

**PLANS AND CONSTRUCTION CHECK LIST
SILVER LAKE WATER & SEWER DISTRICT**

YES *NO*

- District Assigned Project No.
- Current version of District Standards used in design: July 2010.
- Construction Plans signed and dated by a Washington State licensed engineer.
- Construction plans expire 1 year from date of District approval.
- Cover sheet showing entire property and location of improvements has been included.
- Plans showing Erosion Control, Grading, Street Improvements, Storm Drainage, and Landscaping have been included.
- Engineering scale and north arrow are shown for each plan view.
- Plans sheets are 22" x 34".
- Horizontal scale: 1-inch = 50 feet, Vertical Scale: 1 inch = 5 feet (or as otherwise approved by the District).
- Vertical datum is NAVD 88 with conversion factor noted to NGVD 29.
- District General Notes are included on first water plan sheet and sewer plan sheet.
- District Approval Block is included on each water and sewer plan sheet.
- Location of streets, right-of-ways, easements, existing utilities and water system facilities have been located and/or called out.
- All flood plains, wetlands, steep slope, and/or sensitive areas are clearly identified.
- Existing and proposed grades have been shown and labeled.
- Stationing has been provided for the site area and on all structures to be constructed.
- Match lines and title blocks are shown correctly.
- All existing/proposed utilities are shown on Plans.
- District system standard details have been referenced.
- Road restoration has been performed per County, City, and/or State standards.

_____ All public rights-of-way, front lot corners and a property line stakes are clearly identified.

_____ Fenced easement areas provided with access gates of matching construction.

WATER

_____ Property lines, water meters, water valves, hydrants, and paving locations are shown.

_____ Mains are located 10 feet northerly or easterly of street centerline (or District approved location).

_____ Water main easements are minimum of 15-feet wide.

_____ A minimum of 3'-6" cover over all 8-inch or less sized water mains except 4'-0" cover in easements. A minimum 4'-0" cover on all water mains 12-inches and larger.

_____ Fire hydrant spacing does not exceed 600 feet and/or located no more than 350 feet from the back of any proposed lot.

_____ Each hydrant shall be marked 1 foot offset from the center line of the street with a Type III blue reflector.

_____ Pipes connecting hydrants to mains are at least 6 inches in diameter and not longer than 50 feet.

_____ Only one fire hydrant is installed on any dead-end 8-inch run.

_____ Valve spacing has not been exceeded (1,000 feet maximum spacing).

_____ Valves are installed on each leg of all tees and crosses, except fire hydrant tees unless required by the District.

_____ Valves are installed at each end of easements.

_____ All valves 14 inches and larger are ductile iron butterfly valves.

_____ All valves 12 inches and smaller are ductile iron resilient seated gate valves.

_____ Approved backflow assemblies is provided for all connections other than single family residential.

_____ All backflow assemblies are located immediately behind and on the property side of the water service box unless internal location in a building receives prior District approval.

_____ District approved air and vacuum assemblies are located at all isolated high point(s) in system.

- _____ _____ Blow-off assemblies are located at all isolated low point(s) and dead ends in system. Fire hydrants may be required in lieu of blowoff assemblies at the discretion of the District.
- _____ _____ All dead end mains are closed with dead end MJ caps, plugs, thrust blocks, and blowoff assemblies or hydrants.
- _____ _____ All pipeline deflections are designed and constructed in accordance with pipe manufacturer's recommendations.
- _____ _____ Thrust blocks, anchor blocks or restrained joint pipe have been provided for all fittings and bends.
- _____ _____ Minimum size service lines between water main and a single water meter is 1-inch for single-family and 2-inch for commercial and multi-family. Pipes and fittings have been inspected for defects before installation, and are clearly labeled and identified by manufacturer in regards to Class.
- _____ _____ Valves have been set with vertical stems.
- _____ _____ Operating nut of all valves is within 3'-6" of finished grade, 2-inch standard nut, and 5-inch soil pipe will be used in assembly. Stem extension required if greater in depth than 3'-6".
- _____ _____ Valves located in easements or outside of paved areas are set to grade and have concrete collars.
- _____ _____ Valve markers have been placed at edge of right-of-way opposite the valve and painted and stenciled appropriately.
- _____ _____ Guard posts have been installed and painted for each hydrant, if required by District.
- _____ _____ All water services are located within public road rights-of-way or District approved easements.
- _____ _____ Meter service, MXU radio unit, and meter boxes have been set to final finished grade elevations and adjusted prior to final pressure test (unless otherwise approved by the District).
- _____ _____ Water meters larger than 1-inch have been furnished and installed by the Contractor.
- _____ _____ All pipes have been tested and disinfected to District and AWWA standards prior to acceptance.
- _____ _____ Service gaskets and dual check valves have been provided to the District.
- _____ _____ Backflow assemblies have been tested and installed on all services other than single family residential connections, certified and written test results have been provided to the District.

SEWER

YES NO

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| _____ | _____ | Property lines, sewer main, manholes, side sewer, and paving locations are shown. |
| _____ | _____ | Mains are located 5 feet south or west of centerline (or District approved location). Sewer main easements are minimum of 15 feet wide. |
| _____ | _____ | All-weather access is provided to manholes in easements suitable for motor trucks. |
| _____ | _____ | All pipelines shall have a minimum cover of 3 feet. (Side sewer laterals in public rights-of-way shall have a minimum of 5-foot cover at right-of-way line). |
| _____ | _____ | All sewer main crossings and parallel sewer mains have 10-foot horizontal spacing and 18 inches of vertical separation from the nearest water main. |
| _____ | _____ | Pipes between manholes are straight in alignment. |
| _____ | _____ | Pipes are designed for no less than the following minimum grade:
8 inch gravity main - 0.5%
6 inch side sewer - 2.0%
8 inch gravity dead end - 1.0%. |
| _____ | _____ | Steeper slopes may be required depending on topography and tributary flows (at the discretion of the District). Other diameter pipe lines must conform to DOE design standards. |
| _____ | _____ | Side sewer laterals are located at downstream sewer locations (10 feet from the side lot line and 15 feet (typical) past the street right-of-way line). |
| _____ | _____ | Backwater valves provided for all side sewers where potential exists for sewer main to back up into the served facility. |
| _____ | _____ | Sewers on 18% slope or greater are anchored securely with concrete anchors or equal:
18 to 35% - 36 feet center to center
35 to 50% - 24 feet center to center
50% and over - 16 feet center to center. |
| _____ | _____ | Manhole spacing has not exceeded 400 feet (unless approved by District). |
| _____ | _____ | Manholes are a minimum of 8 feet from rim to invert (unless approved by District). |

- _____ _____ Manholes are located at all changes in grade, pipe alignment, pipe intersections, and termination points. Clean-outs are not acceptable as a substitute except as approved by the District.
- _____ _____ Manholes are not located in low points of vertical curves or curb flow lines (gutter sections).
- _____ _____ Manholes are located at the terminus of all sewer mains (unless approved by the District).
- _____ _____ Drop connections must be approved by District.
- _____ _____ Manholes and cleanouts have locking lids.
- _____ _____ Manholes and cleanouts located in easement areas or outside of paved areas have concrete collars and green carsonite markers.
- _____ _____ Manholes have a 0.10 foot drop across the channel.
- _____ _____ Match crowns of the pipes where a smaller sewer joins a larger one.
- _____ _____ Invert and rim elevations are shown on plan and profile for all manholes.
- _____ _____ Correct invert elevation at point of connection (field verified) is shown on the plans.
- _____ _____ Manhole steps and ladders are polypropylene.
- _____ _____ Individual tee connections have been used for side sewer lines (or District approved alternative).
- _____ _____ All pipe bedding has been field inspected prior to backfill.
- _____ _____ Side sewer stubs have been provided for each lot that requires service (no double side sewer connections).
- _____ _____ Inspection of side sewer has been completed prior to backfill of line.
- _____ _____ Markers have been provided at the termination of all side sewer stubs and stenciled appropriately.
- _____ _____ Side sewer cleanouts have been placed at no more than 100-foot spacing.
- _____ _____ Commercial, Industrial, and School food establishments have grease interceptor(s) installed outside of the building (interceptor installed as close as possible to source of grease/fat).
- _____ _____ All pipes have been tested prior to acceptance.

ADDITIONAL REQUIREMENTS MAY BE MANDATED BY THE DISTRICT, ON A CASE BY CASE BASIS, DUE TO SITE SPECIFIC CONDITIONS.