Corporate Production GIS Metadata

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Layer Name: Storm_Pipes

General Information

Layer Name:	Storm_Pipes
# of Features:	21794
Status:	ACTIVE
Layer Source:	GIS_DATA.STM_PIPE
Layer Quality:	Good
Feature Accuracy:	+/- 1m
Type:	POLYLINE
Description:	Inventory of underground pipes draining surface water including culverts and bridge culverts. A storm pipe transports excess rain water, snowmelt water, or subsurface ground water from one location to another using the force of gravity (downhill fluid flow). A storm sewermain is physically comprised of many individual sections of physical pipe, however, for the purposes of representation and asset management, a single segment of sewer main is considered to be the assembly of pipe sections between physical access points, commonly referred to as manholes. A secondary type of storm sewermain that connects surface water intake structures known as catchbasins and inlets to the main storm sewer network is known as a storm lead. For the purposes of the system, storm leads are considered part of the inlet structure, and are not considered storm sewermains.
Projection:	NAD 83 UTM Zone 17N (EPSG 26917)
Disclaimer:	The City of Kitchener assumes no responsibility for the accuracy of the provided data. Any use of this information is done so at the users risk. Good survey practices must be applied when utilizing this information. The City of Kitchener and its partners have created this data for information purposes on an as-is and as available basis and is under no circumstances a substitute for a Legal Survey. The City does not make any representations or warranty, express or implied, concerning the accuracy, quality, likely results, or reliability of the use of the data. The City of Kitchener assumes no responsibility for any errors and is not liable for any damages of any kind resulting from the use of, or reliance on, the information and material contained in this layer. All information should be verified independently before being used or relied on. Users are encouraged to contact the City of Kitchener to ensure the accuracy of the information provided by Kitchener.

Source and Contraints

Source Map Label:	Storm Water Pipe Network: Development & Technical Services - Engineering Design Construction (Sept 2002), Corporate Services - Information Technology - GIS (2002 - current)
History:	August 2004 - Conversion of DGN files maintained by Engineering into SDE September 1 2004 - Conversion of attributes from MS Access database maintained by Engineering into SDE May 2005 QC of convered attributes June 2005 Input of new Infrastructure August 2005 started updating layer based on Service Agreement: DTS - Engineering : Sanitary, Storm Drainage, Road Infrastructure, Sidewalk, Survey Monumentation. Please see Sevice Agreement for details
Original Source:	INS - Engineering
Original Source Process:	
Maintenance:	Service Agreement: DTS - Engineering : Sanitary, Storm Drainage, Road Infrastructure, Sidewalk, Survey Monumentation. Please see Sevice Agreement for details
Current Info Source:	Ortho Imagery & As-Builts
Outstanding Issues:	Backlog of New Infrastructure from 2002. 1999 Infrastructure with no Attributes, Prior to 1999 Infrastructure Attributes needed QC started.
Update Frequency:	CONTINUOUS

Data Fields & Domain Information

Storm_Pipes

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values
OBJECTID	OBJECTID	NUMBER	ESRI system maintained integer field used to uniquely identify rows in tables in a geodatabase. Note that OBJECTIID values change upon export or import of the data and should not be used as a primary field for searching or identifying records.			
STMPIPEID	Stmpipe ID	NUMBER	Database maintained field that permanently assigns a unique value for each record. This ID value should be the one referred to when identifying a record.			
PARENTID	Parent ID: ID of pipe that was replaces (if applicable)	NUMBER	GIS maintained field. Used when an an existing storm water pipe is split for any number of reasons. The existing record is split into 2 or more individual records. The longest single existing record retains its STMPIPEID value and no value is entered into PARENTID, however for each of the remaining shorter existing split records the original STMPIPEID value is copied into the PARENTID field, their STMPIPEID values are deleted and the database generates new STMPIPEIDs for the 1 or more new split shorter records. This is done so that information, such as work orders, could be linked back to the records that have new STMPIPEID values.			
STATUS	Status	VARCHAR2	Indicates the status of feature. A pick list is used for this field - contact GIS for pick list values.	GISStatus	ACTIVE	ACTIVE; HISTORIC; PLANNED; UNKNOWN
START_PIPE	Start Pipe	VARCHAR2	GIS maintained field. Identifies if the storm water pipe is the first pipe in a drainage basin (the highest elevation pipe in a gravity pipe flow network). A pick list is used for this field - contact GIS for pick list values.	YesNoOnly	N	No; Yes
SOURCE	Source	NUMBER	GIS maintained field. Source EDRA (Electronic Document Registration Application) document number, or name of department or specific staff member that the information came from.			
SOURCE_DATE	Source Date	DATE	GIS maintained field. Date of the source document or information.			
MAP_LABEL	Map Label	VARCHAR2	Database maintained field that combines the LENGTH, WIDTH, SLOPE and MATERIAL field values.			
UP_STMMANHOLEID	Upstream Stmmanhole ID: Upstream (defined by flow) end of the stormwater pipe flows from.	NUMBER	GIS maintained field. STMMANHOLEID of the GIS_DATA.STMMANHOLE layer feature that the upstream (defined by flow) end of the stormwater pipe flows from. A value of -1 indicates that the stormwater pipe does not have a up stream manhole.			
DN_STMMANHOLEID	Downstream Stmmanhole ID: downstream (defined by flow) end of the stormwater pipe flows to.	NUMBER	GIS maintained field. STMMANHOLEID of the GIS_DATA.STMMANHOLE layer feature that the downstream (defined by flow) end of the stormwater pipe flows to. A value of -1 indicates that the stormwater pipe does not have a down stream manhole.			
QUARTER_GRID_ID	Quarter Grid ID	VARCHAR2	GIS maintained field. GENERAL_GRID_ID value of the GIS_DATA.GRID_STANDARD_QUARTERED layer feature which the center of the stormwater pipe falls within. A value of -1 indicates that the stormwater pipe does not fall inside a quarter grid. A pick list is used for this field - contact GIS for pick list values.			

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values
ROADCONSTLIMITID	Road Construction Limit ID	NUMBER	This field is not being used at this time.			
ROADSEGMENTID	Roadsegment ID	NUMBER	GIS maintained field. ROADSEGMENTID of the GIS_DATA.ROADSEGMENT layer feature that the majority of the storm water pipe follows. A value of -1 indicates that the feature does not follow a road. Roadsegments must have a CATEGORY value of 'ROAD' or 'ROUNDABOUT' and a STATUS value of 'ACTIVE' , 'PLANNED', or 'REGISTERED'.			
PARCELID	Parcel ID	NUMBER	Reference Parcel ID that the feature is located in. The value is either manually entered or generated from a spatial join process.			
CREATE_BY	Create By	VARCHAR2	Database maintained field. Updates to the user name that created the feature. Update takes place when the feature is created.			
CREATE_DATE	Create Date	DATE	Database maintained field. Updates to the current data/time. Update takes place when the feature is created.			
UPDATE_BY	Update By	VARCHAR2	Database maintained field. Updates to the user name that most recently updated either an attribute or the geometry of the feature. Update takes place when the feature is created and/or changed.			
UPDATE_DATE	Update Date	DATE	Database maintained field. Updates to the current data/time when an attribute or the geometry of the feature is changed. Update takes place when the feature is created and/or changed.			
TAG1	Tag1	VARCHAR2	Temporary location to store short term data for mapping purposes only.			
TAG2	Tag2	VARCHAR2	Temporary location to store short term data for mapping purposes only.			
TAG3	Tag3	VARCHAR2	Temporary location to store short term data for mapping purposes only.			
GIS_NOTES	GIS Notes	VARCHAR2	Open text field for outlining any problems or to highlight special characteristics of the feature specific to GIS.			
SHAPE	SHAPE	ST_GEOMETRY	ESRI system maintained field. Stores the geometry type and geometry of the feature.			
CATEGORY	Category	VARCHAR2	Provided through as-built plan or digital submission. Indicates the type of storm water pipe. A pick list is used for this field - contact GIS for pick list values.	StmPipeCategory		FORCEMAIN; GRAVITY; STUB; UNKNOWN
OWNERSHIP	Asset Owner	VARCHAR2	Asset Owner: Who owns the feature, Generally Government agencies such as CITY, REGION and MTO and private citizens and businesses shown as PUBLIC. This usually relates to the property the asset sits on.	StmOwnership1	KITCHENER	CAMBRIDGE; CN; DUAL CITY AND REGION; KITCHENER; MTO; PRIVATE; REGION; WATERLOO
PIPE_SHAPE	Cross sectional pipe shape	VARCHAR2	Provided through as-built plan or digital submission. The cross sectional shape of the storm water pipe. A pick list is used for this field - contact GIS for pick list values.	StmShape	ROUND	ARCHED; HORIZONTAL ELLIPTICAL; IRREGULAR; NOT APPLICABLE; OVAL; RECTANGULAR; ROUND; SQUARE; VERTICAL ELLIPTICAL

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values
LENGTH	Length (m) from as-built plan	NUMBER	Provided through as-built plan or digital submission. Length in metres of the storm water pipe as given on the as-built drawing submitted.			
WIDTH	Width (mm) Inside cross-sectional width (mm)	NUMBER	Provided through as-built plan or digital submission. Inside cross-sectional width of the storm water pipe in millimetres. The pipe or in this case, culverts, “Pipe_shape” would determine how the height and width fields are utilized. If round, the 2 values should be the same as the vertical and horizontal cross sectional length should be equal. In the case of rectangular culverts, they would be different. A pick list is used for this field - contact GIS for pick list values. A value of -2 indicates that the width was not given or is unknown.	StmPipeWidthHeight	0	0; 3330; 3500; 3700; 4000; 5000; 5050; 5180; 5500; 6200 ...See GIS for a complete list...
HEIGHT	Height (mm) Inside cross-sectional height (mm)	NUMBER	Provided through as-built plan or digital submission. Inside cross-sectional height of the storm water pipe in millimetres. The pipe or in this case, culverts, “Pipe_shape” would determine how the height and width fields are utilized. If round, the 2 values should be the same as the vertical and horizontal cross sectional length should be equal. In the case of rectangular culverts, they would be different. A value of -2 indicates that the width was not given or is unknown.	StmPipeWidthHeight	0	0; 3330; 3500; 3700; 4000; 5000; 5050; 5180; 5500; 6200 ...See GIS for a complete list...
UP_INVERT	Upstream Invert: Elevation in metres of the upstream (defined by flow) low end of the inside bottom of a storm pipe	NUMBER	Provided through as-built plan or digital submission. Elevation in metres of the upstream (defined by flow) low end of the inside bottom of the storm water pipe. The default value is <null>. Valid values should range between 260 and 450. A value of -2 indicates that the up invert was not given or is unknown.			
DN_INVERT	Downstreamn Invert: Elevation in metres of the downstream (defined by flow) low end of the inside bottom of a storm pipe	NUMBER	Provided through as-built plan or digital submission. Elevation in metres of the downstream (defined by flow) low end of the inside bottom of the storm water pipe. The default value is <null>. Valid values should range between 260 and 450. A value of -2 indicates that the down invert was not given or is unknown.			
SLOPE	Slope (%)	NUMBER	Provided through as-built plan or digital submission. The slope, in percent, of the storm water pipe. A value of -999999 indicates that the slope was not given or is unknown.			

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values
MATERIAL	Material	VARCHAR2	Provided through as-built plan or digital submission. Material that the storm water pipe is composed of. A pick list is used for this field - contact GIS for pick list values.	StmPipeMaterial	XXX	AC - ASBESTOS CEMENT; CSP - CORRUGATED STEEL PIPE; CSU - CONCRETE SEGMENTS (UNBOLTED); HDPE - HIGH DENSITY POLYETHYLENE; PE - POLYETHYLENE; PP - POLYPROPYLENE; PVC - POLYVINYL CHLORIDE; RCP - REINFORCED CONCRETE; VCP - VITRIFIED CLAY PIPE; XXX - UNKNOWN ...See GIS for a complete list...
MATERIAL_CLASS	Material Class	VARCHAR2	Provided through as-built plan or digital submission. Submaterial that the storm water pipe is composed of. A pick list is used for this field - contact GIS for pick list values.	StmPipeMaterialClass		100-D; HE3; PERFORATED; SDR 28 (PVC); SDR 28 CSA 182.2; SDR 35; SDR 35 (PVC); SDR 35 CSA 182.2; ULTRA RIB; UNKNOWN ...See GIS for a complete list...
LINER_YEAR	Year Liner Installed	NUMBER	Provided by Engineering Department staff. Year that a lining was applied.		-9999	
COOLING_TRENCH	Is Pipe a Cooling Trench	VARCHAR2	Provided through as-built plan or digital submission. Indicates if the storm water pipe is a cooling trench. A pick list is used for this field - contact GIS for pick list values.	YesNoLongOnly	NO	NO; YES
GROUNDWATER_SYSTEM	Is Pipe part of a Groundwater System	VARCHAR2	Provided through as-built plan or digital submission. Indicates if the storm water pipe is a part of the groundwater system. A pick list is used for this field - contact GIS for pick list values.	YesNoLong	NO	NO; UNKNOWN; YES
INSTALLATION_DATE	Installation Date	DATE	Date the feature was installed			
INSTALLATION_YEAR	Installation Year	NUMBER	Year the asset was installed. Usually a database maintained field.			
ACQUISITION	how the city received or acquired pipe	VARCHAR2	Input by GIS staff. Identification of how the city received or acquired the feature. If the feature came through the subdivision process it is considered 'DONATED' and if not it is 'PURCHASED'	PSABAcquisition	DONATED	DONATED; PURCHASED
ISSUE_NOTES	Issue Notes	VARCHAR2	CoK maintained field. Open text field that is used to identify or list data issues.			
ENGINEERING_NOTES	Engineering Notes	VARCHAR2	Engineering maintained field. Open text field for notes.			
CONSULTANT	Consultant that submitted drawings	VARCHAR2	Provided through as-built plan or digital submission. Open text field used to indicate the consultant that submitted drawings using the digital submission process.			

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values
SAN_SUB_DRAINAGE_AREA	San Sub Drainage Area	VARCHAR2	GIS maintained field. LEVEL_NAME of the GIS_DATA.SAN_DRAINAGE_AREA layer feature that has a value of either SUB AREA or MAIN AND SUB AREA in the CATEGORY field that the stormwater pipe is within. The value is either manually entered or generated from a spatial join process. A pick list is used for this field - contact GIS for pick list values.	SanSubDrainageArea		BIEHN; BRIDGEPORT; LOWER SCHNEIDER - UPPER DOON; NONE; UNKNOWN; UPPER SCHNEIDER - SHOEMAKER DIRECT; UPPER SCHNEIDER - UPPER SCHNEIDER DIRECT; UPPER SCHNEIDER - VICTORIA; UPPER SCHNEIDER - VOISON; UPPER SCHNEIDER - WESTMOUNT DIRECT ...See GIS for a complete list...
SUBCATEGORY	Subcategory	VARCHAR2		StmPipeSubcategory		CULVERT; DRIVEWAY CULVERT; PIPE; UNKNOWN
DOWNSTREAM_PLUG	DOWNSTREAM_PLUG	VARCHAR2		YesNoLong	NO	NO; UNKNOWN; YES
CTSPEC_HYPERLINK	CTSPEC_HYPERLINK	VARCHAR2				

*Layer Quality:
SCHEMATIC - spatial representation of features are not to scale and not in accurate relative position to other features on other layers.
GENERALIZED - position of features are approximate, should not be used in conjunction with base layers (parcel fabric or Ortho-imagery)
GOOD - position of features are usually based on relative position to base layers (Ortho-imagery or parcel fabric)

Note: Dataset may not include all fields: Open Data layers will only include fields approved for sharing as open data

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