Sanitary

It is recommended that electronic submittals be required for Sanitary Gravity Mains, Sanitary Forcemains, Sanitary Manholes, Sanitary Cleanouts, and Lift Stations. These items should be submitted as a file geodatabase (i.e. ".gdb" file extension). This will allow for ease of transferring data while keeping attachments associated with features. These items should be geolocated and should have a horizontal accuracy of within 4 inches. The vertical accuracy should be within 1 inches if modeling of the system is a future desire; otherwise, a vertical accuracy of within 4 inches is acceptable.

Upon the completion of the project, the files should be submitted to the Town of Danville to the designated person in charge of maintaining the Town of Danville's GIS files. This person should coordinate with the appropriate Town of Danville Department Head to check that the data is complete and correct. We recommend a retainage be held until the files have been submitted and checked for accuracy and compliance with any future Town of Danville Standards.

The Town of Danville should require photos be attached to each feature. Features that will be buried should be photographed prior to burial. Features that have inverts should have photos taken of the inverts from the top of the structure. It is recommended that all photos have a specific orientation in regards to cardinal directions. Typically orienting photos so that the photos are taken facing North is recommended. The Town of Danville should set size restrictions for attachments to 10MB. Keeping file limited in size reduces the overall size of the database the Town of Danville will have to maintain. Additional attachments could be considered for standards, such as design or as-built drawings. It is recommended that as-built drawings and design documentation be included as attachments to lift stations.

Sanitary Manhole. Top of photo is North.

The following information should be included for each feature. The field names should match those shown below for consistency in data to allow for easier data compilation and analysis. Additional fields desired by the Town of Danville should be added to any future Town of Danville Standards.

Electronic Submittal Recommendations

Sanitary Gravity Mains	Sanitary Forcemains	Sanitary Manholes
Pipe_Size	Pipe_Size	Sanitary_Manhole_ID
Pipe_Material	Pipe_Material	Cover_Type
Upstream_Point_ID	Upstream_Point_ID	Manhole_Type
Downstream_Point_ID	Downstream_Point_ID	Wall_Material
Slope	Date_of_Install	Structure_Condition
Date_of_Install	Length	Lined
Length	Design_Flow	Flow_Direction
Comment	Comment	Flow_Level
		Flow_Restriction
		Rim_Elevation
		Date_of_Install
		Date_of_Last_Service
		Invert_1_Direction
		Invert_1_Pipe_Depth
		Invert_1_Pipe_Diameter
		Invert_1_Pipe_Material
		Invert_1_Pipe_Condition
		Invert_2_Direction
		Invert_2_Pipe_Depth
		Invert_2_Pipe_Diameter
		Invert_2_Pipe_Material
		Invert_2_Pipe_Condition
		Invert_3_Direction
		Invert_3_Pipe_Depth
		Invert_3_Pipe_Diameter
		Invert_3_Pipe_Material
		Invert_3_Pipe_Condition
		Invert_4_Direction
		Invert_4_Pipe_Depth
		Invert_4_Pipe_Diameter
		Invert_4_Pipe_Material
		Invert_4_Pipe_Condition
		Invert_5_Direction
		Invert_5_Pipe_Depth
		Invert_5_Pipe_Diameter
		Invert_5_Pipe_Material
		Invert_5_Pipe_Condition
		Invert_6_Direction
		Invert_6_Pipe_Depth
		Invert_6_Pipe_Diameter
		Invert_6_Pipe_Material
		Invert_6_Pipe_Condition
		Invert_7_Direction
		Invert_7_Pipe_Depth
		Invert_7_Pipe_Diameter
		Invert_7_Pipe_Material
		Invert_7_Pipe_Condition
		Invert_8_Direction
		Invert_8_Pipe_Depth
		Invert_8_Pipe_Diameter
		Invert_8_Pipe_Material
		Invert_8_Pipe_Condition
		Comment

Electronic Submittal Recommendations

Sanitary Cleanouts	**Lift Stations**
Sanitary_Cleanout_ID	Lift_Station_ID
Access_Type	Valve_Vault_Access_Size
Access_Material	Valve_Vault_Access_Type
Access_Diameter	Valve_Vault_Depth
Interior_Depth	Wet_Well_Access_Size
Cleanout_Type	Wet_Well_Access_Type
Comment	Wet_Well_Depth
	Number_of_Pumps
	Pump_Manufacturer
	Pump_Model
	Pump_Level_On
	Pump_Level_Off
	Maximum_Design_Flow
	Invert_1_Direction
	Invert_1_Pipe_Depth
	Invert_1_Pipe_Diameter
	Invert_1_Pipe_Material
	Invert_1_Pipe_Condition
	Invert_2_Direction
	Invert_2_Pipe_Depth
	Invert_2_Pipe_Diameter
	Invert_2_Pipe_Material
	Invert_2_Pipe_Condition
	Invert_3_Direction
	Invert_3_Pipe_Depth
	Invert_3_Pipe_Diameter
	Invert_3_Pipe_Material
	Invert_3_Pipe_Condition
	Invert_4_Direction
	Invert_4_Pipe_Depth
	Invert_4_Pipe_Diameter
	Invert_4_Pipe_Material
	Invert_4_Pipe_Condition
	Invert_5_Direction
	Invert_5_Pipe_Depth
	Invert_5_Pipe_Diameter
	Invert_5_Pipe_Material
	Invert_5_Pipe_Condition
	Invert_6_Direction
	Invert_6_Pipe_Depth
	Invert_6_Pipe_Diameter
	Invert_6_Pipe_Material
	Invert_6_Pipe_Condition
	Comment

Electronic Submittal Recommendations

Descriptions of the recommended fields and additional details are as follows:

Features	Fields	Field Type	Field Descriptions
Sanitary Gravity Main (Polyline)	Pipe_Size	Short	Diamter of Sanitary Gravity Main (INCHES)
	Pipe_Material	Text - Coded Value	Sanitary Gravity Main Material (PVC, Concrete, Etc.)
	Upstream_Point_ID	Text	ID of Upstream feature. (Sanitary Manhole, Clean Out, Etc.)
	Downstream_Point_ID	Text	ID of Downstream feature. (Sanitary Manhole, Clean Out, Etc.)
	Slope	Double	Slope of Gravity Main (% Slope)
	Date_of_Install	Date	Date Storm Gravity Main was Installed (YYYYMMDD)
	Length	Double	Length of Storm Gravity Main (Calculated by GIS Program)
	Comment	Text	Comments
Sanitary Forcemain (Polyline)	Pipe_Size	Short	Diamter of Sanitary Forcemain (INCHES)
	Pipe_Material	Text - Coded Value	Sanitary Forcemain Material (PVC, HDPE, Etc.)
	Upstream_Point_ID	Text	ID of Upstream feature. (Sanitary Manhole, Clean Out, Etc.)
	Downstream_Point_ID	Text	ID of Downstream feature. (Sanitary Manhole, Clean Out, Etc.)
	Date_of_Install	Date	Date Storm Gravity Main was Installed (YYYYMMDD)
	Length	Double	Length of Storm Gravity Main (Calculated by GIS Program)
	Design_Flow	Double	Design Flow of Forcemain (GPM)
	Comment	Text	Comments
Sanitary Manholes (Point)	Sanitary_Manhole_ID	Text	ID of Sanitary Manhole (Town of Danville Selected Style)
	Cover_Type	Text - Coded Value	Sanitary Manhole Cover Type (Standard, Hinged, Etc.)
	Cover_Diameter	Short	Sanitary Manhole Cover Diameter (INCHES)
	Manhole_Type	Text - Coded Value	Sanitary Manhole Type (Standard, Drop, Etc.)
	Wall_Material	Text - Coded Value	Sanitary Manhole Wall Material (Plastic, Concrete, Etc.)
	Structure_Condition	Text - Coded Value	Sanitary Manhole Structure Condition
	Lined	Text - Coded Value	Is the Sanitary Manhole Lined (Is Structure Lined)
	Flow_Direction	Text - Coded Value	Direction of Flow in Sanitary Manhole Structure (Cardinal Direction)
	Flow_Level	Double	Level of Flow in Sanitary Manhole Structure (Percentage)
	Flow_Restriction	Text - Coded Value	Flow Restriction in Sanitary Manhole Structure
	Rim_Elevation	Double	Sanitary Manhole Rim Elevation (FEET)
	Date_of_Install	Date	Date Sanitary Manhole was Installed (YYYYMMDD)
	Date_of_Last_Service	Date	Sanitary Manhole Last Service Date (YYYYMMDD)
	Invert Data *Not a Field*	-	Recommend Fields for No Less Than 8 Inverts
	Invert_X_Direction	Text - Coded Value	Cardinal Direction of Invert
	Invert_X_Pipe_Depth	Double	Pipe Depth for Invert (FEET)
	Invert_X_Pipe_Diameter	Short	Pipe Diameter for Invert (INCHES)
	Invert_X_Pipe_Material	Text - Coded Value	Pipe Material for Invert (PVC, Concrete, Etc.)
	Invert_X_Pipe_Condition	Text - Coded Value	Pipe Condition for Invert
	Comments	Text	Comments

Electronic Submittal Recommendations

Features	Fields	Field Type	Field Descriptions
Sanitary Cleanouts (Point)	Sanitary_Cleanout_ID	Text	ID of Sanitary Cleanouts (Town of Danville Selected Style)
	Access_Type	Text - Coded Value	Sanitary Cleanout Access Type
	Access_Material	Text - Coded Value	Sanitary Cleanout Access Material
	Access_Diameter	Short	Sanitary Cleanout Access Diameter (INCHES)
	Interior_Depth	Short	Sanitary Cleanout Interior Depth (FEET)
	Cleanout_Type	Text - Coded Value	Sanitary Cleanout Type (Flushing, Cleanout, Etc.)
	Comments	Text	Comments
Lift Stations (Point)	Lift_Station_ID	Text	ID of Lift Station (Town of Danville Selected Style)
	Valve_Vault_Access_Size	Short	Valve Vault Access Size (INCHES)
	Valve_Vault_Access_Type	Text - Coded Value	Valve Vault Access Type (Hinged, Bolted, Etc.)
	Valve_Vault_Depth	Short	Valve Vault Depth (FEET)
	Wet_Well_Access_Size	Short	Wet Well Access Size (INCHES)
	Wet_Well_Access_Type	Text - Coded Value	Wet Well Access Type
	Wet_Well_Depth	Short	Wet Well Depth (FEET)
	Number_of_Pumps	Short	Number of Lift Station Pumps
	Pump_Manufacturer	Text	Lift Station Pump Manufacturer
	Pump_Model	Text	Lift Station Pump Model
	Pump_Level_On	Double	Lift Station Pump Level On (FEET)
	Pump_Level_Off	Double	Lift Station Pump Level Off (FEET)
	Maximum_Design_Flow	Short	Maximum Design Flow of Lift Station (GPM)
	Invert Data *Not a Field*	-	Recommend Fields for No Less Than 6 Inverts
	Invert_X_Direction	Text - Coded Value	Cardinal Direction of Invert
	Invert_X_Pipe_Depth	Double	Pipe Depth for Invert (FEET)
	Invert_X_Pipe_Diameter	Short	Pipe Diameter for Invert (INCHES)
	Invert_X_Pipe_Material	Text - Coded Value	Pipe Material for Invert (PVC, Concrete, Etc.)
	Invert_X_Pipe_Condition	Text - Coded Value	Pipe Condition for Invert
	Comment	Text	Comments