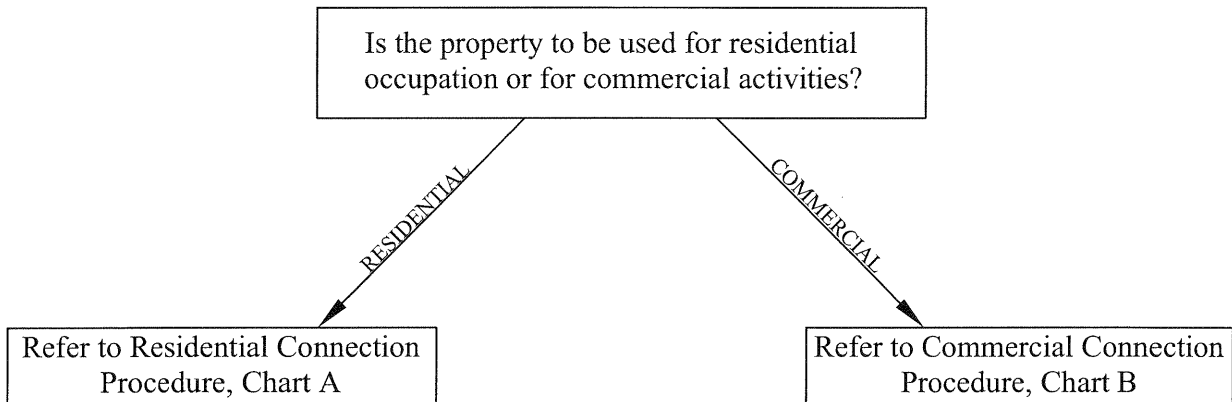


CONNECTION GUIDELINES FOR UTILITY SOLUTIONS, LLC WATER SYSTEM

BLACK BULL SUBDIVISION
MIDDLE CREEK PARKLANDS SUBDIVISION

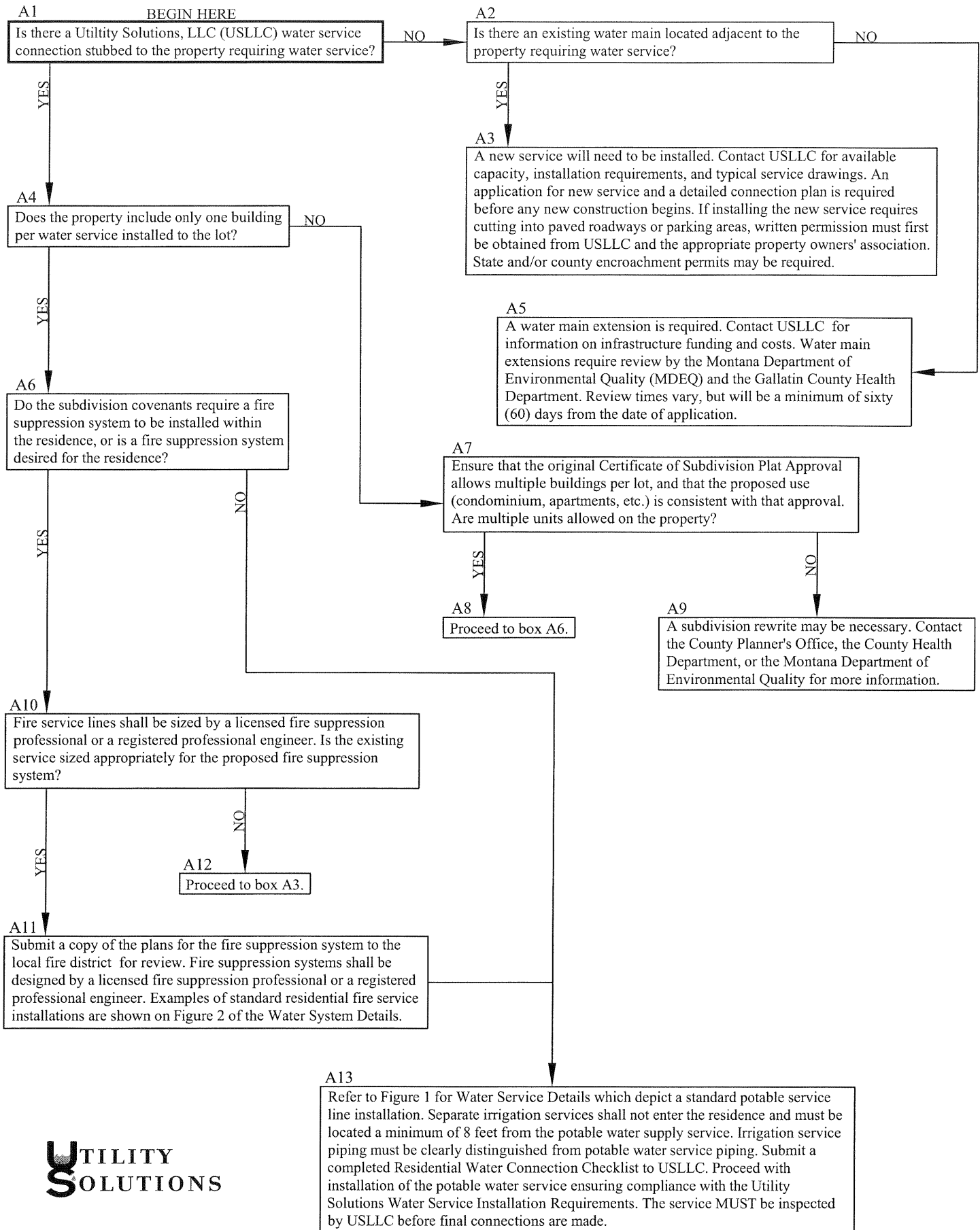


P.O. Box 10098
Bozeman, MT 59719
Tel.: (406) 585-4166
Fax: (406) 585-4169



Revision 2008-1

CONNECTION GUIDELINES FOR UTILITY SOLUTIONS, LLC WATER SYSTEM RESIDENTIAL, CHART A



P.O. Box 10098
 Bozeman, MT 59719
 Tel.: (406) 585-4166
 Fax: (406) 585-4169



Residential Service

Completed by USLLC
 Completed by Builder

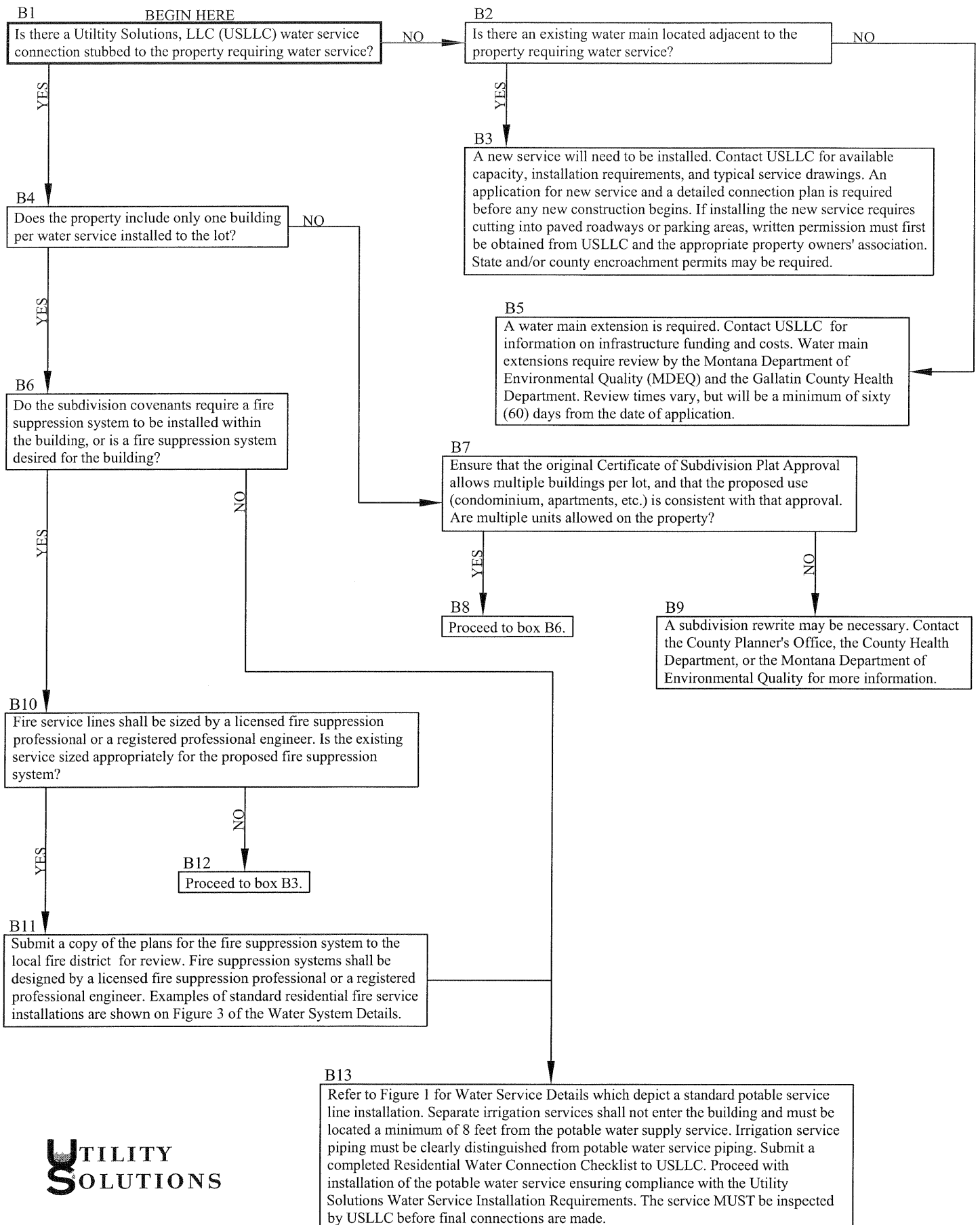
Subdivision: _____ Block: _____ Lot: _____
 Owner: _____ Ph: _____
 Builder/Applicant: _____ Ph: _____

- Service installed from water main to lot/parcel
- Service size meets fire protection requirements
- One water service per building
- One water meter and curbstop per dwelling unit
- Curbstop brought to finished grade and accessible
- All underground plumbing associated with service extension performed by licensed plumbers
- 6.5' minimum cover placed over service line
- Backflow prevention device installed inside building (Watts L 7 Dual Check ONLY)
- Backflow prevention device attached directly to meter coupling
- Water meter installed inside building
- Water meter includes remote-reading capabilities (Sensus Model SR EC)
- Shut-off valves located before and after water meter to facilitate replacement/repair
- Minimum 6" vertical separation at sewer crossings
- Minimum 8' horizontal separation between water and sewer services
- Minimum 8' horizontal separation between potable water and irrigation services
- IRRIGATION SERVICE DOES NOT CONNECT IN ANY WAY TO POTABLE WATER SERVICE OR ENTER THE BUILDING
- Utility Solutions, LLC notified at least ONE (1) business day in advance when the service is ready for inspection and connection to the public water system
- As-built drawing provided (8.5"x11" paper)

For USLLC use only

Inspected by:	Date/Time:	Approval given: Y / N
---------------	------------	-----------------------

CONNECTION GUIDELINES FOR UTILITY SOLUTIONS, LLC WATER SYSTEM COMMERCIAL, CHART B



P.O. Box 10098
 Bozeman, MT 59719
 Tel.: (406) 585-4166
 Fax: (406) 585-4169



Commercial Service

Completed by USLLC
 Completed by Builder

Subdivision: _____ Block: _____ Lot: _____
 Owner: _____ Ph: _____
 Builder/Applicant: _____ Ph: _____

- Service installed from water main to lot/parcel
- Service size meets fire protection requirements
- One water service per building
- One water meter and shut-off per building
- Curbstops/blow-offs brought to finished grade and accessible
- All underground plumbing associated with service extension performed by licensed plumbers
- 6.5' minimum cover placed over service line
- Backflow prevention device installed inside building or meter pit
- Backflow prevention device attached directly to meter coupling
- Water meter installed inside building or in meter vault
- Water meter includes remote-reading capabilities (Sensus Model SR EC)
- Shut-off valves located before and after water meter to facilitate replacement/repair
- Minimum 6" vertical separation at sewer crossings
- Minimum 8' horizontal separation between water and sewer services
- Minimum 8' horizontal separation between potable water and irrigation services
- IRRIGATION SERVICE DOES NOT CONNECT IN ANY WAY TO POTABLE WATER SERVICE OR ENTER THE BUILDING
- Utility Solutions, LLC notified at least ONE (1) business day in advance when the service is ready for inspection and connection to the public water system
- As-built drawing provided (8.5"x11" paper)

For USLLC use only

Inspected by:	Date/Time:	Approval given: Y / N
---------------	------------	-----------------------

P.O. Box 10098
Bozeman, MT 59719
Tel.: (406) 585-4166
Fax: (406) 585-4169

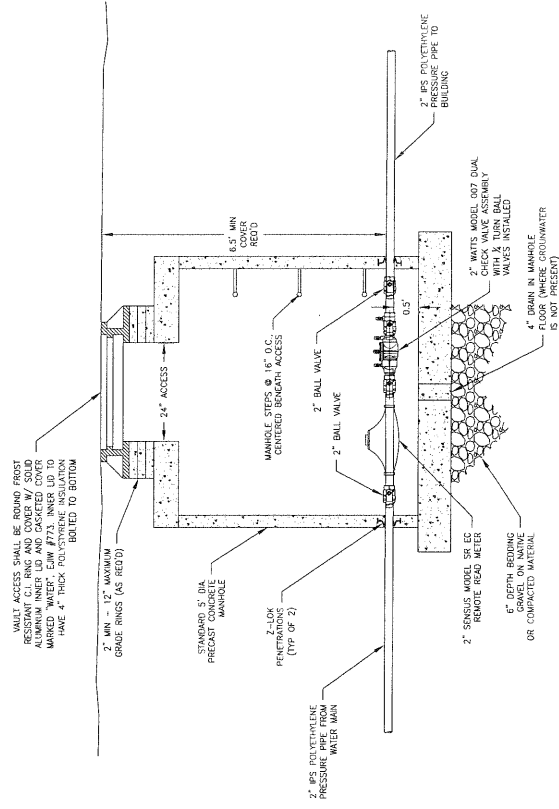
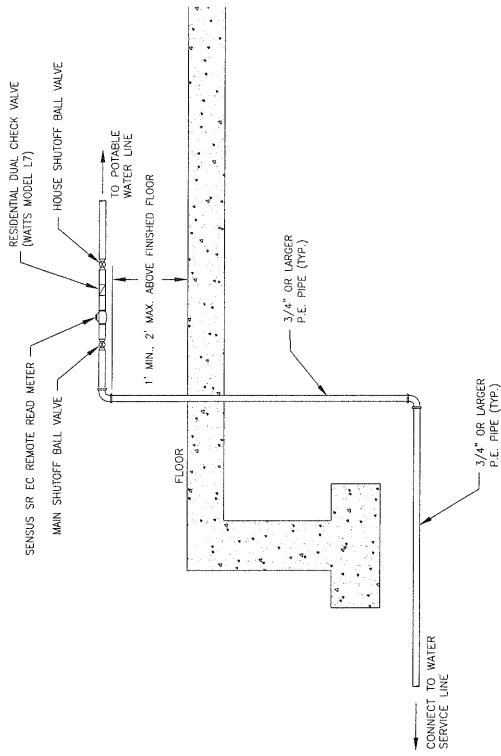
Connection to the Utility Solutions, LLC Water and Wastewater system must follow these guidelines:

1. The owner is responsible for the cost of the sewer and water services from the building to the lateral stub at the property line.
2. The owner or their contractor is responsible for finding the sewer lateral stub but the owner/contractor may contact Utility Solutions, LLC to assist with the location. The owner and contractor are solely responsible for damage to water or sewer infrastructure associated with water and sewer service installation.
3. All underground plumbing must be done by licensed plumbers.
4. All connections to Utility Solutions, LLC public sewer & water systems shall be to the sewer lateral stub and/or water service curb stop at the lot line. If a sewer lateral stub and/or water service curb stop have not been stubbed to the lot line, then the Owner will be responsible for the cost of installing a lateral and/or curb stop from the main line to the property line. Shop drawings must be submitted by the contractor and approved by Utility Solutions, LLC for connection to any water or sewer main line.
5. All sewer laterals and water services must be constructed and laid in accordance with the Montana Public Works Standard Specifications, DEQ requirements, Utility Solutions, LLC Standard Specifications, and Regulations of the Four Corners County Water & Sewer District which include, but are not limited to:
 - a. Pipe Bedding- 4 inches under lateral and 6 inches over lateral piping, using 1 inch minus washed bedding material is required.
 - b. Minimum Slope-All sewer laterals must be installed at a minimum slope of 2.00% (1/4" PER FOOT) unless otherwise approved in writing.
 - c. Clean Outs-One clean out sweep is required within 3 feet from the building, and a double sweep tee every 100 feet thereafter in accordance with the Uniform Plumbing Code.
 - d. Accessibility-All CLEANOUTS and CURBSTOPS will be readily accessible and operational at the completion of the project.
 - e. Water meters shall be installed indoors, with a remote reading device wired to the outside of the establishment. Shut-off valves are required immediately before and after the water meter to facilitate replacement and/or repair.
 - f. Multi-family housing requires a water meter and curb stop for every unit. Commercial buildings require one curb stop and water meter per building.
 - g. ALL CONNECTIONS TO WATER AND SEWER MAIN LINES MUST BE APPROVED IN WRITING BY UTILITY SOLUTIONS, LLC.
 - h. CUTTING INTO ASPHALT ROADWAYS FOR WATER AND SEWER INSTALLATION SHALL REQUIRE WRITTEN PERMISSION FROM UTILITY SOLUTIONS, LLC AND THE APPLICABLE PROPERTY OWNERS ASSOCIATION ALONG WITH APPROPRIATE STATE AND COUNTY ENCROACHMENT PERMITS AS NECESSARY.
 - i. Backflow prevention devices are required on all services, as well as sprinkler and irrigation systems in accordance with the Uniform Plumbing Code (UPC-2003).
 - j. Backflow assembly must be directly attached to meter coupling unless prior approval has been obtained. Watts 007 Dual Check is the only back flow prevention allowed for single family homes and multi-family residential. Shut-Off Valves on backflow assemblies are not accepted as down stream Shut Off Valves.
 - k. All water and sewer work including materials, equipment, and labor shall be guaranteed for a period of 1 year from completion and acceptance. A written warranty shall be provided to Utility Solutions, LLC.
6. Provisions for pre-treatment are required when in the judgment of Utility Solutions, LLC that such waste pretreatment is essential to produce residential-type wastewater. An approved type of grease trap complying with the provisions of the Uniform Plumbing Code (UPC-2003) Ch.10 shall be installed in the waste line leading from sinks, drains, and other fixtures or equipment in establishments such as restaurants,

P.O. Box 10098
Bozeman, MT 59719
Tel.: (406) 585-4166
Fax: (406) 585-4169

bars, hotels, or other establishments where grease may be introduced into the sewage system in quantities that can effect line stoppage or hinder sewage treatment. A grease trap is generally not required for individual residential dwelling units. Other types of pollutants such as metals, VOCs, sediments, chemicals, ect. must have a pre-treatment facility designed and approved prior to construction. Utility Solutions, LLC reserves the right to reject wastewater that is not residential-type.

7. No floor drains may be connected to the sewer system.
8. All sewer laterals and water services must be inspected by a representative from Utility Solutions, LLC prior to backfilling over the sewer and water services.
9. The sewer and/or water lateral contractor will make accommodations for Utility Solutions, LLC representatives for the safe inspection of the work and must give Utility Solutions, LLC at least ONE (1) business days advance notice when the laterals are ready for inspection and connection to the public sewer and/or water systems.
10. In areas where groundwater conditions necessitate dewatering, the contractor shall use appropriate dewatering equipment and comply with all local and state regulations. The contractor shall not allow groundwater to enter any part of the District's water distribution or sewer collection systems.
11. The contractor is responsible for the removal of any mud, sand, or other debris which enters the water or sewer system lateral piping as a result of the lateral installation procedure.
12. The sewer lateral and/or water service contractor is responsible for any damages, or disturbance to the public right-of-way and roads. Restoration of the public right-of-way and/or roads will be the responsibility of the sewer lateral and/or water service contractor. The restoration work must be completed in a manner that is satisfactory to all parties involved and a 2 year written warranty relating to trench backfill and asphalt pavement shall be issued.
13. Sewer laterals and water service laterals shall not be laid in a common trench. At least 8 feet of separation must be maintained without prior approval of the District. If sewer & water lines cross, at least 6 inches of separation must be maintained.
14. A separate water service for irrigation may not terminate within the foundation of a structure, shall maintain 8' separation from the potable water main, shall be buried below frost depth prior to winterization apparatus, and have markings of "Non-Potable Water".
15. As-built drawings showing the locations of water and sewer service lines shall be provided to Utility Solutions, LLC prior to service initiation. The as-built drawing shall be legible on a minimum 8.5"x11" page and include pipe types, pipe sizes, slopes, cleanouts, curb stops, valves, distances from building corners or other permanent improvements, and any other applicable information.
16. Residential and Commercial structures shall be constructed with automatic fire sprinkler systems if deemed required by the Fire District or in the subdivision covenants. Fire sprinkler systems shall meet the requirements of NFPA 13D/Uniform Fire Code. A stamped set of engineered sprinkler system plans shall be submitted to the Fire District prior to construction. Fees and inspections shall be coordinated with the Fire District. Fire service line installation including valves, metering, and backflow prevention shall conform to Utility Solutions, LLC Standard Specifications.



3 COMMERCIAL METERING VAULT
SCALE: NTS

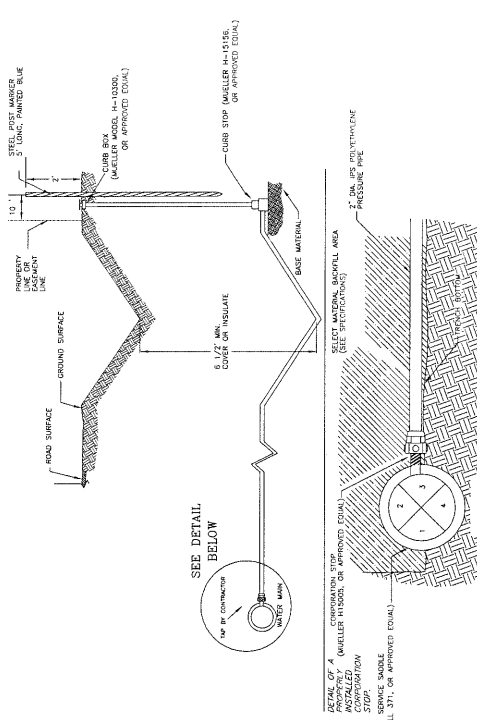


801 Technology Park
Bozeman MT 59718
Phone: (406) 597-0721
Fax: (406) 597-1176
computer@maierle.com
commercial@maierle.com

DRAWN BY: INC.
CHECK BY: DWK
APPROVED BY: ELS
DATE: 08/02/07

BOZEMAN
UTILITY SOLUTIONS, LLC
WATER SYSTEM DETAILS
WATER SERVICE DETAILS

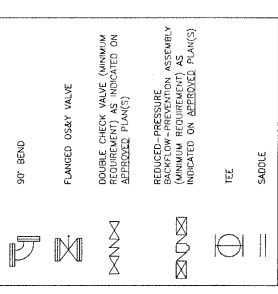
PROJECT NO.
3769.018
MONTANA
FIGURE NUMBER
FIG. 1



GENERAL NOTES:
 1. WATER SERVICE LINES SHALL HAVE A MINIMUM 6 1/2 FOOT COVER MEASURED FROM PIPE EXISTING GROUND SURFACE.
 2. WATER SERVICE LINES SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS OR AS SPECIFIED.
 3. BIDDING SHALL BE 1" DIA. MAXIMUM WITHIN 6' OF SERVICE PIPE.

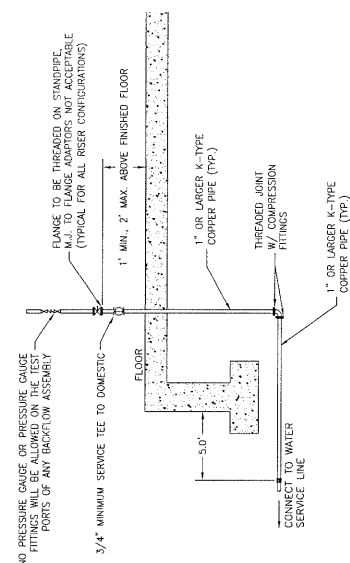
5 WATER MAIN CONNECTION
 SCALE: NTS

LEGEND

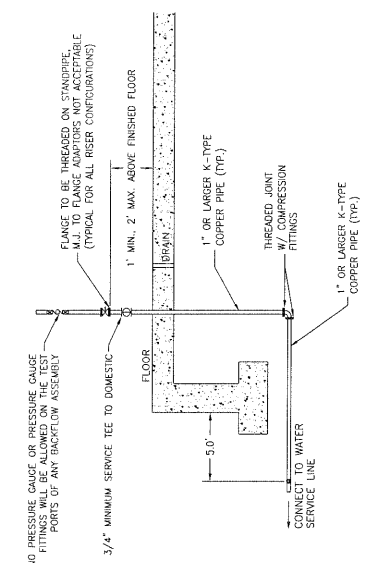


6 DOMESTIC CONNECTION
 SCALE: NTS

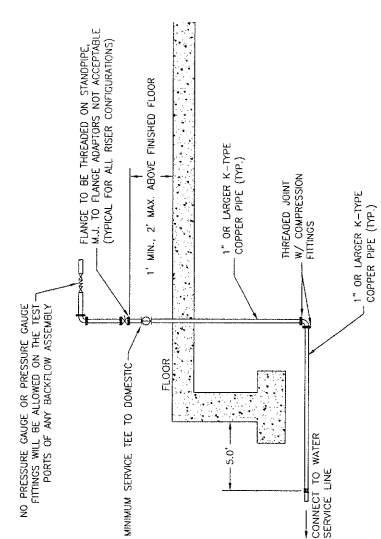
NOTE: PROVIDE FLEXIBLE, WATER-TIGHT CONNECTION FOR ALL FLOOR PIPE PENETRATIONS.



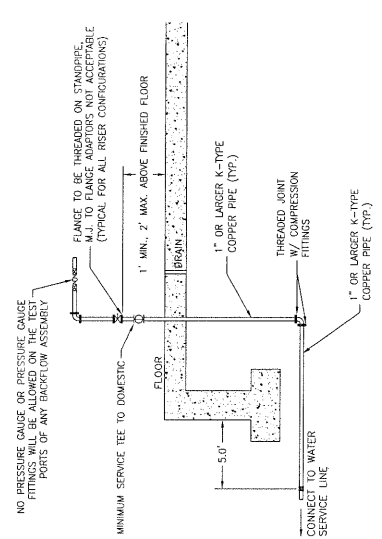
2 STANDARD FIRE SERVICE LINE INSTALLATION
 OPTION 2 FOR CLASS I, II, & III SYSTEMS
 SCALE: NTS



4 STANDARD FIRE SERVICE LINE INSTALLATION
 OPTION 2 FOR CLASS IV & V SYSTEMS
 SCALE: NTS



1 STANDARD FIRE SERVICE LINE INSTALLATION
 OPTION 1 FOR CLASS I, II, & III SYSTEMS
 SCALE: NTS



3 STANDARD FIRE SERVICE LINE INSTALLATION
 OPTION 1 FOR CLASS IV & V SYSTEMS
 SCALE: NTS

MORRISON MAIBERLE, INC.
 An Employee-Owned Company

Engineers
 Surveyors
 Architects

501 Richardson Blvd.
 Bozeman, MT 59718
 Phone: (406) 597-2771
 Fax: (406) 597-1776

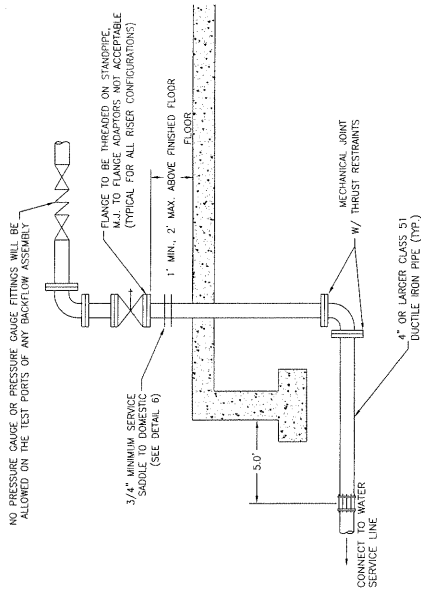
11370000 BACKFLOW SERVICE EB DWG. Printed by mcs:baikawa on 10/02/2008

PROJECT NO. 3708-018
 FIGURE NUMBER **FIG. 2**

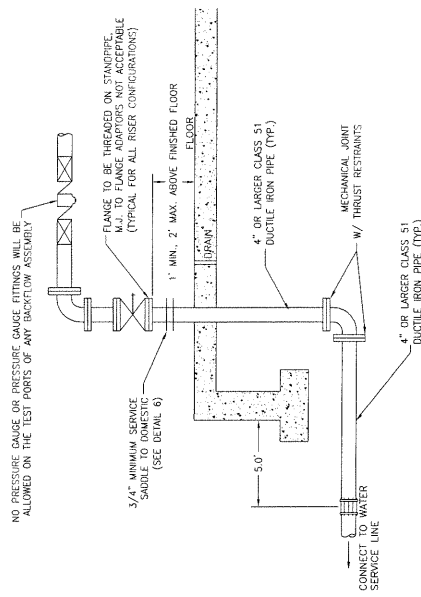
UTILITY SOLUTIONS, LLC
 WATER SYSTEM DETAILS

BOZEMAN MONTANA

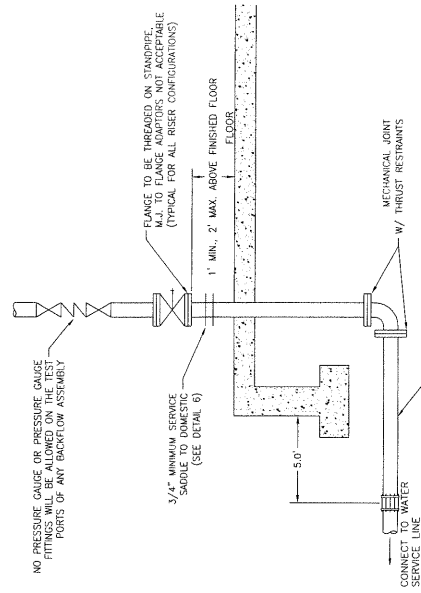
RESIDENTIAL FIRE SERVICE LINE



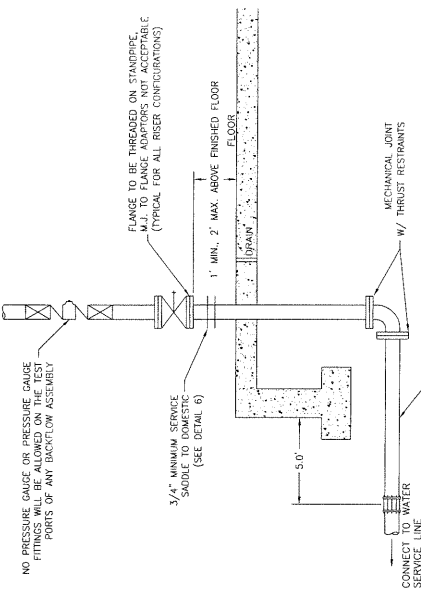
1. STANDARD FIRE SERVICE LINE INSTALLATION
 - OPTION 1 FOR CLASS I, II, & III SYSTEMS
 SCALE: NTS



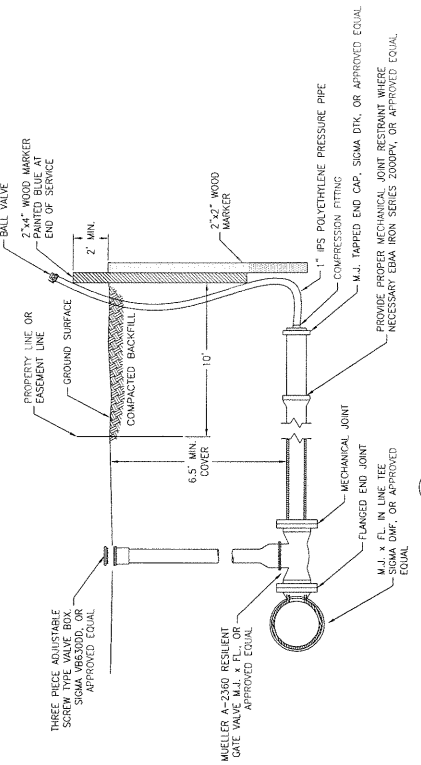
2. STANDARD FIRE SERVICE LINE INSTALLATION
 - OPTION 1 FOR CLASS IV & V SYSTEMS
 SCALE: NTS



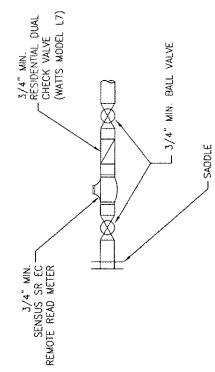
3. STANDARD FIRE SERVICE LINE INSTALLATION
 - OPTION 2 FOR CLASS I, II, & III SYSTEMS
 SCALE: NTS



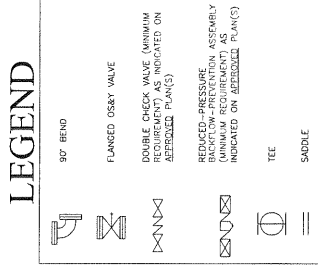
4. STANDARD FIRE SERVICE LINE INSTALLATION
 - OPTION 2 FOR CLASS IV & V SYSTEMS
 SCALE: NTS



5. WATER MAIN CONNECTION
 SCALE: NTS



6. DOMESTIC CONNECTION
 SCALE: NTS



LEGEND

NOTE: PROVIDE FLEXIBLE, WATER-TIGHT CONNECTION FOR ALL FLOOR PIPE PENETRATIONS.

<p>MORRISON MAIERLE, INC. An Employee-Owned Company</p>	801 Technology Blvd Bozeman, MT 59710 Phone: (406) 552-2721 Fax: (406) 552-1476 Website: www.morrisonmaierle.com	DRAWN BY: JMC CHECKED BY: JWB APPR. BY: JWB DATE: 08/20/20	PROJECT NO. 370818
	ENGINEERS SCIENTISTS PLANNERS	BOZEMAN	UTILITY SOLUTIONS, LLC WATER SYSTEM DETAILS
11-7370-01 (PACKAGE ENGINEER SERVICE) Rev. 04/2018		FIGURE NUMBER FIG. 3	
COMMERCIAL FIRE SERVICE LINE		COMMERCIAL FIRE SERVICE LINE	