

Guidelines and Checklist For SAWS Sanitary Sewer

Developmental Engineering Division

INITIAL CONSIDERATIONS – UTILITY SERVICE AGREEMENT

Utility Service Agreement – A Utility Service Agreement (USA) will be required if the development meets any of the conditions listed in section 5.2 of the Utility Service Regulations, which can be found at the following link:

http://www.saws.org/business_center/developer/utilityserviceregs/index.shtml

1. If the Development meets any of the conditions requiring a Utility Service Agreement (USA), has one been applied for and approved by SAWS?
2. If the Development is within an existing USA is the USA still active?
3. If the Development is within an existing and active USA are there a sufficient number of EDUs remaining?

If you answered no to any of the above, apply for a Utility Service Agreement by submitting the information listed on the USA Checklist – Water, which can be found at http://www.saws.org/business_center/specs/newdevel/documents/USA_Water.pdf, and USA Checklist – Sewer, which can be found at http://www.saws.org/business_center/specs/newdevel/documents/USA_Sewer.pdf, to
MANAGER - DEVELOPMENT ENGINEERING

Once you receive a draft copy of the Utility Service Agreement, which outlines what will be required to obtain service, you may submit your plat package and water and sewer plans, if applicable.

PLAT PACKAGE – SEWER PLANS

- I. Developer/Consultant to submit the following to SAWS Manager of Developmental Engineering Division:
 1. ONE SET of PLAT and/or EASEMENT DOCUMENTS (if required)
 2. 2 sets of FOLDED PLANS & PROFILES on 24" x 36" sheets (**ONLY**)
 3. 2 COST ESTIMATES
 4. 2 sets of MASTER PLAN
- II. Proposed subdivision utility layout sheet and water mains must be in agreement with the SAWS approved Master Plan. If the plans do not match with the Master Plan, a revised Master Plan must be submitted for SAWS approval.

III. Visit SAWS's webpage at www.saws.org for the latest specification for water and sanitary sewer construction and standard detail drawings.

IV. General Criteria for Sanitary Sewer Mains, Service Laterals, and Sanitary Sewer Manholes:

A. General Design Criteria for proposed sanitary sewer main.

1. Sanitary Sewer mains design must comply with TCEQ, City of San Antonio and SAWS Utility Service Regulations, and any other governing entity ordinance or codes. These agency requirements supersede any of the requirements listed on these guidelines.
2. Sanitary sewer shall be laid in straight alignment with uniform grade between manholes.
3. Insure that all sanitary sewer main and service lateral slopes meet TCEQ standards.
4. If the sanitary sewer main is shallow, Consultant/Engineer shall insure that all house laterals can be laid at a minimum of 2% slope without being exposed at subgrade.
5. Pipe material must be an approved material accepted by SAWS and TCEQ.
6. Lift Stations should comply with TCEQ rules and regulations and meet SAWS Criteria. Consultant/Engineer shall contact TCEQ and SAWS personnel to obtain information on Lift Station requirements. Consultant to determine the type of proposed pipe for a forcemain.
7. On any sewer main aligned parallel to a proposed or existing storm structure, the Consultant must assure that all lateral services have a min. of 2% slope and do not conflict with the existing/proposed storm structures.
8. Consultant is to field verify the existing sanitary sewer invert elevations.
9. All sanitary sewer laterals and/or stacks should be shown with stations.
10. Three (3) feet of cover to finish grade is required. Proposed sewer mains and service laterals to be a minimum of 3 feet of cover from top of pipe to finish grade.
11. Consultant should indicate on plans the point of connection(s), size and project name of existing sewer main in which the proposed line will be connected to.

B. Proposed and Existing Sanitary Sewer Mains and laterals are to be protected as follows:

1. Concrete encasement to be used if there is less than 3 feet of cover between the top of proposed sewer main and service laterals to bottom of subgrade. Concrete saddle to be used if there is less than 3 feet of cover between the top of an existing sewer main and service laterals to bottom of subgrade.

2. Concrete encasement should be used if there is less than 2 feet between outside diameters of proposed sanitary sewer and storm sewer. Concrete saddle or concrete cradle should be used if there is less than 2 feet between outside diameters of existing sanitary sewer main and storm sewer.

C. Sanitary Sewer manholes are installed as follows:

1. Install a manhole at the end of a proposed sewer main. (Clean outs are not accepted).
2. Install a manhole at each points of change in alignment.
3. Maximum distance between manholes is 400 feet.
4. Design a sanitary sewer line using least amount of manholes, while meeting the above criteria.
5. Provide Drop Manholes and show a detail when the difference in the inlet to outlet elevations is 30" or more.

IV. Sanitary Sewer Plans:

- A. A north arrow is shown on all plans sheets.
- B. The plan scale is 1" = 20' (horizontal), and 1"=5' (vertical) or 1"=50' (horizontal), and 1"=5' (vertical). Any other scale will not be accepted.
- C. Plans should be by American National Standard Institution "D" size - 24" x 36".
- D. Plans and Profiles are drawn from left to right, low point to high point.
- E. Inverts are shown at each manhole with In and Out flow elevations in the profile view, and at every 50 feet intervals.
- F. Stationing are shown at each manhole and at every 50 feet intervals.
- G. Street names, NCB, R.O.W., Block No, Lot Numbers are shown.
- H. Existing and proposed sanitary sewer, storm sewer, and all utilities are shown on plan and profile views.
- I. Indicate sewer main lengths, slopes and distances between manholes on plan and profile sheets.
- J. A SAWS cover sheet with applicable general sanitary sewer notes, job number, and location map showing project limits is required. If Consultant does not have a job number contact SAWS personnel and a job number will be provided after initial plan review.
- K. A block with the required information should be included in the lower right corner on each sheet. The following information in the block is required:
Developer's name, address, phone number and a fax number, SAWS block map, job number, plat number and total sewer EDU's.

Example:

Developer's Name: _____							
Address: _____ _____							
Ctiy _____				State _____			
ZIP _____							
Phone #		(____)		FAX #		(____)	
SAWS Block		Map #		Total		EDU's _____ Total	
Acreage _____							
Total Linear Footage of Pipe: _____				Plat No. _____			
SAWS JOB NO. _____							

- L. Trench Excavation Safety Protection notes shall be shown on each plan sheet.
- M. USGS or TxDOT benchmarks to be shown and called out.
- N. Flow arrows on all plan sheets.
- O. Erosion & Sedimentation control sheet is included, if project is over Edwards Aquifer.
- P. All proposed manholes should be watertight.
- Q. Show all property lines, ROW, turnarounds, creeks, existing and proposed sanitary sewer easements on plans.
- R. Show any permanent and temporary construction easements on plans.
- S. Plans should indicate Matchline from one sheet to the next sheet, indicating stationing and Sheet No. Example Matchline Station 5+00 (see Sheet xx of xx).
- T. No turns greater than 90 degrees is allowed.
- U. Show cut and replace existing asphalt or sidewalk, if applicable.
- V. Engineer's Seal with signature needs to be on the final plans for SAWS acceptance.

V. General Notes and Standard Details:

1. Updated SAWS Sanitary Sewer Notes should be included. (See website)
2. If over Edward Recharge Zone, TCEQ Notes should be included (See website www.TCEQ.state.tx.us).

3. If over Edward Recharge Zone, Standard detail Drawings are required.

VI. Miscellaneous:

1. Consultant to provide cut sheets to Inspection Division prior to Construction.

VII. As-built plans:

1. Upon completion of this project, Developer's Consultant shall send project closure submittals to SAWS. The following items must be submitted concurrently for final acceptance of the system by SAWS: 1) project "Plan of Record" submittals, 2) warranty assignment or bond, 3) Developer Customer's and Contractors Payment and Receipt Affidavit, 4) copy of the approved SAWS Sewer System Field Acceptance Checklist, and 5) four Sanitary Sewer Acceptance Certificates (SSAC) signed by the Developer's Consultant. **As-built plans must be turned within 45 calendar days of Final field acceptance. If closure documentation has not been submitted within 120 calendar days of project completion, SAWS reserves the right to use monies secured by the Developer's plat performance guarantee to pay for any Consulting engineering services necessary to prepare closure documentation.**

The final Plan of Record submittals shall include one set of reproducible Plan of Record drawings, Contractor redline drawings, and electronic copies of the Planning Commission approved plat and Plan of Record drawings.

The Developer shall require his Contractor to guarantee the construction work performed in connection with this permit for a period of one-year commencing immediately upon field acceptance of the project work by SAWS, including pulling the mandrel through the piping system. The one-year guarantee shall be in the form of a warranty assignment, or warranty bond or similar instrument that is acceptable to SAWS, for 10% of the total project cost.

The SSAC shall include the following signed statement by the Developer's Consulting Engineer: "The system was constructed and tested to be substantially in accordance with the final design drawings, 30 TAC 213. 5 (if the project is over the EARZ) and 317.2, and SAWS Specifications". All five items listed in Item 1 must be submitted in order for SAWS to approve the SSAC. SAWS will assume ownership and maintenance of the system upon approval of the SSAC for this project.