

# **ASOTIN COUNTY PUD WATER AND SEWER SYSTEM DESIGN CHECKLIST**

**DISCLAIMER:** This checklist is merely a guide to assist the design engineer in providing the minimum information required for plan submittal for the design of water and sewer utilities within a housing or commercial development. This checklist should be used in conjunction with the current version of The Standard Specifications and Drawings for Asotin County Public Utility District. The complexity of your design may require additional information not included on this checklist.

## **A. Drafting**

1. Include cover sheet showing entire property and location of improvements standard engineering scale.
2. Include Vicinity Map showing the project location. Provide a north arrow and scale used. Vicinity maps must include a major arterial (i.e. road names)
3. Include Overall Utility Plan sheet that shows the overall water and sewer facilities. Provide a north arrow and scale used.
4. Each plan sheet must have an engineering scale and north arrow.
5. Existing and proposed adjacent roads: include edge of pavement, centerline, shoulder ditch, R/W centerline, etc. Clearly identify the road as public or private. Provide a typical cross section of new roads and a restoration detail for existing roads.
6. Project Description: include project name, address and parcel numbers, parcel owners, number of units, buildings, lot numbers, and proposed use of each lot/tract.
7. Show all existing structures on the site and label whether they will remain or be demolished.
8. Provide index of plan sheets.
9. All designs must include plan and profile views.
10. Each sheet shall be identified by sheet number, project name, and match lines.
11. Vertical scale shall be 1" = 2' or 1" = 4'. Horizontal scale shall be 1" = 20' (24" x 36" sheet) or 1" = 40' (11" x 17" sheet). PUD prefers 24" x 36" sheets.
12. Show design benchmark locations and elevations.
13. Include Owner and Engineer's name and address.

## **B. General**

1. All existing and proposed utilities must be shown on plan and profile views.
2. All existing and proposed easements must be shown with distances.
3. Show the existing and proposed topography for the entire property using two-foot contour intervals labeled with the elevation.
4. The minimum easement width for water and sewer is 15 feet with the main centered in the easement.
5. Clearly label finished surface types. (asphalt, concrete, gravel, grass, etc.)
6. Parallel sewer and water lines must have ten (10) feet of horizontal separation.
7. Water and sewer locations shall be identified by station numbering and offsets.

### **C. Sewer**

1. Show the manhole number, length, type, size and slope of sewer pipe in profile view.
2. Show the manhole number, rim elevation, invert elevations, diameter, slope, stationing, offset, special notes in plan view.
3. Clearly label existing and proposed manholes with manhole numbers.
4. Show the proposed rim and invert elevations at each manhole.
5. Show the existing rim and invert elevations at each manhole.
6. Straight vertical and horizontal alignment between manholes is required.
7. Manholes must be installed at all changes in grade, changes in alignment, main intersections and road intersections.
8. Manholes are required at the end of all sewer mains.
9. Over-sizing of pipes to obtain lower minimum slopes is not acceptable.
10. Sewer lateral locations shall be stationed and shown to each lot. Their locations must be measured perpendicular to the appropriate station line.
11. All manholes shall be stationed and identified.
12. Engineer shall field verify all existing manhole rim elevations and invert elevations.
13. Sewer lateral diameter shall be 4-inches or greater.
14. Minimum mainline sewer pipe shall be 8-inches in diameter.
15. Provide 0.1 foot In-Out drop for straight runs, 0.2 foot In-Out drop for 1 side channel and 0.3 foot In-Out drop for 2 side channels.

### **D. Water**

1. Show the length, type, and size of water pipe in plan and profile view.
2. Water service locations shall be stationed and shown to each lot. Their location must be measured perpendicular to the appropriate station line.
3. All mainline fittings, valves, hydrants, etc. shall be stationed, drawn, and identified.
4. Show finished surface type for location of meter lid. (asphalt, concrete, gravel, grass, etc.)
5. Minimum depth and cover shall be 4' measured to top of pipe from finished grade, unless given special approval.
6. Fittings, Meter Locations, Stub Locations, valves, flushers, hydrants shall be called out with reference to PUD standard drawing number.
7. Approved Backflow-Prevention assemblies are required on all private fire lines. The device shall be a double check detector backflow prevention assembly installed on the building side of the property line. The assembly shall be so placed as to allow access for the PUD to read the meter and test if necessary.
8. The City of Clarkston and Asotin County are the jurisdictional entity regarding private fire hydrant/fire line requirements and locations. The specific placement and sizing shall be determined by the Fire Marshall.
9. Water service diameter shall be 1-inch or greater.
10. Minimum mainline water pipe shall be 8-inches in diameter.

**C. Notes for water/sewer plans (to appear on the plan sheet)**

1. All work shall comply with The Standard Specifications and Drawings for Asotin County Public Utility District.
2. All work shall be subject to inspection per PUD Specification Section 103.
3. Grip Ring Pipe restrainer is required at all MJ fittings per Specification Section 301.
4. Install thrust blocks as shown in the drawings and where required per Specification and Standard Drawings 3-8A, 3-8B, and 3-8C.
5. All water mains shall be pressure tested and disinfected per Specification Section 300.
6. Water main depth and cover shall be a minimum of 4' measured to top of pipe from finish grade, unless otherwise shown in the drawings.
7. All water main shutdowns shall be coordinated with Asotin County PUD 72 hrs prior.
8. All material shall meet min. requirements of applicable standards and specifications.
9. If unable to achieve 18" vertical and 10' horizontal separation with nonpotable sources, install pipe casing per Specification Section 120.
10. Contractor to verify size, type and location of all existing utilities prior to excavation.