



## Tahoe City Public Utility District Single Family Residential Sewer & Water Service Requirements

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Upon application for a new construction or remodel permit, the property owner (or agent) shall provide the following to the District:

### Site plan indicating:

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| <input type="checkbox"/> Foundation cleanout(s)                   | <input type="checkbox"/> Footprint of existing structure(s) and or                      |
| <input type="checkbox"/> Property line cleanout(s)                | <input type="checkbox"/> Footprint of remodel / new construction                        |
| <input type="checkbox"/> Mid-line and or transition cleanout(s)   | <input type="checkbox"/> All easements  |
| <input type="checkbox"/> Sewer line location, gravity and or pump | <input type="checkbox"/> Stop and waste valve, not underground                          |
| <input type="checkbox"/> Water service box & line locations       | <input type="checkbox"/> Existing and / or proposed irrigation                          |
| <input type="checkbox"/> Fire service box & line locations        | <input type="checkbox"/> Hydronic heat, boiler, booster pump, etc.                      |
| <input type="checkbox"/> Gas & electrical line locations          | <input type="checkbox"/> Bear box location (garbage box)                                |
| <input type="checkbox"/> Pump system if required, pumps located - | <input type="checkbox"/> -inside -or- <input type="checkbox"/> -outside, the foundation |

### ***The following conditions must be met as a part of the permit process:***

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- One set of site plans must be submitted for review with any new construction or remodel permit application. These will not be returned to the customer.
- All fees associated with permits must be paid prior to a permit being issued.
- Trenches for all new water and sewer services installed as part of new construction / remodel projects must be inspected prior to backfill. Materials and construction methods must conform to District standards. The District must witness all trench inspections.
- A pressure test of water and/or sewer lines is required when any new installation or modification is made. The District must witness all pressure tests.
- All fixtures must be low flow and shall meet or exceed all State and Federal regulations.
- Water pressure must not exceed 60 psi at any fixture, a State of California requirement. The customer must install a pressure-reducing valve if water pressure is greater than 60 psi. The District will verify water pressure prior to the final County inspection.
- Backflow prevention devices are required on potentially hazardous water services. The District will determine the need for backflow prevention assemblies during the plan check process. The applicant should get District approval for the location and model of backflow prevention assemblies if required. The assembly must be tested and certified by a District-approved tester prior to Final. Note: Stop and waste valves shall not be installed underground. If installed, they must be located a minimum of 12" above grade. Frost-free yard hydrants shall have a District approved backflow prevention device installed and tested.
- Drain lines from backflow assemblies are not to discharge to the sewer system.
- The District must inspect all fixtures prior to the final County inspection. All pre-final inspections and testing must be complete and all fixtures must be set prior to TCPUD final inspection.



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- New Construction delay start billing for sanitary sewer service. Billing will be delayed for two consecutive quarters after the quarter in which a successful trench inspection is completed. Teardown-rebuild remodels may also qualify for delay start billing. No further billing delays or extensions will be offered.
- New construction billing for domestic water service shall start at the time of a successful trench / pressure test inspection. Fire service billing shall start at time of successful final inspection or conditional final agreement.
- Other conditions may be identified during the plan checking process.
- All costs associated with the materials and construction of these facilities are the sole responsibility of the property owner.
- The property owner must comply with all District ordinances.

### ***Licensed Contractor***

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- All work associated with the installation of residential sewer service lines must be performed by a California state licensed contractor. The owner must provide the District with the name, address and state license number of the contractor prior to the work commencing.
- The property owner may install his or her own sewer and/or water facilities with prior District authorization. A \$1,000 bond shall be placed with the District, and evidence of insurance must be provided in accordance with Sewer Ordinance 255, Section 5.01.7, and Exhibit 10.01 and Water Ordinance 185, Section 6.21.

### **SEWER SERVICE REQUIREMENTS**

#### ***Sewer Pipe:***

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- Gravity system: minimum of 4" diameter pipe
- All pipe must have approved rubber gasket fittings, no glue joint or slip fittings
- Orangeburg and ABS pipe may not be used for external piping
- PVC SDR 35 with min. 30" of cover non traffic, **or** min. 36" of cover in traffic area
- PVC C-900 or DI if less than 30" of cover, **or** less than 36" of cover in traffic area
- Bends shall be less than 45 degrees. If 45 degrees or greater, a cleanout shall be placed immediately upstream of bend. If a 90 degree bend is desired a special District clean out (c/o) arrangement is available. (A handout is available.) Bends of over 90 degrees are not allowed.
- Pressure system: minimum of 2" diameter pipe
- Class 200: Polyethylene, Ductile Iron or SDR-21 Ring-Tite pressure pipe.
- Tracer / locator wire must be attached to both gravity and pressure pipe
  - "Sewer" burial tape must be installed 6" to 12" above all pressure sewer lines (2008)
  - 10 AWG minimum THW, THHW, TW or THWN wet location insulation
  - Foundation c/o to property line c/o, 2' tail brought up in box



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- Shall surface at all mid-line c/o's, continuous / unbroken coil in box
- Shall be taped to the top of pipe at 5' or less intervals and at all bends
- Splices, if needed, shall incorporate a U.L. listed underground splice kit
- Wire shall be tested for continuity

### ***Sewer Cleanouts:***

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Cleanouts (c/o's) must be installed:

- Double-Wye c/o installed within 5' of the property line, on the customer's side.
- Foundation c/o(s) within 5' of the foundation at each house sewer outfall.
- Midline c/o(s) required if line exceeds 100 feet, a double-wye c/o may be used if desired; and
- Immediately upstream of all bends of 45° and greater or at special 90 degree c/o's.
- Within a concrete box, equal to Christie B-9, or Christie G-5 (only if "T-Cone S402" caps are used) with a metal lid stamped "SEWER". All boxes must be covered to grade. If box is in a traffic area, it must be set 1/2" below finished grade; and
- Cleanouts must be the same size and material as the sewer service line.
- T-Cone S-402 or same as pipe material caps are to be used.
- Cleanout risers to be brought up at 90 degrees, all fittings to be close-coupled at the wye.

### ***Sewer Trench:***

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- Bedding material shall be imported Type 1 sand bedding material, unless in wet area, which shall then be imported Type 2, ¾" crushed rock bedding.
- All bedding material shall be placed 4" below and 12" above pipe.
- Intermediate backfill shall be placed above the bedding material to the surface and must not contain rocks greater than 3". The use of screened native material is acceptable.
- Compaction, intermediate backfill shall be compacted to prevent trench failure.
- Slope shall be a minimum of 1/4" per foot (2% slope). In certain cases slope of less than 2% may be allowed but requires prior approval of the District Engineer.
- A backwater valve may be required if 2% slope cannot be maintained or if any fixture rim elevations are not above the rim level of the next upstream District manhole. Backwater valves shall be installed prior to the foundation cleanout, boxed and fully accessible.
- When water lines share a common trench with sewer, the following shall apply:
  - Gravity sewer & water – minimum of ten feet of horizontal separation at all points – OR – water must be a minimum of 1 foot above and 1 foot horizontal from sewer between the lines at all points and sit on a separate solid bench.
  - Pressurized sewer & water – minimum of ten feet of horizontal separation at all points.



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- Cover: SDR 35 shall have a minimum of 30" of cover in non-traffic and 36" of cover in traffic areas.
- Non-traffic areas with less than 30" of cover requires either C-900 DR-14, DR-18 or ductile iron pipe.
- Traffic areas with less than 36" of cover require C-900 DR-14, DR-18 or ductile iron pipe.
- All sewer pressure mains (force mains) shall have a minimum of 30" of cover.

### ***Sewer Pressure Test:***

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- A pressure test shall be performed after the trench has been backfilled to rough grade.
- Gravity air test: pipe shall hold 3.5 psi for 5 minutes with no more than 0.5 psi loss in pressure during the 5 minute period.
- Gravity hydro test: pipe shall hold 8 feet of water head (measured from pipe invert) for 5 minutes with no more than 0.5 inch of loss in water volume.
- Pressure air test: pipe shall hold 10.0 psi for 10 minutes and shall have no loss in pressure.
- Hydro testing of pressure lines is not allowed.

### ***WATER SERVICE REQUIREMENTS***

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#### ***Water Pipe:***

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Residential water pipe must be:

- Domestic service: minimum of 3/4" I.D. (inside diameter)
- Copper Type K or polyethylene (P.E.) with a rated minimum 160 psi
- Fire Sprinkler service: minimum of 3/4" I.D. (inside diameter) or as determined by the property owners engineer and approved by the District
- Copper Type K or polyethylene with a rated minimum 160 psi or C900 class 200 PVC water main pipe
- Tracer / locator wire must be attached to both the domestic and/or fire service line if material other than K Copper is used.
  - Wire must come up in the service box and terminate at the foundation and
  - Be 10 AWG minimum THW, THHW, TW or THWN wet location insulation
  - Shall be taped to the top of pipe at 5' or less intervals and at all bends
  - Splices, if needed, shall incorporate a U.L. listed underground splice kit
  - Wire shall be tested for continuity



***Water Meter and Boxes:***

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Residential water meter and box specifics:

- Domestic service shall have a minimum 5/8" x 3/4" meter setter
- Water meters for domestic service must be purchased from the District.
- Connections to the supply and service lines must be made with union couplings.
- Dielectric unions must be used for the connection of dissimilar metal pipe materials.
- Meter setter must have valve on top of the setter on the curb stop side, and
- A ball valve curb stop located on the property owner side of the meter setter at the service line level. The valve must be located in a separate box located just outside of the meter box.
- Boxes must be Christy B-9 or equivalent with a minimum of 2 riser boxes and a top box set to grade or 1/2" below grade in paved areas. Property owner valve to be located outside of meter box, use a Christy G-5 or equivalent box with a PVC 4" minimum I.D. pipe for a riser.
- Metal lids with "WATER" cast into them, same as box manufacturer.
- Top of meter setter to be located within 18" to 24" of finish grade, bottom of meter setter to be between 30" and 36" deep.
- Fire Sprinkler service: meter and setter not required, use appropriate size ball valve curb stop, use a Christy G-5 or equivalent box with a PVC 4" minimum I.D. pipe for a riser.
- Metal lid with "WATER" cast into it, same type as box manufacturer.

***Water Trench:***

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- Bedding material shall be Type 1 imported sand, unless in wet area, which shall then be Type 2, imported 3/4" crushed rock bedding.
- Bedding material shall be placed 4" below and 6" above pipe.
- Intermediate backfill must not contain rocks greater than 3". Screened native is acceptable.
- When water lines share a common trench with sewer, the following shall apply:
  - Gravity sewer & water – minimum of ten feet of horizontal separation at all points - OR – water must be a minimum of 1 foot above and 1 foot horizontal from sewer between the lines at all points on it's own separate solid bench.
  - Pressurized sewer & water lines – minimum of ten feet of horizontal separation at all points.
- All domestic and fire service lines shall have a minimum of 30" of cover.



# Tahoe City Public Utility District Single Family Residential Sewer & Water Service Requirements

## **Water Pressure Test:**

- During the trench inspection a 15-minute pressure test of both the domestic and/or fire service lines shall be conducted.
- All water lines, the meter setter and/or fire service valve shall be left exposed from the District curb stop valves to the foundation.
- The domestic and/or fire service lines shall be fitted with a valve or hose bib at the house connection end of the lines to facilitate flushing and charging of the service lines for testing. The District inspector will verify that the lines are charged prior to testing.
- Pressure testing of the domestic and/or fire service lines shall be under the normal working pressure of the supplying District water main with no detectable leakage.

## **Final Inspection:**

- Customer must call 583-3796, extension 6 for a final inspection when all required pre-final inspections and testing have been successfully completed and all fixtures are set.
- All fixtures must be low-flow (Toilets – 1.6 gallons per flush; Showers - 2.5 gallons per minute; Faucets – 2.2 gallons per minute.) Utility sinks MUST be equipped with 2.2 gallons per minute flow restrictors. All fixtures shall meet all State and Federal Regulations.
- Water pressure, for both sewer and water inspections, must be 60 psi or less.
- Water boxes must be exposed and visible with steel lids marked “Water”.
- Cleanouts must be exposed and visible, with proper caps and steel lids marked “Sewer.”
- If potentially hazardous services are found during the final inspection, backflow prevention devices must be installed and tested prior to an approved final notice being issued. All costs associated with the purchase of, installation and testing of any required backflow devices are the sole responsibility of the property owner.

## **Other terms and conditions not listed here and within this document may also apply.**

New Construction delay start billing for sanitary sewer service. Billing will be delayed for two consecutive quarters after the quarter in which a successful trench inspection is completed. Teardown-rebuild remodels may also qualify for delay start billing. No further billing delays or extensions will be offered. See schedule below.

Trench inspection Quarter	Start Billing
1- (Jan, Feb, Mar)	OCT
2- (Apr, May, Jun)	JAN
3- (Jul, Aug, Sep)	APRIL
4- (Oct, Nov, Dec)	JULY

These provisions and benefits may also apply to qualifying Tear Down-Rebuild Remodels. TTSA sewer billing is not included in this agreement.



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The permit fee includes four (4) inspections, any additional inspections may incur extra charges.

All applicants must comply with the service requirements and new construction / remodel procedures contained herein. These requirements are based upon today's application. If you have any changes to the application please notify the District.

**Applicant: I acknowledge that I have received, read and understand the TCPUD sewer / water services requirements handout.**