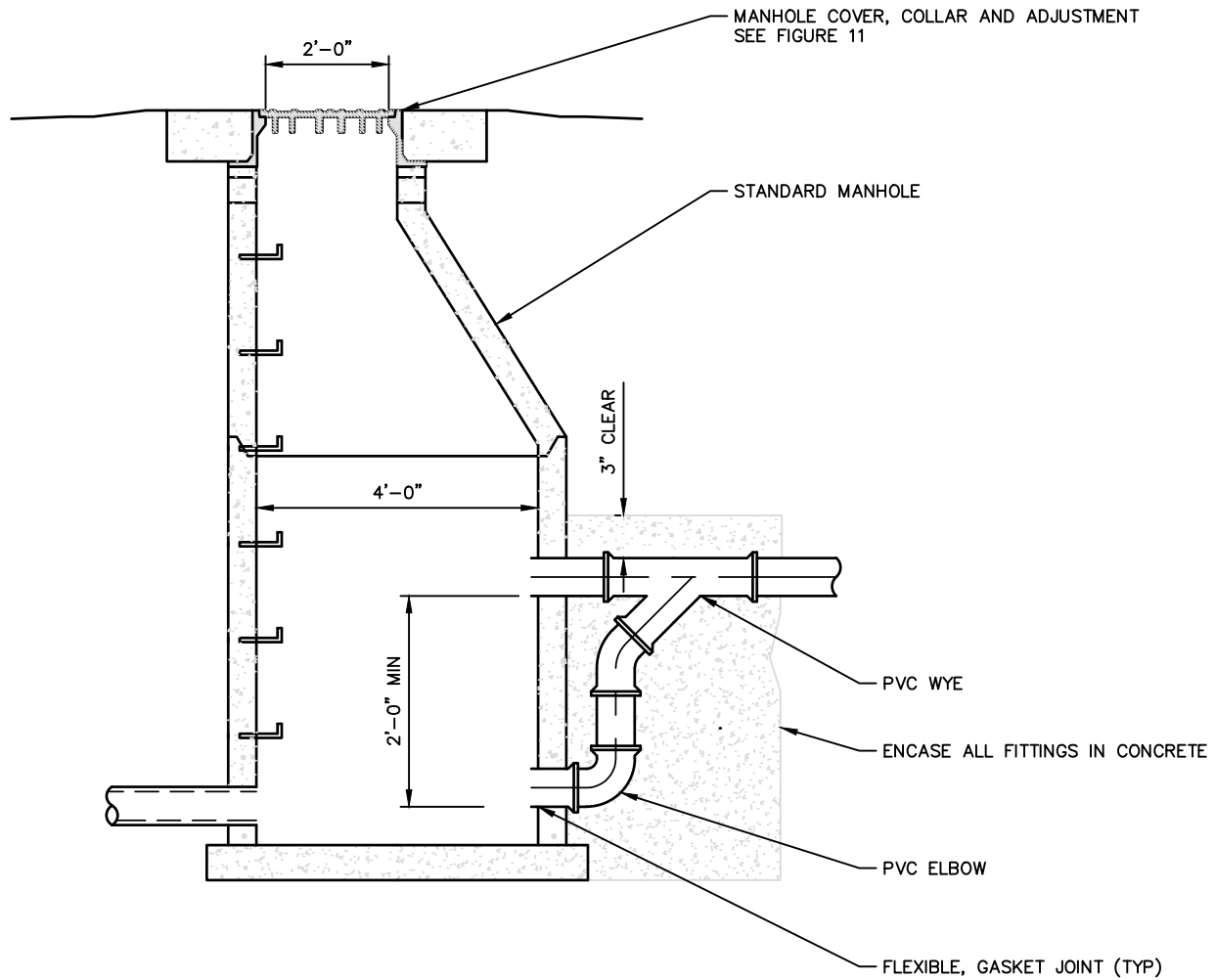
**STANDARD
MANHOLE**

PROJECT TITLE

STANDARD DRAWINGS
*Lakeside County Water and
Sewer District*

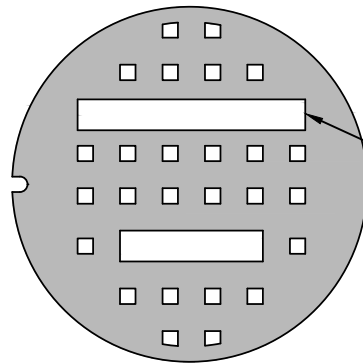
FIGURE

06

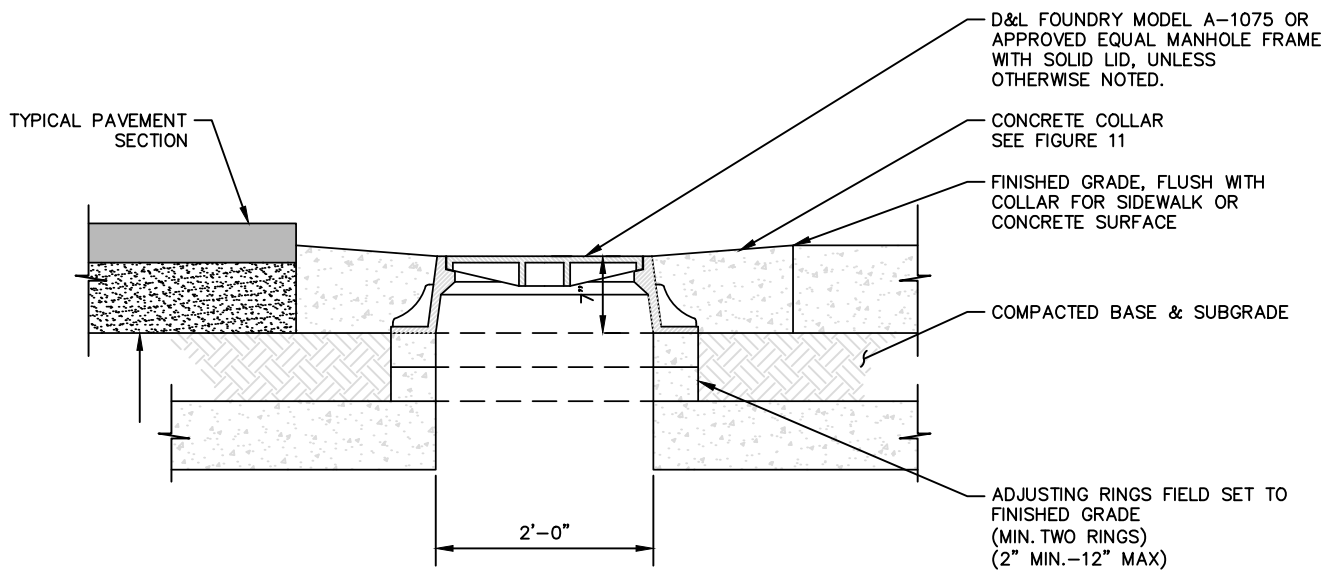


NOTES:

1. PROVIDE A DROP INLET WHENEVER THE PIPE INVERT IS MORE THAN 2'-0" ABOVE THE LOWEST MANHOLE INVERT.



LABEL UTILITY AS APPROPRIATE
(I.E. STORM SEWER, SANITARY SEWER, ETC.)



NOTES:

1. ADJUST MANHOLES UPWARD WITH CONCRETE ADJUSTMENT RINGS UNDER FRAME, 2" MINIMUM, 12" MAXIMUM.
2. SLOPE MANHOLE RING AS REQUIRED TO MATCH LONGITUDINAL & TRANSVERSE GRADE ON STREET. NO PAYMENT SHALL BE MADE FOR ADJUSTMENT OF NEW MANHOLES TO FINAL GRADE.
3. INSTALL CONCRETE COLLAR EXTENDING OUT FROM MANHOLE LID ON ALL SIDES, WHETHER IN STREET OR LANDSCAPED CONDITIONS. SEE FIGURE 11.
4. WATERPROOF MANHOLE RINGS & LIDS ARE REQUIRED ON MANHOLES LOCATED IN GUTTER LINES, FLOW LINES, OR OUTSIDE THE ROADWAY.
5. SANITARY SEWER MANHOLE LIDS IN LANDSCAPED AREAS SHALL BE SLOPED TO DRAIN AWAY FROM LID.

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SCALE: NONE

SHEET TITLE

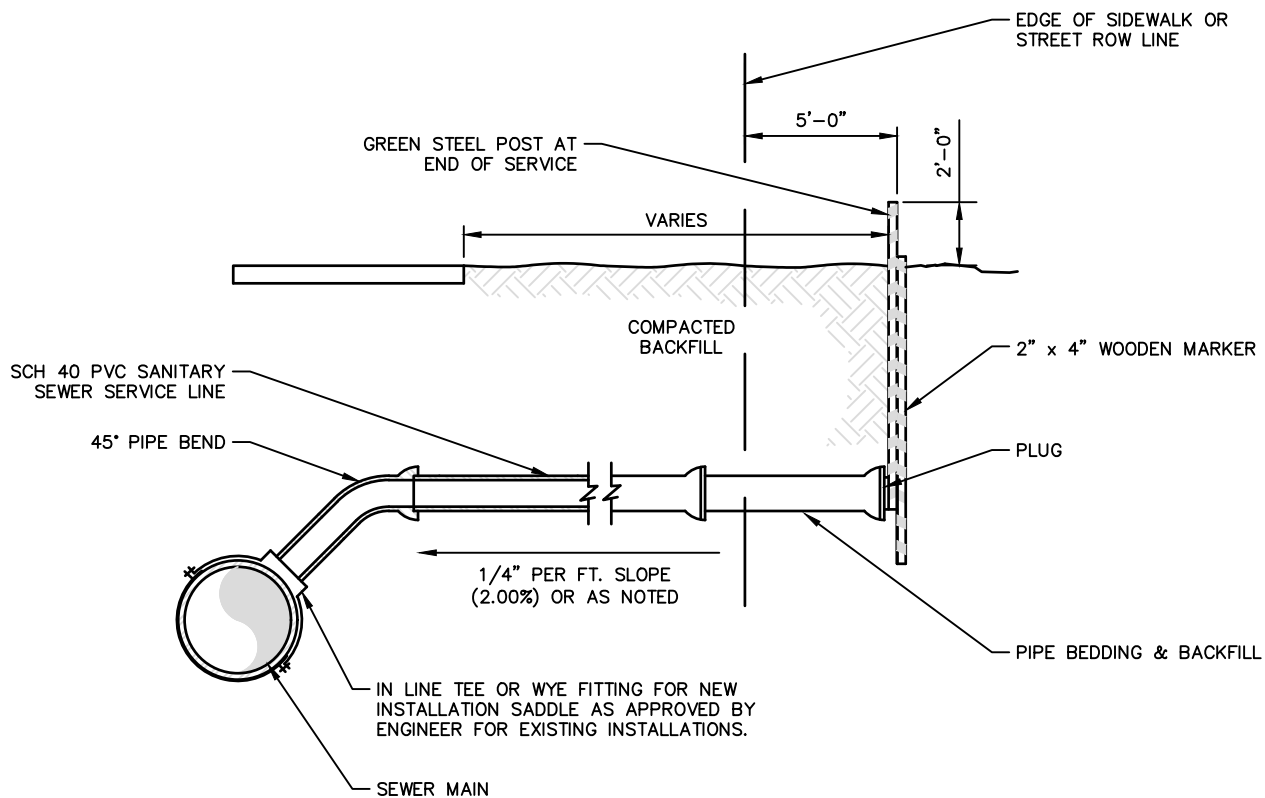
**MANHOLE COVER,
COLLAR &
ADJUSTMENT**

PROJECT TITLE

STANDARD DRAWINGS
*Lakeside County Water and
Sewer District*

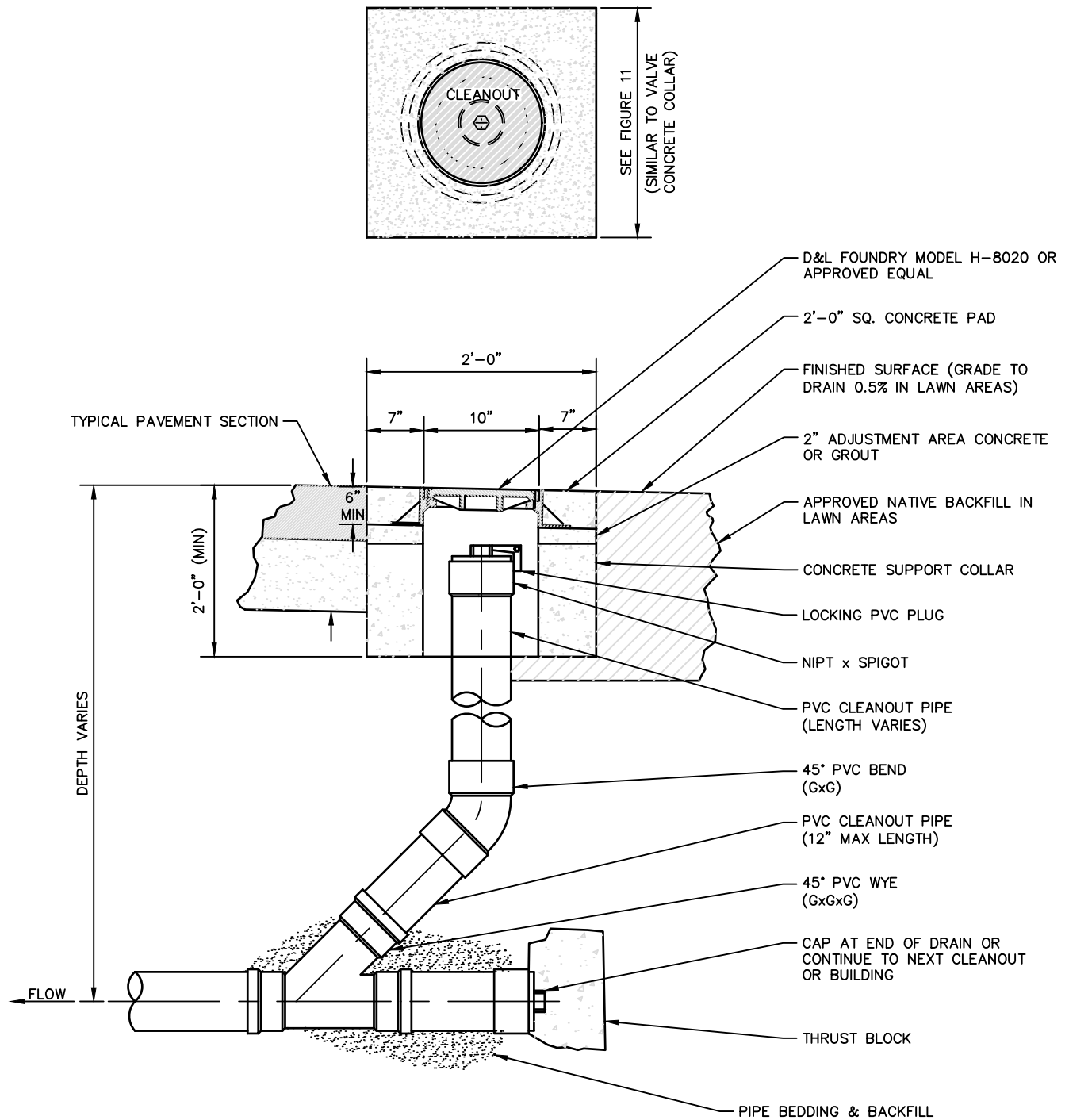
FIGURE

08



NOTES:

1. SERVICE CONNECTIONS MUST BE INSPECTED BY LCWSD PERSONNEL.



NOTES:

1. STUB CLEANOUT 6" ABOVE GROUND SURFACE UNTIL FINAL LANDSCAPING/GRADING/PAVING IS COMPLETED, AT WHICH TIME THE STUB CLEANOUT SHALL BE LOWERED TO NO MORE THAN 6" BELOW FINAL GRADE.
2. ADJUST CLEANOUT COVER 1/4" BELOW FINISHED GRADE ON PAVED SURFACE.
3. CLEANOUT SHALL BE LOCATED 5 FT. FROM BUILDING FACE OR AS SPECIFIED ON THE PLANS.
4. PRECAST TRAFFIC BOXES MUST BE RATED FOR HS20 LOADING & MUST BE SUBMITTED FOR APPROVAL IF CLEANOUT IS PLACED IN ANY LOCATION WHERE TRAFFIC MAY BE PRESENT.

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SCALE: NONE

SHEET TITLE

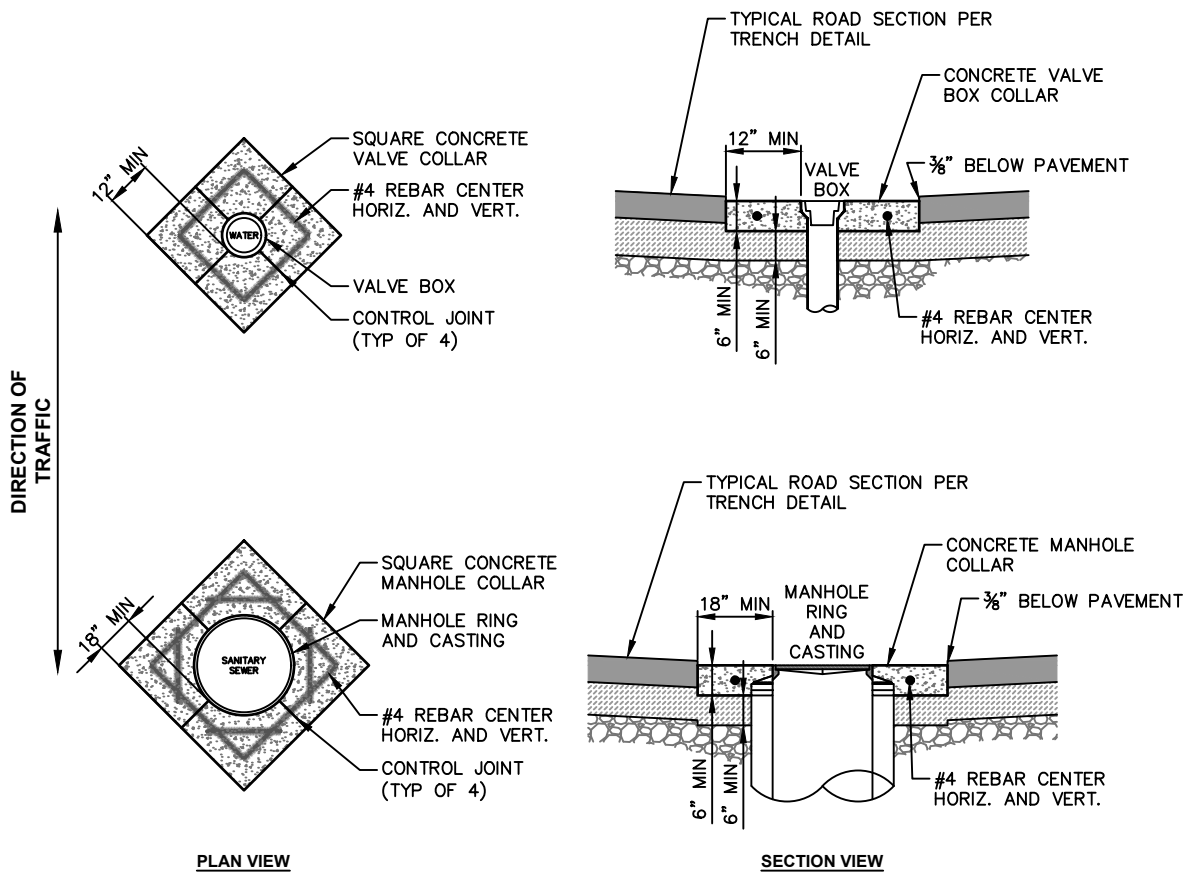
**CLEANOUT
AND COVER**

PROJECT TITLE

STANDARD DRAWINGS
*Lakeside County Water and
Sewer District*

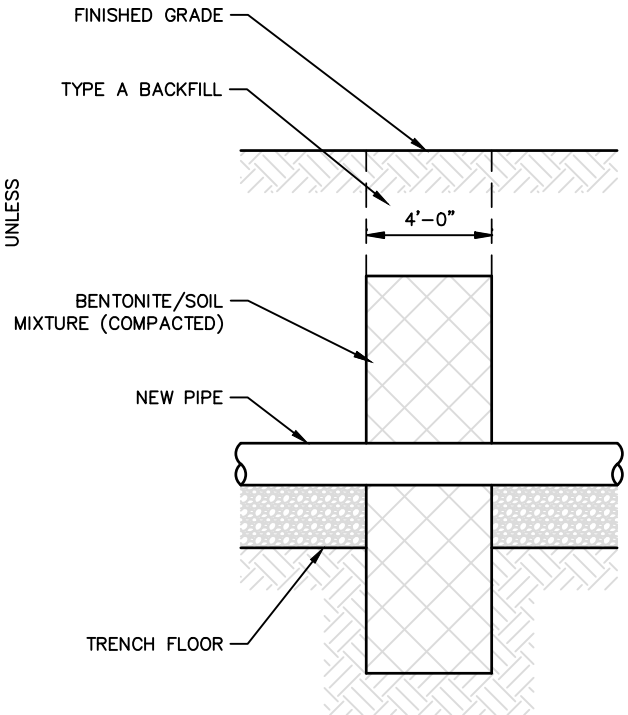
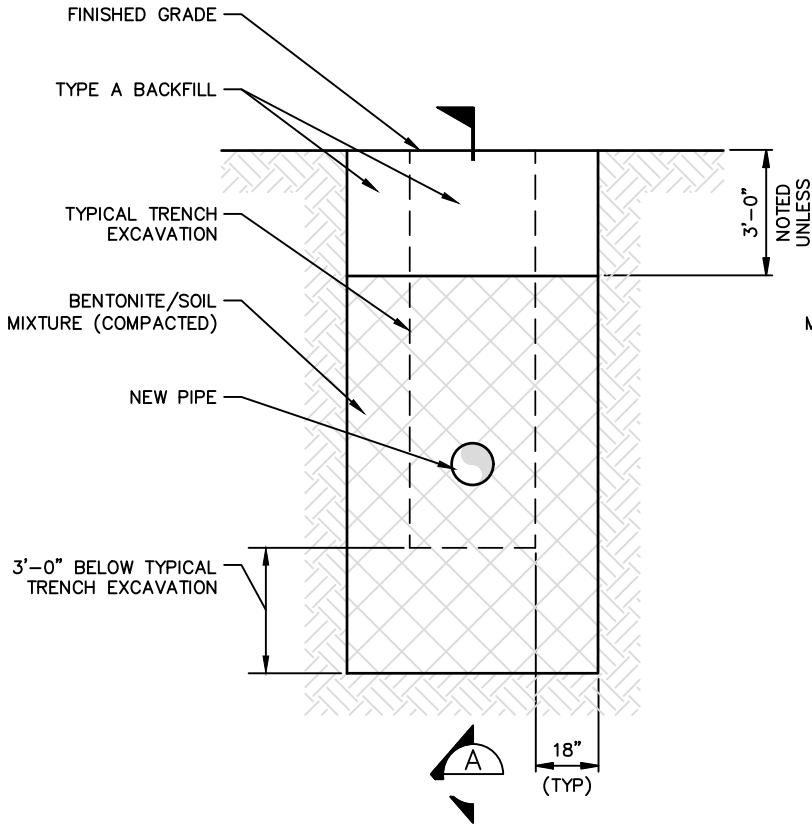
FIGURE

10



NOTE:

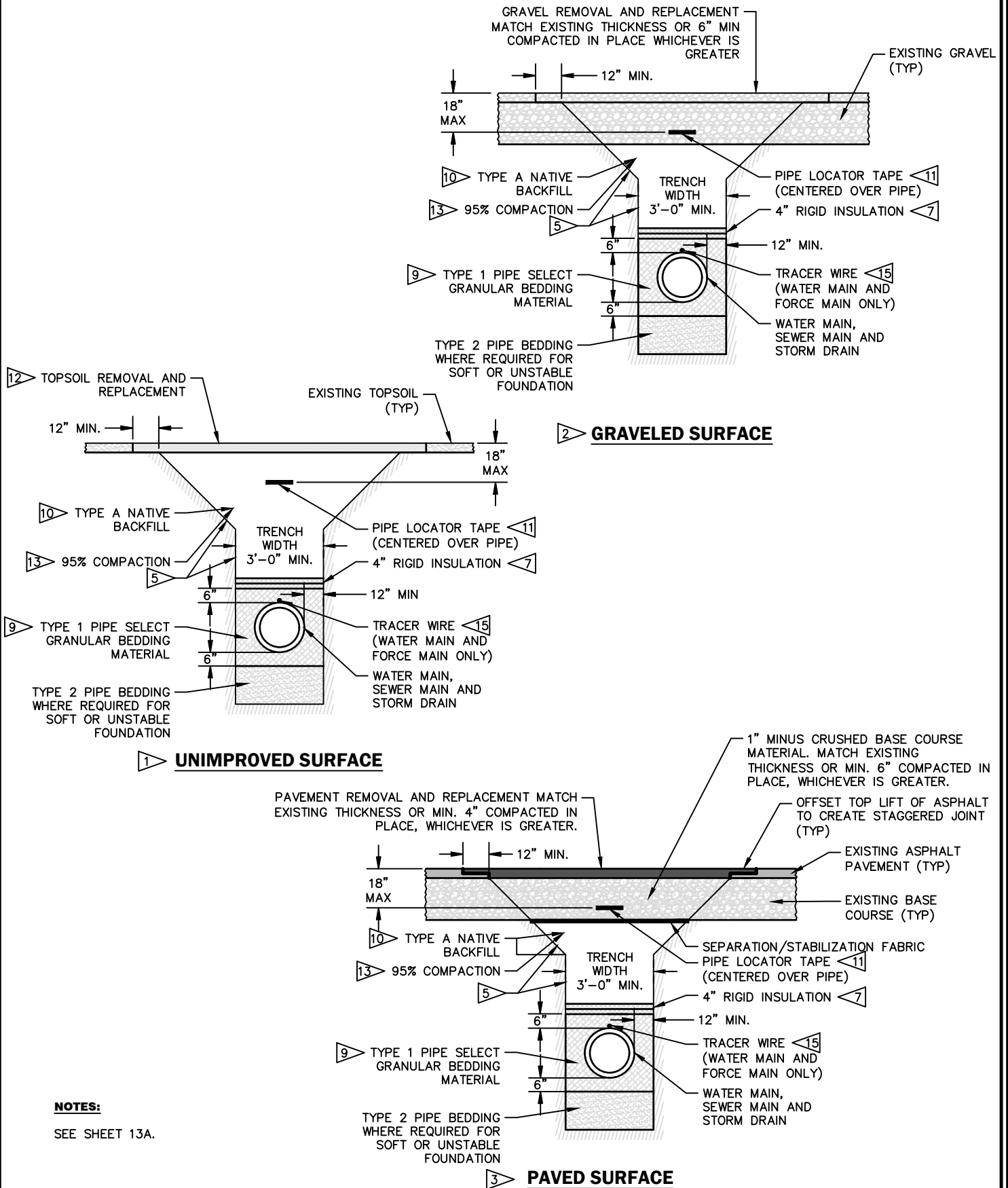
1. ALL VISIBLE CONCRETE EDGES AND JOINTS SHALL BE ROUNDED WITH A $\frac{1}{4}$ " RADIUS EDGING TOOL.
2. CONCRETE SHALL BE M-4000 WITH $\frac{3}{4}$ " MAX. AGGREGATE, MIN. 28 DAY STRENGTH OF 4000 PSI, 6% \pm 1.5% AIR ENTRAINMENT AND MAX SLUMP OF 4".
3. ALL EXISTING ASPHALT AND CONCRETE SHALL BE SAW CUT.
4. IF MANHOLE OR VALVE BOX IS LOCATED IN SIDEWALK OR CONCRETE SURFACE, CONCRETE COLLAR SHALL BE FLUSH WITH SURFACE.



SECTION A

NOTES:

1. THE PURPOSE OF THE TRENCH WATER STOP IS TO PREVENT TYPE 1 & TYPE 2 BEDDING FROM BECOMING A CONDUIT FOR GROUNDWATER.
2. PROVIDE THE MIXTURE PROPORTIONING OF THE BENTONITE MATERIAL WITH ON-SITE LEAN CLAYS. ALL TRENCH WATER STOPS SHALL BE CONSTRUCTED TO HAVE AN IN-PLACE PERMEABILITY RATE OF 1×10^{-7} CM/SECOND OR LESS. A MIX PROPORTION DESIGN & CERTIFIED TESTING RESULTS FROM A PROFESSIONAL LAB INDICATING THE CONFORMANCE WITH THIS PERMEABILITY RATE SHALL BE SUBMITTED.
3. TRENCH WATER STOPS SHALL BE INSTALLED AT A MINIMUM OF 400'-0" APART, OR CROSSINGS OF STREAMS, DITCHES, OR OTHER SOURCES OF GROUNDWATER.



CONSTRUCTION NOTES:

- 1 WHERE TRENCH PASSES THROUGH UNIMPROVED SURFACES THE TOPSOIL SHALL BE REMOVED AND REPLACED A MAXIMUM OF 20' FROM THE CENTERLINE OF THE PIPE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES BEYOND THIS WIDTH AT THEIR OWN EXPENSE.
- 2 WHERE TRENCH PASSES THROUGH EXISTING GRAVEL THE GRAVEL SHALL BE REMOVED AND REPLACED A MAXIMUM OF 10' FROM THE CENTERLINE OF THE PIPE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES BEYOND THIS WIDTH AT THEIR OWN EXPENSE.
- 3 WHERE TRENCH PASSES THROUGH EXISTING PAVEMENT THE PAVEMENT SHALL BE CUT ALONG A NEAT VERTICAL LINE A MAXIMUM OF 5' FROM THE CENTERLINE OF THE PIPE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES BEYOND THIS WIDTH AT THEIR OWN EXPENSE.
4. VERIFY THAT COMPACTION METHODS ARE COMPARABLE WITH PIPE MANUFACTURER'S RECOMMENDATIONS. ANY DAMAGE TO THE PIPE WILL BE THE CONTRACTOR'S RESPONSIBILITY.
- 5 TRENCH SHALL BE CONSTRUCTED TO OSHA SPECIFICATIONS FOR EXCAVATION. DRAWINGS DO NOT SHOW TRENCH DIMENSIONS OR BACKSLOPES THAT MAY BE REQUIRED. CONTRACTOR REQUIRED TO DETERMINE WHICH OSHA SPECIFICATIONS ARE APPLICABLE.
6. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL SPOILS.
- 7 INSTALL 4" OF RIGID INSULATION (BLUEBOARD OR APPROVED EQUAL) THE FULL WIDTH OF THE TRENCH WHEN BURY TO TOP OF PIPE IS LESS THAN 6'-0".
8. ALL ROCKS GREATER THAN 12" IN ANY DIMENSION SHALL BE HAULED OFF SITE AND DISPOSED OF PROPERLY.
- 9 NO ROCKS OR LUMPS LARGER THAN 2" IN ANY DIMENSION SHALL BE ALLOWED WITHIN 6" OF THE PIPE.
- 10 USE SUITABLE NATIVE MATERIAL FOR BACKFILL. SEE TECHNICAL SPECIFICATIONS FOR CONDITIONS REQUIRING IMPORTED TRENCH BACKFILL.
- 11 USE LABELED AND COLOR-CODED TAPE FOR THE APPROPRIATE UTILITY PIPE, PLACED 18" MAXIMUM BELOW FINISHED SURFACE.
- 12 SEED, FERTILIZE, AND MULCH ALL DISTURBED AREAS WHICH ARE NOT PAVED, CONCRETED, OR GRAVELED PER SPECIFICATIONS.
- 13 COMPACTION REFERS TO PERCENT OF MAXIMUM DENSITY DETERMINED BY A STANDARD PROCTOR. ASTM D 698-91. TRENCHES EXCEEDING 10 FEET IN DEPTH SHALL BE COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D 698-91.
14. FINISHED GRADE MUST MATCH THE ORIGINAL EXISTING GRADE WHERE PIPE IS INSTALLED UNLESS OTHERWISE NOTED.
- 15 TRACER WIRE SHALL BE 12 AWG TW DIRECT-BURY SOLID COPPER WIRE WITH CROSS-LINKED POLYETHYLENE INSULATION.

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SCALE: NONE

SHEET TITLE

**UTILITY TRENCH
DETAILS**

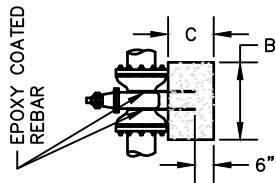
PROJECT TITLE

**STANDARD DRAWINGS
Lakeside County Water and
Sewer District**

FIGURE

13A

FITTING SIZE (INCHES)	BEND ANGLE		
	45°	22-1/2°	11-1/4°
4	0.8	0.3	0.1
6	2.0	0.8	0.3
8	3.0	1.1	0.4
10	4.5	1.7	0.7
12	6.4	2.4	1.0
14	8.6	3.2	1.3
16	11.1	4.2	1.7
18	14.1	5.3	2.2
20	17.3	6.6	2.7
24"	24.2	9.2	3.8



VERTICAL BEND REBAR		
FITTING SIZE	ROD SIZE	EMBODIMENT
12" AND LESS	#6	30"
14" – 16"	#8	36"
18" – 20"	#10	36"
24"	#11	42"

EPOXY COATED REBAR OVER
 FITTING AND EMBEDDED IN
 CONCRETE (SEE TABLE FOR
 SIZES)



VERTICAL BEND

NOTE: DIMENSIONS 'A' IS WIDTH OF THRUST BLOCK (PERPENDICULAR TO PAGE)

VALVE THRUST BLOCK DIMENSIONS							
VALVE SIZE"	REBAR SIZE	100 PSI			150 PSI		
		A	B	C	A	B	C
4"	#6	2.0'	2.0'	2.0'	2.0'	2.0'	2.0'
6"	#6	2.0'	2.0'	2.0'	2.0'	2.0'	2.0'
8"	#6	2.0'	2.0'	2.0'	2.0'	2.0'	2.0'
10"	#6	2.0'	2.0'	2.0'	2.5'	2.5'	2.0'
12"	#6	2.3'	2.0'	2.0'	3.0'	3.0'	2.7'
14"	#8	2.3'	2.0'	2.3'	3.4'	3.0'	3.0'
16"	#9	3.0'	3.0'	2.9'	4.3'	3.0'	3.0'
18"	#10	3.7'	3.0'	3.0'	5.4'	3.0'	3.0'
20"	#10	3.9'	3.3'	3.3'	5.7'	3.3'	3.3'
24"	#11	4.3'	4.0'	4.0'	6.4'	4.4'	4.0'

THRUST BLOCK NOTES:

1. KEEP CONCRETE CLEAR OF JOINT AND JOINT ACCESSORIES.
2. POUR THRUST BLOCKING AGAINST UNDISTURBED EARTH.
3. REQUIRED VOLUMES AND BEARING AREAS SHALL BE AS SHOWN IN THE TABLE AND ADJUSTED, IF NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) AND ALLOWABLE SOIL BEARING STRESS OF 2000 LBS/SQFT.
4. BEARING AREAS FOR HORIZONTAL BEND THRUST BLOCKS ARE BASED ON TEST PRESSURE OF 150 PSIG AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 LBS/SQFT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES USE THE FOLLOWING:

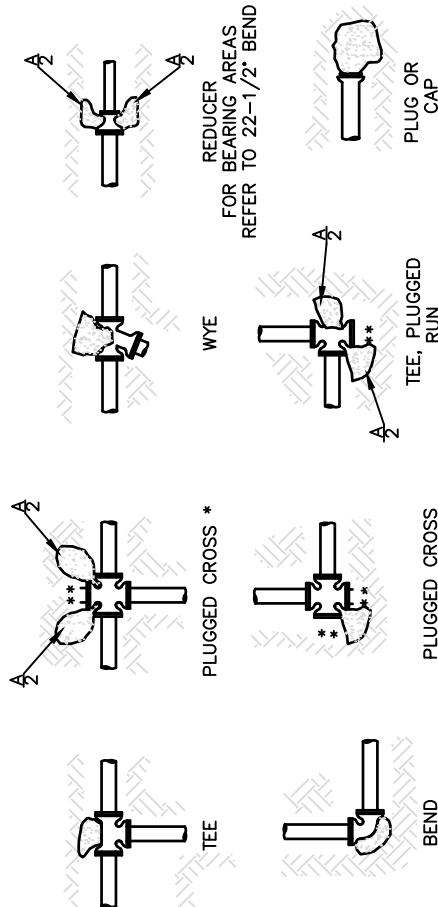
$B_1 = B(13.33)(P_1/2000)$ WHERE:

P_1 = ACTUAL TEST PRESSURE, PSIG

B_1 = COMPUTED BEARING AREA

B = BEARING AREA FROM TABLE

5. THRUST BLOCK VOLUMES FOR VERTICAL BENDS HAVING UPWARD RESULTANT THRUSTS BASED ON TEST PRESSURE OF 150 PSIG AND THE WEIGHT OF CONCRETE = 4050 LBS/CU YD. TO COMPUTE VOLUMES FOR DIFFERENT TEST PRESSURES USE THE FOLLOWING:
$$\text{ACTUAL VOLUME} = (\text{TEST PRESSURE}/150) \times (\text{TABLE VOLUME}).$$
6. VERTICAL BENDS HAVING DOWNWARD RESULTANT THRUSTS AND HORIZONTAL BENDS, HAVE THE SAME THRUST BLOCK REQUIREMENTS.
7. BEARING AREAS, VOLUMES, AND SPECIAL BLOCKING DETAILS SPECIFIED OR SHOWN ELSEWHERE IN THESE PLANS TAKE PRECEDENCE OVER THIS STANDARD DETAIL.
8. THRUST BLOCK BEARING AREA SHALL NOT BE LESS THAN 1.0 SQFT.
9. TEST PRESSURES ARE INDICATED IN THE SPECIFICATIONS AND THE ALLOWABLE SOIL BEARING STRESS IS 2000 LBS/SQFT.
10. CONTRACTOR SHALL PROVIDE THRUST BLOCKING FOR ALL BURIED FITTINGS AND VALVES.



*EACH AREA
(A/2) IS 1/2
OF TABULATED
TOTAL AREA

**** RESTRAINED
PLUG**

**BEARING AREA OF THRUST BLOCKS IN SQFT
(HORIZONTAL BENDS)**

FITTING SIZE (INCHES)	TEE, WYE, 90° BEND, PLUG, OR CROSS	TEE, PLUGGED RUN			BEND ANGLE		
		A	B	A/B	45°	22-1/2°	11-1/4°
4	1.3	1.8	1.3	1.8	1.0	1.0	—
6	3.0	4.2	3.0	4.2	2.3	1.2	1.0
8	5.3	7.6	5.3	7.6	4.1	2.1	1.0
10	8.3	11.8	8.3	11.8	6.4	3.3	1.6
12	12.0	17.0	12.0	17.0	9.2	4.7	2.4
14	16.3	23.1	16.3	23.1	12.5	6.4	3.2
16	21.4	30.2	21.4	30.2	16.3	8.3	4.2
18	27.0	32.0	27.0	32.0	20.7	10.5	5.3
20	33.4	47.2	33.4	47.2	25.5	13.0	6.5
24	40.3	55.0	40.3	55.0	35.7	18.0	9.0

SCALE: NONE

SHEET TITLE

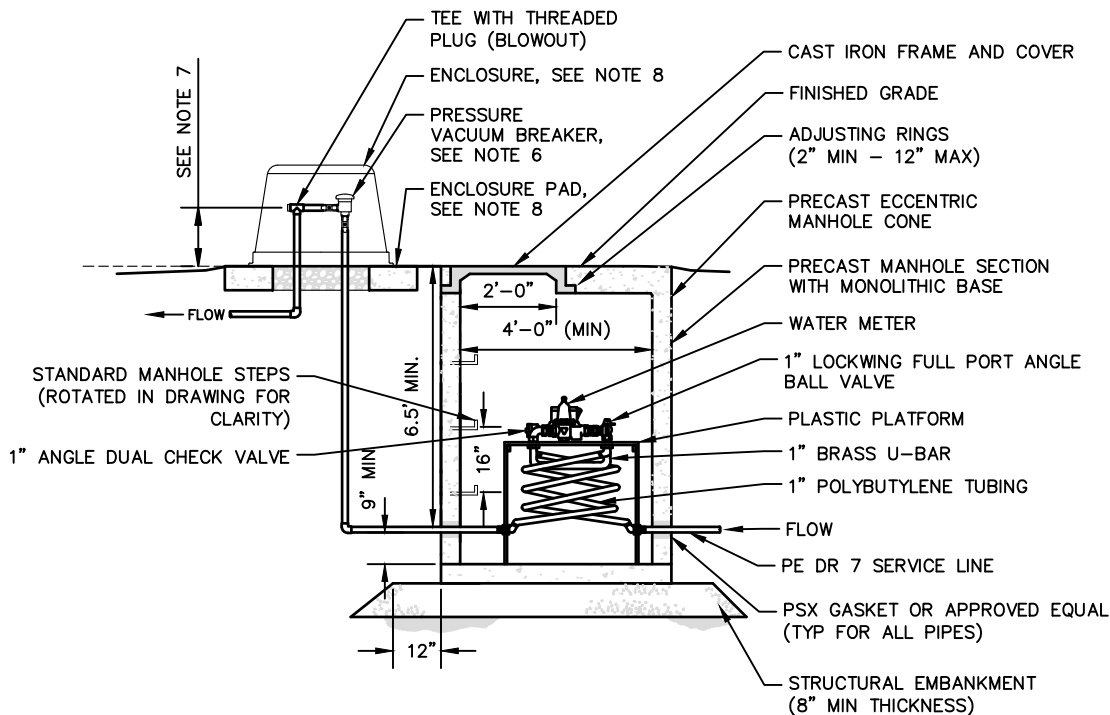
THRUST BLOCKING

PROJECT TITLE

STANDARD DRAWINGS
*Lakeside County Water and
Sewer District*

FIGURE

14



NOTES:

1. FOR STRUCTURES MAINTAINED BY LCWSD, THE LID SHALL BE FLAT WITH LID CENTERED ON THE STRUCTURE AND VALVES SHALL BE LOCATED DIRECTLY BELOW THE LID.
2. NO OBSTRUCTION SHALL BE LOCATED WITHIN 4' OF THE METER PIT TO ALLOW FOR ACCESS.
3. PIPE SUPPORTS SHALL BE INSTALLED INSIDE THE METER PIT VAULT.
4. PIPE SIZES MAY VARY. THE LCWSD WILL REVIEW ALL PROPOSED IRRIGATION METER PIT DESIGNS.
5. SERVICE CONNECTION TO THE LCWSD MAIN MUST FOLLOW FIGURE 01-NEW WATER SERVICE. A CURB STOP MUST BE PROVIDED BETWEEN THE VAULT AND WATER MAIN.
6. A BACKFLOW PREVENTER MUST BE PROVIDED AFTER THE METER WHICH MEETS CURRENT LOCAL, STATE, AND FEDERAL PLUMBING CODES.
7. PRESSURE VACUUM BREAKER SHALL BE SET A MINIMUM OF 1' ABOVE THE HIGHEST DOWNSTREAM PIPING, OUTLET OR 100-YEAR FLOOD ELEVATION.
8. ENCLOSURE SHALL BE HUBBELL HOT BOX PEZ (UNHEATED) OR APPROVED EQUAL. ENCLOSURE SHALL BE CONSTRUCTED OF 1/4" UV STABILIZED HDPE (BEIGE OR GREEN COLOR) WITH 2" OF EXPANDED POLYSTYRENE INSULATION WITH A MINIMUM R-VALUE OF 10.2. ENCLOSURE SHALL BE MOUNTED TO A 4" THICK CONCRETE PAD WITH MANUFACTURER SUPPLIED ANCHOR BRACKETS. PAD DIMENSIONS MUST BE AT LEAST 6" WIDER THAN ENCLOSURE.

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SCALE: NONE

SHEET TITLE

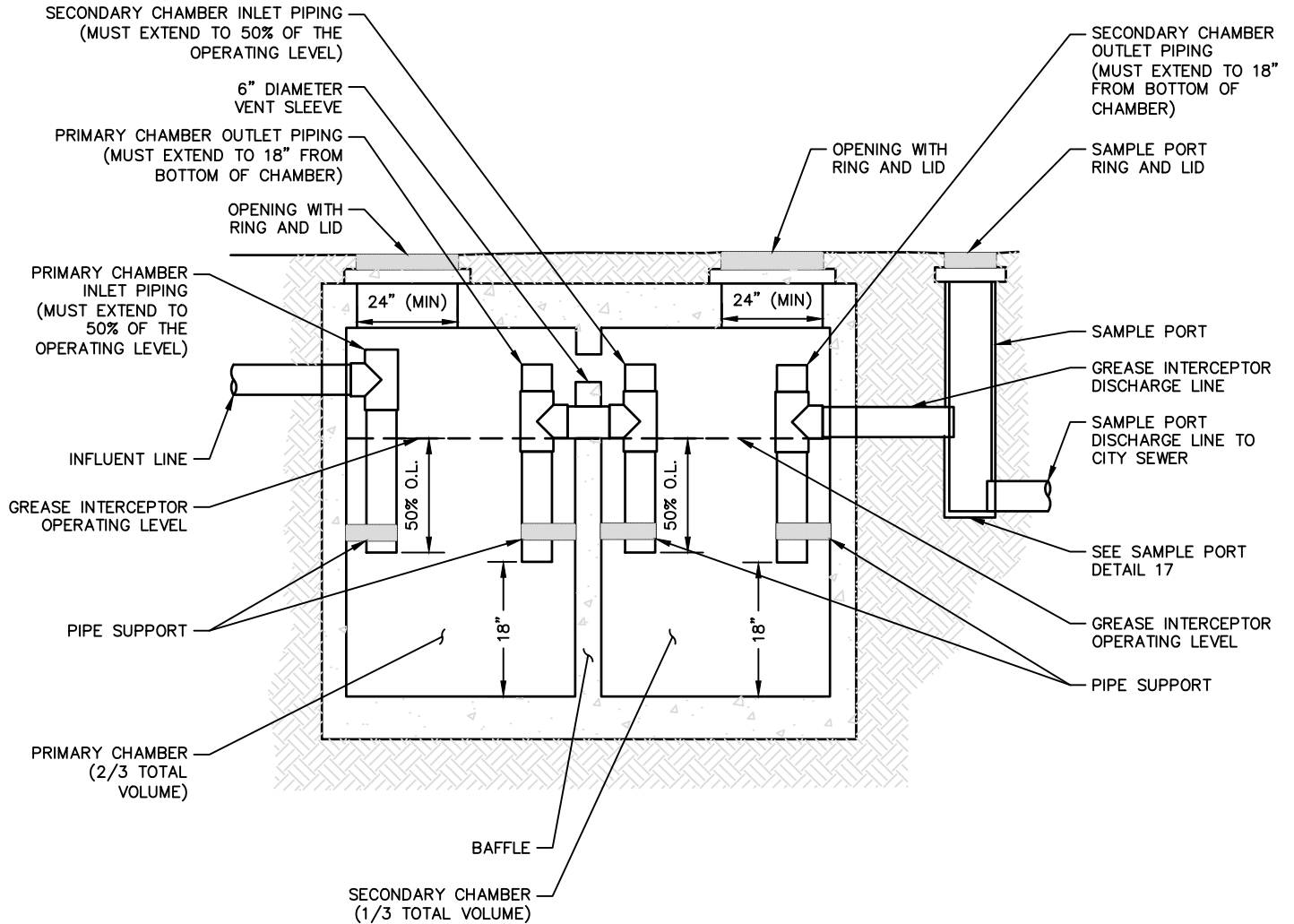
18-INCH DIAMETER COIL TANDEM METER PIT

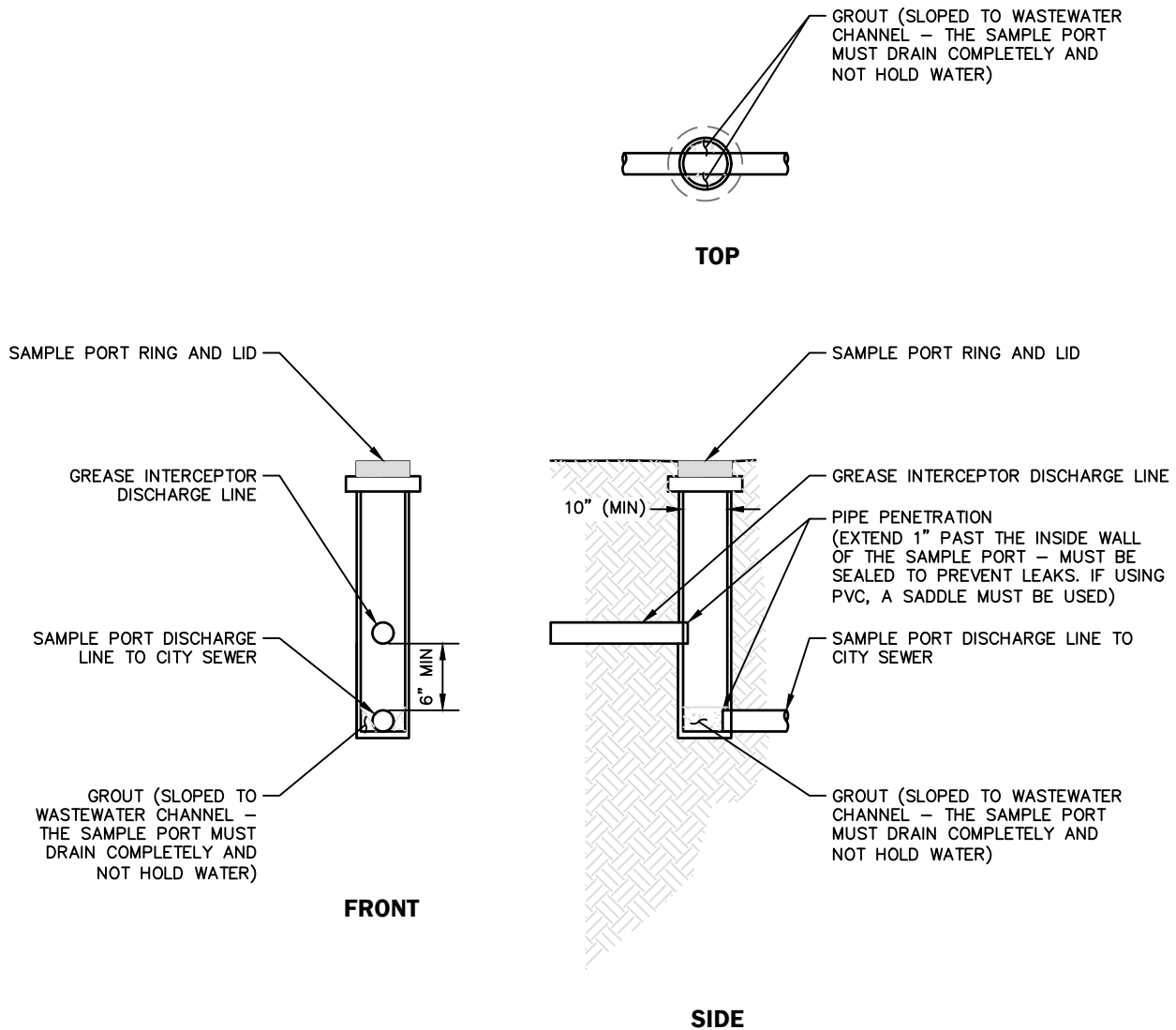
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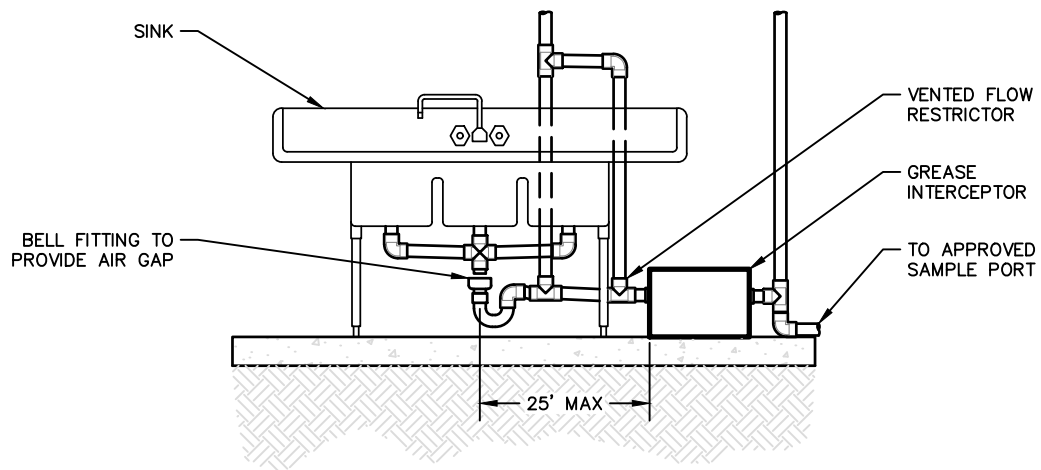
STANDARD DRAWINGS Lakeside County Water and Sewer District

FIGURE

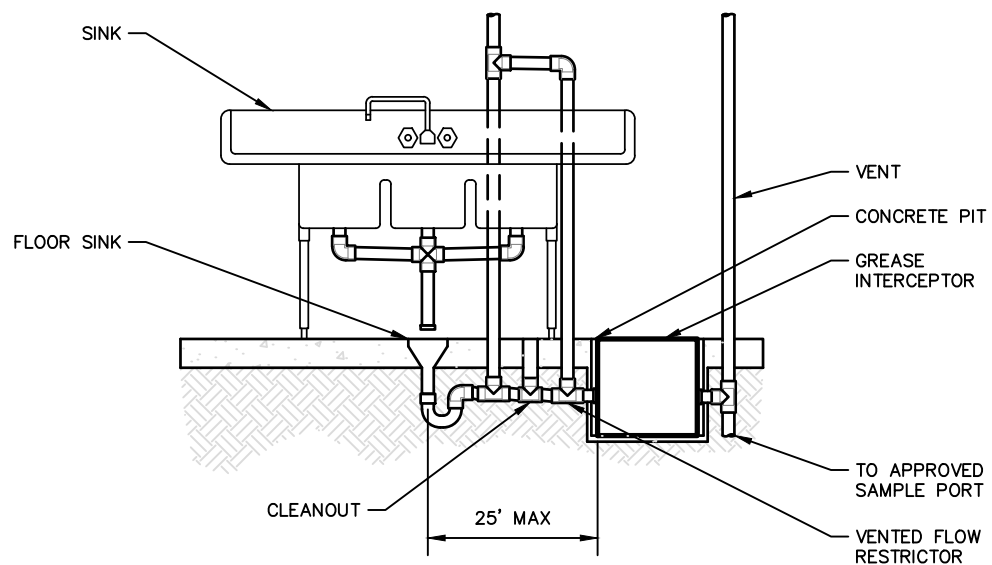
15







INTERIOR ABOVE GRADE GREASE INTERCEPTOR



INTERIOR BELOW GRADE GREASE INTERCEPTOR



SCALE: NONE

SHEET TITLE

STANDARD WATER & SEWER SERVICE CONNECTION

PROJECT TITLE

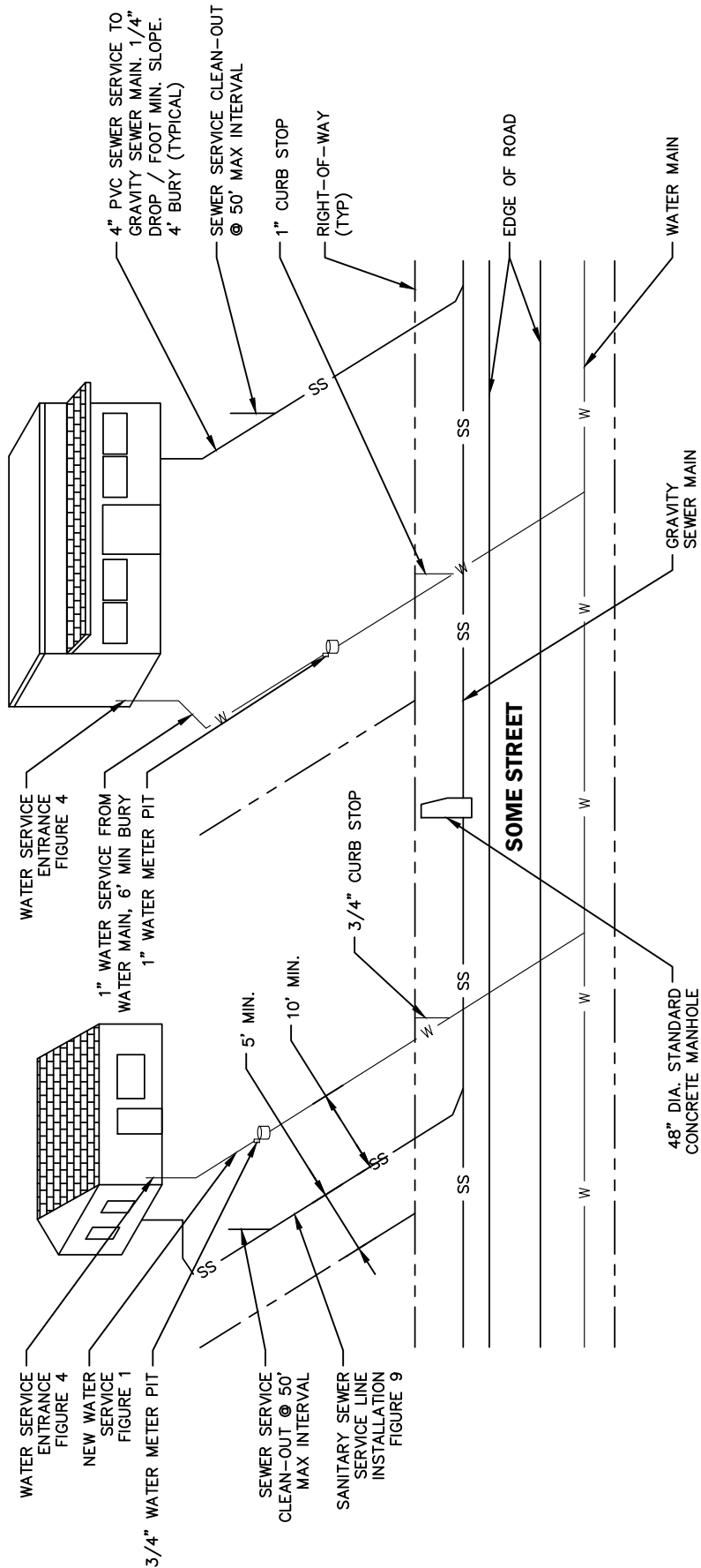
STANDARD DRAWINGS *Lakeside County Water and Sewer District*

FIGURE

19

ALL SINGLE FAMILY BUILDINGS

ALL COMMERCIAL BUILDINGS





SCALE: NONE

SHEET TITLE

ALTERNATE SERVICE CONNECTION DETAIL

PROJECT TITLE

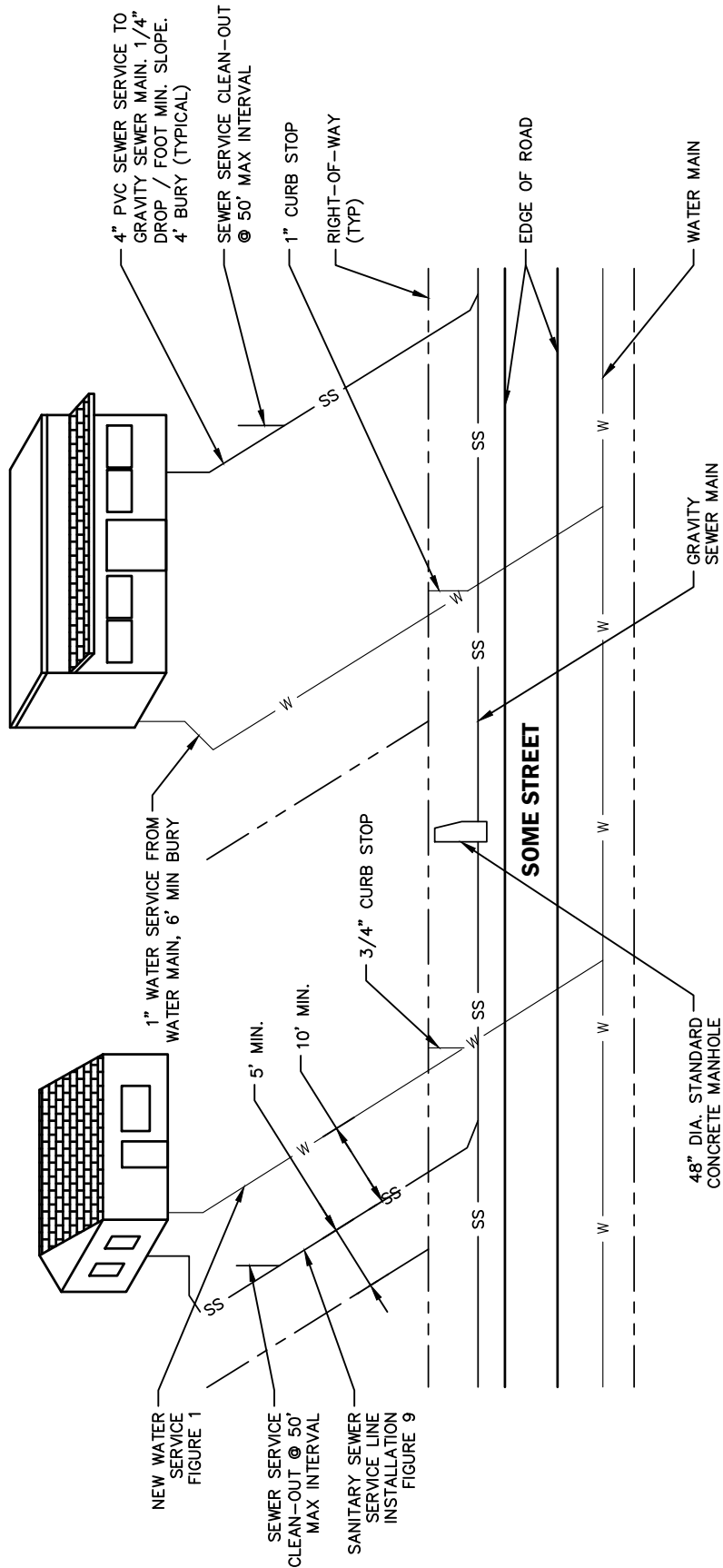
STANDARD DRAWINGS
*Lakeside County Water and
Sewer District*

FIGURE

20

ALL SINGLE FAMILY BUILDINGS

ALL COMMERCIAL BUILDINGS



APPENDIX A

LCWSD NEW SERVICE PERMIT

LCWSD NEW SERVICE PERMIT

253 Bierney Creek Road • Lakeside, MT 59922 • 406-844-3881

(For all new services or existing services changing use or volume discharge)

Prices are subject to change. All quotes will be honored for 30 days

Date: _____ **Date Meter Picked Up:** _____ Account: _____ Route: _____

Property Owners Name: _____ Seasonal: _____

Cell Number: _____ E-mail: _____

Job Address: _____ Billing Address: _____

Type of Service: Single Family _____ Multiple Family _____ Commercial _____

Annexation Required _____ **Mainline Tap Required** _____

	<u>SEWER FEES</u>	<u>WATER FEES</u>	
1. Water meter Size: _____			
2. Permit & Inspection Fee	\$ _____	\$ _____	
3. Plant Investment Fee-Reserved Capacity	\$ _____	\$ _____	
4. Plant Investment Fee-Expanded Capacity	\$ _____	\$ _____	
5. Developer Agreement	\$ _____	\$ _____	
6. Water Meter	\$ _____	\$ _____	
7. Watts PRV	\$ _____	\$ _____	
8. Misc. Connection Parts	\$ _____	\$ _____	
9. Inserta Tee	\$ _____	\$ _____	
Total	\$ _____	\$ _____	Grand Total \$ _____

Payment Info.

Date: _____

Ck. #: _____

Amt.: _____

RV #: _____

An appropriately sized Mueller meter pit with a composite lid is to be installed at your own expense

Contractor's Business Name: _____

Contact Name: _____ Phone Number: _____

Contractor Insurance on File: Yes _____ No _____ Contractor Bond: Yes _____ No _____

I agree to the following conditions if required: (Please Initial)

Obtain and submit copies of proper county road permits: _____

Obtain and submit copies of proper highway permits: _____

Must make an appointment (Min 24 hour) with LCWSD **BEFORE** digging within 10 feet of mainline: _____

I understand that an LCWSD operator must be present **BEFORE** mainline tap is performed: _____

I agree to pay a fee of \$100 if I do not show up for appointment: _____

Installation Requirements: Individual **Sewer** connections shall utilize 4" SDR 35-SD Poly Vinyl Chloride pipe. Gasketed pipe is preferred. Minimum depth of bury is 18 inches. Completion of line connection is subject to mandatory inspection by LCWSD personnel during regular business hours, 8-3 Monday through Friday. **Provide sketch of service connection on back to show main line connection.** All permits are the responsibility of the applicant. Warranty of installation is property owner/contractor responsibility. Any person(s) performing water and sewer excavation must have proof of insurance on file at the LCWSD office. All **Water** services require a District standard meter pit arrangement with meter, backflow prevention device, and curb stop installed. These items are to be paid for by the customer and the ownership will be that of the District. Curb Stop is demarcation point. Abandoned or terminated services must be capped or plugged in an approved manner in order to prevent harm to the systems.

Signature: _____ **Date:** _____

APPENDIX B

PETITION FOR ANNEXATION OF LAND TO LCWSD

PETITION FOR ANNEXATION OF LAND TO THE LAKESIDE COUNTY WATER & SEWER DISTRICT

(is/are) the owner(s) of the following described real property.

Complete Legal Description (meets & bounds) of property to be annexed:

(Attach complete description if more room is required.)

Assessor _____

Pursuant to 7-13-2341 (5), Montana Code Annotated, the undersigned hereby petitions the Board of Directors of the Lakeside County Water & Sewer District to include the land described above, which land is contiguous to the current District. As the sole owner(s) of the above described property, the undersigned further gives consent to the inclusion of such land in the Lakeside County Water & Sewer District and agrees to pay for water and/or sewer services at such rates, times and places as shall be determined by the LCWSD Board of Directors.

Dated: _____

Owner Signature

Owner Signature

CAPACITY: Annexation into the Lakeside County Water & Sewer District for Water and/or Sewer service allows for service capacity based upon the size of the water meter installed to measure consumption (3/4", 1", 2", etc.) and corresponding VRU (Volume Ratio Unit) or multiplier of minimum service size (3/4"=1; 1"=1.8; 1½"=4.0; 2"=7.1 VRU's, etc.) VRU and EDU (Equivalent Dwelling Unit) and multiplier are used interchangeably within the Ordinances of the District. Future increases in capacity requirements (more living units, commercial use, etc.) for property specified here is subject to all fees and assessments that may apply at the time of change of use. "Capacity" is of no pertinence when easements are annexed solely to establish contiguity between parcels.

STATE OF MONTANA)

s.s.

County of Flathead)

On this _____ day of _____, 20____ before me, the undersigned, a Notary Public for the State aforesaid, personally appeared _____, _____, known to me to be the person(s) whose name is subscribed to the foregoing instrument as the Owner(s) of Record, and acknowledged to me that he/she executed the same.

IN WITNESS THEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate last above given.

Notary Public for the State of Montana

Print Name

Residing at: _____

My Commission expires: _____

APPENDIX C

LABOR AND MATERIAL PAYMENT BOND

LABOR AND MATERIAL PAYMENT BOND

**(This bond is issued simultaneously with Performance Bond in favor
of the Owner conditioned on the full and faithful performance of the Contract)**

KNOW ALL MEN BY THESE PRESENTS: that _____

as Principal, hereinafter called Contractor, and, _____

as Surety, hereinafter called Surety, are held and firmly bound unto _____

as Obligee, hereinafter called Owner, in the amount of _____

_____ Dollars (\$ _____),

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____ 20__, entered into a contract with Owner for _____

_____ in accordance with Drawings and Specifications prepared by _____
_____, which contract is by reference made a part
hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Contractor or with a Subcontractor of the Contractor for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental or equipment directly applicable to the Contract.

2. The above named Contractor and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced thereunder by any claimant;

a) Unless claimant, other than one having a direct contract with the contractor, shall have given written notice to any two of the following: The contractor, owner, or surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the contractor, owner or surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which contractor ceased work on said contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.

4. The amount of this Bond shall be reduced by and to the extent of any payment or payments made in good faith thereunder, inclusive of the payment by surety of mechanics' liens that may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this Bond.

Contractor

(Seal)

Title

Surety

(Seal)

Title

(Resident Agent)

APPENDIX D

PERFORMANCE BOND

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____ hereinafter called Principal,
(Corporation, Partnership, or Individual)

and _____ (Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

(Name of Owner)

(Address of Owner)

hereinafter called Owner, in the penal sum of _____ Dollars, (\$_____)

in lawful money of the United States, for payment of which sum well and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the ____ day of _____, 20__, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and during the one-year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense that the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary thereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in ____ counterparts, each one of which shall be deemed an original, this ____ day of _____, 20__.

ATTEST:

(Principal) Secretary

By _____

(SEAL)

(Witness as to Principal)

(Address)

ATTEST:

(Surety) Secretary

By _____
(Attorney-in-Fact)

(SEAL)

Witness as to Surety

(Address)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute Bond.

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

APPENDIX E

SERVICE AGREEMENT

SERVICE AGREEMENT

LAKESIDE COUNTY WATER & SEWER DISTRICT

This Agreement between the LAKESIDE COUNTY WATER & SEWER DISTRICT (LCWSD), hereinafter referred to as DISTRICT or LCWSD, and _____, hereinafter referred to as DEVELOPER or LANDOWNER;

WITNESSETH:

WHEREAS, the DEVELOPER desires sewer and/or water service from the DISTRICT and it is to the mutual benefit of the DISTRICT and the DEVELOPER to provide an extended sewer and/or water main to the residential property owned by the DEVELOPER and others generally described as the _____ Subdivision, located in Flathead County, near Lakeside, Montana. The purpose of this Agreement is to establish procedures for further planning, quote fees, and provide for a commitment to serve the proposed subdivision. The financial terms expressed in this Agreement are good through _____. After that date, the numbers expressed herein may be revised, as established by the LCWSD Board of Directors' action;

NOW, THEREFORE, in consideration of the mutual covenants herein contained, the parties to this Agreement do hereby agree as follows:

1. SEWER AND/OR WATER MAIN EXTENSION: DEVELOPER shall construct a sewer and/or water main extension to and within the subdivision mentioned herein. All new facilities destined for LCWSD ownership and ongoing maintenance shall be identified on all drawings and is described as the extended sewer and/or water main and all its appurtenances. New sewer and/or water district boundaries shall be identified on all maps. Extension of sewer and/or water must be to LCWSD specifications, with LCWSD engineer approval, prior to construction.
2. COLLECTION SYSTEM: DEVELOPER shall construct a collection system in the subdivision as defined under "*Initial Service Area*" below. Landowners shall, at their expense, install and maintain all sewer and/or water service lines from DISTRICT's main line to each building. Such installations by the DEVELOPER must meet the DISTRICT's ordinance specifications. All collection and service lines will be of a "conventional" sewer and/or water system unless otherwise approved by the District Manager.
3. SERVICE: The DISTRICT shall furnish sewer and/or water service to DEVELOPER subject to the limitations and agreements set forth below and subject to its rules, regulations, and policies for service now in force or as hereafter amended.
4. FEES: For permission to secure capacity for this subdivision, DEVELOPER must pay all District latecomers fees or system development fees, as set forth herein and as may be changed from time to time (see below), for Phase One of the proposed subdivision, to the DISTRICT according to the following schedule:

A. Plant Investment Fee (assume one equivalent user per lot):

- 1) Latecomers pro-rata share of LCWSD basic sewer system Back Capital Costs within "initial service" area (the 1987-88 initial community sewer project, locally financed portion)

(Due and payable at the time of signing this Agreement: \$2,081.00 per Equivalent User)

- 2) System Development Charges for each of the Phase 1 lots, over and above the latecomers' fee, intended to cover the costs to expand the sewer system.

(Due and payable at the completion of the LCWSD service permit): \$ 4,162.00 per Equivalent User)

Subsequent fees will be determined and could escalate periodically based on a variety of factors.

5. PROPERTY SERVED: The DISTRICT shall furnish sewer and/or water service to DEVELOPER for the following described property, also known as Phase One of the proposed subdivision:

Initial Service Area: (All occupied structures in the initial service area will connect to the extended system.)

(Name of Subdivision / Project)

<u>Lot No.</u>	<u>Lot No.</u>	<u>Lot No.</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Total Annexing Parcels or Tracts: _____

Future Service Area: Other parcels not listed above require prior approval by LCWSD and may require an engineering report evaluating LCWSD system impacts.

6. EXPIRATION PERIOD: This Agreement is for five (5) years. If Phase One of the proposed subdivision is not completely built out within five (5) years of the signing of this Agreement, the DEVELOPER forfeits all prepaid fees and assessments paid to the DISTRICT and capacity commitments are available for re-allocation by the DISTRICT.

GENERAL REQUIREMENTS

1. **ANNEXATION REQUIRED:** All property served by the LCWSD system must be annexed into the DISTRICT. Annexation requests will be considered on the basis of system capacity availability.
2. **BILLING ENTITIES:** One billing entity will be established for each Equivalent User.
3. **HOLD HARMLESS:** The LANDOWNER agrees to hold the DISTRICT free and harmless from any and all liability regarding the LANDOWNER lines or regarding the LANDOWNER hooking to the DISTRICT's lines and will indemnify the DISTRICT for any damages caused to the DISTRICT or any of the DISTRICT's property or any third party who makes claims against the DISTRICT. This indemnification and hold harmless clause is intended to be broad in scope and all encompassing. This indemnification and hold harmless extends to the governing board of the DISTRICT, the DISTRICT's Manager or employees, as well as to the DISTRICT itself.
4. **AGREEMENT TO ENCUMBRANCE:** The LANDOWNER specifically agrees that this Agreement shall constitute an encumbrance on the land described above, and this encumbrance shall run with the land and be binding upon subsequent purchasers, assignees, heirs, or any other persons or entities coming into possession of the lands as described above during the term of this Agreement. The DISTRICT will record this Agreement with the Flathead County Clerk and Recorder, but failure of the DISTRICT to so record this Agreement with the Flathead County Clerk and Recorder shall not void the binding effect of this Agreement on subsequent purchasers or subsequent mortgagees. The LANDOWNER has the duty and burden of informing subsequent purchasers, heirs, assigns, mortgagees, or others obtaining an interest in the land of this Agreement.
5. **INGRESS AND EGRESS:** LANDOWNER grants permission to the DISTRICT to enter LANDOWNER's property to make reasonable inspections as the DISTRICT deems necessary and for purposes of repairs, maintenance, operation, replacement, removal, and inspection of DISTRICT lines and service lines. LANDOWNER further agrees that LANDOWNER will not build structures on or over any DISTRICT-owned lines and, in the event of any structure on or over said line, the DISTRICT will have the right to remove said structures at LANDOWNER's cost and the DISTRICT has no obligation to repair or replace said structures.
6. **DESIGN:** The DISTRICT shall have the authority to determine the location and design of any service line connected to its collection system. LANDOWNER shall not make any connection or extension on LANDOWNER's service line for the purpose of supplying sewer service to any other building or land. Each residence shall have its own sewer service line and separate connection to the sewer main.
7. **DEBT REPAYMENT:** In addition to the fees for use, the LANDOWNER may be required, through the Monthly User Fee as determined by the LCWSD Board, to make adjusted payments brought about by increased operation and maintenance costs and construction costs relative to system capacity needs. Parties requesting annexation into the DISTRICT agree that in the event revenues of the DISTRICT are inadequate to pay for operations, maintenance, and debt costs, the DISTRICT has the option to assess lands within the DISTRICT to meet those commitments.
8. **DEFAULTS:** In the event of non-payment or default in any term of this Agreement, the DISTRICT may terminate services or enforce payment or enforce DISTRICT rules and regulations using the appropriate court systems. The LANDOWNER specifically agrees that the DISTRICT may elect to

have any delinquent charges for sewer service collected as a tax against the real property described above, per MCA 7-13-2301.

9. LITIGATION: In the event legal proceedings are instituted to enforce payment or other provisions of this Agreement, the prevailing party shall be entitled to a reasonable attorney fee, as well as costs and disbursements.
10. QUALITY OF SEWAGE: Standards for the quality and content of normal residential wastewater are specified in the ordinances of the DISTRICT. Meeting those standards and ensuring effective effluent odor controls are the sole responsibility of the DEVELOPER or his successors.
11. EASEMENTS: Properly recorded easements, 20 feet wide shall be recorded by the DEVELOPER with the Flathead County Clerk and Recorder in the name of LCWSD for all extended main line facilities. Proof of such recorded easements shall be provided to the DISTRICT before wastewater flows begin.
12. POLICY FOR EXTENSION OF SERVICES: Nothing in this Agreement supersedes or nullifies any of the "*Policies For Extension Of Services*" or ordinances of the DISTRICT.
13. WATER METER REQUIREMENT: Each structure that connects to this extended system shall, at their expense, install a water meter with an external/remote reader that meets DISTRICT standards. The Developer or Builder shall install a meter pit with a pressure relief valve (PRV) when system pressures are at or exceed 85 PSI.
14. WARRANTY PERIOD: Responsibility for all maintenance, repairs, inflow and infiltration problems, and/or any other condition requiring corrective action will remain with the DEVELOPER for one (1) year from the time of the first service connection to the newly extended main line. Following a successful final inspection after the warranty period, LCWSD will assume ownership of the extended main line and all operations and maintenance responsibilities. Before final inspection is complete, DEVELOPER will provide DISTRICT with cost breakdown of main line installation.

DEFINITIONS

1. "Agreement" shall mean this extension agreement.
2. "Design Area" shall mean and include those parcels of land described herein and reflected on the maps and plans of the water and sewer service main line extensions.
3. "District Lines" will mean all existing main lines owned by the DISTRICT and any similar lines being extended by the DEVELOPER to be owned by the DISTRICT at the end of the warranty period.
4. "Equivalent Dwelling Unit" (EDU) equates to one average single-family residence or ¾" water meter.
5. "Expanded Capacity" shall mean 1) all out-of-district service requests and/or 2) in-district service requests exceeding allocated parcel capacity of one EDU per one half acre. NOTE: "Out- of-district" refers to all parcels located outside the current District boundaries.

6. "Extended Sewer Main" shall mean those sewer mains and appurtenances from the existing sewer mains located_____.
7. "Extended Water Main", similarly, shall mean the water mains serving this subdivision from the point of interface with existing DISTRICT mains.
8. "Impact Fee" is the portion of Plant Investment Fees required in order to secure requested sewer system capacity.
9. "Initial Cost" shall mean and include all costs related to the design, construction, and installation of the extended sewer mains.
10. "Initial Service Area" is described as _____
11. "Latecomer" shall mean any entity connecting directly to the extended water and sewer mains.
12. "Plant Investment Fee" is a variable fee (over time) intended to recover an EDU's pro-rata share of the capital cost for the construction and provisioning of the water and sewer systems. This fee is reviewed bi-annually by the DISTRICT Board of Directors for appropriate application.
13. "Sewage," "Effluent," and "Wastewater" are used interchangeably.
14. "Structure" shall mean buildings in which plumbing fixtures are installed and have drainage thereon.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement this _____ day of _____, 20____.

ATTESTED: _____

BY: _____
LAKESIDE COUNTY SEWER DISTRICT

ATTESTED: _____

BY: _____
DEVELOPER

APPENDIX F

DEVELOPER EXTENSION AGREEMENT

DEVELOPER EXTENSION AGREEMENT

LAKESIDE COUNTY WATER & SEWER DISTRICT

This Agreement made and entered into this ____ day of _____, 20__, by and between the LAKESIDE COUNTY WATER & SEWER DISTRICT, hereinafter referred to as DISTRICT, and _____, hereinafter referred to as DEVELOPER.

WITNESSETH:

WHEREAS, it is to the mutual benefit of the DISTRICT and the DEVELOPER to provide an extended sewer main and an extended water main for property owned by the DEVELOPER described as _____, a subdivision located near Lakeside, Montana; and

WHEREAS, the parties to this Agreement desire to provide for the collection of the expenses and costs of the extended sewer main, the extended water main, and the storm sewer installation on the _____;

NOW, THEREFORE, in consideration of the mutual covenants herein contained, the parties to this Agreement do hereby agree as follows:

DEFINITIONS

1. "Agreement" shall mean this *Developer Extension Agreement*.
2. "Design Area" shall mean and include those parcels of land shown on Exhibits _____, attached hereto and incorporated herein by this reference.
3. "Extended Sewer Main" shall mean that sewer main and appurtenances extending from the existing sewer main located in _____, beginning at the _____.
4. "Gravity Service Area" shall mean the parcels of land that are to be served by the Extended Sewer Main, shown as Exhibit _____.
5. "Lift Service Area," as shown on Exhibit __, shall mean the parcels of land that would contribute sewage to the Extended Sewer Main via a tentative lift station and force main. Said lift station and force main are not included in this Agreement.
6. "Extended Water Main" shall mean that water main and appurtenances extending from the existing water main located nearest _____, to the end of the new water extension as shown on Exhibit _____.
7. "Water Service Area" shall mean the parcels of land that are to be served by the Extended Water Main as shown on Exhibit _____.

8. "Latecomer" shall mean the entity connecting to the Extended Sewer and/or Water Mains, contributing sewage to the Extended Sewer Main, receiving water from the Extended Water Main, and/or who did not share in the initial cost of the Extended Sewer and/or Water Mains.
9. "Initial Cost" shall mean and include all costs related to the installation of the Extended Sewer and Water Main, which shall consist of the design and inspection fees and the construction costs.
10. "Entity" shall mean an owner's specific parcel of land shown on Exhibits _____, attached, and shall mean the owner of each dwelling unit.
11. "Escrow Agent" shall mean _____, whereto the Latecomer pays the stipulated fee and from which disbursement is made to the DEVELOPER.

PERIOD OF AGREEMENT

This Agreement shall be in effect for a period of 15 years after completion of the Extended Sewer Main and Water Main and installation of the storm sewer. The date of completion is hereby established as _____. Therefore, the termination date shall be _____. Upon the termination of this Agreement, the DEVELOPER shall not be entitled to any further latecomer fees.

During the period of the Agreement, the DISTRICT shall have the right to allow other entities outside the service areas, shown on Exhibits _____, to connect to the Extended Sewer Main and to the Extended Water Main without payment of any fee to the DEVELOPER.

INITIAL COST

The DEVELOPER shall pay an initial cost of constructing the Extended Sewer Main and the Extended Water Main. The initial cost is herein established as follows:

EXTENDED SEWER MAIN

Total Service Area: _____

Total Cost: _____

Cost Per Acre: _____

Gravity Service Area: _____

Tract Area In Acres

Established Fee

SUBTOTAL - Gravity Service Area: _____

Lift Service Area: _____

Tract Area In Acres

Established Fee

SUBTOTAL - Lift Service Area: _____

TOTAL: _____

EXTENDED WATER MAIN

Total Service Area: _____

Total Cost: _____

Cost Per Acre: _____

Tract Area In Acres

Established Fee

TOTAL: _____

The above established fees shall be increased 13 percent on each 12-month anniversary date of this Agreement.

GUARANTEE AND MAINTENANCE

The DISTRICT shall maintain the acceptably constructed Extended Sewer Main. However, the DEVELOPER shall replace or repair any defect in material or workmanship for a period of one (1) year after the foregoing completion date.

DISTRICT FEES

The DISTRICT shall receive payment for establishing usage and connecting fees, in accordance with the DISTRICT rate schedule.

ESTABLISHING AN ESCROW AGENT

The DEVELOPER shall pay all costs in establishing and maintaining the escrow account.

LATECOMER'S FEE TO DEVELOPER

With the exception of Tracts _____, which are lots owned by the DEVELOPER and were the cause of the Extended Sewer Main and Extended Water

Main, the DISTRICT shall not issue any permits for connection to the Extended Sewer Main or the Extended Water Main, or any connection that will contribute to the Extended Sewer Main or receive water from the Extended Water Main, or any entity that shall contribute to the Storm Drain, or permits to allow any curb cuts to an entity, unless said entity presents a receipt evidencing payment of the fees required herein from the escrow agent to the DISTRICT at the time the entity makes application for a permit to connect, nor will the DISTRICT allow any properties in the Gravity Service Area, Lift Service Area, and/or Water Service Area to be connected without paying the latecomer's fee included herein. Latecomers that must extend the main lines beyond this subdivision, in the future, are not subject to the DEVELOPER reimbursement terms contained herein.

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

ATTESTED: _____ BY: _____
LAKESIDE COUNTY SEWER DISTRICT

ATTESTED: _____ BY: _____
DEVELOPER

APPENDIX G

PRE-CONSTRUCTION CONFERENCE

PRE-CONSTRUCTION CONFERENCE

LAKESIDE COUNTY WATER & SEWER DISTRICT

DATE _____

TIME _____

LOCATION _____

1. ORGANIZATION REPRESENTATIVES

Phone No. Present

A. Owner / Developer	_____	_____
B. Lakeside County Water & Sewer District	_____	_____
C. Project Manager	_____	_____
D. Principal Engineer	_____	_____
E. Project Engineer	_____	_____
F. Contractor	_____	_____
G. Contractor's Superintendent	_____	_____
H. Utility Contacts	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

2. CONTRACT

A. Properly executed	_____
B. Labor & Material Payment Bond	_____
C. Performance Bond	_____
D. Insurance	_____
E. Contract Amount	_____
F. Contract Time	_____
G. Notice of Award	_____
H. Notice to Proceed Date	_____
I. Start Work Date	_____
J. Completion Date	_____
K. Liquidated Damages	_____
L. Lien Releases: Performance	_____
Supplies	_____

3. RESPONSIBILITIES OF PARTIES

A. CONTRACTOR

1. Construct project in accordance with contract documents.
2. Supervise all work crews and subcontractors.
3. Ensure safety of all workers on site in accordance with OSHA Regulations.
4. Notify all utility companies, in writing, and request locations of utilities prior to starting project work.

B. ENGINEER

1. Observe construction and provide quality assurance.
2. Interpret contract documents.
3. Advise owner on contract matters.
4. Review and certify monthly pay requests and any change orders.

C. LAKESIDE COUNTY WATER & SEWER DISTRICT

1. Observe construction and inspection.
2. Consult with project engineer.
3. Supervise testing requirements.
4. Provide warranty inspection and acceptance.

D. OWNER

1. Payment in accordance with contract documents.
2. Contract signatory and final decision on contractual matters.

E. COMMUNICATIONS

1. To and from contractor shall be through the engineer.

4. SUBMITTALS

A. CONSTRUCTION SCHEDULE

1. Typewritten memo or bar chart.
2. Review and update requirements in Supplemental General Conditions.

B. SHOP DRAWINGS

1. Master list with schedule.
2. Submitted by prime contractor only.
3. Operations and maintenance information.
4. To be submitted in copies of five (5).

C. LIST OF SUBCONTRACTORS

5. UTILITY LOCATIONS AND COORDINATION

6. EASEMENTS AND SITE ACCESS

7. TRAFFIC PLAN

- A. To be submitted by Contractor and reviewed by engineer.
- B. Coordination of essential services and notification procedure shall be the responsibility of the contractor (law enforcement; fire; ambulance; school bus; road reports).
- C. Truck routing.

8. MATERIAL DISPOSAL AND CLEAN-UP

- A. Disposal site(s) identified.
- B. Written permission of property owner provided to grantee.
- C. Daily clean-up.
- D. Wetlands cannot be filled on private or public property.

9. MATERIALS STORAGE

- A. Location.
- B. Written permission by owner.
- C. Secured.
- D. Prior to payment, conform to shop drawings and O&M information provided.

10. PERMITS

- A. Building (local and State may be required)

- B. Construction de-watering - WQ

- C. 310 Permit: County Conservation District

- D. 124 Permit: Fish, Wildlife & Parks

- E. Floodplain: local floodplain authority _____
- F. State blasting permit _____
- G. Road encroachment permit(s):
 - County _____
 - State _____
 - Private _____

10. PROGRESS MEETINGS AND REPORTS

- A. Project Engineer, Inspector, Contractor, Lakeside County Water & Sewer District, and Owner -- *Bi-monthly report by Engineer.*
- B. Schedule -- *Updated weekly.*

12. PAYMENT

- A. Monthly estimate preparation.
- B. Cut-off date: _____
- C. Invoices for materials in storage: *Documented with paid invoice.*
- D. Certified payrolls: *Submitted* _____ *to* _____
- E. Retainage: _____
- F. Lien releases from suppliers to Lakeside County Water & Sewer District.

13. PAYROLLS

- A. Wage Decision No.: _____
- B. Payrolls checked by: _____
- C. Subcontractor compliance is responsibility of prime Contractor.
- D. Superintendent and owner-operators shown on payroll.
- E. Certified by grantee at completion.
- F. Overtime provisions (overtime over 40 hours per week).

14. CHANGE ORDERS

- A. All contract change orders in writing.
- B. Cost breakdown, negotiation, and engineer's estimate (if no unit prices).
- C. Stop and start work in writing (recommend no-cost change order).

15. RECORD DRAWINGS (AS-BUILTS)

- A. Contractor's responsibility: *One copy delivered to within* _____ *days of project completion.*
- B. Withhold final payment until received.
- C. Three (3) copies of drawings to Lakeside County Water & Sewer District.
- D. Drawing shall include GPS locations of installed infrastructure in the state plane coordinate system.

16. STAKING

- A. Control stake-out: *Completed / To Be Completed.*
- B. Job stake-out: *Completed / To Be Completed.*

17. TESTING

- A. Payment: *Passing tests paid by Contractor.*
- B. Tests requiring Engineer's observation: *Compaction, Deflection, Air, Hydraulic, Television.*
- C. Re-test payment: *Paid by Contractor.*
- D. Laboratory/Company: _____
- E. Contractor to submit proctor test for all fill material.
- F. Final acceptance tests: *Pressure Test, Hydrostatic Test, Televised Inspection.*

18. SAFETY

- A. Trenching practices: *In accordance with OSHA.*
- B. Hard hats: *Required at all times on job site.*
- C. Weekend clean-up: *Close pits or properly sign.*
- D. Engineer to notify appropriate government agency of serious or frequent violations.

19. TEMPORARY SERVICES

- A. Field office with telephone.
- B. Toilets.
- C. Water.
- D. Electricity.

20. LOCAL CONDITIONS

- A. Work hours.
- B. Dust, noise, and burning.
- C. Public safety.

21. PROJECT SIGN _____

22. POSTINGS _____

23. OTHER ITEMS

Prepared by _____

APPENDIX H

TRANSFER AGREEMENT

TRANSFER AGREEMENT

(Example)

THIS AGREEMENT, made and entered into this ____ day of _____, 20____, by and between the **LAKESIDE COUNTY WATER & SEWER DISTRICT**, 253 Bierney Creek Rd., Lakeside, Montana, hereinafter referred to as the "**District**" and _____

_____, hereinafter referred to as the "**Developer**".

WHEREAS, the District is a County Water & Sewer District certified by the Montana Secretary of State under Title 7, Montana Code Annotated (MCA); and,

WHEREAS, the District is staffed with System Operators, Montana State-certified for water and wastewater operations with certification maintained through annual training sessions required by the State; and,

WHEREAS, the District is willing to assume the ownership of said system assuming certain criteria can be met to the satisfaction of the District and to the benefit of the District customers; and,

WHEREAS, both parties are willing to enter into an Asset Transfer Agreement without an interim maintenance contract period, whereby the District could enjoy a period of discovery for unidentified items requiring correction before ownership changes. Both parties agree that a _____ warranty period will suffice in lieu of an interim maintenance contract; and,

WHEREAS, the Developer agrees to correct any known deficiencies, before the end of the warranty period; and,

WHEREAS, the water and wastewater system users are future or current "water" and or "sewer" customers of the District, and all water and sewer installation properties are located within the boundaries of the District.

NOW, THEREFORE, in consideration of the mutual covenants herein set out on the part of each of the parties kept and to be performed, it is agreed as follows:

A. Transfer of Water and Wastewater Collection System: The Developer for good and valuable consideration, transfers to the District, the Water and Wastewater Collection System more particularly described on Exhibit "A", attached hereto;

B. Assignment of Easements: The Developer hereby grants, transfers, and assigns all easements necessary for the repair, maintenance, and replacement of the various components of the wastewater collection system as identified on engineering drawings prepared by _____.

C. Appraisal of System: The District will conduct its own evaluation of the value and remaining life of the various water and wastewater system components. The current value is estimated at _____.

\$_____ for the Water and \$_____ for the Sewer System for the complete project total value of \$_____.

D. Warranty: The Developer warrants, for a period of one year, the entire water and wastewater collection system, more particularly set forth in Exhibit "A" attached hereto, for any and all repairs, maintenance, and replacement of the various components of the water and wastewater collection system and agrees to reimburse the District for any costs expended by the District for such repairs to the wastewater collection system during said warranty period.

E. Cost of Water and Wastewater Collection Service: There will be no change in "Water " or "Sewer" service charges from the District as a consequence of the ownership change.

F. Rules and Regulations of the District: Other than as provided herein, all rules, regulations, policies and procedures of the District will apply to the water and sewer users affected by this Agreement.

G. Disputes – Binding Arbitration: In the event of any disputes arising between the parties relative to any provisions of this Agreement, such dispute or disputes shall be subject to binding arbitration, pursuant to the Montana Uniform Arbitration Act, §27-5-111, MCA, et seq. Each party shall choose an arbitrator. The arbitrators so chosen will then choose an additional arbitrator. The three (3) arbitrators will then decide the matter or matters in dispute, and their decision will be binding on all parties hereto and enforceable by a Court of Law.

H. Binding Effect: This Agreement shall be binding upon each party's agents, agencies, political subdivisions, servants, representatives, employees, heirs, successors, personal representatives, and assigns.

I. Entire Agreement: The parties agree that no promise or inducement that is not herein expressed has been made to them; and that in executing this Agreement, they do not rely upon any statement or representation made by any person, firm, or corporation hereby released or by any agent, attorney, insurer, or other person representing the parties.

J. Contractual: The parties agree and acknowledge that the terms of this Agreement are contractual and not a mere recital.

K. Authority: The undersigned representatives represent and warrant that they, respectively, have the right and authority to execute the within Agreement and to legally bind said entities, that do so of their free act and deed; and that they, respectively, have not sold, assigned, transferred, conveyed or otherwise disposed of any claims or potential claims relating to any matter covered by this Agreement.

L. Construction: It is expressly acknowledged and understood by the parties that since each party has cooperated and assisted in the drafting and preparation of this Agreement, in any future construction of this Agreement, it shall not be construed against any party to it on the basis that the party was the drafter of this Agreement.

DATED this _____ day of _____, 20_____.

THE LAKESIDE COUNTY WATER & SEWER DISTRICT

By: _____
President

By: _____
Representative

Lakeside County Water and Sewer District
253 Bierney Creek Road
Lakeside, Montana 59922

STATE OF _____)

) ss.

County of _____)

On this_____ day of_____, 20____, before me, the undersigned, a Notary Public for the State of_____, personally appeared _____, known to me to be the person(s) whose name(s) are subscribed to the within instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed Notary Seal the day and year first above written.

Notary Public for the State of

(SEAL)

Residing at:

My Commission Expires:_____

APPENDIX I

ENCHROACHMENT APPLICATION AND PERMIT

Return to: LAKESIDE COUNTY WATER & SEWER DISTRICT
253 Bierney Creek Rd.
Lakeside, MT 59922

ENCROACHMENT APPLICATION AND PERMIT

(Easement Affected) _____ (Account Number) _____.

APPLICATION FOR PERMIT TO: Water _____ Sewer _____

Nature of Permit desired: (Give sufficient detail to permit thorough understanding and submit blueprints or sketches of proposed installation.

1. Name of Applicant(s): _____
2. Address of Encroachment: _____
3. Legal description of property involved: _____
4. Physical sewer/water location at or near which installations or structures will be installed: _____

5. For how long a period is the permit desired? _____
6. REMARKS: _____

Dated at _____, Montana, this _____ DAY OF _____, 20____

(Signature of Applicant)

(Signature of Applicant)

APPROVED:

LCWSD General Manager

Date

INSTRUCTIONS AND CONDITIONS CONCERNING USE OF THIS FORM

Applicant will complete this form in duplicate and transmit it to the LCWSD General Manager, along with a Flathead County filing fee of \$_____ (\$8.00/Page). When the application is approved and applicant has signed acceptance, a notarized copy will be delivered to him, and an original filed on record at the Flathead County Court House. If Permittee desires, he may sign acceptance at time of signing application. A completed copy of this form shall accompany the request for service before connection to any facility owned or operated by the LCWSD, subject to the terms and conditions described herein.

PERMIT

1. **TERM** - This permit shall be in full force and effect from the date hereof until revoked as herein provided.
2. **REVOCATION** - Permanent encroachment, but the LCWSD reserves the right to revoke this permit without giving said notice in the event Permittee breaks any of the conditions or terms set forth herein.
3. **COMMENCEMENT OF WORK** - No work shall be commenced until Permittee notifies the LCWSD General Manager, in writing, when he proposes to commence work.
4. **CHANGES IN SEWER/WATER FACILITIES** - If LCWSD changes sewer or water facilities necessitating changes in structures or installations installed under this permit, Permittee shall make necessary changes without expense to LCWSD.
5. **LCWSD SAVED HARMLESS FROM CLAIMS** - In accepting this permit, the Permittee, its/his/her successors or assigns, agree to protect the LCWSD and save it harmless from all claims, actions or damage of every kind and description which may accrue to, or be suffered by, any person or persons, corporations or property by reason of the performance of any such work, character of materials used, or manner of installations, maintenance and operation, or by the improper occupancy of said LCWSD easement; and in case any suit or action is brought against the LCWSD and arising out of, or by reason of, any of the above causes, the Permittee, its/his/her successors or assigns, will, upon notice to it/him/her of the commencement of such action, defend the same at its/his/her sole cost and expense and satisfy any judgement(s) which may be rendered against the LCWSD in any suit or action.
6. **RUBBISH AND DEBRIS** - Upon completion of work contemplated under this permit, all rubbish and debris shall be immediately removed, and the affected area left in a neat and presentable condition satisfactory to the LCWSD.
7. **WORK TO BE SUPERVISED BY LCWSD** - All work contemplated under this permit shall be done under the supervision of and to the satisfaction of the authorized representative of the LCWSD; and the LCWSD hereby reserves the right to order the change of location or removal of any structure or installation authorized by this permit at any time. Said changes or removal to be made at the sole expense of the Permittee.
8. **LCWSD's RIGHT NOT TO BE INTERFERED WITH** - All such changes, reconstruction or relocation shall be done by Permittee in such a manner as will cause the least interference with any of the LCWSD's work; and the LCWSD shall in no way be liable for any damage or injury to the Permittee by reason of any such work by the LCWSD, its agents, contractors or representatives, or by the exercise of any rights by the LCWSD upon the water or sewer systems affecting the installations or structures placed under this permit.
9. **REMOVAL OF INSTALLATIONS OR STRUCTURES** - Unless waived by the LCWSD, upon termination of this permit, the Permittee shall remove the installations or structures contemplated by this permit and restore the premises to the condition existing at the time of entering upon the same under the permit. Reasonable and ordinary wear and tear and damage by the elements, or by circumstances over which the Permittee has no control, excepted.
10. **MAINTENANCE AT EXPENSE OF PERMITTEE** - Permittee shall maintain, at its/his/her sole expense, the installations and structures for which this permit is granted, in a condition satisfactory to the LCWSD

11. **LCWSD NOT LIABLE FOR DAMAGE TO INSTALLATIONS** - In accepting this permit, the Permittee agrees that any damage or injury done to said installations or structures by a contractor working for the LCWSD, or by an LCWSD employee engaged in construction, alteration, repair, maintenance or improvement of the LCWSD facilities, shall be at the sole expense of the Permittee.

12. **LCWSD TO BE REIMBURSED FOR REPAIRING FACILITIES** - Upon being billed, therefore, Permittee agrees to promptly reimburse LCWSD for any expense incurred in repairing sewer/water pipe(s) due to settlement at installation, or for any other damage to facilities as a result of the work performed under this permit.

13. **OTHER CONDITIONS AND/OR REMARKS** _____

The undersigned, the "Permittee" or "Applicant" mentioned in the foregoing instrument, hereby accepts this permit, together with all terms and conditions set forth herein.

Permittee

(Place)

(Date)

Permittee

State of _____)

) ss

County of _____)

On this ____ day of _____, 20 , _____,

personally appeared before me whose identity I verified on the basis of his/her _____, to be the person(s) who signed the above document and proved to be the person(s) whose name is subscribed to this instrument.

Notary Public for the State of Montana Signature

Notary Public printed name

Residing at _____

My commission expires: _____