

# WHITE COUNTY WATER and SEWERAGE AUTHORITY

## Technical Review Checklist

### Sanitary Gravity Sewer System Plan Sheet Requirements

1. Yes\_\_\_ No\_\_\_: North Arrow shown.
2. Yes\_\_\_ No\_\_\_ NA\_\_\_: Symbol legend shown.
3. Yes\_\_\_ No\_\_\_: Drawing scale shown.
4. Yes\_\_\_ No\_\_\_: Drawing to scale as shown.
5. Yes\_\_\_ No\_\_\_ NA\_\_\_: Grading Plan shown in gray scale.
6. Yes\_\_\_ No\_\_\_ NA\_\_\_: Storm Water System Plan shown in gray scale.
7. Yes\_\_\_ No\_\_\_ NA\_\_\_: Street(s) right(s)-of-way shown.
8. Yes\_\_\_ No\_\_\_ NA\_\_\_: Existing easement(s) shown.
9. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed easement(s) shown.
10. Yes\_\_\_ No\_\_\_ NA\_\_\_: 100-year flood plain contour and associated elevation shown.
11. Yes\_\_\_ No\_\_\_ NA\_\_\_: 25-foot State Waters Buffer shown.
12. Yes\_\_\_ No\_\_\_ NA\_\_\_: 50-foot State Water Quality Critical Area shown.
13. Yes\_\_\_ No\_\_\_ NA\_\_\_: Wetlands area shown.
14. Yes\_\_\_ No\_\_\_ NA\_\_\_: The proposed system is not situated on a legally or illegally established landfill.
15. Yes\_\_\_ No\_\_\_ NA\_\_\_: The proposed system will not service a structure situated over a legally or illegally established landfill.

**Comments** \_\_\_\_\_  
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### Sanitary Gravity Sewer System Requirements

1. Yes\_\_\_ No\_\_\_: Existing sanitary gravity sewer system route shown and correct.
2. Yes\_\_\_ No\_\_\_: Existing sanitary sewer gravity main size shown and correct.
3. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed Development with food service facility, car wash, and/or auto repair facility shown with grease/grit/oil interceptor.
4. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed sanitary sewer gravity main route shown.
5. Yes\_\_\_ No\_\_\_ NA\_\_\_: Connecting location of Development's proposed sanitary gravity sewer main to existing sanitary sewer manhole shown.
6. Yes\_\_\_ No\_\_\_ NA\_\_\_: Connecting location of Development's proposed sanitary gravity sewer main to existing sanitary gravity sewer main via "dog house" manhole shown.
7. Yes\_\_\_ No\_\_\_ NA\_\_\_: Connecting location of Development's proposed sanitary single service lateral connection (< 250 ft) to existing sanitary sewer manhole shown.
8. Yes\_\_\_ No\_\_\_ NA\_\_\_: Connecting location of Development's proposed sanitary single service lateral connection to existing sanitary gravity sewer main via tapping saddle shown.
9. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed bore location(s) shown.
10. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed bore casing type, size and length shown.
11. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed sanitary single service lateral routes shown and < 250 ft.
12. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed sanitary gravity sewer main located at the centerline of the street(s) right(s)-of-way and/or easement(s).
13. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed sanitary gravity sewer main pipe size, pipe material and pipe class shown.

**Comments** \_\_\_\_\_  
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# WHITE COUNTY WATER and SEWERAGE AUTHORITY

## Technical Review Checklist

### Sanitary Gravity Sewer System Requirements (continued)

14. Yes\_\_\_ No\_\_\_: Structure(s) not within proposed easement(s). Structures shall not be located in any easement.
15. Yes\_\_\_ No\_\_\_: Proposed sanitary sewer does not cross a lake, reservoir, pond or detention pond.
16. Yes\_\_\_ No\_\_\_: Proposed sanitary sewer does not cross over a water distribution main.
17. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed dumpster pad drain does not discharge to sanitary sewer system.
18. Yes\_\_\_ No\_\_\_ NA\_\_\_: Slope of sewers between manholes shown and are calculated correctly.
19. Yes\_\_\_ No\_\_\_ NA\_\_\_: Slopes of sewers are within minimum and maximum WCW&SA specifications.
20. Yes\_\_\_ No\_\_\_ NA\_\_\_: Ending sewer tangent(s) slopes are = or > 1.00%.
21. Yes\_\_\_ No\_\_\_ NA\_\_\_: Angle between influent and effluent sewers at manhole = or > 90°.
22. Yes\_\_\_ No\_\_\_ NA\_\_\_: Ductile iron pipe used at depths less than 4 feet and greater than 15 feet.
23. Yes\_\_\_ No\_\_\_ NA\_\_\_: Ductile iron pipe used over and under storm water sewers and water distribution piping.
24. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed sanitary sewer separated from water main as follows.  
Horizontal separation: 10 foot min. Vertical separation: 18 inch min.
25. Yes\_\_\_ No\_\_\_ NA\_\_\_: A minimum coverage of 2 feet of soil exists when crossing a stream.
26. Yes\_\_\_ No\_\_\_ NA\_\_\_: A minimum coverage of 2 feet of soil exists when crossing a ditch.
27. Yes\_\_\_ No\_\_\_ NA\_\_\_: Flow arrows are shown along the proposed sewer main.
28. Yes\_\_\_ No\_\_\_: Existing manholes labeled.
29. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed manholes numbered correctly.

**Comments** \_\_\_\_\_  
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# WHITE COUNTY WATER and SEWERAGE AUTHORITY

## Technical Review Checklist

### Sanitary Gravity Sewer System Requirements (continued)

- 30. Yes\_\_\_ No\_\_\_ NA\_\_\_: Manhole cover elevations shown and accurate to vertical scale.
- 31. Yes\_\_\_ No\_\_\_ NA\_\_\_: Manhole cover in paved area indicated to be set flush with finished pavement.
- 32. Yes\_\_\_ No\_\_\_ NA\_\_\_: Manhole cover in non-paved area indicated to be set a minimum of 12 inches above finished grade.
- 33. Yes\_\_\_ No\_\_\_ NA\_\_\_: Manhole cover in 100-yr flood plain above flood plain elevation or cover shown as being with gasket and bolted down.
- 34. Yes\_\_\_ No\_\_\_ NA\_\_\_: Manholes not situated in detention pond.
- 35. Yes\_\_\_ No\_\_\_ NA\_\_\_: Manhole spacing is = or < 400 feet.
- 36. Yes\_\_\_ No\_\_\_ NA\_\_\_: Manhole inlet and outlet invert elevations shown.
- 37. Yes\_\_\_ No\_\_\_ NA\_\_\_: Inlet and outlet elevations accurate and accurate to vertical scale.
- 38. Yes\_\_\_ No\_\_\_ NA\_\_\_: No inside drop manholes
- 39. Yes\_\_\_ No\_\_\_ NA\_\_\_: No outside drop manholes.
- 40. Yes\_\_\_ No\_\_\_ NA\_\_\_: No dog house style manholes (by WCW&SA Executive Director Approval Only)
- 41. Yes\_\_\_ No\_\_\_ NA\_\_\_: Is the following note indicated: "Detection tape or wire shall be installed above all non-ferrous pipe and all ferrous pipe having a bury depth of six (6) feet or more. Mylar detection tape or ferrous wire shall be installed two (2) feet below finished grade such that sewer and/or lateral can be detected after burial."
- 42. Yes\_\_\_ No\_\_\_ NA\_\_\_: Pipe Bedding Detail shown and conforms to WCW&SA requirements.
- 43. Yes\_\_\_ No\_\_\_ NA\_\_\_: Sewer Service Connection Detail shown and conforms to WCW&SA requirements.
- 44. Yes\_\_\_ No\_\_\_ NA\_\_\_: Manhole Sections Detail shown and conforms to WCW&SA requirements.

### Comments

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# WHITE COUNTY WATER and SEWERAGE AUTHORITY

## Technical Review Checklist

### Lift Station/Booster Pump

1. Yes\_\_\_ No\_\_\_: Lift station/Booster Pump site area shown on sanitary sewer/water system plan sheet and site location acceptable.
2. Yes\_\_\_ No\_\_\_ NA\_\_\_: The proposed system is not situated on a legally or illegally established landfill.
3. Yes\_\_\_ No\_\_\_ NA\_\_\_: The proposed system will not service a structure situated over a legally or illegally established landfill.
4. Yes\_\_\_ No\_\_\_: A minimum 40 foot by 40 foot easement is shown for the lift station/booster pump.
5. Yes\_\_\_ No\_\_\_: Access road to lift station/booster pump shown on sanitary sewer system plan sheet.
6. Yes\_\_\_ No\_\_\_: A minimum 20 foot wide easement is shown for the access road.
7. Yes\_\_\_ No\_\_\_: Electrical service route to lift station/booster pump shown on sanitary sewer/water system plan sheet.
8. Yes\_\_\_ No\_\_\_: Electrical service to lift station/booster pump shown as being 3-phase power.
9. Yes\_\_\_ No\_\_\_: Lift station wet well and pumps configuration with north arrow shown on lift station plan detail sheet.
10. Yes\_\_\_ No\_\_\_: Emergency back-up power generator shown on plan detail sheet.
11. Yes\_\_\_ No\_\_\_: Yard hydrant shown on plan detail sheet.
12. Yes\_\_\_ No\_\_\_: Area light location shown on plan detail sheet and location acceptable.
13. Yes\_\_\_ No\_\_\_: Site area fencing shown on plan detail sheet.
14. Yes\_\_\_ No\_\_\_: Low water pump shut-off elevation shown on plan detail sheet (cross-sectional view).
15. Yes\_\_\_ No\_\_\_: High water pump turn-on elevation shown on plan detail sheet (cross-sectional view).

### Comments

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# WHITE COUNTY WATER and SEWERAGE AUTHORITY

## Technical Review Checklist

### Lift Station/Booster Pump (continued)

- 16. Yes \_\_\_ No \_\_\_: High water emergency alarm elevation shown on plan detail sheet (cross-sectional view).
- 17. Yes \_\_\_ No \_\_\_: By-pass valve configuration shown on plan detail sheet (cross-sectional view).
- 18. Yes \_\_\_ No \_\_\_: Lift station/Booster pump concrete slab and reinforcing shown in accordance with WCW&SA requirements.
- 19. Yes \_\_\_ No \_\_\_: Lift station/booster pump graveled area and slope in accordance with WCW&SA requirements.
- 20. Yes \_\_\_ No \_\_\_: Lift Station/Booster Pump and Housing Detail shown and conforms to WCW&SA requirements.
- 21. Yes \_\_\_ No \_\_\_: Lift Station Wet Well Detail shown and conforms to WCW&SA requirements.
- 22. Yes \_\_\_ No \_\_\_: Yard Hydrant Detail shown and conforms to WCW&SA requirements.
- 23. Yes \_\_\_ No \_\_\_: Chain Link Fence Detail shown and conforms to WCW&SA requirements.
- 24. Yes \_\_\_ No \_\_\_: Total Dynamic Head calculation submitted.
- 25. Yes \_\_\_ No \_\_\_: Net Positive Suction Head available and required submitted.
- 26. Yes \_\_\_ No \_\_\_: Operating system curve plotted onto manufactures' pump curve.
- 27. Yes \_\_\_ No \_\_\_: Pump cycle time submitted.
- 28. Yes \_\_\_ No \_\_\_: Wet well sized to provide storage above the high-level alarm equal to four (4) hours at design flow.
- 29. Yes \_\_\_ No \_\_\_: Wet well buoyancy calculation submitted.

**Comments** \_\_\_\_\_  
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# WHITE COUNTY WATER and SEWERAGE AUTHORITY

## Technical Review Checklist

### Force Main

1. Yes\_\_\_ No\_\_\_: Proposed force main route shown and acceptable.
2. Yes\_\_\_ No\_\_\_: Proposed force main 20 foot easement shown.
3. Yes\_\_\_ No\_\_\_: Structure(s) not within proposed easement(s). Structures shall not be located in any easement.
4. Yes\_\_\_ No\_\_\_: Force main depth indicated.
5. Yes\_\_\_ No\_\_\_: Force main profile shown.
6. Yes\_\_\_ No\_\_\_: Proper location and minimum spacing of combination air/vacuum release valve(s).
7. Yes\_\_\_ No\_\_\_: Proper type of combination air/vacuum release valve(s) indicated.
8. Yes\_\_\_ No\_\_\_: Proposed discharge point shown.
9. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed bore location(s) shown.
10. Yes\_\_\_ No\_\_\_ NA\_\_\_: Proposed bore casing type, size and length shown.
11. Yes\_\_\_ No\_\_\_: Proposed force main pipe size, pipe material and pipe class shown.
12. Yes\_\_\_ No\_\_\_: Pipe Depth at Edge of Pavement Detail shown and conforms to WCW&SA requirements.
13. Yes\_\_\_ No\_\_\_: Pipe Bedding Detail shown and conforms to WCW&SA requirements.
14. Yes\_\_\_ No\_\_\_: Thrust Block Dimensions Detail shown and conforms to WCW&SA requirements.
15. Yes\_\_\_ No\_\_\_ NA\_\_\_: Thrust Restraint at Fitting Detail shown and conforms to WCW&SA requirements.
16. Yes\_\_\_ No\_\_\_ NA\_\_\_: Combination Air/Vacuum Release Valve shown and conforms to WCW&SA requirements.

**Comments** \_\_\_\_\_  
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