

**Submittal Checklist  
For  
Gravity Sanitary Sewers**

(Revised 03/15/2022)

**BASIS OF DESIGN & GENERAL REQUIREMENTS**

Yes	No	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drawing detailing sanitary sewer ultimate tributary area boundary
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drawing detailing the zoning classification(s) of tributary area noting acreage
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The design period has been provided
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Estimated tributary population with justification
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design flows to be received by receiving system
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Calculations in a tabular and easy to follow presentation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum velocity for each segment between manholes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Maximum velocity for each segment between manholes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design flow at each manhole
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Forecasting and Design Flows

**ALIGNMENTS AND PROFILE**

Yes	No	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All pipe alignments are straight between manholes unless otherwise approved by the Utility Department
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Any curvilinear pipe that has been used has been specifically approved by the Utility Department
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No new sewer alignments run longitudinally under roads.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All sewer lines have at least 24" of cover.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sewer lines with less than 30" of cover have special conditions for pipe support.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sewer lines can receive flow from all services by gravity flow
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Any sewer lines deeper than 6-feet below finished grade? (If deeper additional easement width will be required)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Any sewer lines deeper than 15-feet deep? (If yes, additional calculations will be required)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sewer exceeding 20% slope has an anchorage system.

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**DETAILS OF DESIGN**

<b>Yes</b>	<b>No</b>	<b>N/A</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sewer system has been designed for future development
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sewer lines have been extended to adjacent property lines for future development
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All sewer lines are 8 inches in diameter or greater
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All changes of pipe size occur at manholes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All materials selected conform to Utility Department Standards
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tracer wire boxes have been detailed at appropriate locations and distances on the plan set
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Corrosive soil environments have been considered in the design
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Geotextile encapsulation added where required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Superimposed loads have been considered in the design
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Buoyancy of sewers has been accounted for in the design
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Special considerations have been given to areas where petroleum products or organic solvents may be present
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All sewer lines have been encased at appropriate locations

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**SANITARY SEWER PROXIMITY TO OTHER FEATURES**

<b>Yes</b>	<b>No</b>	<b>N/A</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There is no proposed connection between sanitary sewer and any potable water line shown on the plan set.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sewer lines have appropriate separations from water lines
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sewer lines that cross streams or are in close proximity have been designed in accordance to the minimum design standards

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**MANHOLES**

<b>Yes</b>	<b>No</b>	<b>N/A</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manholes are located at all changes in grade, changes in pipe sizes, or alignment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Distance between manholes does not exceed max spacing requirements
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drop manholes are used where the flow line elevation of an incoming sewer line is 24 inches or more above the manhole invert
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manholes in areas subject to water inundation have been raised or designed with appropriate manhole covers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No sanitary sewer lines terminate with clean outs

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**SANITARY SEWER SERVICES**

<b>Yes</b>	<b>No</b>	<b>N/A</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All sanitary sewer services greater than four inches are connecting at manholes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All new service lines have a cleanout at property or easement line
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All service lines located in easements or ROW meet the slopes detailed in the minimum design standards

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**EASEMENTS**

<b>Yes</b>	<b>No</b>	<b>N/A</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All sanitary sewer line & appurtenances are located in easements or ROW
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All sewer lines are centered within easements when possible
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All sanitary sewer lines deeper than 6 feet have easement width or equivalent ROW coverage equal to 2.5 times the depth of line
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Landscaping is in accordance to the minimum design standards
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All easements have been recorded at the courthouse or shown on recorded

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**PRIVATE DEVELOPMENTS**

<b>Yes</b>	<b>No</b>	<b>N/A</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All public sanitary sewer lines and appurtenances located in private developments are designed in accordance with the minimum design standards

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**PLANS AND SPECIFICATIONS**

<b>Yes</b>	<b>No</b>	<b>N/A</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All plans, specifications, and reports (including Basis of Design) have been prepared and sealed by a professional engineer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All plans and specifications meet requirements set forth in the minimum design standards or have approved exceptions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All plans and specifications conform to the City of Fort Smith Standard Specifications or have approved exceptions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All utility (water and sewer) easements shall be notated with the recorded book and page number or the recorded plat number.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All connections and appurtenances have been coordinately located.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plan set included a project location map.