



Land Information Ontario

Warehouse Data Class Description
Report:

ORN Road Net Element

Format:
Standard NRVIS Interchange Format (SNIF)

Issued: March 4, 2009

Table of Contents

<i>Introduction</i>	3
<i>Using this Report</i>	4
<i>Related Documents</i>	5
<i>Data Class Overview</i>	6
<i>File List</i>	7
<i>Product Data Model</i>	9
<i>Data Class Table Descriptions</i>	10
<i>Appendix</i>	51

Introduction

Disclaimer

This technical documentation has been prepared by the Ministry of Natural Resources (the “Ministry”), representing Her Majesty the Queen in right of Ontario. No warranties or representations, express or implied, statutory or otherwise shall apply or are being made by the Ministry with respect to the documentation, its accuracy or its completeness.

In no event will the Ministry be liable or responsible for any lost profits, loss of revenue or earnings, claims by third parties or for any economic, indirect, special, incidental, consequential or exemplary damage resulting from any errors, inaccuracies or omissions in this documentation; and in no event will the Ministry’s liability for any such errors, inaccuracies or omissions on any particular claim, proceeding or action, exceed the actual consideration paid by the claimant involved to the Ministry for the materials to which this instructional documentation relates. Save and except for the liability expressly provided for above, the Ministry shall have no obligation, duty or liability whatsoever in contract, tort or otherwise, including any liability or negligence. The limitations, exclusions and disclaimers expressed above shall apply irrespective of the nature of any cause of action, demand or action, including but not limited to breach of contract, negligence, strict liability, tort or any other legal theory, and shall survive any fundamental breach or breaches.

Additional Information

For more information about this document, please contact Land Information Ontario at (705) 755-1878 or lio@ontario.ca

Published March 2009
© 2009 Queen's Printer for Ontario

Using this Report

This report describes the contents and structure of the selected data class package in the format (SNIF) in which data classes are extracted from and published to the Ontario Land Information Warehouse. The purpose of this report is to assist data users in understanding the data received in the SNIF package, as well as to assist data publishers in creating a SNIF package for a single data class.

For a general overview of the SNIF package, refer to the document entitled [What is SNIF?](#) The document entitled *Land Information Ontario Detailed SNIF Subscription Specifications* provides a detailed examination of the SNIF.

This report is meant to be used in conjunction with the [Warehouse Data Class Description Report for Common Tables](#). These two reports together fully describe the complete contents of a SNIF package.

Data Class Overview

The Data Class Overview section provides an overall description of the data class, including version. The abstract class refers to the spatial characteristics to which this class conforms.

File List

The File List section lists the mandatory and optional data class tables that are contained within a SNIF package. Tables that are listed as optional may not necessarily be included in a SNIF package. This report only lists the tables that are contained within the SNIF package “spatial” folder. The tables in the “common” folder relate to every data class and are described in a separate *Warehouse Data Class Description Report for Common Tables*.

Product Data Model

The relevant tables for the data class are depicted in diagram form, showing the relationships between the tables. Common tables are not included in the diagram. Their relationships to the geographic unit (GEOG_UNIT) table are depicted in diagram form in the *Warehouse Data Class Description Report for Common Tables*.

Data Class Table Descriptions

This section of the report describes each table associated with the data class. A description of the table is included, along with column names, descriptions, types, and sizes. Columns which are considered mandatory are noted. The abbreviated column names that appear in the shape file itself are also shown.

Valid values are listed for any columns which have a predefined list of possible values. If there are more than six possible values, the first six are shown in the report with the column description. The complete list is shown in the report appendix.

Using this Report - continued

Some data classes are distributed with an enhanced shape file that contains all attributes from tables that are related to the geographic unit table in a one-to-one relationship. These columns are described in the “_DBF_VW” table in this section of the report. Each column description includes the source data class table in which the column exists. For example, the source for the DBF column “NAME” would be noted as AIRPORT_AIRSTRIP.OFFICIAL_NAME. This means that the NAME column is the OFFICIAL_NAME column located in the AIRPORT_AIRSTRIP table.

Appendix

The report appendix includes full listings of permissible values for columns with more than six possible values. Also included is a description of date fields that are included in every table.

Related Documents

[What is SNIF?](#)

[Warehouse Data Class Description Report for Common Tables](#)

[Ministry of Natural Resources Policy for Management of Classified Data in Ontario
Land Information Warehouse](#)

[Land Information Ontario Detailed SNIF Subscription Specifications](#)

[Land Information Ontario Detail SNIF Publication Specifications](#)

Data Class Overview

Data Class: ORN Road Net Element
Short Name: ORNELEM
Version: 2

The basic centreline road network features, which forms the spatial framework for the ORN. Road net elements are bound by a junction on each end, except for cul-de-sacs (loops) where there is only one junction. The ORN is segmented at real-world intersections (junctions) on the ground.

Abstract Class: SPSLINEM

Spatial Single-Line With Measures: An object is represented by ONE and ONLY ONE line. All vertices along the arc have measures (values for x, y, m). Measures are required for dynamic segmentation/linear referencing. Example: Ontario Road Network road segments.

File List

The following list specifies the table files, along with their folder locations and type (mandatory, optional, or lookup), that are included in a SNIF package for this data class, as extracted from the Ontario Land Information Warehouse.

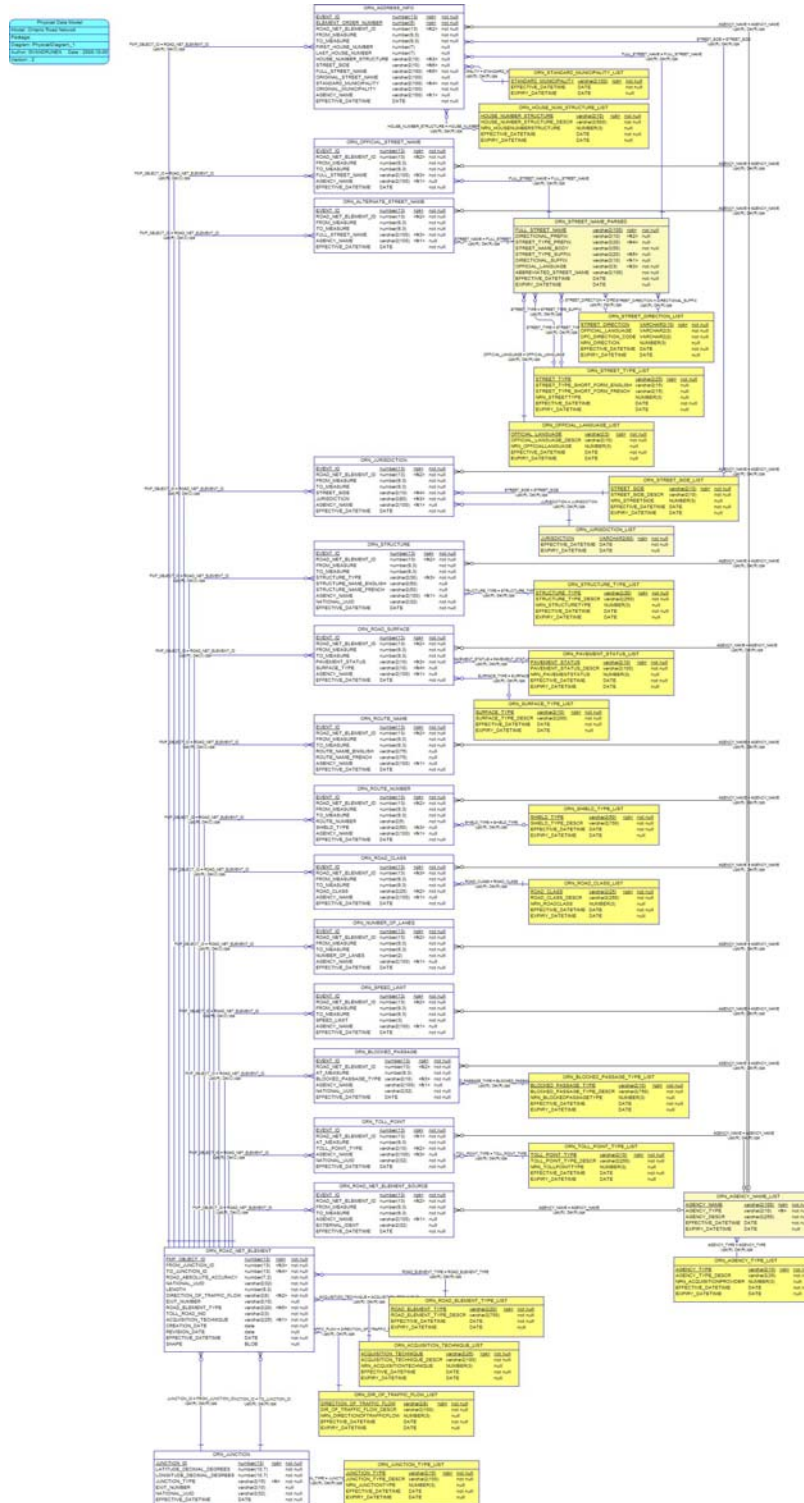
For data publishers, the table files that are not identified as mandatory may be included if the appropriate data is available. Likewise, additional common tables (as described in the *Warehouse Data Class Description Report for Common Tables*) are also identified as optional and may be included if the appropriate data is available. Table files identified as lookup tables provide descriptive values for codes within other tables. These tables do not need to be supplied by data publishers.

Folder and File Name	Mandatory/Lookup
spatial\ORNELEM\ORN_ACQUISITION_TECHNIQUE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_ADDRESS_INFO.tbl	No
spatial\ORNELEM\ORN_AGENCY_NAME_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_AGENCY_TYPE_LIST.tbl	No
spatial\ORNELEM\ORN_ALTERNATE_STREET_NAME.tbl	No
spatial\ORNELEM\ORN_BLOCKED_PASSAGE.tbl	No
spatial\ORNELEM\ORN_BLOCKED_PASSAGE_TYPE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_DIR_OF_TRAFFIC_FLOW_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_HOUSE_NUM_STRUCTURE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_JUNCTION.tbl	No
spatial\ORNELEM\ORN_JUNCTION_TYPE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_JURISDICTION.tbl	No
spatial\ORNELEM\ORN_JURISDICTION_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_NUMBER_OF_LANES.tbl	No
spatial\ORNELEM\ORN_OFFICIAL_LANGUAGE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_OFFICIAL_STREET_NAME.tbl	No
spatial\ORNELEM\ORN_PAVEMENT_STATUS_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_ROAD_CLASS.tbl	No
spatial\ORNELEM\ORN_ROAD_CLASS_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_ROAD_ELEMENT_TYPE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_ROAD_NET_ELEMENT.tbl	Yes

Folder and File Name	Mandatory/Lookup
spatial\ORNELEM\ORN_ROAD_NET_ELEMENT_SOURCE.tbl	No
spatial\ORNELEM\ORN_ROAD_SURFACE.tbl	No
spatial\ORNELEM\ORN_ROUTE_NAME.tbl	No
spatial\ORNELEM\ORN_ROUTE_NUMBER.tbl	No
spatial\ORNELEM\ORN_SHIELD_TYPE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_SPEED_LIMIT.tbl	No
spatial\ORNELEM\ORN_STANDARD_MUNICIPALITY_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_STREET_DIRECTION_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_STREET_NAME_PARSED.tbl	No
spatial\ORNELEM\ORN_STREET_SIDE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_STREET_TYPE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_STRUCTURE.tbl	No
spatial\ORNELEM\ORN_STRUCTURE_TYPE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_SURFACE_TYPE_LIST.tbl	(lookup)
spatial\ORNELEM\ORN_TOLL_POINT.tbl	No
spatial\ORNELEM\ORN_TOLL_POINT_TYPE_LIST.tbl	(lookup)
spatial\ORNELEM\arcm (shapefile)	No

Product Data Model

Click [here](#) for a higher resolution model.



Data Class Table Descriptions

Table ORNELEM_DBF_VW				
ID	Column Name	Type	Mandatory	Short Name
	Desc: Indicates if the road net element is a toll road. (Source: ORN_ROAD_NET_ELEMENT.TOLL_ROAD_IND)			
1	OBJECT_ID	NUMBER(13,0)	Yes	OBJECT_ID
2	DESCR	CHAR	No	DESCR
3	GUT_NUMBER	NUMBER(38,0)	No	GUT_NUMBER
4	LABEL	VARCHAR2(32)	Yes	LABEL
5	FROM_JCT	NUMBER(13,0)	Yes	FROM_JCT
	The beginning junction for a road element or ferry connection. (Source: ORN_ROAD_NET_ELEMENT.FROM_JUNCTION_ID)			
6	TO_JCT	NUMBER(13,0)	Yes	TO_JCT
	The end junction for a road element or ferry connection. (Source: ORN_ROAD_NET_ELEMENT.TO_JUNCTION_ID)			
7	ACCURACY	NUMBER(7,2)	Yes	ACCURACY
	A positional accuracy statement that identifies how closely (in metres) the ORN Road Geometry meets the true centreline position on the ground. (Source: ORN_ROAD_NET_ELEMENT.ROAD_ABSOLUTE_ACCURACY)			
8	NID	VARCHAR2(32)	Yes	NID
	A unique national identifier assigned to a road net element, junction and selected event data such as Toll Point, Blocked Passage and Structure which are required to support the National Road Network (NRN). (Source: ORN_ROAD_NET_ELEMENT.NATIONAL_UUID)			
9	LENGTH	NUMBER(9,3)	Yes	LENGTH
	The measured planimetric length of a road net element in metres. (Source: ORN_ROAD_NET_ELEMENT.LENGTH)			
10	DIRECTION	VARCHAR2(8)	Yes	DIRECTION
	The direction(s) of vehicular or motor traffic flow. All road elements must have a direction of traffic flow assigned. (Source: ORN_ROAD_NET_ELEMENT.DIRECTION_OF_TRAFFIC_FLOW)			
11	EXIT_NUM	VARCHAR2(10)	No	EXIT_NUM
	The number of an exit on and off a freeway or expressway/highway, which has been assigned by an administrating body. (Source: ORN_ROAD_NET_ELEMENT.EXIT_NUMBER)			

Table ORNELEM_DBF_VW				
ID	Column Name	Type	Mandatory	Short Name
Desc: Indicates if the road net element is a toll road. (Source: ORN_ROAD_NET_ELEMENT.TOLL_ROAD_IND)				
12	ELEM_TYPE	VARCHAR2(20)	Yes	ELEM_TYPE
An attribute describing the type of road net element. (Source: ORN_ROAD_NET_ELEMENT.ROAD_ELEMENT_TYPE)				
13	TOLL_ROAD	VARCHAR2(3)	Yes	TOLL_ROAD
Indicates if the road net element is a toll road. (Source: ORN_ROAD_NET_ELEMENT.TOLL_ROAD_IND)				
14	ACQTECH	VARCHAR2(25)	Yes	ACQTECH
The type of data source or technique used to create or revise the road net element. (Source: ORN_ROAD_NET_ELEMENT.ACQUISITION_TECHNIQUE)				
15	CREDATE	DATE	Yes	CREDATE
The date the road net element was originally created. (Source: ORN_ROAD_NET_ELEMENT.CREATION_DATE)				
16	REVDATE	DATE	No	REVDATE
The date the road net element was last revised or updated. (Source: ORN_ROAD_NET_ELEMENT.REVISION_DATE)				

Table ORN_ACQUISITION_TECHNIQUE_LIST

Desc: List of valid acquisition techniques.

ID	Column Name	Type	Mandatory	Short Name
1	ACQUISITION_TECHNIQUE The data source or technique used to create or revise the road net element.	VARCHAR2(25)	Yes	ACQTECH
2	ACQUISITION_TECHNIQUE_DESCR A description of the acquisition technique.	VARCHAR2(100)	Yes	ACQTECH_D
3	NRN_ACQUISITIONTECHNIQUE Acquisition technique assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_ADDRESS_INFO

Desc: The essential components of a street address. Address information is collected and stored relating to left or right side of the street or road element. Addressing is collected and maintained by an authoritative source such as the municipality, county or region for the purposes of assisting in the delivery of "911" services. Addresses are typically directly related to road names, but there are cases where an address does not directly link to a road and the address information is linked to a road net element attribute called road element type – virtual road, i.e. cottage or country roads where access is across water bodies (islands) or along shorelines not accessed by road.

ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	ELEMENT_ORDER_NUMBER This is a sequential number starting at 1 for each event, which determines the order in which the event records combine to form the address range.	NUMBER(5,0)	Yes	ORDER_NUM
6	FIRST_HOUSE_NUMBER The first house number of the address range.	NUMBER(7,0)	No	FIRST_NUM
7	LAST_HOUSE_NUMBER The last house number of the address range.	NUMBER(7,0)	No	LAST_NUM
8	HOUSE_NUMBER_STRUCTURE The type of house or property numbering system that is applied to the address range. Valid Values: See ORN_HOUSE_NUMBER_STRUCTURE_LIST in Appendix for a list of valid values.	VARCHAR2(10)	No	NUM_STRUCT
9	STREET_SIDE The side of the street for which the addressing applies. The street side is determined by the traversal from the "From Measure" to the "To Measure" of the road element. Valid Values: See table ORN_STREET_SIDE_LIST in Appendix for list of valid values.	VARCHAR2(10)	No	ST_SIDE

Table ORN_ADDRESS_INFO				
Desc: See description on page 13.				
ID	Column Name	Type	Mandatory	Short Name
10	FULL_STREET_NAME This attribute is derived from the individual street name components where present, namely directional prefix, street type prefix, street name body, street type suffix and directional suffix and is stored in upper case text.	VARCHAR2(100)	Yes	FULL_NAME
11	ORIGINAL_STREET_NAME The street name provided by source agencies, which is stored as is regardless of spelling or abbreviations.	VARCHAR2(100)	No	ORIG_ST
12	STANDARD_MUNICIPALITY Standardized municipality names as maintained by the Ministry of Municipal Affairs and Housing (MMAH), and Official Indian Reserve Names as maintained by the Federal Government. Valid Values: See table ORN_STANDARD_MUNICIPALITY_LIST in Appendix for list of valid values.	VARCHAR2(100)	Yes	STD_MUNIC
13	ORIGINAL_MUNICIPALITY The municipality name provided by source agencies, which is stored as is, regardless of spelling or abbreviations. It may contain former municipality names or may contain local municipal names such towns or village names.	VARCHAR2(100)	Yes	ORIG_MUNIC
14	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY

Table ORN_AGENCY_NAME_LIST

Desc: The name of the source agency providing geometry or attribute information. This is represented by either a Municipal Name, a Provincial Ministry (i.e. Ministry of Health, Ministry of Transport or the Ministry of Natural Resources) or a Federal Agency (i.e. Natural Resources Canada or Statistics and Elections Canada) and is subject to change.

ID	Column Name	Type	Mandatory	Short Name
1	AGENCY_NAME The name of the agency.	VARCHAR2(100)	Yes	AGENCY
2	AGENCY_TYPE The type of agency. Valid value: See table ORN_AGENCY_TYPE_LIST in Appendix for list of valid values.	VARCHAR2(10)	Yes	AGENCY_T
3	AGENCY_DESCR A description of the type of agency.	VARCHAR2(250)	Yes	AGENCY_D

Table ORN_AGENCY_TYPE_LIST

Desc: List of valid agency types

ID	Column Name	Type	Mandatory	Short Name
1	AGENCY_TYPE The type of agency.	VARCHAR2(10)	Yes	AGENCY_T
2	AGENCY_TYPE_DESCR A description of the type of agency.	VARCHAR2(35)	Yes	AGENCY_T
3	NRN_ACQUISITIONPROVIDER Acquisition provider assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_ALTERNATE_STREET_NAME

Desc: An event identifying an alternate street name and may be associated with a bilingual name. A language code shall be used to specify the applied language which resides in the Street_Name_Parsed Table.

ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	FULL_STREET_NAME This attribute is derived from the individual street name components where present, namely directional prefix, street type prefix, street name body, street type suffix and directional suffix and is stored in upper case text.	VARCHAR2(100)	Yes	FULL_NAME
6	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY

Table ORN_BLOCKED_PASSAGE

Desc: A point event on a road element identifying the existence of an access barrier or an obstruction, either man-made or natural, which controls or limits access to a road element.

ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	AT_MEASURE At measure represents a location or point of interest along a linear feature. At measure is expressed as a distance in metres from the beginning of the road net element. This measure is related to planimetric distance not actual driven distance.	NUMBER(9,3)	Yes	AT_MEASURE
4	BLOCKED_PASSAGE_TYPE A man-made or natural barrier or access restriction placed on a road net element to control or limit access to a road net element. Valid Values: See table ORN_BLOCKED_PASSAGE_TYPE_LIST in Appendix for list of valid values.	VARCHAR2(10)	Yes	BLOCKED_T
5	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY
6	NATIONAL_UUID A unique national identifier assigned to a road net element, junction and selected event data such as Toll Point, Blocked Passage and Structure which are required to support the National Road Network (NRN).	VARCHAR2(32)	Yes	NID

Table ORN_BLOCKED_PASSAGE_TYPE_LIST

Desc: List of valid blocked passage types

ID	Column Name	Type	Mandatory	Short Name
1	BLOCKED_PASSAGE_TYPE The type of man-made or natural barrier or access restriction placed on a road element to control or limit access to a road net element.	VARCHAR2(10)	Yes	BLOCKED_T
2	BLOCKED_PASSAGE_TYPE_DESCR A description of the blocked passage type.	VARCHAR2(750)	Yes	BLOCKED_D
3	NRN_BLOCKEDPASSAGETYPE Blocked passage type assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_DIR_OF_TRAFFIC_FLOW_LIST

Desc: List of valid direction of traffic flows

ID	Column Name	Type	Mandatory	Short Name
1	DIRECTION_OF_TRAFFIC_FLOW The direction(s) of vehicular or motor traffic flow. All road elements must have a direction of traffic flow assigned.	VARCHAR2(8)	Yes	DIRECTION
2	DIR_OF_TRAFFIC_FLOW_DESCR A description of the direction of traffic flow.	VARCHAR2(100)	Yes	DESCR
3	NRN_DIRECTIONOFTRAFFICFLOW Direction of traffic flow assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_HOUSE_NUM_STRUCTURE_LIST

Desc: List of valid house number structures

ID	Column Name	Type	Mandatory	Short Name
1	HOUSE_NUMBER_STRUCTURE The type of house or property numbering system that is applied to the address range.	VARCHAR2(10)	Yes	NUM_STRUCTURE
2	HOUSE_NUMBER_STRUCTURE_DESCR A description of the house number structure.	VARCHAR2(500)	Yes	NUM_STR_D
3	NRN_HOUSENUMBERSTRUCTURE House number structure assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_JUNCTION

Desc: A unique national identifier assigned to a road net element, junction and selected event data such as Toll Point, Blocked Passage and Structure which are required to support the National Road Network (NRN).

ID	Column Name	Type	Mandatory	Short Name
1	JUNCTION_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	JCT_ID
2	LATITUDE_DECIMAL_DEGREES The latitude in decimal degrees.	NUMBER(10,7)	Yes	LATITUDE
3	LONGITUDE_DECIMAL_DEGREES The longitude in negative decimal degrees.	NUMBER(10,7)	Yes	LONGITUDE
4	JUNCTION_TYPE The classification of a junction is based on the valency of the junction. The number of road elements or ferry connections joining at a junction is termed the valency of a junction. Valid values: See table ORN_JUNCTION_TYPE_LIST in Appendix for list of valid values.	VARCHAR2(15)	Yes	JCT_TYPE
5	EXIT_NUMBER The number of an exit on or off a freeway, expressway or highway, assigned by an administrating body and is represented by a valid number or character.	VARCHAR2(10)	No	EXIT_NUM
6	NATIONAL_UUID A unique national identifier assigned to a road net element, junction and selected event data such as Toll Point, Blocked Passage and Structure which are required to support the National Road Network (NRN).	VARCHAR2(32)	Yes	NID

Table ORN_JUNCTION_TYPE_LIST

Desc: List of valid junction types

ID	Column Name	Type	Mandatory	Short Name
1	JUNCTION_TYPE	VARCHAR2(15)	Yes	JCT_TYPE
	The classification of a junction is based on the valency of the junction. The number of road elements or ferry connections joining at a junction is termed the valency of a junction. Valid values: See table ORN_JUNCTION_TYPE_LIST in Appendix for list of valid values.			
2	JUNCTION_TYPE_DESCR	VARCHAR2(100)	Yes	JCT_TYPE_D
	A description of the junction type.			
3	NRN_JUNCTIONTYPE	NUMBER(3,0)	No	NRN_CODE
	Junction type assigned to support the National Road Network (NRN).			

Table ORN_JURISDICTION				
Desc: Identifies jurisdictional, or custodianship responsibility of the road				
ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	STREET_SIDE The side of the street for which the addressing applies. The street side is determined by the direction of the traversal from the "From Measure" to the "To Measure" of the road element. Valid values: See table ORN_STREET_SIDE_LIST in Appendix for list of valid values.	VARCHAR2(10)	Yes	ST_SIDE
6	JURISDICTION An indication of who has the jurisdictional, or custodianship responsibility for a road net element. The custodian would have the responsibility to ensure maintenance occurs, but is not necessarily the one who undertakes the maintenance directly.	VARCHAR2(80)	Yes	JURIS
7	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY

Table ORN_JURISDICTION_LIST

Desc: List of valid road jurisdictions as maintained by the Municipality, Provincial Ministries, and Federal Agencies and is subject to change. Jurisdiction may be based on street side.

ID	Column Name	Type	Mandatory	Short Name
1	JURISDICTION	VARCHAR2(80)	Yes	JURIS
An indication of who has the jurisdictional, or custodianship responsibility for a road net element. The custodian would have the responsibility to ensure maintenance occurs, but is not necessarily the one who undertakes the maintenance directly.				

Table ORN_NUMBER_OF_LANES				
Desc: A linear event indicating the number of lanes.				
ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	NUMBER_OF_LANES The number of lanes of a road.	NUMBER(2,0)	Yes	NUM_LANES
6	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY

Table ORN_OFFICIAL_LANGUAGE_LIST

Desc: List of valid Official Languages - official language code

ID	Column Name	Type	Mandatory	Short Name
1	OFFICIAL_LANGUAGE A code identifying the official language. Validn values: See table ORN_OFFICIAL_LANGUAGE_LIST in Appendix for list of valid values.	VARCHAR2(3)	Yes	OFF_LANG
2	OFFICIAL_LANGUAGE_DESCR A description of the official language.	VARCHAR2(10)	Yes	OFF_LANG_D
3	NRN_OFFICIALLANGUAGE Official language assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_OFFICIAL_STREET_NAME

Desc: An event identifying an official street name and may be associated with a bilingual name. A language code shall be used to specify the applied language which resides in the Street_Name_Parsed Table.

ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	FULL_STREET_NAME This attribute is derived from the individual street name components where present, namely directional prefix, street type prefix, street name body, street type suffix and directional suffix and is stored in upper case text.	VARCHAR2(100)	Yes	FULL_NAME
6	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY

Table ORN_PAVEMENT_STATUS_LIST

Desc: List of valid road surface types.

ID	Column Name	Type	Mandatory	Short Name
1	PAVEMENT_STATUS The surface type of a road element.	VARCHAR2(10)	Yes	PAVEMENT_S
2	PAVEMENT_STATUS_DESCR A description of the surface type.	VARCHAR2(100)	Yes	PAVEMENT_D
3	NRN_PAVEMENTSTATUS Pavement status assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_ROAD_CLASS				
Desc: A linear event identifying the class of road based on a functional classification schema.				
ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	ROAD_CLASS The classification of a road. Valid Values: See table ORN_ROAD_CLASS_LIST in Appendix for list of valid values.	VARCHAR2(25)	Yes	ROAD_CLASS
6	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY

Table ORN_ROAD_CLASS_LIST

Desc: List of valid road classes.

ID	Column Name	Type	Mandatory	Short Name
1	ROAD_CLASS The classification of a road. Valid values: See table ORN_ROAD_CLASS_LIST in appendix for a list of valid values.	VARCHAR2(25)	Yes	ROAD_CLASS
2	ROAD_CLASS_DESCR A description of the road class.	VARCHAR2(250)	Yes	ROAD_CLS_D
3	NRN_ROADCLASS Road class assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_ROAD_ELEMENT_TYPE_LIST

Desc: List of valid road element types.

ID	Column Name	Type	Mandatory	Short Name
1	ROAD_ELEMENT_TYPE An attribute describing the type of road net element. Valid values: See table ORN__ROAD_ELEMENT_LIST for a list of valid values.	VARCHAR2(20)	Yes	ELEM_TYPE
2	ROAD_ELEMENT_TYPE_DESCR A description of the road element type.	VARCHAR2(750)	Yes	ELEM_TYP_D

Table ORN_ROAD_NET_ELEMENT

Desc: The basic centreline of road network features, which forms the spatial network of roads, composed of three types of road net elements, road element, ferry connection and virtual road. The ORN is segmented at real-world intersections or junctions on the ground and road net elements are bound by a junction on each end, except for cul-de-sacs where there is only one junction. Where there are grade-separated crossings, the bisecting road elements do not share a junction. If a junction is present at the location of the grade separation, it is either connected to the lower set of road elements or to the higher but never to both. Proposed roads and roads under construction are not represented in the ORN. Turning lanes separated by a median longer than 10 metres in length are represented in the ORN.

ID	Column Name	Type	Mandatory	Short Name
1	FMF_OBJECT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	OBJECT_ID
2	FROM_JUNCTION_ID The beginning junction for a road element or ferry connection.	NUMBER(13,0)	Yes	FROM_JCT
3	TO_JUNCTION_ID The end junction for a road element or ferry connection.	NUMBER(13,0)	Yes	TO_JCT
4	ROAD_ABSOLUTE_ACCURACY A statement that identifies the positional accuracy of the ORN road geometry, in metres.	NUMBER(7,2)	Yes	ACCURACY
5	NATIONAL_UUID A unique national identifier assigned to a road net element, junction and selected event data such as Toll Point, Blocked Passage and Structure which are required to support the National Road Network (NRN).	VARCHAR2(32)	Yes	NID
6	LENGTH The measured planimetric length of a road net element in metres.	NUMBER(9,3)	Yes	LENGTH
7	DIRECTION_OF_TRAFFIC_FLOW The direction(s) of vehicular or motor traffic flow. All road elements must have a direction of traffic flow assigned. Valid values: See table ORN_DIR_OF_TRAFFIC_FLOW_LIST in Appendix for list of valid values.	VARCHAR2(8)	Yes	DIRECTION
8	EXIT_NUMBER The number of an exit on or off a freeway, expressway or highway, assigned by an administrating body and is represented by a valid number or character.	VARCHAR2(10)	No	EXIT_NUM
9	ROAD_ELEMENT_TYPE An attribute describing the type of road net element. Valid values: See table ORN_ROAD_ELEMENT_TYPE_LIST in Appendix for list of valid values.	VARCHAR2(20)	Yes	ELEM_TYPE

Table ORN_ROAD_NET_ELEMENT				
Desc: See description on page 33.				
ID	Column Name	Type	Mandatory	Short Name
10	TOLL_ROAD_IND Indicates if the road net element is a toll road. Valid Values: Yes,No	VARCHAR2(3)	Yes	TOLL_ROAD
11	ACQUISITION_TECHNIQUE The type of data source or technique used to create or revise the road net element. Valid Values: See table ORN_ACQUISITION_TECHNIQUE_LIST in Appendix for list of valid values.	VARCHAR2(25)	Yes	ACQTECH
12	CREATION_DATE The date the road net element was originally created.	DATE	Yes	CREDATE
13	REVISION_DATE The date the road net element was last revised or updated.	DATE	No	REVDATE

Table ORN_ROAD_NET_ELEMENT_SOURCE

Desc: The source agency, Municipality, Provincial Ministry, Federal Agency or other organization that provided the road net element.

ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY
6	EXTERNAL_IDENT A unique identifier assigned to the source agency.	VARCHAR2(32)	No	EXT_IDENT

Table ORN_ROAD_SURFACE				
Desc: The surface type of a road element.				
ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	PAVEMENT_STATUS The surface type of a road element. Valid values: See table ORN_PAVEMENT_STATUS_LIST in Appendix for list of valid values.	VARCHAR2(10)	Yes	PAVEMENT_S
6	SURFACE_TYPE A linear event indicating the surface type of a road element. Valid values: See table ORN_SURFACE_TYPE_LIST in Appendix for list of valid values.	VARCHAR2(10)	No	SURFACE_T
7	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY

Table ORN_ROUTE_NAME				
Desc: The name attached to a road net element as defined by a Municipality, Provincial Ministry, or Federal Agency and is associated to an established and/or maintained route.				
ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	ROUTE_NAME_ENGLISH The English name that is attached to a road net element as defined by a Municipality, Provincial Ministry, or Federal Agency and is associated to an established and/or maintained route.	VARCHAR2(75)	No	NAME_ENG
6	ROUTE_NAME_FRENCH The French name that is attached to a road net element as defined by a Municipality, Provincial Ministry, or Federal Agency and is associated to an established and/or maintained route.	VARCHAR2(75)	No	NAME_FRE
7	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY

Table ORN_ROUTE_NUMBER

Desc: The route number attached to a road net element as defined by a Municipality, Provincial Ministry, or Federal Agency and is typically associated with provincial highways, secondary highways, county roads and regional roads.

ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	ROUTE_NUMBER The route number assigned to a road typically associated with provincial highways, secondary highways, county roads and regional roads and is represented by a numeric and/or an alpha-numeric character. A road can be assigned multiple route numbers.	VARCHAR2(5)	Yes	ROUTE_NUM
6	SHIELD_TYPE The shield type assigned to a route by a road authority. Valid Values: See table ORN_Shield_Type_List in Appendix for list of valid values.	VARCHAR2(60)	No	SHIELD_T
7	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY

Table ORN_SHIELD_TYPE_LIST

Desc: The shield types that may be assigned to a route by a road authority and is used for cartographic purposes.

ID	Column Name	Type	Mandatory	Short Name
1	SHIELD_TYPE The shield type assigned to a route by a road authority.	VARCHAR2(60)	Yes	SHIELD_T
2	SHIELD_TYPE_DESCR A description of the shield type.	VARCHAR2(750)	Yes	SHIELD_T_D

Table ORN_SPEED_LIMIT

Desc: The maximum speed limit assigned to a road element in kilometres per hour in accordance with Municipal By-Laws or Provincial Law. In cases where a road element has more than one speed limit value, the speed limit of the longest portion of the road element is supplied.

ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	SPEED_LIMIT The maximum speed limit assigned to a road element in kilometres per hour in accordance with Municipal By-Laws or Provincial Law.	NUMBER(3,0)	Yes	LIMIT
6	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY

Table ORN_STANDARD_MUNICIPALITY_LIST

Desc: List of valid standard municipalities.

ID	Column Name	Type	Mandatory	Short Name
1	STANDARD_MUNICIPALITY	VARCHAR2(100)	Yes	STD_MUNIC
Standardized municipality names as maintained by the Ministry of Municipal Affairs and Housing (MMAH), and Official Indian Reserve Names as maintained by the Federal Government.				

Table ORN_STREET_DIRECTION_LIST

Desc: List of valid street directions

ID	Column Name	Type	Mandatory	Short Name
1	STREET_DIRECTION The direction of the street.	VARCHAR2(10)	Yes	ST_DIR
2	OFFICIAL_LANGUAGE A code identifying the official language.	VARCHAR2(3)	Yes	OFF_LANG
3	CPC_DIRECTION_CODE The short form of the street direction as defined by Canada Post Corporation (CPC).	VARCHAR2(2)	Yes	DIR_CODE
4	NRN_DIRECTION Direction assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_STREET_NAME_PARSED

Desc: A lookup table containing standardized and abbreviated official and alternate street names. This table also contains the official and alternate parsed components of the street name and must have a street name body, but may or may not have a directional prefix/suffix or street type prefix/suffix.

ID	Column Name	Type	Mandatory	Short Name
1	FULL_STREET_NAME This attribute is derived from the individual street name components where present, namely directional prefix, street type prefix, street name body, street type suffix and directional suffix and is stored in upper case text.	VARCHAR2(100)	Yes	FULL_NAME
2	DIRECTIONAL_PREFIX A geographic direction, which is part of the official or alternate street name which precedes the street name body and, if appropriate, the street type prefix. Valid Values: See table ORN_STREET_DIRECTION_LIST in Appendix for list of valid values.	VARCHAR2(10)	No	DIR_PREFIX
3	STREET_TYPE_PREFIX A geographic direction, which is part of the official or alternate street name which precedes the street name body and, if appropriate, the street type prefix. Valid Values: See table ORN_STREET_TYPE_LIST in Appendix for list of valid values.	VARCHAR2(20)	No	ST_TYPE_P
4	STREET_NAME_BODY The identifying named component of an official or alternate street name. A street name must have a street name body and street name body can never be abbreviated.	VARCHAR2(50)	Yes	NAME_BODY
5	STREET_TYPE_SUFFIX A part of the official or alternate street name identifying the street type which follows the street name body. Valid Values: See table ORN_STREET_TYPE_LIST in Appendix for list of valid values.	VARCHAR2(20)	No	ST_TYPE_S
6	DIRECTIONAL_SUFFIX A geographic direction, which is part of the official or alternate street name which follows the street name body and, if appropriate, the street type suffix. Valid Values: See table ORN_STREET_DIRECTION_LIST in Appendix for list of valid values.	VARCHAR2(10)	No	DIR_SUFFIX
7	OFFICIAL_LANGUAGE A code identifying the official language. Valid Values: See table ORN_OFFICIAL_LANGUAGE_LIST in Appendix for list of valid values.	VARCHAR2(3)	Yes	OFF_LANG
8	ABBREVIATED_STREET_NAME This attribute is composed of the individual street name components, where present, including directional prefix, street type prefix, street name body, street type suffix and directional suffix. Street name components are abbreviated with the exception of street name body.	VARCHAR2(100)	Yes	ABBR_NAME

Table ORN_STREET_SIDE_LIST

Desc: List of valid street sides

ID	Column Name	Type	Mandatory	Short Name
1	STREET_SIDE The side of the street for which the addressing applies. The street side is determined by the traversal from the "From Measure" to the "To Measure" of the road element.	VARCHAR2(10)	Yes	ST_SIDE
2	STREET_SIDE_DESCR A description of the street side.	VARCHAR2(10)	Yes	ST_SIDE_D
3	NRN_STREETSIDE Street side assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_STREET_TYPE_LIST

Desc: List of valid street types

ID	Column Name	Type	Mandatory	Short Name
1	STREET_TYPE A description of the street type.	VARCHAR2(25)	Yes	ST_TYPE
2	STREET_TYPE_SHORT_FORM_ENGLISH A short form of the street type in English.	VARCHAR2(15)	No	ST_TYPE_EN
3	STREET_TYPE_SHORT_FORM_FRENCH A short form of the street type in French.	VARCHAR2(15)	No	ST_TYPE_FR
4	NRN_STREETTYPE Street type assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_STRUCTURE

Desc: The classification of a structure, that exists on a road element and is managed as a linear event. The types are mutually exclusive.

ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	FROM_MEASURE The location of the beginning of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	FROM_MEAS
4	TO_MEASURE The location of the end of the event measured in metres from the beginning of the road element. This measure is related to planimetric distance, not actual driven distance.	NUMBER(9,3)	Yes	TO_MEASURE
5	STRUCTURE_TYPE The classification of a structure, that exists on a road element and is managed as a linear event. Valid values: See table ORN_STRUCTURE_TYPE_LIST in Appendix for list of valid values.	VARCHAR2(30)	Yes	STRUCT_T
6	STRUCTURE_NAME_ENGLISH The English name provided by a Municipality, Provincial Ministry or Federal Agency. A structure has only one English name.	VARCHAR2(50)	No	NAME_ENG
7	STRUCTURE_NAME_FRENCH The French name provided by a Municipality, Provincial Ministry or Federal Agency. A structure has only one French name.	VARCHAR2(50)	No	NAME_FRE
8	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY
9	NATIONAL_UUID A unique national identifier assigned to a road net element, junction and selected event data such as Toll Point, Blocked Passage and Structure which are required to support the National Road Network (NRN).	VARCHAR2(32)	Yes	NID

Table ORN_STRUCTURE_TYPE_LIST

Desc: List of valid structure types

ID	Column Name	Type	Mandatory	Short Name
1	STRUCTURE_TYPE The classification of a structure, that exists on a road element and is managed as a linear event.	VARCHAR2(30)	Yes	STRUCT_T
2	STRUCTURE_TYPE_DESCR A description of the structure type.	VARCHAR2(250)	Yes	STRUCT_T_D
3	NRN_STRUCTURETYPE Structure type assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Table ORN_SURFACE_TYPE_LIST

Desc: List of valid surface types.

ID	Column Name	Type	Mandatory	Short Name
1	SURFACE_TYPE A linear event indicating the surface type of a road element.	VARCHAR2(10)	Yes	SURFACE_T
2	SURFACE_TYPE_DESCR A description of the surface type.	VARCHAR2(200)	Yes	SURFACE_D

Table ORN_TOLL_POINT				
Desc: A point event along a road element indicating the presence of a toll point..				
ID	Column Name	Type	Mandatory	Short Name
1	EVENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	EVENT_ID
2	ROAD_NET_ELEMENT_ID System generated identifier, unique at the application level.	NUMBER(13,0)	Yes	ELEMENT_ID
3	AT_MEASURE At measure represents a location or point of interest along a linear feature. At measure is expressed as a distance in metres from the beginning of the road net element. This measure is related to planimetric distance not actual driven distance.	NUMBER(9,3)	Yes	AT_MEASURE
4	TOLL_POINT_TYPE A point event indicating the type of a toll point that may exist along a road element. Valid values: See table ORN_TOLL_POINT_TYPE_LIST in Appendix for list of valid values.	VARCHAR2(10)	Yes	TOLL_PT_T
5	AGENCY_NAME The name of the agency. Valid Values: See table ORN_AGENCY_NAME_LIST in Appendix for list of valid values.	VARCHAR2(100)	No	AGENCY
6	NATIONAL_UUID A unique national identifier assigned to a road net element, junction and selected event data such as Toll Point, Blocked Passage and Structure which are required to support the National Road Network (NRN).	VARCHAR2(32)	Yes	NID

Table ORN_TOLL_POINT_TYPE_LIST

Desc: List of valid toll point types

ID	Column Name	Type	Mandatory	Short Name
1	TOLL_POINT_TYPE A point event indicating the type of a toll point that may exist along a road element.	VARCHAR2(10)	Yes	TOLL_PT_T
2	TOLL_POINT_TYPE_DESCR A description of the toll point type.	VARCHAR2(250)	Yes	TOLL_PT_D
3	NRN_TOLLPOINTTYPE Toll point type assigned to support the National Road Network (NRN).	NUMBER(3,0)	No	NRN_CODE

Appendix

Lookup Tables

These tables are lookup tables containing codes and associated descriptive values.

Table Name: ORN_ACQUISITION_TECHNIQUE_LIST

ACQUISITION_TECHNIQUE	ACQUISITION_TECHNIQUE_DESCR	NRN_ACQUISITION_TECHNIQUE	EXPIRY_DATE
UNKNOWN	Impossible to determine	-1	
NONE	No value applies	0	
OTHER	All possible values not explicitly mentioned in the domain	1	
GPS	Data collected using a GPS device	2	
ORTHOIMAGE	Satellite imagery ortho-rectified	3	
ORTHOPHOTO	Aerial photo ortho-rectified	4	
VECTOR DATA	Vector digital data	5	
PAPER MAP	Conventional sources of information like maps or plans	6	
FIELD COMPLETION	Information gathered from people directly in the field	7	
RASTER DATA	Data resulting from a scanning process	8	
DIGITAL ELEVATION MODEL	Data coming from a Digital Elevation Model (DEM)	9	
AERIAL PHOTO	Aerial photography not ortho-rectified	10	
RAW IMAGERY DATA	Satellite imagery not ortho-rectified	11	
COMPUTED	Geometric information that has been computed (not captured)	12	

Table Name: ORN_AGENCY_NAME_LIST

Click [here](#) to retrieve the list.

Table Name: ORN_AGENCY_TYPE_LIST

AGENCY_TYPE	AGENCY_TYPE_DESCR
FEDERAL	FEDERAL DEPARTMENT OR AGENCIES
PROVINCIAL	PROVINCIAL DEPARTMENT OR AGENCIES
MUNICIPAL	MUNICIPAL DEPARTMENT OR AGENCIES
OTHER	OTHER VALUE

Table Name: ORN_BLOCKED_PASSAGE_TYPE_LIST

BLOCKED_PASSAGE_TYPE	BLOCKED_PASSAGE_TYPE_DESCR	NRN_BLOCKEDPASSAGETYPE	EXPIRY_DATETIME
Permanent	An obstacle placed across a road element that has to be removed or destroyed to free the entrance to the other side of the road that it is blocking. Examples include: concrete blocks, mound of earth or culvert or bridge removed.	1	
Removable	A man-made barrier designed to block the entrance to the other side of the road element. An example is a locked gate.	2	

Table Name: ORN_DIR_OF_TRAFFIC_FLOW_LIST

DIRECTION_OF_TRAFFIC_FLOW	DIR_OF_TRAFFIC_FLOW_DESCR	NRN_DIRECTIONOFTRAFFICFLOW	EXPIRY_DATETIME
Both	Traffic is allowed in both directions.	1	
Negative	Traffic is opposite to the direction of the geometry.	3	

Positive	Traffic is in the same direction as the geometry.	2	
----------	---	---	--

Table Name: ORN_HOUSE_NUM_STRUCTURE_LIST

HOUSE_NUMBER_STRUCTURE	HOUSE_NUMBER_STRUCTURE_DESCR	NRN_HOUSENUMBER_STRUCTURE	EXPIRY_DATE
Even	The house numbers appear as even numbers in a sequential sorted order (ascending or descending) when moving from one end of an address information event to the other. Numeric completeness of the series is not a requirement.	1	
Irregular	The house numbers do not occur in any sorted order.	4	
Mixed	The house numbers are odd and even on the same side of an address information event in sequential order (asc or desc) when moving from one end of the address information event to the other. Numeric completeness of the series is not a requirement.	3	
None	No house numbers at all. There are no houses (or addressed dwellings) along a particular side of an address information event.	0	
Odd	The house numbers appear as odd numbers in a sequential sorted order (ascending or descending) when moving from one end of the address information	2	

	event to the other. Numeric completeness of the series is not a requirement.		
--	--	--	--

Table Name: ORN_JUNCTION_TYPE_LIST

JUNCTION_TY PE	JUNCTION_TYPE_DE SCR	NRN_JUNCTIONT YPE	EXPIRY_DATETI ME
Boundary	Intersection of a road element or a ferry connection with a provincial or international boundary.	4.00	
Dead End	At the end of a dead-end road element.	2.00	
Ferry	Intersection of a road element and a ferry connection.	3.00	
Intersection	Intersection of three or more road elements at the same grade level.	1.00	

Table Name: ORN_JURISDICTION_LIST

Click [here](#) to retrieve the list.

Table Name: ORN_OFFICIAL_LANGUAGE_LIST

OFFICIAL_LAN GUAGE	OFFICIAL_LANGUAG E_DESCR	NRN_OFFICIALLA NGUAGE	EXPIRY_DAT ETIME
ENG	English	2	
FRE	French	1	

Table Name: ORN_PAVEMENT_STATUS_LIST

PAVEMENT_STATUS	PAVEMENT_STATUS_DESCR	NRN_PAVEMENTS	EXPIRY_DATE
Paved	A road element which is paved.	1	
Unpaved	A road element which is not paved.	2	

Table Name: ORN_ROAD_CLASS_LIST

ROAD_CLASSES	ROAD_CLASS_DESCRIPTIONS	NRN_ROADCLASSES	EXPIRY_DATE
Alleyway / Laneway	A low speed thoroughfare dedicated to provide access to the rear of properties.	8	
Arterial	A major thoroughfare with medium to large traffic capacity	3	
Collector	A minor thoroughfare mainly used to access properties and to feed traffic with right of way.	4	
Expressway / Highway	A high-speed thoroughfare with a combination of controlled access and intersections at grade level.	2	
Freeway	An unimpeded, high speed controlled access thoroughfare for through traffic with typically no at grade intersections, usually with no property access or direct access and which is accessed by a ramp. Pedestrians prohibited.	1	
Local / Strata	A low speed thoroughfare dedicated to provide access to properties with potential public restriction, trailer parks, First Nations, strata or	6	

	private estates.		
Local / Street	A low speed thoroughfare dedicated to provide full access to the front of properties.	7	
Local / Unknown	A low speed thoroughfare dedicated to provide access to the front of properties but for which the access regulations are unknown.	5	
Ramp	A system of interconnecting roadways providing for the controlled movement between two or more roadways.	9	
Rapid Transit	A thoroughfare restricted 24 hours a day, for the sole use of public transportation buses.	11	
Resource / Recreation	A narrow passage which has as a primary function access for resources extraction and also may have a role in providing an access for the public to back country.	10	
Service	A stretch of road permitting vehicles to come to a stop along a Freeway or Highway. These include weigh scales, emergency lanes, lookouts and rest areas.	12	
Winter	A road that is only useable during the winter months when conditions allow for passage over lakes, rivers and wetlands.	13	

Table Name: ORN_ROAD_ELEMENT_TYPE_LIST

ROAD_ELEMENT_TYP E	ROAD_ELEMENT_TYPE_DESC R	EXPIRY_DATETIME E
FERRY CONNECTION	The approximate route a ferry travels to transport vehicles across water and is linked to a road element by a junction	
ROAD ELEMENT	The basic centreline road feature spanning from intersection to intersection, or intersection to end where there is no subsequent intersection with another road	
VIRTUAL ROAD	A linear feature that is used as an address anchor for Bell 911 address information that is collected for dwellings (i.e. cottages) on islands or shorelines that are not accessible by road. These features are not actual roads and may or may not be connected to the main road network. They may be represented as straight line segments which bisect an island or follow the approximate shoreline of an island. They may also be represented as extensions of the road network crossing over land and water.	

Table Name: ORN_SHIELD_TYPE_LIST

SHIELD_TYPE	SHIELD_TYPE_DESCR	EXPIRY_DATETIME
PRIMARY, KINGS OR 400 SERIES HIGHWAY SHIELD	A network of highways that represents the oldest provincial highways (numbered from 3 to 148) and which are designed to connect urban centres of 2000 people or more by the shortest possible route. Also includes controlled access 400 series highways (CAH), including the Queen Elizabeth Way (QEW) that have imposed stricter access and adjacent land use controls (numbered 400 ; 451).	
SECONDARY	A network of highways (numbered from	

<p>HIGHWAY SHIELD</p>	<p>502 - 673) which connect smaller urban centres to each other and to the Kings Highway system. These highways often connect major traffic generators like airports, mines, quarries, saw mills, resort areas etc to the Kings Highway network. They became part of the provincial highway system in the 1950's and 1960's. The Secondary Highway System takes the place of the County or Regional Road systems in those areas of the provincial without incorporated municipalities or where the tax base was too low to afford a County Road system.</p>	
<p>TOLL HIGHWAY SHIELD</p>	<p>A controlled access highway which involves the payment of a fee to travel upon. Currently, Ontario only has one toll highway, the 407ETR or Electronic Toll Route, located in the golden horseshoe.</p>	
<p>TERTIARY HIGHWAY SHIELD</p>	<p>Highways which connect remote communities in Northern Ontario to the Secondary or Kings Highway network. Tertiary Highways have provincial highway numbers in the 800 series and were generally established in the 1950's and 1960's. The Ministry of Transport (MTO) is not obligated to maintain Tertiary Highways in the winter nor is MTO liable if winter maintenance is not provided. The Lieutenant Governor in Council (LGIC) can also designate a Tertiary Highway as a Resource Road. A number of the provisions of the Highway Traffic Act that apply to Kings and Secondary Highways do not apply to Tertiary Highways.</p>	
<p>DISTRICT, COUNTY, REGIONAL OR MUNICIPAL ROAD SHIELD</p>	<p>Upper Tier, Lower Tier or Single Tier Municipal Roads</p>	

Table Name: ORN_STANDARD_MUNICIPALITY_LISTClick [here](#) to retrieve this list.**Table Name: ORN_STREET_DIRECTION_LIST**

STREET_DIRECTION	OFFICIAL_LANGUAGE	CPC_DIRECTION_CODE	NRN_DIRECTION	EXPIRY_DATE
East	ENG	E	5	
Est	FRE	E	6	
Nord	FRE	N	2	
Nord Est	FRE	NE	12	
Nord Ouest	FRE	NO	10	
North	ENG	N	1	
North East	ENG	NE	11	
North West	ENG	NW	9	
Ouest	FRE	O	8	
South	ENG	S	3	
South East	ENG	SE	15	
South West	ENG	SW	13	
Sud	FRE	S	4	
Sud Est	FRE	SE	16	
Sud Ouest	FRE	SO	14	
West	ENG	W	7	

Table Name: ORN_STREET_SIDE_LIST

STREET_SIDE	STREET_SIDE_DESC	NRN_STREETSID	EXPIRY_DATE
Both	Both Sides	3	
Left	Left Side	1	
Right	Right Side	2	

Table Name: ORN_STREET_TYPE_LISTClick [here](#) to retrieve this list.

Table Name: ORN_STRUCTURE_TYPE_LIST

STRUCTURE_T YPE	STRUCTURE_TYPE_D ESCR	NRN_STRUCTURE TYPE	EXPIRY_DATET IME
Bridge	Part of a road supporting the travel of motorized vehicles, built on a raised structure and serving to span an obstacle, river another road or railway, etc., yet does not have a moveable surface or a building-like cover.	1	
Bridge Covered	Part of a road supporting the travel of motorized vehicles, built on a raised, covered structure and serving to span an obstacle, river, another road or railway, etc.	2	
Bridge Moveable	Part of a road supporting the travel of motorized vehicles, built on a moveable, raised structure and serving to span an obstacle, river another road or railway, etc. The moveable surface allows for the passage of vessels.	3	
Dam	Part of a road supporting the travel of motorized vehicles, built across a waterway or floodway to control the flow of water.	7	
Tunnel	An enclosed man-made construction built to carry a transportation element through or below a natural feature or other obstruction.	5	

Table Name: ORN_SURFACE_TYPE_LIST

SURFACE_TYPE	SURFACE_TYPE_DESCR	EXPIRY_DATETIME
--------------	--------------------	-----------------

Blocks	A paved road element with a surface made of blocks such as cobblestones or interlocking pavers	
Dirt	An unpaved road element, which the surface is formed by the removal of vegetation and/or by transportation movements over the road, which inhibit further growth of any vegetation	
Flexible	A paved road element with a flexible surface such as asphalt or tar gravel	
Gravel	An unpaved road element, which the surface has been improved by grading with gravel	
Rigid	A paved road element with a rigid surface such as concrete	

Table Name: ORN_TOLL_POINT_TYPE_LIST

TOLL_POINT_T YPE	TOLL_POINT_TYPE_ DESCR	NRN_TOLLPOINT TYPE	EXPIRY_DATET IME
Hybrid	A tollbooth along a road element, which is both physical and virtual.	3	
Physical	A construction along or across a road element, where toll can be paid to employees of the organization in charge of collecting the toll or to machines involving electronic methods of payment like credit cards or bank cards.	1	
Virtual	At a virtual point along a road element, toll will be charged via automatic registration of the passing vehicle by subscription or invoice.	2	

Appendix (continued)

Date Information

Note that the format for date attribute columns is yyyy-mm-dd-hh:mm:ss. An example is 1998-02-16-00:00:00.

Standard date columns are shown on the data model diagram, but to save space are not repeated for each of the detailed table descriptions. The descriptions below apply to all of them.

Column Name	Type	Man	Short Name
EFFECTIVE_DATETIME	DATE	Yes	EFF_DATE
For subscription: Date/time that the record was created in the LIO database. For publication: Date/time that the record was created in the source database.			
EXPIRY_DATETIME	DATE	No	EXP_DATE
For subscription: Date/time the record is no longer valid in the LIO database. For publication: Date/time the record is no longer valid in the source database.			
EXT_EFFECTIVE_DATETIME	DATE	Yes	EXT_EFF_DT
For subscription: Date/time that the record was created in the source database. For publication: not applicable.			
EXT_EXPIRY_DATETIME	DATE	No	EXT_EXP_DT
For subscription: Date/time the record is no longer valid in the source database. For publication: not applicable.			

All tables contain EFFECTIVE_DATETIME and EXPIRY_DATETIME.
All tables except lookup tables also contain EXT_EFFECTIVE_DATETIME and EXT_EXPIRY_DATETIME.