
































































## WATER SYSTEM

-  GIS Revision Tracking Point
-  Pressure Tank
-  Unknown FCODE
-  Air and Vacuum Valve
-  Air Release Valve
-  Altitude Valve
-  Ball Valve
-  Butterfly Valve
-  Butterfly Valve Operator Side
-  Check Valve
-  Corporation Stop
-  Curb Stop
-  Drain Valve
-  Gate Valve
-  Globe Valve
-  Hydrant Valve
-  Pressure Reducing Valve
-  Service Valve
-  Surge Relief Valve
-  Private Air Release Valve
-  Private Air and Vacuum Valve
-  Private Altitude Valve
-  Private Ball Valve
-  Private Butterfly Valve
-  Private Butterfly Valve Operator Side
-  Private Check Valve
-  Private Corporation Stop
-  Private Curb Stop
-  Private Drain Valve
-  Private Gate Valve
-  Private Globe Valve
-  Private Hydrant Valve
-  Private Pressure Reducing Valve
-  Private Service Valve
-  Private Surge Relief Valve
-  Closed Valve
-  Isolation Valve
-  Private Isolation Valve
-  Backflow Preventer









### Hydrants

-  Hydrant
-  Private Hydrant




### Water Fittings

-  Adaptor
-  Bend
-  Blind Flange
-  Cap
-  Chamber Flow Arrow
-  Chamber Vent
-  Coupling
-  Cross
-  Denso Tape
-  Flow Meter
-  Link Seal on a Pipe Sleeve
-  M.J. Restraint Device
-  Non-shrink Fill on a Pipe Sleeve
-  Plug
-  Reducer
-  Sleeve
-  Strainer
-  Tapping Sleeve
-  Tee
-  Test Meter Pit
-  Victaulic Coupling
-  Wye
-  Wye Left
-  Wye Right



### Structure Points

-  Air Release Chamber
-  Booster Station
-  Control Chamber
-  Meter Chamber
-  Production Well
-  PRV Chamber
-  Reservoir Chamber
-  Water Treatment Plant














### Other Water Service Features

-  Water Service Point
-  Leaks and Breaks
-  Master Meter





### Water Pumps

-  Domestic Pump
-  Fire Pump



### Water Pipes

-  Unknown Pipe
-  Drain
-  Distribution Main
-  Transmission Main
-  Private Drain
-  Private Distribution Main
-  Private Transmission Main
-  Unknown Lateral
-  Service Lateral
-  Hydrant Lead
-  Private Service Lateral
-  Private Hydrant Lead
-  Pipe Mask

### Water Pipe Insulation

-  Concrete Slab
-  Pipe Wrapped Insulation
-  Protective Piping Encasement
-  Styrofoam Insulation

### Water Pipe Cleaning and Lining

-  Cleaning and Lining
-  Cleaned Pipe

### Structure Polygons



## WASTEWATER COLLECTION SYSTEM

	GIS Revision Tracking Point		Service Point		Sewer Pump
	Collection System Spot Repair		Legacy Service Point		Treatment Facility
<b>Wastewater Manholes and Outfalls</b>			Cathodic Protection Test Station		Casing
	Public Manhole		Control Structure		CCTV Line
	Private Manhole		Identified Deficiency (Pipes/Laterals)		Lining
<b>Wastewater Chambers</b>			Tracewire Access Point		Tracewire
	Diversion Chamber		Force Main Flow Meter		Vent Line
	Diversion Point		Gravity Flow Meter	<b>Wastewater Insulation</b>	
	Force Main Valve Chamber		Gravity Flow Meter - Removed		Concrete Slab
	Junction Chamber	<b>Wastewater Pumping Stations</b>			Pre-Insulated Pipe
	Pre-Treatment Unit		Public Pumping Station		Styrofoam Sheet
	Pump Chamber		Private Pumping Station	<b>Wastewater Pipes</b>	
	Regulating Chamber	<b>Wastewater Holding Tanks</b>			Public Force Main
	Tide Chamber		Heat Recovery Tank		Public Gravity Pressure Pipe
	Outfall		Holding Tank		Public Pressure Pipe
<b>Wastewater Fittings</b>			Overflow Tank		Public Inverted Siphon
	Bend	<b>Wastewater Valves</b>			Public Pipe
	Cap		Air Release Valve		Private Force Main
	Cleanout		Altitude Valve		Private Gravity Pressure Pipe
	Coupling		Butterfly Valve		Private Pressure Pipe
	Eccentric Reducer		Ball Valve		Private Inverted Siphon
	Flexible Coupling		Cone Valve		Private Pipe
	Flex Joint		Check Valve		Public Lateral
	Grouted Connection		Drain Valve		Private Lateral
	Long Radius Bend		Gate Valve		
	Mechanical Joint Restraint		Plug Valve		
	Reducer		Pressure Release Valve		
	Saddle		Surge Relief Valve		
	Tap		Valve		
	Tee				
	Wye				
	Vent				

## STORMWATER COLLECTION SYSTEM

### Stormwater Manholes

- Public Manhole
- Private Manhole

### Stormwater Inlets

- Public Catchbasin
- Public Double Catchbasin
- Public Triple Catchbasin
- Private Catchbasin
- Private Double Catchbasin
- Private Triple Catchbasin

### Stormwater Headwalls and Outfalls

- Headwall
- Outfall

### Stormwater Fittings

- Bend
- Cap
- Cleanout
- Coupling
- Eccentric Reducer
- Flexible Coupling
- Flex Joint
- Grouted Connection
- Long Radius Bend
- Mechanical Joint Restraint
- Reducer
- Saddle
- Tap
- Tee
- Wye

### Stormwater Chambers

- Diversion Chamber
- Diversion Point
- Force Main Valve Chamber
- Junction Chamber
- Pump Chamber
- Regulating Chamber
- Tide Chamber
- Treatment Unit

- Service Point
- Control Structure
- Identified Deficiency (Pipes/Laterals)
- Force Main Flow Meter
- Gravity Flow Meter
- Gravity Flow Meter - Removed

### Stormwater Pumping Stations

- Public Pumping Station
- Private Pumping Station

### Stormwater Valves

- Air Release Valve
- Altitude Valve
- Butterfly Valve
- Ball Valve
- Cone Valve
- Check Valve
- Drain Valve
- Gate Valve
- Plug Valve
- Pressure Release Valve
- Surge Relief Valve
- Valve

### Stormwater Management Structures

- Other (No Remarks)
- Berm
- Constructed Wetland
- Lake
- Oversize Pipe
- Underground Storage
- Wet Pond
- Dry Pond
- Unknown
- Other (See Remarks)

- Casing
- CCTV Line
- Lining
- Ditch

### Stormwater Insulation





- Concrete Slab
- Pre-Insulated Pipe
- Styrofoam Sheet

### Stormwater Pipes
















- Public Catchbasin Lead
- Public Culvert
- Public Drain
- Public Force Main
- Public Gravity Pressure Pipe
- Public Pressure Pipe
- Public Inverted Siphon
- Public Pipe
- Private Catchbasin Lead
- Private Culvert
- Private Drain
- Private Force Main
- Private Gravity Pressure Pipe
- Private Pressure Pipe
- Private Inverted Siphon
- Private Pipe
- Public Lateral
- Private Lateral

## COMBINED COLLECTION SYSTEM




### Combined Manholes and Outfalls

-  Public Manhole
-  Private Manhole
-  Outfall
-  Combined Sewer Overflow (CSO) Structure



### Combined Fitting






-  Bend
-  Cap
-  Cleanout
-  Coupling
-  Eccentric Reducer
-  Flexible Coupling
-  Flex Joint
-  Grouted Connection
-  Long Radius Bend
-  Mechanical Joint Restraint
-  Reducer
-  Saddle
-  Tap
-  Tee
-  Wye

### Combined Holding Tanks








-  Heat Recovery Tank
-  Holding Tank
-  Overflow Tank

### Combined Pumping Stations













-  Public Pumping Station
-  Private Pumping Station

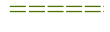


-  Control Structure
-  Identified Deficiency (Pipes/Laterals)
-  Force Main Flow Meter
-  Gravity Flow Meter
-  Gravity Flow Meter - Removed

### Combined Chambers



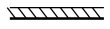
-  Diversion Chamber
-  Diversion Point
-  Force Main Valve Chamber
-  Junction Chamber
-  Pump Chamber
-  Regulating Chamber
-  Tide Chamber

### Combined Valves












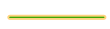
-  Air Release Valve
-  Altitude Valve
-  Butterfly Valve
-  Ball Valve
-  Cone Valve
-  Check Valve
-  Drain Valve
-  Gate Valve
-  Plug Valve
-  Pressure Release Valve
-  Surge Relief Valve
-  Valve

-  Casing
-  CCTV Line
-  Lining

### Insulation

-  Concrete Slab
-  Pre-Insulated Pipe
-  Styrofoam Sheet

### Combined Pipes

-  Public Force Main
-  Public Gravity Pressure Pipe
-  Public Pressure Pipe
-  Public Inverted Siphon
-  Public Pipe
-  Private Force Main
-  Private Gravity Pressure Pipe
-  Private Pressure Pipe
-  Private Inverted Siphon
-  Private Pipe
-  Public Lateral
-  Private Lateral

## UNKNOWN COLLECTION SYSTEM

### Unknown Manholes

- Public Manhole
- Private Manhole

### Unknown Headwalls and Outfalls

- Headwall
- Outfall

### Unknown Fittings

- Bend
- Cap
- Cleanout
- Coupling
- Eccentric Reducer
- Flexible Coupling
- Flex Joint
- Grouted Connection
- Long Radius Bend
- Mechanical Joint Restraint
- Reducer
- Saddle
- Tap
- Tee
- Wye

### Unknown Holding Tanks

- Heat Recovery Tank
- Holding Tank
- Overflow Tank

### Unknown Pumping Stations

- Public Pumping Station
- Private Pumping Station

- Service Point
- Cathodic Protection Test Station
- Control Structure
- Identified Deficiency (Pipes/Laterals)
- Force Main Flow Meter
- Gravity Flow Meter
- Gravity Flow Meter - Removed

### Unknown Chambers

- Diversion Chamber
- Diversion Point
- Force Main Valve Chamber
- Junction Chamber
- Pump Chamber
- Regulating Chamber
- Tide Chamber

### Unknown Valves

- Air Release Valve
- Altitude Valve
- Butterfly Valve
- Ball Valve
- Cone Valve
- Check Valve
- Drain Valve
- Gate Valve
- Plug Valve
- Pressure Release Valve
- Surge Relief Valve
- Valve

- Casing
- CCTV Line
- Lining

### Unknown Insulation

- Concrete Slab
- Pre-Insulated Pipe
- Styrofoam Sheet

### Unknown Pipes

- Public Force Main
- Public Gravity Pressure Pipe
- Public Pressure Pipe
- Public Inverted Siphon
- Public Pipe
- Private Force Main
- Private Gravity Pressure Pipe
- Private Pressure Pipe
- Private Inverted Siphon
- Private Pipe
- Public Lateral
- Private Lateral

## ABANDONED WATER SYSTEM

- ⊗ Abandoned Valves
- ⊖ Abandoned Hydrants
- Abandoned Water Pipe
- Abandoned Water Drain
- Abandoned Service Point
- Abandoned Service Lateral
- Abandoned Structure Points**
- Unknown Structure Subtype
- <sup>ARV</sup> Air Release Chamber
- ⊕<sup>BS</sup> Booster Station
- <sup>CTR</sup> Control Chamber
- <sup>MTR</sup> Meter Chamber
- ⊙<sup>PW</sup> Production Well
- <sup>PRV</sup> PRV Chamber
- <sup>RSV</sup> Reservoir Chamber
- ⊠<sup>WTP</sup> Water Treatment Plant

- Abandoned Fittings**
- × Unknown FCODE
- Adaptor
- Bend
- ≡ Blind Flange
- ⌒ Cap
- ▲ Chamber Flow Arrow
- ⊠<sup>VT</sup> Chamber Vent
- ⌋ Coupling
- ⊠ Cross
- ⊠ Denso Tape
- ⊠ Flow Meter
- ⊠ Link Seal on a Pipe Sleeve

- ⊠ M.J. Restraint Device
- ⊠ Non-shrink Fill on a Pipe Sleeve
- ⊠ Plug
- ▲ Reducer
- Sleeve
- Strainer
- ≡ Tapping Sleeve
- ⌒ Tee
- ⊠<sup>TM</sup> Test Meter Pit
- ⊠ Victaulic Coupling
- ⇒ Wye
- ⇒ Wye Left
- ⇒ Wye Right

**Abandoned Structure Polygons**



## ABANDONED COLLECTION SYSTEM

- Abandoned Manholes**
- ⊠ Combined Manhole
- Wastewater Manhole
- Stormwater Manhole
- ⊠ Unknown Manhole
- ⊠ Abandoned CSO Structure
- Abandoned Inlets and Outfalls**
- Catchbasin
- Double Catchbasin
- Triple Catchbasin
- ( Abandoned Headwall
- ⌒ Abandoned Outfall

- ⊠ Abandoned Cathodic Protection Test Station
- ⊠ Abandoned Control Structure
- ⊠ Abandoned Stormwater Management Structure
- ⊠ Abandoned Tracewire Access Point
- ⊠ Abandoned Sewer Pump

- ⊠ Abandoned Treatment Facility
- ⊠ Abandoned Pumping Station
- ⊠ Abandoned Casing
- ⊠ Abandoned Lining
- ⊠ Abandoned Ditch
- ⊠ Abandoned Insulation
- ⊠ Abandoned Tracewire
- ⊠ Abandoned Vent Line

- Abandoned Fittings**
- Bend
- ⌒ Cap
- ⊕ Cleanout
- ⌋ Coupling
- ▲ Eccentric Reducer
- Flex Joint
- ⌋ Flexible Coupling
- Grouted Connection
- Long Radius Bend
- ⊠ Mechanical Joint Restraint
- ▲ Reducer
- Saddle
- Tap
- ⌒ Tee
- ⇒ Wye
- ⊠<sup>VT</sup> Vent






































- Abandoned Chambers**
- ⊠ Diversion Chamber
- ⊠ Diversion Point
- ⊠<sup>VL</sup> Force Main Valve Chamber
- ⊠<sup>JNC</sup> Junction Chamber
- ⊠<sup>PUMP</sup> Pump Chamber
- ⊠ Regulating Chamber
- ⊠ Stormwater Treatment Unit
- ⊠ Tide Chamber
- ⊠ Wastewater Pre-Treatment Unit

- Abandoned Pipes**
- FM** Combined Force Main
- GP** Combined Gravity Pressure Pipe
- PP** Combined Pressure Pipe
- IS** Combined Inverted Siphon
- Combined Pipe
- Catchbasin Lead
- Culvert
- Drain
- FM** Stormwater Force Main
- GP** Stormwater Gravity Pressure Pipe
- PP** Stormwater Pressure Pipe
- IS** Stormwater Inverted Siphon
- Stormwater Pipe
- FM** Unknown Force Main
- GP** Unknown Gravity Pressure Pipe
- PP** Unknown Pressure Pipe
- IS** Unknown Inverted Siphon
- Unknown Pipe
- FM** Wastewater Force Main
- GP** Wastewater Gravity Pressure Pipe
- PP** Wastewater Pressure Pipe
- IS** Wastewater Inverted Siphon
- Wastewater Pipe
- Lateral




















- Abandoned Holding Tanks**
- ⊠ Heat Recovery Tank
- ⊠ Holding Tank
- ⊠<sup>OF</sup> Overflow Tank

- Abandoned Service Points**
- uk Unknown
- sw Stormwater
- ww Wastewater







## LAND FEATURES

	Traffic Pole	<b>Property Zoning</b>		HPSBB	<b>HRM Service Requirements</b>	
	Utility Pole		BED		LEPL	 Water Service Only
	Survey Monument		CHEB		LTWN	 Wastewater Service Only
	Natural Gas Lateral		CHW		MVDS	 Water and Wastewater Service
	Natural Gas Pipeline		DART		NPLM	
	Property Boundary		DHFV		PROS	
	Road Feature		DRTDO		SACK	
	Halifax Water Collection System Structure		EPCW		SCKDR	
	Land Owned by Halifax Water		ESE		SHUB	
	Community Boundary		ESW		SMB	
	Halifax Water Sewershed Boundary		HMAIN		TLB	
	Halifax Water Stormwater Service Boundary		HPEN			

## BASEMAP

	Power Pole / Transmission Tower		Building
	Municipal Boundary		Road
	Railroad		Parking Area / Driveway / Sidewalk
	Rivers / Stream		Property Boundary
	Streets and Highways (1:100 - 1:8,000)		Lake
	Streets and Highways (1:16,000 - 1:64,000)		Parks / Recreational Areas
	Streets and Highways (1:128,000 - 1:256,000)		Land Owned by University
	Major Highway		Coastline
	Minor Highway		
	Primary Street		
	Street		





## WATER SCHEMATIC

	Water - Schematic System
	Water - Schematic Hydrant
	Water - Schematic System (Private)
	Water - Schematic Hydrant (Private)
	Water - Schematic Cleaning and Lining
	Water - Schematic Cleaned Pipe







**ZONES AND REGIONS**


**Distribution System Regions**










































-  Unknown
-  East
-  Central
-  West

**Collection System Regions**








































































-  Unknown
-  East
-  Central
-  West

**Pressure Zones**

-  Unknown Pressure Zone
-  24 East High
-  Atholea Low
-  Beaver Bank Boosted
-  Beaver Bank Intermediate
-  Bedford Intermediate
-  Bedford Low
-  Bedford South Intermediate
-  Berry Hills Boosted
-  Bluewater Intermediate
-  Broadholme Intermediate
-  Brunello Boosted
-  Burnside Boosted
-  Burnside High
-  Burnside Low
-  Caldwell Road Boosted
-  Charles Road Boosted
-  Churchill Intermediate
-  Cowie High
-  Dartmouth Intermediate East
-  Dartmouth Intermediate West
-  Dartmouth Low
-  Eaglewood Boosted
-  Eastern Passage/Woodside Low
-  Fairview Clayton High
-  Fall River Intermediate
-  Farnhamgate Intermediate
-  Flamingo Intermediate
-  Geizer 123 High
-  Geizer 158 High
-  Geizer Boosted
-  Glenforest Intermediate

-  Hemlock High
-  Hemlock Intermediate
-  Hemlock Super High
-  Herring Cove Low
-  Kearney Lake Intermediate
-  Kingswood High
-  Lake Major High
-  Lakeside Intermediate
-  Leiblin Boosted
-  Lively Boosted
-  Lucasville High
-  Miller Lake High
-  Miller Lake Low
-  Monarch/Rivendale High
-  Montague High
-  Mount Edward Boosted
-  Mowatt Intermediate
-  No. 7 Highway Boosted
-  North Preston
-  Orchard High
-  Peninsula High
-  Peninsula Intermediate
-  Peninsula Low
-  Pockwock Boosted
-  Pockwock High
-  Princess Margaret Low
-  Ritcey Low
-  Robie Reservoir
-  Rockingham Low
-  Rockmanor Intermediate
-  Ross Road Low
-  Sackville High
-  Sackville Intermediate
-  Silverside Boosted
-  Spryfield Intermediate
-  Titus Evans Low
-  Upper Hammonds Plains High
-  Waverley Intermediate
-  Waverley Low
-  West Bedford Intermediate
-  Williams Lake Low

**Meter Zones**

-  Unknown Meter Zone
-  #7 Highway Boosted
-  24 East High
-  Atholea Low
-  Beaver Bank Boosted
-  Beaver Bank Intermediate
-  Bedford Intermediate
-  Bedford Low
-  Bedford South Intermediate
-  Berry Hills Boosted
-  Birch Cove
-  Bluewater Intermediate
-  Broadholme Intermediate
-  Brunello Boosted
-  Burnside Boosted
-  Burnside High
-  Burnside Low
-  Caldwell Rd Boosted
-  Caledonia High
-  Central Dartmouth
-  Charles Rd Boosted
-  Churchill Intermediate
-  Cobequid High
-  Cowie High
-  Dartmouth Low
-  Eastern Passage Low
-  Fairview Clayton Park
-  Fall River Intermediate
-  Farnhamgate Intermediate
-  Flamingo Intermediate
-  Geizer123 High
-  Geizer158 High
-  Geizer Boosted
-  Glenforest Intermediate
-  Hammond Kearney
-  Hemlock High
-  Hemlock Intermediate
-  Hemlock Super High
-  Herring Cove Low
-  Herring Cove Road Intermediate
-  Kearney Lake Intermediate
-  Kingswood High
-  Lake Major High
-  Lakeside High
-  Lakeside Intermediate
-  Leiblin Boosted
-  Lively Boosted
-  Lucasville High
-  Miller Lake High
-  Miller Lake Low
-  Monarch/Rivendale High
-  Montague High
-  Mount Edward Boosted
-  Mowatt Intermediate
-  North Preston
-  Orchard High
-  Penhorn Intermed
-  Peninsula High
-  Peninsula Intermediate Central
-  Peninsula Intermediate North
-  Peninsula Intermediate South
-  Peninsula Low North
-  Peninsula Low South
-  Pockwock Boosted
-  Pockwock High
-  Princess Margaret Low
-  Ritcey Low
-  Robie Reservoir
-  Rockmanor Intermediate
-  Ross Rd
-  Sackville High
-  Sackville Intermediate
-  Silverside Boosted
-  Spryfield Intermediate
-  Titus Evans Low
-  Upper Hammonds Plains High
-  Waverley Intermediate
-  Waverley Low
-  West Bedford Intermediate
-  Williams Lake Low
-  Woodlawn Inter
-  Woodside Low