

Water Fittings

### WATER SYSTEM

OARV	Air Release Valve
OAVC	Air and Vacuum Valve
$\bigcirc$ ALT	Altitude Valve
X	Backflow Preventer
0	Ball Valve
	Butterfly Valve
os	Butterfly Valve Operator Side
Zt	Check Valve
$_{\odot}$ CS	Corporation Stop
$^{\odot}$ CC	Curb Stop
$\bigcirc$ DRN	Drain Valve
$\otimes$	Gate Valve
$\bigcirc GLV$	Globe Valve
$\otimes$	Hydrant Valve
$\bigcirc$ PRV	Pressure Reducing Valve
$\odot$ SRV	Service Valve
$\bigcirc SUR$	Surge Relief Valve
	Private Air Release Valve
	Private Air and Vacuum Valve
	Private Altitude Valve
0	Private Ball Valve
	Private Butterfly Valve
OS	Private Butterfly Valve Operator Side
Zt	Private Check Valve
$_{\odot}$ CS	Private Corporation Stop
$^{\rm O}$ CC	Private Curb Stop
$\otimes$	Private Gate Valve
⊖GLV	Private Globe Valve
$\otimes$	Private Hydrant Valve
OPRV	Private Pressure Reducing Valve
$\odot$ SRV	Private Service Valve
$\bigcirc$ SUR	Private Surge Relief Valve
0	Closed Valve
0	Isolation Valve
0	Private Isolation Valve

#### Adaptor Bend \_ Blind Flange п Сар Chamber Flow Arrow **F**VT Chamber Vent Coupling Л ΓĪ 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 Ξ **Tapping Sleeve** E. Tee ΠTΜ Test Meter Pit Ι Victaulic Coupling Wye > -Wye Left Wye Right **Structure Points** ARV Air Release Chamber $\mathbf{\nabla}$ **Booster Station** CTR Control Chamber MTR Meter Chamber ⊙PW Production Well PRV **PRV** Chamber RSV Reservoir Chamber ÎÌ Water Treatment Plant

#### **Other Water Service Features** • Water Service Point $\star$ Leaks and Breaks М Master Meter $\bigtriangledown$ Water Pump **GIS Revision Tracking Point** 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 71111 Styrofoam Insulation Water Pipe Cleaning and Lining Cleaning and Lining **Cleaned Pipe** Structure Polygons

#### Hydrants

- Private Hydrant

Hydrant



# WASTEWATER COLLECTION SYSTEM

S.S.	GIS Revision Tracking Point	•	Service Point		Sewer Pump
Ŕ		+	Legacy Service Point	Ĩ	Treatment Facility
	Collection System Spot Repair	Ē	Cathodic Protection Test Station		
			Control Structure		Casing
	er Manholes and Outfalls	*	Identified Deficiency (Pipes/Laterals)		CCTV Line
	Public Manhole		Tracewire Access Point		Lining
	Private Manhole	-6-	Force Main Flow Meter		Tracewire
	er Chambers	I I			Vent Line
	Diversion Chamber		Gravity Flow Meter	Wastewat	er Insulation
	Diversion Point	-	Gravity Flow Meter - Removed		Concrete Slab
<b>FM</b> VL	Force Main Valve Chamber	∎ Wastewat	er Pumping Stations		Pre-Insulated Pipe
	Junction Chamber	ي الم	Public Pumping Station		Styrofoam Sheet
	Pre-Treatment Unit			Wastewat	-
PUMP	Pump Chamber		Private Pumping Station	FM▶ —	Public Force Main
	Regulating Chamber		er Holding Tanks	GP▶ —	Public Gravity Pressure Pipe
Т	Tide Chamber		Heat Recovery Tank	PP <b>&gt;</b> ─	Public Pressure Pipe
L.	Outfall	$\bigcirc$	Holding Tank	·IS <b>&gt;</b> —	Public Inverted Siphon
Wastewat	er Fittings	OF	Overflow Tank	$\rightarrow$	Public Pipe
—	Bend	Wastewat	ter Valves	FM)	Private Force Main
	Сар		Air Release Valve	GP>	Private Gravity Pressure Pipe
€ <sup>CO</sup>	Cleanout		Altitude Valve	PP>	Private Pressure Pipe
)(	Coupling		Butterfly Valve	<b>1</b> S <b>&gt;</b> —	Private Inverted Siphon
T	Eccentric Reducer	0	Ball Valve	<b>&gt;</b>	Private Pipe
)(	Flexible Coupling	$\bigtriangledown$	Cone Valve		Public Lateral
8	Flex Joint	Zţ	Check Valve		Private Lateral
Ŷ	Grouted Connection		Drain Valve		
	Long Radius Bend	8	Gate Valve		
¥	Mechanical Joint Restraint	•	Plug Valve		
	Reducer	 PRV	Pressure Release Valve		
	Saddle	SUR	Surge Relief Valve		
=	Тар		Valve		
C	Тее	•	ναινσ		
⇒	Wye				

**F**vt Vent

**Treatment Unit** 

# **STORMWATER COLLECTION SYSTEM**

Stormwate	er Manholes	•	Service Point
0	Public Manhole	X	Control Structure
•	Private Manhole	*	Identified Deficiency (Pipes/Laterals)
Stormwate	er Inlets	- <b>-</b>	Force Main Flow Meter
	Public Catchbasin	•	
B	Public Double Catchbasin		Gravity Flow Meter
目	Public Triple Catchbasin	<u> </u>	Crovity Flow Motor Domovod
	Private Catchbasin	T	Gravity Flow Meter - Removed
-	Private Double Catchbasin	Stormwate	er Pumping Stations
	Private Triple Catchbasin	<u>ک</u>	Public Pumping Station
Stormwate	er Headwalls and Outfalls	R	Private Pumping Station
$\smile$	Headwall	Stormwate	er Valves
L	Outfall		Air Release Valve
Stormwate	er Fittings		Altitude Valve
—	Bend		
	Сар		Butterfly Valve
• <sup>℃0</sup>	Cleanout	0	Ball Valve
)(	Coupling	$\bigtriangledown$	Cone Valve
T	Eccentric Reducer	Zt	Check Valve
)(	Flexible Coupling		Drain Valve
	Flex Joint	$\otimes$	Gate Valve
Ŷ	Grouted Connection		Plug Valve
	Long Radius Bend		Pressure Release Valve
¥	Mechanical Joint Restraint		Surge Relief Valve
	Reducer	٢	Valve
- <b>1</b> -1	Saddle	Stormwate	er Management Structures
=	Тар		Other (No Remarks)
C	Тее		Berm
⇒	Wye	<u> </u>	Constructed Wetland
Stormwate	er Chambers		Lake
	Diversion Chamber		Lake
۲	Diversion Point		Oversize Pipe
<b>M</b> VL	Force Main Valve Chamber	$\bigcirc$	Underground Storage
	Junction Chamber		Wet Pond
PUMP	Pump Chamber	***	Dry Pond
$\bigcirc$	Regulating Chamber	٢	Unknown
T	Tide Chamber	٢	Other (See Remarks)
0			

	Casing
	CCTV Line
	Lining
>	Ditch
Stormwat	er Insulation
	Concrete Slab
<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	Pre-Insulated Pipe
<u></u>	Styrofoam Sheet
Stormwate	r Pipes
	Public Catchbasin Lead
>	Public Culvert
	Public Drain
FM>-	Public Force Main
GP <b>&gt;</b> —	Public Gravity Pressure Pipe
PP <b>&gt;</b> —	Public Pressure Pipe
·IS <b>&gt;</b> —	Public Inverted Siphon
<b>—</b>	Public Pipe
	Private Catchbasin Lead
->	Private Culvert
	Private Drain
FM)>	Private Force Main
GP)	Private Gravity Pressure Pipe
PP)	Private Pressure Pipe
<b>(S)</b>	Private Inverted Siphon
->	Private Pipe
	Public Lateral
	Private Lateral



# **COMBINED COLLECTION SYSTEM**

Combine	d Manholes and Outfalls	X	Control Structure	=
	Public Manhole	*	Identified Deficiency (Pipes/Laterals)	_
	Private Manhole		Force Main Flow Meter	-
<u>الم</u>	Outfall	T		Ir
	Combined Sewer Overflow (CSO) Structure	-	Gravity Flow Meter	
Combine		+	Gravity Flow Meter - Removed	77
—	Bend	Combined	l Chambers	77
•	Сар		Diversion Chamber	С
€ <sup>CO</sup>	Cleanout	۲	Diversion Point	FI
)(	Coupling	<b>FM</b> VL	Force Main Valve Chamber	G
T	Eccentric Reducer		Junction Chamber	P
)(	Flexible Coupling		Pump Chamber	- 13
	Flex Joint		Regulating Chamber	_
Ŷ	Grouted Connection	Т	Tide Chamber	FI
	Long Radius Bend	Combined	d Valves	G
¥	Mechanical Joint Restraint		Air Release Valve	P
	Reducer		Altitude Valve	- C
- <b>1</b>	Saddle		Butterfly Valve	-
=	Тар	0	Ball Valve	
C	Тее		Cone Valve	_
⊂ ≑	Tee Wye	♥ Z↑		_
<b>⇒</b>		_	Cone Valve	_
<b>⇒</b>	Wye	Zt	Cone Valve Check Valve	-
Combined	Wye d Holding Tanks		Cone Valve Check Valve Drain Valve	_
Combined	Wye <b>d Holding Tanks</b> Heat Recovery Tank	Z↑ ⊖DRN ⊗	Cone Valve Check Valve Drain Valve Gate Valve	_
Combined	Wye <b>d Holding Tanks</b> Heat Recovery Tank Holding Tank	Z† Odrn ®	Cone Valve Check Valve Drain Valve Gate Valve Plug Valve	_
Combined	Wye d Holding Tanks Heat Recovery Tank Holding Tank Overflow Tank		Cone Valve Check Valve Drain Valve Gate Valve Plug Valve Pressure Release Valve	_

:	Casing
	CCTV Line
	Lining
Insulation	
	Concrete Slab
	Pre-Insulated Pipe
	Styrofoam Sheet
Combined	Pipes
FM> —	Public Force Main
GP>	Public Gravity Pressure Pipe
PP> —	Public Pressure Pipe
-IS <b>&gt;</b> —	Public Inverted Siphon
<b>—</b>	Public Pipe
FM>	Private Force Main
GP>	Private Gravity Pressure Pipe
PP>	Private Pressure Pipe
	Private Inverted Siphon
<b>→</b>	Private Pipe
	Public Lateral
	Private Lateral



# **UNKNOWN COLLECTION SYSTEM**

Jnknown I	Manholes	•	Service Point
$\bigcirc$	Public Manhole	(TS)	Cathodic Protection Test Station
$\bigcirc$	Private Manhole		Control Structure
Jnknown I	leadwalls and Outfalls	*	Identified Deficiency (Pipes/Laterals)
$\smile$	Headwall		Force Main Flow Meter
▲	Outfall	•	Force Main Flow Meter
Jnknown I	Fittings	+	Gravity Flow Meter
-	Bend	. <b>.</b>	Crowity Flow Motor - Domoved
	Сар		Gravity Flow Meter - Removed
● <sup>CO</sup>	Cleanout	Unknown	Chambers
)(	Coupling		Diversion Chamber
T	Eccentric Reducer		Diversion Point
)(	Flexible Coupling	FM	Force Main Valve Chamber
	Flex Joint		Junction Chamber
Ŷ	Grouted Connection	FUMP	Pump Chamber
Ň	Long Radius Bend	۲	Regulating Chamber
∎ ¥	-	T	Tide Chamber
۶.	Mechanical Joint Restraint	Unknown	Valves
<b>A</b>	Reducer		Air Release Valve
	Saddle		Altitude Valve
Ξ	Тар	-0-	Butterfly Valve
C	Тее	0	Ball Valve
⇒	Wye	-	
nknown I	lolding Tanks	$\mathbf{\nabla}$	Cone Valve
	Heat Recovery Tank	Zt	Check Valve
$\square$	Holding Tank		Drain Valve
OF	Overflow Tank	$\otimes$	Gate Valve
Unknown I	Pumping Stations	D	Plug Valve
ج	Public Pumping Station		Pressure Release Valve
		$\bigcirc$ SUR	Surge Relief Valve
<u>S</u>	Private Pumping Station	۲	Valve

	Casing
	CCTV Line
	Lining
Unknown I	nsulation
	Concrete Slab
<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	Pre-Insulated Pipe
	Styrofoam Sheet
Unknown I	Pipes
FM>	Public Force Main
GP <b>&gt; ─</b>	Public Gravity Pressure Pipe
PP <b>&gt;</b> ──	Public Pressure Pipe
·ıs <b>&gt;</b> —	Public Inverted Siphon
$\rightarrow$	Public Pipe
FM -	Private Force Main
GP>	Private Gravity Pressure Pipe
PP>	Private Pressure Pipe
1 <b>S</b> >	Private Inverted Siphon
<b>→</b> —	Private Pipe
	Public Lateral
	Private Lateral

### **DESIGN SPECIFICATIONS** SECTION 7 - DRAWING REQUIREMENTS (GIS SYMBOLOGY)

# 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
- ARV Air Release Chamber
- **Booster Station**
- CTR Control Chamber
- MTR Meter Chamber
- ●<sup>PW</sup> Production Well
- PRV PRV Chamber
- RSV Reservoir Chamber
  - Water Treatment Plant

# ABANDONED COLLECTION SYSTEM

#### **Abandoned Manholes** (TS) **Combined Manhole** П X Wastewater Manhole 0 Stormwater Manhole $\bigcirc$ Unknown Manhole Ō 1 Abandoned CSO Structure (W) Abandoned Inlets and Outfalls Catchbasin Abandoned Chambers **Double Catchbasin** $\bigtriangledown$ **Triple Catchbasin** ۲ **Diversion Point** Abandoned Headwall FM VL ⊾ Abandoned Outfall JNC Abandoned Fittings PUMP Pump Chamber Bend Cap $\bigtriangleup$ **O**CO Cleanout T Tide Chamber Coupling Eccentric Reducer Abandoned Valves Flex Joint $\bigcirc$ ARV Flexible Coupling ALT Altitude Valve Grouted Connection Long Radius Bend À ¥ ▲ -0-Butterfly Valve Mechanical Joint Restraint Reducer 0 Ball Valve Saddle Cone Valve Тар Ζí Check Valve Tee Drain Valve . Wye $\otimes$ Gate Valve FVT Vent $(\mathbb{I})$ Plug Valve OPRV Abandoned Holding Tanks ⊖ SUR **H** Heat Recovery Tank Valve Holding Tank OF **Overflow Tank** Abandoned Service Points υĸ Unknown

Abandoned Cathodic Protection Test Station Abandoned Control Structure Abandoned Stormwater Management Structure Abandoned Tracewire Access Point Abandoned Sewer Pump **Diversion Chamber** Force Main Valve Chamber Junction Chamber Regulating Chamber Stormwater Treatment Unit Wastewater Pre-Treatment Unit Air Release Valve Pressure Relief Valve Surge Relief Valve

	Abandoned Treatment Facility
$\mathbf{\nabla}$	Abandoned Pumping Station
:	Abandoned Casing
	Abandoned Lining
>	Abandoned Ditch
XXXXXXXX	Abandoned Insulation
	Abandoned Tracewire
Abandana	Abandoned Vent Line
Abandone	Combined Force Main
GP) —	Combined Gravity Pressure Pipe
PP) —	Combined Pressure Pipe
IS) —	Combined Inverted Siphon
$\rightarrow$	Combined Pipe
	Catchbasin Lead
>	Culvert
= =	Drain
FM>-	Stormwater Force Main
GP>-	Stormwater Gravity Pressure Pipe
PP>-	Stormwater Pressure Pipe
· <b>IS</b> >-	Stormwater Inverted Siphon
<b>—</b>	Stormwater Pipe
FM>	Unknown Force Main
GP>-	Unknown Gravity Pressure Pipe
PP <b>&gt;</b> —	Unknown Pressure Pipe
IS)	Unknown Inverted Siphon
$\rightarrow$	Unknown Pipe
FM) —	Wastewater Force Main
GP <b>&gt;</b> —	Wastewater Gravity Pressure Pipe
PP>-	Wastewater Pressure Pipe
IS)	Wastewater Inverted Siphon

Wastewater Pipe

Lateral

- sw Stormwater
- ww Wastewater

Unknown Fitting Adaptor

Abandoned Fittings

- Bend
- Blind Flange
- Cap
- **Chamber Flow Arrow**
- TvT 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

Strainer = **Tapping Sleeve** 

Plug

Reducer

Sleeve

불

ET.

- Tee
- <sup>™</sup> Test Meter Pit I. Victaulic Coupling
- Wye
- Wye Left
- Wye Right

#### Abandoned Structure Polygons



# DESIGN SPECIFICATIONS SECTION 7 - DRAWING REQUIREMENTS (GIS SYMBOLOGY)

## SECTION 7.5.2 AUG 2018

# LAND FEATURES

轝	Traffic Pole	Proper	ty Zoning	HPSBB	HRM Service Requirements
	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		DHFX	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 H	lighways (1:128,000 - 1:256,000)	Land Owned by University
	Major Highway	Coastline
	Minor Highway	

### WATER SCHEMATIC

Street

Primary Street

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



Kearney Lake Intermediate

Kingswood High

Lake Major High

Lakeside Intermediate

Monarch/Rivendale High

Mount Edward Boosted

Mowatt Intermediate

Lakeside High

Leiblin Boosted

Lively Boosted

Lucasville High

Montague High

North Preston

Orchard High

Parkdale Boosted

Penhorn Intermed

Peninsula Intermediate Central

Peninsula Intermediate North

Peninsula Intermediate South

Peninsula Low North

Peninsula Low South

Princess Margaret Low

Rockmanor Intermediate

Sackville Intermediate

Spryfield Intermediate

Waverley Intermediate

West Bedford Intermediate

Upper Hammonds Plains High

Silverside Boosted

Titus Evans Low

Waverley Low

Williams Lake Low

Woodlawn Inter

Woodside Low

Pockwock Boosted

Pockwock High

Robie Reservoir

Sackville High

Ritcey Low

Ross Rd

Peninsula High

#### **ZONES AND REGIONS**

#### Distribution System Regions

Fast

Unknown

- 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 High
- 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
  - 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
- Lakeside Intermediate
- Leiblin Boosted
- Lively Boosted
- Lucasville High
- Monarch/Rivendale High
- Montague High
- Mount Edward Boosted
- Mowatt Intermediate
- No. 7 Highway Boosted
- North Preston
- Orchard High
  - Parkdale Boosted
- 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
- Titas 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 High
- Bedford South Intermediate
- Berry Hills Boosted
- Birch Cove

Bluewater Intermediate

**Brunello Boosted** 

**Burnside Boosted** 

Caldwell Rd Boosted

**Burnside High** 

Burnside Low

Caledonia High

Cobequid High

Dartmouth Low

Geizer123 High

Geizer158 High

Geizer Boosted

Hemlock High

Cowie High

Central Dartmouth

Charles Rd Boosted

**Churchill Intermediate** 

Eastern Passage Low

Fairview Clayton Park

Flamingo Intermediate

**Glenforest Intermediate** 

Hammond Kearney

Hemlock Intermediate

Hemlock Super High

Herring Cove Road Intermediate

Herring Cove Low

Farnhamgate Intermediate

Broadholme Intermediate