User Guide
for
Building as Symbol
and
Building to Scale

LIO Data Classes

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Additional Information

For more information about this document, please contact Spatial Data Infrastructure at sdi@ontario.ca.

Executive Summary

Key Words

Base Data, Base Mapping, Building, Land Management, Land Use Planning, Municipal Planning, OBM, Ontario Base Mapping, Planning/Development, SDI, Spatial Data Infrastructure

Abstract

This user guide details the specifications for the Building as Symbol (BUILDSYM) and Building to Scale (BUILDSCA) Land Information Ontario (LIO) Data Classes.

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List of Acronyms

BUILDSCA: Short Name for Building to Scale Data Class

BUILDSYM: Short Name for Building as Symbol Data Class

GIS: Geographic Information System

LIO: Land Information Ontario

MNRF: Ontario Ministry of Natural Resources and Forestry

OBM: Ontario Base Map

OGF: Ontario Geospatial Feature

SDI: Spatial Data Infrastructure

1. Introduction

The majority of data for Building as Symbol and Building to Scale was collected during the Ontario Base Map (OBM) program. A building is defined as a structure with permanent walls and roofed construction.

In Figure 1 (as seen in the LIO Make a Topographic Map viewer) large buildings (e.g. apartment buildings) are represented to scale while smaller buildings (e.g. residential houses) are represented as symbols.

Figure 1: Buildings represented to scale and as symbols in the Peterborough area

For more information about the Building data classes, contact sdi@ontario.ca.

2. Objectives

This guide is intended for users with a general interest in the Building as Symbol and Building to Scale LIO Data Classes. The remainder of this document describes the extent and context of the information collected in these data classes.

3. Data Classes: Building

Building as Symbol (BUILDSYM)

Small structures (including buildings less than 50 square metres) are not shown unless they constitute a point of orientation. When structures have one dimension larger than 50 metres for the 1:20,000 source scale and larger than 30 metres for the 1:10,000 source they are represented as points.

Building as Symbol locations are represented and maintained as point features in this data class.
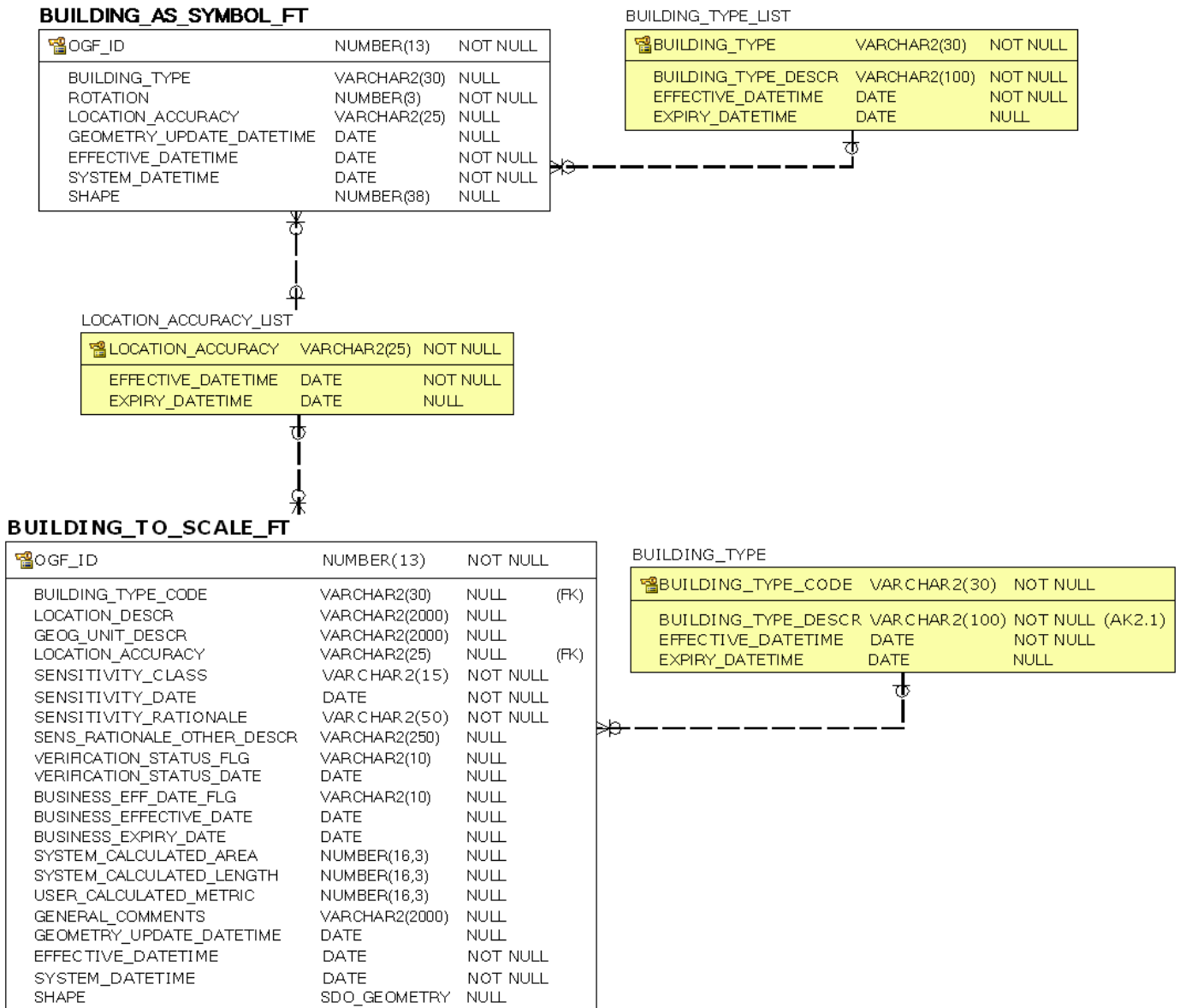
Building to Scale (BUILDSCA)

When structures have one dimension larger than 50 metres for the 1:20,000 scale and larger than 30 metres for the 1:10,000 scale, they are represented as polygons. Smaller structures should be considered points and entered in the Building as Symbol data class.

Building to Scale locations are represented and maintained as polygon features in this data class.

4. Model Diagram: Building as Symbol (BUILDSYM), Building to Scale (BUILDSCA)

Model Effective Date: 2012-JUN-14

Table names with "_LIST" suffix are lookup tables with permissible values.

BUILDING_AS_SYMBOL_FT

OGF_ID	NUMBER(13)	NOT NULL
BUILDING_TYPE	VARCHAR2(30)	NULL
ROTATION	NUMBER(3)	NOT NULL
LOCATION_ACCURACY	VARCHAR2(25)	NULL
GEOMETRY_UPDATE_DATETIME	DATE	NULL
EFFECTIVE_DATETIME	DATE	NOT NULL
SYSTEM_DATETIME	DATE	NOT NULL
SHAPE	NUMBER(38)	NULL

BUILDING_TYPE_LIST

BUILDING_TYPE	VARCHAR2(30)	NOT NULL
BUILDING_TYPE_DESCR	VARCHAR2(100)	NOT NULL
EFFECTIVE_DATETIME	DATE	NOT NULL
EXPIRY_DATETIME	DATE	NULL

LOCATION_ACCURACY_LIST

LOCATION_ACCURACY	VARCHAR2(25)	NOT NULL
EFFECTIVE_DATETIME	DATE	NOT NULL
EXPIRY_DATETIME	DATE	NULL

BUILDING_TO_SCALE_FT

OGF_ID	NUMBER(13)	NOT NULL	
BUILDING_TYPE_CODE	VARCHAR2(30)	NULL	(FK)
LOCATION_DESCR	VARCHAR2(2000)	NULL	
GEOG_UNIT_DESCR	VARCHAR2(2000)	NULL	
LOCATION_ACCURACY	VARCHAR2(25)	NULL	(FK)
SENSITIVITY_CLASS	VARCHAR2(15)	NOT NULL	
SENSITIVITY_DATE	DATE	NOT NULL	
SENSITIVITY_RATIONALE	VARCHAR2(50)	NOT NULL	
SENS_RATIONALE_OTHER_DESCR	VARCHAR2(250)	NULL	
VERIFICATION_STATUS_FLG	VARCHAR2(10)	NULL	
VERIFICATION_STATUS_DATE	DATE	NULL	
BUSINESS_EFF_DATE_FLG	VARCHAR2(10)	NULL	
BUSINESS_EFFECTIVE_DATE	DATE	NULL	
BUSINESS_EXPIRY_DATE	DATE	NULL	
SYSTEM_CALCULATED_AREA	NUMBER(16,3)	NULL	
SYSTEM_CALCULATED_LENGTH	NUMBER(16,3)	NULL	
USER_CALCULATED_METRIC	NUMBER(16,3)	NULL	
GENERAL_COMMENTS	VARCHAR2(2000)	NULL	
GEOMETRY_UPDATE_DATETIME	DATE	NULL	
EFFECTIVE_DATETIME	DATE	NOT NULL	
SYSTEM_DATETIME	DATE	NOT NULL	
SHAPE	SDO_GEOMETRY	NULL	

BUILDING_TYPE

BUILDING_TYPE_CODE	VARCHAR2(30)	NOT NULL	
BUILDING_TYPE_DESCR	VARCHAR2(100)	NOT NULL	(AK2.1)
EFFECTIVE_DATETIME	DATE	NOT NULL	
EXPIRY_DATETIME	DATE	NULL	

5. Data Description

The main business area table(s) for this model can be found below. Associated lookup tables will be listed in Appendix A of this document and are hyperlinked where referenced in this section.

BUILDING_AS_SYMBOL_FT

A building is defined as a structure with permanent walls and roofed construction. Small structures (including buildings less than 50 square metres) are not shown unless they constitute a point of orientation. When structures have one dimension larger than 50 metres for the 1:20000 source scale and larger than 30 metres for the 1:10000 source scale, they are considered to be polygons and entered as Building to Scale.

Column Name	Column Type	Mandatory	Short Name	Description
OGF_ID	NUMBER(13)	Yes	OGF_ID	Ontario Geospatial Feature identifier (OGF ID). A unique numeric provincial identifier assigned to each object.
BUILDING_TYPE	VARCHAR2(30)	No	BUILDING_T	A general classification of a building, often by use, such as educational building, religious building, residence, police station, hospital or fire station. See table BUILDING_TYPE_LIST in Appendix for list of valid values.
ROTATION	NUMBER(3)	Yes	ROTATION	Amount in degrees that the representation of the feature should be rotated, with 0 representing no rotation.
LOCATION_ACCURACY	VARCHAR2(25)	No	ACCURACY	The degree of conformity or closeness of a measurement within the database to its true value in the world. See table LOCATION_ACCURACY_LIST in Appendix for list of valid values.
GEOMETRY_UPDATE_DATETIME	DATE	No	GEO_UPD_DT	Date/time the geometry was created or last modified in the source database.

Column Name	Column Type	Mandatory	Short Name	Description
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	Date/time the record was created or last modified in the source database.
SYSTEM_DATETIME	DATE	Yes	SYS_DATE	Date/time the record was loaded into or last modified in the LIO database. **DEFAULT**: SYSDATE
SHAPE	NUMBER(38)	No	SHAPE	Geometry attribute.

BUILDING_TO_SCALE_FT

A building is defined as a structure with permanent walls and roofed construction. When structures have one dimension larger than 50 metres for the 1:20000 scale and larger than 30 metres for the 1:10000 scale, they are considered to be polygons. Smaller structures should be considered points and entered in the Building as Symbol data class.

Column Name	Column Type	Mandatory	Short Name	Description
OGF_ID	NUMBER(13)	Yes	OGF_ID	Ontario Geospatial Feature identifier (OGF ID). A unique numeric provincial identifier assigned to each object.
BUILDING_TYPE_CODE	VARCHAR2(30)	No	BLDG_TYP_C	A general classification of a building, often by use, such as educational building, religious building, residence, police station, hospital or fire station. See table BUILDING_TYPE in Appendix for list of valid values.
LOCATION_DESCR	VARCHAR2(2000)	No	LOC_DES	Description of the area or directions on how to get to the site.
GEOG_UNIT_DESCR	VARCHAR2(2000)	No	GUNT_DES	Detailed description of the Geographic Unit.
LOCATION_ACCURACY	VARCHAR2(25)	No	ACCURACY	The degree of conformity or closeness of a measurement within the database to its true value in the world. See table LOCATION_ACCURACY_LIST in Appendix for list of valid values.

Column Name	Column Type	Mandatory	Short Name	Description
SENSITIVITY_CLASS	VARCHAR2(15)	Yes	SENS_CLASS	The sensitivity ranking of the information embodied in the feature. Often wide-spread knowledge of the location of some rare aspect of our natural heritage will endanger it. On the other hand, this knowledge by some parties is also extremely important for its protection. **High** - information that is extremely sensitive and intended for use by named individuals only. Refers to information that could have negative impacts on human life or health if released. Currently no data classes meet this ranking. **Medium** - information that is sensitive and intended for use only by specified groups of employees and approved agents of the Crown. For OLIW/NRVIS refers to information where the entire data type has been flagged as sensitive (i.e. Stick Nests for Vulnerable Threatened and Endangered (VTE) species) **Low** - information generally available to employees and approved agents of the Crown. Refers to sensitive features within a data type not normally sensitive (i.e. specific instances of Pileated Woodpecker) **Non-Sensitive** - data and information that does not fall into any of the three sensitivity levels. If disclosed will not result in any injury to individuals, government or private sector institutions (i.e. base data). VALID VALUES: - High - Medium - Low - Non-Sensitive
SENSITIVITY_DATE	DATE	Yes	SENS_DATE	The date that the sensitivity classification was established.

Column Name	Column Type	Mandatory	Short Name	Description
SENSITIVITY_RATIONALE	VARCHAR2(50)	Yes	SENS_RAT	The primary reason for the information sensitivity classification. **Where Sensitivity Class = NON SENSITIVE** No Restriction Needed **Where Sensitivity Class = LOW** Data Provider Agreement Protect Feature Type Protect Single Feature Legislative or Legal Reqt Other* **Where Sensitivity Class = MEDIUM** Legislative or Legal Reqt VTE Species Note: For Species at Risk (SAR) features, please use "Legislative or Legal Reqt" as a rationale. *When "Other" is chosen, the user must describe it in RATIONALE_OTHER_DESCRIPTION VALID VALUES: • VTE Species • Data Provider Agreement • No Restriction Needed • Protect Feature Type • Protect Single Feature • Legislative or Legal Reqt • Other

Column Name	Column Type	Mandatory	Short Name	Description
SENS_RATIONALE_OTHER_DESCR	VARCHAR2(250)	No	SENS_DESCR	Description of the reason(s) for the information classification when "Other" is selected as the rationale.
VERIFICATION_STATUS_FLG	VARCHAR2(10)	No	VERISTT_FL	An indication as to whether a qualified employee has verified the existence of the geographic unit. **VALID VALUES**: • Verified • Unverified
VERIFICATION_STATUS_DATE	DATE	No	VERISTT_DT	Date that the geographic unit was verified/validated.
BUSINESS_EFF_DATE_FLG	VARCHAR2(10)	No	BUSEFFDTFL	Indication of whether the business effective date is an actual or estimated value. **VALID VALUES**: • Actual • Estimated
BUSINESS_EFFECTIVE_DATE	DATE	No	BUS_EFF_DT	Date that the record becomes effective in relation to the business i.e. the date MNR became aware of its existence.
BUSINESS_EXPIRY_DATE	DATE	No	BUS_EXP_DT	A date indicating when the record was determined to be invalid.
SYSTEM_CALCULATED_AREA	NUMBER(16,3)	No	SYS_AREA	The area of a polygon measured in square metres by the system.
SYSTEM_CALCULATED_LENGTH	NUMBER(16,3)	No	SYS_LENGTH	The perimeter of a polygon or length of a line measured in metres.
USER_CALCULATED_METRIC	NUMBER(16,3)	No	USER_CALC	The length, perimeter or area of an object in metres or square metres as measured or provided by the user.
GENERAL_COMMENTS	VARCHAR2(2000)	No	GNL_CMT	General comments.

Column Name	Column Type	Mandatory	Short Name	Description
GEOMETRY_UPDATE_DATETIME	DATE	No	GEO_UPD_DT	Date/time the geometry was created or last modified in the source database.
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	Date/time the record was created or last modified in the source database.
SYSTEM_DATETIME	DATE	Yes	SYS_DATE	Date/time the record was loaded into or last modified in the LIO database.
SHAPE	SDO_GEOMETRY	No	SHAPE	Geometry attribute.

6. Links to Additional Information

- Official LIO Metadata Record for Building as Symbol
- Official LIO Metadata Record for Building to Scale

APPENDIX A: LIO Lookup Tables and Values

BUILDING_TYPE

A general classification of a building, often by use, such as educational building, religious building, residence, police station, hospital or fire station.

Column Name	Column Type	Mandatory	Short Name	Description
BUILDING_TYPE_CODE	VARCHAR2(30)	Yes	BUILDING_T	A general classification of a building, often by use, such as educational building, religious building, residence, police station, hospital or fire station.
BUILDING_TYPE_DESCR	VARCHAR2(100)	Yes	BUILDING_D	A description of the building type.
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	Date/time the record was created or last modified in the source database. **DEFAULT**: SYSDATE
EXPIRY_DATETIME	DATE	No	EXP_DATE	Date/time that the record was expired from use.

BUILDING_TYPE Permissible Values

BUILDING_TYPE	BUILDING_TYPE_DESCR	EFFECTIVE_DATETIME	EXPIRY_DATETIME
Airport - Hangar	A building used to house/maintain aircraft.	Not applicable	Not applicable
Airport - Terminal	A building used to process passengers and cargo for flight transportation.	Not applicable	Not applicable
Arena	An enclosed large surface used for sporting activities	Not applicable	Not applicable
Armoury	A building used by the militia	Not applicable	Not applicable

BUILDING_TYPE	BUILDING_TYPE_DESCR	EFFECTIVE_DATETIME	EXPIRY_DATETIME
Barn Machinery Shed	A large utility building on a farm complex.	Not applicable	Not applicable
Boathouse	A building near water in which watercraft and/or water related equipment is stored.	Not applicable	Not applicable
Cabin	A building in a remote or wilderness area	Not applicable	Not applicable
City Hall	A building where the principal offices of a city administration are located.	Not applicable	Not applicable
Coast Guard Station	A building housing the Coast Guard administrative offices.	Not applicable	Not applicable
Commercial Building	A building used for commercial retail e.g. grocery, hardware, alcohol, convenience stores etc.	Not applicable	Not applicable
Commercial Multi-Use	A building primarily used for commercial purposes including a secondary outlet e.g. Postal/Alcohol.	Not applicable	Not applicable
Community Center	A public building in which community gatherings and/or sporting activities are held	Not applicable	Not applicable
Cottage	A dwelling, typically in a rural or semi-rural location usually for vacation use.	Not applicable	Not applicable
Courthouse	A public building housing the judicial courts.	Not applicable	Not applicable
Customs Post	Where travelers and vehicles crossing an international border are inspected.	Not applicable	Not applicable
Dome	A building with arched roof used for storing salt or sand for road maintenance.	Not applicable	Not applicable
Education Building	An institution for elementary, secondary or post-secondary education.	Not applicable	Not applicable
Electric Power Station	A building where electricity is generated.	Not applicable	Not applicable

BUILDING_TYPE	BUILDING_TYPE_DESCR	EFFECTIVE_DATETIME	EXPIRY_DATETIME
Financial Institution	A building used for financial management e.g. banks, credit unions, investment houses.	Not applicable	Not applicable
Fire Station	A building housing fire-fighting equipment.	Not applicable	Not applicable
Fish Hatchery	A facility where fish are hatched under controlled conditions.	Not applicable	Not applicable
Gas and Oil Facility	A structure dedicated to the production or distribution of gas and oil products.	Not applicable	Not applicable
Generic/Unknown	A unspecified building.	Not applicable	Not applicable
Government, Federal	A building operated by the Federal Government.	Not applicable	Not applicable
Government, Municipal	A building operated by a Municipal Government.	Not applicable	Not applicable
Government, Provincial	A building operated by the Provincial Government.	Not applicable	Not applicable
Grain Elevator	Used for the storage of grain, usually located along a railway.	Not applicable	Not applicable
Greenhouse	A building covered with a transparent material in which plants are grown.	Not applicable	Not applicable
Hall	A building used for public assembly.	Not applicable	Not applicable
Highway Service Centre	A building which provides automotive services and restaurant facilities.	Not applicable	Not applicable
Highway Weigh Scale	A complex along a highway for weighing commercial vehicles.	Not applicable	Not applicable
Hospital	An institution where sick or injured people receive medical care.	Not applicable	Not applicable
Industrial Building	A building for processing/preserving raw materials, manufacture products, or produce energy outputs.	Not applicable	Not applicable

BUILDING_TYPE	BUILDING_TYPE_DESCR	EFFECTIVE_DATETIME	EXPIRY_DATETIME
Library	A building in which books, periodicals, newspapers and audio-visual media, are stored for loan.	Not applicable	Not applicable
Lodging Facilities	A building where sleeping accommodations are rented.	Not applicable	Not applicable
Medical Centre	Replaces a full service hospital in satellite communities or other area without hospital services.	Not applicable	Not applicable
Municipal Hall	Where the main offices of a municipal administration are located.	Not applicable	Not applicable
Museum	A public building set aside for the exhibition of natural, historic, artistic, or scientific objects	Not applicable	Not applicable
Observatory	A building equipped for astronomical observations.	Not applicable	Not applicable
Outbuilding	An outbuilding (i.e. garage, shed, outhouse, sauna).	Not applicable	Not applicable
Parliament Building	Where the elected or appointed members of provincial or federal governments meet and enact laws.	Not applicable	Not applicable
Penal Building	A facility for confining or rehabilitating persons convicted of breaking the law.	Not applicable	Not applicable
Police Station	The main offices of a local or regional police force, including RCMP.	Not applicable	Not applicable
Post Office	A building used or under licence by Canada Post for sending and receiving mail and / or parcels.	Not applicable	Not applicable
Railway Station	A building along a railway where the train stops to load and unload passengers or freight.	Not applicable	Not applicable

BUILDING_TYPE	BUILDING_TYPE_DESCR	EFFECTIVE_DATETIME	EXPIRY_DATETIME
Religious Building	A building serving as a place of worship or residence for a religious order.	Not applicable	Not applicable
Residence	A private dwelling place.	Not applicable	Not applicable
Sanatorium	A building used for the care and rehabilitation of people with mental or physical disorders.	Not applicable	Not applicable
Satellite Tracking Station	A building containing receiving devices to record information from satellites.	Not applicable	Not applicable
Senior Citizens Home	A residence where care is provided to the elderly.	Not applicable	Not applicable
Sewage Plant	A building primarily used for the collection and treatment of sewage.	Not applicable	Not applicable
Shopping Centre	A building which contains a large number of individual retail outlets.	Not applicable	Not applicable
Sportsplex	Provides facilities for various sporting and recreational activities.	Not applicable	Not applicable
Tobacco Kiln	A permanent heated enclosure used for drying tobacco.	Not applicable	Not applicable
Trading Post	A building in a remote area where goods are purchased or exchanged.	Not applicable	Not applicable
Warden/Ranger Station	A building housing national/provincial park or forestry administrative offices.	Not applicable	Not applicable

BUILDING_TYPE_LIST

A general classification of a building, often by use, such as educational building, religious building, residence, police station, hospital or fire station.

Column Name	Column Type	Mandatory	Short Name	Description
BUILDING_TYPE	VARCHAR2(30)	Yes	BUILDING_T	A general classification of a building, often by use, such as educational building, religious building, residence, police station, hospital or fire station.
BUILDING_TYPE_DESCR	VARCHAR2(100)	Yes	TYPE_DESCR	A description of the building type.
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	Date/time the record was created or last modified in the source database. **DEFAULT**: SYSDATE
EXPIRY_DATETIME	DATE	No	EXP_DATE	Date/time that the record was expired from use.

BUILDING_TYPE_LIST Permissible Values

BUILDING_TYPE	BUILDING_TYPE_DESCR	EFFECTIVE_DATETIME	EXPIRY_DATETIME
Airport - Hangar	A building used to house/maintain aircraft.	Not applicable	Not applicable
Airport - Terminal	A building used to process passengers and cargo for flight transportation.	Not applicable	Not applicable
Arena	An enclosed large surface used for sporting activities	Not applicable	Not applicable
Armoury	A building used by the militia	Not applicable	Not applicable
Barn Machinery Shed	A large utility building on a farm complex.	Not applicable	Not applicable
Boathouse	A building near water in which watercraft and/or water related equipment is stored.	Not applicable	Not applicable

BUILDING_TYPE	BUILDING_TYPE_DESCR	EFFECTIVE_DATETIME	EXPIRY_DATETIME
Cabin	A building in a remote or wilderness area	Not applicable	Not applicable
City Hall	A building where the principal offices of a city administration are located.	Not applicable	Not applicable
Coast Guard Station	A building housing the Coast Guard administrative offices.	Not applicable	Not applicable
Commercial Building	A building used for commercial retail e.g. grocery, hardware, alcohol, convenience stores etc.	Not applicable	Not applicable
Commercial Multi-Use	A building primarily used for commercial purposes including a secondary outlet e.g. Postal/Alcohol.	Not applicable	Not applicable
Community Center	A public building in which community gatherings and/or sporting activities are held	Not applicable	Not applicable
Cottage	A dwelling, typically in a rural or semi-rural location usually for vacation use.	Not applicable	Not applicable
Courthouse	A public building housing the judicial courts.	Not applicable	Not applicable
Customs Post	Where travelers and vehicles crossing an international border are inspected.	Not applicable	Not applicable
Dome	A building with arched roof used for storing salt or sand for road maintenance.	Not applicable	Not applicable
Education Building	An institution for elementary, secondary or post-secondary education.	Not applicable	Not applicable
Electric Power Station	A building where electricity is generated.	Not applicable	Not applicable
Financial Institution	A building used for financial management e.g. banks, credit unions, investment houses.	Not applicable	Not applicable
Fire Station	A building housing fire-fighting equipment.	Not applicable	Not applicable

BUILDING_TYPE	BUILDING_TYPE_DESCR	EFFECTIVE_DATETIME	EXPIRY_DATETIME
Fish Hatchery	A facility where fish are hatched under controlled conditions.	Not applicable	Not applicable
Gas and Oil Facility	A structure dedicated to the production or distribution of gas and oil products.	Not applicable	Not applicable
Generic/Unknown	A unspecified building.	Not applicable	Not applicable
Government, Federal	A building operated by the Federal Government.	Not applicable	Not applicable
Government, Municipal	A building operated by a Municipal Government.	Not applicable	Not applicable
Government, Provincial	A building operated by the Provincial Government.	Not applicable	Not applicable
Grain Elevator	Used for the storage of grain, usually located along a railway.	Not applicable	Not applicable
Greenhouse	A building covered with a transparent material in which plants are grown.	Not applicable	Not applicable
Hall	A building used for public assembly.	Not applicable	Not applicable
Highway Service Centre	A building which provides automotive services and restaurant facilities.	Not applicable	Not applicable
Highway Weigh Scale	A complex along a highway for weighing commercial vehicles.	Not applicable	Not applicable
Hospital	An institution where sick or injured people receive medical care.	Not applicable	Not applicable
Industrial Building	A building for processing/preserving raw materials, manufacture products, or produce energy outputs.	Not applicable	Not applicable
Library	A building in which books, periodicals, newspapers and audio-visual media, are stored for loan.	Not applicable	Not applicable
Lodging Facilities	A building where sleeping accommodations are rented.	Not applicable	Not applicable

BUILDING_TYPE	BUILDING_TYPE_DESCR	EFFECTIVE_DATETIME	EXPIRY_DATETIME
Medical Centre	Replaces a full service hospital in satellite communities or other area without hospital services.	Not applicable	Not applicable
Municipal Hall	Where the main offices of a municipal administration are located.	Not applicable	Not applicable
Museum	A public building set aside for the exhibition of natural, historic, artistic, or scientific objects.	Not applicable	Not applicable
Observatory	A building equipped for astronomical observations.	Not applicable	Not applicable
Outbuilding	An outbuilding (i.e. garage, shed, outhouse, sauna).	Not applicable	Not applicable
Parliament Building	Where the elected or appointed members of provincial or federal governments meet and enact laws.	Not applicable	Not applicable
Penal Building	A facility for confining or rehabilitating persons convicted of breaking the law.	Not applicable	Not applicable
Police Station	The main offices of a local or regional police force, including RCMP.	Not applicable	Not applicable
Post Office	A building used or under licence by Canada Post for sending and receiving mail and / or parcels.	Not applicable	Not applicable
Railway Station	A building along a railway where the train stops to load and unload passengers or freight.	Not applicable	Not applicable
Recreation Camp	An area used for commercial tourist operations with a focus on outdoor activities.	Not applicable	Not applicable
Religious Building	A building serving as a place of worship or residence for a religious order.	Not applicable	Not applicable
Residence	A private dwelling place.	Not applicable	Not applicable

BUILDING_TYPE	BUILDING_TYPE_DESCR	EFFECTIVE_DATETIME	EXPIRY_DATETIME
Sanatorium	A building used for the care and rehabilitation of people with mental or physical disorders.	Not applicable	Not applicable
Satellite Tracking Station	A building containing receiving devices to record information from satellites.	Not applicable	Not applicable
Senior Citizens Home	A residence where care is provided to the elderly.	Not applicable	Not applicable
Sewage Plant	A building primarily used for the collection and treatment of sewage.	Not applicable	Not applicable
Shopping Centre	A building which contains a large number of individual retail outlets.	Not applicable	Not applicable
Sportsplex	Provides facilities for various sporting and recreational activities.	Not applicable	Not applicable
Tobacco Kiln	A permanent heated enclosure used for drying tobacco.	Not applicable	Not applicable
Trading Post	A building in a remote area where goods are purchased or exchanged.	Not applicable	Not applicable
Warden/Ranger Station	A building housing national/provincial park or forestry administrative offices.	Not applicable	Not applicable
Youth Camp	An area used for commercial tourist operations with a focus on outdoor activities for youth.	Not applicable	Not applicable

LOCATION_ACCURACY_LIST

List of valid location accuracies.

Column Name	Column Type	Mandatory	Short Name	Description
LOCATION_ACCURACY	VARCHAR2(25)	Yes	ACCURACY	The accuracy of the location of the feature at an OBM scale. The degree of conformity or closeness of a measurement to the true value.
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE	Date/time the record was created or last modified in the source database. **Default**: SYSDATE
EXPIRY_DATETIME	DATE	No	EXP_DATE	Date/time that the record was expired from use.

LOCATION_ACCURACY_LIST Permissible Values

LOCATION_ACCURACY	EXPIRY_DATETIME
Not Applicable	Not applicable
Over 10,000 metres	Not applicable
Within 1 metre	Not applicable
Within 10 metres	Not applicable
Within 10,000 metres	Not applicable
Within 100 metres	Not applicable
Within 1000 metres	Not applicable
Within 2 metres	Not applicable
Within 20 metres	Not applicable

LOCATION_ACCURACY	EXPIRY_DATETIME
Within 200 metres	Not applicable
Within 2000 metres	Not applicable
Within 5 metres	Not applicable
Within 50 metres	Not applicable
Within 500 metres	Not applicable
Within 5000 metres	Not applicable
AC Accurate (to 10m)	2007-01-12
AP Approximate (to 500m)	2007-01-12
GE General (to 10,000m)	2007-01-12
MO Moderate (to 1000m)	2007-01-12
RE Reliable (to 100m)	2007-01-12
VA Very Accurate (to 2m)	2007-01-12
VG Vague (to 100,000m)	2007-01-12
^ Data Load	2007-01-12

APPENDIX B: Table Key Dependency and Relationship Index

Keys are used to link or make relationships between tables through one or more columns. A Parent Table is the source of unique key columns used by a Child Table. The main key types are described below.

Primary Key (PK):

A Primary Key (PK) is a column that uniquely identifies each record in a table. There can be more than one PK defined for a table when additional rules for record uniqueness are needed. Primary Keys cannot contain null values.
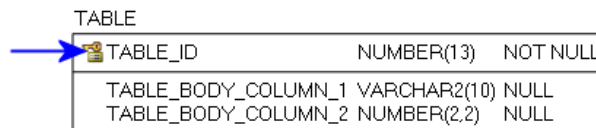
Figure 2: Primary Key example

Foreign Key (FK):

When a Primary Key from a Parent Table appears as a column in the Child Table it is referred to as a Foreign Key (FK). The FK may retain the same name of the Parent Table column, or it may be renamed.
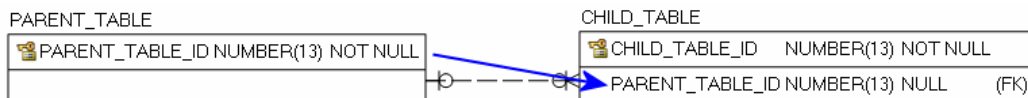
Figure 3: Foreign Key example

Alternate Key (AK):

Alternate Keys (AK) are secondary unique identifiers in a Parent Table. A Child Table can link to a Parent Table AK and use it as a Foreign Key (FK). The FK may retain the same name of the Parent Table column, or it may be renamed. Alternate Keys allow null values.
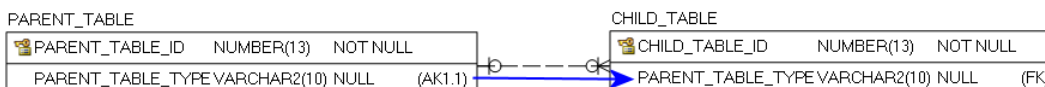

Figure 4: Alternate Key example

There are two relationship type options, identifying and non-identifying, which are described below.

An **Identifying Relationship** occurs when a column from the Parent Table is added to the key section of the Child Table. Though technically a Foreign Key (FK) in the child table, it now forms part of the Primary Key (PK). Identifying Relationships are symbolized with a solid line.
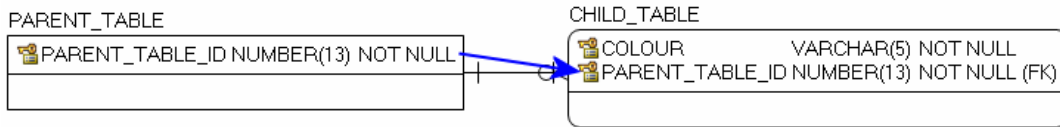

Figure 5: Example of an Identifying Relationship

A **Non-identifying Relationship** occurs when a column from the Parent Table is added to the main body of the Child Table where it is treated as a Foreign Key (FK). Non-identifying Relationships are symbolized with a dashed line.
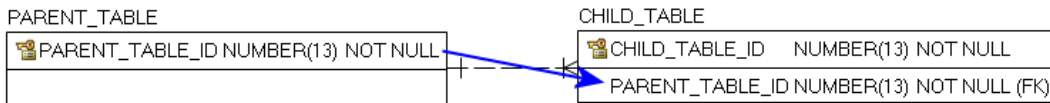

Figure 6: Example of a Non-identifying Relationship

The relationships between tables are set up with cardinality rules describing if the feature record in the Parent Table can relate to zero, one or more records in the associated Child Table and vice versa. These rules are symbolized in the model diagram as follows.

Symbol	Definition
⊖⊣	Zero or one (optional: 1 to 1)
⊖⊰	Zero, one or more (optional: one to many)
—⊰	One or more (mandatory: one to many)
-⊣	Nulls not allowed (mandatory: 1 to 1)

Figure 7: Model Diagram Relationship Symbology Table

The following section is an index of parent table primary keys identifying, where applicable, associated child table dependencies that have been implemented for the Building data classes.

Lookup Table Indexes

Where a lookup table primary key (PK) is used as a foreign key (FK) in other main business area tables in order to control permissible values.

Note: Relationship type reference is either Identifying (I) or Non-Identifying (NI).

Parent Table: **BUILDING_TYPE**
Primary Key(s):   **BUILDING_TYPE_CODE**
Data Type: **VARCHAR2 (30)**

Child Table	Migrated Foreign Key	Rel. Type	Parent to Child Relationship	Child to Parent Relationship
BUILDING_TO_SCALE_FT	BUILDING_TYPE_CODE	NI	Optional: 1 to many	Optional: 1 to1

Parent Table: **BUILDING_TYPE_LIST**
Primary Key(s):   **BUILDING_TYPE**
Data Type: **VARCHAR2 (30)**

Child Table	Migrated Foreign Key	Rel. Type	Parent to Child Relationship	Child to Parent Relationship
BUILDING_AS_SYMBOL_FT	BUILDING_TYPE	NI	Optional: 1 to many	Optional: 1 to1

Parent Table: **LOCATION_ACCURACY_LIST**
Primary Key(s):   **LOCATION_ACCURACY**
Data Type: **VARCHAR2 (25)**

Child Table	Migrated Foreign Key	Rel. Type	Parent to Child Relationship	Child to Parent Relationship
BUILDING_AS_SYMBOL_FT	LOCATION_ACCURACY	NI	Optional: 1 to many	Optional: 1 to1
BUILDING_TO_SCALE_FT	LOCATION_ACCURACY	NI	Optional: 1 to many	Optional: 1 to1

APPENDIX C: Frequently Asked Questions

How do I rotate a building point feature?

ArcMap provides two options for rotation, Geographic and Arithmetic. Geographic rotates clockwise and has the origin at zero degrees, while Arithmetic rotates counter-clockwise and has the origin at ninety degrees. Arithmetic will align building symbols to road features.

Steps for using Rotation:

- Right-click on BUILDING_AS_SYMBOL_FT and choose Properties
- Click the Symbology tab
- Choose Features (single symbol) and assign a symbol for buildings
- Click Advanced and choose Rotation
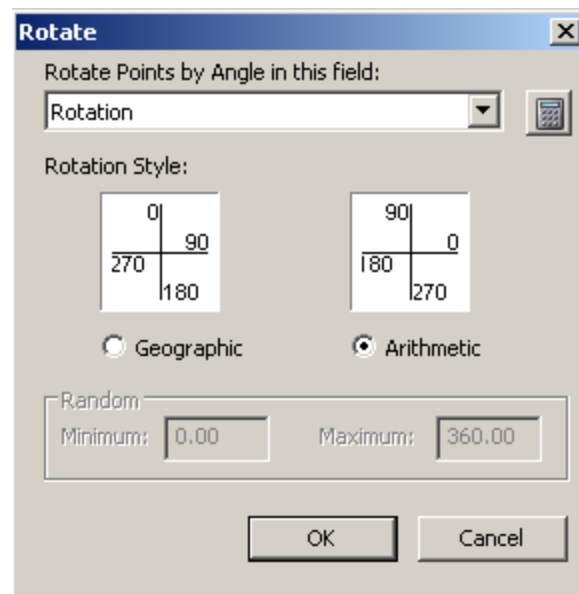- Select the Rotation field from the list
- Choose Arithmetic (counter-clockwise rotation)
- Click OK.

Figure 8: ArcMap's Rotate function

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