



1135 South Lake Street • Montgomery, Illinois 60538
Engineering Inquiries (630) 301-6882
Inspections (630) 301-6811 • FAX (630) 897-6094

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Fox Metro Water Reclamation District

Subdivision or Sanitary Extension Design & Review Guidelines

<http://www.foxmetro.org/business/engineering/>

Design Engineers: Please include this checklist with your submittal; documenting each item as “completed” or “n/a”. Be sure all applicable items have been addressed as we cannot begin review of your plans until this is complete.

1. If applicable, before the review of plans, annexation to Fox Metro W.R.D. may be required. An Accurate Map of Annexation and petition may be needed for review and approval by our Board. See samples of these documents on our website.
2. If this is the first phase of a P.U.D., provide the total gross acreage and total # of dwelling units for the overall development.
3. Submit a final subdivision plat. When available, a recorded version is required.
4. Provide I.E.P.A. applications (WPC-PS-1 & Schedule A/B etc.) with all original signatures by all parties. If needed, we can assist with the assignment of location(s) for signature(s), name and location of our interceptor, etc. To avoid construction delays, this should be done ASAP.
5. Provide a service area map: Immediate Service Area=proposed site, Ultimate area=proposed site PLUS ALL tributary upstream area(s). Fox Metro can assist with this but needs to be confirmed by the City/Village.
6. For tributary service area(s), a manhole(s) shall be constructed to the far property line(s) within the immediate area and shall be at an adequate diameter, depth, and slope to serve the tributary area(s). Current and future sanitary sewers shall be designed so mains have a minimum of 6’ cover at the farthest upstream point (ask the governing municipality for their requirement).
7. Where townhouse (individual ownership) buildings are proposed, provide a list or depict clearly on the plan, the # of dwelling units per building. Where rental apartment dwellings are proposed, provide a list of the # of apartments per building, and also include the corresponding # of bedrooms in each. If “common area” plumbing is proposed in any residential building, submit architectural and plumbing plans.

8. An overall utility plan is required. This plan should be on one sheet, clearly showing all manhole and lot numbers.
9. The diameter and pipe type for all existing public sanitary sewers need to be indicated on the plans.
10. Each single-family, townhouse, or apartment/rental dwelling that possesses individual ground-floor access shall have a separate building sewer to the public main. For apartment dwellings, if the governing/municipal water provider allows one water service for the whole building, then one building sewer to the public main may be considered.
11. Profiles for all public sewer segments are required. In the plan and profile views, call out "XXX L.F. X" SDR XX @ X.XX%" for each overall segment.
12. All public sewers shall be a minimum of 6' in depth. If less is needed, please inquire into this with the governing municipality.
13. On all plan and profile sheets, add a note stating that "All risers shall be installed to a depth of no greater than 6'-7' deep at the property line/right of way". (State requirements regarding conflicts with water and sanitary take precedence)
14. Eliminate drop manhole(s) where the vertical distance between the two incoming pipes have < 3.0' vertical separation. Instead, increase the slope of the upstream segment(s) and then show a single pipe connection at the bottom of the manhole.
15. Where the manhole for the new connection has existing upstream and downstream flows, show a plug in the new invert, as well as on the downstream side of the first new upstream manhole. If the existing manhole is a dead-end, call out the plug required in the downstream pipe. A suggested note to copy and paste/update is: "To prevent any trench or overland flow/water, aggregates, mud or other debris from entering the existing sanitary system, a plug shall be placed in the new south invert of the 12" sanitary main. In addition, a plug shall also be placed in the north invert of S101. The contractor shall maintain these plugs at all times until the system is to be tested. Only the City of Aurora, Village of XXXXXX, or Fox Metro WRD shall approve the removal of these plugs". Where the connection is to a dead end mh with NO live service enters, only one plug needs to be placed in the downstream invert.
16. Our Contractor Notice, General Notes, Manhole/Pipe Specifications, and applicable details shall be on all plans, and be the most current versions from our website. No Fox Metro W.R.D. "Rules and Regulations" are needed.

17. Look for sanitary sewer notes & specifications that contradict ours. Only Fox Metro W.R.D. sanitary notes apply. Notes by others shall be verified to NOT conflict with our OR be removed and replaced with a reference to "See page XX for all Fox Metro W.R.D. notes and specifications".
18. Sewers with cover depth from 3.5'-20', use SDR 26. For sewers over 20' deep, use C-900 pvc.
19. In all profile views, where any storm sewer crosses over the sanitary, call out the clearance distance. If <1.5' of clearance, DR 18 is required per our detail. If within 30' of a manhole, show DR 18 all the way to said structure.
20. If the existing downstream sewer is < or = to 14", establish inverts of all proposed sanitary sewers into manholes by matching the top elevation of the proposed pipe with the top of the downstream pipe. If the existing downstream sewer is > or = to 15", match 80% flow marks.
21. When a drop manhole with > or = 8" pipe is proposed, call out BOTH incoming inverts with lower drop invert calculated per item #21 JUST above.
22. No building service shall be proposed within any portion of another property/parcel.
23. Look for points to which upstream and downstream manholes can be shifted to eliminate manholes. (See item #25 JUST below)
24. Where possible, public sewer segments 8"-14" shall be a maximum of 500'.
25. *Permanent* "dead-end" sewers are those which will never be extended for a future service area. The minimum slope shall be a minimum of 0.60% for the first segment.
26. Any new pipe entering any manhole shall be at an angle > or = to a 90-degree angle from the downstream pipe. For 6" services, use elbows to achieve this. For 8" sewers, an additional manhole might be needed.
27. Where the plan set calls for adherence to the standards of State and local authorities, call out that "Adherence to Fox Metro Water Reclamation District specifications is also required.
28. Where any sanitary main or building sewer crosses a water main or service, design said conflicts per the standards of the Illinois Plumbing code "77 ILL. Administrative Code Part 890 Illinois Plumbing Code", latest edition. The City or Village shall review the plan for compliance with this issue.

29. If an existing Fox Metro W.R.D. or City/Village-owned sewer is on-site, adjacent to the site, or if a connection to any manhole is proposed, add this note to the utility sheet, P&P sheet, and grading plans: *“When working around Fox Metro’s/City of Aurora’s/Village of...’s XX” sewer, extreme care must be taken! Where any rim elevation revision is proposed and/or the area around said manhole is fully exposed, the entire area of the manhole shall be rehabilitated per Fox Metro’s Type A Manhole detail on sheet XX”*. Call out all existing and proposed rim elevations within the entire project area.
30. If a Fox Metro W.R.D. sanitary sewer is on site where grading work is proposed in the easement, this needs to be referenced on the grading and landscape plans. 6% maximum (side-to-side) grading is allowed within this easement. At no time shall any fence, parking spaces, or other encumbrance prohibit access to any sanitary manhole.
 - a. *If any sanitary sewer is adjacent to a paved surface, access to each manhole may be all that is needed. A gravel or paved access path to each manhole (15’ minimum width) shall be provided that can support jet trucks and other heavy equipment. A recessed curb may also be needed.*
31. Where a new connection is proposed to any existing manhole, call out that: *“To create a flow channel, the bench needs to be cored in conjunction with the manhole wall. Instead of coring the bench, said bench may be reconstructed to provide a sweeping flow channel”*.
32. For a 6” connection to any manhole, only one connection at the bottom of the manhole is allowed. To design for proper upstream grade, two 45-degree fittings shall be used.
33. A final-approved address plat is needed from the City/Village. The District cannot issue permits until this has been received.
34. Where any non-mechanical car wash for use in a residential subdivision is proposed, the floor drain may discharge to sanitary ONLY if the garage is fully enclosed (one side open to the front-max.). If it is an open-air-type structure (two or more sides open), the drain must go to a storm sewer. No storm flow can enter the sanitary sewer.

FMWRD office use only:

1. After all required revisions affecting footage and sewer segments have been finalized, calculate TV & Plan Review Fees
2. Create a permit page showing needed info such as restriction status, # of permits to hold, etc.
3. Create Testing & Tv maps for each folder

