



# Navstreets Reference Guide

Product Version 15.9

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**Topics:**

This section contains document notices.

- *Legal Notices*
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# Chapter 1

## Introduction

---

Welcome to NAVSTREETS Street Data by HERE. When you use NAVSTREETS you are taking advantage of the highest quality data available, as well as enjoying the benefits of having just one data set specification across all countries.

With the most accurate geometry, the highest number of attributes, and the most complete detailed coverage, NAVSTREETS is the ideal resource for Fleet applications that offer route planning and optimization, and GIS applications that require superior accuracy. Products, applications, and services that rely on digital mapping data can ensure superior performance and accuracy by using NAVSTREETS.

### Data Sources and Quality Control

HERE's comprehensive data build process ensures the highest quality data available for routing and mapping applications. The process begins with establishing a field office in the new build area. Source or Base Maps are acquired from a variety of sources including local governments, utility companies, other public agencies, and commercial mapping agencies. These maps are then carefully reviewed and digitized. All base map data is further enhanced with aerial photos and differential GPS to accurately position roads and represent lakes, rivers, railroads, etc. Proprietary software is then used to add navigable information, addresses, and points of interest.

HERE additionally road tests the data to further add to the quality of the database. Field office staff drives the roads and streets to collect and verify new data, and then drives them over again to confirm the accuracy of all information contained in the database. Photographs are also taken of all overhead signage to ensure that the data accurately reflects the real world.

### Data Attributes

NAVSTREETS contains the most navigable attributes available in a database. Utilizing the data to its fullest allows the user to access features such as expressway ramps, complete and correct connectivity of all roadways, one-way streets, physical, logical, and legal turn restrictions, construction projects, as well as physical

# Reference Guide

## Introduction

here

and painted lane dividers. In addition to these navigable attributes, NAVSTREETS provides address ranges down to the level of the correct side of the street.

Mapping applications are enhanced with five functional classifications of roads, and polygonal representation of features such as airports, aircraft roads, cemeteries, golf courses, hospitals, military bases, parks, national monuments, pedestrian zones, shopping centres, sports complexes, undefined traffic areas, university/colleges, and woodlands.

### Purpose

The purpose of this document is to describe the content and format of the NAVSTREETS Street Data product. Additional information regarding feature inclusion, naming, etc. is contained in the Country Specific Rules document.

### Audience

This document is intended for use by HERE and its affiliate staff and current licensees.

### Document Conventions

British spellings are used throughout this document (e.g., harbour, manoeuvre, centre). European numeric representations are used (e.g., a period in the place of a comma-1,000 becomes 1.000).

References to other documents are indicated in [1].

### References

[1] Database for Navigation and Digital Cartography: DNDC Digitising and Attributing Rules, HERE, Chicago, 2017. (This is the internal data model for HERE referred through out this document.)

# Chapter 2

## Inclusion

---

**Topics:**

- *Introduction*
- *Prime*
- *Complete*
- *Network*
- *City-to-City*
- *Base*

## 2.1 Introduction

---

This chapter describes the inclusion rules for the various coverage levels supported by HERE Map Content: Prime, Complete, Network, City-to-city, and Base.

This chapter describes the content of the coverage levels. For each coverage level, the inclusion for each of the following categories is provided:

- Transportation Network
  - Lists items that are included as part of the road network.
- Cartographic Inclusion
  - Lists cartographic features that are included and their requirements for inclusion.
- Attributes
  - Indicates the level of attributing in each area of the database.
- Signs
  - Describes the inclusion of signs within the road network and the types of sign information provided.
- Points of Interest (POIs)
  - Describes the level of POI inclusion for each area of the database and the level of attributing for POIs.
- Country and Administrative Areas
  - Describes the attributes for each country and administrative area.

## 2.2 Prime

---

Prime is the highest level of coverage. This coverage level has the most detail and enables door-to-door routing functionality.

The following outlines the basic inclusion for Prime. Sometimes additional features are included based on their cartographic or historic importance.

### 2.2.1 Transportation Network

- Named Roads
- Unnamed roads that substantially enhance routing
- Unnamed roads that serve as access to Rest Areas along motorways
- Unnamed, main paved roads which allow public access, and that are within or lead to any included polygons in the following categories: Airports, Cemeteries, County Parks, Golf Courses, Hospital Complexes, Industrial Complexes, Military Bases, National Monuments, National Parks, Shopping Centres, Sports Complexes, State Parks, or Universities.
- Named and unnamed apartment, autonomy, and mobile home geometry
- Unnamed, paved roads that are used by public vehicles only

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Inclusion

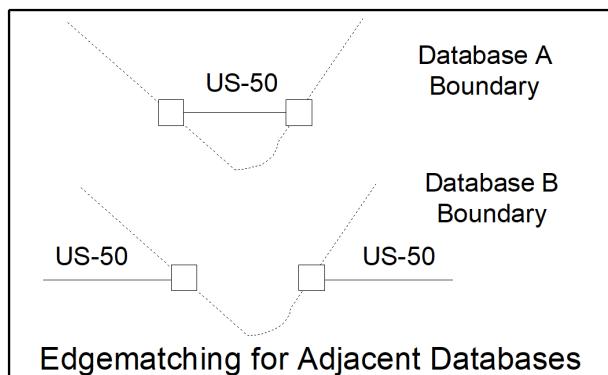
2.2 Prime

- Ferry connections
- Named and addressed walkways, or navigationally significant walkways that are needed for road network connectivity. Unnamed walkways can be included when cartographically significant.
- Undefined Traffic Areas > 1.000 metres<sup>2</sup>/10.800 feet<sup>2</sup>
- Ramps, Roundabouts, Special Traffic Figures, and Turn Lanes
- U-Turn Lanes which are restricted to Public Vehicles Only
- Frontage Roads (also known as Service Roads)
- Pedestrian Streets and Pedestrian Zones
- Roads needed to connect isolated navigable features at the Prime or Network boundary.

**Note:**

Due to Database Coverage Areas (DCA)/sub-DCA definitions and country boundaries, roads at the database boundary may be isolated. See [Figure 1:](#) on page 46 for clarification.

**Figure 1:**



- Transportation Network within airports, which include:
  - Confirmed named roads
  - Arrivals and departures access roads
  - Rental car return and pick-up access roads (when these are not in a parking garage)
  - Parking access roads when different entrance/exit roads exist. The entrance and exit road should be connected with only one internal parking road.
  - Public vehicle roads (buses, taxis, etc.)
  - Any other public roads needed for connectivity

**In Areas with Extended Navigation Content:**

- Access roads, parking lanes, pedestrian walkways, and connections internal to the complex of select POIs in the following categories: Convention Centre, Sports Complex, Casino, Winery, Amusement Park, Historical Monument, Park/Recreation Area, Tourist Attraction, Golf Course, Hospital, and University.
  - For multiple level parking structures, only the base level parking lanes are represented.

**North America only:**

- Named forest service roads
  - Unpaved forest service roads are not verified.

## 2.2.2 Cartographic Inclusion

The following items are included when applicable. The levels of polygonal inclusion may vary due to differences in basic cartographic techniques and differences in scale between coverage areas. Also, see [Geometric Representation](#) on page 72 for further details on the specific items listed below.

- Public Airports and Aircraft Roads (polygonal feature)
  - Aircraft Roads are runway areas, tarmac, and aircraft parking area and cargo facilities.
  - Military airports are not included.
- Administrative Area Boundaries:
  - Administrative Level 1 Linear
  - Administrative Level 2 Linear
  - Administrative Level 3 Polygonal
  - Administrative Level 4 Polygonal
- *Cartographic Country Boundary (linear feature)*
  - *Cartographic Country Boundary is included where two countries border on land.*
- *Cartographic State/Province Boundary (linear feature)*
  - *Cartographic State/Province Boundary is included where two states or provinces border on land.*
- *Building/Landmark Polygons* are included for a sub-set of POIs flagged as nationally important, major tourist attractions and historical monuments, significant buildings used in directions (e.g. Buckingham Palace), and other significant buildings appearing on commercial maps.

 **Note:**

The inclusion of these polygons is generally limited to the city centre/downtown area of selected cities, but additional buildings outside the city centre may also be included, if significant.

In areas with Extended Navigation Content, building footprints are also included for select POIs in the following categories: Animal Park, Cargo Centre, Casino, Convention Centre, Golf Course, Historical Monument, Hospital, Park/Recreation Area, Parking Garage/House, Sports Complex, Tourist Attraction, University, and Winery.

- Built-up Area Polygon for each Named Place (greater than 250,000 metres<sup>2</sup>/2,700,000 feet<sup>2</sup> or smaller Built-up Areas where significant)
  - Cartographic Settlement Boundary
  - Environmental Zone
  - Railways (linear feature)
-  **Note:** Local commuter rail network, light rail networks, and cable car lines are not included.
- Area polygons greater than 50.000 metres<sup>2</sup>/540.000 feet<sup>2</sup> for standard inclusion for the following categories:

 **Note:**

Please see [Expanded Inclusion](#) on page 505, as smaller cartographic features are included under the Expanded Inclusion rules.

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Inclusion

2.2 Prime

- Amusement Park
- Animal Park
- Cemetery
- Golf Course
- Hospital Complex
- Industrial Complex. (In North America, only industrial complexes greater than 250.000 metres<sup>2</sup>/2.700.000 feet<sup>2</sup> are included. In EMEA industrial complexes greater than 20.000 metres<sup>2</sup>/215.000 feet<sup>2</sup> are included.)
- Military Base
- Native American Reservation
- Shopping Centre
- Sports Complex
- University/College Complex
- Area polygons greater than 10.000 metres<sup>2</sup>/50.000 feet<sup>2</sup> for standard inclusion for the following categories:
  - ① **Note:** Also see *Expanded Inclusion* on page 505, as smaller cartographic features are included under the Expanded Inclusion rules.
  - Beach
  - Cartographic Settlement Boundary
  - Glacier
  - Municipal (City)/County Park
  - National Park
  - National Monument
- ① **Note:**

In Europe, only National Monument polygons for parks and woodlands are included. Polygons are not added for historical city centres, bridges, castles, squares, or historical buildings.
- State Park
- Park in Water
  - The size inclusion for the park polygon is the combined size of both the park on land and the park in water.
  - Park in Water polygons can exist without a corresponding park on land polygon. This can occur when the park only consists of water.
  - Park in Water are applied to parks in Oceans and large Bays/Harbours. Parks within, or partially within smaller water features, such as lakes and rivers, generally do not apply.
- Pedestrian Area
- Woodland
- Parking Lots greater than 500 metres<sup>2</sup>/5400 feet<sup>2</sup>

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Inclusion

2.2 Prime

- Polygonal Water Features include:
  - Bays/Harbours greater than 1 million metres<sup>2</sup>/10.800.000 feet<sup>2</sup> when there is a logical point of closure
  - Canals/Channels/Rivers wider than 5 metres/16 feet
  - Islands not in Oceans greater than 10.000 metres<sup>2</sup>/108.000 feet<sup>2</sup> or having navigable features
  - Islands within Oceans: islands greater than 250.000 metres<sup>2</sup>/2.700.000 feet<sup>2</sup> or having navigable features
  - Lakes greater than 10.000 metres<sup>2</sup>/108.000 feet<sup>2</sup>
  - Oceans
- Linear Water Features
  - Canal/Channels/Rivers between 10 metres/33 feet and 25 metres/82 feet wide
- Pedestrian Areas
- Congestion Zone
- Hurricane/Flood/Tsunami Prone Area
- Intermodal Freight Facilities

Intermodal Freight Facilities support freight transfer between modes of transportation. Intermodal facility geometry makes it possible to track cargo vehicles. The following polygons and POIs make up Intermodal Freight Facilities:

Polygons = Seaport/Harbour and Railyard

POIs = Weigh Station, Airport Cargo Facilities and Cargo Centres

### 2.2.3 Attributes Included when Applicable

The following attributes are included when applicable.

- Access Characteristics
- Access Restrictions
- Addressing
  - Address Range (block by block for both sides of the street)
  - Point Address Information (optional distinct addresses for both sides of the street)
  - Address Scheme (Addressing at Airports: Addresses are included for named roads within airports if applicable)
  - Address Type
  - Address Format
- Administrative Area Information
- Aligned Nodes and Shape Points
- Boat and Rail Ferry
- Bridge and Tunnel
- Carpool Road
- Controlled Access Road
- Coverage Indicator
- Dependent Special Speed Type

# Reference Guide

Inclusion

2.2 Prime

- Detailed City Inclusion = Y
- Direction-of-Travel
- Display Class
- Divider Location
- Divider Type (Physical and Legal)
- Enhanced Geometry
- Exonyms, Synonyms, and Plain Text for Administrative Area Names
- Environmental Zone attributes
  - Environmental Zone ID
  - Polygon Restriction
- Express Lane
- Feature Name (and Trans Feature Name when applicable)
- Feature Type
- Four-wheel Drive
- From/To Number of Lanes
- From/Toward Reference Speed Limit
- Frontage (Service) Road
- Full Geometry = Y
- Functional Class
- Gate
- In-Process Data = N
- Intersection Coding (Intersection Internal Link, Indescribable Link, and Manoeuvre Link)
- Junction View
- Lane Marking Information
  - Lane Counting
  - Lane Divider Marker
  - Direction Category
  - Center Divider Marker
- Lane Category
- Low Mobility
- Multiply Digitised
- Name Status
- Parking Lot Road
- Paved Road
- Permitted Driving Manoeuvre
- POI Access
- Postal Code
- Priority Road
- Private Road
- Public Access
- Ramp

# Reference Guide

Inclusion

2.2 Prime

- Restricted Driving Manoeuvre (Legal, Logical, and Physical)
- Reversible
- Road Construction
- Roundabout
- Route Type
- Scenic Route
- Scenic Route Name
- Signs, Signals & Warnings Coding
  - Traffic Sign
  - Traffic Sign Type
  - Traffic Sign Category
  - Traffic Sign Subcategory
  - Traffic Sign Value
  - General Warning Sign Type
  - Supplemental Sign Duration
  - Supplemental Pre-Warning Sign
  - Supplemental Validity Time
  - Supplemental Sign Applicable Vehicles
  - Railway Crossing
  - Railway Crossing Type
  - No Overtaking
  - Protected Overtaking
  - Direction
- Special Explication
- Special Traffic Figure
- Speed Category
- Speed Limit Unit
- Special Speed Limit
- Special Speed Situation
- Toll Structure
- Tollway
- Traffic Signal Information
  - Signal/Sign Location

## Reference Guide

Inclusion

2.2 Prime

- Transport Access Restriction
  - Direction Disclosure
  - Hazardous Material Type
  - Trailer Type
  - Physical Structure Type
  - Weight Restriction
  - Weight per Axle Restriction
  - Height Restriction
  - Length Restriction
  - Width Restriction
- Transport Restricted Driving Manoeuvre
- Transport Special Speed Situation
  - Transport Speed Limit
  - Transport Speed Situation Type
  - Direction
  - Weight Dependent
  - Weather Type
- Transport Preferred Route
  - Preferred Route Type
- Undefined Traffic Internal
- Usage Fee Required
- Vanity Name and Address
- Variable Speed Sign
- Z-Level
- Zone

### 2.2.4 Signs

Exit signs and Straight On signs are included at decision points along motorways (Controlled Access roads) and ramps. In some countries with non-Latin sign representations (e.g., Hong Kong, Greece, etc.), Alternate Exit Numbers are included in the country's national language in addition to the Exit Numbers.

Signs are also included inside public airports.

Entrance Ramp signs are included on entrances to motorways (controlled access roads).

Additional signs may be added at other locations where such information is navigationally significant.

### 2.2.5 Points of Interest (POIs)

The POI categories included in Prime coverage areas is included in Section [Alphabetical Listing of POIs](#) on page 1274. This list includes all of the standard POIs included in global Prime coverage areas.

- ① **Note:** Although most POI categories are published globally, there are particular categories that are only published for specific regions/countries.

## Reference Guide

Inclusion

2.2 Prime

Additional POI categories may be present for Premium Products.

### 2.2.6 POI Attributes Included

① **Note:** Some attributes are only applied for a subset of the categories.

- 24 Hour Indicator (for Petrol/Gasoline Stations only)
- Actual Address (unparsed)
- Actual Address components (parsed)
  - Actual Admin
  - Actual Postal
  - House Number
  - Street Name
- Airport Type (for Airports)
- Building Type (for Places of Worship)
- Capital Indicator information (for Named Places)
- Diesel
- Display Location X, Y
- Entrance Type (where applicable)
- Facility Description exonyms
- Facility Name, including exonyms and synonyms
- Facility Type
- Food Type (for Restaurants)
- In-Vicinity Indication = N
- Multiple Contact Information
  - Number of Contacts
  - Contact Type
  - Preferred Contact
  - Contact
- National Importance
- Parent/Child Relationships
- Percent from Reference Node
- POI Association attributes
- POI Phone Number
- POI Street Number
- Full POI Street Number (where applicable)
- Full POI Street Number Language Code (where applicable)
- POI Chain ID

(For ATMs, Auto & Motorcycle Dealerships, Auto Service & Maintenance, Banks, Cinemas, Grocery Stores, Hotels, Nightlife, Parking, Petrol/Gasoline Stations, and Shopping Centres)

- Population for Named Place POIs
- Private

## Reference Guide

Inclusion

2.3 Complete

- Rest Area Type
- Restaurant-specific attributes
  - Food Type
  - Alternate Food Type
  - Regional Food Type
  - Restaurant Type
- Side of Street
- Subcategory
- Vanity City ID

## 2.3 Complete

Complete is a level of coverage, which is source dependent. It is the coverage level used for links that are not verified and are flagged with the In Process Data = Y attribute.

In-Process links have varying geometric accuracy and attribute inclusion depending on the source of the data. In-Process links are coded with *Detailed City* = N, *In Process Data* = Y, *Full Geometry* = Y, and *Functional Class* = 5. As HERE verifies and fully attributes these links to either the Prime or Network specification, these flags are adjusted accordingly.

① **Note:** In some countries, *Functional Class* = 3, 4, and 5 may have *In Process Data* = Y. See Scopes for detailed information.

The following outlines the minimum inclusion required for In-Process areas. Additional coding may exist.

### 2.3.1 Transportation Network

- Named roads
- All Unnamed roads that substantially enhance routing.
- Named and unnamed apartment, autonomy, and mobile home geometry

### 2.3.2 Cartographic Inclusion

- Administrative Level 4 Polygons
- *Cartographic Country Boundary* (*linear feature*)
- *Cartographic Country Boundary* is included where two countries border on land.
- *Cartographic State/Province Boundary* (*linear feature*)
- *Cartographic State/Province Boundary* is included where two states or provinces border on land.
- Built-up areas may be included when they exist in the source.
- Area polygons greater than 10.000 metres<sup>2</sup>/108.000 feet<sup>2</sup> for the following categories:
- Other linear features may be included when they exist in the source.

## 2.3.3 Attributes Required

- Administrative Area coding for each link
- Feature Naming

## 2.3.4 Attributes Included when Applicable

Additional attributes can be included when they exist in the source.

## 2.3.5 Attributes Not Required

The following attributes are not required. The attributes that have a Boolean value are defaulted to “N”. The Coded value attributes default to blank.

- Access Restrictions
- Boat and Rail Ferry
- Bridge and Tunnel
- Composite Road Feature (except for multiply-digitised roads)
- Dependent Special Speed Type
- Direction of Travel (For singly digitised roads Direction of Travel = To/From)
- Divider Location
- Divider Type (Physical and Legal)
- Enhanced Geometry
- Exonym, Synonym, and Plain Text for Administrative Area Names
- From/To Number of Lanes
- Frontage Road
- Gate
- Multiply Digitised
- POI Access
- Private
- Restricted Driving Manoeuvre (Legal, Logical, and Physical)
- Construction
- Roundabout
- Special Explication
- Special Speed Limit
- Special Speed Situation
- Special Traffic Figure
- Speed Limit Unit
- Toll Structure
- Undefined Traffic Internal
- Vanity Name and Addresses
- Variable Speed Sign

## Reference Guide

Inclusion

2.3 Complete

- Zone

### 2.3.6 Attributes Not Applicable

These Attributes are not applicable to this Level of Coverage and are therefore set to No.

- Controlled Access
- Ramp
- Tollway

 **Note:**

HERE does not allow roads that would have Yes settings for these attributes to also be coded as In-Process Data = Y. All of these roads are coded to the Network or Prime coverage level.

### 2.3.7 Points of Interest

- Airport
- Automobile Dealership
- Auto Service & Maintenance
- Bank
- Hotel
- Named Place
- Petrol/Gasoline Station
- Restaurant
- Additional Points of Interest may be included.

### 2.3.8 POI Attributes Included

 **Note:** Some attributes apply only to specific POI categories.

- 24 Hour Indicator
- Address
- Chain Name
- Diesel
- Display Location X,Y (optional)
- Facility Description Exonyms
- Facility Name
- Facility Type
- Food Type
- Phone Number
- Population for Named Place POIs
- Side of Street
- Subcategory
- Vanity City ID

## Reference Guide

Inclusion

2.4 Network

### 2.3.9 POI Attributes Not Required

The following attributes are not required. The attributes that have a Boolean value are defaulted to “N”. The Coded value attributes default to blank.

If available, the actual value may be included.

- Actual Address
- Actual Admin (component of parsed Actual Address)
- Actual Postal (component of parsed Actual Address)
- House Number (component of parsed Actual Address)
- Parent/Child
- Percent from Reference Node
- Population for Named Place POIs
- Private
- Street Name (component of parsed Actual Address)

### 2.3.10 POI Attributes Not Applicable

 **Note:**

At this Level of Coverage, the following are always set to No.

- Capital Indicator for Named Place POIs
- In-Vicinity
- National Importance

 **Note:**

POIs that are a capital city or are nationally important would be included at the Network or Prime coverage levels. In-Vicinity does not apply to In- Process coverage because all named roads are included and therefore the POIs can be placed.

## 2.4 Network

Network coverage includes the main highway network and all the necessary attributes required to allow routing from city to city. Network links are coded with Detailed City Inclusion = N and In-Process Data = N. For Network links, the Full Geometry flag may be set to either yes or no depending on the presence or lack of surrounding In-Process Data Coverage.

The following outlines the minimum inclusion required for Network areas. Additional coding may exist.

Network areas include the following:

Transportation Network

# Reference Guide

Inclusion

2.4 Network

here

- Major Roads
  - Global
    - Roads that received Functional Class = 1-4.
    - Roads that lead to included Named Place POIs.
    - Public roads within national public airports.
  - Canada: Federal, regional and provincial numbered routes.
  - U.S.: Interstate, Federal, State, and Primary county numbered routes.
- Unnamed roads that substantially enhance routing.
- Named and unnamed apartment, townhome, and mobile home geometry.
- Bridges/Tunnels
  - Bridges or tunnels that are longer than 200 metres are included.
  - Smaller bridges/tunnels are included when significant.
- Ferry connections
- Roads that connect POIs that meet Network inclusion rules.
- The main road within included rest areas.
- Ramps (slip roads), roundabouts, special traffic figures, turn lanes.
  - ① **Note:** All exit and entrance ramps along motorways are included, even if they do not connect to an included road. The ramps are connected by enough of the crossing road to allow exiting and re-entering the motorway.
- U-Turn lanes which are restricted to public vehicles only.

## 2.4.1 Cartographic Inclusion

The following items are included, when applicable. The levels of polygonal inclusion may vary due to differences in basic cartographic techniques and differences in scale between coverage areas. For generalisation guidelines, refer to [Geometric Representation](#) on page 72. Also, see [Geometric Representation](#) on page 72 for further details on the specific items listed below.

- Airports
- Administrative Area Boundaries:
  - Administrative Level 1 - Linear
  - Administrative Level 2 - Linear
  - Administrative Level 3 - Polygonal
- ① **Note:**

For some countries, a polygonal city boundary (Administrative Level 4) is also present.
- ① **Note:**

See [Administrative Level Coding and Boundary Features](#) on page 1169 for definitions of “State”, “County” and “City” for European countries.
- *Cartographic Country Boundary (linear feature)*
  - *Cartographic Country Boundary is included where two countries border on land.*

# Reference Guide

Inclusion

2.4 Network

- *Cartographic State/Province Boundary (linear feature)*
- *Cartographic State/Province Boundary is included where two states or provinces border on land.*
- Built-up Area Polygon for each Named Place (greater than 250.000 meters<sup>2</sup>/2.700.000 feet<sup>2</sup> are included or smaller built-up areas are included where significant)
- Railways (linear feature):
  - The main lines of above-ground railways.
  - The National and Civil railways that comprise the main railway network.
- Polygonal Water Features:
  - Bays/Harbours greater than 1 million metres<sup>2</sup>/10.800.000 feet<sup>2</sup> when there is a logical point of closure
  - Canals, Channels and Rivers that are wider than 100 metres/328 feet for at least 5 km/3 miles.
- ① **Note:**

They are included as linear features if they are between 25 metres/82 feet and 100 metres/328 feet wide.
- Islands:
  - Greater than 250.000 metres<sup>2</sup>/2.700.000 feet<sup>2</sup>
  - Greater than 1 million metres<sup>2</sup>/10.800.000 feet<sup>2</sup> in North America are included.
- Islands within Oceans: islands greater than 250.000 metres<sup>2</sup>/2.700.000 feet<sup>2</sup> or containing navigable features
- Lakes
  - Lakes with an area greater than 250.000 metres<sup>2</sup>/2.700.000 feet<sup>2</sup> are included.
- Oceans
- Linear Water Features
- Area Polygons greater than 10.000 metres<sup>2</sup>/108.000 feet<sup>2</sup> for the following categories:
  - National Monument
  - National Park
  - State Park
  - Park in Water
- The size inclusion for the park polygon is the combined size of both the park on land and the park in water.
- Park in Water polygons can exist without a corresponding park on land polygon. This can occur when the park only consists of water.
- Park in Water are applied to parks in Oceans and large Bays/ Harbours. Parks within, or partially within smaller water features, such as lakes and rivers, generally do not apply.
- Beach Polygons greater than 10,000 metres<sup>2</sup>/108,000 feet<sup>2</sup>.
- Australia, Africa, Europe and the Indian Subcontinent: Woodlands greater than 250.000 metres<sup>2</sup>/2.700.000 feet<sup>2</sup>
- U.S.: Woodlands greater than 3.000.000 metres<sup>2</sup> are represented as full formation (i.e., with holes).

## Reference Guide

Inclusion

2.4 Network

- North America: Area Polygons greater than 1 million metres<sup>2</sup>/10.800.000 feet<sup>2</sup> for the following categories:
  - Military Base (Includes Army, Navy, Air Force, Marine and Coast Guard Bases)
  - Native American Reservation

### 2.4.2 Attributes Included when Applicable

The following attributes are included when applicable.

- Access Characteristics
- Access Restrictions
- Administrative Area Identifier for each street segment
- Aligned Nodes and Shape Points
- Boat and Rail Ferry
- Bridge and Tunnel
- Composite Road Feature Information
- Construction
- Controlled Access
- Coverage Indicator
- Dependent Special Speed Type
- Detailed City Inclusion = N
- Direction-of-Travel
- Divider Location
- Divider Type (Physical and Legal)
- Display Class
- Enhanced Geometry (where applicable)
- Exonym, Synonyms, and Plain Text for Administrative Area Name
- Evacuation Route Attributes
  - Evacuation Route
  - Evacuation Event Type
  - Evacuation Travel Flow
  - Event Code
- Feature Name (and Trans Feature Name when applicable)
- Feature Type
- Four-wheel Drive (where applicable)
- From/To Number of Lanes
- From/Toward Reference Speed Limit
- Frontage (Service) Road
- Full Geometry
- Functional Class
- In-Process Data = N
- Intersection Coding (Intersection Internal Link, Indescribable Link, and Manoeuvre Link)

# Reference Guide

Inclusion

2.4 Network

- Junction View (where applicable)
- Lane Category
- Multiply Digitised
- Name Status
- Paved
- Permitted Driving Manoeuvre
- POI Access
- Ramp
- Restricted Driving Manoeuvre (Legal, Logical, and Physical)
- Roundabout
- Route Type
- Signs, Signals & Warnings Coding
  - Traffic Sign
  - Traffic Sign Type
  - Traffic Sign Category
  - General Warning Sign Type
  - Supplemental Sign Duration
  - Supplemental Sign Pre-Warning
  - Supplemental Validity Time
  - Supplemental Sign Applicable Vehicles
  - Railway Crossing
  - Railway Crossing Type
  - No Overtaking
  - Protected Overtaking
  - Direction
- Special Explication
- Special Traffic Figure
- Speed Category
- Speed Limit Unit
- Special Speed Limit
- Special Speed Situation
- Toll Structure
- Tollway
- Undefined Traffic Internal
- Usage Fee Required
- Variable Speed Sign (Select countries: Links with Controlled Access = Y)
- Z-Level

## 2.4.3 Attributes Not Included

- Gate

## Reference Guide

Inclusion

2.4 Network

- Vanity Name and Address

### 2.4.4 Attributes Not Required

The following attributes are not required. The attributes that have a Boolean value are defaulted to “N”. The Coded value attributes default to blank.

If available, the actual value may be included.

- Address Range
- Address Scheme
- Address Format
- Address Type
- Postal Code
- Private
- Zone

### 2.4.5 Signs

Exit signs and Straight On Signs are included at decision points along motorways (Controlled Access roads) and ramps. In some countries with non-Latin sign representation (e.g., Hong Kong, Greece, etc.), Alternate Exit Numbers are included in the country's national language in addition to the Exit Numbers. Signs are also included inside national public airports.

Entrance Ramp signs are included on entrances to motorways (controlled access roads).

- Additional signs may be added at other locations where such information is navigationally significant.

### 2.4.6 Points of Interest

The following Points of Interest are included when applicable.

- Airport
- Automobile Dealership
- Border Crossing
- Hotel
  - Hotels located within 3 exits of airports in all directions
  - At Rest Areas
- International Ferry Terminal
- Named Place
- National and State Park, including U.S. National Monument
- National Tourist Attraction

- ① **Note:** The POI is assigned the Facility Type based on the definitions and priority in the Standard POI Inclusion List. For example, an amusement park that is also a national tourist attraction receives the POI Facility Type of Amusement Park, not Tourist Attraction and therefore is not included in Network coverage.

# Reference Guide

Inclusion

2.4 Network

- Petrol/Gasoline Station
- Rest Areas along a motorway (controlled access road) that are named, that have rest rooms, or that contain other facilities such as a restaurant or petrol station, or named rest areas. Restaurants, Petrol stations, or Hotels that are located within the rest area are included as separate POIs.
- Restaurant (At airports and rest areas only)
- Ski Lift
- Ski Resort
- Additional Points of Interests may be included, but are not required. For instance, in Network areas where Full Geometry = Y, the POI categories listed under In-Process Coverage are also present.

## 2.4.7 POI Attributes Included

① **Note:** Some attributes apply only to specific categories.

- 24 Hour Indicator
- Airport Type (for Airports)
- Building Type (for Places of Worship)
- Capital Indicator (for Named Places)
- Chain Name
- Diesel
- Display Location X, Y
- Facility Description exonyms
- Facility Name, including exonyms and synonyms
- Facility Type
- Food Type (for Restaurants)
- In-Vicinity
- Multiple Contact Information
  - Number of Contacts
  - Contact Type
  - Preferred Contact
  - Contact
- National Importance
- Parent/Child Relationships
- Percent from Reference Node
- POI Association Attributes
- POI Phone Number
- POI Street Number
- Full POI Street Number
- Full POI Street Number Language Code
- Population for Named Place POIs
- Private
- Rest Area Type (for Rest Areas)

- Side of Street
- Vanity City ID

## 2.4.8 POI Attributes Not Required

The following attributes are not required. The attributes that have a Boolean value are defaulted to “N”. The Coded value attributes default to blank.

If available, the actual value may be included.

- Actual Address
- Actual Admin (component of parsed Actual Address)
- Actual Postal (component of parsed Actual Address)
- Address Information
- House Number (component of parsed Actual Address)
- Postal Code
- Street Number (component of parsed Actual Address)

## 2.5 City-to-City

---

The City-to-City specification enables HERE to maintain minimum coverage in areas prior to completing Prime, Network, or In- Process areas. Examples include:

- Major Roads only, in a country where there is no existing coverage.
- Major roads to a city in a country where there is currently no other existing coverage.
- Major roads between existing DC/Prime, IT/Network, or In-Process areas.

This coverage level allows turn-by-turn guidance so that the end user experience is similar to that of Major Roads of Europe or Route USA™.

This coverage level refers to three types of city inclusion: Target City, Connector City, and Other Cities along Connector Route. A network of “Connector Roads” links these cities. See [Figure 2:](#) on page 65 for an overview of these concepts, which are detailed in the remainder of this section.

This is a minimum specification requirement. These areas may be enhanced over time to meet Prime, In- Process Data, Complete, or Network specification requirements.

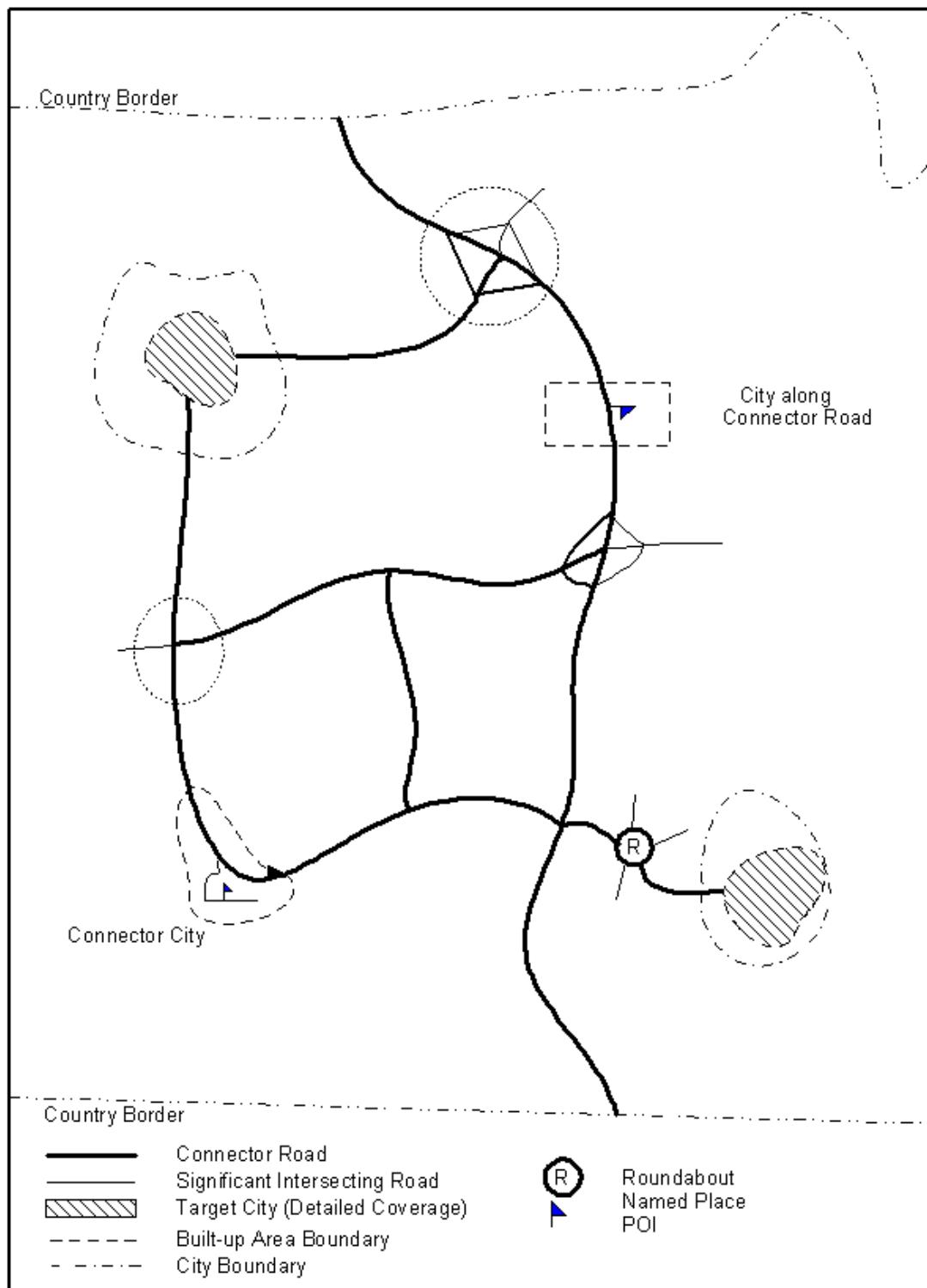
# Reference Guide

Inclusion

2.5 City-to-City

here

Figure 2:



## 2.5.1 Definitions

The section below is a glossary of terms used within this section.

## Connector Roads

Roads connecting Target Cities, Connector Cities, and existing coverage in bordering countries.

## Significant Intersecting Roads

Additional geometry at intersections where turn-by-turn guidance along the connector route is needed. This does not include all intersecting geometry that may exist in reality.

## Sink (Car Graveyard/Cemetery)

A link onto which a car can enter, but not exit because it is a one-way and a dead end.

## Source (Car Factory)

A link from which a car can exit, but not enter from the navigational network.

## 2.5.2 Coverage Areas

There are three possible types of city inclusion. The following rules are used for determining the coverage area of the project:

### Target City

Everything within the coverage area of the Target City is built to Prime Inclusion. All links within the Target City are coded as *Detailed City* = Y and *In-Process Data* = N. *Functional Class* coding may contain dangles at the edge of the coverage area.

The outline of a Target City is based on administrative boundaries or prominent physical features such as ring roads or rivers. Map display and maximising options for routing are the most important factors evaluated when defining the outline of a Target City.

### Connector City

Connector Cities are included as part of a phased implementation process. All roads required to route to the Named Place POI are included (see [City-to-City](#) on page 64). The Connector Cities are *Detailed City* = N and will be upgraded to Target Cities at a later date.

### Other Cities along Connector Route

The Named Place POIs for these cities are located along the Connector Road. For detailed specifications on placement, see [POIs \(Connector Roads\)](#) on page 71. These cities also have an associated Built-Up Area polygon and receive administrative coding as detailed in [Administrative Coding](#) on page 69.

## 2.5.2.1 Road Network

- *Functional Class* = 1 and 2 (Only *Functional Class* = 1 in Europe).
- Logical connections to Named Place POIs comprised of a navigable path or *Functional Class* = 1, 2, 3 and 4 roads.
- The first link of the side roads intersecting the network above, unless the road is in a Connector area where some intersecting roads may be included. These roads are named. These links receive *Stub Link* = Y so that a system can avoid them for routing and destination selection.

# Reference Guide

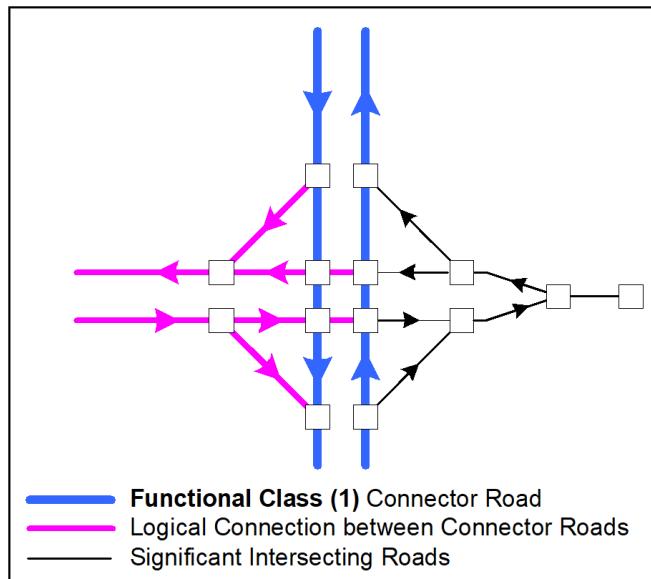
Inclusion

2.5 City-to-City

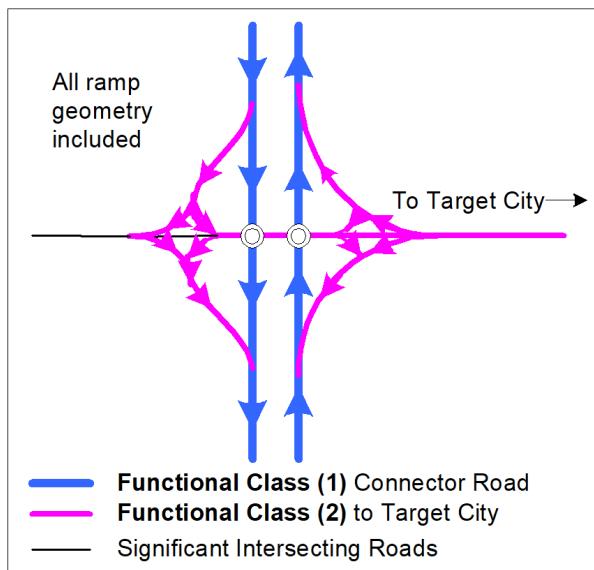
here

- Ramps along included roads.
- Significant Intersecting Roads (the entire road is not included, just a segment is) along the route created by the above Functional Class roads. Additional geometry at all intersections where turn-by-turn guidance is needed. See [Figure 3:](#) on page 67.

**Figure 3:**



**Figure 4:**



## Additional Requirements:

- *Functional Class* connectivity is maintained with adjacent databases. The Connector Roads are accessible when merged with other databases, either via road or by Boat/Rail Ferry. However, *Functional Class* coding may contain dangles at the edge of the coverage area.
- Only roads and ferries that are accessible for Autos and Through Traffic are included.
- Connecting links need to be added when necessary to prevent Sinks and Sources.

## 2.5.2.2 Cartographic Inclusion

- Administrative Features
  - Country Linear Feature.
    - ① **Note:** In some countries the Country border may not fully represent reality if the Connector Route does not pass through a significant portion of the country.
  - Administrative Level 2 Feature for the complete country (based on the Country inclusion above).
  - "Spanning Set" Polygons at Spanning Level appropriate for the country (based on the Country inclusion above):
    - Accurate Administrative Polygons for areas through which connector roads pass.
    - "Filler" Polygons for areas through which connector roads do not pass (see [Figure 5](#): on page 69).
  - ① **Note:** "Spanning Set" means that the set of polygons completely covers the country without any gaps and without overlapping. In most countries, such an administrative level exists in reality, but in some cases it does not. In cases where the administrative boundaries are not spanning in reality, "filler polygons" are created to complete the set. "Filler" Polygons may not represent reality with regard to cartography, naming or feature type. In order to create a spanning set, HERE created filler polygons for those counties with made up names and feature types.
- Where the Built-Up Area concept exists in reality, Built-Up Area polygons are included for Target Cities, Connector Cities, and other cities along the Connector Roads for which a *Named Place* POI is included.
- City boundaries for Target Cities only.
- Oceans (where applicable).
- Significant cartographic features (e.g., National Parks, major rivers).

# Reference Guide

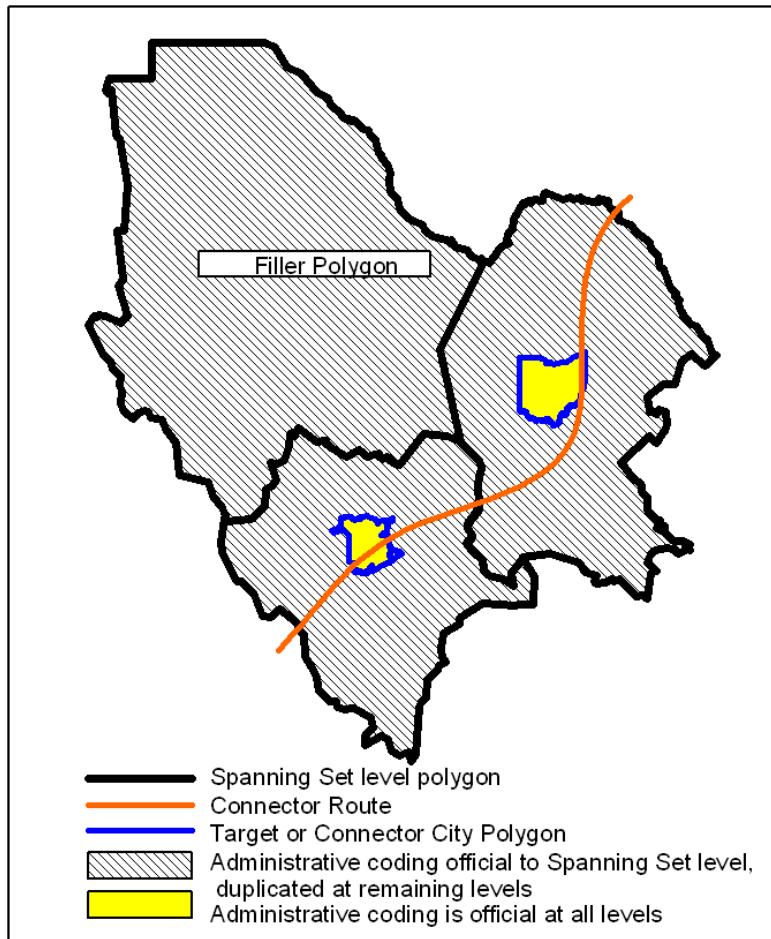
Inclusion

2.5 City-to-City

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- Airport polygons with Aircraft Roads for included airports.

**Figure 5:**



## 2.5.2.3 Administrative Coding

The Administrative Coding for the Connector Roads follows the official administrative structure for the country. Official administrative coding is reflected down to the level of the "Spanning Set" and duplicated at the remaining levels.

For example, Portugal has four Administrative Levels. The "Spanning Set" is Level 2. The administrative structure would be:

Admin Level	Admin Code Structure	Example	Named Place POI Required Y/N
1	Official	Portugal	No
2	Official	Faro	No
3	Official Duplicated	Faro	No
4	Official Duplicated	Faro	No

# Reference Guide

Inclusion

2.5 City-to-City

here

- ① **Note:** The Named Place POIs are not included because there are no roads in these areas.

## 2.5.2.4 Feature Name

Primary Route number names and any other official names are applied to the Connector Roads in the Connector Cities and Other Cities along Connector Route where applicable. For example, a road may be named "US-23" in the rural area, but through a city it may have additional names if these are the more recognizable names on road signs.

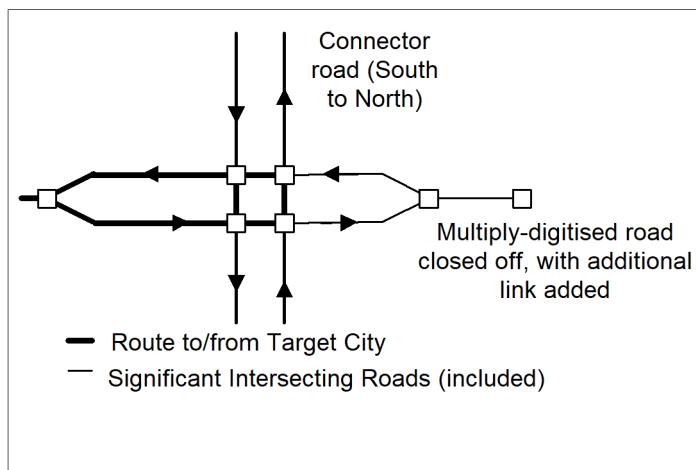
## 2.5.2.5 Attributes Included (Connector Roads)

- Attributes meet Network specifications.
- Connector Roads outside the Target City are coded as *Detailed City* = N, *In-Process Data* = N, and *Full Geometry* = N.
- Connector Roads are accessible to *Autos* and *Through Traffic*. Other access characteristics are coded per reality.

## 2.5.2.6 Attributes Included (Significant Intersecting Roads)

- In addition to being coded *Detailed City* = N, *In-Process Data* = N, and *Full Geometry* = N, Significant Intersecting Roads are coded *Functional Class* = 5.
- Significant Intersecting Roads that are multiply digitised are digitised as in [Figure 6](#): on page 70. The roads are connected at one point and one additional link is added.
- One ways may not be added for roads that are singly digitised.
- Names are added to Significant Intersecting Roads if they are available, but are not required.
- Significant Intersecting Roads are not necessarily accessible for *Autos* and *Through Traffic*. All access characteristics are coded per reality.

**Figure 6:**



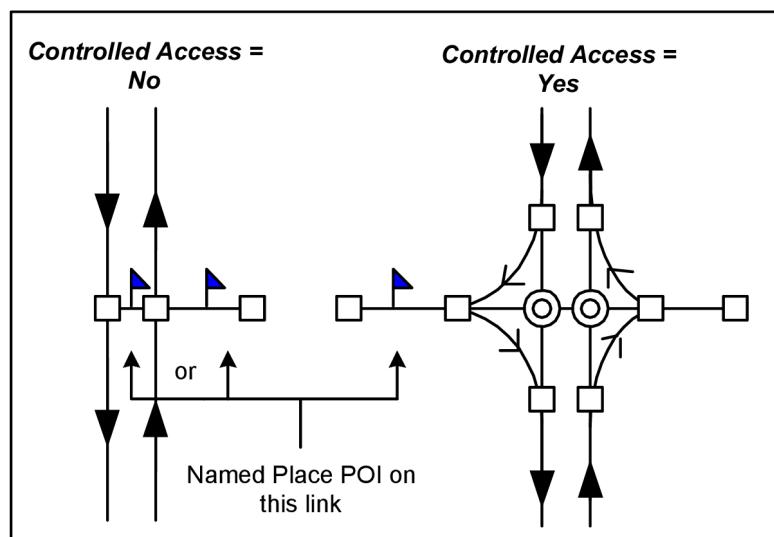
## 2.5.2.7 Signs and Conditions (Connector Roads)

- Signs are included:
  - At points along the Connector Roads where the driver must enter or exit the motorway.
  - Where a motorway splits into two or more motorways.
- Signs are not required for ramp interchanges that are not part of the Connector Network.
- Conditions (such as *Special Explication*, *Restricted Driving Manoeuvres*, and *Construction*) are not required, but may be present.

## 2.5.2.8 POIs (Connector Roads)

- For Connector Cities, the *Named Place* POI is placed on a link with Functional Class (Level 1, 2, 3, or 4), open for autos all the time, and on a bi-directional road. The POI is placed in a central location, this can be a 'well known' street, the main railway station, or some other significant road that allows autos.
- For other Cities along Connector Route, if the *Named Place* POI falls along a path that is *Multiply Digitised* = Yes, links are added within the City/BUA for placement of the POI as shown in [Figure 7](#): on page 71.
- For other Cities along Connector Route, if the *Named Place* POI falls along a path that is *Multiply Digitised* = No, the POI is placed on the appropriate link.
- All POIs (except *Named Place*) on the Connector Roads are collected and attributed according to Network specifications.

**Figure 7:**



## 2.6 Base

Base coverage consists of roads that are included in HERE Map Content that are not yet verified.

## Reference Guide

Geometric Representation

# Chapter 3

## Geometric Representation

---

### Topics:

- *Introduction*
- *Representation*
- *Reference Node and Non-Reference Node*
- *Polygon Formation*
- *Generalisation Guidelines*
- *Transportation Network Representation*
- *Cartography*
- *Matching Links and Nodes between Databases*

## 3.1 Introduction

Digitisation is the process of creating geometry. Features are digitised to represent real-world objects and non-physical entities such as geopolitical boundaries.

This section describes how the real world is represented in the database through links, nodes and shape points. The information provided in this section includes:

- Representation
- Transportation Network
- Cartography
- Polygon Formation
- Edgematching

## 3.2 Representation

The basic geometric primitives represented in NAVSTREETS are nodes, links, and polygons. A node can be further classified as either the end node of a link or the shape point (intermediate node) defining the geometric curvature of a link. A polygon consists of a closed set of 1 or more links representing the boundary of an area feature. Map object IDs (published for Links, Features, etc.) use 32-bit integer values to fit in a N(10) scheme.

- Nodes can represent:
  - links intersecting at the same Z-Level.
  - a change in attribute information (e.g., a name change, a bridge, tunnel, etc.).
  - an intersection with a cartographic feature such as an administrative border or park.
  - the geographic perimeter of a database.
  - the end of a link.

A Node describes a physical position in the database in terms of its longitude, latitude, and relative Z-level. The DNDC stores geodetic coordinates in units of .00001 degrees latitude and longitude. The datum used is WGS84. There are two types of nodes: end point nodes and shape points.

- The shape points of a link can represent:
  - the curvature or sharp bend in the link that represents the real-world feature.
  - the crossing of links at different elevations - Z-Level.

 **Note:**

A node or shape point is required for all link crossings. A link crossing without a shape point or node is not allowed.

 **Note:**

A node cannot be attached to more than seven links.

- Links can represent:

- Navigable Features (e.g., Roads).
- Non-Navigable Features (e.g. links that comprise a polygon).

 **Note:**

A link contains two end node points and fewer than 490 shape points.

The minimum length of a link is 2 metres/7 feet. The maximum length of a link is 10 kilometres/6.2 miles.

 **Note:**

Links representing ferry routes are the exception to the above rule (they may have a length greater than 10 kilometres/6.2 miles).

- Polygons can represent:

- Polygons are comprised of a closed set of links (e.g., lakes, parks, municipalities).

## 3.3 Reference Node and Non-Reference Node

---

*Reference Node* and *Non-Reference Node* are identified using the following rules:

- The *Reference Node* is the node with the lower latitude. See Example 1 in [Figure 8](#): on page 75 where A is the *Reference Node*.
- If the latitudes of both end nodes are identical and their longitudes differ, the *Reference Node* is determined by the end node with the lower longitude. See Example 2 in [Figure 8](#): on page 75 where A is the *Reference Node*.

# Reference Guide

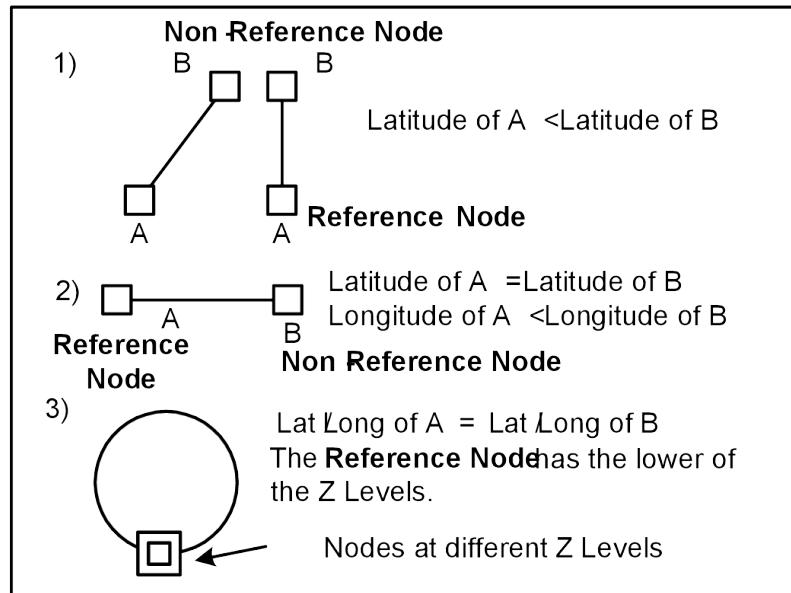
Geometric Representation

3.3 Reference Node and Non-Reference Node

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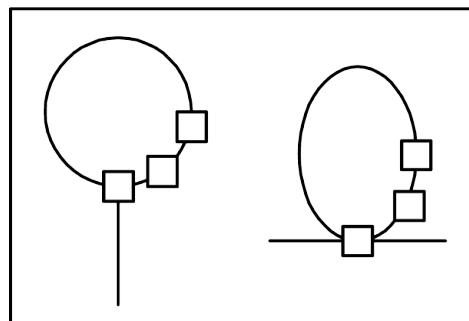
- If, however, the latitudes and longitudes of both end nodes are identical but their Z-Levels are different, the *Reference Node* is determined by the end node with the lower Z-Level. See Example 3 in [Figure 8:](#) on page 75.

**Figure 8:**



- The *Non-Reference Node* and *Reference Node* of a link may be the same node. This is called a teardrop. A teardrop link always contains at least two shape points. Teardrops are only valid for features other than Roads. Nodes are added to avoid teardrop situations on roads. See [Figure 9:](#) on page 75.

**Figure 9:**



- Side orientation is established using the *Reference Node* and *Non-Reference Node*. The *Reference Node* is located at the “beginning” of a link. The *Non-Reference Node* is located at the “end” of a link. Side orientation is used to assign sides to a link. The “right side” of a link is the side on the right when facing the *Non-Reference Node*, or “end” of a link, from the *Reference Node*, or “beginning” of the link. The right and left sides of a link are used to assign attributes such as address ranges and administrative area information.

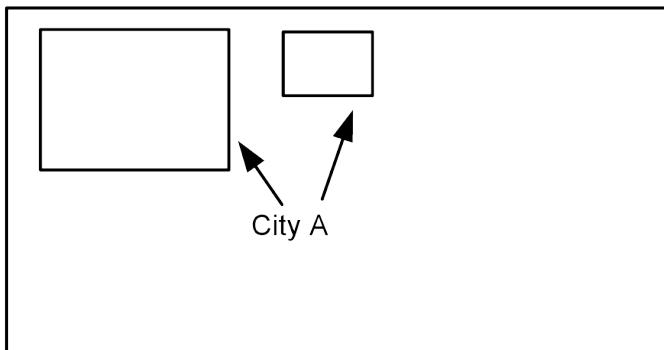
## 3.4 Polygon Formation

A polygonal feature is comprised of a closed set of links. In this case, “closed” is defined as being connected at X and Y co-ordinates, without a gap in geometry, name, or Feature Type.

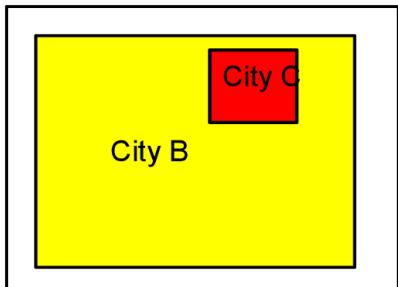
A polygon is composed of a number of links. A single link can participate in several polygons. Each polygon has its own Polygon ID. The polygon name is published in the corresponding NAVSTREETS layer.

If an administrative area or cartographic feature is present in two distinct geographic areas, it is represented with two polygons as shown in [Figure 10:](#) on page 76. If the administrative area (for example: City B) or cartographic feature has a “hole” in it, it is represented by one polygon. See [Figure 11:](#) on page 76.

**Figure 10:**



**Figure 11:**



A polygon is either outline formation or full formation. Outline formation can be used for all polygons not listed in the full formation rules below. Outline formation requires representing only the perimeter of the feature. A lake inside of a park is an example of outline formation, as shown in [Figure 12:](#) on page 77. The park feature and feature code are only represented on the perimeter of the park.

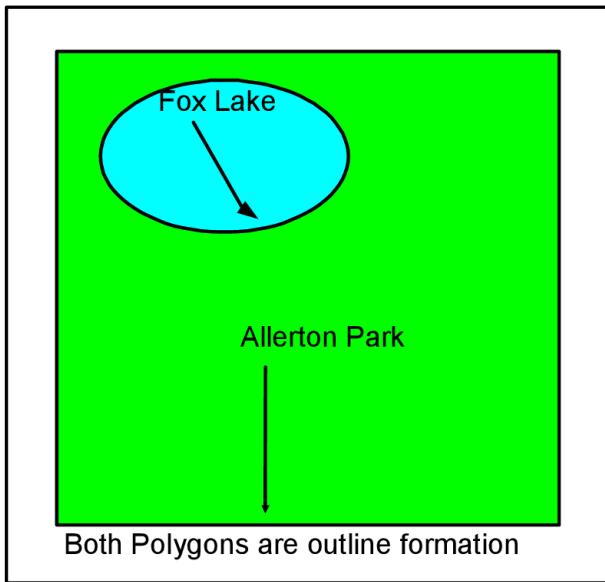
# Reference Guide

Geometric Representation

3.4 Polygon Formation

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Figure 12:

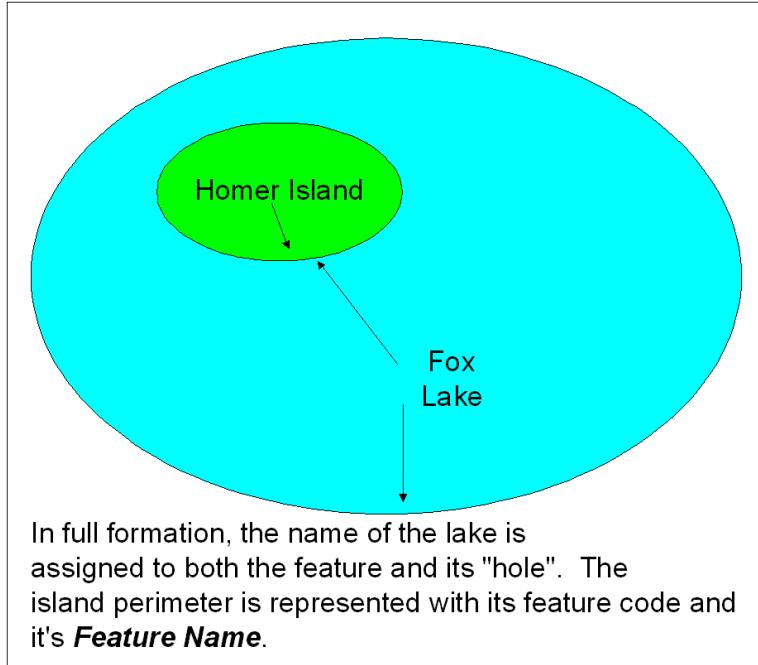


Full Formation requires digitisation of the perimeter and “holes” or “pockets” that are enclosed within a polygon but are not considered a part of that polygon. Full formation is required for the following:

- Water polygons when islands exist
  - Airport runways when they have holes.
  - Some administrative boundaries.
- ① **Note:** In the above cases, the holes meet polygon size inclusion rules.
- Small islands that contain roads are always full formation
  - Building or landmark that surrounds an open area of ground that is visible on source materials.
  - Building or landmark that belongs to a Feature Aggregation (e.g., Grouped Structure) and there is one or more polygons inside another polygon, i.e., a polygonal building footprint.
    - In this case, each outer polygon is Full Formation around all inner polygons.

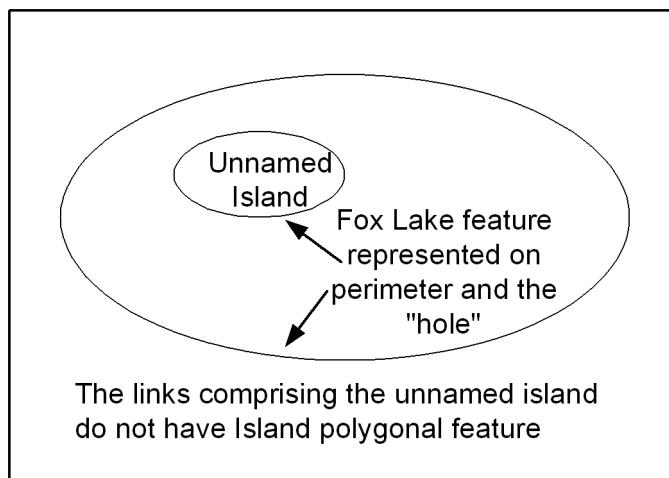
When using full formation representation, the “hole” is assigned the *Feature Name* and Feature Type of the polygons, as shown in *Figure 13:* on page 78.

**Figure 13:**



Unnamed islands located inside a water polygon receive the same *Feature Name* and Feature Type of the water polygon. See [Figure 14:](#) on page 78.

**Figure 14:**



## 3.5 Generalisation Guidelines

Generalisation refers to the process of reusing existing links when cartography and administrative boundaries are created. If existing geometry is within the generalization guidelines below, then the feature is added to the existing links instead of creating additional geometry.

Roads and ferries cannot share geometry with railways, runways, country boundaries, or any water links. Additionally, Building/Landmark polygons which require sufficient detail to make the building recognisable,

can never share geometry with navigable links. All other cartography may share geometry based on the generalisation rules. For example, a road link or railroad link may also have a feature of state park or hospital.

Cartography and administrative boundary features in Prime Inclusion areas can be generalised up to:

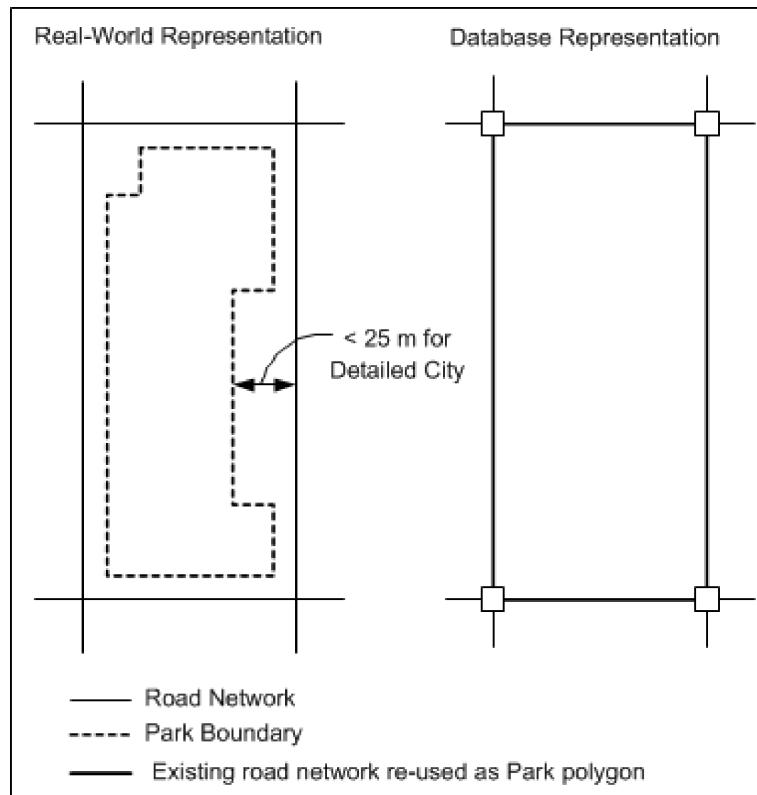
- 25 metres/82 feet (except built-up areas)
- 100 metres/328 feet for built-up areas

Cartography and administrative boundary features in Network areas can be generalised up to:

- 250 metres/820 feet (except built-up areas)
- 100 metres/328 feet for built-up areas

*Figure 15:* on page 79 illustrates both the real world and NAVSTREETS representation of how a park and a navigable feature share links.

**Figure 15:**



## 3.6 Transportation Network Representation

### 3.6.1 Centreline Digitisation

The method of centreline digitisation is used to represent objects as a single line. A centreline represents the median distance between the outer edges of an object. For example, the centreline of a road indicates the middle of a roadbed, as shown in *Figure 16:* on page 80.

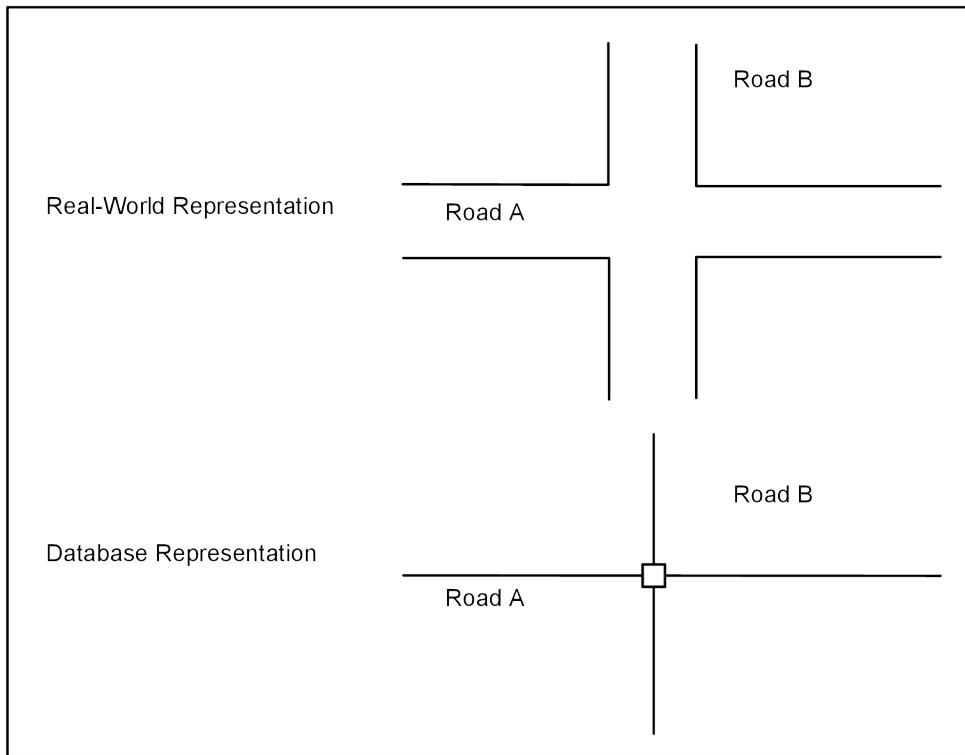
# Reference Guide

Geometric Representation

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**Figure 16:**



In centreline digitisation, any point along the link cannot deviate more than 3 metres/10 feet perpendicular to the centreline of the road relative to its end points. See [Figure 19: on page 82](#).

Nodes and shape points are represented within 15 metres/48 feet of absolute ground truth for Prime areas and within 100 metres/328 feet for all non-Prime coverage areas.

Links with *Enhanced Geometry = Y* conform to accuracy requirements of +/- 5 metres for absolute position and +/- 1 metre for relative position.

- ① **Note:** Absolute positional accuracy refers to the tolerance within which the latitude and longitude values of nodes and intermediate points of the edge representing the centreline of a road represent their true latitude and longitude position on earth.
- ② **Note:** Relative positional accuracy refers to whether each node and intermediate point is located in the correct relative position to each other to accurately represent the shape of the centreline of a road.

In [Figure 17: on page 81](#), the absolute positional accuracy is within the requirements but the shape of the road is not accurate due to poor relative positional accuracy.

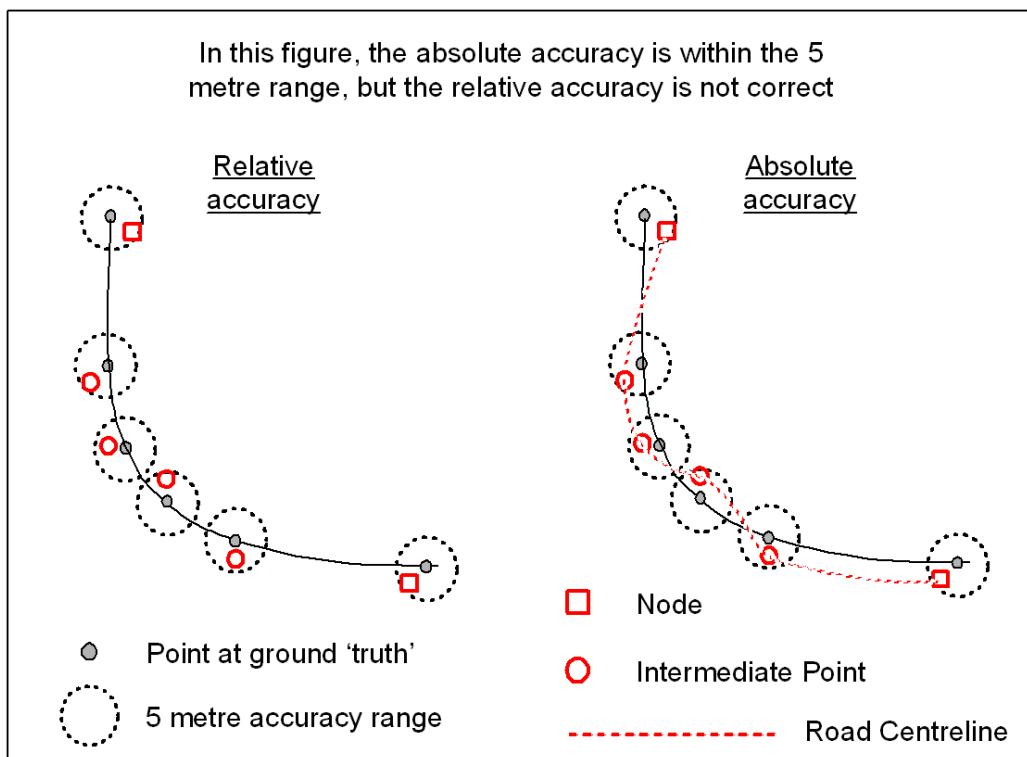
In [Figure 18: on page 81](#), the absolute positional accuracy is not within the requirements but the shape of the road is maintained (relative accuracy).

# Reference Guide

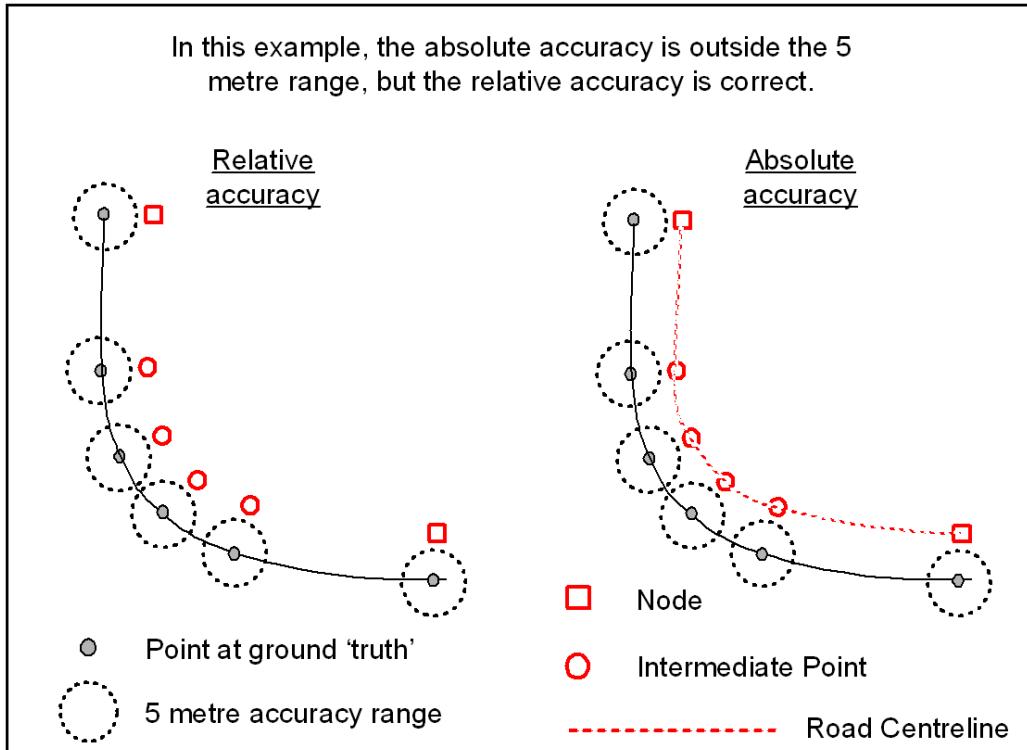
Geometric Representation

3.6 Transportation Network Representation

**Figure 17:**



**Figure 18:**

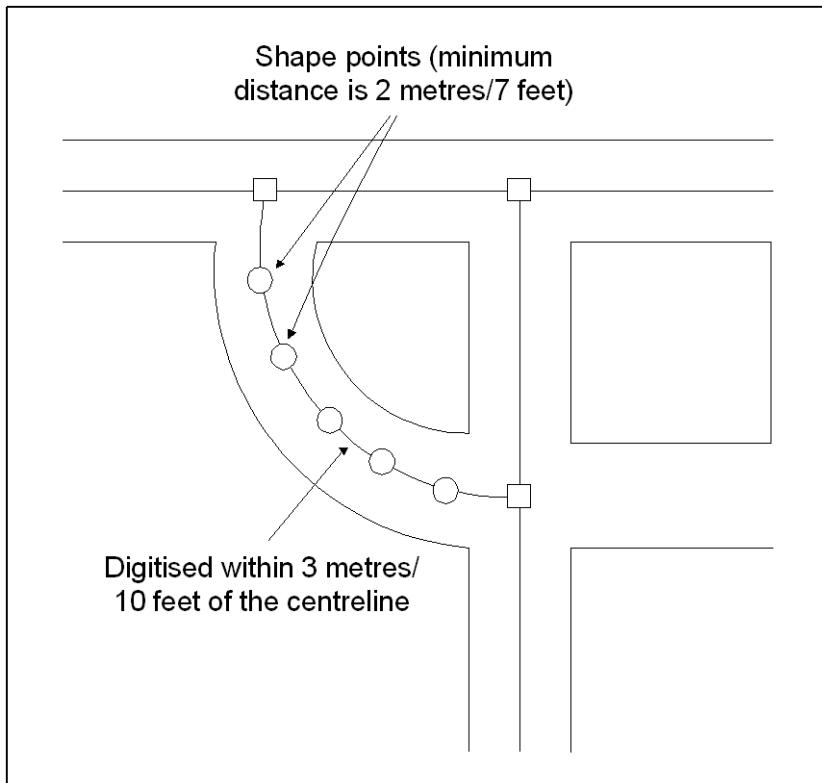


The requirements above may not apply to *In-Process Data = Yes* roads; the accuracy varies based on the country and source used for adding these Full Coverage Links.

## 3.6.2 Curved Features

Shape points represent the curves along a link. A minimum number of shape points are used to maintain a curve, within 3 metres/10 feet of a road's centreline. The minimum distance between nodes and among nodes and shape points, is 2 m/7 ft, as shown in [Figure 19](#): on page 82.

**Figure 19:**



## 3.6.3 Multiple Digitisation

A single road may have physically separated roadbeds. Multiple digitisation is the method of representing these roads as multi-carriageways. Multiple digitisation occurs when the distance separating these roadbeds becomes significant (see bullets below) for map matching. For example, when opposing lanes of traffic diverge to a point where they meet the criteria for multiple digitisation, the roads are separately digitised, as shown in [Figure 20](#): on page 83.

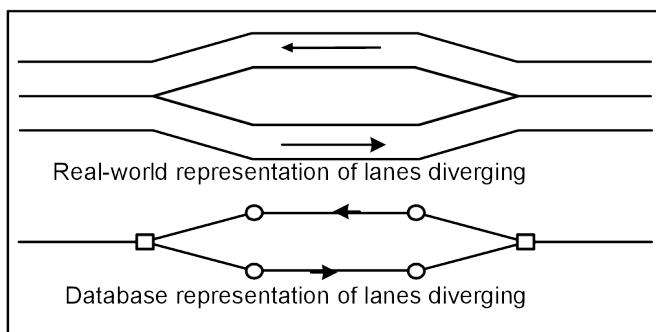
# Reference Guide

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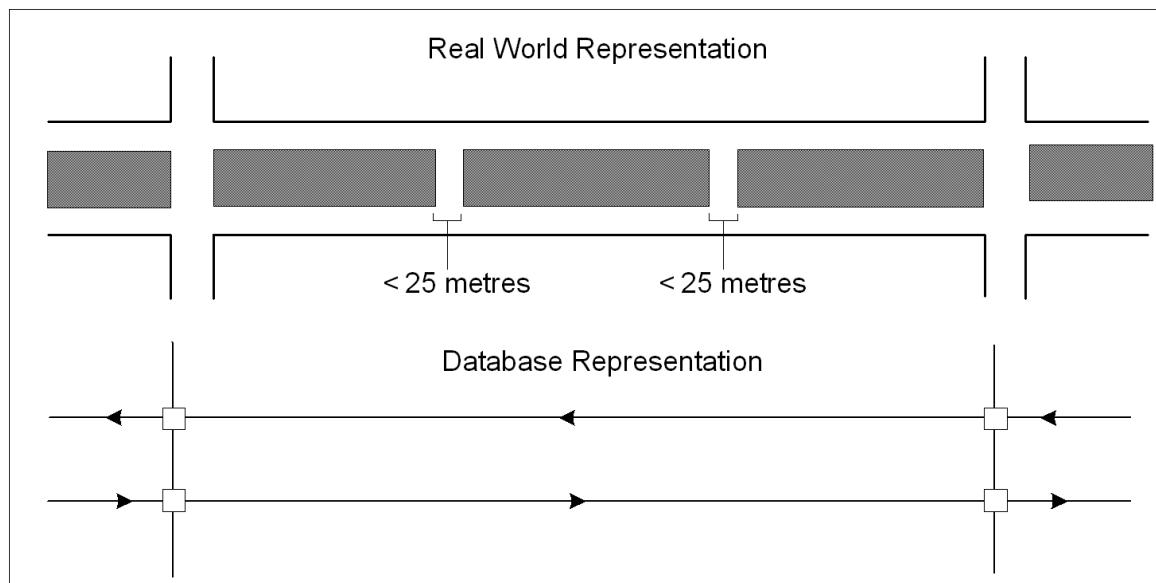
**Figure 20:**



Roads are multiply digitised when one or more of the following situations exist:

- The road has limited access via ramps (slip roads) and crossings not at grade (motorways).
- A physical divider exists that is wider than 3 metres/10 feet, and longer than 40 metres/131 feet. If the divider stops for more than 25 metres/82 feet, the digitisation changes from multiply to singly digitised. A series of dividers where the gaps are shorter than 25 metres/82 feet are treated as one divider when measuring the length. See [Figure 21:](#) on page 83.

**Figure 21:**



- The distance between the centrelines of the opposing traffic lanes is greater than 25 metres/82 feet and a physical divider of any size exists between these lanes.

## Extensive Inclusion

In select countries, roads are also multiply digitised if both of the following are met:

- The road centrelines of the opposing lanes are more than seven metres apart.
- A physical divider exists and is at least one half of a metre wide.

## 3.6.4 Separately Digitised

Roads may be separately digitised when one of the following conditions exists:

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3.6 Transportation Network Representation

- A road with one direction of traffic flow (one-way) splits into two parallel one-way roads separated by a divider and it is navigationally significant.
- A road is separated divider and is designated as either for reversible direction of traffic flow, for High Occupancy Vehicles (HOV), or for public vehicles.
- The road meets the criteria of a frontage road, regardless of the size of the divider that separates it from the main road.
- For ramps, if a physical divider of any size exists.

### 3.6.4.1 Extensive Inclusion

Roads that do not meet the standard Separately Digitised rules are separately digitised in select countries if they meet the rules for Extensive Inclusion.

#### Rules

- Opposing lanes are separately digitised if all of the following are met:
  - The real-world road centrelines of the opposing lanes are equal to or greater than 7 metres apart.
  - A physical divider exists and is at least 0.5 metres wide.

### 3.6.4.2 HOV Lane

#### Rules

- HOV lanes are separately digitised even if only a legal divider separates the HOV lane from the other lanes on the road if the HOV lane meets one of the following criteria:
  - If an HOV lane is separately digitised and a legal divider that follows the physical barrier prevents access to a road feature connecting to the HOV lane, the separately digitised lane are reconnected to the roadway at the end of the legal divider. See [Figure 22:](#) on page 85.

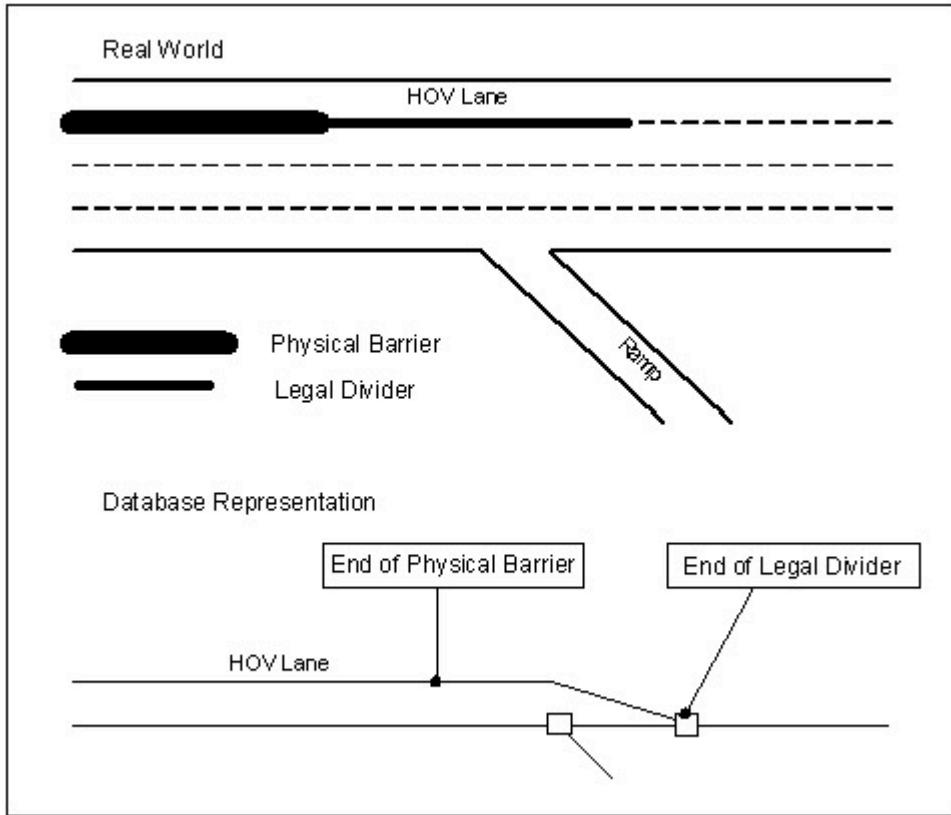
# Reference Guide

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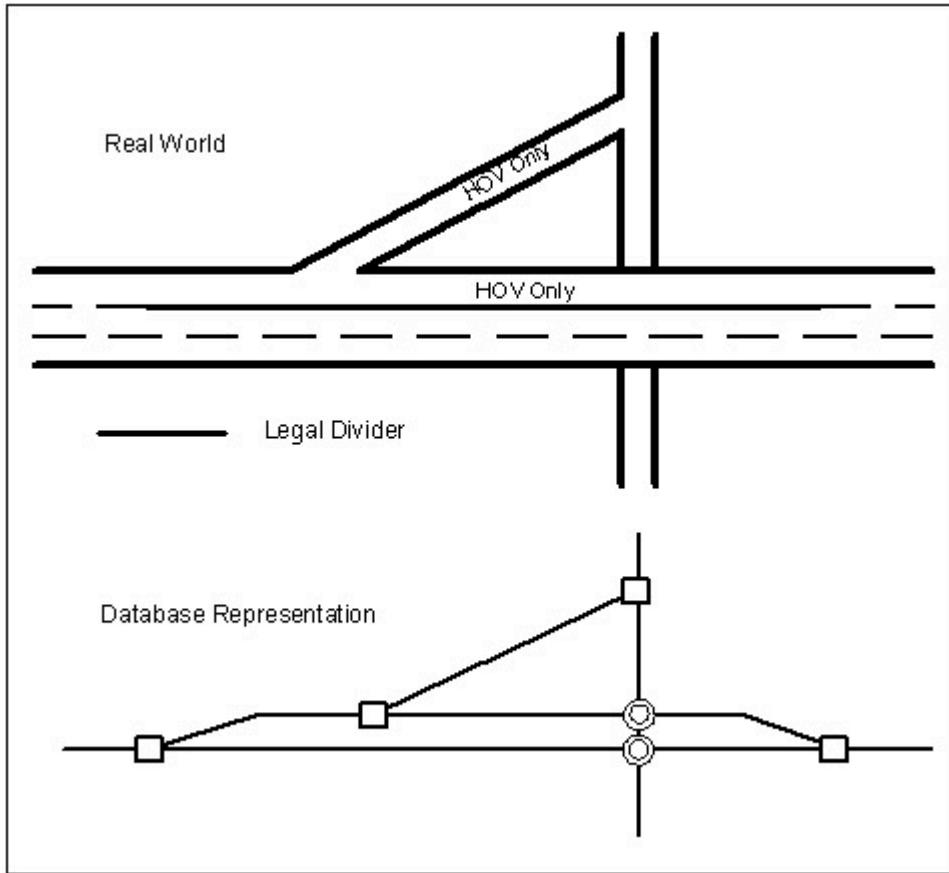
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**Figure 22:**



- If there is an HOV only ramp that is not accessible from all lanes and there is a legal divider between the HOV lane and the access lanes, the HOV lane is separately digitised from the last point of legal entry before the ramp to the first point of legal exit after the ramp. The position of the ramp represents reality. See [Figure 23: on page 86](#).

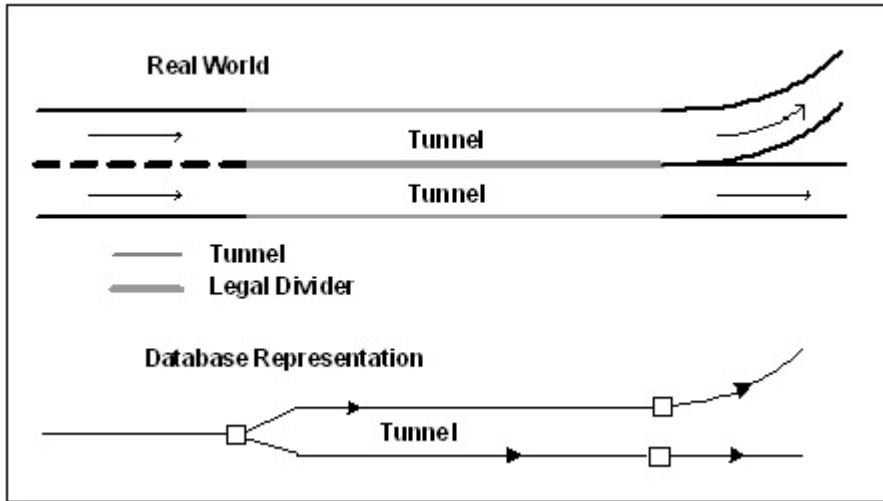
**Figure 23:**



## 3.6.4.3 Tunnel

### Rules

- Multiple lanes are separately digitised if it is not possible to change lanes after the tunnel due to the legal/physical dividers. See [Figure 24:](#) on page 87.

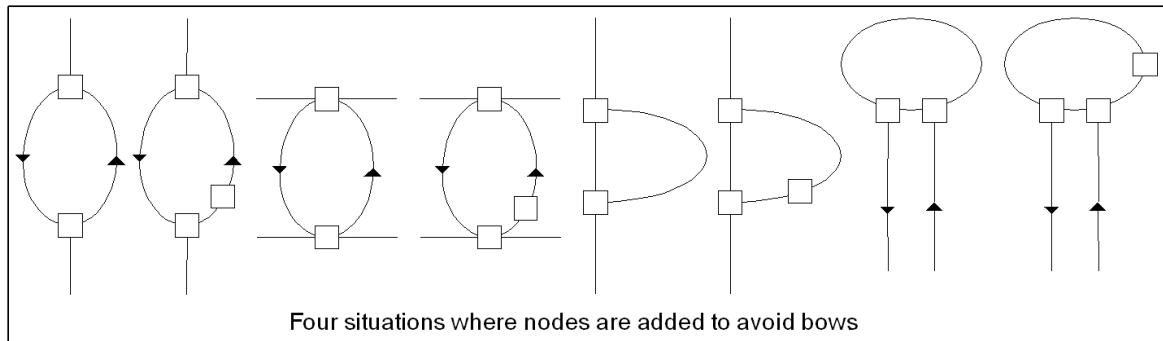
**Figure 24:**

### 3.6.5 Bows and Teardrops

Bows are situations where two links share the same *Reference Node* and *Non-Reference Node*. Teardrops are situations where a Link's *Reference Node* and *Non-Reference Node* are at the same latitude, longitude, and Z-Level, e.g., a cul-de-sac. Bow and teardrop configurations are not valid for navigable links.

Nodes are added to break bows and teardrops according to the following rules:

- When two links share the same *Reference Node* and *Non-Reference Node* regardless of naming or any other attributing, a node is added to eliminate the bow situation. See [Figure 25:](#) on page 87 for examples.

**Figure 25:**

## Reference Guide

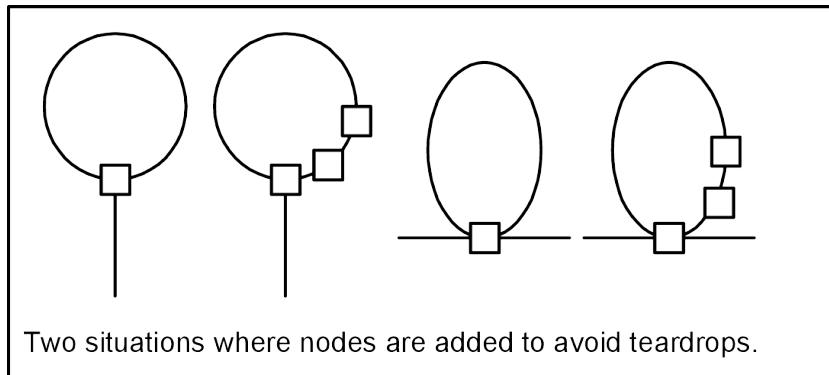
Geometric Representation

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- When a link starts and ends at the same latitude and longitude, it is broken to eliminate the teardrop situation by adding two nodes. See [Figure 26](#): on page 88 below for examples.

**Figure 26:**

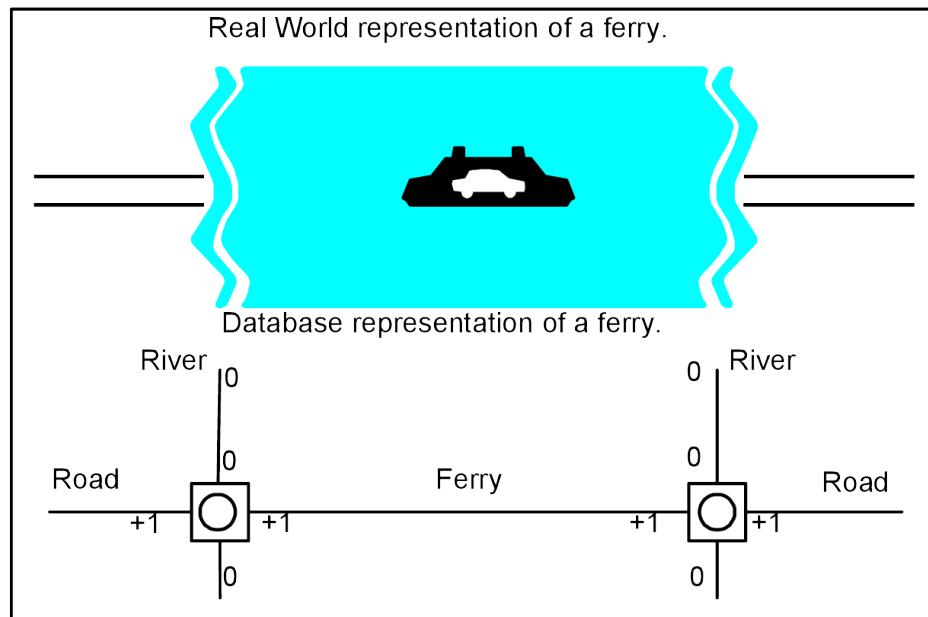


Two situations where nodes are added to avoid teardrops.

### 3.6.6 Ferry Route

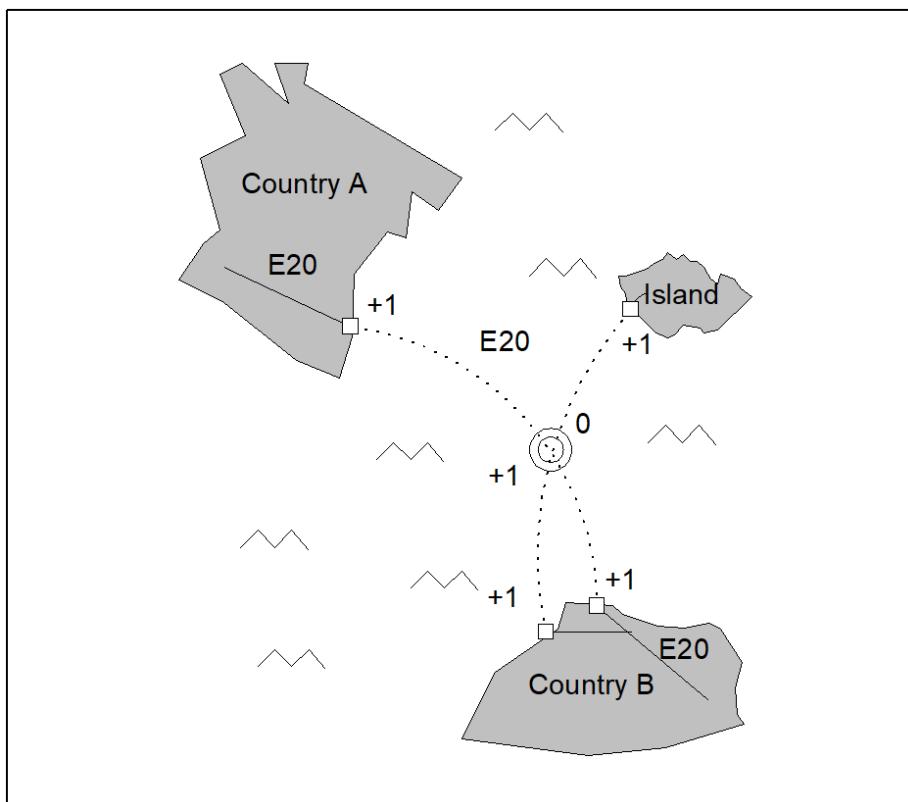
A ferry route is represented as a generalised connection between the road points. In [Figure 27](#): on page 88, the Z-Level changes for the node where the road connects to the water because a road link and a hydrography link cannot intersect at the same Z-Level.

**Figure 27:**



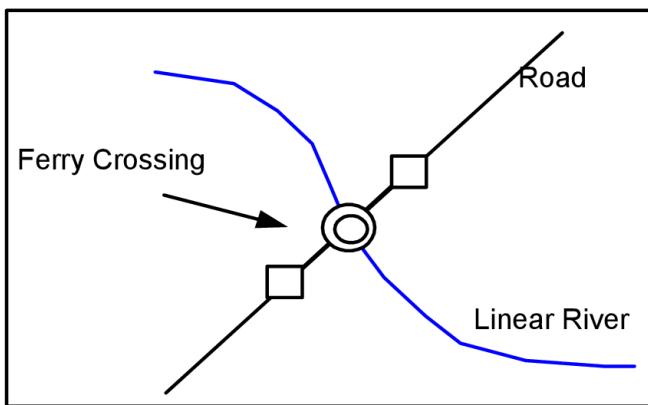
Ferry crossings are represented as shape points with a Z-Level change between the ferry routes, as shown in [Figure 28](#): on page 89. The crossing cannot be represented as a node, since this would imply connectivity. Ferry routes cannot connect at a node except when connecting with links at the shoreline.

**Figure 28:**



Ferry crossings on a linear river are represented by a short ferry link. The nodes are offset a short distance on either side of the river. See [Figure 29:](#) on page 89.

**Figure 29:**



### 3.6.7 Pedestrian Zones

Pedestrian zones with a closed-off shopping area that is less than 30 metres/98 feet in width are represented by the centrelines of the addressed streets. The real world representation is shown in [Figure 30:](#) on page 90.

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Geometric Representation

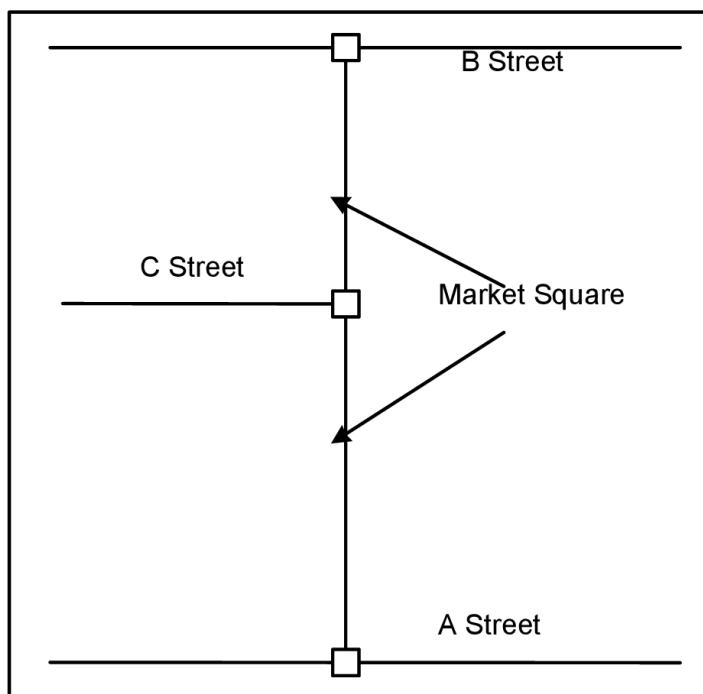
3.6 Transportation Network Representation

**Figure 30:**



*Figure 31:* on page 90 below shows how the pedestrian zone described above is represented in the database.

**Figure 31:**



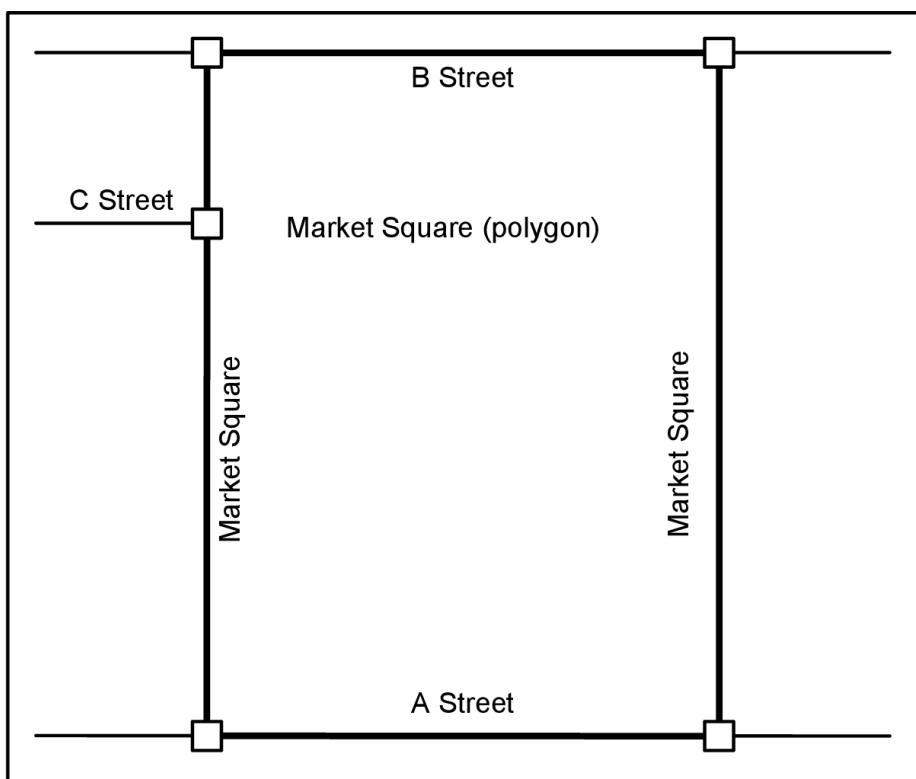
## Reference Guide

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A pedestrian zone wider than 30 metres/98 feet is represented using Pedestrian Area (*Feature Type* = 900158), reusing existing links, as shown in bold in [Figure 32: on page 91](#).

**Figure 32:**



### 3.6.8 Roundabouts

A roundabout is represented when:

- A roundabout sign is posted regardless of the roundabout's size
- A divider of any size exists within the roundabout and the diameter of the entire junction is equal to or greater than 25 metres/82 feet, as shown in [Figure 33: on page 92](#).
- Smaller roundabouts (10–25 metres) where significant or available from a digital source.

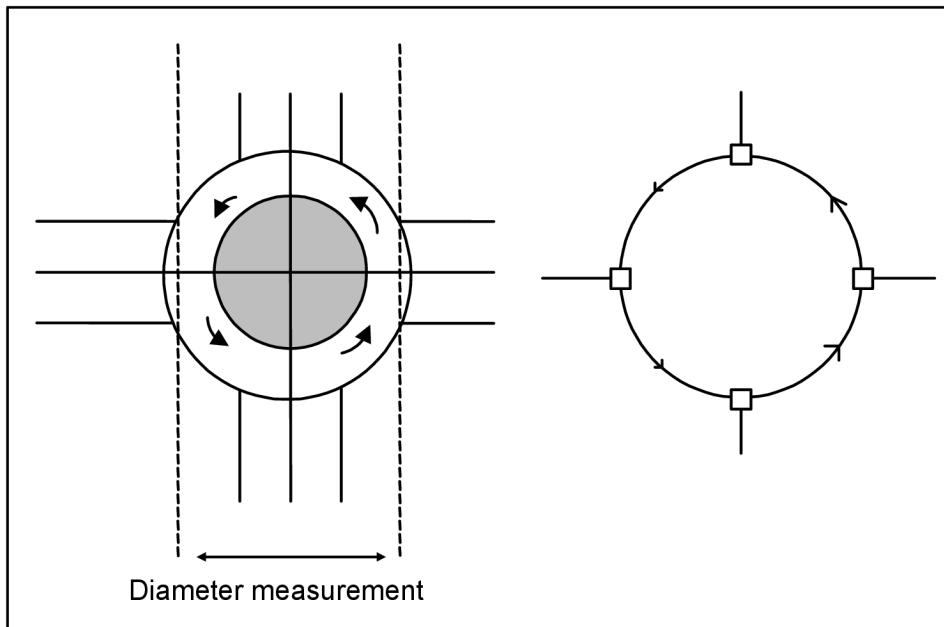
The geometry must function as a roundabout to be included. Otherwise, the roundabout is represented as a Node.

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**Figure 33:**



## Turbo Roundabout

Turbo Roundabouts, roundabouts that have legal dividers or small physical dividers that restrict a lane change and ensure better traffic flow, are also represented as Roundabouts (i.e., without representing the lanes through separate digitisation). Traffic islands however are created prior to the roundabout. See [Figure 34: on page 93](#).

To fully represent a Turbo Roundabout, the following are applied (as shown in [Figure 34: on page 93](#) and [Single-Point Urban Interchange \(SPUI\) on page 94](#)):

- Roundabout = Y - on the roundabout proper (black dashed line).
- Intersection Internal = Y is published on the Intersection Internal and Manoeuvre links (shown in red and green).
- Special Explication conditions are applied at the splits created by the traffic islands.

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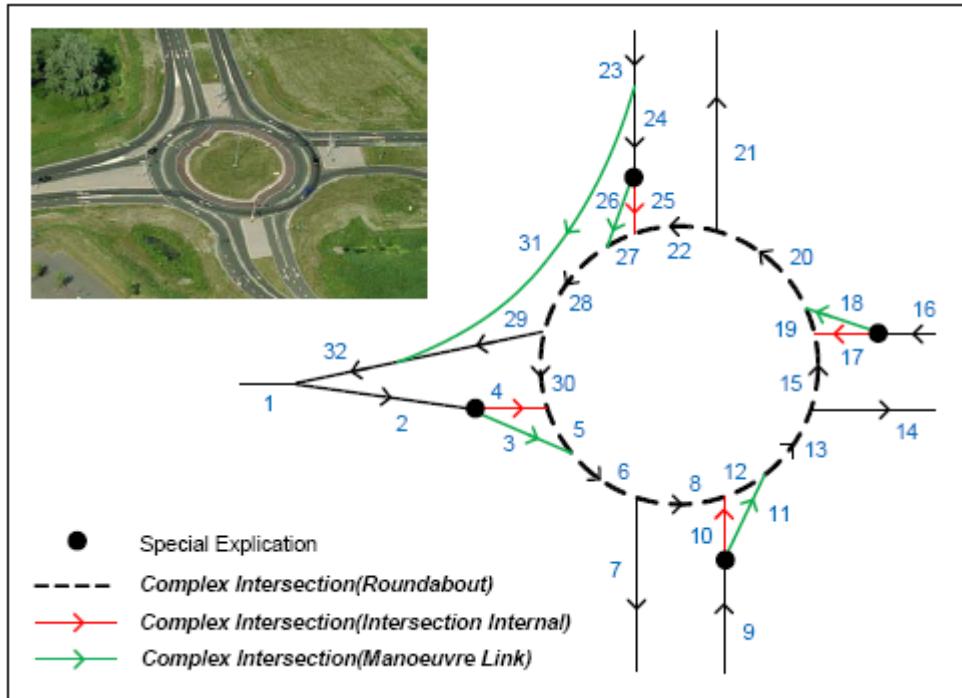
Geometric Representation

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- Restricted Driving Manoeuvre conditions are applied for connections that are blocked because of legal or physical dividers.

Figure 34:



From the West	From the South	From the East	From the North
West to south: n/a	South to east; 10-12-13-14	East to north: n/a	North to west: 25-27-28-29
West to east: 3-6-8	South to north: n/a	East to west: 18-20-22	North to south: n/a
West to north: n/a	South to west: 11-13-15-19-20-22	East to south: n/a	North to east: 26-28-30-5-6-8
West to west: 4-5-6-8-12-13-15-19-20-22	South to south: n/a	East to east: 17-19-20-22-27-28-30-5-6-8	North to north: n/a

### 3.6.9 Runaway Truck Ramp

Runaway Truck Ramp is a section of road, usually sand or gravel filled, designed to safely stop large vehicles that are having braking problems on a downhill slope. They may also be referred to as escape lane, emergency escape ramp, or truck arrester bed.

They are added where they exist in reality only when both explicitly sign-posted and where separate road geometry exists.

### 3.6.10 Safety Check Areas

Safety Check Areas refer to various safety related pull-over areas along the road that provide a safe location to perform specific activities in preparation for the road ahead or for emergency vehicle checks. Examples for these areas include: Chain-Up and Chain-Off Areas, Brake Check Areas, Lay-by and Pull-off Areas.

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Geometric Representation

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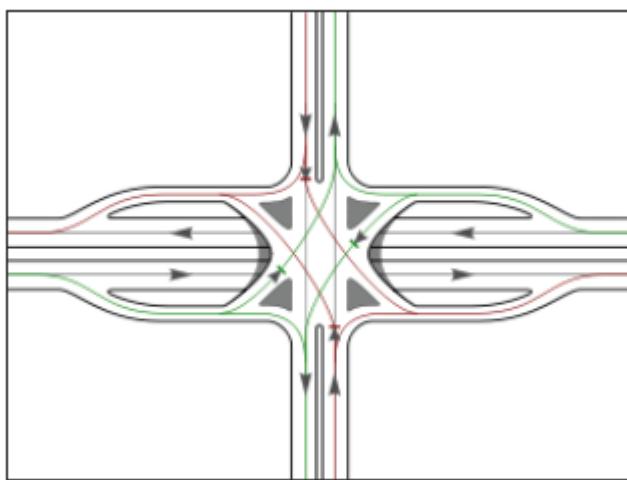
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These areas are represented if they are both sign-posted and qualify for separate digitisation.

### 3.6.11 Single-Point Urban Interchange (SPUI)

A Single-Point Urban Interchange (SPUI) is a type of highway interchange that helps move large volumes of traffic efficiently through small areas. Typically, traffic is controlled by a single set of traffic signals allowing traffic to clear the intersection quickly and efficiently. It allows for traffic travelling in opposite directions to make left turns at the same time (without crossing paths).

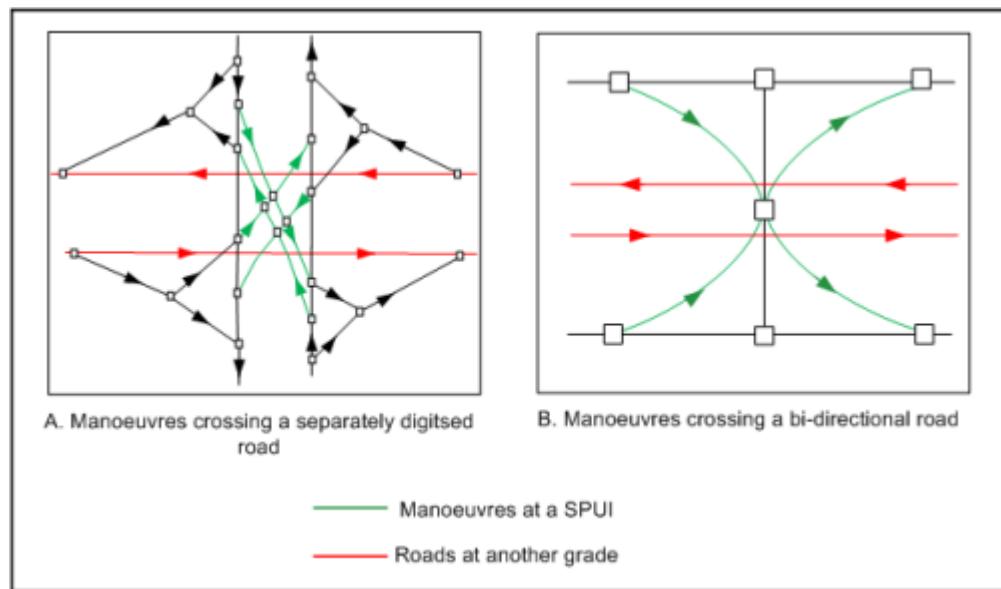
**Figure 35:**



Manoeuvres at a SPUI are represented as follows:

- Each manoeuvre at a SPUI is separately digitised when they cross a separately digitised road. See *Single-Point Urban Interchange (SPUI)* on page 94(diagram A).
- Left turns are connected at one node if the manoeuvres cross a bi-directional road. See *Single-Point Urban Interchange (SPUI)* on page 94(diagram B).

**Figure 36:**

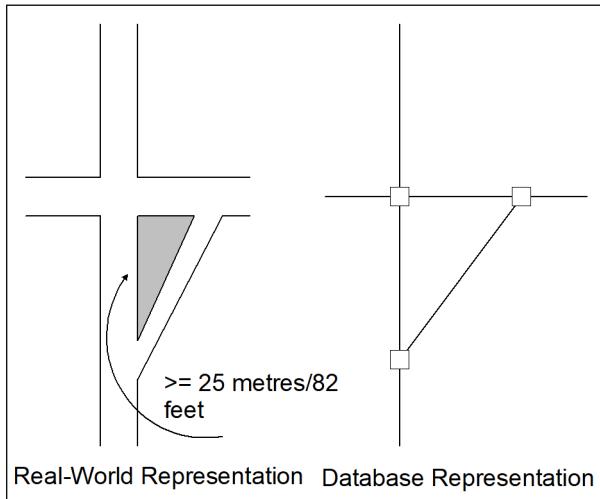


### 3.6.12 Traffic Islands and Turn Lanes

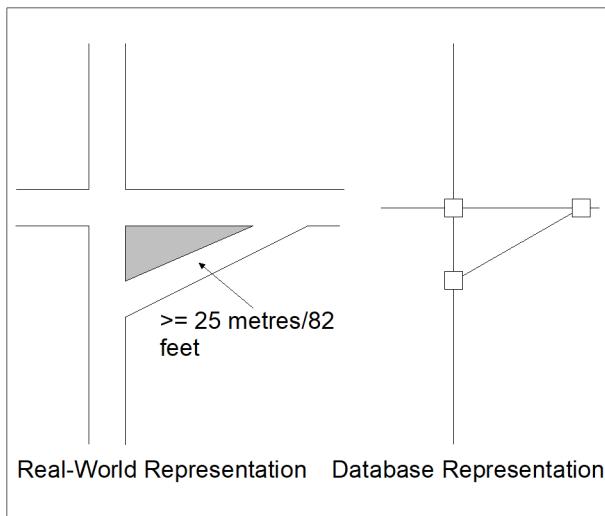
Traffic islands and turn lanes are separately digitised when any side of the physical or painted barrier is longer than 25 metres/82 feet, as shown in [Figure 37](#): on page 95, [Figure 38](#): on page 95, and [Figure 39](#): on page 96.

A road that is classified as a ramp and has a physical divider that meets the criteria for digitisation of a turn lane/traffic island is separately digitised.

**Figure 37:**



**Figure 38:**



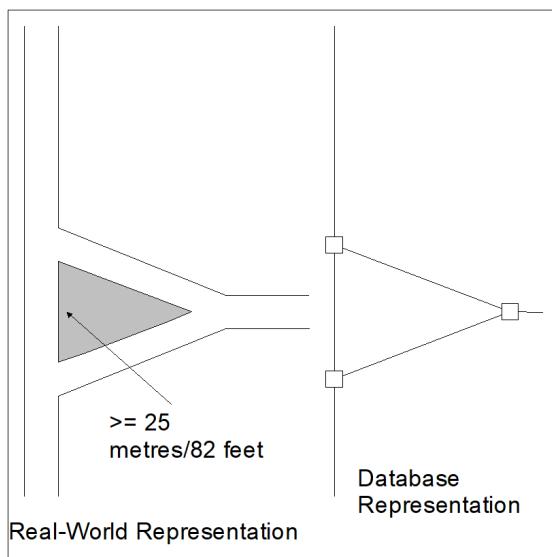
# Reference Guide

Geometric Representation

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here

Figure 39:

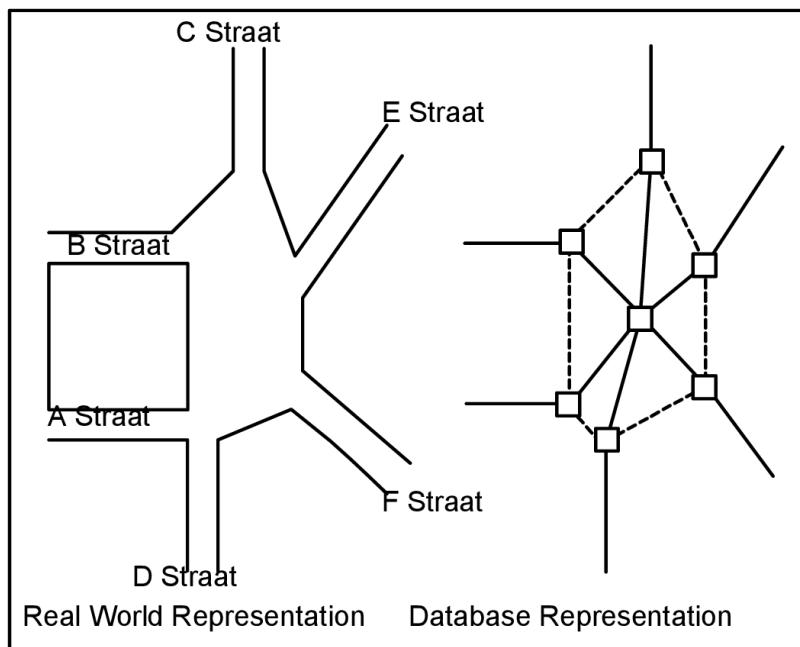


## 3.6.13 Undefined Traffic Areas

An undefined traffic area is a paved area where a car can travel but there are no legally defined traffic paths.

Undefined Traffic Area is represented as a polygon using the outline of the paved area. All links entering the unstructured traffic area are connected at a node in the approximate centre, as shown in [Figure 40](#): on page 96. These links are attributed as *Undefined Traffic Area Internal* = Y. These links do not represent real roads; GPS track does not match to any of these links.

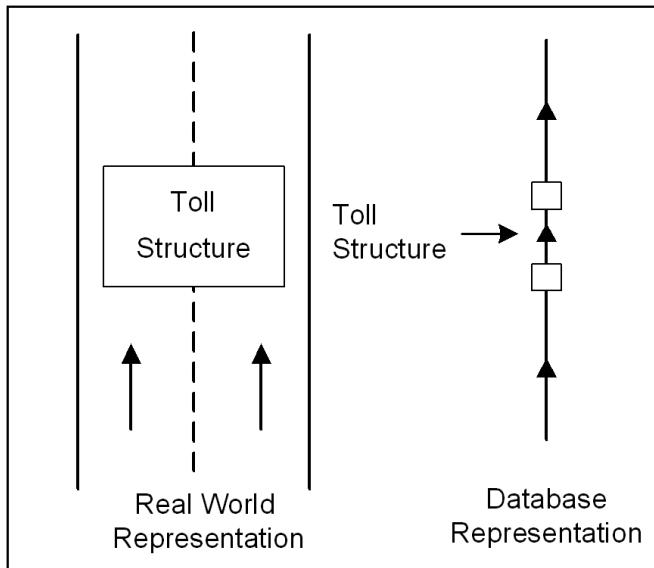
Figure 40:



### 3.6.14 Toll Structures

Toll Structures are represented by a short link roughly defining the extent of the toll structure area. See [Figure 41: on page 97](#).

**Figure 41:**



### 3.6.15 Airports

The overall purpose of airport geometry is to provide good guidance and access to the main destinations and facilities within the airport (terminals, rental car agencies, parking lots, etc.) without an excessive amount of detail.

Thus, the following geometry is included:

- Confirmed named roads
- Arrival and departure access roads
- Rental car return and pick-up access roads
- Parking access roads
- Public vehicle roads (buses, taxis, etc.)
- Any other public roads needed for connectivity.

### 3.6.16 Seaport/Harbour (U.S., Canada, and Mexico Specific)

Seaport/Harbour (Feature Type = 9997008) represents a location where large container ships dock to load/unload their cargo.

All internal geometry within the Seaport/Harbour polygon is included. These are roads that are traversable by the trucks picking up and dropping off cargo containers and also any other seaport/harbour management

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vehicles. When a railyard is present in a Seaport/Harbour, rail line representation is enhanced by expanding existing rail geometry to include all rail lines contained within the railyard.

The published polygon will reflect the land portion of the Seaport/Harbour only. The polygon does not extend into the water.

For example: The Port of Oakland. see [Figure 42:](#) on page 98.

**Figure 42:**



### 3.6.17 Railyard Areas

Railyard (Feature Type = 9997007) represents a major hub for freight trains where freight is transferred to/from cargo ships and/or trucks. Rail line representation is enhanced by expanding existing rail geometry to include all rail lines contained within the railyard. All internal road geometry within the railyard boundary is included. These are roads that are traversable by truck traffic picking up and dropping off cargo containers and also any railyard management vehicles.

Railroads may exist within a seaport/harbour as outlined in [Seaport/Harbour \(U.S., Canada, and Mexico Specific\)](#) on page 97. See [Figure 42:](#) on page 98. The Port of Oakland contains the Oakland Int'l Gateway BNSF Intermodal Yard and the Railport Oakland Union Pacific Intermodal Yard. See [Figure 43:](#) on page 99. In this case three separate polygons are created:

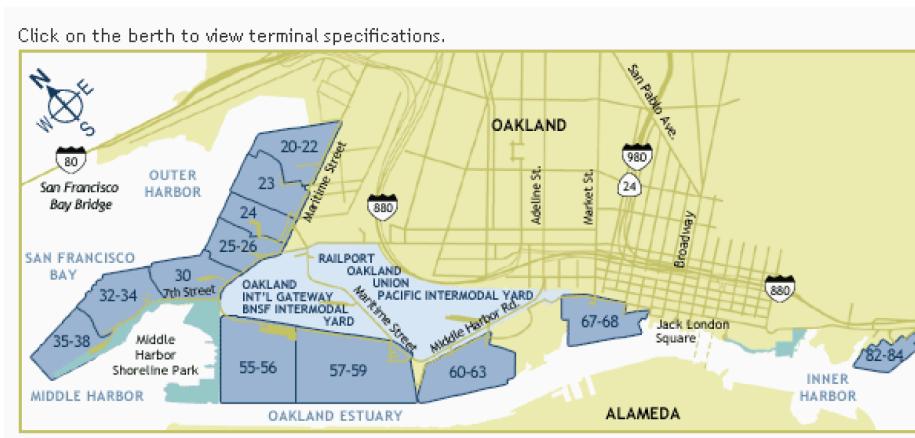
- 1) Port of Oakland (Seaport/Harbour)
- 2) Oakland Int'l Gateway BNSF Intermodal Yard (Railyard)
- 3) Railport Oakland Union Pacific Intermodal Yard (Railyard)

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**Figure 43:**



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here

All railyards of major railroad companies (see [Weigh Station](#) on page 100) are included in the U.S.

Rail Company	Website
Burlington Northern Santa Fe (BNSF)	<a href="https://www.bnsf.com/">https://www.bnsf.com/</a>
Union Pacific	<a href="https://www.up.com/customers/index.htm">https://www.up.com/customers/index.htm</a>
Norfolk Southern	<a href="http://www.nscorp.com/content/nscorp/en/shipping-options/intermodal.html/">http://www.nscorp.com/content/nscorp/en/shipping-options/intermodal.html/</a>
Canadian National <sup>1</sup>	<a href="https://www.cn.ca/en/search">https://www.cn.ca/en/search</a>
Canadian Pacific <sup>1</sup>	<a href="https://www.cpr.ca/en/choose-rail/intermodal-shipping">https://www.cpr.ca/en/choose-rail/intermodal-shipping</a>

### 3.6.18 Weigh Station

Separate polygons are not added for weigh stations.

All weigh station geometry is included in the core map. Weigh Station POIs are published in the Truck POIs Rich Content Product.

For example: Weigh Station along I-680 in Alameda County, CA. See [Figure 44:](#) on page 101.

---

<sup>1</sup> Though these railroads are Canadian, their railyards may be included if they exist in the U.S.

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**Figure 44:**



## 3.6.19 Airport Cargo Facility

All geometry for major airports which also have cargo facilities is included.

Separate polygons are not added for airport cargo facilities.

All internal road geometry within existing Airport polygons is included. These are roads that are traversable by truck traffic picking up and dropping off cargo and also any airport management vehicles.

- ① **Note:** Airport polygons are part of the standard cartographic inclusion.

## 3.6.20 Rest Areas

Rest Area POIs are generally comprised of various links. These include the following;

- The main driving path within the Rest Area.
- The components of the road network that are needed to locate and access the POIs within the Rest Area.
  - ① **Note:** Rest Area POIs that represent Scenic Overlooks may not have their own internal geometry and may be attached to the main road.
- The components of the road network within the Rest Area complex that are needed to navigate from one POI to another within the same Rest Area.

## 3.7 Cartography

---

### 3.7.1 Airports

Airport polygons (Feature Type 1900403) are contained in the LandUseA layer. Aircraft Road polygons (Feature Type 1907403) are contained in the LandUseB layer.

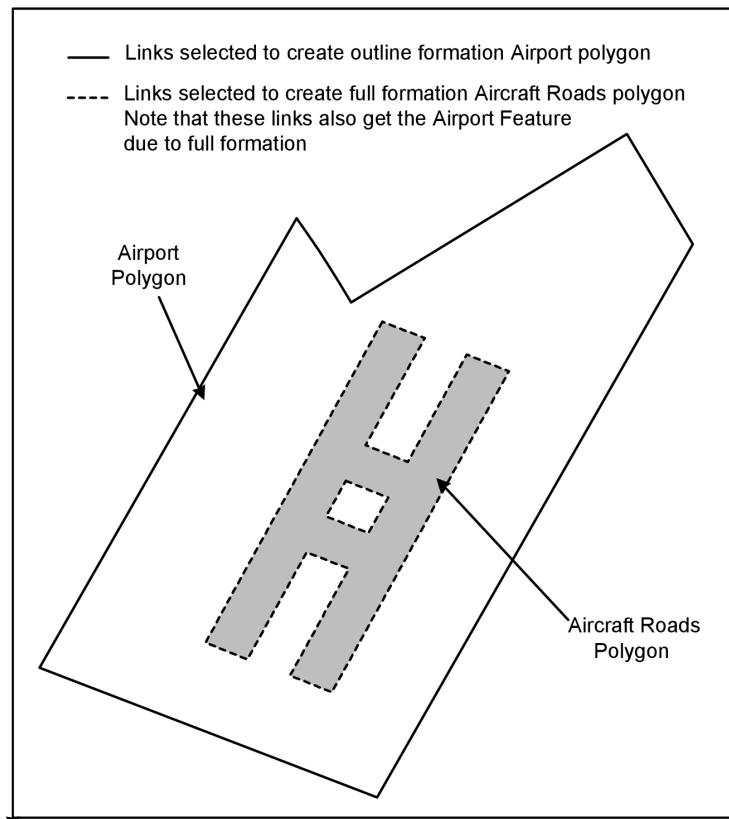
The airport polygon surrounds the entire area of the airport, including buildings, parking areas, and terminals. In addition, the runways and aircraft taxi strips are also represented as separate polygons within the airport polygon. These areas are referred to as Aircraft Roads. Aircraft Roads polygons must be full formation polygons. See [Figure 45:](#) on page 103.

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**Figure 45:**



## 3.7.2 Amusement Park

### Definition

A park that contains rides or other entertainment which may be based on a central theme.

### Value

Feature Code = 2000460

### Specification

- A polygon (Feature Code = 2000460) is included in the LandUseA Layer when the outline of the amusement park is greater than 50,000 metres<sup>2</sup>/540,000 feet<sup>2</sup>.

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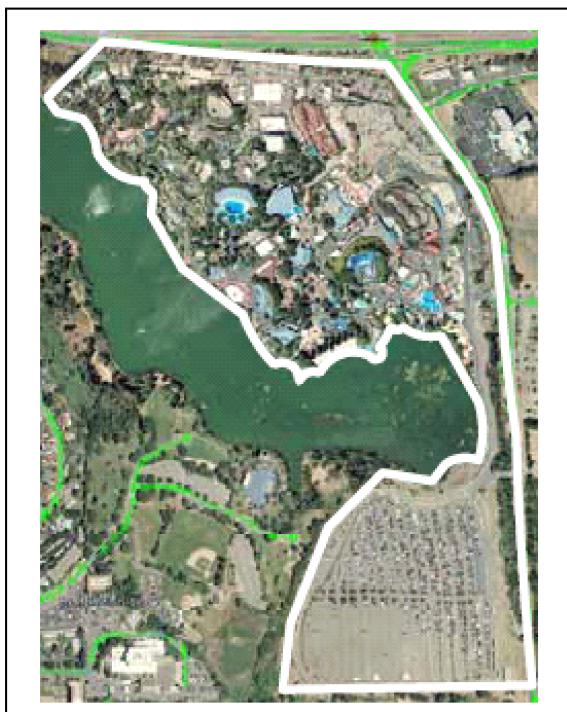
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- The Amusement Park polygon should reflect all the properties belonging to a particular amusement park/resort. The following entities that fall within the amusement park/resort are used to determine the size for inclusion:
  - All parking garages/lots
  - Hotels
  - Restaurants
  - Golf courses
  - Shopping areas
  - Entertainment centres

For example, see [Figure 46](#): on page 104, Six Flags Discovery Kingdom, Vallejo, CA:

**Figure 46:**



- When an amusement park consists of more than one park, a separate polygon is included for the larger resort area and one for each park within the resort area that requires admission to be paid.

## Example 1

Walt Disney World Resort is included as a polygon. In addition, polygons are added for the Magic Kingdom park, Epcot, Disney's Hollywood Studios, Disney's Animal Kingdom, Disney's Blizzard Beach, and Disney's Typhoon Lagoon.

## Example 2

Universal Studios Orlando Resort is included as a polygon. Additionally there are polygons published for Islands of Adventure and Universal Studios Florida.

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## Example 3

Disneyland Resort is included as a polygon. In addition, Disneyland and Disney's California Adventure are included as polygons.

- Amusement Park polygons are outline formation.
- Each Amusement Park feature has a corresponding POI.
- The name of the park matches the name of the corresponding POI.

## 3.7.3 Animal Park

### Definition

A park that is open to the public for viewing of various animals. For example, zoos, wild animal parks, and wildlife refuges.

① **Note:**

Petting zoos are not included in this feature.

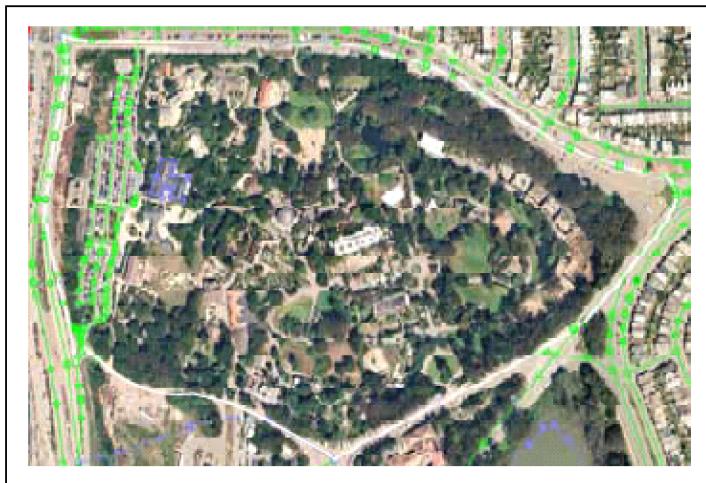
### Value

Feature Code = 2000461

### Specification

- A polygon (Feature Code = 2000461) is included when the outline of the animal park is greater than 50,000 metres<sup>2</sup>/540,000 feet<sup>2</sup>.
- ① **Note:** A zoo, wild animal park, or wildlife refuge may be included if it is smaller than the size inclusion above if it is regionally significant.
- The animal park polygon includes all of the parking facilities belonging to the animal park. See [Figure 47](#): on page 105- example of San Francisco Zoological Gardens.

**Figure 47:**



- Animal park polygons are outline formation.
- Each animal park feature has a corresponding POI.

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- The name of the park matches the name of the corresponding POI.

## 3.7.4 Building/Landmark Polygons

Building/Landmark polygons (Feature Type 2005000 through 2005899) are contained in the Landmark layer.

A *Building/Landmark* polygon represents the outline of the base of a building or man-made structure. This can be used for enhanced map display.

### 3.7.4.1 General Rules

- Each building or landmark is represented as a separate polygon.
  - Note:** Duplicate polygons are not added in order to match exonym names that exist for a corresponding POI.
- Building/Landmark polygons that exist in a body of water have an Island Feature around them.
  - Note:** Island Features added do not necessarily conform to minimum size inclusion.
- When a single entity consists of multiple adjacent buildings, each building is represented by a separate polygon. For example, a hospital complex that consists of multiple separate buildings is represented by multiple *Building/Landmark* polygons.
- When a building or landmark surrounds an open area of ground that is visible on source materials, the *Building/Landmark* polygon is created using Full Formation representation.

### 3.7.4.2 Casino

#### Definition

A gambling establishment.

#### Attribute Value

Name	Feature Code
Casino	2005403
Hotel	2005003
Convention/Exhibition Centre	2005050
Shopping Centre	2005512
Parking	2005850

#### Layer

Feature Attribute Layer

#### Related Attributes

Feature Category = 3, Attribute Type = 2 (Main Feature Type)

Feature Category = 3, Attribute Type = 3 (Additional Feature Type)

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Geometric Representation

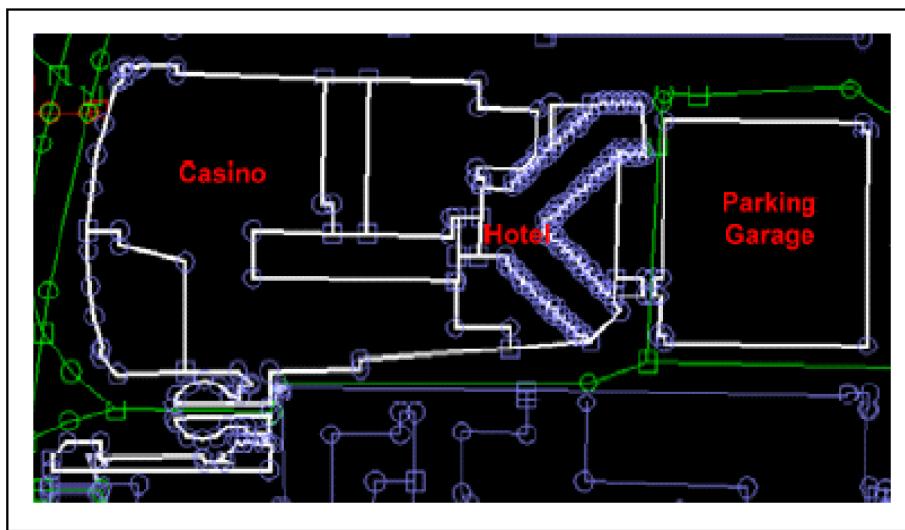
3.7 Cartography

Feature Category = 3, Attribute Type = 4 (Unknown)

## Specification

- Casino buildings may be published with the following Building/Landmark Features:
  - Park/Leisure Building/Landmark
  - Tourist Building/Landmark
  - Business/Commerce Building/Landmark
  - Convention/Exhibition Centre
- A casino resort area may consist of the following Building/Landmark features:
  - Casino
  - Hotel
  - Convention/Exhibition Centre
  - Shopping Centre
  - Parking (for parking garages)
- Each feature has a corresponding POI.
- For example, see *Figure 48:* on page 107 for the representation of Harrah's Casino in Las Vegas. The front portion of the feature is the casino/gambling establishment. The middle portion the hotel feature. The feature on the far right is the parking garage.

**Figure 48:**



- If the functional areas of a casino resort can be clearly identified as a casino, hotel, parking garage, shopping centre, or convention/exhibition centre, the appropriate Feature Code is published for that particular building in the Feature Attribute Layer.
  - ① **Note:** Feature Code = 2005999 is published in the Building/Landmark Layer.
    - For example, the Venetian Casino has a convention/exhibition centre attached to the casino resort; this building is published with the Convention/Exhibition centre building/landmark feature.
    - The shopping centre at Caesar's Palace is also identified as a separate building; this building is coded with the Shopping Centre Building/Landmark Feature.

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- When multiple functions exist for a building, multiple Feature Codes are published for that building in the Feature Attribute Layer, and Feature Code = 2005999 is published in the Building/Landmark Layer.
  - For example, a building is both a casino and a hotel:
    - Feature Code = 2005999 is published in the Building/Landmark Layer.
    - The Feature Code = 2005403 (in the Attribute Value field) for the casino is published in the Feature Attribute Layer with the Feature Category = 3, Attribute Type = 2 (Main Feature Type) indicating the building's most common use/functionality.
    - The Feature Code = 2005003 (in the Attribute Value field) for the hotel is published in the Feature Attribute Layer with Feature Category = 3, Attribute Type = 3 (Additional Feature Type).
- ① **Note:** If the main/predominant Feature Type cannot be determined for a Building/Landmark then Feature Category = 3, Attribute Type = 4 (Unknown) is published.

### 3.7.4.3 Parking

#### Definition

Identifies parking garages as Building/Landmark features.

#### Value

Feature Code = 2005850

#### Layer

Feature Attribute Layer

#### Related Attributes

Feature Category = 3, Attribute Type = 2 (Main Feature Type)

Feature Category = 3, Attribute Type = 3 (Additional Feature Type)

Feature Category = 3, Attribute Type = 4 (Unknown)

#### Specification

- Parking garages may be included as Parking Building/Landmark features.
  - Feature Code = 2005999 is published in the Building/Landmark Layer.
  - The Feature Code = 2005850 (in the Attribute Value field) for the parking garage is published in the Feature Attribute Layer with *Feature Category* = 3, *Attribute Type* = 2 (Main Feature Type) indicating the building's most common usage/functionality.
- Parking Lots are not considered parking garages and are not included.
- Each feature has a corresponding POI.

### 3.7.4.4 Winery

#### Definition

A wine-making facility.

#### Attribute Value

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Feature Code = 2005406

## Layer

Feature Attribute Layer

## Related Attributes

Feature Category = 3, Attribute Type = 2 (Main Feature Type)

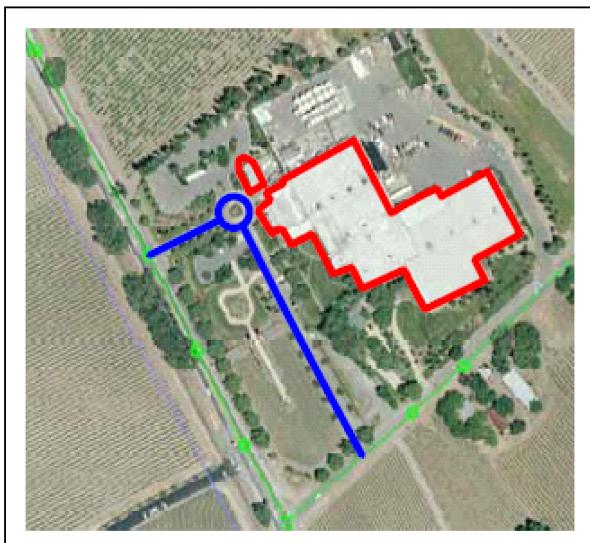
Feature Category = 3, Attribute Type = 3 (Additional Feature Type)

Feature Category = 3, Attribute Type = 4 (Unknown)

## Specification

- Building/Footprints are included for wineries that provide tours or wine tastings. For example; Franciscan Oakville Estates, see [Figure 49:](#) on page 109.

**Figure 49:**



Feature Code = 2005999 is published in the Building/Landmark Layer.

The Feature Code = 2005406 (in the Attribute Value field) for the winery is published in the Feature Attribute Layer with Feature Category = 3, Attribute Type = 2 (Main Feature Type) indicating the building's most common usage/functionality.

- In addition to the Building/Landmark Feature, the entrance roads are included (blue links in [Figure 49:](#) on page 109). The winery POI is published on an entrance link. The entrance roads are published as POI Access = Y.
- Each winery has a corresponding POI.
- The name of the POI matches the name of the building.

## 3.7.5 Built-Up Area (BUA) For European and Canadian Databases

### General rules

- Built-up area boundaries are generalised. Existing geometry is reused as much as possible, including municipality or other administrative boundaries.
- When the same name built-up area is separated by an empty area that is wider than 200 metres/656 feet, two separate polygons are created with the same name. Sequence number or extra information is not added to the polygon name.
- If a river or a motorway (controlled access road) goes through the built-up area, the built-up area is not broken into two polygons.
- Industrial areas are considered part of the built-up area. If the industrial area meets the size inclusion criteria, it is also made into a polygon. If the industrial area is separated by an empty space of more than 200 metres/656 feet, the area is not included in the Built-up Area polygon.
- The polygon represents the outline of the built-up area and does not have any islands or holes within it.
- In cases where a built-up area cannot be defined because the houses are scattered, no BUA polygon is included.
- Both sides of a multi-digitised road are either within or outside of the BUA polygon.

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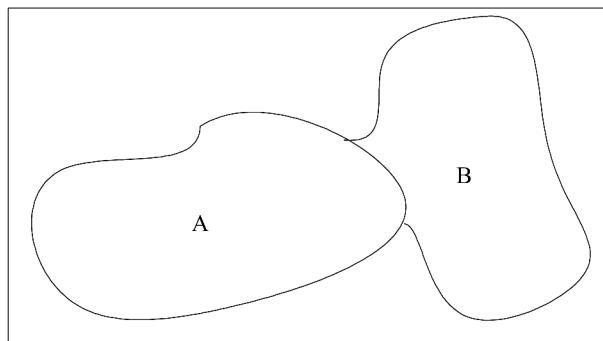
- Built-up areas that are adjacent to one another are made into separate polygons with the name of the built-up area they represent. See [Figure 50:](#) on page 112.

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**Figure 50:**



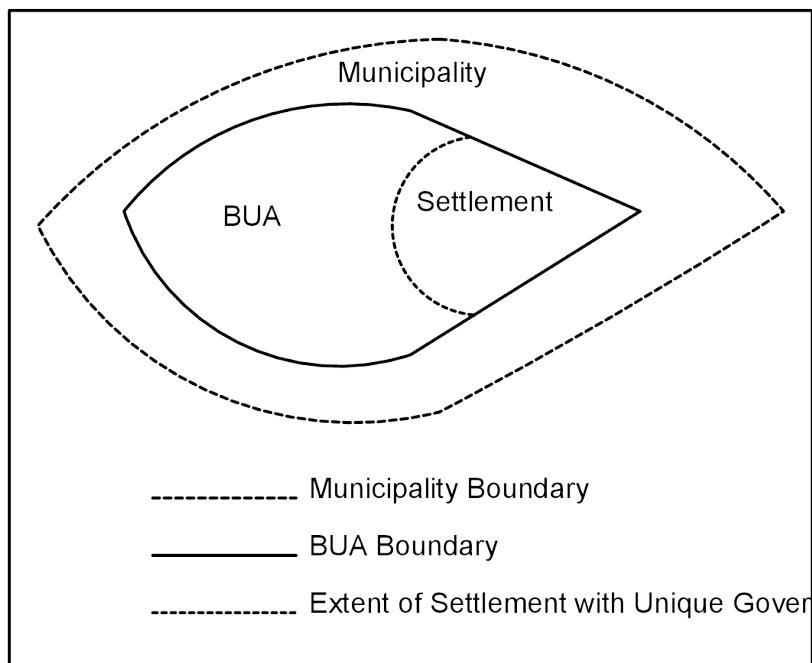
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- A separate Built-up Area Polygon is not created for settlements whose built-up area is completely within the built-up area of the municipality. See [Figure 51:](#) on page 113.
- A built-up area polygon is not included for any synonym names.

**Figure 51:**



## Prime Inclusion

A built-up area polygon is included for every settlement that has settlement level coding, with one exception. When the built-up area of a settlement is completely within the built-up area of the municipality, only one built-up area polygon with the name of the municipality is included.

For example, even though settlement level coding is included for Stuttgart, the settlements are within the built-up area of the municipality of Stuttgart. There is only one built-up area polygon with the name of Stuttgart. Note: This is an exception to the inclusion rule of 250.000 metres.

## Network

A built-up area polygon is included for every settlement that is included, except when the houses are scattered.

## 3.7.6 Cartographic Settlement Boundary

Cartographic Settlement Boundary polygons (Feature Type 908003) are contained in the LandUseA layer.

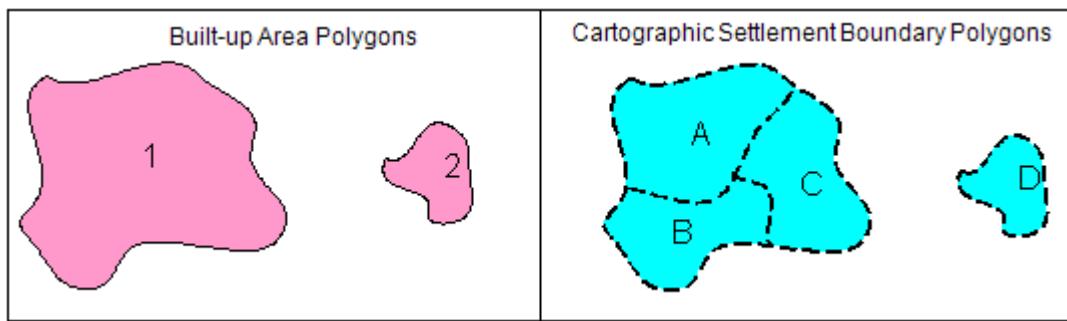
A Cartographic Settlement Boundary is a cartographic feature representing a neighbourhood area. This is included only in Colombia. In urban areas, Cartographic Settlement Boundary polygons, are contained within a Built-up Area polygon. In areas where Cartographic Settlement Boundary data is available, a Built-up Area polygon may contain one or more Cartographic Settlement Boundary polygons. For example, in [Figure 52:](#) on page 114, Built-up Area 1 contains Cartographic Settlement Boundaries A, B, and C. Built-up Area 2 contains only Cartographic Settlement Boundary D.

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**Figure 52:**



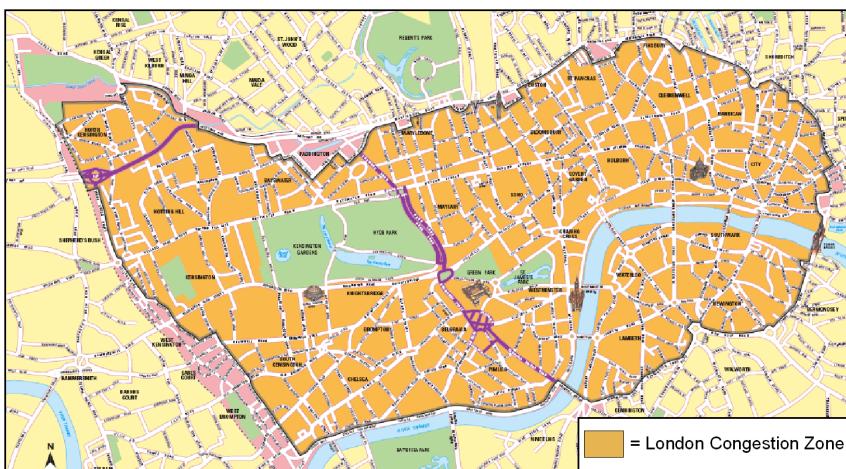
Cartographic Settlement Boundary data in non-urban areas is not available at this time.

### 3.7.7 Congestion Zone

Congestion Zone polygons (Feature Type 997004) are contained in the LandUseB layer.

A Congestion Zone is a cartographic feature representing the boundaries of a congestion zone. See [Figure 53: on page 114](#) and [Figure 54: on page 115](#).

**Figure 53:**



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**Figure 54:**



## 3.7.8 Environmental Zone

Environmental Zone identifies an area where access to traffic is limited and defined based upon specific environmental criteria. It can be used in route calculation and for map display.

- Environmental Zone in a city or area is always provided with a corresponding Environmental Zone (9997010) polygon.

When an Environmental Zone applies to a stretch or road only, for example a highway or part of a highway, an Environmental Zone polygon (9997010) is not published.

- A fee may exist in an Environmental Zone to override the restriction allowing access to vehicles that do not conform to the environmental criteria defined for the zone. Fee or charge information, however is not provided as part of the Environmental Zone content.
- Only permanent Environmental Zone areas that apply at predefined times are included. Environmental zones activated by local authorities based on real time environmental condition in the area are not published.
- Links inside an Environmental Zone are coded with Environmental Zone condition (Condition Type = 34). See Section [Environmental Zone](#) on page 600.

## 3.7.9 Hurricane/Flood/Tsunami Prone Areas

### Hurricane Prone Area

Hurricane Prone Area polygons (Feature Type 600101) are contained in the RiskArea layer.

Hurricane Prone Area polygon identifies areas subject to the same severity rating risk in case of hurricane.

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The Hurricane Prone Area feature type polygon can be used for map display to highlight areas subject to a specific hurricane risk level. Hurricane Risk Area polygons are usually related to a corresponding evacuation phase.

- Hurricane Prone Area polygon can only exist on land mass.
- Polygon name is included if present on governmental sources.

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- One or more polygon is included to represent areas subject to hurricane risk as in *Figure 55:* on page 118 below.

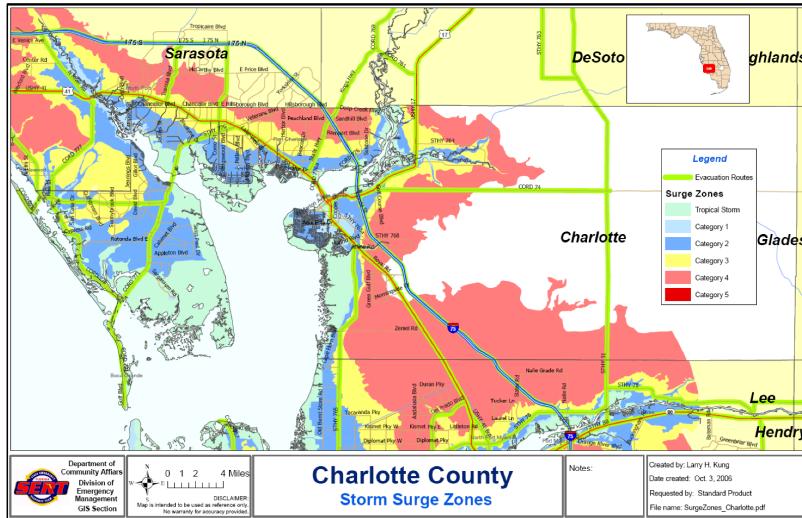
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Figure 55:



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### Flood Prone Area

Flood Prone Area polygons (Feature Type 600102) are contained in the RiskArea layer.

Flood Prone Area polygon identifies areas subject to the same severity rating risk in case of flooding.

The Flood Prone Area feature type polygon can be used for map display to highlight areas subject to a specific flood risk level. Flood Risk Area polygons are usually related to a corresponding evacuation phase.

- Flood Prone Area polygon can only exist on land mass.
- Polygon name is included if present on governmental sources.

### Tsunami Prone Area

Tsunami Prone Area polygons (Feature Type 600103) are contained in the RiskArea layer.

Tsunami Prone Area polygon identifies areas subject to the same severity rating risk in case of tsunami.

The Tsunami Prone Area feature type polygon can be used for map display to highlight areas subject to a specific flood risk level. Tsunami Risk Area polygons are usually related to a corresponding evacuation phase.

- Tsunami Prone Area polygon can only exist on land mass.
- Polygon name is included if present on governmental sources.

## 3.7.10 Glacier

Glacier is a cartographic feature representing a large mass of ice created from accumulating snow that melts and moves slowly across a surface of land or through a valley.

- Only glaciers greater than 10,000 metres<sup>2</sup>/108,000 feet<sup>2</sup> are included.
- Only one glacier polygon is published as outline formation to represent a particular glacier.

## 3.7.11 Parking Lots

Parking Lot polygons (Feature Type 1700215) are contained in the LandUseA layer.

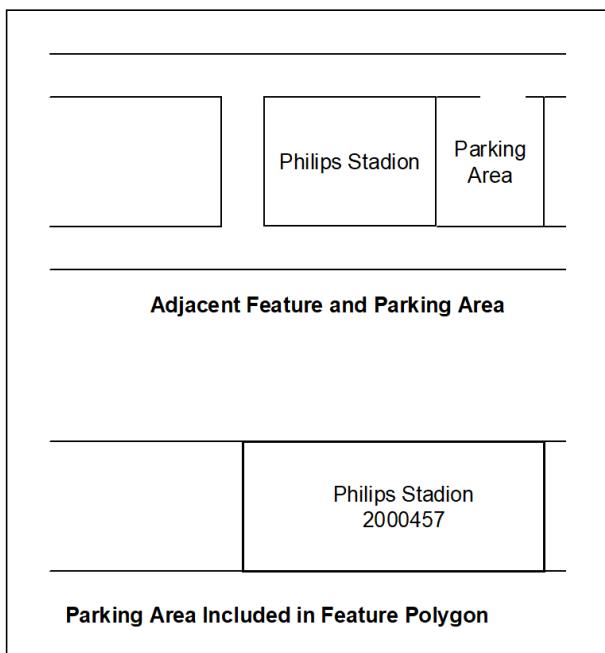
When a parking lot is adjacent to a feature, the parking lot is included within the boundary of the polygon, as shown in *Figure 56*: on page 120.

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**Figure 56:**



In Europe, parking lot is included in the measurement of the polygon for size inclusion.

In North America, parking lot is not included in the measurement of a cartographic feature. For example, when measuring a shopping mall to determine size inclusion, only the size of the buildings is measured. The parking area is not included.

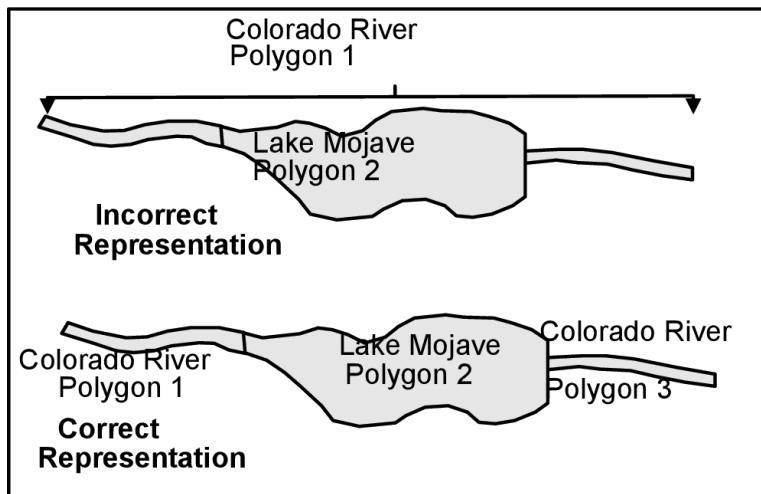
## 3.7.12 Hydrography

A waterway is represented until it becomes permanently thinner than the width for linear water inclusion rules.

Water Feature Types do not share geometry with Road Network or Railroad features.

In Network, when the area of a set of water bodies combined is greater than 1 million metres<sup>2</sup>/10,800,000 feet<sup>2</sup>, individual lakes or ponds are included and are digitised as a separate water feature when the area is at least 100.000 metres<sup>2</sup>/1.080.000 feet<sup>2</sup>.

Water polygons (except Oceans) do not overlap. See [Figure 57:](#) on page 121.

**Figure 57:**

### 3.7.13 Oceans

Oceans follow the edge of the land. If, however, there is another water feature which extends past the land, the ocean is represented using the outer link of the water feature. This occurs only for water features that are included as separate features based on the inclusion sizes, such as a bay or a harbour. See [Figure 58:](#) on page 122 and [Figure 59:](#) on page 123.

#### Geometry

- Oceans are represented as polygonal features. For additional information, refer to Polygon Formation section.
- The ocean polygons overlap in order to create a more aesthetically pleasing display. This overlap exists when databases are merged. See [Figure 60:](#) on page 123 and [Figure 61:](#) on page 124.
- When two countries are less than 200 kilometres apart, the Ocean geometry is coincident with the other country's landmass. In these cases it is necessary to exactly 'match' the Ocean geometry with the landmass from the opposing country. Example: The ocean (Nordsee) between the Netherlands and the UK.

**Note:**

Matching means 'node on node' and 'shape on shape'. The nodes and shapes along the shoreline should be *Aligned* = N.

- Nodes are added at Ocean boundaries whenever ocean polygons overlap or a ferry crosses an Ocean polygon.

**Note:**

Nodes are added in all cases, also when the Ocean or ferry from an 'opposing' country is crossing.

- As a guideline, the ocean polygon extends 200 kilometres out from the land to create a sensible display.
- The ocean polygons are full formation around all islands.
- Ferry routes are extended to the midpoint of the ocean polygon overlap between the two countries. The ferries are edgematched and set to *Aligned* = Y.

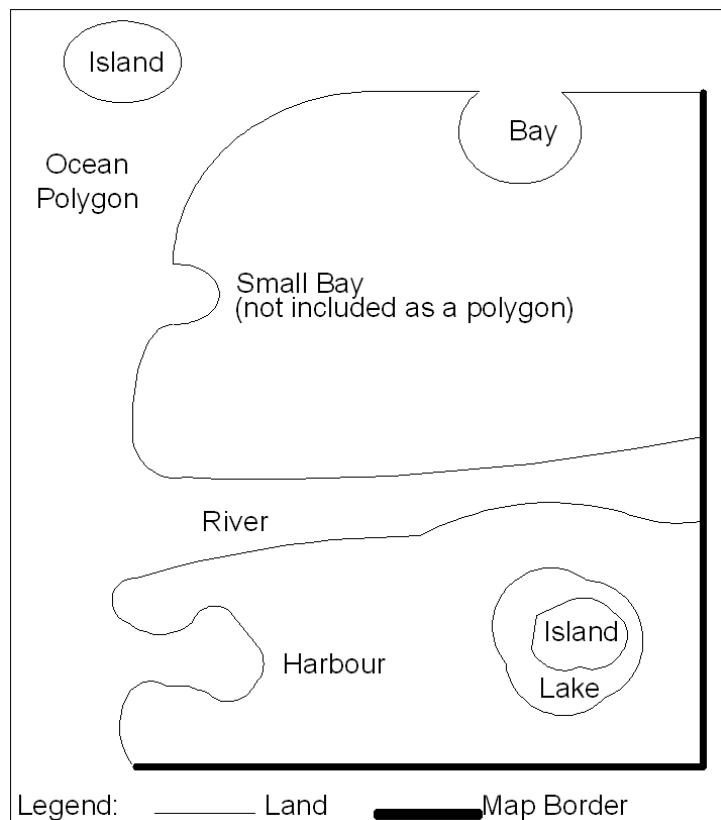
# Reference Guide

Geometric Representation

3.7 Cartography

- To improve map display of the country boundary in Italy, large bays are represented with the *Feature Type* = 0500116 (Ocean). For example Golfo di Taranto in the South of Italy.

**Figure 58:**

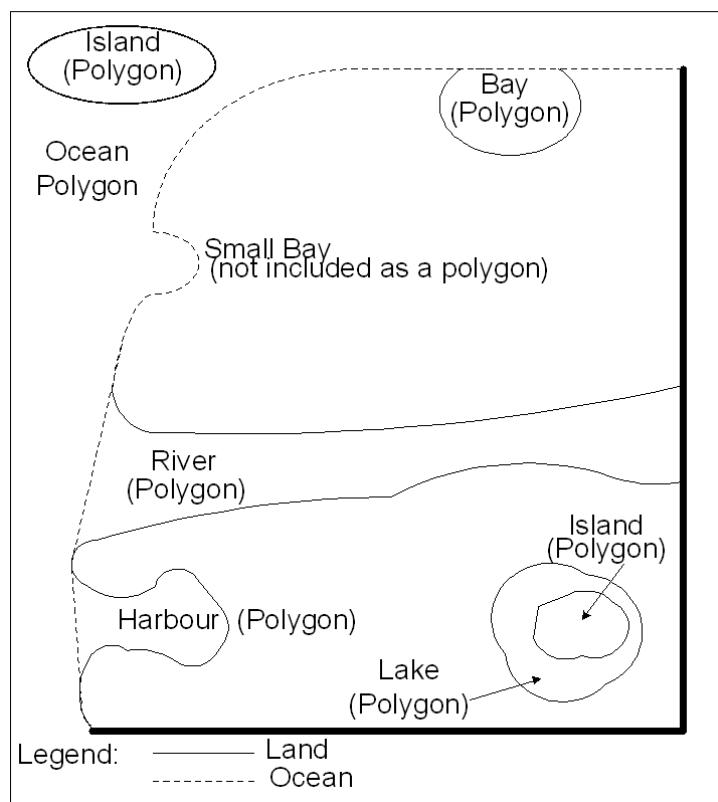


# Reference Guide

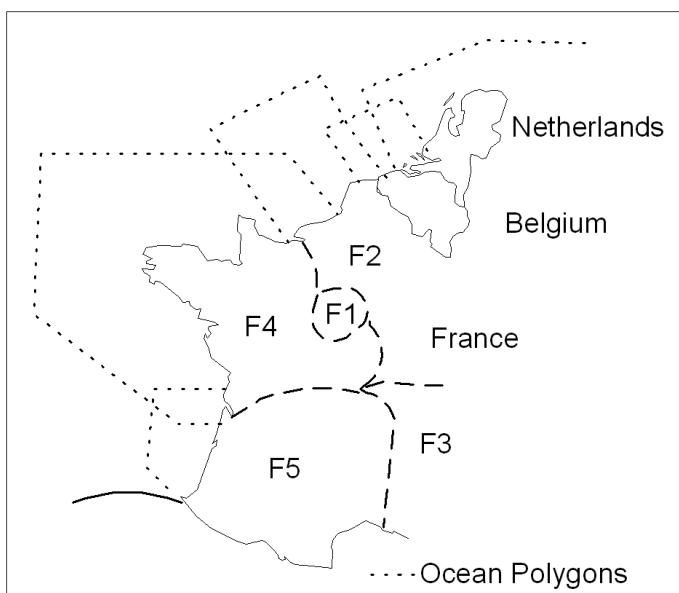
Geometric Representation

3.7 Cartography

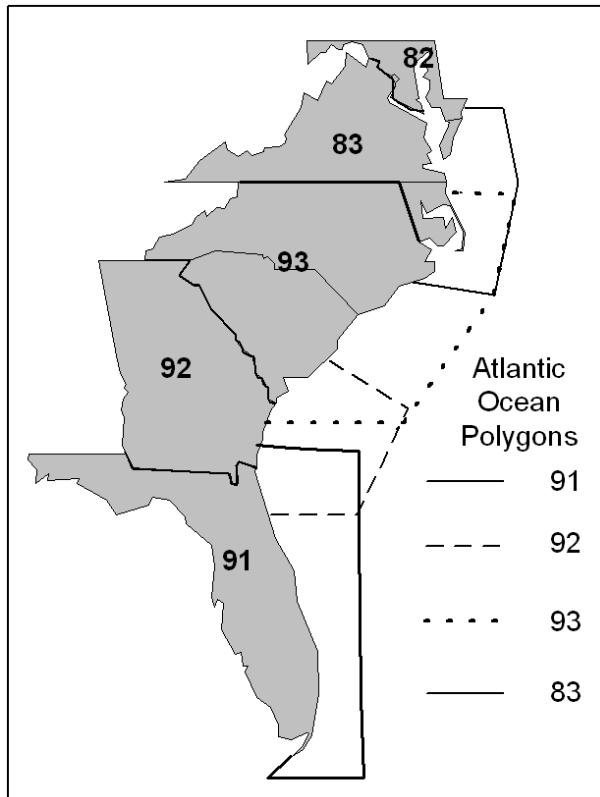
**Figure 59:**



**Figure 60:**



**Figure 61:**



## 3.7.14 Rivers

River polygons and segments (Feature Type 500412) are contained in the WaterWys layer (MapInfo) and the WaterSeg layer (Shapefile).

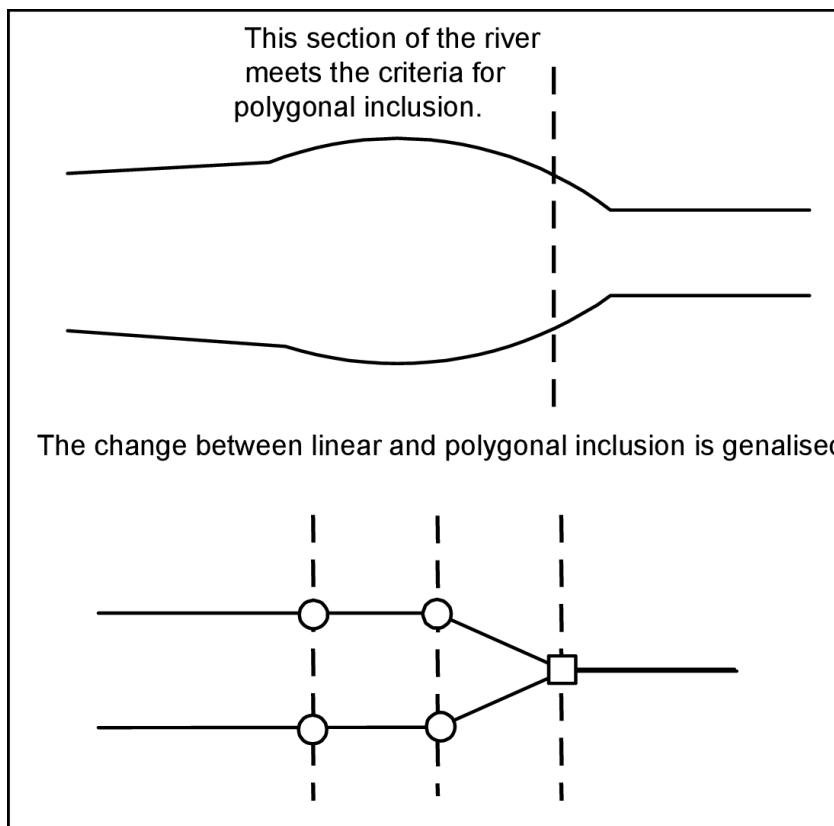
Rivers are digitised as centerline when they meet the linear inclusion rules. Rivers may become wide enough in places to be represented as polygons. The transition between linear and polygonal representation is digitised at an angle (as a gradual change) and is completed within 25 metres/82 feet of the point where the river's width changes, as shown in [Figure 62](#): on page 125. The general trend of the river is digitised as linear or polygonal based on the overall trend of the river. See [Figure 63](#): on page 125.

## Reference Guide

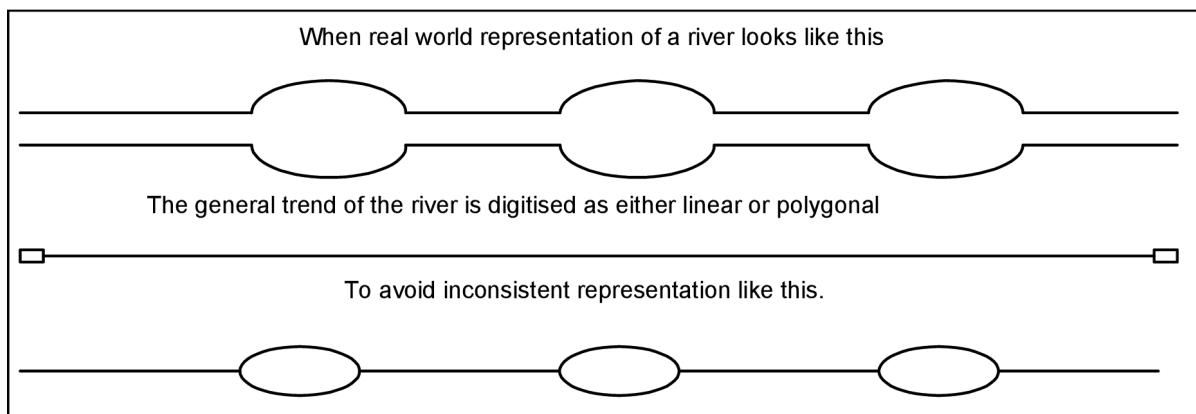
Geometric Representation

3.7 Cartography

**Figure 62:**



**Figure 63:**



### 3.7.15 Intermittent Rivers

Intermittent Rivers (Feature Type = 0500413) are contained in the WaterWys layer (MapInfo) and the WaterSeg layer (Shapefile).

### 3.7.16 Beach Polygons

Beach polygons (Feature Type = 0509998) are contained in the LandUseA layer. They represent the following:

- All sandy areas along ocean coastlines as well as any connecting bay/harbours.

## Reference Guide

Geometric Representation

3.7 Cartography

- All sandy areas along the shores of lakes that receive Long Haul = Y.

### General Guidelines:

- All beaches are included regardless whether they are public or private.

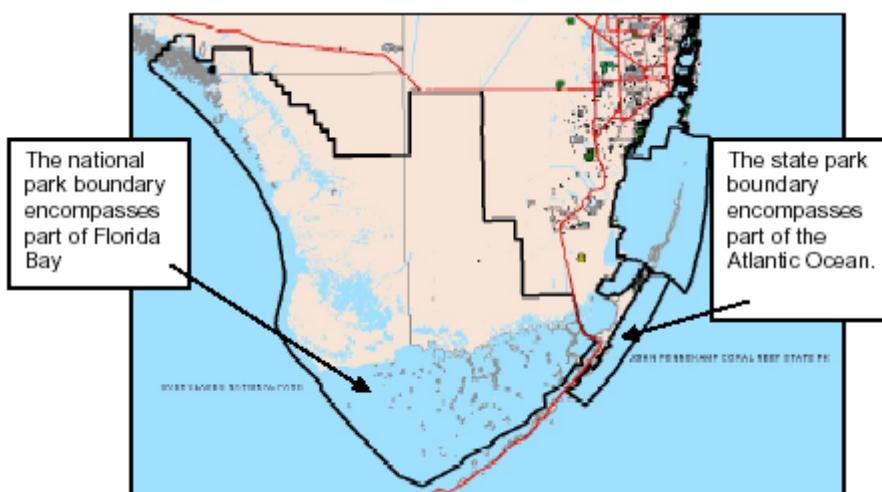
 **Note:** This feature is intended for map display only and no corresponding POI is added.

## 3.7.17 Parks

### Park in Water

Park in Water polygons (*Feature Type* = 900140) are contained in the LandUseA layer. They represent National, State, County or City park boundaries that encompass whole or partial water features. See [Figure 64:](#) on page 126 for example of Everglades National Park.

**Figure 64:**



*Park in Water* polygons may exist without a corresponding park on land polygon. This occurs when a park consists of water only.

The size inclusion for the park polygon is the total size of both the park on land and the park in water polygons.

### General Guidelines

- When a park is partly in water and partly on land, two separate polygons are included; one polygon representing the park on land (*Feature Type* = 0900103, 0900130, or 0900150), and one polygon representing the *Park in Water* (*Feature Type* = 0900140). The *Feature Names* of the park on land and the park in water are the same in these cases.
-  **Note:** Park in Water polygons are applied to water features when the water feature is fully contained within a park on land boundary. For example, Yellowstone Lake in Yellowstone National Park does not have a Park in Water polygon.
- Ocean polygons are not full formation around Park in Water polygons. However, Park in Water polygons are full formation around all islands within the Park in Water polygon.
- Z-levels are applied when a ferry crosses the Park in Water boundary.

## Reference Guide

Geometric Representation

3.7 Cartography

- Park in Water polygons do not overlap. In cases where a Park in Water polygon is split between two regions, the Park in Water boundary in one region is edge matched to the Park in Water polygon in the other region.
- The name of the Park in Water polygon matches the name of the park on land if they are representing the same park.

### 3.7.18 Railroads and Railroad Yards

Railroad tracks are digitised as centrelines. Railroad yards are generalised to include the main track in and out of the railroad yard and approximately every third track in the yard. If more than one main line track runs outside of a railroad yard, the centreline of the track bed is digitised.

### 3.7.19 Water Boundary

Water Boundary (Feature Type = 9997021) represents an administrative border on water, which is required from a legal perspective in a country. It demarcates an official boundary between the two administrative areas that extends into the water as per the local governments. See [Figure 65:](#) on page 128.

- Water Boundary is coded only on water features. It is currently coded in selected countries only.
- Water Boundary is coded with the Default Language Code of the country.
- Water Boundary is not coded with Disputed Boundaries.

### 3.7.20 Cartographic Features at the Prime Inclusion Edge

During database creation, a polygonal feature such as a city, lake, or park may not be fully contained in the Prime Inclusion scope. In these situations, the polygon is completed across the Prime Inclusion boundary, as shown in [Figure 66:](#) on page 128. All links added on the Network side are coded *Detailed City* = Y. Polygonal rivers may become linear when crossing from Prime Inclusion to Network due to representation rules.

## Reference Guide

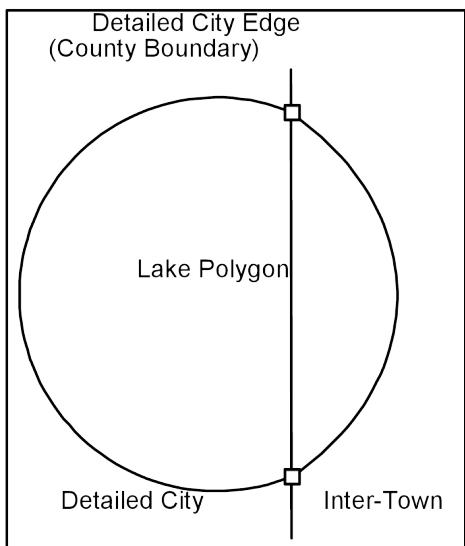
Geometric Representation

3.8 Matching Links and Nodes between Databases

**Figure 65:**



**Figure 66:**



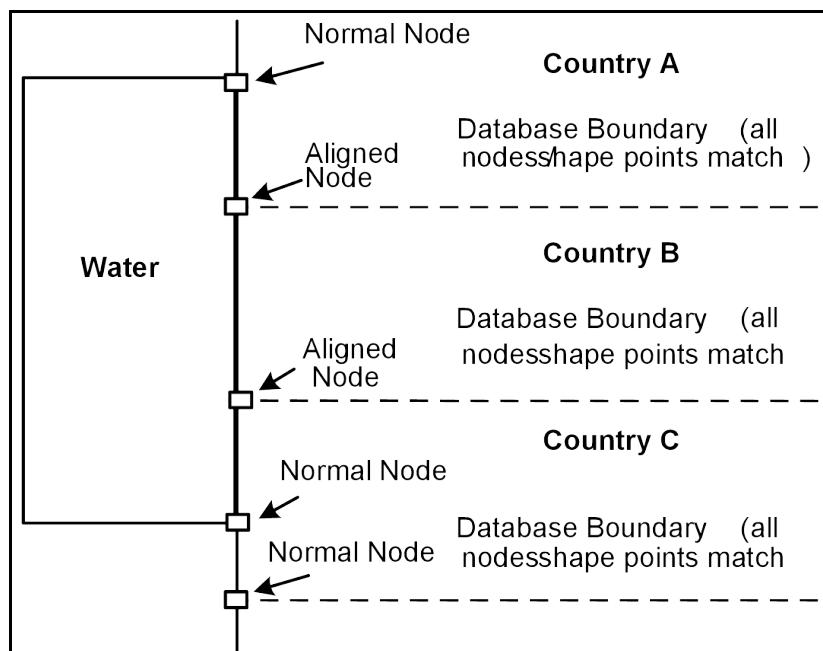
## 3.8 Matching Links and Nodes between Databases

The following rules apply to geographically matching links and nodes between databases:

## 3.8.1 Geometry

- All nodes and shape points along a coincident link match so there is an equal number of links and sub-links between databases. *Aligned* applies to all nodes and shape points that have been matched between touching databases. Nodes only match to other nodes and shape points only match to other shape points. While the links, nodes, and shape points are duplicated between touching databases, the features represented are not duplicated. Only ocean polygons may overlap between databases. *Aligned* is not set where ocean polygons overlap or when an ocean is coincident with another countries land mass (distance between 2 countries < 200 kilometres).
- Z-Level coding is consistent across database boundaries to ensure connectivity when databases are merged within the same quarter.
- The nodes and shape points of the ocean links are not set to *Aligned*, but they match the shoreline and islands exactly. *Aligned* applies to the nodes and shape points of the adjacent databases as if the ocean were not present. See [Figure 67: on page 129](#).

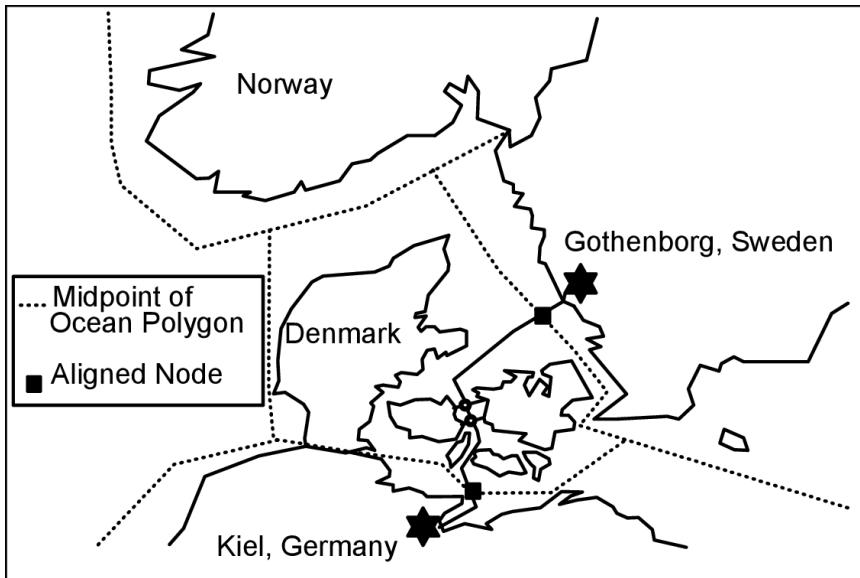
**Figure 67:**



- Aligned* is used where ferries intersect between neighbouring databases. In order to avoid overlapping ferry routes in ocean polygon overlap areas, the ferry routes, in most cases, should not terminate at the

perimeter of the ocean polygon. The ferry routes meet at a logical midpoint of the overlapping ocean area, as shown in [Figure 68](#): on page 130 below.

**Figure 68:**



### 3.8.2 Linear Features

- Road features coincident with a database boundary do not exist in both databases. However, the link exists in both databases. One database is picked at random for representing the road feature. In [Figure 69](#): on page 131, Road A runs partly on the border in both databases. That part of the road is only represented in Database 1.
- The only linear features duplicated between databases are administrative boundaries. For example, in reality there is one administrative boundary between the states of California and Oregon but these states are in 2 different databases. The boundary link exists in both databases but the administrative features are split respectively: "California" and "Siskiyou" are included as the administrative features on the boundary for Database 1 containing California, and the features "Oregon" and "Jackson" are only included in Database 2 containing Oregon.

## Reference Guide

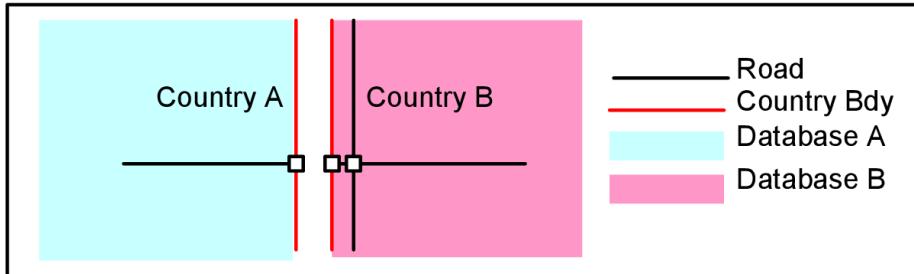
Geometric Representation

3.8 Matching Links and Nodes between Databases

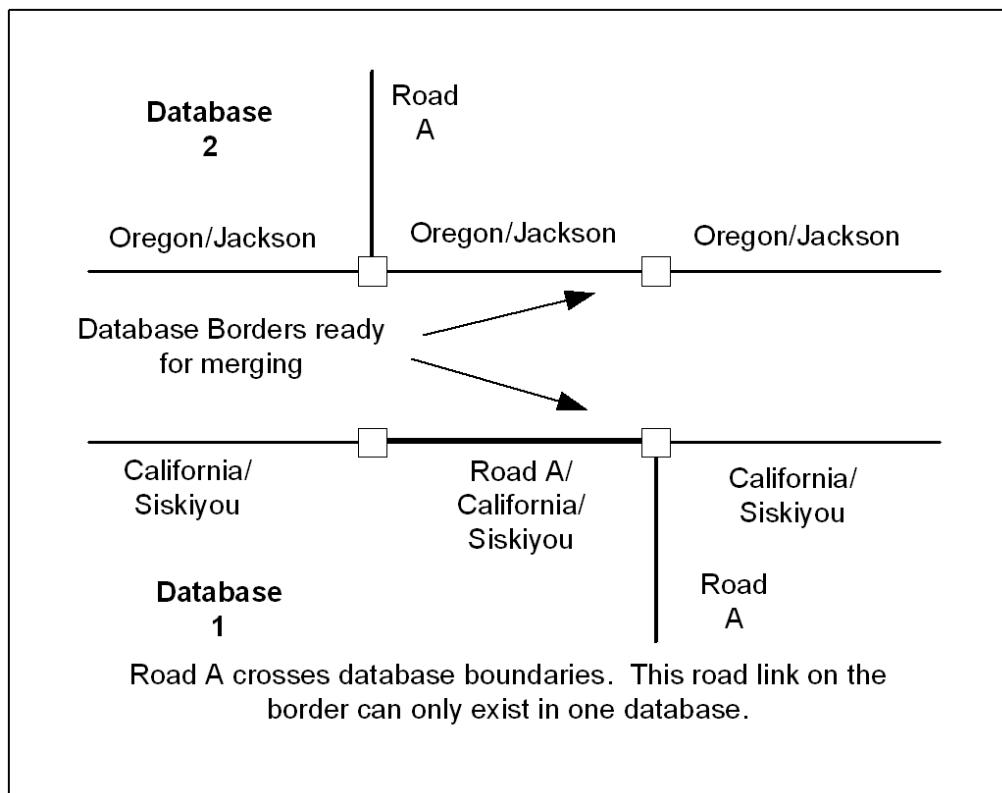
here

- A road and a country feature cannot coincide with each other. The link is digitised separately from the country boundary. See [Figure 70: on page 131](#).

**Figure 69:**



**Figure 70:**



### 3.8.3 Polygons

- If a polygon crosses database borders then two separate polygons exist, one in each database.
- If a database boundary is defined by an administrative boundary that runs down the middle of a river polygon, then the river is split, one polygon in each database, for example, the Rhine River between France and Germany.

### 3.8.4 Administrative Area Coding

- On country borders, the appropriate administrative information is applied per side of the border. This is also true when a country is fully contained within another country. For example, Monaco is fully contained within France.
- On non-country database borders the appropriate administrative coding is applied to each side. This means that even in the Oregon database, there is coding for California that represent administrative areas on the border. However, there is no any corresponding polygonal or linear features (as explained above) for these features.

### 3.8.5 Other

- Other attributes such as Feature Name, Direction of Travel, Access Characteristics, etc., are consistent across databases.

# Chapter 4

## Installation

---

**Topics:**

- *Shapefile*
- *MapInfo*

## 4.1 Shapefile

### 4.1.1 Overview

This chapter provides the instructions for installing NAVSTREETS data, coverage area, documentation, and custom symbols in ArcView GIS 3.2.

Note that the colour display setup on your system should be set to 24 bit RGB colour to ensure that your system will display the data (boundaries, highways, etc.), using the database's preset standard colours (the technical descriptions in Chapter 3 list the standard colours for each layer).

### 4.1.2 Installation Procedure

The product has been shipped as a GZipped collection of shapefiles, using standard NAVSTREETS design.

The delivery mode for NAVSTREETS Shapefile is a GZipped TAR archive with the following content:

- Map layers (Shape), with corresponding index and attribute files.
  - Shapefiles will be included only if they contain geometric data.
  - Data tables are included only as database format files (\*.DBF); empty shapefiles for non-spatial content (e.g., metadata and condition tables) are not created.
- Project file (.MXD).
- Separate directory with Icon files.
  - ① **Note:** The provided Icon files only work with Shapefile, and are not ArcGIS compatible.
- Projection File (.PRJ) is generated for each map layer for the NAVSTREETS Shapefile product. This eliminates the need to add a projection file for each layer.

## 4.2 MapInfo

### 4.2.1 Overview

This chapter provides the instructions for installing NAVSTREETS data, coverage area, documentation, and custom symbols in MapInfo Professional. These instructions assume that you already have MapInfo Professional (version 6 or higher), installed on your system.

Note that the colour display setup on your system should be set to 24 bit RGB colour to ensure that your system will display the data (boundaries, highways, etc.), using the database's preset standard colours (the technical descriptions in Chapter 3 list the standard colours for each layer).

### 4.2.2 Installation Procedure

The product has been shipped as a GZipped collection of Tab files, using standard NAVSTREETS design.

The delivery mode for NAVSTREETS MapInfo is a GZipped TAR archive with the following content:

- Map layers (Tab), with corresponding index and attribute files.
- Workspace files (.WOR).
- Separate directory with Icon files.

# Chapter 5

## NAVSTREETS Layers

---

Topics:

- *Shapefile/MapInfo*
- *Road Features and Associated Navigation Information*
- *Points of Interest*
- *Administrative Areas and Other Cartography*
- *Metadata*

# Reference Guide

NAVSTREETS Layers

5.1 Shapefile/MapInfo

here

## 5.1 Shapefile/MapInfo

This section describes the NAVSTREETS layer for Shapefile and MapInfo.

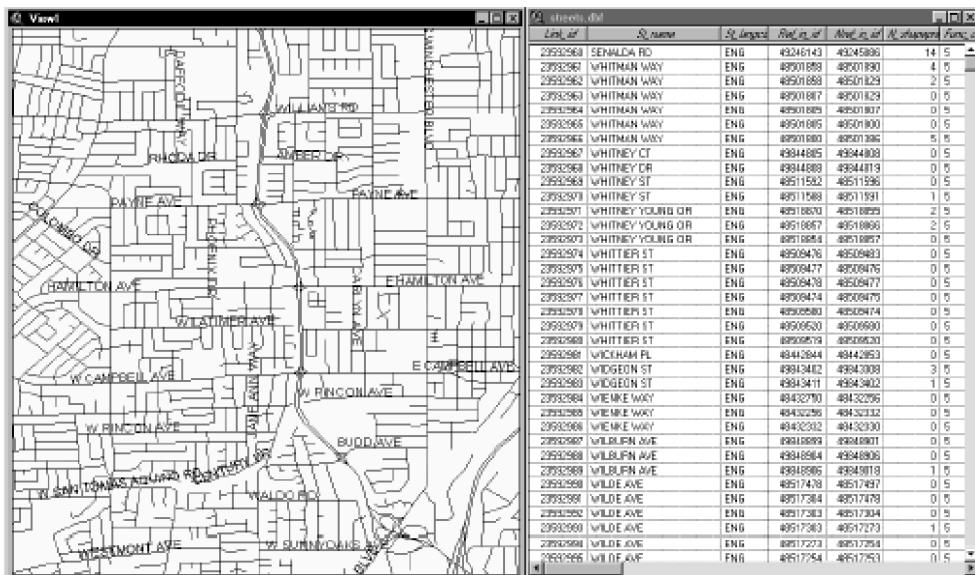
## 5.2 Road Features and Associated Navigation Information

### 5.2.1 Streets

The Streets layer contains all roads plus all Road Network features such as direction of travel, dividers, speed category, and access restrictions. This layer is suitable for routing applications, as it represents the complete navigable road network. For intersection-driven routing applications, the Z Levels layer can also be used to establish roadway connectivity. This layer contains address ranges for all addressable lines and polylines in the Streets layer, and is used primarily for geocoding. NAVSTREETS provides Addresses for each end and each side of a line or polyline. “From” addresses correspond to the “Reference” end of the line or polyline, and “To” addresses correspond to the “Non-Reference” end of the line or polyline.

#### Shapefile

**Figure 71:**



#### MapInfo

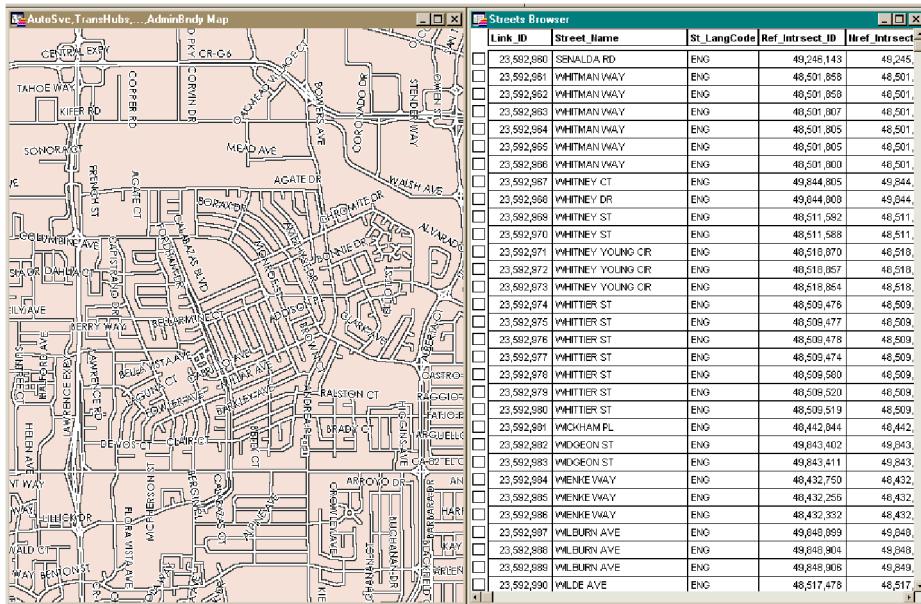
# Reference Guide

NAVSTREETS Layers

5.2 Road Features and Associated Navigation Information

here

Figure 72:



## 5.2.2 Alternate Street Names and Addresses

The Alternate Street Address table is used to publish alternate road names and address information for Street Links. Some Street Layer entries will have a corresponding Alternate Street Address layer entry. Alternate Street Names are sign-posted in reality, but they are not the most commonly used (sign-posted) name. The most commonly used (sign-posted) name is published in the Streets layer.

The Alternate Street Address table is also used to publish alternate route type information for links that have more than one route type associated with them. In these cases, one route type is published in the Streets layer and the remaining route types is published in the Alternate Street Address layer.

Geometric representation is published in the Alternate Streets layer to provide improved support for cartography and labeling of the data represented within it. Duplicate geometry exists between the AltStreets and the Streets layers, thus the AltStreets layer is intended for display and geocoding purposes only.

## 5.2.3 Street Trans Layer

① **Note:** This layer appears in MapInfo, but is unpopulated.

The Street Trans layer provides transliteration support for Street Names as published in the Streets or Alternate Street Names and Addresses layers.

The Street Trans layer relates the transliterated street names to the Streets or AltStreets layer via the Feature ID field. The Feature ID is a unique identifier for a Street Name. Therefore, the Streets Trans layer publishes distinct Street Name transliterations, and many Streets or AltStreets entries can use one Streets Trans layer entry.

Only the Base Name and Street Name are transliterated in the Streets Trans layer. The Street Type, Prefix and Suffix are transliterated via the Metadata Reference (MtdRef) layer.

## Reference Guide

NAVSTREETS Layers

5.2 Road Features and Associated Navigation Information

The Transliterated Street Type position and attached information is defined in the fields Street Type After and Street Type Attached.

The Transliteration Type is applicable to all transliterated names in the Streets Trans layer.

An entry is only generated in the Street Trans layer when a transliteration is required. This implies that for Latin-1 regions the Street Trans layer is empty.

### Street Type

The Street Types are transliterated using the Metadata Reference layer (MtdRef).

The Transliterated Street Type position and attached information is defined in the fields Street Type After and Street Type Attached.

## 5.2.4 Street Type Translations

The Street Type Translations (StrTypeTr) layer relates the translated street types to the Streets or AltStreets layer via the Feature ID field. The Feature ID is a unique identifier for a Street Name. Therefore, the Street Type Trans layer publishes distinct Street Type translations, and many Streets or AltStreet entries will refer to a single StrTypeTr layer entry.

This additional table will be delivered only if Street Type Translations are published in a given product region. The StrTypeTr table is delivered with:

- Bahrain, Egypt, Hong Kong, Jordan, Kuwait, Lebanon, Macau, Morocco, Oman, Qatar, Saudi Arabia, Thailand and United Arab Emirates.

## 5.2.5 Major Highways

The Major Highways layer contains Road Network features based on the “Functional Class” value on each link present in NAVSTREETS. This layer contains all links that have a Functional Class value of either “Level 1” or “Level 2”. The Functional Class of a highway defines the network used to determine a logical and efficient route for a traveller.

Functional Class Level 1 roads are those with very few (if any), speed changes, typically controlled access, and provide high volume, maximum speed movement between and through major metropolitan areas.

Functional Class Level 2 roads are those with very few (if any), speed changes, and provide high volume, high speed traffic movement. They are typically used to channel traffic to (and from) Level 1 roads.

The Major Highways layer is used for map visualisation.

## 5.2.6 Secondary Highways

The Secondary Highways layer contains Road Network features based on the “Functional Class” value on each link present in NAVSTREETS. This layer contains all links that have a “Functional Class” value of 'Level 3' and 'Level 4'. Functional Class 3 roads interconnect Level 2 roads and provide a high volume of traffic movement at a lower level of mobility than Level 2 roads. Functional Class 4 roads provide for a high volume of traffic movement at moderate speeds between neighbourhoods.

The Secondary Highways layer is used for map visualisation.

## Reference Guide

NAVSTREETS Layers

5.2 Road Features and Associated Navigation Information

### 5.2.7 Major Highway Shields

The Major Highway Shields layer contains the shield icons for Major Highways. These shields are used in conjunction with the Major Highways layer to identify the route number and distinguish a major highway from a different type of highway. The Major Highway Shields layer is used for map visualisation. This layer is currently only applicable to North American databases.

### 5.2.8 Secondary Highway Shields

The Secondary Highway Shields layer contains the shield icons for Secondary Highways. These shields display above the Secondary Highways layer to identify the route number, and distinguish a secondary highway from a different type of highway. The Secondary Highway Shields layer is used for map visualisation. This layer is currently applicable only to North American databases.

### 5.2.9 Signs

The Signs layer contains highway entrance and exit signage. This layer is primarily used for route guidance.

### 5.2.10 Distance Marker

The Distance Marker Layer contains distance marker signage. This layer can be used for route guidance, destination selection and location referencing.

Distance Markers include markers expressed in miles or kilometres. Distance Markers are only expressed on named roads.

Distance Markers are sequentially numbered markers placed along roads at regular intervals that serve as reference location signs.

### 5.2.11 Condition/Driving Manoeuvres

The Condition/Driving Manoeuvres layer contains information about different condition types that exist on the source link that prohibit navigation from one navigable line or polyline object (source link) to another (e.g. a restricted driving manoeuvre (no left turn), an access restriction (carpool vehicles only), or a seasonal road closure). This layer is used for route calculation.

### 5.2.12 Condition/Driving Manoeuvres - Date/Time Modifiers

The Condition/Driving Manoeuvre - Date/Time Modifiers layer contains information about the time period when a Condition/Driving Manoeuvre is in effect. This layer is used for route calculation in conjunction with the Condition/Driving Manoeuvres layer.

## Reference Guide

NAVSTREETS Layers

5.2 Road Features and Associated Navigation Information

### 5.2.13 Condition Modifiers

The Condition Modifiers layer contains information about Gates, Direction of Travel, Restricted Driving Manoeuvres, Access Restrictions, Special Speed Situations, Variable Speed Signs, Traffic Signs and Sign Locations, Railway Crossings, Toll Structures, Usage Fee Required and Evacuation Routes.

### 5.2.14 Lane Condition/Driving Manoeuvres

The Lane Condition/Driving Manoeuvre layer contains information about different condition types that exist on the source lane. This layer is used for route calculation.

### 5.2.15 Lane Connectivity

The Lane Connectivity layer publishes the Lane involved in a Lane Condition in case of multi-Link condition such as Lane Traversal Conditions and Toll Structure conditions.

### 5.2.16 Restricted Driving Manoeuvres - Manoeuvre Links

The Restricted Driving Manoeuvres - Manoeuvre Links layer contains information about all the manoeuvre links associated with a Restricted Driving Manoeuvre. This layer is essential when working with a Restricted Driving Manoeuvre that includes multiple links (e.g. an access restriction that applies to more than one link when calculating a route). This layer is used for route calculation in conjunction with the Condition/Driving Manoeuvres layer.

### 5.2.17 Z-Levels

The Z-Levels layer contains relative vertical positions for all points represented by polylines, lines, points, and regions. Valid values for Z-Levels range from -4 to +5. Points at grade are represented by 0. No inference of actual elevation can be made based on these values. This layer is used for route calculation and vehicle positioning. This layer also assists with the development of routing applications that are intersection driven (intersections that are used in the Streets layer).

 **Note:**

Z-Levels are only represented for road segments in NAVSTREETS.

### 5.2.18 Traffic

The Traffic layer contains traffic codes for select navigable links used within NAVSTREETS.

### 5.2.19 Lane

The Lane layer is used to define a Lane with the lane attribution corresponding to Lane Marking content. Specific attribute fields are added to the Lane layer to enable Lane specific attribution. The attribute specified in the Lane layer only apply to the lane defined in the Lane Number field.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

here

### 5.2.20 Condition File Association

The Condition File Association layer is used to associate data published in external files (provided as look-along data to NAVSTREETS) to the corresponding Condition / Driving Manoeuvre layer (Cdms). The Condition File Association is connected to the Condition / Driving Manoeuvre layer via the Condition\_ID (Cond\_ID).

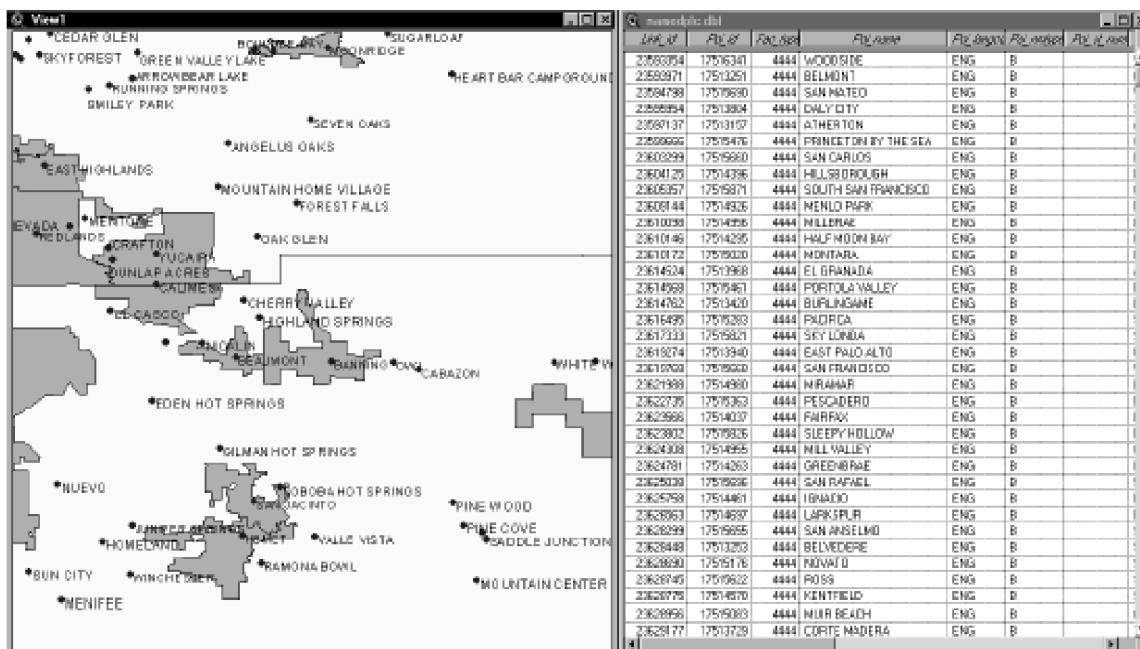
## 5.3 Points of Interest

### 5.3.1 Named Places

The Named Places layer contains the names of populated areas within a NAVSTREETS coverage area (e.g. all US cities, towns, or villages). In Europe, there are named places for all municipalities, and all other settlements that are over 200,000m<sup>2</sup>. The location of a named place is usually a city centre, or a main point such as a city hall, police station, or library. The Named Places layer is especially useful for calculating routes to a non-specific location (e.g. London to Paris).

Shapefile

Figure 73:



MapInfo

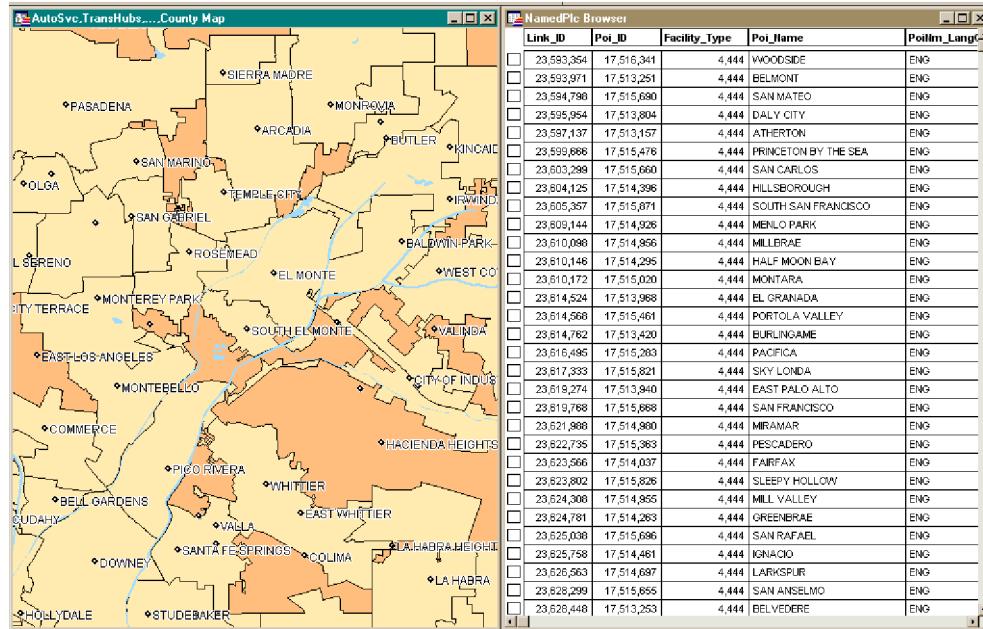
# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

here

Figure 74:



## 5.3.1.1 Named Place

### Feature Code

4444

### Definition

Populated named places.

### Inclusion

- A Named Place POI is placed on a link that is located in the centre of the area it represents: either an Administrative Area (i.e., City/Municipality or Settlement), or Zone (e.g., KD, KA, etc.). Generally, the link is open for autos at all times in both directions and is a Functional Class 1-4 link.
- A Named Place POI may be placed on a link flagged as In Process Data = Y.
- Europe

All settlements and cities.

- If there is a settlement and a city with the same name (e.g., Berlin), only one Named Place is published.
- If the lowest and second lowest administrative levels have the same name and are the same feature, the Named Place POI will reference the second lowest administrative level.

This only applies to countries that have Settlements as an administrative level.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- Canada

All municipalities, settlements, and Indian reserves.

- If the lowest and second lowest administrative levels have the same name and are the same feature, the Named Place POI will reference the second lowest administrative level.

① **Note:** This only applies to countries that have Settlements as an administrative level.

- U.S.

- All cities and zones.

① **Note:** There are cases where a zone does not have a Named Place POI (e.g., O'Hare).

- All unincorporated cities where *Vanity City ID* is applied.

### Phone Number

Not Included

## 5.3.1.2 Neighbourhood

### Feature Code

9709

### Definition

A Neighbourhood is a centre point for a Neighbourhood Zone.

### Specification

- Neighbourhood POI is included for the following:
  - A community officially recognised by the municipality.
  - Housing development (i.e., subdivision) meeting the above definition.
- Each Neighbourhood POI corresponds to a Neighbourhood Zone and a Neighbourhood cartographic feature.
- A Neighbourhood POI is not published if there is an existing place (e.g., a place represented by a Named Place or Hamlet POI) of the same name that corresponds to the same locality.

### Naming

Neighbourhoods are published with their official names and may have alternate names if applicable.

### Phone Number

Not Included

## 5.3.2 Hamlets

The Hamlets layer contains the names of populated areas within the NAVSTREETS Detailed Coverage/Prime Inclusion area (e.g. villages). A Hamlet is a very small village, typically without a church. In some countries, these Hamlets are well known locations and are used by inhabitants to refer to their home address. When the Hamlet is a duplicate of a Named Place, no Hamlet is included.

# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

## Hamlet

### Feature Code

9998

### Definition

A Hamlet is generally a very small village, typically without a church. In some countries, these Hamlets are well known locations and are used by inhabitants to refer to their home address. It can also be a community without an official, independent political structure (a.k.a. an “unincorporated” community).

### Inclusion

- Generally, a Hamlet POI is published for places that fit the category's definition, for example “Lieux dits” are included as Hamlet POIs in France. In Spain, these are known as “Lugares” and “Aldeas”.
- Hamlet POIs are included for small villages or groups of scattered houses that do not meet the Prime Inclusion size inclusion guidelines for Built-up Area polygon. Therefore, Hamlet POIs do not necessarily have a Built-up Area polygon.
- Hamlet POIs are also included for various communities. See the Country Specific Rules document.
- When a Hamlet is published as a Named Place POI, no additional Hamlet POI is included.

① **Note:**

Hamlets may be on unnamed streets.

### Phone Number

Not Included

## 5.3.3 Hospitals

The Hospitals layer contains Hospital and Medical Service POIs within a NAVSTREETS coverage area that provide in-patient and emergency care for people. This layer is used for destination selection, geocoding, and map visualisation.

### Hospital

These include facilities that provide in-patient care, including 24-hour emergency care for patients.

### Medical Service

These include facilities that perform medical services, which are not directly associated or connected with a medical hospital.

## Hospital

### Feature Code

8060

### Definition

A facility that provides in-patient medical care, including 24-hour emergency care, for patients.

### Inclusion

# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- The following are included:
  - Hospital/Clinics, including Children's Hospitals, that provide 24-hour emergency care.
  - Two POIs for each hospital are included, one representing the main entrance and one representing the emergency entrance.

**Note:** When both a Hospital/Clinic and a Children's Hospital are located within the same physical structure and each has their own associated ER, four POIs are published, two for each facility.
- The following are not included:
  - Psychiatric hospitals
  - Veterans Administration Hospitals
  - Private hospitals / clinics that are exclusive to members
  - Hospitals that do not provide emergency care

## Naming

- The main entrance receives the official hospital name.
- The emergency entrance includes the official hospital name plus a reference to emergency care in the language of the country. See the table below for examples.

Country	POI Name Format	Example
Canada	<hospital name>-<ER>	Toronto General Hospital - ER
Croatia	<hospital name>-<hitna pomoc>	Jordanovac-Hitna Pomoc
England	<hospital name>-<A&E>	Addenbrookes Hospital-A&E

## Phone Number

Included for the main and emergency entrances.

## Medical Service

### Feature Code

9583

### Definition

A facility that performs medical services, which is not directly associated or connected with a medical hospital.

### Inclusion

Hospitals/Clinics that do not meet the Hospital POI inclusion rules.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Phone Number

Included, if available.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### 5.3.4 Parks and Recreation

The Parks and Recreation layer contains Amusement Park, Animal Park, Campground, Golf Practice Range, Museum, Sports Complex, Marina, Public Sport Airport, Bowling Centre, Park/Recreation area, Casino, Sports Centre, and Ice Skating Rink POIs within a NAVSTREETS coverage area. This layer is used for destination selection, geocoding, and map visualisation.

#### **Amusement Park**

These include locally known parks that contain rides or other entertainment that may be based on a central theme.

#### **Animal Park**

These include parks that are open to the public for viewing of various animals, for example, zoos, wild animal parks, and wildlife refuges.

#### **Bowling Centre**

These include major bowling centres that are regionally known and have more than six bowling alleys.

#### **Campground**

These include areas designated for short-term tent, trailer, and/or RV (recreational vehicle) camping.

#### **Casino**

In the United States, these include any variety of gambling and gaming establishments ranging from the large casinos in Las Vegas to riverboat gambling and card rooms that draw regionally. In Europe and Canada, only casinos that are licensed by the government are included.

#### **Golf Course**

These include all private and public golf courses.

#### **Golf Practice Range**

An area for practicing golf shots.

#### **Ice Skating Rink**

These include all indoor and outdoor facilities designed for all types of ice skating.

#### **Marina**

These are specific to yacht harbours and public docking facilities.

#### **Museum**

These include museums of regional importance that are open to the public.

#### **Park/Recreation Area**

These include areas of public land that are preserved and maintained for recreational use (public parks and recreation parks).

#### **Public Sport Airport**

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

These include all airfields designated for recreational purposes (e.g. to fly hot air balloons, use gliders, get flying lessons, or fly private airplanes).

### Sports Centre

These include all combined sport centres, swimming and tennis facilities, and famous public fitness centres that also offer other facilities like sauna and massage.

### Sports Complex

These include all multi-use indoor arenas that seat more than 1,000 people, multi-use outdoor arenas that seat more than 10,000 people, and race tracks.

## 5.3.4.1 Amusement Park

### Feature Code

7996

### Definition

A park that contains rides or other entertainment which may be based on a central theme.

### Inclusion

The following are included:

- Major amusement parks that are regionally known.
- Miniature golf courses, go-cart raceways, and aquatic parks with wavepools and/or waterslides.

### Phone Number

Included, if Available

## 5.3.4.2 Animal Park

### Feature Code

9718

### Definition

A park that is open to the public for viewing of various animals, for example, zoos, wild animal parks, and wildlife refuges.

### Inclusion

POIs are included for each of the following:

- Zoo
- Wild Animal Park
- Wildlife Refuge
- Aquarium

 **Note:** Petting zoos are not included.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### Naming

The official name is included for the animal park.

### Phone Number

Included if available

## 5.3.4.3 Bowling Centre

### Feature Code

7933

### Definition

A facility designed for bowling.

### Inclusion

Major bowling centres that are regionally known and have more than 6 bowling alleys.

In Germany, "Skittle" alleys are not included.

In India, publicly accessible bowling centres (regardless of the number of alleys) are included.

### Phone Number

Included, if available.

## 5.3.4.4 Campground

### Feature Code

9517

### Definition

An area designated for short-term tent, trailer, and/or RV (recreational vehicle) camping.

### Inclusion

- Global
  - All campgrounds
- North America
  - Campgrounds that have water supply and restroom facilities.

### Phone Number

Included, if available.

## 5.3.4.5 Casino

### Feature Code

7985

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### Definition

A gambling establishment.

### Inclusion

Any variety of gambling and gaming establishments ranging from the large casinos in Las Vegas to riverboat gambling and card rooms of regional draw such as the Bay 101 Club in San Jose. In Europe only those that are licensed by the government are included.

### Phone Number

Included

## 5.3.4.6 Golf Course

### Feature Code

7992

### Definition

An area designated and maintained for playing golf.

### Inclusion

All private (including military) and public golf courses, excluding driving ranges and miniature golf facilities.

### Phone Number

Included

## 5.3.4.7 Golf Practice Range

### Feature Code

9573

### Definition

An area for practicing golf shots.

### Inclusion

- Select APAC countries only

All public and private facilities are included regardless of the number of tees.

The following are not included:

- Miniature golf facilities
- Driving ranges located inside Golf Courses

### Phone Number

Included, if available.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### 5.3.4.8 Ice Skating Rink

#### **Feature Code**

7998

#### **Definition**

A facility designated for all types of ice skating.

#### **Inclusion**

All indoor and outdoor ice skating rinks.

#### **Phone Number**

Included, if available.

### 5.3.4.9 Marina

#### **Feature Code**

4493

#### **Definition**

A dock that provides secure moorings for small pleasure craft.

#### **Inclusion**

Only yacht harbours and public docking facilities.

#### **Phone Number**

Included, if available.

### 5.3.4.10 Museum

#### **Feature Code**

8410

#### **Definition**

A building for the preservation and exhibition of artistic, historical, or scientific objects.

#### **Inclusion**

Museums of regional importance that are open to the public.

#### **Phone Number**

Included

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### 5.3.4.11 Park/Recreation Area

#### **Feature Code**

7947

#### **Definition**

An area of public land preserved and maintained for recreational use.

#### **Inclusion**

Public parks and recreation areas.

Privately owned parks and recreation areas that are open to the general public.

Named and unnamed beaches.

#### **Phone Number**

Included, if available for national and state parks

Not Included for county/city parks

### 5.3.4.12 Public Sports Airport

#### **Feature Code**

4580

#### **Definition**

A facility designated for different kinds of aviation sports.

#### **Inclusion**

All airfields designated for recreational purposes only (e.g. use gliders, get flying lessons, fly private airplanes).

#### **Phone Number**

Included, if available.

### 5.3.4.13 Sports Centre

#### **Feature Code**

7997

#### **Definition**

A facility designated for recreational sports.

#### **Inclusion**

All combined sport centres, swimming and tennis facilities, thermal baths, and famous public fitness centres that also offer other facilities like sauna and massage.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- Subcategory is applied to Sports Centre POIs.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Phone Number

Included, if available.

## 5.3.4.14 Sports Complex

### Feature Code

7940

### Definition

An area where sporting events are held.

### Inclusion

- Global
    - All multi-use indoor arenas that seat more than 1.000 people, multi-use outdoor arenas that seat more than 10.000 people, and race tracks (auto, motorcycle, horse, dog).
  - North America
- POI provided by third party data supplier.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Phone Number

Included

## 5.3.5 Transportation Hubs

The Transportation Hubs layer contains all Airport, Bus Station, Cargo Centre, Commuter Rail Station, Ferry Terminal, Train Station, and Transportation Service POIs within a NAVSTREETS coverage area. This layer is used for destination selection, geocoding, and map visualisation.

### Airport

These include all national public airports in Europe (more than 300,000 passengers per year), all FAA certified airports in the United States, and all public airports in Canada.

### Bus Station

These are facilities that function as a hub for a bus service network, including those that provide park and ride facilities, and long distance and/or inter-city bus service.

### Cargo Centre

These are facilities where cargo is handled between different modes of transportation, i.e., ship to rail, ship to truck, air to truck, etc.

### Commuter Rail Station

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

A facility that provides access to rail transit for metropolitan commuters within a city or from the suburbs to the city centre.

### Ferry Terminal

This category is specific to structures established and maintained by ferry services that transport passengers and automotive vehicles by rail or water.

### Train Station

These include all facilities that function as a hub for passengers and goods travelling between metropolitan areas along a railway network.

### Transportation Service

These include companies that provide charter air travel, limousine services, or taxi services.

## 5.3.5.1 Airport

### Feature Code

4581

### Definition

A facility designated for the landing and takeoff of aircraft, and the dispensing and loading of aircraft contents.

### Inclusion

- In Prime Areas: All civil aviation (non-military) airports that have scheduled air transport, general aviation facilities and are open to the public.
- In Network, Complete, and City-to-City (minimum inclusion):
  - Global: Intercontinental Airports
  - U.S.: The following are also included:
    - FAA Certified Airports
    - Non-military Airports
    - Airports that are open to the public
  - Individually maintained landing strips, heliports, balloonports, gliderports or military airports are not included.

### Naming

See Naming Rules for Airport Related POIs in section *POI Name* on page 733.

### Phone Number

Europe: Included

North America: Not Included

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### 5.3.5.2 Bus Station

#### Feature Code

4170

#### Definition

A facility that functions as a hub in the inter-city bus service network.

#### Inclusion

Included: Bus stations that serve as park & ride facilities, provide long distance bus service, or provide inter-city bus service.

Not included: Roadside bus stops or loading/unloading areas for charters.

#### Naming

- **France, Germany, Italy, and Spain**

The POI is named using the country exonym for "bus station" or the company name with additional city name. See the table below.

Country	Bus Station Example
France	GARE ROUTIÈRE DE BUSSY-ST-GEORGES
Germany	BUSBAHNHOF PASSAU
Italy	AUTOLINEE NOVARA
Spain	ESTACIÓN DE AUTOBUSES DE HUELVA

- **Rest of the Regions**

The POI is named using the company name, when applicable, followed by the location.

Examples:

- Greyhound-Union Bus Terminal
- Trailways-Peter Pan Terminal
- Omnibusbahnhof Emmerich

#### Phone Number

Included, if available.

### 5.3.5.3 Cargo Centre

#### Facility Code

9714

#### Definition

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

Cargo Centre identifies a facility where cargo is handled between different modes of transportation, i.e., ship to rail, ship to truck, air to truck, etc.

### Inclusion

- **United States only**

POIs are included for each of the following:

- Seaport/Harbour
- Railyard
- Airport Cargo Facility

### Naming

- The official name is included for the Railyard or Seaport/Harbour.
- For Airport Cargo facilities, where a singular air cargo facility is associated with an airport, the full and complete main airport name plus the word "cargo" is included. For example, Hector International Airport Cargo.
- When multiple Airport Cargo facilities are associated with an airport, the Airport Cargo facility is named using the airport identifier followed by the word "cargo", a hyphen and the specific cargo facility name. For example, San Francisco Int'l Airport has many Airport Cargo facilities located in different areas of the airport. Each POI is represented with its own POI and named accordingly. E.g., SFO Cargo-Southwest Airlines.

### Specification

- Every Seaport/Harbour and Railyard polygon will have a corresponding Cargo Centre POI with appropriate Subcategory published.
- The Seaport/Harbour and Railyard polygon will match the name of the corresponding POI.
- Only one Subcategory attribute will be published for every Cargo Centre POI.
- Each Cargo Centre with the Subcategory = Airport Cargo will be published as a child of the main Airport POI.
- The POI for each Cargo Centre will be placed on the main entrance to the facility.

### Phone Number

Not required

## 5.3.5.4 Commuter Rail Station

### Feature Code

4100

### Definition

A facility that provides access to rail transit for metropolitan commuters within a city or from the suburbs to the city centre.

### Inclusion

The following are published as Commuter Rail Station POIs:

# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- Light Rail
- Metro Rail
- Subway

## Rules

- Subcategory Modifier is applied to Commuter Rail Station POIs.
- See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

## Naming

Commuter Rail Station POIs are named according to the name shown in official timetables. For example, in N.A., the POI is represented using the name of the railroad followed by the name of the station, e.g., "MARC-Union Station", or if there is no station name, the location is represented, e.g., "BART-Fremont."

## Phone Number

Not included

## 5.3.5.5 Ferry Terminal

### Feature Code

4482

### Definition

A facility established to provide ferry service.

### Inclusion

Ferry services that transport passengers and/or automotive vehicles by rail or water. Ferry Terminal POIs are included whether an actual terminal structure exists or not.

① **Note:** Linear ferry elements may exist without a Ferry Terminal POI.

Separate POIs are included for different ferry companies leaving from and going to the same destination.

### Naming

Europe

Official names are used when they exist. When there is no official name and only one terminal, the city name e.g. "Calais" is represented. When there is no official name and more than one terminal, then the city name / company name e.g. "Genova / Tirrenia Navigazione" is represented.

North America

Official names are used when they exist. When there is no official name, the names of the destinations are used.

### Phone Number

included, if available.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### 5.3.5.6 Train Station

#### Feature Code

4013

#### Definition

A facility designated as a hub for passengers and goods travelling between metropolitan areas along the railway network.

#### Inclusion

Train stations that meet the definition, excluding light rail stations or terminals.

#### Naming

Railway stations are represented by the name shown in official timetables. In the U.S., the name of the railroad is represented followed by the name of the station, e.g., "Amtrak-Pennsylvania Station", or if there is no station name, the location, e.g., "Amtrak-Roseville" is represented."

#### Phone Number

Included, if available.

### 5.3.5.7 Transportation Service

#### Feature Code

9593

#### Definition

A company that provides charter air travel, limousine services, or taxi services.

#### Inclusion

Charter air travel, limousine services and taxi services.

#### Phone Number

Included, if available.

## 5.3.6 Travel Destinations

The Travel Destinations layer contains all Convention/Exhibition Centre, Historical Monument, Hotel, Other Accommodation, Rental Car Agency, Rest Area, Ski Lift, Ski Resort, Tourist Attraction, Tourist Information, and Winery POIs within a NAVSTREETS Detailed Coverage/Prime area. This layer is used for destination selection, geocoding, and map visualisation.

#### Convention/Exhibition Centre

These include all regionally known convention centres used for large events such as trade shows, trade fairs, or conventions.

# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

## **Historical Monument**

These include buildings, statues, monuments, or sites with important historical or cultural value.

## **Hotel**

These include all chain and locally known independent hotels and motels.

## **Other Accommodation**

These include lodging facilities that cannot be described as a standard hotel or motel.

## **Rental Car Agency**

These include all rental car agency chain locations that have pick-up and return facilities.

## **Rest Area**

These include any signed/named rest areas along motorways where the entrance leads only to the rest area.

## **Ski Lift**

These include devices in rural and urban ski resorts and ski areas with the purpose of transporting people up a mountain.

## **Ski Resort**

These include nationally or regionally recognised downhill ski resorts (i.e. larger resorts with multiple ski lifts and lodge facilities).

## **Tourist Attraction**

These include regionally known landmarks that do not meet the criteria for inclusion in a more specific category (an example of a more specific category is Historical Monument, which contains historical sites, monuments, etc.).

## **Tourist Information**

These include all tourist information offices that provide services such as lodging procurement, tourism information, and events schedules and information.

## **Winery**

These include wineries that provide tours or wine tasting.

## **5.3.6.1 Convention/Exhibition Centre**

### **Feature Code**

7990

### **Definition**

A facility used for large events such as trade shows, trade fairs, or conventions.

### **Inclusion**

All convention centres that are regionally known are included.

Hotels with attached meeting facilities are not included.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### Phone Number

- Europe  
Included
- North America  
Included, if available.

## 5.3.6.2 Historical Monument

### Feature Code

5999

### Definition

Building, statues, monuments, or sites with important historical or cultural value.

### Inclusion

All locally known buildings, statues, monuments, and sites of regional importance.

### Phone Number

Included, if available.

## 5.3.6.3 Hotel

### Feature Code

7011

### Definition

A commercial establishment that provides lodging to the public.

### Inclusion

- Global
  - Hotels associated with airports. A hotel is considered to be associated with the airport when all of the following are true:
    - Phone book lists the hotel at the airport location.
    - Hotel name includes the airport name.
    - Hotel is within ~2 miles of the main entrance of the airport.
  - France, Germany, Italy, and Spain
    - Hotel and Motel Chains
    - Independent Hotels and Motels

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- Rest of Europe

Included:

- Hotel and Motel Chains
- Independent Hotels and Motels
- Bed & Breakfasts and lodges.

- North America

Except for hotels associated with nationally important airports, this POI is supplied by a third party data supplier.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Phone Number

Included

## 5.3.6.4 Other Accommodation

### Feature Code

7013

### Definition

A lodging facility that cannot be described as a standard hotel or motel.

### Inclusion

The following are included in regions where the Subcategory attribute is not available.

- Guest House
- Hostel
- Holiday Park
- Bed & Breakfast
- U.K. - POIs supplied by a third party data provider.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Phone Number

Included if available.

## 5.3.6.5 Rental Car Agency

### Feature Code

7510

### Definition

A retail business that rents automotive vehicles.

### Inclusion

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

The following are included:

- All locations (pick-up and return facilities) of all rental car agency chains.
- Car rental complexes in airports (complexes where multiple rental car agencies are centrally located).
  - ① **Note:** Individual rental car agencies within rental car complex are included.
- Not included: Administrative offices of rental car agencies.

### Naming

- Global

See Naming Rules for Airport-Related POIs in section [POI Name](#) on page 733 for the naming conventions used for airport Rental Car Agency POIs.

- France, Germany, Italy, and Spain

- The *Chain Name* is always included in the official name, e.g., EUROP CAR PARC DES PRINCES. No *Exonym* is included.
- When the location is for pick-up or return only, this information is included in the name e.g. "AVIS SCHIPHOL (RETURN)" or "AVIS MIAMI INT'L AIRPORT (RETURN)".

① **Note:** Pick-up is the actual location, not the reservation counter as seen in airport terminals.

### Phone Number

Included

## 5.3.6.6 Rest Area

### Feature Code

7897

### Definition

A public facility, located next to a large thoroughfare such as a highway, expressway, freeway, or provincial road where drivers and passengers can rest, eat, or refuel without exiting onto secondary roads.

### Inclusion

Any signed/named rest areas or scenic overlooks with parking along motorways and non-motorways.

Along non-motorways, officially designated locations that provide parking only (i.e., posted with a sign similar to the one below) are also included.

### Figure 75:



### Naming

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

Official name is represented, if known (e.g. Belvidere Oasis, George Ade Service Area, etc.). Otherwise the country specific generic name is represented (e.g. Rest Area, Service Area, etc.).

### Phone Number

Not Included

## 5.3.6.7 Ski Lift

### Feature Code

7014

### Definition

Ski lifts are devices located in urban and rural areas of ski resorts and ski areas with the purpose of transporting people up a mountain. Ski lifts can be gondolas, funiculars, chair lifts, or ski/rope tow.

### Inclusion

- The following are included:
    - Ski lifts leaving from the ski resort or village.
    - Ski lifts not associated with a ski resort/ski area.
  - The following are not included:
    - Further connecting gondolas, chairlifts, or ski tows.
    - Ski lifts returning to the ski resort or village
- ① **Note:** Ski/rope tow lifts accessing playgrounds or practice fields.

### Naming

The official name of the Ski Lift is used when available. If a name does not exist the Ski Lift POI is unnamed.

In EMEA, a synonym is published that indicates to which ski resort/are the ski lift POI is associated.

## 5.3.6.8 Ski Resort

### Feature Code

7012

### Definition

A resort built specifically for skiing, snowboarding, and other activities such as snowmobiling, ice-skating etc. A ski resort includes accommodations, restaurants, and other forms of entertainment such as clubs, cinema, theatre, game rooms, etc.

A Ski Resort POI can also represent a resort area, which is a village or group of villages with a church, city hall, etc., not built specifically for skiing and snowboarding. A ski area includes accommodations, restaurants, and other forms of entertainment such as clubs, cinema, theatre, game rooms, etc.

### Inclusion

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- Nationally or regionally recognised downhill ski resorts. These are the larger resorts with multiple ski lifts and lodge facilities.
- The following are not included:
  - Small ski areas providing limited facilities and not considered a resort.
  - Indoor ski areas.

### Naming

- The official name of the ski resort or ski area is used. E.g., Alpine Valley, Skiwelt Wilder Kaiser.
  - When an additional name exists, representing multiple ski areas/resorts, the name is included as part of the Ski Resort POI name in that ski area. E.g., Courchevel/Les 3 Vallées, Les Menuires / Les 3 Vallées, etc.
- ① **Note:** Additional names are not used if they have the same name as the ski area/resort.

### Phone Number

Included, if available.

## 5.3.6.9 Tourist Attraction

### Feature Code

7999

### Definition

Place or object of special interest to tourists.

### Inclusion

Regionally known landmarks that do not meet the criteria for another more specific category (e.g., Eiffel Tower, zoos, and missions).

### Phone Number

Included, if available.

## 5.3.6.10 Tourist Information

### Feature Code

7389

### Definition

A facility that provides service such as lodging procurement, tourism information, and event schedules and information.

### Inclusion

- Global
    - All tourist information offices.
  - North America
- POI provided by third party data supplier.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### Phone Number

Included

## 5.3.6.11 Winery

### Feature Code

2084

### Definition

A wine making facility.

### Inclusion

Any winery which is open to the public for tours or wine tasting. Wine tasting may be by appointment only.

### Phone Number

Included

## 5.3.7 Shopping

The Shopping layer contains shopping destinations identified as grocery stores (only chains and other locally known large grocery stores), or a complex of businesses, such as retail stores and restaurants, grouped together and sharing common services such as parking or utilities. This layer is used for destination selection, geocoding, and map visualisation.

In Europe, this includes all covered shopping centres and pedestrian areas with shops and restaurants. In North America, the Shopping layer includes all enclosed shopping malls of regional importance ("strip malls" are not included).

### Bookstore

These include retail businesses that primarily sells books, magazines, and other reading materials.

### Clothing Store

These include retail businesses that sells general apparel, garments, and/or fashion accessories for men, women, and children.

### Consumer Electronics Store

These include businesses establishment that sells consumer electronics and electronic entertainment equipment.

### Convenience Store

These include small stores that sell beverages, snacks, magazines/newspapers, toiletries, tobacco products and may or may not sell gasoline.

### Department Store

These include large retail stores carrying a wide variety of merchandise and organised into various departments for sales and administrative purposes.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### **Grocery Store**

These include stores that sell a variety of food.

### **Home Improvement & Hardware Store**

These include retail establishments that sell a variety of building materials, hardware, and home improvement products.

### **Home Specialty Store**

These include retail establishments that sell furnishings and accessories for a home and business establishments that specialise in the retail or custom creation of furniture.

### **Office Supply and Service Store**

These include retail businesses that sell general office supplies and may provide professional business services. These services may include but not limited to: printing, photocopying, graphic design, shipping, and advertising.

### **Pharmacy**

These include businesses where prescription and non-prescription medications as well as other retail cosmetics, toiletry items, etc. are sold.

### **Shopping**

These include complexes of businesses, such as retail stores and restaurants, grouped together and sharing common services, such as parking or utilities.

### **Specialty Store**

These include businesses that specialise in the retail of a specific type of merchandise.

### **Sporting Goods Store**

These include retail businesses that sell items used in team and individual sports including recreational sports.

## 5.3.7.1 Bookstore

### **Feature Code**

9995

### **Definition**

A retail business that primarily sells books, magazines, and other reading materials.

### **Inclusion**

Included: All book stores as per definition.

### **Naming**

The official name is used as *Base Name*.

### **Phone Number**

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

Included, if available.

### 5.3.7.2 Clothing Store

#### Feature Code

9537

#### Definition

A retail business that sells general apparel, garments, and/or fashion accessories for men, women, and children.

A business that specialises in a specific type of clothing.

#### Inclusion

All locations fitting the definition are included.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

#### Phone Number

Included, if available.

### 5.3.7.3 Consumer Electronics Store

#### Feature Code

9987

#### Definition

A business establishment that sells consumer electronics and electronic entertainment equipment.

#### Inclusion

All locations fitting the definition are included.

#### Phone Number

Included, if available.

### 5.3.7.4 Convenience Store

#### Feature Code

9535

#### Definition

A small store that sells beverages, snacks, magazines/newspapers, toiletries, tobacco products and may or may not sell gasoline.

#### Inclusion

All locations fitting the definition are included.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

POI provided by third party supplier.

### Phone Number

Included, if available.

## 5.3.7.5 Department Store

### Feature Code

9545

### Definition

A large retail store carrying a wide variety of merchandise and organised into various departments for sales and administrative purposes.

### Inclusion

All locations fitting the definition are included.

POI provided by third party supplier.

### Phone Number

Included, if available.

## 5.3.7.6 Grocery Store

### Feature Code

5400

### Definition

A store that sells a variety of foods and other home goods. The store is organised into aisles and various departments such as meat, produce, bakery, dairy, cleaning products, etc.

### Inclusion

See *Attribute Modifier Value: SUBCATEGORY* on page 803.

- Global
  - Chains and other locally known large grocery stores.
    - ① **Note:** Large locally known markets are included if they are in a permanent covered structure and are open most days of the week, e.g., Mon-Sat from 7am-5pm; similar to the schedule of a standard grocery store.
    - Convenience and other small stores that sell some groceries, but do not provide all of the services of a large grocery store, are not included.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- Europe, Middle East & Africa (EMEA)
  - Included are supermarkets and grocery stores such as:
    - ALDI
    - Supermarkets and Hypermarkets in Spain
  - The following are not included:
    - Shops which focus on one specialty, such as butchers, bakeries, cigar shops, greengrocers, etc.

### Naming

- *Chain IDs* are applied where applicable.
- If a Grocery Store POI is added with a *Chain ID*, the *Base Name* matches the *Chain Name*.
- When the POI name is not unique in a city, the street name is added behind the *Chain Name* or official name. E.g., <chain name>,<street name>.

### Phone Number

Not Included

## 5.3.7.7 Home Improvement & Hardware Store

### Feature Code

9986

### Definition

A retail establishment that sells a variety of building materials, hardware, and home improvement products.

### Inclusion

All locations fitting the definition are included.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Phone Number

Included, if available.

## 5.3.7.8 Home Specialty Store

### Feature Code

9560

### Definition

A retail establishment that sells furnishings and accessories for a home. A business establishment that specialises in the retail or custom creation of furniture.

### Inclusion

All locations fitting the definition are included.

### Phone Number

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

Included, if available.

### 5.3.7.9 Office Supply and Services Store

#### Feature Code

9988

#### Definition

A retail business that sells general office supplies and may provide professional business services. These services may include but not limited to: printing, photocopying, graphic design, shipping, and advertising.

#### Inclusion

All locations fitting the definition are included.

#### Phone Number

Included, if available.

### 5.3.7.10 Pharmacy

#### Feature Code

9565

#### Definition

A business where prescription and non-prescription medications as well as other retail cosmetics, toiletry items, etc. are sold.

#### Inclusion

All locations fitting the definition are included.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

#### Phone Number

Included, if available.

### 5.3.7.11 Shopping

#### Feature Code

6512

#### Definition

A complex of businesses, such as retail stores and restaurants, grouped together and sharing common services, such as parking or utilities.

#### Inclusion

- All shopping malls of regional importance and major outlet malls.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- All covered shopping centres, pedestrian areas and famous shopping streets with shops and restaurants.
  - Major retail brands that are individual stores, usually located in shopping areas/boulevards. Inclusion is based on merchant sourced list.
    - ① **Note:** In France, out-of-town shopping centres that typically comprise large furniture stores, carpet warehouses, and home improvement stores are also included.
  - Department stores occupying buildings that are included as Building/Landmark features.
- Not Included: Strip Malls except in North America.

### Phone Number

Not Included

## 5.3.7.12 Specialty Store

### Feature Code

9567

### Definition

A business that specialises in the retail of a specific type of merchandise.

### Inclusion

- Stores that do not fit into one of the other shopping-related POI categories.
- Independent gift shops.
- The following are not included: Gift shops in Amusement Parks, Museums, Tourist Attractions, etc.

### Phone Number

Included, if available.

## 5.3.7.13 Sporting Goods Store

### Feature Code

9568

### Definition

A retail business that sells items used in team and individual sports including recreational sports.

### Inclusion

All locations fitting the definition are included.

### Phone Number

Included, if available.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### 5.3.8 Restaurants

The Restaurants layer contains all restaurants within a NAVSTREETS coverage area. This includes all chain and locally known restaurants, as well as those located at rest areas along motorways. This layer is used for destination selection, geocoding, and map visualisation.

#### Coffee Shop

These include businesses that sell coffee and other light foods, including pastries and other snacks.

#### Restaurant

These include establishments that sell refreshments and prepared meals and provide seating.

#### 5.3.8.1 Coffee Shop

##### Feature Code

9996

##### Definition

A business that sells coffee and other light foods, including pastries and other snacks.

##### Inclusion

All major chain coffee shops (e.g., Starbucks), locally owned coffee shops, drive-thru coffee stands, and tearooms that provide coffee as a primary service.

- ① **Note:** Multiple POIs are published, when a facility, which functions mainly as a Coffee Shop, changes its function depending on the time of day. For example, when a location is a place to drinking tea and coffee during the day, changes to a restaurant in the evening, and then becomes a bar in the late evening, Restaurant and Nightlife POIs are also added.
- ① **Note:** U.K. - Service supplied by a third party data supplier.

##### Phone Number

Included if available.

#### 5.3.8.2 Restaurant

##### Feature Code

5800

##### Definition

An establishment that sells refreshments and prepared meals and provides seating.

##### Inclusion

- Global
  - All chains and locally owned restaurants.

- ① **Note:**

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

All publicly accessible restaurants associated with airports.

- Fast food establishments such as McDonald's "Express" version found within gas stations and convenience stores.
- Restaurants that provide "pick-up" and/or "take-out" only service for food orders at the restaurant premises, e.g. Dominos.
- In Europe, restaurants located at rest areas along motorways.
- India

In India, the following are also Included: Large/popular Dhabbas (roadside food services) and Dining Halls when they meet size and service requirements.

### Naming

See Naming Rules for Airport-Related POIs in section [POI Name](#) on page 733 for the naming conventions used for airport Restaurant POIs.

### Phone Number

Included

## 5.3.9 Entertainment

The Entertainment layer contains all nightlife, performing arts, and entertainment destinations within a NAVSTREETS coverage area. This layer is used for destination selection, geocoding, and map visualisation.

### Bar or Pub

These include establishments that serve alcoholic beverages, provide seating, and may serve food.

### Cinema

These include all cinemas with more than 200 seats. This category is exclusive to European Detailed Coverage/Prime Inclusion areas.

### Nightlife

This is specific to places that offer live music, and includes most famous music clubs in a European Detailed Coverage/Prime Inclusion area. This category is exclusive to European Detailed Coverage/Prime Inclusion areas.

### Performing Arts

These include all cultural centres, concert halls, and theatres that seat more than 250 people, or that are locally known within the NAVSTREETS Detailed Coverage/Prime Inclusion area.

## 5.3.9.1 Bar or Pub

### Feature Code

9532

### Definition

An establishment that serves alcoholic beverages, provides seating, and may serve food.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### Inclusion

POIs supplied by third party data supplier.

### Phone Number

Included, if available.

## 5.3.9.2 Cinema

### Feature Code

7832

### Definition

A building used for showing movies to a large audience.

### Inclusion

Included: All cinemas open to the public and showing:

- Mainstream genres
- Independent productions
- Art house movie theatres

Not included: Adult cinemas, thematic cinemas, e.g., within a park, convention centre, or museum.

### Phone Number

Included, if available.

## 5.3.9.3 Nightlife

### Feature Code

5813

### Definition

An establishment that provides social activities or entertainment that is available in the evening.

### Inclusion

Bars, pubs, live music clubs, dance clubs, pool halls, arcades, karaoke, and stand-up comedy clubs.

### Phone Number

Included, if available.

## 5.3.9.4 Performing Arts

### Feature Code

7929

### Definition

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

A building or outdoor structure in which performing arts are presented.

### Inclusion

Cultural centres, concert halls, and theatres that seat more than 250 people, or that are locally known.

### Phone Number

- Europe
  - Included
- North America
  - Included if available.

## 5.3.10 Auto Maintenance, Service, and Petrol

The Auto Maintenance, Service, and Petrol layer contains all Auto Service and Maintenance, Automobile Club, Automobile Dealership, Automobile Dealership - Used Cars, Motorcycle Dealerships, Petrol/Gas Station, Truck Stop/Plaza, and Weigh Station POIs within a NAVSTREETS coverage area. This layer is used for destination selection, geocoding, and map visualisation.

### Auto Service and Maintenance

These include all major automotive service chains, dealerships, and (for the United States), AAA approved repair facilities within a NAVSTREETS North American Detailed Coverage/Prime Inclusion areas.

### Automobile Club

These include all AAA and CAA branch and main office locations in North America.

### Automobile Dealership

These are specific to new car dealerships based on auto manufacturer supplied lists.

### Automobile Dealership - Used Cars

These include automobile dealerships that sell used cars.

### Motorcycle Dealership

These are specific to new motorcycle dealerships based on motorcycle manufacturer supplied lists.

### Petrol/Gas Station

These include all petrol/gas stations and convenience stores that sell gasoline.

### Truck Dealership

These include retail businesses that sell new heavy trucks/lorries.

### Truck Stop/Plaza

These include business facilities used by long distance truck drivers that include fuel pumps for heavy trucks/lorries and may include a restaurant, a service facility, and sleeping and shower facilities.

### Weigh Station

These include checkpoints along the highway to inspect vehicular weights.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### 5.3.10.1 Auto Service & Maintenance

#### Feature Code

7538

#### Definition

Major automotive service chains.

#### Inclusion

Car repair facilities - automotive service centres and certified garages.

POI provided by third party data supplier.

- Subcategory Modifier is published to Auto Service & Maintenance POIs. See section [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

#### Phone Number

Included

### 5.3.10.2 Automobile Club

#### Feature Code

8699

#### Definition

An association that provides travel related and emergency services to its members.

#### Inclusion

Main branch or office locations.

#### Naming

The office name is represented as shown in the AAA/CAA sources, e.g., California State Automobile Association, AAA Michigan, CAA Toronto.

#### Phone Number

Included

### 5.3.10.3 Auto Dealership

#### Feature Code

5511

#### Definition

Auto dealerships that sell new cars.

#### Inclusion

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

Dealerships are included when a special agreement is signed between HERE and the manufacturer and a list is provided by the manufacturer. Only the dealerships on customer-supplied lists are included.

### Naming

The following examples demonstrate the naming and Chain ID coding when auto dealerships sell multiple brands:

Example 1:

- "Import Motors" sells BMW, Lexus, and Subaru, but only BMW and Lexus have agreements with HERE for inclusion.
- Two POIs are represented in arbitrary order: "Import Motors BMW" (with the BMW Chain ID) and "Import Motors Lexus" (with the Lexus Chain ID).

Example 2:

- "Courtesy Toyota Oldsmobile Kia" sells these three brands but there is no agreement for Kia inclusion.
- Two POIs are represented: "Courtesy Toyota" (with the Toyota Chain ID) and "Courtesy Oldsmobile" (with the Oldsmobile Chain ID).

Refer to the Country Specific Rules document for country-specific naming.

### Phone Number

Included

## 5.3.10.4 Auto Dealership-Used Cars

### Feature Code

5512

### Definition

An Automobile Dealership that sells used cars.

### Inclusion

Dealerships that sell used (second-hand) cars.

U.K. - POI provided by third party data supplier.

### Phone Number

Included if available

## 5.3.10.5 Motorcycle Dealership

### Feature Code

5571

### Definition

Motorcycle dealerships that sell new motorcycles.

# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

## Inclusion

Dealerships are included when a special agreement is signed between HERE and the manufacturer and a list is provided by the manufacturer. Only the dealerships on customer-supplied lists are included.

## Phone Number

Included, if available

## 5.3.10.6 Petrol/Gasoline Station

### Feature Code

5540

### Definition

A retail business which sells fuel for automotive vehicles.

### Inclusion

- Petrol/Gasoline Stations and businesses such as convenience stores which sell gasoline.
- Petrol/Gasoline Stations that serve only specific fleets and members.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Naming

France, Germany, Italy, and Spain

- For petrol/gasoline stations, only the brand name, e.g., "SHELL" is published. Local names, such as "BOB'S SHELL STATION", are not included either as a *Base* or as a *Synonym*.
- For unbranded petrol/gasoline stations, the naming is as illustrated in the following table.

Country	Naming Rule	Petrol/Gasoline Station Example
Argentina	If no name exists in reality, <estacion de servicio>	ESTACION DE SERVICIO
France	If an official name exists, <garage><official name>	GARAGE LEFEBVRE
	If no official name exists, <station-service>	STATION-SERVICE
Germany	If an official name exists, <official name>	MEIERS TANKSTELLE
	If no official name exists, <freie tankstelle>	FREIE TANKSTELLE
Italy	<official name>	ENERPETROLI
Spain	If an official name exists, <official name>	SABATER NURI CARBURANTS
	Apply name as in Mundi Petrol Guide, <mundi petrol guide name>	EURAGASA

# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

Country	Naming Rule	Petrol/Gasoline Station Example
	If no name exists in reality and not in the Mundi Petrol, <gasolinera no abanderada>	GASOLINERA NO ABANDERADA

## Phone Number

- Global  
Not Included
- France, Germany, Italy, and Spain  
Included, if available.

## 5.3.10.7 Truck Dealership

### Feature Code

9719

### Definition

A retail business that sells new heavy trucks/lorries.

### Inclusion

Dealerships on customer-provided lists are included.

### Phone Number

Required

## 5.3.10.8 Truck Stop/Plaza

### Feature Code

9522

### Definition

A business facility used by long distance truck drivers that includes fuel pumps for heavy trucks/lorries and may include a restaurant, a service facility, and sleeping and shower facilities.

### Inclusion

- North America  
POIs are supplied by a third party data supplier.

### Phone Number

Included

## 5.3.10.9 Weigh Station

### Feature Code

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

9710

### Definition

A location typically along a freeway/highway where checks are made to ensure trucks are compliant with trucking laws, i.e., not exceeding documented weight, all paperwork is in order, etc.

### Inclusion

- All official use (non-private) Weigh Stations.
- All weigh stations associated to Functional Class level 1 and 2 roads.

### Naming

The official name is included for truck dealerships. When an official name does not exist, the name "WEIGH STATION" or a country-specific equivalent is applied.

### Specification

Weigh Station POIs are placed on weigh station geometry.

### Phone Number

Included, if available.

## 5.3.11 Financial Institutions

The Financial Institutions layer contains all banks (headquarters and regional office locations), and ATMs of the major banks and networks within a NAVSTREETS Detailed Coverage/Prime Inclusion areas in North America. This layer is used for destination selection, geocoding, and map visualisation.

### ATM

These include all computer terminals that allow bank customers to deposit, withdraw, or transfer funds without the assistance of a bank teller.

### Bank

These include all establishments whose primary function is to maintain, lend, exchange, or issue money for its customers.

## 5.3.11.1 ATM

### Feature Code

3578

### Definition

A computer terminal that allows bank customers to deposit, withdraw, or transfer funds without the assistance of a bank teller.

### Inclusion

All ATMs which may be located at a bank, credit union, grocery store, convenience store, mall, etc.

### Phone Number

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

Not Included

### 5.3.11.2 Bank

#### Feature Code

6000

#### Definition

An establishment whose primary function is to maintain, lend, exchange, or issue money for its customers.

#### Inclusion

Banks, savings and loans, credit unions, currency exchanges, and dedicated money transfer offices.

#### Naming

The *Base Name* matches the *Chain Name*.

#### Phone Number

Included, if available.

### 5.3.12 Business Facilities

The Business Facilities layer contains all businesses that are considered the largest employers in each city as determined by the Chambers of Commerce. These include headquarters, all regional office locations, and all HERE offices. In Europe, this layer only includes HERE offices and client specified offices. This layer is used for destination selection, geocoding, and map visualisation.

#### Business Facilities

These include all businesses that are considered the largest employers in each city as determined by the Chambers of Commerce.

#### Industrial Zones

These include non-residential areas that contain complexes dedicated to industrial activities and/or storage facilities.

### 5.3.12.1 Business Facility

#### Feature Code

5000

#### Definition

Businesses that are considered the largest employers in each city as determined by the Chambers of Commerce.

#### Inclusion

- General office buildings (housing multiple different businesses).

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- In EMEA, business facilities that do not meet the criteria for another more specific category (e.g., government office, hospital, etc.) are also included.
  - ① **Note:** Country-specific inclusion may exist (e.g., based on the facility's size, top-employer lists, etc.)
- U.K. - POIs are supplied by a third party data provider.

### Phone Number

Included, if available.

## 5.3.12.2 Industrial Zone

### Feature Code

9991

### Definition

A non-residential area that contains a complex dedicated to industrial activities and/or storage facilities.

### Inclusion

POIs are included for each named Industrial Complex polygon.

Business Parks containing service industries are also included.

### Phone Number

not applicable

## 5.3.13 Community Service Centres

The Community Service Centres layer contains all Civic/Community Centres, City Halls, Court Houses, Police Stations, Places of Worship, and Post Offices within a NAVSTREETS coverage area. This layer is used for destination selection, geocoding, and map visualisation.

### Civic/Community Centre

These include all civic or community centres (public buildings used for community events). In Europe, this is specific to civic or community centres with a regional function.

### City Hall

These include the city hall of each municipality or settlement within the NAVSTREETS Detailed Coverage/Prime Inclusion area.

### County Council

These include the main building that houses the seat of any incorporated local government.

### Court House

These include court houses at any level of government.

### Embassy

These include buildings that house diplomatic representatives of foreign countries.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### Government Office

These include any offices where government employees work.

### Place of Worship

These include all places of worship within the NAVSTREETS coverage area.

### Police Station

These include any police stations within the NAVSTREETS Detailed Coverage/Prime Inclusion area.

### Post Office

These include all facilities which provide mail services.

## 5.3.13.1 Civic/Community Centre

### Feature Code

7994

### Definition

A public building used for community events.

### Inclusion

- Global
  - All civic or community centres.
- Europe
  - Only civic or community centres with a regional function.

### Phone Number

Included, if available.

## 5.3.13.2 City Hall

### Feature Code

9121

### Definition

The main building that houses the seat of an incorporated government for a municipality, city, borough, town, etc.

### Inclusion

The city hall of each municipality or settlement.

### Naming

France, Germany, Italy, and Spain

The official name is applied. See the following table for examples.

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NAVSTREETS Layers

5.3 Points of Interest

here

Country	Examples
France	MAIRIE DE MARSEILLE
Germany	RATHAUS BAMBERG
Italy	MUNICIPIO TORINO
Spain	AYUNTAMIENTO DE ALCALA DE HENARES

## Phone Number

Included, if available.

### 5.3.13.3 County Council

#### Feature Code

9994

#### Definition

The main building that houses the seat of any incorporated local government.

#### Inclusion

Seats of government, mainly at the county level.

In the U.K. POIs are provided by third party data supplier.

#### Phone Number

Included if available.

### 5.3.13.4 Court House

#### Feature Code

9211

#### Definition

A building that houses courts of law.

#### Inclusion

Courthouses at any level of government.

Military courthouses are not included.

#### Phone Number

Included, if available.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### 5.3.13.5 Embassy

#### Feature Code

9993

#### Definition

A building that houses diplomatic representatives of foreign countries.

#### Inclusion

The following are included:

- Embassy
- Consulate, Honorary Consulate, General Consulate
- High Commission
- Vatican Nunciature

① **Note:** POIs are included for embassies of all United Nation recognised countries.

France, Germany, Italy, and Spain

When multiple facilities are located in the same building, multiple POIs should be added. E.g., when an embassy and consulate are present in the same building two POIs should be added with a *Physical Parent/Child* relationship.

#### Naming

Words in parenthesis below are represented in the language of the country where the POI is located:

- Embassy: <EMBASSY> <COUNTRY NAME>
- Consulate: <CONSULATE> <COUNTRY NAME>
- General Consulate: <GENERAL CONSULATE> <COUNTRY NAME>
- Honorary Consulate: <HONORARY CONSULATE> <COUNTRY NAME>
- High Commission: <HIGH COMMISSION> <COUNTRY NAME>

#### Phone Number

Included

### 5.3.13.6 Government Office

#### Feature Code

9525

#### Definition

An office where government employees work.

#### Inclusion

Included in select countries only.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### Phone Number

Included, if available.

## 5.3.13.7 Place of Worship

### Feature Code

9992

### Definition

A building where religious services are held.

### Inclusion

- Included: All mosques, churches, temples, synagogues, ashrams, gurdwaras and other buildings where religious services are held.
- Not included: Temporary places of worship. For example, in Middle Eastern countries, mosques are sometimes temporary structures that exist to serve people at a location, such as a construction site, for a limited period of time.
- *Building Type* is applied to all *Place of Worship* POIs.
- See [POI Inclusion per Region/Country](#) on page 200 for detailed inclusion by region/country.

### U.K.

POI provided by third party data supplier.

### Naming

If a name does not exist, the Place of Worship is unnamed.

### Phone Number

Included, if available.

## 5.3.13.8 Police Station

### Feature Code

9221

### Definition

Law enforcement facilities from which officers are dispatched.

### Inclusion

Required for U.K., optional for the rest of Europe

U.K. - POI provided by third party data supplier.

France, Germany, Italy, and Spain

- Included:
  - All police stations that are open to the public

# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- Not included:
  - Campus, tribal, airport, harbour or military police

Table 4-4Federal law enforcement agencies

## Phone Number

Included, if available

## 5.3.13.9 Post Office

### Feature Code

9530

### Definition

A local branch or national office processing and transmitting the mail for a specific area.

### Inclusion

- Post offices that provide postal service to the public
- Shops that deliver basic retail postal services
  - ① **Note:** Post offices within shops are added only when visible from the outside.

If the Post Office also has the facilities of a Bank, then a Bank POI is also added. A Parent/Child relationship, however, is not added.

### Naming

- When not unique in a city, the street name is added after the generic name: <generic name>, <street name>
- For Germany only: <private name>, <street name>

See the following table for country specific naming rules.

Country	Post Office Example
France	LA POSTE, <street name>
Germany	POST, <street name><private name>, <street name>
Italy	UFFICIO POSTALE, <street name>
Spain	CORREOS, <street name>
India	POST OFFICE, <street name>

### Phone Number

Included, if available.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### 5.3.14 Educational Institutions

The Educational Institutions layer contains all Higher Education, Library, School, and Training Centre/Institute POIs within a NAVSTREETS coverage area. This layer is used for destination selection, geocoding, and map visualisation.

#### Higher Education

These include the main administration building of any post secondary education facility, junior college, college, or university.

#### Library

These include all public libraries within the NAVSTREETS Prime Inclusion area.

#### School

These include all pre-schools and any public or private elementary or secondary educational facilities.

#### Training Centre/Institute

Locations outside of the scope of basic elementary, secondary, and/or higher education, that provide training of study of various courses.

### 5.3.14.1 Higher Education

#### Feature Code

8200

#### Definition

Public or private schools that provide post-secondary education.

#### Inclusion

Any post secondary education facility, such as:

- Junior college
- Colleges for higher education
- Universities

One POI with the official name of the university, located at the main administration building, is included.  
Additional POIs, representing each facility on the university campus are included.

- Not included: Correspondence schools

#### Phone Number

Included, if available.

### 5.3.14.2 Library

#### Feature Code

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

8231

### Definition

A place in which literary, musical, artistic, or reference materials are kept for use and circulation, but are not for sale.

### Inclusion

Included: All libraries as per definition.

### Phone Number

Included, if available.

## 5.3.14.3 School

### Feature Code

8211

### Definition

Public or private pre-schools and schools that provide basic/elementary or secondary education.

### Inclusion

The following are included:

- Pre-schools
- Any type of public or private elementary or secondary education facility.
- Not included: Daycare centres.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Naming

"School" is added to the name where applicable, e.g., LYNWOOD ELEMENTARY SCHOOL, CAMPBELL HIGH SCHOOL, etc.

### Phone Number

Included, if available.

## 5.3.14.4 Training Centre/Institute

### Feature Code

9596

### Definition

Locations outside of the scope of basic elementary, secondary, and/or higher education, that provide training or study of various courses.

### Inclusion

Select countries only.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Phone Number

Included, if available.

## 5.3.15 Parking

The Parking layer contains all Park & Ride, Parking Garage/House, Parking Lot and Truck Parking POIs within a NAVSTREETS coverage area. This layer is used for destination selection, geocoding, and map visualisation.

### Park & Ride

These include all park & ride facilities designated on official city plans, or on signs as a Park & Ride.

### Parking Garage/House

These include enclosed facilities for parking motor vehicles such as public parking houses and garages based on local knowledge, and parking garages in airports.

### Parking Lot

These include public parking lots based on local knowledge and airport parking lots.

### Truck Parking

These include parking areas for heavy trucks/lorries.

## 5.3.15.1 Park & Ride

### Feature Code

7522

### Definition

A parking facility that is designated as a Park & Ride, a facility where people leave their vehicles to join a carpool/bus/etc.

### Inclusion

All park & ride facilities as designated on official city plans or on signs as a Park & Ride.

### Naming

The name is applied based on the following:

- The official name or.
- "Park & Ride" followed by the name of the related facility or.
- "Park & Ride" followed by the name of the street on which the Park & Ride is located.
- Examples:
  - Park & Ride am Bahnhof
  - Park & Ride A9-Leibnitz
  - Park & Ride Markt Allhau
  - Big Cottonwood Park & Ride

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### Phone Number

Not Included

## 5.3.15.2 Parking Garage/House

### Feature Code

7521

### Definition

A covered facility for parking motor vehicles.

### Inclusion

- Global
  - Public parking houses and garages based on local knowledge and parking garages in airports.
- ① **Note:** Multiple POIs may be published for a single facility when multiple entrances exist on different streets.
- North America
  - A Parking Garage POI is included for downtown hotels if:
    - The parking garage is accessed on a different street from the hotel entrance.
    - A driver would need to be re-routed on city streets to gain access to the parking garage from the main entrance of the hotel.
  - An additional Parking Garage POI is added for the visitors' parking garage if a hotel has a separate garage for visitors of hotel guests and either rule above applies.

### Naming

- Global

See Naming Rules for Airport-Related POIs in section [POI Name](#) on page 733 for the naming conventions used for airport parking.

Non airport-related parking garages can be named for the company operating the facility with a location identifier e.g., "Ampco Parking-7th St."

- North America

Hotel-associated facilities are named as follows:

- <Hotel name> Parking Garage
- If two Parking Garage POIs have been added to represent guest and visitor garages, the following is applied:
  - <Hotel name> Parking Garage Guest
  - <Hotel name> Parking Garage Visitor

### Phone Number

Not Included

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### 5.3.15.3 Parking Lot

#### Feature Code

7520

#### Definition

An open area for parking motor vehicles.

#### Inclusion

- The following are included:
  - All parking areas are associated with included airports.
  - Public parking lots at sports stadiums, convention centres, shopping centres, etc., if these are always accessible.
  - Public parking lots based on local knowledge.
- The following are not included:
  - Parking lots at sports stadiums, hospitals, universities, shopping centres, etc., that are for visitors only.
  - Parking lots dedicated only to vehicles other than autos.
  - Parking lots for apartment buildings.
  - Private parking lots owned and maintained by private businesses such as hotels, office buildings and strip malls.

#### Naming

- The same name is applied as that of the facility to which a parking lot is associated.
- In North America open parking areas can be named by the operating company name followed by a location, e.g., "Ampco Parking-7th St."

See Naming Rules for Airport-Related POIs in section [POI Name](#) on page 733 for the naming conventions used for airport parking.

#### Phone Number

Not Included

### 5.3.15.4 Truck Parking

#### Feature Code

9720

#### Definition

An area for parking heavy trucks/lorries. These areas may service other facilities (e.g., restaurants, rest areas, warehouse stores), but offer parking for heavy trucks. The POI reflects the name of the associated facility.

#### Inclusion

# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

Based on Third Party data.

## Naming

The official name of the associated facility is used, i.e., WAL-MART, etc.

## Phone Number

Included, if available.

## 5.3.16 Border Crossing

The Border Crossing layer contains all international border crossings for all motorway crossings, as well as other important crossings that are not on motorways. This layer is used for destination selection, and map visualisation.

### Border Crossing

#### Feature Code

9999

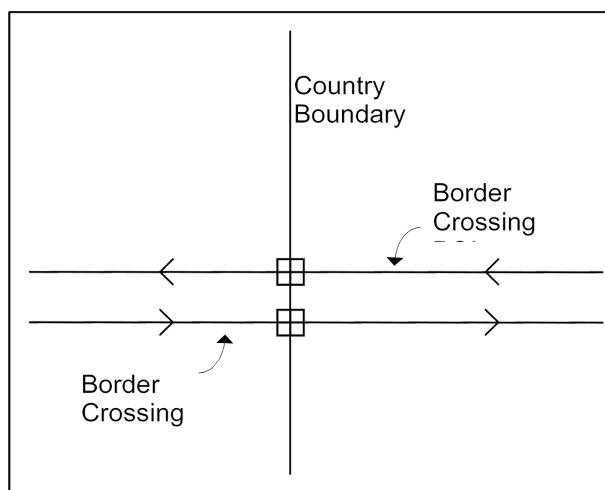
#### Definition

International border crossings.

#### Inclusion

- *Border Crossings* are included for all motorway crossings, as well as other important crossings not on motorways.
- One Border Crossing POI is placed on the outgoing road in each country where HERE has coverage. See [Figure 76:](#) on page 193.

**Figure 76:**



#### Naming

- For all crossings, a POI has the name of:
  - City/Route Number/Name of Country to which the driver is headed.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- Or, if a local name is known, the name is:
  - City/Local Name/Route Number/Name of the Country to which the driver is headed.
- Or, if there is only a local name, the name is:
  - City/Local Name/Country to which the driver is headed.
- Examples:
  - In Austria:
    - Andau/L206/Ungarn
    - Arnbach-Sillian/B100/Italien
    - Durractal/Deutschland
  - In the U.S.:
    - Blaine/WA-543/Canada
    - Sweetgrass/I-15/Canada
- If a Border Crossing is for trucks only, the name includes “-TRUCK” at the end of the Frontier Crossing Name in the appropriate country language, e.g., SARLES/ND-20/CANADA-TRUCK.

### Phone Number

Not Included.

## 5.3.17 Miscellaneous Categories

The Miscellaneous Categories layer contains facilities within the NAVSTREETS coverage area that cannot be categorized into any other layer. The Miscellaneous layer contains all Cemetery, Fire Department, Highway Exit, Meeting Point, Military Base, Public Restroom, Repair Service, Residential Area/Building and Tollbooth POIs within a NAVSTREETS coverage area.

### Cemetery

These are parcels of land designated for the burial of human remains.

### Fire Department

These are stations from which firefighters are dispatched.

### Highway Exit

These are Highway Exits of a Controlled Access Network.

### Meeting Point

These are designated (safe) places where people can gather or must report to during an emergency.

### Military Base

A facility that is directly owned and operated by the military or one of its branches. The military base shelters military equipment, and personnel, and facilitates military training and operations.

### Named Intersection

An intersection/crossover/flyover with an official name.

# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

## Public Restroom

These are restrooms open for public use.

## Repair Services

A business that provides repair service for various items.

## Residential Area/Building

These are Residential Buildings whose names can clearly be seen from the main road and are over 8 stories high.

## Tollbooth

A booth where toll is collected.

## 5.3.17.1 Cemetery

### Feature Code

9591

### Definition

A parcel of land designated for the burial of human remains.

### Inclusion

The following are included:

- Cemeteries
- Crematoriums
- Military cemeteries

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Phone Number

Included, if available.

## 5.3.17.2 Fire Department

### Feature Code

9527

### Definition

A station from which firefighters are dispatched.

### Inclusion

Included in South Korea only.

# Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

## 5.3.17.3 Highway Exit

### Feature Code

9592

### Definition

Highway Exits of the Controlled Access Network of North America

### Inclusion

- North America
  - All Exits of the North American Road Network are included.
  - Highway Exit POIs are associated to all POIs within a 1/4 mile (approximately 400 metres) driving distance from the interchange for categories that include, but may not be limited to the following:
    - ATM
    - Bank
    - Business Facility
    - Coffee Shop
    - Grocery Store
    - Hotel
    - Petrol/Gasoline Station
    - Rest Area
    - Restaurant
    - Shopping
- ① **Note:** Additional POIs beyond 1/4 mile driving distance may be included when deemed significant to that exit.
- South Korea
  - All exits along a motorway, preceding an exit ramp are included.

### Naming

- Each Highway Exit POI is uniquely named.
- Exits that have an assigned Exit Number are named as Exit Number/Ramp Destination/Direction, e.g., EXIT 61/CENTER ST/N.
- If no Exit Number exists, the POI is named as Ramp Destination/Direction, e.g., MAIN ST/N.

### Rules

- In North America, Highway Exit POIs are associated via Point of Interest Associations to Hospital POIs that are located within a driving distance of three miles (4828 metres).
  - ① **Note:** Highway Exit POIs are unaddressed (and are expected to be unaddressed links), so the placement of the POI is defined by Percent From Reference Node (PFRN). If the Highway Exit POI's link touches the defined exit at its reference end, the PFRN is 0, if the POI's link touches the defined exit at its non-reference end, the PFRN is 100.
  - ② **Note:** In S. Korea, the PFRN value for a Highway Exit POI may be any value, not only "0" or "100" as is the case in North America.

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

### Phone Number

Not included.

## 5.3.17.4 Meeting Point

### Feature Code

9725

### Definition

A designated (safe) place where people can gather or must report to during an emergency (tsunami, earthquake, fire, flood or volcanic eruption).

### Inclusion

Select countries.

Subcategory is applied to Meeting Point POIs.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Phone Number

Included, if available.

## 5.3.17.5 Military Base

### Feature Code

9715

### Definition

A facility that is directly owned and operated by the military or one of its branches. The military base shelters military equipment and personnel, and facilitates military training and operations.

### Inclusion

Included in select countries in North and South America.

### Phone Number

Included, if available.

## 5.3.17.6 Named Intersection

### Feature Code

9730

### Definition

An intersection/crossover/flyover with an official name.

### Inclusion

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

For specific countries only. Refer to the Country Specific Rules document.

### Phone Number

Not included

## 5.3.17.7 Public Restroom

### Feature Code

9589

### Definition

A restroom open for public use.

### Inclusion

Restrooms within restaurants, shopping centres, etc. are not included.

### Phone Number

Not included.

## 5.3.17.8 Repair Services

### Feature Code

9595

### Definition

A business that provides repair service for various items.

### Inclusion

Select countries only.

See [Attribute Modifier Value: SUBCATEGORY](#) on page 803.

### Phone Number

Included, if available.

## 5.3.17.9 Residential Area/Building

### Feature Code

9590

### Definition

Areas and buildings designated for residential use.

- ① **Note:** Since addresses are not prevalent and are not coded in some countries, Residential Buildings which are very common, become important for destination selection.

### Inclusion

## Reference Guide

NAVSTREETS Layers

5.3 Points of Interest

- Residential buildings, gated communities and golf estates.
- Select countries only.
- See the Country Specific Rules.

### Phone Number

Not included.

## 5.3.17.10 Tollbooth

### Feature Code

9717

### Definition

A booth where toll is collected.

### Inclusion

Select countries only.

Any sign-posted/named tollbooths on motorways.

### Naming

When the official name is not known, a country-specific generic name is published, e.g., 收費站, Caseta de Cobro, etc.

### Phone Number

Included if available

## 5.3.18 POI Trans Layer

 **Note:** This layer appears in MapInfo, but is unpopulated.

The POI Trans layer provides transliteration support for Facility Name, POI Street Name and POI Actual Address. The POI Trans layer is a single layer that supports transliteration for all POI layers.

An entry is only generated in the POI Trans layer when a transliteration is required. This implies that the POI Trans layer is empty for Latin-1 regions.

The Transliteration Type is applicable to all transliterated names in the POI Trans layer.

The Sequence Number in POI Trans is necessary to explicitly link the POI Trans to a single entry in the POI layer. NAVSTREETS duplicates entries in the POI layer when a POI has multiple names. The Sequence Number allows for unique identification of the POI Name to which the Transliteration applies.

 **Note:** All POI Layers receive a Sequence Number field.

## 5.3.19 Point Addresses

The Point Addresses layer contains the individual house numbers for a link, represented as point objects.

### 5.3.20 Point Address Trans1

The Point Address Trans layer provides transliteration support for the Point Address layer.

An entry is only generated in the Point Address Trans layer when a transliteration is required. This implies that the Point Address Trans layer is empty for Latin-1 regions.

The Transliteration Type is applicable to all transliterated names in the Point Address Trans layer.

### 5.3.21 Point Of Interest Association

The Point of Interest Association layer contains a list of all the Point of Interest layer parent and child relationships within NAVSTREETS.

### 5.3.22 Actual POI Location

The Actual POI Location layer contains the Actual POI Location display coordinates for POIs.

### 5.3.23 POI File Association

The POI File Association layer defines the association of auxiliary files to a POI. The files are provided as auxiliary data outside the NAVSTREETS structure.

### 5.3.24 POI Attribute

The POI Attribute layer publishes additional attributes associated to any of the POIs in the NAVSTREETS POI Layers. When multiple Attribute Modifiers are associated with a POI, multiple records will be published in this layer.

### 5.3.25 POI Contact Information

The POI Contact Information layer contains contact information, such as phone numbers or web addresses for a POI.

### 5.3.26 POI Inclusion per Region/Country

Refer to the accompanying Country Specific Point of Interest Inclusion document.

## Reference Guide

NAVSTREETS Layers

5.4 Administrative Areas and Other Cartography

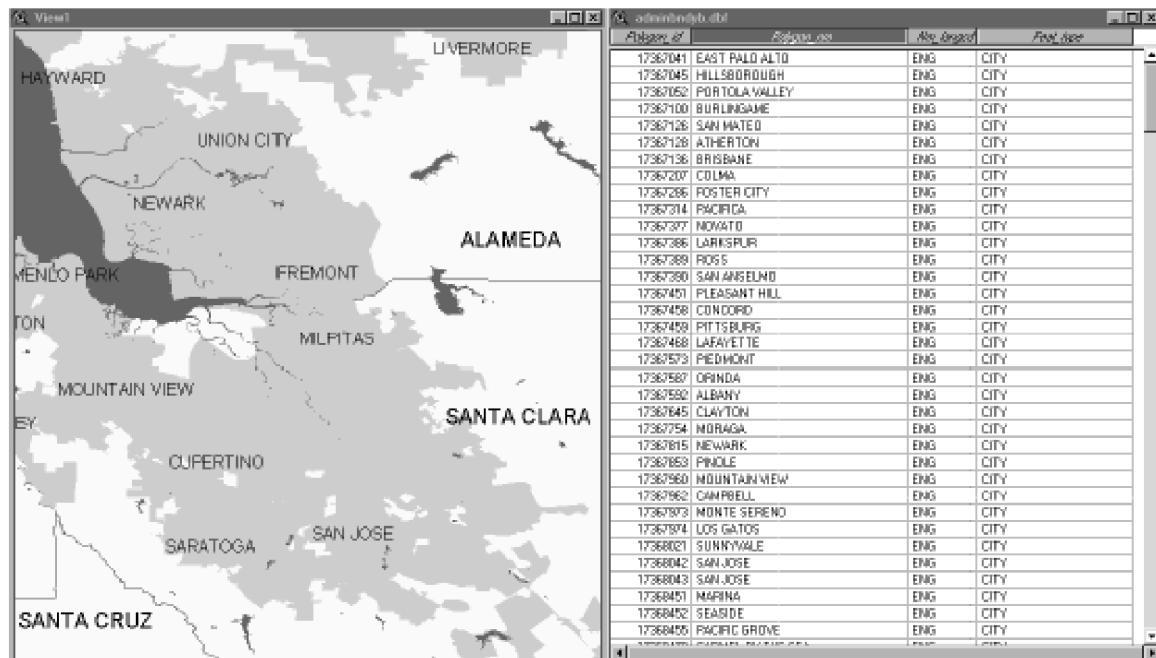
# 5.4 Administrative Areas and Other Cartography

## 5.4.1 Administrative Area Boundaries (1, 2, 3, 4, 5)

There are five Administrative Area Boundaries layers (1, 2, 3, 4, 5). These layers contain the boundaries that divide countries into administrative areas such as country, state, county, city, or settlement. These designations vary on a country by country basis. (In the US for example, the Administrative Area Boundary 3 layer displays the county boundaries, and Administrative Area Boundary 4 displays the City boundaries). This layer is used for map visualisation.

Shapefile

**Figure 77:**



MapInfo

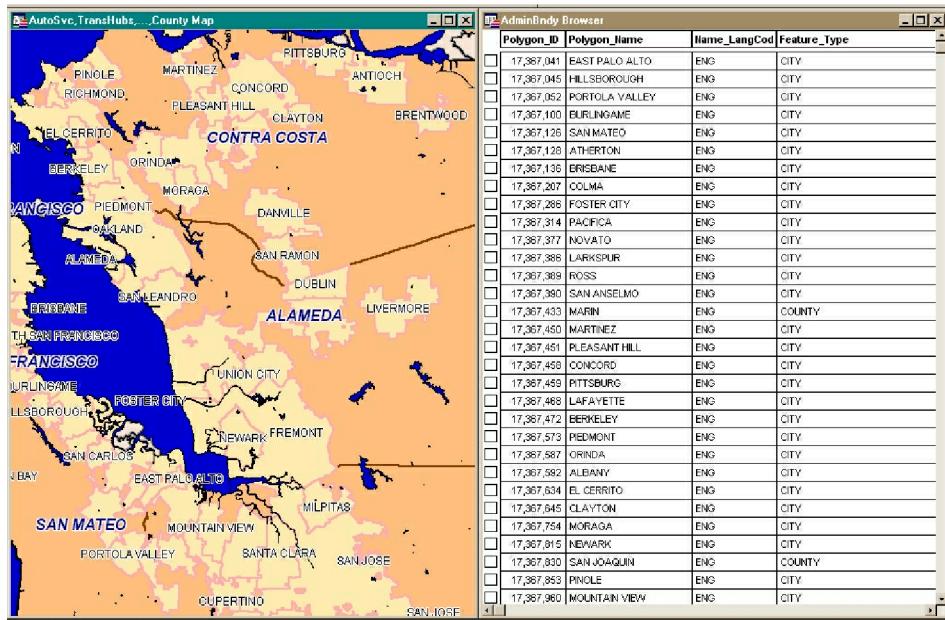
# Reference Guide

NAVSTREETS Layers

5.4 Administrative Areas and Other Cartography

here

Figure 78:



## 5.4.2 Administrative Area

The Administrative Area layer contains a list of additional area ids associated with administrative area boundaries within NAVSTREETS.

## 5.4.3 Administrative Linear Boundaries 1

This layer is used in the Disputed Territories product. Administrative Linear Boundaries 1 publishes link-level administrative country boundaries. The link-level administrative boundaries can be converted to polygons when grouping the links based on a common Area ID.

## 5.4.4 Administrative Linear Boundaries 2

This layer is used in the Disputed Territories product. Administrative Linear Boundaries 2 publishes link-level administrative state boundaries. The link-level administrative boundaries can be converted to polygons when grouping the links based on a common Area ID.

## 5.4.5 Feature Census

Census data defines Census Types (e.g. GNIS Feature ID, CBSA Metropolitan Statistical Area), Census Values and Census Names for GIS and government markets. This data also includes the two-character Census Class Codes.

## 5.4.6 Islands

The Islands layer contains all islands within a NAVSTREETS coverage area. An island is represented as a polygonal feature. The Islands layer is used for map visualisation.

## 5.4.7 Cartographic Country

The Cartographic Country layer contains linear features that represent country boundary information. This layer is used for map visualisation.

## 5.4.8 Cartographic State

The Cartographic State layer contains linear features that represent state boundary information. This layer is used for map visualisation.

## 5.4.9 Built-up Areas USA

- ① **Note:** This layer is not contained in the core product. It is delivered as a separate shapefile layer and can be found on the EDD.

The Built-up Areas USA layer contains area polygons demarcating the core settlement areas of incorporated and unincorporated communities across the 50 states, Puerto Rico and the US Virgin Islands.

## 5.4.10 Zones

The Zones layer contains zone information (where applicable), for navigable lines and polylines in the Streets layer. The Zones layer allows users to specify a destination when the administrative coding of a destination link does not reflect its commonly known name. An example of a “Known As” zone would be to decode to an address in Queens instead of using New York as a city name in address resolution.

## 5.4.11 Uninhabited Islands

The Uninhabited Islands layer contain islands or territories that are not inhabited by people and which may geographically extend from the administrative boundary of one country to another.

## 5.4.12 Metadata - Zone Records

The Metadata - Zone Records layer contains primary information about each Zone included in NAVSTREETS. This includes the Zone ID, Zone Name, Language Code, Name Type, Zone Type, and Area ID.

## Reference Guide

NAVSTREETS Layers

5.4 Administrative Areas and Other Cartography

### 5.4.13 Railroads

The Railroads layer contains Railroad features published as lines and polylines. These include the name of the railroad, and if the railroad goes onto a bridge or through a tunnel. This layer is used primarily for map visualisation.

### 5.4.14 Waterway Polygons, Waterway Segments

The Waterway Polygons and Waterway Segments layers contain polygonal and linear features that represent water features within a NAVSTREETS coverage area. These include Rivers, Water Channels, Lakes, Bays/ Harbours, Rivers, Intermittent Rivers and Canals/Water Channels that can be represented as either polygons or linear features, while other water features are typically represented as polygons. These layers are used for map visualisation.

### 5.4.15 Oceans

The Oceans layer contains all oceans within your NAVSTREETS Prime Inclusion area. An ocean is represented as a polygonal feature. The oceans layer is used for map visualisation.

### 5.4.16 Building/Landmark Features

The Building/Landmark features layer contains polygons that represent various building and landmarks features found within a coverage area. These include Business/Commerce, Convention/Exhibition, Cultural, Education, Emergency, Government, Historical, Medical, Park/Leisure, Residential, Retail, Sports, Tourist, Transportation and Unclassified Building/Landmarks.

This layer is used for map visualisation.

The Feature Code in the Building/Landmark Features Layer specifies a “placeholder” value = ‘2005999’ for Building/Landmarks. To derive the actual feature type(s) of a building, it is necessary to use the Feature Attribute Layer (FeatureAttr) to interpret the current attribute type/value combination for FEATURE CATEGORY = 3 (i.e., BUILDING TYPE).

### 5.4.17 Land Use Features (A, B)

NAVSTREETS provides two Land Use Feature layers. Land Use Features (A) contains polygons that represent various land usage features found within a Prime Inclusion area. These include Airports, Amusement Parks, Animal Parks, Beaches, Cartographic Settlement Boundaries, Cemeteries, Glaciers, Hospitals, Industrial Complexes, Military Bases, National Monuments, Parks, Parks in Water, Parking Lots, Railyards, Seaports/ Harbours, Shopping Centres, Sports Complexes, Undefined Traffic Areas, Universities/Colleges, and Woodlands.

The Land Use Features (B) layer contains features that may be within larger Land Use Features. These include Aircraft Roads, Congestion Zones, Environmental Zones, Golf Courses, Native American Reservations, and Pedestrian Zones.

## Reference Guide

NAVSTREETS Layers

5.5 Metadata

Both layers are used for map visualisation.

### 5.4.18 Aggregated Feature

The Aggregated Feature layer contains general aggregation (grouping) of polygonal features used in the context of City Model data: Grouped Structures or Grouped Complexes.

### 5.4.19 Aggregated Feature Component

The Aggregated Feature Component layer defines the components included in an Aggregated Feature.

### 5.4.20 Aggregated Feature File Association

The Aggregated Feature File Association layer defines the association of auxiliary files to an Aggregated Feature. The files are provided as auxiliary data outside the NAVSTREETS structure.

### 5.4.21 Risk Prone Area

The Risk Prone Area layer contains polygons representing risk prone areas. The risks can include hurricanes, tornadoes, etc. This layer can aide in showing evacuation routes in the event of a natural disaster. This layer currently supports hurricane, flood, and tsunami prone areas in the U.S. only.

### 5.4.22 Alternate Feature Names

The Alternate Feature Names layer provides alternate names for various features (cartographic features in bilingual areas, for example). This layer may provide alternate names for features published in the following layers; Islands, CartoCountry, CartoState, Railroads, WaterSeg, WaterPoly, Oceans, Landmark, LandUseA, LandUseB, AggrFeature and RiskArea.

## 5.5 Metadata

---

### 5.5.1 Metadata - Country Reference

The Metadata -Country Reference layer contains information that is particular to a given country. Information includes the country's Unit of Measure, Maximum Administrative Level, House Number Format, Driving Side, Phone Country Code, and a description of each of its administrative levels.

### 5.5.2 Metadata - Daylight Saving Time

Daylight Saving Time contains several attributes that identifies for a specific Administrative Area when Daylight Saving Time is in effect.

## Reference Guide

NAVSTREETS Layers

5.5 Metadata

### 5.5.3 Metadata - Administrative Area

The Metadata - Administrative Area layer contains primary information about each Administrative Area within the NAVSTREETS Prime Inclusion area. This includes the Area Name, Government Code, Administrative Level, and Administrative Hierarchy.

### 5.5.4 Metadata - Reference Classes

The Metadata - Reference Classes layer contains a description of all the coding schemes (Reference Classes) used within NAVSTREETS. See the References Classes layer description in Chapter 3 for a complete list of NAVSTREETS Reference Classes.

### 5.5.5 Metadata - Compound Reference

The Metadata - Compound Reference layer contains description information for the access restriction (HOV) condition modifiers.

The Metadata - Compound Reference layer contains description information for POI Attribute Modifier Values.

### 5.5.6 Metadata - File Identification

The Metadata - File Identification layer contains information that uniquely identifies a particular NAVSTREETS database, including the date of creation, the version, and the geographic area represented in the file.

## Reference Guide

Attributes per Layer

# Chapter 6

## Attributes per Layer

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### Topics:

- *Introduction*
- *Shapefile/MapInfo*

# Reference Guide

## Attributes per Layer

## 6.1 Introduction

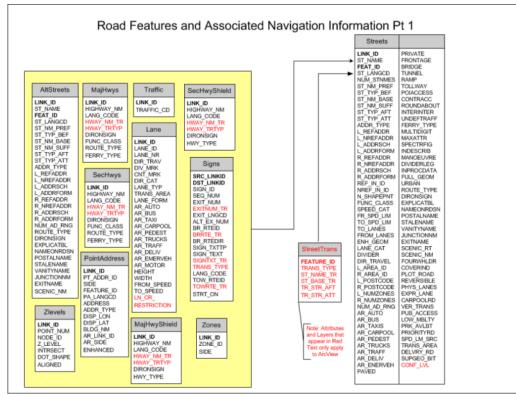
## 6.1 Introduction

### 6.1.1 General information

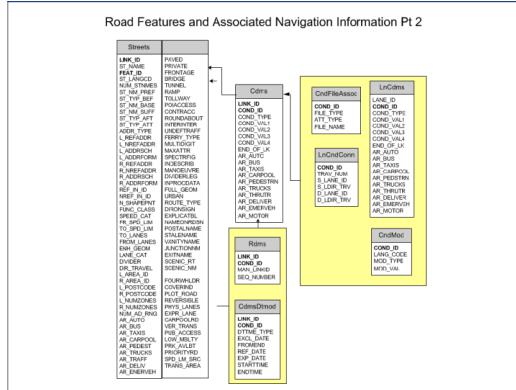
This section describes all the attributes per layer for Shapefile and MapInfo.

## 6.1.2 NAVSTREETS Entity Relationship Diagram

**Figure 79:**



**Figure 80:**



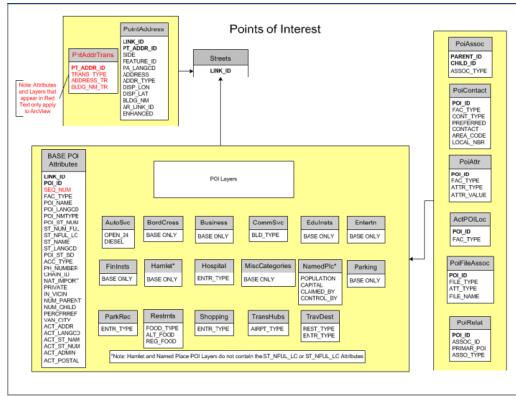
# Reference Guide

Attributes per Layer

6.1 Introduction

here

**Figure 81:**



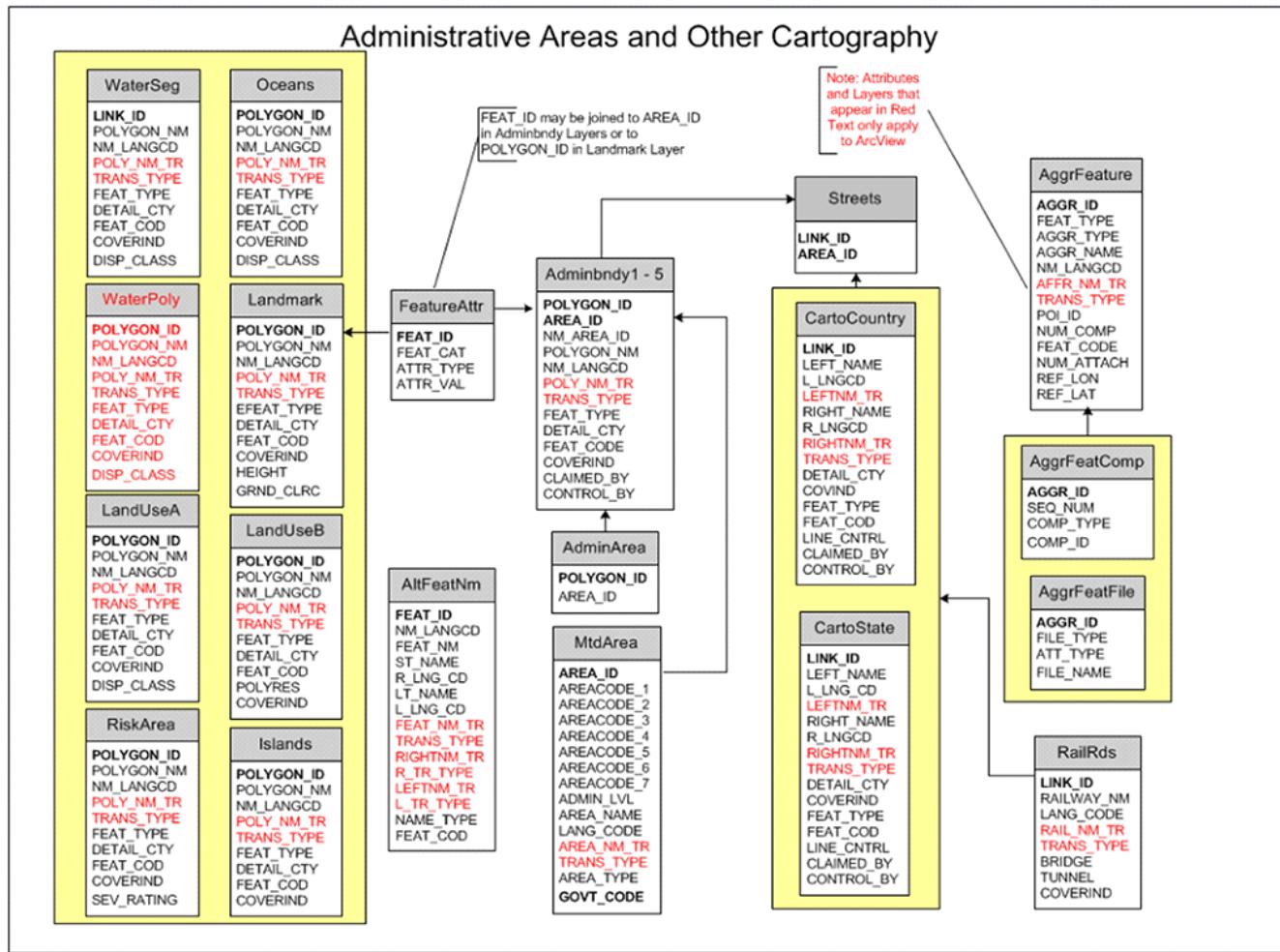
# Reference Guide

Attributes per Layer

6.1 Introduction

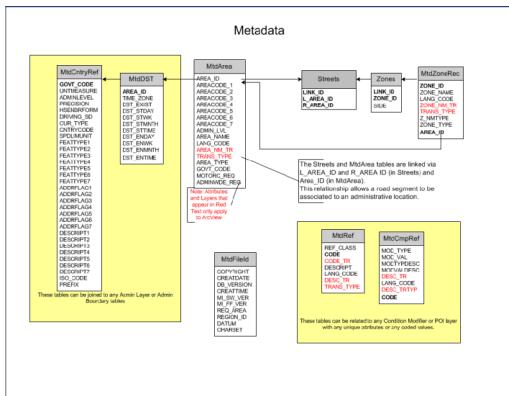
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**Figure 82:**





**Figure 83:**



## 6.2 Shapefile/MapInfo

### 6.2.1 Road Features and Associated Navigation Information

### 6.2.1.1 Streets (Streets)

## Shapefile

The Streets (.shp, .shx, .dbf) files represent the Streets layer. The Streets layer has a Scale Min/Max of 0/70,000.

- Note:** An Alternate Street Address table exists to model alternate names/addresses for Street Links.

Certain Street Layer entries will have a corresponding Alternate Street Address layer entry. In the following cases an Alternate Street Address layer entry is generated for a Link:

- The Link has more than one Street Name
  - The Link has more than one Address Range
  - The Link has more than one Route Type (Name Route Type)

Street Layer entries having Num\_StNmes > 1, Num\_Ad\_Rng > 1, or Route\_Type >1 will have a corresponding entry in the Alternate Street Address layer.

MapInfo

The Streets table represents the Streets layer. The Streets layer has a Zoom Min/Max of 0/12 miles (0/19 kilometers). The Label Zoom Min/Max is 0/4 miles (0/6 kilometers).

-  **Note:**

The Streets layer contains a 'Unique' clause that helps speed up the search on a Street\_Name within the Streets table (especially when there are duplicate street names in the table). The search is performed by executing the 'Find' command from within MapInfo Professional's menu option 'Query'. This feature is useful for Geocoding purposes.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

Specifying a column in the 'Unique' clause for the Streets.mif file results in the creation of two additional tables in the Streets layer.

For example:

## **Streets.TAB**

Contains all the columns and can be indexed only by the Street\_Name.

## **Streets1.TAB**

Contains all the columns with the exception of the Street\_Name column (since it is specified as 'Unique'), and another column called 'MI\_refnum' that contains a reference number for each record. This reference number serves as a link between the Streets2.TAB and Streets1.TAB.

## **Streets2.TAB**

Contains only the Street\_Name column and the 'MI\_refnum' column.

The Streets1.TAB file also must be opened to add additional indices to the Streets table. If another column such as the 'Link\_ID' was specified in the 'Index' clause within the MIF file (apart from searching the Streets.TAB table by the Street\_Name), the search must be performed on the Streets1.TAB. This is because MapInfo Professional does not allow the user to perform the search by another index (since it was not specified in the 'Unique' clause) in the Streets.TAB table.

An Alternate Street Address table exists to model alternate names/addresses for Street Links.

Certain Street Layer entries will have a corresponding Alternate Street Address layer entry. In the following cases an Alternate Street Address layer entry is generated for a Link:

- The Link has more than one Street Name
- The Link has more than one Address Range
- The Link has more than one Route Type (Name Route Type)

Street Layer entries having Num\_StNames > 1, NumAddrRanges > 1, or Route\_Type > 1 will have a corresponding entry in the Alternate Street Address layer.

Display Characteristics

Shapefile

**Figure 84:**

Object	Font/Pen/Brush/Symbol
Lines	NSpen.avp Pen Palette: Highway (0) Boat Ferry (1) Rail Ferry (2)
Points	N/A
Fill Patterns	N/A

MapInfo

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 85:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	1 pixel wide, Solid Black
Points	N/A
Line Pattern	Roads – pattern# 191 Boat ferries – pattern# 111 Rail ferries – pattern# 118

## Attributes and Structure<sup>2</sup>

The Streets layer contains the following attributes. Note that additional street name and address information is published in the AltStreets layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>3</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Street Name</i> on page 367	ST_NAME	STREET_NAME	Char(120), (240)
<i>Feature ID</i> on page 367	FEAT_ID	FEATURE_ID	Decimal(10,0)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Number of Street Names</i> on page 369	NUM_STNMES	NUM_STNAMES	Decimal(2,0)
<i>Street Name Prefix</i> on page 369	ST_NM_PREF	STNM_PREF	Char(2), (6)
<i>Street Type Before (and Street Type After)</i> on page 371	ST_TYP_BEF	STTYPE_BEFORE	Char(50), (90)
Street Name Base ( <i>Feature Name</i> on page 368)	ST_NM_BASE	STNM_BASE	Char(70), (105)
<i>Street Name Suffix</i> on page 372	ST_NM_SUFF	STNM_SUFFIX	Char(2), (6)
<i>Street Type After</i> on page 373	ST_TYP_AFT	STTYPE_AFTER	Char(50), (90)
<i>Street Type Attached</i> on page 373	ST_TYP_ATT	STTYPE_ATTACHED	Char(1)
<i>Address Type</i> on page 374	ADDR_TYPE	ADDRESS_TYPE	Char(1)
<i>Left Reference Address</i> on page 376	L_REFADDR	LEFT_REFADDR	Char(10)

<sup>2</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>3</sup>
<i>Left non-Reference Address</i> on page 377	L_NREFADDR	LEFT_NONREFADDR	Char(10)
<i>Left Address Scheme</i> on page 378	L_ADDRSCH	LEFT_ADDRScheme	Char(1)
<i>Left Address Format</i> on page 379	L_ADDRFORM	LEFT_ADDRFORMAT	Char(2)
<i>Right Reference Address</i> on page 389	R_REFADDR	RIGHT_REFADDR	Char(10)
<i>Right Non-Reference Address</i> on page 390	R_NREFADDR	RIGHT_NONREFADDR	Char(10)
<i>Right Address Scheme</i> on page 390	R_ADDRSCH	RIGHT_ADDRScheme	Char(1)
<i>Right Address Format</i> on page 391	R_ADDRFORM	RIGHT_ADDRFORMAT	Char(2)
<i>Reference End Intersection ID</i> on page 391	REF_IN_ID	REF_INTRSECT_ID	Decimal(10,0)
Non-Reference End Intersection ID	NREF_IN_ID	NREF_INTRSECT_ID	Decimal(10,0)
<i>Number of Shapoints</i> on page 391	N_SHAPEPNT	NUM_SHAPEPOINTS	Decimal(10,0)
<i>Functional Class</i> on page 392	FUNC_CLASS	FUNC_CLASS	Char(1)
<i>Speed Category</i> on page 397	SPEED_CAT	SPEED_CAT	Char(1)
<i>From Reference Speed Limit</i> on page 402	FR_SPD_LIM	FROMREFSPEEDLIMIT	Decimal(5)
<i>Toward Reference Speed Limit</i> on page 402	TO_SPD_LIM	TOWARDSREFSPEEDLIMIT	Decimal(5)
<i>To Lanes</i> on page 410	TO_LANES	TO_LANES	Decimal(2,0)
<i>From Lanes</i> on page 410	FROM_LANES	FROM_LANES	Decimal(2,0)
<i>Enhanced Geometry</i> on page 420	ENH_GEO	ENHANCED_GEOMETRY	Char(1)
<i>Lane Category</i> on page 421	LANE_CAT	LANE_CAT	Char(1)
<i>Divider</i> on page 421	DIVIDER	DIVIDER	Char(1)
<i>Direction of Travel</i> on page 426	DIR_TRAVEL	DIR_OF_TRAVEL	Char(1)
<i>Left Area ID</i> on page 427	L_AREA_ID	L_AREA_ID	Decimal(10,0)

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>3</sup>
<i>Right Area ID</i> on page 428	R_AREA_ID	R_AREA_ID	Decimal(10,0)
<i>Left Postal Code</i> on page 428	L_POSTCODE	L_POSTCODE	Char(11)
<i>Right Postal Code</i> on page 429	R_POSTCODE	R_POSTCODE	Char(11)
<i>Number of Left Zones</i> on page 430	L_NUMZONES	LEFT_NUMZONES	Decimal(2,0)
<i>Number of Right Zones</i> on page 430	R_NUMZONES	RIGHT_NUMZONES	Decimal(2,0)
<i>Number of Address Ranges</i> on page 430	NUM_AD_RNG	NUMADDRANGES	Decimal(2,0)
<i>Access Automobiles</i> on page 437	AR_AUTO	AR_AUTO	Char(1)
<i>Access Buses</i> on page 437	AR_BUS	AR_BUS	Char(1)
<i>Access Taxis</i> on page 437	AR_TAXIS	AR_TAXIS	Char(1)
<i>Access Carpools</i> on page 437	AR_CARPOOL	AR_CARPOOLS	Char(1)
<i>Access Pedestrians</i> on page 438	AR_PEDEST	AR_PEDESTRIANS	Char(1)
<i>Access Trucks</i> on page 438	AR_TRUCKS	AR_TRUCKS	Char(1)
<i>Access Through Traffic</i> on page 438	AR_TRAFF	AR_THROUGHTRAFFIC	Char(1)
<i>Access Deliveries</i> on page 438	AR_DELIV	AR_DELIVERIES	Char(1)
<i>Access Emergency Vehicles</i> on page 438	AR_EMERVEH	AR_EMERVEH	Char(1)
<i>Access Motorcycles</i> on page 438	AR_MOTOR	AR_MOTORCYCLES	Char(1)
<i>Paved</i> on page 438	PAVED	PAVED	Char(1)
<i>Private</i> on page 439	PRIVATE	PRIVATE	Char(1)
<i>Frontage Road</i> on page 440	FRONTAGE	FRONTAGE	Char(1)
<i>Bridge</i> on page 442	BRIDGE	BRIDGE	Char(1)
<i>Tunnel</i> on page 443	TUNNEL	TUNNEL	Char(1)
<i>Ramp</i> on page 444	RAMP	RAMP	Char(1)
<i>Tollway</i> on page 447	TOLLWAY	TOLLWAY	Char(1)
<i>POI Access Road</i> on page 448	POIACCESS	POIACCESS	Char(1)

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>3</sup>
<i>Controlled Access</i> on page 449	CONTRACC	CONTROLLEDACCESS	Char(1)
<i>Roundabout</i> on page 452	ROUNDABOUT	ROUNDABOUT	Char(1)
<i>Intersection Internal</i> on page 453	INTERINTER	INTERSECTIONINTERNAL	Char(1)
<i>Undefined Traffic Area</i> on page 463	UNDEFTRAFF	UNDEFTRAFFICAREA	Char(1)
<i>Ferry Type</i> on page 464	FERRY_TYPE	N/A	Char(1)
<i>Boat Ferry</i> on page 465	N/A	BOATFERRY	Char(1)
<i>Rail Ferry</i> on page 466	N/A	RAILFERRY	Char(1)
<i>Multiply Digitised</i> on page 466	MULTIDIGIT	MULTIDIGITIZED	Char(1)
<i>Maximum Attributes</i> on page 468	MAXATTR	MAXATTR	Char(1)
<i>Special Traffic Figure</i> on page 469	SPECTRFIG	SPECIALTRAFFICFIGURE	Char(1)
<i>Indescribable</i> on page 472	INDESCRIB	INDESCRIBABLE	Char(1)
<i>Manoeuvre</i> on page 472	MANOEUVRE	MANOEUVRE	Char(1)
<i>Divider Legal</i> on page 472	DIVIDERLEG	DIVIDERLEGAL	Char(1)
<i>In Process Data</i> on page 474	INPROCADATA	INPROCESSDATA	Char(1)
<i>Full Geometry</i> on page 474	FULL_GEOM	FULLGEOMETRY	Char(1)
<i>Urban</i> on page 475	URBAN	URBAN	Char(1)
<i>Route Type</i> on page 476	ROUTE_TYPE	ROUTE_TYPE	Char(1)
<i>Direction on Sign</i> on page 478	DIRONSIGN	DIRONSIGN	Char(1)
<i>Explicable</i> on page 479	EXPLICATBL	EXPLICATABLE	Char(1)
<i>Name on Road Sign</i> on page 480	NAMEONRDSN	NAMEONROAD SIGN	Char(1)
<i>Postal Name</i> on page 481	POSTALNAME	POSTALNAME	Char(1)
<i>Stale Name</i> on page 481	STALENAME	STALENAME	Char(1)
<i>Vanity Name</i> on page 482	VANITYNAME	VANITYNAME	Char(1)
<i>Junction Name</i> on page 483	JUNCTIONNM	JUNCTIONNAME	Char(1)
<i>Exit Name</i> on page 483	EXITNAME	EXITNAME	Char(1)

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>3</sup>
<i>Scenic Route</i> on page 484	SCENIC_RT	SCENIC_ROUTE	Char(1)
<i>Scenic Route Name</i> on page 485	SCENIC_NM	SCENIC_NAME	Char(1)
<i>Four-wheel Drive</i> on page 485	FOURWHLDR	FOURWHEELDR	Char(1)
<i>Coverage Indicator</i> on page 486	COVERIND	COVERIND	Char(2)
<i>Parking Lot Road</i> on page 488	PLOT_ROAD	PLOT_ROAD	Char(1)
<i>Reversible</i> on page 490	REVERSIBLE	REVERSIBLE	Char(1)
<i>Express Lane</i> on page 491	EXPR_LANE	EXPR_LANE	Char(1)
<i>Carpool Road</i> on page 492	CARPOOLRD	CARPOOLRD	Char(1)
<i>Physical Number of Lanes</i> on page 493	PHYS_LANES	PHYS_LANES	Decimal(2,0)
Transport Verified	VER_TRANS	VER_TRANS	Char(1)
<i>Public Access</i> on page 494	PUB_ACCESS	PUB_ACCESS	Char(1)
<i>Low Mobility</i> on page 497	LOW_MBLTY	LOW_MBLTY	Char(1)
<i>Priority Road</i> on page 498	PRIORITYRD	PRIORITYRD	Char(1)
<i>Speed Limit Source</i> on page 503	SPD_LM_SRC	SPD_LM_SRC	Char(2)
<i>Transition Area (Streets)</i> on page 504	TRANS_AREA	TRANS_AREA	Char(1)
<i>Expanded Inclusion</i> on page 505	N/A	EXPAND_INC	Char(1)
<i>Delivery Road</i> on page 510	N/A	DELIVRY_RD	Char(1)
<i>Supplemental Geometry Bitset</i> on page 510	N/A	SUPGEO_BIT	Char(10)
<i>Confidence Level Rating</i> on page 512	N/A	CONF_LVL	Char(1)

## 6.2.1.2 Alternate Street Names and Addresses (AltStreets)

The AltStreets files represent the Alternate Streets Address layer.

<sup>3</sup> (1) The number in the first set of parenthesis represents the length of the dbf field. The number in the second set of parenthesis represents the length of the tab field.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>4</sup>

The Alternate Street Address layer contains the following attributes:

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>5</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Street Name</i> on page 367	ST_NAME	STREET_NAME	Char(80), (240)
<i>Feature ID</i> on page 367	FEAT_ID	FEATURE_ID	Decimal(10,0)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Street Name Prefix</i> on page 369	ST_NM_PREF	STNM_PREF	Char(2), (6)
<i>Street Type Before (and Street Type After)</i> on page 371	ST_TYP_BEF	STTYPE_BEFORE	Char(30), (90)
<i>Street Name Base</i> on page 372	ST_NM_BASE	STNM_BASE	Char(35), (105)
<i>Street Name Suffix</i> on page 372	ST_NM_SUFFIX	STNM_SUFFIX	Char(2), (6)
<i>Street Type After</i> on page 373	ST_TYP_AFT	STTYPE_AFTER	Char(30), (90)
<i>Street Type Attached</i> on page 373	ST_TYP_ATT	STTYPE_ATTACHED	Char(1)
<i>Address Type</i> on page 374	ADDR_TYPE	ADDRESS_TYPE	Char(1)
<i>Left Reference Address</i> on page 376	L_REFADDR	LEFT_REFADDR	Char(10)
<i>Left non-Reference Address</i> on page 377	L_NREFADDR	LEFT_NONREFADDR	Char(10)
<i>Left Address Scheme</i> on page 378	L_ADDRSCH	LEFT_ADDRScheme	Char(1)
<i>Left Address Format</i> on page 379	L_ADDRFORM	LEFT_ADDRFORMAT	Char(2)
<i>Right Reference Address</i> on page 389	R_REFADDR	RIGHT_REFADDR	Char(10)
<i>Right Non-Reference Address</i> on page 390	R_NREFADDR	RIGHT_NONREFADDR	Char(10)
<i>Right Address Scheme</i> on page 390	R_ADDRSCH	RIGHT_ADDRScheme	Char(1)

<sup>4</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>5</sup>
<a href="#">Right Address Format</a> on page 391	R_ADDRFORM	RIGHT_ADDRFORMAT	Char(2)
<a href="#">Number of Address Ranges</a> on page 430	NUM_AD_RNG	NUMADDRRANGES	Decimal(2,0)
<a href="#">Route Type</a> on page 476	ROUTE_TYPE	ROUTE_TYPE	Char(1)
<a href="#">Direction on Sign</a> on page 478	DIRONSIGN	DIRONSIGN	Char(1)
<a href="#">Explicable</a> on page 479	EXPLICATBL	EXPLICATABLE	Char(1)
<a href="#">Name on Road Sign</a> on page 480	NAMEONRDSN	NAMEONROAD SIGN	Char(1)
<a href="#">Postal Name</a> on page 481	POSTALNAME	POSTALNAME	Char(1)
<a href="#">Stale Name</a> on page 481	STALENAME	STALENAME	Char(1)
<a href="#">Vanity Name</a> on page 482	VANITYNAME	VANITYNAME	Char(1)
<a href="#">Junction Name</a> on page 483	JUNCTIONNM	JUNCTIONNAME	Char(1)
<a href="#">Exit Name</a> on page 483	EXITNAME	EXITNAME	Char(1)
<a href="#">Scenic Route Name</a> on page 485	SCENIC_NM	SCENIC_NAME	Char(1)

## 6.2.1.3 Street Trans Layer (StreetTrans)

6

The StreetTrans files represent the Street Trans Layer.

Attributes and Structure<sup>7</sup>

The Street Trans layer contains the following attributes

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<a href="#">Feature ID</a> on page 367	FEATURE_ID	N/A	Decimal(10)
<a href="#">Transliteration Type</a> on page 516	TRANS_TYPE	N/A	Char(3)

<sup>5</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>6</sup> This layer appears in MapInfo, but is unpopulated.

<sup>7</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Street Name Trans</i> on page 519	ST_NAME_TR	N/A	Char(250)
<i>Street Name Base Trans</i> on page 519	ST_BASE_TR	N/A	Char(250)
<i>Trans Street Type After</i> on page 519	TR_STR_AFT	N/A	Char(1)
<i>Trans Street Type Attached</i> on page 520	TR_STR_ATT	N/A	Char(1)

### 6.2.1.4 Street Type Translations (StrTypeTr)

- ① **Note:** This layer appears in MapInfo, but is unpopulated. It is only delivered in Shapefile where Street Type Translations are published for a certain region: Bahrain, Egypt, Hong Kong, Jordan, Kuwait, Lebanon, Macau, Morocco, Oman, Qatar, Saudi Arabia, Thailand and United Arab Emirates.

The StrTypeTr files represent the Street Type Translations layer.

Attributes and Structure<sup>8</sup>

The Street Trans layer contains the following attributes

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Feature ID</i> on page 520	FEATURE_ID	N/A	Decimal(10,0)
<i>Street Type</i> on page 520	STREET_TYP	N/A	Char(60)

### 6.2.1.5 Major Highways (MajHwys)

Shapefile

The MajHwys (.shp, .shx, .dbf) files represent the Major Highways layer. Major Highways has a Scale Min/Max of 0/6,000,000.

MapInfo

The MajHwys table represents the Major Highways layer. Major Highways has a Zoom Min/Max of 0/150 miles (0/241 kilometers). The Label Zoom Min/Max is 0/40 miles (0/64 kilometers).

Display Graphics

Shapefile

<sup>8</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 86:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	NSpen.avp Pen Palette: Highway (3) Boat Ferry (4) Rail Ferry (5)
Fill Patterns	N/A

MapInfo

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 87:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	2 pixels wide, Solid Red
Line Pattern	Roads – pattern# 2 Boat ferries – pattern# 111 Rail ferries – pattern# 118

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>9</sup>

The Major Highways layer contains the following attributes. Note that multiple line or polyline objects represent a single segment of a major highway when it is associated with multiple highway names.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>10</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Highway Name</i> on page 521	HIGHWAY_NM	HIGHWAY_NAME	Char(80), (240)
Highway Name <i>Language Code</i> on page 618	LANG_CODE	LANG_CODE	Char(3)
Highway Name <i>Transliteration</i> on page 518	HWAY_NM_TR	N/A	Char(250)
Highway Name <i>Transliteration Type</i> on page 516	HWAY_TRTYP	N/A	Char(3)
<i>Direction on Sign</i> on page 478	DIRONSIGN	DIRONSIGN	Char(1)
<i>Functional Class</i> on page 392	FUNC_CLASS	FUNC_CLASS	Char(1)
<i>Route Type</i> on page 476	ROUTE_TYPE	ROUTE_TYPE	Char(1)
<i>Ferry Type</i> on page 522	FERRY_TYPE	N/A	Char(1)
<i>Boat Ferry</i> on page 522	N/A	BOATFERRY	Char(1)
<i>Rail Ferry</i> on page 522	N/A	RAILFERRY	Char(1)

## 6.2.1.6 Secondary Highways (SecHwys)

### Shapefile

The SecHwys (.shp, .shx, .dbf) files represent the Secondary Highways layer. The Secondary Highways layer has a Scale Min/Max of 0/185,000.

### MapInfo

The SecHwys table represents the Secondary Highways layer. The Secondary Highways layer has a Zoom Min/Max of 0/30 miles (0/48 kilometers). The Label Zoom Min/Max is 0/15 miles (0/24 kilometers).

### Display Graphics

### Shapefile

<sup>9</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>10</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 88:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	NSpen.avp Pen Palette: Highway (3) Boat Ferry (4) Rail Ferry (5)
Fill Patterns	N/A

MapInfo

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 89:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	2 pixels wide, Solid Blue
Line Pattern	Roads – pattern# 2 Boat ferries – pattern# 111 Rail ferries – pattern# 118

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

## Attributes and Structure<sup>11</sup>

The Secondary Highways layer contains the following attributes. Note that multiple line or polyline objects represent a single segment of a secondary highway when it is associated with multiple highway names

Attribute  <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>12</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Highway Name</i> on page 522	HIGHWAY_NM	HIGHWAY_NAME	Char(80), (240)
Highway Name <i>Language Code</i> on page 618	LANG_CODE	LANG_CODE	Char(3)
Highway Name <i>Transliteration</i> on page 518	HWAY_NM_TR	N/A	Char(250)
Highway Name <i>Transliteration Type</i> on page 516	HWAY_TRTYP	N/A	Char(3)
<i>Direction on Sign</i> on page 478	DIRONSIGN	DIRONSIGN	Char(1)
<i>Functional Class</i> on page 392	FUNC_CLASS	FUNC_CLASS	Char(1)
<i>Route Type</i> on page 476	ROUTE_TYPE	ROUTE_TYPE	Char(1)
<i>Ferry Type</i> on page 523	FERRY_TYPE	N/A	Char(1)
<i>Boat Ferry</i> on page 523	N/A	BOATFERRY	Char(1)
<i>Rail Ferry</i> on page 523	N/A	RAILFERRY	Char(1)

## 6.2.1.7 Major Highway Shields (MajHwyShield)

### Shapefile

The MajHwyShield (.shp, .shx, .dbf) files represent the Major Highway Shields layer. The Major Highway Shields layer has a Scale Min/Max of 0/185,000.

### MapInfo

The MajHwyShield table represents the Major Highway Shields layer. The Major Highway Shields layer has a Zoom Min/Max of 0/40 miles (0/64 kilometers). The Label Zoom Min/Max is 0/40 miles (0/64 kilometers).

### Display Graphics

### Shapefile

---

<sup>11</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>12</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 90:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 91:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Points	 Inte-32.bmp,  StShield.bmp,  Circle.bmp  1bont324.bmp,  2ont324.bmp,  3ont324.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>13</sup>

The Major Highway Shields layer contains the following attributes. Note that multiple point objects represent a Major Highway Shield icon when it is associated with multiple highway names.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>14</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Highway Name</i> on page 522	HIGHWAY_NM	HIGHWAY_NAME	Char(80), (240)
Highway Name <i>Language Code</i> on page 618	LANG_CODE	LANG_CODE	Char(3)
Highway Name <i>Transliteration</i> on page 518	HWAY_NM_TR	N/A	Char(250)
Highway Name <i>Transliteration Type</i> on page 516	HWAY_TRTYP	N/A	Char(3)
<i>Direction on Sign</i> on page 478	DIRONSIGN	DIRONSIGN	Char(1)
<i>Highway Type</i> on page 524	HWY_TYPE	N/A	Char(2)

## 6.2.1.8 Secondary Highway Shields (SecHwyShield)

### Shapefile

The SecHwyShield (.shp, .shx, .dbf) files represent the Secondary Highway Shields layer. The Secondary Highway Shields layer has a Scale Min/Max of 12,000/175,000.

### MapInfo

The SecHwyShield table represents the Secondary Highway Shields layer. The Secondary Highway Shields layer has a Zoom Min/Max of 0/40 miles (0/64 kilometers). The Label Zoom Min/Max is 0/40 miles (0/64 kilometers).

### Display Graphics

### shapefile

<sup>13</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>14</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 92:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 93:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Points	 Inte-32.bmp,  StShield.bmp,  Circle.bmp  1bont324.bmp,  2ont324.bmp,  3ont324.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>15</sup>

The Secondary Highway Shields layer contains the following attributes. Note that multiple point objects represent a Secondary Highway Shield icon when it is associated with multiple highway names.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>16</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Highway Name</i> on page 524	HIGHWAY_NM	HIGHWAY_NAME	Char(80), (240)
Highway Name <i>Language Code</i> on page 618	LANG_CODE	LANG_CODE	Char(3)
Highway Name <i>Transliteration</i> on page 518	HWAY_NM_TR	N/A	Char(250)
Highway Name <i>Transliteration Type</i> on page 516	HWAY_TRTYP	N/A	Char(3)
<i>Direction on Sign</i> on page 478	DIRONSIGN	DIRONSIGN	Char(1)
<i>Highway Type</i> on page 524e	HWY_TYPE	N/A	Char(2)

## 6.2.1.9 Signs (Signs)

The Signs files represent the Signs layer.

### Display Graphics

This layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>17</sup>

This layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>18</sup>
<i>Source Link ID</i> on page 530	SRC_LINKID	SOURCE_LINKID	Decimal(10,0)
<i>Destination Link ID</i> on page 532	DST_LINKID	DESTINATION_LINKID	Decimal(10,0)
<i>Sign ID</i> on page 532	SIGN_ID	SIGN_ID	Decimal(10,0)
<i>Sequence Number (Signs)</i> on page 532	SEQ_NUM	SEQ_NUMBER	Decimal(4,0)

<sup>15</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>16</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>17</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>18</sup>
<i>Exit Number</i> on page 533	EXIT_NUM	EXIT_NUMBER	Char(8), (24)
Exit Number <i>Language Code</i> on page 618	EXIT_LNGCD	EXIT_LANGCD	Char(3)
Exit Number <i>Transliteration</i> on page 518	EXITNUM_TR	N/A	Char(40)
<i>Alternate Exit Number</i> on page 533	ALT_EX_NUM	ALT_EX_NUM	Char(8), (24)
<i>Branch Route ID</i> on page 534	BR_RTEID	BRANCH_ROUTEID	Char(20), (60)
Branch Route ID <i>Transliteration</i> on page 518	BRRTE_TR	N/A	Char(250)
<i>Branch Route Direction</i> on page 536	BR_RTEDIR	BRANCH_ROUTEDIR	Char(1)
<i>Sign Text</i> on page 537	SIGN_TEXT	SIGN_TEXT	Char(60), (180)
Sign Text <i>Transliteration</i> on page 518	SIGNTXT_TR	N/A	Char(250)
Sign <i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
<i>Sign Text Type</i> on page 538	SIGN_TXTTP	SIGN_TEXTP	Char(1)
Sign <i>Language Code</i> on page 618	LANG_CODE	LANG_CODE	Char(3)
<i>Toward Route ID</i> on page 541	TOW_RTEID	TOWARD_ROUTEID	Char(20), (60)
Toward Route ID <i>Transliteration</i> on page 518	TOWRTE_TR	N/A	Char(250)
<i>Straight-On-Sign</i> on page 542	STRT_ON	STRAIGHT_ON	Char(1)

### 6.2.1.10 Distance Marker (DistMarker)

See *Distance Marker (DistMarker) - Layer Layout* on page 1129.

### 6.2.1.11 Condition/Driving Manoeuvres (Cdms)

The Cdms files represent the Condition/Driving Manoeuvres layer.

Display Graphics

<sup>18</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

This layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>19</sup>

The Condition/Driving Manoeuvres layer contains the following attributes. When there are multiple restricted manoeuvre links associated with a condition on a link then multiple records will be found in this layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Condition ID</i> on page 545	COND_ID	CONDITION_ID	Decimal(10,0)
<i>Condition Type</i> on page 545	COND_TYPE	CONDITION_TYPE	Decimal(5,0)
<i>Condition Value</i> on page 605	COND_VAL1	CONDITION_VALUE1	Char(30)
<i>Condition Value 2</i> on page 605	COND_VAL2	CONDITION_VALUE2	Char(15)
<i>Condition Value 3</i> on page 605	COND_VAL3	CONDITION_VALUE3	Char(30)
<i>Condition Value 4</i> on page 605	COND_VAL4	CONDITION_VALUE4	Decimal(5,0)
<i>End of Link</i> on page 605	END_OF_LK	END_OF_LINK	Char(1)
<i>AR-Auto</i> on page 608	AR_AUTO	AR_AUTO	Char(1)
<i>AR-Bus</i> on page 608	AR_BUS	AR_BUS	Char(1)
<i>AR-Taxis</i> on page 609	AR_TAXIS	AR_TAXIS	Char(1)
<i>AR-Carpools</i> on page 609	AR_CARPOOL	AR_CARPOOLS	Char(1)
<i>AR-Pedestrians</i> on page 609	AR_PEDSTRN	AR_PEDESTRIANS	Char(1)
<i>AR-Trucks</i> on page 610	AR_TRUCKS	AR_TRUCKS	Char(1)
<i>AR-Through Traffic</i> on page 610	AR_THRUTR	AR_THROUGHTRAFFIC	Char(1)
<i>AR-Deliveries</i> on page 610	AR_DELIVER	AR_DELIVERIES	Char(1)
<i>AR-Emergency Vehicles</i> on page 611	AR_EMERVEH	AR_EMERG_VEH	Char(1)
<i>AR-Motorcycles</i> on page 611	AR_MOTOR	AR_MOTORCYCLES	Char(1)

### 6.2.1.12 Condition/Driving Manoeuvres - Date/Time Modifiers (CdmsDtmod)

The CdmsDtmod files represent the Condition/Driving Manoeuvre - Date/Time Modifiers layer.

<sup>19</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Display Graphics

The Condition/Driving Manoeuvre - Date/Time Modifiers layer does not have any graphic objects associated with the data.

## Attributes and Structure<sup>20</sup>

The Condition/Driving Manoeuvre - Date/Time Modifiers layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Condition ID</i> on page 545	COND_ID	CONDITION_ID	Decimal(10,0)
<i>Date/Time Modifier (DTM) Type</i> on page 612	DTTME_TYPE	DATETIME_TYPE	Char(1)
<i>Exclude Date</i> on page 613	EXCL_DATE	EXCLUDE_DATE	Char(1)
<i>From End</i> on page 613	FROMEND	FROMEND	Char(1)
<i>Reference Date</i> on page 614	REF_DATE	REFERENCE_DATE	Char(8)
<i>Expiration Date</i> on page 616	EXP_DATE	EXPIRATION_DATE	Char(8)
<i>Start Time</i> on page 617	STARTTIME	STARTTIME	Char(4)
<i>End Time</i> on page 617	ENDTIME	ENDTIME	Char(4)

## 6.2.1.13 Condition Modifiers (CndMod)

The Condition Modifiers layer contains information about the restricted access conditions as well as Signs, Signals & Warnings conditions. The modifier value field may contain a coded value or a value string.

## Display Graphics

The Condition Modifiers layer does not have any graphic objects associated with the data.

## Attributes and Structure<sup>21</sup>

The Condition Modifiers layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Condition ID</i> on page 545	COND_ID	CONDITION_ID	Decimal(10,0)
<i>Language Code</i> on page 618	LANG_CODE	LANG_CODE	Char(3) Optional
<i>Modifier Type</i> on page 623	MOD_TYPE	MODIFIER_TYPE	Decimal(5,0)

<sup>20</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>21</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Modifier Value</i> on page 625	MOD_VAL	MODIFIER_VALUE	Decimal(100)

### 6.2.1.14 Lane Condition/Driving Manoeuvres (LnCdms)

Lane conditions information is published in the Lane Condition/Driving Manoeuvres (LnCdms) layer.

Lane Condition is used to determine a single lane restriction for cartographic representation and for proper lane guidance.

The Lane Conditions/Driving Manoeuvres (LnCdms) layer may be joined with the following tables:

- Lane (Lane) Layer - To identify Lane Specific Attributes.
- Condition Modifier (CndMod) Layer - To identify Condition Modifiers.
- Condition/Driving Manoeuvres - Date/Time Modifiers (CdmsDtmod) - To identify conditions applicable to times and days.
- Lane Connectivity (LnCndConn) Layer

When multiple lanes on a Link are affected by the same condition (e.g. Toll Structure) and the condition attribution is the same for all conditions (e.g., same Payment Method and Toll Structure Type), then one record per Lane in Lane Condition/Driving Manoeuvres (LnCdms) layer is published with the same Condition ID.

#### Display Graphics

The Lane Connectivity layer does not have any graphic objects associated with the data.

#### Attributes and Structure<sup>22</sup>

The Lane Connectivity layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Lane ID</i> on page 681	LANE_ID	LANE_ID	Decimal(10,0)
<i>Condition ID</i> on page 681	COND_ID	COND_ID	Decimal(10,0)
<i>Condition Type</i> on page 681	COND_TYPE	COND_TYPE	Decimal(5,0)
<i>Condition Value</i> on page 681	COND_VAL1	COND_VAL1	Char(30)
<i>Condition Value 2</i> on page 681	COND_VAL2	COND_VAL2	Char(15)
<i>Condition Value 3</i> on page 681	COND_VAL3	COND_VAL3	Char(30)
<i>Condition Value 4</i> on page 682	COND_VAL4	COND_VAL4	Decimal(5,0)
<i>End Of Link</i> on page 682	END_OF_LK	END_OF_LK	Char(1)

<sup>22</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>AR-Auto</i> on page 682	AR_AUTO	AR_AUTO	Char(1)
<i>AR-Bus</i> on page 682	AR_BUS	AR_BUS	Char(1)
<i>AR-Taxis</i> on page 682	AR_TAXIS	AR_TAXIS	Char(1)
<i>AR-Carpool</i> on page 682	AR_CARPOOL	AR_CARPOOL	Char(1)
<i>AR-Pedestrian</i> on page 682	AR_PEDSTRN	AR_PEDSTRN	Char(1)
<i>AR-Trucks</i> on page 682	AR_TRUCKS	AR_TRUCKS	Char(1)
<i>AR-Through Traffic</i> on page 682	AR_THRUTR	AR_THRUTR	Char(1)
<i>AR-Deliveries</i> on page 682	AR_DELIVER	AR_DELIVER	Char(1)
<i>AR-Emergency Vehicles</i> on page 682	AR_EMERVEH	AR_EMERVEH	Char(1)
<i>AR-Motorcycles</i> on page 683	AR_MOTOR	AR_MOTORCYCLES	Char(1)

## 6.2.1.15 Lane Connectivity (LnCndConn)

The Lane Connectivity layer publishes the Lane involved in a Lane Condition in case of multi-Link condition such as Lane Traversal Conditions and Lane Toll Structure conditions.

### Display Graphics

The Lane Connectivity layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>23</sup>

The Lane Connectivity layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Condition ID</i> on page 683	COND_ID	COND_ID	Decimal(10,0)
<i>Traversal Number</i> on page 683	TRAV_NUM	TRAV_NUM	Decimal(2)
<i>Source Lane ID</i> on page 683	S_LANE_ID	S_LANE_ID	Decimal(10,0)
<i>Source Travel Direction</i> on page 683	S_LDIR_TRV	S_LDIR_TRV	Char(1)
<i>Destination Lane ID</i> on page 684	D_LANE_ID	D_LANE_ID	Decimal(10,0)

<sup>23</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Destination Travel Direction</i> on page 685	D_LDIR_TRV	D_LDIR_TRV	Char(1)

When multiple lane strands are identified by the same condition having the same originating Lane, multiple records are published in Lane Connectivity layer. Traversal Number attribute identifies the different Lane strands.

For Lane Traversal Conditions, when more than two Links are involved in the same Lane Traversal condition, a default Lane object for the intermediate Link(s) is used to ensure lane connectivity. Lane Number 1 is used as default for the lane(s) present on the link(s) internal to the Lane Connectivity condition, independently of the total number of lanes on the links.

### 6.2.1.16 Restricted Driving Manoeuvres - Manoeuvre Links (Rdms)

The Restricted Driving Manoeuvres - Manoeuvre Links layer contains information about all the manoeuvre links associated with a Condition/Driving Manoeuvre. This layer is essential when working with a Condition/Driving Manoeuvre that includes multiple links (e.g. an access restriction that applies to more than one link when calculating a route). This layer is used for route calculation in conjunction with the Restricted Driving Manoeuvres layer. The table ONLY contains conditions that involve two (2) or more links.

The Rdms (.dbf) files represent the Restricted Driving Manoeuvres - Manoeuvre Links layer.

#### Display Graphics

The Rdms layer does not have any graphic objects associated with the data.

#### Attributes and Structure<sup>24</sup>

This layer contains the following attributes

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Condition ID</i> on page 545	COND_ID	CONDITION_ID	Decimal(10,0)
<i>Manoeuvre Link ID</i> on page 685	MAN_LINKID	MANOEUVRE LINK ID	Decimal(10,0)
<i>Sequence Number (Restricted Driving Manoeuvres)</i> on page 686	SEQ_NUMBER	SEQ_NUMBER	Decimal(4,0)

<sup>24</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

### 6.2.1.17 Z-Levels (Zlevels)

#### Shapefile

The Zlevels (.shp, .shx, .dbf) files represent the Z-Levels layer. No labels are produced for geometric points.

#### MapInfo

The Zlevels table represents the Z-Levels layer. The Z-Levels layer has a Zoom Min/Max of 0/3 miles (0/5 kilometers). No labels are produced for geometric points.

#### Display Graphics

This layer is not open by default, and needs to be opened to display.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 94:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	N/A
Lines	N/A
Points	MapInfo standard Symbol 38 for End Points, and MapInfo Standard Symbol 40 for Shape Points.
Fill Patterns	N/A

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

### Attributes and Structure<sup>25</sup>

The Z-Levels layer contains the following attributes. Note that a single intersection is represented by multiple point objects when it connects with multiple line or polyline street segments.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<a href="#">Link ID</a> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<a href="#">Point Number</a> on page 686	POINT_NUM	POINT_NUMBER	Decimal(4,0)
<a href="#">Node ID</a> on page 687	NODE_ID	NODE_ID	Decimal(10,0)
<a href="#">Z-Level</a> on page 687	Z_LEVEL	Z_LEVEL	Decimal(2,0)
<a href="#">Intersection</a> on page 690	INTRSECT	INTERSECTION	Char(1)
<a href="#">Z-Shape</a> on page 690	DOT_SHAPE	N/A	Decimal(2,0)
<a href="#">Aligned</a> on page 691	ALIGNED	ALIGNED	Char(1)

### 6.2.1.18 Traffic (Traffic)

The Traffic files represent the Traffic layer.

#### Display Graphics

The Traffic layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>26</sup>

The Traffic layer contains the following attributes. Note that for countries with multiple providers, there will be links having multiple traffic codes. Using the Location Database Number it is possible to be able to find the set of Traffic Codes for a specific provider. Please refer to the Product Release Notes for information about traffic providers and the values assigned to them.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<a href="#">Link ID</a> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<a href="#">Traffic Code</a> on page 692	TRAFFIC_CD	TRAFFICCODE	Char(10)

<sup>25</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>26</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## 6.2.1.19 Lane (Lane)

The Lane layer defines a Lane with the lane attribution corresponding to Lane Marking content. Specific attribute fields are added to the Lane layer to enable Lane specific attribution. The attribute specified in the Lane layer only apply to the lane defined in the Lane Number field.

### Display Graphics

The Lane layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>27</sup>

The Lane layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Lane ID</i> on page 693	LANE_ID	LANE_ID	Decimal
<i>Lane Number</i> on page 693	LANE_NR	LANE_NR	Decimal(2,0)
Lane <i>Direction of Travel</i> on page 426	DIR_TRAV	DIR_TRAV	Char(1)
<i>Lane Divider Marker</i> on page 694	DIV_MRK	DIV_MRK	Decimal(2,0)
<i>Center Divider Marker</i> on page 699	CNT_MRK	CNT_MRK	Decimal(2,0)
<i>Direction Category</i> on page 701	DIR_CAT	DIR_CAT	Decimal(10,0)
<i>Lane Type</i> on page 704	LANE_TYP	LANE_TYP	Decimal(6)
<i>Transition Area (Lane)</i> on page 711	TRANS_AREA	TRANS_AREA	Char(1)
<i>Lane Forming/Ending</i> on page 715	LANE_FORM	LANE_FORM	Decimal(2)
<i>Access Automobiles</i> on page 718	AR_AUTO	AR_AUTO	Char(1)
<i>Access Buses</i> on page 718	AR_BUS	AR_BUS	Char(1)
<i>Access Taxis</i> on page 718	AR_TAXI	AR_TAXI	Char(1)
<i>Access Carpools</i> on page 718	AR_CARPOOL	AR_CARPOOL	Char(1)

<sup>27</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<a href="#">Access Pedestrians</a> on page 719	AR_PEDEST	AR_PEDEST	Char(1)
<a href="#">Access Trucks</a> on page 719	AR_TRUCKS	AR_TRUCKS	Char(1)
<a href="#">Access Through Traffic</a> on page 719	AR_TRAFF	AR_TRAFF	Char(1)
<a href="#">Access Deliveries</a> on page 719	AR_DELIV	AR_DELIV	Char(1)
<a href="#">Access Emergency Vehicles</a> on page 719	AR_EMERVEH	AR_EMERVEH	Char(1)
<a href="#">Access Motorcycles</a> on page 719	AR_MOTOR	AR_MOTORCYCLES	Char(1)
<a href="#">Lane Height</a> on page 719	HEIGHT	HEIGHT	Decimal(10)
<a href="#">Lane Width</a> on page 720	WIDTH	WIDTH	Decimal(10)
<a href="#">From Speed</a> on page 720	FROM_SPEED	FROM_SPEED	Decimal(10)
<a href="#">To Speed</a> on page 720	TO_SPEED	TO_SPEED	Decimal(10)
<a href="#">Lane Crossing Restriction</a> on page 721	N/A	LANE_CROSSING_RESTRICTION	Decimal(1)

## 6.2.1.20 Condition File Association (CndFileAssoc)

The Condition File Association layer associates the auxiliary data for junction view to the specified junction view condition.

The Condition File Association layer is used to associate data published in external files (provided as look-aside data to NAVSTREETS) to the corresponding Condition / Driving Manoeuvre layer (Cdms). The Condition File Association is connected to the Condition / Driving Manoeuvre layer via the Condition\_ID (Cond\_ID). One Condition ID could have multiple auxiliary files associated.

### Display Graphics

The Condition File Association layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>28</sup>

The Condition File Association layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<a href="#">Condition ID</a> on page 545	COND_ID	COND_ID	Decimal(10,0)

<sup>28</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
File Type	FILE_TYPE	FILE_TYPE	Decimal(2,0)
<a href="#">Attachment Type</a> on page 727	ATT_TYPE	ATT_TYPE	Char(3)
<a href="#">Associated File Name</a> on page 728	FILE_NAME	FILE_NAME	Char(150)

## 6.2.2 Points of Interest

### 6.2.2.1 Named Places (NamedPlc)

#### Shapefile

The NamedPlc (.shp, .shx, .dbf) files represent the Named Places layer. The Named Places layer has a Scale Min/Max of 0/95,000.

#### MapInfo

The NamedPlc table represents the Named Places layer. The Named Places layer has a Zoom Min/Max of 0/8 miles (0/12 kilometers). The Label Zoom Min/Max is 0/5 miles (0/8 kilometers).

#### Display Graphics

#### Shapefile

**Figure 95:**

Object	Font/Pen/Brush/Symbol
Lines	N/A
Fill Patterns	N/A

#### MapInfo

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 96:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	◆ Cityl32.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>29</sup>

The Named Places layer contains the following attributes. Note that a Named Place is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>30</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Named Place Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Named Place Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Named Place Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)

<sup>29</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>30</sup>
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Population</i> on page 758	POPULATION	POPULATION	Decimal(10,0)
<i>Capital</i> on page 759	CAPITAL	CAPITAL	Char(1)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)
<i>Claimed By</i> on page 854	CLAIMED_BY	CLAIMED_BY	Char(3)
<i>Controlled By</i> on page 760	CONTROL_BY	CONTROL_BY	Char(3)

## 6.2.2.2 Hamlets (Hamlet)

Shapefile

The Hamlet files represent the Hamlets layer. The Hamlets layer has a Scale Min/Max of 0/6,000.

MapInfo

The Hamlet table represents the Hamlets layer. The Hamlets layer has a Zoom Min/Max of 0/.5 miles (0/.8 kilometers). The Label Zoom Min/Max is 0/.5 miles (0/.8 kilometers).

Display Graphics

Shapefile

<sup>30</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 97:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

MapInfo

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 98:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Hamlet.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>31</sup>

The Hamlets layer contains the following attributes. Note that a hamlet is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>32</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Hamlet Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Hamlet Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Hamlet Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)

<sup>31</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>32</sup>
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)

### 6.2.2.3 Hospitals (Hospital)

#### Shapefile

The Hospital (.shp, .shx, .dbf) files represent the Hospitals layer. The Hospitals layer has a Scale Min/Max of 0/95,000.

#### MapInfo

The Hospital table represents the Hospitals layer. The Hospitals layer has a Zoom Min/Max of 0/8 miles (0/12 kilometers). The Label Zoom Min/Max is 0/5 miles (0/8 kilometers).

#### Display Graphics

#### Shapefile

**Figure 99:**

Object	Font/Pen/Brush/Symbol
Lines	N/A
Fill Patterns	N/A

#### MapInfo

<sup>32</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 100:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Hospital3.bmp, Healthcare32.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>33</sup>

The Hospitals layer contains the following attributes. Note that a Hospital is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>34</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Hospital Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Hospital Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Hospital Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>33</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>34</sup>
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)
<i>Entrance Type</i> on page 765	ENTR_TYPE	ENTR_TYPE	Char(1)

### 6.2.2.4 Parks and Recreation (ParkRec)

#### Shapefile

The ParkRec (.shp, .shx, .dbf) files represent the Parks and Recreation layer. The Parks and Recreation layer has a Scale Min/Max of 0/18000.

#### MapInfo

The ParkRec table represents the Parks and Recreation layer. The Parks and Recreation layer has a Zoom Min/Max of 0/1.5 miles (0/.2.4 kilometers). The Label Zoom Min/Max is 0/.5 miles (0/.8 kilometers).

#### Display Graphics

#### Shapefile

<sup>34</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 101:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

MapInfo

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 102:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Amuse32.bmp,  Museum32.bmp,  Sports32.bmp,  Rec32.bmp,  Golf32.bmp,  Bowling32.bmp,  Marina32.bmp,  Casino32.bmp,  Skating32.bmp,  Sprtair3.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>35</sup>

The Parks and Recreation layer contains the following attributes. Note that a park/recreation facility is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>36</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Park/Recreation Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Park/Recreation Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Park/Recreation Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>35</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>36</sup>
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)
<i>Entrance Type</i> on page 765	ENTR_TYPE	ENTR_TYPE	Char(1)

## 6.2.2.5 Transportation Hubs (TransHubs)

### Shapefile

The TransHubs (.shp, .shx, .dbf) files represent the Transportation Hubs layer. The Transportation Hubs layer has a Min/Max Scale Min/Max of 0/95,000.

### MapInfo

The TransHubs table represents the Transportation Hubs layer. The Transportation Hubs layer has a Zoom Min/Max of 0/8 miles (0/12 kilometers). The Label Zoom Min/Max is 0/5 miles (0/8 kilometers).

### Display Graphics

### Shapefile

<sup>36</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 103:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

MapInfo

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 104:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Airport32.bmp,  Train32.bmp,  bus32.bmp,  Ferry32.bmp,  Comrail3.bmp, TransitStop32.bmp,  TransitAccess32.bmp,  Taxi32.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>37</sup>

The Transportation Hubs layer contains the following attributes. Note that a transportation hub is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>38</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749 <sup>39</sup>	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)

<sup>37</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>38</sup>
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (154)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)
<i>Airport Type</i> on page 766	AIRPT_TYPE	AIRPORT_SUB_TYPE	Char(1)

### 6.2.2.6 Travel Destinations (TravDest)

#### Shapefile

The TravDest (.shp, .shx, .dbf) files represent the Travel Destinations layer. The Travel Destinations layer has a Scale Min/Max of 0/18,000.

#### MapInfo

The TravDest table represents the Travel Destinations layer. The Travel Destinations layer has a Zoom Min/Max of 0/1.5 miles (0/2.4 kilometers). The Label Zoom Min/Max is 0/.5 miles (0/.8 kilometers).

#### Display Graphics

#### Shapefile

<sup>38</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>39</sup> This field is no longer in use.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 105:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

MapInfo

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 106:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Hotel32.bmp,  Tourist3.bmp,  Tourinf3.bmp,  Convtn32.bmp,  Winery32.bmp,  Skiing32.bmp,  Restare3.bmp,  Histor32.bmp,  RentCar3.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>40</sup>

The Travel Destination layer contains the following attributes. Note that a travel destination is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>41</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>40</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>41</sup>
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)
<i>Entrance Type</i> on page 765	ENTR_TYPE	ENTR_TYPE	Char(1)
<i>Rest Area Type</i> on page 767	REST_TYPE	REST_AREA_TYPE	Char(30)

## 6.2.2.7 Shopping (Shopping)

### Shapefile

The Shopping (.shp, .shx, .dbf) files represent the Shopping layer. The Shopping layer has a set to a Scale Min/Max of 0/95,000.

### MapInfo

The Shopping table represents the Shopping layer. The Shopping layer has a set to a Zoom Min/Max of 0/8 miles (0/12 kilometers). The Label Zoom Min/Max is 0/5 miles (0/8 kilometers).

### Display Graphics

### Shapefile

<sup>41</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled Shape file.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 107:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

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### MapInfo

Attributes and Structure<sup>42</sup>

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<sup>42</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 108:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Shop32.bmp,  Grocery3.bmp,  Pharmacy32.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

The Shopping layer contains the following attributes. Note that a shopping facility is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>43</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>43</sup>
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)
<i>Entrance Type</i> on page 765	ENTR_TYPE	ENTR_TYPE	Char(1)

### 6.2.2.8 Restaurants (Restrnts)

#### Shapefile

The Restrnts (.shp, .shx, .dbf) files represent the Restaurants layer. The Restaurants layer has a Scale Min/Max of 0/18,000.

#### MapInfo

The Restrnts table represents the Restaurants layer. The Restaurants layer has a Zoom Min/Max of 0/1.5 miles (0/2.4 kilometers). The Label Zoom Min/Max is 0/.5 miles (0/.8 kilometers).

#### Display Graphics

#### Shapefile

<sup>43</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 109:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 110:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Rest1-32
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>44</sup>

The Restaurant layer contains the following attributes. Note that a restaurant is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>45</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>44</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>45</sup>
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Food Type</i> on page 770	FOOD_TYPE	FOOD_TYPE	Char(35)
<i>Alternate Food Type</i> on page 772	ALT_FOOD	ALT_FOOD_TYPE	Char(35)
<i>Regional Food Type</i> on page 773	REG_FOOD	RG_FOOD_TYPE	Char(35)
<i>Restaurant Type</i> on page 775	RSTR_TYPE	RSTR_TYPE	Char(35)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD		Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)

## 6.2.2.9 Entertainment (Entertn)

### Shapefile

The Entertn (.shp, .shx, .dbf) files represent the Entertainment layer. The Entertainment layer has a Scale Min/Max of 0/95,000.

### MapInfo

The Entertn table represents the Entertainment layer. The Entertainment layer has a Zoom Min/Max of 0/8 miles (0/12 kilometers). The Label Zoom Min/Max is 0/5 miles (0/8 kilometers).

### Display Graphics

### Shapefile

<sup>45</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 111:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 112:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Disco32.bmp,  PerArt3.bmp,  Cinema32.bmp,  Nightclub32.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>46</sup>

The Entertainment layer contains the following attributes. Note that a entertainment facility is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>47</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>46</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>47</sup>
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)

### 6.2.2.10 Auto Maintenance, Service, and Petrol (AutoSvc)

#### Shapefile

The AutoSvc (.shp, .shx, .dbf) files represent the Auto Maintenance, Service, and Petrol layer. The Auto Maintenance, Service, and Petrol layer has a Zoom Min/Max of 0/18,000.

#### MapInfo

The AutoSvc table represents the Auto Maintenance, Service, and Petrol layer. The Auto Maintenance, Service, and Petrol layer has a Zoom Min/Max of 0/1.5 miles (0/2.4 kilometers). The Label Zoom Min/Max is 0/.5 miles (0/.8 kilometers).

#### Display Graphics

#### Shapefile

<sup>47</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 113:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 114:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Petrol32.bmp,  Carserv3.bmp,  Cardeal3.bmp,  Carclub3.bmp  Motorcy3.bmp  TruckStop32.bmp  WeighStation32.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>48</sup>

The Auto Maintenance, Service, and Petrol layer contains the following attributes. Note that auto maintenance, service, and petrol facilities are represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>49</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)

<sup>48</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>49</sup>
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD		Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)
<i>Open 24 Hours</i> on page 777	OPEN_24	OPEN_24_HOURS	Char(1)
<i>Diesel</i> on page 778	DIESEL	DIESEL	Char(1)

## 6.2.2.11 Financial Institutions (FinInsts)

### Shapefile

The FinInsts (.shp, .shx, .dbf) files represent the Financial Institutions layer. The Financial Institutions layer has a Zoom Min/Max of 0/18,000.

### MapInfo

The FinInsts table represents the Financial Institutions layer. The Financial Institutions layer has a Zoom Min/Max of 0/1.5 miles (0/2.4 kilometers). The Label Zoom Min/Max is 0/.5 miles (0/.8 kilometers).

### Display Graphics

### Shapefile

<sup>49</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 115:**

Object	Font/Pen/Brush/Symbol
Lines	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 116:**

Object	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Bank32.bmp,  Atm32.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>50</sup>

The Financial Institutions layer contains the following attributes. Note that a financial institution is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>51</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>50</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>51</sup>
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)

### 6.2.2.12 Business Facilities (Business)

#### Shapefile

The Business (.shp, .shx, .dbf) files represent the Business Facilities layer. The Business Facilities layer has a Zoom Min/Max of 0/95,000.

#### MapInfo

The Business table represents the Business Facilities layer. The Business Facilities layer has a Zoom Min/Max of 0/8 miles (0/12 kilometers). The Label Zoom Min/Max is 0/5 miles (0/8 kilometers).

#### Display Graphics

#### Shapefile

<sup>51</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 117:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 118:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Busines3.bmp, Industrial32.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>52</sup>

The Business Facilities layer contains the following attributes. Note that a business facility is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>53</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>52</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>53</sup>
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)

### 6.2.2.13 Community Service Centres (CommSvc)

#### Shapefile

The CommSvc (.shp, .shx, .dbf) files represent the Community Service Centres layer. The Community Service Centre layer has a Zoom Min/Max of 0/95,000.

#### MapInfo

The Community Service Centre layer has a Zoom Min/Max of 0/1.5 miles (0/2.4 kilometers). The Label Zoom Min/Max is 0/.5 miles (0/.8 kilometers).

#### Display Graphics

#### Shapefile

<sup>53</sup> The number in the second set of parenthesis the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 119:**

Object	Font/Pen/Brush/Symbol
Lines	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 120:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 Commctr3.bmp,  Cityhal3.bmp,  Court32.bmp,  Police32.bmp,  Governmentoffices32.bmp,  Religious.bmp  PostOff3.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>54</sup>

The Community Service Centres layer contains the following attributes. Note that a community service centre is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>55</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Building Type	BLD_TYPE	BUILDING_TYPE	Char(30)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)

<sup>54</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>55</sup>
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)

### 6.2.2.14 Educational Institutions (Edulnsts)

#### Shapefile

The Edulnsts (.shp, .shx, .dbf) files represent the Educational Institutions layer. The Educational Institutions layer has a Scale Min/Max of 0/95,000.

#### MapInfo

The Edulnsts table represents the Educational Institutions layer. The Educational Institutions layer has a Zoom Min/Max of 0/8 miles (0/12 kilometers). The Label Zoom Min/Max is 0/5 miles (0/8 kilometers).

#### Display Graphics

shapefile

<sup>55</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 121:**

Object	Font/Pen/Brush/Symbol
Lines	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 122:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 School32.bmp,  Library3.bmp,  Higedu3.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>56</sup>

The Educational Institutions layer contains the following attributes. Note that an educational institution is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>57</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>56</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>57</sup>
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)
<i>Entrance Type</i> on page 765	ENTR_TYPE	ENTR_TYPE	Char(1)

### 6.2.2.15 Parking (Parking)

#### Shapefile

The Parking (.shp, .shx, .dbf) files represent the Parking layer. The Parking layer has a Scale Min/Max of 0/95,000.

#### MapInfo

The Parking table layer represents the Parking layer. The Parking layer has a Zoom Min/Max of 0/8 miles (0/12 kilometers). The Label Zoom Min/Max is 0/5 miles (0/8 kilometers).

#### Display Graphics

#### Shapefile

<sup>57</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 123:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 124:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	Parklot3.bmp,  Parking3.bmp,  Prk&rid3.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>58</sup>

The Parking layer contains the following attributes. Note that a parking facility is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>59</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>58</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>59</sup>
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)

## 6.2.2.16 Border Crossing (BordCross)

### Shapefile

The BordCross (.shp, .shx, .dbf) files represent the Border Crossing layer. The Border Crossing layer has a Scale Min/Max of 0/95,000.

### MapInfo

The BordCross table represents the Border Crossing layer. The Border Crossing layer has a Zoom Min/Max of 0/1.5 miles (0/2.4 kilometers). The Label Zoom Min/Max is 0/.5 miles (0/.8 kilometers).

### Display Graphics

### Shapefile

<sup>59</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 125:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 126:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 BordCross.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>60</sup>

The Border Crossing layer contains the following attributes. Note that a border crossing is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>61</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>60</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>61</sup>
<i>Number Parents</i> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<i>Number Children</i> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<i>Percent From Reference Node</i> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<i>Vanity City ID</i> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<i>Actual Address</i> on page 755	ACT_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<i>Actual Address Language Code</i> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<i>Actual Street Name</i> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<i>Actual Street Number</i> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<i>Actual Admin Name</i> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<i>Actual Postal Code</i> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)

## 6.2.2.17 Miscellaneous Categories (MiscCategories)

The Miscellaneous Categories layer contains facilities within the NAVSTREETS coverage area that cannot be categorized into any other layer.

The MiscCategories table represents the Miscellaneous Categories layer.

Shapefile

The Miscellaneous Categories layer has a Zoom Min/Max of 0/8 miles (0/12 kilometers). The Label Zoom Min/Max is 0/5 miles (0/8 kilometers).

MapInfo

The Miscellaneous Categories layer has a Zoom Min/Max of 0/8 miles (0/12 kilometers). The Label Zoom Min/Max is 0/5 miles (0/8 kilometers).

Display Graphics

Shapefile

<sup>61</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 127:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

MapInfo

here

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 128:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	N/A
Points	 ResiBldg3.bmp
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>62</sup>

The Miscellaneous Categories layer contains the following attributes. Note that a miscellaneous POI is represented by multiple point objects when it has names in multiple languages. A full description of Facility Type codes and Chain ID codes can be obtained from the Metadata-Reference Classes layer.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>63</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Sequence Number (POIs)</i> on page 731	SEQ_NUM	N/A	Decimal(2)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
Facility Name (See <i>POI Name</i> on page 733)	POI_NAME	POI_NAME	Char(250), (254)
Facility Name <i>Language Code</i> on page 618	POI_LANGCD	POINM_LANGCODE	Char(3)
Facility Name Type (See <i>POI Name Type</i> on page 740)	POI_NMTYPE	POI_NAMETYPE	Char(1)
<i>Street Number</i> on page 746	POI_ST_NUM	POI_ST_NUMBER	Char(10)
<i>Full POI Street Number</i> on page 747	ST_NUM_FUL	ST_NUM_FUL	Char(25), (75)
Full POI Street Number <i>Language Code</i> on page 618	ST_NFUL_LC	ST_NFUL_LC	Char(3)
<i>Street Name</i> on page 748	ST_NAME	STREET_NAME	Char(80), (240)
Street Name <i>Language Code</i> on page 618	ST_LANGCD	ST_LANGCODE	Char(3)
<i>Side</i> on page 748	POI_ST_SD	POI_ST_SIDE	Char(1)
<i>Access Type</i> on page 749	ACC_TYPE	ACCESS_TYPE	Char(1)
<i>Phone Number</i> on page 749	PH_NUMBER	PHONE NUMBER	Char(15)
<i>Chain ID</i> on page 750	CHAIN_ID	CHAIN_ID	Decimal(10,0)
<i>National Importance</i> on page 751	NAT_IMPORT	NATIONAL_IMPORTANCE	Char(1)
<i>Private (POIs)</i> on page 752	PRIVATE	PRIVATE	Char(1)
<i>In Vicinity</i> on page 752	IN_VICIN	IN_VICINITY	Char(1)

<sup>62</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>63</sup>
<a href="#">Number Parents</a> on page 753	NUM_PARENT	NUMBER_PARENTS	Decimal(5,0)
<a href="#">Number Children</a> on page 754	NUM_CHILD	NUMBER_CHILDREN	Decimal(5,0)
<a href="#">Percent From Reference Node</a> on page 754	PERCFRREF	PERCFRREF	Decimal(3,0)
<a href="#">Vanity City ID</a> on page 754	VANCITY_ID	VANITY_CITY_ID	Decimal(10,0)
<a href="#">Actual Address</a> on page 755	ACTL_ADDR	ACTUAL_ADDRESS	Char(110), (254)
<a href="#">Actual Address Language Code</a> on page 756	ACT_LANGCD	ACT_LANGCD	Char(3)
<a href="#">Actual Street Name</a> on page 757	ACT_ST_NAM	ACT_ST_NAM	Char(50)
<a href="#">Actual Street Number</a> on page 757	ACT_ST_NUM	ACT_ST_NUM	Char(10)
<a href="#">Actual Admin Name</a> on page 757	ACT_ADMIN	ACT_ADMIN	Char(50)
<a href="#">Actual Postal Code</a> on page 758	ACT_POSTAL	ACT_POSTAL	Char(11)

## 6.2.2.18 POI Trans (PoiTrans)

 **Note:** This layer appears in MapInfo, but is unpopulated.

The POI Trans layer provides transliteration support for Facility Name, POI Street Name and POI Actual Address. It is a single layer that supports transliteration for all POI layers.

### Display Graphics

The POI Trans layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>64</sup>

The POI Trans layer contains the following attributes:

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<a href="#">POI ID</a> on page 782	POI_ID	N/A	Decimal(10)
<a href="#">Sequence Number</a> on page 782	SEQ_NUM	N/A	Decimal(2)

<sup>63</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>64</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Facility Type</i> on page 782	FAC_TYPE	N/A	Char(5)
<i>Transliteration Type</i> on page 783	TRANS_TYPE	N/A	Char(3)
<i>POI Name Transliteration</i> on page 783	POI_NM_TR	N/A	Char(250)
<i>Street Name Transliteration</i> on page 783	ST_NM_TR	N/A	Char(250)
<i>Actual Address Transliteration</i> on page 783	ACTADDR_TR	N/A	Char(250)
<i>Full POI Street Number</i> on page 783	ST_NFUL_TR	N/A	Char(100)
<i>Actual Street Name Transliteration</i> on page 783	ACT_ST_NAM_TR	N/A	Char(100)
<i>Actual Admin Name Transliteration</i> on page 784	ACT_ADMIN_TR	N/A	Char(100)
<i>Actual Postal Code Transliteration</i> on page 784	ACT_POSTAL_TR	N/A	Char(100)

### 6.2.2.19 Point Addresses (PointAddress)

The Point Addresses layer contains the individual house numbers for a link, represented as point objects.

The PointAddress table represents the Point Addresses layer.

#### Display Graphics

The Point Addresses layer has geometry associated with each point, but it does not have any graphic objects associated with the data.

#### Attributes and Structure<sup>65</sup>

The Point Addresses layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>66</sup>
<i>Link ID</i> on page 784	LINK_ID	LINK_ID	Decimal(10,0)
<i>Point Address ID</i> on page 785	PT_ADDR_ID	PT_ADDR_ID	Decimal(10,0)
<i>Side</i> on page 748	SIDE	SIDE	Char(1)

<sup>65</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>66</sup>
<i>Feature ID</i> on page 367	FEATURE_ID	FEATURE_ID	Decimal(10,0)
<i>Language Code</i> on page 618	PA_LANGCD	PA_LANGCD	Char(3)
<i>Address</i> on page 785	ADDRESS	ADDRESS	Char(40), (75)
<i>Address Type</i> on page 513	ADDR_TYPE	ADDR_TYPE	Char(1)
<i>Point Address Display X Coordinate</i> on page 786	DISP_LON	DISP_LON	Decimal(12,0)
<i>Point Address Display Y Coordinate</i> on page 786	DISP_LAT	DISP_LAT	Decimal(12,0)
<i>Building Name</i> on page 787	BLDG_NM	BLDG_NM	Char(60), (105)
<i>Arrival Link ID</i> on page 787	AR_LINK_ID	AR_LINK_ID	Decimal(10,0)
<i>Arrival Side</i> on page 788	AR_SIDE	AR_SIDE	Char(1)
<i>Enhanced</i> on page 789	ENHANCED	ENHANCED	Char(1)

## 6.2.2.20 Point Address Trans (PntAddrTrans)

<sup>①</sup> **Note:** This layer appears in MapInfo, but is unpopulated.

The Point Address Trans layer provides transliteration support for the Point Address layer.

### Display Graphics

The Point Address Trans layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>67</sup>

The Point Address Trans layer contains the following attributes:

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Point Address ID</i> on page 785	PT_ADDR_ID	N/A	Decimal(10,0)
<i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
<i>Address Transliteration</i> on page 518	ADDRESS_TR	N/A	Char(50)

<sup>66</sup> The number in the first set of parenthesis represents the length of the dbf field. The number in the second set of parenthesis represents the length of the tab field.

<sup>67</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
Building Name <i>Transliteration</i> on page 518	BLDG_NM_TR	N/A	Char(50)

### 6.2.2.21 Point Of Interest Association (PoiAssoc)

The PoiAssoc table represents the Point Of Interest Association layer.

#### Display Graphics

The Point Of Interest Association layer does not have any graphic objects associated with the data.

#### Attributes and Structure<sup>68</sup>

The Point Of Interest Association contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Parent ID</i> on page 790	PARENT_ID	PARENT_ID	Decimal(10,0)
<i>Child ID</i> on page 790	CHILD_ID	CHILD_ID	Decimal(10,0)
<i>Assoc Type</i> on page 791	ASSOC_TYPE	ASSOC_TYPE	Char(1)

### 6.2.2.22 Actual POI Location (ActPOILoc)

The Actual POI Location layer defines the actual position of a POI. Display coordinates are floating coordinates not positioned on any existent road network geometry.

#### Display Graphics

The Actual POI Location layer has geometry associated with each point, but it does not have any graphic objects associated with the data.

See *Display Location X, Y (Geometry)* on page 795 for more information.

#### Attributes and Structure<sup>69</sup>

The Actual POI Location contains the following attributes.

Attribute <sup>70</sup> <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)

<sup>68</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>69</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## 6.2.2.23 POI File Association (PoiFileAssoc)

The POI File Association layer defines the association of auxiliary files to a POI. The files are provided as auxiliary data outside the NAVSTREETS structure.

The PoiFileAssoc table represents the POI File Association layer.

### Display Graphics

The POI File Association layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>71</sup>

The POI File Association layer contains the following attributes.

Attribute  <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>File Type</i> on page 726	FILE_TYPE	FILE_TYPE	Decimal(2,0)
<i>Attachment Type</i> on page 727	ATT_TYPE	ATTACHMENT_TYPE	Char(3)
<i>File Name</i> on page 796	FILE_NAME	FILE_NAME	Char(150)

## 6.2.2.24 POI Attribute (POIAttr)

The POI Attribute layer publishes additional attributes associated to any of the POIs in the NAVSTREETS POI layers. When multiple Attribute Modifiers are associated with a POI, multiple records will be published in this layer, one for each attribute.

### Display Graphics

The POI Attribute Layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>72</sup>

The POI Attribute Layer contains the following attributes.

Attribute  <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Facility Type</i> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)

<sup>70</sup> A POI facility is represented by multiple point objects when it has names in multiple languages. The field Facility Type should be used to refer each entry in this layer to the correct main POI Layer. The POI ID should then be used to retrieve the POI Name in the main POI layer.

<sup>71</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>72</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<a href="#">Attribute Type</a> on page 797	ATTR_TYPE	ATTRIBUTE_TYPE	Decimal(5,0)
<a href="#">Attribute Value</a> on page 799	ATTR_VALUE	ATTRIBUTE_VALUE	Decimal(10,0)

### 6.2.2.25 POI Contact Information (PoiContact)

The POI Contact Information table represents the POI Contact Information layer.

#### Display Graphics

The POI Contact Information layer does not have any graphic objects associated with the data.

#### Attributes and Structure<sup>73</sup>

The POI Contact Information layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<a href="#">POI ID</a> on page 730	POI_ID	POI_ID	Decimal(10,0)
<a href="#">Facility Type</a> on page 732	FAC_TYPE	FACILITY_TYPE	Decimal(5,0)
<a href="#">Contact Type</a> on page 826	CONT_TYPE	CONTACT_TYPE	Char(1)
<a href="#">Preferred</a> on page 827	PREFERRED	PREFERRED	Char(1)
<a href="#">Contact</a> on page 828	CONTACT	CONTACT	Char(200)
<a href="#">Phone Area Code</a> on page 830	AREA_CODE	AREA_CODE	Char(7,0)
<a href="#">Phone Local Number</a> on page 831	LOCAL_NBR	LOCAL_NBR	Char(15,0)

### 6.2.2.26 POI Association (PoiRelat)

The POI Association layer is used to group POIs together.

#### Display Graphics

The POI Association layer does not have any graphics associated with the data.

#### Attributes and Structure<sup>74</sup>

The POI Association table contains the following attributes.

<sup>73</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>74</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Association ID</i> on page 832	ASSOC_ID	ASSOC_ID	Decimal(10,0)
<i>POI ID</i> on page 832	POI_ID	POI_ID	Decimal(10,0)
<i>Primary POI</i> on page 833	PRIMAR_POI	PRIMAR_POI	Char(1)
<i>Association Type</i> on page 833	ASSO_TYPE	ASSOC_TYPE	Decimal(1)

### 6.2.3 Administrative Areas and Other Cartography

#### 6.2.3.1 Administrative Area Boundaries (1) (Adminbndy1)

##### Shapefile

The Adminbndy1 (.shp, .shx, .dbf) files represent the Administrative Area Boundaries (1) layer. The Administrative Area Boundaries (1) layer itself does not have a Scale Min/Max setting.

##### MapInfo

The Adminbndy1 table represents the Administrative Area Boundaries (1) layer. See Appendix B for a list of the administrative area types by country. The Administrative Area Boundaries (1) layer itself does not have a Zoom Min/Max setting. The Label Zoom Min/Max is 0/10 miles (0/16 kilometers).

##### Display Graphics

##### Shapefile

**Figure 129:**

Object	Font/Pen/Brush/Symbol
Lines	4 points wide, Black
Points	N/A
Fill Patterns	Solid

##### MapInfo

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 130:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Labels	Black, 8pt, Century Gothic
Lines	4 pixels wide, Black
Points	N/A
Fill Patterns	Solid

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>75</sup>

The Administrative Area Boundaries (1) layer contains the following attributes. Note that an Administrative Area Boundary is represented by multiple region objects when it has names in multiple languages.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Admin Area ID</i> on page 841 (See <i>Polygon ID</i> on page 841)	POLYGON_ID	POLYGON_ID	Decimal(10,0)
<i>Area ID</i> on page 842	AREA_ID	AREA_ID	Decimal(10)
<i>Number of Area IDs</i> on page 842	NM_AREA_ID	NUMBER_AREA_ID	Decimal(2)
<i>Admin Area Name</i> on page 843	POLYGON_NM	POLYGON_NAME	Char(80), (105)
<i>Admin Area Name Language Code</i> on page 843	NM_LANGCD	NAME_LANGCODE	Char(3)
<i>Admin Area Name Transliteration</i> on page 843	POLY_NM_TR	N/A	Char(250)
<i>Admin Area Name Transliteration Type</i> on page 843	TRANS_TYPE	N/A	Char(3)
<i>Feature Type</i> on page 844	FEAT_TYPE	FEATURE_TYPE	Char(40)
<i>Detailed City</i> on page 853	DETAIL_CTY	DETAILED_CITY	Char(1)
<i>Admin Feature Code</i> on page 888	FEAT_COD	FEAT_COD	Decimal(10,0)
<i>Coverage Indicator</i> on page 486	COVERIND	COVERIND	Char(2)
<i>Claimed By</i> on page 1071	CLAIMED_BY	CLAIMED_BY	Char(3)
<i>Controlled By</i> on page 1074	CONTROL_BY	CONTROL_BY	Char(3)

## 6.2.3.2 Administrative Area Boundaries (2-5) (Adminbndy2/3/4/5)

### Shapefile

The Adminbndy2/3/4/5 (.shp, .shx, .dbf) files represent the Administrative Area Boundaries (2/3/4/5) layer. The Administrative Area Boundaries (2/3/4/5) layer itself does not have a Scale Min/Max setting.

### MapInfo

<sup>75</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>76</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

The Adminbndy2 table represents the Administrative Area Boundaries (2) layer. See Appendix B for a list of the administrative area types by country. The Administrative Area Boundaries (2) layer itself does not have a Zoom Min/Max setting. The Label Zoom Min/Max is 0/10 miles (0/16 kilometers).

Display Graphics

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

**Figure 131:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	2 points wide, Light Grey
Points	N/A
Fill Patterns	Solid

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>77</sup>

The Administrative Area Boundaries (2, 3, 4, 5) layer contains the following attributes. Note that an Administrative Area Boundary is represented by multiple region objects when it has names in multiple languages.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
Admin Area ID (See <i>Polygon ID</i> on page 841)	POLYGON_ID	POLYGON_ID	Decimal(10,0)
<i>Area ID</i> on page 842	AREA_ID	AREA_ID	Decimal(10)
<i>Number of Area IDs</i> on page 842	NM_AREA_ID	NUMBER_AREA_ID	Decimal(2)
<i>Admin Area Name</i> on page 843	POLYGON_NM	POLYGON_NAME	Char(80), (105)
<i>Admin Area Name Language Code</i> on page 618	NM_LANGCD	NAME_LANGCODE	Char(3)
<i>Admin Area Name Transliteration</i> on page 518	POLY_NM_TR	N/A	Char(250)
<i>Admin Area Name Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
<i>Admin Area Description</i> (See <i>Feature Type</i> on page 368)	FEAT_TYPE	FEATURE_TYPE	Char(40)
<i>Detailed City</i> on page 853	DETAIL_CTY	DETAILED_CITY	Char(1)
<i>Admin Feature Code</i> on page 888	FEAT_COD	FEAT_COD	Decimal(10,0)
<i>Coverage Indicator</i> on page 486	COVERIND	COVERIND	Char(2)
<i>Claimed By</i> on page 1071	CLAIMED_BY	CLAIMED_BY	Char(3)
<i>Controlled By</i> on page 1074	CONTROL_BY	CONTROL_BY	Char(3)

### 6.2.3.3 Administrative Area (AdminArea)

The AdminArea table represents the Administrative Area layer.

#### Display Graphics

The Administrative Area layer does not have any graphic objects associated with the data.

<sup>77</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>78</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

### Attributes and Structure<sup>79</sup>

The Administrative Area contains the following attributes

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
Admin Area ID (See <i>Polygon ID</i> on page 841)	POLYGON_ID	POLYGON_ID	Decimal(10,0)
<i>Area ID</i> on page 842	AREA_ID	AREA_ID	Decimal(10,0)
<i>Number of Area IDs</i> on page 842	N/A	NUMBER_AREA_IDS	Decimal(2,0)

### 6.2.3.4 Administrative Linear Boundaries 1 (AdminLine1)

See [Administrative Linear Boundaries 1 \(AdminLine1\)](#) on page 1064.

### 6.2.3.5 Administrative Linear Boundaries 2 (AdminLine2)

See [Administrative Linear Boundaries 2 \(AdminLine2\)](#) on page 1065.

### 6.2.3.6 Feature Census (FeatureCens)

The Feature Census (.shp, .shx, .dbf) files represent the Feature Census layer.

#### Attributes and Structure<sup>80</sup>

The Feature Census layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Feature ID</i> on page 367	FEAT_ID	FEAT_ID	Decimal(10)
<i>Feature ID</i> on page 908	FEAT_CAT	FEAT_CAT	Decimal(2)
<i>Census Type</i> on page 857	CENS_TYPE	CENS_TYPE	Decimal(2)
<i>Census Value</i> on page 859	CENS_VALUE	CENS_VALUE	Char(10)
<i>Language Code</i> on page 618	LANG_CODE	LANG_CODE	Char(3)
<i>Census Name</i> on page 860	CENS_NAME	CENS_NAME	Char(100)

<sup>79</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>80</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

### 6.2.3.7 Islands (Islands)

#### Shapefile

The Islands (.shp, .shx, .dbf) files represent the Islands layer. The Islands layer itself does not have a Scale Min/Max setting.

#### MapInfo

The Islands table represents the Islands layer. The Islands layer itself does not have a Zoom Min/Max setting. The Label Zoom Min/Max is 0/10 miles (0/16 kilometers).

#### Display Graphics

**Figure 132:**

Object	Font/Pen/Brush/Symbol
Lines	1 point wide, LightGrey
Points	N/A
Fill Patterns	LightWheat

Attributes and Structure<sup>81</sup>

The Islands layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>82</sup>
Island ID (See <i>Polygon ID</i> on page 841)	POLYGON_ID	POLYGON_ID	Decimal(10,0)
Island Name (See <i>Feature Name</i> on page 368)	POLYGON_NM	POLYGON_NAME	Char(80), (105)
Island Name <i>Language Code</i> on page 618	NM_LANGCD	NAME_LANGCODE	Char(3)
Island Name <i>Transliteration</i> on page 518	POLY_NM_TR	N/A	Char(250)
Island Name <i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
Island Description (See <i>Feature Type</i> on page 368)	FEAT_TYPE	FEATURE_TYPE	Char(40)
<i>Detailed City</i> on page 853	DETAIL_CTY	DETAILED_CITY	Char(1)

<sup>81</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>82</sup>
<i>Admin Feature Code on page 853</i>	FEAT_COD	FEAT_COD	Decimal(10,0)
<i>Coverage Indicator on page 486</i>	COVERIND	COVERIND	Char(2)

### 6.2.3.8 Cartographic Country (CartoCountry)

The CartoCountry (.shp, .shx, .dbf) files table represents the Cartographic Country layer. The Cartographic Country layer itself does not have a Scale Min/Max setting.

Display Graphics

**Figure 133:**

Object	Font/Pen/Brush/Symbol
Lines (Country)	2 pixels wide, Solid Black
Lines (Disputed)	2 pixels wide, Dashed Red
Points	N/A
Fill Patterns	N/A

Attributes and Structure<sup>83</sup>

The Cartographic Country layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>84</sup>
Cartographic Country ID (See <i>Link ID</i> on page 367)	LINK_ID	LINK_ID	Decimal(10,0)
<i>Cartographic Country Left Name on page 863</i>	LEFT_NAME	LEFT_NAME	Char(35) (105)
Cartographic Country Left <i>Language Code</i> on page 618	L_LNG_CD	L_LNG_CD	Char(3)
Cartographic Country Left Name <i>Transliteration</i> on page 518	LEFTNM_TR	N/A	Char(250)

<sup>82</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>83</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>84</sup>
Cartographic Country Right Name	RIGHT_NAME	RIGHT_NAME	Char(35) (105)
Cartographic Country Right <i>Language Code</i> on page 618	R_LNG_CD	R_LNG_CD	Char(3)
Cartographic Country Right Name <i>Transliteration</i> on page 518	RIGHTNM_TR	N/A	Char(250)
Cartographic Country Name <i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
<i>Detailed City</i> on page 853	DETAIL_CTY	DETAIL_CITY	Char(1)
<i>Coverage Indicator</i> on page 486	COVIND	COVERIND	Char(2)
<i>Admin Area Description</i> on page 844	FEAT_TYPE	FEAT_TYPE	Char(40)
Admin <i>Feature Code</i> on page 888	FEAT_COD	FEAT_COD	Decimal(10,0)
<i>Line of Control</i> on page 1076	LINE_CNTRL	LINE_CNTRL	Char(1)
<i>Claimed By</i> on page 1071	CLAIMED_BY	CLAIMED_BY	Char(3)
<i>Controlled By</i> on page 1074	CONTROLLED_BY	CONTROLLED_BY	Char(3)

## 6.2.3.9 Cartographic State (CartoState)

The CartoState (.shp, .shx, .dbf) files table represents the Cartographic State layer. The Cartographic State layer itself does not have a Scale Min/Max setting.

### Display Graphics

<sup>84</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 134:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines (State)	2 pixels wide, Solid Black
Lines (Disputed)	2 pixels wide, Dashed Red
Points	N/A
Fill Patterns	N/A

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

## Attributes and Structure<sup>85</sup>

The Cartographic State layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>86</sup>
Cartographic State ID (See <a href="#">Link ID</a> on page 367)	LINK_ID	LINK_ID	Decimal(10,0)
<i>Cartographic State Left Name</i> on page 865	LEFT_NAME	LEFT_NAME	Char(35), (105)
Cartographic State Left <a href="#">Language Code</a> on page 618	L_LNG_CD	L_LNG_CD	Char(3)
Cartographic State Left Name <a href="#">Transliteration</a> on page 518	LEFTNM_TR	N/A	Char(250)
<i>Cartographic State Right Name</i> on page 865	RIGHT_NAME	RIGHT_NAME	Char(35), (105)
Cartographic State Right <a href="#">Language Code</a> on page 618	R_LNG_CD	R_LNG_CD	Char(3)
Cartographic State Right Name <a href="#">Transliteration</a> on page 518	RIGHTNM_TR	N/A	Char(250)
Cartographic State Name <a href="#">Transliteration Type</a> on page 516	TRANS_TYPE	N/A	Char(3)
<i>Detailed City</i> on page 853	DETAIL_CTY	DETAIL_CITY	Char(1)
<i>Coverage Indicator</i> on page 486	COVERIND	COVERIND	Char(2)
<i>Admin Area Description</i> on page 844	FEAT_TYPE	FEAT_TYPE	Char(40)
Admin <a href="#">Feature Code</a> on page 888	FEAT_COD	FEAT_COD	Decimal(10,0)
<i>Line of Control</i> on page 1076	LINE_CNTRL	LINE_CNTRL	Char(1)
<i>Claimed By</i> on page 1071	CLAIMED_BY	CLAIMED_BY	Char(3)
<i>Controlled By</i> on page 1074	CONTROLLED_BY	CONTROLLED_BY	Char(3)

<sup>85</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>86</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## 6.2.3.10 Built-up Areas USA

-  **Note:** This layer is not contained in the core product. It is delivered as a separate shapefile layer and can be found on the EDD.

The Built-up Areas USA (.dbf) files represent the Built-up Areas USA layer.

### Attributes and Structure

This layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Built-up Area Name</i> on page 866	NAME	N/A	Char(255)
<i>State FIPS Code</i> on page 866	STATEFIPS	N/A	Char(2)
<i>DCA</i> on page 867	DCA	N/A	Char(8)
<i>Coverage Indicator</i> on page 867	COVIND	N/A	Char(255)
<i>Population</i> on page 867	POP	N/A	Decimal(4,0)

## 6.2.3.11 Zones (Zones)

The Zones (.shp, .shx, .dbf) files represent the Zones layer.

### Display Graphics

The Zones layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>87</sup>

This layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Zone ID</i> on page 868	ZONE_ID	ZONE_ID	Decimal(10,0)
<i>Zone Side</i> on page 868	SIDE	SIDE	Char(1)

<sup>87</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

### 6.2.3.12 Uninhabited Islands

The Uninhabited Islands is part of [Administrative Area Boundaries \(1\) \(Adminbndy1\)](#) on page 328 and is represented by [Cartographic Country \(CartoCountry\)](#) on page 336 itself.

For uninhabited islands that are the territory of another country, the following are observed:

- "Uninhabited Island" is applied as the name for the Country Administrative feature.
- Each named island of an island group is mapped as Administrative Level 3.
- If the island is not part of an island group, island name is mapped as Administrative Level 2 and Administrative Level 3. See table below for an example of representation of various Uninhabited Islands in the territory of New Zealand.

Level	Feature Type	Administrative Area Name		
Administrative Area Level 1	907196	Uninhabited Island		
Administrative Area Level 2	900170	Auckland Islands	Antipodes Islands	Campbell Island
Administrative Area Level 3	900101	Auckland Island Disappointment Island Ewing Island Rose Island Dundas Island Green Island Blanche Rock Frenchs Island Ocean Island Yule Island	Antipodes Island Bollons Island	Campbell Island

### 6.2.3.13 Metadata - Zone Records (MtdZoneRec)

The MtdZoneRec (.shp, .shx, .dbf) files represent the Metadata - Zone Records layer.

#### Display Graphics

The Metadata - Zone Records layer does not have any graphic objects associated with the data.

#### Attributes and Structure<sup>88</sup>

This layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>89</sup>
<a href="#">Zone ID</a> on page 868	ZONE_ID	ZONE_ID	Decimal(10,0)

<sup>88</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>89</sup>
<a href="#">Zone Name</a> on page 869	ZONE_NAME	ZONE_NAME	Char(35), (105)
<a href="#">Language Code</a> on page 618	LANG_CODE	LANG_CODE	Char(3)
Zone Name <a href="#">Transliteration</a> on page 518	ZONE_NM_TR	N/A	Char(250)
Zone Name <a href="#">Transliteration Type</a> on page 516	TRANS_TYPE	N/A	Char(3)
<a href="#">Name Type</a> on page 870	Z_NMTYPE	ZONE_NAMETYPE	Char(1)
<a href="#">Zone Type</a> on page 871	ZONE_TYPE	ZONE_TYPE	Char(2)
<a href="#">Area ID</a> on page 842	AREA_ID	AREA_ID	Decimal(10,0)

### 6.2.3.14 Railroads (RailRds)

The RailRds (.shp, .shx, .dbf) files represent the Railroads layer. The Railroads layer has a Scale Min/Max of 0/30,000.

Display Graphics

<sup>89</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

**Figure 135:**

<i>Object</i>	<i>Font/Pen/Brush/Symbol</i>
Lines	1 point wide, Black, Standard Pen Palette (22)
Points	N/A
Fill Patterns	N/A

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

### Attributes and Structure<sup>90</sup>

The Railroads layer contains the following attributes. Note that a single segment of a railroad is represented by multiple line or polyline objects when it is associated with multiple railroad names.

Attribute  <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>91</sup>
<i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
Railway Name (See <i>Feature Name</i> on page 368)	RAILWAY_NM	RAILWAY_NAME	Char(80), (105)
Railway Name <i>Language Code</i> on page 618	LANG_CODE	LANG_CODE	Char(3)
Railway Name <i>Transliteration</i> on page 518	RAIL_NM_TR	N/A	Char(250)
Railway Name <i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
<i>Bridge</i> on page 442	BRIDGE	BRIDGE	Char(1)
<i>Tunnel</i> on page 443	TUNNEL	TUNNEL	Char(1)
<i>Coverage Indicator</i> on page 486	COVERIND	COVERIND	Char(2)

### 6.2.3.15 Waterway Segments (WaterSeg)

The WaterSeg (.shp, .shx, .dbf) files represent the Waterway Segments layer. The Waterway Segments layer itself does not have a Scale Min/Max setting.

#### Display Graphics

**Figure 136:**

Object	Font/Pen/Brush/Symbol
Lines	2 points wide, Solid Blue
Points	N/A
Fill Patterns	Blue

### Attributes and Structure<sup>92</sup>

<sup>90</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>91</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>92</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

The Waterway Segments layer contains the following attributes. Note that a Waterway is represented by multiple line, or polyline objects when it has names in multiple languages.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>93</sup>
Waterway ID (See <a href="#">Link ID</a> on page 367)	LINK_ID	LINK_ID	Decimal(10,0)
Waterway Name (See <a href="#">Feature Name</a> on page 368)	POLYGON_NM	POLYGON_NM	Char(80), (105)
Waterway <a href="#">Language Code</a> on page 618	NM_LANGCD	NAME_LANGCD	Char(3)
Waterway Name <a href="#">Transliteration</a> on page 518	POLY_NM_TR	N/A	Char(250)
Waterway Name <a href="#">Transliteration Type</a> on page 516	TRANS_TYPE	N/A	Char(3)
Waterway Description (See <a href="#">Feature Type</a> on page 368)	FEAT_TYPE	FEAT_TYPE	Char(40)
<a href="#">Detailed City</a> on page 853	DETAIL_CTY	DETAIL_CITY	Char(1)
<a href="#">Admin Feature Code</a> on page 853	FEAT_COD	FEAT_COD	Decimal(10,0)
<a href="#">Coverage Indicator</a> on page 486	COVERIND	COVERIND	Char(2)
<a href="#">Display Class</a> on page 874	DISP_CLASS	DISP_CLASS	Char(1)
<a href="#">Expanded Inclusion</a> on page 876	N/A	EXPAND_INC	Char(1)

### 6.2.3.16 Waterway Polygons (WaterPoly)

The WaterPoly (.shp, .shx, .dbf) files represent the Waterway Polygons layer. The Waterway layer itself does not have a Scale Min/Max setting.

Display Graphics

<sup>93</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Figure 137:

Object	Font/Pen/Brush/Symbol
Lines	2 points wide, Solid Blue
Points	N/A
Fill Patterns	Blue

## Attributes and Structure<sup>94</sup>

The Waterway Polygons layer contains the following attributes. Note that a Waterway Polygon is represented by multiple region objects when it has names in multiple languages.

Attribute <i>(italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>95</sup>
Waterway ID (See <a href="#">Polygon ID</a> on page 841)	POLYGON_ID	POLYGON_ID	Decimal(10,0)
Waterway Name (See <a href="#">Feature Name</a> on page 368)	POLYGON_NM	POLYGON_NAME	Char(80), (105)
Waterway <a href="#">Language Code</a> on page 618	NM_LANGCD	NAME_LANGCODE	Char(3)
Waterway Name <a href="#">Transliteration</a> on page 518	POLY_NM_TR	POLY_NM_TR	Char(250)
Waterway Name <a href="#">Transliteration Type</a> on page 516	TRANS_TYPE	TRANS_TYPE	Char(3)
Waterway Description (See <a href="#">Feature Type</a> on page 368)	FEAT_TYPE	FEATURE_TYPE	Char(40)
<a href="#">Detailed City</a> on page 853	DETAIL_CTY	DETAILED_CITY	Char(1)
<a href="#">Admin Feature Code</a> on page 853	FEAT_COD	FEATURE_CODE	Decimal(10,0)
<a href="#">Coverage Indicator</a> on page 486	COVERIND	COVERIND	Char(2)
<a href="#">Display Class</a> on page 874	DISP_CLASS	DISP_CLASS	Char(1)
<a href="#">Expanded Inclusion</a> on page 878	EXPAND_INC	EXPAND_INC	Char(1)

<sup>94</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>95</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

### 6.2.3.17 Oceans (Oceans)

The Oceans (.shp, .shx, .dbf) files represent the Oceans layer. The Oceans layer itself does not have a Scale Min/Max setting.

#### Display Graphics

**Figure 138:**

Object	Font/Pen/Brush/Symbol
Lines	2 points wide, Black
Points	N/A
Fill Patterns	LightBlue

#### Attributes and Structure<sup>96</sup>

The Oceans layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>97</sup>
Ocean ID (See <i>Polygon ID</i> on page 841)	POLYGON_ID	POLYGON_ID	Decimal(10,0)
Ocean Name (See <i>Feature Name</i> on page 368)	POLYGON_NM	POLYGON_NAME	Char(80), (105)
Ocean Name <i>Language Code</i> on page 618	NM_LANGCD	NM_LANGCD	Char(3)
Ocean Name <i>Transliteration</i> on page 518	POLY_NM_TR	N/A	Char(250)
Ocean Name <i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
Ocean Description (See <i>Feature Type</i> on page 368)	FEAT_TYPE	FEATURE_TYPE	Char(40)
<i>Detailed City</i> on page 853	DETAIL_CTY	DETAILED_CTY	Char(1)
<i>Admin Feature Code</i> on page 853	FEAT_COD	FEAT_COD	Decimal(10,0)
<i>Coverage Indicator</i> on page 486	COVERIND	COVERIND	Char(2)
<i>Display Class</i> on page 874	DISP_CLASS	DISP_CLASS	Char(1)

<sup>96</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

### 6.2.3.18 Building/Landmark Features (Landmark)

The Landmark (.shp, .shx, .dbf) files represents the Building/Landmark Features layer. The Building/Landmark Features layer itself does not have a Scale Min/Max setting.

#### Display Graphics

**Figure 139:**

Object	Font/Pen/Brush/Symbol
Lines	1 pixel wide, Solid Black
Points	N/A
Fill Patterns	Gray

#### Attributes and Structure<sup>98</sup>

The Building/Landmark Features layer contains the following attributes. Note that a Building/Landmark feature is represented by multiple region objects when it has names in multiple languages.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>99</sup>
Building/Landmark ID (See <i>Polygon ID</i> on page 841)	POLYGON_ID	POLYGON_ID	Decimal(10,0)
Building/Landmark Name (See <i>Feature Name</i> on page 368)	POLYGON_NM	POLYGON_NAME	Char(80), (105)
Building/Landmark <i>Language Code</i> on page 618	NM_LANGCD	NAME_LANGCD	Char(3)
Building/Landmark Name <i>Transliteration</i> on page 518	POLY_NM_TR	N/A	Char(250)
Building/Landmark Name <i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
<i>Building/Landmark Description (Feature Type)</i> on page 880	FEAT_TYPE	FEATURE_TYPE	Char(40)
<i>Detailed City</i> on page 853	DETAIL_CTY	DETAILED_CITY	Char(1)
<i>Building/Landmark Description (Feature Code)</i> on page 883	FEAT_COD	FEAT_COD	Decimal(10,0)

<sup>97</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>98</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>99</sup>
<i>Coverage Indicator</i> on page 486	COVERIND	COVERIND	Char(2)
<i>Building Height</i> on page 884	HEIGHT	HEIGHT	Decimal(3,0)
<i>Ground Clearance</i> on page 884	GRND_CLRC	GROUND_CLRC	Decimal(4,0)

### 6.2.3.19 Land Use Features A (LandUseA)

The LandUseA (.shp, .shx, .dbf) files represents the Land Use Features A layer.

The Land Use Features A layer itself does not have a Scale Min/Max setting.

Display Graphics

**Figure 140:**

Object	Font/Pen/Brush/Symbol
Lines	1 point wide, Solid Black
Points	N/A
Fill Patterns	Industrial Complex Standard Fill Palette (26) Shopping Centre Standard Fill Palette (3) Park In Water Standard Fill Palette(Light Blue) All Others Features Solid (1)

Attributes and Structure<sup>100</sup>

The Land Use Features A layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>101</sup>
Land Use ID (See <i>Polygon ID</i> on page 841)	POLYGON_ID	POLYGON_ID	Decimal(10,0)
Land Use Name (See <i>Feature Name</i> on page 368)	POLYGON_NM	POLYGON_NAME	Char(80), (105)

<sup>99</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>100</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>101</sup>
Land Use <i>Language Code</i> on page 618	NM_LANGCD	NAME_LANGCODE	Char(3)
Land Use Name <i>Transliteration</i> on page 518	POLY_NM_TR	N/A	Char(250)
Land Use Name <i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
Land Use Description (See <i>Feature Type</i> on page 368)	FEAT_TYPE	FEATURE_TYPE	Char(40)
<i>Detailed City</i> on page 853	DETAIL_CTY	DETAILED_CITY	Char(1)
Feature Code	FEAT_COD	FEAT_COD	Decimal(10,0)
<i>Coverage Indicator</i> on page 486	COVERIND	COVERIND	Char(2)
<i>Display Class</i> on page 874	DISP_CLASS	DISP_CLASS	Char(1)
<i>Expanded Inclusion</i> on page 888	N/A	EXPAND_INC	Char(1)

## 6.2.3.20 Land Use Features B (LandUseB)

The LandUseB (.shp, .shx, .dbf) files represents the Land Use Features B layer.

The Land Use Features B layer itself does not have a Scale Min/Max setting.

Display Graphics

**Figure 141:**

Object	Font/Pen/Brush/Symbol
Lines	1 point wide, Black
Points	N/A
Fill Patterns	Aircraft Roads Standard Fill Palette (24) All Others Features Solid (1)

Attributes and Structure<sup>102</sup>

The Land Use Features B layer contains the following attributes.

<sup>101</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>102</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>103</sup>
Land Use ID (See <i>Polygon ID</i> on page 841)	POLYGON_ID	POLYGON_ID	Decimal(10,0)
Land Use Name (See <i>Feature Name</i> on page 368)	POLYGON_NM	POLYGON_NAME	Char(80), (105)
Land Use <i>Language Code</i> on page 618	NM_LANGCD	NAME_LANGCODE	Char(3)
Land Use Name <i>Transliteration</i> on page 518	POLY_NM_TR	N/A	Char(250)
Land Use Name <i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
Land Use Description (See <i>Feature Type</i> on page 368)	FEAT_TYPE	FEATURE_TYPE	Char(40)
<i>Detailed City</i> on page 853	DETAIL_CTY	DETAILED_CITY	Char(1)
<i>Feature Code</i> on page 889	FEAT_COD	FEAT_COD	Decimal(10,0)
<i>Coverage Indicator</i> on page 486	COVERIND	COVERIND	Char(2)
<i>Polygon Restriction</i> on page 889	POLYRES	POLYRES	Decimal(2,0)
<i>Expanded Inclusion</i> on page 890	N/A	EXPAND_INC	Char(1)

## 6.2.3.21 Aggregated Feature (AggrFeature)

The Aggregated Feature layer contains general aggregation (grouping) of polygonal features used in the context of City Model data: Grouped Structures or Grouped Complexes.

The AggrFeature table represents the Aggregated Feature layer.

### Display Graphics

The Aggregated Feature layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>104</sup>

The Aggregated Feature layer contains the following attributes.

<sup>103</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>104</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>105</sup>
Aggregated <i>Feature ID</i> on page 367	AGGR_ID	AGGR_ID	Decimal(10,0)
<i>Aggregated Feature Description</i> on page 891	FEAT_TYPE	FEAT_TYPE	Char(40)
<i>Aggregation Type</i> on page 891	AGGR_TYPE	AGGR_TYPE	Decimal(2,0)
Aggregated <i>Feature Name</i> on page 368	AGGR_NAME	AGGR_NAME	Char(35), (105)
Aggregated Feature <i>Language Code</i> on page 618	NM_LANGCD	NM_LANGCD	Char(3)
Aggregated Feature Name <i>Transliteration</i> on page 518	AFFR_NM_TR	N/A	Char(250)
Aggregated Feature Name <i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
Associated <i>POI ID</i> on page 730	POI_ID	POI_ID	Decimal(10,0)
<i>Number of Components</i> on page 894	NUM_COMP	NUM_COMP	Decimal(5,0)
<i>Feature Code</i> on page 889	FEAT_COD	FEAT_COD	Decimal(10,0)
<i>Number of Attachments</i> on page 894	NUM_ATTACH	NUM_ATTACHMNTS	Decimal(5,0)
<i>Reference X Coordinate</i> on page 894	REF_LON	REF_LON	Decimal(12,0)
<i>Reference Y Coordinate</i> on page 895	REF_LAT	REF_LAT	Decimal(12,0)

## 6.2.3.22 Aggregated Feature Component (AggrFeatComp)

The Aggregated Feature Component layer defines the components included in an Aggregated Feature.

The AggrFeatComp table represents the Aggregated Feature Component layer.

Display Graphics

The Aggregated Feature Component layer does not have any graphic objects associated with the data.

Attributes and Structure<sup>106</sup>

<sup>105</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>106</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

The Aggregated Feature Component layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
Aggregated <i>Feature ID</i> on page 367	AGGR_ID	AGGR_ID	Decimal(10,0)
<i>Sequence Number (Aggregated Feature Component)</i> on page 895	SEQ_NUM	SEQ_NUM	Decimal(5,0)
<i>Component Type</i> on page 896	COMP_TYPE	COMP_TYPE	Char(2)
<i>Component ID</i> on page 896	COMP_ID	COMP_ID	Decimal(10,0)

### 6.2.3.23 Aggregated Feature File Association (AggrFeatFile)

The Aggregated Feature File Association layer defines the association of auxiliary files to an Aggregated Feature. The files are provided as auxiliary data outside the NAVSTREETS structure.

The AggrFeatFile table represents the Aggregated Feature File Association layer.

#### Display Graphics

The Aggregated Feature File Association layer does not have any graphic objects associated with the data.

#### Attributes and Structure<sup>107</sup>

The Aggregated Feature File Association layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
Aggregated <i>Feature ID</i> on page 367	AGGR_ID	AGGR_ID	Decimal(10,0)
<i>File Type</i> on page 726	FILE_TYPE	FILE_TYPE	Decimal(2,0)
<i>Attachment Type</i> on page 727	ATT_TYPE	ATT_TYPE	Char(3)
File Name (See <i>Associated File Name</i> on page 728)	FILE_NAME	FILE_NAME	Char(150)

### 6.2.3.24 Risk Prone Area (RiskArea)

The Risk Prone Area layer contains polygons representing risk prone areas. The risks can include hurricanes, tornadoes, etc. This layer can aide in showing evacuation routes in the event of a natural disaster. This layer currently supports hurricane, flood, and tsunami prone areas in the U.S. only.

The RiskArea table represents the Risk Prone Area layer.

<sup>107</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

The Risk Prone Area layer itself does not have a Zoom Min/Max setting. The Label Zoom Min/Max is 0/10 miles (0/16 kilometers).

## Display Graphics

**Figure 142:**

Object	Font/Pen/Brush/Symbol
Labels	Black, 8pt, Century Gothic
Lines	1 pixel wide, Solid Black
Points	N/A
Fill Patterns	Light orange color for hurricane prone areas

## Attributes and Structure<sup>108</sup>

The Risk Prone Area layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>109</sup>
Polygon ID (See <i>Polygon ID</i> on page 841)	POLYGON_ID	POLYGON_ID	Decimal(10,0)
Risk Prone Area Name (See <i>Feature Name</i> on page 368)	POLYGON_NM	POLYGON_NAME	Char(35), (105)
<i>Language Code</i> on page 618	NM_LANGCD	NAME_LANGCODE	Char(3)
Polygon Name <i>Transliteration</i> on page 518	POLY_NM_TR	N/A	Char(250)
Polygon Name <i>Transliteration Type</i> on page 516	TRANS_TYPE	N/A	Char(3)
Feature Description (See <i>Feature Type</i> on page 368)	FEAT_TYPE	FEATURE_TYPE	Char(40)
<i>Detailed City</i> on page 853	DETAIL_CTY	DETAILED_CITY	Char(1)
<i>Admin Feature Code</i> on page 853	FEAT_COD	FEAT_COD	Decimal(10,0)
<i>Coverage Indicator</i> on page 486	COVERIND	COVERIND	Char(2)
<i>Severity Rating</i> on page 899	SEV_RATING	SEVERITY_RATING	Char(2)

<sup>108</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>109</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

### 6.2.3.25 Alternate Feature Names (AltFeatNm)

This table publishes translated Cartographic Feature Names.

#### Attributes and Structure

The Alternate Feature Names layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Feature ID</i> on page 899	FEAT_ID	FEATURE_ID	Decimal(10)
<i>Language Code</i> on page 900	NM_LANGCD	NAME_LANGCODE	Char(3)
<i>Feature Name</i> on page 901	FEAT_NM	FEATURE_NAME	Char(250)
<i>Right Feature Name</i> on page 901	RT_NAME	RIGHT_NAME	Char(250)
<i>Right Language Code</i> on page 902	R_LNG_CD	R_LNG_CD	Char(3)
<i>Left Feature Name</i> on page 902	LT_NAME	LEFT_NAME	Char(250)
<i>Left Language Code</i> on page 903	L_LNG_CD	L_LNG_CD	Char(3)
<i>Feature Name Transliteration</i> on page 904	FEAT_NM_TR	N/A	Char(250)
<i>Transliteration Type</i> on page 904	TRANS_TYPE	N/A	Char(3)
<i>Right Feature Name Transliteration</i> on page 905	RIGHTNM_TR	N/A	Char(250)
<i>Right Transliteration Type</i> on page 905	R_TR_TYPE	N/A	Char(3)
<i>Left Feature Name Transliteration</i> on page 906	LEFTNM_TR	N/A	Char(250)
<i>Left Transliteration Type</i> on page 907	L_TR_TYPE	N/A	Char(3)
<i>Name Type</i> on page 907	NAME_TYPE	NAME_TYPE	Char(1)
<i>Feature Code</i> on page 908	FEAT_COD	FEAT_COD	Decimal(10)

## 6.2.3.26 Feature Attribute (FeatureAttr)

The Feature Attribute Layer is used for publishing the Cartographic polygons (Polygon ID), and Zones (Zone ID).

### Display Graphics

The Feature Attribute layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>110</sup>

The Feature Attribute layer contains the following attributes.

Attribute (Italic text is a link)	dbf Field Name	tab Field Name	Format
<i>Feature ID</i> on page 367	FEAT_ID	FEAT_ID	Decimal(10)
<i>Feature ID</i> on page 908	FEAT_CAT	FEAT_CAT	Decimal(2)
<i>Attribute Type</i> on page 908	ATTR_TYPE	ATTR_TYPE	Decimal(5)
<i>Attribute Value</i> on page 909	ATTR_VALUE	ATTR_VALUE	Char(100)

## 6.2.4 Metadata

### 6.2.4.1 Metadata - Country Reference (MtdCntryRef)

The MtdCntryRef (.shp, .shx, .dbf) files represent the Metadata - Country Reference layer.

### Display Graphics

The Metadata - Country Reference layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>111</sup>

This layer contains the following attributes.

Attribute (Italic text is a link)	dbf Field Name	tab Field Name	Format <sup>112</sup>
<i>Government Code</i> on page 922	GOVT_CODE	GOVT_CODE	Decimal(10,0)
<i>Unit of Measure</i> on page 923	UNITMEASURE	UNITOFMEASURE	Char(1)
<i>Maximum Admin Level</i> on page 924	ADMINLEVEL	MAX_ADMINLEVEL	Decimal(1,0)

<sup>110</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>111</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

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Attributes per Layer

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Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>112</sup>
<i>Currency Precision</i> on page 924	PRECISION	CURRENCY_PRECISION	Decimal(1,0)
<i>House Number Format</i> on page 925	HSENBRFORM	HOUSENBRFORMAT	Char(1)
<i>Driving Side</i> on page 925	DRIVING_SD	DRIVING_SIDE	Char(1)
<i>Currency Type</i> on page 926	CUR_TYPE	CURRENCY_TYPE	Char(3)
<i>Phone Country Code</i> on page 926	CNTRYCODE	PHONE_CNTRYCODE	Char(3)
<i>Speed Limit Unit</i> on page 927	SPDLIMUNIT	SPEEDLIMITUNIT	Char(3)
AALevel 1 Feature Type (See <i>AALevel 1-7 Feature Type</i> on page 927)	FEATTYPE1	AALEVEL1_FEATYPE	Decimal(7,0)
AALevel 2 Feature Type	FEATTYPE2	AALEVEL2_FEATYPE	Decimal(7,0)
AALevel 3 Feature Type	FEATTYPE3	AALEVEL3_FEATYPE	Decimal(7,0)
AALevel 4 Feature Type	FEATTYPE4	AALEVEL4_FEATYPE	Decimal(7,0)
AALevel 5 Feature Type	FEATTYPE5	AALEVEL5_FEATYPE	Decimal(7,0)
AALevel 6 Feature Type	FEATTYPE6	AALEVEL6_FEATYPE	Decimal(7,0)
AALevel 7 Feature Type	FEATTYPE7	AALEVEL7_FEATYPE	Decimal(7,0)
AALevel 1 Address Flag <sup>113</sup> (See <i>AALevel 1-7 Address Flag</i> on page 927)	ADDRFLAG1	AALEVEL1_ADDRFLAG	Char(1)
AALevel 2 Address Flag	ADDRFLAG2	AALEVEL2_ADDRFLAG	Char(1)
AALevel 3 Address Flag	ADDRFLAG3	AALEVEL3_ADDRFLAG	Char(1)
AALevel 4 Address Flag	ADDRFLAG4	AALEVEL4_ADDRFLAG	Char(1)
AALevel 5 Address Flag	ADDRFLAG5	AALEVEL5_ADDRFLAG	Char(1)
AALevel 6 Address Flag	ADDRFLAG6	AALEVEL6_ADDRFLAG	Char(1)
AALevel 7 Address Flag	ADDRFLAG7	AALEVEL7_ADDRFLAG	Char(1)
Admin Area 1 Description (See <i>Admin Area 1-7 Description</i> on page 927)	DESCRIPT1	AALEVEL1_DESCRIPTION	Char(18), (54)
Admin Area 2 Description	DESCRIPT2	AALEVEL2_DESCRIPTION	Char(18), (54)

# Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

here

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>112</sup>
Admin Area 3 Description	DESCRIPT3	AALEVEL3_DESCRIPTION	Char(18), (54)
Admin Area 4 Description	DESCRIPT4	AALEVEL4_DESCRIPTION	Char(18), (54)
Admin Area 5 Description	DESCRIPT5	AALEVEL5_DESCRIPTION	Char(18), (54)
Admin Area 6 Description	DESCRIPT6	AALEVEL6_DESCRIPTION	Char(18), (54)
Admin Area 7 Description	DESCRIPT7	AALEVEL7_DESCRIPTION	Char(18), (54)
<i>ISO Country Code</i> on page 928	ISO_CODE	ISO_CODE	Char(3)
<i>Phone Prefix</i> on page 929	PREFIX	PREFIX	Char(2)

## 6.2.4.2 Metadata - Daylight Saving Time (MtdDST)

Daylight Saving Time contains several attributes that identifies for a specific Administrative Area when Daylight Saving Time is in effect.

### Display Graphics

The Daylight Saving Time layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>114</sup>

The Daylight Saving Time layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Area ID</i> on page 842	AREA_ID	AREA_ID	Decimal(10,0)
<i>Time Zone</i> on page 930	TIME_ZONE	TIME_ZONE	Char(4)
<i>DST Observed</i> on page 931	DST_EXIST	DST_EXIST	Char(1)
<i>DST Start Day</i> on page 931	DST_STDAY	DST_STDAY	Decimal(2,0)
<i>DST Start Weekday</i> on page 932	DST_STWK	DST_STWK	Decimal(1,0)
<i>DST Start Month</i> on page 932	DST_STMNTH	DST_STMNTH	Decimal(2,0)
<i>DST Start Time</i> on page 932	DST_STTIME	DST_STTIME	Decimal(4,0)
<i>DST End Day</i> on page 933	DST_ENDAY	DST_ENDAY	Decimal(2,0)

<sup>112</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>113</sup> The AA Level # Address Flag fields are no longer used.

<sup>114</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

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Attributes per Layer

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Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
DST End Weekday on page 933	DST_ENWK	DST_ENWK	Decimal(1,0)
DST End Month on page 934	DST_ENMNTH	DST_ENMNTH	Decimal(2,0)
DST End Time on page 934	DST_ENTIME	DST_ENTIME	Decimal(4,0)

### 6.2.4.3 Metadata - Administrative Area (MtdArea)

The MtdArea (.shp, .shx, .dbf) files represent the Metadata - Administrative Area layer.

#### Display Graphics

The Metadata - Administrative Area layer does not have any graphic objects associated with the data.

#### Attributes and Structure<sup>115</sup>

This layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>116</sup>
Area ID on page 842	AREA_ID	AREA_ID	Decimal(10,0)
Area Code 1 (See <a href="#">Area Code 1 - 7 on page 935</a> )	AREACODE_1	AREACODE_1	Decimal(5,0)
Area Code 2	AREACODE_2	AREACODE_2	Decimal(5,0)
Area Code 3	AREACODE_3	AREACODE_3	Decimal(5,0)
Area Code 4	AREACODE_4	AREACODE_4	Decimal(5,0)
Area Code 5	AREACODE_5	AREACODE_5	Decimal(5,0)
Area Code 6	AREACODE_6	AREACODE_6	Decimal(5,0)
Area Code 7	AREACODE_7	AREACODE_7	Decimal(5,0)
Administrative Level on page 936	ADMIN_LVL	ADMIN_LEVEL	Decimal(1,0)
Area Name on page 936	AREA_NAME	AREA_NAME	Char(35), (105)
Area Name Language Code on page 937	LANG_CODE	LANG_CODE	Char(3)
Area Name Transliteration on page 518	AREA_NM_TR	AREA_NM_TR	Char(250)

<sup>115</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

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Attributes per Layer

6.2 Shapefile/MapInfo

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Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>116</sup>
Area Name <i>Transliteration Type</i> on page 516	TRANS_TYPE	TRANS_TYPE	Char(3)
<i>Area Name Type</i> on page 942	AREA_TYPE	AREA_NAME_TYPE	Char(1)
<i>Government Code</i> on page 945	GOVT_CODE	GOVT_CODE	Decimal(10,0)
<i>Motorcycle Minimum Requirement</i> on page 945	MOTORC_REQ	MOTORCYCLE_REQ	Char(3)
<i>Admin Wide Regulations</i> on page 946	ADMWDE_REG	ADMINWIDE_REG	Char(1)

## 6.2.4.4 Metadata - Reference Classes (MtdRef)

The MtdRef (.shp, .shx, .dbf) files represent the Metadata - Reference Classes layer.

### Display Graphics

The Metadata - Reference Classes layer does not have any graphic objects associated with the data.

### Reference Class Descriptions

The Metadata - Reference Classes layer describes the following Reference Classes.

Name	Description/Attribute
AANAMTYP	Administrative Area Name Type
ADDRFMT	Address Format
ADDRSCH	Address Scheme
ADDRTYPE	Address Type
AGGRETYP	Aggregation Type
AIRPTYP	Airport Type
ASSONMTP	Association Name Type
ASSOCTYP	Association Type
ATTCHTYP	Attachment Type
BEARING	Direction of Travel
CENSTYPE	Census Type
CHAINID	Chain ID

<sup>116</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

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Attributes per Layer

6.2 Shapefile/MapInfo

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Name	Description/Attribute
COMPTYPE	Component Type
CONDMODTYP	Condition Modifier Type
CONDTYPE	Condition Type
CONF_LVL	Confidence Level
CONTYPE	Contact Type
COV_IND	Coverage Indicator
CURRTYPE	Currency Type
DATETYPE	Date Type
DATUM	World Geodetic System of 1984
DIRSIGN	Direction on Sign
DISPCLAS	Display Class
DIVLOC	Divider Location
DRIVSIDE	Driving Side
DSTDAY	Daylight Saving Time Day
DSTMONT	Daylight Saving Time Month
DSTWKDAY	Daylight Saving Time Weekday
ENTRTYPE	Entrance Type
EVACCODE	Evacuation Code
EVACTYPE	Evacuation Event Type
EXPAND_INC	Expanded Inclusion
FACILITY	Facility Type
FEATCAT	Feature Category
FEATURE	Feature Type
FILEDESC	File Description
FPNTTYPE	Feature Point Type
FTATTTYPE	Feature Attribute Type
FUNCLASS	Function Class
HSENBFMT	House Number Format
LAFCOMP	Landmark/Feature Component

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Attributes per Layer

6.2 Shapefile/MapInfo

here

Name	Description/Attribute
LANECAT	Lane Category
LANETYPE	Lane Type
LANGCODE	Language Code
LINKEND	Link End
LINKSIDE	Link Side
LNCROSREST	Lane Crossing Restriction
LNDIRCAT	Lane Direction Category
LNDIVMRK	Lane Divider Marker
LNFORMEND	Land Forming/Ending
LOWMOBIL	Low Mobility
OBJASSOTYP	Object Association Type
PHONE_CNTRYCODE	Phone Country Code
POIASSOC	POI Association Type
POISIDE	POI Side
POLYRES	Polygon Restriction
PONAMTYP	POI Name Type
PREFSUFF	Prefix/Suffix Street Type
RTETYPE	Route Type
SPDLMSRC	Speed Limit Source
SPDUNIT	Speed Limit Unit
SPEEDCAT	Speed Category
STRTYPE <sup>117</sup>	Street Type
SUPGEOBT	Supplemental Geometry Bitset
TEXTTYPE	Sign Text Type
TRACCLVL	Transit Access Level
TRACCMTH	Transit Access Method
TRACCTYP	Transit Access Type
TEXTTYPE	Sign Text Type
TRVFLOW	Travel Flow

## Reference Guide

Attributes per Layer

6.2 Shapefile/MapInfo

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Name	Description/Attribute
UOM	Unit of Measure
ZNNAMTYP	Zone Name Type
ZONETYPE	Zone Type

### Attributes and Structure<sup>118</sup>

This layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>119</sup>
<a href="#">Reference Class</a> on page 946	REF_CLASS	REFERENCE_CLASS	Char(10)
<a href="#">Code</a> on page 947	CODE	CODE	Char(12)
<a href="#">Code Transliteration</a> on page 947	CODE_TR	N/A	Char(250)
<a href="#">Description</a> on page 948	DESCRIPT	DESCRIPTION	Char(40), (120)
<a href="#">Language Code</a> on page 618	LANG_CODE	LANG_CODE	Char(3)
<a href="#">Description Transliteration</a> on page 948	DESC_TR	N/A	Char(250)
<a href="#">Transliteration Type</a> on page 948	TRANS_TYP	N/A	Char(3)

### 6.2.4.5 Metadata - Compound Reference (MtdCmpRef)

The Metadata - Compound Reference layer contains description information for the access restriction (HOV) condition modifiers. The MtdCmpRef table represents the Metadata - Compound Reference layer.

#### Display Graphics

The Metadata - Compound Reference layer does not have any graphic objects associated with the data.

#### Attributes and Structure<sup>120</sup>

This layer contains the following attributes.

<sup>117</sup> In English, both the Street Type code (ex. AVE) and the Description (ex. AVENUE) are provided in the metadata. For all other languages, only the full spelling of the Street Type is provided in the metadata.

<sup>118</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>119</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>120</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

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Attributes per Layer

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Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>121</sup>
<i>Modifier Type</i> on page 623	MOD_TYPE	MODIFIER_TYPE	Decimal(10,0)
<i>Modifier Value</i> on page 625	MOD_VAL	MODIFIER_VAL	Decimal(10,0)
<i>Modifier Type Description</i> on page 949	MODTYPEDESC	MODTYPEDESC	Char(40), (120)
<i>Modifier Value Description</i> on page 949	MODVALDESC	MODVALDESC	Char(40), (120)
Description <i>Transliteration</i> on page 518	DESC_TR	DESC_TR	Char(250)
<i>Language Code</i> on page 618	LANG_CODE	LANG_CODE	Char(3)
Description <i>Transliteration Type</i> on page 516	DESC_TRTYP	DESC_TRTYP	Char(3)
<i>Code</i> on page 947	CODE	CODE	Char(8)

## 6.2.4.6 Metadata - File Identification (MtdFileId)

The MtdFileId (.shp, .shx, .dbf) files represent the Metadata - File Identification layer.

### Display Graphics

The Metadata - Field Identification layer does not have any graphic objects associated with the data.

### Attributes and Structure<sup>122</sup>

This layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<i>Copyright</i> on page 950	COPYRIGHT	COPYRIGHT	Char(52)
<i>Standard Creation Date</i> on page 950	CREATDATE	CREATIONDATE	Decimal(6,0)
<i>Database Version</i> on page 951	DB_VERSION	DATABASE_VERSION	Char(5)
<i>Standard Creation Time</i> on page 951	CREATTIME	CREATIONTIME	Decimal(6,0)
<i>GIS Software Version</i> on page 951	MI_SW_VER	MAPINFO_SOFTWARE_VER	Char(5)

<sup>121</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

<sup>122</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

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Attributes per Layer

6.2 Shapefile/MapInfo

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Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
<a href="#">GIS File Version</a> on page 952	MI_FF_VER	MAPINFO_FILEFORMAT_VER	Char(5)
<a href="#">Requested Area</a> on page 952	REQ_AREA	REQUESTED_AREA	Char(30)
<a href="#">DNDC Region</a> on page 952	REGION_ID	REGION_ID	Char(5)
<a href="#">Datum</a> on page 953	DATUM	DATUM	Char(5)
<a href="#">Character Set</a> on page 953	CHARSET	CHARSET	Char(20)

## Reference Guide

Attributes - Road Features and Associated Navigation Information

# Chapter 7

## Attributes - Road Features and Associated Navigation Information

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### Topics:

- *Introduction*
- *Streets (Streets)*
- *Alternate Street Names and Addresses (AltStreets)*
- *Street Trans*
- *Street Type Translations (StrTypeTr)*
- *Major Highways (MajHwys)*
- *Secondary Highways (SecHwys)*
- *Major Highway Shields (MajHwyShield)*
- *Secondary Highway Shields (SecHwyShield)*
- *Signs (Signs)*
- *Distance Marker (DistMarker)*
- *Condition/Driving Manoeuvres (CDMs)*
- *Condition/Driving Manoeuvres - Date/Time Modifiers (CdmsDtmod)*
- *Condition Modifiers (CndMod)*
- *Lane Condition/Driving Manoeuvres (LnCdms)*
- *Lane Connectivity (LnCndConn)*
- *Restricted Driving Manoeuvres - Manoeuvre Links (Rdms)*
- *Z-Levels (Zlevels)*
- *Traffic (Traffic)*
- *Lane (Lane)*
- *Condition File Association (CndFileAssoc)*

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.1 Introduction

## 7.1 Introduction

---

This chapter describes all of the attributes contained in the layers associated with Road Features and Associated Navigation Information.

## 7.2 Streets (Streets)

---

### 7.2.1 Link ID

#### **Definition**

Unique identifier for the link.

#### **Value**

nnnnnnnnnn

#### **Length**

10

#### **Type**

Numeric

#### **Usage**

Link ID is used to identify each link in the database.

#### **Specification**

- Link IDs are unique.

### 7.2.2 Street Name

The Street Name is a combination of Feature Name, Street Type, Name Prefix and Name Suffix.

### 7.2.3 Feature ID

#### **Definition**

Unique identifier for the feature. This is the database Path ID.

#### **Value**

nnnnnnnnnn

#### **Length**

10

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

## Type

Numeric

## Usage

Feature ID is used as a reference to features in the database.

## Feature Name

### Definition

The base name of the feature. It is a numbered route, local name, or a commonly accepted name for a feature. It is the main part of the street name minus the prefix, street type, and suffix.

### Length

105

### Length

70 (for Streets layer dbf file)

### Type

Text

## Usage

The Feature Name should be used for route guidance and destination selection along with the Name Prefix, Street Type, and Name Suffix that exist for a given feature.

For street names, the ones indicated by Name on Road Sign should be used for route guidance.

## Specification

- For use of punctuations, abbreviation, and for bilingualism and other details on naming, refer to Appendix B, General Naming Rules.

## Feature Type

### Definition

An identifier that distinguishes different feature categories.

### Value

Feature Code	Description
900159	Undefined Traffic Area
9999999	Road Network

### Length

7

### Type

Numeric

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### Usage

Feature Type can be used to identify the functionality of the link for usage in destination selection, route guidance, map display, and route calculation.

### Specification

- Refer to [Administrative Level Coding and Boundary Features](#) on page 1169 for administrative Feature Types defined for each country.
- The Feature Type of 9992000 distinguishes RDS-TMC features from street names.
- See end of this chapter for naming rules specific to certain feature types (other than administrative features).

## 7.2.4 Street Name Language Code

The Street Name Language Code is equivalent to the Language Code.

## 7.2.5 Number of Street Names

### Definition

The Number of different street names Link ID has in this table. A particular street name maybe present more than once if it has multiple address ranges.

### Value

### Length

2

### Type

Numeric

## 7.2.6 Street Name Prefix

### Definition

Street Name Prefix is a directional identifier that precedes the Feature Name of a road.

### Value

Value	Description		Value	Description	
	ENG	ARA		FRE	SPA
E	East	شرق	E	Est	Este
N	North	شمال	N	Nord	Norte
NE	Northeast	N/A	NE	Nord-est	Nord-este
NW	Northwest	N/A	NO	Nord-ouest	Nor-oeste

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

Value	Description		Value	Description	
	ENG	ARA		FRE	SPA
S	South	جنوب	S	Sud	Sur
SE	Southeast	N/A	SE	Sud-est	Sud-este
SW	Southwest	N/A	SO	Sud-ouest	Sud-oeste
W	West	غرب	O	Ouest	Oeste

## Length

2

## Length (UTF-8)

6

## Type

Text

## Related Attributes

Feature Name

Language Code

Street Type

Name Suffix

Street Type Before

Street Type Attached

Explicable

Name on Road Sign

## Usage

The Street Name Prefix is included in the full name for roads. The full name should be used for route guidance and destination selection instead of individual components Name Prefix, Street Type, Feature Name, and Name Suffix. If the full name is used for display or destination input list the Street Name Prefix should not be displayed after the name or Street Type, this may allow the Street Name Prefix to be confused with the Street Name Suffix.

## Specification

- A prefix is not required as part of a road name, but it is always entered when one exists.
- If a road name begins with a direction (e.g., North, South, East, etc.) that is not related to addressing, the direction is not included as a Street Name Prefix. Rather, the direction is spelled out in the Feature

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

Name field. For example, in “North Carolina Blvd”, “North” is part of the road name (the name of the state of North Carolina) and not a Street Name Prefix.

- Prefixes are only applicable for Feature Type = 9999999.
- Prefixes occur on numbered routes for address matching purposes. For example, “IL-59” (with no prefix) runs through a city. Within the city limits, three blocks of “IL-59” become “S IL-59” and have addresses assigned to them. In this case, the prefixed name is added as a second, non-explicable name even if displayed on street signs.
  - Name 1: “IL-59” is Explicable = Y, Name Route Type = 3 and does not include the addresses.
- Name 2: “S IL-59” is Explicable = N, no Named Route Type information and includes the addresses. If the name with the prefix is only found in the postal file, then it is coded as Postal Name = Y.
- This scheme prevents the generation of navigation directions such as “Take IL-59 to S IL-59 to IL-59...”.

## 7.2.7 Street Type Before (and Street Type After)

### Definition

Indicates whether the Street Type occurs before or after the Feature Name (the Base Street Name). For additional information see [STRTYPE - Street Type](#) on page 1221.

### Length

90

### Length

50 (in Streets layer in dbf)

### Type

Text

### Usage

Street Type Before can be used to determine the placement of the Street Type for usage in destination selection, map display and route guidance.

### Specification

For example:

- Street Type Before (Street Types are shown in red)
  - Chemin du Racourci
  - Rue Randolph-Duguay
  - Rue de la Baie
  - Avenue Balfour
- Street Type After (Street Types are shown in red)
  - Daalsweg
  - Daelwijcklaan
  - Laburnam Road
  - Ladycroft Walk

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### Non-Latin Street Types

- In some Asian countries, names with Transliteration Type (e.g., VIE, THE, etc.) represent either a translation or a transliteration. Unlike other countries using non-Latin characters where EHRE generates the transliteration, Transliterated names are based on ground truth, i.e., as sign posted. As a result, a native non-Latin name would have more than one equivalent; a translation and a transliteration or various transliterations. Street Type (Translitereted) representation is simplified by adopting only one equivalent transliteration.

## 7.2.8 Street Name Base

The Street Name Base is equivalent to the Feature Name.

## 7.2.9 Street Name Suffix

### Definition

A Street Name Suffix is a directional identifier that follows, but is not included in, the Feature Name of a road.

### Value

See [Street Name Prefix](#) on page 369.

### Length

2

### Length

(UTF-8)

6

### Related Attributes

Feature Name

Language Code

Name Prefix

Street Type

Street Type Before

Street Type Attached

Explicable

Name on Road Sign

### Usage

The Street Name Suffix is included in the full name for roads. The full name should be used for route guidance and destination selection instead of individual components Name Prefix, Street Type, Feature Name, and Name Suffix. If the full name is used for display or destination input list the Street

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

Name Prefix should not be displayed after the name or Street Type, this may allow the Street Name Prefix to be confused with the Street Name Suffix.

### Specification

- A Street Name Suffix is not required as part a road name, but it is always entered when one exists.
- Suffixes are only applicable for Feature Type = 9999999.
- Suffixes occur on numbered routes for address matching purposes. For example, “IL-59” (with no prefix) runs through a city. Within the city limits, three blocks of “IL-59” become “IL-59 S” and have addresses assigned to them. In this case, the prefixed name is added as a second, non-explicable name even if displayed on street signs.
- Name 1: “IL-59” is Explicable = Y, Name Route Type = 3 and does not include the addresses.
- Name 2: “IL-59 S” is Explicable = N, no Named Route Type information and includes the addresses. If the name with the suffix is only found in the postal file, then it is coded as Postal Name = Y.
- This scheme prevents the generation of navigation directions such as “Take IL-59 to IL-59 S to IL-59...”.

### Kuwait

- If the Language Code is ENG, Street Name Suffix is published to the right of the Base Name. If the Language Code is ARA, Street Name Suffix is published to the left of the Base Name.

## 7.2.10 Street Type After

See [Street Type Before \(and Street Type After\)](#) on page 371.

## 7.2.11 Street Type Attached

### Definition

Indicates whether the Street Type is attached or separated by a space from the Feature Name.

### Value

Y - Attached

N - Not Attached

### Length

1

### Type

Boolean

### Usage

Street Type Attached can be used to determine the location of the Street Type for usage in destination selection, map display and route guidance.

### Specification

For example:

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- Street Type Attached = Y

- Lenbachstrasse
- Obere Seegasse
- Kaiserbergweg
- Konradplatz

- Street Type Attached = N

- Strada Macario
- Vicolo Macchetta
- Piazza Macelli di Soziglia
- Via Della Macina

## 7.2.12 Address Type

### Definition

Address Type identifies the type of the house number range assigned to the link.

### Value

B - Base

C - City

D - County

O - Old

T - Commercial

A - Actual

H - Alternate Base

### Length

1

### Type

Text

### Related Attributes

Left/Right Reference Address

Left/Right Non-Reference Address

Left/Right Address Scheme

Left/Right Address Format

### Usage

The Address Type is used in conjunction with related address attributes, and the associated name for destination selection and geocoding.

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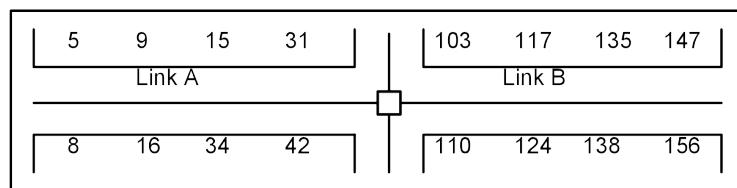
## Specification

- Road names may be assigned multiple address ranges.
  - 101-199 Address Type (Base)
  - 12001-12099 Address Type (County)
- Address Type = B is assigned to the address range that is most commonly used. Street names with one address range are set to Address Type = B. Street names with multiple address ranges must have one range set to Base and the others set to any combination of the other values. A street name cannot contain two Base address ranges.
- Address Type = C, Address Type = T, Address Type = D, and Address Type = O are assigned only when an Address Type = B is already assigned to the link.
- Address Type = C is assigned to address ranges assigned by the city government.
- Address Type = D is assigned to address ranges assigned by the county government.
- Address Type = O is assigned to an address range to indicate a more recent address range has been assigned to the link.
- Address Type = T is assigned to address ranges applied to commercial establishments along the link. For example, in some countries two ranges exist on the same road, one range is applied to residential addresses and a different range is applied to commercial establishments.
- Address Type = A is assigned to address ranges that represent the actual address range on a link.
- Address Type = H is an Address Type without a hyphen.

## Address Type = A (Actual)

- In Australia, North America, and Singapore, codes logical address ranges as Address Type = Base. Logical address ranges include the entire range of valid addresses for a given block and are often represented in blocks of 100 (e.g., 100-198). The full logical address range may not be in use in reality, i.e. specific addresses defined in the logical address range may not be assigned.
- Address Type = Actual represents the actual address range of a link. With Address Type = Actual, HERE provides the actual addresses in use for each link.
- Address Type = Actual (actual address range) is coded in addition to Address Type = Base (logical address range). The actual address range falls within the logical address range.

**Figure 143:**



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### Address Type = A

- Address Type = Actual (actual address range) is coded in addition to Address Type = Base (logical address range). The actual address range falls within the logical address range.

*Figure 143:* on page 375 shows that for Link A the Logical address ranges are:

- Address 1-99 (Odd)
- Address 2-98 (Even)
- The actual address ranges are:
  - Address 5 – 31 (Odd)
  - Address 8 – 42 (Even)

For Link B, the logical address ranges are:

- Address 101 – 199 (Odd)
- Address 100 – 198 (Even)

The actual address ranges are:

- Address 103 – 147 (Odd)
- Address 110 – 156 (Even)

- If Address Type = Actual is used for destination selection, many segments will have overlapping address ranges. HERE recommends using logical address ranges (Address Type = Base) for destination selection rather than actual address range (Address Type = Actual) to avoid overlapping address ranges. Address Type = Actual is the preferred range for resolving a specified address, because it has higher accuracy.
- Using Address Type = Actual will yield more accurate address resolution compared to Address Type = Base due to linear address interpolation. The actual address range is calculated based on Point Address data. Therefore, actual address range is available where Point Address data is collected.

### Address Type = H (Alternate Base)

- For every link with Address Format = Hyphenated or Alpha-Hyphenated, an additional address range is published without the hyphen as Address Type = H with the corresponding Address Format.
- Address Type = H is only published with Address Formats = N, Z, or 3.
- Actual Address Ranges (Address Type = Actual) and Point Addresses do not have the corresponding non-hyphenated addresses published.

## 7.2.13 Left Reference Address

### Definition

This is the house number on the left side of the link at the reference end.

### Length

10

### Type

Text

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### Usage

The Left Reference Address is used in conjunction with related address attributes and the associated name for destination selection and geocoding.

### Specification

- Left Reference Address is applied for the left side of a named and addressed link.
- Address data is applied to both the right and left sides of a link. Right and left sides are relative to the reference node of the link.
- Addresses are included for named roads within airports when applicable.
- In North America, addresses are applied in Prime Inclusion, Network, and In-Process Data areas where they exist in reality.
- In Europe, address inclusion varies by country in Prime Inclusion areas.
- Addresses may also be included in non-Prime Inclusion areas. However, they are not required.
- Duplicate addresses may exist when present in reality and necessary for accurate representation. For example in Europe, if the addresses 2a and 2b exist on the same road, they are represented as 2 for both instances. In the U.S., 12 Main St may exist twice within a city. Both links would carry these addresses.
- Postal zones usually make addresses unique within a city or Built-up Area
- In Europe, actual address ranges include only addresses of existing structures. For example, the address of a vacant lot would not be included. Actual address ranges are not rounded to the nearest hundred (e.g., 112-168, rather than 100-198).
- In North America, logical address ranges include the entire range of valid addresses for a given block, regardless of whether or not a structure is present. Logical address ranges are often represented in blocks of 100 (e.g., 100-198).
- In North America, apartment numbers are not included in the database. Though the mailing address may be 650 E Weddell Dr #140, only the 650 would be included as an address.

## 7.2.14 Left non-Reference Address

### Definition

This is the house number on the left side of the link at the non-reference end.

### Value

### Length

10

### Type

Text

### Usage

The Left Non-Reference Address is used in conjunction with related address attributes and the associated name for destination selection and geocoding.

### Specification

- Left Non-Reference Address is applied for the left side of a named and addressed link.

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- Address data is applied to both the right and left sides of the link. Right and left sides are relative to the reference node of the link.
- See rules under Left Reference Address.

### 7.2.15 Left Side Reference Address

The Left Side Reference Address is equivalent to the Left Reference Address.

### 7.2.16 Left Side Non-Reference Address

The Left Side Non-Reference Address is equivalent to the Left Non-Reference Address.

### 7.2.17 Left Address Scheme

#### **Definition**

The numbering scheme for the addresses assigned to the left side of the link.

#### **Value**

E - Even

M - Mixed

O - Odd

#### **Length**

1

#### **Type**

Text

#### **Usage**

The Left Address Scheme is used in conjunction with related address attributes and the associated name for destination selection and geocoding.

#### **Specification**

- Left Address Scheme = E is applied to indicate that only the even numbers of the address range are valid. Even address ranges must begin with "2", rather than "0", except in case of non-numeric addresses (i.e. 12-00 to 12-98).
- Address Scheme = M is applied to indicate that both the even and odd numbers of the address range are valid.
  - ① **Note:** Address Scheme = M is always applied for Left Address Format/Right Address Format = 7 (Kilometer Marker).
- Address Scheme = O is applied to indicate that only the odd numbers of the address range are valid.
- Address Scheme = Undefined is published when the address is unknown or no address exist.
- Address data is applied to both the right and left sides of a link. Right and left sides are relative to the reference node of the link.

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- In North America, addresses are applied in Prime Inclusion, Network, and In-Process Data areas where they exist in reality.
- Addresses may also be included in non-Prime Inclusion areas. However, they are not required.

### 7.2.18 Left Address Format

#### Definition

The format of the addresses on the left side of the link.

- Note:** Please see the 'Country Profiles: Address Format Descriptions' for additional information on Address Formats.
- Note:** The reference and non-reference addresses must have the same format.

#### Value

Code	Description	Format
(space)	UNADDRESSED	
A	ALPHANUMERIC-N	12N123
B	BLOCK	A123
C	ALPHANUMERIC-1	2M89
D	SLASH <sup>123</sup>	34/134
E	ALPHANUMERIC-E	12E123
H	HYPHENATED	123-123
I	ALPHANUMERIC-NW	N123W12312
J	ALPHANUMERIC-NE	N123E12312
K	ALPHANUMERIC-SW	S123W12312
L	ALPHANUMERIC-SE	S123E12312
N	NUMERIC	123456
O	ALPHANUMERIC-ES	E123S12312
P	ALPHANUMERIC-EN	E123N12312
Q	ALPHANUMERIC-WS	W123S12312
R	ALPHANUMERIC-WN	W123N12312
S	ALPHANUMERIC-S	12S123
W	ALPHANUMERIC-W	12W123
X	ALPHANUMERIC SLASH <sup>124</sup>	A8/5

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Code	Description	Format
Z	LEADING ZERO	012345
1	ALPHAHYPHENATED-5	AB-12
3	ALPHANUMERIC 3	AH34
4	NUMERIC ALPHA	12A
5 <sup>125</sup>	DOUBLE SLASH	50/99/101
63	TRIPLE SLASH	22/22/22
7 <sup>126</sup>	KILOMETER MARKER	Km 18.2
83	Numeric Slash Alpha	1/A
93	Slash Numeric Alpha	1/1A
AA3	Numeric Slash Alpha Numeric	1/1A1
AB3	Alphanumeric Double Slash	2/A/100

## Length

2

## Type

Text

## Usage

The Left Address Format is used in conjunction with related address attributes and the associated name for destination selection and geocoding.

## Specification

- Address data is applied to both the right and left sides of a link. Right and left sides are relative to the reference node of the link.
- In North America, addresses are applied in Prime Inclusion, Network, and In-Process Data areas where they exist in reality.
- In Europe, address inclusion varies by country in Prime Inclusion areas.
  - Addresses may also be included in non-Prime Inclusion areas. However, they are not required.

Address inclusion in the U.S. and its territories

<sup>123</sup> This format is commonly used in Thailand.

<sup>124</sup> This format is commonly used in Indonesia.

<sup>125</sup> This format is commonly used in Vietnam

<sup>126</sup> This format is used in Puerto Rico.

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- Most addresses in the U.S. are comprised of the numeric characters 0-9. The formats contain other characters such as letters and hyphens. See the following table for variations of the different Address Formats.
  - For every link with Address Format = H(Hyphenated) or 1(Alphahyphenated-5) (i.e., addresses that contain a hyphen), a second address ranges is published without the hyphen.
  - The addresses without the hyphen have Address Type = H, and the corresponding Address Formats = N, Z, or 3 (see these specific formats in the following table).
  - All addresses with Address Formats in the following table, indicated as H or 1 receive a second address range without the hyphen.
- ① **Note:** As a result of the hyphen removal, HERE publishes additional address overlaps. For example: A road may have the Hyphenated addresses: 10-101 and 101-01 on different road elements. Consequently, the Alternate Hyphenated addresses will be 10101 and 10101 for the corresponding links.
- ① **Note:** In order to determine the incrementing ranges, the original address (of Address Format = H or 1) must be taken into account to accurately depict how the range increments.

Real-World Address Format			Address Format Derived Upon Extraction		
Address Format	Address Type	Examples	Address Format	Address type	Examples
H (Hyphenated)	B (Base)	n-nn nnn-nn	N (Numeric)	H (Alternate Base)	nnn nnnnn
H (Hyphenated)	B (Base)	0n-nn	Z (Leading Zero)	H (Alternate Base)	0nnn 00n
1 (Alphahyphenated-5)	B (Base)	AA-n	3 (Alphanumeric-3)	H (Alternate Base)	AAn AAAnnn

Address Format	Examples of Format Variations	Incrementing Range
A (Alphanumeric-N) S (Alphanumeric-S) E (Alphanumeric-E) W (Alphanumeric-W)	nAnnn, nnAnnn, 0Annn, 00Annn (Where A can equal E, W, N, or S)	The numeric characters after the alpha can be used to calculate the address range 15W001 to 15W799, i.e. 1-799.
B (Block)	An, Ann, Annn (Where A can equal A-Z)	The numeric characters after the Alpha can be used to calculate the address range 1S001-1S599, i.e.1-599.

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Address Format	Examples of Format Variations	Incrementing Range
D (Slash)	n/n n/nn n/nnn nn/n nn/nn nn/nnn nnn/n nnn/nn nnn/nnn nnnn/nnnn	The numeric characters after the slash can be used to calculate the address range.
I (Alphanumeric-NW) J (Alphanumeric-NE) K (Alphanumeric-SW) L (Alphanumeric-SE) O (Alphanumeric-ES) P (Alphanumeric-EN) R (Alphanumeric-WN) Q (Alphanumeric-WS)	AnnnAnnn, AnnnAnnnn, AnnnAnnnnn (Where A can equal E, W, N, or S) Note: There can be 1-3 digits between the alphas and 3-5 digits after the 2nd alpha. There is a maximum of ten digits.	The numeric characters after the second alpha can be used to calculate the address range N121W20001 to N121W20199, i.e. 20001-20199.
X (Alphanumeric Slash)	An/n AA/nnn AAn/nn (Where A can equal A-Z)	The numeric characters after the slash can be used to calculate the address range.
Z (Leading Zero)	00n, 0nn, 0nnn, 0nnnn	The numeric characters after the leading zeros can be used to calculate the address range. For example, the range 002 to 098 is 2-98.

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Address Format	Examples of Format Variations	Incrementing Range
H (Hyphenated)	0-0n, 0-nn, 0n-00, 0n-0n, 0n-nn, n-0n, n-0nnn, n-00, n-00nn, n-000n, n-n, n-nn, n-nnn, n-nnnn, nn-00, nn-00n, nn-000, nn-0n, nn-0nn, nn-0nnn, nn-n, nn-nn, nn-nnn, nnn-00, nnn-0n, nnn-n, nnn-nn, nnn-nnn,	The numeric characters after the hyphen can be used to calculate the address range 01-01 to 01-99, i.e. 1-99. Refer to individual areas for more details.
C (Alphanumeric 1)	nAn, nAnn (Where A can be any alphabet)	The numeric characters after the alpha can be used to calculate the address range, e.g., range 1A1 to 1A9 would be 1-9.
1 (Alphahyphenated 5)	AA-n, AA-nn, AAA-nn, AAA-nnn (Where A can be any alphabet)	The numeric characters after the hyphen can be used to calculate the address range because the alphas are constant for a given range, e.g., range AA-11 to AA-99 would be 11-99.

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Address Format	Examples of Format Variations	Incrementing Range
3 (Alphanumeric 3)	AAn, AAAn, AAnn (Where A can be any alphabet)	The numeric characters after the alphas can be used to calculate the address range because the alphas are constant for a given range.
4 (Numeric Alpha)	1A 12A (Where A can be any alphabet)	The numeric characters before the alpha can be used to calculate the address range for 1E to 99E, i.e. 1-99
5 (Double Slash)	1/1/1 1/22/99 50/99/101 101/101/199	The first two sets of numbers represent the alley number. The last number(s) can be used to calculate the address range.
6 (Triple Slash)	1/1/1/1 22/22/22/22 123/456/789/199	The first three sets of numbers represent the alley number. The last number(s) can be used to calculate the address range.
7 (Kilometer Marker)	Km 18.2	The address range is calculated between 0.0 and 999.99.
8 (Numeric Slash Alpha)	n/A n/AA n/AAA nn/A nn/AA nn/AAA nnn/A nnn/AA nnn/AAA	The last set of numbers determines trend and scheme.

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Address Format	Examples of Format Variations	Incrementing Range
9 (Slash Numeric Alpha)	n/nA nn/nA nnn/nA n/nnA n/nnnA n/nAA n/nAAA nn/nnA nn/nnnA nn/nAA nn/nAAA nnn/nnA nnn/nnnA nnn/nAA nnn/nAAA nnn/nnnAAA n/An nn/An nnn/An n/AAn n/AAAn n/Ann n/Annn nn/AAn nn/AAAn nn/Ann nn/Annn nnn/AAn nnn/AAAn nnn/Ann nnn/Annn nnn/AAAnnn nA/n nnA/n nnnA/n nAA/n nAAA/n nA/nn nA/nnn nnAA/n	The last set of numbers determines trend and scheme.

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Address Format	Examples of Format Variations	Incrementing Range
9 (Slash Numeric Alpha) Cont.	nnAAA/n nnA/nn nnA/nnn nnnAA/n nnnAAA/n nnnA/nn nnnA/nnn nnnAAA/nnn	The last set of numbers determines trend and scheme.
AA (Numeric Slash Alpha Numeric)	nn/nAAAn nnn/nAAAn n/nAn nn/nAn nnn/nAn n/nnAn n/nnnAn n/nAAAn n/nAnn n/nAnnn nn/nnAn nn/nnnAn nn/nAAAn nn/nAAAn nn/nAnn nn/nAnnn nnn/nnAn nnn/nnnAn nnn/nAAAn nnn/nAAAn nnn/nAnn nnn/nAnnn nnn/nnnAAAAnnn	The last set of numbers determines trend and scheme.

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Address Format	Examples of Format Variations	Incrementing Range
AB (Alphanumeric Double Slash)	n/A/n nn/A/n nnn/A/n n/AA/n n/AAA/n n/A/nn n/A/nnn nn/AA/n nn/AAA/n nn/A/nnn nn/A/nnnn nnn/AA/n nnn/AAA/n nnn/A/nn nnn/A/nnn nnn/AAA/nnn A/n/n AA/n/n AAA/n/n A/nn/n A/nnn/n A/n/nn A/n/nnn AA/nn/n AA/nnn/n AA/n/nn AA/n/nnn AAA/nn/n AAA/nnn/n AAA/n/nn AAA/n/nnn AAA/nnn/nnn n/n/A nn/n/A nnn/n/A n/nn/A n/nnn/A n/n/AA n/n/AAA nn/nn/A	The last set of numbers determines trend and scheme.

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Address Format	Examples of Format Variations	Incrementing Range
AB (Alphanumeric Double Slash) Cont.	nn/nnn/A nn/n/AA nn/n/AAA nnn/nn/A nnn/nnn/A nnn/n/AA nnn/n/AAA nnn/nnn/AAA	The last set of numbers determines trend and scheme.

## Address Format (A, S, E, W)

- New links are created whenever any characters change left of the alpha and including the alpha. For example, the numeric value left of the alpha changes from 15 to 16 or the alpha character changes from W to N. The characters left of and including the alpha can be different on opposite sides of the link as long as they match for each side respectively. For example, one side of a segment can be 15W000-15W152 and the opposite side is 14W751-14W799. See the following diagram.

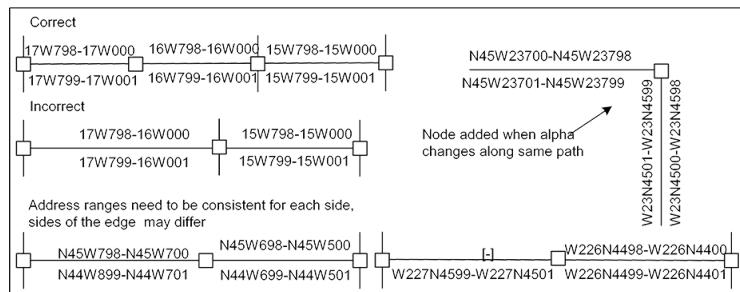
## Address Format (B)

- New links are created if the alpha changes. A node is included between A1-A99 and B1-B99.

## Address Format (I, J, K, L, O, P, R, Q)

- New links are created whenever any characters change left of the alpha and including the second alpha. For example, when characters left of the second alpha change from N121W20198 to N122W20198 or the alphas switch W227N4599 to N45W22801. The characters left of and including the second alpha can be different on opposite sides of the link as long as they match for each side respectively. See the following diagram.

**Figure 144:**



## Address Format (Z)

- New links are created to separate Leading Zero addresses from Numeric addresses.

## Address Format (H)

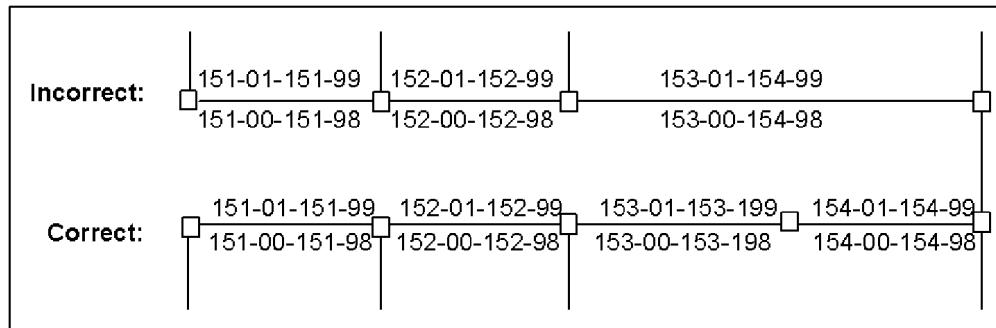
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- New links are created when the number left of the hyphen changes. For each block, the number of digits to the right of the hyphen may change. For example, the range for a block may begin at 98-900 and end at 98-1099.

**Figure 145:**



### Address Format (C)

- Links always have the same leading digit and alpha for all addresses.

### Address Format (1, 3, 4)

- New links are created when the alphas change.

In the above examples, portions of the address can be dropped in order to calculate an address range. However, it is important to keep these portions of the address during destination selection and map display. For example, 50 Main St and 050 Main St exist on 2 separate links in Portland.

### Address Formats (5, 6)

- New links are created when any of the numbers preceding the slash change.

### Address Format (7)

- Links always have the same leading "Km" string for all addresses.

## 7.2.19 Right Reference Address

### Definition

This is the house number on the right side of the link at the reference end.

### Length

10

### Type

Text

### Usage

The Right Reference Address is used in conjunction with related address attributes and the associated name for destination selection and geocoding.

### Specification

- Right Reference Address is applied for the right side of a named and addressed link.

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- Address data is applied to both the right and left sides of the link. Right and left sides are relative to the reference node of the link.
- See rules under [Left Reference Address](#) on page 376.

### 7.2.20 Right Non-Reference Address

#### Definition

This is the house number on the right side of the link at the non-reference end.

#### Length

1

#### Type

Text

#### Usage

The Right Non-Reference Address is used in conjunction with related address attributes and the associated name for destination selection and geocoding.

#### Specification

- Right Non-Reference Address is applied for the right side of a named and addressed link.
- Address data is applied to both the right and left sides of the link. Right and left sides are relative to the reference node of the link.
- See rules under [Left Reference Address](#) on page 376.

### 7.2.21 Right Side Non-Reference Address

The Right Side Non-Reference Address is equivalent to the Right Non-Reference Address.

### 7.2.22 Right Address Scheme

#### Definition

The numbering scheme for the addresses assigned to the right side of the link.

#### Value

Blank – undefined

E – Even

M – Mixed

O – Odd

#### Length

1

#### Type

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Text

### Usage

The Right Address Scheme is used in conjunction with related address attributes and the associated name for destination selection and geocoding.

### Specification

- See [Left Address Scheme](#) on page 378 for rules.

## 7.2.23 Right Address Format

### Definition

The format of the addresses on the right side of the link.

① **Note:**

The reference and non-reference addresses must have the same format.

### Value

See [Left Address Format](#) on page 379 for values.

### Length

2

### Type

Text

### Specification

- See [Left Address Format](#) on page 379 for rules.

## 7.2.24 Reference End Intersection ID

The Reference End Intersection ID is equivalent to the Reference Node ID.

## 7.2.25 Number of Shapepoints

### Definition

The number of curvature points associated with this link.

### Value

nnnnn

### Length

5

### Type

Numeric

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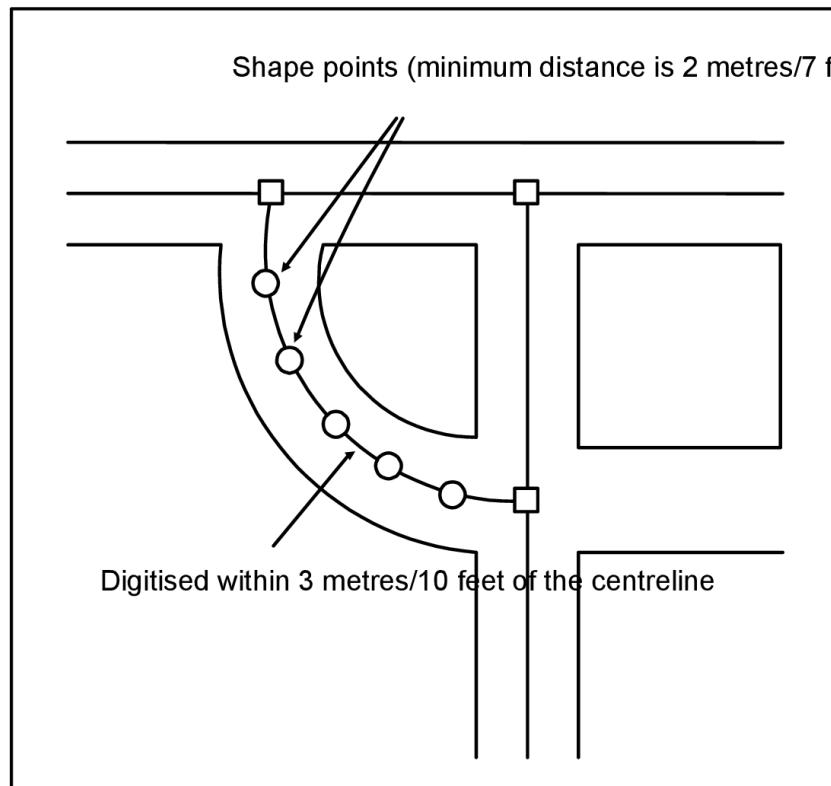
## Usage

Number of Shapepoints can be used to verify the number of curvature points on a link.

## Specification

- Shape points represent the curves along a link. A minimum number of shape points are used to maintain a curve, within 3 metres/10 feet of a road's centreline. The minimum distance between nodes and among nodes and shape points, is 2 m/7 ft, as shown in [Figure 146](#): on page 392.

**Figure 146:**



## 7.2.26 Functional Class

### Definition

Functional Class defines a hierarchical network used to determine a logical and efficient route for a traveller.

### Value

(space) - Not Applicable

1 - Level 1

2 - Level 2

3 - Level 3

4 - Level 4

5 - Level 5

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## Length

1

## Type

Text

## Usage

Functional Class can be used to determine sets of links that form connected graphs.

## Specification

- The arterial network is connected. Each link has at least one connection in the network to every other link with the same Functional Class via a link with the same or higher functionality.
- Functional Class = 1 roads allow for high volume, maximum speed traffic movement between and through major metropolitan areas.
  - Functional Class = 1 is applied to roads with very few, if any, speed changes. Access to the road is usually controlled.
- Functional Class = 2 roads are used to channel traffic to Functional Class = 1 roads for travel between and through cities in the shortest amount of time.
- Functional Class = 2 is applied to roads with very few, if any speed changes that allow for high volume, high speed traffic movement.
- Functional Class = 3 is applied to roads which interconnect Functional Class = 2 roads and provide a high volume of traffic movement at a lower level of mobility than Functional Class = 2 roads.
- Functional Class = 4 is applied to roads which provide for a high volume of traffic movement at moderate speeds between neighbourhoods. These roads connect with higher functional class roads to collect and distribute traffic between neighbourhoods.
- Functional Class = 5 is applied to roads whose volume and traffic movement are below the level of any functional class. In addition, walkways, truck only roads, bus only roads, and emergency vehicle only roads receive Functional Class = 5.

The following also receive Functional Class = 5:

- Access roads, parking lanes, and connections internal to select POIs in North America.
- Roads in marginal and illegal settlements in developing countries
- Functional Class = Not Applicable is applied to non-navigable links.
- As a general rule, Functional Class assignments have no direct correlation with other road attributes like speed, controlled access, route type, etc. While in general Functional Class = 1 roads are controlled access this is not always the case, and it is also not the case that all controlled access roads are Functional Class = 1
- The Functional Class network is a hierarchical classification of roads based on reality. Density and pattern of each Functional Class level is influenced by the physical road network that exists in reality. Physical road network density variations between countries and between regions within a country are reflected in the Functional Class network. For example, the density of the road network differs between North American and European countries. Even within the U.S., for instance, density will vary from the East Coast to the West Coast.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- Functional Class = 1, 2, 3, and 4 roads are connected to form a comprehensive road network for navigation of long distance, mid-range and short routes in any given coverage area.
- For example, long distance routes are often calculated by searching the road network through progressively higher Functional Classes to get to a Level 1 road. The route continues exclusively on Level 1 roads until travel is required through progressively lower Functional Classes in order to reach the destination.
- The lowest Functional Class necessary to produce inter-connectivity is applied to ramps, turn lanes, and intersection internal links.

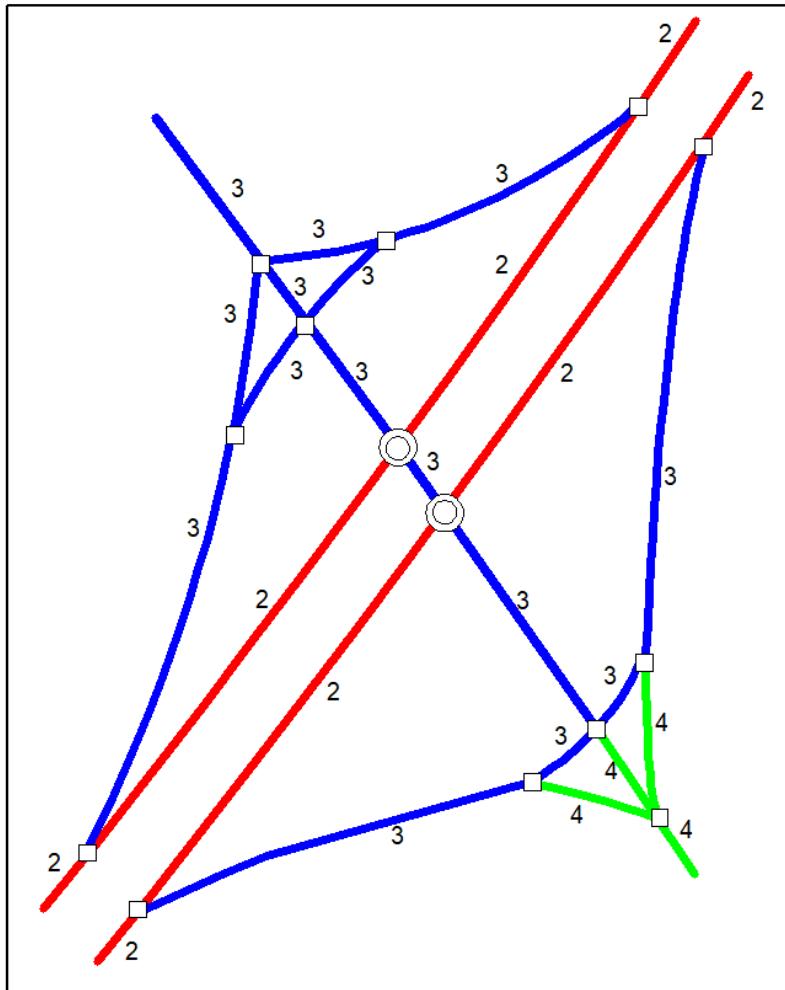
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- When two or more different Functional Class roads connect, the lower functional class is applied to the connecting roads, see the following illustrations for connectivity.

**Figure 147:**

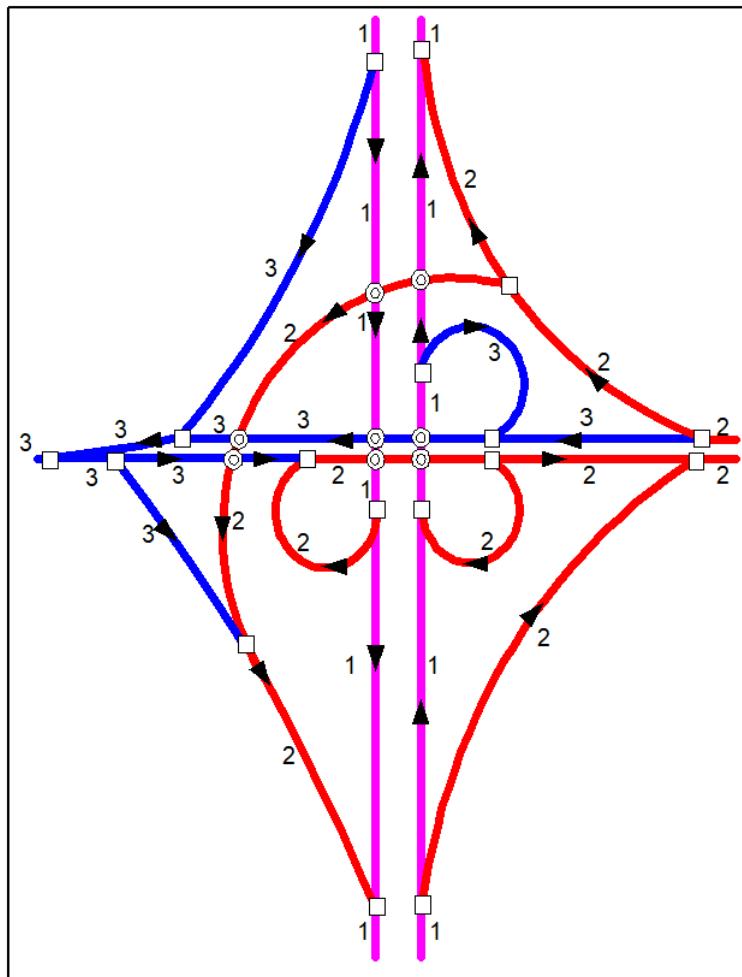


## Reference Guide

Attributes - Road Features and Associated Navigation Information

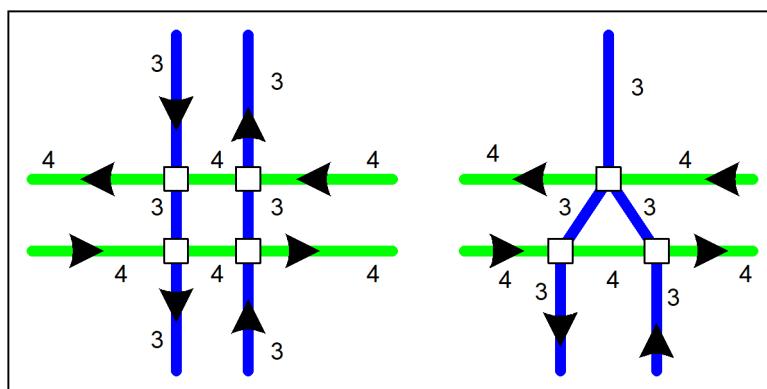
7.2 Streets (Streets)

**Figure 148:**



- If a road's Functional Class is equal on both sides of an intersection, then the links internal to the intersection receive the same value as illustrated in [Figure 149](#): on page 396.

**Figure 149:**



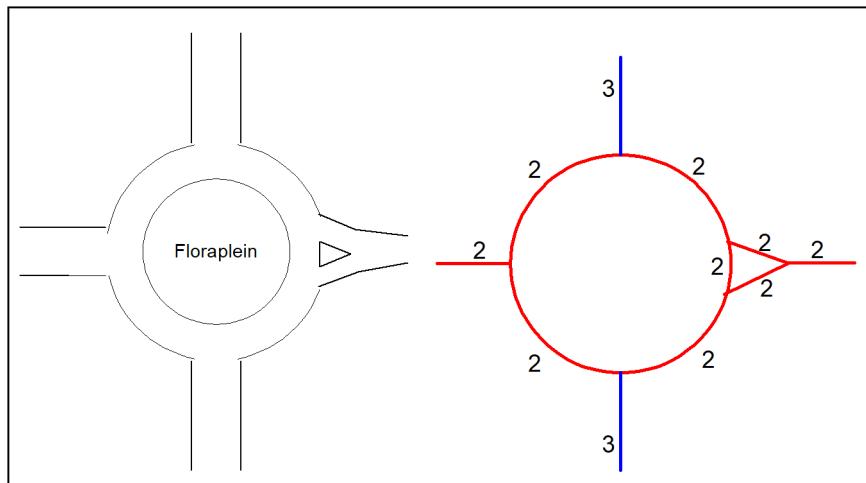
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

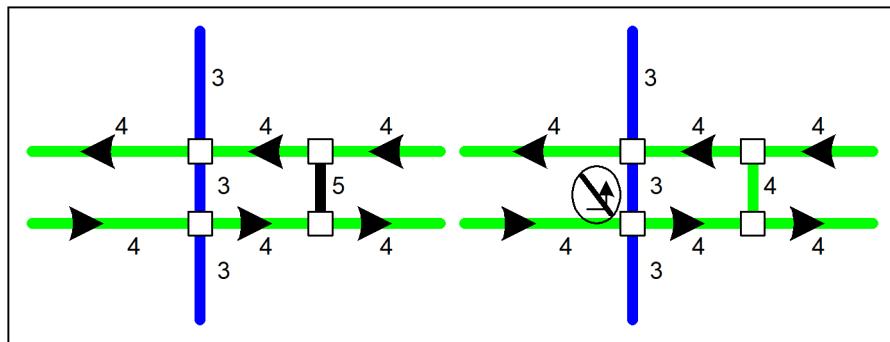
- Roundabout links receive the most important Functional Class of the roads connected to the Roundabout, as shown in [Figure 150:](#) on page 397.

**Figure 150:**



- A U-turn lane receives Functional Class = 5 unless it is considered part of an intersection. A U-turn lane is considered part of an intersection when the presence of turn restrictions at the intersection forces the use of the U-turn link, as shown in [Figure 151:](#) on page 397.

**Figure 151:**



## 7.2.27 Speed Category

### Definition

Speed Category classifies the general speed trend of a road based on posted or legal speed and is provided to enhance route calculation and the timing of route guidance. Speed Category values represent the combination of several factors besides legal speed limit (e.g., physical restrictions or access characteristics). Therefore Speed Category values can differ from Speed Limit values, which represent the legal speed limit only.

### Value

Speed Category values represent a combination of several factors besides legal speed limit (e.g., physical restrictions, access characteristics, etc.). Therefore, Speed Category values can differ from Speed Limit values (which only represent the legal speed limit).

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

<b>Value</b>	<b>Description</b>	
	<b>in KPH</b>	<b>in MPH</b>
(space)	Not Applicable	Not Applicable
1	> 130 KPH	> 80 MPH
2	101-130 KPH	65-80 MPH
3	91-100 KPH	55-64 MPH
4	71-90 KPH	41-54 MPH
5	51-70 KPH	31-40 MPH
6	31-50 KPH	21-30 MPH
7	11-30 KPH	6-20 MPH
8	<11 KPH	< 6 MPH

## Length

1

## Type

Text

## Usage

Speed Category may be used to estimate link traversal times, to prioritise link selection during route calculation, and to calculate timing of the route guidance.

## Specification

- A value is applied to all navigable links based on the posted speed limit. Speed Category is generally applied from road intersection to road intersection to reflect the overall speed trend of a road.

 **Note:**

Speed Category values can differ from From/Toward Reference Speed Limit values, which are applied on a link-by-link basis.

- Posted speed limits that are not full time are not coded. For example, a road with 40 mph speed limit has a zone where, for one link, the posted speed limit is 25 mph during specific hours. In this case, Speed Category = 5 is applied to all links to reflect the overall trend of the road.
- Speed Category = Not Applicable is applied to non-navigable links.
- If the posted speed limit is different for the two directions on a bi-directional road, then the lower speed limit is used to determine Speed Category.
- On roads that have physical restrictions such as speed bumps or chicanes, the Speed Category can be lower than the legal speed limit.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- Speed Category is applied as follows:
  - Speed Category = 7 to Ferry Routes.
    - ① **Note:** In rare situations, ferry routes may receive higher or lower values to reflect reality.
  - Speed Category = 7 to POI Access and Rest Area roads.
  - Speed Category = 7 to roads on marginal and illegal settlements in developing countries (e.g., favelas in Brazil).
  - Speed Category = 8 to Walkways.
  - Speed Category = 8 to Pedestrian Zones.
    - ① **Note:** In North America, access roads, parking lanes, and connections internal to the complex of select POIs are also coded with Speed Category = 8.
  - Speed Category = Not Applicable to non-navigable links.
- The Speed Category for turn lanes and Intersection Internal links can reflect any of the Speed Cat values of the roads they touch.

## Ramps and Highway-to-Highway Connectors

- ① **Note:** The following rules in this section are not applicable to countries with legal defaulted speed limits for ramps.
- For Ramps/Highway-to-Highway connectors, the Speed Category is applied based on the advisory speed limit. If an advisory speed limit is not present, the Speed Category based on the posted or implied speed limit is applied. See [Figure 152: on page 400](#) and [Figure 153: on page 400](#).
  - ① **Note:**
    - In Europe, signs that imply speed limit are: Built-up Area sign, Motorway sign, and Motorised Vehicles Only sign.
  - The Speed Category based on the advisory speed limit is applied if a Ramp/Highway-to-Highway connector has both an advisory and posted/implied speed limit. See Ramp D in [Figure 153: on page 400](#).
  - The Speed Category based on the average speed limit is applied if multiple advisory or posted speed limit (not implied) signs are present on a ramp/Highway-to-Highway connector. See [Figure 153: on page 400](#).
- If the advisory or posted speed limit is halfway along the ramp, the Speed Category that reflects the advisory or posted/implied speed limit is applied on the complete ramp. See Ramp B in [Figure 152: on page 400](#).
  - Built-up Area sign: Applied as aligned to the default Built-up Area Speed Limit.
  - Motorway sign: Speed Category of the high-speed road it is connected to is applied.
  - Motorised Vehicles Only sign: Speed Category of the high-speed road it is connected to is applied.

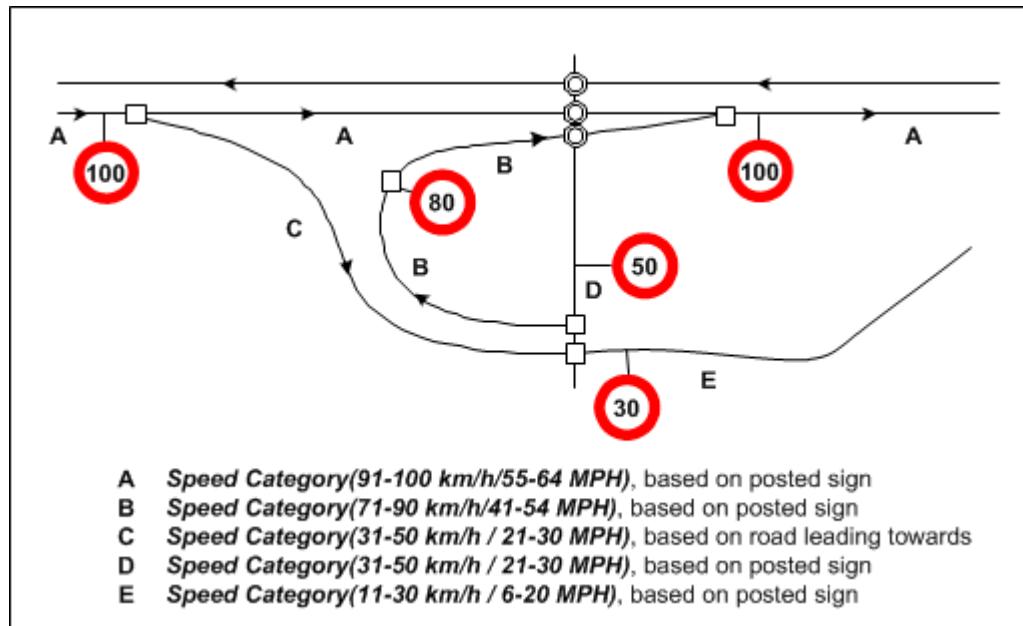
## Reference Guide

Attributes - Road Features and Associated Navigation Information

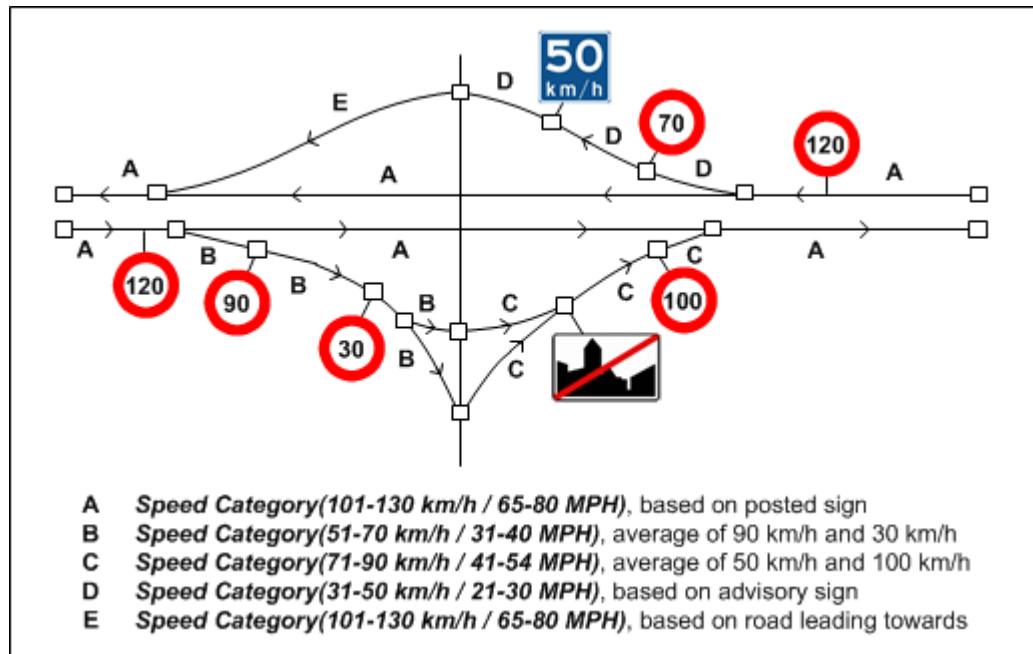
7.2 Streets (Streets)

- If an advisory or posted speed limit is not present, the Speed Category of the road it is leading towards is applied. See Link C in [Figure 152](#): on page 400 and Link E in [Figure 153](#): on page 400.

**Figure 152:**



**Figure 153:**



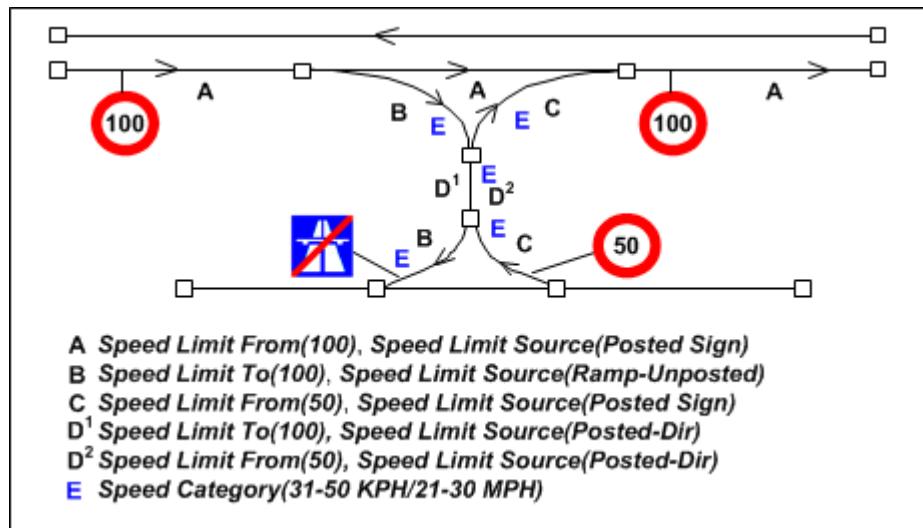
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- The same Speed Category is applied for both the entrance and exit ramps if one link is part of the entrance and exit ramps. The lower Speed Category of the two roads connected by the ramp is applied. See [Figure 154: on page 401](#).

**Figure 154:**



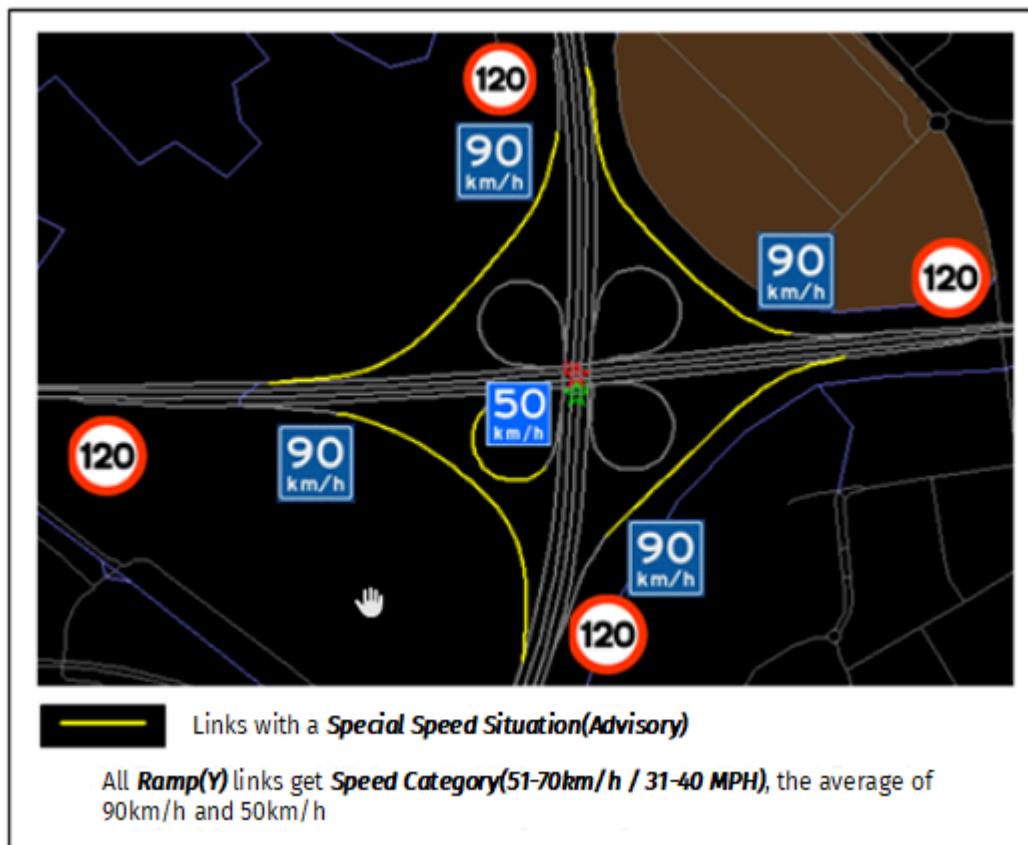
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- For cloverleaf ramps and Highway-to-Highway connectors, the Speed Category is applied based on the average speed limit of all advisory or posted speed limit signs present on the complete ramp system, i.e., all ramp links get the same Speed category. See [Figure 155:](#) on page 402.

**Figure 155:**



- For parallel ramps, where the main roads and the parallel ramp have the same Functional Class, the Speed Category is applied on the parallel ramp to be one category lower than on the main road.

### 7.2.28 From Reference Speed Limit

See From Reference Speed Limit & Toward Reference Speed Limit below.

### 7.2.29 Toward Reference Speed Limit

See From Reference Speed Limit & Toward Reference Speed Limit below.

### 7.2.30 From Reference Speed Limit & Toward Reference Speed Limit

#### Definition

From/Toward Speed Limit is the posted or legal speed limit in each travel direction on a road.

#### Value

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

1 - 999

## Length

5

## Type

Numeric

## Usage

Speed Limit may be used to estimate link traversal times, to prioritise link selection during route calculation, to calculate timing of the route guidance, and for display purposes.

## Specification

- From/Toward Reference Speed Limit is the maximum legal speed allowed on the road.
- Positional accuracy is within +/-50 metres.
- From/Toward Reference Speed Limit is included for Links with Enhanced Geometry = Y.
- A From/Toward Reference Speed Limit value can exist on Links with Enhanced Geometry = N.
- From/Toward Reference Speed Limit is indicated for a road in the measurement system used in a particular country. This means that speeds posted in kph are entered with their kph value and speeds posted in mph are entered with their mph value.
- From/Toward Reference Speed Limit values are collected and included only when applicable to autos (not autos with trailers, trucks, or any other configuration).
- From/Toward Reference Speed Limit is based either on overall country/administrative rules, posted signs, or road markings.
- When there is no posted sign a default From/Toward Reference Speed Limit value is implemented. Defaults are based on administrative-wide regulations.
- When a road has a different speed during certain times, the From/Toward Reference Speed Limit value is based on the speed that applies most of the time. The additional speed limit information is included as a *Special Speed Situation Condition*.
  - For example, night-time speeds are in effect on some roads in Montana. In this case, day-time speed is predominant, and thus is used as the *From/Toward Reference Speed Limit* value, while the night-time speed is included as a *Special Speed Situation*. Signs describing seasonal changes will be evaluated on an individual basis.
- For roads that allow an unlimited speed, the From/Toward Reference Speed Limit value is 999. For example, many motorways in Germany do not have a maximum speed.
- For longer term temporal speed change situations such as “change testing” (e.g., does lower speed affect emissions), where speed limit signs appear to be permanently placed, From/To Speed Limit is based on the existing speed limit signs, even if known that speeds may change after the testing.
- The From/Toward Reference Speed Limit value for turn lanes is the lowest speed of the connecting roads.
- When a speed changes within 50 metres of an intersection, the speed attribute change is coded from the intersection. See [Figure 163:](#) on page 408.
- When a speed change occurs that is not within 50 metres of an intersection, any existing node within +/-50 metres of the sign is used to code the speed change. If an existing node is not available, a node is added. See [Figure 164:](#) on page 408 and [Figure 165:](#) on page 409.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

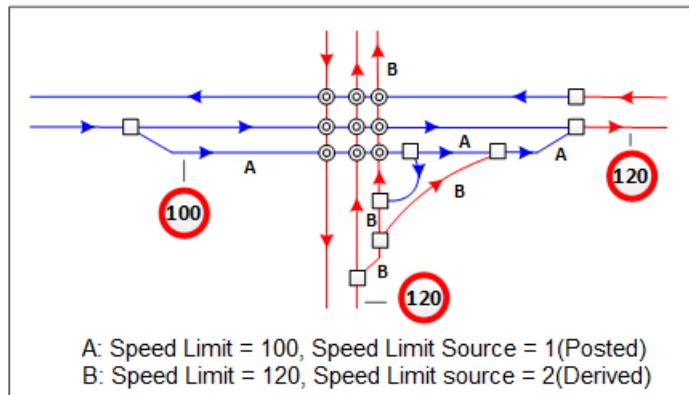
7.2 Streets (Streets)

- When there are different speed limits on each side of a bi-directional Link, the appropriate From/Toward Reference Speed Limit is applied. See [Figure 166: on page 409](#) and [Figure 167: on page 410](#).

## On (Parallel) Ramps

- Parallel Ramps are published with From/Toward Reference Speed Limit posted speed limit. If a posted speed limit is not available, the speed limit of the road the driver is leaving is applied with Speed Limit Source - Derived. See [Figure 156: on page 404](#).

**Figure 156:**



## On (Standard) Ramps

- Ramps are published with From/Toward Reference Speed Limit posted speed limit. If a posted speed limit is not available, the legal speed limit (based on legal statute) is applied instead.
- ① **Note:** In US and Canada, the advisory speed limit is coded as the From/Toward Reference Speed Limit if a posted speed limit is not present, regardless if the ramp is a highway to highway connector or not. The advisory speed limit applied in the Special Speed Situation condition will be preserved and the value is duplicated as a posted speed limit.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

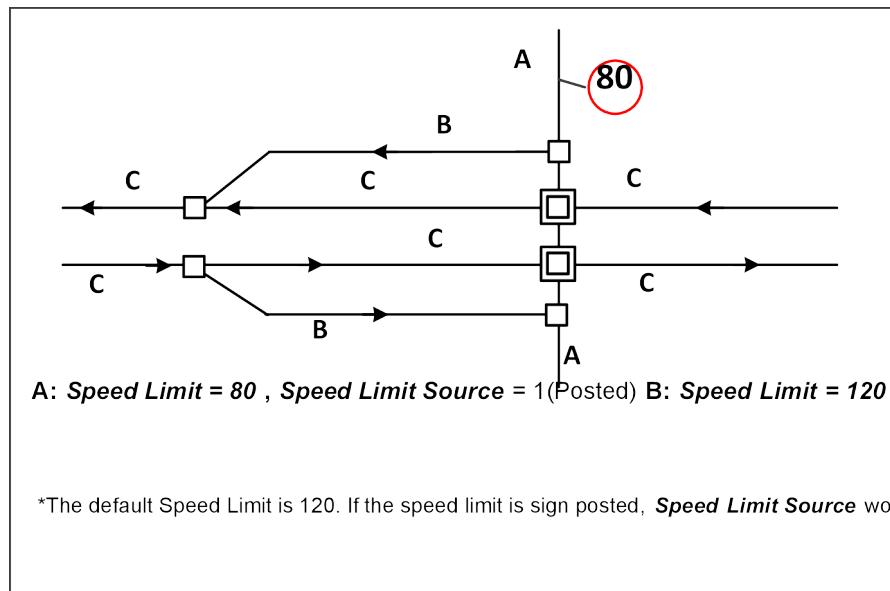
7.2 Streets (Streets)

## On (Standard) Ramps in Countries with no Legal Speed Limits on Ramps

- For exit and entrance ramps without posted speed limit signs, the same From/Towards Reference Speed Limit as the high speed road is applied with Speed Limit Source - Derived. See [Figure 157: on page 405](#).

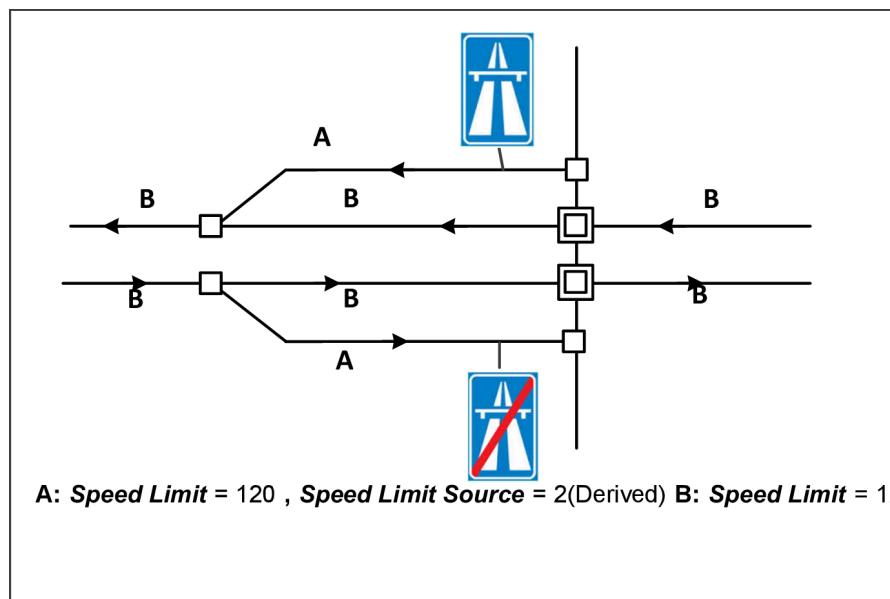
A Special Speed Situation condition is published on the ramp if it is also published on the high speed road.

**Figure 157:**



- Motorway or Motorised Vehicles Only sign is not used for determining the From/Towards Reference Speed Limit of the ramp link. See [Figure 158: on page 405](#).

**Figure 158:**



- If a built-up area sign is present on the ramp, the implied From/Towards Reference Speed Limit is published.

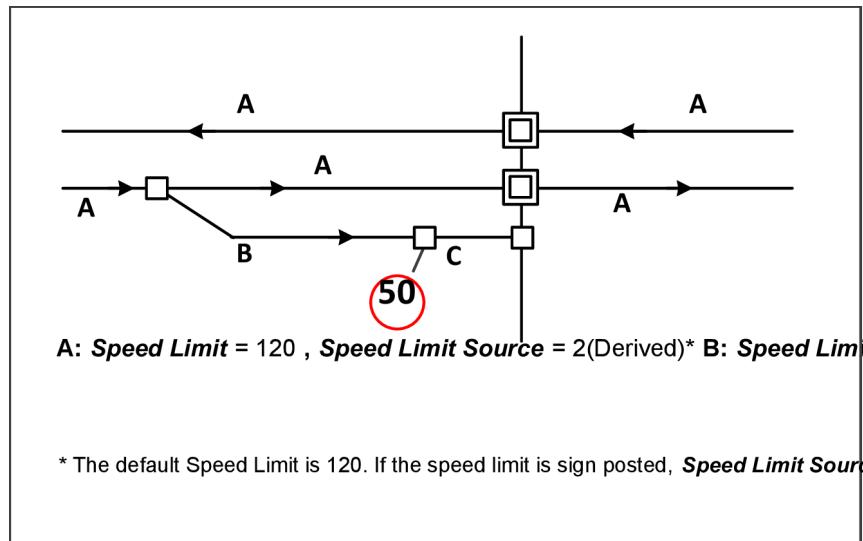
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

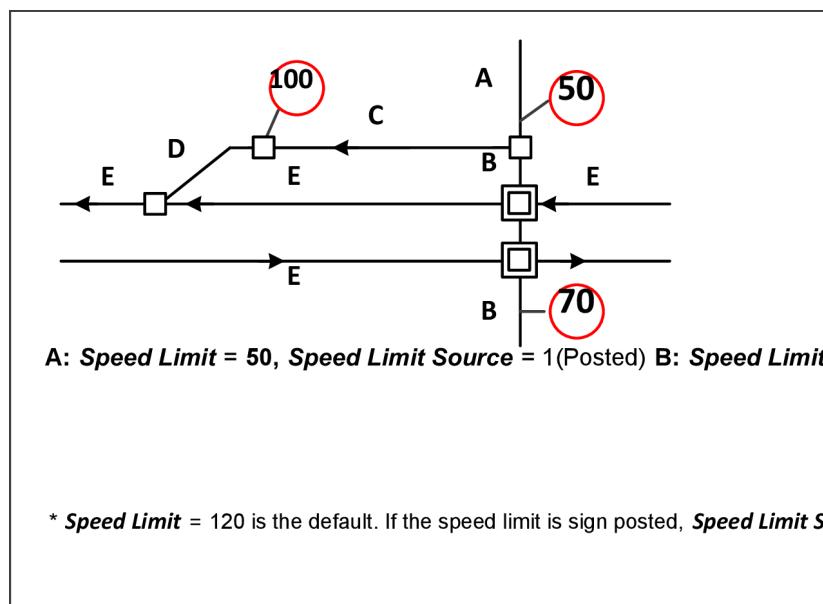
- For exit ramps with posted speed limit signs, the From/Towards Reference Speed Limit of the road the driver is leaving is published with Speed Limit Source = 2(Derived). See [Figure 159:](#) on page 406.

**Figure 159:**



- For entrance ramps with posted speed limit signs, the From/Towards Reference Speed Limit of the connected non-ramp links are published with Speed Limit Source = 2 Derived on all links prior to the posted speed limit sign. See [Figure 160:](#) on page 406.
  - The highest speed limit values on Link C is published if the connected non-ramp link, Road A and Road B in [Figure 160:](#) on page 406, has different From/Towards Reference Speed Limit values.
- If Road A and Road B in do not have From/Towards Reference Speed Limit values, Towards Speed Limit (100) is published with Speed Limit Source = 2(Derived) based on the posted speed limit sign on the ramp.

**Figure 160:**



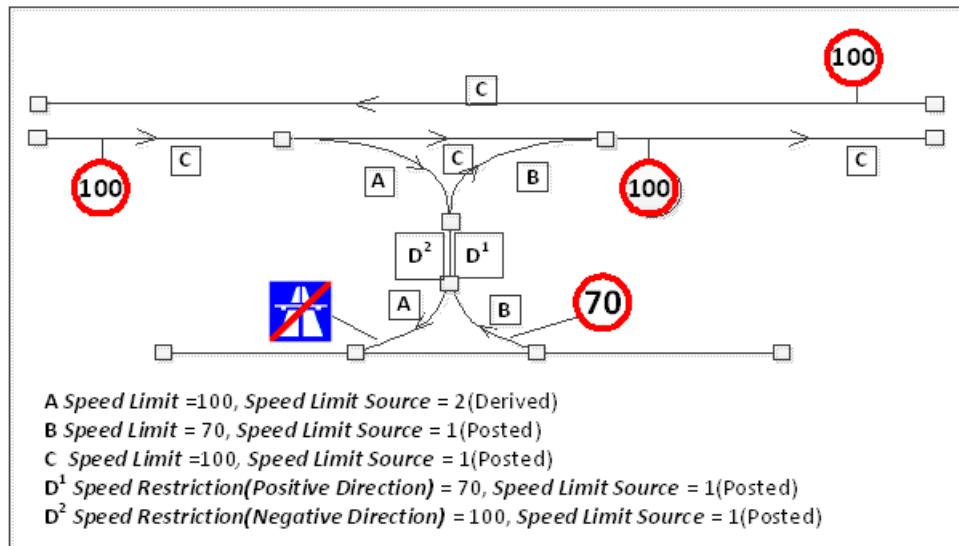
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

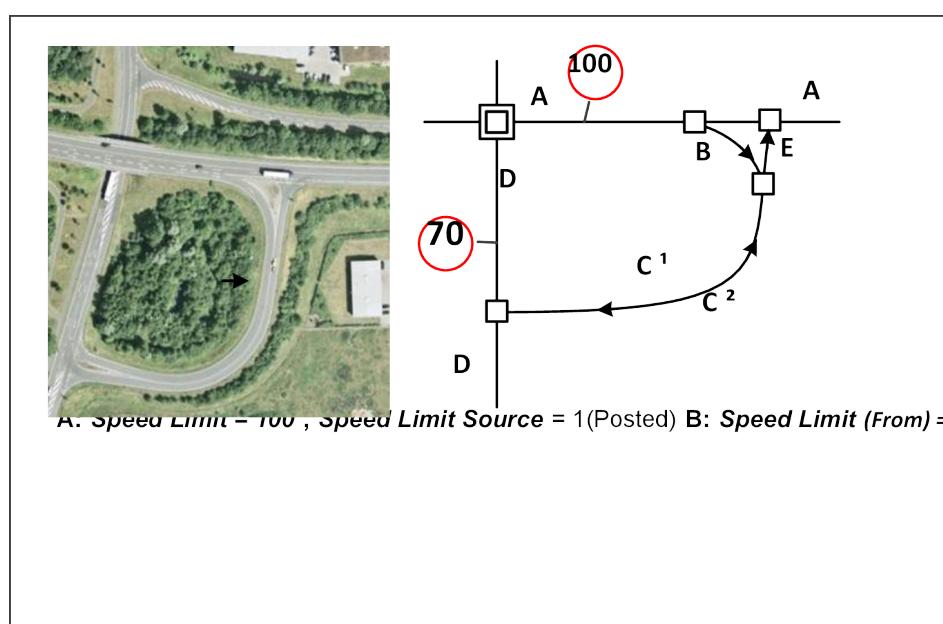
- If entrance and exit ramps share a link, the shared link with the appropriate direction dependent attribution is published. See [Figure 161:](#) on page 407.

**Figure 161:**



- For entrance ramps without a posted speed limit, the From/Towards Reference Speed Limit of the connected non-ramp links with Speed Limit Source = 2(Derived) is published, if one or more of the following is applicable;
  - There is no acceleration lane
  - The angle between the ramp link and the high speed road is around 90 degrees, see Link E to Link A in [Figure 162:](#) on page 407.
  - It is expected that a driver will need to slow down to 20/30 km/h to safely travel from the ramp to the high speed road.

**Figure 162:**



# Reference Guide

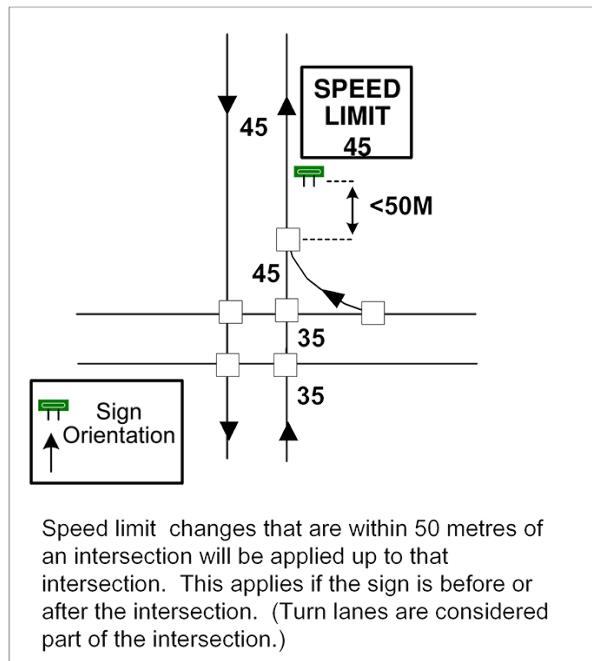
Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

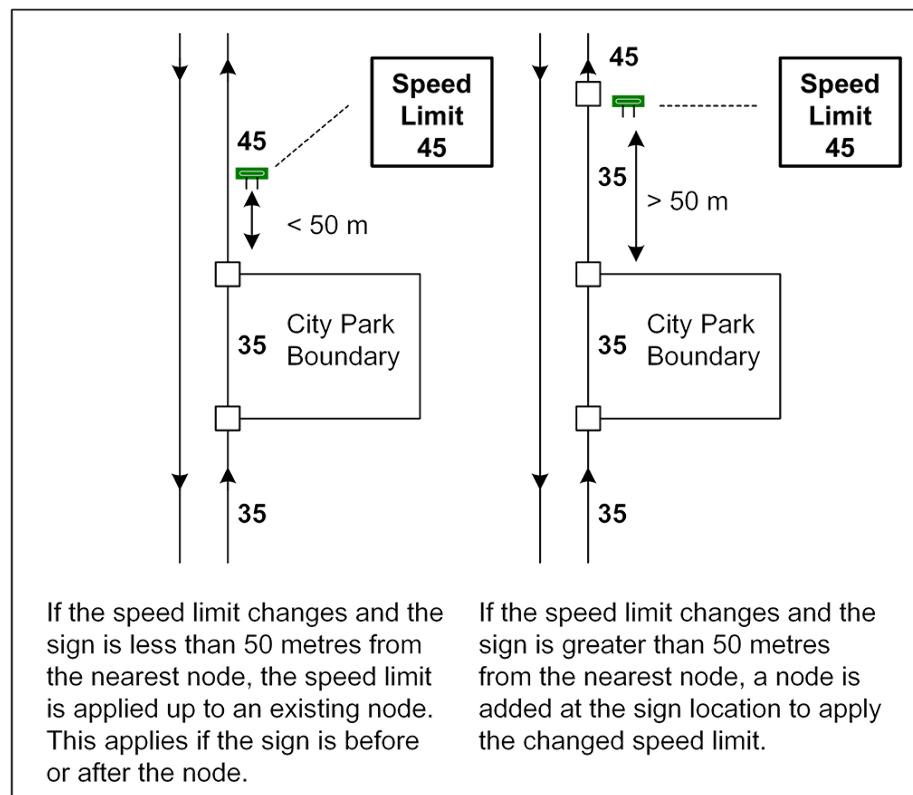
## On Ramps that are Highway-to-Highway Connectors

- From/Toward Reference Speed Limit on a Highway-to-Highway connector receives the speed limit of the link it is leaving.

**Figure 163:**



**Figure 164:**



# Reference Guide

Attributes - Road Features and Associated Navigation Information

here

7.2 Streets (Streets)

Figure 165:

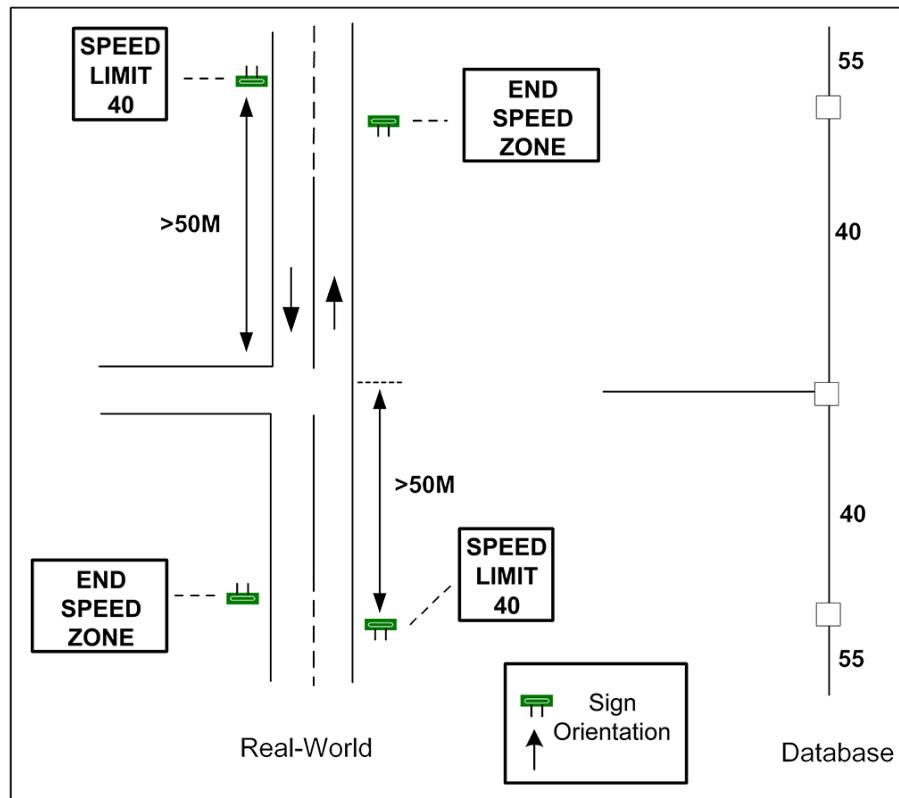
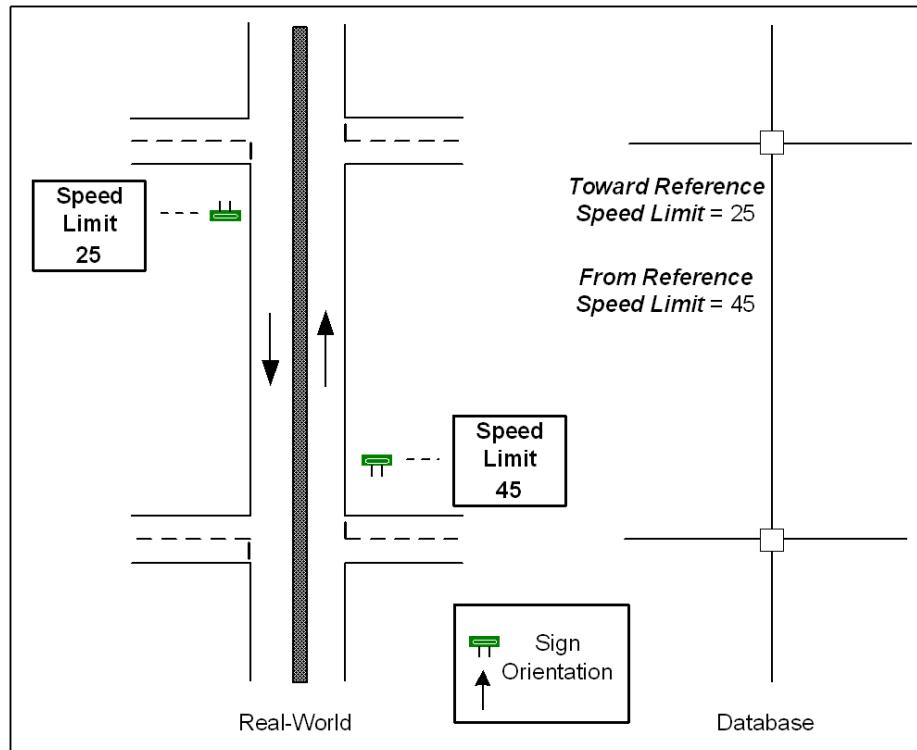


Figure 166:

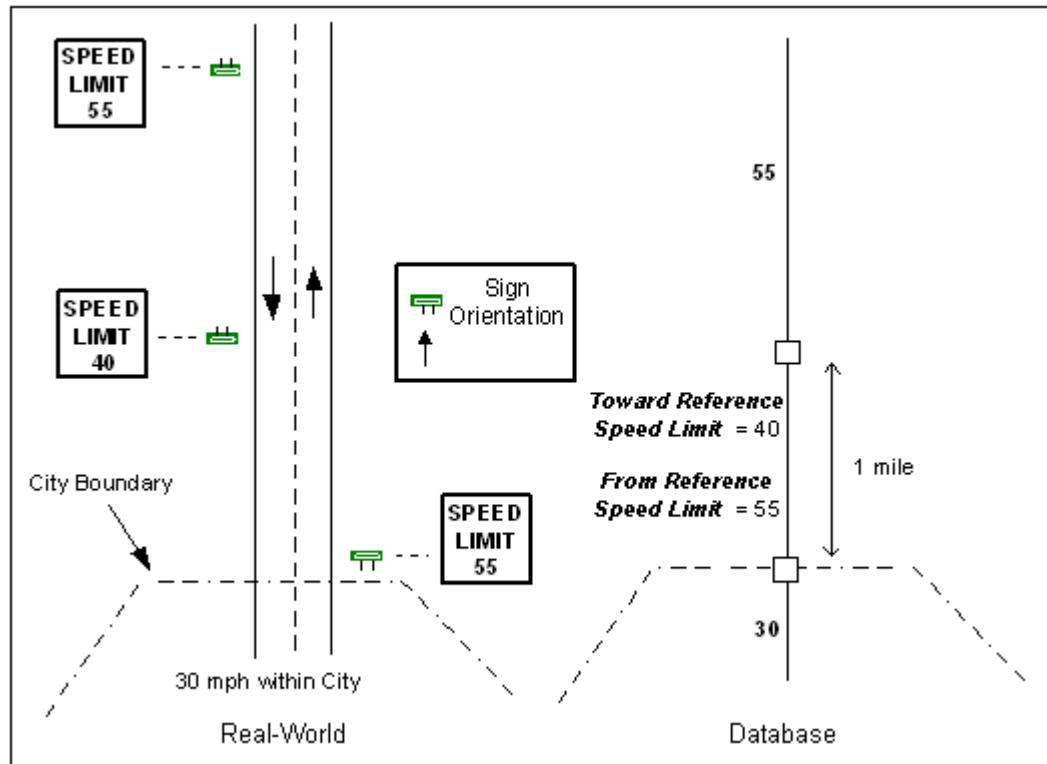


## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

**Figure 167:**



### 7.2.31 To Lanes

See [To Lanes & From Lanes](#) on page 410.

### 7.2.32 From Lanes

See [To Lanes & From Lanes](#) on page 410.

### 7.2.33 To Lanes & From Lanes

#### Definition

To Lanes and From Lanes, together, indicate the number of lanes applicable for each direction of travel on the link.

#### Value

1 - 16

**Note:**

A value of "0" indicates that To/From Lane information is unavailable.

#### Default Value

None

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

## Length

2

## Type

Numeric

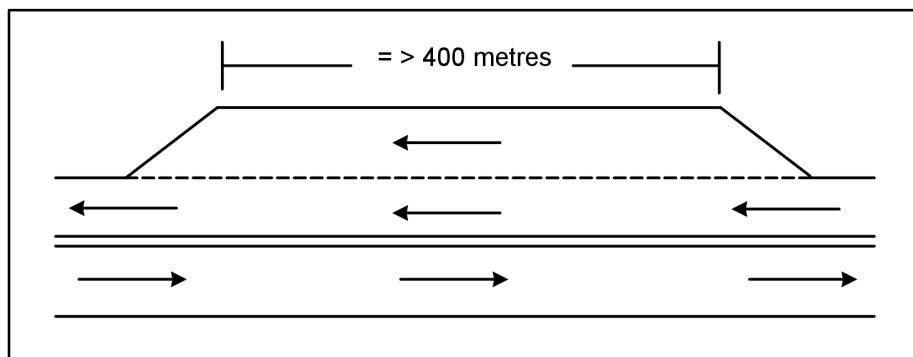
## Usage

To Lanes and From Lanes can be used for cartographic representation of road widths on printed maps, as well as traffic management and display applications. To Lanes and From Lanes may also be used for route guidance timing.

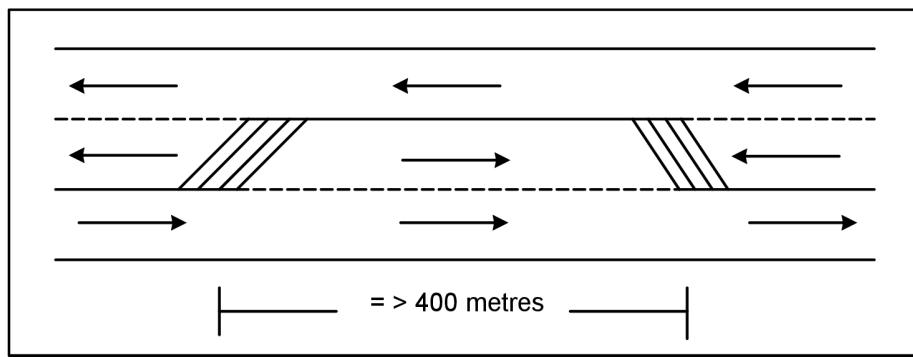
## Specification

- To Lanes and From Lanes specify the number of lanes towards the Reference Node and from the Reference Node.
- Positional accuracy is within +/- 50 metres.
- High Occupancy Vehicle lanes are counted as lanes.
- On rural roads, lanes exclusively used for overtaking (see [Figure 168: on page 411](#)), and temporary lanes such as “passing lanes” (see [Figure 169: on page 411](#)) are included when these are equal to or longer than 400 metres. These lanes typically have standard dashed lane markings and are considered part of the main driving path.

**Figure 168:**



**Figure 169:**



# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- In general, lanes that are not used as the main driving path are not counted. The following type of lanes are not counted as Lanes:
  - Shoulder Lanes (Emergency lanes)
  - Ramp Transition Lanes
  - Turn Lanes at intersection
  - Parking lanes at the side of the road
  - Bus/Taxi/Truck lanes
- From/To Lanes is not adjusted based on construction works.

## For Toll Structures

- To Lanes and From Lanes will be published before and after the Toll Structure when additional lanes form at the Toll Structure area. Nodes will be added to indicate the start and end of the area with additional lanes. When no lane markings occur at the Toll Structure area but the roadbed widens, nodes will be added at the start of the roadbed (where the roadbed is at its maximum width) and at the end of the roadbed (where the roadbed narrows again), see [Figure 170:](#) on page 413.
  - ① **Note:** To Lanes and From Lanes are always coded on ADAS compliant roads, regardless if the number of lanes changes at the Toll Structure.
- When the number of lanes varies at a Toll Structure area, the To Lanes and From Lanes reflect the total number of fixed lanes at the Toll Structure, excluding the reversible lanes.
- When the lanes are not marked at the Toll Structure area (i.e., open area at the Toll Structure), the To Lanes and From Lanes reflect the total number of access points at the Toll Structure, excluding the reversible access points.

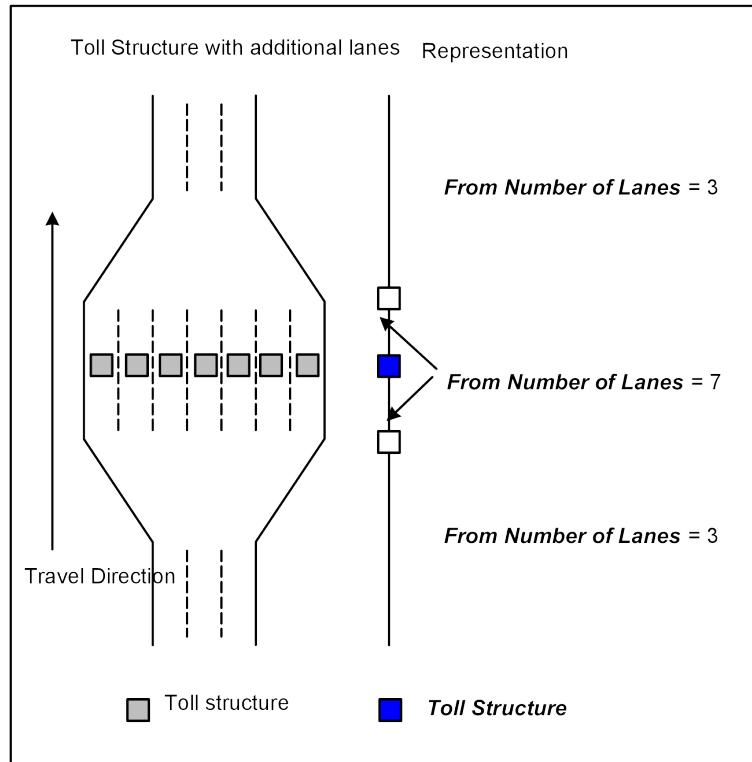
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- The maximum number of lanes published for a Toll Structure is 16 per driving direction. When the number of lanes at the Toll Structure exceeds 16, the combined total of To Lanes and From Lanes published is 16 due to the limitation.

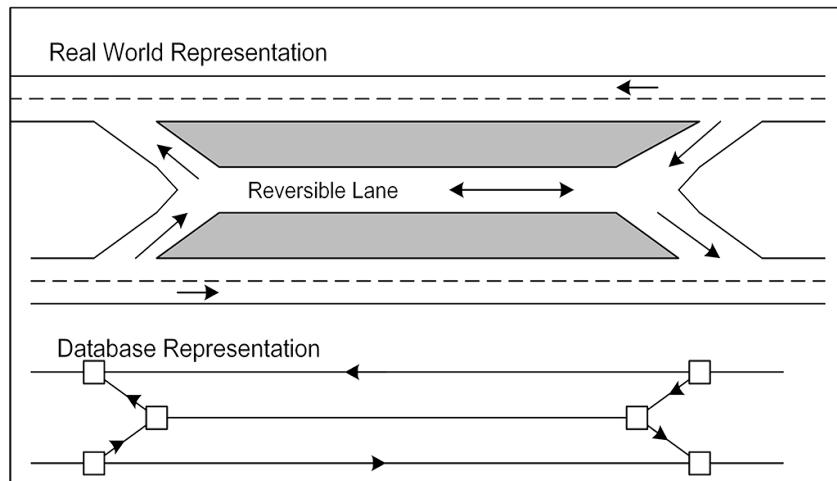
**Figure 170:**



### For Reversible Lanes

- If a reversible lane is separately digitised, as shown in [Figure 171](#): on page 413, To Lanes and From Lanes = the actual number of lanes. In the example below, To Lanes and From Lanes = 1.

**Figure 171:**



- If a reversible lane(s) is just an extra lane, not separately digitised, and accessible to autos, the following guidelines were used to apply To Lanes and From Lanes. For roads with an even number of total lanes,

# Reference Guide

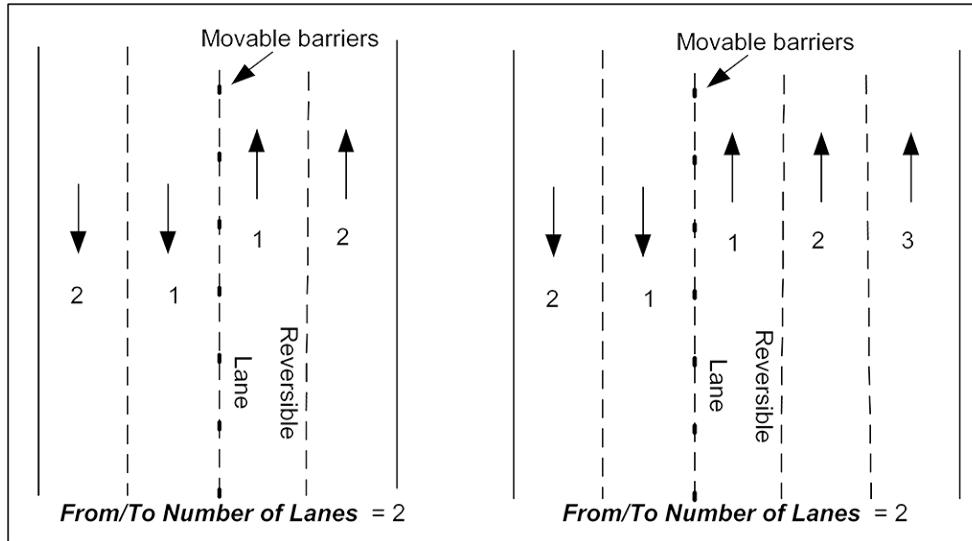
Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

here

To Lanes and From Lanes equals half of the total number of lanes. If the road has an odd number of lanes, To Lanes and From Lanes equals half of the total number of lanes minus 1. See [Figure 172](#): on page 414. If the lane is not accessible to automobiles, bus-only, etc., then the lane is not counted in the To Lanes and From Lanes.

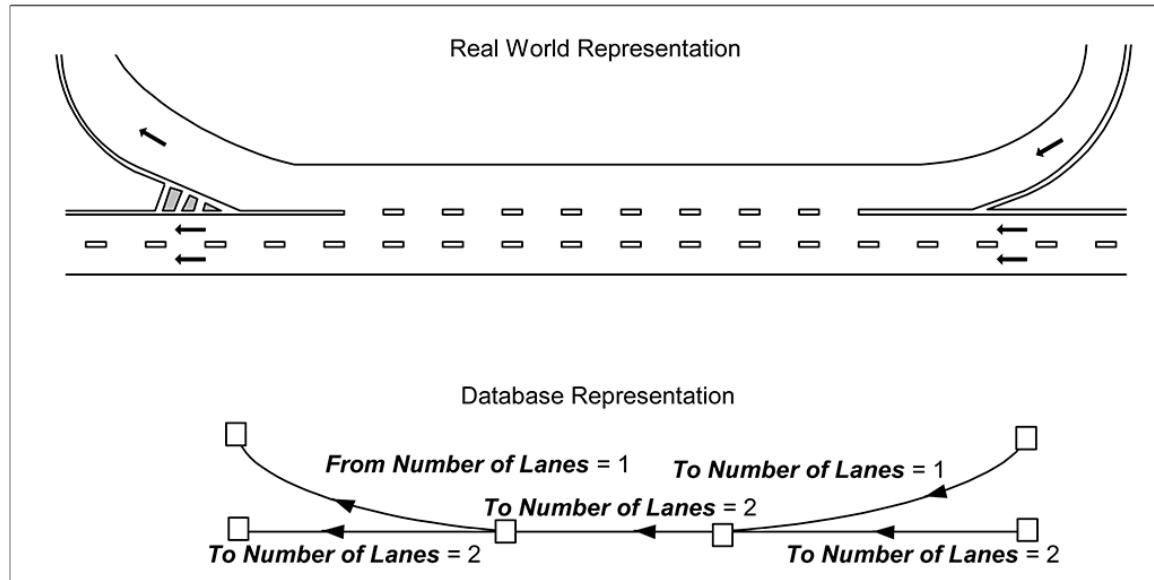
**Figure 172:**



- On the following pages are examples of lane configurations.

## Ramp Transition Lane

**Figure 173:**



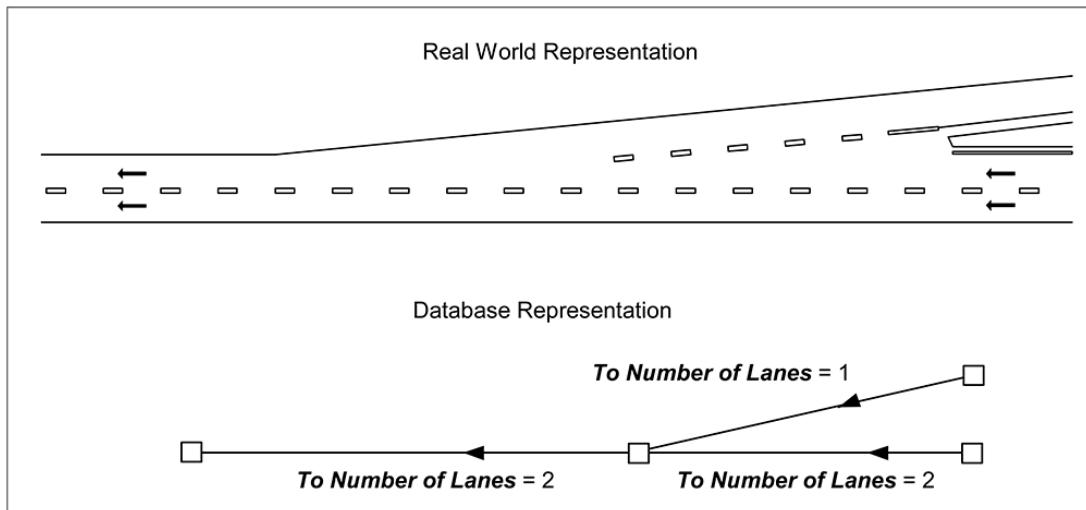
# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

## Ramp Merge

Figure 174:



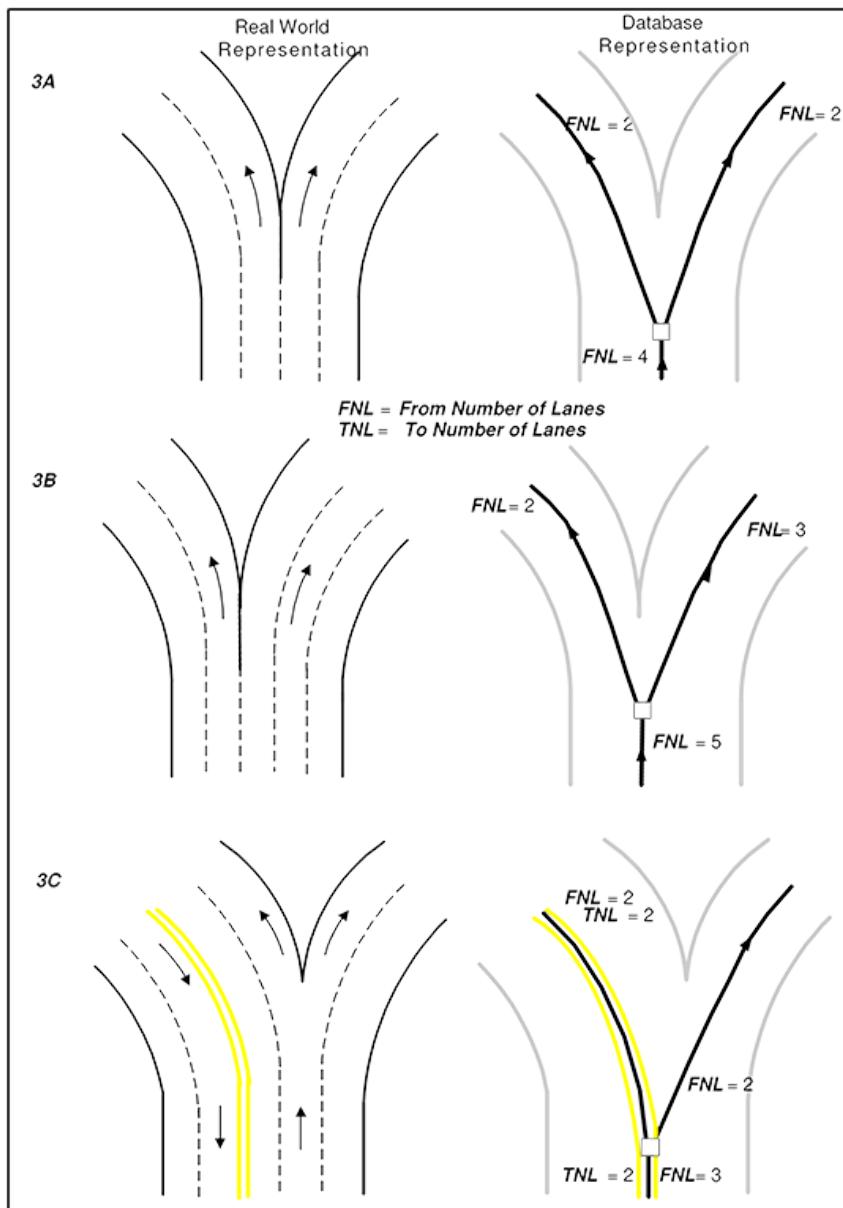
# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

## Bifurcations

Figure 175:



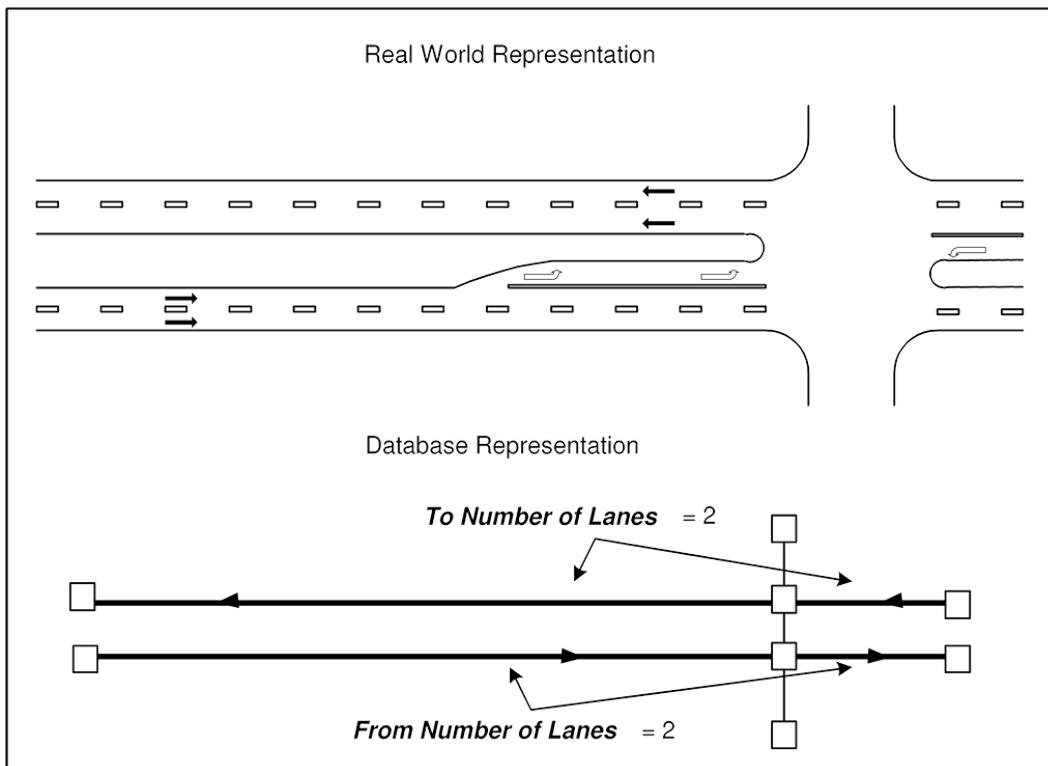
# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

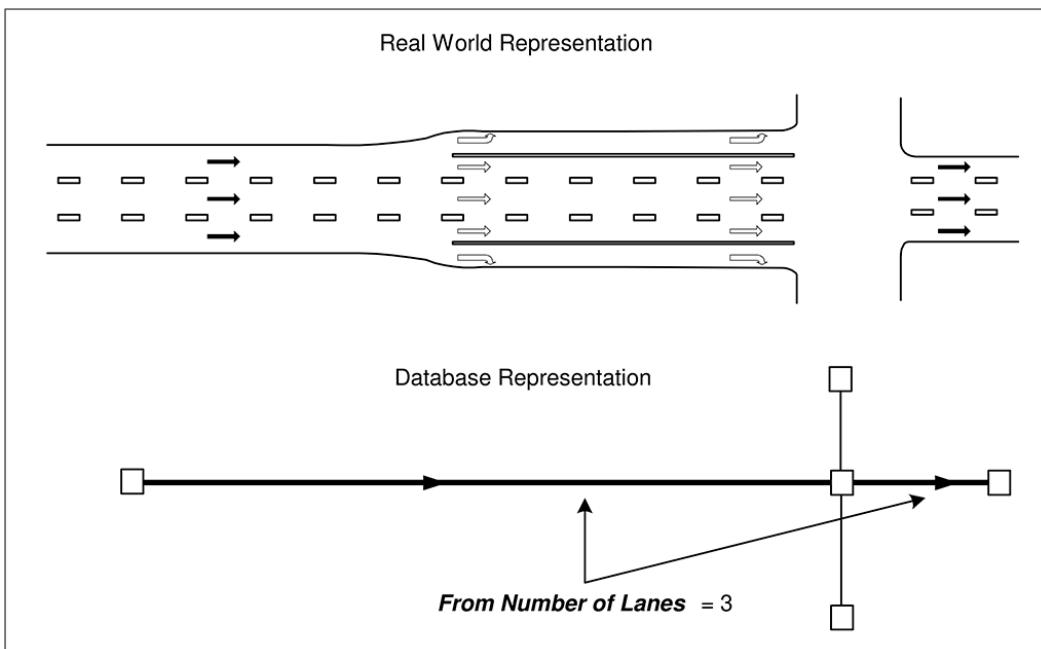
## Turn Lanes on Multiply Digitised Road

Figure 176:



## Turn Lanes on Singly Digitised Road

Figure 177:



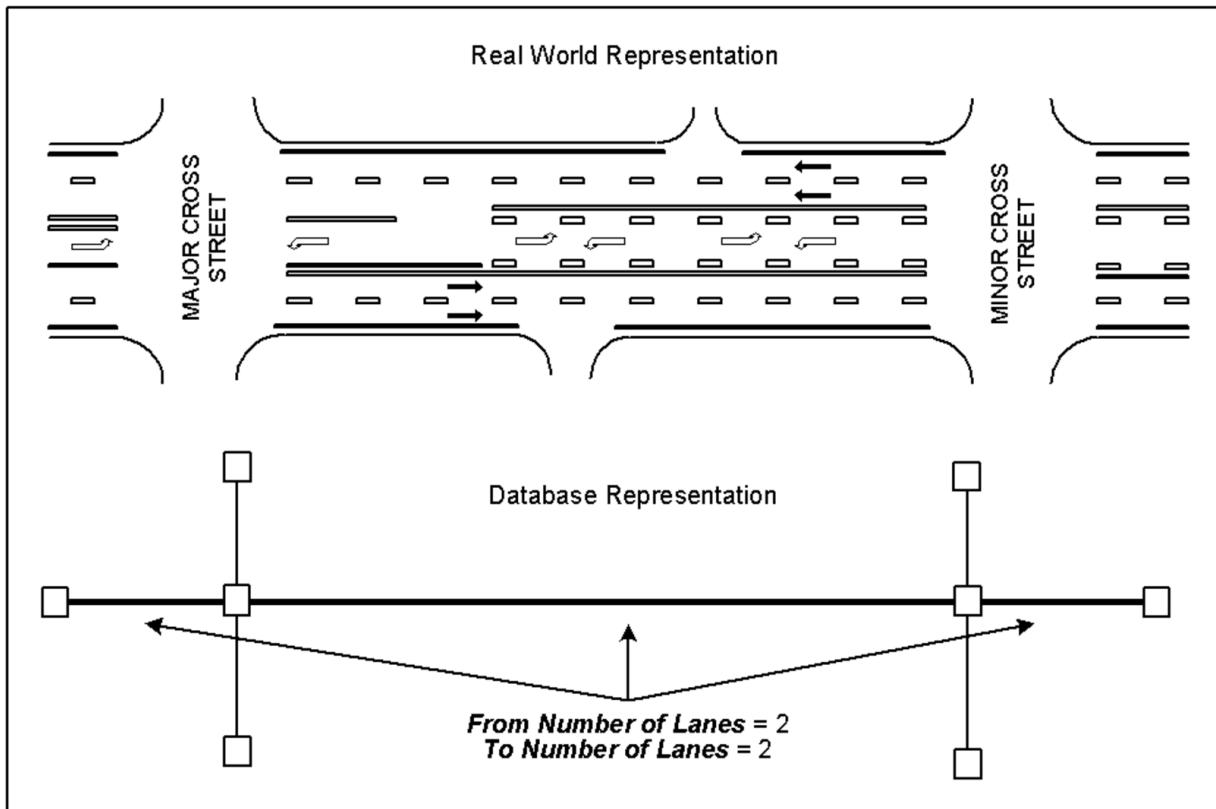
# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

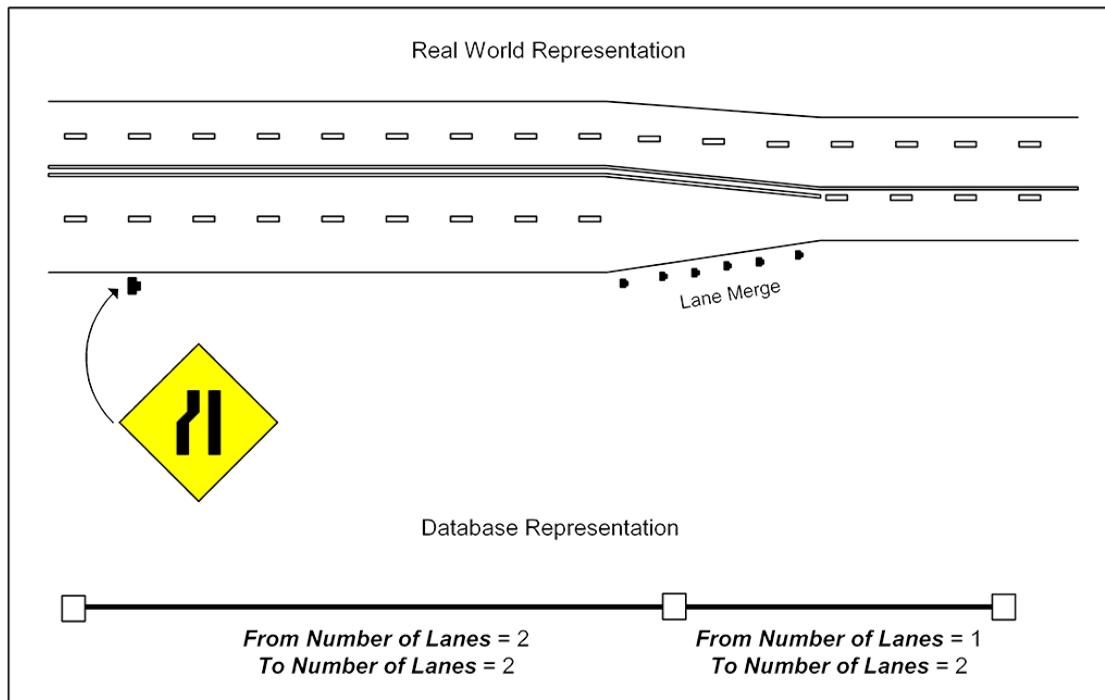
## Centre Turn Lanes

Figure 178:



## Lane Merge

Figure 179:



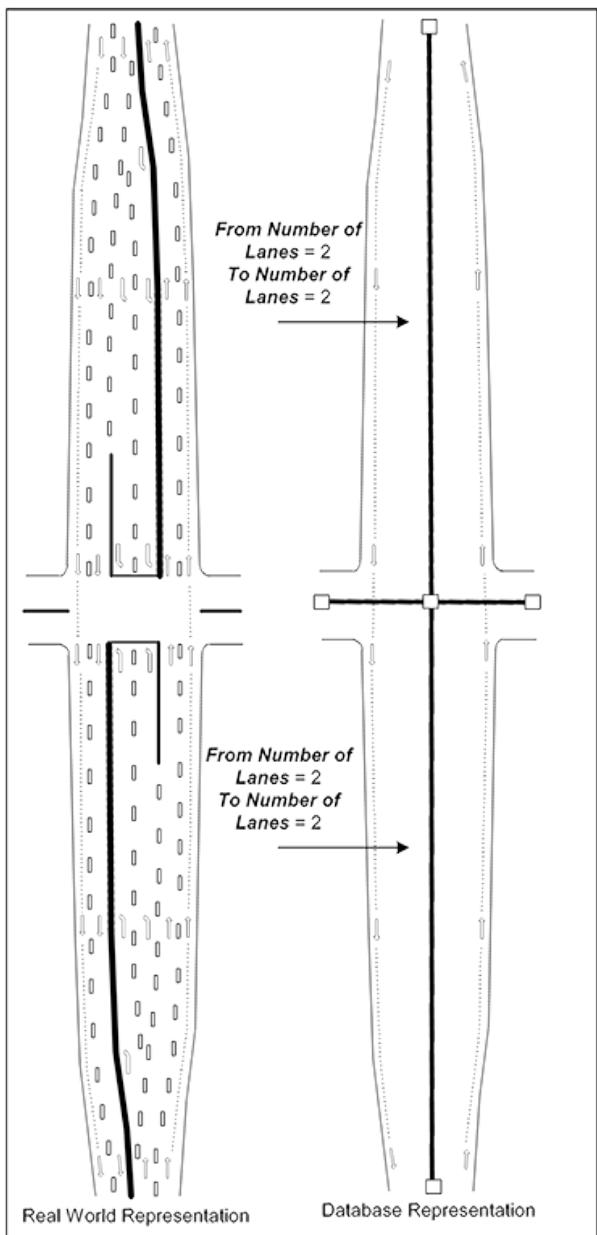
# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

## Left Turn Lanes

Figure 180:



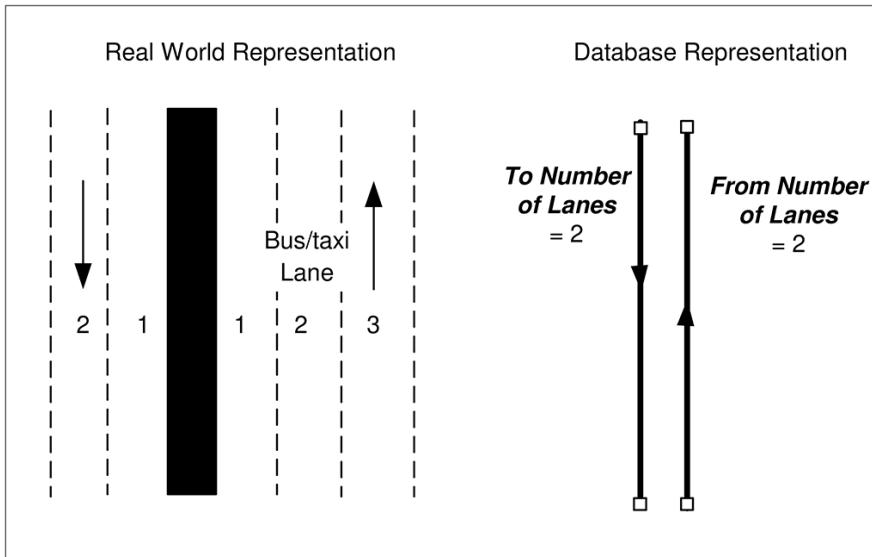
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### Centre bus/taxi lane (Lane 2 northbound)

**Figure 181:**



**Note:**

Bus/Taxi lanes are not counted for applying the Number of Lanes.

### 7.2.34 Enhanced Geometry

#### Definition

Enhanced Geometry indicates that the geometry associated with a Link meets the positional accuracy.

#### Value

Y - Enhanced Geometry

N - Not Enhanced Geometry

#### Length

1

#### Type

Boolean

#### Usage

Enhanced Geometry may be used to identify links with an enhanced level of geometrical accuracy.

#### Specification

- Enhanced Geometry is indicated for each link where the requirements for geometrical accuracy are met.
- Positional Accuracy is +/- 5 metres.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### 7.2.35 Lane Category

#### Definition

Lane Category classifies a road based on the number of lanes in each direction.

#### Value

(space) - Not Applicable

1 - One Lane

2 - Two or Three Lanes

3 - Four or More Lanes

#### Length

1

#### Type

Text

#### Usage

Lane Category can be used for cartographic representation of road widths on printed maps, as well as traffic management and display applications. Lane Category may also be used for route guidance timing.

#### Specification

- Lane Category is applied to every navigable link.
- Lane Category is applied describing the overall trend of the road. Short stretches where the Lane Category differs from the overall trend are disregarded if determined to be insignificant.
- Carpool lanes that are not separately digitised are included in the lane count.
- Lane Category = Not Applicable is applied to non-navigable links.
- If the number of lanes is different for each direction of travel on the link, the higher of the two numbers is applied.
- Turn lanes are not included.
- The number of lanes in the Lane Category implies the number of lanes per direction, not the total number of lanes of the link. Therefore, this must be looked at in conjunction with the Direction of Travel attribute.
- Navigable links without lanes (i.e., Walkways) receive Lane Category = 1.

### 7.2.36 Divider Location

The Divider Location is equivalent to the Divider.

### 7.2.37 Divider

#### Definition

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

This attribute identifies the presence of a physical traffic blocking divider.

## Value

(space) = Not Applicable

A = Both Nodes and Link

L = Link Only

N = No Divider

1 = Ref Node and Link

2 = Nref Node and Link

## Length

1

## Type

Text

## Usage

Divider coding enables a system to prevent left turns (in right-side driving countries), right turns (in left-side driving countries), and U-turns at divided intersections and in the middle of divided roads. See diagrams in the Specification section below.

## Specification

- Divider = L is applied when only the link is divided. Turns are allowed at either node of the divided link. U-turns are not allowed along the divided link.
- Divider = A is applied when the link and both nodes are divided. Additionally, left turns (in right-side driving countries), right turns (in left-side driving countries), and U-turns are not allowed to/from the divided link to/from any link at either node or to driveways along the link.
- Divider = 1 is applied when the link and reference node are divided. Left turns (in right-side driving countries, right turns (in left-side driving countries), and U-turns are not allowed from the divided link to/from any link at the reference node or to driveways along the link.
- Divider = 2 is applied when the link and non-reference node are divided. Left turns (in right-side driving countries), right turns (in left-side driving countries), and U-turns are not allowed, from the divided link to/from any link at the non-reference node or to driveways along the link.
- Divider = N is applied when the link is not divided and the link is navigable.
- Divider = Not Applicable is applied to non-navigable links.
- Physical or painted dividers which only restrict driving manoeuvres at intersections are coded using Restricted Driving Manoeuvres. See [#unique\\_440/unique\\_440\\_Connect\\_42\\_id-6-11-3-8-restricted-driving-manoeuvre](#).
- When a link indicates a divided node, the adjacent link in the road must also indicate that the intersection is divided.

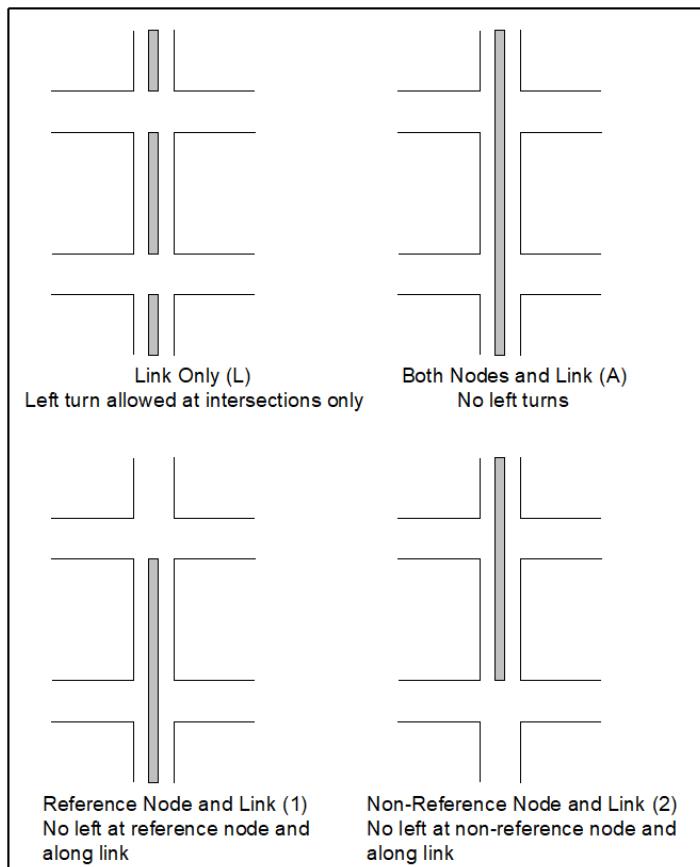
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- Divider is used in combination with Divider Legal to represent legal dividers. If Legal Divider = No, then the Divider value represents a physical divider.

**Figure 182:**



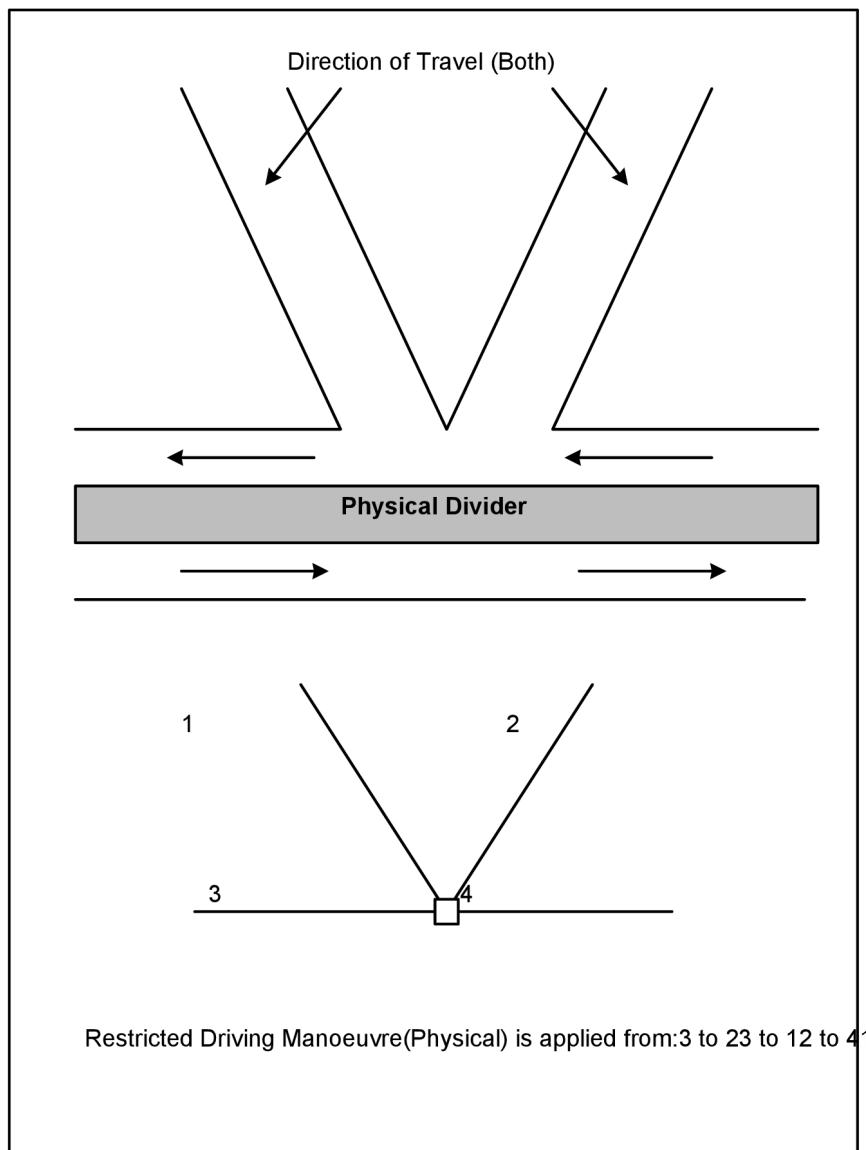
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- Divider coding alone does not prevent all illegal driving manoeuvres when two or more non-divided links connect at the same node to a divided road on the same side. “Link Only” codes are applied with physical turn restrictions to indicate prohibited manoeuvres, as shown in the following.

Figure 183:



- If a divider is larger than 3 metres wide, the opposing lanes of traffic are separately digitised, and each link receives Multiply Digitised = 1 instead of Divider coding.

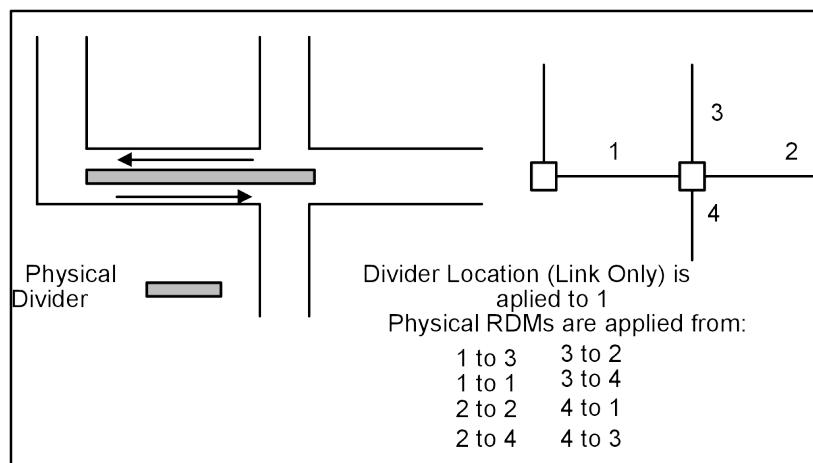
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- Painted dividers which block an intersection but cannot be coded with Divider Location from both sides are coded using Restricted Driving Manoeuvres. The Divider Legal attribute identifies if the divider is painted.
  - A physical divider which exists along a link and extends into or through the intersection but does not continue along the opposing link is coded with Restricted Driving Manoeuvre = Physical and Divider Location = L as shown in [Figure 184](#): on page 425.

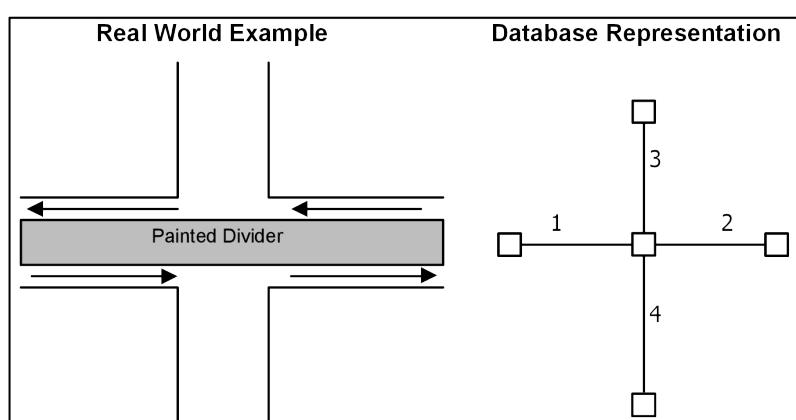
**Figure 184:**



- In the following illustration, a painted divider goes through the intersection. The following manoeuvres are prohibited in reality:
  - Link 1 to Link 3
  - Link 2 to Link 4
  - Link 3 to Link 2
  - Link 3 to Link 4
  - Link 4 to Link 1
  - Link 4 to Link 3
  - Link 1 to Link 1 (No U-turn)
  - Link 2 to Link 2 (No U-turn)

**Note:** These prohibited manoeuvres do not exist in the database.

**Figure 185:**



## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### 7.2.38 Direction of Travel

#### Definition

Direction of Travel identifies legal travel directions for a navigable link.

#### Value

(space) - Not Applicable

B - Both Directions

F - From Reference Node

T - To Reference Node

N - Closed in both directions

#### Length

1

#### Type

Text

#### Usage

Direction of Travel enables correct route calculation, route guidance, and map display. For example, display of one-way icon.

#### Specification

- Direction of Travel = F is applied when the direction of travel is one way from the reference node to the non-reference node.
- Direction of Travel = T is applied when the direction of travel is one way to the reference node from the non-reference node.
- Direction of Travel = B is applied when travel is allowed in both directions between the reference and the non-reference nodes.
- Direction of Travel = Not Applicable is applied to non-navigable links.
- Direction of Travel = N is applied to permanent parking lanes that are never used for driving.
- The Direction of Travel is determined based on each individual link. Links within the same one-way road may have a different Direction of Travel value because of the relative positions of the reference and non-reference node, as shown in the following illustration.

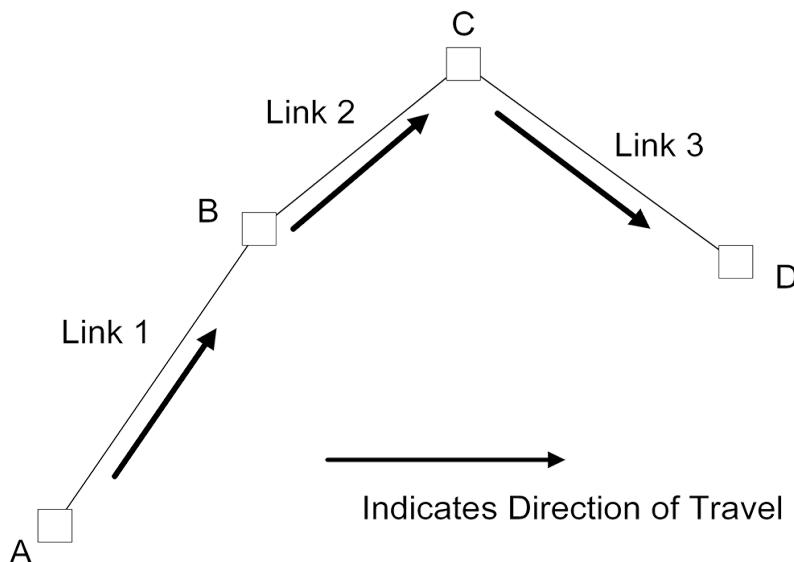
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- Ferries and walkways receive Direction of Travel = B.

**Figure 186:**



Link	Ref. Node	Non-Ref. Node	Dir of Travel
1	A	B	F
2	B	C	F
3	D	C	T

### 7.2.39 Left Area ID

#### Definition

Unique identifier for the lowest level admin on the left side of the link.

#### Value

nnnnnnnnnn

#### Length

10

#### Type

Numeric

#### Usage

Area information can be used for destination selection and map display. Area information can be used to uniquely define destinations.

See [Area ID](#) on page 934 for more information about Area IDs.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### 7.2.40 Right Area ID

#### Definition

Unique identifier for the lowest level admin on the right side of the link.

#### Value

nnnnnnnnnn

#### Length

10

#### Type

Numeric

#### Usage

Area information can be used for destination selection and map display. Area information can be used to uniquely define destinations.

See [Area ID](#) on page 934 for more information about Area IDs.

### 7.2.41 Left Postal Code

 **Note:**

Starting in Q3, 2013, Postal Code information is no longer published on non-navigable links. Postal Codes are only published on links with Feature Type 9999999.

#### Definition

The postal code for the left side of the link. A Postal Code represents the code generated by the government to facilitate mail delivery.

#### Value

Maximum of 11 alpha numeric characters

#### Length

11

#### Type

Text

#### Usage

While this feature can be used for destination selection this is usually not recommended, except in the case of refined address resolution. For example, when the same address exists twice within a city, a postal code selection may narrow down which address is preferred.

When displaying an address, the system may also want to display the postal code.

#### Specification

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- A postal code is assigned to each side of a link.
- Postal Codes may be assigned in Network, In-Process Data, and Connector Road /City-to-City areas. However, they are not required. They are always included in Prime Inclusion areas.
- If a coastline or country border defines the boundary and the adjacent country has not been built yet the known Postal Code is duplicated on both sides.
- Communities served by P.O. boxes will still have the appropriate postal code applied to the links. For example, Carmel by the Sea only has P.O. Boxes and no addresses, but carries the Postal Code for the P.O. Boxes.
- Postal Codes that represent a single building or business are not included. (These are sometimes called unique zips or point zips in the U.S., U.S.V.I., and P.R.).
- Starting in Q1, 2013, the postal codes on non-navigable links (cartography links) are no longer maintained or expanded.
- Postal Codes in Europe are not always coded to the most detailed Postal level. In some countries Postal Codes only refer to a few houses, so coding the full Postal Code would require splitting existing links to create very small links. Please see the Country Profiles database for postal code structures and examples per country.

### 7.2.42 Right Postal Code

#### Note:

Starting in Q3, 2013, Postal Code information is no longer published on non-navigable links. Postal Codes are only published on links with Feature Type 9999999.

#### Definition

The postal code for the right side of the link. A Postal Code represents the code generated by the government to facilitate mail delivery.

#### Value

Maximum of 11 alpha numeric characters

#### Length

11

#### Type

Text

#### Usage

While this feature can be used for destination selection this is usually not recommended, except in the case of refined address resolution. For example, when the same address exists twice within a city, a postal code selection may narrow down which address is preferred.

When displaying an address, the system may also want to display the postal code.

#### Specification

- See rules for Left Postal Code.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### 7.2.43 Number of Left Zones

#### Definition

The number of zones on the left side of the link. This value includes Left Zone ID 1.

#### Value

0 - 10

#### Length

2

#### Type

Numeric

#### Usage

The Number of Zones can be used to determine how many zones need to be accounted for in destination selection and in building the link's administrative hierarchy.

### 7.2.44 Number of Right Zones

#### Definition

The number of zones on the right side of the link. This value includes Right Zone ID 1.

#### Value

0 - 10

#### Length

2

#### Type

Numeric

#### Usage

The Number of Zones can be used to determine how many zones need to be accounted for in destination selection and in building the link's administrative hierarchy.

### 7.2.45 Number of Address Ranges

#### Definition

The number of address ranges for the feature. This value includes the Base address range.

#### Value

nn

#### Length

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

2

### Type

Numeric

### Usage

Indicates that addresses in the Link Address Record must also be taken into account.

### Specification

- The Number of Address Ranges includes the Base Address Range.
- Base Address Range is published in this record.
- If number of address ranges is more than 1, the remaining Address Ranges can be found in the Link Address Record.

## 7.2.46 Access Characteristics (Streets)

### Definition

Identifies the types of traffic allowed on a link.

### Value

Y - Is allowed

N - Not allowed

### Length

1 character per Access Characteristic

### Type

Boolean

### Overview

HERE defines Vehicle Types as follows:

#### Passenger Cars (Automobiles)

Four-wheel vehicles that are allowed according to national/local vehicle regulations to drive on motorways, ranging from sub-compact cars to full-size vans and light RVs (generally less than 3.5 tons). Ultra/very/light trucks are also considered automobiles or passenger cars.

Quad bikes and motorised tricycles may be allowed on city streets but are not allowed on motorways in many countries, thus they are not considered automobiles/passenger cars.

#### Through Traffic

Represents passenger vehicles (i.e., those defined as Passenger Car/Automobiles) that are allowed access on roads that restrict through traffic. These roads are generally posted with "No Through Traffic", "Residents Only", "Anlieger frei", etc.

The table below indicates resulting Automobile access for various Automobile and Through Traffic combinations.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

Automobile	Through Traffic	Resulting Automobile Access
Y	Y	Automobiles allowed
Y	N	Automobiles allowed only if arriving or leaving
N	Y	Not supported
N	N	No Automobile allowed

## Trucks

Represent large vehicles (generally heavier than 3.5 tons) that range from medium to heavy duty trucks. These include Service Trucks, Utility Trucks, and Delivery Trucks.

Examples of other vehicles that are considered Truck:

- Pickup-trucks with six wheels (dual rear wheels)
- Medium Class: weighing between 13,000 and 33,000 lbs. (5.9 and 15.0 tons) for the US; for the UK and the EU the weight is between 3.5 to 7.5 tons
- Heavy Class: the largest on the road, including heavy dump trucks, concrete pump trucks, etc.

Examples of vehicles that are not considered Trucks:

- Ultra-light trucks
- Very light trucks

## Deliveries (Delivery Trucks)

Represent delivery trucks (same as defined above) that are permitted to enter the city proper to unload goods at businesses, e.g., supermarkets, department stores, etc. They can be considered as heavy goods vehicles with “through traffic” access privileges.

The table below indicates resulting Truck access for various Trucks and Deliveries access combinations.

Trucks	Deliveries	Resulting Automobile Access
Y	Y	Trucks allowed
Y	N	Not Supported
N	Y	Trucks allowed only if delivering
N	N	No Trucks allowed

## Motorcycles

Represent motorised two-wheeled passenger vehicles. Generally, mopeds are considered motorcycles.

- ① **Note:** Some countries (e.g., Taiwan and France) have clear/posted distinction between motorcycle and scooter access.

## Emergency Vehicles

Represent any vehicle that is designated and authorized to respond to an emergency in a life-threatening situation. Emergency vehicles have special access rights.

## Buses

In urban settings, represent buses that are used for public transportation.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

In rural settings, represent all bus transportation (i.e., regional bus lines, coaches, tour buses, public transportation, etc.).

## Taxis

Represent four-wheel vehicles that are usually fitted with a taximeter, that may be hired, along with their driver, to carry passengers to any specified destination.

**Note:** Uber, Grab and similar services do not fall under Taxi.

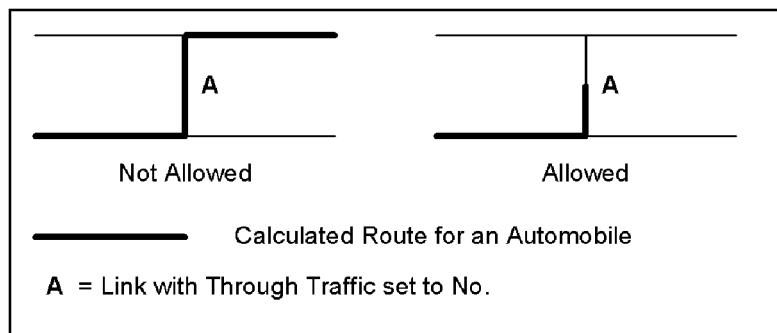
## Pedestrians

Represent persons traveling on foot, whether walking or running.

## Usage

- The Access Characteristics enable correct Route Calculation and Map Display. For instance, if the link is Emergency Vehicle only, no other vehicles would be routed on the particular link.
- Note:** Due to limited inclusion of Transport Access, routing on Functional Class = 5 should be avoided. Functional Class = 5 should only be used for routing if the current car position and/or final destination is on a Functional Class = 5 link.
- If a link has Through Traffic set to No then routing through that link with an Automobile is not permitted to reach a destination outside the no through traffic area. See the following illustration.

Figure 187:



- Beside Route Calculation, links which are marked with Through Traffic = N may also be identified on a map with a special colour or display pattern.

## Specification

- The Access Characteristics are based on what is legally allowed on a link.
- Links receive Through Traffic = N when:
  - The link is internal to a parking lot.
  - There is a posted or legal restriction stating, for example, "No Through Traffic", "Residents Only", "Anlieger Frei", etc.
  - The road is on a military facility. (Some roads on military facilities do receive Through Traffic = Y.)
- Through Traffic is usually set to N for links in marginal or illegal settlements.
- Through Traffic only applies to Automobiles. If Automobiles are not allowed at all on a link, Through Traffic = N.
- A link that is privately maintained does not automatically receive Through Traffic = N. In the real world, links exist that are privately maintained, but they can freely be used by all Automobiles.

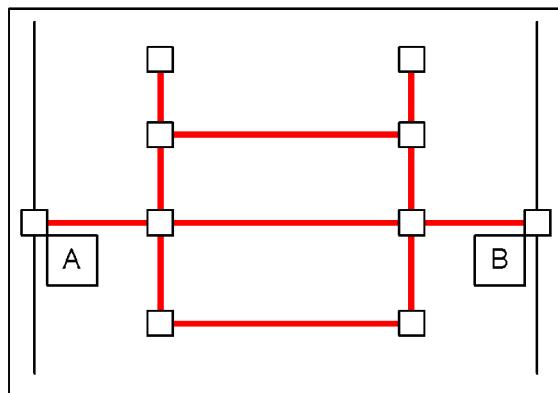
# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- Through Traffic is not set to N to reflect physical restrictions of the link, such as a dead end road.
- Referring to the following illustrations, if the Through Traffic is set to N for links A and B, then all the links within the enclosed area (shown in bold) will have Through Traffic set to N, because they are only reachable via links A or B.

**Figure 188:**



- For non-navigable links, all Access Characteristics are published as N.

## Ramps on Limited Access Roads

- If ramps on Limited Access Roads are restricted for a specific Vehicle Type, the corresponding Deceleration and Acceleration Lanes also restrict the same Vehicle Type.

## Transport Access Characteristics

- Links that are entirely closed to all trucks at all times are coded with Trucks = N and Deliveries = N.
- Links for which a Transport Condition exists are coded with Trucks = Y as Access Characteristics on a link.
- Roads with the EU sign Forbidden for Trucks are considered closed to all trucks and have Access Characteristics on link level coded with Trucks = N and Deliveries = N.
- Roads with the U.S. sign Forbidden for Trucks imply that no truck of any type can enter the road. Therefore, the Access Characteristics on the link level are coded with Truck = N and Deliveries = N.
- Only when a weight restriction is explicitly signposted, is the link coded Trucks = Y and Access Deliveries = Y.
- In EU, legally imposed access restrictions exist indicating Forbidden for Trucks with a supplemental sign indicating Except Deliveries, Except Residents, Except Residents and Deliveries, or Except Public Vehicles.

For these specific exceptions, the following are published:

- Except Deliveries: Link is coded Trucks = N and Deliveries = Y
- Except Residents: Link is coded Trucks = N and Deliveries = Y
- Except Residents and Deliveries: Link is coded Trucks = N and Deliveries = Y
- Except Public Vehicles: Link is coded Trucks = N and Deliveries = N

- ① **Note:** In case any of these exceptions is only applicable in one driving direction or additionally signposted with a weight restriction, these are published as a Transport Access Restriction with attributes indicating the Direction Closure and/or Weight.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

## N.A. - Specific Through Traffic Coding:

- Through Traffic = N is applied to links internal to the following facilities:
  - Casino Complex
  - Convention Centre Complex
  - Parking Lot (or links coded as Parking Lot Road) See [Figure 189](#): on page 436
  - Railyard
  - Seaport/Harbour
  - Weigh Station
  - Winery
- Through Traffic = N is applied to links internal to the following facilities (if not a thoroughfare):
  - Amusement Parks
  - Cemetery polygons
  - Golf Course without homes
  - Golf Course with homes and a gate
  - Hospital
  - Park(City)
  - University
  - Shopping Centre
  - Sports Complex

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- Through Traffic = Y is applied to links that are associated with and/or internal to the following Facility Types:
  - Airport
  - Golf Course with homes and without a gate
  - Historical Monument
  - Native American Reservation
  - Park(National)
  - Park(State)
  - Tourist Attraction

**Figure 189:**



- Through Traffic = N is applied to links internal to the complex of a POI. See table below.

Facility Type	Through Traffic	Private	POI Access
Parks (National)	Y (except posted otherwise)	No, except if posted	No
Parks (State)	Y (except posted otherwise)	No, except if posted	No
Parks (City)	N (except for major thoroughfares)	No	No
University	N (except for major thoroughfares)	Yes, except if thoroughfare	No <sup>127</sup>
Shopping Centre	N (interior to ring roads) Y (ring road and major thoroughfares)	Yes, except if thoroughfare	No1

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

here

Facility Type	Through Traffic	Private	POI Access
Sports Complex	N (except for major thoroughfares)	Yes, except if thoroughfare	No <sup>1</sup>
Golf Course w/o homes	N (except for major thoroughfares)	No, except if posted	Yes, if driveway to clubhouse is unnamed <sup>1</sup>
Golf Course w/ homes and gate	N (except for major thoroughfares)	Yes	Yes, if driveway to clubhouse is unnamed <sup>1</sup>
Golf Course w/ homes but w/o gate	Y (except posted otherwise)	No, except if posted	Yes, if driveway to clubhouse is unnamed <sup>1</sup>
Hospitals	N (except for major thoroughfares)	No, except if posted	Yes, if driveway to hospital/ER is unnamed <sup>1</sup>
Amusement Park	N (except for major thoroughfares that do not require payment)	Yes, except if thoroughfare	No <sup>1</sup>
Casinos	N	No, except Native American Reservation casinos	No <sup>1</sup>
Wineries	N	Yes	Yes, if POI is located on winery entrance link.
Historical Monument	Y (except posted otherwise)	No, except if posted	No
Convention/Exhibition Centre	N	Yes, except if thoroughfare	No
Tourist Attraction	Y (except posted otherwise)	Yes, unless managed by a public (city) department	No

- For non-navigable links, all Access Characteristics are published as N.

### 7.2.47 Access Automobiles

For Access Automobiles see: [Access Characteristics \(Streets\)](#) on page 431.

### 7.2.48 Access Buses

For Access Buses see: [Access Characteristics \(Streets\)](#) on page 431.

### 7.2.49 Access Taxis

For Access Taxis see: [Access Characteristics \(Streets\)](#) on page 431.

### 7.2.50 Access Carpools

For Access Carpools see: [Access Characteristics \(Streets\)](#) on page 431.

<sup>127</sup> This is a coding change from what may exist today.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### 7.2.51 Access Pedestrians

For Access Pedestrians see: [Access Characteristics \(Streets\)](#) on page 431.

### 7.2.52 Access Trucks

For Access Trucks see: [Access Characteristics \(Streets\)](#) on page 431.

### 7.2.53 Access Through Traffic

For Access Through Traffic see: [Access Characteristics \(Streets\)](#) on page 431.

### 7.2.54 Access Deliveries

For Access Deliveries see: [Access Characteristics \(Streets\)](#) on page 431.

### 7.2.55 Access Emergency Vehicles

For Access Emergency see: [Access Characteristics \(Streets\)](#) on page 431.

### 7.2.56 Access Motorcycles

For Access Motorcycles also see: [Access Characteristics \(Streets\)](#) on page 431.

#### **Definition**

Identifies a two wheel motorised vehicle.

#### **Related Layers**

Metadata Administrative Area(MtdArea)

Condition/Driving Manoeuvres Date/Time Modifiers

#### **Related Attributes**

Motorcycle Minimum Requirement

#### **Specification**

- Mopeds are considered Motorcycles.
- Motorised bicycles are not considered motorcycles.
- Motorcycle Minimum Requirement is specified by the appropriate administrative area to identify the minimum size requirement in cc (cubic centimetre) units for motorcycles to be allowed on the motorways in the particular area.

### 7.2.57 Paved

#### **Definition**

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

Describes roads that are made of materials which create a solid surface.

### **Value**

Y - Paved

N - Not Paved

### **Length**

1

### **Type**

Boolean

### **Usage**

Paved is primarily used for cartographic representation (map display). This attribute could also affect routing algorithms by assigning higher penalties to unpaved roads.

### **Specification**

- Roads that are made of concrete, asphalt, brick or cobblestone are examples of Paved = Y. Roads that are not solid (e.g., gravel, dirt or grass) are examples of Paved = N road.
- For non-navigable links, Paved is published as N.

## 7.2.58 Private

### **Definition**

Identifies roads not maintained by an organization responsible for maintenance of public roads.

### **Value**

Y - Private Road

N - Public Road

### **Length**

1

### **Type**

Boolean

### **Usage**

Private allows for unique cartographic representation of roads that restrict public use. This attribute could also affect routing algorithms by assigning higher penalties to unpaved roads.

### **Specification**

- Private = Y is applied to roads that are not maintained by a public organization. This includes links that are signed posted as Private and roads that are for military use only.
- For non-navigable links, Private is published as N.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

## North America

- Private = N is applied to all links associated with and/or internal to the following Facility Types:
  - Airports
  - Cemetery, unless owned by a church
  - Golf Course (with or without homes but with no gate), unless posted
  - Historical Monument, unless posted
  - Hospital, unless posted
  - Industrial Complex, unless posted
  - Native American Reservation, unless posted
  - Park (National or State), unless posted
  - Park (City)
  - Parking Lot/Garage, unless posted
  - Pedestrian Zone
  - Rest Area
  - Undefined Traffic Area
  - Unsafe Area
  - Weigh Station
  - Woodland, unless posted
- Private = Y is applied to all links associated with and/or internal to the following Facility Types:
  - Golf Course (with homes and gate)
  - Tourist Attraction unless managed by a public (i.e., city) department

## Africa

- Private = Y is applied to Park/Recreation Area POIs that are private game reserves.
  - ① **Note:** Lodges associated with private game reserves are publicly accessible. Therefore, the Private attribution is not published for them.

## 7.2.59 Frontage Road

### Definition

Frontage Roads (aka Service Roads) are local roads that run parallel to and usually contain the name(s) and addresses of a road with a higher traffic flow.

### Value

Y - Frontage Road

N - Not a Frontage Road

### Length

1

### Type

Boolean

# Reference Guide

Attributes - Road Features and Associated Navigation Information

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here

## Usage

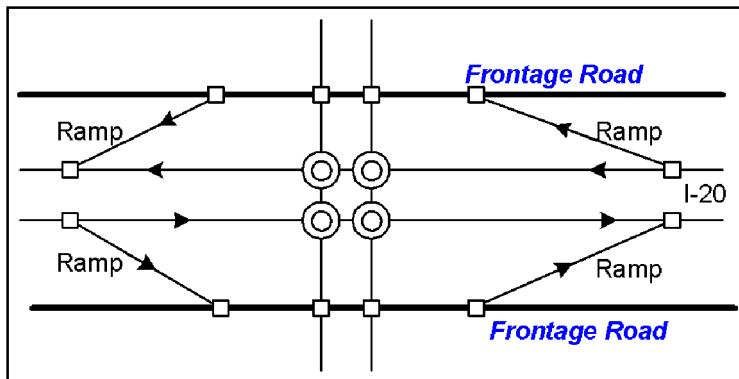
When it is necessary to be guided along the Frontage, the flag enables navigation systems to provide an appropriate message, for example, "take the Frontage Road".

This attribute enables better route guidance, if this attribute is not taken into consideration, a system might say "you are approaching an intersection of many Main Streets. Take the one in the middle". The Frontage flag indicates that although the name of the road is the same, the functionality is different. In this way, the strange explications can be avoided.

## Specification

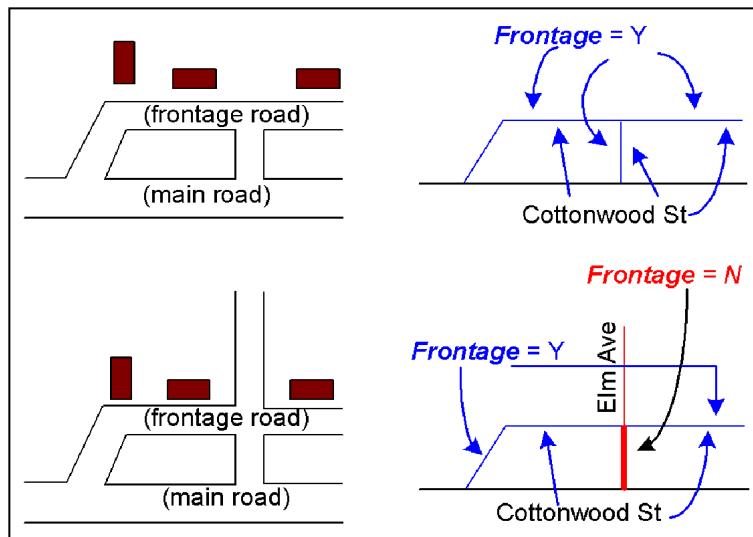
- Frontage = Y is applied to all links that meet the following criteria:
  - The road runs parallel to and contains the name and addresses of the main road.
  - The road allows direct access to residences, businesses, and side streets.
  - See the following illustrations.

**Figure 190:**



- Links that only lead to the frontage road receive Frontage = Y, while other intersecting cross streets receive Frontage = N, as shown in **Figure 191:** on page 441 below:

**Figure 191:**



- For non-navigable links, Frontage is published as N.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### 7.2.60 Bridge

#### Definition

Bridge is a structure that allows a road, railroad, or walkway to pass over another road, railroad, water feature, or valley.

#### Value

Y - Bridge

N - Not a Bridge

#### Length

1

#### Type

Boolean

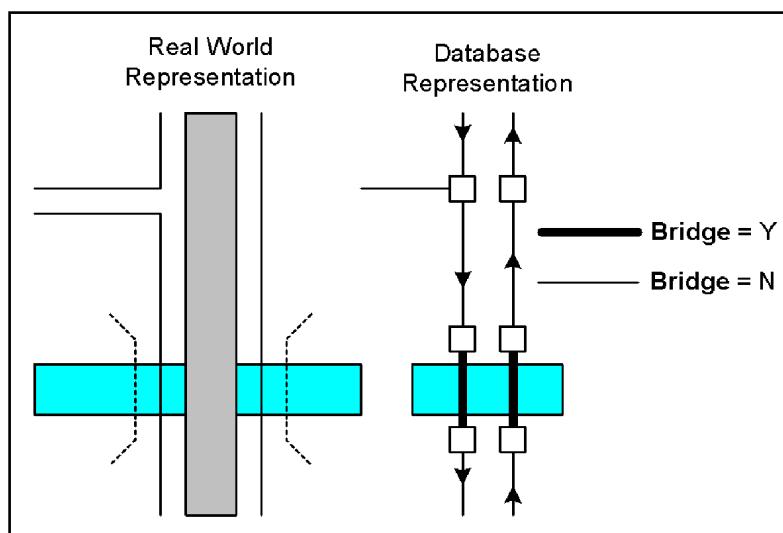
#### Usage

This attribute can be used for display or route guidance.

#### Specification

- Bridge = Y is applied when the bridge is longer than 200 metres/656 feet for Standard Inclusion. Smaller bridges may be included where significant. Bridges between 5 and 200 metres are included as Expanded Inclusion features.
- Bridge coding is applied to roads and railroads.
- Underpasses receive Bridge = N.
- Overpasses receive Bridge = Y.
- When a Bridge is on a road that is multiply digitised, the length of the attribute will match on both sides of the road, as shown in the following illustrations.

**Figure 192:**



## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- For non-navigable links, Bridge is published as N.

### 7.2.61 Tunnel

#### Definition

Tunnel is a covered passageway through or under an obstruction.

#### Value

Y - Tunnel

N - Not a Tunnel

#### Length

1

#### Type

Boolean

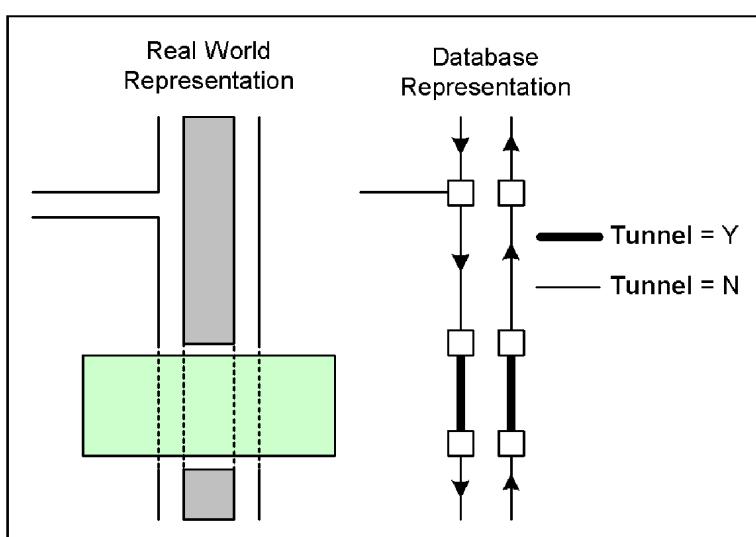
#### Usage

This attribute can be used for display or route guidance.

#### Specification

- Tunnel = Y is applied when the tunnel is longer than 200 metres/656 feet for Standard Inclusion. Smaller tunnels may be included where significant.. Tunnels between 5 and 200 metres are included as Expanded Inclusion features.
- Tunnel coding is applied to roads and railroads
- When a Tunnel is on a road that is multiply digitised, the length of the attribute will match on both sides of the road, as shown in the following illustrations.

**Figure 193:**



- For non-navigable links, Tunnel is published as N.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

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### 7.2.62 Ramp

#### Definition

Ramp identifies a road with the sole purpose of allowing vehicles to enter/exit two or more roads that do not connect at grade (physically intersect), in a controlled manner.

#### Value

Y - Ramp

N - Not a Ramp

#### Length

1

#### Type

Boolean

#### Usage

This attribute allows explication of manoeuvres involving ramps (e.g., "Take the ramp"). This attribute can also be used for display at different zoom levels or different colors and for route guidance when determining if sign text should be used.

#### Specification

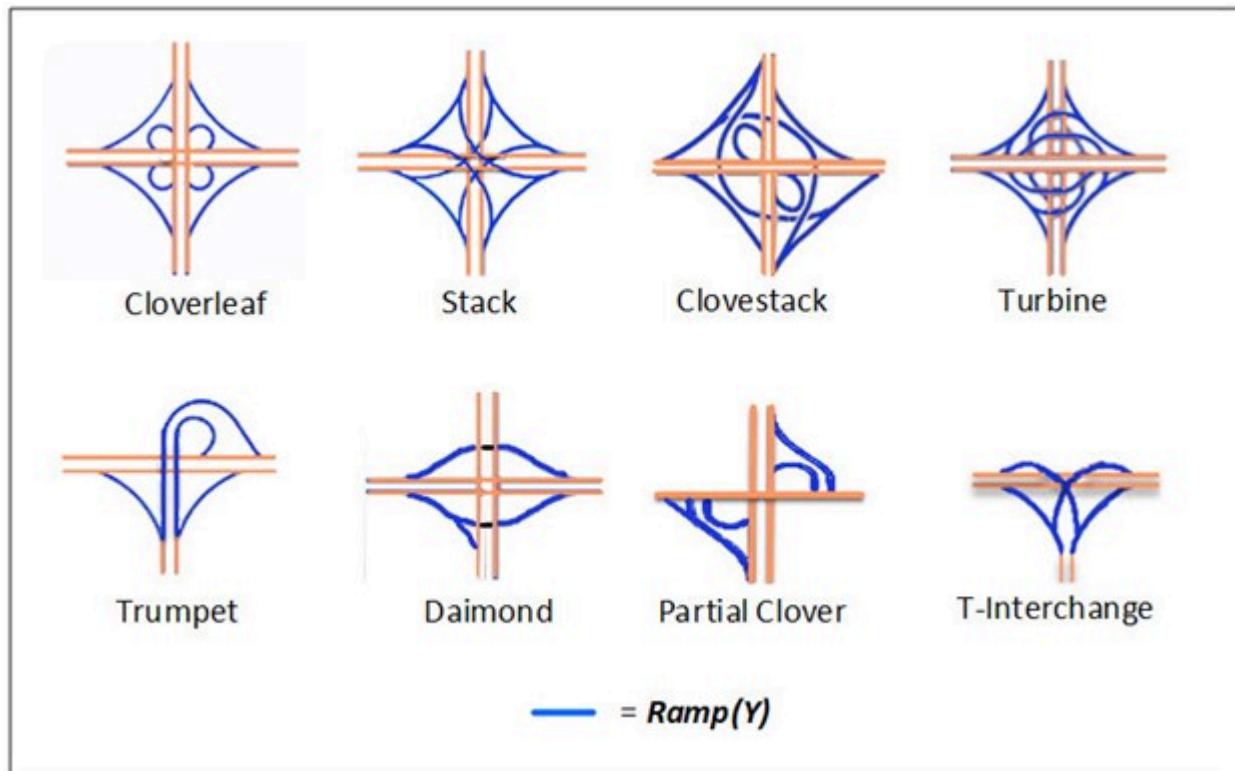
## Reference Guide

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- Ramp is flagged on all roads that meet the definition of a ramp. The figure below shows common ramp examples for interchange/junctions.

Figure 194:



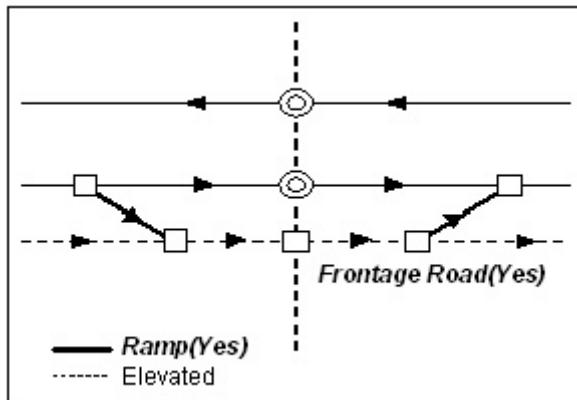
## Reference Guide

Attributes - Road Features and Associated Navigation Information

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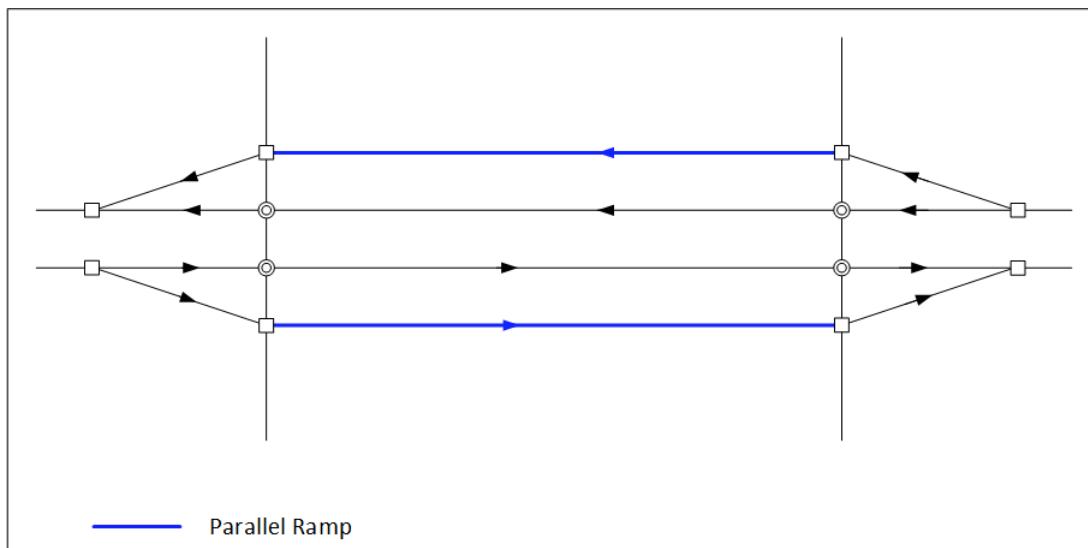
- Ramp is also flagged on the following situations:
  - The entrance and exit roads (slip roads) that connect parallel roads (not at grade), to Controlled Access or Limited Access roads as shown below.

**Figure 195:**



- Parallel ramps as shown in the example below:

**Figure 196:**



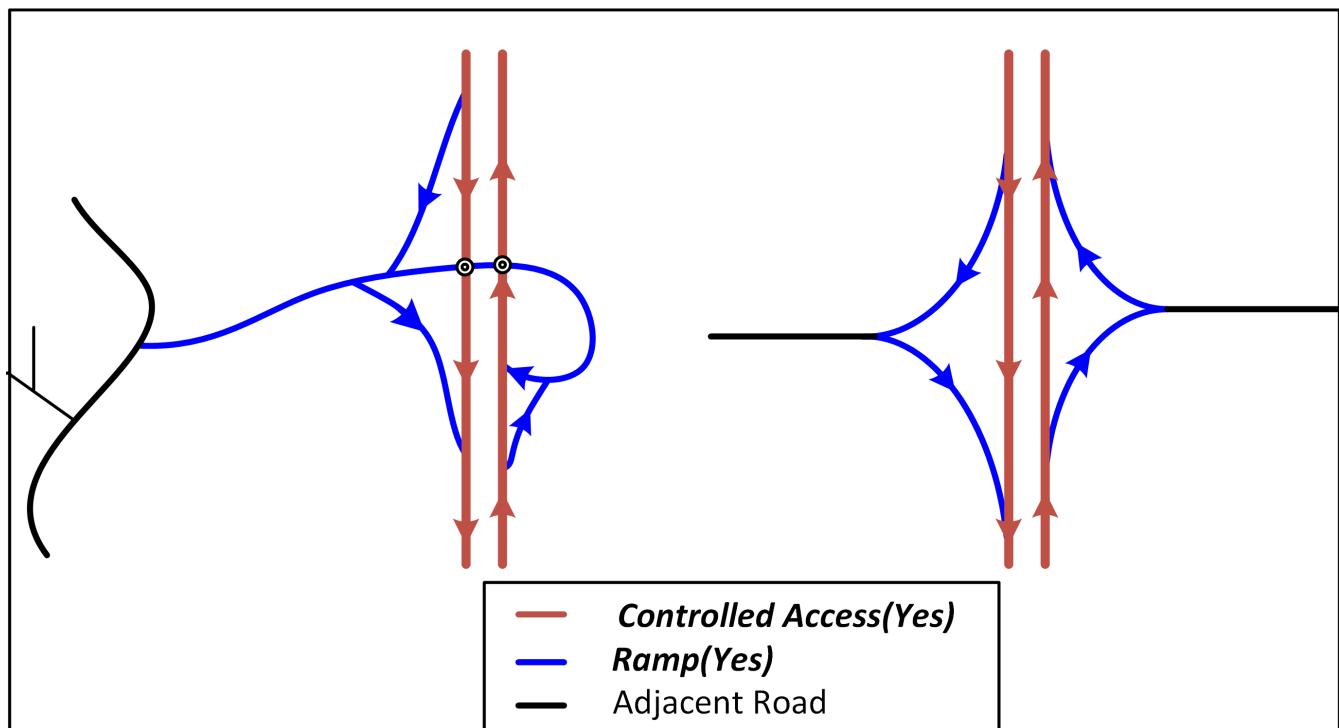
- The connections from a tunnel to surrounding streets if it is used for connectivity, not as the main road.
- Controlled entrances/exits from Controlled Access or Limited Access road intended to provide the only means of connectivity to adjacent or nearby roads, as shown in the example below:

## Reference Guide

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**Figure 197:**



### 7.2.63 Tollway

#### Definition

This attribute identifies links which should be displayed as Tollways. Please see the Usage section below for clarification.

#### Value

Y - Tollway

N - Not a Tollway

#### Length

1

#### Type

Boolean

#### Usage

Tollway identifies roads that require payments for traversal. This intended uses for this attribute are display and map publishing purposes.

① **Note:** Usage Fee Required should be used for route guidance when trying to avoid Toll Roads.

#### Specification

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- Tollway = Y is applied to links that require a fee for traversal. This does not include bridges and tunnels that require payment for access.
  - ① **Note:** Tollway and Usage Fee Required values do not necessarily match. A road can be flagged as Tollway without receiving Usage Fee Required condition.
- Tollway = Y is applied to Ramp = Y links, when the links connect two tollways.
- For non-navigable links, Tollway is published as N.

## 7.2.64 POI Access Road

### Definition

POI Access Roads connect Points of Interest (POIs) to the road network. These roads provide the only means of entrance or exit from a POI to a public road.

### Value

Y - POI Access

N - Not POI Access

### Length

1

### Type

Boolean

### Usage

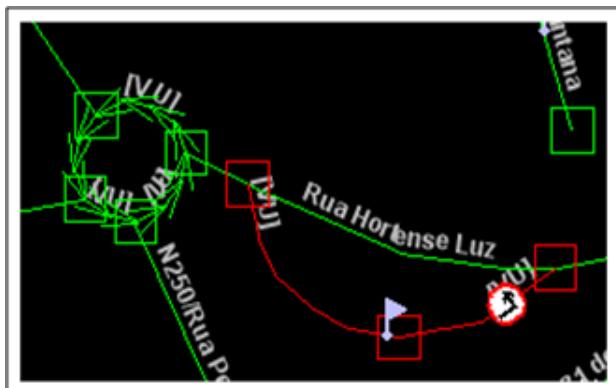
POI Access attribute allows an entrance to be identified by the POI name for route guidance. For example, the entrance road to a golf course may be explicated as "Turn right at the golf course entrance".

### Specification

#### General:

- POI Access is applied to identify roads that are used solely to enter or exit a POI, for example, all roads within a Rest Area or a Park & Ride. As shown below, the complete path (indicated by the red line) is flagged with POI Access.

Figure 198:



## Reference Guide

Attributes - Road Features and Associated Navigation Information

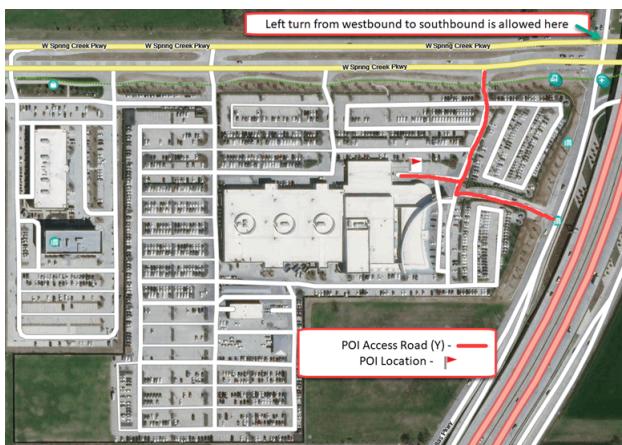
7.2 Streets (Streets)

- POI Access is generally flagged on unnamed roads only.
- POI Access is published as N for roads that are flagged as Parking Lot Road.
- POI Access is published as N for non-navigable links.

### Specific Locations:

- POI Access is flagged on all unnamed roads and roads that received Parking Lot Road = N in the following locations:
  - Park & Ride
  - Rest Areas
- POI Access is not flagged on unnamed roads within complex POI locations (i.e., POIs with corresponding polygonal cartographic features), with the following exceptions:
  - Golf Course
  - Hospital
- For other POIs without corresponding polygonal cartographic features (as shown in the example below), POI Access is flagged on the most logical and most direct connection to and from the POI. POI Access is not flagged on every conceivable connection in case of locations with multiple entrance points.

**Figure 199:**



## 7.2.65 Controlled Access

### **Definition**

Controlled Access indicates roads that are separately digitised, high-speed roads, where all legal traffic movements are controlled, allowing uninterrupted high speed traffic flow.

These roads constitute the interstate/freeway network in the U.S. and the motorway network in Europe.

### **Value**

Y - Controlled Access

N - Not Controlled Access

### **Length**

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1

## Type

Boolean

## Usage

The Controlled Access attribute can be used for map display, avoidance of freeway/motorway, and route guidance timing.

## Specification

- Controlled Access is published for links only.
- Generally, Controlled Access is flagged on roads that meet the following:
  - Limited entrances and exits that allow uninterrupted high speed traffic flow
  - Separately digitised roads
- ① **Note:** There can be slight variations in the application of this attribute. For example, in Europe, only roads with the "Motorway" sign are flagged as Controlled Access. See the *Country Specific Rules* document.
- Controlled Access is also applied to the following:
  - Connections between two or more roads that received Controlled Access
  - Spurs of significant length (e.g., at least 5 Km) from a road that received Controlled Access. See [Figure 200: on page 451](#).

① **Note:**

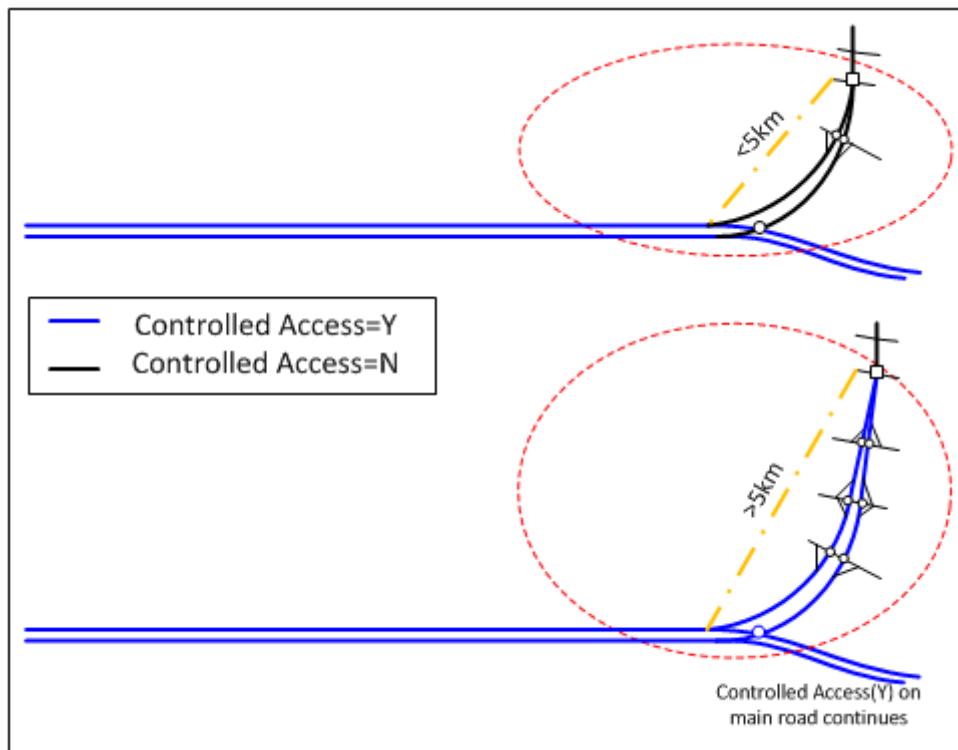
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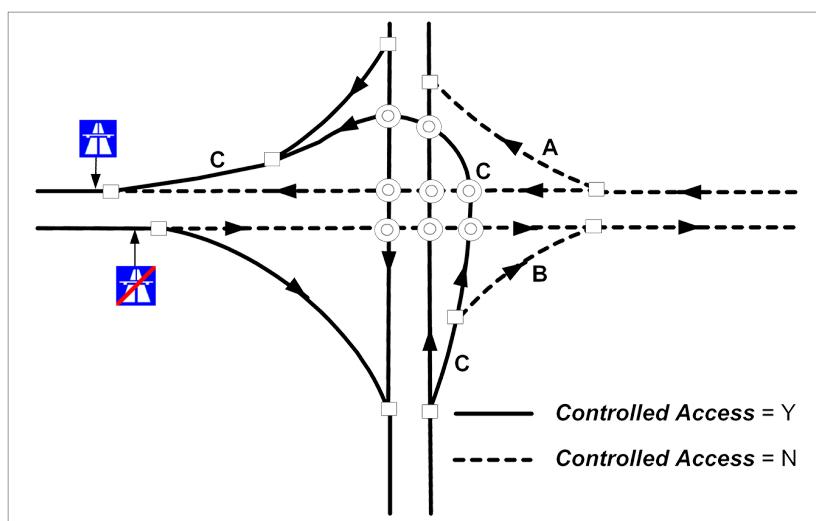
When a roadway has all the characteristics of a Controlled Access = Yes road and only one end is connected to another Controlled Access = Yes road, the "spur/branch" will receive Controlled Access coding regardless of length.

**Figure 200:**



- All connections between two or more controlled access roads are coded Controlled Access = Y.
- All connections between a controlled access road and a non-controlled access road are coded Controlled Access = N. See the following illustration, Link A.

**Figure 201:**



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Attributes - Road Features and Associated Navigation Information

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### 7.2.66 Roundabout

#### Definition

A roundabout is a contiguous loop with consistent one-way traffic throughout the circle that controls the traffic flow from converging roads.

#### Value

Y - Roundabout

N - Not a Roundabout

#### Length

1

#### Type

Boolean

#### Usage

This attribute allows explication of manoeuvres involving roundabouts (i.e., "Take the third exit from roundabout").

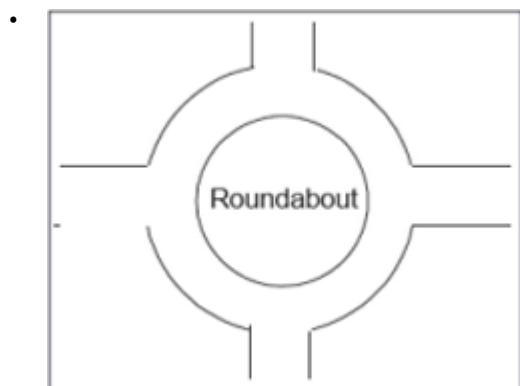
#### Specification

- A roundabout is a contiguous loop with consistent one-way traffic throughout the circle that controls the traffic flow from converging roads. See [#unique\\_357/unique\\_357\\_Connect\\_42\\_fig-000000ab](#) on page 452.

A roundabout may have variations in configuration, e.g., a Turbo Roundabout, which has legal or small physical dividers that restrict a lane change and ensure better traffic flow.

- Roundabout is applied to road features that:

- Are closed and have a circular or oval shape and are perceived as a roundabout and/or signposted as a roundabout
- Alter the direction of travel 360 degrees
- Have a direction of travel that is counter-clockwise in right-side driving countries and clockwise in left-side driving countries
- Have three or more arms in reality
- Do not have at grade navigable geometry within the interior



## Reference Guide

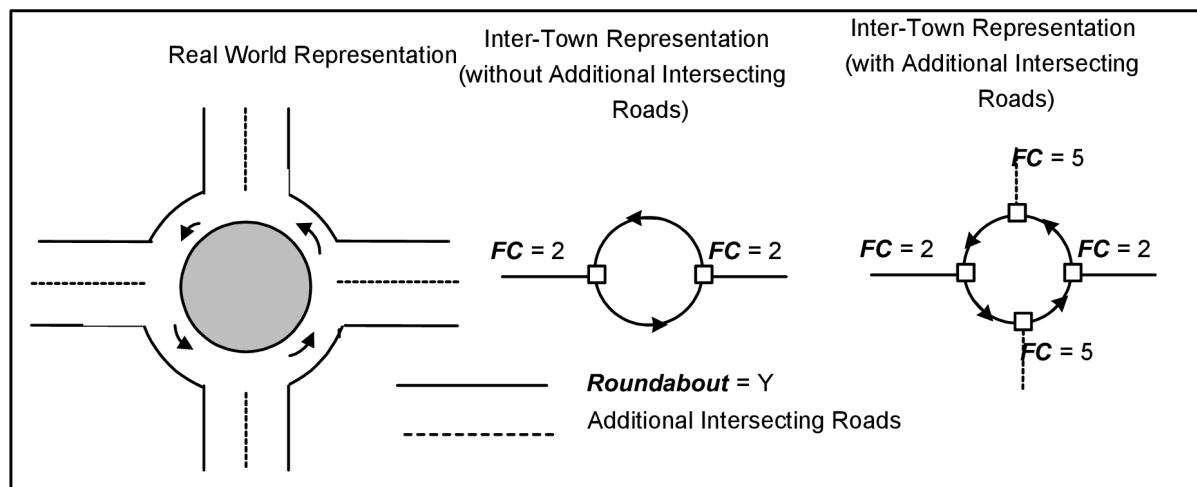
Attributes - Road Features and Associated Navigation Information

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here

- If the geometry has the shape of a roundabout but is not perceived as a roundabout, Roundabout = N. (For examples: Cul-de-Sacs (global), two armed situations where the round geometry is added solely for slowing down traffic (U.K only), and all two armed reality situations in North America.)
- Roundabout = Y is applied for the following situations:
  - If a roundabout has 2 or more arms in reality it is coded as Roundabout = Y, even if not all the roundabout arms are included in the database due to Network inclusion rules (see [Figure 202:](#) on page 453).
  - A section of each additional intersecting road connecting to a roundabout in Network may be included, even if these roads do not meet Network inclusion rules (e.g., Functional Class = 5 roads). This will help to assist guidance (see [Figure 202:](#) on page 453).
  - In Europe, if a roundabout is finished, but other future intersecting roads are still under construction, part of the intersecting road is still published.

**Figure 202:**



- For non-navigable links, Roundabout is published as N.

### 7.2.67 Intersection Internal

The Intersection Internal information can be found under [Intersection Coding](#).

### 7.2.68 Intersection Coding

#### Definition

Identifies links that are part of or associated with road intersections. These include links created when multiply digitised roads are intersected or when the centrelines of intersecting roads do not meet at a single node. Turn lanes, traffic islands, u-turn lanes, and ramps are also included in the intersection definition.

#### Value

Y - Intersection Internal, Manoeuvre, or Indescribable

N - Not Intersection Internal, Manoeuvre, or Indescribable

#### Length

# Reference Guide

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1

## Type

Boolean

## Usage

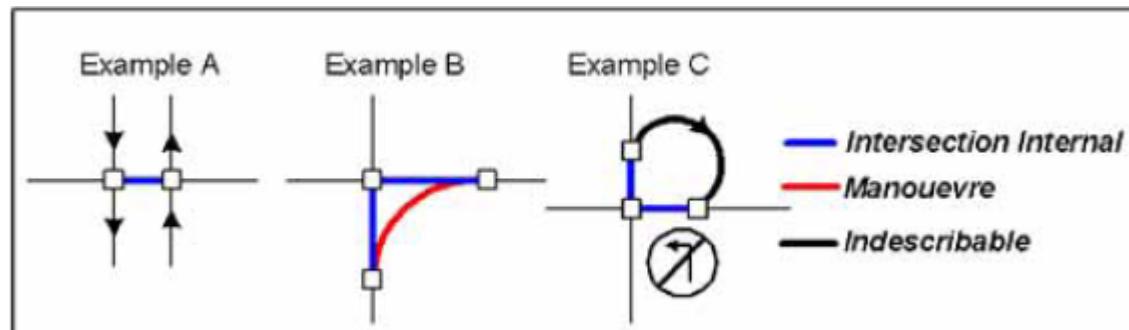
Intersection coding can be used for explication and display. The flags indicate whether a driver will perceive a situation as one or multiple intersections. These flags imply that the situation may require different explication than what is implied by the geometry.

**Intersection Internal (II)** indicates that a road segment should be viewed as part of the intersection, instead of as an individual piece of road. A separate guidance instruction should not exist for this segment. For example, if making a U-turn in Example A in [Figure 203: on page 454](#) the Intersection Internal link should be ignored, and the driver should be told to make U-turn, not "turn left, turn left".

**Manoeuvre (M)** indicates that only one command should be given despite the fact that technically two turns occur—one at each end of the turn lane. It is only necessary to state "turn right" near the beginning of the manoeuvre because generally at the end the driver does not have a choice in direction. See Example B in [Figure 203: on page 454](#).

**Indescribable (I)** indicates a turn that cannot be explained in one command or at all. A graphic may be needed to illustrate the turn. In these situations a driver may need to go right to make a left turn. See Example C in [Figure 203: on page 454](#).

**Figure 203:**



## Specification

- All measurements given in the following diagrams are guidelines.
- For non-navigable links, Intersection Internal, Manoeuvre, and Indescribable are published as N.

## Intersection Internal

- **Intersection Internal** is applied to links that meet any of the following criteria:
- Crossing of multiply digitised roads. A by-product of multiple digitisation is that one intersection is represented by 4 links. Similarly, the crossing link of a Multiply Digitised = N road and a Multiply

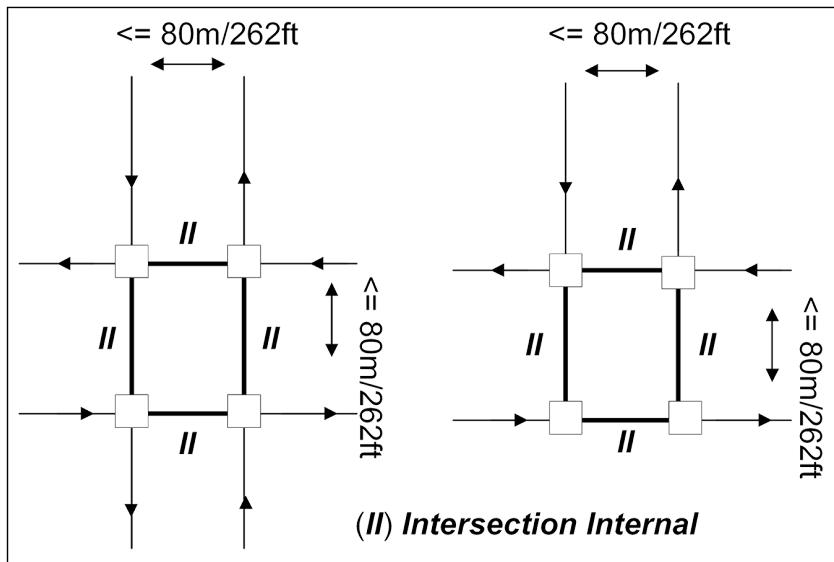
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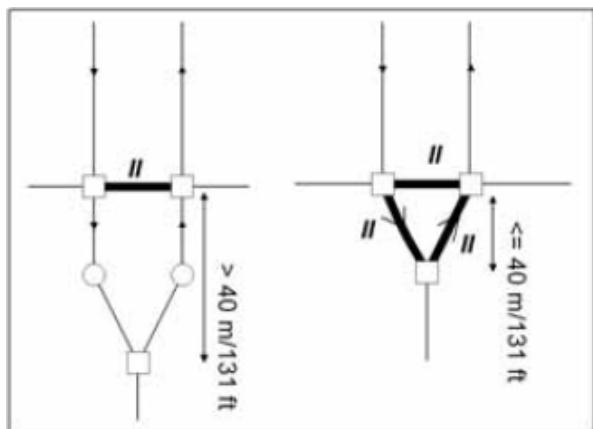
Digitised = Y road is one intersection, as shown in the illustrations in [Figure 204: on page 455](#) and [Figure 205: on page 455](#).

**Figure 204:**



- When a Multiply Digitised = N road splits into a Multiply Digitised = Y road before an intersection, the links which are the beginning of the Multiply Digitised = Y road require Intersection Internal coding if the distance before the intersection is less than 40 metres/131 feet, as shown in [Figure 205: on page 455](#).

**Figure 205:**



- Offset Streets with Overlapping Casements: The outer edge of a roadbed is called a road casement. When road casements overlap, the link that is created by offset centrelines is coded as Intersection Internal, as shown in the following illustration. The road names before and after an intersection are not taken into account when determining intersection coding. Intersection Internal implies that the

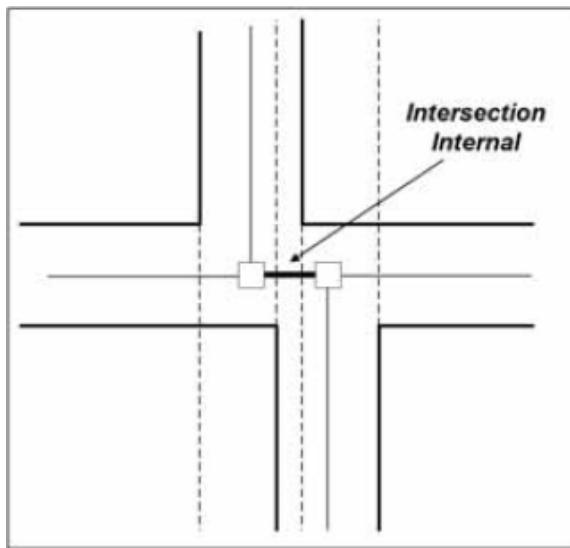
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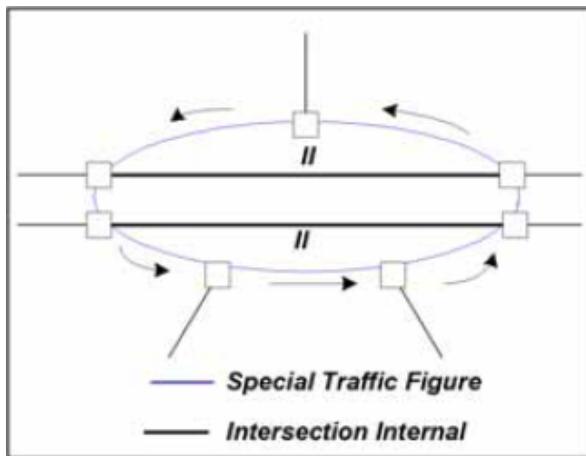
segment can be ignored for explication. In the following illustration, the driver would not want to hear - "turn left" followed by "turn right".

**Figure 206:**



- The link is navigable and is internal to a Special Traffic Figure, as shown here.

**Figure 207:**



- See additional cases of Intersection Internal applied in relation to the application of Manoeuvre and Indescribable.

### Manoeuvre

- Manoeuvre is applied to a link or group of links that suggest a single manoeuvre be explicated, rather than multiple manoeuvres. For example, at an intersection with a turn lane (turn lane receives Manoeuvre), good explication would tell the driver to take a right slightly before the manoeuvre. Poor explication would tell the driver to turn right at both the beginning and end of the manoeuvre. Only one command is needed because at the end of the manoeuvre the driver does not have a choice in direction.

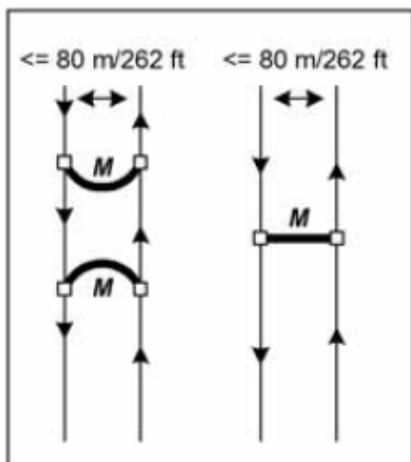
## Reference Guide

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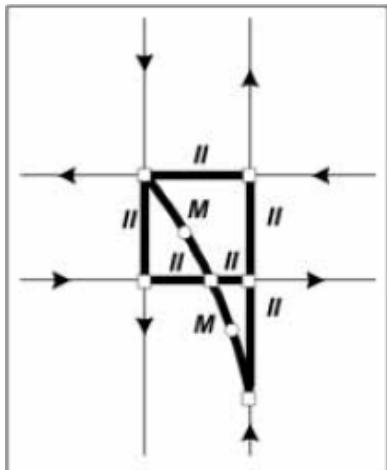
- If the road is coded with Multiply Digitised = Y, the U-turn lanes are coded as Manoeuvre, as shown here.

**Figure 208:**



- An internal turn lane that is less than 120 metres/394 feet is a Manoeuvre. The distance is determined by measuring from the beginning of the turn lane to the end of the turn lane. The remaining triangle links are coded as Internal Intersection, as shown here.

**Figure 209:**



- An external turn lane that is less than 120 metres/394 feet is a manoeuvre link. This distance is determined by measuring from the beginning of the turn lane to the end of the turn lane. The remaining triangle links receive Intersection Internal when both links are less than or equal to 40 metres/131 feet, as shown in Case 1 of the following illustration. If one of the remaining triangle segments is longer than 40 metres/131 feet, then neither of the remaining links are Intersection Internals as in Case 2.

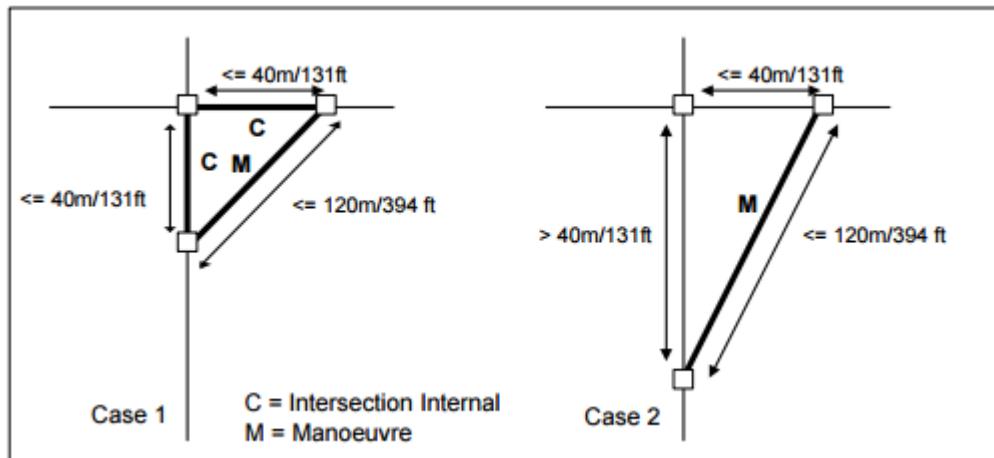
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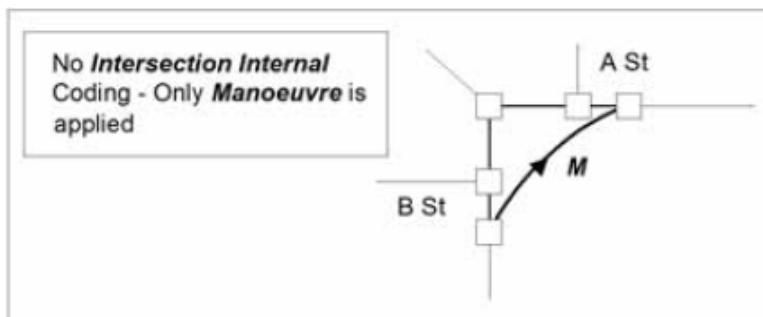
- The bearing of the turn lane does not change the application of the Manoeuvre attribute.

**Figure 210:**



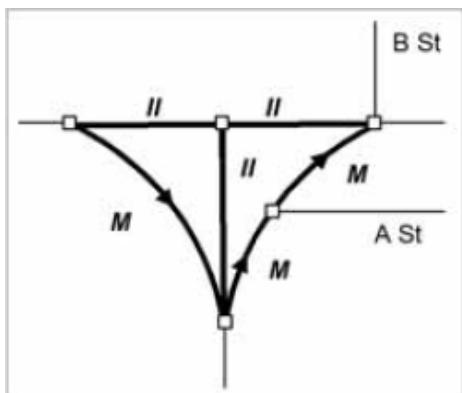
- Situations where intervening roads connect to an intersection may not be perceived as one intersection, so only the turn lane is coded Manoeuvre as shown in [Figure 211](#): on page 458.

**Figure 211:**



- External turn lanes are coded Manoeuvre even if several manoeuvres can be made such as to roads A and B.

**Figure 212:**



- When a ramp or turn lane forks into two separate links near the beginning or end of the ramp or turn lane connection, this is called a splitter. A splitter link receives intersection Manoeuvre coding if it is less than 120 metres/394 feet and not connected to a motorway (controlled access road). When both splitter

## Reference Guide

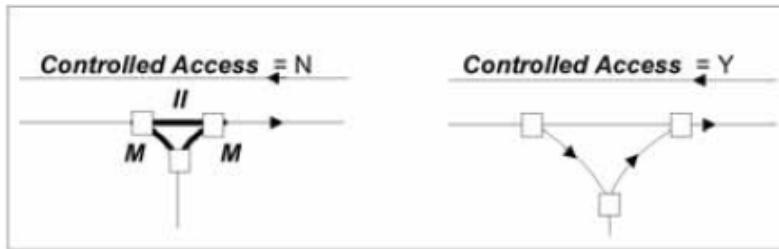
Attributes - Road Features and Associated Navigation Information

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links receive Manoeuvre, the link of the main road that connects the two splitter segments receives Intersection Internal.

- Ramp splitters that are connected to a Controlled Access = Y road (diagram on the right) are not treated as one intersection as shown in the following illustration and therefore do not receive intersection coding. As opposed to when ramp splitters are connected to Controlled Access = N (diagram on the left) that does receive intersection coding.

**Figure 213:**



- When three or more singly digitised roads meet at a traffic island and each side of the connection is less than 40 metres/131 feet, then the link which is perceived or which functions as a turn lane is coded as a Manoeuvre and the remaining links comprising the intersection are Intersection Internal, as shown in

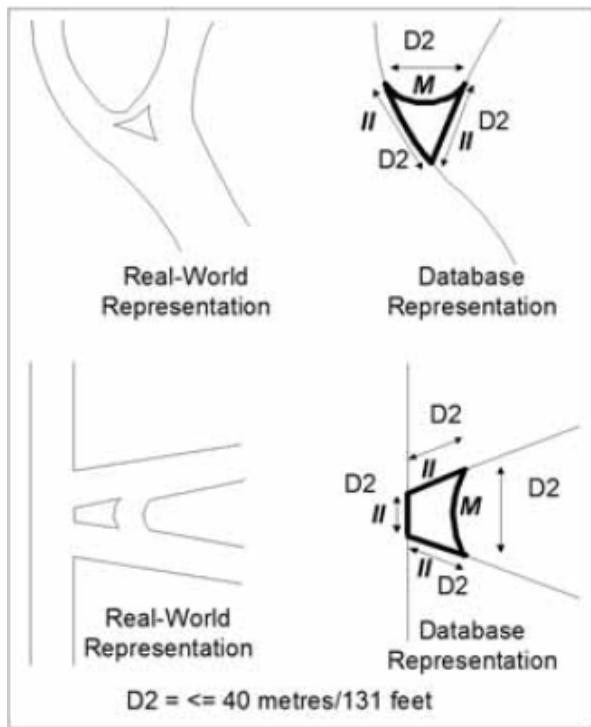
## Reference Guide

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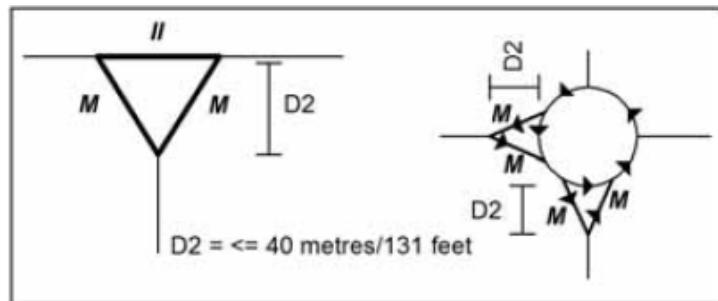
7.2 Streets (Streets)

the following illustrations. This rule is used if there is a crossing of singly digitised roads due to extended centrelines, even though there is no actual physical traffic island.

**Figure 214:**



**Figure 215:**



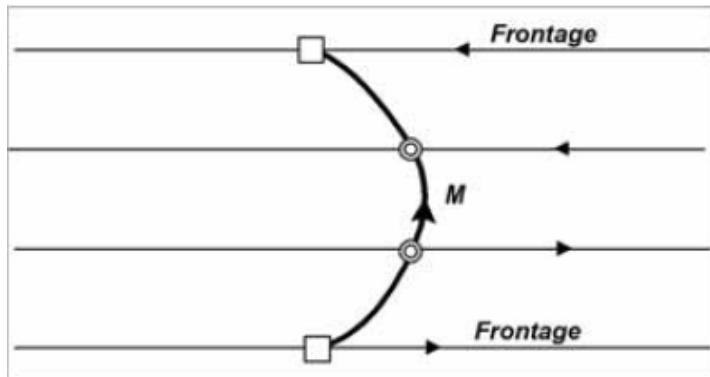
## Reference Guide

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- A turn lane which connects two frontage roads over/under a motorway receives Manoeuvre. See [Figure 216: on page 461](#).

**Figure 216:**



# Reference Guide

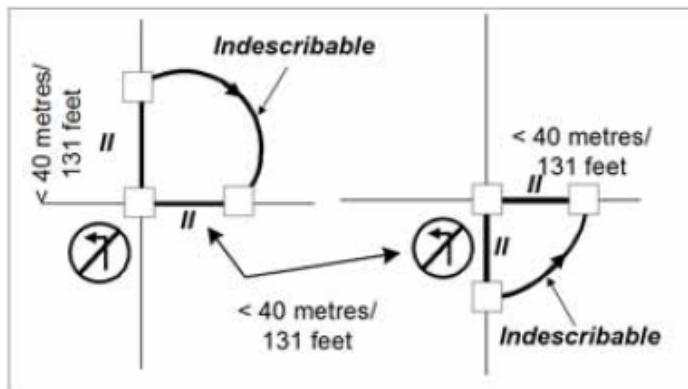
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## Indescribable

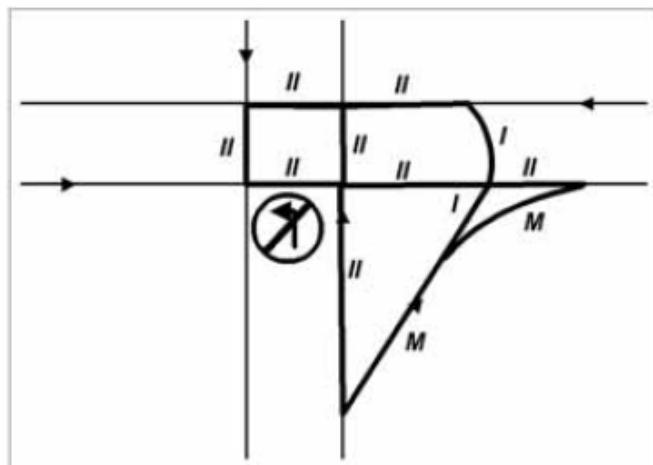
- Indescribable is applied to a link that meets any of the following criteria:
  - The link comprises a right-exiting external turn lane for turning left or for U-Turns. These segments are Indescribable.
  - Once the Indescribable is coded, if the remaining triangle's sides are both shorter than 40 metres/131 feet, then the remaining triangle links are Intersection Internal, as shown here.

**Figure 217:**



- A link comprises a U-turn lane on a Multiply Digitised = Y road required for left turns, as shown here.

**Figure 218:**



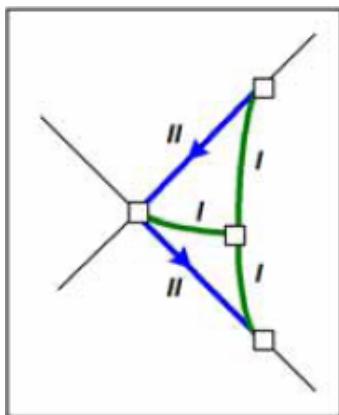
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- Any intersection requiring a graphic of the intersection to aid the driver to properly traverse through the intersection. See the following illustration.

**Figure 219:**



### 7.2.69 Undefined Traffic Area

#### Definition

Identifies links inside of an Undefined Traffic Area polygon (Feature Type – 900159), which is a paved area where a car can travel, but there are no legally defined traffic paths.

#### Value

Y - Undefined Traffic Area Link

N - Not a Undefined Traffic Area Link

#### Length

1

#### Type

Boolean

#### Related Polygon

Undefined Traffic Area Polygon (Feature Type: 900159)

#### Usage

A car is not limited to driving on the Undefined Traffic Area links. The car can drive in any pattern within the Undefined Traffic Area polygon. HERE includes generalised paths so that real road segments retain connectivity, but systems should recognise that if the GPS signal is not matching to these links, it does not mean the car is off route. Instead it should wait until the car reaches a real link again before determining its status as on/off route.

#### Specification

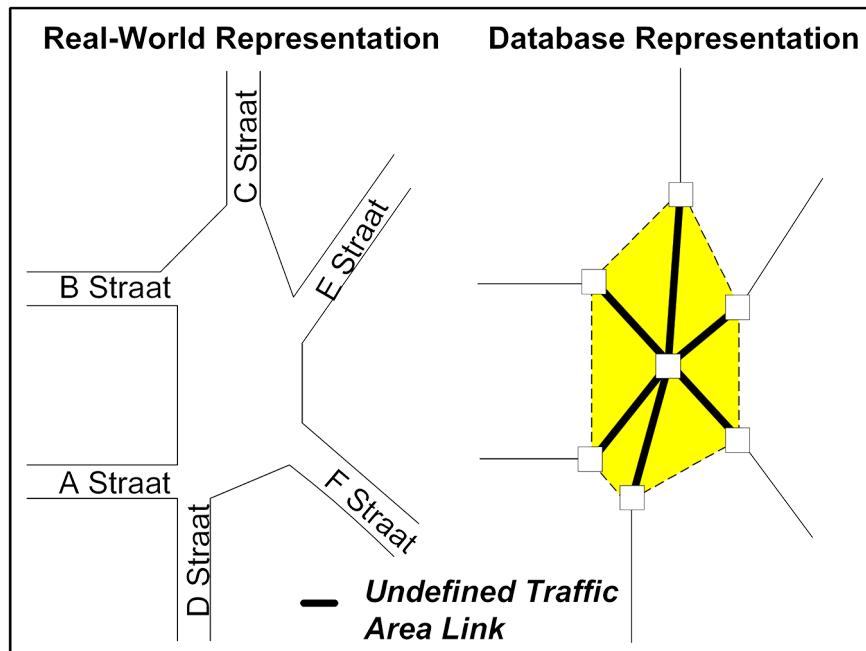
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- An Undefined Traffic Area is a paved area where a car can travel, but there are no legally defined traffic paths. See [Figure 220:](#) on page 464.

**Figure 220:**



- For non-navigable links, Undefined Traffic Area Link is published as N.

### 7.2.70 Ferry Type

**① Note:**

This attribute is only published in the Shapefile format. The Boat Ferry and Rail Ferry attributes are published in the MapInfo format.

**Definition**

An attribute that defines whether a link is or is not a ferry link. If the link is a ferry link, Ferry Type will describe if it is a boat ferry link, or a rail ferry link. It is a combination of the Boat Ferry and Rail Ferry attributes. See [Boat Ferry](#) on page 465 below for Boat Ferry and Rail Ferry combinations that define the Ferry Type.

**Value**

H - Not a Ferry

B - Boat Ferry

R - Rail Ferry

**Length**

1

**Type**

Text

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### Related Attributes

Boat Ferry

Rail Ferry

Boat Ferry	Rail Ferry	Ferry Type
N	N	H
Y	N	B
N	Y	R

## 7.2.71 Boat Ferry

### ① Note:

This attribute is only published in the MapInfo format. The Ferry Type attribute is published in the Shapefile format.

### Definition

A Boat Ferry represents the generalised route of a ferry for passengers or vehicles over water.

### Value

Y - Boat Ferry

N - Not a Boat Ferry

### Length

1

### Type

Boolean

### Related Attributes

Ferry Type

### Usage

This attribute can be used for map display.

### Specification

- See [Ferry Route](#) on page 88 for detailed information.
- For non-navigable links, Boat Ferry is published as N.
- For more information see Appendix H: RDS-TMC.
- Boat Ferry is applied to links that represent a ferry route for vehicles and/or passengers over water.
- Passenger-only ferry route links are published with Pedestrian = Y only.
- Pedestrian-only geometry is published to connect passenger-only ferry routes to the nearest existing geometry.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### 7.2.72 Rail Ferry

#### ① Note:

This attribute is only published in the MapInfo format. The Ferry Type attribute is published in the Shapefile format.

#### Definition

A Rail Ferry represents the generalised route of a ferry for vehicles and/or passengers via rail.

#### Value

Y - Rail Ferry

N - Not a Rail Ferry

#### Length

1

#### Type

Boolean

#### Related Attributes

Ferry Type

#### Usage

This attribute can be used for map display.

#### Specification

- See [Ferry Route](#) on page 88 for detailed information.
- For non-navigable links, Rail Ferry is published as N.
- For more information see Appendix H: RDS-TMC.

### 7.2.73 Multiply Digitised

#### Definition

The Multiply Digitised attribute identifies links that are digitised with one line per direction of traffic instead of one line per road and using the rules listed below.

#### Value

Y - Multiply Digitised

N - Not Multiply Digitised

#### Length

1

#### Type

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

Boolean

## Usage

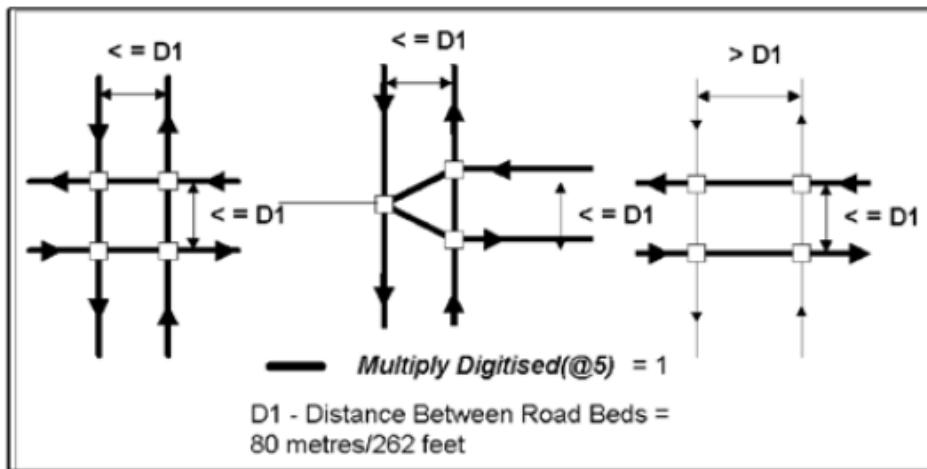
For wide roads a link is digitised for each direction of traffic (instead of for each road) in order to improve map matching of the car to the road map. The **Multiply Digitised** attribute identifies these opposing lanes of traffic when it is reasonable to represent them as a single line on displays and printed maps.

When route guidance calls for a u-turn involving a multi-digitised road, the guidance given should be “make a u-turn at intersection” and not “make a left turn”, followed by “make a left turn.”

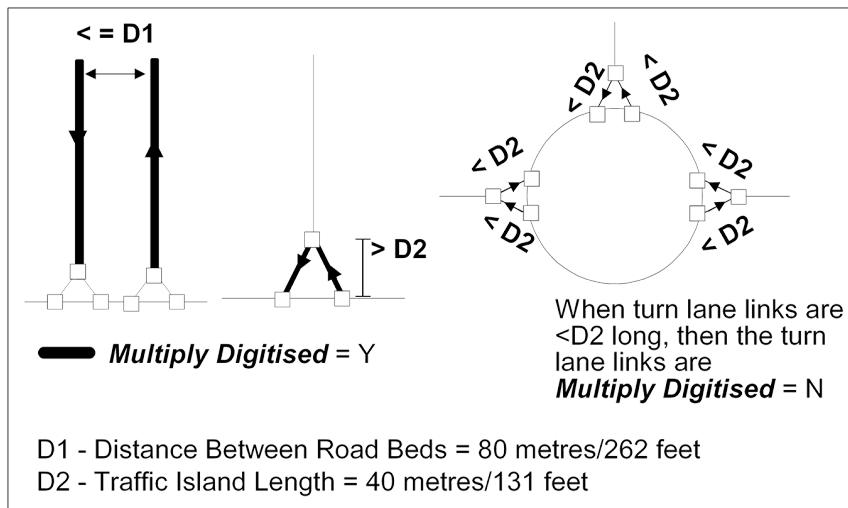
## Specification

- **Multiply Digitised = Y** is applied to roads where opposing lanes of traffic are;
  - Separated by either a physical or legal divider wider than 3 metres/10 feet, and are longer than 40 metres/131 feet, and
  - Are no more than 80 metres/262 feet apart. When the roadbeds are more than 80 metres apart. See [Figure 221: on page 467](#) and [Figure 222: on page 467](#).

**Figure 221:**



**Figure 222:**



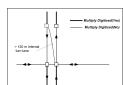
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- The above rule does not apply when any of the following are applied to the link:
    - Ramp = Y,
    - Direction of Travel = B, or
    - Manoeuvre = Y
 In these cases, the road segment receives Multiply Digitised = N.
  - Multiply Digitised = Y is applied to roads when any linear feature is located between the separately digitised opposing lanes of traffic. The reason for this is that to maintain proper map display with the other feature, the roadbeds must remain separate in map display.
- The following are examples:
- An elevated/underground road or rail
  - A tram/light rail tracks which restrict crossing from one side to the other
  - A walkway
- ① **Note:** Roadbeds that do not meet the above criteria may receive Multiply Digitised = Y. For example, if a change in a multiply digitised road continues for less than 100 metres/328 feet then the Multiply Digitised = Y attribution is maintained. This exception ensures cartographic consistency by preventing the display of "hour glass" shaped roads when the is attribute is used to simplify display.
- Multiply Digitised = N is applied to the following road situations:
    - If any linear feature (e.g., railroad tracks, canal, etc.) or thick vegetation is located between the separately digitised opposing lanes of traffic. The reason for this is that to maintain proper map display with the other feature, the roadbeds must remain separate in the map display.
    - Separately digitised opposing lanes of traffic are on top of each other instead of being separated horizontally, e.g., a double decker bridge.
    - Separately digitised roads with an internal turn lane greater than 120 metres/394 feet as shown below.

**Figure 223:**



- If there are different names for each side of the road.

### 7.2.74 Maximum Attributes

The Maximum Attributes is equivalent to the Detailed City.

### 7.2.75 Detailed City

#### Definition

This attribute specifies whether a link is part of a Detailed City coverage area.

If Detailed City = N, then the inclusion level may be either Network, In-Process Data, or Connector Road/City-to-City.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### Value

Layers: Streets, Cartographic Country and Cartographic State

Y - Part of Detailed City Coverage Area

N - Not Detailed City Coverage Area

Layers: Administrative Area Boundaries, Waterway Polygons, Waterway Segments, Building/Landmark Features, Land Use Features A/B, Islands and Risk Prone Area

Y - Part of Detailed City Coverage Area

N - Not Detailed City Coverage Area

P - Part of the polygon is Detailed City Coverage Area, part is not Detailed City Coverage Area

### Length

1

### Type

Boolean

### Usage

This attribute allows systems to adapt to different levels of attributing.

### Specification

Links in an ocean receive Detailed City = N.

## 7.2.76 Special Traffic Figure

### Definition

A Special Traffic Figure (STF) is a somewhat circular intersection which controls the traffic flow from incoming roads.

### Value

Y - Special Traffic Figure

N - Not Special Traffic Figure

### Length

1

### Type

Boolean

### Usage

The coding of a Special Traffic Figure allows for guidance that uses the word “exit” instead of “turn.” “Exit” is preferable because the Special Traffic Figure feels similar to a roundabout with regard to driving through it.

### Specification

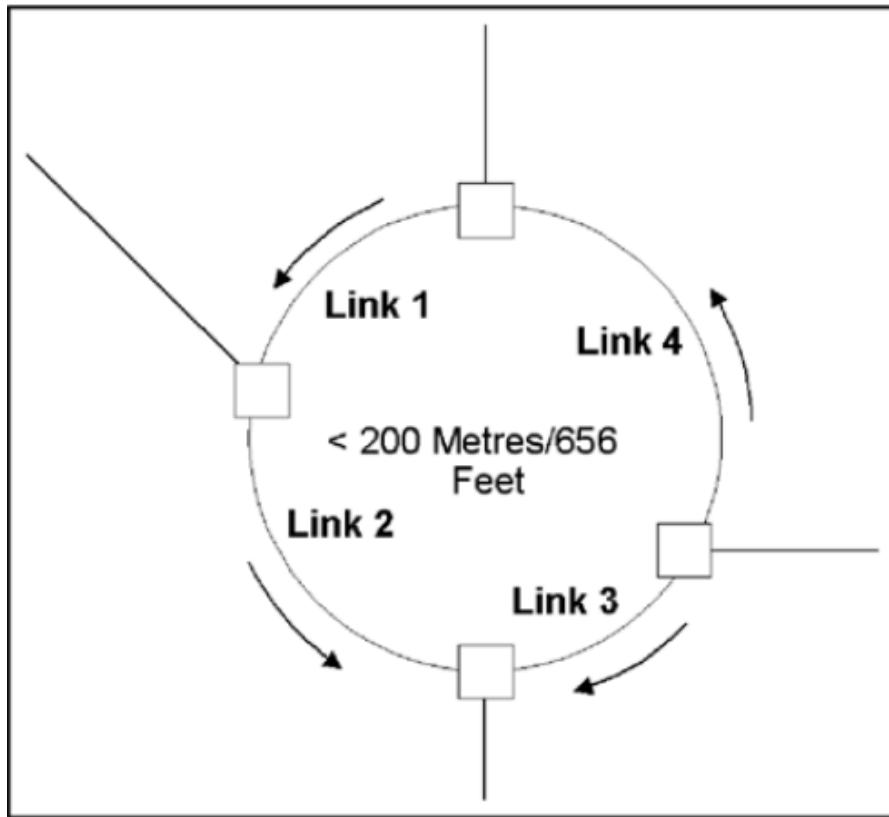
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- A STF occurs when an intersection looks similar to a roundabout, but it:
  - forms a closed loop, but one part of the loop contains a different Direction of Travel than the rest of the loop, as shown in *Figure 224:* on page 470 below:

**Figure 224:**



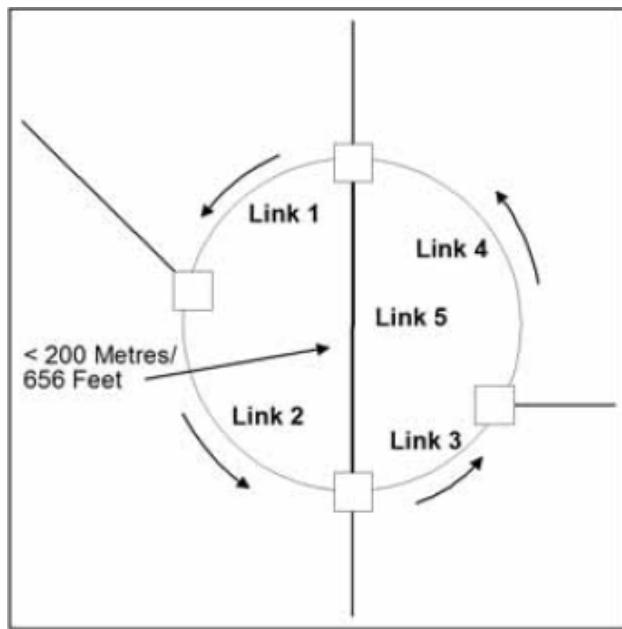
- Link 1 – Receives STF = Y
- Link 2 – Receives STF = Y
- Link 3 – Receives Intersection Internal
- Link 4 – Receives STF = Y
- forms a closed loop but allows for crossings at grade within the loop, as shown in *Figure 225:* on page 471 below:

## Reference Guide

Attributes - Road Features and Associated Navigation Information

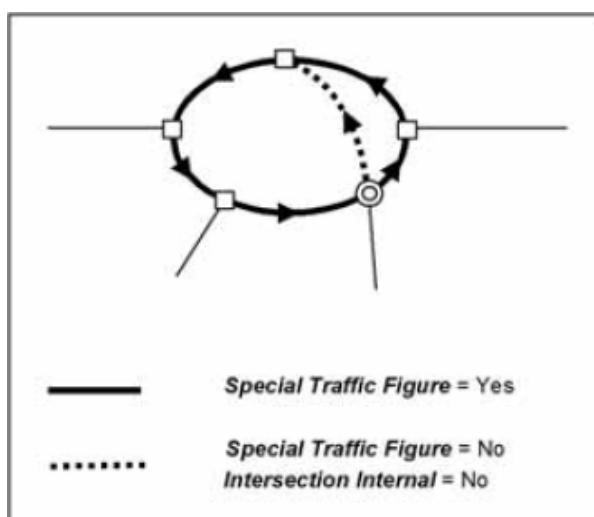
7.2 Streets (Streets)

**Figure 225:**



- Link 1 – Receives STF = Y
- Link 2 – Receives STF = Y
- Link 3 – Receives STF = Y
- Link 4 – Receives STF = Y
- Link 5 – Receives Intersection Internal = Y
- forms a closed loop, but a road intersects from the inside, and is only connected at grade at one end, as shown in [Figure 226](#): on page 471 below.

**Figure 226:**



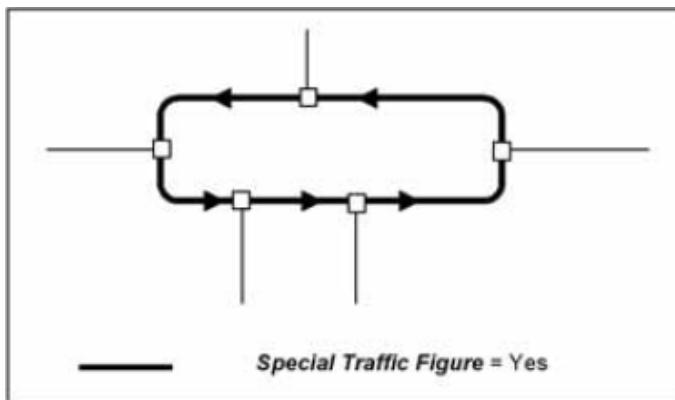
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- is not perceived as a roundabout due to its shape, as shown in [Figure 227](#): on page 472. An example of this situation is “Place de la Concorde” in Paris.

**Figure 227:**



### 7.2.77 Indescribable

The Indescribable information can be found under Intersection Coding.

### 7.2.78 Manoeuvre

The Manoeuvre information can be found under Intersection Coding.

### 7.2.79 Divider Legal

#### Definition

This attribute identifies whether or not divider is a legal (by statute only) or a physical divider.

#### Value

Y - Legal Divider

N - Not Legal Divider

#### Length

1

#### Type

Boolean

#### Usage

In combination with the Divider attribute, enables a system to prevent left turns (in right-side driving countries), right turns (in left side driving countries), and U-turns at divided intersections and in the middle of divided roads.

Divider Legal identifies physically passable dividers for emergency vehicle routing applications.

A physical divider identifies a physical barrier that cannot be traversed.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- ① **Note:** Divider Legal is not applied in South Korea for physical barriers.

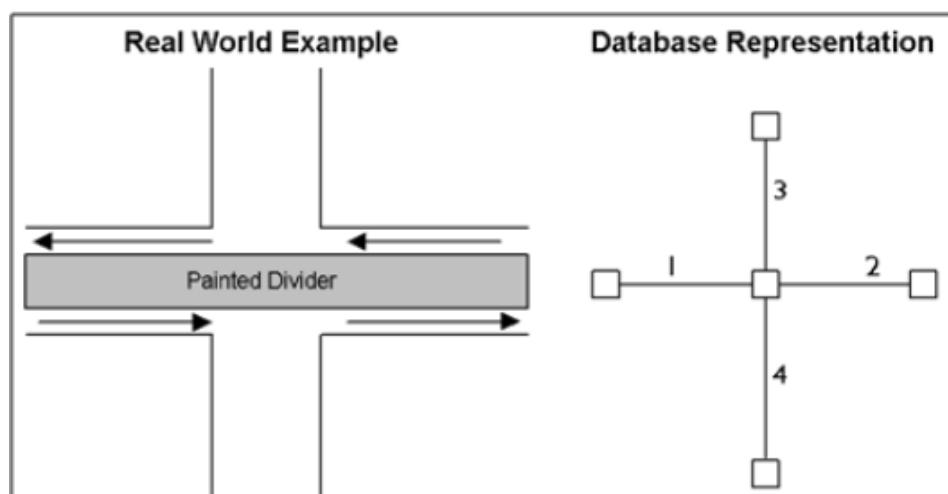
## Specification

- See Divider for additional information on divider coding.
- Divider Legal = Y when the divider is a physically passable barrier, such as painted lines, that prohibits traversal by statute only. See [Figure 228: on page 473](#).
- In [Figure 228: on page 473](#), a painted divider (Divider Legal) goes through the intersection. The following manoeuvres are prohibited in reality:
  - Link1 to Link 3
  - Link 2 to Link 4
  - Link 3 to Link 2
  - Link 3 to Link 4
  - Link 4 to Link 1
  - Link 4 to Link 3
  - Link 1 to Link 1 (No U-turn)
  - Link 2 to Link 2 (No U-turn)

- ① **Note:**

These turn restrictions do not exist in the database.

**Figure 228:**



- Link 1:
  - Divider = 2 (NonRef Node and Link)
  - Divider Legal = Y
- Link 2:
  - Divider = 1 (Ref Node and Link)
  - Divider Legal = Y

① **Note:** When necessary, an emergency vehicle can make any of the turns restricted here.

- For non-navigable links, Divider Legal is published as N.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### 7.2.80 In Process Data

#### Definition

In Process Data identifies that a link is included prior to completion to full specification.

#### Value

Y - In Process Data

N - Not In Process Data

#### Length

1

#### Type

Boolean

#### Usage

The In Process Data attribute on links indicates that the links do not have full routing attributes. Direction of Travel, Speed Category, etc. may not represent reality.

#### Specification

- The minimum specification for these links are:
  - Complete administrative coding to the Maximum Administrative Level.
  - Complete local and route number names.
- Links with In Process Data = Y receive Full Geometry = Y.
  - ① **Note:** In some countries (e.g., Argentina, Australia, Brazil, Canada, Chile, Mexico, New Zealand, U.S. (Alaska only), Thailand, and Venezuela), In- Process Data = Y may be applied to Functional Class = 1 through 4.
- For non-navigable links, In Process Data is published as N.

### 7.2.81 Full Geometry

#### Definition

Full Geometry identifies that a link has the complete geometry of the road network surrounding it.

① **Note:**

The same value is applied to all of the links comprising a country's road network. Thus, Full Geometry indicates that a link is within a country that has all of the road network geometry included.

#### Value

Y - Full Geometry

N - Not Full Geometry

#### Length

1

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

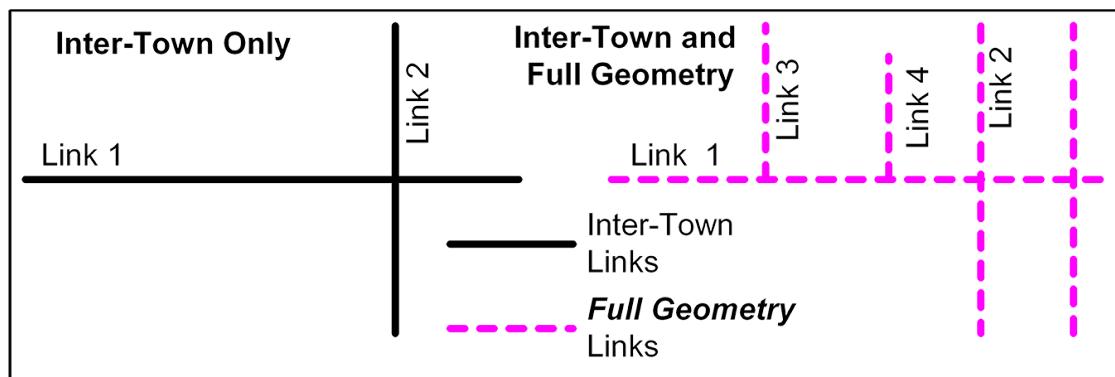
### Type

Boolean

### Usage

- Full Geometry allows more precise route calculation and route guidance. It also allows more accurate timing of guidance
- In *Figure 229:* on page 475 below, if the driver was driving east on Link 1 and was given the guidance to turn left, the driver might mistakenly turn left at Link 3 instead of Link 2 (the destination). With Full Geometry taken into account, the driver should receive the guidance to turn left at the third intersection (Link 2).
- For the diagram on the left, simply saying “Next Left Turn” would make no sense to the driver. Not all the roads that exist in reality are displayed here. Therefore, it would make more sense to say “Turn Left in 1.5 miles”.

**Figure 229:**



- Without taking Full Geometry into account the guidance to the driver may not represent reality.

### Specification

- The following receive Full Geometry = Y
  - Links with Detailed City = Y
  - Links with In Process Data = Y and Detailed City = N.
  - Links with In Process Data = N and Detailed City = N belonging to administrative area which includes links that are In Process Data = Y.
- For non-navigable links, Full Geometry is published as N.

## 7.2.82 Urban

### Definition

This attribute identifies links located within a Built-up Area polygon.

### Value

Y - Urban

N - Not Urban

### Length

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

1

### Type

Boolean

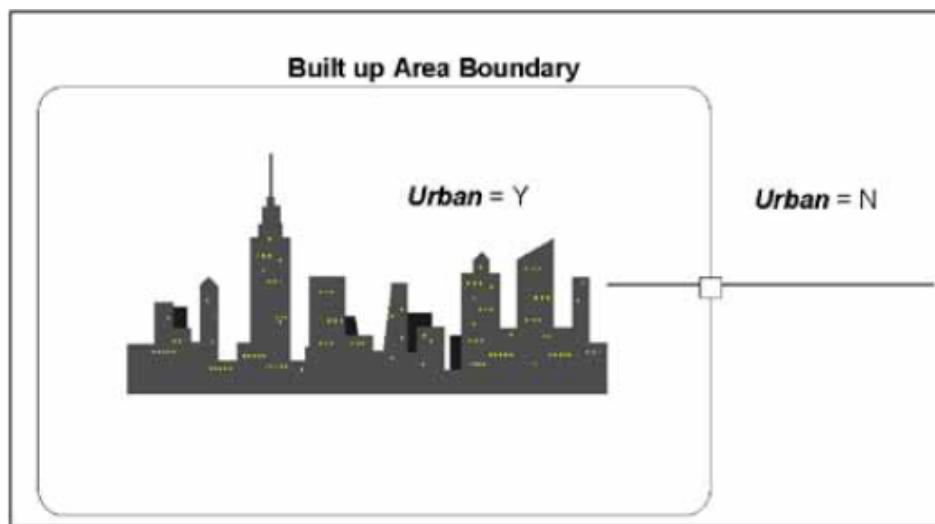
### Usage

This attribute can be used for map display.

### Specification

- Urban = Y is applied to all links inside a Built-Up Area polygon including the Built-Up Area boundary. See [Figure 230](#): on page 476. This attribute is applied in Canada, Europe, and the U.S. Urban has specific speed connotations in these countries. In Canada and Europe, commercial maps display Built-Up Areas. In the U.S., as commercial maps display city boundaries, the Urban boundary is defined by the polygonal extent of the latest available Built Up Area (BUA) USA product to denote changes to urban coding in the map on a regular basis.

**Figure 230:**



## 7.2.83 Route Type

The Route Type is equivalent to the Name Route Type.

## 7.2.84 Name Route Type

### Definition

The route type indicates that the road's name is actually a route number and in many countries is displayed in a shield symbol (i.e., Interstate and State routes in the U.S.).

### Value

Code	Description
(space)	Not Applicable

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

Code	Description
1	U.S. Interstate or European Level 1 Road
2	U.S. Federal or European Level 2 Road
3	U.S. State or European Level 3 Road
4	U.S. County or European Level 4 Road
5	European Level 5 Road
6	European Level 6 Road

For descriptions and examples of Route Types and Signs, see the *Country Profile Road Signs* document.

## Length

1

## Type

Numeric

## Usage

Name Route Type can be used for display and map publication to display the appropriate route shield when used in conjunction with the Direction on Sign.

## Specification

- HERE does not publish route shield icons.
  - A link may have more than one Route Number.
- ① **Note:** When multiple Route Types exist, one is published in the Streets layer and the rest are published in the Alt Streets Layer.
- Each name assigned to a road may have a different route type.
  - Name Route Type may be applied to ferry routes.

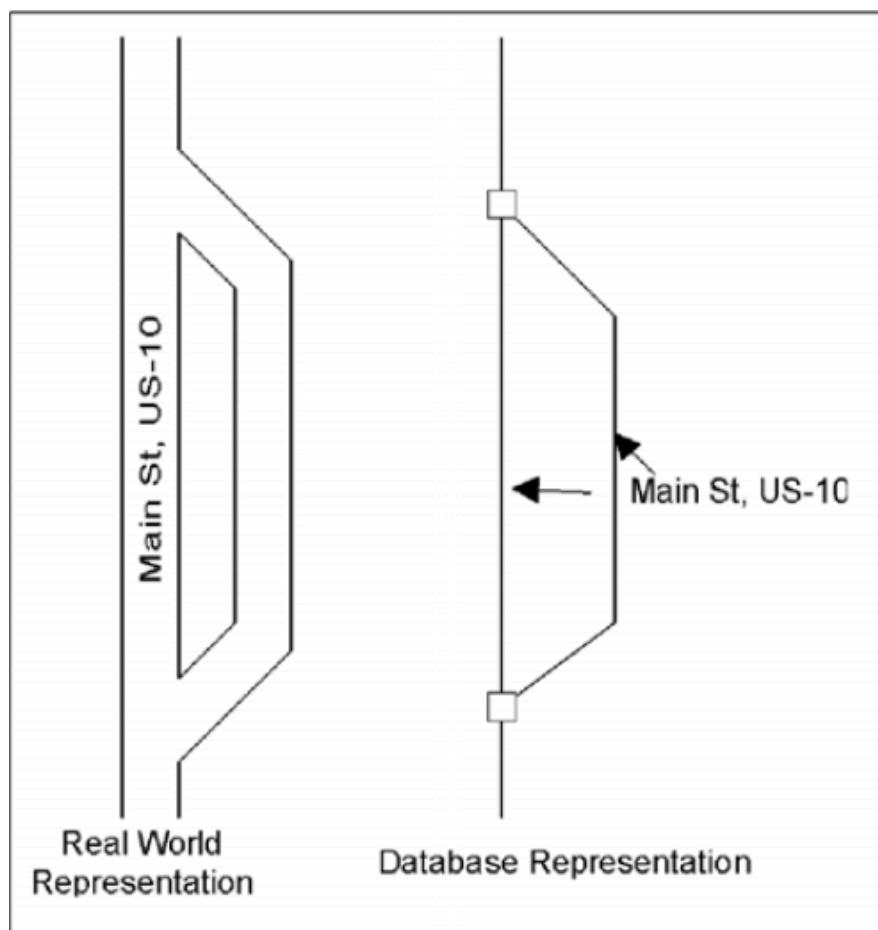
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- The following do not receive Name Route Type:
    - Non-numeric routes such as Garden State Parkway, Bayshore Freeway, or Trans Canada Hwy/Autoroute Transcanadienne which may or may not be represented in a shield symbol.
    - Features with no associated route identifier.
    - Names on Frontage Roads unless they are posted shield signs.
    - Numbered routes that are added for address matching purposes only.
    - Road names that represent specific road functionality such as HOV, reversible, or express lanes that are applied to separately digitised controlled access roads.
- ① **Note:** These roads may have additional names that may carry a Name Route Type.

Figure 231:



### 7.2.85 Direction on Sign

#### Definition

The official directional identifiers assigned to highways.

#### Value

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

Value	Description			Value	Description	
	ENG	ARA	CHT		FRE	SPA
N	North	شمال	北	N	Nord	Norte
S	South	جنوب	南	S	Sud	Sur
E	East	شرق	東	E	Est	Este
W	West	غرب	西	O	Ouest	Oeste

### Length

1

### Type

Text

### Usage

Direction on Sign should be used in conjunction with Feature Name, Name on Road Sign, and Name Route Type. For route guidance, US-101 South should be used and not just US-101 when appropriate.

### Specification

- These specifications are applicable for North America and South Africa only. This is due to where Direction on Sign exists as a concept in reality.
- When a Multiply Digitised = Y numbered route is coded with Route Type = 1, 2, 3, or 4, Direction on Sign is applied according to the officially assigned directional identifiers.
- Direction on Sign is the official direction and not necessarily the travel direction. For example, US-101 through the city of Sunnyvale is physically located east to west. However, the official Direction on Sign is North/South.
- Direction on Sign may be assigned to non-multiply digitised roads, when a route diverges through an urban area due to one-way streets so that opposing directions of the route are on separate roads.
- Other Multiply Digitised = Y highways with non-numeric names like "Garden State Pky" or others which typically have "Hwy" or "Pky" street types may also have Direction on Sign applied if there are official directional identifiers.
- Direction on Sign is not applied to names on frontage roads unless these are shielded routes and coded with Route Type = 1-4.
- Numeric county routes do not usually require Direction on Sign unless verified as officially posted.

## 7.2.86 Explicable

### Definition

Explicable indicates which names should be used to identify a given road when providing directions.

### Value

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

Y - Explicable

N - Not Explicable

### Length

1

### Type

Boolean

### Usage

Names with Name on Road Sign = Y or Exit Number = Y are always suitable for explication. Other names on a link may or may not be. The Explicable flag will show this.

Names which are Explicable = N are included in the database to assist in destination selection but are not recommended for route guidance.

### Specification

- A name is identified as Explicable = Y when it is a legal name or the name on road sign for a road.
- A name is identified as Explicable = N when it is:
  - obtained from a postal service file and is known to be misspelled, or its Prefix, Suffix, or Street Type is incorrect.
  - an old street name which no longer appears on any sign but is still in use.
  - a name that represents a named building (IBM Plaza).
  - a name that people commonly misunderstand or misrepresent when referring to a road.
- Applies to navigable linear features only.

## 7.2.87 Name on Road Sign

### Definition

Name on Road Sign indicates the name assigned to a road by the official organisation responsible for the existence and maintenance of the road. The Name on Road Sign is generally the name posted on the street signs.

### Value

Y - Name on Road Sign

N - Not Name on Road Sign

### Length

1

### Type

Boolean

### Usage

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

For destination selection any name may be used. However only names with Name on Road Sign = Y and Exit Number = Y should be used for route guidance.

A link may have more than one name with Name on Road Sign = Y. There is no distinction in this case to which name is more important than the other name.

### Specification

- A name with Name on Road Sign = Y may not be the name that is on every street sign. It is the predominant name(s) for a stretch of road.
- Every named link must have at least one name which is Name on Road Sign = Y. However, multiple names with Name on Road Sign = Y may exist on a named link.
- It is impossible to rank a Feature Name (non route number) with Name on Road Sign = Y and a Feature Name (a route number) with Name on Road Sign = Y when they are both published for the same link.
- For detailed information on naming rules see [General Naming Rules](#) on page 1135.
- Applies to navigable linear features only.

## 7.2.88 Postal Name

### Definition

Postal Name identifies additional names that are added to a link merely to match a postal service file. They could not be verified on any other sources or by field research.

### Value

Y - Postal Name

N - Not a Postal Name

### Length

1

### Type

Boolean

### Usage

Postal Names are included in the database to assist in destination selection but should never be used during route guidance or map display.

### Specification

- A Postal Name is always Explicable = N.
- Applies to navigable linear features only.

## 7.2.89 Stale Name

### Definition

Stale Name identifies old names that are still in use.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### **Value**

Y - Stale Name

N - Not a Stale Name

### **Length**

1

### **Type**

Boolean

### **Usage**

Stale Names are included in the database to assist in destination selection but should never be used during route guidance or map display.

### **Specification**

- A Stale Name is always Explicable = N.
- Applies to navigable linear features only.

## 7.2.90 Vanity Name

### **Definition**

A Vanity Name identifies an alternative name (specific to a business, settlement, location, etc.) other than the official street name. The Vanity Name may only apply to one building along the street (e.g., IBM Plaza).

### **Value**

Y - Vanity Name

N - Not a Vanity Name

### **Length**

1

### **Type**

Boolean

### **Usage**

Vanity Names are included in the database to assist in address identification and may be used for route guidance.

### **Specification**

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- A Vanity Name identifies:
  - a named building with an internal address (1 IBM Plaza).
  - a group of buildings along the same street (some Résidences, Cités).
  - a group of buildings along different streets (some Housing Estates).
  - settlements without street names, but with addresses that are numbered sequentially for the settlement, for example, Praglia 1...25 (in the settlement Praglia).
- A Vanity Name is included when it is well known or when there is no street name available.
- In case of a housing estate, only the name of the estate is entered and not the names of the individual buildings.
- Names with Vanity Name = Y will also be coded as Explicable = Y and Name on Road Sign = Y if it is the only name present on a link. If there is more than one name present, the Vanity Name is Explicable = N and Name on Road Sign = N.
- ① **Note:** A Street Type is not published when Vanity Names are published for street names.
- Applies to navigable linear features only.

## 7.2.91 Junction Name

### Definition

Junction Name identifies a ramp system that comprises a named Junction between two or more motorways or a named motorway exit/entrance.

### Value

Y - Junction Name

N - Not a Junction Name

### Length

1

### Type

Boolean

### Usage

Junction Name allows for explication of an exit or entry ramp that comprises a named junction without having to use the sign text.

### Specification

- Junction Name = Y is applied to the entire ramp system comprising a named junction.
- Junction Names are primarily found in the European databases. However, Junction Names can be found in the U.S. states of New Jersey and Pennsylvania.

## 7.2.92 Exit Name

### Definition

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

**Exit Name** identifies a name that is an (alpha)numeric exit name.

### Value

Y - Exit Name

N - Not an Exit Name

### Length

1

### Type

Boolean

### Usage

An exit name (Exit Name = Y) as a feature name can be used for destination selection.

### Specification

- Exit Name = Y is only applied to the first ramp link of an exit. The exit number is applied as a Feature Name.
- Applies to navigable linear features only.

## 7.2.93 Scenic Route

### Definition

Scenic Route is a route offering pleasing views of natural landscapes.

### Value

Y - Scenic Route

N - Not a Scenic Route

### Length

1

### Type

Boolean

### Usage

Scenic Route can be used for route calculation, prioritising scenic routes and for map display.

### Rules

- Scenic Route is only applied to roads that allow Autos and Through Traffic.
- Scenic Route is not applied to a Boat/Rail Ferry or frontage roads.
- Scenic Route “spurs” are not coded. These “spurs” are roads that lead to a scenic view off the main route.

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- A Scenic Route is navigable and connected (no small gaps exist). Any single Scenic Route is navigable from start to end point (and back) meaning guidance is not blocked by Restricted Driving Manoeuvres, Gates, Dividers, or Direction of Travel.

### 7.2.94 Scenic Route Name

#### Definition

Official name for a Scenic Route. If the link is a scenic route, indicates if it has a scenic route name associated with it.

#### Value

Y - Scenic Route Name

N - Not a Scenic Route Name

#### Length

1

#### Type

Boolean

#### Usage

Scenic Route Names can be used for destination selection and map display.

#### Rules

- Scenic Route Name is applied when the name represents a scenic route.
- Scenic Route Name is only applied to a link that has Scenic Route = Y attribute coding.

##### Note:

Not all links with Scenic Route = Y will have a Scenic Route Name.

- Scenic Route Name is coded Explicable = N and Name on Road Sign = N, unless it is the only name on the link, then it is Explicable = Y and Name on Road Sign = Y.

### 7.2.95 Four-wheel Drive

#### Definition

Identifies roads which are suitable only for vehicles with four-wheel drive.

#### Value

Y - Four-wheel Drive

N - not Four-wheel Drive

#### Length

1

#### Type

## Reference Guide

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7.2 Streets (Streets)

Boolean

### Usage

Four-wheel Drive is primarily used for cartographic representation (map display). This attribute can also affect routing algorithms by assigning higher penalties to four-wheel drive roads.

### Specification

- Four-wheel Drive is applied to navigable geometry suited for use only by four-wheel drive vehicles.
- Four-wheel Drive is published only for the following countries: Australia, Botswana, Canada, Guatemala, Iceland, Lesotho, Mozambique, Namibia, Saudi Arabia, South Africa, Swaziland, Ukraine, United Arab Emirates, and the United States
- Four-wheel Drive is not applied to navigable geometry that is suitable for use by vehicles not equipped with four-wheel drive.
- Access Characteristics/Vehicle Types on links coded Four-wheel Drive should be as follows:
  - Autos = Y
  - Emergency Vehicles = Y
  - Carpools = Y
  - Through Traffic = Y
- Links coded Four-wheel Drive receive the following default attribute values:
  - Speed Category = <11 KPH/< 6 MPH)
  - Functional Class = 5
  - Paved = No
- Links coded with Four-wheel Drive cannot have a Named Place POI.
- In the Middle East (Saudi Arabia, Oman, UAE, Qatar and Kuwait), “-Off-road” is published at the end of POI base names that are only accessible by four-wheel drive roads (<POI Name>-Off-road).

## 7.2.96 Coverage Indicator

### Definition

Coverage Indicator is an attribute to a navigable or non-navigable link that indicates a product level that corresponds to the inclusion of database features. It also indicates verification and completeness for a particular feature in the database.

### Value

Content Level	Coverage Indicator Description	Coverage Indicator Value	Road Inclusion	Road Verification
HERE Map Content	Prime	N0	FC 1-5	FC 1-5
	Complete	N1	FC 1-5 (all FC = 5 roads are included)	FC 1-4
	Network	N2	FC 1-5 (not all FC = 5 roads are included)	FC 1-4

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Content Level	Coverage Indicator Description	Coverage Indicator Value	Road Inclusion	Road Verification
	City-To-City	N4	FC 1-5 (not all FC = 5 roads are included)	FC 1-2
	Base - Urban Routing/ Point2Point	B6	FC 1-4 roads included to the Intermediate Map specification. FC-5 roads may be included and may have limited connectivity.	None
	Base - Search and Display	B8	FC 1-2 roads included to the Intermediate Map specification. FC 3-5 roads may be included and have limited connectivity.	None
	Base - Display Only	B9	FC 1-2 roads included to the Intermediate Map specification. FC 3-5 roads may be included and may have limited connectivity.	None
Intermediate Map Content	Urban Routing/ Point2Point	I1	FC 1-4 roads included to the Intermediate Map specification. FC-5 roads may be included.	None
	Search and Display	I2	FC 1-4 roads included to the Intermediate Map specification. FC-5 roads may be included and may have limited connectivity.	None
	Display Only	I3	FC 1-2 roads included to the Intermediate Map specification. FC 3-5 roads may be included and may have limited connectivity.	None
Entry Map Content	Entry Map	E7	FC 1-3 (included to Entry Map specification)	None
Not Content Level Specific	Global Ocean Layer	O1	N/A	N/A
	Tracks4Africa	W0	N/A	N/A

## Length

2

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### Type

Text

### Usage

Coverage Indicator provides a refinement to the existing Prime Inclusion, Network, Integrated and Full Geometry coding in the HERE Map Content.

An application can use Coverage Indicator to provide specific guidance or display depending on the Coverage Indicator value. An example of specific guidance would be a message when entering an area with a particular coverage indicator.

### Specification

- Coverage Indicator is published for both navigable links and non-navigable features. In this record, however, only values for non-navigable links are published.
- Each cartographic layer will have a Coverage Indicator field.
- A Link or cartographic feature can have only one Coverage Indicator attribute associated.
- Coverage Indicator is published for all databases. For existing coverage areas specific Coverage Indicator values are assigned (N0 through N3 and I0 through I1).
- Existing Prime Inclusion and In Integrated coding is unaffected by the introduction of Coverage Indicator.
- Linear cartographic features, i.e., Feature ID for a non-navigable usage, can have different Coverage Indicator values applied for the links that define the feature. This means that some links of a linear cartographic feature could be published with a different Coverage Indicator value from that of other links in the same linear cartographic feature.
- Polygonal cartographic features, i.e., Feature ID for a non-navigable usage, are always entirely published with the same Coverage Indicator value. This means that all links of a polygonal cartographic usage are published with the same Coverage Indicator value.
- Coverage Indicator values are listed in the Value section above. The detailed meaning of each Coverage Indicator value is outlined in other HERE product documentation (Country Profiles). Please refer to these documents for a more detailed country specific meaning of each Coverage Indicator value.

## 7.2.97 Parking Lot Road

### Definition

Identifies roads internal to parking lot areas.

### Value

Y - Parking Lot Road

N - Not a Parking Lot Road

### Length

1

### Field Name

Plot\_Road

# Reference Guide

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## Layer

STREETS

### Related Attributes

Feature Type Parking Lot (1700215)

### Usage

Parking Lot Road can be used to enable special guidance in Parking Lot areas and provides enhanced map display.

### Specification

- Parking Lot Road = Y is coded on links with Feature Type 9999999 (Road Network).
- Parking Lot Road = Y is coded on links that meet the following criteria:
  - Functional Class = 5
  - Speed Category = 8
  - Lane Category = 1
  - Access Characteristics
    - Through Traffic = No
    - Auto = Yes
    - Pedestrian = Yes
- Parking Lot Road = Y is not coded on parking lot primary arteries that lead to and from the POI. See [Figure 232:](#) on page 490.

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- POIs are not placed on link with Parking Lot Road = Y

**Figure 232:**



Blue Links - Roads external to Shopping Centre and parking lot primary arteries.

Red Links - Parking Lot Roads

### 7.2.98 Reversible

#### Definition

Reversible indicates that a road is fully reversible, which implies that traffic is allowed in both directions of the same lane, at specific times of day.

① **Note:**

Current specifications provide coding for Reversible Links, however the lane counting is duplicated for reversible links. The double lane counting for reversible links is sub-optimal for display related lane-level content like Lane Marking. This specification provides an enhanced model to resolve the lane counting issue for reversible links.

#### Field

Reversible (Reversible)

#### Value

N - Not reversible

Y - Reversible

#### Default Value

N - Not reversible

## Reference Guide

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7.2 Streets (Streets)

### Type

Char(1)

### Layer

Streets

### Usage

The Reversible attribute can be used to identify links that are fully reversible. The Reversible attribute aids in the interpretation of lane dependent coding and enables correct rendering of lane marking content.

### Specification

- Reversible = Y is flagged for links that are fully reversible, which means links where all lanes are accessible in both directions at specific times of the day.
- Links where only a subset of lanes is reversible are coded Reversible = N.
- With the introduction of Reversible link flag, Lane Divider Marker is only coded in the positive travel direction for Reversible Links.
- Reversible will be published globally on a go forward basis.

## 7.2.99 Express Lane

### Definition

The Express Lane attribute identifies links that serve as express lane.

### Field

Express Lane (Expr\_Lane)

### Value

N - Link is not an Express Lane

Y - Link is an Express Lane

### Default

N - Link is not an Express Lane

### Type

Char(1)

### Layer

Streets

### Usage

Express Lane can be used to prioritise ongoing traffic to take the express lane.

### Specification

- Express Lane = Y is published if all lanes on a link are express lanes, which means links where all lanes are accessible in both directions at specific times of the day.

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- Express Lane = N is published for links if tolls are imposed for all vehicles, including carpools, regardless of the number of lanes representing express/carpool (High Occupancy Toll) and ETL (Express Toll Lanes), i.e., even if all of the lanes are express/carpool lanes.
- Only links where all lanes are express lane are coded Express Lane = Y. Links having only some express lane(s) will be coded Express Lane = N.
- Express Lanes have the same Functional Class as the main road to which the express lane is associated. Prioritisation in routing to express lanes therefore should be based on the Express Lane attribute.

## 7.2.100 Carpool Road

### Definition

The Carpool Road attribute identifies a Link where at some point all lanes serve as Carpool lane.

### Field

Carpool Road (CarpoolRd)

### Value

N - Link is not a Carpool Road

Y - Link is a Carpool Road

### Default

N - Link is not a Carpool Road

### Type

Char(1)

### Layer

Streets

### Related Attributes

Express Lane

Reversible

### Usage

Carpool Road can be used to avoid Carpool links in the routing, and can be used for explicit instructions (guidance) in relation to Carpool links.

### Specification

- Carpool Road = Y is coded for link where all lanes are in-use as Carpool (HOV) at specific times.
- A Link where only a sub-set of lanes is used as an HOV lane is coded Carpool Road = N.
- A Link coded Carpool Road = Y can be closed to all traffic at specific times, or can be open to non-HOV vehicles at specific times. The Carpool Road = Y attribute only indicates that a link is at some point only accessible to HOV vehicles.

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- Carpool Road = N is published for links if tolls are imposed on all vehicles, including carpools, regardless of the number of lanes representing express/carpool (High Occupancy Toll) and ETL (Express Toll Lanes), i.e., even if all of the lanes are express/carpool lanes.

### 7.2.101 Physical Number of Lanes

#### Definition

Physical Number of Lanes indicates the total number of all lanes on a link across all travel directions.

① **Note:**

Reversible lanes are counted as one lane.

#### Field

Physical Number of Lanes (Phys\_Lanes)

#### Value

1 - 32

#### Default Value

No default applies. Column = '0' is published for links that do not have Lane Objects published.

#### Type

Number(2,0)

#### Layer

Streets

#### Related Attributes

From / To Number of Lanes

Reversible

#### Usage

Physical Number of Lanes can be used to correctly render the road layout, in combination with Lane Marking and Lane Type.

① **Note:**

Lane Feature coding can only be correctly interpreted in combination with Physical Number of Lanes.

#### Specification

- Physical Number of Lanes is only published for links that require lane level attribution; corresponding Lane Objects are published in the Lane layer.
- Physical Number of Lanes counting is independent from the driving direction and counts reversible lanes only once. Physical Number of Lanes reflects the actual number of lanes present on a link.
- Physical Number of Lanes is a Link-only attribute.

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7.2 Streets (Streets)

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### 7.2.102 Public Access

#### Definition

The Public Access attribute indicates whether or not the Link allows public access.

#### Field

Public access (Pub\_Access)

#### Type

Boolean

#### Values

Y - Link allows public access.

N - Link does not allow public access.

#### Usage

- Route Calculation

The Public Access attribute indicates if the road element can be used in route calculation to avoid specific navigable links.

- Route Guidance

The Public Access attribute can be used in route guidance for additional guidance instructions.

- Map Display

The Public Access attribute can be used in map display to differentiate navigable links.

Facility Type/Area	Through Traffic	Private	POI Access Road	Public Access	Low Mobility <sup>128</sup>
Airport	Yes, except if posted No, if Bus/Taxi lane	No, except Restricted Areas	No	Yes, except Restricted Areas	No, except Restricted Areas
Airport Cargo	No	Yes	No	No	Yes, if SC7 or SC8 <sup>129</sup>
Amusement Park	No, except thoroughfare <sup>130</sup> that does not require payment	Yes, excluding thoroughfare1	No	Yes	Yes, except if thoroughfare3
Animal Park	No, except thoroughfare3	Yes, excluding thoroughfare1	No	Yes	Yes, except if thoroughfare3
Casino	No	Yes, except Native American Reservation Casinos	No	Yes	Yes, if SC7 or SC82
Cemetery	No, except if thoroughfare3	No, if owned by city Yes, if owned by church	No	Yes	Yes

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Facility Type/Area	Through Traffic	Private	POI Access Road	Public Access	Low Mobility <sup>128</sup>
Convention Centre <sup>131</sup>	No	Yes, excluding thoroughfare3	No	Yes	Yes, if SC7 or SC82 and excluding thoroughfare3
Gated Communities	No	Yes	No	No	No
Golf Course without homes	No, except if thoroughfare3	No, except if posted	Yes, if geometry to clubhouse is unnamed	Yes, except if gated	Yes, if SC7 or SC82 and excluding thoroughfare3
Golf Course with homes and Gate	No, except if thoroughfare3	Yes	Yes, if geometry to clubhouse is unnamed	No	No, except if there is a clubhouse entrance road
Golf Course with no homes and No Gate	Yes, except if posted	No, except if posted	Yes, if geometry to clubhouse is unnamed	Yes	No, except if there is a clubhouse entrance road
Historical Monument <sup>4</sup>	Yes, except if posted	No, except if posted	No	Yes	Yes if SC7 or SC82 and excluding thoroughfare3
Hospital	No, except if thoroughfare3	No, except if posted	Yes, if geometry to main entrance and ER is unnamed	Yes	Yes, except if thoroughfare3
Industrial Complex	Yes, except if posted	No, except if posted or private in reality	No	Yes, except if gated	Yes if SC7 and SC82
Military Base	No, except if thoroughfare3	Yes, except if thoroughfare1	No	No, excluding thoroughfare1	Yes if SC7 or SC82 and excluding thoroughfare3
Native American Reservation	Yes, except if posted	No, except if posted	No	Yes	Yes if SC7 or SC82 and excluding thoroughfare3
Park & Ride	No	No	Yes	Yes	Yes if SC7 or SC82 and excluding thoroughfare3
Park(National)	Yes, except if posted	No, except if posted	No	Yes	Yes if SC7 or SC82 and excluding thoroughfare3
Park(State)	Yes, except if posted	No, except if posted	No	Yes	Yes if SC7 or SC82 and excluding thoroughfare3
Park(City)	No, except if thoroughfare3	No	No	Yes	Yes if SC7 or SC82 and excluding thoroughfare3
Parking Lot/Garage <sup>4</sup>	No	No, except if posted	No	Yes	Yes

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Facility Type/Area	Through Traffic	Private	POI Access Road	Public Access	Low Mobility <sup>128</sup>
Pedestrian Zone	No, except if thoroughfare <sup>3</sup>	No	No	Yes	Yes
Rail Yard	No, excluding thoroughfare <sup>3</sup>	Yes	No	No	Yes
Rest Area	Yes	No	Yes	Yes	Yes
Seaport/Harbour	No, excluding thoroughfare <sup>1</sup>	Yes	No	No	Yes
Shopping Centre	No, interior to ring road Yes, if ring road or any thoroughfare <sup>3</sup>	Yes, excluding thoroughfare <sup>3</sup>	No	Yes	Yes, interior to ring road
Sports Complex	No, except if thoroughfare <sup>3</sup>	Yes, excluding thoroughfare <sup>3</sup>	No	Yes	Yes, excluding thoroughfare <sup>3</sup>
Tourist Attraction <sup>4</sup>	No, except if posted	Yes, except if managed by a public (i.e., city) department	No	Yes	Yes, excluding thoroughfare <sup>3</sup>
Undefined Traffic Area	Yes, except if posted	No	No	Yes	No
University	No, except if thoroughfare <sup>3</sup>	Yes, except if thoroughfare <sup>3</sup>	No	Yes	Yes, if SC7 and below
Unsafe Areas <sup>4</sup>	No	No	No	Yes	Per Reality
Weigh Station	No	No	Yes	Yes	Yes
Winery <sup>4</sup>	No	Yes	Yes, if POI is located on winery entrance link	Yes	Yes, if SC7 or SC82
Woodland	Yes, except if posted	No, except if posted	No	Yes	Yes, if SC7 or SC82

## Unsafe Areas

There are certain areas that are regarded as unsafe for non-local drivers. These are typically illegal settlements. Links representing these roads receive the following standard attribution:

<sup>128</sup> Low Mobility is only published in Europe, Canada and the U.S. at this time.

<sup>129</sup> SC stand for "Speed Category."

<sup>130</sup> Thoroughfare Definition: Thoroughfare is a public road that allows city traffic to continue through/around the feature (i.e., park, shopping centre, etc). The thoroughfare is not limited to just the traffic accessing the feature in question.

<sup>131</sup> A land use polygon does not exist for such Facility Types. Geometry added to enhance navigation (e.g., entrance roads, parking lot roads, etc.) around these Facility Types/areas is published to the specifications in the table.

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### Main Roads

- Functional Class = 5
- Speed Category = 7
- Through Traffic = N
- Other attributes are applied as appropriate.

### Roads in Residential Areas

- Functional Class = 5
- Speed Category = 7
- Through Traffic = N
- Other attributes are applied as appropriate.

### Inclusion

Argentina, Chile, Colombia, Costa Rica, Israel, Gaza Strip, Palestine, Kenya, Lebanon, South Africa and Venezuela.

### Specification

- Public Access is coded at the Link level.
- A Link coded with Public Access = N indicates that the road element is restricted to access for use by the general public.
- The attributes Private and Through Traffic remain unchanged.

## 7.2.103 Low Mobility

### Definition

The Low Mobility attribute provides for display of links differently from other functional class 5 and low speed category roads. It further distinguishes functionality of functional class 5 roads similar to the Parking Lot Road and Four-wheel Drive attributes.

### Field

Low Mobility (Low\_Mbly)

### Type

Char(1)

### Values

- 1 - Driving condition is low mobility.
- 2 - Driving condition is not low mobility.
- 3 - Driving condition is unknown.

### Usage

The Low Mobility attribute provides for display of links differently from other functional class 5 and low speed category roads. It further distinguishes functionality of functional class 5 roads similar to the

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Parking Lot Road and Four-wheel Drive attributes. This information can be used in route calculation to avoid specific links.

### Specification

- Links will get Low Mobility = 1 when:
  - The Functional Class = 5.
  - The number of lanes per direction of travel Lane Category = 1.
  - The Speed Category = 7 or 8.
- Low Mobility = 1 applies to all links with Four-wheel Drive = Y.
- Low Mobility = 1 applies to all links with Parking Lot Road = Y.

In some countries, which include but are not limited to Russia and Ukraine, Low Mobility is also applied to links that serve as access to parking lots of apartment buildings.

- In some other countries like Azerbaijan and Kazakhstan, Low Mobility is applied only for apartment roads. Low Mobility will allow the consistency for Commonwealth of Independent States (CIS) countries.
  - Low Mobility = 2 is applied to links where driving conditions do not require a low speed.
  - Low Mobility = 3 is applied to links where it is unknown whether driving conditions require a low speed.
-  **Note:** This is the default value except in the United States and Canada.
- All links with Low Mobility = 1 are validated for connectivity. This means that there cannot be a link with Low Mobility = 2 in the middle of links with Low Mobility = 1.
  - POIs can exist on links with Low Mobility = 1 except when Parking Lot Road = Y.
  - A road element coded with Low Mobility = 1 may have speed bumps.
  - Low Mobility = 1 is not one-to-one with Thru Traffic or with Unpaved.
  - Exceptions to the above rules may exist in individual cases.

## 7.2.104 Priority Road

### Definition

Priority Road defines road stretches that have signs indicating priority on the road. On these roads all traffic has priority over the traffic on the incoming roads.

### Value

N - Link is not a Priority Road

Y - Link is a Priority Road

### Default Value

N - Link is not a Priority Road

### Type

Char(1)

### Usage

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**Priority Road** can be used for route planning to achieve lower fuel consumption. By prioritising priority roads during route planning, the “stop and go” at intersections, resulting in high fuel consumption, can be minimized.

## Specification

- Priority Road is a Link only attribute.
- Turn lanes and ramps have Priority Road (No) applied.
- Priority Road is applied based on signs indicating priority on the road. Priority on a road is indicated Sign 1 as shown in the following table. End of priority is indicated by Sign 2 in the following table. Priority can also be indicated by the signs indicating the priority at an intersection (see [Figure 233: Example of Priority Road Direction Signs. More variations of this sign exist.](#) on page 500) or by the supplemental sign panel indicating the priority road direction when the priority road is making a sharp bend (see [Figure 233: Example of Priority Road Direction Signs. More variations of this sign exist.](#) on page 500).
- The Priority Road attribute stops when one of the following signs is posted:
  - End of Priority sign
  - Stop sign
  - Yield sign
  - Crossing with Priority from the Right

However, when Traffic Lights or sign-posted pedestrian crossings are present, the priority road continues unless one of the signs defined above is posted at the same time.

- Certain countries have a rule that the priority road continues until the End of Priority Sign is posted. A list of countries will be provided when the product is released.

Sign Example	Description	Sign Example	Description
1 	Priority Road	2 	End of Priority Road

Sign Example	Description
1 	Road intersection with priority over minor roads from the left and right.

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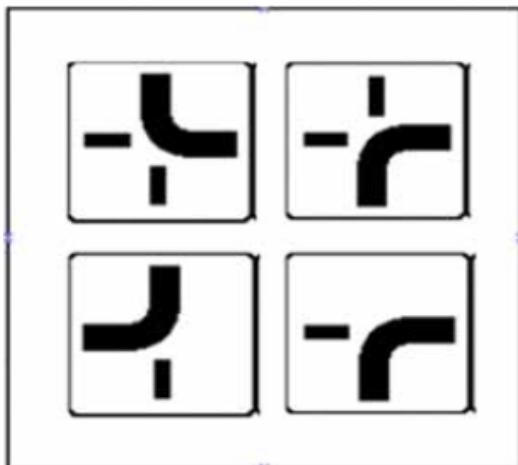
7.2 Streets (Streets)

Sign Example	Description
2	Road intersection with priority over minor road from the left.
	

3	Road intersection with priority over minor road from the right.
	

Figure 233: Example of Priority Road Direction Signs. More variations of this sign exist.



- The Priority Road attribute is only published from intersection to intersection. This means that the Priority Road attribute does not necessarily start or stop exactly where sign-posted. The sign indicating priority road can be sign-posted before or after an intersection. The Priority Road coding

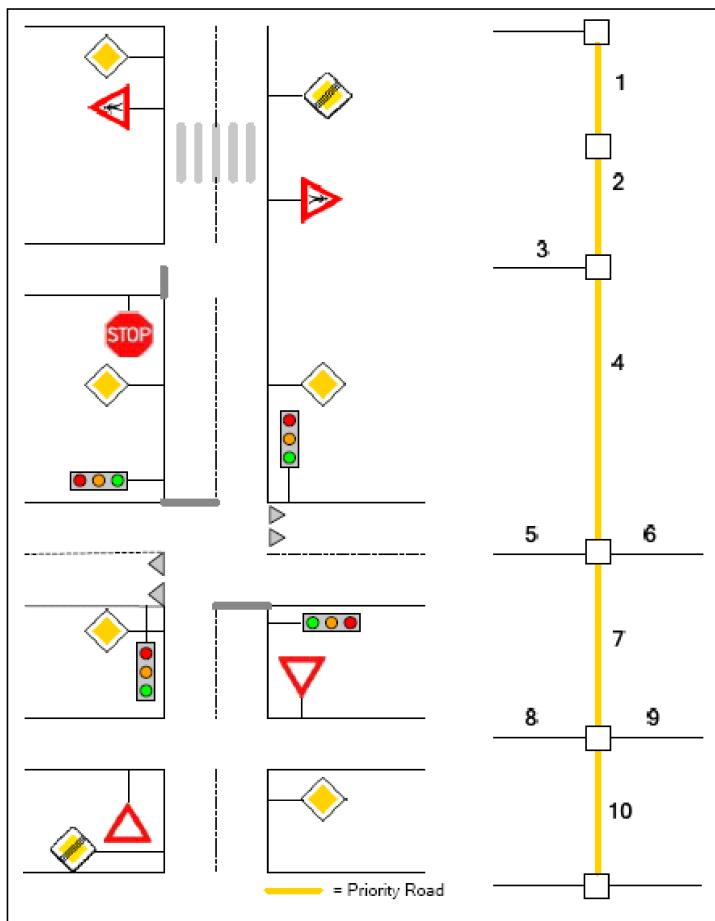
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starts from the intersection prior to where the sign is posted until the next intersection, regardless of the actual position of the sign (see Links 1, 2 and 10)

**Figure 234:**



- Priority Intersection Signs ([Figure 233: Example of Priority Road Direction Signs. More variations of this sign exist.](#) on page 500) are sign-posted just before an intersection. The Priority Road coding starts from the intersection where the Priority Intersection sign is posted until the next

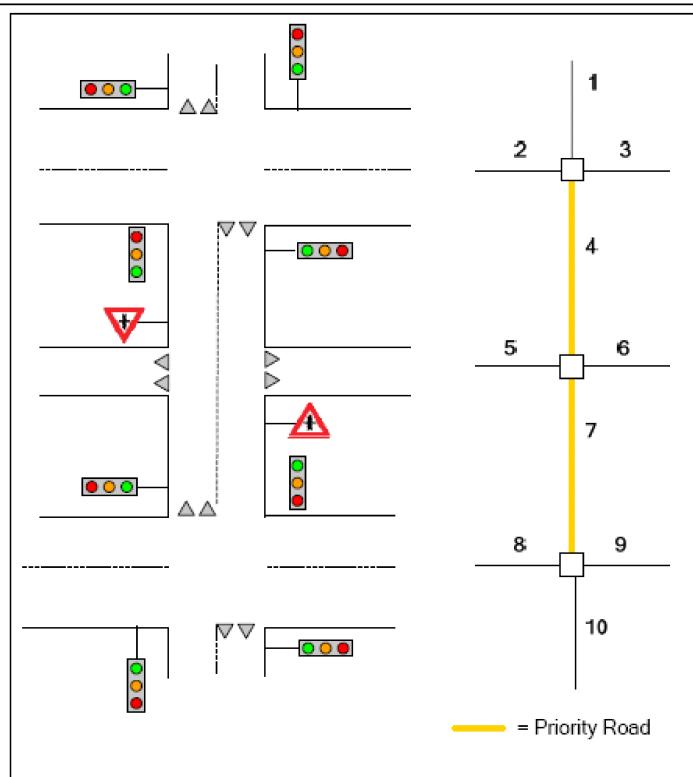
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intersection. In case the next intersection is also posted with a Priority Intersection sign, then the Priority Road coding continues until priority ends.

**Figure 235:**



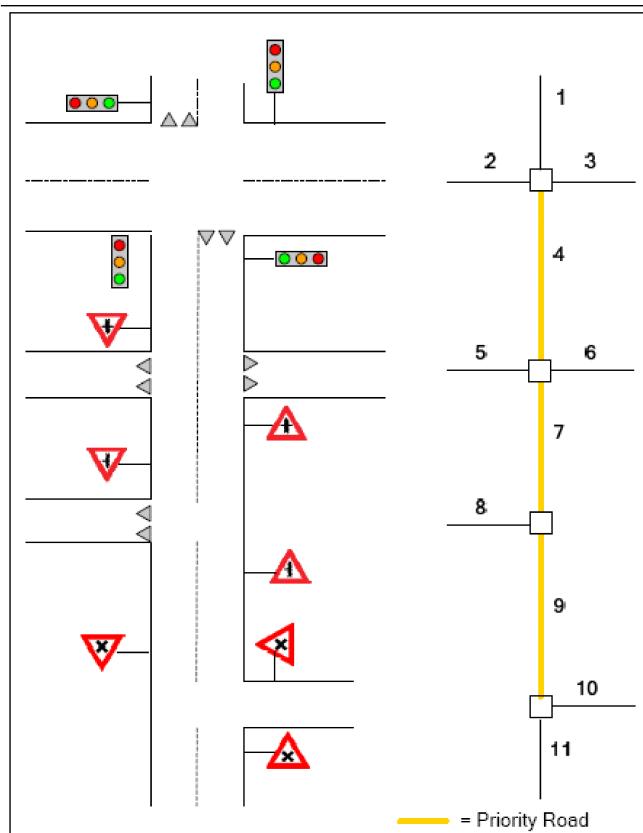
# Reference Guide

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here

Figure 236:



- Priority Road can be published for Links that have a Through Route condition.
- The priority rules on Priority Roads can be impacted by other traffic regulations such as Traffic Lights at the intersection of crossing priority roads or pedestrian crossings (either sign-posted or controlled by lights) along the priority road. The Priority Road attribute will continue after such an intersection unless signs are present indicating that the priority road ends. However, the priority is temporarily impacted by other traffic regulations in these cases.
- Priority Road is not published for roundabouts. The priority rules on roundabouts are such that traffic either has to yield to traffic on the roundabout when entering the roundabout, or yield to traffic that enters the roundabout when travelling on the roundabout.
- Highways/motorways are considered Priority Roads by default. Therefore, highways/motorways are not published with the Priority Road attribute.

## 7.2.105 Speed Limit Source

### Definition

Speed Limit Source is a generalised identification of the source of the To/From Speed Limit information.

### Values

1 - Posted

2 - Derived

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### Default Value

(space) - Not Applicable

### Format

Char(2)

### Layer

Streets Layer (Streets)

### Related Attributes

From Reference Speed Limit

Toward Reference Speed Limit

### Usage

Speed Limit Source provides information to speed limit recognition applications about the generalised source of the speed limits in the database, to allow the application to choose between the speed limit from the database and the speed limit from the camera.

### Specification

- Speed Limit Source = 1 – Posted is published if Speed Limit is based on a posted speed limit sign, speed limit information painted on the road, or data obtained from official sources.
- Speed Limit Source = 2 – Derived is published if Speed Limit is based on administrative regulations; such as:
  - State-specific speed limits on highways (U.S.)
  - Country-specific speed limits on roads outside Built-up Areas (EU)
  - Signs implying a certain speed such as Motorway signs (EU), Built-up Area signs (EU), Traffic Calming Zones
- ① **Note:** As an exception to the rule, Speed Limit Source = 2 – Derived is also published (in the U.S. and Canada) for posted advisory speed limits.
- Speed Limit sources can differ per travel direction, for example Posted in one direction and Derived in the opposite direction. In these cases, Speed Limit Source = 1 – Posted is published.

## 7.2.106 Transition Area (Streets)

### Definition

Transition Area defines the stretch of road where the number of lanes changes and lane markings are not present on the road.

### Values

Y - Is Transition Area

N - Not a Transition Area

### Default Value

N - Not a Transition Area

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Attributes - Road Features and Associated Navigation Information

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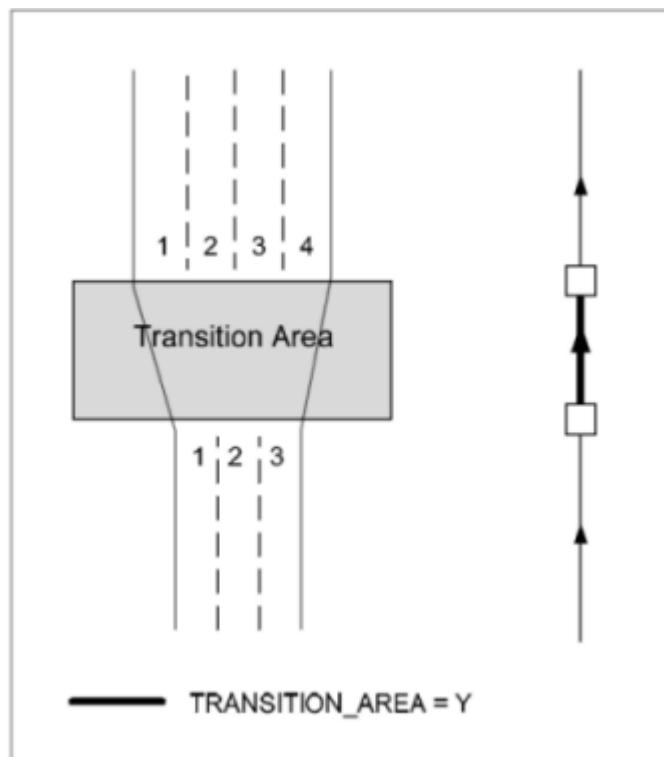
## Usage

Transition Area can be used for display purposes to inform the user that the number of lanes changes and show when the transition starts and ends.

## Specification

- When Lane Transition Area is published for all Lanes or a subset of lanes, Link Transition Area publishes "Y". See [Figure 237:](#) on page 505.

**Figure 237:**



## 7.2.107 Expanded Inclusion

### Definition

Identifies cartographic features or links that meet the requirements for Expanded Inclusion.

### Layers

Streets

Land Use A

Land Use B

Waterway Segments

Waterway Polygons

### Values

1 - Meets Expanded Inclusion

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

2 - Supplemental Only

3 - Cemetery

4 - Industrial Complex

5 - Park (City/County)

6 - Lake

7 - Woodland

8 - 2D Building Footprint

9 - Pedestrian Geometry

10 - Supplemental Geometry

11 - Four-Wheel Drive

12 - Parking Lot Road

13 - In-Process Data

14 - Coverage Expansion

15 - Extended Navigation

## Entity-Attribution Relation

1:0,1

## Usage

This attribute makes all of the links or cartographic features that meet the inclusion requirements for expanded inclusion easily identifiable. This allows for the option to not publish these links/features if the inclusion causes issues with the size of the database.

Can be used to differentiate links included only for limited use from those published with limited use attribution. For example, when a portion of a hiking trail shares geometry with an unpaved road for use by autos, only those links dedicated for hiking are indicated for limited use only.

## Rules

Expanded Inclusion is applied based on feature-specific criteria.

### Landuse Features:

- Expanded Inclusion is applied to any Land Cover according to the following table.

 **Note:**

Features that exceed the standard size requirement do not receive Expanded Inclusion.

Features	Coverage Level	Inclusion Rules	
		Standard	Expanded
Building/ LandmarkFootprint	All HERE Maps	Regional inclusion definitions	Areas outside of the defined areas for standard inclusion

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)



Allotment	All HERE Maps	>=10.000 m2	>=500 m2 and <10.000 m2
Amusement Park	All HERE Maps	>=50.000 m2	>=10.000 m2 and <50.000 m2
Animal Park	All HERE Maps	>=50.000 m2	>=10.000 m2 and <50.000 m2
Beach	All HERE Maps	>=10.000 m2	>=2.000 m2 and <10.000 m2
Cemetery	All HERE Maps	>=50.000 m2	<10.000 m2 for urban areas <50.000 m2 for rural areas
Golf Course	All HERE Maps	>=50.000 m2	>=10.000 m2 and <50.000 m2
Industrial Complex	Prime/Complete	N.A.:  > =250,000 m2 EMEA: > =20,000 m2	N.A.:  <20.000 m2 for named and in urban areas  <50.000 m2 for unnamed and in urban areas  <50.000 m2 for unnamed/named and in urban areas
Island <sup>132</sup>	Prime/Complete	>=10.000 m2	N/A
	Network/City-to-City	>=250.000 m2 (NA: >=1 million m2)	N/A
National Forest <sup>132</sup>	All HERE Maps	>=10.000 m2	>=500 m2 and <10.000 m2
National Park	All HERE Maps	>=10.000 m2	>=500 m2 and <10.000 m2
City/County Park	All HERE Maps	>=10.000 m2	<10.000 m2 in urban areas <100.000 m2 in rural areas
Shopping Centre	All HERE Maps	>=50.000 m2 (EMEA:>20.000 m2, NA: >=250.000 m2)	>=10.000 m2 and <50.000 m2 (EMEA: >= 10.000 m2 and <20.000 m2 NA: >=10.000 m2 and <250.000 m2)
State Park	All HERE Maps	>=10.000 m2	>=500 m2 and <10.000 m2
Woodland	Prime	>=10.000 m2	N.A.:  <1.000.000 m2 Rest of the World:  <50.000 m2
	Network	>=250.000 m2	

<sup>132</sup> All islands with navigable road network are included. Inclusion sizes provided apply to islands without navigable road network. For Expanded Inclusion, Islands are included if within a hydro feature included under Expanded inclusion rule.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

- Expanded Inclusion is not applied to the following:
  - Land Cover Features associated to a Service that is flagged as National Importance
  - Land Cover Features with Natural Guidance associations

## Water Features

- ① **Note:** Features that exceed the standard size requirement do not receive Expanded Inclusion. However, features that are flagged as Expanded Inclusion at a lower Coverage Indicator level retain the Expanded Inclusion flag when the Coverage Indicator gets upgraded to a higher level where the Standard Inclusion size overlaps with that of the Expanded Inclusion. For example, if a lake feature flagged with Expanded Inclusion in Canada has a Coverage Indicator value of N4 and is upgraded to N0, it maintains the Expanded Inclusion = 1 (Meets expanded inclusion) regardless of meeting standard inclusion size for Coverage Indicator value = N0.

## Lakes

- All lakes that qualify for Expanded Inclusion are applied with Expanded Inclusion = 6 (Lake) instead of Expanded Inclusion = 1 (Meets expanded inclusion).

## Bridges/Tunnels

- Expanded Inclusion is applied to any Brunnel Feature(s) whose length is between 5 and 200 metres (17 and 656 ft).
- ① **Note:** Features that exceed the standard size requirement do not receive Expanded Inclusion.
- When Brunnel Feature(s) that meet the inclusion criteria for *Expanded Inclusion* are located on geometry that meets one of the *Expanded Inclusion* criteria for road geometry (i.e., #9 values 9 through 15), the Bridge/Tunnel Expanded Inclusion criteria are ignored and the *Expanded Inclusion* for geometry takes precedence to allow filtering of the geometry.

## Roads

### **Expanded Inclusion=9 (Pedestrian Geometry)**

Expanded Inclusion is applied considering the following:

- Access Characteristics
- Urban vs. Rural location
- Address Range
- Services association

Expanded Inclusion is not applied for the following:

- Pedestrian geometry in urban areas
- Pedestrian geometry in rural areas with associated Services
- Pedestrian geometry in rural areas with address information.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

## Expanded Inclusion=10 (Supplemental Geometry)

- Expanded Inclusion is applied considering the following:
  - Supplemental Geometry bitset
  - Pedestrian Preferred
  - Urban vs. Rural location
- Expanded Inclusion is applied to the following features (Supplemental Geometry Bitset):
  - Undetermined Geometry Type (2)
  - Driveway (4)
  - Bicycle Path (16) with Pedestrian Preferred (Unknown)
  - Walking Path (32) with Pedestrian Preferred (Unknown)
  - Private Road for Service Vehicle (64)
  - Hiking Trail (256)
  - Cross Country Ski Trail (512)
  - Golf Course Trail (1024)
  - Ski Run (2048) Ski Lift (4096)
  - Outdoor Activity Access (131072)
  - Oil Field Road (262144)
- Expanded Inclusion is not applied to the following features:
  - Alley (8)
  - Supplemental Geometry types described in the table below:

Supplemental Geometry	Pedestrian Preferred	Urban vs Rural Location	Other Conditions
Walking Path (32)	Yes	Urban	N/A
Bicycle Path (16)	Yes	Urban	N/A
Walking Path (32)	Yes	Rural	With Services or address information associated
Bicycle Path (16)	Yes	Rural	With Services or address information associated

Network connectivity is guaranteed when suppressing supplemental geometry with Expanded Inclusion = 10 (Supplemental Geometry).

## Expanded Inclusion=11 (Four-Wheel Drive)

Expanded Inclusion is applied to the following:

- Roads that are flagged as Four Wheel Drive
- Roads in specific Product Region, e.g., the United States.

## Expanded Inclusion=12 (Parking Lot Road)

Expanded Inclusion is applied to the following:

- Roads that are flagged as Parking Lot
- Roads without EV Charging Station Services.

 **Note:**

Note: Network connectivity is guaranteed when suppressing Parking Lot Road geometry with Expanded Inclusion = 12 (Parking Lot Road).

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

### Expanded Inclusion=13 (In-Process Data)

- Expanded Inclusion is applied to roads that are flagged as In-Process Data.

 **Note:**

Network connectivity is guaranteed when suppressing In-Process Data geometry with Expanded Inclusion = 13 (In-Process Data).

### Expanded Inclusion=14 (Coverage Expansion)

- Expanded Inclusion is applied to roads that are newly added through processes that are not considered editing or maintenance.

 **Note:**

Network connectivity is guaranteed when suppressing Coverage Expansion geometry with Expanded Inclusion = 14 (Coverage Expansion).

### Expanded Inclusion=15 (Extended Navigation)

- Expanded Inclusion is applied for parking lot primary arteries that are unnamed and lead to/from the POI.

## 7.2.108 Delivery Road

- See *Delivery Road* on page 1058.

## 7.2.109 Supplemental Geometry Bitset

 **Note:**

This attribute is only published in the MapInfo format.

### Definition

Provides a classification for road geometry types included for special or limited use. These geometries are provided in addition to the standard road network.

### Field Name

SUPGEO\_BIT

### Values

Supplemental Geometry Type is a bitmask since multiple types are able to exist on one link.

1 - Race Track

2 - Undetermined Geometry Type

4 - Driveway

8 - Alley

16 - Bicycle Path

32 - Walking Path

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.2 Streets (Streets)

64 - Private Road for Service Vehicle

262144 - Oil Field Road

### Cardinality

1:0,1

### Default Value

NULL

### Usage

Supplemental Geometry Bitset can be used for map display and route calculation (avoidance of Supplemental Geometry).

### Specification

- When a link is not defined as Supplemental Geometry, the value is Null.
- Note:** Supplemental Geometry Bitset = 0 is not published.

## Race Track

### Definition

Tracks within a racing facility.

### Value

1

### Specification

- All links that are part of a race track are published as Supplemental Geometry Bitset = 1 (Race Track).
- The following default attribution is published:
  - Functional Class = 5
  - Speed Category = 8 (<11 KPH / <6 MPH)
  - Low Mobility = 2 or 3 (whichever is applicable to a country)
  - All other attributes per reality.
- Access Characteristics is defined as follows:
  - Autos =Y
  - Emergency Vehicles = Y
  - Through Traffic = N
  - All others = N
- All other attributes per reality.

## Undetermined Geometry Type

### Definition

A generic representation in the core product for miscellaneous Supplemental Geometry.

### Value

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.3 Alternate Street Names and Addresses (AltStreets)

2

### Driveway

#### Definition

A private road for local access to one or a small group of structures, owned and maintained by an individual or group of individuals.

#### Value

4

#### Specification

- Driveways that are 100 metres/328 feet or longer, regardless of the appearance, are included.

### Oil Field Road

#### Definition

A road used for the sole purpose of accessing an oil field and oil field operations.

#### Value

262144

#### Specification

- Roads published as Supplemental Geometry Bitset = 262144 (Oil Field Road) receive the following attribution:
  - Functional Class = 5
  - Speed Category = 7
  - Lane Category = 1
  - Low Mobility = 1
  - Public Access = N
  - Through Traffic = N
  - All other attributes per reality.

### 7.2.110 Confidence Level Rating

As of the Q3, 2016 product release, data for this attribute is no longer published.

## 7.3 Alternate Street Names and Addresses (AltStreets)

### 7.3.1 Link ID

See [Link ID](#) on page 367.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.3 Alternate Street Names and Addresses (AltStreets)

### 7.3.2 Street Name

See [Street Name](#) on page 367.

### 7.3.3 Feature ID

See [Feature ID](#) on page 367.

### 7.3.4 Street Name Language Code

See [Street Name Language Code](#) on page 369.

### 7.3.5 Street Name Prefix

See [Street Name Prefix](#) on page 369.

### 7.3.6 Street Type Before

See [Street Type Before \(and Street Type After\)](#) on page 371.

### 7.3.7 Street Name Base

See [Street Name Base](#) on page 372.

### 7.3.8 Street Name Suffix

See [Street Name Suffix](#) on page 372.

### 7.3.9 Street Type After

See [Street Type After](#) on page 373.

### 7.3.10 Street Type Attached

See [Street Type Attached](#) on page 373.

### 7.3.11 Address Type

See [Address Type](#) on page 374.

### 7.3.12 Left Side Reference Address

See [Left Side Reference Address](#) on page 378.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.3 Alternate Street Names and Addresses (AltStreets)

### 7.3.13 Left Side Non-Reference Address

See [Left Side Non-Reference Address](#) on page 378.

### 7.3.14 Left Address Scheme

See [Left Address Scheme](#) on page 378.

### 7.3.15 Left Address Format

See [Left Address Format](#) on page 379.

### 7.3.16 Right Side Reference Address

See [Right Reference Address](#) on page 389.

### 7.3.17 Right Side Non-Reference Address

See [Right Side Non-Reference Address](#) on page 390.

### 7.3.18 Right Address Scheme

See [Right Address Scheme](#) on page 390.

### 7.3.19 Right Address Format

See [Right Address Format](#) on page 391.

### 7.3.20 Number of Address Ranges

See [Number of Address Ranges](#) on page 430.

### 7.3.21 Route Type

See [Route Type](#) on page 476.

### 7.3.22 Direction on Sign

See [Direction on Sign](#) on page 478.

### 7.3.23 Explicable

See [Explicable](#) on page 479.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.4 Street Trans

### 7.3.24 Name on Road Sign

See [Name on Road Sign](#) on page 480.

### 7.3.25 Postal Name

See [Postal Name](#) on page 481.

### 7.3.26 Stale Name

See [Stale Name](#) on page 481.

### 7.3.27 Vanity Name

See [Vanity Name](#) on page 482.

### 7.3.28 Junction Name

See [Junction Name](#) on page 483.

### 7.3.29 Exit Number

See [Exit Number](#) on page 533.

### 7.3.30 Scenic Route Name

See [Scenic Route Name](#) on page 485.

## 7.4 Street Trans

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① **Note:**

This layer appears in MapInfo, but is unpopulated.

### 7.4.1 Feature ID

① **Note:**

This attribute is not published in MapInfo.

See [Feature ID](#) on page 367.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.4 Street Trans

here

## 7.4.2 Transliteration Type

① **Note:** This attribute is not published in MapInfo.

### Definition

A Transliteration Type defines the method used to transliterate a non-Latin-1 name into Latin-1.

### Values

A 3-character code.

Language Code	Language Description
ARX	Armenian Transliteration
ASX	Assamese Transliteration
AZX	Azeri Transliteration
BEX	Belarusian Transliteration
BGX	Bengali Transliteration
BOX	Bosnian Transliteration
BUX	Bulgarian Transliteration
CZX <sup>133</sup>	Czech Transliteration
ENG	English
ESX	Estonian Transliteration
FRE	French
GEX	Georgian Transliteration
GJX	Gujarati Transliteration
GRX	Greek Transliteration
HEX	Hebrew Transliteration
HIX	Hindi Transliteration
HUX	Hungarian Transliteration
JPX	Japanese Transliteration
KAX	Kazakh Transliteration
KIX	Kyrgyz Transliteration
KNX	Kannada Transliteration
KOX	Korean Transliteration

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.4 Street Trans

here

Language Code	Language Description
LAX	Latvian Transliteration
LIX	Lithuanian Transliteration
MAX	Macedonian Transliteration
MGX	Mongolian Transliteration
MLX	Maltese Transliteration
MNX	Montenegrin Transliteration
MRX	Marathi Transliteration
MYX	Malayalam Transliteration
ORX	Oriya Transliteration
PNX	Punjabi Transliteration
POR	Portuguese
POX	Polish Transliteration
PYN	Pinyin - Transliteration for Chinese
RMX	Romanian Transliteration
RUX	Russian Transliteration
SCX	Serbian Transliteration
SIX	Slovenian Transliteration
SLX1	Slovak Transliteration
SRX	Croatian Transliteration
THE	Thai English
TLX	Telugu Transliteration
TMX	Tamil Transliteration
TUX	Turkish Transliteration
TWE	Taiwan English
UKX	Ukrainian Transliteration
VIX	Vietnamese Transliteration

## Type

Char(3)

## Layer

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.4 Street Trans

Many layers in NAVSTREETS have Transliteration fields defined. The Name of the transliteration type field is dependant on the Layer, and typically includes a reference to the nature of the name (e.g., Sign Transliteration Type, or Polygon Name Transliteration Type, etc.).

## Usage

A Transliteration Type can be used in a similar manner as a Language Code.

## Specification

- A Transliteration always has a corresponding Transliteration Type that defines the method for generating the transliteration.

## Transliteration

### Definition

A Transliteration is a Latin-1 representation of a non-Latin-1 name.

### Value

A textual description of a non-Latin-1 name using Latin-1 characters only.

### Length

Depends on the field.

### Type

Text

### Layer

Many layers in NAVSTREETS have Transliteration fields defined. The Name of the transliteration field is dependent on the Layer, and typically includes a reference to the nature of the name (e.g., Sign Text Transliteration, or Polygon Name Transliteration etc.).

## Usage

A Transliteration can be used to:

- Enable destination input for specific non-Latin-1 languages (i.e., hieroglyphic languages like Chinese). In such languages the transliteration is required for entering a name in the non-Latin-1 language.
  - Offer a Latin-1 product for countries using non-Latin-1 languages.
- ① **Note:** Not all non-Latin-1 names have a corresponding transliteration. Some names only have translations.

## Specification

- A Transliteration is always related to a name in a non-Latin-1 language. A Transliteration can never exist without its corresponding name in the native language.
- A Transliteration always has a corresponding Transliteration Type that defines the method for generating the transliteration.
- A Transliteration is optional for a name in a non-Latin-1 language. If no transliteration is provided for a name in a non-Latin-1 language, a corresponding Translation is provided.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.4 Street Trans

- In Arabic and some Asian countries, the names with Transliteration Type (e.g., ARE, THE, etc.) represent either a translation or a transliteration. Transliteration Names are based on ground truth, i.e., as sign posted, unlike countries in Europe where HERE generates the Transliteration. As a result, a native non-Latin Name (e.g., a Street Name in THA) can have more than one associated Transliteration Name: a translation and a transliteration, or various transliterations.

### Example:

Street in Name in THA: ถนนสุขุม

Transliterations in THE:

- Sukhumwit
- Sukhumvit

### 7.4.3 Street Name Trans

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518 and [Street Name](#) on page 367.

### 7.4.4 Street Name Base Trans

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518 and [Street Name Base](#) on page 372.

### 7.4.5 Trans Street Type After

① **Note:**

This attribute is not published in MapInfo.

#### Definition

Indicates whether the transliterated street type precedes or follows the street name.

#### Value

Y - Transliterated Street Type is After the Street Name

N - Transliterated Street Type is Before the Street Name

#### Length

1

#### Type

Boolean

<sup>133</sup> Transliterations for Facility Types in Czech and Slovak are published in the metadata.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.5 Street Type Translations (StrTypeTr)

### 7.4.6 Trans Street Type Attached

① **Note:**

This attribute is not published in MapInfo.

**Definition**

Indicates whether or not the transliterated street type is attached to the street name.

**Value**

Y - Transliterated Street Type is Attached to the Street Name

N - Transliterated Street Type is Not Attached to the Street Name

**Length**

1

**Type**

Boolean

## 7.5 Street Type Translations (StrTypeTr)

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① **Note:**

This layer appears in MapInfo, but is unpopulated.

### 7.5.1 Feature ID

① **Note:**

This attribute is not published in MapInfo.

See *Feature ID* on page 367.

### 7.5.2 Street Type

① **Note:**

This attribute is not published in MapInfo.

See *Street Type Before (and Street Type After)* on page 371.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.6 Major Highways (MajHwys)

## 7.6 Major Highways (MajHwys)

---

### 7.6.1 Link ID

See [Link ID](#) on page 367.

### 7.6.2 Highway Name

The Highway Name is a combination of *Feature Name*, *Street Type*, *Name Prefix* and *Name Suffix*.

### 7.6.3 Highway Name Language Code

The Highway Name Language Code is equivalent to the *Language Code*.

### 7.6.4 Highway Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 7.6.5 Highway Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 7.6.6 Direction on Sign

See [Direction on Sign](#) on page 478.

### 7.6.7 Functional Class

See [Functional Class](#) on page 392.

### 7.6.8 Route Type

See [Route Type](#) on page 476.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.7 Secondary Highways (SecHwys)

### 7.6.9 Ferry Type

① **Note:**

This attribute is not published in MapInfo.

See [Ferry Type](#) on page 464.

### 7.6.10 Boat Ferry

① **Note:**

This attribute is not published in Shapefile.

See [Boat Ferry](#) on page 465.

### 7.6.11 Rail Ferry

① **Note:**

This attribute is not published in Shapefile.

See [Rail Ferry](#) on page 466.

## 7.7 Secondary Highways (SecHwys)

---

### 7.7.1 Link ID

See [Link ID](#) on page 367.

### 7.7.2 Highway Name

The Highway Name is a combination of *Feature Name*, *Street Type*, *Name Prefix* and *Name Suffix*.

### 7.7.3 Highway Name Language Code

The Highway Name Language Code is equivalent to the *Language Code*.

### 7.7.4 Highway Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.7 Secondary Highways (SecHwys)

### 7.7.5 Highway Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 7.7.6 Direction on Sign

See [Direction on Sign](#) on page 478.

### 7.7.7 Functional Class

See [Functional Class](#) on page 392.

### 7.7.8 Route Type

See [Route Type](#) on page 476.

### 7.7.9 Ferry Type

① **Note:**

This attribute is not published in MapInfo.

See [Ferry Type](#) on page 464.

### 7.7.10 Boat Ferry

① **Note:**

This attribute is not published in Shapefile.

See [Boat Ferry](#) on page 465.

### 7.7.11 Rail Ferry

① **Note:**

This attribute is not published in Shapefile.

See [Rail Ferry](#) on page 466.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.8 Major Highway Shields (MajHwyShield)

# 7.8 Major Highway Shields (MajHwyShield)

## 7.8.1 Link ID

See [Link ID](#) on page 367.

## 7.8.2 Highway Name

The Highway Name is a combination of *Feature Name*, *Street Type*, *Name Prefix* and *Name Suffix*.

## 7.8.3 Highway Name Language Code

The Highway Name Language Code is equivalent to the *Language Code*.

## 7.8.4 Highway Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

## 7.8.5 Highway Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

## 7.8.6 Direction on Sign

See [Direction on Sign](#) on page 478.

## 7.8.7 Highway Type

① **Note:**

This attribute is not published in MapInfo.

### Definition

Indicates if segment is a Federal, Interstate or state or Provincial (Canada) highway. This field is used for display purpose only.

### Value

I1 - Interstate Highway

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.9 Secondary Highway Shields (SecHwyShield)

S1 - Federal Highway

S2 - State Highway

C1 - Primary Highway

C2 - Secondary Highway

C3 - Regional Road

### Length

1

### Type

Text

## 7.9 Secondary Highway Shields (SecHwyShield)

---

### 7.9.1 Link ID

See [Link ID](#) on page 367.

### 7.9.2 Highway Name

The Highway Name is a combination of *Feature Name*, *Street Type*, *Name Prefix* and *Name Suffix*.

### 7.9.3 Highway Name Language Code

The Highway Name Language Code is equivalent to the *Language Code*.

### 7.9.4 Highway Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 7.9.5 Highway Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

### 7.9.6 Direction on Sign

See [Direction on Sign](#) on page 478.

### 7.9.7 Highway Type

① **Note:**

This attribute is not published in MapInfo.

See [Highway Type](#) on page 524.

## 7.10 Signs (Signs)

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### 7.10.1 Signpost Information

Signs represent textual and graphic information posted along roads. The information is always represented as text, but may originate from a graphic icon. Signs are coded by a Start and End link, which are not necessarily contiguous.

Signpost information can be used for route guidance (both audible and graphical/textual) and for map display. It is important to use the sign text and not the name on the ramp or the name at the end of the ramp because that does not always match what is on the sign and may confuse the system user.

In Europe, Toward Text is most relevant for guidance, while in North America, both Branch and Toward Route Number information are relevant. Furthermore, in North America, if Route Numbers are not present, Branch Text is preferred over Towards Text.

Additionally, Route Direction is important for both audible and graphical route guidance in North America.

#### Related Attributes

Branch Route Direction

Street Name

Exit Number

Exit Sign Type

#### General Inclusion

- Advisory signs are included generally at decision points along motorways including ramps, intersections, and junctions.
- The signs included are generally the last signs before the decision point. If no sign is located at the decision point, the next closest sign leading to the necessary manoeuvre is applied.
- Additional signs may be added at other locations where such information is navigationally significant.  
See the Country Specific Rules document for country-specific inclusions.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

- The following types of sign information are included:
  - Street Names (e.g., Main St)
  - Route Names (e.g., A5)
  - City Names (e.g., Eindhoven)
  - Airport Names (e.g., Heathrow)
  - Country Names (e.g., Frankreich)
  - Exit Numbers (e.g., 12)
  - Generic terms for City Centre posted (e.g., Downtown, Zentrum, City Center, etc.)
  - Generic terms for City Centre when sign posted with a city name (e.g., San Francisco City Center, Downtown San Jose, etc.)
  - Tourist information if posted with a destination sign and provides useful information
  - Navigationally significant text (including icons or symbols) posted on official road signs (e.g., Airport, Ferry Boat/Train, Harbour, Train, etc.)
  - Other relevant information for aiding the driver
- The following types of sign are not included:
  - Signs indicating the exit without a unique number or name (Exit, Ausfahrt, etc.)
  - Speed Limit Signs
  - Tourist Information Signs (e.g., Museum or Downtown)
  - Route number signs (as well as Route shield icons) along the motorway
  - Signs indicating distance to a city or location
  - City name that is followed by the designation of a country in a circle (i.e., D in a circle for Germany)
  - Extraneous sign text such as “Exit Only”, “Keep Left”, “To”, “Sortie”, “Uit”, and “Uscita”, etc.
  - Signs pointing to all destinations, such as “Toutes Directions” and “Alle Richtungen”. etc.
  - Signs indicating a Rest Area or parking lot
  - Signs with variable text.

## Inclusion on Motorways

- The following sign information are included:
  - Exit ramps (Origin: Motorway; Destination: Ramp)
  - On the motorway (Origin: Motorway; Destination: Motorway)
  - Ramp splits (Origin: Ramp; Destination: Ramp)
  - Motorway entrance Ramps (Origin: Local Road; Destination: Ramp)
  - Continuation Sign (Origin: Motorway; Destination: Motorway)
  - Ramp End (Origin: Ramp; Destination: Local Road) - in select regions/countries only. See the Country Specific Rules document.

## Inclusion on Non-Motorways (Non-Controlled Access)

- The following sign information are included:
  - Branch and Toward signs for all directions accessing the ramps
  - Sign information on bifurcations applied with Special Explication
- See the Country Specific Rules document for region/country specific inclusion.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

## Inclusion at Airports

- The following are specific inclusion guidelines for Airports.
  - Signs are entered at all decision points, including signs pointing to cargo terminals.
  - Airline names are not included in the sign text. If the text on the sign is “Terminal 1: KLM/Martinair”, only “Terminal 1” is included.
  - All other sign information that is significant to a driver is included. Examples: Arrivals, Departures, Rental Cars, Rental Return, Short Term Parking, Long Term Parking, Terminal information, etc.
  - Signs listing multiple terminal names are included as one line of text with no spaces between the terminal numbers, e.g., “Terminal A/B/C”.
  - Symbols are converted to text if applicable. For all symbols, the symbol is only converted when there is no additional name attached, where the symbol for Rental Car is followed by Hertz, only Hertz is added. See [Figure 238: on page 529](#) for European examples and [Figure 238: on page 529 thru Representation](#) on page 530 for U.S. examples.

 **Note:**

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

These are not necessarily consistent throughout the U.S.

**Figure 238:**



**Figure 239:**



**Figure 240:**



## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

**Figure 241:**



**Figure 242:**



### Representation

- The sign information is entered from the top of the sign down. The information at the top is deemed to be the most important. Any supplemental sign, e.g., a sign for a car rental, however is entered last even it is located on top of the sign.
- Signpost information is entered exactly as spelled on a signpost, including punctuations.
- Symbols depicted on a sign are translated into word in the national language and included as Toward Text, if applicable. For example, if an airport symbol is depicted on a sign and followed by the location name, e.g., Frankfurt, if the sign was in Germany, the sign entry would be "Flughafen Frankfurt".
- Exit numbers posted just outside the decision point can be combined with the other signs at the decision point.

## 7.10.2 Source Link ID

### Definition

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

The Source Link ID identifies the source link for the sign. The source link is the link prior to the manoeuvre decision. A manoeuvre decision is a point where the road splits and the driver may be unable to determine the direction to traverse.

### Value

nnnnnnnnnn

### Length

10

### Type

Numeric

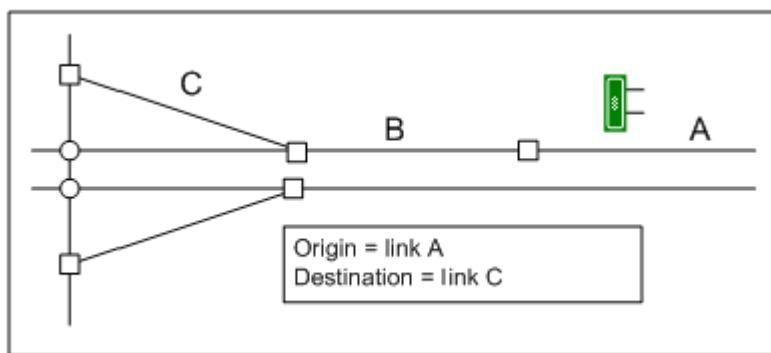
### Usage

The Source Link ID in conjunction with the Destination Link ID associated with the sign can be used for route guidance timing and map display purposes.

### Specification

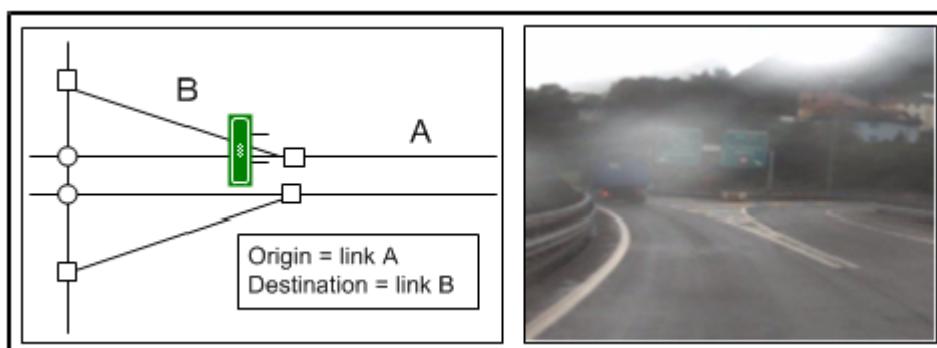
- The source link and destination link are not necessarily contiguous. See [Figure 243:](#) on page 531.

**Figure 243:**



- Occasionally, the sign intended for the decision point is located shortly after the decision point in reality. Since the Source Link location is where the driver reads the sign to make their decision, the Source Link may be placed before the physical location of the sign. See [Figure 244:](#) on page 531.

**Figure 244:**



## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

### 7.10.3 Destination Link ID

#### Definition

The Destination Link ID identifies the destination link for the sign. The destination link is the link after the manoeuvre decision. A manoeuvre decision is a point where the road splits and the driver may be unable to determine the direction to traverse.

#### Value

nnnnnnnnnn

#### Length

10

#### Type

Numeric

#### Usage

The Destination Link ID in conjunction with the Source Link ID associated with the sign can be used for route guidance timing and map display purposes.

#### Specification

- The source link and destination link are not necessarily contiguous. See [Figure 243:](#) on page 531.

### 7.10.4 Sign ID

#### Definition

Unique identifier for the sign.

#### Value

nnnnnnnnnn

#### Length

10

#### Type

Numeric

### 7.10.5 Sequence Number (Signs)

#### Definition

A counter starting from 1 to the number of Signs for a specific Sign ID.

#### Value

nnnn

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

### Length

4

### Type

Numeric

## 7.10.6 Exit Number

### Definition

Exit Number identifies the number and/or letter assigned by a government to an exit from a road. Not all road exits have exit numbers.

### Length

8

### Type

Text

### Usage

Exit Number can be used for route guidance and map display.

### Specification

- If the only sign at the decision point is a sign depicting the exit number, the information is entered into the Text field with Entry Type = B (Branch Sign Text).
- Exit numbers can be alphanumeric (e.g., 2A, 13B).

## 7.10.7 Exit Number Language Code

The Exit Number Language Code is equivalent to the *Language Code*.

## 7.10.8 Exit Number Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

## 7.10.9 Alternate Exit Number

### Definition

Alternate Exit Number provides an alternate Exit Number for the sign.

### Layer

Signs Layer

### Length

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

8

## Length (UTF-8)

24

## Type

Text

## Related Attributes

Source Link ID

Exit Number

Branch Route ID

Branch Route Direction

Sign Text Type

Sign Text

Toward Route ID

## Specification

- Alternate Exit Number publishes an additional Exit Number for a Sign
- Alternate Exit Number is only published when, in addition to an Exit Number in the local non Latin-1 language, an additional Exit Number is present on the sign.
  - Alternate Exit Number may only represent a value that is Latin-1
- Alternate Exit Number has no Language Code associated. The Language Code is presumed to be 'UND.'

Example: In Hong Kong, the following exit numbers are present on a sign:

1 - Exit Number: 南11A

2 - Exit Number: 11A

Field	Value	Language Code
Exit Number	南11A	CHI
Alternate Exit Number	11A	UND

## 7.10.10 Branch Route ID

### Definition

Specifies the name of the route that is at the end of a ramp.

### Value

### Length

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

here

20

## Length (UTF-8)

60

## Type

Text

## Usage

*Branch Route ID* can be used for route guidance (both audible and graphical/textual guidance) and map display. For route guidance, US-101 South should be used and not just US-101 when appropriate.

## Specification

- A route name is applied as the *Branch Route ID* when the ramp system is directly connected to a link with the route name that is identified on the sign. See [Figure 245](#): on page 539 (RR-6).
- Some countries contain names that can only be represented in Unicode (e.g. Russia). Name records for *Branch Route ID* are supported by the delivery of a companion External Unicode “look-aside” file. See [Non-Latin-1 Name Representation](#) on page 1342 for details.

### Route Name and Number Representation

- Sign information in a shield is represented according to the conventions listed in the following bullets.
  - Alphanumeric and numeric routes represented on a sign in a shield or symbol are added using the standard identifiers listed below. Directional identifiers associated with the Branch Route ID are entered as *Branch Route Direction*.
  - In Europe, route numbers are represented as the letter followed immediately by the number.
  - In the U.S., numbered routes are represented using the route identifier, followed by a hyphen and the route number. Standard identifiers (see [Branch Route ID](#) on page 534) for numbered routes include:

Route	Identifier	Examples
Interstate	I	I-80, I-280
Federal	US	US-101, US-17
State Abbreviation	CA, IL, M	CA-82, IL-59
State Route or Route (only when State abbreviation is not applicable)	SR, RT	SR-123, RT-436
Country Route	CR	CR-427A
Other county level routes, (Farm to Market, Ranch to Market, Parish Road)	FM	FM-125
Bureau of Indian Affairs	BIA	BIA-12
National Forest Roads	NF	NF-444
Bureau of Land Management	BLM	BLM-25

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

- When official modifiers such as “LOOP” or “BUS” are included within the shield symbol, these are attached to the name using the conventions listed in [Branch Route ID Transliteration](#) on page 536 below.
- When text such as “Business”, “Loop”, “Alternate”, “Express”, etc., is associated with a shield sign but is not included within the shield symbol then it is attached to the name without a hyphen e.g., “US-50 Business”.
- Numbered routes represented on a sign as text (no shield) are entered as *Sign Text* with *Text Type* = B or T.
- Non-numeric routes represented in a shield or symbol are entered as *Sign Text* with the directional identifiers spelled out. For example, routes such as “Garden State Parkway”, “New Jersey Turnpike North”, and “Florida's Turnpike”.

Route	Identifier	Examples
Alternate or Alternate Route	ALT	CR-80-ALT
Business Loop	BL	US-101-BL
Business Route	BR	SR-10-BR
Bypass	BYP	CA-12-BYP
Connector	CONN	CA-12-CONN
Extension	EXT	IL-53-EXT
Link	Link	NE-10B-Link
Loop	LOOP	CA-12-LOOP
Scenic (Not all routes labelled as “Scenic” on sources require the name identifier.)	SCENIC	AZ-10-SCENIC
Spur	SPUR	I-80-SPUR
Toll	TOLL	PA-60-TOLL
Truck Route	TRUCK	CA-12-TRUCK
Turnpike	TPKE	IL-59-TPKE

### 7.10.11 Branch Route ID Transliteration

 **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 7.10.12 Branch Route Direction

**Definition**

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

The official directional identifier assigned to the *Branch Route ID*.

### Value

Code	Description	Language Code
(space)	Not Applicable	Not Applicable
E	East	ENG
E	Est	FRE
E	Este	SPA
N	North	ENG
N	Nord	FRE
N	Norte	SPA
O	Ouest	FRE
O	Oeste	SPA
S	South	ENG
S	Sud	FRE
S	Sur	SPA
W	West	ENG

### Length

1

### Type

Text

### Usage

In conjunction with *Branch Route ID*, *Branch Route Direction* can be used for route guidance (both audible and graphical/textual guidance) and map display. For route guidance, US-101 South should be used and not just US-101 when appropriate.

### Specification

- The posted directional identifiers associated with official route designates are entered where applicable.

## 7.10.13 Sign Text

### Definition

Contains a line of sign text.

### Value

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

### Length

60

### Length (UTF-8)

180

### Type

Text

### Usage

*Sign Text*, in conjunction with the other attributes, can be used for route guidance (both audible and graphical/textual guidance) and map display.

### Specification

- Some countries contain names that can only be represented in Unicode (e.g. Russia). The *Sign Text* will be a Latin-1 name (transliteration) or an identifier (numerical ID) intended to be used to the External Unicode “look-aside” file. See [Non-Latin-1 Name Representation](#) on page 1342 for details.
- When multiple B or T *Sign Text* information exists, multiple Link Sign Records will be published for that destination Link ID.
- When one B and one T *Sign Text* information exists, only one Link Sign Record will be published for that destination Link ID.

## 7.10.14 Sign Text Transliteration

### ① Note:

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

## 7.10.15 Sign Transliteration Type

### ① Note:

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

## 7.10.16 Sign Text Type

### Definition

This attribute identifies whether the sign information is a specific destination at the end of a ramp system (branch) or a destination beyond where the ramp system ends (Towards).

### Value

B - Branch to a street

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

T - Toward an eventual destination link

## Length

1

## Type

Text

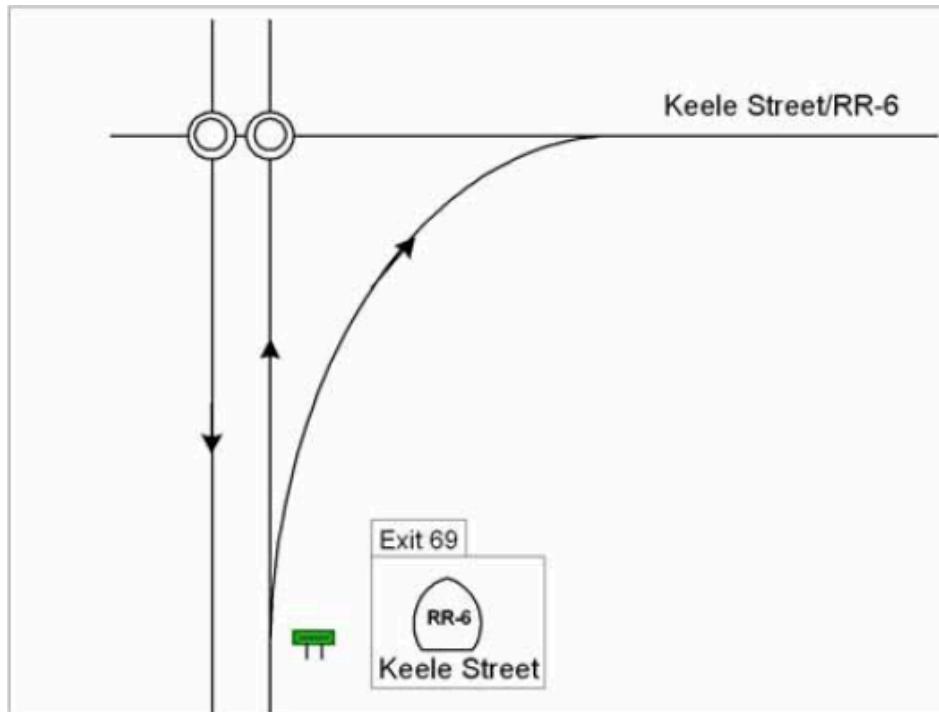
## Usage

In conjunction with the other attributes, *Text Type* can be used for route guidance (both audible and graphical/textual guidance) and map display. For example, this attribute can trigger guidance of “take the main street exit” or “take the exit toward main street”.

## Specification

- *Text Type* = B is applied when the ramp system is directly connected to the name identified in the *Sign Text*.
- In [Figure 245](#): on page 539, Keele Street would be applied as *Sign Text* with *Text Type* = B.

**Figure 245:**



- *Text Type* = T is applied when an entire ramp system is not directly connected to a link with the name identified in the *Sign Text*. For example, in the U.S., the sign includes Main St. However, the ramp system does not touch Main St. Main St. would be entered in the *Sign Text* field with *Text Type* = T.
  - ① **Note:** In South Korea, all sign text entries are published as ‘T’ - Toward an eventual destination link.
- All non-road *Sign Text* entries (i.e. O'Hare Airport, San Francisco, Paris, etc.) are applied as *Text Type* = T.

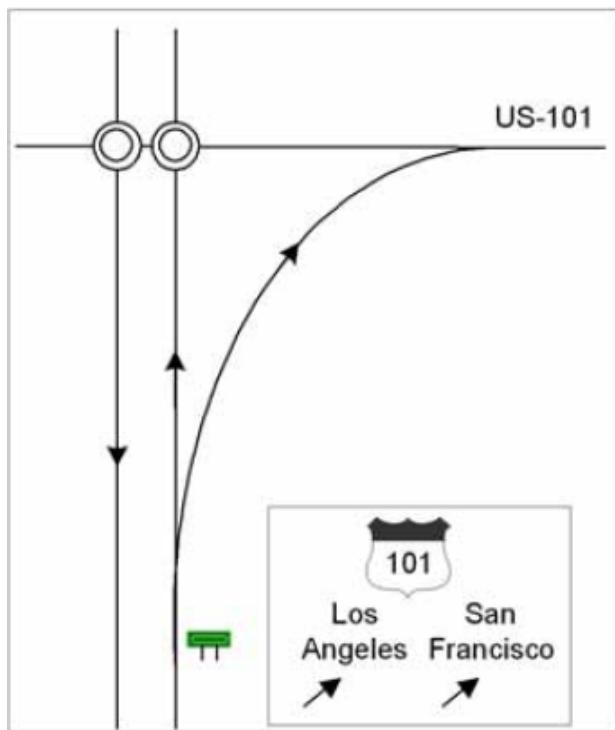
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

- In [Figure 246](#): on page 540, Los Angeles & San Francisco are examples of *Text Type* = T. They are destinations that are not reached directly at the exit from the ramp system.

**Figure 246:**



### 7.10.17 Sign Language Code

The Sign Language Code is equivalent to the *Language Code*.

### 7.10.18 Signal/Sign Location

#### Definition

Signal/Sign Location identifies the location of the Traffic Signal at the intersection.

#### Value

1 - Right

2 - Left

3 - Overhead

#### Length

5

#### Type

Numeric

#### Usage

## Reference Guide

Attributes - Road Features and Associated Navigation Information

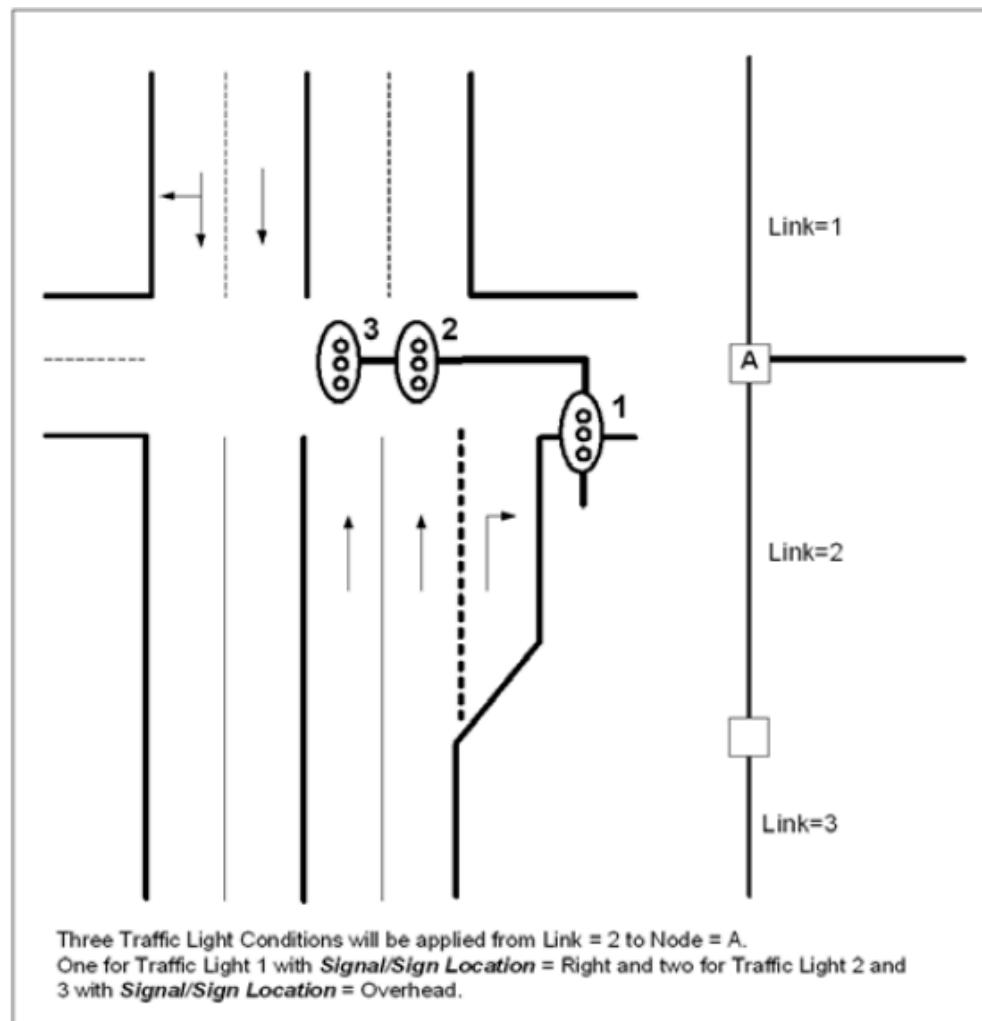
7.10 Signs (Signs)

Signal/Sign Location can be used to display the location of the Traffic Signal at the intersection.

### Rules

- The Traffic Signal condition is published with attribute Signal/Sign Location equal to one of the following:
  - Signal/Sign Location = 1 - Right is applied when the Traffic Signal is located on the Right side in the travel direction.
  - Signal/Sign Location = 2 - Left is applied when the Traffic Signal is located on the Left side in the travel direction.
  - Signal/Sign Location = 3 - Overhead is applied when the Traffic Signal is located overhead in the travel direction.
- Multiple Traffic Signal conditions are applied in case multiple Traffic Signals exist at the same location. The Signal/Sign Location attribute indicates the detailed position of the Traffic Signal. See [Figure 247:](#) on page 541.

**Figure 247:**



### 7.10.19 Toward Route ID

#### Definition

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

Specifies the name of a route beyond where the ramp system ends.

### Value

#### Length

20

#### Length (UTF-8)

60

#### Type

Text

#### Usage

*Toward Route ID* can be used for route guidance (both audible and graphical/textual guidance) and map display.

#### Specification

- See Route Name and Number Representation in the *Branch Route ID* specifications for naming rules.
- Some countries contain names that can only be represented in Unicode (e.g. Russia). The *Toward Route ID* will be a Latin-1 name (transliteration) or an identifier (numerical ID) intended to be used to the External Unicode “look-aside” file. See [Non-Latin-1 Name Representation](#) on page 1342 for details.

## 7.10.20 Toward Route ID Transliteration

### ① Note:

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

## 7.10.21 Straight-On-Sign

### Definition

*Straight-on-Sign* identifies signs added solely to provide additional guidance information for the road ahead.

### Value

Y - Sign information is a Straight-on-Sign

N - Sign information is not a Straight-on-Sign

### ① Note:

Default value is "N" (field can not be Null).

#### Length

1

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.10 Signs (Signs)

## Type

Text

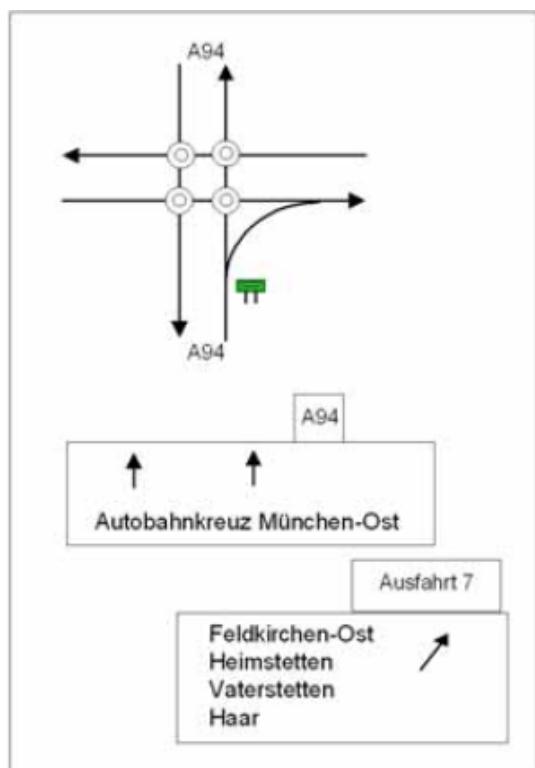
## Usage

*Straight-on-Sign can be used to differentiate Straight-on Signs from Exit Signs.*

## Specification

- A *Straight-on Sign* has the *Straight-on-Sign* attribute set to “Y” when one of the following is applicable:
  - The straight on sign is located at a decision point where an exit sign is also present.
  - The sign contains information pertinent to continuing on the highway.
- A *Straight-on Sign* has the *Straight-on-Sign* set to “N” when one of the following is applicable:
  - A special explication situation exists
  - A highway name changes or a different name becomes the preferred name, but there is manoeuvre required
  - A motorway splits into two or more motorways
- *Straight-on-Sign* is applied to signs with *Text Type* = T (Towards an eventual destination link) only.

**Figure 248:**



## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.11 Distance Marker (DistMarker)

- The sign text on the exit ramp information for [Figure 248](#): on page 543 is represented as follows:
  - Exit Ramp information ([Figure 249](#): on page 544):

**Figure 249:**

SEQ_NUM	1	2	3	4
EXIT_NUM	7	7	7	7
BR_RTEID				
BR_RTEDIR				
SIGN_TXTTP	T	T	T	T
SIGN_TEXT	FELDKIRCHEN -OST	HEIMSTET TEN	VATERSTE TTEN	HAAR
LANG_CODE	GER	GER	GER	GER
TOW_RTEID				

- Straight-on-Sign information ([Figure 250](#): on page 544):

**Figure 250:**

SEQ_NUM	1
EXIT_NUM	7
BR_RTEID	
BR_RTEDIR	
SIGN_TXTTP	T
SIGN_TEXT	AUTOBAHNKR EUZ MÜNCHEN- OST
LANG_CODE	GER
TOW_RTEID	A94

## 7.11 Distance Marker (DistMarker)

---

### 7.11.1 Link ID

See [Link ID](#) on page 1129.

### 7.11.2 Feature ID

See [Feature ID](#) on page 1130.

### 7.11.3 Distance Marker Value

See [Distance Marker Value](#) on page 1130.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

### 7.11.4 Direction on Sign

See [Direction on Sign](#) on page 1131.

### 7.11.5 Direction

See [Direction](#) on page 1131.

### 7.11.6 Unit of Measure

See [Unit of Measure](#) on page 1132.

### 7.11.7 Enhanced

See [Enhanced](#) on page 1132.

## 7.12 Condition/Driving Manoeuvres (CDMs)

---

### 7.12.1 Link ID

See [Link ID](#) on page 367.

### 7.12.2 Condition ID

#### Definition

Condition ID to which the auxiliary file is associated. Key into field Condition ID in the Condition / Driving Manoeuvre layer.

#### Value

nnnnnnnnnnnn

#### Type

Numeric

### 7.12.3 Condition Type

#### Definition

Specifies the type of condition.

① **Note:**

The value of this field will determine the content of the Condition Modifier fields.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

## Value

Code	Description
1	Toll Structure
3	Construction Status Closed
4	Gate
5	Direction of Travel
7	Restricted Driving Manoeuvre
8	Access Restriction
9	Special Explication
10	Special Speed Situation
11	Variable Speed Sign
12	Usage Fee Required Condition
13	Lane Traversal
14	Through Route
16	Traffic Signal
17	Traffic Sign
18	Railway Crossing
19	No Overtaking
20	Junction View
21	Protected Overtaking
22	Evacuation Route
23	Transport Access Restriction
25	Transport Special Speed Situation
26	Transport Restricted Driving Manoeuvre
27	Transport Preferred Route
34	Environmental Zone
38	Blackspot
39	Permitted Driving Manoeuvre

## Length

5

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

## Type

Numeric

## Specification

- See the following Specification sections for individual Condition Types.

## 7.12.3.1 Toll Structure

### Definition

*Toll Structure* - previously known as Toll Booth - identifies the presence of physical toll structures or automatic controls at entry and exit points along a toll road and the requirement for (electronic) payment or ticket retrieval for traversal.

### Condition Type

1

### Condition Modifier

None

### Related Attributes

*Toll Structure Type*

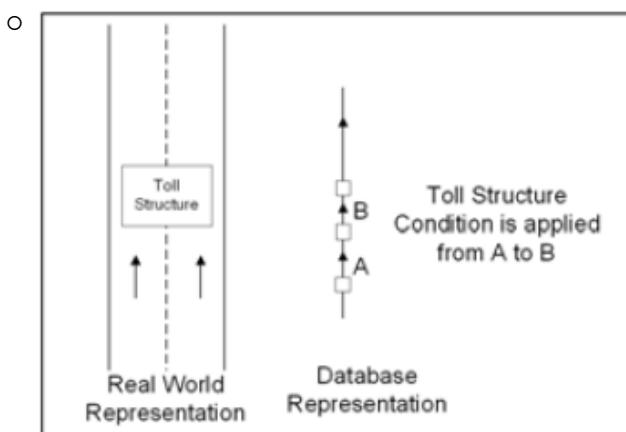
Method Payment

### Usage

*Toll Structure* can be used to determine where a toll structure exists, the type of toll structure, and the payment methods that are accepted at the toll structure.

### Specification

- Toll Structure* conditions are applied to a series of two contiguous links as origin and destination. The origin is the link prior to the Toll Structure and the destination is the link after the Toll Structure. The Link ID field identifies the origin link and the Manoeuvre Link ID 1 field identifies the destination link.
- Positional accuracy is within +/-50 metres from the actual location of a toll structure.



# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

- The *Access Characteristics* of the *Toll Structure* condition are set to match the *Access Characteristics* of the *Usage Fee Required* condition located on destination link of the *Toll Structure*.
- Date/Time Modifier* information is not published for Toll Structure conditions. Instead Date/Time Modifiers are modelled through the *Usage Fee Required* condition.
- A relationship between a Toll Structure and a Usage Fee Required condition is not identified. If multiple Usage Fee Required conditions exist for a toll road, it cannot be determined which one is related to a specific Toll Structure. The premium XML Toll Cost product will provide this functionality.

## From/To Number of Lanes

- See *To Lanes & From Lanes* on page 410.

## Electronic/Automatic Toll Structures

- At some Toll Structures, lanes that allow for automatic payment (FastTrak, transponder lanes, etc.) can be physically divided from the other lanes at the Toll Structure. In this case, the lanes are separately digitized. An example is a Toll Structure on CA-73. At this Toll Structure, the FastTrak (Transponder) lanes are physically divided from the cash lanes. In this case, the FastTrak lanes are separately digitised from the cash lanes.

**Figure 251:**



- For a Toll Structure located on a bi-directional link which require toll payment in both directions, two conditions are entered, one for each direction.
- A *Toll Structure* condition is not entered for Ferry Terminals.
- Electronic Toll Structures are only included when the Toll Structure is used to calculate the amount of Toll to be paid. Electronic Toll Structures are not included when the Toll Structure only monitors if payment has been done. The Electronic Toll Structures that are not included are typically present along the motorway, not at entry and exit points to the motorway. These types of Toll Structures are found in Germany and Austria.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

here

## Examples of Toll Structures

The table below describes some of the existing Toll systems.

Name of Toll Structure	Area	Description
407 ETR	Canada (Greater Toronto Area)	Toll is collected by using transponders or through scanning the license plate for vehicles without a transponder. Toll is calculated per distance travelled.
E-Z Pass / I-PASS	United States	Toll is collected electronically through a small electronic tag that is attached to the windshield of the car. Each time the driver uses a toll facility where E-Z Pass/IPASS is offered, an antenna at the toll plaza reads the vehicle and account information. The appropriate toll is then electronically debited from a prepaid account.
FastTrak	North America	FastTrak lanes at Toll Structures allow for automatic payment through a transponder device (on-board unit).
Toll Collect	Germany Austria	Toll is collected through automatic controls (cameras) at entry and exit points along the Toll Road (Toll is calculated based on distance travelled).  In Germany, trucks pay for using the Toll Collect network.  In Austria, trucks and buses pay for using the Toll Collect network. Payment is done through the internet, cash payment at designated Toll Terminals or through an on-board unit.
Toll Zone (also referred to as Congestion Zones.)	London Stockholm	Toll is collected through automatic controls which automatically record vehicles entering a toll zone in the centre of a city. Various payment methods are possible, e.g., designated businesses, telephone, etc. Payment is determined by scanning the license plate.
Turnpike Toll Roads	United States	Turnpike is a typical name used in the U.S. for toll roads that require Toll payment based on travelled distance; however such toll roads also exist in Europe. A ticket is retrieved when entering the Toll road and payment (pay per ticket) is done when exiting. Payment methods can vary.
Vignette	Austria Switzerland Czechia Slovakia Hungary Slovenia	A vignette is a pre-purchased permit that allows a driver to make unlimited use of certain roads during the validity period of the permit. Vignettes can be purchased at petrol stations (prior to the country border) or other designated businesses.

### 7.12.3.2 Lane Toll Structure

#### Definition

Lane Toll Structure identifies the presence of physical toll structures or automatic controls at entry and exit points along a toll road and the requirement for (electronic) payment or ticket retrieval for traversal.

While Toll Structure provides information at Link level, Lane Toll Structure provides this information at the detailed lane level.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

## Condition Type

1

## Default Value

None

## Length

5

## Type

Number

## Layer

Lane Condition/Driving Manoeuvre (LnCdms)

## Related Attributes

Toll Structure Type

Method Payment

## Usage

Lane Toll Structure can be used to determine where a toll structure exists, the type of toll structure per lane, and the payment methods that are accepted at the toll structure at lane level.

## Specification

- Lane Toll Structure conditions are applied to two contiguous lanes as origin and destination. The origin is the lane prior to the Toll Structure; the destination is the lane after the Toll Structure.
- Lane Toll Structure is published only when Toll Structure specific attributes are different per Toll Structure on each lane.
  - Toll Structure condition on the link provides the aggregated Toll Structure condition attributes.
  - Lane Toll Structure condition on the lane provides the Toll specific attributes per lane.
- Lane Toll Structure Condition attributes Toll Structure Type and Method of Payment follows the same rules as Toll Structure Type and Method of Payment attributes for the Toll Structure condition at link level.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

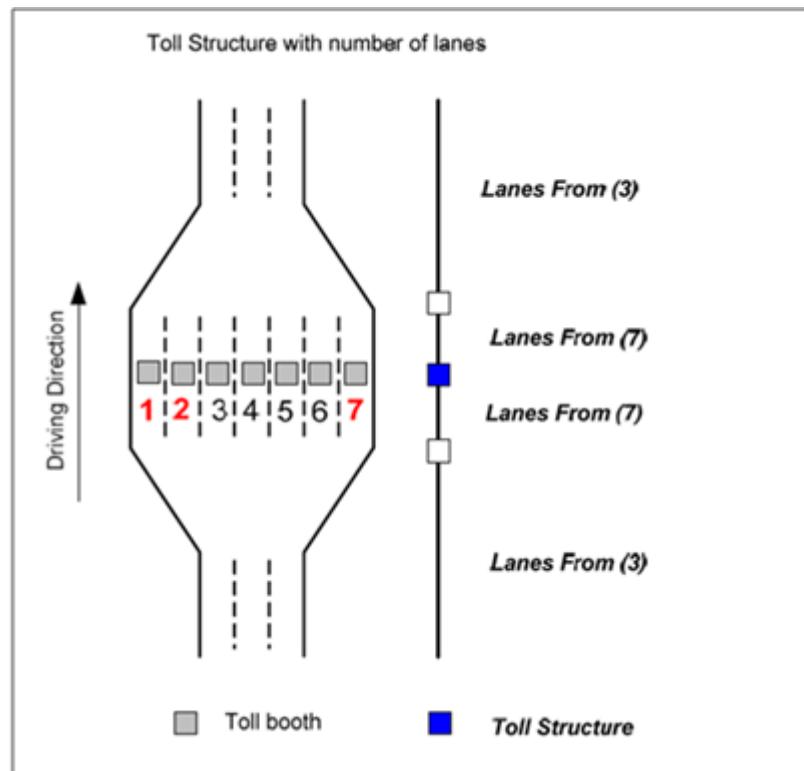
7.12 Condition/Driving Manoeuvres (CDMs)

here

- Lane Toll Structure condition applies to all vehicle in the access characteristics regardless of the lane access characteristics.

Example:

**Figure 252:**



A Toll Structure condition is published at Lane level. The Toll Structure consists of seven different lanes; on Lane 1, 2 and Lane 7 the Toll Structure has different settings in regards to:

- Lane Access Characteristics
- Method of Payment
- Toll Structure Type

See [Figure 252: on page 551](#)

Lane Toll Structure Condition			
Lane	Structure Type	Method of Payment	Lane Access Characteristics <sup>134</sup>
1	4 - Electronic	5 - Transponder	Emergency Vehicles
2	3 - Pay per Ticket 4 - Electronic	3 - Credit Card 4 - Pass/Subscription 5 - Transponder 8 - Travel Card	Trucks, Buses
3	3 - Pay per Ticket	1 - Cash 3 - Credit Card	All Vehicles

# Reference Guide

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Lane Toll Structure Condition			
Lane	Structure Type	Method of Payment	Lane Access Characteristics <sup>134</sup>
4	3 - Pay per Ticket	1 - Cash 3 - Credit Card	All Vehicles
5	3 - Pay per Ticket	1 - Cash 3 - Credit Card	All Vehicles
6	3 - Pay per Ticket	1 - Cash 3 - Credit Card	All Vehicles
7	3 - Pay per Ticket 4 - Electronic	3 - Credit Card 4 - Pass/Subscription 5 - Transponder 8 - Travel Card	Autos, Taxis

In *Construction Status Closed* on page 552, the Toll Structure aggregated condition modifiers published per link are illustrated.

Link Toll Structure		
Structure Type	Method of Payment	Access Characteristics
3 - Pay per Ticket 4 - Electronic	1 - Cash 3 - Credit Card 4 - Pass/Subscription 5 - Transponder 8 - Travel Card	All Vehicles

## 7.12.3.3 Construction Status Closed

### Definition

Construction Status Closed indicates the road is affected by construction preventing its use.

### Condition Type

3

### Usage

Construction Status Closed can be used for map display and route calculation. When a road is closed, no traffic can travel on the road for the duration of the construction.

### Specification

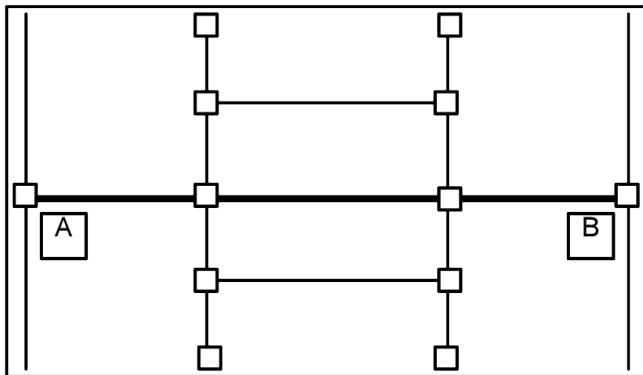
<sup>134</sup> Lane Access Characteristics provides the access information per vehicle type.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

- Construction Status Closed indicates that the links are closed to public use for at least three months after the database release date.
- Construction Status Closed is published for all links affected by the construction. This includes roads that become physically impassable and navigable links that are isolated from the navigable network due to the construction. In the following example, if links A and B are under construction, then all the links within the complex (shown in bold) receive Construction Status Closed.



- The road's Functional Class is not changed if Construction Status Closed is published for a link. Functional Class = 1 - 4 is published for an alternative route to maintain navigability.
- A link's Access Characteristics do not change when a Construction Status Closed condition is applied. The information about the Access Characteristics for a Construction Status Closed condition exactly matches the link's Access Characteristics.
- The construction period is published in the Date Time modifier.

### Special Notes

- When an old stretch of road is replaced with a newly built road, the old road could remain in the HERE Map as isolated geometry. HERE physically disconnects the old, never to be re-opened, roads from the existing road geometry. This is done to avoid guidance issues or other negative side effects. The old road however may not be demolished immediately and consequently, HERE may decide to leave in such old stretches of road.
- When old roads are not yet demolished, but are no longer in use, the HERE Map may publish isolated road geometry, where the following is applied:
  - Functional Class = 5
  - Construction Status Closed, with an End Date far in the future Such old roads which are not in use anymore can remain in the HERE Maps for some time, depending on the timing of demolishing such roads in reality.

### 7.12.3.4 Gate

#### Definition

Gate identifies the presence of a gate/movable barrier that prohibits the traveller from progressing along the road.

#### Condition Type

4

#### Condition Modifier

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

1 - Key Access

2 - Permission Required

3 - Emergency Gates

## Usage

The Gate condition can be used for map display, route guidance, and for route calculation.

## Specification

- Gate coding is applied to two contiguous links. The Link ID field contains the link prior to the gate. The Manoeuvre Link ID 1 field contains the link after the gate.
- Gate Condition Type is published with Condition Modifier 1 equal to one of the following:
  - Gate Condition Modifier 1 = 1 (Key Access) when the gate is unattended and locked and the driver must use a key, keycard or pre-assigned password to open it. (Usually the entrance into a private community.)
  - Gate Condition Modifier 1 = 2 (Permission Required) when the gate is attended, but permission must be obtained from an authorised source in order to pass through.
  - Gate Condition Modifier 1 = 3 (Emergency Gate) when the gate remains closed to all traffic except emergency vehicles. (For example, a chain link fence across a street with a padlock that can only be opened by emergency personnel.)
- A CDM Date/Time Modifier Record may be published in relationship to the Gate Condition.
- The Access Characteristics of the record are set to Y for all vehicle types for the Gate Condition. This does not reflect which vehicles may pass through the gate. The links' Access Characteristics identifies which vehicle types are allowed on the links and the Gate modifier identifies the permissions to use the gate.
- Gates do not exist between two links that each have Functional Class = 1, 2, 3, or 4.
- Gates are not applied to ferries.
- Gates are not applied when the road is also coded with approximate seasonal closure.
- A Gate condition is applied in all directions for which a traveller is required to use a key, keycard, password, etc., or to receive permission before progressing. A gate which has the above restrictions in one direction and but not in the other is coded with one Gate condition.

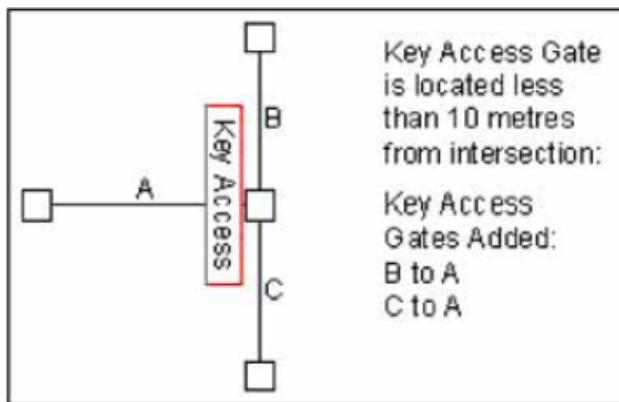
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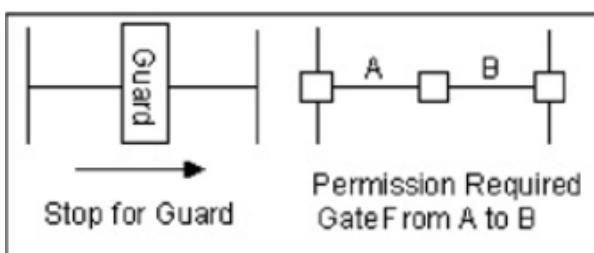
- If the gate is within 10 metres/32 feet of an intersection, then the gate is entered at the intersection node.  
If the gate is further than 10 metres/32 feet from the intersection, the gate is entered where it is located.

**Figure 253:**



The key is only required to enter and not to exit. If the key is needed in both directions then the gate is also applied from A to B and A to C.

**Figure 254:**



## Reference Guide

Attributes - Road Features and Associated Navigation Information

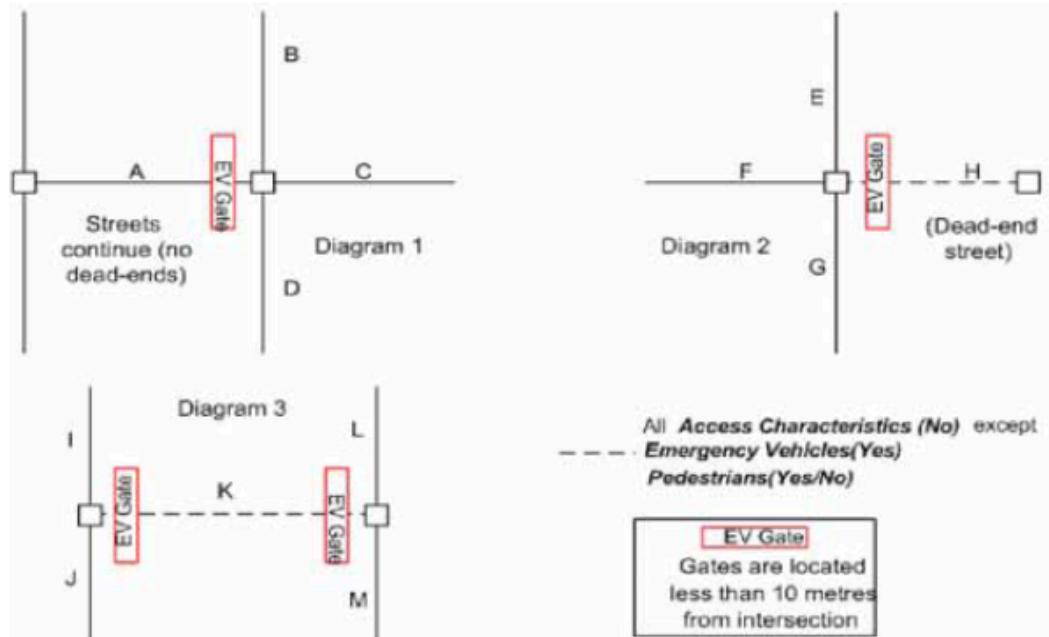
7.12 Condition/Driving Manoeuvres (CDMs)

here

- When the Participating Link (on which the gate is located) would be isolated or is a dead end, and the Gate Condition Modifier = 3, the Link Access Characteristics are changed.

To represent reality, the link Access Characteristics for H and K are: Emergency Vehicle (Y), Pedestrian (Y or N), Bike (Y or N), Autos (N), Buses (N), Carpools (N), Deliveries (N), Trucks (N), Through Traffic (N), and Taxis (N). Pedestrian information based on whether or not they are allowed.

Figure 255:



- The following gates are added:

	Diagram 1	Diagram 2	Diagram 3
EV: Gate	B to A, A to B C to A, A to C D to A, A to D	E to H, H to E F to H, H to F G to H, H to G	I to K, K to I J to K, K to J L to K, K to L M to K, K to M

- When the Participating Link (on which the gate is located) would be isolated, or is a dead end, and the Gate Condition Modifier = 1, or 2, the Link Access Characteristics are changed so that Through Traffic = N. Other characteristics are based on which vehicles are allowed in reality.

### 7.12.3.5 Direction of Travel

#### Definition

Direction of Travel describes the direction of travel on a road for specific time periods and/or for specific Access Characteristics. This condition overrides the Direction of Travel information on the link.

#### Condition Type

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

## Condition Modifier 1

- 1 - From
- 2 - To
- 3 - Both

### Usage

The Direction of Travel condition enables correct route calculation, route guidance, and map display.

### Specification

- When the Condition Type = 5, the Condition Modifier 1 should be used in conjunction with the Access Characteristics and the information in the associated Link CDM Date/Time Modifier Record. The associated Link CDM Date/Time Modifier Record can be identified by its Entity ID field, which has the same value as the Entity ID field.
- Direction of Travel Condition Modifier 1 = 1 (From) is applied when direction of travel is one way from the reference node.
- Direction of Travel Condition Modifier 1 = 2 (To) is applied when direction of travel is one way towards the reference node.
- Direction of Travel Condition Modifier 1 = 3 (Both) is applied when direction of travel is allowed in both directions.
- For a reversible road, the link receives the attribute of Direction of Travel = Both. Two Direction of Travel Link Condition/Driving Manoeuvre Records are published with associated Link CDM Date/Time Modifier Records to reflect the times when the road reverses.
- Roads where the Direction of Travel Changes:
  - Timed one-ways that are of short duration are coded using Time of Day/ Day of Week Link CDM Date/ Time Modifier. These roads have a predominant travel direction but may change for short periods such as on weekends or during special events. The link's Direction of Travel attribute value reflects the situation that applies most of the time. Direction of Travel Link Condition/Driving Manoeuvre Records are published with associated Link CDM Date/Time Modifier Records to reflect the periods where the direction changes.
  - Roads with seasonal direction of travel changes are cases where, for example, a road is one-way during summer when the traffic is heavy and two-way the rest of the year. For this case, Direction of Travel = From or Toward is applied to reflect the one-way direction and a Direction of Travel Link Condition/Driving Manoeuvre Record is published with associated Link CDM Date/Time Modifier Records for the periods when the roads are two-way.
  - Roads that are considered “reversible” are typically separately digitised lanes of Controlled Access = Y roads. Fully reversible links require that they are represented as Direction of Travel = Both with timed Direction of Travel Conditions to reflect reversibility.

## 7.12.3.6 Lane Direction of Travel & Lane Access Restriction

### Definition

Lane Conditions determine the conditions that are applicable to a lane.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

## Layer

Condition/Driving Manoeuvre Layer (Cdms)

Lane Condition/Driving Manoeuvre Layer (LnCdms)

## Condition Types

5 - Lane Direction of Travel

8 - Lane Access Direction

## Related Layers

Condition Modifier (CndMod)

Condition/Driving Manoeuvres - Date/Time Modifiers (CdmsDtmod)

## Usage

Lane conditions are used to determine single lane restriction for cartographic representation and for proper lane guidance.

## Specification

- Only Single Link Lane Conditions may be defined.

Example: on a single direction of travel link with two lanes, the right most lane prohibits Trucks at certain times of the day.

The Streets Layer (Streets) publishes the following access characteristics:

Column	Value
.....	...
AUTOMOBILES	Y
BUSES	Y
TAXIS	Y
CARPOOLS	Y
PEDESTRIANS	Y
TRUCKS	Y
THROUGH TRAFFIC	Y
DELIVERIES	Y
EMERGENCY VEHICLES	Y
MOTORCYCLES	Y

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

here

Column	Value
.....	...

The Lane Layer (Lane) publishes the following access characteristics:

Column	Value
LANE_ID	123456789
LANE_NUMBER	2
.....	...
AUTOMOBILES	Y
BUSES	Y
TAXIS	Y
CARPOOLS	Y
PEDESTRIANS	Y
TRUCKS	Y
THROUGH TRAFFIC	Y
DELIVERIES	Y
EMERGENCY VEHICLES	Y
MOTORCYCLES	Y

The Lane Condition/Driving Manoeuvre (LnCdms) layer publishes the following access characteristics:

Column	Value
LANE_ID	123456789
CONDITION_ID	33224930
CONDITION_TYPE	5
AUTOMOBILES	Y
BUSES	Y
TAXIS	Y
CARPOOLS	Y
PEDESTRIANS	Y
TRUCKS	Y
THROUGH TRAFFIC	Y

## Reference Guide

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7.12 Condition/Driving Manoeuvres (CDMs)



Column	Value
DELIVERIES	Y
EMERGENCY VEHICLES	Y
MOTORCYCLES	Y

The Lane Condition Template layer publishes:

Column	Value
CONDITION_ID	33224929
Lane_1	N
Lane_2	Y
.....	
Lane_16	

The Condition/Driving Manoeuvre - Date/Time Modifiers layer publishes the following:

LINK_ID	122178232	122178232
COND_ID	33224929	33224930
DTTME TYPE	1	1
EXCL DATE	N	N
FROMEND	N	N
REF_DATE	YYYYYYN	YYYYYYN
EXP DATE		
STARTTIME	1200	1200
ENDTIME	1900	1900

### 7.12.3.7 Restricted Driving Manoeuvre

#### Definition

A *Restricted Driving Manoeuvre* (RDM) describes a manoeuvre from one link to another that is prohibited.

#### Condition Type

7

#### Length

5

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

## Condition Modifier 1

- 1 - Legal
- 2 - Physical
- 3 - Logical
- 4 - Observed

## Condition Modifier 2

- 1 - Time Override = Dawn to Dusk
- 2 - Time Override = Dusk to Dawn

## Related Attribute

*End of Link*

## Usage

The *Restricted Driving Manoeuvre* condition is used to prevent a vehicle from making a prohibited manoeuvre, resulting in more accurate route calculation.

## Specification

- *Restricted Driving Manoeuvres* are applied to two or more contiguous links that uniquely define the restricted manoeuvre.
- Where the links are reported is significant. For example, if link A is reported in the Record Key as the *Link ID* and link B is reported in the *Manoeuvre Link ID 1* field, the manoeuvre is restricted from link A to link B.
- In the case of a restriction involving more than 2 links, then additional Manoeuvre Link IDs are contained in the Restricted Driving Manoeuvres - Manoeuvre Links (Rdms) layer. The order of the links is still significant. An order of A, B, C, D, E would mean that the car cannot traverse the links in that order to get from A to E. Note that this does not imply that traversing subsets of these links is prohibited (for example travelling from C to D to E may be legal even if going from A to E is illegal).
- The number of links which can be involved in a *Restricted Driving Manoeuvre* is limited to 500, but it is minimised to the point where the restriction is uniquely identified.

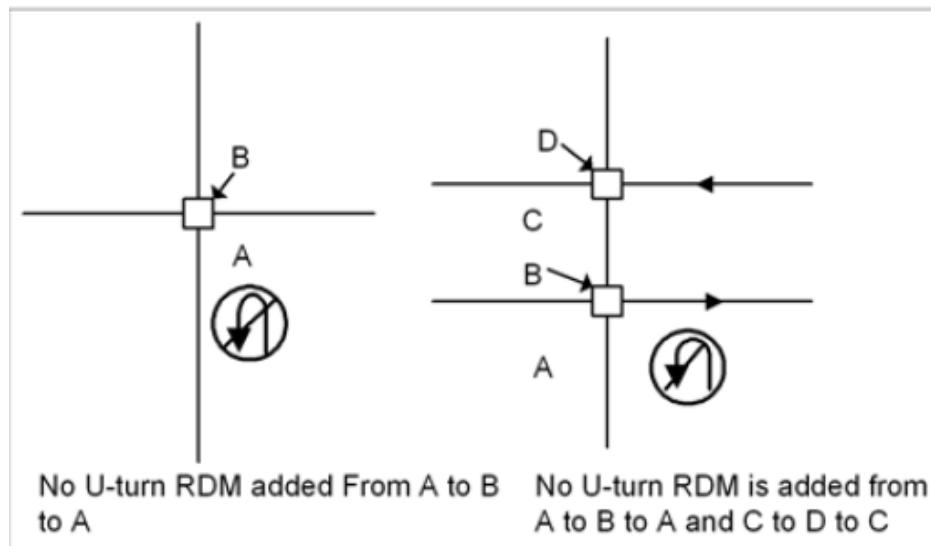
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- “No U-Turns” at intersections of single digitised links are represented. See also *End of Link* attribute.
- Note:** The Restricted Driving Manoeuvre condition is not applied to represent Administrative Area wide (e.g., municipal or regional) traffic restrictions such as “No U-turns Allowed” in a specific city. Instead these are represented by Admin Wide Regulations..

**Figure 256:**



- Municipal or regional traffic restrictions such as “No U-turns allowed in the city of St. Louis” are not coded in the database. A listing of these cities can be found in the Administrative Areas where U-Turns are not Allowed Document.
- Restricted Driving Manoeuvres* are not coded onto links whose accessibility is already restricted by the link attributes or by other Condition/Driving Manoeuvres, such as:
  - Direction of Travel
  - Access Characteristics
  - Divider
  - Z-Level
  - Condition Type = 4 (Gate)
- If the an associated Link CDM Date/Time Modifier is not present, the *Restricted Driving Manoeuvre* is in effect 24 hours a day, every day of the year.
- Outside the period contained in the associated Link CDM Date/Time Modifier, the *Restricted Driving Manoeuvre* is not in effect.
  - The Access Characteristics for the condition are applied based on the information legally posted. For example, “No left turn for trucks only”.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

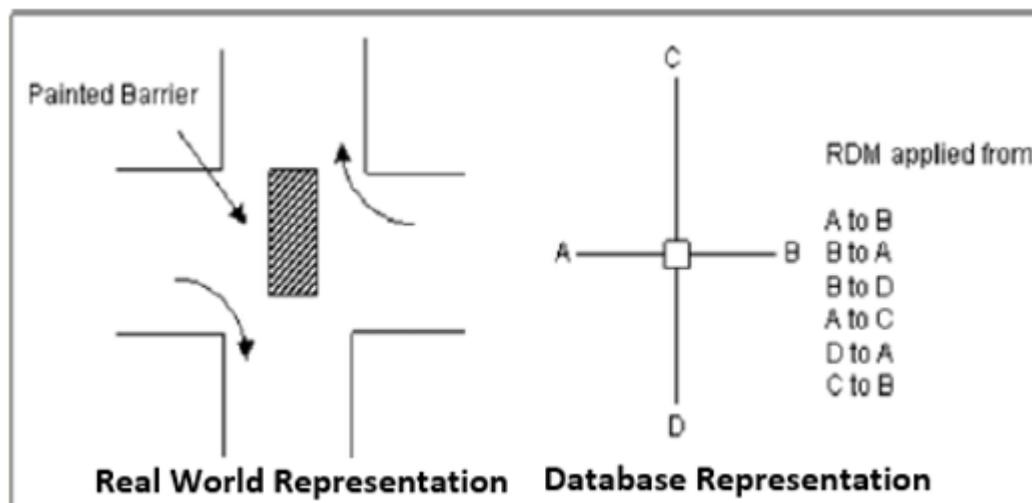
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- **Restricted Driving Manoeuvre Condition Modifier 1 = 1 (Legal):** The manoeuvre is legally prohibited due to posted turn restriction signs, restricted manoeuvre signs, painted traffic restrictions or other traffic regulations.

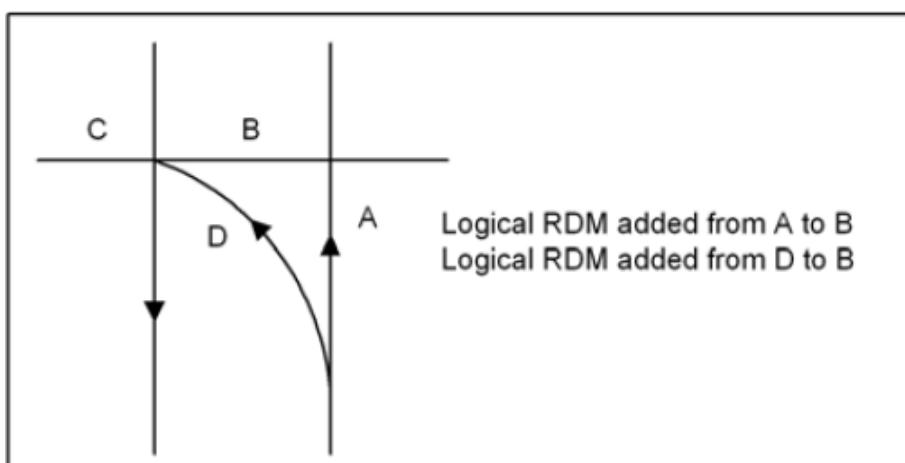
① **Note:** In South Korea Restricted Driving Manoeuvre Condition Modifier 1 = 1 (Legal) is applied to all RDMs regardless of the actual type of restriction.

Figure 257:



- **Restricted Driving Manoeuvre Condition Modifier 1 = 1 (Legal):** is never in effect for Emergency Vehicles and/or Pedestrians.
  - **Restricted Driving Manoeuvre Condition Modifier 1 = 1 (Legal):** can only apply to vehicles that are generally allowed on the link. For example, if Buses are generally not allowed on the link, then the manoeuvre cannot apply to Buses.
- **Restricted Driving Manoeuvre Condition Modifier 1 = 3 (Logical):** The manoeuvre is logically prohibited. Although not legally or physically restricted, no vehicle would logically make this manoeuvre in order to traverse a link or intersection.

Figure 258:



- **Restricted Driving Manoeuvre Condition Modifier 1 = 3 (Logical):** are always in effect for all Access Characteristics except for Pedestrians. Emergency Vehicles are also restricted from *Restricted Driving*

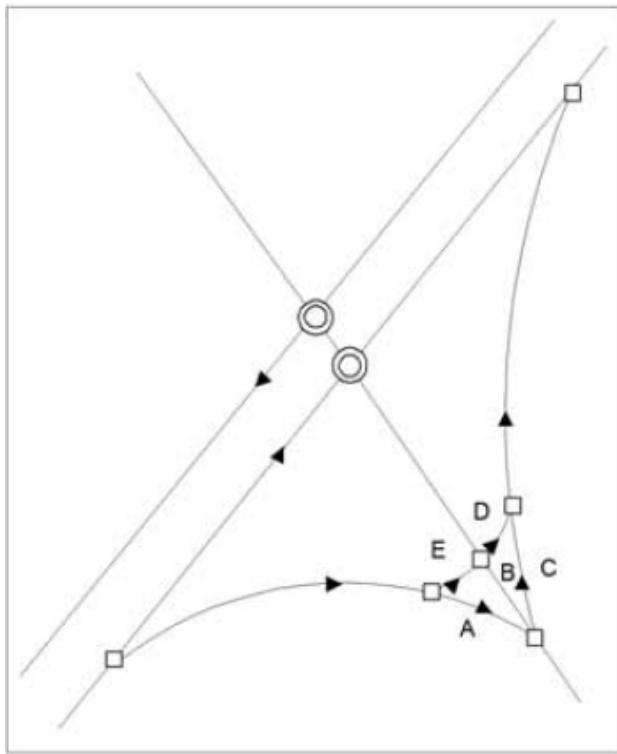
## Reference Guide

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7.12 Condition/Driving Manoeuvres (CDMs)

**Manoeuvre Condition Modifier 1 = 3 (Logical).** See [Figure 259:](#) on page 564 for examples of *Restricted Driving Manoeuvre Condition Modifier 1 = 3 (Logical)*.

**Figure 259:**



*Restricted Driving Manoeuvre Condition Modifier 1 = 3 (Logical) from:*

- Link A to Link B
- Link A to Link C
- Link B to Link C
- Link B to Link D
- Link E to Link B

## Reference Guide

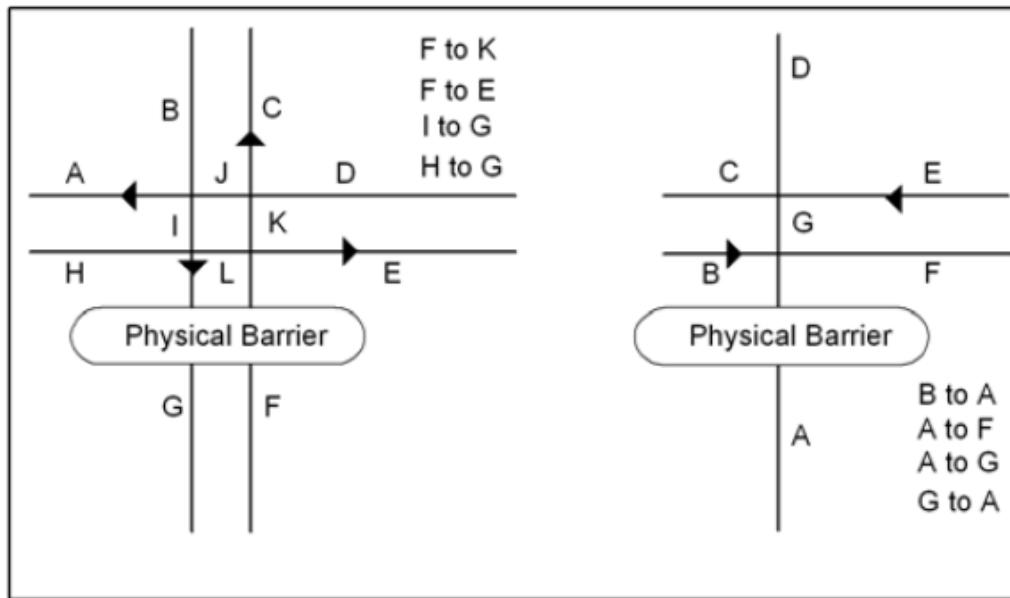
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- **Restricted Driving Manoeuvres Condition Modifier 1 = 2 (Physical):** The manoeuvre is physically prohibited, due to permanent barriers or other permanent physical impediments.

**Figure 260:**



- **Restricted Driving Manoeuvres Condition Modifier 1 = 2 (Physical)** are always in effect for all vehicles allowed on the first link of the manoeuvre, which is found in the Link ID field of this record.

## Reference Guide

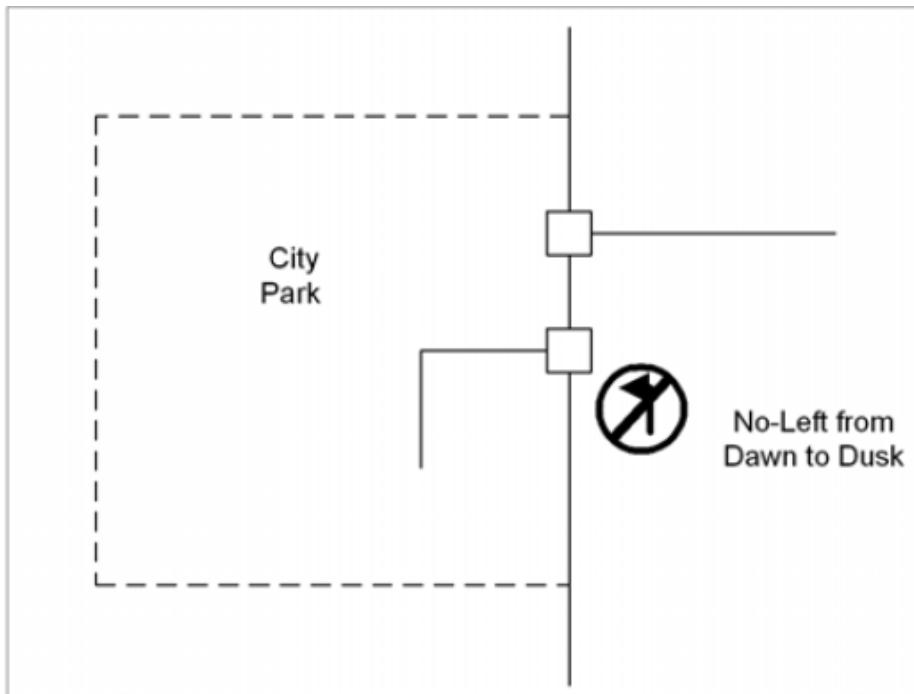
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7.12 Condition/Driving Manoeuvres (CDMs)

- Condition Modifier 2

- *Restricted Driving Manoeuvre* Condition Modifier 2 = 1 (Dawn to Dusk) is applied when the restricted driving manoeuvre goes into effect at dawn and is no longer in effect at dusk.
- *Restricted Driving Manoeuvre* Condition Modifier 2 = 2 (Dusk to Dawn) is applied when the restricted driving manoeuvre goes into effect at dusk and is no longer in effect at dawn.

**Figure 261:**



- RDM Type = OBSERVED (4), similar to other RDM Type values, is used for route calculation.
- RDM Type = OBSERVED is published for RDMs that are based solely on aggregated sourced and proprietary probe data.
- RDM Type = OBSERVED is published only for newly added RDMs.
- RDM Type = OBSERVED is not published to the following:
  - New Restricted Driving Manoeuvre conditions detected by probe data but are further verified through standard verification methods (e.g., field drives, satellite, and street imagery, etc.) will be published with their appropriate RDM values (e.g., LEGAL, PHYSICAL, AND LOGICAL).
  - Existing Restricted Driving Manoeuvre conditions updated with the help of probe data retain their original RDM Type.
- Applicable Vehicles are defaulted to the Access Characteristics of the origin link except emergency vehicles and pedestrians.
- Date Time Modifier is defaulted to be in effect 24 hours a day, every day of the year (i.e., no DTM is published).

### 7.12.3.8 Access Restriction

#### Definition

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.12 Condition/Driving Manoeuvres (CDMs)

**Access Restrictions** are used to identify situations where specified types of vehicles are prohibited from travelling on the road at specific times. It also identifies which lane(s) allow access for HOV vehicles only, and provides requirements for accessing these lanes.

## Condition Type

8

### Usage

*Access Restriction* conditions enable correct route calculation and map display. For example, if an *Access Restriction* exists that limits the access of automobiles for a specified time period, automobiles may be routed around that link for the duration of the restriction.

It can be used to determine which lanes are accessible to HOV vehicles only, and can also be used to identify the requirements for legally using the HOV lanes.

### Specification

- This Condition Type is used in conjunction with a *Date/Time Modifier*.
- The access characteristics in this record override the *Access Characteristics* on the link during the time period specified.

For example, when a Carpool Only road (separately digitised), is closed to all traffic during non-commuting hours, then an *Access Restriction* is applied for the closed time. The condition applies to the types of traffic that are allowed when the road is open.

Another example: In an area which is restricted to residents only (i.e. no thru traffic) between 20:00 and 08:00, the *Access Restriction* condition applies to *Through Traffic* = Y.

- This Condition Type may be used in conjunction with Time Override (Dawn to Dusk and Dusk to Dawn) modifier where applicable.

### Seasonal Closures

Seasonally closed roads or ferries are represented with *Access Restriction* Conditions. Approximate date ranges, based on past closure dates, are created for these seasonally closed arterial roads. For example, Tioga Pass in the Sierra Nevada Mountains is closed approximately from November 1st through May 15th.

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7.12 Condition/Driving Manoeuvres (CDMs)

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An Access Restriction Condition (Condition Applies to all vehicle types allowed on the link) is applied with three Date/Time Modifiers for November 1st to May 15th. The three Date/Time Modifiers would be:

1. DTM Type = H

- Reference Date = 00110000
- End Date = 00120000

2. DTM Type = H

- Reference Date = 00010000
- End Date = 00040000

3. DTM Type = I

- Reference Date = 00010005
- End Date = 00150005

The Access Restriction Condition attribute of Condition Modifier 1 = 1 (Approximate Seasonal Closure = Yes) is also applied. If there are definite dates for the seasonal closure Condition Modifier 1 = 0 (Approximate Seasonal Closure = No) is applied.

If seasonally closed roads also have gates in reality, both the Access Restriction condition (with an Approximate Seasonal Closure = Y) and a Gate condition are published.

## (HOV) Access Restriction Coding

- HOV lane(s) is/are specified by the Access Characteristics at lane level in the Access Restriction condition. In case all lanes are open to HOV vehicles only, then the Access Restriction condition applies to all lanes.
- An HOV lane is coded with an Access Restriction condition which applies to all Access Characteristics = Yes except for Carpool = No, Bus = No (depending if they are allowed or not), and Emergency Vehicles = No.
- Date/Time Modifiers are coded to indicate specific time periods when the lane is open to HOV vehicles only, or to specify changes in the number of passengers required at certain hours of the day. Each unique combination of HOV lane open and number of passengers is a separate Access Restriction Condition.
- Reversible HOV lanes are separately digitized, regardless of the type of divider (physical or painted) between the HOV lane and the other lanes. This is done to accommodate the reversible situation.
- Example of new condition modifiers for HOV Access condition, as published in the Condition Modifier layer (larger font size denotes new addition). Each access condition has its corresponding End Of Link to define directionality, and a Lane Condition/Driving Manoeuvre layer entry to define the lanes to which the HOV access condition applies.

The following table provides an example of the Condition Modifier (CndMod) layer with the new HOV Access Restriction attribution:

Condition ID	Modifier Type	Modifier Value
634548039	10	2
634548039	11	1
634548039	12	1
634548039	57	1

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Condition ID	Modifier Type	Modifier Value
634548039	58	0
634548040	10	2
634548040	11	1
634548040	12	1
634548040	57	1
634548040	58	0

### 7.12.3.9 Lane Access Restriction

The Lane Access Restriction condition is defined in the same section as the Lane Direction of Travel condition. See [Lane Direction of Travel & Lane Access Restriction](#) on page 557.

### 7.12.3.10 Special Explication

#### Definition

The Special Explication condition indicates a point where a road splits into two or three roads. If no route guidance advice was provided, the driver may not be able to determine in which direction to continue.

#### Condition Type

9

#### Length

5

#### Condition Modifier

None

#### Related Attribute

Controlled Access

#### Usage

Special Explication can be used for map display and route guidance.

#### Specification

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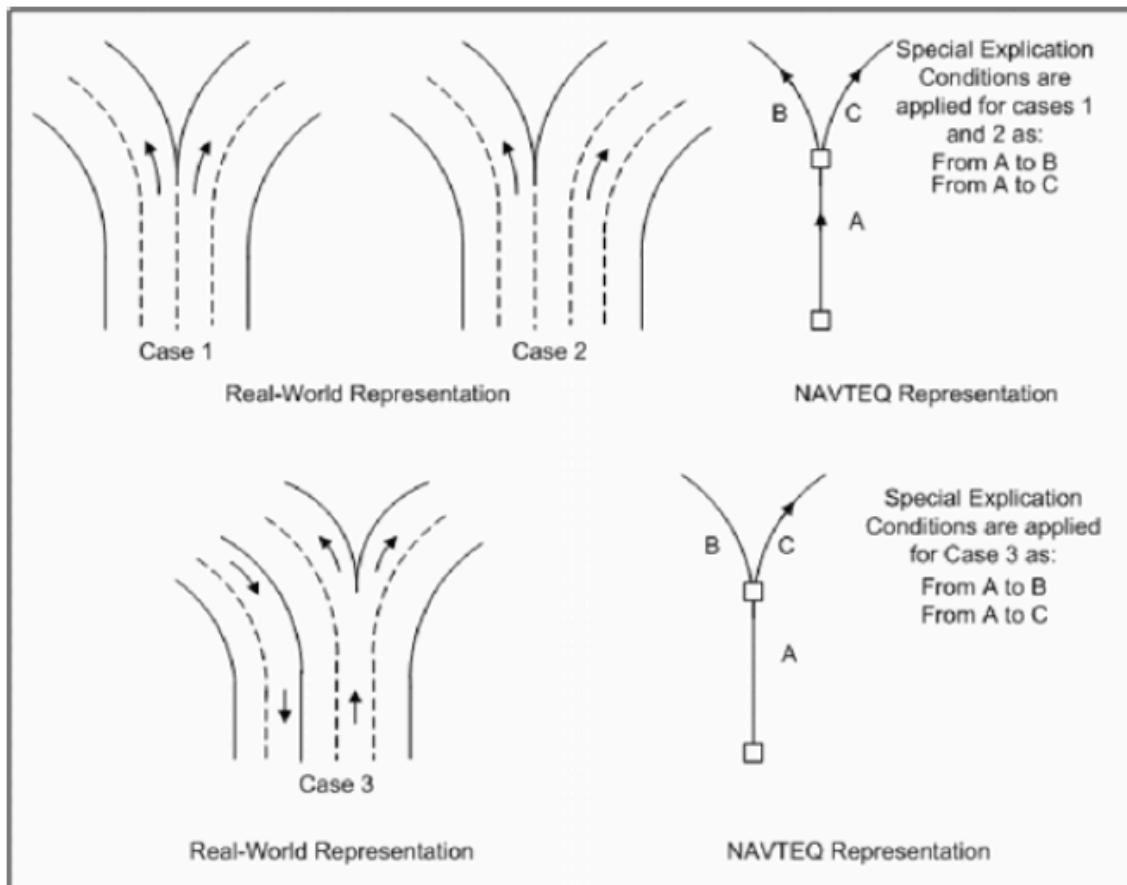
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- At qualifying decision points (see rules below), two or more Special Explication Conditions are always added, one for each link after the split.

Figure 262:



- The Access Characteristics of the Special Explication Condition are set to Y for all vehicle types.
- A Special Explication Condition can be applied to Motorway links.

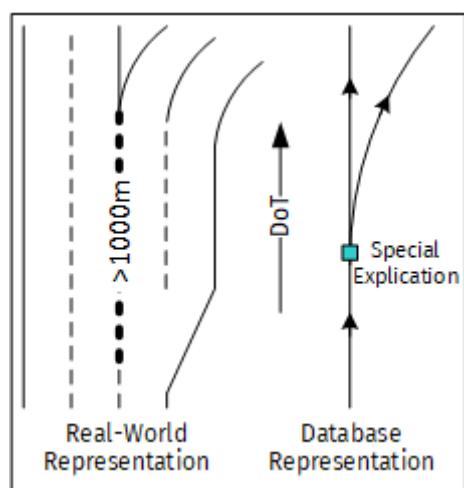
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- A Special Explication Condition is applied when:
  - The lane configuration suggests a non-controlled access road as splitting and instruction to keep to the left or right is necessary to continue in the correct direction as shown in the examples below.
  - The lane configuration suggests a controlled access road as splitting into two or more controlled access roads.
  - The lane configuration suggests a Highway-to-Highway Connector as splitting into two or more Highway-to-Highway Connectors.
  - The controlled access road widens to include two (or more) extra lanes for at least 1000 metres before the decision point. In this case, the lane configuration suggests a motorway as splitting. See example below.

**Figure 263:**



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here

- The Access Characteristics of the Special Explication Condition are set to Y for all vehicle types.

Figure 264:

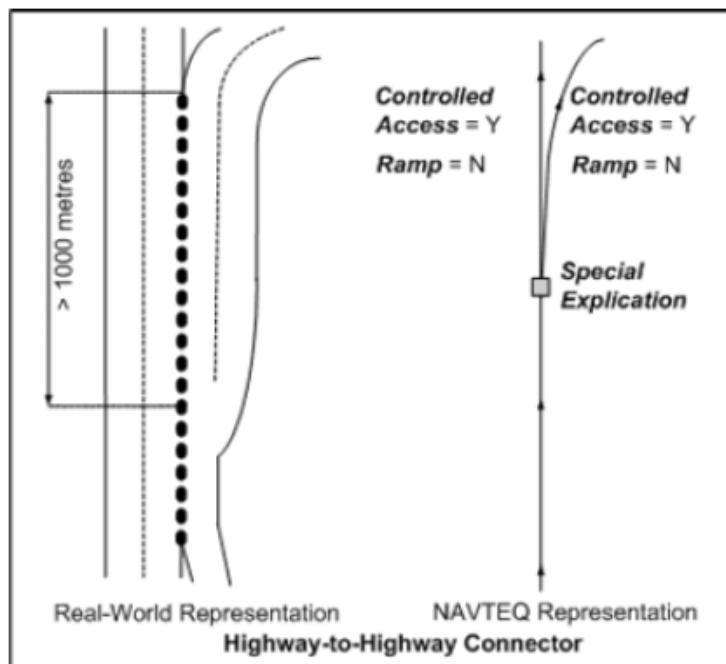
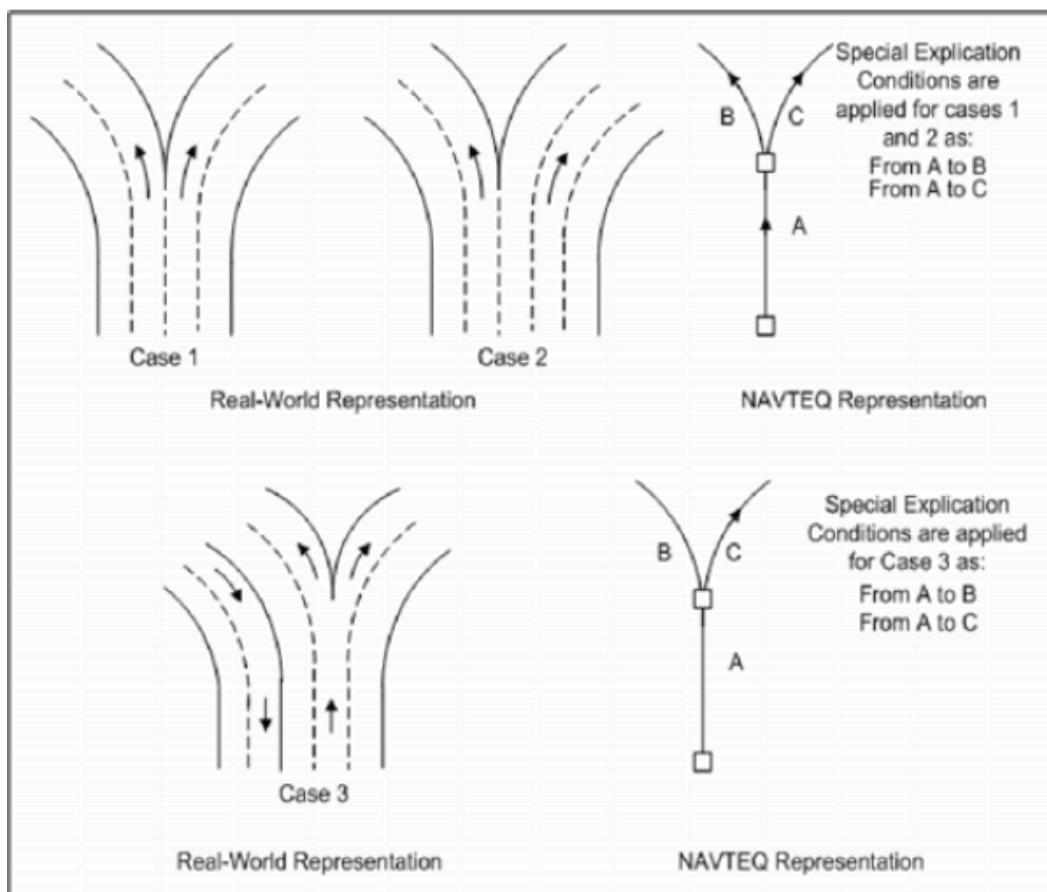


Figure 265:



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### 7.12.3.11 Special Speed Situation

#### Special Speed Situation

##### Definition

*Special Speed Situation* indicates a speed that exists under special circumstances.

##### Condition Type

10

##### Length

5

##### Condition Modifier 1

- 1 - Special Speed Type = Advisory
- 2 - Special Speed Type = Dependent
- 3 - Special Speed Type = Speed Bumps Present

##### Condition Modifier 2

- 1 - Time Override = Dawn to Dusk
- 2 - Time Override = Dusk to Dawn

##### Condition Modifier 3

- 1 - Dependent Speed Type = School
- 2 - Dependent Speed Type = Rain
- 3 - Dependent Speed Type = Snow
- 4 - Dependent Speed Type = Time Dependent
- 5 - Dependent Speed Type = Approximate Seasonal Time
- 6 - Dependent Speed Type = Lane Dependent
- 7 - Dependent Speed Type = Fog

##### Condition Modifier 4

Numeric Value (1-999) - *Special Speed Limit*

##### Related Attribute

*Speed Limit Unit*

##### Usage

*Special Speed Situation* can be used to further refine the estimation of link traversal times, prioritisation of link selection during route calculation, and calculation of route guidance timing.

##### Specification

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- *Special Speed Situation can be applied for any road regardless of Functional Class. Inclusion varies, however per country and/or extract variation, e.g., only Special Speed Situation for links with Functional Class = 1 and 2 are published for base contents.*
- *Special Speed Situation* is indicated when a road has both a legal speed limit and some situation that causes the legal speed limit to change. The change can be due to time, conditions, or activity. Only *Special Speed Situation* signs with a posted speed value or representing a specific speed value by legal statute are included.
- The speed limit for a *Special Speed Situation* is indicated in the measurement system used in a particular country. This means that speeds posted in kph are entered with their kph value and speeds posted in mph are entered with their mph value.
- Positional accuracy is within +/-50 metres from the start and end of a particular *Special Speed Situation* location.
- A *Special Speed Type* is always indicated. *Special Speed Type* values include:
  - **Advisory.** These posted speeds are not the legal limit, but rather serve to warn a driver that road conditions indicate a lower speed is practical. Typically, the road condition is a curved road or a ramp but it may be due to a narrow road, narrow bridge, intersecting road, drainage dip, etc. In some cases, the advisory sign is on a different road than the one for which it applies (this can happen with ramps). In this case, the advisory speed is indicated for the road for which it is intended, even if the sign is further than 50 metres from the particular road.
    - - Advisory speed signs due to construction are not included.
    - - A speed value is published for advisory signs.
  - **Dependent.** This is a speed that is enforced when certain criteria are met. Examples include: School, Rain, Snow, Time Dependent, etc. A speed value is published for all *Dependent Speed Types* except for Lane Dependent. A *Date/Time Modifier* must be applied to the *Dependent Speed Type* = Time Dependent (see below).
    - School: School zone signs are often placed to slow drivers before reaching an intersection where children are crossing. Nodes are added to apply the *Special Speed Limit* if the school zone sign is greater than 50 metres from an intersection.
    - The speed value for school zones can be based on signs that have a posted speed value or signify a specific speed based on a legal statute.
    - Time Dependent: These are speed limits that are in effect only during a specified time period. The date range corresponding to the time is indicated as the *Date/Time Modifier*. Also, there are cases

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- where a different speed is applicable at night. This is indicated with a *Time Override* = Dusk to Dawn.
- Rain, Snow: These are speed limits that are in effect only under specific weather conditions. For example, in Germany, speed limits on motorways can be reduced in case of rain.
  - Approximate Seasonal Time: These are the “seasonal” situations. For example, in Chicago, Lake Shore Drive changes from 45mph to 40mph during the winter.
  - Lane Dependent: These are situations where a road has different speed limits per lane. No *Special Speed Limit* is published for this *Dependent Speed Type*. The *From/Toward Reference Speed Limit* value is the predominant speed allowed.
  - Speed Bumps. This indicates that for a stretch of road, speed bumps are present or chicanes are present that effectively reduce the posted speed. A *Special Speed Limit* value is not indicated for *Speed Bumps*.
    - The following situations are not considered speed bumps/chicanes:
    - rumble strips (commonly rows of raised reflectors used to warn drivers when approaching a speed change or other situation).
    - cattle grids.
    - chicanes that do not effectively slow down the traffic.
  - For variable message signs that indicate a reduced speed due to conditions, a *Special Speed Situation* is not included.
  - *Special Speed Type* = *Speed Bumps* does not have a *Special Speed Limit* nor a *Dependent Speed Type* published.
  - *Special Speed Type* = *Advisory* always has a *Special Speed Limit* published. *Dependent Speed Type* is not published for advisory.

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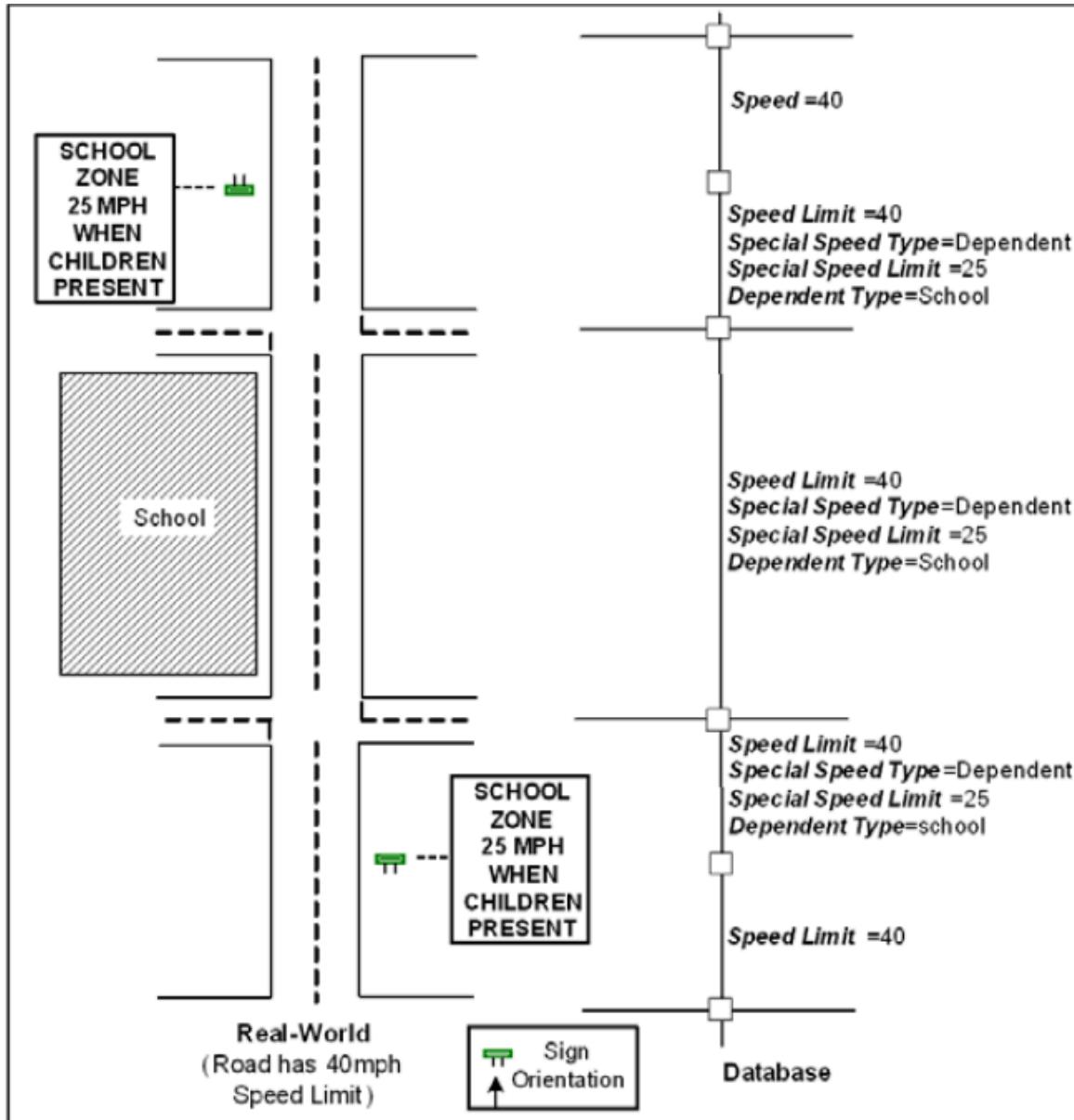
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here

- *Special Speed Type = Dependent* always has a *Special Speed Limit* and a *Dependent Speed Type* published except when the *Dependent Speed Type = Lane Dependent*.

Figure 266:



## 7.12.3.12 Variable Speed Sign

### Definition

*Variable Speed Sign* indicates the location of a typically automated sign where the posted speed limit can vary.

### Condition type

11

### Length

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5

## Condition Modifier 1

- 1 - Variable Sign Location = Left
- 2 - Variable Sign Location = Right
- 3 - Variable Sign Location = Overhead

## Specification

- In European and U.S. databases, *Variable Speed Sign* and *Variable Sign Location* are published on links with *Controlled Access* = Y.  
*In Western Europe, and in select Baltic states and East European countries, Variable Speed Sign is also published for links with Functional Class = 1 to 2.*
- *Variable Speed Sign* represents the location of a variable speed sign. The Condition consists of two links. The order of the links determines the facing direction of the sign.
- *Variable Sign Location* identifies if the location is to the Left, Right or Overhead. If located in more than one spot, the most prominent one is chosen as the location.
- Positional accuracy is within +/-50 metres of the location of the *Variable Speed Sign*.
- A *Variable Sign Location* is indicated when a variable speed sign is present and is permanently placed.
- The *Access Characteristics* of the *Variable Speed Sign* Condition are set to Y for all vehicle types.

The following image shows a road where only a digital speed limit sign is displayed. With this type of sign the local authorities can change the speed limit without notice. In this situation, only *Variable Speed Sign* is applied, the speed limit value is not entered.

**Figure 267:**



## 7.12.3.13 Usage Fee Required

### Usage Fee Required

#### Definition

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The Usage Fee Required condition and condition modifiers identify the links that are affected by toll, the Access Characteristics to which the toll applies and the type of toll feature it represents. The Usage Fee Required condition modifiers also identify the type of toll system if applicable. Date/Time Modifiers may be published in case the toll is only required certain times during the day or on certain days only.

## Condition Type

12

## Length

5

## Related Attributes

*Toll Feature Type*

*Toll System Type*

## Usage

The Usage Fee Required condition can be used for routing and guidance (e.g., for enabling avoidance of toll roads). It can be used for display purposes by displaying the links that are affected by tolls.

The Usage Fee Required condition can also be used to generate differentiated displays of toll feature types, and/or the Access Characteristics to which the toll applies.

## Specification

- The Usage Fee Required condition is applied to all links that are affected by any type of toll. See [Examples of Toll Structures](#) on page 549.

 **Note:**

The model for Usage Fee Required dictates that all navigable links within the applicable area receive Usage Fee Required = Y.

 **Note:**

Tollway and Usage Fee Required values do not necessarily match. A road can be flagged as Tollway without receiving Usage Fee Required.

- When Toll Structures are located on a ramp, the Usage Fee Required condition is applied starting at the point where the driver has no other option than entering the toll road. The Usage Fee Required condition

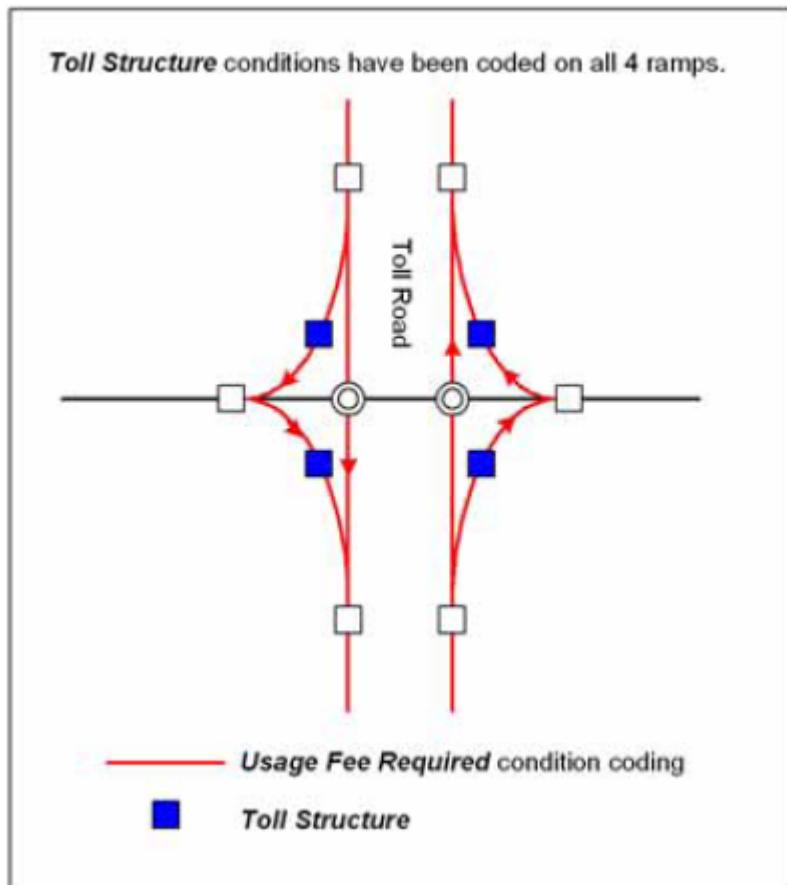
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will also be applied to the complete ramp in case a Toll Structure is present on an exit ramp. See the following example.

**Figure 268:**



# Reference Guide

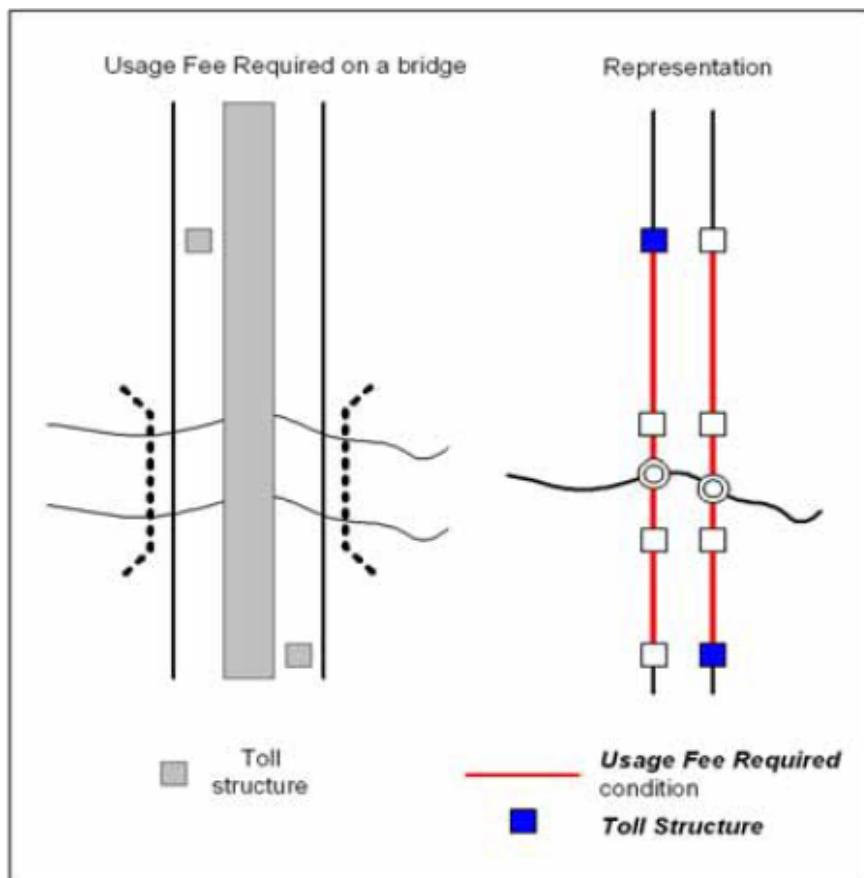
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- In case Toll Structures are located at a bridge, the Usage Fee Required condition is applied starting at a point after the Toll Structure and ending at the logical end point of the bridge. In most cases, this would be the point where the Toll Structure is located for the other driving direction.

Figure 269:



- The Usage Fee Required condition will be applied to all links that connect two or more toll roads.
- Rest areas along a toll road will also be coded with the Usage Fee Required condition.
- Multiple Usage Fee Required conditions can be present for one link in case the link serves multiple types of Toll. Example: In Austria, Trucks and Buses pay Toll through the Toll Collect system (Electronic Toll Structures). All other vehicles pay Toll through the Vignette system. In this case, one link has two Usage Fee Required conditions: one for the Toll Collect system, and one for the Vignette system.
- A relationship between a Toll Structure and a Usage Fee Required condition is not identified. If multiple Usage Fee Required conditions exist for a toll road, it cannot be determined which one is related to a specific Toll Structure. The premium XML Toll Cost product will provide this functionality.

## Lane Level (Single Direction Toll Roads)

- Usage Fee Required is published for a lane when either of the following is true:
  - A link is bidirectional and the Toll System (including HOT (High Occupancy Toll) Lanes and ETL (Express Toll Lanes)) is applicable to all of the lanes in only one direction of travel.
  - The attribute is only applicable to a subset of lanes on the link.

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- Lane Direction of Travel = From - From the Reference Node is published if the Usage Fee Required condition is applicable only in the positive link direction (from reference node towards non-reference node).
- Lane Direction of Travel = To - To the Reference Node is published if the Usage Fee Required condition is applicable only in the negative link direction (from the non-reference node towards reference node).
- If the toll system is applicable in both driving directions, then Usage Fee Required is published at the link level.

### Access Characteristics

The Access Characteristics indicate to which vehicle types the toll applies. Some toll systems only apply to certain type of vehicles. For example, in Germany only Trucks are required to pay a fee in order to traverse the motorway network

### Date/Time Modifier

Date/Time Modifier information is applied when the toll is in effect only on specific days or during specific times of the day.

### Usage Fee Required - Toll Cost Association

Usage Fee Required or Toll Structure Type ties the external Toll Cost XML LAT file to the NAVSTREETS extract.

## 7.12.3.14 Lane Usage Fee Required

### Definition

A Lane Usage Fee Required condition identifies situations where Toll Systems apply in one direction only on a bi-directional link. The Lane Usage Fee Required condition is modelled as a single lane Condition. The direction in which the Toll System is applicable is modelled using the Lane Direction of Travel.

### Layer

Lane Condition Driving Manoeuvre (LnCdms)

### Related Attributes

Condition Type = 12 (Usage Fee Required)

Lane ID

Condition ID

### Related Layers

Streets Layer

Lane Layer

Condition Modifiers (CndMod)

### Related Attributes/Fields

Streets Layer

Physical Number of Lanes

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Lane Layer

Link ID

Lane ID

Lane Number

Lane Direction of Travel

Lane Type

Access

Condition Modifiers (CndMod)

Condition ID

Modifier Type = 33 (Toll Feature Type)

### Usage

Lane Usage Fee Required can be used to retrieve the direction in which the Usage Fee Required condition applies.

### Specification

- A Lane Usage Fee Required condition is applied when a Toll System is applicable in one direction only on a bi-directional link.
- Lane Direction of Travel = F - From the Reference Node is published when the Usage Fee Required condition is only applicable in the positive direction of the link (from the reference node towards the non-reference node).
- Lane Direction of Travel = T - To the Reference Node is published when the Usage Fee Required condition is only applicable in the negative direction of the link (from non-reference node towards reference node).
- Lane Usage Fee Required is published for a lane if a toll system, (including HOT (High Occupancy Toll) lanes and ETL (Express Toll Lanes), is applicable in one direction only on a bidirectional link.
- When the Toll System is applicable in both driving directions, the Usage Fee Required condition is published at the link level.

## 7.12.3.15 Through Route

### Through Route

#### Definition

The *Through Route* condition represents the links indicating the continuation of the main road through an intersection.

#### Condition Type

14

#### Length

5

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## Condition Modifier

None

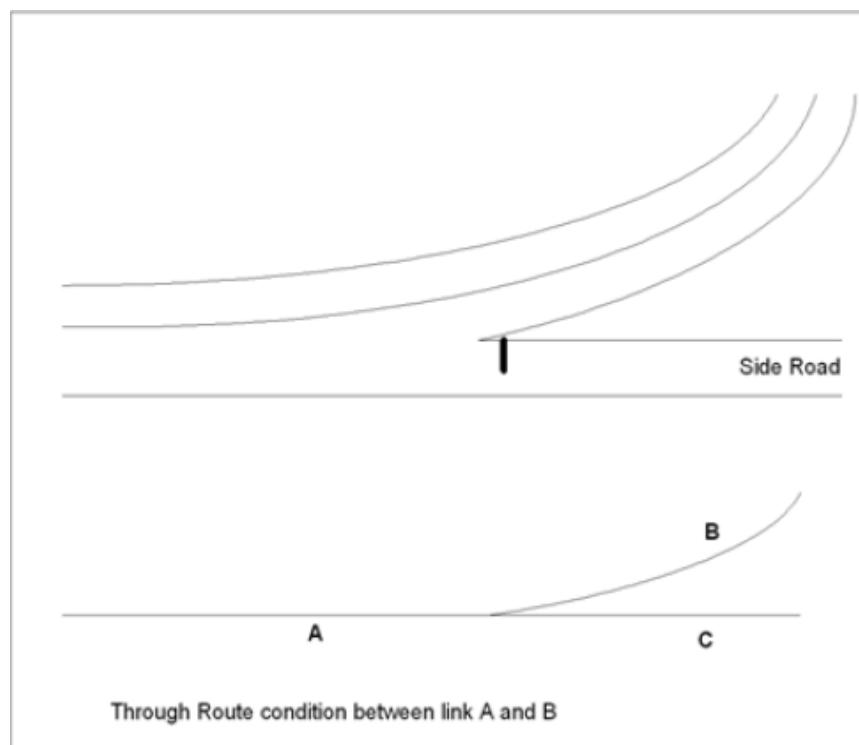
## Usage

*Through Route* can be used in guidance messaging to either give no guidance when following the main road or to give specific guidance like “turn left to follow the main road”, for example, when driving from A to B.

## Specification

Through Route conditions are applied to two contiguous links as origin and destination. The origin is the link prior to the road split and the destination is the link reflecting the continuation. See link A (origin) and B (destination).

**Figure 270:**



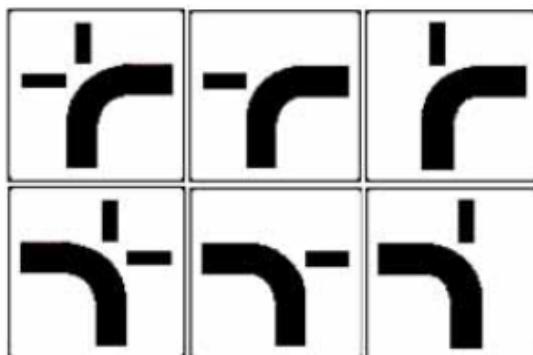
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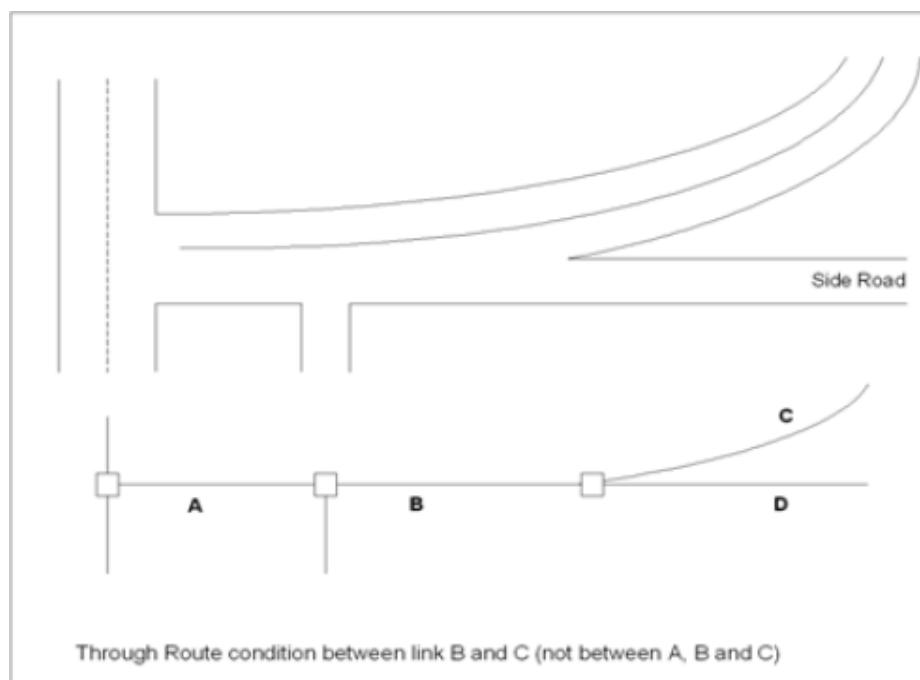
- Depending on the road marking or sign in each direction, the *Through Route* condition can exist in only one direction or in both directions.
  - The Through Route condition will never be applied against the direction of travel.

**Figure 271:**



- Through Route conditions can not have Access Characteristics nor Date/Time Modifier information set.
- Through Route conditions are applied to the minimum number of links required to uniquely identify the continuation of the road within an intersection.

**Figure 272:**



- Through Route conditions only exist on roads that are open to Automobiles = Y.
- Nodes are not added to limit the extent of the Through Route condition.
- Through Route conditions are not coded on Controlled Access = Y roads.

### 7.12.3.16 Traffic Signal

#### Definition

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The Traffic Signal condition (Condition Type = 16) indicates the presence of a traffic signal that is intended to effectively 'stop' traffic. It also indicates the location of the traffic signal.

## Condition Type

16

## Usage

The Traffic Signal information can be used for map display. When coverage is extended, Traffic Signal information can be used for improved travel time guidance.

① **Note:**

There are several factors that might influence the use case for improved travel time. In case of limited coverage, the improved travel time use case can not be supported. Other factors that might influence the travel time are situations where it is allowed to turn right at a red traffic signal. However, in these situations the driver always needs to yield to other traffic and pedestrians so the impact is minimal. Additionally there are cases where traffic signals are turned off (flashing only) at night or in weekends which might also impact the travel time. These specific situations are not modelled at this time.

## Specification

- Traffic Signal conditions are applied for traffic signals that include a red light in the lighting configuration, including at pedestrian crossings. See figure below for an example.
- Traffic Signal conditions are also applied for traffic signals along roads that are flagged as Controlled Access or Limited Access on the following locations:
  - Where the entire road (all lanes) is affected by traffic signals
  - Where traffic signals are placed prior to affected location indicating an upcoming traffic signal



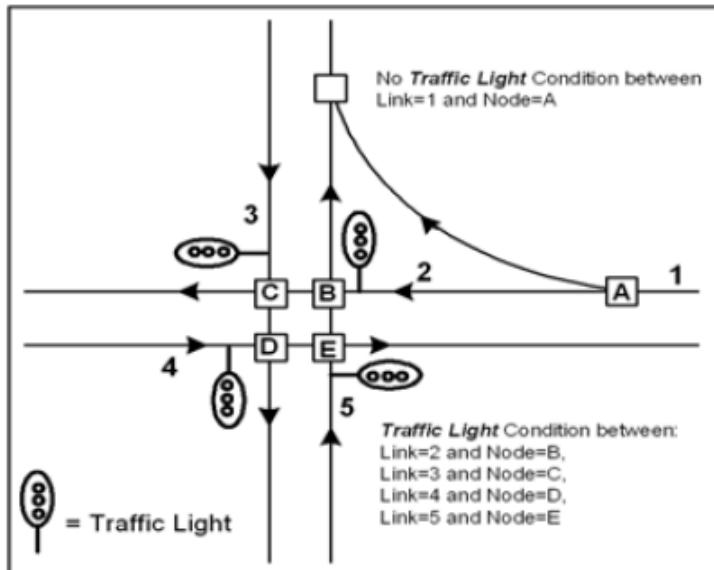
① **Note:** Note: "Configuration" means two or more lights are present on the signal.

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- Traffic Signal conditions are applied to one Link as origin and one connected Node as the destination. The origin is the Link prior to the traffic sign location and the destination is the intersection Node affected by the Traffic Signal. See Link = 2 and Node = B.



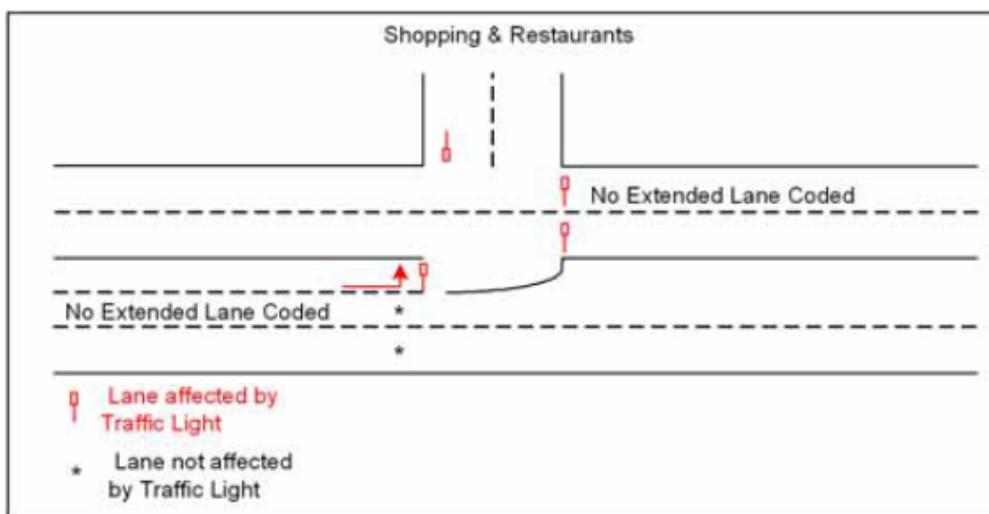
- Turn lanes not affected by a traffic light do not get *Traffic Signal* condition applied.
- Only Traffic Lights directly affecting the intersection, tunnel, metering location, etc. are included. Traffic Lights prior to the intersection, indicating an upcoming Traffic Light intersection, are not included.
- Traffic Signal* conditions are also included for *Traffic Signal* conditions for traffic lights for a pedestrian crossing just before/after the intersection that are controlled independent of the intersection traffic signals.
- The *Traffic Signal* condition does not indicate which lanes are affected by the Traffic Light and the direction arrows on the Traffic Light.
- Traffic Signal* conditions are not applied in the following situations:
  - Turn lanes not affected by a traffic signal
  - Signal lights along roads that are closed to cars
  - Construction traffic signals
  - Traffic signals used only at specific times for specific purposes; for example, variable traffic signals used at the location of fire stations
  - Traffic Lights used for protected left turns (see figure below)
  - Traffic signals on lines for Bus only
  - Traffic lights at a toll booth
  - A single light on controlled or limited access roads
  - Redundant signals that are part of the same intersection

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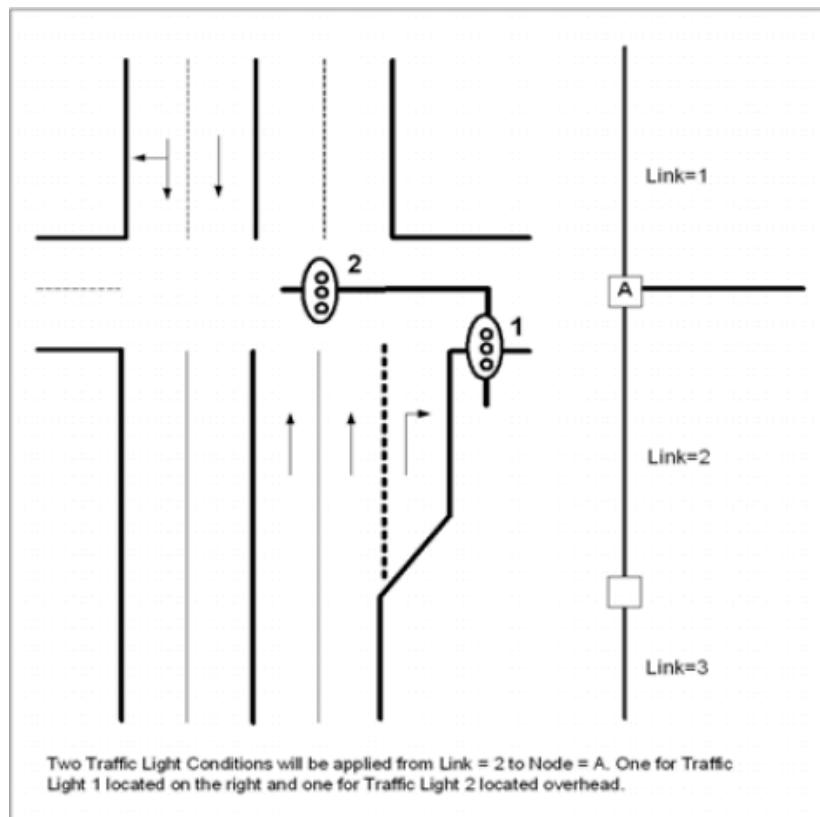
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## The following rules apply to Europe only:

- In case multiple Traffic Signals exist at the same location, then multiple Traffic Signal conditions are applied, one for each individual Traffic Signal.
- In case Traffic Signals exist on links that have no Lane Traversal condition, only one Traffic Signal condition is applied without a Signal/Sign Location attribute.
- In case Traffic Signals exist on a pedestrian crossing, only one Traffic Signal condition is applied without a Signal/Sign Location attribute.

Figure 273:



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### Rest of the World (Where Content is Included):

- Traffic Signal conditions are included on all roads that are Functional Class = 1, 2, 3, or 4.
- Traffic Signal conditions are also included for roads with Functional Class = 5 that have Lane Traversal condition coding.

## 7.12.3.17 Traffic Sign

### Definition

The *Traffic Sign* is a condition indicating the location of a Traffic Sign, the type of sign, and the sign category. It also includes supplemental signs, if present, indicating distance or other specific information.

### Condition Type

17

### Length

5

### Related Attributes

Traffic Sign Type (Modifier Type = 22)

Traffic Sign Category (Modifier Type = 28)

General Warning Sign Type (Modifier Type = 47)

Traffic Sign Value (Modifier Type = 51)

Supplemental Sign Duration (Modifier Type = 23)

Supplemental Sign Pre-Warning (Modifier Type = 24)

Supplemental Sign Validity Time (Modifier Type = 26)

### Usage

The *Traffic Sign* condition can be used for map display and for generating specific signs, signals & warnings messages.

### Specification

- The Traffic Sign condition is only included where a physical sign is present in reality.
  - ① **Note:** For traffic signs that apply to the intersection (e.g., Stop Sign or Yield Sign), the condition is applied to the intersection node even if the actual sign is located prior to the intersection.
- Traffic Signs are included with an accuracy of 50 metres.
- The condition modifiers Supplemental Sign Duration (23), Supplemental Sign Pre-Warning (24), and Supplemental Sign Validity Time (26) publish the supplemental sign text in the required language code. The language code is present in the Condition Modifier (CndMod) layer. The language code can be used to differentiate the supplemental sign text in case multiple modifiers of the same type (e.g., in bi-lingual areas) are coded for one Traffic Sign.

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- Supplemental sign text for modifier types Supplemental Sign Duration (Modifier Type = 23), Supplemental Sign Pre-Warning (Modifier Type = 24), and Supplemental Sign Validity Time (Modifier Type = 26) will only be published in Latin-1. The supplemental sign text will represent the actual text in Latin-1.

If more than one Latin-1 sign text is present on the sign, then multiple supplemental sign text of the same modifier type can be published.

- The following Traffic Signs are not included:

- Temporarily posted Traffic Signs
- Traffic Signs painted on the road (except for Stop Signs)

- The Traffic Sign condition is included for the following types of Traffic Signs (see the supporting document Country Profiles: Signs, Signals, and Warnings for examples):

Value	Traffic Sign	Description
1	Start of No Overtaking	Overtaking is prohibited for all vehicles.
2	End of No Overtaking	The No Overtaking restriction ends.
3	Protected Overtaking - extra lane	An extra lane forms on the right or left side of the road to allow safe overtaking. The sign does not indicate on which side the extra lane forms.
4	Protected Overtaking - extra lane right side	An extra lane forms on the right side to allow for safe overtaking.
5	Protected Overtaking - extra lane left side	An extra lane forms on the left side to allow for safe overtaking.
6	Lane Merge Right	An extra lane ends and the lane merges on the right side
7	Lane Merge Left	An extra lane ends and the lane merges on the left side. Lane Merge Left is also applied when two motorways merge together and one lane coming in from the left side ends. Note: Lane Merge Left is also used to indicate the end of a Protected Overtaking zone.
8	Lane Merge Center	Two lanes merge into one lane.
9	Railway Crossing Protected	A sign is present indicating a protected railway crossing with barriers.
10	Railway Crossing Unprotected	A sign is present indicating an unprotected railway crossing (without barriers).
11	Road Narrows	A sign is present indicating that the road narrows. This can be from both sides or from the left or right side only.
12	Sharp Curve Left	A sign is present indicating a sharp curve to the left.
13	Sharp Curve Right	A sign is present indicating a sharp curve to the right.
14	Winding Road Starting Left	A sign is present indicating a winding road with the first curve starting to the left.

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Value	Traffic Sign	Description
15	Winding Road Starting Right	A sign is present indicating a winding road with the first curve starting to the right.
16	Start of No Overtaking Trucks	A sign is present indicating no overtaking for trucks.
17	End of No Overtaking Trucks	No Overtaking for Trucks restriction ends.
18	Steep Hill Upwards	A sign is present indicating a steep ascent.
19	Steep Hill Downwards	A sign is present indicating a steep descent.
20	Stop Sign	A sign is present indicating that traffic must come to a stop.
21	Lateral Wind	A sign is present indicating that a strong crosswind is possible.
22	General Warning	A sign is present indicating a general warning.
23	Risk of Grounding	An elevation on the roadbed exists that can cause damage to the underbody of the truck.  Note: Risk of Grounding can also be published as a General Warning Sign (Traffic Sign Type = 22 with General Warning Sign Type = 2 when supplemental signs are used for signage in reality.)
24	General Curve	A sign is present indicating a curve warning, without an indication in which direction the curve is heading
25	End of all Restrictions	A sign is present indicating the end of all restrictions.
26	General Hill	A sign is present indicating a hill warning, without an explicit indication for uphill or downhill travel.
27	Animal Crossing	A sign is present indicating a warning that animals might be crossing; the sign represents any type of animal crossing.
28	Icy Conditions	A sign is present indicating that the road ahead can be icy.
29	Slippery Road	A sign is present indicating that the road ahead can be slippery.  Note: In some European countries, the Slippery Sign is accompanied by an Icy Condition Sign. This sign combination is published as Traffic Sign Type = 29 - Slippery Road only.
30	Falling Rocks	A sign is present indicating a warning that rocks might be falling.
31	School Zone	A sign is present indicating a warning that children may be crossing; the sign is posted near schools and playgrounds.
32	Tramway Crossing	A sign is present indicating that a Tramway crossing is ahead.
33	Congestion Hazard	A sign is present indicating a congestion prone area.
34	Accident Hazard	A sign is present indicating an accident prone area.

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Value	Traffic Sign	Description
35	Priority over Oncoming Traffic	A sign is present indicating that the driver has right-of-way over oncoming traffic.
36	Yield to Oncoming Traffic	A sign is present indicating that the driver must give-way to oncoming traffic.
37	Crossing with Priority from the Right	A sign is present indicating that the driver is approaching a crossing where traffic has to give way to traffic approaching the intersection from the right.
41	Pedestrian Crossing	A sign is present indicating that the driver is approaching a pedestrian crossing.
42	Yield	A sign is present indicating that the driver has to give priority (i.e., yield) to traffic on the crossing road.
53	No Engine Brake	A sign is present indicating that braking using the engine is not allowed.
54	End of No Engine Brake	A sign is present indicating that braking using the engine is no longer restricted.
55	No Idling	A sign is present indicating that the engine needs to be turned off when standing still
56	Truck Rollover	A sign is present indicating that there is a danger for trucks to tip over.
57	Low Gear	A sign is present indicating that trucks have to use a low gear to break when descending.
58	End of Low Gear	A sign is present indicating that trucks no longer have to break by using a low gear.
59	Bicycle Crossing	A sign is present indicating that the driver is approaching an intersection with bicycles.
60	Yield to Bicycles	A sign is present indicating that the driver has to give priority (yield) to bicycles.
61	No towed caravan allowed	A sign is present indicating that vehicles towing a caravan are prohibited access.
62	No towed trailer allowed	A sign is present indicating that vehicles towing a trailer are prohibited access.
63	No camper or motorhome allowed	A sign is present indicating that vehicles towing a motorhome are prohibited access.
64	No Turn on Red	A sign is present indicating that turning on red light is prohibited.
65	Turn on Red Permitted	A sign is present indicating that turning on red light is allowed.

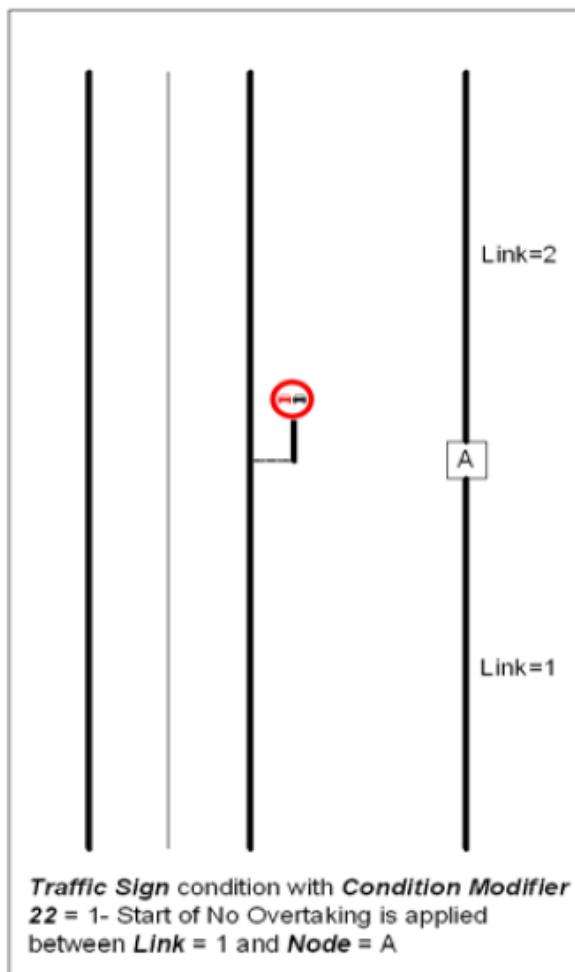
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- *Traffic Sign* conditions are applied to one Link as origin and one connected Node as the destination. The origin is the Link prior to the *Traffic Sign* location and the destination is the Node affected by the *Traffic Sign*.

**Figure 274:**



- *Traffic Signs* are defined in relation to the driving direction. Therefore, different *Traffic Signs* may be included per driving direction.
- *Traffic Signs* indicating an upcoming warning are not included unless no additional *Traffic Sign* is present at the start of the warning. These types of signs typically include a supplemental sign indicating the distance to the point where the actual warning starts. In case an additional *Traffic Sign* is present at the actual start of the warning, then the *Traffic Sign* indicating an upcoming warning is not included.
- The Access Characteristics of the *Traffic Sign* condition are set to Y for all vehicle types.
- Date/Time Modifier information is not published for *Traffic Sign* conditions.

### 7.12.3.18 Railway Crossing

#### Definition

*Railway Crossing* is a condition (Condition Type = 18) indicating the location of a Railway Crossing. It also indicates the type of Railway Crossing.

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### Condition Type

18

#### Usage

The Railway Crossing condition can be used for map display and to generate specific Signs, Signals & Warnings alerts when approaching a railway crossing.

#### Specification

Apply the Railway Crossing condition for crossings on roads in the following situations:

- Crossings that look and act like a Railway Crossing, regardless of the railway geometry or a "crossing" sign being present.
  - ① **Note:** The Railway Crossing condition is applied for other surface railways, e.g., light rail, tram, metro rail, etc.
- Anywhere a railway or rail-like crossing signs is present, e.g., Railway Crossing, Tramway Crossing, etc.
- The Railway Crossing condition is applied in both driving directions.
- Railway Crossing conditions are only applied to roads that are open to Autos.
- The *Access Characteristics* of the *Toll Structure* condition are set to match the *Access Characteristics* of the *Usage Fee Required* condition located on destination link of the *Toll Structure*.
- Date/Time Modifier information is not published for Railway Crossing conditions.

## 7.12.3.19 No Overtaking

### Definition

The No Overtaking is a single link condition indicating whether it is allowed or not to pass other cars on the associated Link.

The coding is based on the presence of a Start of No Overtaking sign. A No Overtaking condition can be published with Access Characteristics and Date/Time Modifier information when applicable.

### Condition Type

19

#### Length

5

#### Usage

The No Overtaking condition can be used to pre-warn the driver of an upcoming road stretch indicating a no passing zone for all or certain vehicles. Since coded at link-level, the Passing Restriction condition can also be used to visualize and highlight no-overtaking zones.

#### Specification

- No Overtaking is applied to all links that are affected by Traffic Signs indicating no overtaking. See examples A and B in [Figure 275: on page 594](#) and [Figure 276: on page 594](#).

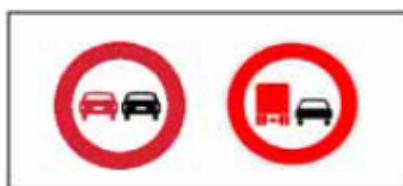
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- The *No Overtaking* attribute coded only when:
  - A sign indicating the start of no overtaking (see examples A and B), and its corresponding end of no overtaking sign (see examples A and B) are present.
  - Only a Start of No Overtaking Sign is present, and is followed by a legal divider.
    - ① **Note:** No Overtaking is not published when only a change in the divider marking is present in reality.
  - Only an End of No Overtaking Sign is present, and is preceded by a legal divider.
    - ① **Note:** There are cases where no sign indicating the end of the No Overtaking Zone is present in reality. In these cases, the End of No Overtaking is based on the lane marking indicating an end of No Overtaking.

**Figure 275:**



**Figure 276:**



- No Overtaking conditions should be used in conjunction with the *Traffic Sign* condition on bi-directional roads in order to determine the direction.
- There will be no gaps in the No Overtaking condition coding; it consists of a closed set of Links.
- A No Overtaking condition is published with *Access Characteristics* information indicating to which *Access Characteristic* the no overtaking is applicable.
- A No Overtaking condition may be published with *Date/Time Modifier* information. Example: A sign indicating no overtaking for Trucks can indicate that trucks are not allowed to overtake from 8:30 till 18:00 hours. In this case *Date/Time Modifier* information would be published for the *No Overtaking* condition.

### 7.12.3.20 Junction View

#### Definition

Junction View represents complex intersections where additional guidance is necessary. Each condition is associated with two graphic images that provide a one-directional view of the upcoming interchange with the appropriate manoeuvre indicated by an arrow.

#### Condition Type

20

#### Length

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7.12 Condition/Driving Manoeuvres (CDMs)

5

## Usage

A Junction View condition ties an image representation of a junction and arrow overlays to the corresponding road geometry. This can enable an application to display the junction view graphic for a junction with the appropriate arrow overlay prior to the desired manoeuvre. See the following example.

**Figure 277:**



## In Combination with 2D Signs

The 2D Signs graphics are associated to the Junction View relationship. For select junctions, the Junction View relationship publishes both Junction View graphics and 2D Signs graphics. This allows for the following usage of graphics to provide junction view guidance:

- 1) Only use 2D Signs
- 2) Only use Junction View Images (combination of Junction View and Arrow)

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7.12 Condition/Driving Manoeuvres (CDMs)

- 3) Use combination of Junction View images and 2D Signs graphics.

Option 2 and 3 are only available in South Korea where there are Junction View images published. Option 3 requires the combined usage of the Junction View images (2D Patterns, and 2D Arrow) and the Sign as Real SVG files.

To facilitate the integration of Junction View and 2D Signs, the Sign as Real SVG file has a transparent canvas surrounding the actual sign boards. The transparent canvas exactly matches the Junction View to which the 2D Signs image is associated.

**Figure 278:**



The combination of Junction View image with the 2D Signs graphics results in a representation as shown in the following figure. The arrow in the figure is part of the Junction View content.

**Figure 279:**



## Specification

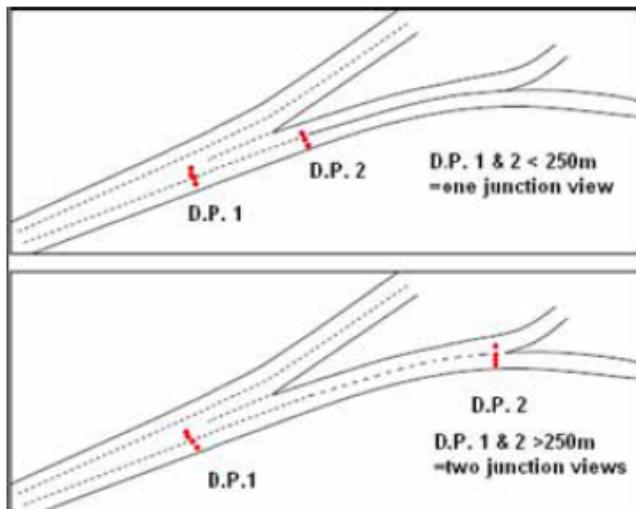
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- The location chosen is the node where the manoeuvre shown in the image occurs.
  - Each junction view covers one decision point in the junction, with the appropriate arrow overlays.
  - The decision point is the location where the driver must receive the information in order to make the manoeuvre.

**Figure 280:**



- Along motorways, a *Junction View* condition may be coded at any exit that has *Extended Lane* coding referencing a corresponding image showing the motorway and exiting ramp. Appropriate arrow overlay images are included for the exiting manoeuvres only.
  - No Junction View conditions for background and arrow overlay images are included for the “straight-on” direction, i.e., when a driver continues on the motorway.
- In case of a bifurcation or a parallel ramp split along motorways, *Junction View* conditions are coded for each possible driving direction.
- Junction View* conditions can involve multiple links (i.e., > 2 links). The links participating in a multi-link condition need to be consecutive.

In Combination with 2D Signs, the 2D Signs content can be combined with the Junction View content. The Sign as Real SVG files are associated to the existing Junction View condition. Some Junction View conditions therefore have three File Types associated:

- Two (2) Junction View references (2D Pattern and 2D Arrow), and
- one (1) 2D Sign.

**Note:**

Select Sign as Real SVG have no Junction View image associated. For these locations, the 2D Signs file can not be combined with Junction View image for graphical guidance.

[Figure 281:](#) on page 598 provides an example of the junction view representation with file associations.

- Junction View condition A: From link 1 to 2
- Junction View condition B: From link 1 to 5

Referenced auxiliary files for both conditions use file association concept:

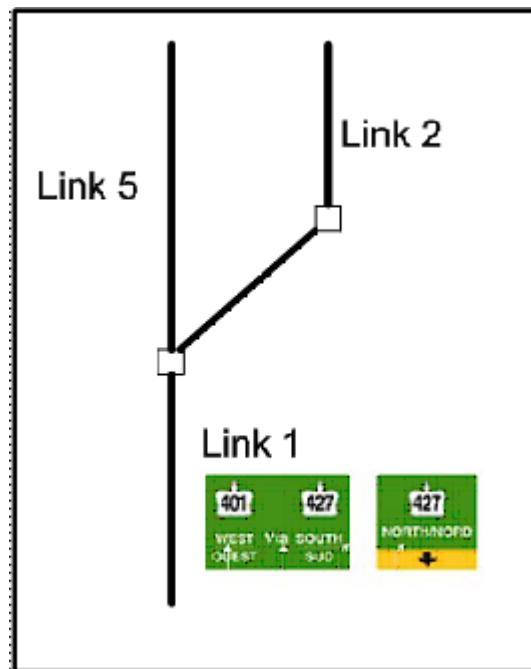
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- File Type = 1(2D Pattern) for view of entire junction
- File Type = 2 (2D Arrow) for the highlighted manoeuvre within the junction
- File Type = 25 (Sign as Real) for the graphical representation of the sign at the junction (optional).

**Figure 281:**



### 7.12.3.21 Protected Overtaking

#### Definition

*Protected Overtaking* is a single link condition indicating where a sign is present in reality indicating Protected Overtaking and extra lane(s) are present to support safe overtaking.

① **Note:**

Protected Overtaking is only coded on bi-directional roads.

#### Condition Type

21

#### Length

5

#### Usage

The *Protected Overtaking* condition can be used to pre-warn the driver of an upcoming road stretch indicating safe overtaking. Since coded at link-level, the *Protected Overtaking* condition can also be used to visualize and highlight protected overtaking zones.

#### Specification

- The *Protected Overtaking* condition is applied to all Links that are affected by Traffic Signs indicating protected overtaking. See [Figure 282:](#) on page 599: sign A for a European example, and sign B for a U.S.

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here

example. The end of the protected overtaking is coded when a sign is present in reality indicating the end of the protected overtaking. See [Figure 283:](#) on page 599: sign A for a European example and sign B for a U.S. example.

- Number of Lanes will be published for the Links coded with a Protected Overtaking condition.

**Figure 282:**



**Figure 283:**



- The *Protected Overtaking* condition is only coded when a sign is present on a bi-directional road indicating the start of protected overtaking (see [Figure 282:](#) on page 599: sign A for a European example, and sign B for a U.S. example). In the U.S., an additional lane is formed in these situations. The lane for slower traffic is also referred to as "climbing lane".
- The *Protected Overtaking* condition should be used in conjunction with the Traffic Sign on bi-directional roads in order to determine the direction.
- There are no gaps in the *Protected Overtaking* condition coding; it consist of a closed set of Links.
- The Access Characteristics of the *Protected Overtaking* condition are set to Y for all vehicle types.
- Date/Time Modifier information is not published for *Protected Overtaking* conditions.

### 7.12.3.22 Evacuation Route

#### Definition

Evacuation Route is a set of conditions coded on links involved in an evacuation route. Evacuation routes are paths designed by the local authorities as preferred routes for the evacuation of a city or an area in case of disaster.

#### Condition Type

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Evacuation Route includes evacuation routes of any of the Event Types (Modifier Type = 22) listed below:

- 1 - Hurricane
- 2 - Floods
- 3 - Nuclear Incidents
- 4 - Terrorist Incidents
- 5 - Earthquakes
- 6 - Snow Advisories
- 7 - Wildfires
- 8 - Volcanic Eruptions
- 9 - Tsunami

### Related Attributes

Evacuation Event Type

Evacuation Travel Flow

Event Code

### Usage

Evacuation Route condition can be used for display and routing purposes.

## 7.12.3.23 Environmental Zone

### Definition

The Environmental Zone condition is used to identify links that are located within an environmental zone area.

### Condition Type

34

### Related Condition Modifier

Environmental Zone ID (Modifier Type 69)

### Usage

The Environmental Zone condition can be used to inform the user of the special limitation on the link and may be used in route calculation to avoid routing on participating links.

### Specification

- Environmental Zone condition informs that a Link is within an Environmental Zone.
- When an Environmental Zone polygon exists for a city or area, all Links inside the polygon publish the Environmental Zone condition accordingly to the link access characteristics.
- Links within an environmental zone may not be involved in an Environmental Zone condition if they are exempted from the Environmental Zone restriction (i.e., a motorway intersecting a city or Built-up Area).

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- Condition Access Characteristics in the Condition/Driving Manoeuvres layer indicate to which vehicles the Environmental Zone applies.

### 7.12.3.24 Blackspot

#### Definition

Blackspot identifies intersections, points or stretches along a road with an unusually high number of accidents. The blackspot definition is based on what the external source data defines as a blackspot or can be based on posted signs at intersections and roads. The blackspot definition can vary between sources, regions or countries.

#### Condition Type

38

#### Layer

Condition/Driving Manoeuvres (CDMs)

#### Related Modifiers

Blackspot Source (73)

Direction (60)

#### Related Layer

Condition Modifiers (CndMod) - Condition Modifiers 60 and 73.

#### Specification

- The Blackspot inclusion is based on posted blackspot locations or blackspot source data. The blackspot definition as defined by the external source data is used for Blackspot inclusion. Posted blackspot signs are also considered for blackspot inclusion. The source origin, the blackspot definition defined by the source data and examples of blackspot signs are documented in the Country Specific Addendums.
- Blackspot conditions are published on roads and intersections where applicable and viable.
- Blackspot conditions are published as follows:
  - Condition with a Link and a Node (End of Link = N or R): Involves one Link as origin and one connected Node (modelled via End of Link) as the destination in case the Blackspot is referencing a point, or single node intersection, see [Figure 284:](#) on page 602. Points can be based on coordinate references in source data or based on posted signs indicating a blackspot location. Blackspot signs are not standardised and vary widely between regions and countries.
  - Condition with only a Link (End of Link is empty): Is applied to Link(s) in case the blackspot is referencing a stretch of road or intersection links, see [Figure 285:](#) on page 602. When a blackspot

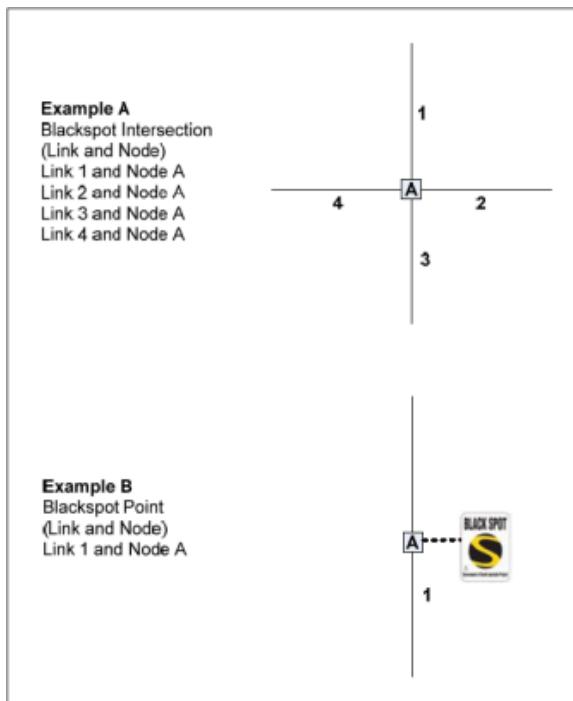
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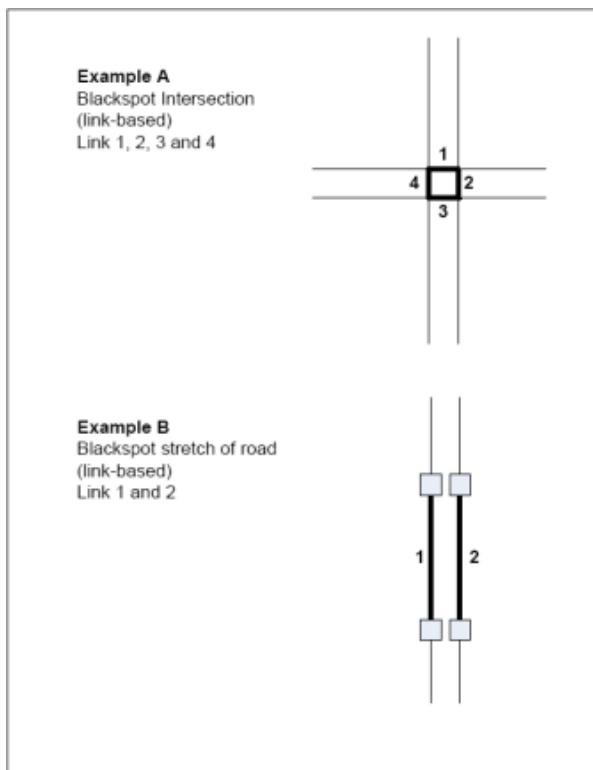
7.12 Condition/Driving Manoeuvres (CDMs)

sign indicates an extent, then the blackspot sign is published in Link(s) that reflect the extent indicated on the sign.

**Figure 284:**



**Figure 285:**



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7.12 Condition/Driving Manoeuvres (CDMs)

### 7.12.3.25 Permitted Driving Manoeuvres (PDMs)

#### Definition

Permitted Driving Manoeuvres indicate when a turn is allowed in areas where administrative-wide turn restrictions exist.

① **Note:**

Restricted Driving Manoeuvres are not explicitly published at all appropriate intersections in areas where administrative-wide turn restrictions exist.

#### Condition Type

39

#### Layer Name

Condition/Driving Manoeuvre Layer

Lane Condition/Driving Manoeuvre Layer

#### Entity Attribute Relation

1:0,1,M

#### Related Layers

Metadata Administrative Area (MtdArea)

Condition/Driving Manoeuvres Date/Time Modifiers

#### Related Attributes

Admin Wide Regulations

PDM Type

End of Link

Time Override

#### Usage

The inclusion of Permitted Driving Manoeuvres optimises route calculations, thus improving the route guidance given.

#### Rules

- Permitted Driving Manoeuvres(PDMs) can only be published in areas with Admin Wide Regulations = 1.

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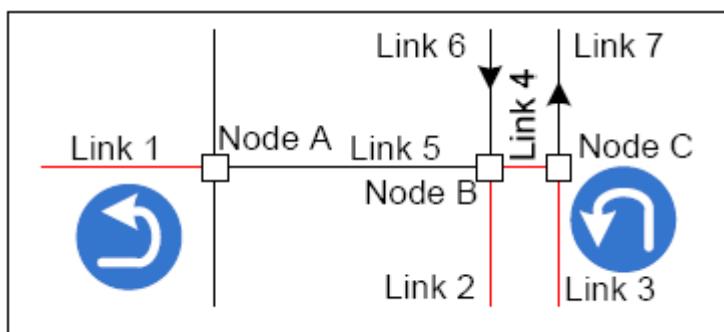
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here

- PDMs are published when exceptions exist to the area-wide u-turn restrictions allowing a manoeuvre to take place. These exceptions have to be posted (legal). See the example below;

**Figure 286:**



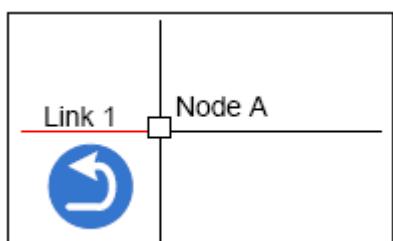
Permitted Manoeuvres	Restricted Manoeuvres <sup>135</sup>
Link 1 at Node A	Link 5 at Node A
Link 3 to Link 4 to Link 2	Link 5 at Node B
	Link 4 at Node B
	Link 4 at Node C
	Link 6 to Link 4 to Link 7

- End of Link is specified for a permitted u-turn manoeuvre if only one link is involved.
- Date/Time Modifier or Time Override may be specified if applicable.

## Example

No U-turn at any intersection exists in Singapore, unless posted that U-turn is allowed.

**Figure 287:**



Layer	Attribute	Value
MtdArea	Admin Wide Regulations	Admin Place = Singapore Admin Wide Regulations = Y
Condition/Driving Manoeuvre	Condition Type	39

<sup>135</sup> These restrictions are not explicitly published as RDMs. They are implied by the Admin Wide Regulations attribute.

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7.12 Condition/Driving Manoeuvres (CDMs)

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Layer	Attribute	Value
Condition/Driving Manoeuvre	Condition Value 1 (PDM Type)	1 (legal)
Condition/Driving Manoeuvre	Link ID	1
Condition/Driving Manoeuvre	End of Link	N

## 7.12.4 Condition Modifier 1-4

### Definition

General purpose field used to store information specific to a Condition Type.

### Value

See specific *Condition Types* for *Condition Modifier* values

### Length

*Condition Modifier 1 - 5*

*Condition Modifier 2 - 15*

*Condition Modifier 3 - 30*

*Condition Modifier 4 - 5*

### Type

Numeric

### Condition Value

The Condition Value is equivalent to the *Condition Modifier 1-4*.

### Condition Value 2

The Condition Value 2 is equivalent to the *Condition Modifier 1-4*.

### Condition Value 3

The Condition Value 3 is equivalent to the *Condition Modifier 1-4*.

### Condition Value 4

The Condition Value 4 is equivalent to the *Condition Modifier 1-4*.

## 7.12.5 End of Link

### Definition

Specifies which end of the link the restricted driving manoeuvre applies to.

### Value

Blank - Condition applies to whole link

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N - Condition applies to non-reference end of link

R - Condition applies to reference end of link

### Length

1

### Type

Text

### Specification

- *End of Link* identifies the end of the link at which a condition applies.
- *End of Link* is used when a condition applies to a single link (e.g., U-turn). If the condition applies to more than one link, *End of Link* is blank.
- *Restricted Driving Manoeuvre End of Link = R (Reference)* is applied when the condition applies to the reference end of a link.
- *Restricted Driving Manoeuvre End of Link = N (Non-Reference)* is applied when the condition applies to the non-reference end of a link.
- For HOV Lanes, *End of Link is specified in case the HOV lane is on a both-way link.*
  - *End of Link = R is applied in case the HOV lane is present towards the Reference Node.*
  - *End of Link = N is applied in case the HOV lane is present towards the Non-Reference Node.*

## 7.12.6 Access Restriction - General Information

### Definition

*Access Restrictions* are used to identify situations where specified types of vehicles are prohibited from travelling on the road at specific times. It also identifies which lane(s) allow access for HOV vehicles only, and provides requirements for accessing these lanes.

### Usage

*Access Restriction* conditions enable correct route calculation and map display. For example, if an *Access Restriction* exists that limits the access of automobiles for a specified time period, automobiles may be routed around that link for the duration of the restriction.

It can be used to determine which lanes are accessible to HOV vehicles only, and can also be used to identify the requirements for legally using the HOV lanes.

### Specification

- This Condition Type is used in conjunction with a *Date/Time Modifier*.

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- The access characteristics in this record override the *Access Characteristics* on the link during the time period specified.

For example, when a Carpool Only road (separately digitised), is closed to all traffic during non-commuting hours, then an Access Restriction is applied for the closed time. The condition applies to the types of traffic that are allowed when the road is open.

Another example: In an area which is restricted to residents only (i.e. no thru traffic) between 20:00 and 08:00, the *Access Restriction* condition applies to *Through Traffic* = Y.

### Seasonal Closures

Seasonally closed roads or ferries are represented with *Access Restriction* Conditions. Approximate date ranges, based on past closure dates, are created for these seasonally closed arterial roads. For example, Tioga Pass in the Sierra Nevada Mountains is closed approximately from November 1st through May 15th. An *Access Restriction* Condition (Condition Applies to all vehicle types allowed on the link) is applied with three *Date/Time Modifiers* for November 1st to May 15th. The three *Date/Time Modifiers* would be:

1. *DTM Type* = H

- Reference Date* = 00110000
- End Date* = 00120000

2. *DTM Type* = H

- Reference Date* = 00010000
- End Date* = 00040000

3. *DTM Type* = I

- Reference Date* = 00010005
- End Date* = 00150005

The *Access Restriction* Condition attribute of *Condition Modifier 1* = 1 (Approximate Seasonal Closure = Yes) is also applied. If there are definite dates for the seasonal closure *Condition Modifier 1* = 0 (Approximate Seasonal Closure = No) is applied.

If seasonally closed roads also have gates in reality, both the *Access Restriction* condition (with an Approximate Seasonal Closure = Y) and a Gate condition are published.

### (HOV) Access Restriction Coding

- HOV lane(s) is/are specified by the *Access Characteristics* at lane level in the *Access Restriction* condition. In case all lanes are open to HOV vehicles only, then the *Access Restriction* condition applies to all lanes.
- An HOV lane is coded with an *Access Restriction* condition which applies to all *Access Characteristics* = Yes except for Carpool = No, Bus = No (depending if they are allowed or not), and Emergency Vehicles = No.
- Date/Time Modifiers are coded to indicate specific time periods when the lane is open to HOV vehicles only, or to specify changes in the number of passengers required at certain hours of the day. Each unique combination of HOV lane open and number of passengers is a separate *Access Restriction* Condition.
- Reversible HOV lanes are separately digitized, regardless of the type of divider (physical or painted) between the HOV lane and the other lanes. This is done to accommodate the reversible situation.
- The Condition Lane Template (CndLn) layer defines the Lanes to which the Access condition applies. The Condition Lane Template layer is interpreted in combination with the End of Link field in the Condition/

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7.12 Condition/Driving Manoeuvres (CDMs)

Driving Manoeuvre (Cdms) layer, and thereby is travel direction dependent. No changes are introduced to the Access conditions for reversible links.

- Example of new condition modifiers for HOV Access condition, as published in the Condition Modifier layer (larger font size denotes new addition). Each access condition has its corresponding End Of Link to define directionality, and a Condition Lane Template layer entry to define the lanes to which the HOV access condition applies.

The following table provides an example of the Condition Modifier (CndMod) layer with the new HOV Access Restriction attribution:

Condition ID	Modifier Type	Modifier Value
634548039	10	2
634548039	11	1
634548039	12	1
634548039	57	1
634548039	58	0
634548040	10	2
634548040	11	1
634548040	12	1
634548040	57	1
634548040	58	0

## AR-Auto

### Definition

Identifies whether or not the condition applies to Autos.

### Value

Y - Applies to

N - Does not apply to

### Length

1

### Type

Boolean

## AR-Bus

### Definition

Identifies whether or not the condition applies to Buses.

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### **Value**

Y - Applies to

N - Does not apply to

### **Length**

1

### **Type**

Boolean

## AR-Taxis

### **Definition**

Identifies whether or not the condition applies to Taxis.

### **Value**

Y - Applies to

N - Does not apply to

### **Length**

1

### **Type**

Boolean

## AR-Carpools

### **Definition**

Identifies whether or not the condition applies to Carpools. See [Access Restriction](#) on page 566 for more specific information about HOV.

### **Value**

Y - Applies to

N - Does not apply to

### **Length**

1

### **Type**

Boolean

## AR-Pedestrians

### **Definition**

Identifies whether or not the condition applies to Pedestrians.

### **Value**

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Y - Applies to

N - Does not apply to

### Length

1

### Type

Boolean

## AR-Trucks

### Definition

Identifies whether or not the condition applies to Trucks.

### Value

Y - Applies to

N - Does not apply to

### Length

1

### Type

Boolean

## AR-Through Traffic

### Definition

Identifies whether or not the condition applies to Through Traffic.

### Value

Y - Applies to

N - Does not apply to

### Length

1

### Type

Boolean

## AR-Deliveries

### Definition

Identifies whether or not the condition applies to Deliveries.

### Value

Y - Applies to

N - Does not apply to

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(CdmsDtmod)

### Length

1

### Type

Boolean

## AR-Emergency Vehicles

### Definition

Identifies whether or not the condition applies to Emergency Vehicles.

### Value

Y - Applies to

N - Does not apply to

### Length

1

### Type

Boolean

## AR-Motorcycles

### Definition

Identifies whether or not the condition applies to Motorcycles.

### Value

Y - Applies to

N - Does not apply to

### Length

1

### Type

Boolean

## 7.13 Condition/Driving Manoeuvres - Date/Time Modifiers (CdmsDtmod)

### 7.13.1 Link ID

See [Link ID](#) on page 367.

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Attributes - Road Features and Associated Navigation Information

7.13 Condition/Driving Manoeuvres - Date/Time Modifiers  
(CdmsDtmod)

### 7.13.2 Condition ID

See [Condition ID](#) on page 545.

### 7.13.3 Date/Time Modifier (DTM) Type

#### Definition

Identifies the period for which the condition is valid.

#### Value

A - Date Ranges

C - Day of Month

D - Day of Week of Month

E - Day of Week of Year

F - Week of Month

H - Month of Year

I - Day of Month of Year

1 - Daymask

2 - External

 **Note:**

See [Reference Date](#) for examples

#### Length

1

#### Type

Text

#### Usage

This enables dynamic route calculation. If the system does not consider this entire record it is either ignoring possible routes or using illegal ones during the specified times.

#### Specification

- For *Date/Time Modifier Types* = A-I, the *Reference Date* represents the start of the range and the *End Date* represents the end of the range for *Date/Time Modifier Types* A-I. See [Reference Date](#) for specific formats for each type.
- For *Date/Time Modifier Type* = 1, *Reference Date* identifies the days of the week.
- For *Date/Time Modifier Type* = 2, *Reference Date* identifies the name of the external date.

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7.13 Condition/Driving Manoeuvres - Date/Time Modifiers  
(CdmsDtmod)

### 7.13.4 Exclude Date

#### Definition

Identifies exceptions to the previously published Date/Time Modifiers.

#### Value

Y - Exclude Date

N - Not an Exclude Date

#### Length

1

#### Type

Boolean

#### Usage

This enables dynamic route calculation. If the system does not consider this entire record it is either ignoring possible routes or using illegal ones during the specified times.

### 7.13.5 From End

#### Definition

This attribute allows time to be specified “from the end” of a standard time period such as month and year.

#### Value

Y - From End

N - Not from End

#### Length

1

#### Type

Boolean

#### Usage

This enables dynamic route calculation. If the system does not consider this entire record it is either ignoring possible routes or using illegal ones during the specified times.

#### Specification

- This attribute is not applied when the Date/Time Modifier is Day of Month, Day of Week of Year, or Week of Year.
- For example, if Day of Week of Month is specified as the Date/Time Modifier Type and Day = 02, Week = 01, and *From End* = Y. The time represented would be the Last Monday of the month.

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7.13 Condition/Driving Manoeuvres - Date/Time Modifiers  
(CdmsDtmod)

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## 7.13.6 Reference Date

### Definition

Identifies the start dates of the Date/Time Modifier for *DTM Types* = A-I. Identifies the days of the week for *DTM Type* = 1 and the external date for *DTM Type* = 2.

### Value

DTM Type	DTM Type Description	Value Examples	Description
A	Date Ranges	YYYYMMDD 20020524	YYYY is the year MM is the month DD is the day
C	Day of Month	DDDD0000 00260000	DDDD is a value in the range 0001-0031
D	Day of Week of Month	DDDDWWWW 00010004	DDDD is a value in the range 0001-0007 Where 0001 is Sunday, 0002 is Monday, etc... WWWW is a value in the range 0001-0005
E	Day of Week of Year	DDDDWWWW 00060023	DDDD is a value in the range 0001-0007 Where 0001 is Sunday, 0002 is Monday, etc... WWWW is a value in the range 0001-0052
F	Week of Month	WWWW0000 00030000	WWWW is a value in the range 0001-0005
H	Month of Year	MMMM0000 00080000	MMMM is a value in the range 0001-0012
I	Day of Month of Year	DDDDMMMM 00070007	DDDD is a value in the range 0001-0031 MMMM is a value in the range 0001-0012
1 <sup>136</sup>	Daymask	XXXXXX-X YYYYYYN	Each X is a Boolean flag starting with Sunday
2 <sup>136</sup>	External	Easter	Easter is the only external date defined. Easter is only published for European databases.

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7.13 Condition/Driving Manoeuvres - Date/Time Modifiers  
(CdmsDtmod)

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## Length

8

## Type

Text

## Usage

This enables dynamic route calculation. If the system does not consider this entire record it is either ignoring possible routes or using illegal ones during the specified times.

## Specification

- The *Reference Date* reflects the start for the condition, while the *End Date* reflects the end for the condition.
- DTM Type* = 1 denotes the days of the week: 1st Position = Sunday, 2nd Position = Monday, 3rd Position = Tuesday, 4th Position = Wednesday, 5th Position = Thursday, 6th Position = Friday, and 7th Position = Saturday.
- Examples:

DTM Type	Value	Explanation
Day of Month	00010000	1 January, 1 February, ..., 1 December
Day of Week of Month	00010002 00020001 00070002 00060005	2nd Sunday of each month 1st Monday of each month 2nd Saturday of each month 5th Friday of each month
Day of Week of Year	00030020 00050052	Tuesday of week 20 Thursday of week 52
Week of Month	00020000	2nd week of each month
Week of Year	00010000 00270000	Week 1 Week 27
Month of Year	M=1 M=7	January July
Day of Month of Year <sup>137</sup>	00150001 00300004	15 January 30 April

<sup>136</sup> DTM Types = 1 and 2 are left justified and padded with blanks on the right.

<sup>137</sup> Day of Month of Year reflects the specified time every year vs. a Date Range that reflects a particular year only.

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7.13 Condition/Driving Manoeuvres - Date/Time Modifiers  
(CdmsDtmod)

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## 7.13.7 Expiration Date

### Definition

Identifies the end date of the Date/Time Modifier for DTM Types = A-I.

DTM Type	DTM Type Description	Value Examples	Description
A	Date Ranges	YYYYMMDD 20020524	YYYY is the year MM is the month DD is the day
C	Day of Month	DDDD0000 00260000	DDDD is a value in the range 0001-0031
D	Day of Week of Month	DDDDWWWW 00010004	DDDD is a value in the range 0001-0007 Where 0001 is Sunday, 0002 is Monday, etc... WWWW is a value in the range 0001-0005
E	Day of Week of Year	DDDDWWWW 00060023	DDDD is a value in the range 0001-0007 Where 0001 is Sunday, 0002 is Monday, etc... WWWW is a value in the range 0001-0053
F	Week of Month	WWWW0000 00030000	WWWW is a value in the range 0001-0005
H	Month of Year	MMMM0000 00080000	MMMM is a value in the range 0001-0012
I	Day of Month of Year	DDDDMMMM 00070007	DDDD is a value in the range 0001-0031 MMMM is a value in the range 0001-0012
1 <sup>138</sup>	Daymask	XXXXXX-X YYYYYYN	Each X is a Boolean flag starting with Sunday
2 <sup>136</sup>	External	Easter	Easter is the only external date defined. Easter is only published for European databases.

### Length

<sup>138</sup> DTM Types = 1 and 2 are left justified and padded with blanks on the right.

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7.13 Condition/Driving Manoeuvres - Date/Time Modifiers  
(CdmsDtmod)

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### Type

Text

### Usage

This enables dynamic route calculation. If the system does not consider this entire record it is either ignoring possible routes or using illegal ones during the specified times.

### Specification

- *DTM Types = 1 and 2 will not have an End Date.*

## 7.13.8 Start Time

### Definition

Identifies the start time for the time period in which the condition is in effect.

### Value

HHMM

(Range: 0000 to 2400)

### Length

4

### Type

HM

### Usage

This enables dynamic route calculation. If the system does not consider this entire record it is either ignoring possible routes or using illegal ones during the specified times.

### Specification

- If the condition applies all day, then the *Start Time* = 0000 and the *End Time* = 2400.

## 7.13.9 End Time

### Definition

Identifies the end time for the time period in which the condition is in effect.

### Value

HHMM

(Range to 2400)

### Length

4

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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## Type

HM

## Usage

This enables dynamic route calculation. If the system does not consider this entire record it is either ignoring possible routes or using illegal ones during the specified times.

## Specification

- If the condition applies all day, then the *Start Time* = 0000 and the *End Time* = 2400.

## 7.14 Condition Modifiers (CndMod)

### 7.14.1 Condition ID

See [Condition ID](#) on page 545.

### 7.14.2 Language Code

#### Definition

The language associated with the feature name.

Value	Attribute Description
ALB	ALBANIAN
AMT	ARMENIAN TRANSCRIBED
ARA	ARABIC
ARE	ARABIC ENGLISH
ARM	ARMENIAN
AMT	ARMENIAN TRANSCRIBED
ARX	ARMENIAN TRANSLITERATION
ASM	ASSAMESE
ASX	ASSAMESE TRANSLITERATION
AZE	AZERI
AZX	AZERI TRANSLITERATION
IND	BAHASA INDONESIA
BAQ	BASQUE
BEL	BELARUSIAN

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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Value	Attribute Description
BEX	BELARUSIAN TRANSLITERATION
BEN	BENGALI
BGX	BENGALI TRANSLITERATION
BOS	BOSNIAN
BOX	BOSNIAN TRANSLITERATION
BUL	BULGARIAN
BUT	BULGARIAN TRANSCRIBED
BUX	BULGARIAN TRANSLITERATION
CAT	CATALAN
BUR	BURMESE
BUE	BURMESE ENGLISH
CHI	CHINESE (MODERN)
CHT	CHINESE (TRADITIONAL)
SCR	CROATIAN
SRX	CROATIAN TRANSLITERATION
CZE	CZECH
CZX	CZECH TRANSLITERATION
DAN	DANISH
DUT	DUTCH
ENG	ENGLISH
EST	ESTONIAN
ESX	ESTONIAN TRANSLITERATION
FIN	FINNISH
FAO	FAROESE
FRE	FRENCH
GLG	GALICIAN
GEO	GEORGIAN
GET	GEORGIAN TRANSCRIBED
GEX	GEORGIAN TRANSLITERATION

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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Value	Attribute Description
GER	GERMAN
GRE	GREEK
GRT	GREEK TRANSCRIBED
GRX	GREEK TRANSLITERATION
GRN	GUARANÃ
GUJ	GUJARATI
GJX	GUJARATI TRANSLITERATION
HEB	HEBREW
HEX	HEBREW TRANSLITERATION
HIN	HINDI
HIX	HINDI TRANSLITERATION
HUN	HUNGARIAN
HUX	HUNGARIAN TRANSLITERATION
ICE	ICELANDIC
GLE	IRISH GAELIC
ITA	ITALIAN
JPN	JAPANESE
KAN	KANNADA
KNX	KANNADA TRANSLITERATION
KAZ	KAZAKH
KAT	KAZAKH TRANSCRIBED
KAX	KAZAKH TRANSLITERATION
KHE	KHMER ENGLISH
KIR	KYRGYZ
KIT	KYRGYZ TRANSCRIBED
KIX	KYRGYZ TRANSLITERATION
KOR	KOREAN
KOX	KOREAN TRANSLITERATION
LAV	LATVIAN
LAX	LATVIAN TRANSLITERATION

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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Value	Attribute Description
LIT	LITHUANIAN
LIX	LITHUANIAN TRANSLITERATION
MAC	MACEDONIAN
MAT	MACEDONIAN TRANSCRIBED
MAX	MACEDONIAN TRANSLITERATION
MAL	MALAYALAM
MYX	MALAYALAM TRANSLITERATION
MAY	MALAYSIAN
MLT	MALTESE
MLX	MALTESE TRANSLITERATION
MAR	MARATHI
MRX	MARATHI TRANSLITERATION
MOL	MOLDOVAN
MOX	MOLDOVAN TRANSLITERATION
MON	MONGOLIAN
MGX	MONGOLIAN TRANSLITERATION
MNE	MONTENEGRIN
MNX	MONTENEGRIN TRANSLITERATION
NOR	NORWEGIAN
ORI	ORIYA
ORX	ORIYA TRANSLITERATION
PAN	PANJABI
PNX	PANJABI TRANSLITERATION
PYN	PINYIN
POL	POLISH
POX	POLISH TRANSLITERATION
POR	PORTUGUESE
RUM	ROMANIAN
RMX	ROMANIAN TRANSLITERATION

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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Value	Attribute Description
RUS	RUSSIAN
RST	RUSSIAN TRANSCRIBED
RUX	RUSSIAN TRANSLITERATION
SRB	SERBIAN
SCT	SERBIAN TRANSCRIBED
SCX	SERBIAN TRANSLITERATION
SLO	SLOVAK
SLX	SLOVAK TRANSLITERATION
SLV	SLOVENIAN
SIX	SLOVENIAN TRANSLITERATION
SPA	SPANISH
SWE	SWEDISH
TAM	TAMIL
TMX	TAMIL TRANSLITERATION
TEL	TELUGU
TLX	TELUGU TRANSLITERATION
THA	THAI
THE	THAI ENGLISH
TUR	TURKISH
TKT	TURKISH TRANSCRIBED
TUX	TURKISH TRANSLITERATION
UKR	UKRAINIAN
UKT	UKRAINIAN TRANSCRIBED
UKX	UKRAINIAN TRANSLITERATION
UND	UNDEFINED
UZB	UZBEK
VIE	VIETNAMESE
VIX	VIETNAMESE TRANSLITERATION
WEL	WELSH

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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Value	Attribute Description
WEN	WORLD ENGLISH

### Length

3

### Type

Text

### Usage

The Language Code, in conjunction with Prefix, Feature Name, Street Type, and Suffix, can be used in destination selection, route guidance, and map display.

### Specification

- Each name receives a language code. Regardless of the origin of a Feature Name, only authorised languages are valid in a country. For example, in the U.S. only language type ENG is authorised even for names like “El Camino Real” or “San Jose” which are of Spanish origin.
  - For the Map Language Codes, the three character standard code defined by MARC is used. Our data uses the MARC standard as defined by MARC at the time of inclusion into the map products. For example, when HERE introduced a map product for Serbia, the official MARC language code was “SRB.” After the political reorganization of the Balkans at the end of the 20th century, the MARC standard for Serbian was changed to “SRP.” Our data does not reflect changes to MARC language codes after the initial HERE Map Content product is made available.
  - Some map data is delivered with the Language Code “WEN” (World English). World English is not a language, and therefore, there is no MARC Language Code standard. “WEN” is a construct created by HERE that is used as a unique code for Entry Map and Intermediate Map products. Source data for these products is often delivered in multiple languages. Using the “WEN” language code allows HERE to deliver the data with only one language code.
  - Phonetic Language Codes, Transcribed Language Codes, and Transliteration Types are all defined by HERE, as no MARC standards are available for these specific types of data.
- ① **Note:** Many Map Language Codes, such as French (FRE), Spanish (SPA), Dutch (DUT), etc. are also used in the Voice Phonetic Transcriptions products as Phonetic Language Codes.

## 7.14.3 Modifier Type

### Definition

Identifies the modifier type associated with the Condition Driving Manoeuvre. The Modifier Types and their values are listed in the table below. For more detail see [Modifier Value](#) on page 625.

### Value

Modifier Type	Description
10	Minimum Number of Passengers
11	Motorcycle Considered Carpool

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7.14 Condition Modifiers (CndMod)

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Modifier Type	Description
12	Hybrids Considered Carpool
22 <sup>139</sup>	Traffic Sign Type
231	Supplemental Sign Duration
241	Supplemental Sign Pre-Warning
25	Supplemental Sign
26	Supplemental Sign Validity Time
27	Railway Crossing Type
281	Traffic Sign Category
30	Toll Structure Type
31	Method of Payment
33	Toll Feature Type
34	Toll System Type
35	Evacuation Event Type
36	Evacuation Traffic Flow
37	Event Code
38 <sup>140</sup>	Direction Closure
39	Hazardous Material Type
41	Height Restriction
42	Weight Restriction
43	Weight per Axle
44	Length Restriction
45	Width Restriction
46	Trailer Type
47	General Warning Sign Type
48	Transport Speed Limit
49	Transport Preferred Route
51	Traffic Sign Value
53	Physical Structure Type

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7.14 Condition Modifiers (CndMod)

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Modifier Type	Description
57	Alternate Fuel Considered Carpool
58	Fee Pay Considered Carpool
59	Transport Special Speed Situation Type
60	Direction
61	Weight Dependant
62	Weather Type
69	Environmental Zone ID
71	Traffic Sign Subcategory
72	Importance Indicator
73	Blackspot Modifier
752	Transport Number of Axles
81	Transport KPRA Length
83	Transport Speed Limit Type
87	Dependent Access Type

## Related Condition

See [Signs, Signals & Warnings \(General Information\)](#).

### Length

5

### Type

Numeric

## 7.14.4 Modifier Value

### Definition

The value associated with the Modifier Type field.

### Value

<sup>139</sup> Modifier is used in the Standard Extract and in NT Transport.

<sup>140</sup> Modifier is used in NT Transport see [Trucks](#) on page 990.

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7.14 Condition Modifiers (CndMod)

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Condition Type/Value	Condition Modifier/Value
1 - Toll Structure	When Modifier = 30 - Toll Structure Type 1 - Fixed Fee 2 - Obtain Ticket 3 - Pay per Ticket 4 - Electronic
	When Modifier = 31 - Method of Payment 1 - Cash 2 - Bank Card 3 - Credit Card 4 - Pass/Subscription 5 - Transponder 6 - Video Toll Charge 7 - Exact Cash 8 - Travel Card
3 - Construction Status Closed	
4 - Gates	When Modifier = 1 - Gate Type 1 - Key Access 2 - Permission Required 3 - Emergency Gates
5 - Direction of Travel	When Modifier = 1 - Direction of Travel 1 - From Reference Node 2 - To Reference Node 3 - Both  When Modifier = 87 - Dependent Access Type 0 - Dependent Access Type = No 1 - Dependent Access Type = Y
7 - Restricted Driving Manoeuvre	When Modifier = 1 - RDM Type 1 - RDM Type = Legal 2 - RDM Type = Physical 3 - RDM Type = Logical 4 - RDM Type = Observed  When Modifier = 2 - Time Override 1 - Time Override = Dawn to Dusk 2 - Time Override = Dusk to Dawn

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7.14 Condition Modifiers (CndMod)

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Condition Type/Value	Condition Modifier/Value
8 - Access Restriction	When Modifier = 1 - Approximate Seasonal Closure 0 - Approximate Seasonal Closure = No 1 - Approximate Seasonal Closure = Yes
	When Modifier = 10 - HOV Minimum Passengers Number (Minimum Number of Passengers - used in conjunction with HOV vehicles)
	When Modifier = 11 - HOV Motorcycles Allowed 0 - Motorcycles Considered Carpool = No 1 - Motorcycles Considered Carpool = Yes
	When Modifier = 12 - HOV Hybrids Allowed 0 - Hybrids Considered Carpool = No 1 - Hybrids Considered Carpool = Yes
	When Modifier = 57 - HOV Alternate Fuel Approved 0 - Alternate Fuel Considered Carpool = No 1 - Alternate Fuel Considered Carpool = Yes
	When Modifier = 58 - HOV Fee Pay Approved 0 - Fee Pay Considered Carpool = No 1 - Fee Pay Considered Carpool = Yes
	When Modifier = 87 - Dependent Access Type 0 - Dependent Access Type = No 1 - Dependent Access Type = Y
9 - Special Explication	
12 - Usage Fee Required	When Modifier = 33 - Toll Feature Type 1 - Toll Road 2 - Bridge 3 - Tunnel 4 - Park 5 - Mountain Pass 6 - Scenic Route 7 - Vignette Road 8 - Toll Zone 9 - Ferry
	When Modifier = 34 - Toll System Type ID number in XML look-aside file.
13 - Lane Traversal	

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7.14 Condition Modifiers (CndMod)

Condition Type/Value	Condition Modifier/Value
14 - Through Route	
16 - Traffic Signal	<p>When Modifier = 1 - Signal/Sign Location</p> <p>1 - Signal/Sign Location = Right</p> <p>2 - Signal/Sign Location = Left</p> <p>3 - Signal/Sign Location = Overhead</p> <p>When Modifier = 72 - NG Indicator</p> <p>Numeric value of 0 to 10.</p>

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7.14 Condition Modifiers (CndMod)

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Condition Type/Value	Condition Modifier/Value
17 - Traffic Sign	When Modifier = 22 Traffic Sign Type 1 - Start of No Overtaking 2 - End of No Overtaking 3 - Protected Overtaking - Extra Lane 4 - Protected Overtaking - Extra Lane Right Side 5 - Protected Overtaking - Extra Lane Left Side 6 - Lane Merge Right 7 - Lane Merge Left 8 - Lane Merge Centre 9 - Railway Crossing Protected 10 - Railway Crossing Unprotected 11 - Road Narrows 12 - Sharp Curve Left 13 - Sharp Curve Right 14 - Winding Road Starting Left 15 - Winding Road Starting Right 16 - Start of No Overtaking Trucks 17 - End of No Overtaking Trucks 18 - Steep Hill Upwards 19 - Steep Hill Downwards 20 - Stop Sign 21 - Lateral Wind 22 - General Warning 23 - Risk of Grounding 24 - General Curve 25 - End of All Restrictions 26 - General Hill 27 - Animal Crossing 28 - Icy Conditions 29 - Slippery Road 30 - Falling Rocks 31 - School Zone 32 - Tramway Crossing 33 - Congestion Hazard 34 - Accident Hazard 35 - Priority Over Oncoming Traffic 36 - Yield to Oncoming Traffic 37 - Crossing with Priority from the Right 41 - Pedestrian Crossing 42 - Yield

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7.14 Condition Modifiers (CndMod)

Condition Type/Value	Condition Modifier/Value
	<p>53 - No Engine Brake        54 - End of No Engine Brake        55 - No Idling        56 - Truck Rollover        57 - Low Gear        58 - End of Low Gear        59 - Bicycle Crossing        60 - Yield To Bicycles        61 - No Towed Caravan Allowed        62 - No Towed Trailer Allowed        63 - No Camper or Motorhome Allowed        64 - No Turn on Red        65 - Turn Permitted on Red</p>
	<p>When Modifier = 23 Traffic Sign Duration        Supplemental Sign Duration (Text)</p>
	<p>When Modifier = 24 Traffic Sign Prewarning        Supplemental Sign Pre-Warning</p>
<p>17 - Traffic Sign (continued)</p>	<p>When Modifier = 25 - Traffic Sign Applicable Vehicles        1 - Truck        2 - Truck Over 3.5 Tons, Trailers or Semi-Trailers        3 - Bus        4 - Passenger Vehicle with Trailer        5 - Motor Home        6 - Motorcycle</p>
	<p>When Modifier = 26 Traffic Sign Validity Time        Supplemental Sign Validity Time</p>
	<p>When Modifier = 28 - Traffic Sign Category        1 - Regulatory Sign        2 - Informative Sign        3 - Warning Sign</p>
	<p>When Modifier = 47 - Traffic Sign General Warning Type        1 - Object Overhang        2 - Risk of Grounding        3 - Animal Crossing        4 - Accident Hazard</p>

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7.14 Condition Modifiers (CndMod)

Condition Type/Value	Condition Modifier/Value
	<p>When Modifier = 51 - Traffic Sign Value Text - as it appears on traffic sign</p> <p>When Modifier = 62 - Weather Type 1 - Rain 2 - Snow 3 - Fog</p> <p>When Modifier = 71 - Traffic Sign Sub Category 1 - Priority Sign</p> <p>When Modifier = 72 - Importance Indicator Numeric value of 0 to 10.</p>
18 - Railway Crossing	<p>When Modifier = 27 - Railway Crossing Type 1 - Protected 2 - Unprotected</p>
19 - No Overtaking	<p>When Modifier = 60 - Direction 1 - Positive Direction 2 - Negative Direction 3 - Both Directions 4 - Unknown</p> <p>When Modifier = 62 - Weather Type 1 - Rain 2 - Snow 3 - Fog</p>
20 - Junction View	
21 - Protected Overtaking	<p>When Modifier = 60 - Direction 1 - Positive Direction 2 - Negative Direction 3 - Both Directions</p>

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7.14 Condition Modifiers (CndMod)

Condition Type/Value	Condition Modifier/Value
22 - Evacuation Route	<p>When Modifier = 35 - Evacuation Event Type</p> <p>1 - Hurricane 2 - Floods 3 - Nuclear Incidents 4 - Terrorist Incidents 5 - Earthquakes 6 - Snow Advisories 7 - Wildfires 8 - Volcanic Eruptions 9 - Tsunami</p>
	<p>When Modifier = 36 - Evacuation Travel Flow</p> <p>1 - From 2 - To 3 - Both 4 - Closed</p>
	<p>When Modifier = 37 - Event Code</p> <p>1 - Alligator Alley Northbound 2 - Alligator Alley Southbound</p>
23 - Transport Access Restriction	<p>When Modifier = 38 - Direction Closure</p> <p>1 - Closed in Both Directions 2 - Closed in Positive Direction 3 - Closed in Negative Direction</p>

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7.14 Condition Modifiers (CndMod)

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Condition Type/Value	Condition Modifier/Value
	When Modifier = 39 - Hazardous Material Type 1 - Explosives 2 - Gas 3 - Flammable 4 - Flammable Solid/Combustible 5 - Organic 6 - Poison 7 - Radioactive 8 - Corrosive 9 - Other 20 - Any Hazardous Material 21 - Poisonous Inhalation Hazard (PIH) 22 - Goods Harmful to Water 23 - Explosive and Flammable 24 - Tunnel Category B 28 - Tunnel Category C 32 - Tunnel Category D 34 - Tunnel Category E
	When Modifier = 41 - Height Restriction Number (in inches or centimetres)
	When Modifier = 42 - Weight Restriction Number (in pounds or kilograms)
	When Modifier = 43 - Weight per Axle Restriction Number (in pounds or kilograms)
	When Modifier = 44 - Length Restriction Number (in inches or centimetres)
	When Modifier = 45 - Width Restriction Number (in inches or centimetres)
	When Modifier = 46 - Trailer Type 1 - Truck with one or more trailers 2 - Truck with two or more trailers 3 - Truck with three or more trailers 4 - Semi or tractor with 1 or more trailers

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7.14 Condition Modifiers (CndMod)

Condition Type/Value	Condition Modifier/Value
23 - Transport Access Restriction (continued)	<p>When Modifier = 53 - Physical Structure Type</p> <p>1 - Bridge (Overpass) 2 - Tunnel (Underpass) 3 - Arch Bridge 4 - Arch Tunnel 5 - Other</p>
	<p>When Modifier = 61 - Weight Dependent</p> <p>Number (in pounds or kilograms)</p>
	<p>When Modifier = 62 - Weather Type</p> <p>1 - Rain 2 - Snow 3 - Fog</p>
	<p>When Modifier = 75 - Number of Axles</p> <p>1 - Two or more axles 2 - Three or more axles 3 - Four or more axles 4 - Five or more axles 5 - Six or more axles 8 - Triple Axle 9 - Quad Axle 10 - Quint Axle 11 - Two Axles 12 - Three Axles 13 - Four Axles 14 - Five Axles 15 - Six Axles 16 - Seven Axles</p>
	<p>When Modifier = 81 - KPRA Length</p> <p>Length value (inches in US, cm outside US)</p>
	<p>Time Override</p> <p>1 - Dawn to Dusk 2 - Dusk to Dawn</p>

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7.14 Condition Modifiers (CndMod)

Condition Type/Value	Condition Modifier/Value
25 - Transport Special Speed Situation	<p>When Modifier = 46 - Trailer Type</p> <p>1 - Truck with one or more trailers 2 - Truck with two or more trailers 3 - Truck with three or more trailers 4 - Semi or tractor with 1 or more trailers 5 - Truck with no trailer(s) 6 - Truck with one trailer 7 - Truck with two trailers 8 - Truck with three trailers 9 - Truck with four trailers 10 - Straight Truck with one or more trailers 11 - Straight Truck with two or more trailers 12 - Straight Truck with three or more trailers 13 - Straight Truck with or without trailers 14 - Straight Truck with no trailer(s) 15 - Straight Truck with one trailer 16 - Straight Truck with two trailers 17 - Straight Truck with three trailers 18 - Straight Truck with four trailers 19 - Semi-Truck with one or more trailers 20 - Semi-Truck with two or more trailers 21 - Semi-Truck with three or more trailers 22 - Semi-Truck with or without trailers 23 - Semi-Truck with no trailer(s) 24 - Semi-Truck with one trailer 25 - Semi-Truck with two trailers 26 - Semi-Truck with three trailers 27 - Semi-Truck with four trailers</p>
	<p>When Modifier = 48 - Transport Speed Limit</p> <p>Number (in mph or kph)</p>
	<p>When Modifier = 59 - Transport Speed Situation Type</p> <p>1 - Hazardous Material 2 - Trailer 3 - Weight 4 - Weather</p>

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7.14 Condition Modifiers (CndMod)

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Condition Type/Value	Condition Modifier/Value
	<p>When Modifier = 60 - Direction</p> <p>1 - Positive Direction</p> <p>2 - Negative Direction</p> <p>3 - Both Directions</p>
	<p>When Modifier = 61 - Weight Dependent</p> <p>Number (in pounds or kilograms)</p>
	<p>When Modifier = 62 - Weather Type</p> <p>1 - Rain</p> <p>2 - Snow</p> <p>3 - Fog</p>
	<p>When Modifier = 83 - Speed Limit Type</p> <p>1 - Legal</p> <p>2 - Advisory</p>
26 - Transport RDM	<p>When Modifier = 39 - Hazardous Material Type</p> <p>1 - Explosives</p> <p>2 - Gas</p> <p>3 - Flammable</p> <p>4 - Flammable Solid/Combustible</p> <p>5 - Organic</p> <p>6 - Poison</p> <p>7 - Radioactive</p> <p>8 - Corrosive</p> <p>9 - Other</p> <p>20 - Any Hazardous Material</p> <p>21 - Poisonous Inhalation Hazard (PIH)</p> <p>22 - Goods Harmful to Water</p> <p>23 - Explosive and Flammable</p> <p>24 - Tunnel Category B</p> <p>28 - Tunnel Category C</p> <p>32 - Tunnel Category D</p> <p>34 - Tunnel Category E</p>
	<p>When Modifier = 41 - Height Restriction</p> <p>Number (in inches or centimetres)</p>
	<p>When Modifier = 42 - Weight Restriction</p> <p>Number (in pounds or kilograms)</p>

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

Condition Type/Value	Condition Modifier/Value
	When Modifier = 43 - Weight per Axle Restriction Number (in pounds or kilograms)
	When Modifier = 44 - Length Restriction Number (in inches or centimetres)
	When Modifier = 45 - Width Restriction Number (in inches or centimetres)
	When Modifier = 46 - Trailer Type 1 - Truck with one or more trailers 2 - Truck with two or more trailers 3 - Truck with three or more trailers 4 - Semi or tractor with 1 or more trailers 5 - Truck with no trailer(s) 6 - Truck with one trailer 7 - Truck with two trailers 8 - Truck with three trailers 9 - Truck with four trailers 10 - Straight Truck with one or more trailers 11 - Straight Truck with two or more trailers 12 - Straight Truck with three or more trailers 13 - Straight Truck with or without trailers 14 - Straight Truck with no trailer(s) 15 - Straight Truck with one trailer 16 - Straight Truck with two trailers 17 - Straight Truck with three trailers 18 - Straight Truck with four trailers 19 - Semi-Truck with one or more trailers 20 - Semi-Truck with two or more trailers 21 - Semi-Truck with three or more trailers 22 - Semi-Truck with or without trailers 23 - Semi-Truck with no trailer(s) 24 - Semi-Truck with one trailer 25 - Semi-Truck with two trailers 26 - Semi-Truck with three trailers 27 - Semi-Truck with four trailers

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

Condition Type/Value	Condition Modifier/Value
	<p>When Modifier = 62 - Weather Type</p> <p>1 - Rain</p> <p>2 - Snow</p> <p>3 - Fog</p>
	<p>When Modifier = 75 - Number of Axles</p> <p>1 - Two or more axles</p> <p>2 - Three or more axles</p> <p>3 - Four or more axles</p> <p>4 - Five or more axles</p> <p>5 - Six or more axles</p> <p>8 - Triple Axle</p> <p>9 - Quad Axle</p> <p>10 - Quint Axle</p> <p>11 - Two Axles</p> <p>12 - Three Axles</p> <p>13 - Four Axles</p> <p>14 - Five Axles</p> <p>15 - Six Axles</p> <p>16 - Seven Axles</p>
	<p>When Modifier = 81 - KPRA Length</p> <p>Length value (inches in US, cm outside US)</p>
26 - Transport RDM (continued)	<p>Time Override</p> <p>1 - Dawn to Dusk</p> <p>2 - Dusk to Dawn</p>

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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Condition Type/Value	Condition Modifier/Value
27 - Transport Preferred Route	When Modifier = 49 - Transport Preferred Route Type 1 - STAA 2 - TD 3 - NRHM 4 - Class 1 HazMats 5 - PIH 6 - Medical Waste Materials 7 - Radioactive Material 8 - General Hazardous Goods 9 - Local 15 - Functional Class 1 Override 16 - Functional Class 2 Override 17 - B-Double Route 18 - B-Triple Route 19 - 50 Maz 20 - HPMV 21 - LHV Germany 22 - LHV Denmark 23 - LHV Norway 24 - PBS 2A Australia 25 - PBS 2B Australia 26 - PBS 3A Australia 27 - PBS 3B Australia 28 - PBS 4A Australia 29 - B-Double_HML 30 - B-Double_19 31 - B-Double_21 32 - B-Double_23 33 - B-Double_25 34 - B-Double_26 35 - B-Double_26_HML 36 - B-Double_27.5 37 - AB-Triple 38 - AB-Triple_HML 39 - B-Triple_HML

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

Condition Type/Value	Condition Modifier/Value
	When Modifier = 60 - Direction 1 - Positive Direction 2 - Negative Direction 3 - Both Directions
	When Modifier = 61 - Weight Restriction Number (in pounds or kilograms)
34 - Environmental Zone	When Modifier = 69 - Environmental Zone ID Number (Environmental Zone ID))
38 - Blackspot	When Modifier = 60 - Direction 1 - Positive Direction 2 - Negative Direction 3 - Both Directions
	When Modifier = 73 - Blackspot Source 1 - Posted 2 - Sourced

## Related Condition

See [Signs, Signals & Warnings \(General Information\)](#).

## Length

10

## Type

Numeric

## Minimum Number of Passengers

### Definition

The minimum number of passengers required for a vehicle to be considered an HOV.

### Condition Modifier Type

10

### Value

Numeric

## Related Condition

Access Restriction (Condition Type = 8)

## Specification

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- Each HOV lane has the minimum number of passengers specified.
-  **Note:** The minimum number of passengers is only applicable to Carpools, not to any other Access Characteristics.

See [\(HOV\) Access Restriction Coding](#) on page 607, in Access Restriction for details and example.

### Motorcycle Considered Carpool

#### Definition

Indicates if Motorcycles are considered HOV.

#### Condition Modifier Type

11

#### Value

1 - Yes

0 - No

#### Related Condition

Access Restriction (Condition Type = 8)

#### Related Attributes

Hybrids Considered Carpool

Alternate Fuel Considered Carpool

Fee Pay Considered Carpool

#### Specification

- Most HOV lanes in North America allow Motorcycles on the HOV lane.
  - In case Motorcycles are allowed on the HOV lane, then Modifier Type 11 = 1 is set in the Access Restriction condition.
  - Otherwise, Modifier Type 11 = 0 will be applied.

See [\(HOV\) Access Restriction Coding](#) on page 607, in Access Restriction for details and example.

### Hybrids Considered Carpool

#### Definition

Indicates if Hybrid Cars are considered HOV.

#### Condition Modifier Type

12

#### Value

0 - No

1 - Yes

#### Related Condition

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

Access Restriction (Condition Type = 8)

## Related Attributes

Hybrids Considered Carpool

Alternate Fuel Considered Carpool

Fee Pay Considered Carpool

## Specification

- Some HOV lanes allow Hybrid cars on the HOV lane.
  - In case Hybrid cars are allowed on the HOV lane, then Modifier Type 12 = 1 is set in the Access Restriction condition.
  - Otherwise, Modifier Type 12 = 0 is applied.

See [\(HOV\) Access Restriction Coding](#) on page 607, in Access Restriction for details and example.

# Traffic Sign Type

## Definition

The *Traffic Sign Type* identifies the type of warning sign.

## Condition Modifier Type

22

## Related Attributes

Traffic Sign Category (Condition Modifier = 28)

Traffic Sign Value (Condition Modifier = 51)

Supplemental Sign Category (Condition Modifier = 47)

Traffic Sign Sub Category (71)

## Related Condition

Traffic Sign (Condition Type = 17)

## Usage

The *Traffic Sign Type* can be used to give specific Signs, Signals & Warnings alert messaging using the sign type. *Traffic Sign Type* can also be used to display the *Traffic Sign*. Warning signs can be used in optimizing route calculation.

## Specification

The *Traffic Sign* condition is published with Condition Modifier 22 according to the table below. See the corresponding examples in section [Traffic Sign](#) on page 588:

 **Note:**

The appearance of the signs listed below can vary depending on the situation in reality. There are also differences in the appearance of signs between countries.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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Value	Traffic Sign	Description
1	Start of No Overtaking	Overtaking is prohibited for all vehicles.
2	End of No Overtaking	The No Overtaking restriction ends.
3	Protected Overtaking - extra lane	An extra lane forms on the right or left side of the road to allow safe overtaking. The sign does not indicate on which side the extra lane forms.
4	Protected Overtaking - extra lane right side	An extra lane forms on the right side to allow for safe overtaking.
5	Protected Overtaking - extra lane left side	An extra lane forms on the left side to allow for safe overtaking.
6	Lane Merge Right	An extra lane ends and the lane merges on the right side
7	Lane Merge Left	An extra lane ends and the lane merges on the left side. Lane Merge Left is also applied when two motorways merge together and one lane coming in from the left side ends.  Note: Lane Merge Left is also used to indicate the end of a Protected Overtaking zone.
8	Lane Merge Center	Two lanes merge into one lane.
9	Railway Crossing Protected	A sign is present indicating a protected railway crossing with barriers.
10	Railway Crossing Unprotected	A sign is present indicating an unprotected railway crossing (without barriers).
11	Road Narrows	A sign is present indicating that the road narrows. This can be from both sides or from the left or right side only.
12	Sharp Curve Left	A sign is present indicating a sharp curve to the left.
13	Sharp Curve Right	A sign is present indicating a sharp curve to the right.
14	Winding Road Starting Left	A sign is present indicating a winding road with the first curve starting to the left.
15	Winding Road Starting Right	A sign is present indicating a winding road with the first curve starting to the right.
16	Start of No Overtaking Trucks	A sign is present indicating no overtaking for trucks.
17	End of No Overtaking Trucks	No Overtaking for Trucks restriction ends.
18	Steep Hill Upwards	A sign is present indicating a steep ascent.
19	Steep Hill Downwards	A sign is present indicating a steep descent.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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Value	Traffic Sign	Description
20	Stop Sign	A sign is present indicating that traffic must come to a stop.
21	Lateral Wind	A sign is present indicating that a strong crosswind is possible.
22	General Warning	A sign is present indicating a general warning.
23	Risk of Grounding	An elevation on the roadbed exists that can cause damage to the underbody of the truck.  Note: Risk of Grounding can also be published as a General Warning Sign (Traffic Sign Type = 22 with General Warning Sign Type = 2 when supplemental signs are used for signage in reality.)
24	General Curve	A sign is present indicating a curve warning, without an indication in which direction the curve is heading
25	End of all Restrictions	A sign is present indicating the end of all restrictions.
26	General Hill	A sign is present indicating a hill warning, without an explicit indication for uphill or downhill travel.
27	Animal Crossing	A sign is present indicating a warning that animals might be crossing; the sign represents any type of animal crossing.
28	Icy Conditions	A sign is present indicating that the road ahead can be icy.
29	Slippery Road	A sign is present indicating that the road ahead can be slippery.  Note: In some European countries, the Slippery Sign is accompanied by an Icy Condition Sign. This sign combination is published as Traffic Sign Type = 29 - Slippery Road only.
30	Falling Rocks	A sign is present indicating a warning that rocks might be falling.
31	School Zone	A sign is present indicating a warning that children may be crossing; the sign is posted near schools and playgrounds.
32	Tramway Crossing	A sign is present indicating that a Tramway crossing is ahead.
33	Congestion Hazard	A sign is present indicating a congestion prone area.
34	Accident Hazard	A sign is present indicating an accident prone area.
35	Priority over Oncoming Traffic	A sign is present indicating that the driver has right-of-way over oncoming traffic.

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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Value	Traffic Sign	Description
36	Yield to Oncoming Traffic	A sign is present indicating that the driver must give-way to oncoming traffic.
37	Crossing with Priority from the Right	A sign is present indicating that the driver is approaching a crossing where traffic has to give way to traffic approaching the intersection from the right.
41	Pedestrian Crossing	A sign is present indicating that the driver is approaching a pedestrian crossing.
42	Yield	A sign is present indicating that the driver has to give priority (i.e., yield) to traffic on the crossing road.
53	No Engine Brake	A sign is present indicating that braking using the engine is not allowed.
54	End of No Engine Brake	A sign is present indicating that braking using the engine is no longer restricted.
55	No Idling	A sign is present indicating that the engine needs to be turned off when standing still
56	Truck Rollover	A sign is present indicating that there is a danger for trucks to tip over.
57	Low Gear	A sign is present indicating that trucks have to use a low gear to break when descending.
58	End of Low Gear	A sign is present indicating that trucks no longer have to break by using a low gear.
59	Bicycle Crossing	A sign is present indicating that the driver is approaching an intersection with bicycles.
60	Yield to Bicycles	A sign is present indicating that the driver has to give priority (yield) to bicycles.
61	No towed caravan allowed	A sign is present indicating that vehicles towing a caravan are prohibited access.
62	No towed trailer allowed	A sign is present indicating that vehicles towing a trailer are prohibited access.
63	No camper or motorhome allowed	A sign is present indicating that vehicles towing a motorhome are prohibited access.
64	No Turn on Red	A sign is present indicating that turning on red light is prohibited.
65	Turn on Red Permitted	A sign is present indicating that turning on red light is allowed.

## Unprotected Railway Crossing

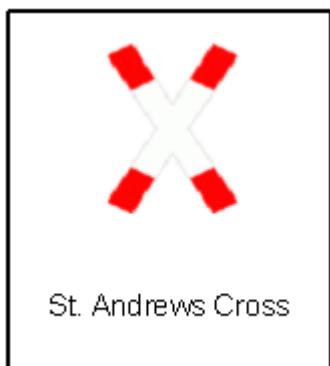
# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

Unprotected railway crossings can just have a St. Andrews Cross (see [Figure 288: on page 646](#)) or other type of indication (country specific) at the actual railway crossing and no sign indicating a railway crossing prior to the crossing. The signs at the actual railway crossing are not considered for Traffic Sign implementation. However, all railway crossings with and without a Railway Crossing sign prior to the crossing will be coded with a new condition Railway Crossing with attribute Railway Crossing Type = 1 - Protected or 2 - Unprotected. See Railway Crossing Type for details.

**Figure 288:**



## Supplemental Sign Duration

### Definition

The Traffic Sign attribute Supplemental Sign Duration indicates additional sign shields that are displayed below the Traffic Sign indicating the duration of the warning.

① **Note:**

Existing Supplemental Sign Duration is extended to allow for multiple Supplemental Sign Duration attributes for one Traffic Sign condition. A Language Code field is added to Condition Modifier (CndMod) layer to explicitly indicate the language in which the Supplemental Sign Duration is published. NAVSTREETS will only publish Latin-1 supplemental sign text.

### Value

Textual description of text (maximum of 10 characters) visible on the sign indicating duration.

### Condition Modifier Type

23

### Related Condition

Traffic Sign (Condition Type = 17)

### Usage

The supplemental sign duration can be used for map display or to indicate the duration of the warning in the Signs, Signals & Warnings alert messaging.

### Specification

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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- Supplemental signs indicating the duration are typically showing the distance information with arrows on either side of the distance information.

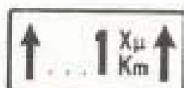
**Figure 289:**



- The distance information in the Traffic Sign Condition Modifier Type 23 is published including the measurement indication. The supplemental sign text for duration will be represented as spelled on the sign, excluding spaces. The example above would be represented as '2400m'.
- Each Supplemental Sign Duration has a corresponding language code in the Condition Modifier (CndMod) layer.
- Multiple Supplemental Sign Duration modifiers can be published for one Traffic Sign condition. This can happen for example when the Supplemental Sign Duration text is posted in different Latin-1 languages.
- The Supplemental Sign Duration modifier is not transliterated and not translated. Only Latin-1 supplemental text posted on signs in non-Latin-1 countries will be coded. Since NAVSTREETS is a Latin-1 product, supplemental sign text in non-Latin-1 will not be available in NAVSTREETS.

Condition ID	Language Code	Modifier	Modifier Value
19519646	ENG	23 (Supplemental Sign Duration)	1KM

**Figure 290: Greek (top) and Latin (bottom) supplemental sign text indicating Supplemental Sign Duration.**



- Latin-1 Supplemental Sign Duration text posted in countries where non-Latin-1 language is applicable will be coded and published with Language Code = ENG.

## Supplemental Sign Pre-Warning

### Definition

The *Traffic Sign condition attribute Supplemental Sign Pre-Warning* indicates additional sign shields that are displayed below the Traffic Sign indicating an upcoming warning or regulation. These signs are only included when no additional Traffic Sign is present at the actual start of the warning or regulation.

 **Note:**

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

Existing Supplemental Sign Pre-Warning is extended to allow for multiple Supplemental Sign Pre-Warning modifiers for one Traffic Sign condition. A Language Code field is added to Condition Modifier (CndMod) layer to explicitly indicate the language in which the Supplemental Sign Duration is published. NAVSTREETS will only publish Latin-1 supplemental sign text.

## Value

Textual description of text visible on the supplemental sign indicating pre-warning.

## Condition Modifier Type

24

## Related Conditions

Traffic Sign (Condition Type = 17)

## Usage

The supplemental sign pre-warning can be used for map display or to indicate a pre-warning for an upcoming warning or regulation in the Signs, Signals & Warnings alert messaging.

## Specification

- Traffic Signs with supplemental signs indicating the distance to an upcoming warning or regulation are not included in case an additional *Traffic Sign* is present at the actual start of the warning. In case no *Traffic Sign* is present at the actual start of the warning, then the Traffic Sign with the supplemental sign indicating the distance to the upcoming warning or regulation is included. These types of supplemental signs typically show the distance information without the arrows on either side of the distance information. See the following illustration for an example.

Figure 291:



- The distance information in the condition Modifier Type 24 - *Supplemental Sign Pre-Warning* will be published including the measurement indication. The supplemental sign text for pre-warning will be represented as spelled on the sign, excluding spaces. The example above would be represented as '400m'.
- Each Supplemental Sign Pre-Warning has a corresponding language code in the Condition Modifier (CndMod) layer.
- Multiple Supplemental Sign Pre-Warning modifiers can be published for one Traffic Sign condition. This can happen for example when the Supplemental Sign Pre-Warning supplemental text is posted in different Latin-1 languages.

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- The Supplemental Sign Pre-Warning modifier is not transliterated and not translated. Only Latin-1 supplemental text posted on signs in non-Latin-1 countries will be coded. Since NAVSTREETS is a Latin-1 product, supplemental sign text in non-Latin-1 will not be available in NAVSTREETS. See the following table.

Condition ID	Language Code	Modifier	Modifier Value
19519646	ENG	24 (Supplemental Sign Pre-Warning)	200M

Figure 292: Greek (top) and Latin-1 (bottom) supplemental sign text indicating a Supplemental Sign Pre-Warning



- Latin-1 Supplemental Sign Pre-Warning text posted in countries where a non-Latin-1 language is applicable will be coded and published with language code = 'ENG'.

## Supplemental Sign Applicable Vehicles

### Definition

*Supplemental Sign Applicable Vehicles* indicates additional sign shields which are displayed below the Traffic Sign indicating to which vehicle(s) the Traffic Sign is applicable.

### Condition Modifier Type

25

### Value

- 1 – Truck
- 2 – Truck over 3.5 tons, trailers, and semi-trailers
- 3 – Bus
- 4 – Passenger Vehicle with trailer
- 5 – Motor Home
- 6 - Motorcycle

### Specification

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- Supplemental signs displaying specific vehicles indicate to which specific vehicle(s) the *Traffic Sign* is applicable. See the following example.

**Figure 293:**



- The condition Modifier Type 25 - *Supplemental Sign Applicable Vehicles* can have one or more of the following values applied (see the following).

**Figure 294:**

	1 – Truck
	2 – Truck over 3.5 tons, trailers or semi-trailers
	3 – Bus
	4 – Passenger Vehicle with trailer
	5 – Motor Home
	6 – Motorcycle

### Supplemental Sign Validity Time

#### Definition

The *Traffic Sign* condition attribute *Supplemental Sign Validity Time* indicates that an additional sign shields exists, displayed below the *Traffic Sign*, indicating a specific time(s) at which the *Traffic Sign* is applicable. Example: No overtaking for Trucks from 8:30 till 18:00 hours.

Existing Supplemental Sign Pre-Warning is extended to allow for multiple Supplemental Sign Pre-Warning modifiers for one *Traffic Sign* condition. A Language Code field is added to Condition Modifier (CndMod) layer to explicitly indicate the language in which the Supplemental Sign Duration is published. NAVSTREETS will only publish Latin-1 supplemental sign text.

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7.14 Condition Modifiers (CndMod)

## Value

Textual description of text (maximum 100 characters) visible on the supplemental sign indicating validity time.

## Condition Modifier Type

26

## Related Condition

Traffic Sign (Condition Type = 17)

## Usage

Supplemental sign text for validity time can be used to display the supplemental traffic sign with information as present on the sign.

## Specification

- Supplemental signs displaying validity time indicate a specific time at which the *Traffic Sign* is applicable. See the following as an example.

Figure 295:



- The time period in the condition attribute *Supplemental Sign Validity Time* will be published as spelled on the sign, including hour indication, dashes etc. The minimum amount of spaces will be used. Example: The representation of the Supplemental sign is: 8:30-18h.

① **Note:**

In case no separator is present between the hour and the minutes, then the separator ":" will be used. Example: Start time 830 in the previous illustration would be represented as 8:30.

- When multiple Supplemental Sign Validity Time modifiers exist on one supplemental sign, a comma is used as a separator between them. The validity time, is represented as 8-11H, 16-18H. When Supplemental

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

Sign Validity Time modifiers include a comma, it is an indicator that an additional line of text appears within the same supplemental sign.

**Figure 296:**



- Each Supplemental Sign Validity Time has a corresponding language code in the Condition Modifier (CndMod) layer.
- Multiple Supplemental Sign Validity Time attributes can be published for one Traffic Sign condition. This can happen, for example, when the Supplemental Sign Validity Time supplemental text is posted in different Latin-1 languages.
- The Supplemental Sign Validity Time modifier is not transliterated and not translated. Only Latin-1 supplemental text posted on signs in non-Latin-1 countries will be coded. Since NAVSTREETS is a Latin-1 product, supplemental sign text in non-Latin-1 will not be available in NAVSTREETS.
- Latin-1 Supplemental Sign Pre-Warning text is posted in countries where a non-Latin-1 language is applicable will be coded and published with language code = 'ENG'.

## Railway Crossing Type

### Definition

*Railway Crossing Type* indicates if the Railway Crossing is protected with a barrier or unprotected without barriers.

### Condition Modifier Type

27

### Value

1 – Protected

2 – Unprotected

### Usage

The supplemental sign displaying validity time can be used for map display.

### Specification

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- The *Railway Crossing* condition is published with Condition Modifier 27 equal to one of the following:
  - Railway Crossing Type = 1* (Protected) is applied when the Railway Crossing is protected with a barrier. See the following illustration.

**Figure 297:**



- Railway Crossing Type = 2* (Unprotected) is applied when the Railway Crossing is not protected by barriers.

**Figure 298:**



- In case a traffic sign is present in reality indicating a railway crossing, then two conditions are applied per driving direction. One condition indicating the traffic sign location and one condition indicating the actual railway crossing.

## Traffic Sign Category

### Definition

*Traffic Sign Category* identifies the main sign category to which the sign belongs to.

### Condition Modifier Type

28

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7.14 Condition Modifiers (CndMod)

## Value

1 – Regulatory Sign

2 – Informative Sign

3 – Warning Sign

## Related Attributes

Traffic Sign Type (Modifier Type = 22)

General Warning Sign Type (Modifier Type = 47)

## Related Condition

Traffic Sign (Condition Type = 17)

## Usage

Traffic Sign Category can be used to give specific informative messaging.

## Specification

- The *Traffic Sign* condition is published with Condition Modifier 28 equal to one of the following:
  - Traffic Sign Category* = 1 (Regulatory Sign) is applied when the Traffic Sign is indicating a regulation. See [Toll Structure Type](#) on page 656 for Traffic Sign Types defined as Regulatory Signs.
  - Traffic Sign Category* = 2 (Informative Sign) is applied when the *Traffic Sign* indicates certain information to alert the driver. See [Toll Structure Type](#) on page 656 for Traffic Sign Types defined as Informative Signs.
  - Traffic Sign Category*= 3 (Warning Sign) is applied when the Traffic Sign is indicating a warning. See [Toll Structure Type](#) on page 656 for Traffic Sign Types defined as Warning Signs.

Value	Description	Regulatory	Informative	Warning
1	Start of No Overtaking	X		
2	End of No Overtaking	X		
3	Protected Overtaking - extra lane		X	
4	Protected Overtaking - extra lane right side		X	
5	Protected Overtaking - extra lane left side		X	
6	Lane Merge Right			X
7	Lane Merge Left			X
8	Lane Merge Center			X
9	Railway Crossing Protected			X

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

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Value	Description	Regulatory	Informative	Warning
10	Railway Crossing Unprotected			X
11	Road Narrows			X
12	Sharp Curve Left			X
13	Sharp Curve Right			X
14	Winding Road starting Left			X
15	Winding Road starting Right			X
16	Start of No Overtaking Trucks	X		
17	End of No Overtaking Trucks	X		
18	Steep Hill Upwards			X
19	Steep Hill Downwards			X
20	Stop Sign	X		
21	Lateral Wind			X
22	General Warning			X
23	Risk of Grounding			X
24	General Curve			X
25	End of all Restrictions	X		
26	General Hill			X
27	Animal Crossing			X
28	Icy Conditions			X
29	Slippery Road			X
30	Falling Rocks			X
31	School Zone			X
32	Tramway Crossing			X
33	Congestion Hazard			X
34	Accident Hazard			X
35	Priority over Oncoming Traffic	X		

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7.14 Condition Modifiers (CndMod)

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Value	Description	Regulatory	Informative	Warning
36	Yield to Oncoming Traffic	X		
37	Crossing with Priority from the Right			X
41	Pedestrian Crossing			X
42	Yield	X		
53	No Engine Brake	X		
54	End of No Engine Brake	X		
55	No Idling	X		
56	Truck Rollover			X
57	Low Gear		X	
58	End of Low Gear		X	
59	Bicycle Crossing			X
60	Yield To Bicycles	X		
61	No Towed Caravan Allowed	X		
62	No Towed Trailer Allowed	X		
63	No Camper or Motorhome Allowed	X		
64	No Turn on Red	X		
65	Turn Permitted on Red	X		

## Toll Structure Type

### Definition

The Toll Structure Type attribute is a sub-attribute to the Toll Structure condition, and identifies the type of toll structure and specifies if (electronic) payment and/or ticket retrieval is required at the toll structure.

### Condition Modifier Type

30

### Value

- 1 - Fixed Fee
- 2 - Obtain Ticket
- 3 - Pay per Ticket

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Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

## 4 - Electronic

### Related Condition

*Toll Structure* (Condition Type = 1)

### Usage

Toll Structure Type can be used to inform the user about the type of Toll Structure approached.

### Specification

- The Toll Structure condition attribute Toll Structure Type is published with one or more of the following values:
  - Toll Structure Type = 1 - Fixed Fee is applied when a fixed fee is required for traversal.
  - Toll Structure Type = 2 - Obtain Ticket is applied when a ticket needs to be obtained at the Toll Structure.
  - Toll Structure Type = 3 - Pay per Ticket is applied when payment is required based on the travelled distance between the Toll Structure where the ticket was obtained and the Toll Structure at which the toll road is exited.
  - Toll Structure Type = 4 - Electronic (see [Figure 299:](#) on page 657) is applied when automatic controls are present which automatically records the beginning and end of the stretch of toll road that has been travelled. Payment is calculated based on the travelled distance between the entry and exit point. For example, 407 ETR - Greater Toronto area. Toll is collected by using transponders or through scanning the license plate for vehicles without a transponder. Another example is the German Toll Collect system for Trucks. Toll is collected by payment through the internet, cash payment at designated Toll Terminals or through an on-board unit.
    - Toll Structure Type = 4 - Electronic is also applied when automatic controls are present which automatically record vehicles entering a toll zone in the centre of a city. Payment is determined by scanning the license plate. This is typical for the London and Stockholm Congestion Zones.

**Figure 299:**



- In case both electronic payment (e.g., transponder) and non-electronic payment/ticket retrieval are possible at a Toll Structure, two Toll Structure Type values are coded: Toll Structure Type = 1 - Fixed Fee/2 - Obtain Ticket/3 - Pay per Ticket, and Toll Structure Type = 4 - Electronic.
- The Toll Structure Type is not published when the type of Toll Structure has not been verified.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- When a Toll Structure has a Method of Payment = 5 (Transponder) or Method of Payment = 6 (Video Toll Charge), Toll Structure Type = 4 (Electronic) is coded. See [Modifier Value](#) on page 625 for more detail.
- A Toll structure that is only coded with Toll Structure Type = 1 (Fixed Fee) is not coded with Method of Payment = 5 (Transponder) or Method of Payment = 6 (Video Toll Charge). The same is true for Toll Structure of type Toll Structure Type = 3 (Pay per Ticket) only. See [Modifier Value](#) on page 625 for more detail.

## Toll Structure Type - Toll Cost Association

- Toll Structure Type or Usage Fee Required ties the external Toll Cost XML to the NAVSTREETS Extract.

## Method of Payment

### Definition

Method of Payment is a sub-attribute to the Toll Structure Condition and identifies the type of payment methods (e.g., electronic payment, cash etc.) that are accepted at the Toll Structure.

### Condition Modifier Type

31

### Value

- 1 - Cash
- 2 - Bank Card
- 3 - Credit Card
- 4 - Pass/Subscription
- 5 - Transponder
- 6 - Video Toll Charge
- 7 - Exact Cash
- 8 - Travel Card

### Related Condition

*Toll Structure (Condition Type = 1)*

### Usage

Method of Payment can be used to provide information on the accepted payment method at a Toll Structure.

### Specification

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- Method of Payment is only set for Toll Structure conditions with the following Toll Structure Types:

- 1 - Fixed Fee
- 3 - Pay per Ticket
- 4 - Electronic

Method of Payment is also set for Toll Structure Type = 4 (Electronic) when it co-exists with Toll Structure Type = 2 (Obtain Ticket).

The Method of Payment values are:

- Method of Payment = 1 - Cash is applied when Cash payment can be done at the Toll Structure.
- Method of Payment = 2 - Bank Card is applied when payment can be done by bank card at the Toll Structure.
- Method of Payment = 3 - Credit Card is applied when payment can be done through a Credit Card at the Toll Structure.
- Method of Payment = 4 - Pass/Subscription is applied when access at the toll structure is obtained by using a pre-purchased pass or subscription through the internet for example.
- Method of Payment = 5 - Transponder is applied when access at the toll structure is obtained by using a transponder.
- Method of Payment = 6 - Video Toll Charge is applied when automatic controls monitor vehicles that enter the toll road without a transponder.
- Method of Payment = 7 - Exact Cash is applied when payment can be done with exact cash by throwing exact cash in a "basket" at the Toll Structure. "Tokens" are also considered Exact Cash. Tokens are pre-purchased coins that are used to pay toll. For example, The Garden State Parkway in New Jersey accepts Tokens for payment.
- Method of Payment = 8 - Travel Card is applied when payment can be done through a Travel Card at the Toll Structure. A Travel Card is a card that is specifically used for purchasing fuel. In some countries this card can also be used to pay toll at the Toll Structure.

- The table below provides an overview of the payment methods that can exist in combination with the different Toll Structure Types:

Toll Structure	Method of Payment Values Possible
1 - Fixed Fee	1 - Cash 2 - Bank Card 3 - Credit Card 4 - Pass/Subscription 7 - Exact Cash 8 - Travel Card
2 - Obtain Ticket	None

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

Toll Structure	Method of Payment Values Possible
3 - Pay per Ticket	1 - Cash 2 - Bank Card 3 - Credit Card 4 - Pass/Subscription 7 - Exact Cash 8 - Travel Card
4 - Electronic	4 - Pass/Subscription 5 - Transponder 6 - Video Toll Charge

- The Method of Payment will not be published in case payment methods have not been verified.

## Toll Feature Type

### Definition

The Usage Fee Required attribute Toll Feature Type identifies the type of toll feature it represents.

### Condition Modifier Type

33

### Related Attributes

Toll System Type

### Related Condition

Usage Fee Required (Condition Type = 12)

### Usage

The Toll Feature Type can be used for display purposes and offers the possibility to differentiate in display between the different Toll Feature Types.

### Specification

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- The Toll Feature Type attribute is published with one of the following values:
  - Toll Feature Type = 1 - Toll Road is applied when toll is paid at Toll Structures in order to traverse a designated toll road, and the Toll Road is not of any of the type of Toll Feature Types listed below.
  - Toll Feature Type = 2 - Bridge is applied when toll is paid in order to traverse a bridge.
  - Toll Feature Type = 3 - Tunnel is applied when toll is paid in order to traverse a tunnel.
  - Toll Feature Type = 4 - Park is applied when toll is paid in order to travel through a (national) park.
  - Toll Feature Type = 5 - Mountain Pass is applied when toll is paid in order to traverse a mountain pass.
  - Toll Feature Type = 6 - Scenic Route is applied when toll is paid in order to traverse a scenic route.
  - Toll Feature Type = 7 - Vignette Road is applied when a Vignette is required in order to traverse the Toll Road.
  - Toll Feature Type = 8 - Toll Zone is applied when toll is paid in order to traverse a toll zone within a city. Example: London Congestion Zone and toll zone in Stockholm.
  - Toll Feature Type = 9 - Ferry is applied when toll is paid in order to traverse by Ferry
- In case multiple Toll Feature Types exist for a road or stretch of road, then multiple Usage Fee Required conditions are coded with different Toll Feature Types.
- Toll Feature Type is not published when the type of Toll feature has not been verified.

## Toll System Type

### Definition

Toll System Type defines a unique ID for each toll system that has a common Toll Operator and Toll Collection Scheme. Toll System Type can either be a modifier of the Usage Fee Required (12) condition or an attribute of an Administrative Area. The Toll System Type IDs are unique per continent. The Toll System Type IDs reference the detailed Vehicle Category information for each toll system in an XML file.

### Condition Modifier Type

34

### Layers

Feature Attribute Layer (FeatureAttr)

Condition Modifiers (CndMod)

### Fields and Attribute Values

Usage Fee Required

Condition Modifiers (CndMod)

- MODIFIER\_TYPE = 34 (Toll System Type)  
MODIFIER\_VALUE = Numeric ID

Administrative Area (Reference to the Toll Cost XML product)

Feature Attribute Layer (FeatureAttr)

- FEAT\_CAT = 02 ADMIN AREA  
ATTR\_TYPE = 5 - TOLL SYSTEM TYPE

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

ATTR\_VALUE = Numeric ID

## Cardinality

Usage Fee Required - 1:1

Administrative Area - 1:0,1

## Related Attributes

Toll Feature Type

## Related Conditions/Features

Usage Fee Required (Condition Type = 12)

Administrative Area

## Related Look-aside File

Vehicle Category XML file

## Usage

The Toll System Type can be used for display purposes. Toll System Type IDs can be used to retrieve the detailed vehicle characteristics that are applicable to a specific toll system.

## Specification

- Each Toll System receives a unique Toll System Type ID. Toll systems are defined by a common Toll Operator and Toll Collection Scheme.
- The Toll System Type (34) is a modifier of the Usage Fee Required condition. Usage Fee Required is published on toll roads and toll zones (like congestion zones).
- Toll Systems can apply to an entire country (i.e., trucks over 3.5 tonnes are required to pay toll on all roads in Switzerland). In this case the Feature Attribute Layer (FeatureAttr) publishes the Toll System Type for administrative level Country (AA Level 1).
- The Usage Fee Required Condition can be published with *Toll System Type*.
- The corresponding Toll System Type is applied to all links that are affected by the toll zone.
- Toll System Type (34) can only be applied in combination with Toll Feature Type = 7 - Vignette Road.

## Metadata

### Simple Reference Classes

Metadata - Reference Class (MtdRef) entry is required for Toll System Type:

Reference Class	Code	Description	Language Code
FTATTTYPE	5	Toll System Type	ENG

## Examples

# Reference Guide

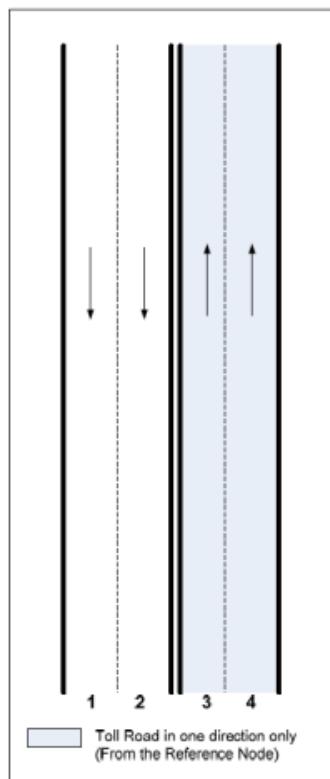
Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

here

## Lane Usage Fee Required

Figure 300:



### Streets Layer

Column	Contents
Link ID	0182498304
Physical Number of Lanes	4
...	

### Lane Layer

Column	Contents	Contents
Link ID	0182498304	0182498304
Lane ID	1122334455	6622334455
Lane Number	3	4
Lane Direction of Travel	F	F
...		
Lane Type	1	1
...		

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

## Lane Condition/Driving Manoeuvres (LnCdms) Layer

Column	Contents	Contents
Lane ID	1122334455	6622334455
Condition ID	0931050817	1731050829
Condition Type	12	12
...		

## Condition Modifier (CndMod) Layer

Column	Contents	Contents
Condition ID	0931050817	1731050829
Language Code	ENG	ENG
Modifier Type	33	33
Modifier Value	1	1

This coding indicates that the Usage Fee Required (12) condition on this Link applies only in the positive link direction (from the Reference Node) on lanes 3 and 4.

## Toll System type for Admin Place

Example: In Switzerland, trucks over 3.5 tonnes are required to pay toll on all roads within the country. In this case the Feature Attribute Layer (FeatureAttr) is published with Attribute Type = 5 - Toll System Type to reference the detailed Vehicle Category information in the Vehicle Category XML data. The actual cost is published in the Toll Cost XML data.

## Administrative Area (AdminArea) Layer

Column	Contents
Area_ID	0011223344
Area Code_1	00001
Area Code_2	
Area Code_3	
Area Code_4	
Area Code_5	
Area Code_6	
Area Code_7	
Admin_Level	1

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

here

Column	Contents
Area_Name	Schweiz
Lang_Code	GER
Area Name_Type	B
Government Code	12

## Feature Attribute (FeatureAttr) Layer

Column	Contents
Feature_ID	11223344
Feature_Cat	02
Attr_Type	5
Attr_Value	6233891

Example: For a toll bridge, all trucks over 7.5 tonnes have to pay a fee in order to cross the bridge. In this case the Usage Fee Required (12) condition is published with condition attribute Toll System Type (34). The Toll System Type IDs reference the detailed Vehicle Category information in the XML.

## Condition/Driving Manoeuvres (Cdms) Layer

Column	Contents
Link_ID	9976587
Cond_ID	3367511
Cond_Type	12
Cond_Val1	
Cond_Val2	
Cond_Val3	
Cond_Val4	
End_of_Lk	
AR_Auto	N
AR_Bus	N
AR_Taxi	N
AR_Carpool	N
AR_Pedest	N
AR_Trucks	Y

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

here

Column	Contents
AR_Thrutr	N
AR_Delvier	N
AR_Emerveh	N
AR_Motor	N

## Condition Modifiers (CndMod) Layer

Column	Contents
Condition_ID	3367511
Language_Code	
Modifier_Type	34
Modifier_Value	1234567

## Evacuation Event Type

### Definition

Evacuation Event Type identifies the type of emergency event associated to an evacuation route.

### Condition Modifier Type

35

### Value

- 1 - Hurricane
- 2 - Floods
- 3 - Nuclear Incidents
- 4 - Terrorist Incidents
- 5 - Earthquakes
- 6 - Snow Advisories
- 7 - Wildfires
- 8 - Volcanic Eruptions
- 9 - Tsunami

### Related Condition

Evacuation Route (Condition Type = 22)

### Specification

- Evacuation Event Type identifies the event associated to a given evacuation route.
- Evacuation Event Type is applied as appropriate based on sources.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

### 7.14.4.1 Evacuation Travel Flow

#### Definition

Evacuation Travel Flow specifies the direction of travel in case of emergency when this is different from the regular Link Direction of Travel.

#### Condition Modifier Type

36

#### Value

- 1 - From
- 2 - To
- 3 - Both
- 4 - Closed

#### Related Condition

Evacuation Route (Condition Type = 22)

#### Specification

- The Evacuation Travel Flow Condition Modifier 36 is used to specify or to override the basic travel direction of the link.
- Evacuation Travel Flow is applied to bi-directional links to specify the evacuation route travel direction.
- The Evacuation Travel Flow is applied to one-way links to override the basic travel direction of the link.  
Contra-flows are established for certain expressways and interstates in order to use the maximum number of highway lanes possible for evacuating people from a threatened area. When the decision is made to activate a contra-flow, sections of these highways are set up to route traffic in one direction, heading away from the approaching storm.
- The Evacuation Travel Flow is applied on links to allow traffic (for cases where links are normally closed) in the event of evacuation.

### 7.14.4.2 Event Code

#### Definition

Event Code defines a specific Evacuation Route path when multiple Evacuation Route conditions exist.

#### Condition Modifier Type

37

#### Value

- 1 - Alligator Alley Northbound
- 2 - Alligator Alley Southbound

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

## Related Condition

Evacuation Route (Condition Type = 22)

## Specification

- Event Code is applied as appropriate based on sources.
- Event Code can be used to determine a specific evacuation route path when more than one Evacuation Route conditions are coded on a Link.

# Reference Guide

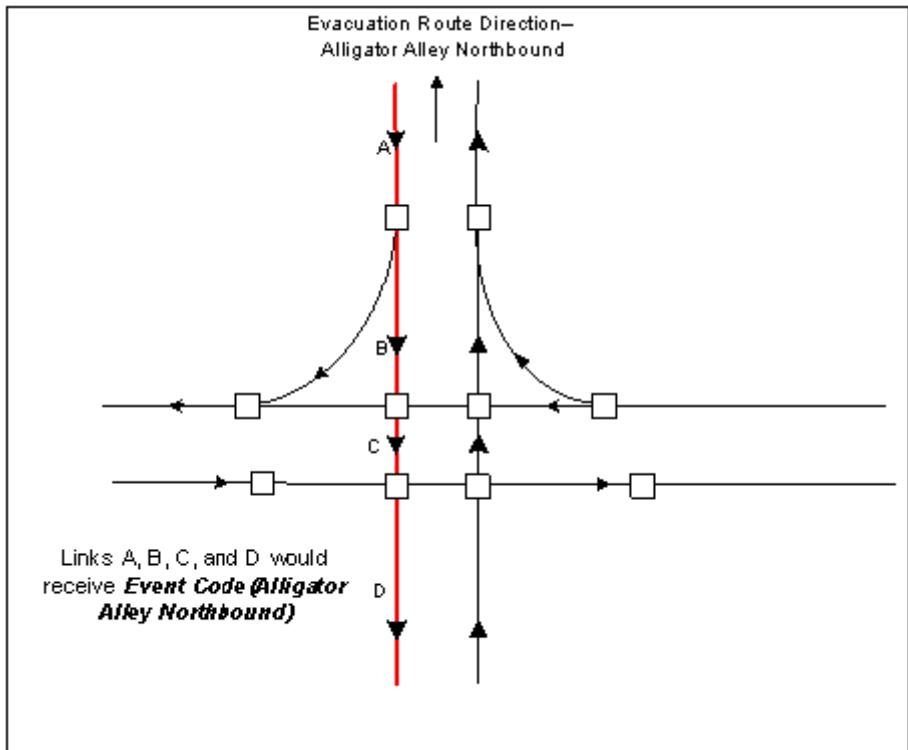
Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

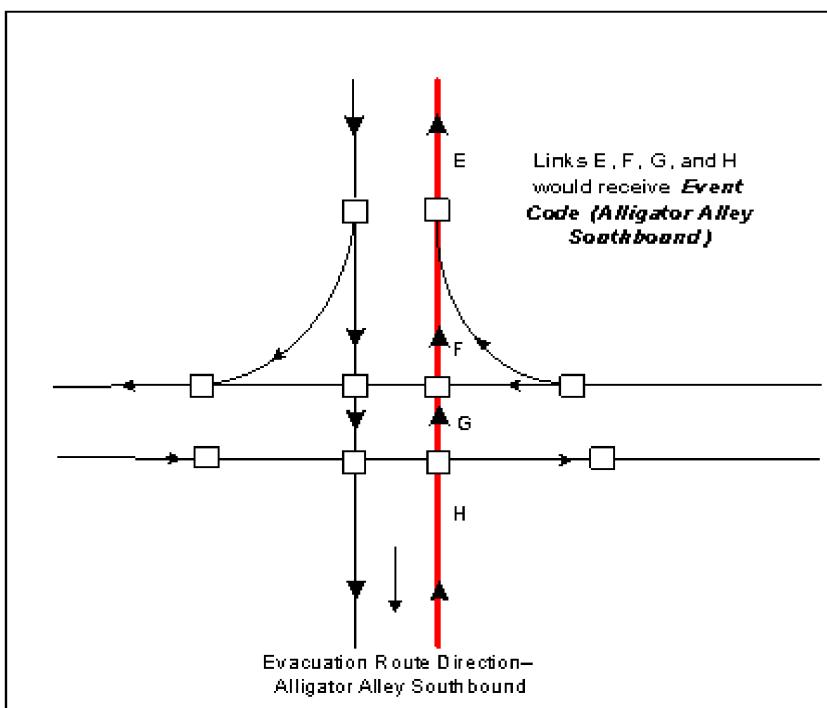
here

- Event Code Condition Modifier 37 may be used to code two Evacuation Route conditions on the same link.
  - The Event Code Condition Modifier 37 with modifier value 1 is applied to links A, B, C and D.
  - The Event Code Condition Modifier 37 with modifier value 2 is applied to links E, F, G, and H.

**Figure 301:**



**Figure 302:**



## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

### 7.14.4.3 Direction Closure

#### Condition Modifier Type

38

See [Direction Closure \(Modifier Type = 38\) on page 1013.](#)

### 7.14.4.4 Hazardous Material Type

#### Condition Modifier Type

39

See [Hazardous Material Type \(Modifier Type = 39\) on page 1014.](#)

### 7.14.4.5 Height Restriction

#### Condition Modifier Type

41

See [Height Restriction \(Modifier Type = 41\) on page 1015.](#)

### 7.14.4.6 Weight Restriction

#### Condition Modifier Type

42

See [Weight Restriction \(Modifier Type = 42\) on page 1017.](#)

### 7.14.4.7 Weight per Axle

#### Condition Modifier Type

43

See [Weight per Axle Restriction \(Modifier Type = 43\) on page 1020.](#)

### 7.14.4.8 Length Restriction

#### Condition Modifier Type

44

See [Length Restriction \(Modifier Type = 44\) on page 1021.](#)

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

### 7.14.4.9 Width Restriction

#### Condition Modifier Type

45

See [Width Restriction \(Modifier = 45\)](#) on page 1023.

### 7.14.4.10 Trailer Type

#### Condition Modifier Type

46

See [Trailer Type \(Modifier Type = 46\)](#) on page 1024.

### 7.14.4.11 General Warning Sign Type

#### Definition

The Traffic Sign modifier General Warning Sign Type (Modifier Type = 47) is used to specify the nature or a general warning sign (Traffic Sign Type = 22).

#### Condition Modifier Type

47

#### Value

1 - Object Overhang

2 - Risk of Grounding

3 - Animal Crossing

4 - Accident Hazard

#### Related Attributes

Traffic Sign Type (Modifier Type = 22)

#### Related Condition

Traffic Sign (Condition Type = 17)

#### Usage

General Warning Sign Type can be used to explicitly indicate the type of warning for a General Warning sign.

#### Specification

- Traffic Signs of Traffic Sign Type = 22 (General Warning Sign) are only included when a supplemental sign is present in reality. The General Warning Sign will be published with a General Warning Sign Type (Modifier Type = 47).

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- General Warning Sign Type = 1 - Object Overhang is only coded when an overhang of any type is signposted on a supplemental sign in reality. For example, see [Preferred Route Type \(Modifier Type = 49\)](#) on page 1031.
- General Warning Sign Type = 2 - Risk of Grounding is only coded when the risk of grounding signage is signposted on a supplemental sign in reality. For example, see [Preferred Route Type \(Modifier Type = 49\)](#) on page 1031.
- General Warning Sign Type = 3 - Animal Crossing is only coded when the animal crossing signage is present as a supplemental sign in reality. For an example, see.
- General Warning Sign Type = 4- Accident Hazard is only coded when the accident hazard signage is present as a supplemental sign in reality. For an example, see the following table.

<p>22</p> <p><b>Figure 303:</b></p> 	<p>General Warning Sign</p>		
<p><b>Figure 304:</b></p> 	<p>General Warning Sign with Condition Modifier 47 = 1 - Object Overhang</p>	<p><b>Figure 305:</b></p> 	<p>General Warning Sign with Condition Modifier 47 = 2 - Risk of Grounding</p>
<p><b>Figure 306:</b></p> 	<p>General Warning Sign with Condition Modifier 47 = 3 - Animal Crossing</p>	<p><b>Figure 308:</b></p> 	<p>General Warning Sign with Condition Modifier 47 = 4- Accident Hazard</p>
<p><b>Figure 307:</b></p> 		<p><b>Figure 309:</b></p> 	

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

### 7.14.4.12 Transport Speed Limit

#### Condition Modifier Type

48

See [Transport Speed Limit \(Modifier Type = 48\)](#) on page 1030.

### 7.14.4.13 Transport Preferred Route

#### Condition Modifier Type

49

See [Preferred Route Type \(Modifier Type = 49\)](#) on page 1031.

### 7.14.4.14 Traffic Sign Value

#### Definition

The Traffic Sign modifier Traffic Sign Value (Modifier Type = 51) provides values visible on the sign related to specific sign types.

#### Value

Textual description of the value visible on the sign. Traffic Sign Value publishes the text on the sign with the default language code of the country. Only Latin-1 text will be published.

#### Condition Modifier Type

51

#### Related Attributes

Traffic Sign Type (Modifier Type = 22)

#### Related Conditions

Traffic Sign (Condition Type = 17)

#### Usage

Traffic Sign Value can be used to display the traffic signs with the exact restriction or information as provided on the sign.

#### Specification

- Traffic Sign Value publishes the text on the sign with the default language code of the country. Only Latin-1 text will be published.

 **Note:** The Traffic Sign Value attribute is not transliterated and not translated.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- Traffic Sign Value (Modifier Type = 51) is initially applied to the following Traffic Sign Types (Modifier Type = 22) values:
  - 18 - Steep Hill Upwards
  - 19 - Steep Hill Downwards
- Inclination values for Traffic Sign Type = 18 (Steep Hill Upwards) and 19 (Steep Hill Downwards) will have the same percentage indication included (e.g., 9% on the traffic sign is published as Condition Modifier 51 = 9%).

### 7.14.4.15 Physical Structure Type

#### Condition Modifier Type

53

See [Physical Structure Type \(Modifier Type = 53\)](#) on page 1036.

### 7.14.4.16 Alternate Fuel Considered Carpool

#### Definition

Alternate Fuel Considered Carpool is an (HOV) access condition modifier and indicates if vehicles running on alternate fuel are considered carpool and thereby are allowed in carpool lanes.

#### Condition Modifier Type

57

#### Values

0 - Vehicles running on Alternate Fuel are not considered as Carpool

#### Related Condition

1 - Vehicles running on Alternate Fuel are considered as Carpool

#### Related Attributes

Hybrids Considered Carpool

Motorcycle Considered Carpool

Fee Pay Considered Carpool

#### Rules

- In case vehicles running on alternate fuel are allowed on HOV lanes, then Alternate Fuel Considered Carpool = 1 is coded for the HOV Access Restriction condition.
- Alternate Fuel Considered Carpool is only published for HOV Access Restriction conditions (which is Condition Type = 8) with a Minimum Number of Passenger (Modifier Type = 10) condition attribute.

See [\(HOV\) Access Restriction Coding](#) on page 607 under Access Restriction for details and example.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

### 7.14.4.17 Fee Pay Considered Carpool

#### Definition

Fee Pay Considered Carpool is an (HOV) Access condition attribute that indicates that non-HOV vehicles can use an HOV Lane for an additional charge. The payment could be for pay-per-use or pass scenario.

#### Condition Modifier Type

58

#### Values

0 - The HOV / Carpool lane can not be used by non-HOV vehicles for an additional charge

1 - The HOV / Carpool lane can be used by non-HOV vehicles for an additional charge

#### Related Condition

Access Restriction (Condition Type = 8)

#### Related Attributes

Hybrids Considered Carpool

Alternate Fuel Considered Carpool

Motorcycle Considered Carpool

#### Rules

- In case the HOV/Carpool lane can be used by non-HOV vehicles for an additional charge, then Fee Pay Considered Carpool = 1 is coded for the HOV Access condition.
- Fee Pay Considered Carpool is only published for HOV Access conditions (ConditionType = 8) with a Minimum Number of Passengers (Modifier Type = 10) condition attribute.

See [\(HOV\) Access Restriction Coding](#) on page 607 in Access Restriction for details and example.

### 7.14.4.18 Transport Speed Situation Type

#### Condition Modifier Type

59

See [Transport Speed Situation Type \(Modifier Type = 59\)](#) on page 1037.

### 7.14.4.19 Direction

#### Definition

Direction is a general condition modifier used for select single-link conditions that indicates the link direction for which a direction-dependent attribute is applicable. Direction is a sub-attribute to direction dependent condition coding.

#### Condition Modifier Type

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

60

### Value

1 - From Reference Node

2 - To Reference Node

3 - Both Directions

4 - Unknown

### Related Conditions

No Overtaking (condition\_type = 19)

Protected Overtaking (condition\_type = 21)

Blackspot (condition\_type = 38)

### Usage

Direction can be used to retrieve the link direction for which the No Overtaking and Protected Overtaking condition applies.

### Specification

- Direction = 1 - From Reference Node is published when the No Overtaking, Protected Overtaking or Blackspot condition is only applicable in the positive direction of the link (from reference node towards non-reference node).
- Direction = 2 - To Reference Node is published when the No Overtaking, Protected Overtaking or Blackspot condition is applicable in the negative direction (from non-reference node towards reference node).
- Direction = 3 Both is published when the No Overtaking, Protected Overtaking or Blackspot condition is only applicable in both driving directions.
- Direction = 4 - Unknown is published when the direction to which the No Overtaking or Protected Overtaking applies is not known. This value is not used in relation to Blackspot conditions.
- All No Overtaking and Protected Overtaking conditions are published with the Direction attribute.

## 7.14.4.20 Weight Dependent

### Condition Modifier Type

61

See [Weight Dependent \(Modifier Type = 61\)](#) on page 1039.

## 7.14.4.21 Weather Type

### Condition Modifier Type

62

See [Weather Type \(Modifier Type = 62\)](#) on page 1040.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

### 7.14.4.22 Environmental Zone ID

#### Definition

The Environmental Zone ID provides a unique identifier for the environmental zone, and is used as a reference to the Environmental Zone XML file.

#### Condition Modifier Type

69

#### Value

Numeric (The Environmental Zone Unique ID)

#### Usage

The Environmental Zone ID uniquely defines a specific environmental zone, and should be used to relate the Environmental Zone XML file to the NAVSTREETS dataset.

#### Specification

- Environmental Zone ID provides a unique identifier for the environmental zone that can be used to associate links to an Environmental Zone.
- Environmental Zone ID is a unique identifier that can be used to retrieve additional environmental zone information published in the Environmental Zone XML file.

### 7.14.4.23 Traffic Sign Sub Category

#### Definition

The Traffic Sign condition modifier Traffic Sign Sub Category identifies the sub-category of the Traffic Sign Category (28) = Regulatory Sign.

#### Condition Modifier Type

71

#### Value

1 - Priority Sign

#### Related Attributes

Traffic Sign Category (28)

Traffic Sign Type (22)

#### Related Condition

Traffic Sign (Condition Type = 17)

#### Usage

Traffic Sign Sub Category can be used to group Traffic Signs related to Priority.

#### Specification

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- Traffic Sign Sub Category (71) is only published for Traffic Sign Category (28) = 1 - Regulatory Sign.
- The Traffic Sign condition is published with attribute Traffic Sign Sub Category (71) = 1 - Priority Sign for the following Traffic Sign Types (22):
  - Traffic Sign Type (22) = 20 - Stop Sign
  - Traffic Sign Type (22) = 35 - Priority Over Oncoming Traffic
  - Traffic Sign Type (22) = 36 - Yield to Oncoming Traffic
  - Traffic Sign Type (22) = 42 - Yield

### 7.14.4.24 Blackspot Source

#### Definition

Blackspot Source (73) identifies the source of the Blackspot data. Blackspot data can be based on field collected data or data from external sources, like government data for example.

#### Condition Modifier Type

73

#### Values

1 - Posted

2 - Sourced

#### Format

Numeric

#### Cardinality

1:1

#### Default Value

None

#### Related Modifiers

Direction (60)

#### Related Condition

Blackspot (Condition Type = 38)

#### Usage

Blackspot Source can be used to determine the source of the blackspot data.

#### Specification

- Each Blackspot Condition will have a Blackspot Source (73) identified.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

- Blackspot Source can have one of the following values:
  - Blackspot Source = 1 - Posted is used for blackspot data that is field collected by HERE. Field collection of blackspot data is based on posted blackspot signage. The blackspot signs that are published are shown in the Country Specific Addendums.
  - Blackspot Source = 2 - Sourced is used for blackspot data that is based on external source data, e.g., government statistics or statistics from insurance companies. In case no blackspot-specific data is available for a region, then accident data is evaluated for potential inclusion.
- Whenever multiple different source types reference the same blackspot location, then multiple Blackspot conditions are published, one for each source specified (e.g., Posted and Sourced).

### 7.14.4.25 Transport Number of Axles

#### Condition Modifier Type

75

See [Number of Axles \(Modifier Type = 75\)](#) on page 1041.

### 7.14.4.26 Transport KPRA Length

#### Condition Modifier Type

81

See [KPRA Length \(Modifier = 81\)](#) on page 1046.

### 7.14.4.27 Transport Speed Limit Type

#### Condition Modifier Type

83

See [Speed Limit Type \(Modifier Type = 83\)](#) on page 1047.

### 7.14.4.28 Dependent Access Type

#### Definition

Dependent Access Type indicates that a dependency exists (e.g., traffic flow, weather condition, etc.,) on a link or lane when a lane access restriction or direction of travel condition is in effect but a set time is not specified or is unknown.

#### Condition Modifier Type

87

#### Value

1 - Dependent Access Type

#### Related Layers

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.14 Condition Modifiers (CndMod)

CndMod

MtdRef

MtdCompRef

### Related Attributes

Condition Type = 8 (Access Restriction)

Condition Type = 5 (Direction of Travel)

### Usage

Dependent Access Type may be used with other related attributes to guide a driver through lanes, which are controlled using variable indicators/electronic controls.

### Rules

- When an Access Restriction Condition or a Direction of Travel Condition is present with a Dependent Access Type modifier, then the respective condition modifier gets published in the Condition Modifier (CndMod) layer with Modifier Type = 87 and Modifier Value = 1.
- When an Access Restriction Condition or a Direction of Travel Condition is present without a Dependent Access Type modifier, then no condition modifier is published in the Condition Modifier (CndMod) layer with Modifier Type = 87.
- Dependent Access Type is published in the Metadata Compound Reference (MtdCmpRef) and Metadata Reference (MtdRef) layers.

## 7.14.4.29 PDM Type

### Definition

PDM Type (Permitted Driving Manoeuvre Type) identifies the type of Permitted Driving Manoeuvre.

### Condition Modifier Type

91

### Value

1 - Legal

### Entity-Attribute Relation

1:1

### Related Layers

Metadata Administrative Area (MtdArea)

Condition/Driving Manoeuvres Date/Time Modifiers

### Related Attributes

Admin Wide Regulations

PDM (Condition Type = 39)

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.15 Lane Condition/Driving Manoeuvres (LnCdms)

### Usage

The inclusion of Permitted Driving Manoeuvres optimises route calculations, thus improving the route guidance given.

### Rules

- Posted U-turns which are exceptions to the administrative-wide U-turn restrictions are published with Condition Value 1 = 1.

## 7.15 Lane Condition/Driving Manoeuvres (LnCdms)

---

### 7.15.1 Lane ID

#### Definition

Lane ID identifies the unique ID for the Lane.

#### Length

10

#### Type

Numeric

### 7.15.2 Condition ID

See [Condition ID](#) on page 545.

### 7.15.3 Condition Type

See [Condition Type](#) on page 545.

### 7.15.4 Condition Value

See [Condition Modifier 1-4](#) on page 605.

### 7.15.5 Condition Value 2

See [Condition Modifier 1-4](#) on page 605.

### 7.15.6 Condition Value 3

See [Condition Modifier 1-4](#) on page 605.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.15 Lane Condition/Driving Manoeuvres (LnCdms)

### 7.15.7 Condition Value 4

See [Condition Modifier 1-4](#) on page 605.

### 7.15.8 End Of Link

See [End of Link](#) on page 605.

### 7.15.9 AR-Auto

See [AR-Auto](#) on page 608.

### 7.15.10 AR-Bus

See [AR-Bus](#) on page 608.

### 7.15.11 AR-Taxis

See [AR-Taxis](#) on page 609.

### 7.15.12 AR-Carpool

See [AR-Carpools](#) on page 609

### 7.15.13 AR-Pedestrian

See [AR-Pedestrians](#) on page 609

### 7.15.14 AR-Trucks

See [AR-Trucks](#) on page 610.

### 7.15.15 AR-Through Traffic

See [AR-Through Traffic](#) on page 610.

### 7.15.16 AR-Deliveries

See [AR-Deliveries](#) on page 610.

### 7.15.17 AR-Emergency Vehicles

See [AR-Emergency Vehicles](#) on page 611.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.16 Lane Connectivity (LnCndConn)

### 7.15.18 AR-Motorcycles

See [AR-Motorcycles](#) on page 611.

## 7.16 Lane Connectivity (LnCndConn)

---

### 7.16.1 Condition ID

See [Condition ID](#) on page 545.

### 7.16.2 Traversal Number

#### **Definition**

Traversal Number identifies individual traversal/strands on a link.

#### **Length**

2

#### **Type**

Numeric

### 7.16.3 Source Lane ID

#### **Definition**

Source Lane ID provides the ID of the source lane.

#### **Length**

10

#### **Type**

Numeric

### 7.16.4 Source Travel Direction

#### **Definition**

(Source/Destination) Direction of Travel identifies legal travel directions for a navigable link.

#### **Value**

(space) - Not Applicable

B - Both Directions

F - From Reference Node

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.16 Lane Connectivity (LnCndConn)

T - To Reference Node

N - Closed in Both Directions

### Length

1

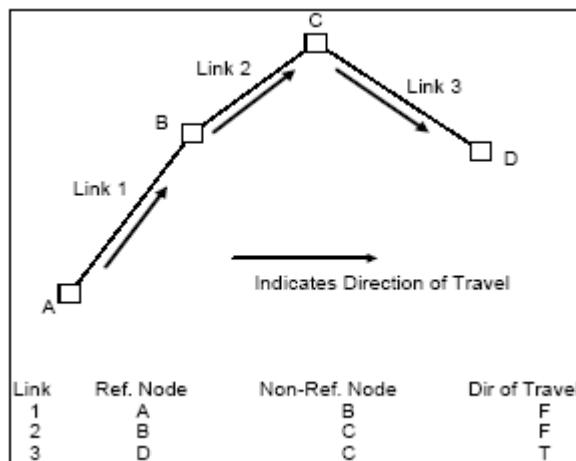
### Type

Text

### Specification

- Direction of Travel = F is applied when the direction of travel is one way from the reference node to the non-reference node.
- Direction of Travel = T is applied when the direction of travel is one way to the reference node from the non-reference node.
- Direction of Travel = B is applied when travel is allowed in both directions between the reference and the non-reference nodes.
- Direction of Travel = N is applied for permanent parking lanes that are never used for driving.
- Direction of Travel = Not Applicable is applied to non-navigable links.
- The Direction of Travel is determined based on each individual link. Links within the same one-way road may have a different Direction of Travel value because of the relative positions of the reference and non-reference node, as shown in [Figure 310:](#) on page 684.
- Ferries and walkways receive Direction of Travel = B.

**Figure 310:**



## 7.16.5 Destination Lane ID

### Definition

Destination Lane ID provides the ID of the destination lane.

### Length

10

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.17 Restricted Driving Manoeuvres - Manoeuvre Links (Rdms)

### Type

Numeric

## 7.16.6 Destination Travel Direction

See [Source Travel Direction](#) on page 683.

## 7.17 Restricted Driving Manoeuvres - Manoeuvre Links (Rdms)

---

### 7.17.1 Link ID

See [Link ID](#) on page 367.

### 7.17.2 Condition ID

See [Condition ID](#) on page 545.

### 7.17.3 Manoeuvre Link ID

#### Definition

Link ID of a manoeuvre link associated with the Condition/Driving Manoeuvre (CDM). Identifies the links involved in the Restricted Driving Manoeuvre condition.

#### Value

nnnnnnnnnn

#### Length

10

#### Type

Numeric

#### Specification

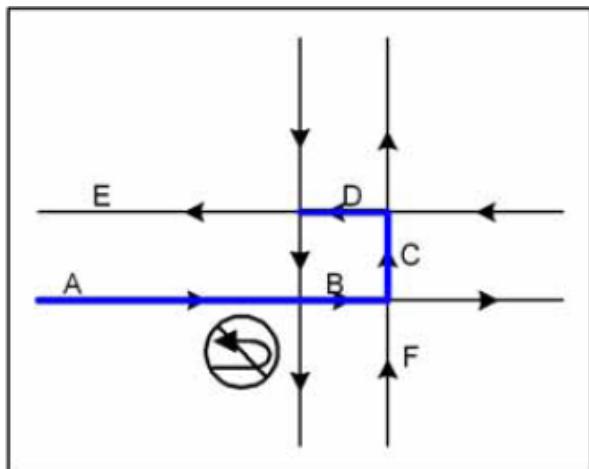
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.18 Z-Levels (Zlevels)

- All the links must be taken into account. A turn may be legal on a sub-set of the links. See [Figure 311:](#) on page 686. The prohibited manoeuvre is from Link A to Link B to Link C to Link D. However, it is legal to go from Link C to Link D when traversing from Link F to Link E.

**Figure 311:**



- For more information see [Restricted Driving Manoeuvre](#) on page 560.

### 7.17.4 Sequence Number (Restricted Driving Manoeuvres)

#### Definition

A counter starting from 1 to the number of records for this Condition/Driving Manoeuvre.

#### Value

nnnn

#### Length

4

#### Type

Numeric

## 7.18 Z-Levels (Zlevels)

### 7.18.1 Link ID

See [Link ID](#) on page 367.

### 7.18.2 Point Number

#### Definition

A counter, starting from 1, of the number of Link Shapes for this link.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.18 Z-Levels (Zlevels)

### **Value**

nnn

### **Length**

4

### **Type**

Numeric

### **Specification**

- The Reference Node has a Point Number value of 1 (the highest number is the Non-Reference Node).

## 7.18.3 Node ID

### **Definition**

Unique identifier for the node.

### **Value**

nnnnnnnnnn

### **Length**

10

### **Type**

Numeric

### **Usage**

*Node ID* is used as a reference for the node in the database.

## 7.18.4 Z-Level

### **Definition**

The relative vertical position of the shape point.

### **Value**

-4 to +5

### **Length**

5

### **Type**

Signed Numeric

### **Usage**

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.18 Z-Levels (Zlevels)

The Z-Level is used to represent the crossing over or under of links with other links. This attribute is not to be used to indicate actual elevation gain or loss. It is used to prevent routing between links that do not connect in reality.

## Specification

- The Z-Level represents a relative vertical position of nodes in relation to “0” when features do not meet at-grade. For example, the intersection nodes of a motorway and an overpass have different Z-Levels. Note that the value is not an actual elevation.
- Z-Levels do not change for a link that does not cross another link. Nodes or shape points are not added after a bridge in order to “lower” the Z-Level.
- In Network, the Z-Level does not change on an included road if it crosses over/under another feature (road, railway, waterway) that is not included.
- The Z-Levels change when a road crosses over or under another road, railroad, or Building/Landmark polygon.
- Water features are represented at a Z-Level different from crossing roads and railroad.
- Unless stated above, a Z-Level does not change when other non-water cartographic features, intersect with another feature. For example, when an administrative boundary intersects a road, railroad, or water feature, they may share the same Z-Level.
- Occasionally, when representing multi-level road features a link-on-link situation occurs. For example, some bridges have two levels where the top roadbed is directly above the lower. The upper or lower roadbed is reached via a ramp. When this occurs, the nodes for the upper and lower level links are at the same latitude/longitude but are represented at different Z-Levels. Only nodes (illustrated by the squares

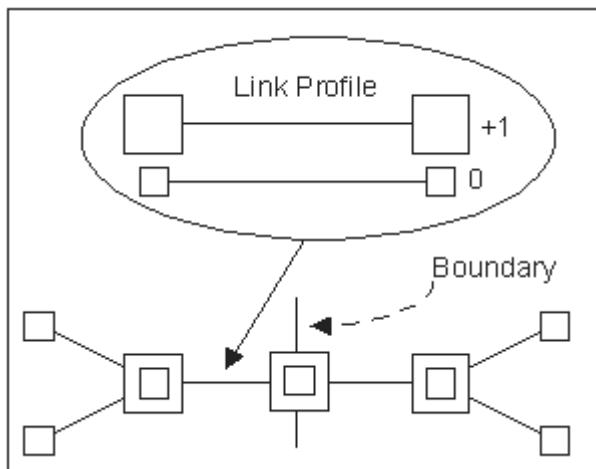
# Reference Guide

Attributes - Road Features and Associated Navigation Information

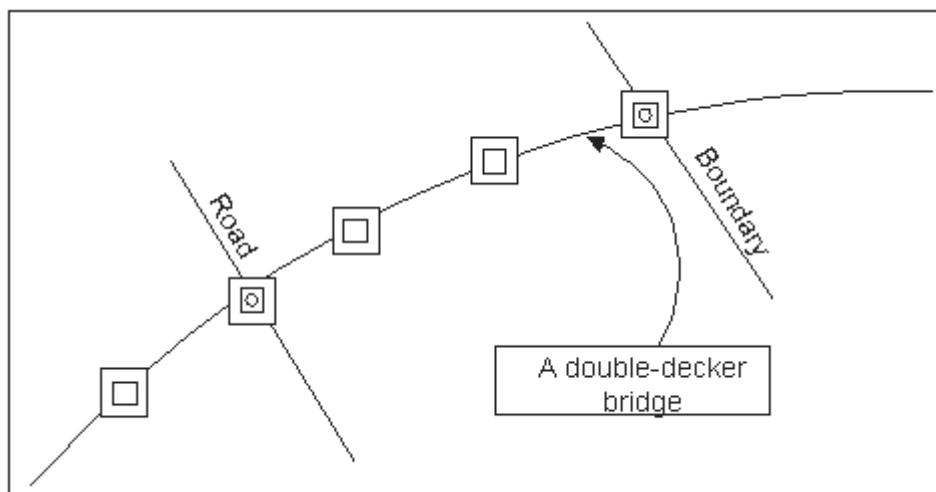
7.18 Z-Levels (Zlevels)

in the diagrams) may be represented for link-on-link situations, shape points are not valid, as shown in [Figure 312: on page 689](#) and [Figure 313: on page 689](#).

**Figure 312:**



**Figure 313:**



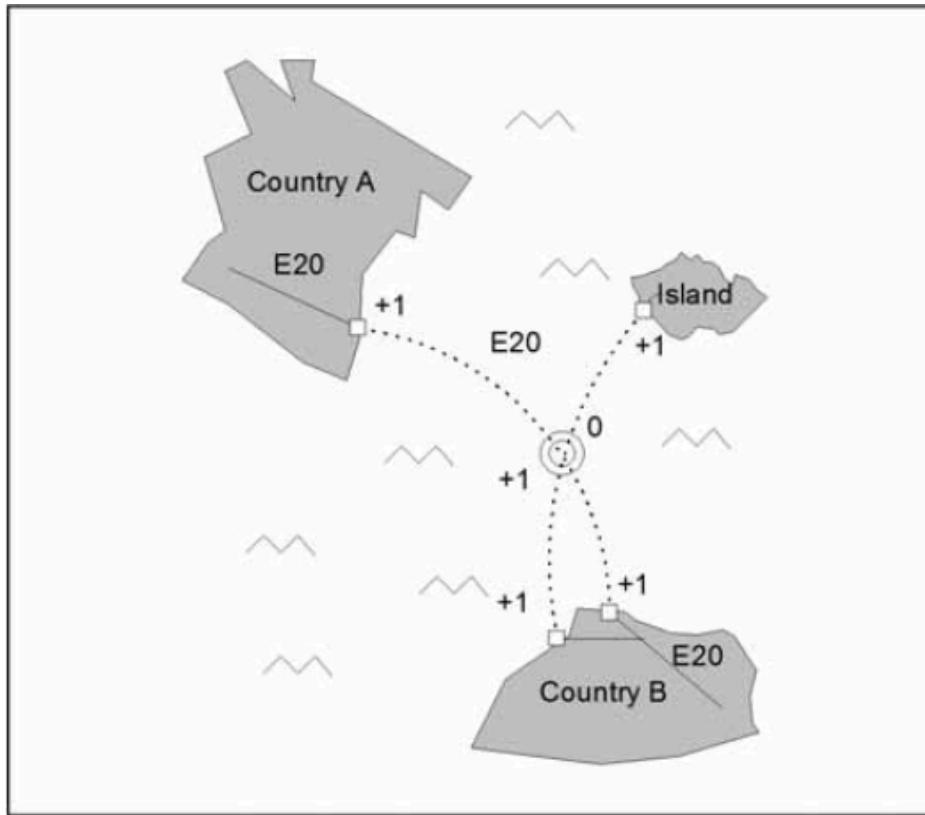
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.18 Z-Levels (Zlevels)

- Ferry routes that cross other ferry routes are represented using shape points at different Z-Levels (see [Figure 314: on page 690](#)). Different ferry routes can only connect at a node at the point where they connect to a road.

**Figure 314:**



### 7.18.5 Intersection

#### Definition

Indicates whether this node connects to an intersection.

#### Value

Y - The node connects to an intersection.

N - The node does not connect to an intersection.

#### Length

1

#### Type

Boolean

### 7.18.6 Z-Shape

**Note:**

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.19 Traffic (Traffic)

This attribute is not published in MapInfo.

### Definition

Identifier for the display of the Z-Level reference.

### Value

nn

### Length

2

### Type

Numeric

## 7.18.7 Aligned

### Definition

Indicates that this node is on the boundary between two database regions and that its X and Y Coordinates have been matched to a node in the adjacent region.

### Value

Y - Aligned

N - Not Aligned

### Length

1

### Type

Boolean

### Usage

Identifies nodes at the boundary of a database for merging with other databases.

### Specification

- See *Matching Links and Nodes between Databases* on page 128 for Aligned Specifications.

## 7.19 Traffic (Traffic)

---

### 7.19.1 Link ID

See *Link ID* on page 367.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.19 Traffic (Traffic)

### 7.19.2 Traffic Code

#### ① Note:

This content is no longer maintained.

#### Definition

RDS-TMC Code: The traffic information identifier for this link. It consists of several parts: ABCCDEEEEE.

PLOC : RDS Problem Locations in database

#### Value

A	<p>is the one character Direction of Road. This is based on the Direction of Travel on the link. “+” is the direction from the <i>From Node</i>. “-” is the direction towards the <i>From Node</i>.</p>
B	<p>is the one character EBU Country Code. Note: EBU are defined for European Countries. There are no official EBU codes for Canada and the U.S. HERE has defined “C” for Canada and “1” for the U.S.</p>
CC	<p>is the two digit Location Table number.</p>
D	<p>is the one character RDS direction, where: + is in the positive direction and external to the Problem Location. - is in the negative direction and external to the Problem Location. P is in the positive direction and internal to the Problem Location. N is in the negative direction and internal to the Problem Location.</p>
EEEEEE	<p>is the five digit Location Code. This has leading zeros if necessary.</p>

① Note: RDS-TMC codes do not exist in South Africa.

#### Length

10

#### Type

Text

#### Usage

#### For Navigable Links

- Inclusion of traffic message information in route calculation. Based on the traffic event (e.g. “Serious fire” or “Avalanche risk”) the route can be planned around the affected area.
- Inclusion of traffic messages information in route timing. Based on the traffic event (e.g. “Fog”) the route time can be longer through the affected area.

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

- Inclusion of traffic messages information in route information. Based on the traffic event (e.g. “earthquake damage”) the user could be informed that “earthquake damage” is present in the area through which the planned route is leading or that the affected area is nearby.
- Display of traffic messages in the map. Based on the traffic event (e.g. “falling rocks” or “flooding”) icons can be displayed in the affected area.
- Display of weather forecast messages in the map. Based on the forecast events and values for the different areas a weather forecast could be constructed on the map.

## 7.20 Lane (Lane)

---

### 7.20.1 Link ID

See [Link ID](#) on page 367.

### 7.20.2 Lane ID

See [Lane ID](#) on page 681.

### 7.20.3 Lane Number

#### **Definition**

Lane Number identifies the number of the lane on the specified link.

#### **Value**

1-45 (Lane Model)

#### **Length**

2

#### **Type**

Text

#### **Usage**

Lane Number is used to uniquely identify lanes on a link.

#### **Specification**

## Reference Guide

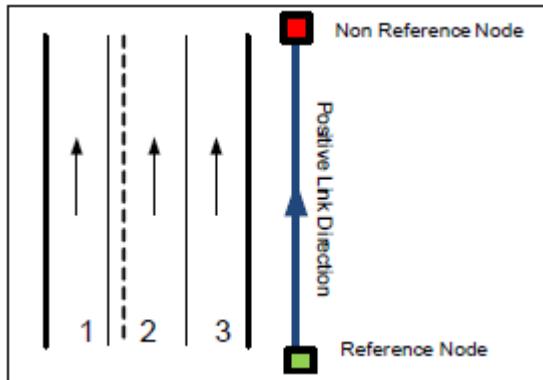
Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

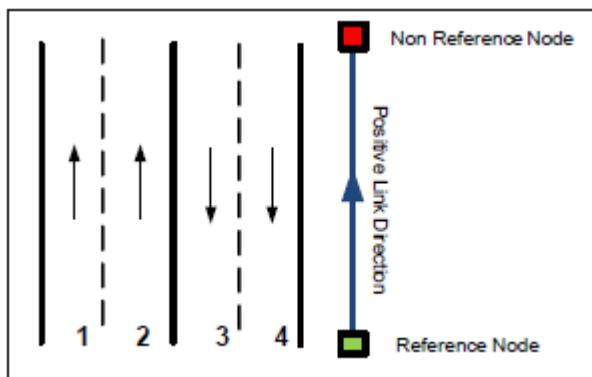
here

- Lane Number provides the lane number for a lane based on counting left to right in the positive lane direction independent of travel direction and of driving side. See [Figure 315: on page 694](#) and [Figure 316: on page 694](#).

**Figure 315:**



**Figure 316:**



### 7.20.4 Lane Direction of Travel

See [Direction of Travel](#) on page 426.

### 7.20.5 Lane Divider Marker

#### Definition

Lane Modifier Type *Lane Divider Marker* describes the appearance and type of the lane separators between lanes of a Link.

#### Values

Value	Description
0	No Marker
1	Long Dashed Line
2	Double Solid Line

# Reference Guide

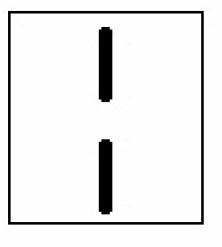
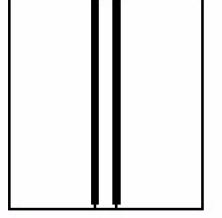
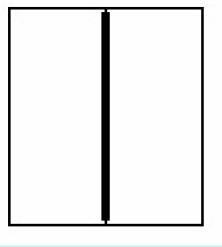
Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

here

Value	Description
3	Single Solid Line
4	Double Line, combination of inner single solid line and outer dashed line
5	Double Line, combination of inner dashed line and outer single solid line
6	Short Dashed Line
7	Shaded Area Marking
8	Dashed Blocks
9	Physical Divider < 3M wide
10	Double Dashed Line
11	No Divider Marker
12	Crossing Alert

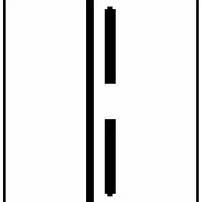
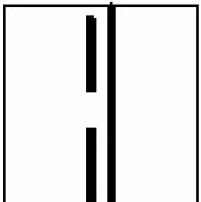
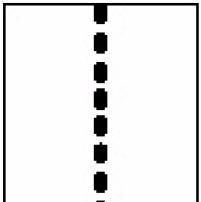
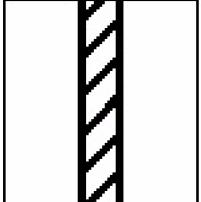
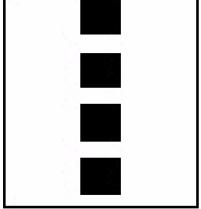
See the following examples:

Value	Description	Representation	Example
1	Long Dashed Line		
2	Double Solid Line		
3	Single Solid Line		

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

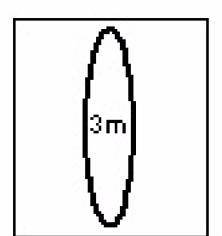
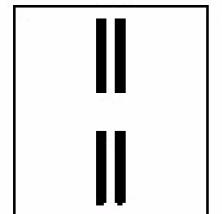
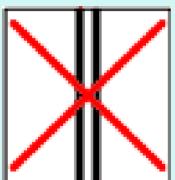
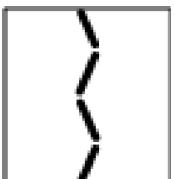
Value	Description	Representation	Example
4	Double Line, combination of inner single solid line and outer dashed line		
5	Double Line, combination of inner dashed line and outer single solid line		
6	Short Dashed Line		
7	Shaded Area Marking		
8	Dashed Blocks		

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

here

Value	Description	Representation	Example
9	Physical Barrier < 3M		
10	Double Dashed Line		
11	No Divider Marker		
12	Crossing Alert		

## Usage

*Lane Divider Marker* can be used to show the driver the lane separators matching the road ahead.

## Specification

- Also see [Lane Model](#) on page 1092.
- *Lane Divider Marker* is applied to:
  - Road links where Lane Model information is included
  - HOV lanes - Lane Divider Markers between the HOV lanes and the adjacent lanes.
- Lane Divider Marker is indicating the lane separator on the right side of the specified lane in the lane driving direction for Right-side driving countries. For Left-side driving countries the *Lane Divider Marker* is indicating the lane separator on the left side of the specified lane in the lane driving direction.  
Lanes are counted from the centre of the roadbed outward in the direction of travel. Right-side driving

## Reference Guide

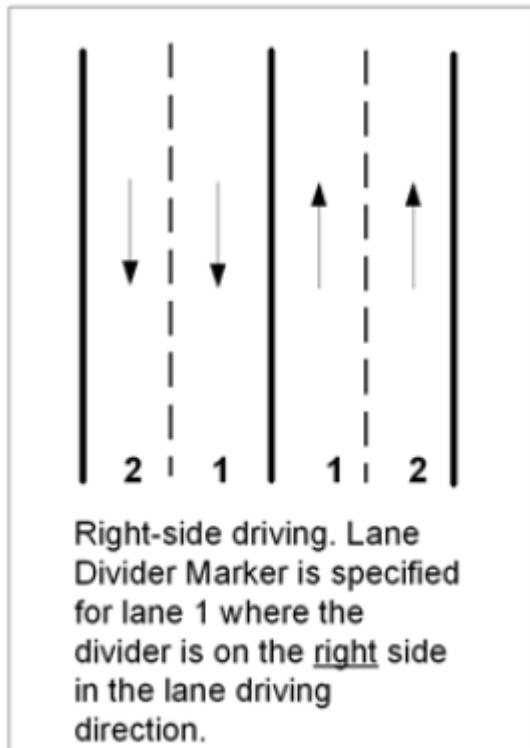
Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

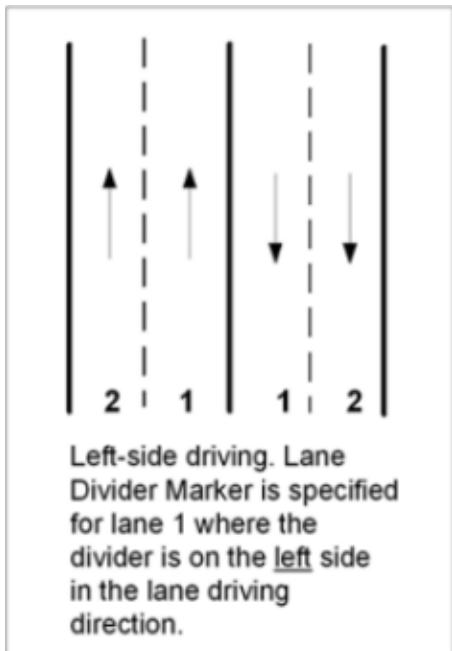
countries always count the leftmost lane as lane one. Left-sided driving countries always count the rightmost lane as one.

Example: Bi-directional road with two lanes in each driving direction. For both Right-side and Left-side driving countries the *Lane Divider Marker* will be specified for Lane one (1).

**Figure 317:**



**Figure 318:**



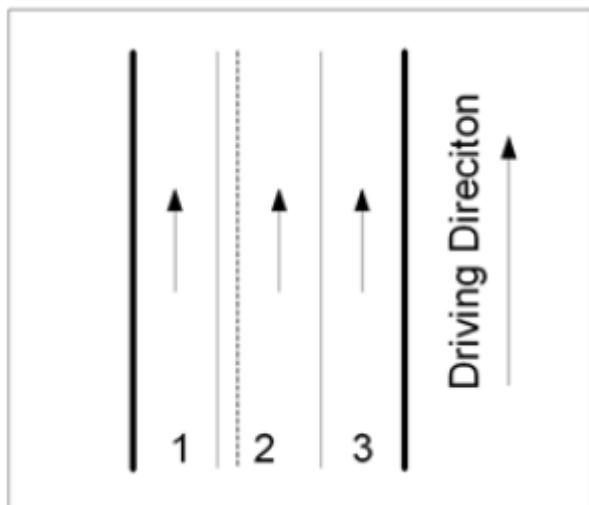
## Reference Guide

Attributes - Road Features and Associated Navigation Information

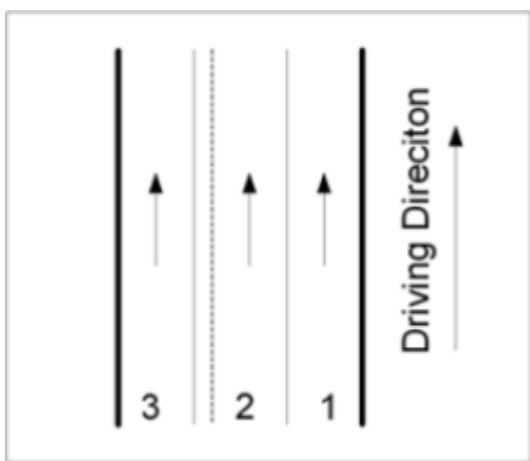
7.20 Lane (Lane)

- For Lane Divider Marker = 4 or 5 - Double Lines, the inner line refers to the line that is to the left in lane driving direction. The outer line refers to the line on the right. In Right-side driving, the Lane Divider Marker for lane 1 = 4 - inner single solid and outer dashed line. In Left-side driving, the Lane Divider Marker for lane 2 = 4 - inner single solid and outer dashed line.

**Figure 319:**



**Figure 320:**



- Lane Divider Marker* will not be specified for the dividers that bound the road in each driving direction. Centre dividers for bi-directional roads will be separately specified as *Center Divider Marker*.
- The *Lane Divider Marker* attribute represents the physical characteristics of the road lanes. Therefore *Access Characteristics* and *Date/Time Modifier information* are not applicable to the *Lane Divider Marker* attribute.

In conjunction with reversible lanes

- Lane Divider Marker* is only published in the positive travel direction for reversible links, in conjunction with *Physical Number of Lanes*.

## 7.20.6 Center Divider Marker

### Definition

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

here

Lane Modifier Type *Center Divider Marker* describes the type of separator for centre dividers on bi-directional Links.

## ① Note:

When the Lane ID is zero, that record represents the legacy lane model.

## Value

Value	Description
1	Long Dashed Line
2	Double Solid Line
3	Single Solid Line
4	Double Line, combination of inner single solid line and outer dashed line
5	Double Line, combination of inner dashed line and outer single solid line
6	Short Dashed Line
7	Shaded Area Marking
8	Dashed Blocks
9	Physical Divider < 3M wide
10	Double Dashed Line
11	No Divider Marker
12	Crossing Alert

① Note: For examples, see [Lane Divider Marker](#) on page 694.

## Usage

*Center Divider Marker* can be used to show the driver the type of centre divider matching the road ahead.

## Specification

- Also see [Lane Model](#) on page 1092.
- Center Divider Marker* is only specified for bi-directional Links.
- Center Divider Marker* is only defined for Lane one (1) for which the *Center Divider Marker* is on the left side in the positive link direction for Right-side driving Countries. See [Center Divider Marker](#) on page 699 below, Lane 1A. For Left-side driving countries, the *Center Divider Marker* is defined for Lane one (1) for which the *Center Divider Marker* is on the right side in the positive link direction. See [Center Divider Marker](#) on page 699 below, Lane 1B.

- ① Note: Positive direction refers to the direction from the reference node to the non-reference node.
- For *Center Divider Marker* = 4 or 5 - Double Lines, the inner line refers to the line that is to the left in the positive link direction. The outer line refers to the line on the right in the positive link direction. In [Center](#)

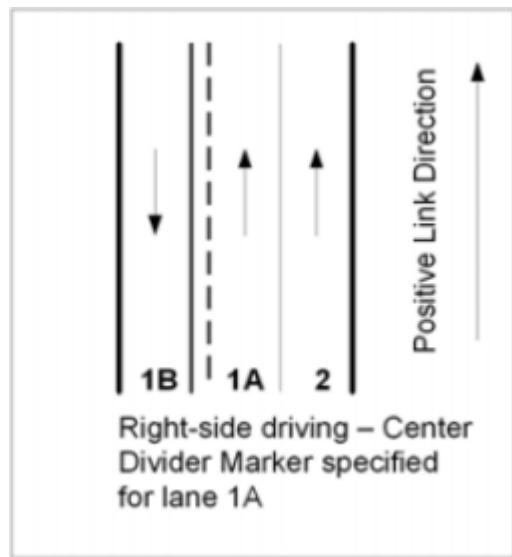
## Reference Guide

Attributes - Road Features and Associated Navigation Information

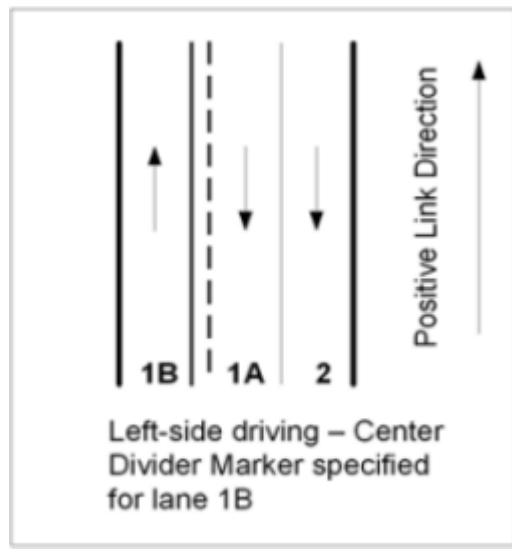
7.20 Lane (Lane)

*Divider Marker* on page 699, the *Center Divider Marker* for lane 1A (Right-side driving) = 4 - inner single solid and outer dashed line. In *Center Divider Marker* on page 699, the *Center Divider Marker* for lane 1B (Left-side driving) = 4 - inner single solid and outer dashed line.

**Figure 321:**



**Figure 322:**



- The *Center Divider Marker* attribute represents the physical characteristics of the road lanes. Therefore, Access Characteristics and Date/Time Modifier information are not applicable to the *Center Divider Marker* attribute.

### 7.20.7 Direction Category

#### Definition

Lane Modifier Type *Direction Category* refers to the arrow direction shown on a sign or by road markings for a specific lane.

- ① **Note:**

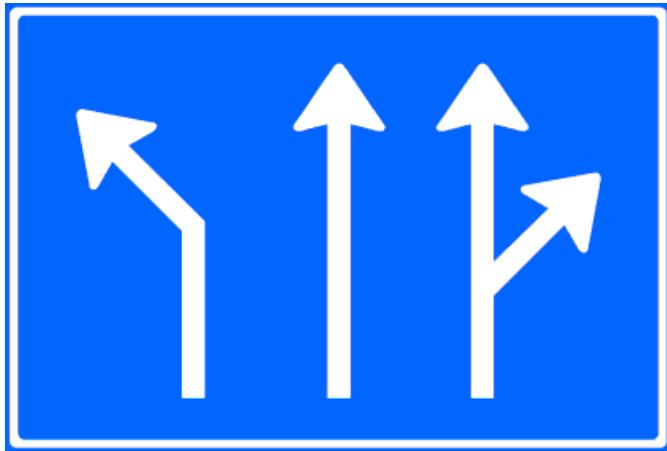
# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

Signposted markings are signs showing an overview of the direction markers for each lane. See *Figure 323:* on page 702 below for an example.

**Figure 323:**



## Value

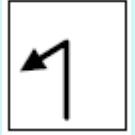
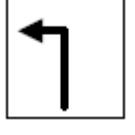
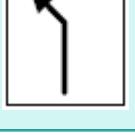
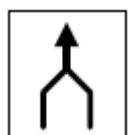
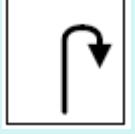
Value	Description	Representation
0	No direction Indicated	N/A
1	Straight	
2	Between Straight and Right (soft right)	
4	Right	
8	Between Right and Backward (hard right)	
16	U-turn Left	

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

here

Value	Description	Representation
32	Between Left and Backward (hard left)	
64	Left	
128	Between Straight and Left (soft left)	
256	Merge into Right Lane (lane ends)	
512	Merge into Left Lane (lane ends)	
1024	Merging Lanes (no priority)	
2048	U-turn Right	
4096	Second Right	
8192	Second Left	

- ① **Note:** The *Direction Category* is using bitmask encoding, which implies that actual values published for Direction Category can be a combination of individual Direction Category values.

## Usage

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

*Direction Category* can be used in map display to show how the lanes are marked in reality. When combining the *Direction Category* values for each specific lane, an application can generate arrow direction pictures.

## Specification

- *Direction Category* is applied to links where extended lane information is included.
- Lanes are counted left to right over all travel directions relative to the positive link direction.
- Each lane will have only one *Direction Category* value specified. This value can however be a combination of multiple arrows. Example: *Direction Category* = 5 is a combination of two arrows, Straight (value 1) and Right (value 4).
- The *Direction Category* attribute represents the physical characteristics of the road lanes. Therefore, *Access Characteristics* and *Date/Time Modifier* information are not applicable to the *Direction Category* attribute.
- *Direction Category* is not applied for arrows in signs containing destination information.

## 7.20.8 Lane Type

### Definition

Lane Type identifies the type of lane present on the link.

### Values

#### Bit Mask Values

- 1 - Regular Lane
- 2 - HOV Lane
- 4 - Reversible Lane
- 8 - Express Lane
- 16 - Acceleration Lane
- 32 - Deceleration Lane
- 64 - Auxiliary
- 128 - Slow Lane
- 256 - Passing Lane/Overtaking Lane
- 512 - Drivable Shoulder Lane
- 1024 - Regulated Lane Access
- 2048 - Turn Lane
- 4096 - Center Turn Lane
- 8192 - Truck Parking Lane
- 16384 - Parking Lane
- 32768 - Variable Driving Lane
- 65536 - Bicycle Lane

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

- The following Lane Type values are the only valid combinations:
  - 6 - HOV, Reversible
  - 10 - HOV and Express
  - 12 - Reversible and Express
  - 14 - HOV, Reversible and Express
  - 18 - HOV and Acceleration
  - 20 - Reversible, Acceleration Lane
  - 22 - HOV, Reversible, Acceleration Lane
  - 24 - Express and Acceleration
  - 34 - HOV and Deceleration
  - 36 - Reversible, Deceleration Lane
  - 38 - HOV, Reversible, Deceleration Lane
  - 40 - Express and Deceleration
- If a lane is used for multiple purposes and a combination lane type is not valid, then the predominant Lane Type is applied.

## Default Value

“000000”

## Related Attributes

Lane Number

Lane Direction of Travel

Access Characteristics

## Usage

Lane Type may be used for route guidance and map display.

## Specification

- Lane Type is a lane-only attribute.
  - Lane Type = 1 - Regular Lane defines lanes that do not have a specific use. Lane Type = 1 is also published for a lane on Internal Intersection, Manoeuvre or Indescribable Links when the Link is internal to a Lane Connectivity condition.
- ① **Note:** Bus, Motorcycle, or Taxi lanes are also included in this Lane Type.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

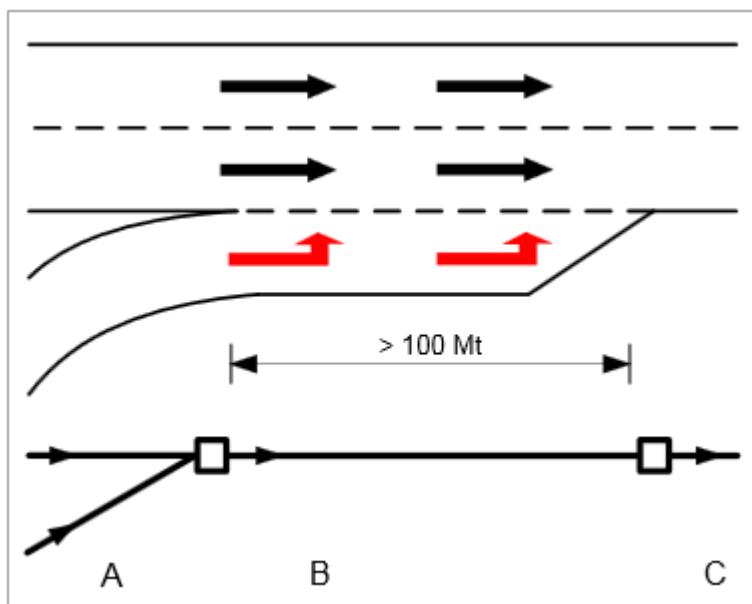
- Lane Type = 2 - HOV Lane defines that an HOV or carpool lane is reserved for carpool usage. Carpool lane requires a minimum number of passengers in the car in order for the car to use the carpool lane. HOV Lane may require a fee. HOV lanes may also be reserved for hybrids, motorcycles, alternate fuel etc.

**Figure 324:**



- Lane Type = 4 - Reversible Lane. See Reversible Lane: see [Reversible](#) on page 490.
- Lane Type = 8 Express Lane is used when a lane of a road is used for faster moving traffic and has less access to exits/off ramps.
- Lane Type = 16 - Acceleration Lane defines lanes, typically on the right side of a roadway, that allows a vehicle increase its speed so that it may safely merge with traffic. These lanes can be connected to ramps, rest areas, or weigh stations. See [Figure 325:](#) on page 706.

**Figure 325:**



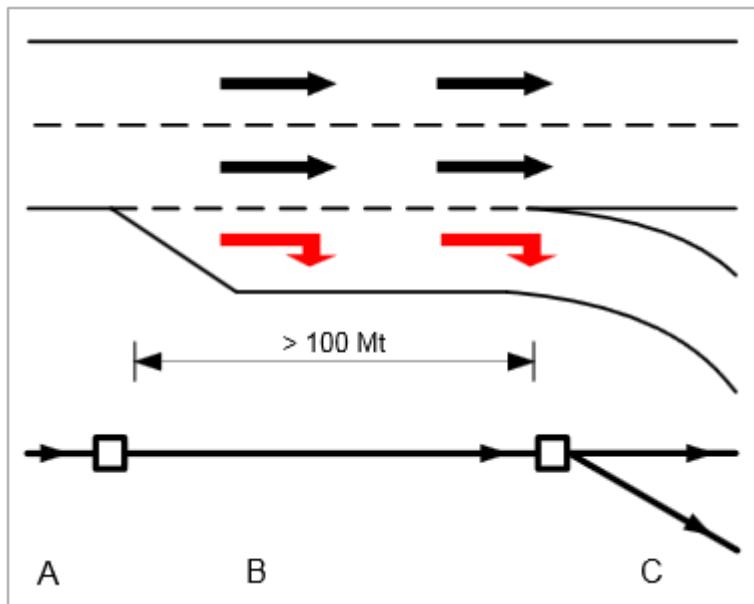
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

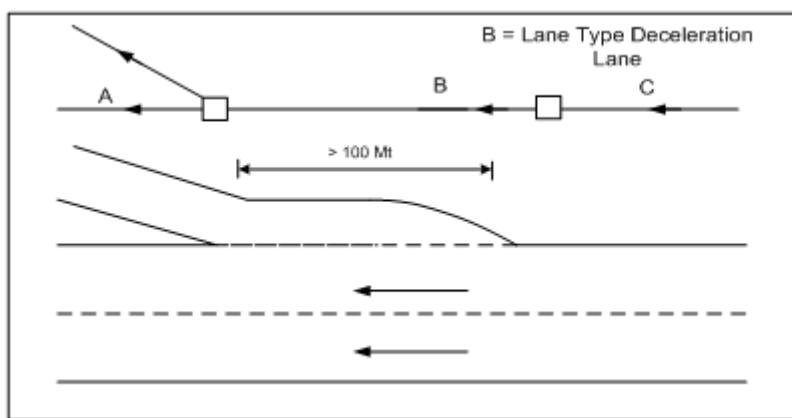
- Lane Type = 32 - Deceleration Lane defines lanes, typically on the right side of a roadway, that allows vehicles to decrease speed in order to safely stop or turn. See [Figure 326: on page 707](#).

**Figure 326:**



- Acceleration and Deceleration Lane Types are only published when, in reality, the Deceleration Lane > 100m long exists prior to the split point or an Acceleration Lane exists > 100m long following the merge point of the ramp.
- Acceleration and Deceleration Lane Types are published on Motorways, on roads that function as a Motorway (FC1-4 and accessible via ramps) and on surface streets. See [Figure 327: on page 707](#).

**Figure 327:**

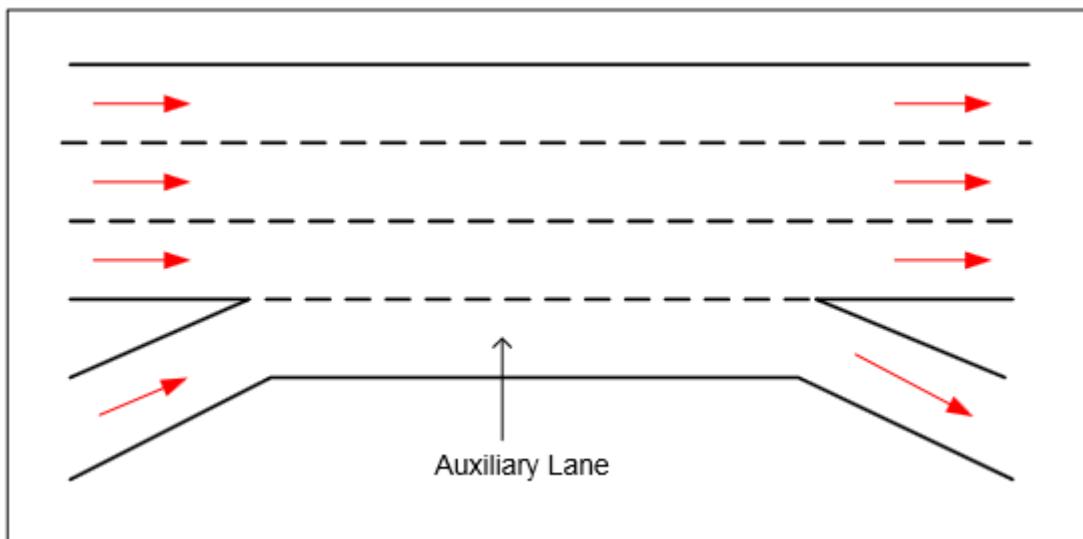


## Reference Guide

Attributes - Road Features and Associated Navigation Information

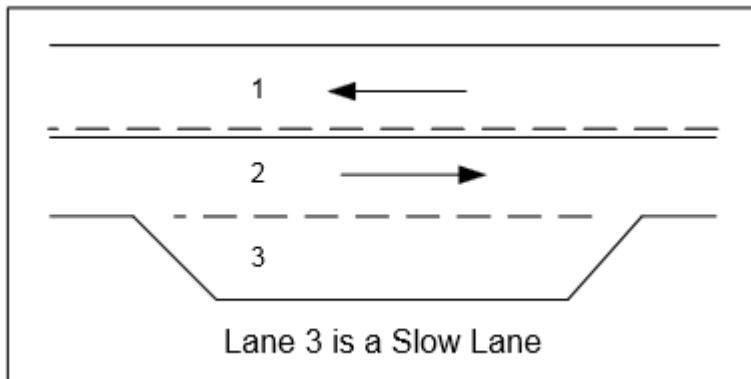
7.20 Lane (Lane)

- Lane Type = 64 - Auxiliary Lane defines lanes that run parallel along a motorway and connects the entrance ramp/acceleration lane from one interchange exit ramp/deceleration lane of the next interchange. This does not include separately-digitised parallel ramps. See [Figure 328: on page 708](#).
  - Auxiliary Lane Types are only published on Motorways and to roads that function as a Motorway (FC 1-4 and accessible via ramps).
  - Only auxiliary lanes shorter than 500 metres can receive Lane Type = 64 (Auxiliary Lane).
  - An entire auxiliary lane can receive a succession of different Lane Type values.
  - **Figure 328:**



- Lane Type = 128 - Slow Lane defines a designated lane on long and/or steep uphill/downhill stretches of high-speed roads to facilitate slow traffic (see [Figure 329: on page 708](#)). Examples are truck lanes in the United States and crawler lanes in Great Britain.

**Figure 329:**



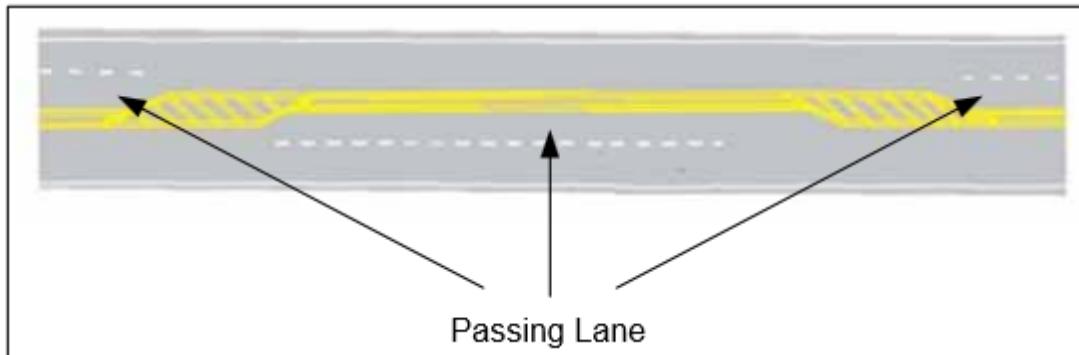
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

- Lane Type = 256 - Passing/Overtaking Lane defines a lane that can occur on steep mountain grades or other roads where overtaking needs to be regulated for safety (i.e. curvy roads). They are used to safely pass slow traffic (see [Figure 330: on page 709](#)).

**Figure 330:**



- Lane Type = 512 - Drivable Shoulder Lane defines an emergency lane that is used as an extra lane for traffic during rush hours, either for buses only, or for all vehicles (see [Figure 331: on page 709](#)).

**Figure 331:**



- Lane Type = 1024 - Regulated Lane Access defines a lane designated as a holding zone, used to regulate traffic using time intervals. Regulated Lane Access is only coded for truck holding zones that are used

## Reference Guide

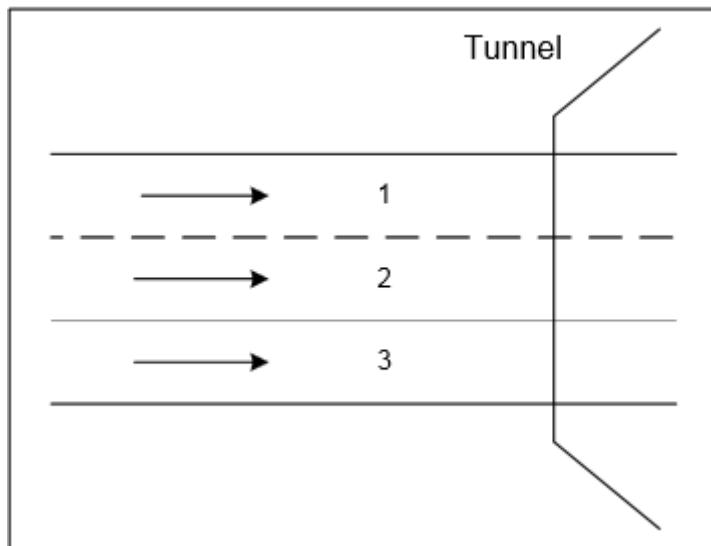
Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

to regulate truck access into tunnels and over bridges using time intervals (i.e., some tunnel access in Switzerland).

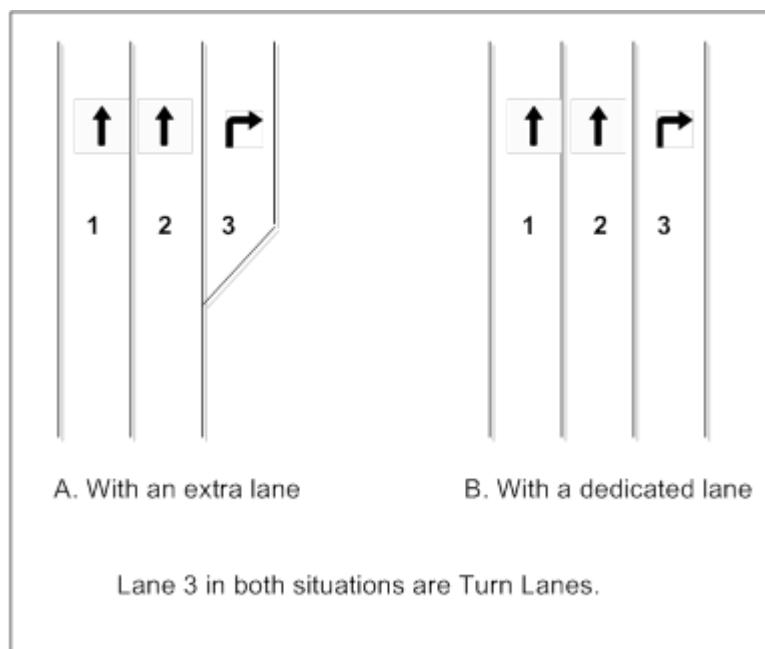
- In [Figure 332](#): on page 710, Lane 3 is a Regulated Lane Access. Only trucks are allowed on this lane. Lanes 1 and 2 are prohibited to trucks.

**Figure 332:**



- Lane Type = 2048 Turn Lane identifies a dedicated lane that allows vehicles to slow down in a direction dependent lane and make a turn without disrupting traffic flow. See [Figure 333](#): on page 710.

**Figure 333:**



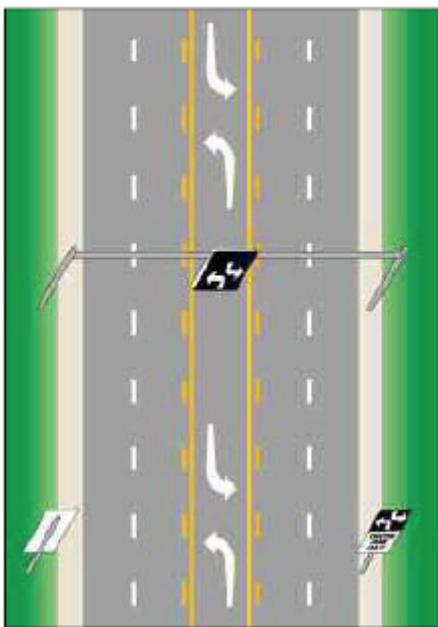
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

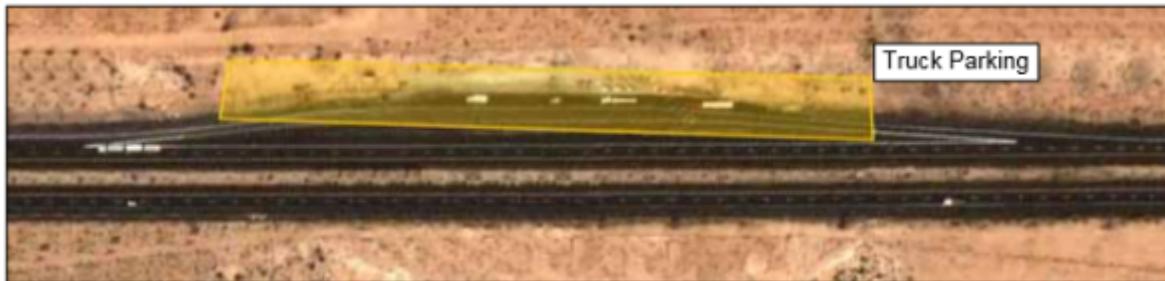
- Lane Type = 4096 Center Turn Lane identifies a bidirectional turn lane located in the middle of the road that allows traffic in both directions to turn left (right for left side driving countries). See [Figure 334](#): on page 711.
  - Center Turn Lanes longer than 20 metres are included. Shorter Center Turn Lanes may be included if significant.

**Figure 334:**



- Lane Type = 8192 - Truck Parking Lane defines wide shoulder lanes that may be used for truck parking as well as for emergencies. See [Figure 335](#): on page 711.

**Figure 335:**



- Lane Type = 16348 - Parking Lane defines portions of the roadbed that may legally be used for parking. At times, they may allow traffic.
- Lane Type = 32768 - Variable Driving Lane defines lanes that open and close to accommodate traffic volume and flow using variable indicators.
- Lane Type = 65536 - Bicycle Lane defines lanes that only allow bicycle traffic as indicated by lane markings, signs, buffers or barriers.

## 7.20.9 Transition Area (Lane)

### Definition

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

Transition Area defines a stretch of road where the number of lanes changes and lane marking are not present on the road surface.

## Values

Y - Is Transition Area

N - Not a Transition Area

## Default Value

N - Not a Transition Area

## Related Attributes

Lane Number

Lane Direction of Travel

Lane Forming/Ending

## Usage

Transition Area can be used for display purposes to inform the user that the number of lanes changes and show where the transition starts and ends.

## Rules

- Transition Area is an area where the number of lanes changes and no lane markings are present along the Link.
- Transition Area Lane attribute is also published as a Link attribute (See *Transition Area (Streets)* on page 504).
- Transition Area is also published in situations where the number of lanes changes and the transition area has lane markings on the road surface. In this situation lanes are not forming on the right or left of

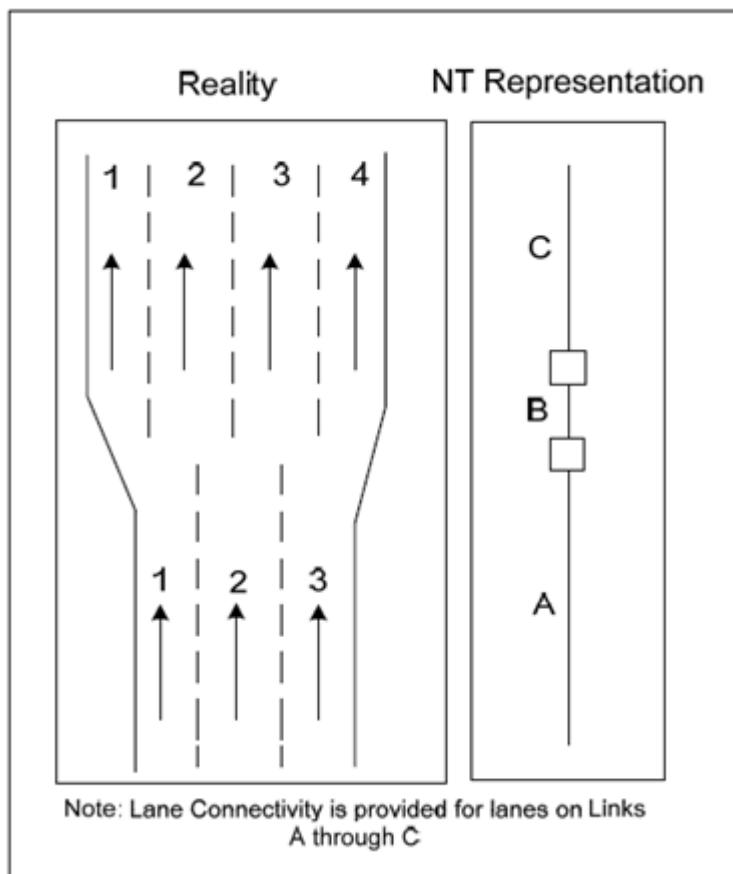
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

the road but equally across. In these cases a Transition Area Link is introduced, see [Figure 336: on page 713](#).

**Figure 336:**



- Transition areas must be at least 50 metres long and not longer than 500 metres. Longer Transition Areas may be published if significant. Shorter Transition Areas may be published in situations as shown in [Figure 336: on page 713](#).
- When Transition Area = "Y" (Is Transition Area) is published, the number of lanes corresponds to the number of lanes value at the transition end. See examples below.
- Lane Divider Markers are not published on Transition Area lanes.

## Reference Guide

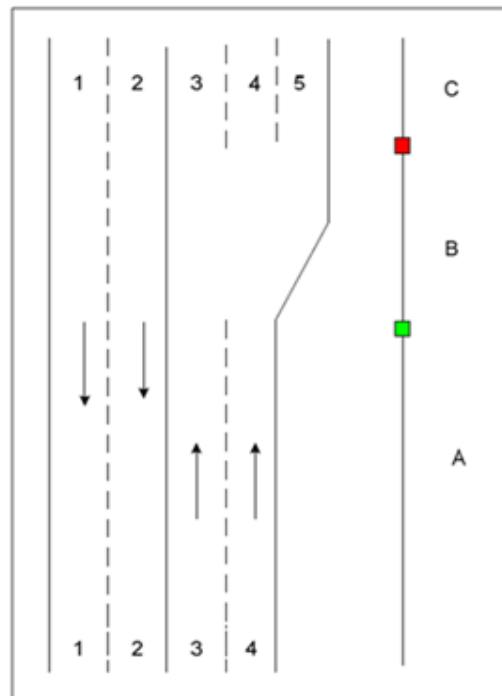
Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

- Transition Area may be published for a subset of lanes. See Example 2 below.

Example 1 - Transition Area in one direction of travel:

**Figure 337:**



Link	Number of Lanes	Lane Object	Lane Travel Direction	Transition Area
B	5	1	T	N
		2	T	N
		3	T	Y
		4	T	Y

## Reference Guide

Attributes - Road Features and Associated Navigation Information

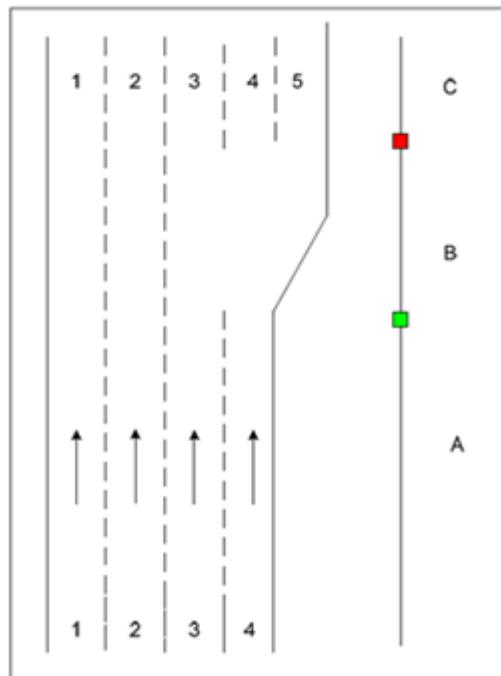
7.20 Lane (Lane)

here

Link	Number of Lanes	Lane Object	Lane Travel Direction	Transition Area
		5	T	Y

Example 2 - Transition Area on a sub-set of lanes:

**Figure 338:**



Link	Number of Lanes	Lane Object	Lane Travel Direction	Transition Area
B	5	1	T	N
		2	T	N
		3	T	Y
		4	T	Y
		5	T	Y

## 7.20.10 Lane Forming/Ending

### Definition

Lane Forming/Ending specifies lane forming and lane ending when the number of lanes changes at transition points and transition areas.

### Values

- 1 - LANE FORMING
- 2 - LANE ENDING
- 3 - LANE FORMING ENDING

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

## Default Value

"0"

## Related Attributes

Lane Number

Lane Direction of Travel

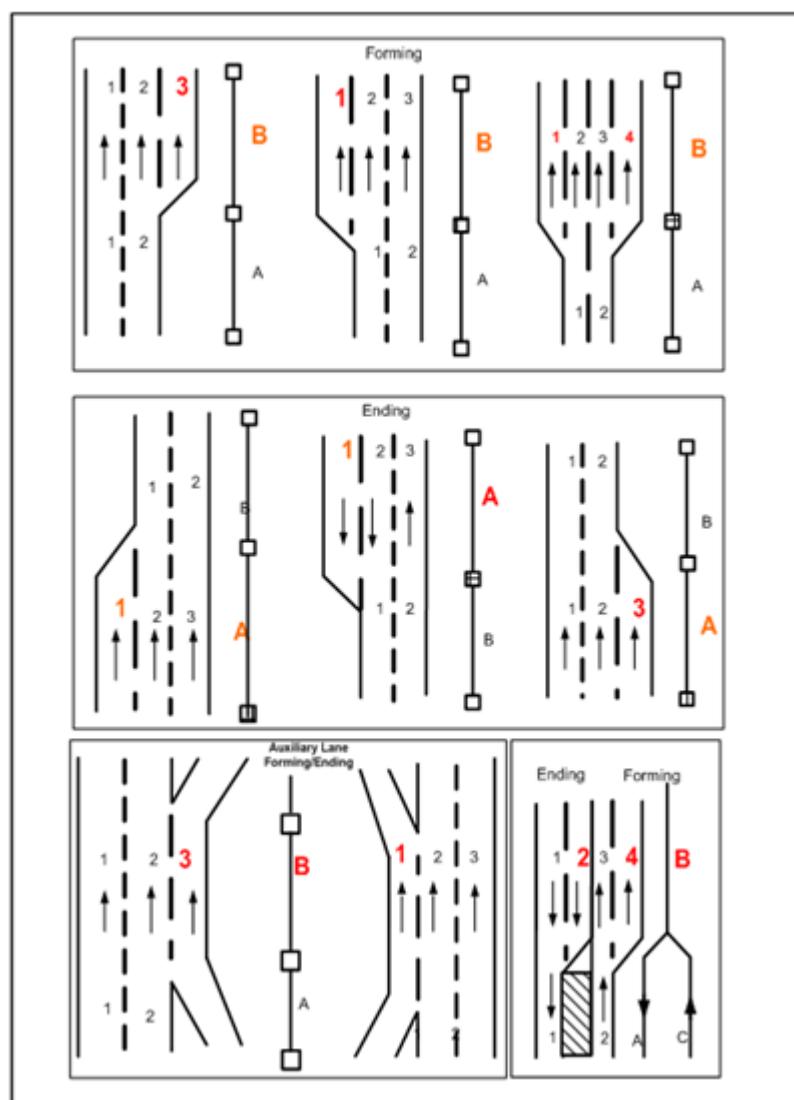
## Usage

Lane Forming/Ending can be used for display to determine on which side of the road a lane is forming.

## Specification

- Lane Forming/Ending is a lane only attribute.
- Lane Forming/Ending is published in the positive link direction. See [Figure 339:](#) on page 716.

**Figure 339:**



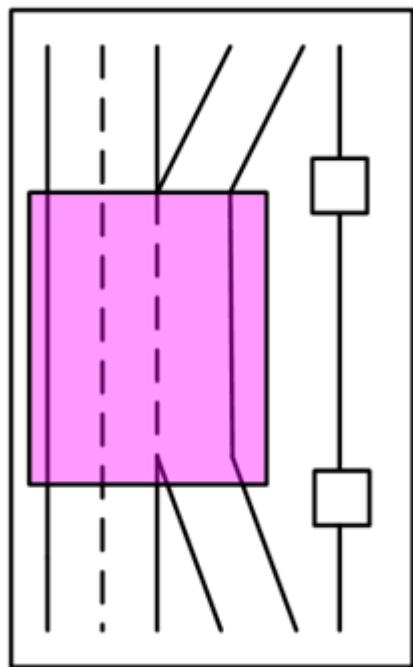
## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

- Lane Forming/Ending = 3 (FORMING\_ENDING) may be used in conjunction with Lane Type = 64 (Auxiliary Lane) Lane Type = 256 (Passing Lane/Overtaking Lane) when the additional lane forms and ends on one link. See [Figure 340:](#) on page 717.

**Figure 340:**



### 7.20.11 Access Characteristics (Lane)

#### Definition

Access Characteristics identify the types of traffic allowed on a lane in the Lane Model product.

#### Specification

- Lane Access Characteristics are only published when they differ from the Link Access Characteristics published in the Streets layer.

Example: on a single direction of travel link of two lanes, the leftmost lane is never permitted to Trucks.

Streets layer publishes:

Column	Value
.....	...
AUTOMOBILES	Y
BUSES	Y
TAXIS	Y
CARPOOLS	Y
PEDESTRIANS	Y

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

Column	Value
TRUCKS	Y
THROUGH_TRAFFIC	Y
DELIVERIES	Y
EMERGENCY_VEHICLES	Y
MOTORCYCLES	Y
.....	...

Lane layer publishes:

Column	Value
LANE NUMBER	2
.....	...
AUTOMOBILES	Y
BUSES	Y
TAXIS	Y
CARPOOLS	Y
PEDESTRIANS	Y
TRUCKS	N
THROUGH_TRAFFIC	Y
DELIVERIES	Y
EMERGENCY_VEHICLES	Y
MOTORCYCLES	Y

## Access Automobiles

For Access Automobiles see [Access Characteristics \(Streets\)](#) on page 431.

## Access Buses

For Access Buses see [Access Characteristics \(Streets\)](#) on page 431.

## Access Taxis

For Access Taxis see [Access Characteristics \(Streets\)](#) on page 431.

## Access Car pools

For Access Car pools see [Access Characteristics \(Streets\)](#) on page 431.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

### Access Pedestrians

For Access Pedestrians see [Access Characteristics \(Streets\)](#) on page 431.

### Access Trucks

For Access Trucks see [Access Characteristics \(Streets\)](#) on page 431.

### Access Through Traffic

For Access Through Traffic see [Access Characteristics \(Streets\)](#) on page 431.

### Access Deliveries

For Access Deliveries see [Access Characteristics \(Streets\)](#) on page 431.

### Access Emergency Vehicles

For Access Emergency Vehicles see [Access Characteristics \(Streets\)](#) on page 431.

### Access Motorcycles

For Access Motorcycles see [Access Motorcycles](#) on page 438.

## 7.20.12 Lane Height

### Definition

Lane Height specifies the occurrence of a height restriction on a Lane limiting access to vehicles exceeding a specific height.

### Value

Height Restriction is specified in units of measure as adopted for a country.

U.S. = Inches with precision zero.

Rest of the World = Centimetres with precision zero.

### Default Value

"0"

### Related Attributes

Lane Number

Lane Direction of Travel

### Usage

Lane Height can be used to restrict access of vehicles to specific Lane Elements based on the vehicle's height.

### Specification

- Lane heights posted at the location of a physical structure are applied. The Lane where the height restriction applies publishes Lane Height attribute.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

- To provide a numeric value allowing for computation. Lane Height for the U.S. is published in inches and Lane Height in the rest of the world is published in centimetres. The signage for the height restrictions is generally in metres and feet/inches.
- At arch-bridges only a sub-set of lanes can have a height specified. In this case only the lanes with a posted height will have a Lane Height value applied.

### 7.20.13 Lane Width

#### Definition

Lane Width specifies the width of the lane when it differs from country specific values.

#### Value

Lane Width is specified in units of measure as adopted for a country.

U.S. = Inches with precision zero.

Rest of the World = Centimetres with precision zero.

#### Default Value

"0"

#### Entity-Attribute Relation

1:1

#### Related Attributes

None

#### Usage

Lane Width can be used to specify the lane width when it differs from the country specific lane width.

#### Specification

- Lane Width is only applied when there is a posted sign indicating a deviation from the standard lane width for a country.
- Country specific Lane Width default values are provided in the Country Profile.
- To provide a numeric value allowing for computation. Lane Width is the U.S. is published in inches and Lane Width in the rest of the world is published in centimetres. The signage for width restrictions is generally shown in metres and feet/inches.

### 7.20.14 From Speed

See [From/To Lane Speed](#) on page 721.

### 7.20.15 To Speed

See [From/To Lane Speed](#) on page 721.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

### From/To Lane Speed

#### Definition

Speed specifies speed limits applicable to a specific lane.

#### Value

1 - 999

#### Default Value

"0"

#### Related Attributes

Lane Number

Lane Direction of Travel

#### Usage

Speed can be used to determine speed limit specific to a lane.

#### Specification

- From/To Speed is only published on a Lane when the lane speed limit differs from the general speed limit on the Link.
  - From Speed is used when the lane has positive direction of travel.
  - To Speed is used when the lane has negative direction of travel.
- On Reversible Lanes, From/To Speed may publish different speed values.

## 7.20.16 Lane Crossing Restriction

#### Note:

This attribute is not published in Shapefile.

#### Definition

Lane Crossing Restriction is a lane attribute indicating on which side(s) of a lane it is not allowed to cross into an adjacent lane. When Lane Crossing Restriction does not publish any value, this assumes that crossing between lanes is allowed.

#### Field Name

Lane\_Crossing\_Restriction

#### Values

1 - Left

2 - Right

3 - Both

#### Length

1

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

## Type

Numeric

## Cardinality

1:0,1

## Default Value

NULL

## Related Attributes

- Lane ID (Lane\_Id)
- Lane Type (Lane\_Typ)
- Lane Number (Lane\_Nr)
- Lane Direction Travel (Dir\_Trav)
- Access Automobiles (AR\_Auto)
- Access Buses (AR\_Bus)
- Access Taxis (AR\_Taxi)
- Access Carpools (AR\_Carpool)
- Access Pedestrians (AR\_Pedest)
- Access Trucks (AR\_Trucks)
- Access Through Traffic (AR\_Traff)
- Access Deliveries (AR\_Deliv)
- Access Emergency Vehicles (AR\_EmerVeh)
- Access Motorcycles (AR\_Motorcycles)
- Lane Divider Marker (Div\_Mrk)

## Usage

The functional usage is turn-by-turn lane guidance related to HOV lanes.

## Specification

- Lane Crossing Restriction can be published for the left side, right side, or both sides of a lane in the positive link direction.
- Lane Crossing Restrictions can be published for HOV lanes and lanes adjacent to either side of an HOV lane.
- Lane-specific coding and restrictions should be considered to determine if crossing into an adjacent lane is possible at a given time.
- Lane access characteristics for the HOV lane might limit access to some specific type of HOV vehicles, like taxis or trucks.

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

- Lane Crossing Restrictions are only indicated between drivable lanes, not between a drivable lane and a shoulder lane.

### Example 1

HOV lane with a Lane Crossing Restriction on one side.

Figure 341:

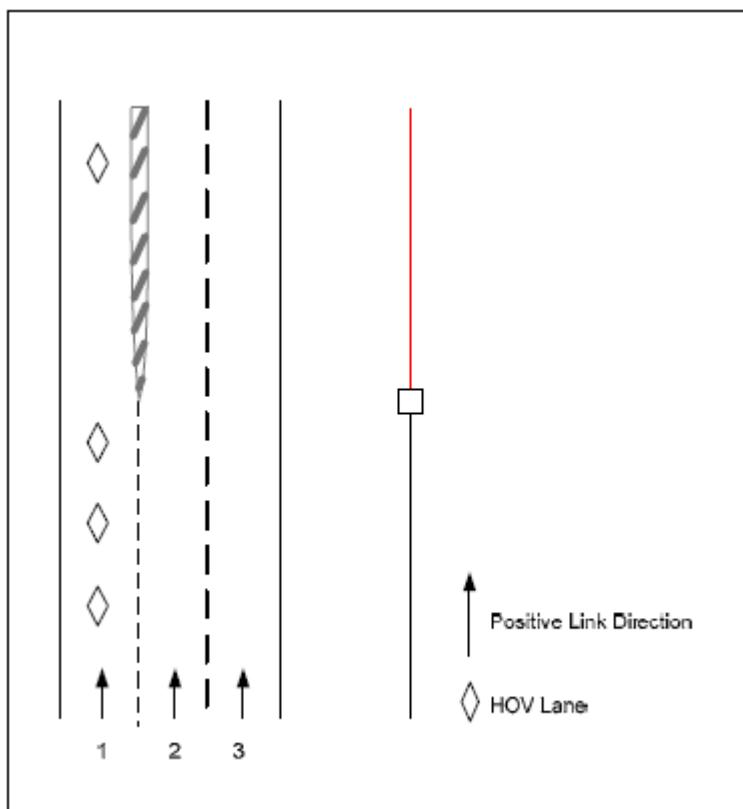


Figure 342:



Link_Id	764949831	764949831
Lane_Id	21440610	21440611

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

Lane_Nr	1	2
Dir_Trav	F	F
Div_Mrk	2	
Cnt_Mrk		
Dir_Cat		
Lane_Typ	2	1
...		
...		
AR_Auto	N	Y
AR_Bus	Y	Y
AR_Taxi	Y	Y
AR_Carpool	Y	Y
AR_Pedest	N	Y
AR_Trucks	N	Y
AR_Traff	N	Y
AR_Deliv	N	Y
AR_EmerVeh	Y	Y
Lane_Crossing_Restriction	2	1

## Example 2

HOV lane with Lane Crossing Restrictions on both sides.

 **Note:**

# Reference Guide

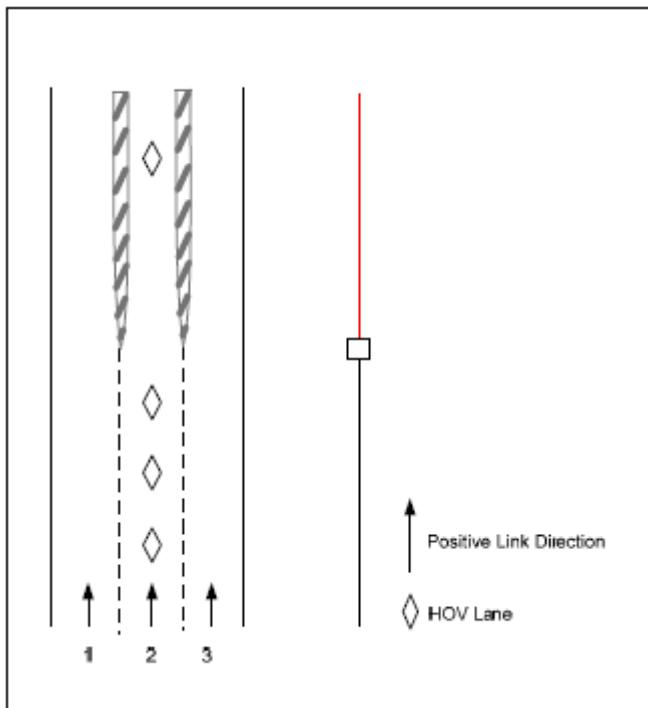
Attributes - Road Features and Associated Navigation Information

7.20 Lane (Lane)

here

This example re-uses the same IDs as the example above. The difference is that lane 2 is an HOV lane in this example and the Lane Crossing Restriction coding is published for each lane.

**Figure 343:**



Link_Id	764949831	764949831	764949831
Lane_Id	21440610	21440611	21440612
Lane_Nr	1	2	3
Dir_Trav	F	F	F
Div_Mrk	2	2	
Cnt_Mrk			
Dir_Cat			
Lane_Typ	2	2	1
...			
...			
AR_Auto	N	Y	Y
AR_Bus	Y	Y	Y
AR_Taxi	Y	Y	Y
AR_Carpool	Y	Y	Y
AR_Pedest	N	N	Y

## Reference Guide

Attributes - Road Features and Associated Navigation Information

7.21 Condition File Association (CndFileAssoc)

here

AR_Trucks	Y	N	Y
AR_Traff	N	N	Y
AR_Deliv	Y	N	Y
AR_EmerVeh	Y	Y	Y
Lane_Crossing_Restriction	2	3	1

## 7.21 Condition File Association (CndFileAssoc)

### 7.21.1 Condition ID

See [Condition ID](#) on page 545.

### 7.21.2 File Type

#### Definition

The type of the contents published within the file.

#### Value

- 1 - 2D Pattern
- 2 - 2D Arrow
- 5 - Landmark Icon
- 6 - Icon Alpha Channel bitmap
- 11 - 3D Landmark Model Standard
- 12 - 3D Landmark Model Light
- 31 - 2D Low Res View (Korea)
- 32 - 2D High Res View (Korea)
- 25 - Sign as Real
- 34 - 2D Junction View

#### Length

2

#### Type

Numeric

#### Related Condition

Junction View (Condition Type = 20)

# Reference Guide

Attributes - Road Features and Associated Navigation Information

7.21 Condition File Association (CndFileAssoc)

## Related Attributes

File Name

Attachment Type

Associated File Name

## Usage

The 2D Pattern, 2D Arrow, and Sign as Real File Types are used to identify the auxiliary content referenced by the Junction View condition as Sign as Real.

## Rules

- FileType = 25 is coded as an additional File Association for existing Junction View conditions. These existing Junction View conditions also have FileType = 1 (2D Pattern) and FileType = 2 (2D Arrow) associated.
- The Junction View images (FileType = 1 and FileType = 2, only available in South Korea) associated to existing Junction View conditions can be combined with the Sign as Real SVG file to obtain an integrated image representing the function.
  - ① **Note:** A separate document, the SVG file specification document, describes how the SVG files can be combined with the Junction View images.
- Two levels of 3D Object resolution are provided for each Grouped Structure. There is one level of resolution provided for each Grouped Complex.
  - File Type = 11 represents Standard 3D Landmark Model
  - File Type = 12 represents Light 3D Landmark Model
- When a 3D Object is included or non Landmark buildings, the resolution is detailed enough to be recognisable but of the lightest weight.

## 7.21.3 Attachment Type

### Definition

The definition of the format of the published file.

### Value

OBJ - Wavefront Object

TGA - Targa File Format

SVG - Scalable Vector Graphics

DAE - Digital Asset Exchange

### Length

3

### Type

Text

### Related Condition

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Attributes - Road Features and Associated Navigation Information

7.21 Condition File Association (CndFileAssoc)

Junction View (Condition Type = 20)

### Related Attributes

File Type

File Name

Associated File Name

### Usage

This data indicates which type of attachment is referenced.

### Specification

- OBJ indicates that the attached file is a file of type .OBJ. The OBJ file references the MTL and TGA files internally. The MTL and TGA files are located within the same path as the OBJ.
- TGA indicates that the attached file is a .TGA file type.
- SVG is coded for all 2D Signs graphics. The auxiliary 2D Signs graphics are defined using Scalable Vector Graphics (SVG), v1.1.
- The SVG files can be used to automatically render graphics for signs using tools that allow SVG rendering.  
① **Note:** A separate document, the SVG file specification document, describes the SVG file in detail.

## 7.21.4 Associated File Name

### Definition

Textual field with description of the file name that publishes additional information.

### Value

### Length

150

### Type

Text

## 7.21.5 Lane Type

See [Lane Type](#) on page 704.

## 7.21.6 Lane Forming/Ending

See [Lane Forming/Ending](#) on page 715.

# Chapter 8

## Attributes - Points of Interest

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### Topics:

- *Introduction*
- *Base POI Attributes*
- *Named Place (NamedPlc)*
- *Hamlets (Hamlet)*
- *Hospitals (Hospital)*
- *Parks and Recreation (ParkRec)*
- *Transportation Hubs (TransHubs)*
- *Travel Destinations (TravDest)*
- *Shopping (Shopping)*
- *Restaurants (Restrnts)*
- *Entertainment (Entertn)*
- *Auto Maintenance, Service, and Petrol (AutoSvc)*
- *Financial Institutions (FinInsts)*
- *Business Facilities (Business)*
- *Community Service Centres (CommSvc)*
- *Educational Institutions (EduInsts)*
- *Parking (Parking)*
- *Border Crossing (BordCross)*
- *Miscellaneous Categories (MiscCategories)*
- *POI Trans (PoiTrans)*
- *Point Address (PointAddr)*
- *Point Address Trans*
- *Point of Interest Association (PoiAssoc)*
- *Actual POI Location (ActPOILoc)*
- *POI File Association (PoiFileAssoc)*
- *POI Attribute (POIAttr)*
- *POI Contact Information (POIContact)*
- *POI Association (PoiRelat)*
- *POI vs. Polygon Inclusion*

## 8.1 Introduction

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This chapter describes the attributes contained in the layers associated with Points of Interest.

The rules described in this chapter apply to the POIs published in HERE Map Content and not those contained within rich content products unless otherwise stated. For example, Electric Vehicle Charging Stations in the Fuel Type XML product can be published on Parking Lot Roads.

## 8.2 Base POI Attributes

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This section describes all of the attributes that are common to the first 17 layers in the Points of Interest section.

### 8.2.1 Link ID

See [Link ID](#) on page 367.

### 8.2.2 POI ID

#### Definition

Unique identifier for the POI.

#### Value

nnnnnnnnnn

#### Length

10

#### Type

Numeric

#### Layers

POI ID is published in all of the POI layers (all of the POI layers are described in section [Points of Interest](#) on page 142).

#### Related Attributes

Facility Type

Attribute Modifier Type

Attribute Modifier Value

Contact Type

Preferred

# Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

## Contact

### Usage

POI ID can be used to link the additional attribute modifier layer and the additional contact information layer to the POI main theme information layer.

POI ID is published for all POIs.

### Specification

- Multiple records with the same POI ID can be present when multiple attribute modifiers exist for the same POI.

## 8.2.3 Sequence Number (POIs)

### Note:

This attribute is not published in MapInfo.

### Definition

The Sequence Number is a counter that starts from the number 1. In NAVSTREETS each POI is duplicated when it has multiple names. The Sequence Number is necessary in order to distinctly associate a POI Transliteration to its correct POI Name.

### Value

nn

### Length

2

### Type

Numeric

For example, a POI has three names:

- ENG (English)
- RUS (Russian)
- FRE (French)

This results in 3 entries in the POI Layer, all with the same POI ID.

In order to associate the POI Transliteration (POI Trans) correctly to the Russian POI Name in this example, a Sequence Number is used.

POI ID	Sequence Number	Facility Type	Language Code
11223344	1	5800	ENG
11223344	2	5800	RUS

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Attributes - Points of Interest

8.2 Base POI Attributes

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POI ID	Sequence Number	Facility Type	Language Code
11223344	3	5800	FRE

POI ID	Sequence Number	Facility Type	Language Code
11223344	2	5800	RUX

The Transliteration in the POI Trans layer relates to the POI Feature Name in Russian (sequence number = 2).

## 8.2.4 Facility Type

### Definition

A 4-digit code that is used to categorise the POIs.

### Value

For values, see [Listing of POIs by Feature Code](#) on page 1278 or refer to [FACILITY - Facility Type](#) on page 1192.

### Length

5

### Type

Numeric

### Layers

Facility Type is published in all of the POI layers (all of the POI layers are described in section [Points of Interest](#) on page 142).

### Related Attributes

POI ID

Attribute Type

Attribute Value

Contact Type

Preferred

Contact

### Usage

Facility Type can be used to link the additional attribute modifier layer to the POI main theme information layer.

Facility Type is published for all POIs.

# Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

## 8.2.5 POI Name

### Definition

The facility name of the POI.

### Value

#### Length

250

#### Length

(UTF-8)

254

### Usage

POI Names can be used for destination selection and map display for languages supported by the HERE Map Content.

### Related Attributes

POI Name Type

Language Code

Truncated

### Specification

- There is no limit to the number of POIs associated with a link. However, two identical POIs are not allowed on the same link. Each POI is uniquely identified by the combination of POI Name, Facility Type, Street Address and Side.
- The type of POI is not included in the name if it is not a part of the official name. For example, Holiday Inn Hotel is not included for the POI Holiday Inn Crowne Plaza.
- If the name of the chain is part of the official name of the POI, it is included in the POI Name.
- Some countries contain names that can only be represented in Unicode (e.g. Russia). The *POI Name* will be a Latin-1 name (transliteration) or an identifier (numerical ID) intended to be used to the External Unicode “look-aside” file. See [Non-Latin-1 Name Representation](#) on page 1342 for details.
- POIs may be unnamed.
- POIs are published generally only for facilities that are accessible by the general public or by membership.
- See [General Naming Rules](#) on page 1135 for naming rules by category

### European Naming Rules

- The official POI name is included.
- When a name contains a dash, a space is not included before or after the dash.

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Attributes - Points of Interest

8.2 Base POI Attributes

- For In-Vicinity Auto Dealerships and Motorcycle Dealerships:
  - POI Name: <official name>, <street name> <address> (or <address> <street name>)
  - In case the Auto Dealership POI sells multiple brands, the following naming rule is applied: <official name> (<additional brand name>), <street name> <address> (or <address> <street name>)
  - For example: Autohaus Wagner, Berliner Strasse 2
  - A space between the comma and the street name and between the street name and the address is added. If no official name exists, the chain name is applied instead, followed by the street name.

## North American Naming Rules

- Punctuation
  - Periods are not valid in POI names.
  - Apostrophes are allowed to indicate possessive e.g., “Frankie’s Restaurant”
  - When a name contains a dash, a space is not included before or after the dash, e.g., “Tied-House Cafe and Brewery.”
  - Commas are allowed, e.g., “Wright, Jones, and Smith.”
  - A space or apostrophe is not included following Mc\_/\_Mac\_/\_O\_/\_O’ or similar letter combinations in POI names. For example, the following POI names would be entered as “McDonnell” and “Obrien”.

 **Note:**

Names that use single quotation marks will be displayed in NAVSTREETS as double-quotes.

Examples:

Reality: Toys"R"Us

NAVSTREETS Representation: TOYS""R""US

- Abbreviations

Abbreviations are not used unless the POI entry exceeds the length of the field. When this occurs, the official name is searched backward, from the last word in the POI entry, for an authorised abbreviation. The name is abbreviated by the number of words necessary to fit the POI entry into the field. Some commonly used authorised abbreviations are listed in the following table. If no abbreviation can be determined, then part of the POI entry is deleted as long as name recognition is not affected. For example, a source lists “Teske’s Germania Restaurant-Bar and Beer Garden” which will not fit in the POI name field. Since no acceptable abbreviations can be used, the POI is included as “Teske’s Germania”; this retains name recognition.

- Spaces are not used between acronyms e.g., “TGI Friday’s” not “T G I Friday’s.”
- Business qualifiers such as LTD, Inc, Corp, Assoc are not used unless preceded by an “and” or concatenated. Examples: “HERE” not “HERE Corp”, Carey and Co (preceded by “and”), Citicorp (concatenated).
- If POI name includes “The” at the beginning, it is not included, e.g., “Red Lion Inn”, NOT “The Red Lion Inn”. Only include “The” as the first word in the name when it is needed for name recognition, e.g., “The Cafe”.

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Attributes - Points of Interest

8.2 Base POI Attributes

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- POIs representing large areas may have multiple entrances that each will be represented by a separate POI. Each entrance is uniquely named using the official names or determine a logical descriptive name such as “POI West Entrance” that will aid the driver.

Word	Abbreviation	Word	Abbreviation	Word	Abbreviation	Word	Abbreviation
Administration	Admin	East	E	Lake	Lk	Reservoir	Reserv'r
Agricultural	Agr	Educational	Edu'l	Landing	Lndg	Ride	Rde
Air Force Base	AFB	Elementary	Elem	Learning	Lrng	Ridge	Rdg
Alternative	Alt	Entrance	Ent	Library	Lbry	River	Riv
American	Amer	Environmental	Envr'l	Lodge	Ldg	Saint	St
Associates	Assoc	Fame	Fme	Maintenance	Maint	Sanctuary	Sanct'y
Avenue	HERE Conv	Field	Fld	Mall	MI	Savings	Sav
Beach	Bch	Fields	Flds	Management	Mgt	School	Sch
Bed & Breakfast	B&B	Fort	HERE Conv	Meadows	Mdws	Science	Sci
Branch	Br	Gallery	Gal'y	Medical	Med	Shoal	Shl
Building	Bldg	General	Gen	Memorial	Mem'l	Shores	Shrs
Bluff	Blf	Glen	Gln	Metropolitan	Metro	Society	Soc
Bridge	Brg	Golf Club	GC	Missle Range	MR	South	S
Canyon	HERE Conv	Golf Course	GC	Monument	Mon	Spring	Spg
Center	Ctr	Golf and Country Club	G&CC	Mount	Mt	Springs	Spgs
Central	Ctr'l	Government	Gov't	Mountain	HERE Conv	Square	squ
Chicken	Ckn	Green	Grn	Mountains	Mts	Stadium	Std
Children's	Chldrn's	Group	Grp	Municipal	Muni	State	St
Church	Ch	Grove	Grv	Museum	Msm	State Historical Park	SHP
Circle	Cir	Harbor	Hbr	National	Nat'l	State Park	SP
Civil	Cvl	Heritage	Hrtg	Natural	Nat	Station	Stn
Cliffs	Clfs	High School	HS	Naval Air Station	NAS	Stream	Strm
College	Col	Hills	Hls	North	N	Suites	Sts
Commerce	Com	Historical	Hist'l	Organization	Org	Summit	Smt

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Attributes - Points of Interest

8.2 Base POI Attributes

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Word	Abbreviation	Word	Abbreviation	Word	Abbreviation	Word	Abbreviation
Commercial	Com'l	History	Hist	Park	Pk	System	Sys
Company	Co	Hospital	Hosp	Place	Pl	Tabernacle	Tbrncl
Conference	Conf	Hotel	Htl	Plains	Plns	Technical	Tech
Conservatory	Cons	House	Hse	Plaza	Plz	Tours	Trs
Convention	Conv	Information	Info	Port	Prt	Trail	Trl
Corporation	Corp	Institute	Inst	Point	Pt	Train	Trn
Country	Cntry	International	Int'l	Precinct	Prct	Tunnel	Tnl
Country Club	CC	Interpretive	Interp	Quarter	Qtr	University	Univ
County	Cnty	Interstate	Intst	Railroad	RR	Village	Vlg
Creek	Crk	Island	Is	Ranger Station	RS	Valley	Vly
Department	Dept	Junction	Jct	Recreation	Rec	Washington	Wash
Development	Dvlp't	Junior High School	JrHS	Region	Reg	Wells	Wls
Division	Div	Knolls	Knls	Regional	Reg'l	West	W
Downtown	Dntwn	Lake	HERE Conv	Reservation	Res	White	Wh

## Abbreviations (Canada Only)

- Saint and Sainte are abbreviated as “St” and “Ste” for all POIs.
- All other French language features names are not normalized but are entered as shown on sources.

## Special Naming Convention in the Middle East

- In the Middle East, POIs on links that are published with Four-wheel Drive = Y, are named to indicate that these are located off-road. The following convention is observed:

<POI Name>-Off-road

## Naming Rules for Airport-Related POIs

- The following rules explain the naming of Airport-Related POIs.

POI	Naming	Example
Airport (4581)	Official Name.	AEROPUERTO DE MÁLAGA
	In the case of a well-known name being preferred above the official name, the well-known name is added as base name and the official name is added as synonym. All other POIs use this well-known name when referencing the airport.	LOGAN INT'L AIRPORT with synonym GENERAL EDWARD LAWRENCE LOGAN INT'L AIRPORT

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Attributes - Points of Interest

8.2 Base POI Attributes

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POI	Naming	Example
	The airport name is included in the national language.	
	If more than one main entrance exists the airport name is followed by the junction name if available, otherwise by the street name.	FLUGHAFEN FRANKFURT MAIN-A3 ZUGANG
	For exonym/synonym inclusion see Exonym/Synonym Section.	
Airport Terminal (4581)	The word “airport” should not be added to airport terminals.	BARCELONA-TERMINAL A, instead of: AERPORT DE BARCELONA-TERMINAL A
	If there is only one terminal designation and “Arrival” and “Departure” are reached via different access roads, the POI name is the official name (without “airport”) followed by a dash followed by Arrival or Departure. Arrival/Departure is included in the national language.	SCHIPHOL-AANKOMST
	If an entrance link serves multiple terminals, and “Arrival” and “Departure” are for both terminals at the same location, the POI name is the official name (without “airport”) followed by a dash, followed by the terminal names divided by the & sign. The terminal names are included in the national language.	STOCKHOLM-ARLANDA-TERMINAL 2&3
	If an entrance link serves multiple terminals, and “Arrivals” and “Departures” are not at the same location, the POI name is the official name (without “airport”) followed by a dash, followed by the terminal name(s) divided by the & symbol followed by Arrivals or Departures. The terminal names and Arrivals/Departures are included in the national language.	
	Exonyms for additional languages are included for Europe and Canada.	LOGAN INT'L-T1&2 ARRIVALS
Rental Car Agency (7510)	The word “airport” is not added to the Rental Car Agency POIs.	AVIS-EINDHOVEN, instead of AVIS-EINDHOVEN AIRPORT.
	Company Name followed by a dash and the official airport name.	AVIS-SACRAMENTO INT'L
	In case rental car pick-up and return are on different links, the POI name is the company name followed by pick-up or return followed by a dash and the official airport name (without “airport”).	AVIS PICK-UP-SACRAMENTO INT'L
Hotel (7011)	The word “airport” is not added to the hotel name.	SHERATON-SACRAMENTO INT'L, instead of SHERATON-SACRAMENTO INT'L AIRPORT

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8.2 Base POI Attributes

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POI	Naming	Example
	Hotel name followed by a dash and the official airport name (without “airport”).  U.S: POIs that are added via TPD do require this naming convention for National Important airports only.	CROWN PLAZA-HANNOVER
Restaurant (5800)	The word “airport” is not added to the restaurant POIs.  Restaurant name followed by a dash and the official airport name (without “airport”).  U.S: POIs that are added via TPD do require this naming convention for National Important airports only.	APOLLO-PARIS CHARLES DE GAULLE, instead of APOLLO- AÉROPORT DE PARIS CHARLES DE GAULLE  APOLLO-PARIS CHARLES DE GAULLE  APOLLO DA VINCI-PARCHEGGIO
Parking Lot/Garage (7520, 7521)	The word “airport” is not added to the Parking Lot/Garage POIs.  Official airport name (without “airport”) followed by a dash and the terminal name, if applicable, then a dash and the parking name or “parking” if no name is available.  “Long term” or “Short term” information is included in the name if applicable  “Parking” is included in the national language.  U.S: Parking Lots that are added via TPD do require this naming convention for Nationally Important airports only.  North America If the parking is private, the POI name is the name of the airport followed by a dash followed by the name of the Hotel or Restaurant followed by the parking name or “parking” if no name is available.	LEONARDO DA VINCI-PARCHEGGIO, instead of AEROP LEONARDO DA VINCI-PARCHEGGIO  LEONARDO DA VINCI-PARCHEGGIO  SCHIPHOL-P3 LANG PARKEREN  LOGAN INT'L-PARKING A HOURLY  LOGAN INT'L-SHERATON PARKING

- If the POI Name exceeds 35 characters with the naming rules mentioned above, then parts of the official name are abbreviated.

① **Note:** Periods are not included after the abbreviations.

Name	Language	Abbreviation
Airport	ALL	Arpt
Aéroport	FRE	Aérop
Aeroport	CAT	Aerop
Aeropuerto	SPA	Aerop
Aeroporto	GAG, POR	Aerop

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8.2 Base POI Attributes

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Name	Language	Abbreviation
Aeroportua	BAQ	Aerop
Aeroporto	ITA	Aerop
Aérodrome	FRE	Aérodr
Arrival	ENG	ARR
Departure	ENG	DEP
Flygplats	SWE	Flygpl or Flpl
Flygstation	SWE	Flygst or Flst
Flughafen	GER	Flugh or Flh
Flugplatz	GER	Flugpl or Flpl
International	ENG	Int'l
Letiste	CZE	Let
Letisko	SLO	Let
Lentokenttä	FIN	Lent
Lufthavn	DAN, NOR	Lufthvn or Lufth
Luchthaven	DUT	Luchthvn or Luchth
Terminal	ENG	T

- In North America, International is abbreviated “Int'l”
- Synonyms are included for the main Airport(4581) POIs only.
  - The 3-character airport code is included as a synonym to the main Airport(4581) POI. When there are multiple entrances, this synonym is only applied to the one that is the Parent POI. The language code matches the one used for the main Airport(4581) POI. See <https://www.world-airport-codes.com> for a list of airport codes.
    - ① **Note:** Some airports do not have a 3-character Airport Code in reality.
  - When a well-known name is preferred over the official name, this name is added as the base name and the airport's official name is added as synonym. For example, Base Name = LOGAN INT'L AIRPORT and Synonym = GENERAL EDWARD LAWRENCE LOGAN INT'L.
  - Other well-known synonyms are included when applicable.

Airport Name/Base Name	Synonym
SAN FRANCISCO INT'L AIRPORT	SFO INT'L AIRPORT
LOS ANGELES INT'L AIRPORT	LAX INT'L AIRPORT
DALLAS/FT WORTH INT'L AIRPORT	DFW INT'L AIRPORT

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8.2 Base POI Attributes

Airport Name/Base Name	Synonym
JOHN F KENNEDY INT'L AIRPORT	JFK INT'L AIRPORT

- The following table contains examples of synonyms for Aéroport de Paris Charles de Gaulle:

Alternate Name	Language Code
ROISSY	FRE
CDG	FRE
PAR	FRE

- Exonyms are included for all main Airport(4581) POIs and airport terminals in Europe and Canada. In Europe, exonyms are included for the following languages: Czech, Danish, Dutch, English, Finnish, French, German, Italian, Norwegian, Portuguese, Spanish, Slovakian, and Swedish.

- The following table contains examples of exonyms for Aéroport de Paris Charles de Gaulle:

Alternate Name	Language Code
Aeroporto de Paris Ch de Gaulle	POR
Aeroporto di Parigi Ch de Gaulle	ITA
Aeropuerto París Charles de Gaulle	SPA
Flughafen Paris Charles de Gaulle	GER
Luchthaven Parijs/Charles de Gaulle	DUT
Pariisin Lentokentä Ch de Gaulle	FIN
Paris Charles de Gaulle Airport	ENG
Paris Charles de Gaulle Flygplats	SWE
Paris Charles de Gaulle Lufthavn	DAN
Paris Charles de Gaulle Lufthavn	NOR
Letisko Paríz-Charlese de Gaullea	SLO
Letiste Paríz-Charlese de Gaullea	CZE

## 8.2.6 POI Name Language Code

The POI Name Language Code is equivalent to the Language Code.

## 8.2.7 POI Name Type

### Definition

The Type of facility name.

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Attributes - Points of Interest

8.2 Base POI Attributes

## Value

B - Base Name

E - Exonym

J - Shortened Base Name

K - Shortened Exonym/Synonym

S - Synonym

U - Unnamed

## Layer

Any of the POI Name Types can be published in any of the POI Layers.

## Length

1

## Type

Text

## Usage

All POI Names (Base Names, Exonyms, Shortened Base Names, Shortened Exonym/Synonyms, Synonyms, and Unnamed) can be used for destination selection and map display for languages supported by HERE Map Content.

## Specification

- POI Names are sorted for a given POI. Each set of POI names is sorted by the following: all Base Names, any Synonyms, any Abbreviations, and any Exonyms along with their corresponding shortened representation if available.

## 8.2.7.1 Base Name

### Definition

A Base Name is a name in a language that is considered official in a given administrative area.

① **Note:**

In administrative areas with multiple official languages, multiple Base Names can exist.

### Rules

- In Administrative Areas with multiple official languages, multiple Base Names are published for Named Place POIs, if the official names are different in each language.
- ① **Note:** The Base Name with the default Language Code is always published first.

## 8.2.7.2 Exonym

### Exonym

#### Definition

An Exonym is a name that is different in another language than it is in the National Language.

#### Rules

- For POIs in areas where multiple required languages are spoken, the name of the POI is entered in each of these languages (e.g., for Bolzano/Bozen (Italian/German) two Named Place POIs are entered. The name(s) in the other language(s) are entered as an exonym.

Language	Language Code	Transliteration Code	Phonetic Transcription
Czech	CZE	CZX	YES
Danish	DAN	N/A	YES
Dutch	DUT	N/A	YES
Finnish	FIN	N/A	YES
French	FRE	N/A	YES
German	GER	N/A	YES
Greek	GRE	GRX	N/A
Hungarian	HUN	HUX	N/A
Italian	ITA	N/A	YES
Norwegian	NOR	N/A	YES
Polish	POL	POX	YES
Portuguese	POR	N/A	YES
Russian	RUS	RUX	N/A
Slovak	SLO	SLX	N/A
Spanish	SPA	N/A	YES
Swedish	SWE	N/A	YES

- Exonyms are published (according to *Synonym* on page 745) for:
  - Nationally Important POIs (e.g., Eiffel Tower)
  - Named Place POIs with Long Haul = Y
  - Named Place POIs with Capital = Level 1 or 2
- Exonyms may be translations of the official name.

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8.2 Base POI Attributes

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## Canada Specific:

- In Canada, if settlements in French speaking provinces have names in two different languages, the French name is entered as the base language and the English name as the exonym. When in English speaking provinces, French name is entered as the exonym.
- In Quebec province, one POI is entered for all categories (except Named Place POI). If the POI has both an English and French name, the French name is used as the base POI. The English name is entered as an exonym. When multi-language street names exist, the POI is assigned to the French street name.
- See section *Naming Rules for Airport-Related POIs* on page 736 for specific information regarding exonyms applied to Airport POIs.

Lang. Code	Regions					
	Europe	Middle East	Africa	North America	South America	APAC
ALB						
BAQ						
BEL						
BOS						
BUL						
CAT						
CHI						X <sup>141</sup>
CHT						X1
CZE	X <sup>142</sup>					
DAN	X					
DUT	X	X	X	X	X	X
ENG	X	X	X	X	X	X
EST						
FIN	X					
FRE	X	X	X	X	X	X
GER	X	X	X	X	X	X
GLE						
GLG						
GRE	X2					
HUN	X					

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8.2 Base POI Attributes

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Lang. Code	Regions					
	Europe	Middle East	Africa	North America	South America	APAC
ICE						
IND						X1
ITA	X	X	X	X	X	X
KOR						X1
LAV						
LIT						
MAC						
MLT						
MAY						X1
MNE						
MOL						
NOR	X					
POL	X2					
POR	X				X	
RUM						
RUS	X2					
SRB						
SCR						
SLO	X2					
SLV						
SPA	X	X	X	X	X	X
SWE	X					
THA						X1
TUR						
UKR						
WEL						

<sup>141</sup> Exonyms are published in the native representation and also in the corresponding transliteration.

<sup>142</sup> Not included for Australia and New Zealand.

## 8.2.7.3 Synonym

### Definition

A synonym is a name in the National Language which is different than the official name.

### Rules

- When appropriate, synonyms are applied to a POI.
- Commonly used names for airports are entered as a synonym name for the airport. For example:
  - In Los Angeles:
  - official name: Los Angeles International Airport
  - synonym: LAX
- In Milan:
- official name: Aeroporto Linate
- synonym: Aeroporto Forlanini
- See [Naming Rules for Airport-Related POIs](#) on page 736 for specific information regarding synonyms applied to Airport POIs.

### Admin Area Names

- A Synonym is published if a city name includes a suffix (e.g., “upon the Sea”) and the public refers to the city by its short name. For example, Hull upon the Sea is also referred to as Hull.
- A Synonym is not published if the synonym has the exact same spelling as a City (FeatureType (0900101) somewhere else in that country).

Official Name	Synonym
Hull upon the Sea	Hull
Kingston upon Thames	Kingston
Stratford upon Avon	Stratford
Berwick upon Tweed	Berwick
Newcastle upon Tyne	Newcastle
Stoke on Trent	Stoke
Frankfurt am Main	Frankfurt
Manila	City of Manila

- A Synonym can also represent an abbreviation of an Administrative Area. For example, province abbreviations in Italy are added as synonyms, e.g., RM for Rome.

### Phonetic Transcriptions

- See [Voice Phonetic Transcriptions](#) on page 1353.

## Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

- No additional Exonyms are published for a POI to represent commonly known alternate pronunciations. The phonetic representation for commonly known alternate pronunciations references the Base Name of a POI. The commonly known alternate pronunciation is not published as an additional name to a POI.

### 8.2.7.4 Shortened Base Name

#### Definition

Shortened Base Name identifies the shorter, abbreviated name for a POI. A Shortened Base Name is at most 35 characters length.

#### Rules

- POI names with Name Type = "J" (Shortened Base Name) represent an alternative (additional) name, of 35 characters or less, for a POI Base Name longer than 35 characters.
- POI names with Name Type = "J" (Shortened Base Name) do not provide an approved, formal abbreviation of a Base Name; rather, it is an abbreviation based on common sense.
- Shortened POI Base Names are not published for Named Place (4444) POIs or Hamlet (9998) POIs.

### 8.2.7.5 Shortened Exonym/Synonym Name

#### Definition

Shortened Exonym/Synonym identifies the shorter, abbreviated name for a POI. A Shortened Exonym/Synonym is at most 35 characters length.

#### Rules

- POI names with Name Type = "K" (Shortened Exonym/Synonym) represent an alternative (additional) name, of 35 characters or less, for a POI exonym or synonym longer than 35 characters.
- POI names with Name Type = "K" (Shortened Exonym/Synonym) do not provide an approved, formal abbreviation of an Exonym/Synonym Name; rather, it is an abbreviation based on common sense.

Shortened Exonym/Synonyms are not published for Named Place (4444) POIs or Hamlet (9998) POIs.

### 8.2.8 Street Number

#### Definition

The street number (address) assigned to a Point of Interest.

#### Value

Maximum 10 alphanumeric characters. Hyphens are allowed.

#### Length

10

#### Type

Text

## Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

### Usage

This data in conjunction with the related attributes and link address information may be used to locate and calculate a coordinate for a POI. This attribute may be used to display POI address to the user.

### Specification

- An address for a POI may not be included if one does not exist (such as for a park, park & ride facility, etc.) or is not provided by third party suppliers.
- In-Vicinity POIs do not carry an Address when located on an unaddressed Network link.
- When addresses are not present in Network, POIs in the Network areas will not have an address.

## 8.2.9 Full POI Street Number

### Definition

Identifies the complete house number for the POI.

### Value

Maximum 25 alphanumeric characters. Hyphens are allowed.

### Layer

All POI Layers (except the Hamlet and Named Place Layers)

### Length

25

### Type

Text

### Related Attributes

POI Street Number

### Usage

Full POI Street Number can be used for destination selection and map display.

### Specification

- Full POI Street Number is always published along with the POI Street Number attribute in the same record only in countries where the standard POI Street Number is not sufficient to represent the POI street number according to reality (e.g., in Russia).  
Full POI Street Number transliterations will be published in a new POI Transliterations (PoiTrans) layer that will be introduced in a future delivery. Until then, Full POI Street Number in existing POI layers will publish Latin-1 transliterations where applicable, as opposed to the corresponding UTF-8 string.

## 8.2.10 Full POI Street Number Language Code

### Definition

## Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

The Language Code of the Full POI Street Number field.

### Value

A 3-digit language code

See [Language Code](#) on page 618 for the complete list of Language Codes.

### Layer

All POI Layers (except the Hamlet and Named Place layers)

### Length

3

### Type

Text

### Related Attributes

Full POI Street Number

### Usage

Full POI Street Number Language Code may be used to determine the language code of the Full Street Number.

## 8.2.11 Street Name

The Street Name is a combination of Feature Name, Street Type, Name Prefix and Name Suffix.

### Non-Latin Street Names and Transcriptions

- See [Non-Latin Names](#) on page 1138.
- ① **Note:** For Arabic countries (where translations are published as additional names), there are cases where a POI has a name in more than one language, but the corresponding Street Name exists only in one language, or is the same in all languages. In this case, the POI has a Base Name in each relevant language, but the Street Name is published only once with the country's default language code. If, for example, there is no Street Name in ENG to correspond to a POI with a Base Name in the ENG language code, then the POI Base Name with the ENG language code can use the Street Name in the ARA language code.

## 8.2.12 Street Name Language Code

The Street Name Language Code is equivalent to the Language Code.

## 8.2.13 Side

### Definition

The side of the street the POI is located on.

### Value

## Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

L - Left Side

N - Not Applicable

R - Right Side

### Length

1

### Type

Text

## 8.2.14 Access Type

This field is no longer in use.

## 8.2.15 Phone Number

### Definition

The phone number of the POI.

### Value

nnnnnnnnnnnnnnnn

① **Note:**

A hyphen may exist in varying positions.

### Length

15

### Type

Text

### Usage

Telephone numbers enable the contacting of POIs for information, reservations, etc.

### Specification

- Only one telephone number is included for each POI.
- Maximum of 15 characters.
- Phone numbers are represented with a hyphen between Area Code and Local/Subscriber Code e.g., in the U.S. 408-7373200, in the Netherlands 499-331414, etc. The country code can be found in the Metadata - Country Reference (MtdCntryRef) layer.

For countries where the Area Code and Local/Subscriber Code are combined, no hyphen separates the Area Code from the Local/Subscriber Code in the published Phone Number, e.g., in Italy +(39)-0119408967, in Spain, +(34)-934190112,

- General toll free numbers that are in addition to a POI's main phone number are not included. In North America, these numbers start with 800, 866, 877, or 888, in the Netherlands with 0800.

## Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

### 8.2.16 POI Chain ID

#### Definition

A 10-digit code that identifies the commercial chain with which the POI is associated.

#### Value

For values see POI Inclusion sheet (delivered separately).

#### Length

10

#### Type

Numeric

#### Usage

POI Chain ID allows a user or system to limit POIs to a preferred brand. For example, the user may receive incentives for buying Shell gas, thus would like to limit searcher to that brand only.

#### Specification

- POI Chain ID is included for specific POI categories, but are most commonly published for the following:
  - ATM/Bank
  - Automobile Dealership
  - Cinema
  - Coffee Shop
  - Grocery Store
  - Hotel/Motel
  - Motorcycle Dealership
  - Nightlife
  - Petrol Station
  - Pharmacy
  - Rental Car Agency
- In EMEA, Chain IDs are also included for the following categories:
  - Hospital
  - Park/Recreation Area
- The above categories can have POIs shown without a POI chain ID when the POI is not part of an actual chain.

### 8.2.17 Chain ID

The Chain ID is equivalent to the POI Chain ID.

## 8.2.18 National Importance

### Definition

Indicates the POI name is recognisable without a city name. For example, Heathrow Airport is recognisable without the city name of London.

### Value

Y - Nationally Important

N - Not Nationally Important

### Length

1

### Type

Boolean

### Usage

For systems that require city input first, National Importance allows display of regionally prominent POIs in a scroll list without needing to identify the city name.

### Specification

- National Importance is identified for well known:
  - International Ferries
    - ① **Note:** If they are small and not well known, the attribute is not applied.
  - National Historical Monuments
  - National Parks
  - National Public Airports
    - ① **Note:** In Europe, National Importance = Y is applied to airports with more than 300,000 passengers per year.
    - ① **Note:** In North America, National Importance = Y is applied to major public airports.
    - ① **Note:** Only the main entrance Airport POI is coded National Importance = Y. Airport Terminal POIs and all other children associated with the airport are coded National Importance = N.
  - National Tourist Attractions
  - Border Crossings (On Functional Class = 1 and 2 only)
  - Amusement Park (with more than 2 million visitors per year)
    - ① **Note:** If there are no Amusement Parks with more than 2 million visitors per year, the top 5 in a country are coded as National Importance = Y.
  - Park in Water
  - Museum (with more than 1 million visitors per year)
  - Ski Resort
  - Sports Complex
  - Winery

## Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

- Other POI categories, not listed above, generally do not receive National Importance = Y. However, pre-determined deviations exist.
- When a POI qualifies for National Importance = Y, but is located on an In-Process Data = Y link, the POI is added but does not receive National Importance = Y.
- If a Parent/Child relationship exists because of multiple entrances for National Parks, and the parent POI is coded National Importance = Y the children are also National Importance = Y.
- When a POI qualifies for National Importance, but is located on an In Process Data road link, the POI is added, but will not receive National Importance = Y.
- If a Parent-Child association exists because of multiple entrances for POIs that represent large areas, e.g., National Parks, and the Parent POI is published National Importance = Y, the children will also be published with National Importance = Y.

## 8.2.19 Private (POIs)

### Definition

Identifies POIs that normally require membership for admission.

### Value

Y - Private

N - Not Private

### Length

1

### Type

Boolean

### Usage

Private can be used to inform users during destination selection and route guidance that the POI is a private facility and therefore, the POI may restrict access based on membership.

### Specification

- Private is generally applied to the following:
  - Golf Courses
    - ① **Note:** If a Restaurant is located within a private Golf Course, it is also flagged as Private.
    - Petrol Stations serving only specific fleet vehicles and members.
- Private can also be applied to other POIs, e.g., Hospital, Park (National/State), etc. Please see the *Country Specific Rules* document.

## 8.2.20 In Vicinity

### Definition

Identifies whether a POI is located directly on the road with which it is associated.

# Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

## Value

Y - In Vicinity

N - Not In Vicinity

## Length

1

## Type

Boolean

## Usage

The attribute tells a system what kind of route guidance information should be provided to users. If the POI is not In Vicinity the system can state 'you have arrived'. If the POI is In Vicinity, the system can tell the user the POI is nearby but that further routing advice is not available.

## Specification

- When the POI is attached to a road other than the road where the POI is physically located, it is identified as In Vicinity. This situation occurs when, due to the Network or City-to-City inclusion rules, the road where the POI is actually located is not contained in the database. In these situations, the POI may not carry a POI Street Number.
- Only Auto and Motorcycle Dealerships POIs in EMEA may be identified as In Vicinity. The following naming conventions will be applied to these Auto Dealerships and Motorcycle Dealerships:
  - POI Name: <official name>, <street name> <address> (or <address> <street name>)
  - In case the Auto Dealership POI sells multiple brands, the following naming rule is applied: <official name> (<additional brand name>), <street name> <address> (or <address> <street name>)
  - For example: Autohaus Wagner, Berliner Strasse 2
  - A space between the comma and the street name and between the street name and the address is added. If no official name exists, the chain name is applied instead, followed by the street name.

## 8.2.21 Number Parents

### Definition

The number of POI Parents.

## Value

nnnnn

## Length

5

## Type

Numeric

## Specification

- A POI may have from 0 to 10 parents.

## Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

### 8.2.22 Number Children

#### Definition

The number of POI Children.

#### Value

nnnnn

#### Length

5

#### Type

Numeric

#### Specification

- A POI may have from 0 to 100 children.

### 8.2.23 Percent From Reference Node

#### Definition

Percent From Reference Node is an attribute to a Point Of Interest (POI) and indicates the location of the POI on the link in terms of percent from the reference node.

#### Usage

POI Percent from Reference Node can be used to determine icon placement and timing of guidance information. This is particularly useful when POIs do not have an address, the road does not carry addresses, or when the POI is located on a very long link.

#### Specification

- POI Percent from Reference Node is represented in increments of 10.
- POI icon placement can be determined using the POI Street Number value, however the POI Percent from Reference Node value offers greater precision.
- In the U.S. and Canada, POI Percent from Reference Node is only published for POIs that meet all the following criteria:
  - POI has been verified
  - POI is on a link longer than 800 metres/2640 feet.

### 8.2.24 Vanity City ID

#### Definition

Vanity City ID identifies a city that is different from the city where the POI is physically located. For example, Charles-de-Gaulle airport is located in Roissy-en-France, not in Paris. It is common, however, for people to think the airport is in Paris.

# Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

## Attribute Modifier Value

Area ID Value - Area ID index to Area Reference Record for the Vanity City.

### Length

10

### Type

Numeric

### Usage

Vanity City ID allows identification and selection as a destination under the official address, or the city/location name that is normally associated with the POI.

### Specification

- Vanity City ID is included when the POI address does not match the administrative or zone coding applied to the link. For Example:

POI Name	Administrative Area	Vanity City ID
Disneyland Paris	Couvrain	10 digit Vanity City ID for Paris
Aéroport de Lille-Lesquin	Fretin (rural)	10 digit Vanity City ID for Lesquin and Lille

- Parent/Child Relationships
  - If the parent POI has a Vanity City ID, then the children will also have the same Vanity City ID.
  - If the parent POI does not have a Vanity City ID (e.g., an airport) and the child POI is in a different administrative area, then the child POI will include a Vanity City ID for the parent POI.
  - However if the parent POI does have a Vanity City ID and the child POI falls within the administrative area of the Vanity City ID, then no Vanity City ID is indicated for that child POI.

## 8.2.25 Actual Address

### Definition

The Actual Address represents the actual address but is different from the street address where the entrance of the POI is physically located.

### Length

100

### Length (UTF-8)

254

### Usage

# Reference Guide

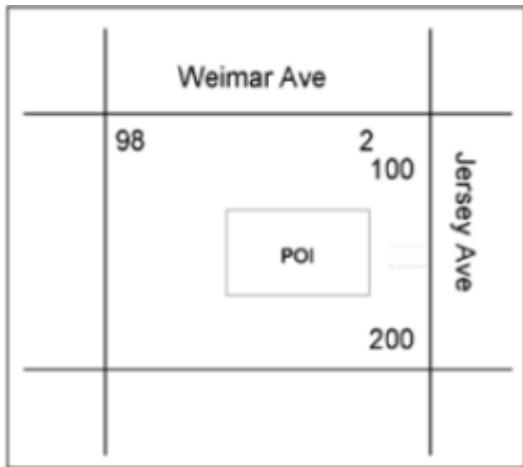
Attributes - Points of Interest

8.2 Base POI Attributes

here

**Actual Address** allows the actual address of a POI to be displayed when the POI entrance is not physically located at that address.

**Figure 344:**



In [Figure 344](#): on page 756, the actual address for the POI is 10 Weimar Ave, but the POI is accessed from Jersey Ave. In this case, the POI is attached to Jersey Ave with no address but with an Actual Address pointing to a Name Record ID with “10 Weimar Ave Chicago, IL 60018”. Even though Jersey Ave has an address range of 100-200, the address for the POI is blank.

## Specification

- Actual Address is represented using the standard format employed in respective countries. This includes the Address, Street Name, City, and Postal Code.
- Some countries contain names that can only be represented in Unicode (e.g. Russia). The POI Name is a Latin-1 name (transliteration) or an identifier (numerical ID) intended to be used to the External Unicode “look-aside” file. See [Non-Latin-1 Name Representation](#) on page 1342 for details.
- For multi-line addresses, the 2nd line begins in the 51st position of the data.
- Primarily, Golf Course, Casinos, and Shopping Centres are assigned Actual Address. However, any POI may have an Actual Address assigned.
- Actual Addresses do not exceed two lines. Please see the Actual Address formats used per country in the Country Specific Rules document.

## 8.2.26 Actual Address Language Code

### Definition

The Language Code of the Actual Address.

### Value

A 3-digit Language Code.

### Length

3

### Type

## Reference Guide

Attributes - Points of Interest

8.2 Base POI Attributes

Text

**Layer**

All POI Layers

**Related Attributes**

Actual Address

**Usage**

Provides the language information associated with the Actual Address.

**Specification**

- The Language Code associated with the Actual Address information.

## 8.2.27 Actual Street Name

**Definition**

The parsed Actual Street Name of the POI.

**Length**

50

100 in the Feature Introduction Map

**Type**

Text

## 8.2.28 Actual Street Number

**Definition**

The parsed Actual Street Number of the POI.

**Length**

10

15 in the Feature Introduction Map

**Type**

Text

## 8.2.29 Actual Admin Name

**Definition**

The parsed Actual Admin Name of the POI. Up to two admin names can be published separated by a comma.

**Length**

## Reference Guide

Attributes - Points of Interest

8.3 Named Place (NamedPlc)

50

100 in the Feature Introduction Map

### Type

Text

## 8.2.30 Actual Postal Code

### Definition

The parsed Actual Postal Code of the POI.

### Length

11

### Type

Text

## 8.3 Named Place (NamedPlc)

---

### 8.3.1 Base POI Attributes

The Named Place Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attributes.

### 8.3.2 Named Place Name

The Named Place Name is equivalent to the POI Name.

### 8.3.3 Named Place Name Language Code

The Named Place Name Language Code is equivalent to the Language Code.

### 8.3.4 Named Place Name Type

The Named Place Name Type is equivalent to the POI Name Type.

### 8.3.5 Population

#### Definition

The Population of a Named Place is the number of inhabitants of that Named Place.

#### Attribute Modifier Value

## Reference Guide

Attributes - Points of Interest

8.3 Named Place (NamedPlc)

here

Numeric population count

### Usage

Population information can be used to vary icon size and to display subsets of Named Place icons at various zoom levels.

### Specification

- Generally, Population is published for all Named Place POIs that represent municipalities/cities (Feature Type = 0900101).
- Population can also be published for other Administrative levels that are deemed significant, e.g., settlements. See the *Country Specific Rules* document.
- Population is not published for Hamlet POIs.

## 8.3.6 Capital

### Definition

The Capital attribute identifies Named Place POIs that are capitals of an administrative area.

### Attribute Modifier Value

Defines the administrative level of a capital.

1 - Administrative Level 1

2 - Administrative Level 2

3 - Administrative Level 3

4 - Administrative Level 4

5 - Administrative Level 5

6 - Administrative Level 6

7 - Administrative Level 7

### Usage

Capital can be used to identify Named Place POIs that may be important for map display.

### Specification

- All country capitals are indicated and receive the Attribute Modifier value of 1. A small number of countries do not have a capital in reality. See table below for exceptions.
- Examples for Capital Indicator definition for various countries are provided in the table below. See the *Country Specific Rules* document for the complete listing.

If a Named Place POI is a capital for multiple administrative levels, an Attribute Modifier value is coded for all applicable administrative levels.

Country	Level 2	Level 3	Level 4
Germany	Bundesland	Kreis	N/A

## Reference Guide

Attributes - Points of Interest

8.4 Hamlets (Hamlet)

here

Country	Level 2	Level 3	Level 4
South Korea	N/A	N/A	N/A
United States	State	N/A	N/A
Uruguay	N/A	Departamento	N/A

### 8.3.7 Claimed By

See [Claimed By](#) on page 1071.

### 8.3.8 Controlled By

See [Controlled By](#) on page 1074.

## 8.4 Hamlets (Hamlet)

---

### 8.4.1 Base POI Attributes

The Hamlet Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attributes.

### 8.4.2 Hamlet Name

The Hamlet Name is equivalent to the POI Name.

### 8.4.3 Hamlet Name Language Code

The Hamlet Name Language Code is equivalent to the Language Code.

### 8.4.4 Hamlet Name Type

The Hamlet Name Type is equivalent to the POI Name Type.

## 8.5 Hospitals (Hospital)

---

### 8.5.1 Base POI Attributes

The Hospitals Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attribute.

## Reference Guide

Attributes - Points of Interest

8.5 Hospitals (Hospital)

### 8.5.2 Hospital Name

The Hospital Name Type is equivalent to the POI Name.

### 8.5.3 Hospital Name Language Code

The Hospital Name Language Code is equivalent to the Language Code.

### 8.5.4 Hospital Name Type

The Hospital Name Type is equivalent to the POI Name Type.

### 8.5.5 Entrance Type

#### **Definition**

Entrance Type identifies the type of entrance to a facility.

#### **Modifier Type Value**

1 - Preferred Entrance

#### **Default Value**

(Space)

#### **Length**

1

#### **Type**

Char

#### **Layer**

Hospital

TravDest

ParkRec

Shopping

EduInst

#### **Related Attributes**

None

#### **Related Layer**

None

#### **Usage**

# Reference Guide

Attributes - Points of Interest

8.5 Hospitals (Hospital)

**Entrance Type** can be used for destination selection and map display to identify preferred entrances to a POI.

## Specification

- Entrance Type is published for POIs meeting the following requirements:
  - POIs participate in physical parent child relationship
  - Parent and Children have the same Facility Type, which can be any of the following:
    - Amusement Park
    - Casino
    - Convention Centre
    - Golf Course
    - Historical Monument
    - Hospital
    - Park/Recreation Area
    - Shopping Centre
    - Sports Complex
    - Tourist Attraction
    - University
    - Winery
- Parent POIs are always Entrance Type = 1 (Preferred Entrance). See [Figure 345:](#) on page 763.

# Reference Guide

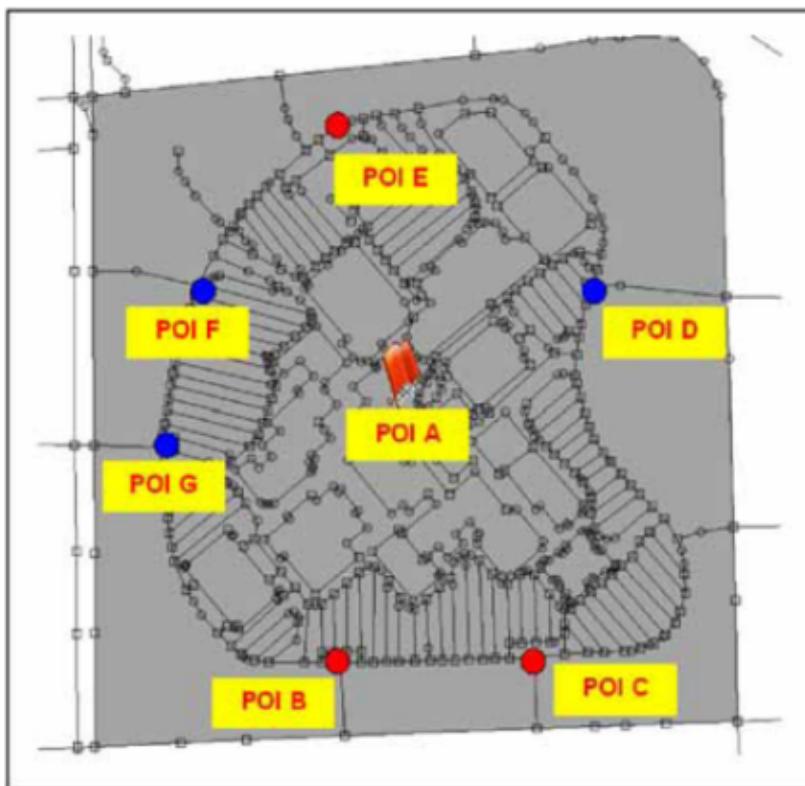
Attributes - Points of Interest

8.5 Hospitals (Hospital)

here

- Additional POIs are published Entrance Type = 1 (Preferred Entrance) in any of the following situations:
  - They are the predominant entrance to the facility, whether to the building or the parking area.
  - They are located on the main road network that leads to the facility or to the parking area.

Figure 345:



	POI ID	POI Name <sup>143</sup>	Parent/Child	Entrance Type
POI A	426129839	OAKBROOK CENTER MALL SHOPPING	P	1
POI B	795612428	OAKBROOK CENTER WEST ENTRANCE	C	1
POI C	795612431	OAKBROOK CENTER SOUTH ENTRANCE	C	1
POI D	795612429	OAKBROOK CENTER EAST ENTRANCE	C	
POI E	795612432	OAKBROOK CENTER NORTH ENTRANCE	C	
POI F	795612433	OAKBROOK CENTER MALL-NORTH	C	1

# Reference Guide

Attributes - Points of Interest

8.5 Hospitals (Hospital)

here

	POI ID	POI Name <sup>143</sup>	Parent/Child	Entrance Type
POI G	795612434	OAKBROOK CENTER MALL-WEST	C	

## Example

POI with POI ID 426129839 is a Parent POI and Preferred Entrance. POIs with POI ID 795612431 795612429 are children POIs for this Parent POI and are also Preferred Entrance. Remaining children POIs for this Parent POI are not preferred entrances, therefore do not Publish the Entrance Type Attribute Type.

POI_ID	...	ENTR_TYPE
426129839	...	1
795612428	...	1
795612431	...	
795612429	...	1
795612432	...	
795612433	...	
795612434	...	

## Parent/Child

### Rules

- The main entrance POI is designated the Parent POI.
- The Parent POI always receives Entrance Type = 1. If additional entrances are considered a major entrance; that entrance should receive Entrance Type = 1.
- The Parent/Child relationship for the multiple entrances and any applicable Parking Garage/House is Physical to the main POI.
- A Parent/Child relationship is applied for all POI locations when applicable, e.g., a Restaurant located within a Tourist Attraction would be represented as a child to the Tourist Attraction (Parent) POI.
- Parking Garage/Houses are published as children to Airport POIs.
- If rental car agencies are located within a rental car complex, the complex and the individual rental car agency POIs are published as children to the airport POI.
- For outlying building POIs within a Shopping Centre complex but not attached to the main shopping mall, a logical Parent/Child relationship is applied.

### Naming

- The official name should be applied for the main entrance, i.e., the Parent POI.

<sup>143</sup> Names in this example do not necessarily reflect reality.

## Reference Guide

Attributes - Points of Interest

8.6 Parks and Recreation (ParkRec)

- The name of possible additional entrances is the official name plus a location identifier.
- Anchor Stores located in Shopping Centres begin with the Store's name followed by the location name, e.g., Macy's-Woodfield Mall.
- See the table below for naming examples.

Main Entrance Name	Additional Entrance Name
Wrigley Field	Wrigley Field-North Entrance
	Wrigley Field-South Entrance
	Wrigley Field-East Entrance
Woodfield Mall	Woodfield Mall-North Door
	Woodfield Mall-South Door

## 8.6 Parks and Recreation (ParkRec)

### 8.6.1 Base POI Attributes

The Parks and Recreation Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attribute.

### 8.6.2 Park/Recreation Name

The Park/Recreation Name is equivalent to the POI Name.

### 8.6.3 Park/Recreation Name Language Code

The Park/Recreation Name Language Code is equivalent to the Language Code.

### 8.6.4 Park/Recreation Name Type

The Park/Recreation name Type is equivalent to the POI Name Type.

### 8.6.5 Entrance Type

See [Entrance Type](#) on page 761.

## 8.7 Transportation Hubs (TransHubs)

### 8.7.1 Base POI Attributes

The Transportation Hubs Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attribute.

### 8.7.2 Facility Name

The Facility Name is equivalent to the POI Name.

### 8.7.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

### 8.7.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

### 8.7.5 Airport Type

#### Definition

Airport Type indicates if the Airport POI is a terminal.

#### Attribute Modifier Value

1 - Terminal

#### Usage

An application can use this data to display different icons based on the sub-type for the airport.

#### Specification

- Airport Type is only indicated for each terminal Airport POI.
- If this attribute is not published, the Airport POI is considered to be an entrance.

#### Airport Sub Type

The Airport Sub Type information can be found under Airport Type.

## 8.8 Travel Destinations (TravDest)

### 8.8.1 Base POI Attributes

The Travel Destinations Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attributes.

### 8.8.2 Facility Name

The Facility Name is equivalent to the POI Name.

### 8.8.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

### 8.8.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

### 8.8.5 Entrance Type

See [Entrance Type](#) on page 761.

### 8.8.6 Rest Area Type

#### Definition

The attribute modifier for Rest Area Type indicates what type of Rest Area is represented by a Rest Area POI.

#### Attribute Modifier Value

- 1 - Complete Rest Area
- 2 - Parking and Rest Room only
- 3 - Parking only
- 4 - Motorway Service Area
- 5 - Scenic Overlook

#### Usage

Can be used to indicate the available facilities/services in a Rest Area.

- Specification Rest Area POIs with Rest Area Type = Complete Rest Area is published for rest areas with rest room facilities and one or more additional facilities.

## Reference Guide

Attributes - Points of Interest

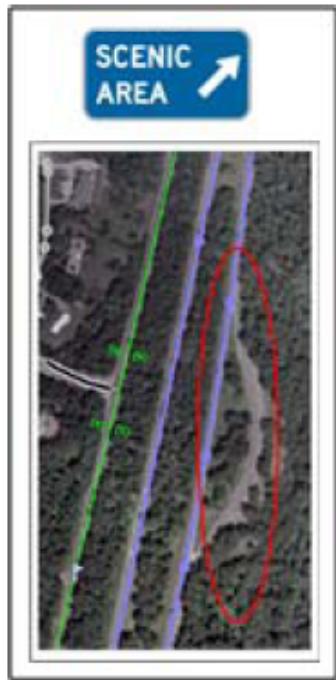
8.8 Travel Destinations (TravDest)

- Rest Area POIs with Rest Area Type = Parking and Rest Room Only is published for rest areas that only have rest room facilities.
- Rest Area POIs with Rest Area Type = Parking Only is published for rest areas that do not have any facilities (such as restaurants, petrol stations, rest rooms, etc.).
- Rest Area POIs with Rest Area Type = Motorway Service Area is published for motorway service area signposted on the highway. These are located close to the highway, but are only accessible after exiting the highway.

These are known as Autohöfe in Germany.

- The location of the Rest Area POI with Rest Area Type = Motorway Service Area is on the same link as the Petrol Station POI. When there is no Petrol Station POI, the Rest Area POI is located on the entrance of the service area.
- Rest Area POIs with Rest Area Type = Scenic Overlook is published for rest areas where a driver must exit to park and enjoy the scenery. See [Figure 346:](#) on page 768.

**Figure 346:**



- Parent/Child attributions are published between the Rest Area POI and other related POIs such as Restaurant, Hotel and Petrol Station. The Parent/Child relationship is Physical.
- Geometry along a Controlled Access = No road, which looks like a Rest Area is only published with Rest Area POI when the Rest Area Type is:
  - Complete Rest Area or
  - Parking and Rest Room Only

## Reference Guide

Attributes - Points of Interest

8.9 Shopping (Shopping)

- Rest Areas along Controlled Access = No roads that only provide parking facilities are not published with a Rest Area POI. See [Figure 347:](#) on page 769. Other POIs like Petrol Stations are published based on reality.

**Figure 347:**



## 8.9 Shopping (Shopping)

### 8.9.1 Base POI Attributes

The Shopping Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attribute.

### 8.9.2 Facility Name

The Facility Name is equivalent to the POI Name.

### 8.9.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

### 8.9.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

### 8.9.5 Entrance Type

See [Entrance Type](#) on page 761.

## 8.10 Restaurants (Restrnts)

### 8.10.1 Base POI Attributes

The Restaurants Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attributes.

### 8.10.2 Facility Name

The Facility Name is equivalent to the POI Name.

### 8.10.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

### 8.10.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

### 8.10.5 Food Type

#### Definition

The identification of cuisine served in a restaurant.

#### Value

Value	Description	Value	Description
1	American Food	53	International Food
2	Californian Food	54	Bohemian Food
3	Chinese Food	55	Balkan Food
4	Continental Food	56	Finnish Food
5	French Food	57	Australian Food
6	German Food	58	Pizza
7	Greek Food	59	Punjabi
8	Indian Food	60	Rajasthani
9	Italian Food	61	Moghrai
10	Japanese Food	62	Bengali

# Reference Guide

Attributes - Points of Interest

8.10 Restaurants (Restrnts)

here

Value	Description	Value	Description
11	Mexican Food	63	Goan
12	Other	64	Jain
13	Seafood	65	Konkani
14	Thai Food	66	Gujarati
15	Vegetarian Food	67	Parsi
16	Vietnamese Food	68	South Indian
18	Austrian Food	69	Maharashtrian
19	Barbecue/Southern	70	North Indian
20	Belgian Food	71	Malvani
21	Bistro <sup>144</sup>	72	Hyderabadi
22	Brewpub	73	Snacks & Beverages
23	British Isles Food	74	Breakfast
24	Cajun/Caribbean Food	75	Chicken
25	Dutch Food	76	Ice Cream
26	East European Food	77	Tapas
27	Fast Food <sup>144</sup>	78	Irish Food
28	Grill	79	Caribbean Food
29	Hawaiian/Polynesian Food	80	Malaysian Food
30	Hungarian Food	81	Moroccan Food
31	Indonesian/Malaysian Food	82	Fusion
32	Jewish/Kosher Food	83	Brazilian Food
33	Korean Food	84	Criolla Food
34	Latin American Food	85	Burgers
35	Maltese Food	86	Creperie
36	Middle Eastern Food	87	Pastries
37	Filipino Food	88	Sushi
38	Polish Food	89	Vegan Food
39	Portuguese Food	91	Cajun Food

# Reference Guide

Attributes - Points of Interest

8.10 Restaurants (Restrnts)

here

Value	Description	Value	Description
40	Russian Food	92	Indonesian Food
41	Sandwich	93	Fondue
42	Scandinavian Food	95	Argentinean Food
43	South American Food	96	Chilean Food
44	Southeast Asian Food	97	Azerbaijan Food
45	Southwestern Food	98	Baltic Food
46	Surinamese Food	99	Belorussian Food
47	Spanish Food	100	Caucasian Food
48	Steak House	101	Ukrainian Food
49	Swiss Food	102	Venezuelan Food
50	Turkish Food	103	Bruneian Food
51	African Food	104	Pakistani Food
52	Canadian Food	105	Burmese Food

## Related Attributes

Restaurant Type

Alternate Food Type

Regional Food Type

## Usage

Implementation of Food Type allows a user to select restaurants by desired cuisine type. Food Type enables restaurants to be indexed, queried, and displayed by cuisine type.

## Specification

- Each Restaurant POI receives only one Food Type.
- HERE Map Content does not provide icons for Food Types.
- When alternate food types exist, the food type in the Food Type field will be the primary food type.

## 8.10.6 Alternate Food Type

### Definition

The identification of a second or alternate cuisine in a restaurant.

### Value

<sup>144</sup> Not published in Canada, EMEA, Mexico, Puerto Rico, the United States, and the U.S. Virgin Islands.

## Reference Guide

Attributes - Points of Interest

8.10 Restaurants (Restrnts)

Same values as Food Type see [Food Type](#) on page 770.

### Layer

Restaurants

### Related Attributes

Restaurant Type

Food Type

Regional Food Type

### Usage

Implementation of Alternate Food Type allows a user to select restaurants by more than one food type. Alternate Food Type enables restaurants to be indexed, queried, and displayed by an additional food type.

### Specification

- Alternate Food Type can only be populated when Food Type is populated.
- The value of Alternate Food Type cannot be the same value of Food Type.

## 8.10.7 Regional Food Type

### Definition

The identification of regional sub-food types.

### Value

The values are listed in the corresponding Regional Food Type column.

### Layer

Restaurants

### Related Attributes

Restaurant Type

Food Type

Alternate Food Type

### Usage

Implementation of Regional Food Type allows a user to select restaurants by a regional sub-cuisine. Regional Food Type enables restaurants to be indexed, queried, and displayed by a regional sub-cuisine.

### Specification

- Each Restaurant POI receives only one Regional Food Type.

# Reference Guide

Attributes - Points of Interest

8.10 Restaurants (Restrnts)

here

- Each Regional Food Type is published only with the following Food Type:

Food Type	Regional Food Type	
	Value	Description
Chinese	1	Szechuan
	2	Cantonese
Indian	3	Tandoori
	4	Punjabi
Mexican	5	Yucateca
	6	Oaxaqueña
	7	Veracruzana
	8	Poblana
Brazilian	9	Baiana
	10	Capixaba
	11	Mineira
Indian	12	Rajasthani
	13	Mughlai
	14	Bengali
	15	Goan
	16	Jain
	17	Konkani
	18	Gujarati
	19	Parsi
	20	South Indian
	21	Maharashtrian
	22	North Indian
	23	Malvani
	24	Hyderabadi
French	25	Alsacian
	26	Auvergnate
	27	Basque

# Reference Guide

Attributes - Points of Interest

8.10 Restaurants (Restrnts)

here

Food Type	Regional Food Type	
	Value	Description
	28	Corse
	29	Lyonnaise
	30	Provençale
	31	Sud-ouest
Brazilian	32	Bakery

- The Food Type that corresponds to the Regional Food Type must be the primary food type.

## 8.10.8 Restaurant Type

### Definition

Describes the type of facility for a Restaurant POI.

### Value

Restaurant Type		Restaurant Description
Value	Description	
(NULL)	No Description Published	Restaurant Type is currently unknown.
1	Fast Food	Restaurants serving quickly prepared, or readily available processed food.
2	Casual Dining	Restaurants serving moderately-priced food in a casual atmosphere.
3	Fine Dining	High-end restaurants, usually with trained chefs and an elegant atmosphere.
4	Take-out and Delivery only	Restaurants without seating, only offering take-out and/or delivery service.
5	Food Market/Stall	Outdoor restaurants providing specialty foods.
6	Taqueria	Restaurants or stands selling quickly prepared Mexican food, such as tacos or burritos.
7	Deli	Restaurants selling ready-to-serve delicatessens including cheeses, cold cooked meats, and salads.

# Reference Guide

Attributes - Points of Interest

8.11 Entertainment (Entertn)

here

Restaurant Type		Restaurant Description
Value	Description	
8	Cafeteria	Restaurants where, instead of tables there are food-serving counters/stalls, either in a line or allowing arbitrary walking paths. Customers take the food they require as they walk along, placing it on a tray and pay at check-out.
9	Bistro	Restaurants that could be described as a small café, usually serving modest, down-to-earth food and wine.

## Usage

Implementation of Restaurant Type allows a user to select restaurants by class of restaurant. Restaurant Type enables restaurants to be indexed, queried, and displayed by restaurant classification.

## Specification

- Each Restaurant POI receives one Restaurant Type that best describes the restaurant facility.

# 8.11 Entertainment (Entertn)

## 8.11.1 Base POI Attributes

The Entertainment Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attributes.

## 8.11.2 Facility Name

The Facility Name is equivalent to the POI Name.

## 8.11.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

## 8.11.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

<sup>145</sup> Cafeterias of private institutions, such as schools, are excluded.

## 8.12 Auto Maintenance, Service, and Petrol (AutoSvc)

### 8.12.1 Base POI Attributes

The Auto Maintenance, Service, and Petrol Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attributes.

### 8.12.2 Facility Name

The Facility Name is equivalent to the POI Name.

### 8.12.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

### 8.12.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

### 8.12.5 Open 24 Hours

#### Definition

The attribute Open 24 Hours identifies if a Petrol/Gasoline Station is open all the time.

 **Note:**

Open 24 Hours is only available in Europe, North America, Mexico and New Zealand.

#### Attribute Modifier Value

1 - Open 24 Hours

0 - Not Open 24 Hours

 **Note:**

The absence of this attribute indicates that this information is not known.

#### Usage

This can be used to identify Petrol/Gasoline Stations that are open all the time so that drivers are not routed to POIs that are not available when driving outside regular business hours.

#### Specification

- Open 24 Hours = 1 is published for Petrol/Gasoline Station POIs that are open 24 hours, every day of the week, including holidays.

## Reference Guide

Attributes - Points of Interest

8.13 Financial Institutions (FinInsts)

- Open 24 Hours = 0 is published for Petrol/Gasoline Station POIs that are not open 24 hours, every day of the week, including holidays.
- Open 24 Hours is not published when the opening hours of a Petrol/Gasoline Station POI are unknown.

### 8.12.6 Diesel

#### Definition

Diesel identifies if a petrol station is selling Diesel.

#### Value

(space) - Information is Unknown

Y - Diesel Sold

N - Diesel Not Sold

#### Length

1

#### Type

Text

## 8.13 Financial Institutions (FinInsts)

---

### 8.13.1 Base POI Attributes

The Financial Institutions Layer contains all of the attributes listed above in *Base POI Attributes* on page 730, and the following non-base attributes.

### 8.13.2 Facility Name

The Facility Name is equivalent to the POI Name.

### 8.13.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

### 8.13.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

## Reference Guide

Attributes - Points of Interest

8.14 Business Facilities (Business)

# 8.14 Business Facilities (Business)

---

## 8.14.1 Base POI Attributes

The Business Facilities Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attributes.

## 8.14.2 Facility Name

The Facility Name is equivalent to the POI Name.

## 8.14.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

## 8.14.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

# 8.15 Community Service Centres (CommSvc)

---

## 8.15.1 Base POI Attributes

The Community Service Centres Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attribute.

## 8.15.2 Building Type

### Definition

The attribute modifiers for Building Type indicate which type of religious building is represented by a Place of Worship(9992) POI.

### Attribute Modifier Value

- 1 - Mosque
- 2 - Church
- 3 - Temple
- 4 - Synagogue
- 5 - Ashram

## Reference Guide

Attributes - Points of Interest

8.16 Educational Institutions (Edulnsts)

6 - Other

7 - Gurdwara

8 - Pagoda

### Usage

The Building Type can be used to identify which type of religious building is represented by a Place of Worship(9992) POI.

## 8.15.3 Facility Name

The Facility Name is equivalent to the POI Name.

## 8.15.4 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

## 8.15.5 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

## 8.16 Educational Institutions (Edulnsts)

---

### 8.16.1 Base POI Attributes

The Educational Institutions Layer contains all of the attributes listed above in *Base POI Attributes* on page 730, and the following non-base attributes.

### 8.16.2 Facility Name

The Facility Name is equivalent to the POI Name.

### 8.16.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

### 8.16.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

## 8.17 Parking (Parking)

---

### 8.17.1 Base POI Attributes

The Parking Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attributes.

### 8.17.2 Facility Name

The Facility Name is equivalent to the POI Name.

### 8.17.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

### 8.17.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

## 8.18 Border Crossing (BordCross)

---

### 8.18.1 Base POI Attributes

The Border Crossing Layer contains all of the attributes listed above in [Base POI Attributes](#) on page 730, and the following non-base attributes.

### 8.18.2 Facility Name

The Facility Name is equivalent to the POI Name.

### 8.18.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

### 8.18.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

## Reference Guide

Attributes - Points of Interest

8.19 Miscellaneous Categories (MiscCategories)

# 8.19 Miscellaneous Categories (MiscCategories)

## 8.19.1 Base POI Attributes

The Miscellaneous Categories Layer contains all of the attributes listed above in *Base POI Attributes* on page 730, and the following non-base attributes.

## 8.19.2 Facility Name

The Facility Name is equivalent to the POI Name.

## 8.19.3 Facility Name Language Code

The Facility Name Language Code is equivalent to the Language Code.

## 8.19.4 Facility Name Type

The Facility Name Type is equivalent to the POI Name Type.

# 8.20 POI Trans (PoiTrans)

① **Note:**

This layer appears in MapInfo, but is not populated.

## 8.20.1 POI ID

① **Note:**

This attribute is not populated in MapInfo.

See *POI ID* on page 730.

## 8.20.2 Sequence Number

① **Note:**

This attribute is not populated in MapInfo.

See *Sequence Number (POIs)* on page 731.

## 8.20.3 Facility Type

① **Note:**

## Reference Guide

Attributes - Points of Interest

8.20 POI Trans (PoiTrans)

This attribute is not populated in MapInfo.

See [Facility Type](#) on page 732.

### 8.20.4 Transliteration Type

① **Note:**

This attribute is not populated in MapInfo.

See [Transliteration Type](#) on page 516.

### 8.20.5 POI Name Transliteration

① **Note:**

This attribute is not populated in MapInfo.

See [Transliteration](#) on page 518.

### 8.20.6 Street Name Transliteration

① **Note:**

This attribute is not populated in MapInfo.

See [Transliteration](#) on page 518.

### 8.20.7 Actual Address Transliteration

① **Note:**

This attribute is not populated in MapInfo.

See [Transliteration](#) on page 518.

### 8.20.8 Full POI Street Number

① **Note:**

This attribute is not populated in MapInfo.

See [Full POI Street Number](#) on page 747.

### 8.20.9 Actual Street Name Transliteration

① **Note:**

This attribute is not populated in MapInfo.

#### Definition

Provides the transliterated and parsed address of the street name in Unicode.

#### Value

## Reference Guide

Attributes - Points of Interest

8.21 Point Address (PointAddr)

A string representing the actual parsed address of the street name in Unicode.

### Usage

Actual Street Name Transliteration can be used in conjunction with related attributes to create the transliterated address of a POI.

## 8.20.10 Actual Admin Name Transliteration

### Note:

This attribute is not populated in MapInfo.

### Definition

Provides the transliterated and parsed actual name of the administrative area in Unicode.

### Value

A string representing the parsed actual name of the administrative area in Unicode.

### Usage

Actual Admin Name Transliteration can be used in conjunction with related attributes to create the transliterated address of a POI.

## 8.20.11 Actual Postal Code Transliteration

### Note:

This attribute is not populated in MapInfo.

### Definition

Provides the transliterated and parsed actual postal code address in Unicode.

### Value

A string representing the actual parsed postal code address of the postal code in Unicode.

### Usage

Actual Postal Code Transliteration can be used in conjunction with related attributes to create the transliterated address of the POI.

## 8.21 Point Address (PointAddr)

---

### 8.21.1 Link ID

See [Link ID](#) on page 367.

## Reference Guide

Attributes - Points of Interest

8.21 Point Address (PointAddr)

### 8.21.2 Point Address ID

#### Definition

The Point Address unique identifier.

#### Value

nnnnnnnnnn

#### Length

10

#### Type

Numeric

### 8.21.3 Side

See [Side](#) on page 748.

### 8.21.4 Feature ID

See [Feature ID](#) on page 513.

### 8.21.5 Language Code

See [Language Code](#) on page 618.

### 8.21.6 Address

#### Definition

The Address attribute provides the address that distinctly identifies the Point Address along the specified Street Name or Building Name. The Address provides an addressable location in combination with either Street Name or Building Name.

#### Length

75

#### Length

40 (in PointAddress layer in dbf)

#### Type

Text

#### Usage

The Address should be used for destination selection or could be used for map display.

# Reference Guide

Attributes - Points of Interest

8.21 Point Address (PointAddr)

here

## Specification

- The Address can be numeric or alphanumeric.
- The Address has an associated language code, which is field Language Code in the Point Address layer. The default language code of the applicable country is associated to the Address.
- The Address is optional and is empty for Point Addresses that are not identified by a house number (address). This happens for situations where
  - Point Address is identified only through a Building Name
  - Point Address generated from an unaddressed POI. These Point Addresses are flagged Enhanced = 'N'.
- Each Address has an associated Address Type.
- The Address Type for a Point Address is optional and is empty for Point Addresses without Address.
- The address format of the Address for the Point Address can be different from the link's address range format.

## 8.21.7 Address Type

See [Address Type](#) on page 513.

## 8.21.8 Point Address Display X Coordinate

### Definition

Point Address Display X/Y Coordinate represents the Display location of the Point Address.

### Value

Coordinates of Latitude and Longitude in HERE Units (0.00001 degrees)

### Length

12

### Type

Numeric

### Specification

- Point Address Display X/Y Coordinates are only provided if they differ from the Arrival Link ID.
- See [Figure 348](#): on page 788 as an example of Point Address Display X/Y Coordinate and Arrival Link ID.

## 8.21.9 Point Address Display Y Coordinate

### Definition

Point Address Display X/Y Coordinate represents the Display location of the Point Address.

### Value

## Reference Guide

Attributes - Points of Interest

8.21 Point Address (PointAddr)

Coordinates of Latitude and Longitude in HERE Units (0.00001 degrees)

### Length

12

### Type

Numeric

### Specification

- See the Specification section under [Point Address Display X Coordinate](#) on page 786 above.

## 8.21.10 Building Name

### Definition

Building Name is a Point Address attribute to publish the name of the building that identifies the Point Address. For certain countries the *Building Name* is an alternative to the address for identifying a Point Address, and required to define the Point Address.

### Length

60

### Length

105 (in PointAddress layer of dbf)

### Type

Text

### Usage

The Building Name attribute can be used for destination selection. The Building Name combination provides an addressable entity.

### Specification

- The Building Name is optional for a Point Address.
- A Building Name can have a corresponding Transliteration when the building name in the native language includes non-Latin-1 characters. Transliterations of Building Name can be found in the Unicode look-aside file.
- The Building Name either in conjunction with the Street Name or administrative information provides an addressable feature.
- The Building Name can be applied in combination with the Address for a Point Address.

## 8.21.11 Arrival Link ID

### Definition

Arrival Link is the link with the drive-to Link for the Point Address. The Arrival Link represents the link where one would like to guided to when selecting a specific Point Address.

## Reference Guide

Attributes - Points of Interest

8.21 Point Address (PointAddr)

### **Note:**

There are a few instances where the Arrival Link is a pedestrian-only link.

### Value

Arrival Link, which is a foreign key into the Streets layer.

### Length

10

### Type

Numeric

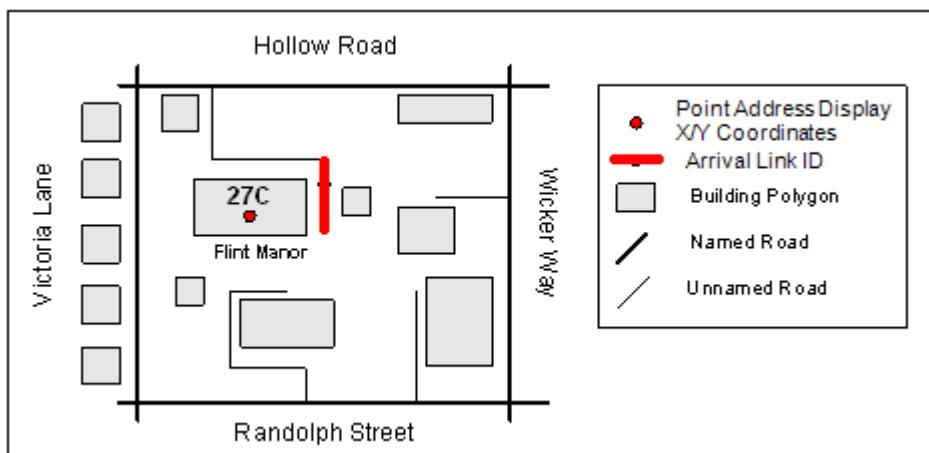
### Usage

The Arrival Link is used for route calculation and route guidance, and represents the drive-to Link for the Point Address.

### Specification

- A Point Address always has an Arrival Link associated.
- Latitude and Longitude for the Arrival Link are not provided. This information can be derived by using ArcGIS.
- Arrival Side indicates on which side of the Arrival Link the Point Address is located.
- The Administrative, Postal and Zone coding associated to the Arrival Link is insignificant for the Point Address. Only the Address Link (Link ID and Feature ID) provides the addressable information for the Point Address.

**Figure 348:**



## 8.21.12 Arrival Side

### Definition

Arrival Side indicates on which side of the Arrival Link the Point Address is located.

### Value

L - Left

## Reference Guide

Attributes - Points of Interest

8.22 Point Address Trans

R - Right

### Length

1

### Type

Text

## 8.21.13 Enhanced

### Definition

Enhanced is an attribute to identify if the Point Feature has been verified or has been automatically generated.

### Value

Y - Point Address is from a trusted source and/or has been verified

N - Point Address is generated from non spatial data in the context of location referencing

 **Note:** No default value applies to Enhanced.

### Length

1

### Type

Boolean

### Usage

The Enhanced attribute can be used to differentiate between Point Addresses that are verified, and Point Addresses that are automatically generated but do not necessarily represent a verified position.

### Specification

- Enhanced = Y is coded for the majority of Point Address data.
- Enhanced = N is coded only for Point Addresses generated from non spatial sources.

## 8.22 Point Address Trans

 **Note:**

This layer appears in MapInfo, but is not populated.

## 8.22.1 Point Address ID

 **Note:**

This attribute is not populated in MapInfo.

See [Point Address ID](#) on page 785.

### 8.22.2 Transliteration Type

 **Note:**

This attribute is not populated in MapInfo.

See [Transliteration Type](#) on page 516.

### 8.22.3 Address Transliteration

 **Note:**

This attribute is not populated in MapInfo.

See [Transliteration](#) on page 518.

### 8.22.4 Building Name Transliteration

 **Note:**

This attribute is not populated in MapInfo.

See [Transliteration](#) on page 518.

## 8.23 Point of Interest Association (PoiAssoc)

---

### 8.23.1 Parent ID

**Definition**

The POI ID of the associated parent POI.

**Value**

nnnnnnnnnn

**Length**

10

**Type**

Numeric

### 8.23.2 Child ID

**Definition**

The POI ID of the associated child POI.

**Value**

## Reference Guide

Attributes - Points of Interest

8.23 Point of Interest Association (PoiAssoc)

nnnnnnnnnn

### Type

Numeric

## 8.23.3 Assoc Type

### Definition

Indicates whether the POI is physically or logically associated with this (the parent) POI.

### Value

L – Logical Relation

P – Physical Relation

### Length

1

### Type

Text

### Usage

Association Type can be used to provide information that the desired destination is located within, or serves another POI, such as a hotel near an airport.

### Specification

- Physical relationship is identified when the POIs are physically located in, or are directly attached, to each other.
- Logical relationship is identified when the POIs are not physically located in, or not directly attached, to each other. For example, a Rental Car Agency that serves an airport may be located outside the airport grounds.

### General

- An association is applied when two POIs have a relationship (i.e., the child POI has a relationship to the parent POI). POIs sharing the same building do not necessarily qualify for Parent/Child coding. For example, a Parent/Child Association is applied for a Restaurant in a Hotel, or for a Bookstore in a Train Station. A Parent/Child Association however, is not applied for a Bank at the ground floor of a Business Facility POI if the bank is directly accessible from the street.
- A POI may have up to ten parents.
- A POI may have an unlimited number of children.

In North America, for example, Hospital POIs (both the main entrance and the ER entrance) within a driving distance of 4.8 kilometres (3 miles) from a Highway Exit POI are applied as children. This results in an unusually large number of Parent/Child relationships.

# Reference Guide

Attributes - Points of Interest

8.23 Point of Interest Association (PoiAssoc)

here

## Physical vs. Logical

- Physical Relation is identified when the Parent/Child POIs are physically located in, or are directly attached to each other.  
Examples:
  - Physical is applied for additional POIs placed on multiple entrances of a National Park POI.
  - Physical is applied for all POIs within the boundary of the main POI that represents a facility with limited access, e.g., industrial zones with checkpoints or requiring payment for admission.
- Logical Relation is identified when the Parent/Child POIs are not physically located in, or not directly attached to each other.

Example:

- Logical is applied for a Parking Lot POI that is located outside any of the terminal buildings at an airport.

## Multiple Parent/Child Associations

- A POI can be designated both as a parent and a child if it is according to reality.

Examples:

- A Hotel is a parent to a Restaurant and a child to a Highway Exit.
- A Delivery Entrance is the Parent of a Dock and child to a Shopping Centre.
- An Airport Terminal is the child of the Airport and the parent of a Parking Lot.

## Multiple Entrances

- When there are multiple entrances to a feature on different streets, then a POI is created for each entrance, when navigationally significant.
- The main entrance (if possible) is designated as the parent POI and the remaining entrances as the children POI with a physical relationship.
- Parent/Child coding is applied to POIs with the same Facility Type located in the same building but representing two different facilities. For example, Embassy and Consulate (both coded as Embassy), or Dental and Medical clinic (both coded as Medical Service).

### Examples

The following are illustrations how Parent/Child Associations are implemented on select POIs.

## Airport

- The Airport is designated as the Parent and facilities associated with the Airport as the Children.
  - Assoc Type = P(Physical Relation) is applied if the facility is within any of the main airport buildings, e.g., terminals, ticketing/booking buildings, etc.
  - Assoc Type = P(Physical Relation) is applied between the main Airport and Airport terminal POIs.
  - Assoc Type = L(Logical Relation) is applied if the facilities are outside of any of the above-mentioned major buildings, but associated with the Airport.

## Reference Guide

Attributes - Points of Interest

8.23 Point of Interest Association (PoiAssoc)

- Hotels or Motels are Assoc Type = L(Logical Relation) of the Airport when:
  - Phone book lists the Hotel at the Airport location.
  - Hotel name includes the Airport name.
  - Hotel is within approximately two miles of the entrance of the Airport.

### Airport Terminals

- The Airport terminal is designated as the Parent of a Parking Garage or Parking Lot when the parking facility is designated on signage as a parking area for a particular Airport terminal.

### Automobile Dealership with Motorcycle Dealership

- The Automobile Dealership POI is designated as the parent of the Motorcycle Dealership POI when located in the same building.
-  **Note:** Parent-Child Association is not applied between Automobile Dealership POIs and Auto Service & Maintenance POIs.

### Business Facility

- A Parent/Child relationship is applied between a Business Facility and additional POIs located at the ground floor if they are only accessible from inside the building. Assoc Type = P(Physical Relation) is applied.

### Highway Exit

- Assoc Type = L(Logical Relation) between Highway Exit POIs and the following POI Facility Types:
  - ATM
  - Auto Service & Maintenance
  - Bank
  - Business Facility
  - Coffee Shop
  - Grocery Store
  - Hospital
  - Hotel
  - Petrol/Gasoline Station
  - Rest Area
  - Restaurant
  - Shopping

### Hospital

- The main public entrance and the emergency room entrance are added at their actual locations. The main Hospital entrances is designated as the parent and the emergency entrance as the child. Assoc Type = P(Physical Relation) is applied.

### Hotel/Parking Garage (North America)

- A Parent/Child relationship is applied where the Hotel is the parent and the Parking Garage is the child.

## Industrial Zone

- Parent-Child Association is applied between an Industrial Zone and other POIs only if the facilities are related to the Industrial Zone. For example, a Business Facility can be the Child POI of an Industrial Zone.

## Residential Area/Building

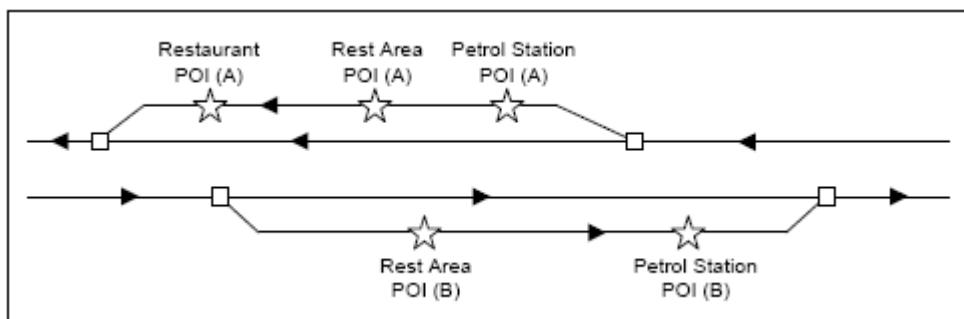
- A Parent/Child relationship can exist between a Residential Area/Building POI and additional POIs located at the ground floor, if the Child POIs are only accessible from inside the building. The Assoc Type = P(Physical Relation) in these instances.

## Rest Area

- A Parent/Child relationship can exist between Rest Area POIs (Parent), and other related POIs (Children) at the rest area (e.g., Restaurants, Hotels, etc.). The Assoc Type = P(Physical Relation).
- For Rest Areas that have facilities on both sides of the motorway which are accessible via a bridge or tunnel for pedestrians the Parent/Child relationship shown in [Figure 349](#): on page 794 is applied.

Parent	Children
Rest Area (A)	Restaurant (A)
	Petrol Station (A)
Rest Area (B)	Petrol Station (B)

**Figure 349:**



## Ski Resort - Ski Lift

- A Parent/Child relationship is applied between the Ski Resort and the associated Ski Lift POIs. The Ski Resort is designated as the parent and the Ski Lift POIs as the children, if the Ski Lift is part of a ski resort/ski area. The Assoc Type = L(Logical Relation).

# 8.24 Actual POI Location (ActPOILoc)

## 8.24.1 POI ID

See [POI ID](#) on page 730.

## Reference Guide

Attributes - Points of Interest

8.24 Actual POI Location (ActPOILoc)

### 8.24.2 Facility Type

See [Facility Type](#) on page 732.

### 8.24.3 Display Location X, Y (Geometry)

#### Definition

Display Location represents the actual position of the POI or a Point Address. It is not an attribute contained in the Actual POI Location layer, but is geometry that is included in the layer.

#### Usage

Represents the coordinates of the location representing the centre point of the main building/facility/complex where the POI is located. This can be used for display or explication.

#### Specification

- Actual POI display location coordinates are floating coordinates not positioned on any existent road network geometry.
- Generally, Display Location coordinates are published for categories that include, but may not be limited to the following POI Features:
  - Amusement Parks
  - Auto Dealerships (brand dependent)
  - Casinos
  - Exhibition and Conference Centres
  - Golf Courses
  - Hospitals
  - Shopping Centres
  - Sports Complexes
- Display Location coordinates are also published for POIs that have a 2D landmark icon file associated.
- Display Location coordinates may be published for Hamlet or Named Place POI in China only, as an exception.

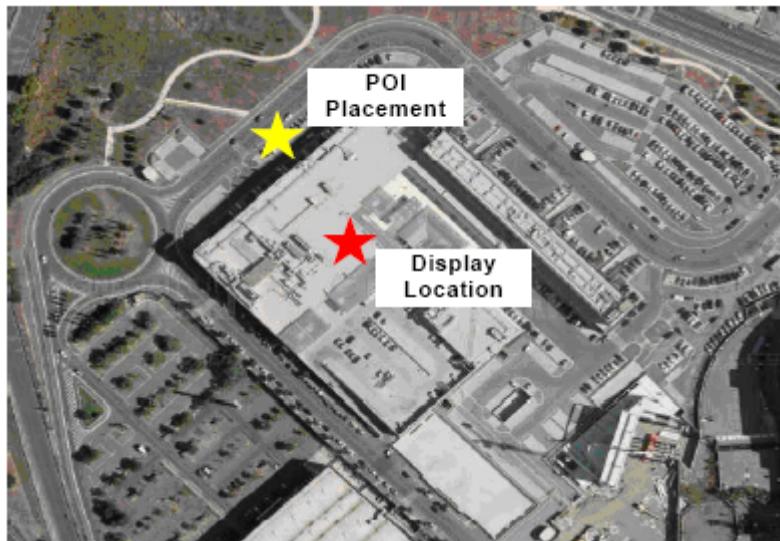
## Reference Guide

Attributes - Points of Interest

8.25 POI File Association (PoiFileAssoc)

- The Display Location coordinates are represented in [Figure 350](#): on page 796 by the Display Location flag and are the centre point of the main building/facility/complex.

**Figure 350:**



## 8.25 POI File Association (PoiFileAssoc)

### 8.25.1 POI ID

See [POI ID](#) on page 730.

### 8.25.2 File Type

See [File Type](#) on page 726.

### 8.25.3 Attachment Type

See [Attachment Type](#) on page 727.

### 8.25.4 File Name

#### Definition

A textual description of the associated file name. This is used to find the file in the look-aside file.

#### Length

150

#### Type

Text

## Reference Guide

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8.26 POI Attribute (POIAttr)

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### Related Condition

Junction View (Condition Type = 20)

### Related Attributes

File Type

Attachment Type

### Usage

File Name provides an explicit reference to the auxiliary file and allows for retrieval of the file.

### Rules

- File names are provided as look-aside textual field with descriptions of the file name that publishes additional information associated to the condition.
- Files are provided as look-aside data to NAVSTREETS.
- Detailed File Name conventions are defined for the Scalable Vector Graphic (SVG) file. Please refer to the SVG specification document, a separate document, for the naming conventions in the SVG files.

## 8.26 POI Attribute (POIAttr)

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### 8.26.1 POI ID

See [POI ID](#) on page 730.

### 8.26.2 Facility Type

See [Facility Type](#) on page 732.

### 8.26.3 Attribute Type

#### Definition

The attribute type associated with the POI.

#### Values

Attribute Type	Description
1	Food Type
3	Vanity City ID
4	Population
5	Capital Indicator
11	Diesel

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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Attribute Type	Description
15	24 Hour Indicator
16	Building Type
18	Rest Area Type
22	Airport Type
28	Alternate Food Type
29	Regional Food Type
30	Restaurant Type
33	Subcategory
34	Entrance Type
37	Family Chain ID

## Layers

POI Attribute

Feature Attribute Layer

## Related Attributes

POI ID

Facility Type

Attribute Value

Chain ID

## Usage

Provides additional sub category POI information for explication and display.

POI Family Chain ID can be used for POI destination selection and display.

## Specification

- Family Chain ID is the family chain name to which the POI belongs to (e.g., A POI Holiday Inn Express, is coded with Family Brand Name “IHG”).
- A POI can only have one Family Chain ID.
- Family Chain ID may be published for any POI Facility Types.

Example: The following Auto Dealership POIs are published in a Location Association.

POI with POI ID 342524480 publishes Family Chain ID BMW since Mini is part of the BMW auto dealership family.

POI_ID	NAME	LOCATION_ID	CAT_ID	CHAIN_ID	PHONE_NUMBER
342510592	BARON BMW	1413519	5511	10265	+(1)-913-7225100

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

here

POI_ID	NAME	LOCATION_ID	CAT_ID	CHAIN_ID	PHONE_NUMBER
342524480	BARON BMW	1413519	5511	938	+(1)-913-7225100

- Family Chain ID is associated to a POI based on the Chain Name.

When in reality, more than one distinct Family Chain Name exists for a specific Chain, only the predominant Family Chain Name is coded. Thus, a Family Chain ID might not be valid for some specific POIs. These situations are limited in frequency and to specific areas.

For example, "AGIP" Petrol Stations are coded with Family Chain ID "ENI". However, in Portugal, these POIs should be coded with Family Chain ID "GALP" instead.

- Exonyms for Family Chain Name, where existing, may be published.

## 8.26.4 Attribute Value

### Definition

The attribute value associated with the POI.

### Value

Value	Description
1	Car Wash
2	Auto Parts
3	Car Repair
4	Truck Repair
5	Tire Repair
6	Emission Testing
7	Fitness & Health Club
8	Racketball Court
9	Shooting Range
10	Indoor Ski
11	Soccer Club
12	Squash
13	Swimming Pool
14	Tennis Court
15	Indoor Sports
16	Hockey
17	Hotel

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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Value	Description
18	Motel
19	Guest House
20	Hostel
21	Holiday Park
22	Bed & Breakfast
23	Family/General Practice
24	Dentist
25	Clinic/Medical Centre
26	Nursing Home
27	Psychiatric Institute
28	Underground Train/Subway
29	Commuter Train
30	Pharmacy
31	Drugstore
32	Cemetery
33	Crematorium
34	Bar/Pub/Stube/Biergarten
36	Night Club
37	Dancing
38	Karaoke
39	Entertainment/Cabaret/Live Music
40	Billiards/Pool Hall
41	Video Arcade/Gaming Room
42	Jazz Club
44	Pet Supply
45	Warehouse/Wholesale
46	Food/Beverage
47	Men's Apparel
48	Women's Apparel

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

here

Value	Description
49	Children's Apparel
50	Shoes/Footwear
51	Short-time Motel
52	Seaport/Harbour
53	Railyard
54	Airport Cargo
55	Zoo
56	Wild Animal Park
57	Wildlife Refuge
58	Aquarium
59	Garden
60	Beach
61	Sports Field
62	Boat Ferry
63	Rail Ferry
64	Van Repair
65	Gallery
66	Science
67	Children's
68	History
69	Art
70	Mobile Retailer
71	Mobile Service Centre
72	Basketball
73	Badminton
74	Cellphone Parking Lot
75	Rugby
76	Diving Centre
77	Power Equipment Dealer

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

here

Value	Description
78	Trailhead
79	Hobby, Toy, and Game Store
80	Off Road Vehicle Area
81	Pediatrician
82	Bakery
83	Butcher
84	Dairy Goods
85	Sweets Shop
86	Pre-School
87	Coaching Institute
88	Fine Arts
89	Language Studies
90	Electrical
91	Plumbing
92	Blood Bank
93	Outdoor Market
94	Indoor Market
95 <sup>146</sup>	Waking Path
96 <sup>146</sup>	Bicycle Path
97 <sup>146</sup>	Off-Road
100	Tsunami
101	Fire
102	Earthquake
103	Volcanic Eruption
104	Flood
1026	Non-Star Hotel
1027	5 Star
1028	4 Star

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

here

Value	Description
1029	3 Star
1030	1-2 Star
1035	Fishing
1091	Ping Pong
1092	Sauna
1093	Condo
1094	Home Lodging
1097	Funeral Hall
1098	Cinerarium
1099	LPG Only

## Related Attributes

POI ID

Facility Type

Attribute Type

## Usage

The Subcategory value for the POI.

## Specification

See the next section for a detailed description.

## 8.26.4.1 Attribute Modifier Value: SUBCATEGORY

### Note:

Starting in Q1, 2014, country-level inclusion of POI Subcategories is included in the SPIL (Standard POI Inclusion List), as announced in TNM-0180.

## Definition

Subcategory provides a subcategory classification for POIs.

## Usage

Subcategory modifier allows the user to select POIs by the desired sub category.

## Specification

<sup>146</sup> Metadata is present, but no information is currently published in this POI Subcategory.

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

here

- Subcategory can be published for any POI belonging to the Facility Types below.

- Subcategory is not published for a POI when it does not belong to any of the Subcategory values listed.

## Auto Service and Maintenance (7538)

- The following Subcategory values are only used for Auto Service and Maintenance (7538) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
1	Car Wash	An Auto Service & Maintenance with car washing as its primary function.
2	Auto Parts	An Auto Service & Maintenance with the sale of automotive parts as its primary function. Auto dealerships that sell auto parts as a sub-service are not applicable.
3	Car Repair	Automotive service centres and certified garages.
4	Truck Repair	An Auto Service & Maintenance with truck repair as its primary function.
5	Tire Repair	An Auto Service & Maintenance with tire repair as its primary function.
6	Emission Testing	An Auto Service & Maintenance with emission testing as its primary function.
64	Van Repair	An Auto Service & Maintenance with van repair as its primary function.

- A maximum of three Subcategory modifier values can be published on a Auto Service and Maintenance (7538) POI.

## Sport Centre (7997)

- The following Subcategory values are only used for Sport Centre (7997) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
7	Fitness & Health Club	A Sports Centre that houses exercise equipment.
8	Racket Ball Court	A Sports Centre that primarily functions as a facility for playing racketball.
9	Shooting Range	A Sports Centre that primarily functions as a shooting range.
10	Indoor Ski	A Sports Centre that primarily functions as a facility for participating in indoor ski activities.
11	Soccer Club	A Sports Centre that primarily functions as a facility for playing soccer.

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Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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Modifier		Definition
Value	Description	
12	Squash	A Sports Centre that primarily functions as a facility for playing squash.
13	Swimming Pool	A Sports Centre that primarily functions as a facility for swimming (indoor and/or outdoor)
14	Tennis Court	A Sport Centre that primarily functions as a facility for playing tennis.
15	Indoor Sports	A Sport Centre that functions as a facility for participating in a variety of indoor sports.
16	Hockey	A Sport Centre that functions as a facility for playing hockey.
72	Basketball	A Sports Centre that functions as a facility for playing basketball.
73	Badminton	A Sports Centre that functions as a facility for playing badminton.
75	Rugby	A Sports Centre that functions as a facility for playing rugby.
76	Diving Centre	A Sports Centre that primarily functions as a facility for scuba diving.
1035	Fishing	A Sports Centre that functions as a facility for fishing.
1091	Ping Pong	A Sports Centre that functions as a facility for playing ping pong.
1092	Sauna	A Sports Centre that functions as a sauna facility.

- A maximum of five Subcategory modifier values can be published on Sports Centre (7997) POIs Hotel (7011)
- The following Subcategory values are only used for Hotel (7011) POIs and used in the following coverage:

Modifier		Definition
Value	Description	
17	Hotel	A Hotel facility that primarily provides lodging and usually meals, entertainment, and various personal services for the public.
18	Motel	A Hotel facility that primarily provides lodging and parking in which the rooms are usually accessible from an outdoor parking area.
1026	Non-Star Hotel	A Hotel facility that has no star rating.
1030	1-2 Star	A Hotel facility that has a 1 or 2 star rating.
1029	3 Star	A Hotel facility that has a 3 star rating.

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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Modifier	Definition	
Value	Description	
1028	4 Star	A Hotel facility that has a 4 star rating.
1027	5 Star	A Hotel facility that has a 5 star rating.

- Only one Subcategory modifier value can be published on Hotel (7011) POIs.

## Other Accommodation (7013)

- The following Subcategory values are only used for Other Accommodation (7013) POIs and used in the following coverage:

Modifier	Description	
Value	Description	
19	Guest House	A small house or cottage, adjacent to a main house, available for lodging.
20	Hostel	A supervised, inexpensive lodging place for travellers, especially youth.
21	Holiday Park	An area with rental cottages and a variety of holiday related activities (e.g., bowling, restaurants, swimming, mini golf, etc.).
22	Bed & Breakfast	A lodging facility providing breakfast (but not other meals) and lodging at an inclusive price. These are typically private homes with only one or two bedrooms available for commercial use.
51	Short Time Motel	A small house or cottage, adjacent to a main house, available for lodging.
1093	Condo	A lodging facility that is a condominium.
1094	Home Lodging	A lodging facility that is actually a home available for lodging.

- Only one Subcategory modifier value can be published on Other Accommodation (7013) POIs.
- Short-time Motel is coded for motels designed for romantic encounters, usually not requiring a full night's accommodation.

## Medical Services (9583)

- The following Subcategory values are only used for Medical Services (9583) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
23	Family/General Practice	A Medical Service that offers medical services to individual persons or families.
24	Dentist	A Medical Service that offers dental services.
25	Clinic/Medical Centre	A Medical Service that offers quality medical services to the general public.

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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Modifier	Definition	
Value	Description	
26	Nursing Home	A Medical Service that primarily functions as a facility that provides constant nursing care to the elderly.
27	Psychiatric Institute	A Medical Services that primarily functions as a facility for mental health services.
81	Pediatrician	A Medical Service whose physicians specialize in the care and treatment of children.
82	Blood Bank	A Medical Service where blood is collected from donors, typed, separated into components, stored, and prepared for transfusion to recipients.

- Only one Subcategory modifier value can be published on Medical Services (9583) POIs.

Commuter Rail Station (4100)

- The following Subcategory values are only used for Commuter Rail Station (4100) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
28	Underground Train/Subway	A Commuter Rail Station POI that provides access to an underground rail transit system.
29	Commuter Rail Station	A Commuter Rail Station POI that provides access to an above ground rail transit system.

- A maximum of two Subcategory modifier values can be published on Commuter Rail Station (4100) POIs.

Pharmacy (9565)

- The following Subcategory values are only used for Pharmacy (9565) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
30	Pharmacy	A Pharmacy POI that prepares and dispenses prescription drugs.
31	Drugstore	A Pharmacy POI that sells other goods (i.e., cosmetics, snacks, beverages) in addition to prescription drugs.

- Only one Subcategory modifier can be published on Pharmacy (9565) POIs.

Cemetery (9591)

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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- The following Subcategory values are only used for Cemetery (9591) POIs and used in the following coverage:

Modifier		Definition
Value	Description	
32	Cemetery	A Cemetery POI that represents a parcel of land designated for the burial of human remains.
33	Crematorium	A Cemetery POI that represents a facility specialising in the incineration of human remains.
1097	Funeral Hall	A Cemetery POI that represents a facility that provides funeral-related services.
1098	Cinerarium	A Cemetery POI that represents a facility where ashes of the deceased are kept.

- A maximum of two Subcategory modifier values can be published on Cemetery (9591) POIs.

## Nightlife (5813)

- The following Subcategory values are only used for Nightlife (5813) POIs and used in the following coverage:

Modifier		Definition
Value	Description	
34	Bar/Pub/Stube/Biergarten	A Nightlife POI that provides alcoholic beverages (i.e., beer, wine, liquor drinks) and light meals.
36	Nightclub	A Nightlife POI that provides evening entertainment generally until the very early morning.
37	Dancing	A Nightlife POI that provides a place to dance.
38	Karaoke	A Nightlife POI that provides a place to sing karaoke.
39	Live Entertainment/Music/Cabaret	A Nightlife POI that provides music or live entertainment.
40	Billiards/Pool Hall	A Nightlife POI where one can play billiards/pool.
41	Video Arcade/Gaming Room	A Nightlife POI where one can play video games.
42	Jazz Club	A Nightlife POI where one can enjoy Jazz music in a club setting.

- Only one Subcategory modifier value can be published on Nightlife (5813) POIs.

## Specialty Store (9567)

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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- The following Subcategory values are only used for Specialty Store (9567) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
44	Pet Supply	A Specialty Store POI that provides goods and services for family pets.
45	Warehouse/Wholesale	A Specialty Store POI where one can buy goods in bulk, e.g., Sam's Club, Costco.
46	Food/Beverage	A Specialty Store POI that sells specialty food and/or beverages, e.g., liquor stores, wine stores, candy shops.
79	Hobby, Toy, and Game Store	A Specialty Store POI that specializes in hobby supplies such as model airplanes, trains, boats, and remote control cars; toys and games such as board games, video games, puzzles and dolls.
82	Bakery	A Specialty Store POI where a consumer can purchase fresh bakery items and associated goods.
83	Butcher	A Specialty Store POI where a consumer can purchase fresh meats and associated goods.
84	Dairy Goods	A Specialty Store POI where a consumer can purchase fresh dairy products and associated goods.
85	Sweets Shop	A Specialty Store POI where a consumer can purchase candies, sweets and associated items

- Only one Subcategory modifier value can be published on Specialty Store (9567) POIs.

## Clothing Store (9537)

- The following Subcategory values are only used for Clothing Store (9537) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
47	Men's Apparel	A Clothing Store POI that primarily sells men's wear and accessories.
48	Women's Apparel	A Clothing Store POI that primarily sells women's wear and accessories.
49	Children's Apparel	A Clothing Store POI that primarily sells clothes and accessories for children.
50	Shoes/Footwear	A Clothing Store POI that primarily sells shoes.

- A maximum of four Subcategory modifier values can be published on Clothing Store (9537) POIs.

## Cargo Centre (9714)

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

here

- The following Subcategory values are only used for Cargo Centre (9714) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
52	Seaport/Harbour	A Cargo Centre POI where large container ships dock to load/unload cargo.
53	Railyard	A Cargo Centre POI which is a major hub for freight trains, where freight is transferred to/from cargo ships.
54	Airport Cargo	A Cargo Centre POI that is a portion of an airport dedicated to the transport of cargo.

- Only one Subcategory modifier value can be published on Cargo Centre (9714) POIs.

## Animal Park (9718)

- The following Subcategory values are only used for Animal Park (9718) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
55	Zoo	An Animal Park POI where live animals are kept in cages or large enclosures for public exhibition.
56	Wild Animal Park	An Animal Park POI where wild animals are kept in an open environment for public exhibition.
57	Wildlife Refuge	An Animal Park POI where animals are kept in their natural environment for conservation and exhibition.
58	Aquarium	An Animal Park POI where live fish and other aquatic animals are kept for public exhibition.

- Only one Subcategory modifier can be published on Animal Park (9718) POIs.

## Park/Recreation Area (7947)

- The following Subcategory values are only used for Park/Recreation Area (7947) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
59	Garden	A Park/Recreation Area POI that is a garden, e.g., a botanic garden.
60	Beach	A Park/Recreation Area POI that primarily functions as a beach.
61	Sports Field	A Park/Recreation Area POI that primarily serves as a public sports field.

# Reference Guide

Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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Modifier	Definition	
Value	Description	
78	Trailhead	A Park/Recreation Area POI that represents the beginning point for a 4WD vehicle trail or hiking trail. These areas may contain parking areas for vehicles or trailers, a map or information of the trail ahead, brochures, and restrooms.
80	Off Road Vehicle Area	A Park/Recreation POI that represents remote public areas and/or trails for off-road driving by 4WD vehicles, ATVs, etc.

- Only one Subcategory modifier can be published on Park/Recreation Area (7949) POIs.

Ferry Terminal (4482)

- The following Subcategory values are only used for Ferry Terminal (4482) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
62	Boat Ferry	A Ferry Terminal POI that is for a boat ferry.
63	Rail Ferry	A Ferry Terminal POI that is for a rail ferry.

- A maximum of two Subcategory modifiers can be published on Ferry Terminal (4482) POIs.

Tourist Attraction (7999)

- The following Subcategory values are only used for Tourist Attraction (7999) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
65	Gallery	A Tourist Attraction POI that exhibits works of art.

- Only one Subcategory modifier can be published on Tourist Attraction (7999) POIs.

Museum (8410)

- The following Subcategory values are only used for Museum (8410) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
66	Science	A Museum POI that primarily contains objects of scientific interest.
67	Children's	A Museum POI that primarily contains objects of interest to children.
68	History	A Museum POI that primarily contains historical objects.
69	Art	A Museum POI that primarily contains objects of art.

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Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

- A maximum of two Subcategory modifiers can be published on Museum (8410) POIs.  
Consumer Electronics Store (9987)
- The following Subcategory values are only used for Consumer Electronics Store (9987) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
70	Mobile Retailer	A Consumer Electronics Store POI that is a company-authorized cell phone dealers.
71	Mobile Service Centre	A Consumer Electronics Store POI that offers cell phone repair.

- A maximum of two Subcategory modifier values can be published on Consumer Electronics Store (9987) POIs.

Parking Lot (7520)

- The following Subcategory values are only used for Parking Lot (7520) POIs and used in the following coverage:

Modifier	Definition	
Value	Description	
74	Cellphone Parking Lot	A Parking Lot POI where a driver, picking up an airline passenger, can park short-term while waiting for the passenger to call for pickup.

- Only one Subcategory modifier value can be published on Parking Lot (7520) POIs.

Home Improvement & Hardware Store (9986)

- The following Subcategory values are only used for Home Improvement & Hardware Store (9986) POIs and are used in the following coverage:

Modifier	Definition	
Value	Description	
77	Power Equipment Dealer	A Home Improvement & Hardware Store POI where one can purchase, rent, or service heavy or light-duty power equipment such as lawn mowers, generators, snow blowers, tillers, pumps, etc.

- Only one Subcategory modifier can be published on Home Improvement & Hardware Store (9986) POIs.

School (8211)

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8.26 POI Attribute (POIAttr)

here

- The following Subcategory values are only used for School (8211) POIs and are used in the following coverage:

Modifier		Definition
Value	Description	
86	Pre-School	A School POI for the education of children before the start of statutory education. Usually for children between the ages of two and five, dependent on the country's educational system.

- Only one Subcategory modifier can be published on School (8211) POIs.

Training Centre/Institute (9596)

- The following Subcategory values are only used for Training Centre/Institute (9596) POIs and are used in the following coverage:

Modifier		Definition
Value	Description	
87	Coaching Institute	A Training Centre/Institute POI where individuals are "coached" on various topics. For example, preparation for competitive exams, preparation for government jobs, preparation for admission into reputed universities, etc.
88	Fine Arts	A Training Centre/Institute POI where individuals learn an aspect of Fine Arts. For example, painting, photography, tap dance, etc.
89	Language Studies	A Training Centre/Institute POI where individuals learn a particular language.

- A maximum of three Subcategory modifiers can be published on Training Centre/Institute (9596) POIs.

Repair Services (9595)

- The following Subcategory values are only used for Repair Services (9595) POIs and are used in the following coverage:

Modifier		Definition
Value	Description	
90	Electrical	A Repair Services POI where a consumer can take electrical items for repair.
91	Plumbing	A Repair Services POI where a consumer can take plumbing items in for repair, or book an appointment with a plumber to visit the premises.

- A maximum of two Subcategory modifiers can be published on Repair Services (9595) POIs.

Grocery Store (5400)

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Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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- The following Subcategory values are only used for Grocery Store (5400) POIs and are used in the following coverage:

Modifier		Definition
Value	Description	
93	Outdoor Market	Large locally known markets in an open air environment that are open most days of the week with a set schedule; similar to a schedule of a standard grocery store.
94	Indoor Market	Large locally known markets in a permanent covered structure that are open most days of the week with a set schedule; similar to a schedule of a standard grocery store.

- A maximum of one Subcategory modifier can be published on Repair Services (9595) POIs.

Meeting Point (9725)

- The following Subcategory values are only used for Meeting Point (9725) POIs and are used in the following coverage:

Modifier		Definition
Value	Description	
100	Tsunami	The Meeting Point for a tsunami incident.
101	Fire	The Meeting Point for a fire incident.
102	Earthquake	The Meeting Point for an earthquake incident.
103	Volcanic Eruption	The Meeting Point for a volcanic eruption incident.
104	Flood	The Meeting Point for a Flood incident.

Petrol/Gasoline Station (5540)

- The following Subcategory values are only used for Petrol/Gasoline Station (5540) POIs and are used in the following coverage:

Modifier		Definition
Value	Description	
1099	LPG Only	A Petrol/Gasoline Station POI that sells LPG (Liquid Petroleum Gas) only.

The following table is an example of how Subcategories are published:

POI_ID	FAC_TYPE	ATTR_TYPE	ATTR_VALUE
1234561880	7538	33	1
1234561881	7538	33	2
1234561790	9714	33	19

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Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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POI_ID	FAC_TYPE	ATTR_TYPE	ATTR_VALUE
1234561722	9583	33	22
1234561723	9583	33	23
1234561721	9583	33	26

POI Category	Maximum Values Published	Value	Description	Definition
Animal Park (9718)	1	55	Zoo	An Animal Park POI where live animals are kept in cages or large enclosures for public exhibition.
		56	Wild Animal Park	An Animal Park POI where wild animals are kept in an open environment for public exhibition.
		57	Wildlife Refuge	An Animal Park POI where animals are kept in their natural environment for conservation and public exhibition.
		58	Aquarium	An Animal Park POI where fish or other aquatic animals are kept for public exhibition.
Auto Service and Maintenance (7538)	3	1	Car Wash	An Auto Service & Maintenance POI with car washing as its primary function.
		2	Auto Parts	An Auto Service & Maintenance POI with the sale of automotive parts as its primary function. Auto dealerships that sell auto parts as a sub-service are not applicable.
		3	Car Repair	Automotive service centres and certified garages.

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Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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POI Category	Maximum Values Published	Value	Description	Definition
		4	Truck Repair	An Auto Service & Maintenance POI with truck repair as its primary function.
		5	Tire Repair	An Auto Service & Maintenance POI with tire repair as its primary function.
		6	Emission Testing	An Auto Service & Maintenance POI with emission testing as its primary function.
		64	Van Repair	An Auto Service & Maintenance POI with van repair as its primary function.
Cargo Centre (9714)	1	52	Seaport/Harbour	A Cargo Centre POI where large container ships dock to load/unload their cargo.
		53	Railyard	A Cargo Centre POI, which is a major hub for freight trains where freight is transferred to/from cargo ships.
		54	Airport Cargo	A Cargo Centre POI, which is a portion of an airport, dedicated to the transportation of cargo.
Cemetery (9591)	2	32	Cemetery	Cemetery POI that represents a parcel of land designated for the burial of human remains.
		33	Crematorium	Cemetery POI that represents a facility specialising in the incineration of human remains.
		1097	Funeral Hall	Cemetery POI that represents a facility that provides funeral-related services.

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8.26 POI Attribute (POIAttr)

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POI Category	Maximum Values Published	Value	Description	Definition
		1098	Cinerarium	Cemetery POI that represents a facility where ashes of the deceased are kept.
Clothing Store (9537)	4	47	Men's Apparel	Clothing Store POI that primarily sells men's wear and accessories.
		48	Women's Apparel	Clothing Store POI that primarily sells women's wear and accessories.
		49	Children's Apparel	Clothing Store POI that primarily sells clothes and accessories for children.
		50	Shoes/Footwear	Clothing Store POI that primarily sells shoes.
Commuter Rail Station (4100)	2	28	Underground Train/Subway	Commuter Rail Station POI that provides access to an underground rail transit system.
		29	Commuter Rail Station	Commuter Rail Station POI that provides access to an above ground rail transit system.
Consumer Electronics Store (9987)	2	70	Mobile Retailer	Consumer Electronics Store POI are company-authorised cell phone retailers.
		71	Mobile Service Centre	Consumer Electronics Store POI that offers cell phone repair.
Ferry Terminal (4482)	2	62	Boat Ferry	Boat Ferry Terminal POI that is for a boat ferry.
		63	Rail Ferry	Rail Ferry Terminal POI that is for a rail ferry.
Grocery Store (5400)	1	93	Outdoor Market	Large locally known markets in an open air environment that are open most days of the week with a set schedule; similar to a schedule of a standard grocery store.

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Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

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POI Category	Maximum Values Published	Value	Description	Definition
		94	Indoor Market	Large locally known markets in a permanent covered structure that are open most days of the week with a set schedule; similar to a schedule of a standard grocery store.
Home Improvement & Hardware Store (9986)	1	77	Power Equipment Dealer	Home Improvement & Hardware Store POI where one can purchase, rent, or service heavy or light-duty power equipment such as lawn mowers, generators, snow blowers, tillers, pumps, etc.
Hotel (7011)	1	17	Hotel	A Hotel facility that primarily provides lodging and usually meals, entertainment, and various personal services for the public.
		18	Motel	A Hotel facility that primarily provides lodging and parking and in which the rooms are usually accessible from an outdoor parking area.
		1026	Non-Star Hotel	A Hotel POI that has no star rating.
		1030	1-2 Star	A Hotel facility that has a 1 or 2 star rating.
		1029	3 Star	A Hotel facility that has a 3 star rating.
		1028	4 Star	A Hotel facility that has a 4 star rating.
		1027	5 Star	A Hotel facility that has a 5 star rating.
Medical Service (9583)	1	23	Family/General Practice	A Medical POI that offers medical services to individual persons or families.

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POI Category	Maximum Values Published	Value	Description	Definition
		24	Dentist	A Medical POI that offers dental services.
		25	Clinic/Medical Centre	A Medical POI that offers quality medical services to the general public.
		26	Nursing Home	A Medical POI that primarily functions as a facility that provides constant nursing care to the elderly.
		27	Psychiatric Institute	A Medical POI that primarily functions as a facility for mental health services.
		81	Pediatrician	A Medical Service whose physicians specialize in the care and treatment of children.
		92	Blood Bank	A Medical Service where blood is collected from donors, typed, separated into components, stored, and prepared for transfusion to recipients.
Meeting Point (9725)	5	100	Tsunami	The Meeting Point for a tsunami incident.
		101	Fire	The Meeting Point for a fire incident.
		102	Earthquake	The Meeting Point for an earthquake incident.
		103	Volcanic Eruption	The Meeting Point for a volcanic eruption incident.
		104	Flood	The Meeting Point for a flood incident.
Museum (8410)	2	65	Gallery	A Tourist Attraction POI that exhibits works of art.

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Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

here

POI Category	Maximum Values Published	Value	Description	Definition
		66	Science	A Museum POI that primarily contains objects of scientific interest.
		67	Children's	A Museum POI that primarily contains objects of interest to children.
		68	History	A Museum POI that primarily contains historical objects.
		69	Art	A Museum POI that primarily contains objects of art.
Nightlife (5813)	1	34	Bar/Pub/Stube/ Biergarten	Nightlife POI that provides alcoholic beverages (i.e., beer, wine, liquor drinks) and light meals.
		36	Nightclub	Nightlife POI that provides evening entertainment generally until the very early morning.
		37	Dancing	Nightlife POI that provides a place to dance.
		38	Karaoke	Nightlife POI that provides a place to sing Karaoke.
		39	Live Entertainment/ Music/Cabaret	Nightlife POI that provides music or live entertainment.
		40	Billiards/Pool Hall	Nightlife POI where one can play billiards/pool.
		41	Video Arcade/Gaming Room	Nightlife POI where one can play video games.
		42	Jazz Club	Nightlife POI where one can enjoy jazz music in a club setting.

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8.26 POI Attribute (POIAttr)

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POI Category	Maximum Values Published	Value	Description	Definition
Other Accommodation (7013)	1	19	Guest House	A small house or cottage, adjacent to a main house, available for lodging.
		20	Hostel	A supervised, inexpensive lodging place for travellers, especially youth.
		21	Holiday Park	An area with rental cottages and a variety of holiday related activities (e.g., bowling, restaurants, swimming, mini golf, etc.).
		22	Bed & Breakfast	A lodging facility providing breakfast (but not other meals) and lodging at an inclusive price. These are typically private homes with only one or two bedrooms available for commercial use.
		51	Short-Time Motel	A lodging facility designed for romantic encounters, usually not requiring a full night's accommodation.
		1093	Condo	A lodging facility that is a condominium.
		1094	Home Lodging	A lodging facility that is actually a home available for lodging.
Park/Recreation Area (7947)	1	59	Garden	Park/Recreation Area POI that is a garden, e.g., a botanic garden.
		60	Beach	Park/Recreation Area POI that primarily functions as a beach.
		61	Sports Field	Park/Recreation Area POI that primarily serves as a public sports field.

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8.26 POI Attribute (POIAttr)

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POI Category	Maximum Values Published	Value	Description	Definition
		78	Trailhead	Park/Recreation Area POI that represents the beginning point for a 4WD vehicle trail or hiking trail. These areas may contain parking areas for vehicles or trailers, a map or information of the trail ahead, brochures and restrooms.
		80	Off Road Vehicle Area	Park/Recreation Area POI that represents a remote public area and/or trail for off-road driving by 4WD vehicles, ATVs, etc.
Parking Lot (7520)	1	74	Cellphone Parking Lot	Parking Lot POI where a driver picking up an airline passenger can park short-term while waiting for the passenger to call for pickup.
Petrol/Gasoline Station (5540)	1	1099	LPG Only	A Petrol/Gasoline Station POI that sells LPG (Liquid Petroleum Gas) only.
Pharmacy (9565)	1	30	Pharmacy	A Pharmacy POI that prepares and dispenses prescription drugs.
		31	Drugstore	A Pharmacy POI that sells other goods (i.e., cosmetics, snacks, beverages) in addition to prescription drugs.
Repair Services (9595)	2	90	Electrical	A Repair Services POI where a consumer can take electrical items for repair
		91	Plumbing	A Repair Services POI where a consumer can take plumbing items in for repair, or book an appointment with a plumber to visit the premises.

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Attributes - Points of Interest

8.26 POI Attribute (POIAttr)

here

POI Category	Maximum Values Published	Value	Description	Definition
School (8211)	1	86	Pre-School	A School POI for the education of children before the start of statutory education. Usually for children between the ages of two and five, dependent on the country's educational system.
Specialty Store (9567)	1	44	Pet Supply	Specialty Store POI that provides goods and services for family pets.
		45	Warehouse/Wholesale	Specialty Store POI where one can buy goods in bulk, e.g., Sam's Club, Costco.
		46	Food/Beverage	Specialty Store POI that sells specialty food and/or beverages, e.g., liquor stores, wine stores, candy shops.
		79	Hobby, Toy, and Game Store	Specialty Store POI that specializes in hobby supplies such as model airplanes, trains, boats, and remote control cars; toys and games such as board games, video games, puzzles and dolls.
		82	Bakery	Specialty Store POI where a consumer can purchase fresh bakery items and associated goods.
		83	Butcher	Specialty Store POI where a consumer can purchase fresh meats and associated goods.
		84	Dairy Goods	Specialty Store POI where a consumer can purchase fresh dairy products and associated goods.

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8.26 POI Attribute (POIAttr)

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POI Category	Maximum Values Published	Value	Description	Definition
		85	Sweets Shop	Specialty Store POI where a consumer can purchase candies, sweets and associated items
Sport Centre (7997)	5	7	Fitness & Health Club	A Sports Centre POI that houses exercise equipment for the purpose of physical exercise.
		8	Racket Ball Court	A Sports Centre POI that primarily functions as a facility for playing racket ball.
		9	Shooting Range	A Sports Centre POI that primarily functions as a shooting range.
		10	Indoor Ski	A Sports Centre POI that primarily functions as a facility for participating in indoor ski activities.
		11	Soccer Club	A Sports Centre POI that primarily functions as a facility for playing soccer.
		12	Squash	A Sports Centre POI that primarily functions as a facility for playing squash
		13	Swimming Pool	A Sports Centre POI that primarily functions as a facility for swimming (indoor and/or outdoor).
		14	Tennis Court	A Sports Centre POI that primarily functions as a facility for playing tennis.
		15	Indoor Sports	A Sports Centre POI that functions as a facility for participating in a variety of indoor sports.

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8.26 POI Attribute (POIAttr)

here

POI Category	Maximum Values Published	Value	Description	Definition
		16	Hockey	A Sports Centre POI that functions as a facility for playing hockey.
		72	Basketball	A Sports Centre POI that functions as a facility for playing basketball.
		73	Badminton	A Sports Centre POI that functions as a facility for playing badminton.
Sport Centre (7997) (Continued)	5	75	Rugby	A Sports Centre POI that functions as a facility for playing rugby.
		76	Diving Centre	A Sports Centre POI that functions as a facility for scuba diving.
		1035	Fishing	A Sports Centre that functions as a facility for fishing.
		1091	Ping Pong	A Sports Centre that functions as a facility for playing ping pong.
		1092	Sauna	A Sports Centre that functions as a sauna facility.
Tourist Attraction (7999)	1	65	Gallery	A Tourist Attraction POI that exhibits works of art.
Training Centre/ Institute	3	87	Coaching Institute	A Training Centre/ Institute POI where individuals are “coached” on various topics. For example, preparation for competitive exams, preparation for government jobs, preparation for admission into reputed universities, etc.

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Attributes - Points of Interest

8.27 POI Contact Information (POIContact)

here

POI Category	Maximum Values Published	Value	Description	Definition
		88	Fine Arts	A Training Centre/ Institute POI where individuals learn an aspect of Fine Arts. For example, painting, photography, tap dance, etc.
		89	Language Studies	A Training Centre/ Institute POI where individuals learn a particular language.

## 8.27 POI Contact Information (POIContact)

### 8.27.1 POI ID

See [POI ID](#) on page 730.

### 8.27.2 Facility Type

See [Facility Type](#) on page 732.

### 8.27.3 Contact Type

#### Definition

Contact Type identifies the type of contact, for a POI, published.

#### Value

1 - Phone Number

2 - Toll Free Number

3 - URL or Web Address

4 - Email Address

5 - Mobile Phone

 **Note:** Lowercase characters are available for email addresses, web addresses and URLs.

#### Length

1

#### Type

Text

# Reference Guide

Attributes - Points of Interest

8.27 POI Contact Information (POIContact)

## Layer

POI Contact Information

## Related Attributes

POI ID

Facility Type

Preferred

Contact

## Usage

Contact Type is used to allow the user to select the appropriate contact information.

## Specification

Phone Number in the relative POI specific layer is published in POI Contact Information with Contact Type = '1'.

Alternate phone numbers are published with Contact Type = '1' and Preferred = '0'.

The number of contacts per Contact Type per POI is:

Contact Type	Max Number of Contacts Allowed
1 - Phone Number	3
2 - Toll Free Number	2
3 - URL or Web Address	2
4 - Email Address	2
5 - Mobile Phone	2

Example:

POI ID	FACILITY_TYPE	CONTACT_TYPE	PREFERRED	CONTACT
555679944	7011	1	N	916-3661861
555679944	7011	2	Y	800-8008000
555679944	7011	3	N	http://rdf.com
555673232	5000	1	N	916-3661900
555673232	5000	4	Y	name_lastname@rdf.com

## 8.27.4 Preferred

### Definition

Preferred identifies the preferred method of contact for a POI.

# Reference Guide

Attributes - Points of Interest

8.27 POI Contact Information (POIContact)

## Value

Y - Preferred

N - Not Preferred

## Length

1

## Type

Boolean

## Layer

POI Contact Information

## Related Attributes

Facility Type

Contact Type

Contact

## Usage

Preferred can be used to inform the end user about the preferred method of contact for the selected POI.

## Specification

- Only one Contact for a given POI is coded Preferred = 'Y'.
- Only the following Contact Types may be coded Preferred = 'Y':
  - Phone Number
  - Mobile Phone
  - Toll Free Number

## 8.27.5 Contact

### Definition

The contact information of the POI.

## Value

Phone Number/Toll Free Number

Email

Web Address/URL

 **Note:** Lowercase characters are available for email addresses, web addresses and URLs.

## Length

125

## Type

## Reference Guide

Attributes - Points of Interest

8.27 POI Contact Information (POIContact)

### Text

### Layer

POI Contact Information

### Related Attributes

POI ID

Facility Type

Contact Type

Preferred

### Usage

Contact provides the contact information of a POI.

### Specification

- Contact with Contact Type = 'U' only includes one of the following URL address types:
  - `http://www.address.###`
  - `http://address.###`
  - `https://address.###`
  - `https://www.address.###`
- Contact with Contact Type = 'E' are coded as follows:
  - `emailaddress@domain.##`

Generally toll free numbers are in addition to a POI phone number. In North America, these numbers start with 800, 855, 866, , 877 or 888, in the Netherlands with 0800.

## 8.27.6 POI Phone Number Improvement

### New Attributes

- Phone Prefix (Metadata - Country Reference (MtdCntryRef) layer)
- Phone Area Code (POI Contact Information (POIContact) layer)
- Phone Local Number (POI Contact Information (POIContact) layer)

### Definition

Phone Prefix, Phone Area Code, and Phone Local Number, along with the existing Phone Country Code, provide separate components that make up a complete telephone number.

### Usage

Phone number components can be used to display a telephone number with international, national, or local representation. Additionally, they can be used to provide a format for automatic dialing.

The national and international telephone number formats as defined by the International Telecommunications Union are as follows:

National

## Reference Guide

Attributes - Points of Interest

8.27 POI Contact Information (POIContact)

here

(987) 123 4567

International

+22 987 123 4567

These formats can be achieved by combining separate components:

National

(<Area Code>) <Local Number>

International

+<Phone Country Code> <Area Code> <Local Number>

When a country prefix is used for internal country dialing, a leading digit will need to be inserted before the Area Code:

Example:

(0987) 123 4567

(<Prefix><Area Code>) <Local Number>

## 8.27.7 Phone Area Code

### Definition

Provides the area or city code of a telephone number.

### Length

7

### Format

Char

### Cardinality

1:1,0

### Related Attributes

Contact Type

Phone Local Number

### Usage

Phone Area Code precedes the local telephone number. It can be combined with other phone number components for display or for automatic dialing purposes.

### Specification

- Phone Area Code is only published when Contact Type = 1, 2 or 5 is published.
- Phone Area Code is published for all telephone numbers with area codes. For example, in Germany the number 089-99614232 can be parsed as follows:
  - Phone Prefix: 0
  - Area Code: 89
  - Local Number: 99614232

## Reference Guide

Attributes - Points of Interest

8.27 POI Contact Information (POIContact)

- When a non-geographic code (e.g., toll-free or mobile identifier) is used in place of an area code, it is published in the Phone Area Code field. For example, in the toll-free number 800-1234567, Phone Area Code = 800.
- When area codes are not used in a telephone numbering system a Phone Area Code is not published.
- Phone Area Code is not published in some countries. See the *Country Specific Rules* document.

## 8.27.8 Phone Local Number

### Definition

Phone Local Number provides the local portion of a telephone number. This includes the exchange and suffix combined.

### Format

Char

### Length

15

### Type

Number

### Cardinality

1:1,0

### Related Attributes

Contact Type

Phone Area Code

### Usage

Phone Local Number follows the area code. It can be combined with other phone number components for display or for automatic dialing purposes.

### Specification

- Phone Local Number is only published when Contact Type = 1, 2 or 5 is published.
- Phone Local Number is published for all telephone numbers. For example, in Germany the number 089-99614232 can be parsed as follows:
  - Phone Prefix: 0
  - Area Code: 89
  - Local Number: 99614232

## 8.28 POI Association (PoiRelat)

---

### 8.28.1 Association ID

**Definition**

Association ID identifies the POIs involved in the association.

**Value**

A unique ID of the association.

**Layer**

POI ASSOCIATION (POIRelat)

**Related Attributes**

None

**Usage**

Association ID is used to group together POIs belonging to the same association.

**Specification**

- POI Association does not replace the POI Parent-Child relationship described in the Point of Interest Association (PoiAssoc) table.
- POIs that participate in a Parent/Child relationship may not participate in a POI Association combination.
- A POI may participate in multiple POI Associations.
- A POI in an association must relate at least two POIs.
- POI Association ID is not a permanent ID.

### 8.28.2 POI ID

**Definition**

POI ID identifies the POIs participating in the association.

**Value**

The Unique ID of the POI.

**Layer**

POI ASSOCIATION (POIRelat)

**Related Attributes**

PRIMARY POI

**Usage**

POI ID is used to determine the single POI elements involved in the Same Location association.

## Reference Guide

Attributes - Points of Interest

8.28 POI Association (PoiRelat)

### Specification

- A POI can belong to more than one association of different Association Type values.

## 8.28.3 Primary POI

### Definition

Primary POI identifies the primary POI.

### Value

Y - is the Primary POI

N - is not the Primary POI

### Layer

POI ASSOCIATION (POIRelat)

### Related Attributes

POI ID

### Usage

Primary POI is used to inform the user which POI is the predominant POI among those in a POI association.

### Specification

- Only one POI in an association can be the Primary POI.
- Primary POI identifies one POI as the predominant POI in the association.

Examples:

- The Lincoln Memorial is associated with two Facility Types: Historical Monument (9113) and Tourist Attraction (7376). Facility Type 9113 - Historical Monument is Primary POI = Y.
- A Wal-Mart POI is associated with three Facility Types: Department Store (7327), Pharmacy (9565) and Grocery Store (5400). The POI with Facility Type 7327 (Department Store) is attributed with Primary POI = Y.

## 8.28.4 Association Type

### Definition

Association Type identifies the type of relationship that exists between POIs involved in a POI Association.

### Value

1 - IDENTITY

2 - LOCATION

### Layer

POI ASSOCIATION (POIRelat)

# Reference Guide

Attributes - Points of Interest

here

8.28 POI Association (PoiRelat)

## Usage

Association Type can be used for map display and destination selection to inform a user that a relationship between specific POIs exists.

## Specification

### Association Type = Identity is used when:

- An individual POI is associated with multiple Facility Types however, only one facility exists in reality (e.g., the Lincoln Memorial is an Historical Monument (5999) and a Tourist Attraction (7999)). In this situation, the POI is duplicated in order to publish both POI Facility Types.
- Only Tourist Attraction (7999) and Historical Monument (5999) may be published in an Identity Relationship with any of the following categories:

POI Category	Facility Code	Association Type	
		Identity	Location
Amusement Park	7996	X	
Animal Park	9077	X	
Auto Service & Maintenance	7538		X
Bank	6000	X	
Bowling Centre	7933	X	
Casino	7985	X	
Cemetery	9591	X	
Cinema	7832	X	
City Hall	9121	X	
Clothing Store	9537		X
Coffee Shop	9996		X
Commuter Rail Station	4100	X	
Consumer Electronics Store	9987		X
Convenience Store	9535		X
Convention/Exhibition Centre	7990	X	
Court House	9211	X	
Department Store	9545		X
Golf Course	7992	X	
Grocery Store	5400		X
Higher Education	8200	X	

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Attributes - Points of Interest

8.28 POI Association (PoiRelat)

here

POI Category	Facility Code	Association Type	
		Identity	Location
Historical Monument	5999	X	
Home Specialty Store	9560		X
Ice Skating Rink	7998	X	
Library	8231	X	
Marina	4493	X	
Museum	8410	X	
Park/Recreation Area	7947	X	
Performing Arts	7929	X	
Petrol/Gasoline Station	5540		X
Pharmacy	9565		X
Place of Worship	9992	X	
Post Office	9530	X	
School	8211	X	
Ski Resort	7012	X	
Specialty Store	9567		X
Sporting Goods Store	9568		X
Sports Centre	7997	X	
Sports Complex	7940	X	
Tourist Attraction	7999	X	
Tourist Information	7389	X	
Train Station	4013	X	
Winery	2084	X	

- Identity association type is coded on POIs when POIs only differ by the Facility Type.
- Published attributes of associated POIs are identical.
- Two or more POIs exist in Level 1 Bilingual Areas that represent the same POI in reality.
  - An Identity Association is published if the following POI attribution is similar:

Matching Criteria
POI Name

# Reference Guide

Attributes - Points of Interest

8.28 POI Association (PoiRelat)

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Matching Criteria
Street Name
Street Side
Percent From Reference Node
Link

① **Note:**

For POIs in Level 1 Bilingual Areas, the POI Name and Street Name may differ due to the difference in the Language Code.

## Example:

Pharmacie Rue Henri van Nerom (Language Code = FRE) and Apotheek Hendrik van Neromstraat (Language Code = DUT) represent the same pharmacy at the same address in Brussels. These two POI records appear unchanged. However, a POI Association Type identifying that they are the same POI is published. Apotheek Hendrik van Neromstraat is the Primary POI since DUT is the Default Language Code.

## Association Type = Location is used when:

- An individual POI is associated with multiple Facility Types.
- All Facility Types identify a specific function (e.g., Wal-Mart as a Department Store, Pharmacy and Grocery Store).
- POIs in a Location association type have:
  - Different Facility Types
  - Different Functions
  - The same Street Address, Address, and City.
- POIs in a Location association type may have:
  - Different contact information
  - Different POI attributes (e.g., Open 24 Hours)
- The following attributes for POIs in a Location association type must match (when applicable):
  - Point Address
  - Parsed Actual Address (all components)
  - Display Location
- Location association type is only published for POIs with any of the following Facility Type codes:

Facility Type <sup>147</sup>	Facility Code
Auto Service & Maintenance	7538
Clothing Store	9537
Consumer Electronics Store	9987
Convenience Store	9535

## Reference Guide

Attributes - Points of Interest

8.29 POI vs. Polygon Inclusion

Facility Type <sup>147</sup>	Facility Code
Department Store	9545
Grocery Store	5400
Home Specialty Store	9560
Petrol/Gasoline Station	5540
Pharmacy	9565
Specialty Store	9567
Sporting Goods Store	9568

Example:

A 7-ELEVEN Convenience Store exists that has an associated CHEVRON Gas Station. The two POIs participate in the same association.

7-ELEVEN Convenience Store has POI Name “7-ELEVEN”

7-ELEVEN Petrol Station has POI Name “7-ELEVEN”

7-ELEVEN Petrol Station has Chain ID “CHEVRON”

## 8.29 POI vs. Polygon Inclusion

The table below identifies whether or not POIs correlate to a Polygon.

Polygon	POI Inclusion
Airport (1900403)	All Airport(1900403) polygons have an associated POI. There can be Airport(4581) POIs that do not correspond to polygons. Some small airports, such as sport airports, are included as POIs, but do not warrant polygonal inclusion.
Amusement Park (200460)	All Amusement Park(2000460) polygons have an associated POI.
Animal Park (200461)	All Animal Park(2000461) polygons have an associated POI.
Beach (2005601)	A Tourist Attraction(7999) POI is included for each polygon. However, it is possible that there will be an additional POI because some beaches do not meet size inclusion rules for a polygon.
Built-up Area (900156)	A Named Place(4444) POI is included for each Built-up Area polygon.
Cemetery (2000420)	Generally, all Cemetery(9591) POIs correspond to a Cemetery(2000420) polygon. However, some cemeteries do not meet the size inclusion rules for a polygon and are only represented by a POI.

<sup>147</sup> Additional Feature Types may be included in the future.

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Attributes - Points of Interest

8.29 POI vs. Polygon Inclusion

here

Polygon	POI Inclusion
City (900101)	There is a Named Place(4444) POI for every City(900101) polygon. However, there are more Named Place(4444) POIs than City(900101) polygons.
City Park (900150)	There may be more Park/Recreation Area(7947) POIs than City Park(900150) polygons, as some city park areas do not meet the size inclusion rules.
County Park (900150)	All County Park(900150) polygons have an associated Park/Recreation Area(7947) POI. However, there may be more Park/Recreation Area(7947) POIs than County Park(900150) polygons. Some county park areas do not meet the size inclusion rules and some Park/Recreation Area(7947) POIs correspond to other Land Use features.
Golf Course (2000123)	Generally, all Golf Course(7992) POIs correspond to a Golf Course(2000123) polygon. However it is possible that in rare cases the golf course area does not meet the size inclusion rules for a polygon.
Hospital (2000408)	All Hospital(2000408) polygons have a corresponding Hospital(8060) POI. However, there may be more Hospital(8060) POIs since some hospitals do not meet the size inclusion rules for polygons.
Industrial Complex (2000200)	Business Facility(5000) POIs may exist, but are not required for Industrial Complex(2000200) polygons.
Military Base (900108)	If a military base exists as a Postal Area Zone, then a corresponding Named Place(4444) POI exists. If it is owned and operated by the military, there will be an additional Military Base(9715) POI.
National Park/Monument (900103)	All National Park(900103) polygons correspond to either a Park/Recreation(7947) POI or a Historical Monument(5999) POI. However, there may be more Park/Recreation(7947) and Historical Monument(5999) POIs than National Monument(900103) polygons. In rare cases, national park/monument areas may not be large enough to warrant polygonal inclusion. Additionally, some Park/Recreation(7947) POIs correspond to other land use features.
Railyard (997007)	All Railyard(997007) polygons correspond to a Cargo Centre(9714) POI with Railyard subcategory.
Seaport/Harbour (9997008)	All Seaport/Harbour(997008) polygons correspond to a Cargo Centre(9714) POI with Seaport/Harbour subcategory.
Shopping Centre (2000124)	Generally, all Shopping Centre(6512) POIs correspond to a Shopping Centre(2000124) polygon. However, in rare cases, the shopping centre area does not meet the size inclusion rules for a polygon.
Sports Complex (2000457)	Generally, all Sports Complex(7940) POIs correspond to a Sports Complex( 2000457) polygon. However, in rare cases, the sports complex area does not meet the size inclusion rules for a polygon.
State Park (900130)	All State Park(900130) polygons have an associated Park/Recreation(7947) POI. However, there are more Park/Recreation(7947) POIs than StatePark(900130) polygons. In rare cases, state park areas may not meet the size inclusion rules for a polygon and some Park/Recreation(7947) POIs correspond to other land use features.
University/College (2000403)	Generally, all Higher Education(8200) POIs correspond to a University/College(2000403) polygon. However, it is possible that the university area does not meet the size inclusion rules for a polygon so a POI may exist without a polygon.

# Reference Guide

Attributes - Points of Interest

8.29 POI vs. Polygon Inclusion

Polygon	POI Inclusion
"X" Building/Landmark (2005999)	POIs correspond to polygons that represent building landmarks.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

# Chapter 9

## Attributes - Administrative Areas and Other Cartography

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### Topics:

- *Introduction*
- *Administrative Area Boundaries (1-5)*  
(Adminbndy1-5)
- *Administrative Area (AdminArea)*
- *Administrative Linear Boundaries 1*  
(AdminLine1)
- *Administrative Linear Boundaries 2*  
(AdminLine2)
- *Feature Census (FeatureCens)*
- *Islands (Islands)*
- *Cartographic Country (CartoCountry)*
- *Cartographic State (CartoState)*
- *Built-up Areas USA*
- *Zones (Zones)*
- *Metadata - Zone Records*  
(MtdZoneRec)
- *Railroads (RailRds)*
- *Waterway Segments (WaterSeg)*
- *Waterway Polygons (WaterPoly)*
- *Oceans (Oceans)*
- *Building/Landmark Features*  
(Landmark)
- *Land Use Features A (LandUseA)*
- *Land Use Features B (LandUseB)*
- *Aggregated Feature (AggrFeature)*
- *Aggregated Feature Component*  
(AggrFeatComp)
- *Aggregated Feature File Association*  
(AggrFeatFile)
- *Risk Prone Areas (RiskArea)*
- *Alternate Feature Name (AltFeatNm)*
- *Feature Attribute (FeatureAttr)*
- *Feature Point (FeatPoint)*
- *Feature Association Main (AssoMain)*
- *Feature Association Component*  
(AssoComp)
- *Feature Association Attribute*  
(AssoAttrib)
- *Feature Association Name (AssoName)*
- *Feature Association Date Time*  
(AssoDTM)

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.1 Introduction

## 9.1 Introduction

---

This chapter describes all of the attributes contained in the layers associated with Administrative Areas and Other Cartography.

## 9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

---

### 9.2.1 Admin Area ID

The Admin Area ID is equivalent to the Polygon ID.

### 9.2.2 Polygon ID

#### Definition

Unique identifier for polygon features.

#### Value

nnnnnnnnnn

#### Length

10

#### Type

Numeric

#### Usage

Polygon ID can be used to locate all links making up a given polygon. That information, in conjunction with the Side Inclusion for each link in the Feature Name, can be used to build polygons for map display.

#### Specification

- All Links that comprise a polygon have the same Polygon ID.
- If this field is 0, then the feature is not a polygon.
- Refer to Section [Polygons](#) on page 131 for additional information.
- For certain features surrounded by multiple Sub-regions, e.g., the Store Belt ocean (surrounded by Denmark, Germany, and Sweden), the same Polygon ID is published in each of the Sub-regions.
- In administrative areas with multiple official languages, multiple Base Names are published for administrative polygons in each language.

 **Note:** The Base Name using the default language is always published first.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

here

### 9.2.3 Area ID

#### Definition

Identifies the unique ID for the area.

#### Value

nnnnnnnnnn

#### Length

10

#### Type

Numeric

#### Specification

- The Area IDs are unique within North America and within Europe/South Africa. However, Area IDs may be duplicated between North America and Europe/South Africa.
- Cities that exist in multiple counties or settlements that exist in multiple municipalities will have different *Area IDs*. For example, the city of Portland, OR exists in three different counties.
  - Portland in Clackamas County: Area ID = 36988
  - Portland in Multnomah County: Area ID = 37162
  - Portland in Washington County: Area ID = 37228

The Government Code and Area Name for Portland are the same in all three counties:

- Area Name = Portland
- Government Code = 59000

- If two cities have the same name, different Area IDs, and different government codes, they are separate cities.
- Area IDs are published in the AdminBndy5 table for the LAT products. This is in order to be consistent with the non-LAT products where this information is published.
- If the field is 0, then there is no match to a record in the MtdArea table on Area ID (L or R) since an associated administrative entity on level 5 with the same name does not exist.

### 9.2.4 Number of Area IDs

#### Definition

The Number of Area IDs associated to this Administrative Area. If the number > 1, the additional area ids can be found in the AdminArea table.

#### Value

nn

#### Length

2

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

### Type

Numeric

## 9.2.5 Admin Area Name

The Admin Area Name is equivalent to the Feature Name.

## 9.2.6 Feature Name

### Definition

The Feature Name identifies the name of the Administrative Area.

### Length

80

### Length

(UTF-8)

105

### Type

Text

### Usage

Feature Name can be used for destination selection (usually for lower level Administrative Areas such as settlements) and map display for languages supported by HERE Map Content.

### Specification

- See [Name Type](#) on page 870.
- A Synonym is published for Feature Name when applicable. See [#unique\\_516/unique\\_516\\_Connect\\_42\\_admin-area-names](#) under Synonym in the Points of Interest section.

## 9.2.7 Admin Area Name Language Code

The Admin Area Name Language Code is equivalent to the Language Code.

## 9.2.8 Admin Area Name Transliteration

 **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

## 9.2.9 Admin Area Name Transliteration Type

 **Note:**

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

here

## 9.2.10 Admin Area Description

The Admin Area Description information can be found under Feature Type.

## 9.2.11 Feature Type

### Definition

An identifier that distinguishes different feature categories.

### Value

Feature Code	Description
500116	Ocean
500412	River
500413	Intermittent River
500414	Canal/Water Channel
500421	Lake
507116	Bay/Harbour
509997	Glacier
509998	Beach
509999	Island
600101	Hurricane Prone Area
600102	Flood Prone Area
600103	Tsunami Prone Area
900101	City
900103	Park/Monument (National)
900107	Native American Reservation
900108	Military Base
900130	Park (State)
900140	Park in Water
900150	Park (City/County)
900156	Built Up Area

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

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Feature Code	Description
900158	Pedestrian Zone
900159	Undefined Traffic Area
900160	Apartment Complex
900170	County
900202	Woodland
907196	Country
907197	Disputed Country Boundary
908000	Cartographic Country Boundary
908001	Cartographic State/Province Boundary
908002	Neighbourhood Boundary
908003	Cartographic Settlement Boundary
908004 <sup>148</sup>	Cartographic Disputed Country Boundary <sup>148</sup>
9080051	Cartographic Disputed State Boundary <sup>148</sup>
909996	State
9099971	Disputed State Boundary
1700215	Parking Lot
1800201	Railroad
1900403	Airport
1907403	Aircraft Roads
2000123	Golf Course
2000124	Shopping Centre
2000200	Industrial Complex
2000403	University/College
2000408	Hospital
2000420	Cemetery
2000461	Animal Park
2000457	Sports Complex
2000460	Amusement Park

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

here

Feature Code	Description
2005000	Business/Commerce Building/Landmark
2005001	Bank Building/Landmark
2005002	Business Facility Building/Landmark
2005003	Hotel or Motel Building/Landmark
2005004	Rental Car Agency Building/Landmark
2005005	Automobile Dealership Building/Landmark
2005006	Auto Service & Maintenance Building/Landmark
2005007	Petrol Station Building/Landmark
2005050	Convention/Exhibition Centre Building/Landmark
2005100	Cultural Building/Landmark
2005101	Cultural Building/Landmark
2005102	Museum Building/Landmark
2005103	Theatre Building/Landmark
2005104	Civic/Community Centre Building/Landmark
2005150	Education Building/Landmark
2005151	University or College Building/Landmark
2005152	School Building/Landmark
2005200	Emergency Service Building/Landmark
2005201	Police Station Building/Landmark
2005250	Government Building/Landmark
2005251	Embassy Building/Landmark
2005252	Post Office Building/Landmark
2005253	City Hall Building/Landmark
2005254	Court House Building/Landmark
2005255	Government Office Building/Landmark
2005256	County Council Building/Landmark
2005300	Historical Building/Landmark
2005301	Historical Monument Building/Landmark
2005350	Medical Building/Landmark

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

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Feature Code	Description
2005351	Hospital/Polyclinic Building/Landmark
2005352	Medical Service Building/Landmark
2005400	Park/Leisure Building/Landmark
2005401	Bar or Pub Building/Landmark
2005402	Bowling Centre Building/Landmark
2005403	Casino Building/Landmark
2005404	Cinema Building/Landmark
2005405	Nightlife Building/Landmark
2005406	Winery Building/Landmark
2005407	Amusement Park Building/Landmark
2005408	Golf Course Building/Landmark
2005409	Ice Skating Rink Building/Landmark
2005410	Marina Building/Landmark
2005411	Park/Recreation Area Building/Landmark
2005412	Public Sports Airport Building/Landmark
2005413	Ski Resort Building/Landmark
2005450	Residential Building/Landmark
2005451	Residential Area Building/Landmark
2005452	Housing Building/Landmark#unique_623/ unique_623_Connect_42_id-0000c49b
20054532	Apartment Building/Landmark#unique_623/ unique_623_Connect_42_id-0000c49b
2005500	Retail Building/Landmark
2005501	Pharmacy Building/Landmark
2005502	Restaurant Building/Landmark
2005503	Bookstore Building/Landmark
2005504	Clothing Store Building/Landmark
2005505	Consumer Electronics Store Building/Landmark
2005506	Convenience Store Building/Landmark
2005507	Department Store Building/Landmark

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

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Feature Code	Description
2005508	Grocery Store Building/Landmark
2005509	Home Improvement & Hardware Store Building/Landmark
2005510	Home Specialty Store Building/Landmark
2005511	Office Supply & Services Store Building/Landmark
2005512	Shopping Centre Building/Landmark
2005513	Specialty Store Building/Landmark
2005514	Sporting Goods Store Building/Landmark
2005550	Sports Building/Landmark
2005551	Sports Centre Building/Landmark
2005552	Sports Activity Building/Landmark
2005600	Tourist Building/Landmark
2005601	Tourist Attraction Building/Landmark
2005602	Tourist Office Building/Landmark
2005603	Bridge/Landmark
2005650	Transportation Building/Landmark
2005651	Airport Building/Landmark
2005652	Bus Station Building/Landmark
2005653	Commuter Rail Station Building/Landmark
2005654	Ferry Terminal Building/Landmark
2005655	Railway Station Building/Landmark
2005656	Transportation Service Building/Landmark
2005657	Toll Structure Building/Landmark
2005700	Unclassified Building/Landmark
2005750	Place of Worship Building/Landmark
2005751	Church Building/Landmark
2005752	Mosque Building/Landmark
2005753	Temple Building/Landmark
2005754	Synagogue Building/Landmark
2005755	Ashram Building/Landmark

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Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

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Feature Code	Description
2005756	Gurdwara Building/Landmark
2005800	Industrial Building/Landmark
2005801	Factory Building/Landmark
2005850	Parking Building/Landmark
2005900	Miscellaneous Building/Landmark
2005901	Skyway Building/Landmark
9992000	RDS-TMC
9997004 <sup>150</sup>	Congestion Zone <sup>149</sup>
9997007	Railyard
9997008	Seaport/Harbour
9997010	Environmental Zone
9997021	Water Boundary
9999999	Road Network

## Length

7

## Type

Numeric

## Usage

Feature Type can be used to identify the functionality of the link for usage in destination selection, route guidance, map display, and route calculation.

## Specification

- Refer to [Administrative Level Coding and Boundary Features](#) on page 1169 for administrative Feature Types defined for each country.
- The Feature Type of 9992000 distinguishes RDS-TMC features from street names.
- See end of this chapter for naming rules specific to certain feature types (other than administrative features).

<sup>148</sup> Only the metadata for this Feature Type is published in the standard extract. This Feature Code is published only in conjunction with Disputed Territories.

<sup>149</sup> Published in S. Korea only.

<sup>150</sup> This Feature Code is only published for select cities.

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

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## Building/Landmark Polygons

- The Feature Type of a Building/Landmark polygon is determined by the Feature Type Code. See [Feature Type](#) on page 844.

Feature Description (High Level)	Feature Type Code (High Level)	Feature Description (Low Level)	Feature Type Code
Business Commerce	2005000	Bank	2005001
		Business Facility	2005002
		Hotel or Motel	2005003
		Rental Car Agency	2005004
		Automobile Dealership	2005005
		Auto Sales & Maintenance	2005006
		Petrol Station	2005007
Convention/Exhibition Centre	2005050	N/A	2005050
Cultural	2005100	Library	2005101
		Museum	2005102
		Theatre	2005103
		Civic/Community Centre	2005104
Education	2005150	University or College	2005151
		School	2005152
Emergency Service	2005200	Police Station	2005201
Government	2005250	Embassy	2005251
		Post Office	2005252
		City Hall	2005253
		Court House	2005254
		Government Office	2005255
		County Council	2005256
Historical	2005300	Historical Monument	2005301
Medical	2005350	Hospital/Polyclinic	2005351
		Medical Service	2005352
Park/Leisure	2005400	Bar or Pub	2005401

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

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Feature Description (High Level)	Feature Type Code (High Level)	Feature Description (Low Level)	Feature Type Code
		Bowling Centre	2005402
		Casino	2005403
		Cinema	2005404
		Nightlife	2005405
		Winery	2005406
		Amusement Park	2005407
		Golf Course	2005408
		Ice Skating Rink	2005409
		Marina	2005410
		Park/Recreation Area	2005411
		Public Sports Airport	2005412
		Ski Resort	2005413
Residential	2005450	Residential Area/Building	2005451
		Housing <sup>151</sup>	2005452
		Apartment1	2005453
Retail	2005500	Pharmacy	2005501
		Restaurant	2005502
		Bookstore	2005503
		Clothing Store	2005504
		Consumer Electronics Store	2005505
		Convenience Store	2005506
		Department Store	2005507
		Grocery Store	2005508
		Home Improvement & Hardware Store	2005509
		Home Specialty Store	2005510
		Office Supply & Services Store	2005511
		Shopping Centre	2005512

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

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Feature Description (High Level)	Feature Type Code (High Level)	Feature Description (Low Level)	Feature Type Code
		Specialty Store	2005513
		Sporting Goods Store	2005514
Sports	2005550	Sports Centre	2005551
		Sports Activity	2005552
Tourist	2005600	Tourist Attraction	2005601
		Tourist Office	2005602
		Bridge	2005603
Transportation	2005650	Airport	2005651
		Bus Station	2005652
		Commuter Rail Station	2005653
		Ferry Terminal	2005654
		Railway Station	2005655
		Transportation Service	2005656
		Toll Structure	2005657
Unclassified	2005700	N/A	2005700
Place of Worship	2005750	Church	2005751
		Mosque	2005752
		Temple	2005753
		Synagogue	2005754
		Ashram	2005755
		Gurdwara	2005756
Industrial	2005800	Factory	2005801
Parking	2005850	N/A	2005850
Miscellaneous	2005900	Skyway <sup>152</sup>	2005901
Enhanced Building/ Landmark <sup>153</sup>	N/A	N/A	2005999

<sup>151</sup> Available in S. Korea only.

<sup>152</sup> Only available in 3D City Model product.

<sup>153</sup> Placeholder for Feature Type field.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.2 Administrative Area Boundaries (1-5) (Adminbndy1-5)

- In cases where multiple POIs with the same name exist (with different Facility Codes), the Feature Type of the Building/Landmark polygon reflects the primary category.
- In a few rare cases, when a building or landmark is significant and a POI does not already exist, a corresponding POI is added.

### 9.2.12 Detailed City

#### Definition

This attribute specifies whether a link is part of a Detailed City coverage area.

If Detailed City = N, then the inclusion level may be either Network, In-Process Data, or Connector Road/City-to-City.

#### Value

Layers: Streets, Cartographic Country and Cartographic State

Y - Part of Detailed City/Prime Coverage Area

N - Not Detailed City/Prime Coverage Area

Layers: Administrative Area Boundaries, Waterway Polygons, Waterway Segments, Building/Landmark Features, Land Use Features A/B, Islands and Risk Prone Area

Y - Part of Detailed City/Prime Coverage Area

N - Not Detailed City/Prime Coverage Area

P - Part of the polygon is Detailed City Coverage Area, part is not Detailed City Coverage Area

#### Length

1

#### Type

Boolean

#### Usage

This attribute allows systems to adapt to different levels of attributing.

#### Specification

- Links in an ocean receive Detailed City = N.

### 9.2.13 Admin Feature Code

Admin Feature Code is equivalent to Feature Code.

### 9.2.14 Coverage Indicator

See [Coverage Indicator](#) on page 486.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.3 Administrative Area (AdminArea)

### 9.2.15 Claimed By

See [Claimed By](#) on page 1071.

### 9.2.16 Controlled By

See [Controlled By](#) on page 1074.

## 9.3 Administrative Area (AdminArea)

---

### 9.3.1 Admin Area ID

The Admin Area ID is equivalent to the Polygon ID.

### 9.3.2 Area ID

See [Area ID](#) on page 842.

### 9.3.3 Number of Area IDs

① **Note:**

This attribute is not published in Shapefile.

See [Number of Area IDs](#) on page 842.

## 9.4 Administrative Linear Boundaries 1 (AdminLine1)

---

### 9.4.1 Admin Link ID

See [Link ID](#) on page 367.

### 9.4.2 Area ID

See [Polygon ID](#) on page 841.

### 9.4.3 Number of Area IDs

See [Number of Area IDs](#) on page 842.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.4 Administrative Linear Boundaries 1 (AdminLine1)

### 9.4.4 Admin Area Name

See [Feature Name](#) on page 843.

### 9.4.5 Admin Area Name Language Code

See [Language Code](#) on page 618.

### 9.4.6 Admin Area Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.4.7 Admin Area Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 9.4.8 Admin Area Description

See [Feature Type](#) on page 368.

### 9.4.9 Admin Feature Code

See [Admin Feature Code](#) on page 877.

### 9.4.10 Detailed City

See [Detailed City](#) on page 468.

### 9.4.11 Coverage Indicator

See [Coverage Indicator](#) on page 486.

### 9.4.12 Line of Control

See [Line of Control](#) on page 1076.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.5 Administrative Linear Boundaries 2 (AdminLine2)

### 9.4.13 Claimed By

See [Claimed By](#) on page 1071.

### 9.4.14 Controlled By

See [Controlled By](#) on page 1074.

## 9.5 Administrative Linear Boundaries 2 (AdminLine2)

---

### 9.5.1 Admin Link ID

See [Link ID](#) on page 367.

### 9.5.2 Area ID

See [Polygon ID](#) on page 841.

### 9.5.3 Admin Area Name

See [Feature Name](#) on page 843.

### 9.5.4 Language Code

See [Language Code](#) on page 618.

### 9.5.5 Admin Area Description

See [Feature Type](#) on page 368.

### 9.5.6 Admin Feature Code

See [Admin Feature Code](#) on page 877.

### 9.5.7 Detailed City

See [Detailed City](#) on page 468.

### 9.5.8 Coverage Indicator

See [Coverage Indicator](#) on page 486.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.6 Feature Census (FeatureCens)

### 9.5.9 Line of Control

See [Line of Control](#) on page 1076.

### 9.5.10 Claimed By

See [Claimed By](#) on page 1071.

### 9.5.11 Controlled By

See [Controlled By](#) on page 1074.

## 9.6 Feature Census (FeatureCens)

---

### 9.6.1 Feature ID

See [Feature ID](#) on page 367.

### 9.6.2 Feature Category

### 9.6.3 Census Type

#### Definition

The Census Type defines the type of census data for an Administrative Area or Zone (e.g., GNIS Feature ID, Census Class Code, etc.).

#### Values

- 1 - Census Code
- 2 - Census Class Code
- 3 - GNIS Feature ID
- 4 - CBSA Metropolitan Statistical Area
- 5 - CBSA Micropolitan Statistical Area
- 6 - NECTA Metropolitan Statistical Area
- 7 - NECTA Micropolitan Statistical Area
- 8 - Metropolitan Division
- 9 - NECTA Division

#### Default Value

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.6 Feature Census (FeatureCens)

None

## Length

2

## Type

Numeric

## Layer

Feature Census Layer (FeatureCens)

## Related Attributes

Census Value

Census Name

Language Code

## Related Layers

MtdArea

MtdZoneRec

## Usage

Census Type can be used to identify the type of census data.

## Specification

- Census Type = 1 - Census Code defines that the Census data is referencing the Census Codes, previously known as the Federal Information Processing Standard (FIPS) code. Census Codes are currently published as the Administrative Area government code. Census codes are also published in the Feature Census Layer (FeatureCens) with Census Type = 1 - Census Code.
- Census Type = 2 - Census Class Code defines the census classification of a place. An example would be: C1: Identifies an active incorporated place that is not also recognized as an Alaska Native Village statistical area, and does not also serve as a primary county division; this is, it is included in and is part of a primary county division. For example, the city of Hammond Indiana is within and part of North township; the city of Austin, Texas is within and part of several census county divisions in several counties; Hammond and Austin are coded C1.
- Census Type = 3 - GNIS Feature ID defines that the Census data is referencing the Geographic Names Information System (GNIS) Feature ID. GNIS Feature IDs are similar to Census Codes. GNIS includes geographic names for all known places, features, and areas in the United States that are identified by a proper name. Census Codes defined for level 4 Administrative Areas and Zones are being phased out by the U.S. government and replaced by GNIS Feature IDs. However, GNIS Feature IDs in the HERE Map Content data are an add-on, not a replacement of Census Codes. New places only get a GNIS Feature ID assigned. For new places, the government code publishes the GNIS Feature ID. In addition, the GNIS Feature ID is published with Census Type = 2 - GNIS Feature ID in Feature Census Layers (FeatureCens).
- Census Type = 4 - CBSA Metropolitan Statistical Area defines that the Census data is referencing the Core Based Statistical Area (CBSA). CBSA is a collective term for both metro and micro areas. A metro area contains a core urban area population of 50,000 or more, and a micro area contains an urban core

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.6 Feature Census (FeatureCens)

population of at least 10,000 (but less than 50,000). Each metro or micro area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration with the urban core (as measured by commuting to work).

- Census Type = 5 - CBSA Micropolitan Statistical Area. See definition above.
- Census Type = 6 - NECTA Metropolitan Statistical Area defines a set of geographic areas that are defined using cities and towns in the six New England states. The New England City and Town Areas (NECTAs) are defined using the same criteria as Metropolitan and Micropolitan Statistical Areas and are identified as either Metropolitan or Micropolitan. A metro area contains a core urban area population of 50,000 or more, and a micro area contains an urban core population of at least 10,000 (but less than 50,000).
- Census Type = 7 - NECTA Micropolitan Statistical Area. See definition above.
- Census Type = 8 - Metropolitan Division defines that the Census data is referring to a county or group of closely tied contiguous counties that serve as a distinct employment region within a metropolitan statistical area that has a population core of at least 2.5 million. While a Metropolitan Division is a subdivision of a larger metropolitan statistical area, it often functions as a distinct social, economic, and cultural area within a larger region.
- Census Type = 9 - NECTA Division defines NECTAs (see definition above) containing a single core with a population of at least 2.5 million that are subdivided to form smaller groupings of cities and towns referred to as NECTA divisions.

## 9.6.4 Census Value

### Definition

The Census Value defines the actual values defined in the Census Data (e.g., GNIS Feature ID, Census Class Code, etc.).

### Values

Number or Census Class Code

### Default Value

None

### Length

10

### Type

Text

### Layer

Feature Census Layer (FeatureCens)

### Related Attributes

Census Type

Census Name

Language Code

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.6 Feature Census (FeatureCens)

### Related Layers

MtdArea

MtdZoneRec

### Usage

Census Value can be used to identify the value that corresponds to the Census Type.

### Specification

- Census Value for Census Type = 1 publishes the Census Code. Census Codes are used as government codes currently published for Administrative Areas in the U.S. This data is also published as Census data for completeness.
- Census Value for Census Type = 2 publishes the Census Class Code corresponding to the FIPS 55-3 standard. Census Class Codes are alpha-numeric and defined at <http://geonames.usgs.gov/pls/gnisplic>. Census Class Codes will only be published for AA level 3 and AA level 4 Administrative Areas and Zones.
- Census Value for Census Type = 3 publishes the GNIS Feature ID.
  - Census Codes (Census Type = 1) and GNIS Feature IDs (Census Type = 3) are published for Administrative Areas (AA Level 1-4 in the U.S.) and all Zones with official government codes.
- Census Value for CBSA Metropolitan Statistical Area (Census Type = 4) publishes the CBSA code for Metropolitan Statistical Areas. CBSA codes are published for one or more counties where applicable.
- Census Value for CBSA Micropolitan Statistical Area (Census Type = 5) publishes the CBSA code for Micropolitan Statistical Areas. CBSA codes are published for one or more counties where applicable.
  - CBSA Metropolitan or Micropolitan areas (Census Type = 4 or 5) can span multiple counties. There is one CBSA that defines a partial county. St. Louis MO-IL Metropolitan Statistical Area only includes the Sullivan City part of Crawford County, MO. For this specific case the complete Crawford County is published with the CBSA code (41180) for St. Louis, MO-IL.
- Census Value for NECTA Metropolitan Statistical Area (Census Type = 6) publishes the NECTA code for Metropolitan Statistical Areas. NECTAs are published for one or more cities or towns where applicable.
- Census Value for NECTA Micropolitan Statistical Area (Census Type = 7) publishes the NECTA code for Micropolitan Statistical Areas. NECTAs are published for one or more cities or towns where applicable.
- Census Value for Metropolitan Division (Census Type = 8) publishes the Metropolitan Division Code.
- Census Value for NECTA Division (Census Type = 9) publishes the NECTA Division Code.

## 9.6.5 Language Code

See [Language Code](#) on page 618.

## 9.6.6 Census Name

### Definition

The Census Name defines the name for Census Areas as defined in the Census Data.

### Values

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.6 Feature Census (FeatureCens)

Name of the Census Area.

## Default Value

(Space) - None

## Length

100

## Type

Text

## Layer

Feature Census layer (FeatureCens)

## Related Attributes

Census Type

Census Value

Language Code

## Related Layers

MtdArea

MtdZoneRec

## Usage

Census Name can be used to identify the name of the CBSA (metropolitan or micropolitan), NECTA (metropolitan or micropolitan), Metropolitan Division or NECTA Division.

## Specification

- Census Names are published for the following areas:
  - CBSA Metropolitan Statistical Area
  - CBSA Micropolitan Statistical Area
  - NECTA Metropolitan Statistical Area
  - NECTA Micropolitan Statistical Area
  - Metropolitan Division
  - NECTA Division
- Census Names are referred to as “Title” in the Census Data.
- For CBSA and NECTA Metropolitan and Micropolitan Statistical Areas the name will not include “Metropolitan Statistical Area” or “Micropolitan Statistical Area.” This indication is already defined by the Census Type.  
Example: CBSA Micropolitan Statistical Area “Zanesville, OH.”
  - Census Type = 5 - CBSA Micropolitan Statistical Area
  - Census Value = 49780
  - Census Name = Zanesville, OH
  - Language Code = ENG

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.7 Islands (Islands)

## 9.7 Islands (Islands)

---

### 9.7.1 Island ID

The Island ID is equivalent to the Polygon ID.

### 9.7.2 Island Name

The Island Name is equivalent to the Feature Name.

### 9.7.3 Island Name Language Code

The Island Name Language Code is equivalent to the Language Code.

### 9.7.4 Island Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.7.5 Island Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 9.7.6 Island Description

The Island Description information can be found under Feature Type.

### 9.7.7 Detailed City

See [Detailed City](#) on page 853.

### 9.7.8 Admin Feature Code

See [Admin Feature Code](#) on page 853.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.8 Cartographic Country (CartoCountry)

### 9.7.9 Coverage Indicator

See [Coverage Indicator](#) on page 486.

## 9.8 Cartographic Country (CartoCountry)

---

### 9.8.1 Cartographic Country ID

The Cartographic Country ID is equivalent to the Link ID.

### 9.8.2 Cartographic Country Left Name

The Cartographic Country Left Name is equivalent to the Feature Name.

### 9.8.3 Cartographic Country Left Language Code

The Cartographic Country Left Language Code is equivalent to the Language Code.

### 9.8.4 Cartographic Country Left Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.8.5 Cartographic Country Right Name

The Cartographic Country Right Name is equivalent to the Feature Name.

### 9.8.6 Cartographic Country Right Language Code

The Cartographic Country Right Language Code is equivalent to the Language Code.

### 9.8.7 Cartographic Country Right Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.9 Cartographic State (CartoState)

### 9.8.8 Cartographic Country Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 9.8.9 Detailed City

See [Detailed City](#) on page 853.

### 9.8.10 Coverage Indicator

See [Coverage Indicator](#) on page 486.

### 9.8.11 Admin Area Description

See [Admin Area Description](#) on page 844.

### 9.8.12 Admin Feature Code

See [Feature Code](#) on page 888.

### 9.8.13 Line Of Control

See [Line of Control](#) on page 1076.

### 9.8.14 Claimed By

See [Claimed By](#) on page 1071.

### 9.8.15 Controlled By

See [Controlled By](#) on page 1074.

## 9.9 Cartographic State (CartoState)

---

### 9.9.1 Cartographic State ID

The Cartographic State ID is equivalent to the Link ID.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.9 Cartographic State (CartoState)

### 9.9.2 Cartographic State Left Name

The Cartographic State Left Name is equivalent to the Feature Name.

### 9.9.3 Cartographic State Left Language Code

The Cartographic State Left Language Code is equivalent to the Language Code.

### 9.9.4 Cartographic State Left Name Transliteration

 **Note:**

This attribute is not published in MapInfo.

See *Transliteration* on page 518.

### 9.9.5 Cartographic State Right Name

The Cartographic State Right Name is equivalent to the Feature Name.

### 9.9.6 Cartographic State Right Language Code

The Cartographic State Right Language Code is equivalent to the Language Code.

### 9.9.7 Cartographic State Right Name Transliteration

 **Note:**

This attribute is not published in MapInfo.

See *Transliteration* on page 518.

### 9.9.8 Cartographic State Name Transliteration Type

 **Note:**

This attribute is not published in MapInfo.

See *Transliteration Type* on page 516.

### 9.9.9 Detailed City

See *Detailed City* on page 853.

### 9.9.10 Coverage Indicator

See *Coverage Indicator* on page 486.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.10 Built-up Areas USA

### 9.9.11 Admin Area Description

See [Admin Area Description](#) on page 844.

### 9.9.12 Admin Feature Code

See [Feature Code](#) on page 888.

### 9.9.13 Line Of Control

See [Line of Control](#) on page 1076.

### 9.9.14 Claimed By

See [Claimed By](#) on page 1071.

### 9.9.15 Controlled By

See [Controlled By](#) on page 1074.

## 9.10 Built-up Areas USA

---

This layer is not contained in the core product. It is delivered as a separate shapefile layer and can be found on the EDD.

### 9.10.1 Built-up Area Name

#### **Definition**

The standardized Built-up Area name.

#### **Length**

255

#### **Type**

Text

### 9.10.2 State FIPS Code

#### **Definition**

The state FIPS (Federal Information Processing Standard) code.

#### **Length**

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.10 Built-up Areas USA

2

### Type

Text

### Specification

- Built-up Area polygons that cross localities are merged and assigned the locality name where the majority of the Built-up Area boundary resides.

## 9.10.3 DCA

### Definition

Indicates the DCA (Database Coverage Area) value for the Built-up Area.

### Length

8

### Type

Text

### Specification

- Built-up Area polygons that cross DCAs are merged and assigned the DCA name where the majority of the Built-up Area boundary resides.

## 9.10.4 Coverage Indicator

### Definition

Indicates the type of coverage for the Built-up Area.

### Length

255

### Type

Text

## 9.10.5 Population

### Definition

The approximate total population for the Built-up Area.

### Length

4

### Type

Integer

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.11 Zones (Zones)

## Specification

- Population is the aggregation of all population data for conflated Census Block polygons within the Built-up Area.

# 9.11 Zones (Zones)

---

## 9.11.1 Link ID

See [Link ID](#) on page 367.

## 9.11.2 Zone ID

### Definition

Identifies the unique identifier for a zone.

### Value

nnnnnnnnnn

### Length

10

### Type

Numeric

### Usage

All zones should be recognised, along with administrative areas, for destination selection. They can also be used for map display and reverse geocoding. For reverse geocoding, Zone Types = PA and KA can be used. Zones in the U.S. can be used for map display.

## 9.11.3 Zone Side

### Definition

Indicates if the Zone name applies to the left, right, or to both sides of the line or polyline object.

### Value

L - The Zone name applies to the Left side of the line or polyline object.

R - The Zone name applies to the Right side of the line or polyline object.

B - The Zone name applies to Both sides of the line or polyline object.

### Length

1

### Type

Text

## 9.12 Metadata - Zone Records (MtdZoneRec)

### 9.12.1 Zone ID

See [Zone ID](#) on page 868.

### 9.12.2 Zone Name

#### Definition

Identifies the name of the zone

#### Length

35

#### Type

Text

#### Usage

All zones should be recognised along with administrative name for destination selection. They can also be used for map display (in the U.S.) and reverse geocoding (*Zone Type* = PA and KA).

PA and KA Zones have the same exonyms/synonyms as the corresponding Administrative Area Feature.

#### Specification

- In all cases, the zone is an alternate name to the city/built-up area name for destination selection. Systems should recognise the association of a link to all of the city/built-up area and zones when allowing destination input.
- Some countries contain names that can only be represented in Unicode (e.g. Russia). The *Zone Name* will be a Latin-1 name (transliteration) or an identifier (numerical ID) intended to be used to the External Unicode “look-aside” file. See [Non-Latin-1 Name Representation](#) on page 1342 for details.
- Some cities in the U.S. can be entirely covered by a zone.
- Zones are further defined by the *Zone Type*. *Zone Type* can equal PA, KA, GC, or KD.
- Each side of a link may have from 0 to 10 zones associated with it.
- A Named Place POI is included for each zone (exceptions exist for PA Zones such as O’Hare Airport).
- If there are multiple occurrences of an address within a city or built-up area, zones can be used for refined address resolution.

### 9.12.3 Language Code

See [Language Code](#) on page 618.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.12 Metadata - Zone Records (MtdZoneRec)

### 9.12.4 Zone Name Transliteration

 **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.12.5 Zone Name Transliteration Type

 **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 9.12.6 Name Type

**Definition**

Identifies the type of Area Name (i.e., Base, Exonym, Synonym, or Abbreviation)

**Value**

A – Abbreviation

B – Base

E – Exonym

S – Synonym

**Length**

1

**Type**

Text

**Usage**

All Area Names (Base, Abbreviation, Exonyms, and Synonyms) can be used for destination selection and map display for languages supported by HERE.

**Specification**

**Base**

A Base name is a name given in a language that is considered official in a given administrative area.

- If multiple names exist (in the same official language) for a particular administrative area, the base name represents the most commonly used administrative name.
- In administrative areas with multiple official languages, multiple Base names are published for Area Names if the official names are different in each language

 **Note:**

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.12 Metadata - Zone Records (MtdZoneRec)

The Base Name with the default language code is always published first.

### Abbreviation

- Abbreviations are based on the official abbreviations for a country. For instance, in the U.S., the official abbreviation for California is CA. The state abbreviations are very common in the U.S.
- Abbreviations are not included for all administrative levels. They are applied when an official abbreviation list exists. In North America, the Country (U.S. only), State, and Province levels have official abbreviations.

### Synonym and Exonym

A synonym is an alternative (additional) name for a feature in a Language that is official within the given administrative area.

An exonym is a name that is different in another language than it is in the National Language.

- The language code identifies whether the name is a synonym or an exonym of the Zone Name with the Name Type = Base.
  - If the name is in the same language as the Base name, this represents a synonym.
  - If the name is in a different language than the Base name, this represents an exonym.
- An exonym is included only when the spelling of the name is different from the spelling in the country's official language(s).

## 9.12.7 Zone Type

### Definition

Identifies the type of Zone (i.e. KA, KD, or PA)

### Value

KA – Known As – Replaces Admin

KD – Known As – Does Not Replace Admin

PA – Postal Area

GC - Greater City

### Length

2

### Type

Text

### Specification

See [Zones](#) on page 1164 for detailed information.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.13 Railroads (RailRds)

### 9.12.8 Area ID

See [Left Area ID](#) on page 427.

## 9.13 Railroads (RailRds)

---

### 9.13.1 Link ID

See [Link ID](#) on page 367.

### 9.13.2 Railway Name

The Railway Name is equivalent to the Feature Name.

### 9.13.3 Railway Name Language Code

The Railway Name Language Code is equivalent to the Language Code.

### 9.13.4 Railway Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.13.5 Railway Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 9.13.6 Bridge

See [Bridge](#) on page 442.

### 9.13.7 Tunnel

See [Tunnel](#) on page 443.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.14 Waterway Segments (WaterSeg)

### 9.13.8 Coverage Indicator

See [Coverage Indicator](#) on page 486.

## 9.14 Waterway Segments (WaterSeg)

---

### 9.14.1 Waterway ID

The Waterway ID is equivalent to the Polygon ID.

### 9.14.2 Waterway Name

The Waterway Name Place Name is equivalent to the Feature Name.

### 9.14.3 Waterway Language Code

The Waterway Language Code is equivalent to the Language Code.

### 9.14.4 Waterway Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.14.5 Waterway Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 9.14.6 Waterway Description

The Waterway Description information can be found under Feature Type.

### 9.14.7 Detailed City

See [Detailed City](#) on page 853.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.14 Waterway Segments (WaterSeg)

### 9.14.8 Admin Feature Code

See [Admin Feature Code](#) on page 853.

### 9.14.9 Coverage Indicator

See [Coverage Indicator](#) on page 486.

### 9.14.10 Display Class

#### Definition

Display Class is a classification of Features which enables a meaningful display of these specific Features. The classification is assigned according to the importance of the associated Feature.

#### Value

Display Class	Description
1	First Class
2	Second Class
3	Third Class
4	Fourth Class
5	Fifth Class
6	Sixth Class
7	Seventh Class
8	Eighth Class

#### Default Value

8 - Eighth Class

#### Length

1

#### Usage

Display Class information can be used to determine which features to display at different zoom levels

#### Specification

- Display Class is published for water features only.
- Display Class is published for linear and polygonal water features. All features that are not water features do not have Display Class value assigned.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.14 Waterway Segments (WaterSeg)

- Display Class is included for the following water features:

Feature Description	Feature Code
Ocean	0500116
Bay/Harbour	0507116
Lake	0500421
River	0500412
Canal	0500414
Intermittent River <sup>154</sup>	0500413

Display Class is applied to corresponding water features as listed.

Display Class	Water Features
1	Oceans Rivers, Canals, and Intermittent Rivers displayed at world overview maps at an approximate scale of 1:50.000.000 or based on local knowledge. Bays/Harbours touching any of the following with Display Class = 1: Oceans, Rivers, Lakes, Canals/Water Channels.
2	Rivers, Canals, and Intermittent Rivers on commercial maps at an approximate scale of 1:25.000.000 or based on local knowledge. Bays/Harbours touching any of the following with Display Class = 2: Oceans, Rivers, Lakes, Canals/Water Channels.
3	Rivers, Canals, and Intermittent Rivers on commercial maps at an approximate scale of 1:10.000.000 or based on local knowledge. Bays/Harbours touching any of the following with Display Class = 3: Oceans, Rivers, Lakes, Canals/Water Channels.
4	Rivers, Canals, and Intermittent Rivers on commercial maps at an approximate scale of 1:2.500.000 or based on local knowledge. Bays/Harbours touching any of the following with Display Class = 4: Oceans, Rivers, Lakes, Canals/Water Channels.
5	Rivers, Canals, and Intermittent Rivers on commercial maps at an approximate scale of 1:1.000.000 or based on local knowledge. Bays/Harbours touching any of the following with Display Class = 5: Oceans, Rivers, Lakes, Canals/Water Channels.
6	Rivers, Canals, and Intermittent Rivers on commercial maps at an approximate scale of 1:500.000 or based on local knowledge. Bays/Harbours touching any of the following with Display Class = 6: Oceans, Rivers, Lakes, Canals/Water Channels.

<sup>154</sup> Included in Mexico and select African countries only.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.14 Waterway Segments (WaterSeg)

here

Display Class	Water Features
7	Rivers, Canals, and Intermittent Rivers on commercial maps at an approximate scale of 1:150.000 or based on local knowledge. Bays/Harbours touching any of the following with Display Class = 7: Oceans, Rivers, Lakes, Canals/Water Channels.
8	Rivers, Canals, and Intermittent Rivers on commercial maps at an approximate scale of 1:30.000 or based on local knowledge. Bays/Harbours touching any of the following with Display Class = 8: Oceans, Rivers, Lakes, Canals/Water Channels.

- Islands do not have a Display Class value assigned.
- Display Class is not published in Entry Map products.
- Water features can be assigned a more important Display Class based on local knowledge, even though their individual size do not reflect their importance. In cases of large rivers that originate from smaller tributaries, the tributaries receive the same Display Class as the larger river for correct map display.
- Rivers receive the same Display Class for the complete feature, regardless of the changes in width along the course of the river.
  - Branches of main rivers do not necessarily receive the same Display Class as the main river.
- All Display Classes 1 through 8 do not necessarily get populated for all water features. For example, Greece does not have any rivers coded at Display Class = 1 and 2, since no large rivers run through the country. However, all water features will have a Display Class value assigned.
- The corresponding area specification for each Display Class for Lakes and Parks in Water are listed in *Expanded Inclusion* on page 876.

Display Class	Europe/Middle East/Africa & Asia-Pacific (square metres)	Canada (square metres)	Australia, New Zealand & Americas (excluding Canada) (square metres)
1	> 100.000.000	>200.000.000	> 100.000.000
2	> 50.000.000 < 100.000.000	> 50.000.000 < 200.000.000	> 10.000.000 < 100.000.000
3	> 10.000.000 < 50.000.000	> 10.000.000 < 50.000.000	> 5.000.000 < 10.000.000
4	> 5.000.000 < 10.000.000 >	> 5.000.000 < 10.000.000	> 2.500.000 < 5.000.000
5	> 2.500.000 < 5.000.000	> 1.000.000 < 5.000.000	> 1.000.000 < 2.500.000
6	> 1.000.000 < 2.500.000 >	> 600.000 < 1.000.000	> 600.000 < 1.000.000
7	> 250.000 < 1.000.000 >	> 250.000 < 600.000 >	> 250.000 < 600.000
8	> 0 < 250.000	> 0 < 250.000	> 0 < 250.000

### 9.14.11 Expanded Inclusion

See *Expanded Inclusion* on page 505.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.15 Waterway Polygons (WaterPoly)

# 9.15 Waterway Polygons (WaterPoly)

---

## 9.15.1 Waterway ID

The Waterway ID is equivalent to the Polygon ID.

## 9.15.2 Waterway Name

The Waterway Name Place Name is equivalent to the Feature Name.

## 9.15.3 Waterway Language Code

The Waterway Language Code is equivalent to the Language Code.

## 9.15.4 Waterway Name Transliteration

See [Transliteration](#) on page 518.

## 9.15.5 Waterway Name Transliteration Type

See [Transliteration Type](#) on page 516.

## 9.15.6 Waterway Description

The Waterway Description information can be found under Feature Type.

## 9.15.7 Detailed City

See [Detailed City](#) on page 853.

## 9.15.8 Admin Feature Code

See [Admin Feature Code](#) on page 853.

## 9.15.9 Coverage Indicator

See [Coverage Indicator](#) on page 486.

## 9.15.10 Display Class

See [Display Class](#) on page 874.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.16 Oceans (Oceans)

### 9.15.11 Expanded Inclusion

See [Expanded Inclusion](#) on page 505.

## 9.16 Oceans (Oceans)

---

### 9.16.1 Ocean ID

The Ocean ID is equivalent to the Polygon ID.

### 9.16.2 Ocean Name

The Ocean Name is equivalent to the Feature Name.

### 9.16.3 Ocean Name Language Code

The Ocean Name Language Code is equivalent to the Language Code.

### 9.16.4 Ocean Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.16.5 Ocean Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 9.16.6 Ocean Description

The Ocean Description information can be found under Feature Type.

### 9.16.7 Detailed City

See [Detailed City](#) on page 853.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.17 Building/Landmark Features (Landmark)

### 9.16.8 Admin Feature Code

See [Admin Feature Code](#) on page 853.

### 9.16.9 Coverage Indicator

See [Coverage Indicator](#) on page 486.

### 9.16.10 Display Class

See [Display Class](#) on page 874.

## 9.17 Building/Landmark Features (Landmark)

---

### 9.17.1 Building/Landmark ID

The Building/Landmark ID is equivalent to the Polygon ID.

### 9.17.2 Building/Landmark Name

The Building/Landmark Name is equivalent to the Feature Name.

### 9.17.3 Building/Landmark Language Code

The Building/Landmark Language Code is equivalent to the Language Code.

### 9.17.4 Building/Landmark Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.17.5 Building/Landmark Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

## 9.17.6 Building/Landmark Description (Feature Type)

### Definition

The Building Landmark Description (feature type) attribution identifies the main usage of a Building/Landmark. Also, alternate feature types can be indicated.

### Values

Range from 2005000 to 2005899

 **Note:**

The range is subdivided into individual ranges of 50 codes to support a feature code hierarchy and to offer flexibility to introduce additional feature codes in the future.

Feature Description (High Level)	Feature Type Code (High Level)	Feature Description (Low Level)	Feature Type Code
Business Commerce	2005000	Bank	2005001
		Business Facility	2005002
		Hotel or Motel	2005003
		Rental Car Agency	2005004
		Automobile Dealership	2005005
		Auto Sales & Maintenance	2005006
		Petrol Station	2005007
Convention/Exhibition Centre	2005050	N/A	2005050
Cultural	2005100	Library	2005101
		Museum	2005102
		Theatre	2005103
		Civic/Community Centre	2005104
Education	2005150	University or College	2005151
		School	2005152
Emergency Service	2005200	Police Station	2005201
Government	2005250	Embassy	2005251
		Post Office	2005252
		City Hall	2005253
		Court House	2005254

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.17 Building/Landmark Features (Landmark)

here

Feature Description (High Level)	Feature Type Code (High Level)	Feature Description (Low Level)	Feature Type Code
		Government Office	2005255
		County Council	2005256
Historical	2005300	Historical Monument	2005301
Medical	2005350	Hospital/Polyclinic	2005351
		Medical Service	2005352
Park/Leisure	2005400	Bar or Pub	2005401
		Bowling Centre	2005402
		Casino	2005403
		Cinema	2005404
		Nightlife	2005405
		Winery	2005406
		Amusement Park	2005407
		Golf Course	2005408
		Ice Skating Rink	2005409
		Marina	2005410
		Park/Recreation Area	2005411
		Public Sports Airport	2005412
		Ski Resort	2005413
Residential	2005450	Residential Area/Building	2005451
		Housing <sup>155</sup>	2005452
		Apartment1	2005453
Retail	2005500	Pharmacy	2005501
		Restaurant	2005502
		Bookstore	2005503
		Clothing Store	2005504
		Consumer Electronics Store	2005505
		Convenience Store	2005506
		Department Store	2005507

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.17 Building/Landmark Features (Landmark)

here

Feature Description (High Level)	Feature Type Code (High Level)	Feature Description (Low Level)	Feature Type Code
		Grocery Store	2005508
		Home Improvement & Hardware Store	2005509
		Home Specialty Store	2005510
		Office Supply & Services Store	2005511
		Shopping Centre	2005512
		Specialty Store	2005513
		Sporting Goods Store	2005514
Sports	2005550	Sports Centre	2005551
		Sports Activity	2005552
Tourist	2005600	Tourist Attraction	2005601
		Tourist Office	2005602
		Bridge	2005603
Transportation	2005650	Airport	2005651
		Bus Station	2005652
		Commuter Rail Station	2005653
		Ferry Terminal	2005654
		Railway Station	2005655
		Transportation Service	2005656
		Toll Structure	2005657
Unclassified	2005700	N/A	2005700
Place of Worship	2005750	Church	2005751
		Mosque	2005752
		Temple	2005753
		Synagogue	2005754
		Ashram	2005755
		Gurdwara	2005756
Industrial	2005800	Factory	2005801
Parking	2005850	N/A	2005850

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.17 Building/Landmark Features (Landmark)

here

Feature Description (High Level)	Feature Type Code (High Level)	Feature Description (Low Level)	Feature Type Code
Miscellaneous	2005900	Skyway <sup>156</sup>	2005901
Enhanced Building/ Landmark <sup>157</sup>	N/A	N/A	2005999

## 9.17.7 Detailed City

See [Detailed City](#) on page 853.

## 9.17.8 Building/Landmark Description (Feature Code)

### Definition

An identifier that publishes a “placeholder” value for feature categories.

### Value

2005999

### Length

10

### Type

Numeric

### Related Attributes

Feature Attribute (FeatAttr) Layer:

Feature Category = 3, Attribute Type = 2 (Main Feature Type)

Feature Category = 3, Attribute Type = 3 (Alternate Feature Type)

Feature Category = 3, Attribute Type = 4 (Unknown)

### Specification

- The Feature Code of a Building/Landmark polygon is published as 2005999 (“placeholder” value). To derive the actual feature type(s) of a building it is necessary to use the Feature Attribute Layer and interpret the attribute type/value combinations for FEATURE CATEGORY = 3 (ENHANCED FEATURE TYPES).

## 9.17.9 Coverage Indicator

See [Coverage Indicator](#) on page 486.

<sup>155</sup> Available in S. Korea only.

<sup>156</sup> Only available in 3D City Model product.

<sup>157</sup> Placeholder for Feature Type field.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.17 Building/Landmark Features (Landmark)

### 9.17.10 Building Height

#### Definition

Building Height indicates the height of a building (in metres), as used for Structure Footprints.

#### Value

nnn

#### Type

Numeric

#### Specification

- Separate polygons are included for each Structure Footprint height. A new structure footprint is generated when the height of surface areas for a building changes more than 10 metres.
- Height is published in metres, regardless of the country's measurement system.
- Height is measured from the base of the building to the highest point of the roofline of the building. Roofline is also known as base line or eaves.
- Height is not published for a Structure Footprint when 3D-rendering based on a Height value is not possible.

#### In Russia

- Structure Footprints may intersect with Functional Class 5 roads at grade (a channel cut is not required).

### 9.17.11 Ground Clearance

#### Definition

Identifies the distance in metres from ground level to the bottom of the skyway at its lowest point.

#### Value

####

#### Format

Numeric (4)

#### Entity-Attribute Relation

1:1

#### Usage

This enhances the 3D City Model display.

#### Specification

- Ground Clearance is always published in metres, regardless of the country's measurement system.
- Ground Clearance is published for every skyway included.

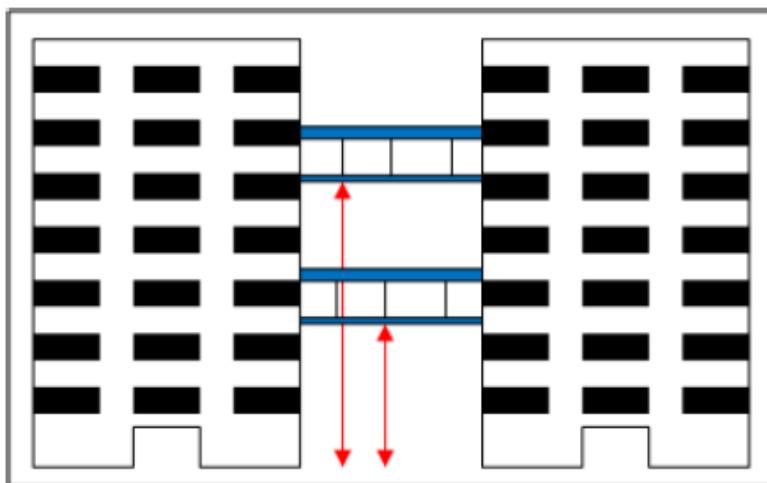
## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.17 Building/Landmark Features (Landmark)

- If the distance to the ground varies at either end of the skyway, the Ground Clearance reflects the shortest distance.
- The Ground Clearance is indicated in the two skyways in *Figure 351:* on page 885 by the red lines.

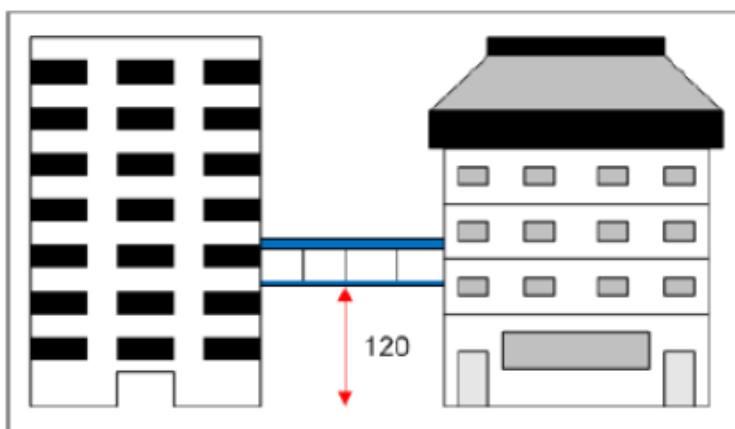
**Figure 351:**



- In *Figure 351:* on page 885 above, two polygons will be directly on top of each other. They will have the same Lat/Long Coordinate information. The only difference will be the Ground Clearance.
- Ground Clearance is given within 10 metres of the actual distance between the ground and the lowest point of the skyway.

**Example 1**

**Figure 352:**



Layer	Attribute	Value
Building/Landmark Features	Polygon ID	193030444
Building/Landmark Features	Building/Landmark Description	Enhanced Building/Landmark
Building/Landmark Features	Building/Landmark Feature Code	2005999
Building/Landmark Features	Height	15

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.17 Building/Landmark Features (Landmark)

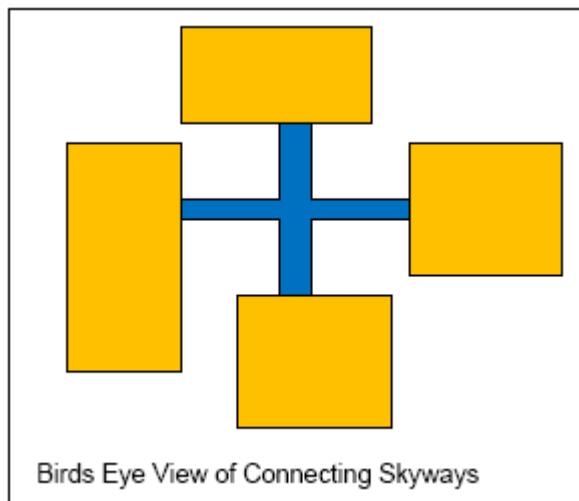
here

Layer	Attribute	Value
Building/Landmark Features	Ground Clearance	120

Layer	Attribute	Value
Feature Attribute	Feature ID	193030444
Feature Attribute	Feature Category	3 (Enhanced Feature Type)
Feature Attribute	Attribute Type	2 (Main Feature Type)
Feature Attribute	Attribute Value	2005901 (Skyway)

## Example 2

Figure 353:



① **Note:**

The connecting skyways are represented as one polygon.

Layer	Attribute	Value
Building/Landmark Features	Polygon ID	193030444
Building/Landmark Features	Building/Landmark Description	Enhanced Building/Landmark
Building/Landmark Features	Building/Landmark Feature Code	2005999
Building/Landmark Features	Height	15
Building/Landmark Features	Ground Clearance	120

Layer	Attribute	Value
Feature Attribute	Feature ID	193030444
Feature Attribute	Feature Category	3 (Enhanced Feature Type)

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.18 Land Use Features A (LandUseA)

here

Layer	Attribute	Value
Feature Attribute	Attribute Type	2 (Main Feature Type)
Feature Attribute	Attribute Value	2005901 (Skyway)

## 9.18 Land Use Features A (LandUseA)

### 9.18.1 Land Use ID

The Land Use ID is equivalent to the Polygon ID.

### 9.18.2 Land Use Name

The Land Use Name is equivalent to the Feature Name.

### 9.18.3 Land Use Language Code

The Land Use Language Code is equivalent to the Language Code.

### 9.18.4 Land Use Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.18.5 Land Use Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 9.18.6 Land Use Description

The Land Use Description information can be found under Feature Type.

### 9.18.7 Detailed City

See [Detailed City](#) on page 853.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.19 Land Use Features B (LandUseB)

### 9.18.8 Feature Code

#### Definition

Feature Code is a number that is assigned to every Feature Type. Feature Codes may also be assigned to Grouped Structures/Grouped Complexes.

#### Value

See [FEATURE - Feature Type](#) on page 1196 for a listing of Feature Codes and their descriptions.

#### Length

10

#### Type

Numeric

### 9.18.9 Coverage Indicator

See [Coverage Indicator](#) on page 486.

### 9.18.10 Display Class

See [Display Class](#) on page 874.

### 9.18.11 Expanded Inclusion

See [Expanded Inclusion](#) on page 505.

## 9.19 Land Use Features B (LandUseB)

---

### 9.19.1 Land Use ID

The Land Use ID is equivalent to the Polygon ID.

### 9.19.2 Land Use Name

The Land Use Name is equivalent to the Feature Name.

### 9.19.3 Land Use Language Code

The Land Use Language Code is equivalent to the Language Code.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.19 Land Use Features B (LandUseB)

### 9.19.4 Land Use Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.19.5 Land Use Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 9.19.6 Land Use Description

The Land Use Description information can be found under Feature Type.

### 9.19.7 Detailed City

See [Detailed City](#) on page 853.

### 9.19.8 Feature Code

**Definition**

Identifies the Grouped Structure/Grouped Complex with a predefined feature code. The feature code is optional. Codes can be found in the Metadata Reference Table. (MtdRef).

**Value**

nnnnnnn

**Length**

7

**Type**

Numeric

### 9.19.9 Polygon Restriction

**Definition**

Polygon Restriction identifies whether the Environmental Zone Polygon applies to all vehicles or to trucks only.

**Length**

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.19 Land Use Features B (LandUseB)

2

### Type

Numeric

### Value

1 - Trucks Only

2 - Autos Only

3 - Autos and Trucks

4 - Buses

### Usage

Polygon Restriction can be used to selectively filter Environmental Zone Polygons that are irrelevant to the user's profile. For example, a driver of a passenger car may not be interested in having each truck-only Environmental Zone Polygon in the map display.

### Specification

- Polygon Restriction is coded for all Environmental Zone polygons.
- Polygon Restriction values are referenced by POLYACC Reference Class in Metadata Reference (MtdRef) table.
- Polygon Restriction = 1 (Trucks Only) identifies polygons related to Environmental Zones restricting access to trucks only.
- Polygon Restriction = 2 (Autos Only) identifies polygons related to Environmental Zones restricting access to autos only.
- Polygon Restriction = 3 (Autos and Trucks) identifies polygons related to Environmental Zones restricting access to autos and trucks.
- Polygon Restriction = 4 (Buses only) identifies polygons related to Environmental Zones restricting access to buses only.
- The Access Characteristics applicable to the Environmental Zone condition (Condition Type = 34) indicate to which vehicles the environmental restriction applies. The Polygon Restriction only indicates if the Environmental Zone Polygon applies to trucks or passenger cars.

## 9.19.10 Coverage Indicator

See [Coverage Indicator](#) on page 486.

## 9.19.11 Expanded Inclusion

See [Expanded Inclusion](#) on page 505.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.20 Aggregated Feature (AggrFeature)

# 9.20 Aggregated Feature (AggrFeature)

## 9.20.1 Aggregated Feature ID

The Aggregated Feature ID is equivalent to the Feature ID.

## 9.20.2 Aggregated Feature Description

### Definition

Aggregated Feature Description identifies the type of the Aggregated Feature.

### Value

'Motorway Junction Object'

### Length

40

### Type

Text

### Description

The feature description of the Motorway Junction Object - Complex Feature (MJO-CF).

## 9.20.3 Aggregation Type

### Definition

Aggregation Type indicates the type of feature defined by the aggregation.

### Value

1 - Grouped Structure

2 - Grouped Complex

3 - Motorway Junction Objects

### Length

2

### Type

Numeric

### Usage

Grouped Structure:

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.20 Aggregated Feature (AggrFeature)

here

The Grouped Structure allows an application to associate the different parts of a structure into one entity for display purposes.

- ① **Note:** For Grouped Structures with an associated 3D Object, the associated Structure Footprint(s) are not intended to be displayed simultaneously with the 3D model.

Grouped Complex:

Grouped Complex allows an application to display the associated 3D Object model in place of the associated Grouped Structures and their associated Structure Footprint polygons. Additionally, the application can revert to display of the Structure Footprints when the distance is far enough away from the complex, consequently making display of the 3D model impractical.

## Specification

Grouped Structure:

- A Grouped Structure can be associated to a POI. This POI can be used as a destination point when routing to a specific building.
- A Grouped Structure that has an associated 3D Object will always have an associated POI or POIs.
- The POI associated to a Grouped Structure can have a parent/child relationship to the POI associated to a Grouped Complex.
- A Name is optionally associated to the Grouped Structure. This name is the same as the name applied to the POI that is associated to the Grouped Structure.
- The POI associated to a Grouped Structure can have an associated Landmark Icon, which is a simplified 2-dimensional representation of the Building.
- A Grouped Structure can have an associated 3D Object, which is a detailed 3-dimensional representation of the Building.
- A 3D Object has a corresponding (virtual) anchor point in the HERE Map Content. The anchor point should be used to correctly position the 3D Object in relation to the Grouped Structure. The anchor point is not explicitly published, but is defined to be the southernmost point (Shape Points or Nodes) over the collection of all associated Structure Footprint polygons. If multiple points have the same lowest Latitude, the south-western most point is the anchor point.
- A Grouped Structure can have the following combinations:

Usage	POI	Landmark Icon for POI	3D Object for POI
- Destination input for building - Icon display for building - 3D Object Display for building	X	X	X
- Destination input for building - Icon Display for building	X	X	
- Destination input building	X		

- A Grouped Structure that has an associated 3D Object also has a POI associated with a corresponding Landmark Icon for zoomed out display.
- For Grouped Structure that has an associated 3D Object, the Structure Footprint(s) correspond equally to both the lower and higher resolution 3D Object.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.20 Aggregated Feature (AggrFeature)

- A POI association will exist for all building/landmark polygons present in HERE's previously released Building/ Landmark Polygon product.
- Grouped Structures are included in such a way that overlap between the building polygons and the road network does not occur. Select countries may deviate from this rule.

### Grouped Complex

- A Grouped Complex has one associated 3D object.
- A Grouped Complex 3D object corresponds to the Structure Footprint(s) of the associated Grouped Structure(s).
- A Name is optionally associated to the Grouped Complex. This name is the same as the name applied to the POI that is associated to the Grouped Complex.
- A Grouped Complex that has an associated POI can have a parent/child relationship to a larger (parent) Grouped Complex with an associated POI. Example: A hospital complex (Grouped Complex) is located at a University complex (Grouped Complex). In this case, the University complex is the parent, and the hospital complex is the child.
- A 3D Object has a corresponding anchor point. The anchor point is used to correctly position the 3D Object in relation to the Grouped Complex. It is defined to be the south most point that is furthest west, over the collection of all associated Structure Footprint polygons.

## 9.20.4 Aggregated Feature Name

The Aggregated Feature Name is equivalent to the Feature Name.

## 9.20.5 Aggregated Feature Language Code

The Aggregated Feature Language Code is equivalent to the Language Code.

## 9.20.6 Aggregated Feature Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

## 9.20.7 Aggregated Feature Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

## 9.20.8 Associated POI ID

The Associated POI ID is equivalent to the POI ID.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.20 Aggregated Feature (AggrFeature)

### 9.20.9 Number of Components

#### Definition

The number of component features associated to the Aggregated Feature.

#### Value

nnnnn

#### Length

5

#### Type

Numeric

### 9.20.10 Feature Code

See [Feature Code](#) on page 888.

### 9.20.11 Number of Attachments

#### Definition

The number of file attachments related to the Aggregated Feature.

#### Value

nnnnn

#### Length

5

#### Type

Numeric

#### Specification

##### Motorway Junction Objects

- For Motorway Junction Objects, 1,2, or 3 different types of MJO-COLLADA files may be provided for each MJO-CF, for 3 different levels of detail.
- ① **Note:** In exceptional cases it may happen that a file attachment is specified in the data but the actual reference file is not part of the delivery (Dangling References).

### 9.20.12 Reference X Coordinate

#### Definition

Reference X Coordinate contains the Longitude of the Location Reference.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.21 Aggregated Feature Component (AggrFeatComp)

### **Value**

nnnnnnnnnnnn

### **Length**

12

### **Type**

Numeric

## 9.20.13 Reference Y Coordinate

### **Definition**

Reference Y Coordinate contains the Latitude of the Location Reference.

### **Value**

nnnnnnnnnnnn

### **Length**

12

### **Type**

Numeric

## 9.21 Aggregated Feature Component (AggrFeatComp)

---

### 9.21.1 Aggregated Feature ID

The Aggregated Feature ID is equivalent to the Feature ID.

### 9.21.2 Sequence Number (Aggregated Feature Component)

#### **Definition**

A counter starting from 1 to the number of components for a specific Aggregated Feature ID.

#### **Value**

nnnnn

#### **Length**

5

#### **Type**

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.21 Aggregated Feature Component (AggrFeatComp)

Numeric

### 9.21.3 Component Type

#### Definition

The type of Feature/Entity used for the definition of an Aggregated Feature.

#### Value

F - Structure Footprint

S - Grouped Structure

L - Link

ⓘ **Note:**

A Grouped Structure has Structure Footprints defined as components, a Grouped Complex has Grouped Structures defined as components.

#### Length

2

#### Type

Text

### 9.21.4 Component ID

#### Definition

The Feature Identifier of the Structure Footprint, Grouped Structure, or Link part of the Aggregated Feature. For Structure Footprints the Component ID corresponds to the Feature ID in the Building/ Landmark Features layer (Landmarks). For Grouped Structures the Component ID corresponds to the Aggr\_ID in the Aggregated Feature layer (AggrFeature). For Motorway Junction Objects the Component ID corresponds to the Feature ID of a navigable link in the Streets layer (Streets) being part of a Motorway Junction Object.Value.

nnnnnnnnnn

#### Length

10

#### Type

Numeric

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.22 Aggregated Feature File Association (AggrFeatFile)

# 9.22 Aggregated Feature File Association (AggrFeatFile)

---

## 9.22.1 Aggregated Feature ID

The Aggregated Feature ID is equivalent to the Feature ID.

## 9.22.2 File Type

See [File Type](#) on page 726.

## 9.22.3 Attachment Type

See [Attachment Type](#) on page 727.

## 9.22.4 File Name

See [Associated File Name](#) on page 728.

# 9.23 Risk Prone Areas (RiskArea)

---

## 9.23.1 Polygon ID

### Definition

The Polygon ID is a 10 digit number that is used to identify a polygon.

### Value

nnnnnnnnnn

### Length

10

### Type

Numeric

### Usage

### Specification

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.23 Risk Prone Areas (RiskArea)

### 9.23.2 Polygon Name

#### Definition

The Polygon Name is used to provide a name for the polygon.

#### Length

35

#### Type

Text

### 9.23.3 Language Code

See [Language Code](#) on page 618.

### 9.23.4 Polygon Name Transliteration

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration](#) on page 518.

### 9.23.5 Polygon Name Transliteration Type

① **Note:**

This attribute is not published in MapInfo.

See [Transliteration Type](#) on page 516.

### 9.23.6 Feature Description

#### Definition

The descriptive text of the Risk Prone Area.

#### Length

40

#### Type

Text

### 9.23.7 Detailed City

See [Detailed City](#) on page 468.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.24 Alternate Feature Name (AltFeatNm)

### 9.23.8 Admin Feature Code

Admin Feature Code is equivalent to Feature Code.

### 9.23.9 Coverage Indicator

See [Coverage Indicator](#) on page 486.

### 9.23.10 Severity Rating

#### **Definition**

Severity Rating is a classification of risks of hurricane, flood, or tsunami in a specific area.

#### **Value**

1 through 10

#### **Default Value**

None

#### **Length**

2

#### **Type**

Character

#### **Usage**

Severity Rating can be used for map display.

#### **Specification**

- Severity Rating can be used for map display.
- Governmental sources are used to determine the applicable Severity Rating value.
- Severity Rating values range from 1 to 10.

## 9.24 Alternate Feature Name (AltFeatNm)

---

### 9.24.1 Feature ID

#### **Definition**

The unique identifier for the feature.

#### **Value**

nnnnnnnnnnnn

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.24 Alternate Feature Name (AltFeatNm)

### Format

Numeric

### Cardinality

1:1

### Default Value

None

### Related Attributes

LINK\_ID

POLYGON\_ID

AGGR\_ID

### Usage

Used to reference features in one of the related tables.

### Specification

- The Feature ID corresponds to a LINK\_ID, POLYGON\_ID or AGGR\_ID in one of the related layers.

## 9.24.2 Language Code

### Definition

The language associated with the feature name.

### Value

Three character language code.

### Format

Text

### Cardinality

1:1

### Default Value

None

### Related Attributes

Feature Name

### Usage

Can be used in map display.

### Specification

- Each name receives a three character standard code as defined by MARC.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.24 Alternate Feature Name (AltFeatNm)

### 9.24.3 Feature Name

#### **Definition**

Provides an alternate name for a feature.

#### **Value**

Name of a feature.

#### **Format**

Text

#### **Cardinality**

1:1,0

#### **Default Value**

None

#### **Related Attributes**

Language Code

Feature Code

#### **Usage**

Can be used for map display.

#### **Specification**

- When the corresponding feature is a Cartographic Country Boundary or a Cartographic State Boundary, this field is not populated.

### 9.24.4 Right Feature Name

#### **Definition**

The alternate name for the right side of a feature.

#### **Value**

Name of feature.

#### **Format**

Text

#### **Cardinality**

1:1,0

#### **Default Value**

None

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.24 Alternate Feature Name (AltFeatNm)

### Related Attributes

Language Code

Feature Code

### Usage

Can be used for map display.

### Specification

- Is only published when the corresponding Feature is a Cartographic Country Boundary or a Cartographic State Boundary.

## 9.24.5 Right Language Code

### Definition

The language code corresponding to the Right Feature Name.

### Value

Three character code

### Format

Char

### Cardinality

1:1,0

### Default Value

None

### Related Attributes

Right Feature Name

### Usage

Can be used for map display.

### Specification

- Each name receives a three character standard code defined by MARC.

## 9.24.6 Left Feature Name

### Definition

The Alternate Name for the left side of a linear feature.

### Value

Name of the feature.

### Format

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.24 Alternate Feature Name (AltFeatNm)

Text

### Cardinality

1:1,0

### Default Value

None

### Related Attributes

Language Code

Feature Code

### Usage

Can be used for map display.

### Specification

- Is only published when the corresponding feature is a Cartographic Country Boundary or a Cartographic State Boundary.

## 9.24.7 Left Language Code

### Definition

The language code associated to the left feature name.

### Value

Three character code.

### Format

Char

### Cardinality

1:1,0

### Default Value

None

### Related Attributes

Left Feature Name

### Usage

Can be used for map display.

### Specification

- Each name receives a three character standard code as defined by MARC.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.24 Alternate Feature Name (AltFeatNm)

### 9.24.8 Feature Name Transliteration

#### ① Note:

This attribute is not published in MapInfo.

#### Definition

A Latin-1 representation of a non-Latin-1 name.

#### Value

A textual description of a non-Latin-1 name.

#### Format

Text

#### Cardinality

1:1,0

#### Default Value

None

#### Related Attributes

Feature Name

#### Usage

Enables destination input for specific non-Latin-1 languages. In such languages the transliteration is required for entering the name in the non-Latin-1 language.

To offer a Latin-1 product for countries using non-Latin-1 languages.

### 9.24.9 Transliteration Type

#### ① Note:

This attribute is not published in MapInfo.

#### Definition

A Transliteration Type defines the method used to transliterate a non-Latin-1 name into Latin-1 text.

#### Value

Three character code.

#### Format

Char

#### Cardinality

1:1,0

#### Default Value

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.24 Alternate Feature Name (AltFeatNm)

None

### Related Attributes

Feature Name Transliteration

### Usage

Can be used in a similar manner as Language Code.

## 9.24.10 Right Feature Name Transliteration

### ① Note:

This attribute is not published in MapInfo.

### Definition

A Latin-1 representation of a non-Latin-1 name.

### Value

A textual description of a non-Latin-1 name.

### Format

Text

### Cardinality

1:1,0

### Default Value

None

### Related Attributes

Language Code

Feature Code

### Usage

Enables destination input for specific non-Latin-1 languages. In such languages the transliteration is required for entering the name in the non-Latin-1 language.

To offer a Latin-1 product for countries using non-Latin-1 languages.

## 9.24.11 Right Transliteration Type

### ① Note:

This attribute is not published in MapInfo.

### Definition

A Transliteration Type defines the method used to transliterate a non-Latin-1 name into Latin-1 text.

### Value

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.24 Alternate Feature Name (AltFeatNm)

Three character code.

### Format

Char

### Cardinality

1:1,0

### Default Value

None

### Related Attributes

Right Name Transliteration

### Usage

Can be used in a similar manner as Language Code.

## 9.24.12 Left Feature Name Transliteration

### ① Note:

This attribute is not published in MapInfo.

### Definition

A Latin-1 representation of a non-Latin-1 name.

### Value

A textual description of a non-Latin-1 name.

### Format

Text

### Cardinality

1:1,0

### Default Value

None

### Related Attributes

Language Code

Feature Code

### Usage

Enables destination input for specific non-Latin-1 languages. In such languages the transliteration is required for entering the name in the non-Latin-1 language.

To offer a Latin-1 product for countries using non-Latin-1 languages.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.24 Alternate Feature Name (AltFeatNm)

### 9.24.13 Left Transliteration Type

#### ① Note:

This attribute is not published in MapInfo.

#### Definition

A Transliteration Type defines the method used to transliterate a non-Latin-1 name into Latin-1.

#### Value

Three character code.

#### Format

Char

#### Cardinality

1:1,0

#### Default Value

None

#### Related Attributes

Left Name Transliteration

#### Usage

Can be used in a similar manner as Language Code.

### 9.24.14 Name Type

#### Definition

Identifies the type of Feature Name.

#### Values

B - Base

E - Exonym

S - Synonym

#### Format

Text

#### Cardinality

1:1

#### Default Value

B

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.25 Feature Attribute (FeatureAttr)

### Related Attributes

Feature Name

Feature ID

### Usage

All name types can be used for map display.

## 9.24.15 Feature Code

### Definition

A number that is assigned to every Feature Type.

### Value

The Feature Code of a corresponding feature in a related layer.

### Format

Numeric

### Cardinality

1:1

### Default Value

None

### Related Attributes

Feature Type

## 9.25 Feature Attribute (FeatureAttr)

---

### 9.25.1 Feature ID

### 9.25.2 Attribute Type

#### Definition

Identifies the type of feature attribute published in this record.

#### Values

For Enhanced Feature Types:

2 - Main Feature Type

3 - Alternate Feature Type

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.25 Feature Attribute (FeatureAttr)

4 - Unknown

For Toll Cost XML

5 - Toll System Type

**Length**

5

**Type**

Numeric

**Related Attributes**

Attribute Value

**Related Layer**

Traffic Layer (Traffic) for RDS-TMC codes on navigable links.

**Specification**

Enhanced Feature Types

- The building's main Feature Type, i.e., the most common usage/function is indicated by Attribute Type = 2 (Main Feature Type).
- The building's alternate Feature Type is indicated by Attribute Type = 3 (Alternate Feature Type).
- If the main indication for the Feature Type(s) for a building is unknown, this is indicated with Attribute Type = 4 (Unknown).

**Toll Cost XML**

- Attribute Type = 5 Toll System Type is a reference to a Toll System in the Toll Cost XML product. See [Toll System Type](#) on page 661 for additional information.

## 9.25.3 Attribute Value

**Definition**

Represents the value associated with a feature.

**Attribute Value**

See the following sections for attribute values.

**Related Attributes**

Attribute Type

**Specification**

See the following sections for specifications.

## 9.25.3.1 Enhanced Feature Types

### Definition

The Building Landmark Description (feature type) attribution identifies the main usage of a Building/Landmark. Also, alternate feature types can be indicated.

### Values

Range from 2005000 to 2005899

 **Note:**

The range is subdivided into individual ranges of 50 codes to support a feature code hierarchy and to offer flexibility to introduce additional feature codes in the future.

Building Type Description	Feature Type Code Range
BUSINESS/COMMERCE	2005000 - 2005049
CONVENTION/EXHIBITION CENTRE	2005050 - 2005099
CULTURAL	2005100 - 2005149
EDUCATIONAL	2005150 - 2005199
EMERGENCY SERVICE	2005200 - 2005249
GOVERNMENT	2005250 - 2005299
HISTORICAL	2005300 - 2005349
MEDICAL	2005350 - 2005399
PARK/LEISURE	2005400 - 2005449
RESIDENTIAL	2005450 - 2005499
RETAIL	2005500 - 2005549
SPORTS	2005550 - 2005599
TOURIST	2005600 - 2005649
TRANSPORTATION	2005650 - 2005699
UNCLASSIFIED	2005700 - 2005749
PLACE OF WORSHIP	2005750 - 2005799
INDUSTRIAL	2005800 - 2005849
PARKING	2005850 - 2005899
MISCELLANEOUS	2005901-2005999

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.25 Feature Attribute (FeatureAttr)

here

Feature Description (High Level)	Feature Type Code (High Level)	Feature Description (Low Level)	Feature Type Code
Business Commerce	2005000	Bank	2005001
		Business Facility	2005002
		Hotel or Motel	2005003
		Rental Car Agency	2005004
		Automobile Dealership	2005005
		Auto Sales & Maintenance	2005006
		Petrol Station	2005007
Convention/Exhibition Centre	2005050	N/A	2005050
Cultural	2005100	Library	2005101
		Museum	2005102
		Theatre	2005103
		Civic/Community Centre	2005104
Education	2005150	University or College	2005151
		School	2005152
Emergency Service	2005200	Police Station	2005201
Government	2005250	Embassy	2005251
		Post Office	2005252
		City Hall	2005253
		Court House	2005254
		Government Office	2005255
		County Council	2005256
Historical	2005300	Historical Monument	2005301
Medical	2005350	Hospital/Polyclinic	2005351
		Medical Service	2005352
Park/Leisure	2005400	Bar or Pub	2005401
		Bowling Centre	2005402
		Casino	2005403
		Cinema	2005404

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.25 Feature Attribute (FeatureAttr)

here

Feature Description (High Level)	Feature Type Code (High Level)	Feature Description (Low Level)	Feature Type Code
		Nightlife	2005405
		Winery	2005406
		Amusement Park	2005407
		Golf Course	2005408
		Ice Skating Rink	2005409
		Marina	2005410
		Park/Recreation Area	2005411
		Public Sports Airport	2005412
		Ski Resort	2005413
Residential	2005450	Residential Area/Building	2005451
		Housing#unique_1287/ unique_1287_Connect_42_id-0000	2005452
		Apartment1	2005453
Retail	2005500	Pharmacy	2005501
		Restaurant	2005502
		Bookstore	2005503
		Clothing Store	2005504
		Consumer Electronics Store	2005505
		Convenience Store	2005506
		Department Store	2005507
		Grocery Store	2005508
		Home Improvement & Hardware Store	2005509
		Home Specialty Store	2005510
		Office Supply & Services Store	2005511
		Shopping Centre	2005512
		Specialty Store	2005513
		Sporting Goods Store	2005514
Sports	2005550	Sports Centre	2005551

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.25 Feature Attribute (FeatureAttr)

here

Feature Description (High Level)	Feature Type Code (High Level)	Feature Description (Low Level)	Feature Type Code
		Sports Activity	2005552
Tourist	2005600	Tourist Attraction	2005601
		Tourist Office	2005602
		Bridge	2005603
Transportation	2005650	Airport	2005651
		Bus Station	2005652
		Commuter Rail Station	2005653
		Ferry Terminal	2005654
		Railway Station	2005655
		Transportation Service	2005656
		Toll Structure	2005657
Unclassified	2005700	N/A	2005700
Place of Worship	2005750	Church	2005751
		Mosque	2005752
		Temple	2005753
		Synagogue	2005754
		Ashram	2005755
		Gurdwara	2005756
		Pagoda	2005757
Industrial	2005800	Factory	2005801
Parking	2005850	N/A	2005850
Miscellaneous	2005900	Skyway#unique_1287/ unique_1287_Connect_42_id-0000d4e9	2005901
Enhanced Building/ Landmark#unique_1287/ unique_1287_Connect_42_id-0000d4e9	N/A	N/A	2005999

## Length

<sup>158</sup> Available in S. Korea only.

<sup>159</sup> Only available in 3D City Model.

<sup>160</sup> Placeholder for Feature Type field.

# Reference Guide

Attributes - Administrative Areas and Other Cartography

9.25 Feature Attribute (FeatureAttr)

100 (for Attribute Value field in Feature Attribute Layer)

## Type

Char (for Attribute Value field in Feature Attribute Layer)

## Layer(s)

Feature Attribute Layer (FeatureAttr), Attribute Value field

## Related Attributes

Building/Landmark Layer:

Building/Landmark Description (Feature Type)

## Specification

- The feature type of a Building/Landmark polygon is determined by appropriate sources. Also, the Facility Type of the POI that corresponds to the same building or landmark can be used to derive this information.
- To derive the actual feature type(s) of a building, it is necessary to use the published Attribute Type / Attribute Value combinations in the Feature Attribute Layer.
  - ① **Note:** Corresponding textual feature type descriptions are provided as metadata.
- The building's main Feature Type, i.e., its most common usage/function is indicated with Attribute Type 2 - Main Feature Type.
- Alternate Feature Types of a building are indicated with Attribute Type 3 - Alternate Feature Type.
- If the "main" indication for the Feature Type(s) of a building is (are) unknown this is indicated with Attribute Type 4 - Unknown.
- High-level Feature Type '2005700' (Unclassified Building/Landmark) is published when the feature type of a Building/Landmark is unknown. Unclassified Building/Landmark polygons are unnamed.
- PLACE OF WORSHIP, INDUSTRIAL and PARKING are added as new high-level categorises for Feature Type information.
- PLACE OF WORSHIP is the high-level Feature Type to CHURCH, MOSQUE, SYNAGOGUE, TEMPLE, ASHRAM and OTHER low-level Feature Types.
- High-level Feature Type INDUSTRIAL has low-level Feature Type FACTORY associated.
- High-Level Feature Type PARKING does not have a low-level Feature Type associated.
  - Building/Landmark polygons which represent "Parking Houses" and "Parking Garages" are coded with this Feature Type.
- The high-level feature type is published if it is the only feature type known or when it reflects the building's most common usage/feature.
- Although the high-level feature type is not always published, users can derive the high-level feature type from the lower level feature types.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.26 Feature Point (FeatPoint)

# 9.26 Feature Point (FeatPoint)

---

## 9.26.1 Feature Point ID

See A.10.2.1 Feature Point ID.

## 9.26.2 Associated Link

See A.10.2.2 Associated Link.

## 9.26.3 Feature Point Type

### **Definition**

Feature Point Type identifies the type of Feature Point.

### **Values**

GP - Guidance Point

RG - Route Guidance Point

RC - Railway Crossing

### **Length**

2

### **Type**

Text

## RC - Railway Crossing

### **Definition**

Identifies when a railroad intersects a road.

### **Usage**

Allows for map display.

### **Specification**

- Railway Crossings are only published when a railroad intersects a road at the same level.

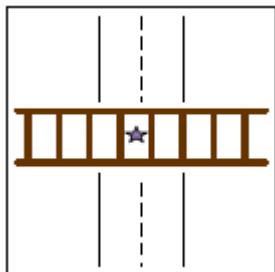
## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.26 Feature Point (FeatPoint)

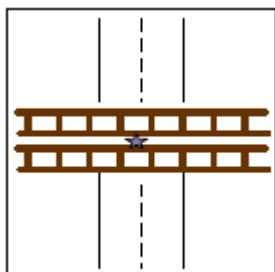
- Railway Crossings are published when a railroad intersects a road. See [Figure 354:](#) on page 916. The Feature Point represents the midpoint of the intersection of the road and railroad.

**Figure 354:**



- When multiple railroad tracks intersect a road at one location and are perceived to be one intersection, only one Feature Point is published. See [Figure 355:](#) on page 916.

**Figure 355:**



- Railway Crossings may be included even though the railroad tracks may not be present in the HERE Map Content.
- Railway Crossings are not associated to any Link or Node. Therefore Side = Not Applicable is published in these cases.
- The presence of a Railway Crossing does not indicate that the crossing is protected or unprotected. This information is published in the Signs, Signals & Warnings product.
- The presence of a Railway Crossing does not indicate if the tracks are actually in use or not. The Railway Crossing may represent railroad tracks that are no longer in use.

## Reference Guide

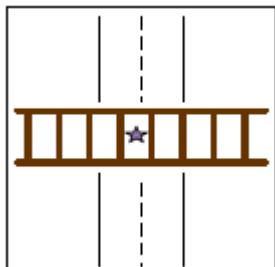
Attributes - Administrative Areas and Other Cartography

9.27 Feature Association Main (AssoMain)

- Positional Accuracy is within +/- 50 metres.

### Example

**Figure 356:**



Layer	Attribute	Value
Feature Point	Feature Point ID	133030444
Feature Point	Associated Link ID	0
Feature Point	Feature Point Type	RC
Feature Point	Side of Link	N

## 9.26.4 Side of Link

See A.10.2.4 Side of Link.

## 9.27 Feature Association Main (AssoMain)

### 9.27.1 Association ID

See A.10.4.1 Association ID.

### 9.27.2 Association Type

See A.10.4.2 Association Type.

### 9.27.3 Number of Components

See A.10.4.3 Number of Components.

### 9.27.4 Number of Attributes

See A.10.4.4 Number of Attributes.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.28 Feature Association Component (AssoComp)

### 9.27.5 Number of Names

See A.10.4.5 Number of Names.

### 9.27.6 Number of Date Time Modifiers

See A.10.4.6 Number of Date Time Modifiers.

## 9.28 Feature Association Component (AssoComp)

---

### 9.28.1 Association ID

See A.10.5.1 Association ID.

### 9.28.2 Component Type

See A.10.5.2 Component Type.

### 9.28.3 Component ID

See A.10.5.3 Component ID.

## 9.29 Feature Association Attribute (AssoAttrib)

---

### 9.29.1 Association ID

See A.10.7 Association ID.

### 9.29.2 Attribute Type

See A.10.8 Attribute Type.

### 9.29.3 Attribute Value

See A.10.9 Attribute Value.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.30 Feature Association Name (AssoName)

# 9.30 Feature Association Name (AssoName)

---

## 9.30.1 Association ID

See A.10.10.1 Association ID.

## 9.30.2 Association Name

See A.10.10.2 Association Name.

## 9.30.3 Language Code

See A.10.10.3 Language Code.

## 9.30.4 Name Type

See A.10.10.4 Name Type.

## 9.30.5 Association Name Trans

See A.10.10.5 Association Name Trans.

## 9.30.6 Association Name Trans Type

See A.10.10.6 Association Name Trans Type.

# 9.31 Feature Association Date Time (AssoDTM)

---

## 9.31.1 Association ID

See A.10.11.1 Association ID.

## 9.31.2 Date/Time Modifier (DTM) Type

See *Date/Time Modifier (DTM) Type* on page 612.

## 9.31.3 Exclude Date

See *Exclude Date* on page 613.

## Reference Guide

Attributes - Administrative Areas and Other Cartography

9.31 Feature Association Date Time (AssoDTM)

### 9.31.4 From End

See [From End](#) on page 613.

### 9.31.5 Reference Date

See [Reference Date](#) on page 614.

### 9.31.6 Expiration Date

See [Expiration Date](#) on page 616.

### 9.31.7 Start Time

See [Start Time](#) on page 617.

### 9.31.8 End Time

See [End Time](#) on page 617.

# Chapter 10

## Attributes - Metadata

---

### Topics:

- *Introduction*
- *Metadata - Country Reference*  
(*MtdCntryRef*)
- *Metadata - Daylight Saving Time*  
(*MtdDST*)
- *Metadata - Administrative Area*  
(*MtdArea*)
- *Metadata - Reference Classes* (*MtdRef*)
- *Metadata - Compound Reference*  
(*MtdCmpRef*)
- *Metadata - File Identification*  
(*MtdField*)

## 10.1 Introduction

This chapter describes all of the attributes contained in the layers associated with Metadata.

## 10.2 Metadata - Country Reference (MtdCntryRef)

### 10.2.1 Government Code

**Definition**

Identifies the government code of the administrative area.

**Value**

nnnnnnnnnn

**Length**

10

**Type**

Numeric

**Usage**

It can be used to identify an administrative area based on its official code.

**Specification**

- Government Codes are included for all administrative levels, KD and GC Zones.
  - ① **Note:** Government Codes are not included for KA zones because the KA zone replaces the administrative area coding. See [Zones](#) on page 1164 for more detail.
- Official codes are used for *Government Codes (Gov Codes)*, if available.
- If official codes are not available, *Gov Codes* are generated by HERE.
- Some areas (*AA Level 3* and *AA Level 4*) in Germany do not have an official code assigned, therefore *Gov Code* of 0 is published. For example, Hamburg (*AA Level 3*) will have a *Gov Code* of 0 published.
- Administrative features at the same level and part of the same higher administrative level are guaranteed to have a unique *Gov Code*. That is, if administrative feature “A” and administrative feature “B” are both part of the same higher administrative feature “C”, They will not have the same *Gov Code*. One might have

## Reference Guide

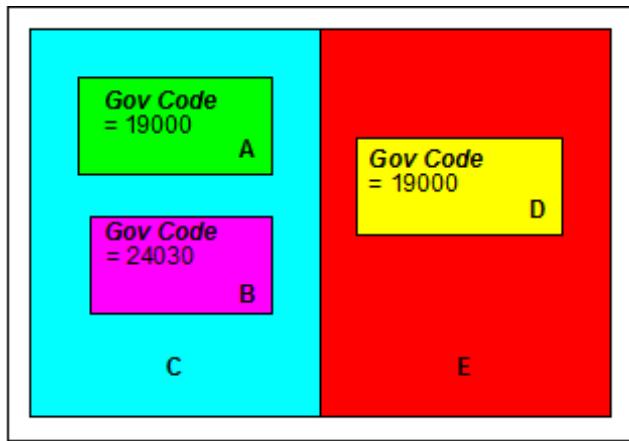
Attributes - Metadata

10.2 Metadata - Country Reference (MtdCntryRef)

here

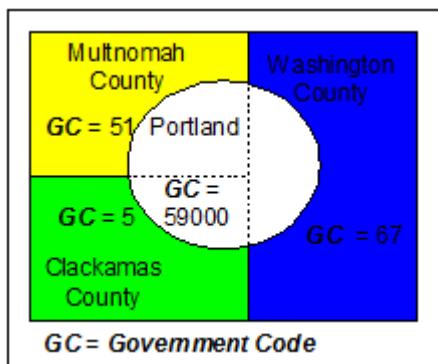
the same *Gov Code* as administrative feature “D” which is part of administrative feature E (same level as “C”). See [Figure 357:](#) on page 923.

**Figure 357:**



- In the case of a city in multiple counties (U.S.) or a Built-up Area in multiple municipalities (Europe/Canada), the *Gov Code* remains the same. See [Figure 358:](#) on page 923. For example in the case of Portland, the *Gov Code* can be used to determine that all three components of Portland belong together and should be treated as one city. Even though there is in fact only one City, the higher administrative levels still need to be retained in case they are needed for address resolution.

**Figure 358:**



In the U.S., Official Codes are based the Federal Information Processing Standards (FIPS) codes.

### 10.2.2 Unit of Measure

#### Definition

Identifies the unit of measure mostly used in that country to describe road and traffic conditions.

#### Value

M -Metric (kilometres and metres)

E - English (miles and feet)

#### Length

1

## Reference Guide

Attributes - Metadata

10.2 Metadata - Country Reference (MtdCntryRef)

### Type

Text

### Usage

This attribute can be used to determine which measurement system to use as default in a specific country.

### Specification

- If unknown, this attribute is not published.

## 10.2.3 Maximum Admin Level

### Definition

Identifies the valid number of administrative levels of a country.

### Value

1-7

### Length

1

### Type

Numeric

### Usage

When creating the administrative hierarchy, this attribute can be used to determine the valid number of administrative levels per country.

### Specification

- This attribute identifies the number of administrative level of a country, including the Built-up Area level (settlement level).
- For example, in the U.S., there are 4 administrative levels. Therefore, 4 is the *Maximum Admin Level*.

## 10.2.4 Currency Precision

### Definition

Identifies the number of digits used after the decimal point or comma for the currency in question.

### Value

0-7

### Length

1

### Type

Numeric

## Reference Guide

Attributes - Metadata

10.2 Metadata - Country Reference (MtdCntryRef)

### Usage

The *Currency Precision* attribute specifies the number of digits to use, after the comma or decimal point, when displaying currency values. *Currency Precision* should be used in conjunction with *Currency Type*.

## 10.2.5 House Number Format

### Definition

Identifies if the house number (address) precedes or follows the street name.

### Value

A – House number is after the street name.

B – House number is before the street name.

### Length

1

### Type

Text

### Usage

Countries have varied conventions for the representation of addresses. In some countries the house number is written after the street name, in others it is before: for example, “VIA NAPOLEONE, 6” in Italy (house number after the street name) and “555 E Weddell Dr” in the U.S. (house number before the street name). This attribute specifies which convention is used for a specific country.

### Specification

- In bilingual countries, the House Number Format may not be the same for each language in reality. However, due to the DNDC data model only the House Number Format for one of the languages can be specified.

## 10.2.6 Driving Side

### Definition

Identifies the legal driving side in a country

### Value

L – Left side driving

R – Right side driving

### Length

1

### Type

Text

## Reference Guide

Attributes - Metadata

10.2 Metadata - Country Reference (MtdCntryRef)

### Usage

This attribute is critical for route calculation and route guidance.

## 10.2.7 Currency Type

### Definition

Identifies the default currency of a country

### Value

See [CURRTYPE-Currency Type](#) on page 1181.

### Length

3

### Type

Text

### Usage

The *Currency Type* attribute specifies the type of currency to use, when displaying currency values. *Currency Type* should be used in conjunction with *Currency Precision*.

### Specification

- ISO currency codes are used

## 10.2.8 Phone Country Code

### Definition

Identifies the international dialing code for a country.

### Value

nnn

See [PHONE\\_CNTRYCODE - Phone Country Code](#) on page 1212.

### Length

3

### Type

Numeric

### Usage

This attribute can be used when displaying the telephone numbers for the Points of Interest.

### Specification

- The country's international dialing code is used as its Phone Country Code.

## Reference Guide

Attributes - Metadata

10.2 Metadata - Country Reference (MtdCntryRef)

### 10.2.9 Speed Limit Unit

#### Definition

This attribute identifies the unit of measure for speed limits. It is a sub-attribute of the country feature.

#### Values

kph

mph

#### Length

3

#### Type

Text

### 10.2.10 AAlevel 1-7 Feature Type

#### Definition

Identifies the Feature Types for the border features associated with Administrative Area Levels 1 through 7.

#### Value

nnnnnnn

#### Length

7

#### Type

Numeric

#### Usage

This feature can be used for map display.

#### Specification

- Currently AAlevel 6 and AAlevel 7 do not exist for any country supported in the HERE Map Content.

### 10.2.11 AAlevel 1-7 Address Flag

These fields are no longer in use.

### 10.2.12 Admin Area 1-7 Description

#### Definition

Identifies the Description for the border features associated with Administrative Area Levels 1 through 7.

## Reference Guide

Attributes - Metadata

10.2 Metadata - Country Reference (MtdCntryRef)

### Values

Admin Area 1 = Country

Admin Areas 2 through 5 = vary by country

Admin Area 6 and 7 = not currently supported

### Length

18

### Length (UTF-8)

54

### Type

Text

### Usage

These features can be used for map display.

### Specification

- The Admin Area 1 Description is not translated: it always has the value of “Country”.
- A Country Feature is published for all countries covered by HERE Map Content products. Some countries are enclaves and are entirely surrounded by another country.  
A Country Feature is also published for external territories (i.e., areas that are controlled by, but are not part of another country).
- Admin Areas 2 through 5 and Admin Area Descriptions 2 through 5 vary by country, see Section C.4, Administrative Level Coding and Boundary Features for country specific Admin Areas and Descriptions.
- Each country will have between 1 and 5 Boundary Features.
  - Boundary Feature 1 Description is always equal to Country (907196).
  - The numerically highest Boundary Feature will always equal to Built-up Area (900156). The numerically highest Boundary Feature will always be in either level 3, 4, or 5.

## 10.2.13 ISO Country Code

### Definition

A three-letter country code.

### Length

3

### Type

Text

## Reference Guide

Attributes - Metadata

10.2 Metadata - Country Reference (MtdCntryRef)

### 10.2.14 Phone Prefix

#### Definition

The prefix of a phone number. The phone number prefix precedes the phone area code for international country dialing. This is sometimes a leading “0” and is considered to be part of the area code when dialing inside a country. The prefix is not used when dialing from outside a country.

#### Length

2

#### Format

Char

#### Cardinality

1:1,0

#### Related Attributes

Phone Country Code

Phone Area Code

Phone Local Number

#### Usage

Phone Prefix precedes the area code in a phone number. It can be combined with other phone number components for display or for automatic dialing purposes.

#### Specification

- Phone Prefix is published when dialing within a country requires a leading digit before the area code. For example, in Germany the number 089-9914232 can be parsed as follows:
  - Phone Prefix: 0
  - Area Code: 89
  - Local Number: 99614232

① **Note:** The leading digit is only published as a Phone Prefix when it is dropped when dialing from outside a country. For example, in Italy the area code 06 must be dialed with the leading 0 when dialing from both inside and outside the country. In this case, 06 is published as an Area Code.
- Phone Prefix is not published in some countries. See the Country Specific Rules document.

## 10.3 Metadata - Daylight Saving Time (MtdDST)

### 10.3.1 General Information Regarding the Daylight Saving Time Layer

**Definition**

Daylight Saving Time is a layer with several attributes that identifies if Daylight Saving Time is observed in a specific Administrative Area and if so, when Daylight Saving Time is in effect for that Administrative Area.

**Usage**

Daylight Saving Time attribution can be used to update the Time Zone for an administrative area based on the observation of Daylight Saving Time.

**Specification**

- Daylight Saving Time is coded for the highest Administrative Level to which it can be applied. For example, if a country is entirely within one time zone and observes the same Daylight Saving Time period, then the Metadata - Daylight Saving entry is coded only for the country.
- Countries (or lower level administrative areas), where for the entire area no Daylight Saving Time is adopted, will have an entry in MtdDST flagged as DST Observed = N.
- Daylight Saving Time is defined through the following fields:
  - DST Observed: indication if Daylight Saving Time applies for an administrative area
  - Day: day of month, or weekday
  - Week: day of the week (e.g. 4 – Wednesday)
  - Month: month of year (e.g. 10 – October)
  - Time: time of day (e.g. 0200 – 2 am)

### 10.3.2 Area ID

See [Left Area ID](#) on page 427.

### 10.3.3 Time Zone

**Definition**

Time Zone is an attribute in the MtdDST layer and identifies the Time Zone applicable to an Administrative Area.

**Usage**

Time Zone can be used to identify the time zone applicable to an administrative area.

**Specification**

## Reference Guide

Attributes - Metadata

10.3 Metadata - Daylight Saving Time (MtdDST)

- Time Zone is published for the highest Administrative Level to which it can be applied. For example, if a country is entirely within one time zone, and observes the same Daylight Saving Time period, then the Time Zone is coded only for the country level.

### For countries West of GMT

- Time Zone is published as a 4-character string with the format SNND where:
  - S is an indicator that the country lies West ('-) of GMT
  - NN identifies the hours
  - D is an option to define ½ hours

### For countries East of GMT

- Time Zone is published as a 3-character string with the format NND where:
  - The 3-character format indicates that the country lies East of GMT
  - NN identifies the hours
  - D is an option to define ½ hours

## 10.3.4 DST Observed

### Definition

Indicates whether the administrative area observes Daylight Saving Time (DST).

### Value

Y - Admin Area observes Daylight Saving Time

N - Admin Area does not observe Daylight Saving Time

### Type

Boolean

## 10.3.5 DST Start Day

### Definition

The day of the month or count of the weekday that DST starts. This field must be interpreted in conjunction with the DST Start Weekday and DST Start Month fields.

### Value

0 - Undefined

- If DST Start Weekday = 8:
  - 1 - Day 1 of Month
  - 2 - Day 2 of Month ...
  - 31 - Day 31 of Month

## Reference Guide

Attributes - Metadata

10.3 Metadata - Daylight Saving Time (MtdDST)

- If DST Start Weekday = 1-7:
  - 41 - First
  - 42 - Second
  - 43 - Third
  - 44 - Fourth
  - 45 - Fifth
  - 46 - Last

### 10.3.6 DST Start Weekday

#### Definition

The day of the week DST starts.

#### Value

- 0 - Undefined
- 1 - Sunday
- 2 - Monday
- 3 - Tuesday
- 4 - Wednesday
- 5 - Thursday
- 6 - Friday
- 7 - Saturday
- 8 - Day of Month

### 10.3.7 DST Start Month

#### Definition

the month DST starts.

#### Value

- 0 - Undefined
- 1 - January
- 2 - February ...
- 12 - December

### 10.3.8 DST Start Time

#### Definition

The DST end time in military format.

## Reference Guide

Attributes - Metadata

10.3 Metadata - Daylight Saving Time (MtdDST)

### Value

0000 - 2400

### Type

HHMM

## 10.3.9 DST End Day

### Definition

The day of the month or count of the weekday that DST ends. This field must be interpreted in conjunction with the DST Start Weekday and DST End Month fields.

### Value

0 - Undefined

- If DST Start Weekday = 8:
  - 1 - Day 1 of Month
  - 2 - Day 2 of Month ...
  - 31 - Day 31 of Month
- If DST Start Weekday = 1-7:
  - 41 - First
  - 42 - Second
  - 43 - Third
  - 44 - Fourth
  - 45 - Fifth
  - 46 - Last

## 10.3.10 DST End Weekday

### Definition

The day of the week DST ends.

### Value

0 - Undefined

1 - Sunday

2 - Monday

3 - Tuesday

4 - Wednesday

5 - Thursday

6 - Friday

7 - Saturday

## Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

8 - Day of Month

### 10.3.11 DST End Month

#### **Definition**

The month DST ends.

#### **Value**

0 - Undefined

1 - January

2 - February ...

12 - December

### 10.3.12 DST End Time

#### **Definition**

The DST end time in military format.

#### **Value**

0000 - 2400

#### **Type**

HHMM

## 10.4 Metadata - Administrative Area (MtdArea)

---

### 10.4.1 Area ID

#### **Definition**

Identifies the unique ID for the area.

#### **Value**

nnnnnnnnnn

#### **Length**

10

#### **Type**

Numeric

#### **Specification**

# Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

here

- The Area IDs are unique within North America and within Europe/South Africa. However, Area IDs may be duplicated between North America and Europe/South Africa.
- Cities that exist in multiple countries or settlements that exist in multiple municipalities will have different Area IDs. For example, the city of Portland Oregon exists in three different counties.
  - Portland in Clackamas County: Area ID = 36988
  - Portland in Multnomah County: Area ID = 37162
  - Portland in Washington County: Area ID = 37228
- The Government Code and Area Name for Portland are the same in all three counties:
  - Area Name = Portland
  - Government Code = 59000
- If two cities have the same name, different Area IDs, and different government codes, they are separate cities.
- Area IDs are published in the AdminBndy5 table for the LAT products. This is in order to be consistent with the non-LAT products where this information is published.
- See [Left Area ID](#) on page 427 and [Right Area ID](#) on page 428.

## 10.4.2 Area Code 1 - 7

### Definition

Identify the internal code assigned to Administrative Area Levels 1-7.

### Value

nnnnn

### Length

5

### Type

Numeric

### Specification

- Area Codes 6 and 7 do not exist for any country supported by the HERE Map Content.
- Area Codes 1 through 7 are internal codes that specify the administrative hierarchy. The Area Records are sorted by the administrative hierarchy.
  - Note:** These codes are not government codes. A separate field Government Code contains this information.
- Cities in multiple counties and settlements in multiple municipalities have different Area IDs. Thus, the Area Code 3, Area Code 4, and/or Area Code 5 will be different as well.

In the example below, the following would be published for Area Codes in Portland:

County	Area Code 1	Area Code 2	Area Code 3	Area Code 4
Clackamas	1	4	20	11

## Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

here

County	Area Code 1	Area Code 2	Area Code 3	Area Code 4
Multnomah	1	4	9	7
Washington	1	4	34	11

The Government Code and Area Name for Portland are the same in all three counties:

Area Name = Portland

Government Code = 59000

### 10.4.3 Administrative Level

#### Definition

Identifies the administrative level for the area

#### Value

1-7

#### Length

1

#### Type

Numeric

### 10.4.4 Area Name

#### Definition

Identifies the name of the administrative area.

#### Value

#### Length

35

#### Type

Text

#### Usage

Area Names can be used for destination selection and map display for languages supported in the HERE Map Content.

#### Specification

- If an administrative feature has more than one official name in the official language, the most commonly used is published with Name Type = Base. Other official names are published with Name Type = Exonym or Synonym. However in bilingual countries, two Base names will exist: one for each language.

 **Note:**

## Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

here

For Canada Level 2 bilingual areas, all administrative area names are published as base names even if the names' spellings in English and French are the same.

- Some countries contain names that can only be represented in Unicode (e.g. Russia). The *Area Name* will be a Latin-1 name (transliteration) or an identifier (numeric ID) intended to be used to the External Unicode "look-aside" file. See [Non-Latin-1 Name Representation](#) on page 1342 for details.

### 10.4.5 Area Name Language Code

#### Definition

Identifies the language associated with the Description.

#### Value

Value	Attribute Description
ALB	ALBANIAN
AMT	ARMENIAN TRANSCRIBED
ARA	ARABIC
ARE	ARABIC ENGLISH
ARM	ARMENIAN
AMT	ARMENIAN TRANSCRIBED
ARX	ARMENIAN TRANSLITERATION
ASM	ASSAMESE
ASX	ASSAMESE TRANSLITERATION
AZE	AZERI
AZX	AZERI TRANSLITERATION
IND	BAHASA INDONESIA
BAQ	BASQUE
BEL	BELARUSIAN
BEX	BELARUSIAN TRANSLITERATION
BEN	BENGALI
BGX	BENGALI TRANSLITERATION
BOS	BOSNIAN
BOX	BOSNIAN TRANSLITERATION
BUL	BULGARIAN
BUT	BULGARIAN TRANSCRIBED

# Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

here

Value	Attribute Description
BUX	BULGARIAN TRANSLITERATION
CAT	CATALAN
BUR	BURMESE
BUE	BURMESE ENGLISH
CHI	CHINESE (MODERN)
CHT	CHINESE (TRADITIONAL)
SCR	CROATIAN
SRX	CROATIAN TRANSLITERATION
CZE	CZECH
CZX	CZECH TRANSLITERATION
DAN	DANISH
DUT	DUTCH
ENG	ENGLISH
EST	ESTONIAN
ESX	ESTONIAN TRANSLITERATION
FIN	FINNISH
FAO	FAROESE
FRE	FRENCH
GLG	GALICIAN
GEO	GEORGIAN
GET	GEORGIAN TRANSCRIBED
GEX	GEORGIAN TRANSLITERATION
GER	GERMAN
GRE	GREEK
GRT	GREEK TRANSCRIBED
GRX	GREEK TRANSLITERATION
GRN	GUARANÃ
GUJ	GUJARATI
GJX	GUJARATI TRANSLITERATION

# Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

here

Value	Attribute Description
HEB	HEBREW
HEX	HEBREW TRANSLITERATION
HIN	HINDI
HIX	HINDI TRANSLITERATION
HUN	HUNGARIAN
HUX	HUNGARIAN TRANSLITERATION
ICE	ICELANDIC
GLE	IRISH GAELIC
ITA	ITALIAN
JPN	JAPANESE
KAN	KANNADA
KNX	KANNADA TRANSLITERATION
KAZ	KAZAKH
KAT	KAZAKH TRANSCRIBED
KAX	KAZAKH TRANSLITERATION
KHE	KHMER ENGLISH
KIR	KYRGYZ
KIT	KYRGYZ TRANSCRIBED
KIX	KYRGYZ TRANSLITERATION
KOR	KOREAN
KOX	KOREAN TRANSLITERATION
LAV	LATVIAN
LAX	LATVIAN TRANSLITERATION
LIT	LITHUANIAN
LIX	LITHUANIAN TRANSLITERATION
MAC	MACEDONIAN
MAT	MACEDONIAN TRANSCRIBED
MAX	MACEDONIAN TRANSLITERATION
MAL	MALAYALAM
MYX	MALAYALAM TRANSLITERATION

# Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

here

Value	Attribute Description
MAY	MALAYSIAN
MLT	MALTESE
MLX	MALTESE TRANSLITERATION
MAR	MARATHI
MRX	MARATHI TRANSLITERATION
MOL	MOLDOVAN
MOX	MOLDOVAN TRANSLITERATION
MON	MONGOLIAN
MGX	MONGOLIAN TRANSLITERATION
MNE	MONTENEGRIN
MNX	MONTENEGRIN TRANSLITERATION
NOR	NORWEGIAN
ORI	ORIYA
ORX	ORIYA TRANSLITERATION
PAN	PANJABI
PNX	PANJABI TRANSLITERATION
PYN	PINYIN
POL	POLISH
POX	POLISH TRANSLITERATION
POR	PORTUGUESE
RUM	ROMANIAN
RMX	ROMANIAN TRANSLITERATION
RUS	RUSSIAN
RST	RUSSIAN TRANSCRIBED
RUX	RUSSIAN TRANSLITERATION
SRB	SERBIAN
SCT	SERBIAN TRANSCRIBED
SCX	SERBIAN TRANSLITERATION
SLO	SLOVAK

# Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

here

Value	Attribute Description
SLX	SLOVAK TRANSLITERATION
SLV	SLOVENIAN
SIX	SLOVENIAN TRANSLITERATION
SPA	SPANISH
SWE	SWEDISH
TAM	TAMIL
TMX	TAMIL TRANSLITERATION
TEL	TELUGU
TLX	TELUGU TRANSLITERATION
THA	THAI
THE	THAI ENGLISH
TUR	TURKISH
TKT	TURKISH TRANSCRIBED
TUX	TURKISH TRANSLITERATION
UKR	UKRAINIAN
UKT	UKRAINIAN TRANSCRIBED
UKX	UKRAINIAN TRANSLITERATION
UND	UNDEFINED
UZB	UZBEK
VIE	VIETNAMESE
VIX	VIETNAMESE TRANSLITERATION
WEL	WELSH
WEN	WORLD ENGLISH

## 10.4.6 Area Name Transliteration

See [Transliteration](#) on page 518.

## 10.4.7 Area Name Transliteration Type

See [Transliteration Type](#) on page 516.

## Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

### 10.4.8 Area Name Type

#### Definition

Identifies the type of Area Name (i.e. Base, Exonym, Synonym, or Abbreviation)

#### Value

A – Abbreviation

B – Base

E – Exonym

F - Additional Exonym

S – Synonym

#### Length

1

#### Type

Text

#### Usage

All Area Names (Base, Abbreviation, Exonyms, and Synonyms) can be used for destination selection and map display for languages supported in the HERE Map Content.

#### Specification

##### Base

#### Definition

A Base name is a name given in a language that is considered official in a given administrative area.

#### Rules

- If multiple names exist (in the same official language) for a particular administrative area, the base name represents the most commonly used administrative name.
- In administrative areas with multiple official languages, multiple Base names are published for Area Names if the official names are different in each language.

 **Note:** The Base name with the default language code is always published first.

##### Abbreviation

#### Rules

- Abbreviations are based on the official abbreviations for a country. For instance, in the U.S., the official abbreviation for California is CA. The state abbreviations are very common in the U.S.
- Abbreviations are not included for all administrative levels. They are applied when an official abbreviation list exists. In North America, the Country (U.S. only), State, and Province levels have official abbreviations.

## Synonym and Exonym

### Definitions

An Exonym is a name that is different in another language than it is in the National Language.

A Synonym is an alternative (additional) name for a feature in a language that is official within the given administrative area.

- The language code identifies whether the name is a synonym or an exonym of the Area Name with the Name Type = Base.
  - If the name is in the same language as the Base name, this represents a synonym.
  - If the name is in a different language than the Base name, this represents an exonym.
- For Administrative Levels 1 and 2, an exonym is included only when the spelling of the name is different from the spelling in the official country language(s).

However, for Administrative Level 1 in Europe, an Exonym for an administrative area is included even when the spelling is the same as the Base Name. [Area Name Type](#) on page 942 lists the countries with published Exonyms and the Language Codes in which the Exonyms are published.

For example, for Italy, where the Base Name in the “ITA” Language Code is ITALIA, a name with the same spelling is published as Exonym in the “SPA” Language Code.

## Additional Exonym

### Definition

An Additional Exonym name represents a non-preferred exonym when more than one exonym for a country name exists in a single exonym language. For example, in the case of the English exonyms for the Dutch country name Nederland:

**Table 1: Language Codes**

LANGUAGE_CODE	NAME	NAME_TYPE	IS_EXONYM
ENG	Netherlands	B	Y
ENG	Holland	F	Y

- Only the (one) preferred exonym, per language, is published with Name Type = B.
- Additional exonyms, or non-preferred exonyms, per language are published with Name Type = F.

# Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

here

- Layers publishing Country Name features that may reference the Metadata Area (MtdArea) layer via AREA\_ID include:
  - Administrative Area Boundaries 1 (Adminbndy1) (Country - 907196, Disputed Country Boundary - 907179)

Feature Name	Languages Included					
	Global	Regional				
		APAC	Africa	Europe	North America	South America
Country Name (Administrative Level 1).	X <sup>161</sup>					
Country Capitals for Admin Level 1 (i.e., Named Place POIs with Capital Indicator = 1).	X <sup>161</sup>					
Cartographic Ocean Feature.	X <sup>161</sup>					
POI Attributes: Restaurant Type, Food Type, Regional Food Type.	X <sup>162</sup>					
Administrative Level 2.		X <sup>163</sup>	X <sup>164</sup>	X <sup>165</sup>	X <sup>166</sup>	X <sup>167</sup>
Named Place POIs with Capital Indicator = 2.		X <sup>163</sup>	X <sup>164</sup>	X	X <sup>166</sup>	X <sup>164</sup>
Nationally Important POIs associated with a Building/ Landmark.		X <sup>163</sup>	X <sup>164</sup>	X <sup>165</sup>	X <sup>166</sup>	X <sup>164</sup>
Cartographic Island Feature Name				X <sup>167</sup>		

<sup>161</sup> Language Codes: CHI, CHT, DUT, ENG, FRE, GER, GRE, IND, ITA, KOR, MAY, SPA and THA

<sup>162</sup> Language Codes: ARA, BUL, CHT, CZE, DAN, DUT, ENG, EST, FIN, FRE, GER, GRE, HIN, HUN, ICE, IND, ITA, JPN, KOR, LIT, MAY, NOR, POL, POR, RUM, RUS, SCR, SLO, SPA, SRB, SWE, THA, TUR, UKR and VIE. In addition, the corresponding transliteration language is added if applicable.

<sup>163</sup> Language Codes: CZE, DAN, DUT, ENG, FIN, FRE, GER, GRE, HUN, ITA, NOR, POL, POR, RUS, SLO, SPA and SWE.

## Reference Guide

Attributes - Metadata

10.4 Metadata - Administrative Area (MtdArea)

- Exonyms are also included for the high profile cities (i.e. New York, Paris, London, etc.).

### 10.4.9 Government Code

See [Government Code](#) on page 922.

### 10.4.10 Motorcycle Minimum Requirement

#### Definition

Identifies the minimum engine size in cubic centimetres for a motorcycle to be legally allowed on a motorway.

#### Values

1-999

#### Format

Char(3)

#### Entity-Attribute Relation

1:0,1

#### Related Layers

Streets Layer

Condition/Driving Manoeuvre Layer

Lane Condition/Driving Manoeuvre Layer

Condition/Driving Manoeuvres Date/Time Modifiers

#### Related Attributes

Motorcycles

#### Usage

Enables proper route calculation for motorcycles with the specified engine size to be allowed on motorways.

#### Specification

- Motorcycle Minimum Requirement is specified by the appropriate administrative area to identify the minimum engine size requirement for motorcycles to be allowed on the motorways in a particular area.
- The attribute is published for the appropriate administrative area, i.e., country, state, etc.
- Engine size is specified by cubic centimetres.

<sup>164</sup> Except for New Zealand and Australia; only the following Language Codes are included: DUT, FRE, GER, ITA and SPA.

<sup>165</sup> Language Codes: DUT, ENG, FRE, GER, ITA and SPA.

<sup>166</sup> Language Codes: BAQ, CAT, CZE, DAN , DUT, ENG, FIN, FRE, GER, GRE, HUN, ITA, MAY, NOR, POL, POR, RUS, SLO, SPA and SWE. Language Codes BAQ, CAT, MAY, POL and RUS only in the West European countries except Iceland and Malta

<sup>167</sup> Only included in Greece: TUR

## Reference Guide

Attributes - Metadata

10.5 Metadata - Reference Classes (MtdRef)

- If the value is not known, Motorcycle Minimum Requirement is left blank.

### 10.4.11 Admin Wide Regulations

#### Definition

Identifies the administrative area in which an administrative-wide u-turn regulation exists

#### Values

1 - U-turns are restricted unless posted.

#### Format

Char(1)

#### Entity-Attribute Relation

1:0,1

#### Related Layers

Condition/Driving Manoeuvre Layer

Lane Condition/Driving Manoeuvre Layer

#### Related Attributes

Permitted Driving Manoeuvre (Condition Type = 39)

PDM Type

#### Usage

Identifies those administrative areas explicitly within the extract which have administrative-wide regulations. U-turns should not be permitted anywhere within this administrative area. This allows for improved route calculations and route guidance.

#### Rules

- When a country, state, county, or city has administrative-wide regulations prohibiting u-turns, Admin Wide Regulations = 1 is published for that administrative area.
  - For example, in the country of Singapore, u-turns are prohibited at intersections unless otherwise posted.
- Permitted Driving Manoeuvres are published when area-wide exceptions exist to the regulations (allowing a manoeuvre to take place).
- If regulations are not known, Admin Wide Regulations is not published.

## 10.5 Metadata - Reference Classes (MtdRef)

### 10.5.1 Reference Class

#### Definition

## Reference Guide

Attributes - Metadata

10.5 Metadata - Reference Classes (MtdRef)

The Reference Class Identifier.

### Value

### Length

10

### Type

Text

## 10.5.2 Code

### Definition

Identifies a particular value for the Reference Class

### Value

See [Simple Reference Classes](#) on page 1174 for the complete list.

Reference Class	Codes
ADDRFMT	space A B E etc.
ADDRSCH	space E M O

### Length

12

### Type

Text

## 10.5.3 Code Transliteration

### Definition

The transliteration of the code.

### Length

250

### Type

Text

## 10.5.4 Description

### Definition

Identifies the description of the value in the Code field.

### Value

See [Simple Reference Classes](#) on page 1174 for the complete list.

Reference Class	Codes	Descriptions
ADDRFMT	space A B E etc.	Unaddressed Alphanumeric - N Block Alphanumeric - E
ADDRSCH	space E M O	Undefined Even Mixed Odd

### Length

40

### Length (UTF-8)

120

### Type

Text

## 10.5.5 Language Code

See [Language Code](#) on page 618.

## 10.5.6 Description Transliteration

See [Description Transliteration](#) on page 950.

## 10.5.7 Transliteration Type

See [Transliteration Type](#) on page 516.

## 10.6 Metadata - Compound Reference (MtdCmpRef)

### 10.6.1 Modifier Type

See [Modifier Type](#) on page 623.

### 10.6.2 Modifier Value

See [Modifier Value](#) on page 625.

### 10.6.3 Modifier Type Description

#### **Definition**

Description for the Modifier Type.

#### **Length**

40

#### **Length**

(UTF-8)

120

#### **Type**

Text

### 10.6.4 Modifier Value Description

#### **Definition**

Description for the Modifier Value.

#### **Length**

40

#### **Length**

(UTF-8)

120

#### **Type**

Text

## Reference Guide

Attributes - Metadata

10.7 Metadata - File Identification (MtdField)

### 10.6.5 Description Transliteration

See [Transliteration](#) on page 518.

### 10.6.6 Language Code

See [Language Code](#) on page 618.

### 10.6.7 Description Transliteration Type

See [Transliteration Type](#) on page 516.

### 10.6.8 Code

See [Code](#) on page 947.

## 10.7 Metadata - File Identification (MtdField)

---

### 10.7.1 Copyright

**Definition**

Identifies that the file is copyrighted

**Value**

(C) HERE NORTH AMERICA, LLC

**Length**

52

**Type**

Text

### 10.7.2 Standard Creation Date

**Definition**

Identifies the date the extract file was created.

**Value**

ymmmdd

yy = year (00-99)

mm = month (01-12)

## Reference Guide

Attributes - Metadata

10.7 Metadata - File Identification (MtdField)

dd = day (01-31)

### Length

6

### Type

Text

## 10.7.3 Database Version

### Definition

Identifies the version of the database.

### Value

x.y.z

### Length

5

### Type

Text

## 10.7.4 Standard Creation Time

### Definition

Identifies the time the extract file was created.

### Value

hh:mm:ss

hh = hour (00-23)

mm = minute (00-59)

ss = second (00-59)

### Length

8

### Type

Text

## 10.7.5 GIS Software Version

### Definition

HERE's GIS Extraction Software version

## Reference Guide

Attributes - Metadata

10.7 Metadata - File Identification (MtdField)

### 10.7.6 GIS File Version

#### **Definition**

The GIS file format version as X.Y.Z.

#### **Value**

X - Major Revision Number (0-9)

Y - Minor Revision Number (0-9)

Z - Point Version Number (0-9)

#### **Length**

10

#### **Type**

Numeric

### 10.7.7 Requested Area

#### **Definition**

Identifies the name of the area.

#### **Length**

30

#### **Type**

Text

### 10.7.8 DNDC Region

#### **Definition**

Identifies the 2-character region ID

#### **Value**

#### **Length**

2

#### **Type**

Text

#### **Example**

The areas on the east and west side of the 180° meridian are separate sub-regions. See the following figure. There is a gap of two database units between the two sub-regions, one database unit on each side of the 180° meridian.

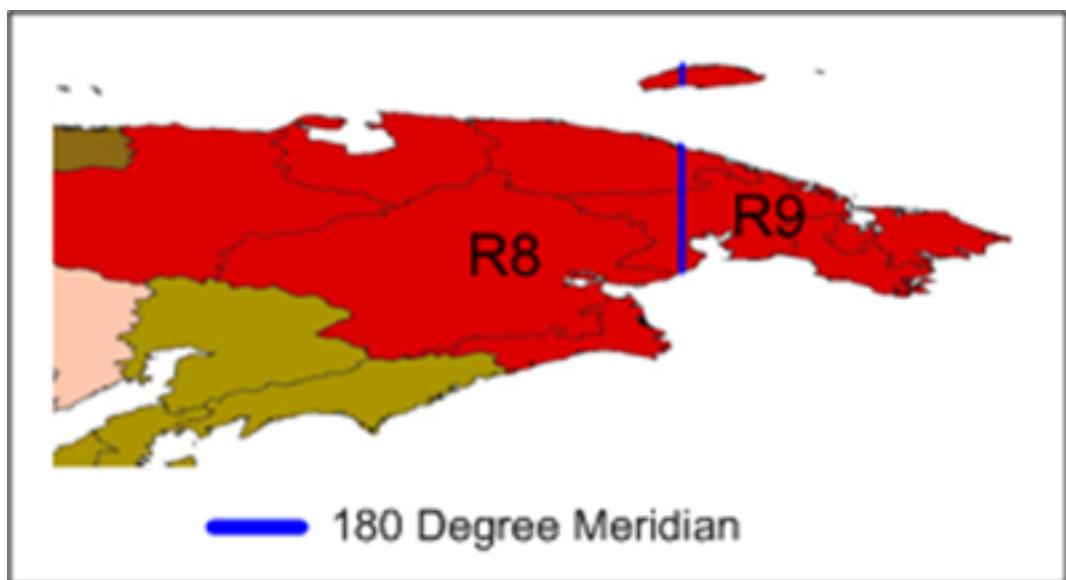
## Reference Guide

Attributes - Metadata

10.7 Metadata - File Identification (MtdField)

Note: One database unit is  $0.00001^\circ$ .

**Figure 359:**



## 10.7.9 Datum

### Definition

Identifies the coordinate system in use.

### Value

WGS84 (World Geodetic System of 1984)

### Length

5

### Type

Text

## 10.7.10 Character Set

### Definition

Indicates the character encoding of the file.

### Value

UTF-8

ISO-8859-1

### Length

20

### Type

# Reference Guide

Attributes - Metadata

10.7 Metadata - File Identification (MtdField)

Text

## Specification

- The UTF-8 character set is valid for shapefile only.
- The ISO-8859-1 character set is valid for shapefile and MapInfo TAB.

# Appendix A

## NAVSTREETS Product Variations

---

**Topics:**

- *Introduction*
- *Transit and Pedestrian*
- *Entry Map*
- *Intermediate Maps*
- *State Clips*
- *World Map*
- *Trucks*
- *Off-Road Africa*
- *Disputed Territories*
- *Lane Model*
- *Distance Marker (DistMarker)*

## A.1 Introduction

---

The following NAVSTREETS Product Variations are described in this chapter:

- Transit and Pedestrian
- Entry Map
- Intermediate Map
- Baseline and Feature Introduction Maps
- State Clips
- World Map
- Trucks
  - Including Loading Dock Locations
- Off-Road Africa
- Disputed Territories
- Lane Model
- Distance Marker

## A.2 Transit and Pedestrian

---

### A.2.1 Introduction

HERE Transit and Pedestrian product offering consists of new content that is published in the NAVSTREETS format.

### A.2.2 Inclusion

#### Geometry

- All pedestrian geometry within parks.
- All pedestrian geometry within universities.
- All pedestrian geometry within hospital complexes that are open to the public.
- Pedestrian geometry leading to the entrance of parks that require an entrance fee or parks that are private.
- All walkways within urban areas.
- Significant geometry between buildings.
- Walkways inside multiply digitised roads.
- Pedestrian crossings.

# Reference Guide

NAVSTREETS Product Variations

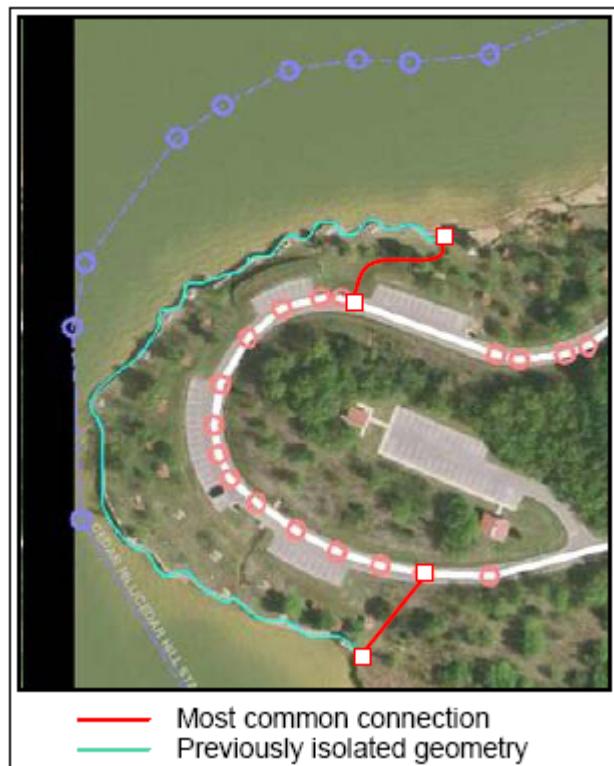
A.2 Transit and Pedestrian

here

- Isolated pedestrian geometry when significant.

ⓘ **Note:** For isolated pedestrian geometry, the path that is the most common connection that people would use to get to the geometry is published. This is not necessarily an existing path. See [Figure 360:](#) on page 957.

**Figure 360:**



Additional geometry, e.g., virtual connections (shown above in red) are published in the XML LAT file.

## Cartographic Inclusion

- Neighbourhood Boundaries

## POIs Included

- Neighbourhood
- Taxi Stand

## Time of Day Access Restriction

Time of Day Access Restrictions applicable to Pedestrians are supported. These can be coded for access to areas such as parks and cemeteries if applicable.

To indicate if Access Restriction is valid from “Dawn to Dusk” or “Dusk to Dawn” condition modifier ‘Time Override’ is used.

The access restriction is coded into the core map.

For further information please see Access Restriction, Cdms Layer, Condition Type = 8; Condition Modifier 2 = ‘Time Override’.

## A.2.3 Geometric Representation

### Pedestrian Navigable Network

#### Generalisation Guidelines

- Pedestrian geometry is not generalised, all pedestrian geometry is digitised separately

### Walkways

#### Inclusion

- Walkways within parks, universities and urban areas. See [Figure 361:](#) on page 958.

**Figure 361:**



### Pedestrian Crossing

#### Rules

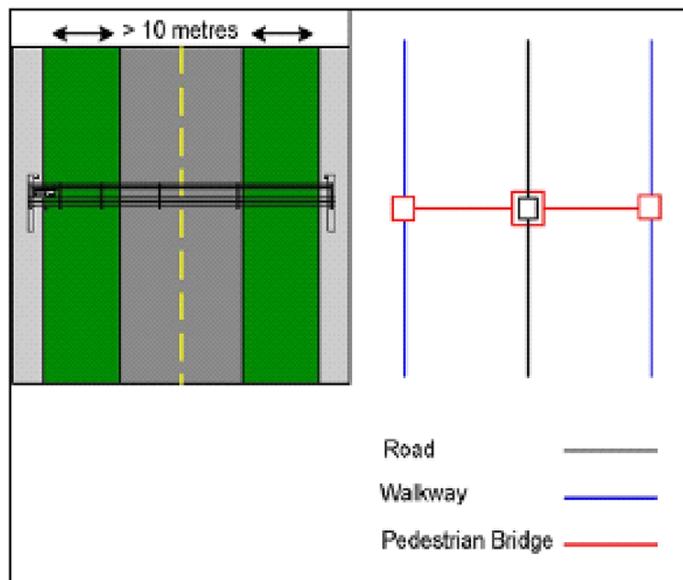
When a pedestrian crossing is a bridge or tunnel connection between pedestrian geometry (i.e., not a crosswalk between sidewalks), geometry is added to represent the pedestrian bridge or tunnel. See [Figure 362:](#) on page 959 and [Figure 363:](#) on page 959.

# Reference Guide

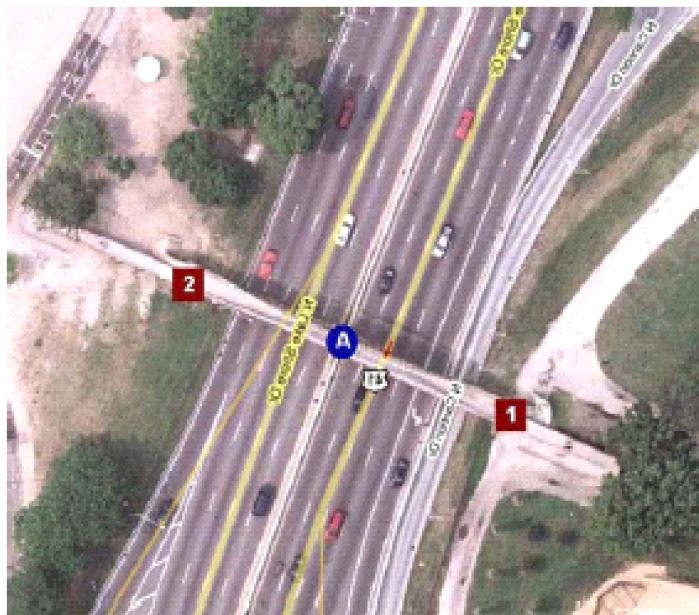
NAVSTREETS Product Variations

A.2 Transit and Pedestrian

**Figure 362:**



**Figure 363:**



## Walkways Within Multiply Digitised Roads

### Rules

- CRF Intersections are published on walkways that are part of an intersection.
- ① **Note:** The only situation where CRF Intersections are published to a navigable link with Complex Intersection(Intersection Internal) = "No" is in the case of a walkway crossing a Multiply Digitised road. See [Figure 364:](#) on page 960.

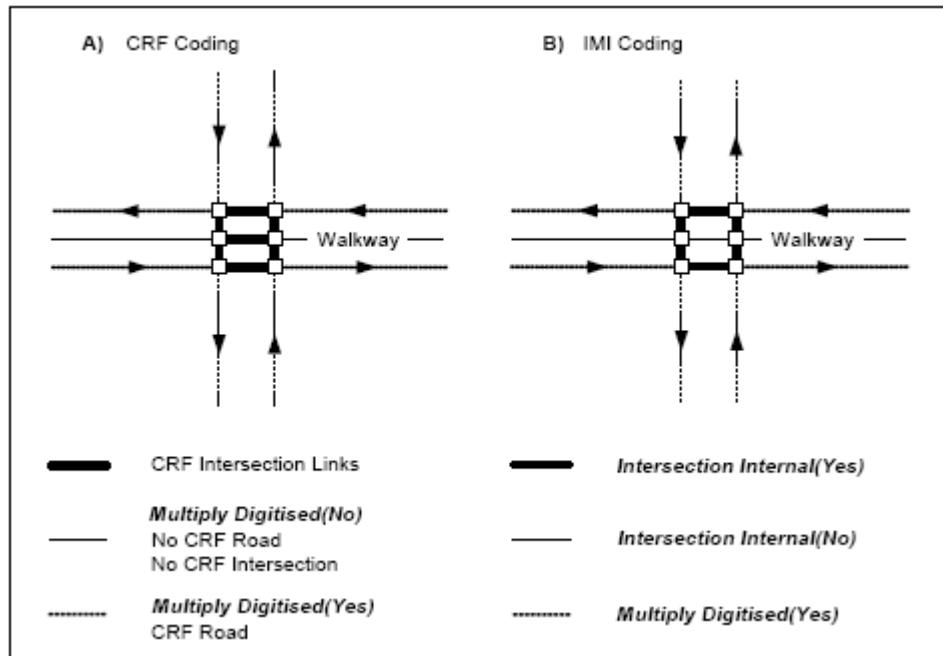
# Reference Guide

NAVSTREETS Product Variations

A.2 Transit and Pedestrian

- CRF coding is not published on parallel walkway links within multiply digitised roads that are not part of an intersection. See [Figure 364: on page 960](#) and [Figure 365: on page 960](#).

**Figure 364:**



**Figure 365:**



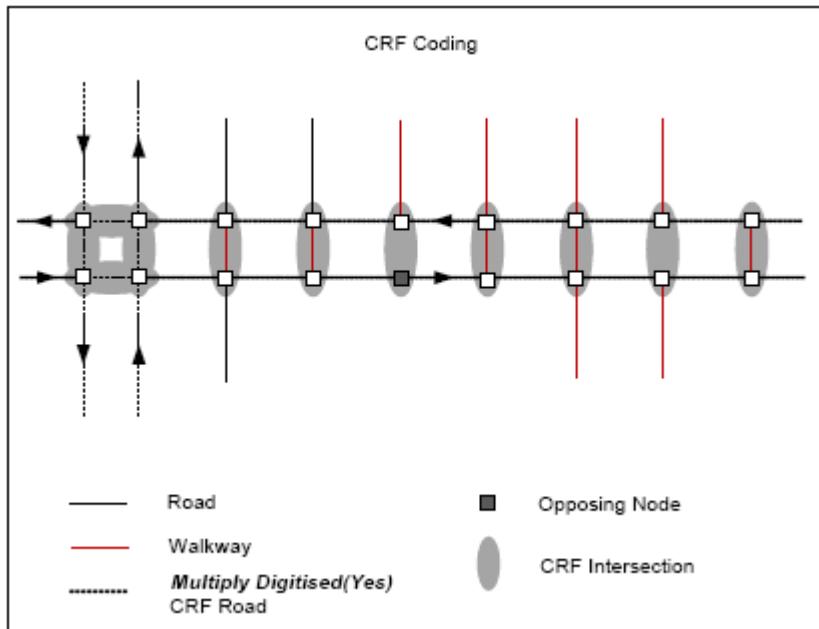
# Reference Guide

NAVSTREETS Product Variations

A.2 Transit and Pedestrian

- CRF Intersection coding is published to perpendicular walkway links within multiply digitised roads. See [Figure 366: on page 961](#) and [Figure 367: on page 961](#).

**Figure 366:**



**Figure 367:**



## Walkways along Controlled Access Roads

### Rules

- Walkways along Controlled Access Roads are separately digitised.

## Walkways Between Buildings

### Rules

# Reference Guide

NAVSTREETS Product Variations

A.2 Transit and Pedestrian

- Explicitly marked walkways between buildings or in urban areas are separately digitised. See [Figure 368](#): on page 962.

**Figure 368:**



## Walkways Through Buildings

### Rules

- Walkways passing through Building/Landmark cartographic features that are Grouped Structure = No are digitised. See [Figure 369](#): on page 962.

These walkways may have stairs.

- For walkways passing through Building/Landmark cartographic features that are Grouped Structure = Yes, a Virtual Connection is published.

**Figure 369:**



## Walkways Along a Beach

### Rules

# Reference Guide

NAVSTREETS Product Variations

A.2 Transit and Pedestrian

- Paved walkways along a beach are separately digitised. See [Figure 370:](#) on page 963.

**Figure 370:**



## Walkways Within a Hospital Complex

### Rules

- Walkways within a hospital complex are separately digitised.
- The links are published POI Access = No.

## Cartography - Neighbourhood

### Rules

Neighbourhood boundaries are applied as outline formation in relation to other Feature Types.

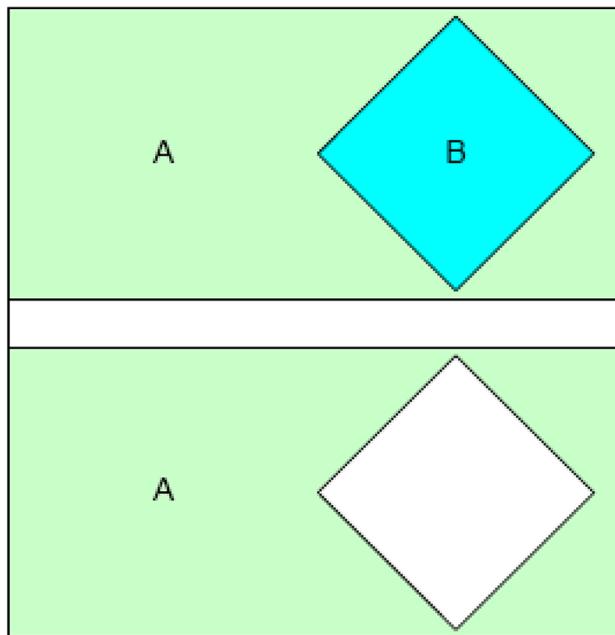
When one neighbourhood boundary is completely enclosed within another neighbourhood, the outer neighbourhood is applied as a full formation polygon. See [Figure 371:](#) on page 964.

# Reference Guide

NAVSTREETS Product Variations

A.2 Transit and Pedestrian

**Figure 371:**



## A.2.4 Feature Naming

### Feature Type

#### Rules

- The following feature types are applicable for Transit and Pedestrian:

Description	Feature Type Code
Neighbourhood	0908002

### Naming for Specific Features

#### Neighbourhood

#### Rules

- Neighbourhood cartographic features are coded with the official name.
- When applicable, additional names are added as synonyms.

## A.2.5 Transit

### Taxi Stand(9989) - POI

#### Facility Type

9989

# Reference Guide

NAVSTREETS Product Variations

A.2 Transit and Pedestrian

## Definition

A designated queuing, loading and unloading area for taxis usually in city centres, and buildings with high volume of pedestrians.

## Usage

This feature can be used for map display and multi-modal routing. It can also be used for destination input.

## Layer

Transportation Hubs (TranHubs) with Fac\_Type = '9989'

## Inclusion

- All taxi stands officially designated by the local government are included.
- Taxi stands at well known places, for example, hotels, exhibition centres are also included. These can be signed or unsigned taxi stands. See *Figure 372:* on page 965.

**Figure 372:**



# Reference Guide

NAVSTREETS Product Variations

A.2 Transit and Pedestrian

- Taxi stands that are only in use during a part of the day are not published. See [Figure 373:](#) on page 966.

**Figure 373:**



## Naming

- The official name is applied.
- If no official name exists, Taxi Stand names are based on the name of the hotel, casino, shopping centre, public transportation system station, etc. where the taxi stand is located.  
① **Note:** If the above rules do not apply, then the Taxi Stand POI will be unnamed.

## Phone Number

Not included.

# A.2.6 Neighbourhood

## Neighbourhood(0908002) - Feature

### Feature Type

0908002

### Definition

A cartographic Feature defining a localised community within a city.

### Usage

Neighbourhood Feature can be used for map display.

### Layer

Land Use Features A (LandUseA) with Feat\_Type = '0908002'

The colour for the Neighbourhood Feature is light yellow.

### Specification

- One Neighbourhood Feature is included for each defined neighbourhood within a city.

# Reference Guide

NAVSTREETS Product Variations

A.3 Entry Map

- Neighbourhood Feature is represented as an outline formation
- Neighbourhoods are coded with their official names and can have alternate names if applicable.

## Neighbourhood Zone - Feature

### Definition

Identifies links belonging to a specific neighbourhood within a city.

### Usage

Neighbourhood Zones identify local areas within a city and provide an alternate name to the city/settlement name for destination selection/input.

### Layer

Metadata - Zone Records (MtdZoneRec) with Zone\_Type = 'NB'.

### Related Layer

Zones (Zones)

### Specification

- Neighbourhood Zones are only published when neighbourhoods exist in reality.
- Neighbourhood Zones require a corresponding Neighbourhood cartographic Area Feature.
- Neighbourhood Zones are not explicitly associated to the cartographic Neighbourhood.
- Neighbourhood Zones can overlap in areas where neighbourhood boundaries are not clearly defined.
- A Neighbourhood POI (Feature Code = 9709) is included at the centre of the Neighbourhood Zone.

# A.3 Entry Map

## A.3.1 Introduction

The Entry Map product is a limited functionality database that supports use cases such as Map Display, Location Visualization and Geocoding. Entry Maps can be used separately to meet above stated use cases or to supplement existing HERE Map Content to create a regional or global digital map database footprint product.

The Entry Map product does not contain any navigable attribution, nor can it be used to create navigable products. This includes turn-by-turn guidance and the provision of driving directions.

The map scale for this product is intended at 1:1.000 k. However, this may vary based on the source used for a particular country.

The Entry Map product was created from a global source for the majority of the countries. However, for certain countries, a local source was used. For these countries, the differences are described in later subsections.

- ① **Note:** The data contained within this product was taken from third party data sources and was not verified. However, the data is validated.

## Reference Guide

NAVSTREETS Product Variations

A.3 Entry Map

### A.3.2 Entry Map Details

This section describes the features/attributes included in this product.

#### Language

- All names within this product are published with the Language Code = WEN (World English) and in Latin-1.
- Local languages are not included for any feature.

#### Road Network

- A Functional Class = 1 - 3 network is implemented and connected.
- **① Note:** Dangles may be present.
- In some cases, there are isolated/floating geometry.
- All names are set as Name on Road Sign = Y and Explicable = Y.
- Street Types are not separated. They are included as part of the Base Name.
- The following default values are used:

- Divider = N
- All Access Characteristics = Y, except the higher speed roads where Pedestrians are not allowed access.
- Direction of Travel = B
- Paved = Y
- Private = N
- Detailed City = N
- In-Process Data = N
- Multiply Digitised = N
- Controlled Access = N

- **① Note:** All other attributes are defaulted.

- Speed Category and Lane Category are populated based on a combination of attributes from the source.

#### Administrative Boundaries

- Worldwide coverage of country boundaries (Feature Type = 0907196) exists.
- Country boundaries (Feature Type = 0907196) are represented as a linear feature and do not extend into the ocean.
- Territories and dependencies are named with what they are known by, rather than by the countries owning them.
- Levels 2 and 3 are copies of the country boundary.

- For example:
  - Level 1(Feature Type = 907196)
  - Level 2(Feature Type = 900170)
  - Level 3(Feature Type = 900101)

#### Country Capitals

- A Named Place POI is included for each capital along with Population.

# Reference Guide

NAVSTREETS Product Variations

A.3 Entry Map

- Additionally, a Hamlet POI is included for major cities, which are published with Population.

## **Administrative Coding**

- The countries have only Level 1 and level 2 coding. Level 2 is a duplicate of Level 1 coding.
- The administrative information for all the oceans will reflect Somalia administrative coding.

## **Hydrography**

- The worldwide ocean inclusion is in blocks of 10 by 10 degrees. See *Figure 374:* on page 970.
- Every block of is represented as an ocean face (Feature Type = 0500116).
- Overlaps for oceans do not exist.

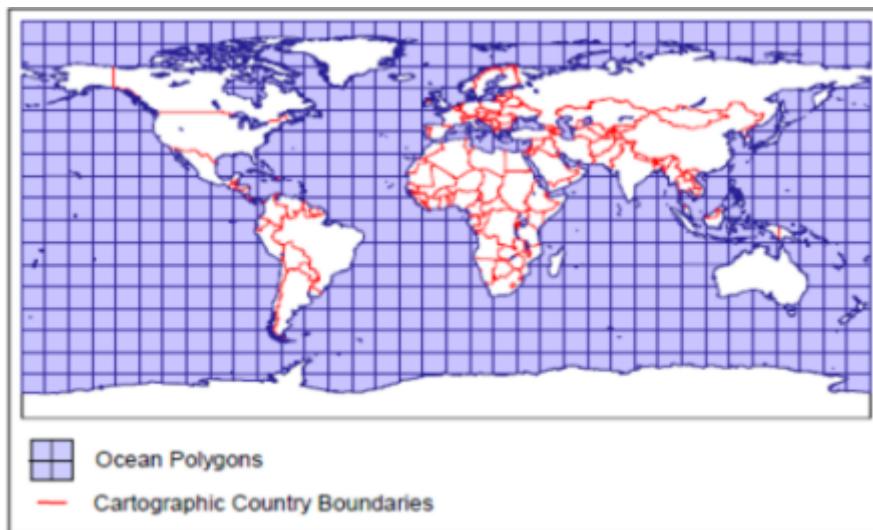
# Reference Guide

NAVSTREETS Product Variations

A.3 Entry Map

- Ocean Polygons are named. The following oceans are included:
  - Andaman Sea
  - Arabian Sea
  - Arctic Ocean
  - Baltic Sea
  - Bay Of Bengal
  - Black Sea
  - Caribbean Sea
  - Gulf Of Bothnia
  - Gulf Of Mexico
  - Indian Ocean
  - Kara Sea
  - Mediterranean Sea
  - North Atlantic Ocean
  - North Pacific Ocean
  - North Sea
  - South Atlantic Ocean
  - South Pacific Ocean
  - Southern Ocean
  - Tasman Sea

**Figure 374:**



## Lakes and Rivers

- The following Feature Types are included for all hydrography:
  - Feature Type = 0500412 (river)
  - Feature Type = 0500421 (lake)
- All lake/river features are unnamed.

## Islands

## Reference Guide

NAVSTREETS Product Variations

A.3 Entry Map

- Major islands are represented as polygons (Feature Type = 0509999).
- The boundary name is the name of country.

### Edge Matching

- The Entry Map coverage is edge matched to the NAV MAP coverage. For example, an Entry Map country that is bordered by a navigable map area of coverage, will be 'seamed' to each other at the border boundaries.
- Consult the release notes to determine which quarter of NAV MAP coverage was used for edge matching.
- Also, the ocean boundaries are matched to the landmass for the entire coverage.

### Split Along 180 Degrees Longitude Line

- Due to limitation when products cross the 180° longitude line, the following countries were split across this line:
  - Antarctica
  - Fiji
  - Kiribati
  - New Zealand
- The Administrative Level 2 for these countries were split into the following:
  - Antarctica East/Antarctica West
  - Fiji East/Fiji West
  - Kiribati East/Kiribati West
  - New Zealand East/New Zealand West

## A.3.3 Regional Differences

Differences result from the use of local sources. These are described in the following subsections.

### Eastern Europe

#### Inclusion

Countries included in Eastern EU Entry Map product:

- Albania
- Cyprus

#### Road Network

- A Functional Class(FC) = 1 - 5 network is implemented and connected.

# Reference Guide

NAVSTREETS Product Variations

A.3 Entry Map

- All Z-levels are set to 0.

## POIs

The following POIs are included in the East European Entry Map product:

- Airports
- Border Crossings
- Ferry Terminals

## Hydrography

The following features are included:

- Canal/Water Channel (Feature Type = 500414)
- Bay/Harbour (Feature Type = 507166)
- Island (Feature Type = 509999)

## Cartographic Features

The following features are included:

- Airport (Feature Type = 1900403)
- Aircraft Roads (Feature Type = 1907403)
- Cartographic Country Boundary (Feature Type = 908000)
- Railroad (Feature Type = 1800201)

## Administrative Boundaries

These administrative boundaries are included:

- Level 1 (Feature Type = 9071986)
- Level 2 (Feature Type = 909996)
- Level 3 (Feature Type = 900170)
- Level 4 (Feature Type = 900101)
- Level 5 (Feature Type = 900156)

## Administrative Coding

Up to five levels are defined for the countries in Eastern Europe.

## Indonesia

### POIs

# Reference Guide

NAVSTREETS Product Variations

A.3 Entry Map

- The following POIs are included in the Indonesian Entry Map product:
  - Airport
  - Automobile Dealership
  - Bank
  - Bus Station
  - Business Facility
  - City Hall
  - Embassy
  - Golf Course
  - Grocery Store
  - Higher Education
  - Historical Monument
  - Hospital
  - Hotel
  - Park/Recreation Area
  - Parking Garage/House
  - Petrol/Gasoline Station
  - Place of Worship
  - Police Station
  - Post Office
  - Residential Area/Building
  - Restaurant
  - School
  - Shopping
  - Sports Complex
  - Tourist Attraction
  - Train Station
- Building Types are published for Place of Worship POIs:
  - Ashram
  - Church
  - Mosque
  - Synagogue
  - Temple
  - Other
  - Gurdwara
  - Pagoda

# Reference Guide

NAVSTREETS Product Variations

A.3 Entry Map

- Percent from Reference Node is coded.

## Cartographic Features

The following features are included:

- Woodlands (Feature Type = 900202)
- Railroads (Feature Type = 1800201)
- Park City/County (Feature Type = 900150)

## Road Network

- A Functional Class(FC) = 1 - 5 network is implemented and connected.
- Pedestrian only roads may exist.
- Logical Direction of Traffic Flow has been coded. In addition, logical Multiply Digitized = Y has been coded.

## Administrative Coding

Indonesia has 5 administrative levels.

## Administrative Boundaries

These administrative boundaries are included:

- Level 1 (Feature Type = 9071986)
- Level 2 (Feature Type = 909996)
- Level 3 (Feature Type = 900170)
- Level 4 (Feature Type = 900101)
- Level 5 (Feature Type = 900156)

## Language Code

Language Code = ENG is applied in Indonesia.

# Russia

## Hydrography

- Rivers and Lakes are named in Russia.
- Canal/Water Channels (Feature Type = 500414) and Islands (Feature Type = 509999)

## Cartographic Features

The following features are included:

- Cartographic Country Boundary (Feature Type = 908000)
- Railroad (Feature Type = 1800201)

## Road Network

- A Functional Class(FC) = 1 - 5 network is implemented and connected.
- All Z-levels are set to 0.

## Administrative Coding

# Reference Guide

NAVSTREETS Product Variations

A.4 Intermediate Maps

- Russia has 5 administrative levels.

## Administrative Boundaries

These administrative boundaries are included:

- Level 1 (Feature Type = 9071986)
- Level 2 (Feature Type = 909996)
- Level 3 (Feature Type = 900170)
- Level 4 (Feature Type = 900101)
- Level 5 (Feature Type = 900156)

## A.4 Intermediate Maps

Intermediate Maps are a separate class of map data designed for customers who need fast time-to-market and desire HERE's service and support to introduce LBS and navigation applications in emerging markets.

Based on third-party data deemed by HERE to be the highest quality available, Intermediate Maps do not adhere to the same specifications or required verification as the company's flagship product, the HERE map. Inclusion and accuracy of geometry, attributes, and features is per the third-party source only. Translations of source data and coding assignments are derived based on automated rules and processing.

The following Coverage Indicator values define Intermediate Map functionality.

- I1 - Urban routing or point-to-point routing
- I2 - Search and display
- I3 - Display only

The minimum inclusion of each Coverage Indicator is:

Attributes/Features/POIs	I1	I2	I3
Administrative Level 1 Coding	Y	Y	Y
Administrative Level 2 Coding	Y	Y	Y
Administrative Level 3 Coding	Y	Y	N
Administrative Level 4 Coding	Y	Y	N
Administrative Level 5 Coding	Y	N	N
Administrative Level 1 Boundary	Y	Y	Y
Administrative Level 2 Boundary	Y	Y	Y
Administrative Level 3 Boundary	Y	Y	N
Administrative Level 4 Boundary	Y	Y	N

# Reference Guide

NAVSTREETS Product Variations

A.4 Intermediate Maps

here

Attributes/Features/POIs	I1	I2	I3
Cartographic Country Boundary	Y	Y	Y
FC(1) applied logically (without field verification)	Y	Y	Y
FC(2) applied logically (without field verification)	Y	Y	Y
FC(3) applied logically (without field verification)	Y	Y	N
FC(4) applied logically (without field verification)	Y	Y	N
Full Coverage	Y	Y	N
Cartographic Features	Y	Y	Y
In-Process Data	Y	Y	Y
Coverage Indicator	Y	Y	Y
Geometric Accuracy	Y	Y	Y
Floating Geometry	N	N	Y
Road Names	Y	Y	N
Named Place POI	Y	Optional	Optional
Hamlet POI	Y	Y	Y
Hamlet POI used to replace Named Place POI	N	Optional	Y
Address Ranges	Y	N	N
Edge Matching	Y	Y	Y
Competitive POIs	Y	Y	Y

If Coverage Indicator = I1 or I2, then geometric accuracy is sufficiently accurate to be upgraded to a HERE Map in a future release.

If Coverage Indicator = I3, then the administrative names default to Country, State, County, City, Settlement as applicable.

Detailed Coverage Indicator information is contained in the release notes.

## A.4.1 Administrative Level Coding on a Link per Country

Please see the Country Profiles database for Administrative Level Coding information.

## A.5 State Clips

HERE has the capability to deliver NAVSTREETS for Shapefile and NAVSTREETS for MapInfo products as State Clips for the continental United States. In cases where the State exists within a single DCA, it is clipped out and delivered as a single State Clip product. In cases where a State is comprised of portions of multiple DCAs, the products are merged and then clipped out for delivery.

It is important to note that if State is dissected by a DCA boundary, then its Administrative Boundary layer will not exist as a polygon in the DCA-level NAVSTREETS products (AdminBndy2). This case exists for the following States in the U.S<sup>168</sup>.

Illinois

Indiana

Maryland

Michigan

New Jersey

New York

North Carolina

Ohio

Pennsylvania

Tennessee

Texas

Washington

Wisconsin

Minnesota

Alaska

This case does not exist with the State Clip products as delivered for the continental United States, but does affect the Alaska data products due to the split between Regions 04 and 05. Both ESRI and MapInfo tools have the capability to merge lower level administrative polygons into the larger, upper level administrative boundaries.

## A.6 World Map

 **Note:**

<sup>168</sup> A similar situation exists for many country level polygons globally (AdminBndy1).

## Reference Guide

NAVSTREETS Product Variations

A.6 World Map

This product is no longer maintained.

### A.6.1 Introduction

World Map is delivered as a separate file that can be merged with map data, and used to enhance small-scale map display by outlining oceans and country boundaries on a global level.

This overcomes the representation limitations of oceans and country boundaries in map data products. In map data products, oceans extend approximately 500 km from the coastline, and country boundaries only exist for countries with navigable coverage, as shown in [Figure 375:](#) on page 978.

**Figure 375:**



Due to the generalisation, World Map is intended for use only for small-scale map display, i.e. “zoomed-out”.

### A.6.2 Inclusion

The following Feature Types are included:

#### Ocean

- The worldwide ocean inclusion is in blocks of 10 by 10 degrees. See [Figure 376:](#) on page 980.
- Every block is represented as an ocean polygon (Feature Type 0500116).

# Reference Guide

NAVSTREETS Product Variations

A.6 World Map

- Many Ocean Polygons are named. The following names are included:
  - Arabian Sea, Aral Sea, Arctic Ocean, Baltic Sea, Bay of Bengal, Black Sea, Caribbean Sea, Caspian Sea, East Sea/Sea of Japan, Gulf of Aden, Gulf of Bothnia, Gulf of Mexico, Gulf of Oman, Gulf of Thailand, Indian Ocean, Kara Sea, Mediterranean Sea, North Atlantic Ocean, North Pacific Ocean
  - North Sea
  - Persian Gulf
  - Red Sea
  - Sea of Okhotsk
  - South Atlantic Ocean
  - South China Sea
  - South Pacific Ocean
  - Southern Ocean
  - Tasman Sea

 **Note:** Beyond these, there are some tiles without an official name.

- The ocean boundaries are not aligned to the landmass of existing coverage.

## Lakes

- Major lakes are represented as polygons (Feature Type 0500421).
- All lakes are named.

## Islands

- Major islands are represented as polygons (Feature Type 0509999).
- Islands > 10,000 km<sup>2</sup> are named. All others are assigned valid unnamed status.
- The boundary name is in English. No local languages are included.

## Country Boundary

- Worldwide coverage of country boundaries (Feature Type 0907196).
- Country boundaries are represented as a linear feature and do not extend into the ocean.
- The boundary name is in English. No local languages are included.
- For the disputed areas, the following are implemented:
  - Kashmir is unnamed.
  - Palestine and Gaza Strip are both within the boundary of Israel.
- For territories and dependencies – named with what they are known by, rather than by the countries owning them.
- Country Cartographic Boundary is allowed to go through Rivers/Lakes.

## Country Capitals

- For each country, a circular polygon approximately 5 miles wide is included to represent the capital. (Feature Type 0900101).

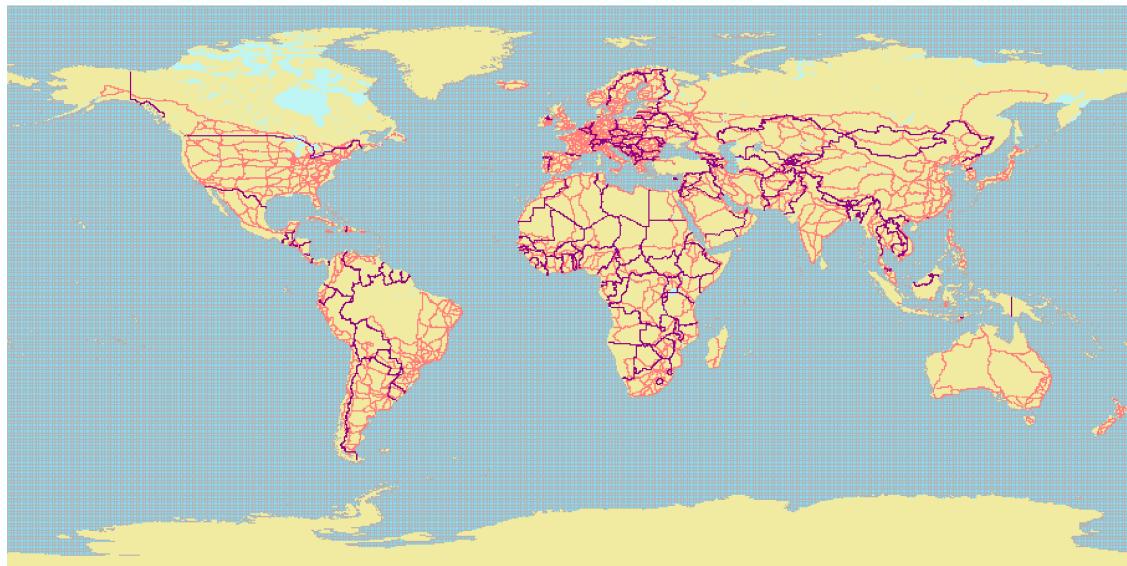
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- The capital name is in English.

**Figure 376:**



### Link Coding

Land: All have postal of LAND and city name of APPINGEDAM. Oceans have postal OC-xxx or OC-xxxx and city name APPINGEDAM.

## A.6.3 Merging World Map with Map Data

When World Map is merged with the regular DNDC product, crossings and overlaps between polygonal features occur.

## A.6.4 Shapefile Record Layout

### Counties (COUNTRIES.shp)

Official Name (ON) in English, alternative names are translated and integrated in the metadata table 'COUNTRY\_NAMES.dbf.'

LAYER	ISO_CODE	ON	AT4
COUNTRIES_shp	ISO_Country_Code	"english name"	907196

### Cities (CITIES.shp)

LAYER	ISO_CODE	ON	AN	AT4
CITIES.shp	ISO_Country_Code	"english name"	"alternative name"	900101

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## Ocean (OCEAN.shp)

LAYER	ON	AN	AT4	WT
OCEAN.shp	"english name"	"alternative name"	900101	1

## Water Elements (WATER.shp)

LAYER	ISO_CODE	AT4	WT
WATER_LAKE	ISO_COUNTRY_CODE	500421	2
WATER_RIVER	ISO_COUNTRY_CODE	500412	3
WATER_BAY/HARBOUR	ISO_COUNTRY_CODE	507116	6

## Main Roads (MAIN\_ROADS.shp)

LAYER	ISO_CODE	AT4	FC
MAIN_ROADS.shp	ISO_COUNTRY_CODE	9999999	0

## Borders (BORDERS.shp)

Borders between countries, Country\_1 and Country\_2 describe the official name (ENG) of both divided countries.

Value for FeatureType (AT4) is based on HERE's GDF 3.0 Reference Manual.

LAYER	COUNTRY_1	COUNTRY_2	AT4
BORDERS.shp	"english name"	"english name"	0

## Metadata - Country Names (COUNTRY\_NAMES.dbf)

COUNTRY\_NAMES contains the translation of the country names including Language Code and ISO Country Code.

LAYER	ISO_CODE	ISO_CODE	ON
COUNTRY_NAMES.dbf	Language_Code	ISO_Country_Code	Name

## A.6.5 List of ISO Country Codes

Country Name	ISO Code
Afghanistan	AFG
Albania	ALB
Algeria	DZA

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Country Name	ISO Code
American Samoa	ASM
Andorra	AND
Angola	AGO
Aguilla	AIA
Antarctica	ATA
Antigua and Barbuda	ATG
Argentina	ARG
Armenia	ARM
Aruba	ABW
Australia	AUS
Austria	AUT
Azerbaijan	AZE
Bahamas	BHS
Bahrain	BHR
Bangladesh	BGD
Barbados	BRB
Belarus	BLR
Belgium	BEL
Belize	BLZ
Benin	BEN
Bermuda	BMU
Bhutan	BTN
Bolivia	BOL
Bonaire	BES
Bosnia and Herzegovina	BIH
Botswana	BWA
Brazil	BRA
Brunei Darussalam	BRN
Bulgaria	BGR

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Country Name	ISO Code
Burkina Faso	BFA
Burundi	BDI
Cabo Verde	CPV
Cambodia	KHM
Cameroon	CMR
Canada	CAN
Cayman Islands	CYM
Central African Republic	CAF
Chad	TCD
Chile	CHL
China	CHN
Colombia	COL
Comoros	COM
Congo	COG
Congo, Democratic Republic of the	COD
Cook Islands	COK
Costa Rica	CRI
Cote D'Ivoire	CIV
Croatia	HRV
Cuba	CUB
Curacao	CUW
Cyprus	CYP
Cyprus - British Sovereign Base Areas	BSB
Cyprus - Turkish Rep. of Northern Cyprus	NCY
Cyprus - UN Neutral Zone	CUN
Czechia	CZE
Denmark	DNK
Djibouti	DJI
Dominica	DMA

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Country Name	ISO Code
Dominican Republic	DOM
East Timor	TLS
Ecuador	ECU
Egypt	EGY
El Salvador	SLV
Equatorial Guinea	GNQ
Eritrea	ERI
Ethiopia	ETH
Falkland Islands	FLK
Faroe Islands	FRO
Fiji	FJI
Finland	FIN
France	FRA
French Guiana	GUF
French Polynesia	PYF
Gabon	GAB
Gambia	GMB
Gaza Strip	GAS
Georgia	GEO
Germany	DEU
Ghana	GHA
Gibraltar	GIB
Golan Heights	ISR
Greece	GRC
Greenland	GRL
Grenada	GRD
Guadeloupe	GLP
Guam	GUM
Guatemala	GTM

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Country Name	ISO Code
Guinea	GIN
Guinea-Bissau	GNB
Guyana	GUY
Haiti	HTI
Honduras	HND
Hong Kong	HKG
Hungary	HUN
Iceland	ISL
India	IND
Indonesia	IDN
Iran	IRN
Iraq	IRQ
Ireland	IRL
Israel	ISR
Italy	ITA
Jamaica	JAM
Japan	JPN
Jordan	JOR
Kazakhstan	KAZ
Kenya	KEN
Kiribati	KIR
Korea	PRK
Korea, Democratic People's Republic of	KOR
Kosovo	SRB
Kuwait	KWT
Kyrgyzstan	KGZ
Laos	LAO
Latvia	LVA
Lebanon	LBN

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Country Name	ISO Code
Lesotho	LSO
Liberia	LBR
Libya	LBY
Liechtenstein	LIE
Lithuania	LTU
Luxembourg	LUX
Macau	MAC
Macedonia	MKD
Madagascar	MDG
Malawi	MWI
Malaysia	MYS
Maldives	MDV
Mali	MLI
Malta	MLT
Marshall Islands	MHL
Martinique	MTQ
Mauritania	MRT
Mauritius	MUS
Mayotte	MYT
Mexico	MEX
Micronesia	FSM
Moldova	MDA
Monaco	MCO
Mongolia	MNG
Montenegro	MNE
Montserrat	MSR
Morocco	MAR
Mozambique	MOZ
Myanmar	MMR

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Country Name	ISO Code
Namibia	NAM
Nauru	NRU
Nepal	NPL
Netherlands	NLD
Netherlands Antilles	ANT
New Caledonia	NCL
New Zealand	NZL
Nicaragua	NIC
Niger	NER
Nigeria	NGA
Niue	NIU
Norfolk Island	NFK
Northern Mariana Islands	MNP
Norway	NOR
Oman	OMN
Pakistan	PAK
Palau	PLW
Palestine (West Bank)	WEB
Panama	PAN
Papua New Guinea	PNG
Paraguay	PRY
Peru	PER
Philippines	PHL
Poland	POL
Portugal	PRT
Puerto Rico	PRI
Qatar	QAT
Reunion	REU
Romania	ROU

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Country Name	ISO Code
Russia	RUS
Rwanda	RWA
Saba	BES
Saint Helena, Ascension, and Tristan da Cunha	SHN
Saint Kitts and Nevis	KNA
Saint Lucia	LCA
Saint Martin	MAF
Saint Pierre and Miquelon	SPM
Saint Vincent and the Grenadines	VCT
Samoa	WSM
San Marino	SMR
Sao Tome and Principe	STP
Saudi Arabia	SAU
Senegal	SEN
Serbia	SRB
Seychelles	SYC
Sierra Leone	SLE
Singapore	SGP
Sint Eustatius	BES
Slovakia	SVK
Slovenia	SVN
Soloman Islands	SLB
Somalia	SOM
South Africa	ZAF
South Sudan	SSD
Spain	ESP
Sri Lanka	LKA
Sudan	SDN
Suriname	SUR

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Country Name	ISO Code
Svalbard and Jan Mayen	SJM
Swaziland	SWZ
Sweden	SWE
Switzerland	CHE
Syria	SYR
Taiwan	TWN
Tajikistan	TJK
Tanzania	TZA
Thailand	THA
Togo	TGO
Tokelau	TKL
Tonga	TON
Trinidad and Tobago	TTO
Tunisia	TUN
Turkey	TUR
Turkmenistan	TKM
Turks and Caicos Islands	TCA
Tuvalu	TUV
Uganda	UGA
Ukraine	UKR
UN Neutral Zone	ISR
United Arab Emirates	ARE
United Kingdom	GBR
United States	USA
Uruguay	URY
Uzbekistan	UZB
Vanuatu	VUT
Vatican City	VAT
Venezuela	VEN

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Country Name	ISO Code
Vietnam	VNM
Virgin Islands, British	VGB
Virgin Islands, U.S.	VIR
Wallis and Fortuna	WLF
Yemen	YEM
Zambia	ZMB
Zimbabwe	ZWE

## A.7 Trucks

### A.7.1 Introduction

This section contains the specification for Trucks in NAVSTREETS.

The coding includes:

- Transport Access Restrictions
  - Transport Restricted Driving Manoeuvre
  - Traffic Signs
  - Coding of Restrictions specifics in terms of Direction Closure, Hazardous Goods, Trailer Type, Weight, Weight per Axle, Height Length, Width limitations and Physical Structure Type.
  - Transport Preferred Route
  - Speed Limits for Trucks with attributes indicating the type of speed limit, speed limit
- ① **Note:** Truck POIs is a separate HERE product that is also available. Please see the POI XML: Truck POIs Reference Manual.

### A.7.2 Attributes and Relationships

#### Definition

Trucks represents a set of attributes that enables routing and guidance specific to large vehicles (trucks). In addition some Trucks specific Points Of Interest coding is available to facilitate input for Trucks specific destinations.

#### Related Attributes

##### Transport Access Restrictions

- Direction Closure
- Hazardous Material Type
- Trailer Type
- Length

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- Weight
- Weight per Axle
- Height
- Width
- Physical Structure Type
- Vehicle Type
- Through Traffic
- Date Time Modifier
- Number of Axles
- KPRA Length
- Trailer Type
- Weather Type
- Time Override

## Transport Restricted Driving Manoeuvre

- Hazardous Material Type
- Trailer Type
- Weight
- Weight per Axle
- Height
- Length
- Width
- Vehicle Type
- Through Traffic
- Date Time Modifier
- Number of Axles
- KPRA Length
- Trailer Type
- Weather Type
- Time Override

## Traffic Signs

- Traffic Sign Type
- Traffic Sign Category
- Supplemental Sign Duration
- Supplemental Sign Pre-Warning
- General Warning Sign Type
- Traffic Sign Value
- Weather Type

## Transport Preferred Route

- Transport Preferred Route Type
- Direction
- Weight Dependent
- Preferred Route Type

## Transport Special Speed Situation

- Transport Speed Situation Type
- Transport Speed Limit
- Direction
- Hazardous Material Type

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- Trailer Type
- Weight Dependent
- Weather Type
- Time Override
- Vehicle Type
- Through Traffic
- Date Time Modifier
- Speed Limit Type

## Usage

Trucks attribution can be used to:

- Provide routes dedicated to specific truck types or to large vehicles
- Provide route guidance dedicated to large vehicles
- Provide warnings specific to large vehicles or trucks
- Offer destinations specific to trucks.

## Coverage

The coverage for Trucks is available through your Account Executive.

## A.7.3 Access Characteristics

### Definition

Access Characteristics are used to model accessibility of links and lanes to specific vehicle types. The regular link Access Characteristics are modelled in the Streets layer, through the Direction of Travel and Access fields.

### Cardinality

1:1

### Related Attributes

Direction of Travel

Through Traffic

Access Characteristics in the Streets layer

Access Characteristics in the Lane layer

## Usage

The Access Characteristics can be used to restrict access to links or lanes for specific vehicle types (e.g. trucks)

Due to limited inclusion, routing on Functional Class = 5 should be avoided. Functional Class = 5 should only be used for routing if the current vehicle position and/or final destination is on a Functional Class = 5 link.

## Specification

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- Links and lanes that are entirely closed to all trucks at all times are coded with Access Trucks = N and Access Deliveries = N.
- Links or lanes for which a Transport Condition exists are coded with Access Trucks = Y as Access Characteristics on the link or lane.
- Roads with the EU Sign ‘forbidden for trucks’ are considered closed to all trucks and have Access Characteristics on link level coded with Trucks = N and Deliveries = N.
- Roads with the US Sign ‘forbidden for trucks’ imply that no truck of any type can enter the road. Therefore the Access Characteristics on link level are coded with Access Truck = N and Access Deliveries = N.
- Only when a weight restriction is explicitly signposted, the link is coded Access Trucks = Y and Access Deliveries = Y.
- Legally imposed access restrictions exist indicating ‘forbidden for trucks’ with a supplemental sign indicating ‘except deliveries’, ‘except residents’, ‘except residents and deliveries’ or ‘except public vehicles’. For these specific exceptions, the following are published:
  - ‘Except deliveries’: Link is coded Access Trucks = N and Access Deliveries = Y
  - ‘Except residents’: Link is coded Access Trucks = N and Access Deliveries = Y
  - ‘Except residents and deliveries’: Link is coded Access Trucks = N and Access Deliveries = Y
  - ‘Except public vehicles’: Link is coded Access Trucks = N and Access Deliveries = N
- ① **Note:** In case any of these exceptions is only applicable in one driving direction or additionally signposted with a weight restriction, then these are published as a Transport Access Restriction with attributes indicating the Direction Closure and/or Weight.

## A.7.4 Transport Conditions

### A.7.4.1 Traffic Sign (Condition Type = 17)

#### **Definition**

The *Traffic Sign* is a condition indicating the location of a Traffic Sign, the type of sign, and the sign category. It also includes supplemental signs, if present, indicating distance or other specific information.

#### **Layer**

Condition/Driving Manoeuvre (Cdms)

#### **Participants in Condition**

Link(s)

Node(s)

#### **Related Attributes**

Traffic Sign Type (Modifier Type = 22)

Traffic Sign Category (Modifier Type = 28)

Supplemental Sign Duration (Modifier Type = 23)

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Supplemental Sign Pre-Warning (Modifier Type = 24)

Traffic Sign Value (Modifier Type = 51)

General Warning Sign Type (Modifier Type = 47)

Weather Type (Modifier Type = 62)

## Usage

The *Traffic Sign* condition can be used for map display and for generating specific Signs, Signals & Warnings alert messages.

## Specification

- The Traffic Sign condition is only included where a physical sign is present in reality. As a result, additional Nodes can be included to correctly place the traffic sign.
- Traffic Signs are included with an accuracy of 50 metres. Where required, additional nodes are included to ensure positional accuracy.
- The Traffic Sign conditions will always be published a Traffic Sign Type attribute indicating the type of traffic sign.
- Date/Time Modifier information is not published for Traffic Sign conditions.
- The Traffic Sign is not vehicle dependent and therefore, applies to all vehicle types and to through traffic.

## A.7.4.2 Transport Access Restriction (Condition Type = 23)

### Definition

Transport Access Restriction condition identifies situations where specific vehicles (other than autos) cannot enter a road. Transport Access Restriction is modelled as a single link condition, with a Direction Closure condition attribute to indicate in which travel direction the restriction applies. Transport Access Restriction has corresponding Access Characteristics and optionally Date/Time Modifier information applied. Specific attribution is applied to define the access restrictions to truck usage or vehicle loads.

### Layer

Condition/Driving Manoeuvres (Cdms)

### Participants in Condition

Link

### Related Attributes

Direction Closure (38)

Hazardous Material Type (39)

Height Restriction (41)

Weight Restriction (42)

Weight per Axle Restriction (43)

Length Restriction (44)

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Width Restriction (45)

Trailer Type (46)

Physical Structure Type (53)

Weather Type (62)

Number of Axles (75)

KPRA Length (81)

Access Characteristics in Condition/Driving Manoeuvre (Cdms)

Date/Time Modifiers

Time Overrides

## Usage

The Transport Access Restriction coding can be used for route calculation to avoid roads not accessible to trucks with a specific weight, a specific usage or vehicles with specific loads.

Due to limited inclusion, routing on Functional Class = 5 should be avoided. Functional Class = 5 should only be used for routing if the current vehicle position and/or final destination is on that link.

## Specification

- Transport Access Restrictions are published for the link or lane to which the restriction applies, not at the location where the restriction is signposted.
- The Transport Access Restriction is published as a single link or lane condition (Condition/Driving Manoeuvre with Condition Type = 23) with the Direction Closure (38) attribute to indicate the direction in which the link or lane is closed, and additional condition attributes if applicable.
- Transport Access Restriction is published for situations where trucks do not have access to roads due to legally imposed restrictions.

The Transport Access restriction may also apply to other vehicle types. This will be reflected in the Access Characteristics applicable to the Transport Access Restriction

- Transport Access Restrictions requiring a measurement value are published in the local measurement system of the applicable country.
- Transport Access Restrictions can have related attribute(s) that restrict the access to trucks with specific characteristics (e.g. weight, load, usage etc.).
- When combinations of Height, Weight, Weight per Axle, Width or Length apply to a link or lane, then multiple Transport Access Restriction conditions are published, each with their applicable attribution.
- Physical restrictions due to overpasses and underpasses are additionally published with a Physical Structure Type attribute. This attribute defines if the physical restriction is caused by a Tunnel or Bridge.

Date/Time specific restrictions can be applied to a Transport Access Restriction where appropriate.

## Reference Guide

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### A.7.4.3 Lane Transport Access Restriction (Condition Type = 23)

#### Definition

Lane Transport Access Restriction condition identifies situations where specific vehicles (other than autos) are not allowed to access a lane. Transport Access restriction is modelled as a single lane Condition, with a **Direction Closure** condition attribute to indicate in which travel direction the restriction applies. Lane Transport Access Restriction has corresponding **Access Characteristics** and optional **Date/Time Modifier** information applied. Specific attribution is applied to define the access restrictions to truck usage or vehicle loads.

While Transport Access Restriction provides information at link level, Lane Transport Access Restriction provides this information detailed at the lane level.

#### Default Value

None

#### Length

5

#### Type

Number

#### Layer

Lane Condition Driving Manoeuvre (LnCdms)

#### Related Attributes

Direction Closure (38)

Hazardous Material Type (39)

Height Restriction (41)

Weight Restriction (42)

Weight per Axle Restriction (43)

Length Restriction (44)

Width Restriction (45)

Trailer Type (46)

Physical Structure Type (53)

#### Usage

Lane Transport Access Restriction can be used for route calculation to avoid lanes not accessible to trucks with a specific restriction, a specific usage or vehicles with specific loads. Due to limited inclusion, routing on Functional Class = 5 should be avoided. Functional Class = 5 should only be used for routing if the current vehicle position and/or final destination is on that link.

#### Specification

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- Lane Transport Access Restriction is published only for transport restriction applicable to a specific lane.
- Lanes that are entirely closed to all trucks at all times are coded with TRUCKS = N and DELIVERIES = N on the Lane Access Characteristics (Lane layer).
- Lane Transport Access Restriction overrides the Access Characteristics. Therefore, for the Lane, Lane Access Characteristics will be set to TRUCKS = Y and DELIVERIES = Y.

### A.7.4.4 Transport Special Speed Situation (Condition Type = 25)

#### Definition

Transport Special Speed Situation is a single link condition to model posted speed limits specific to trucks. Transport speed limits can be different per driving direction for one link.

#### Layer

Condition / Driving Manoeuvres (Cdms) for the Condition Type 25.

#### Related Attributes

Hazardous Material Type (39)

Weight Dependent (42)

Trailer Type (46)

Transport Speed Limit (48)

Transport Speed Situation Type (59)

Direction (60)

Weather Type (62)

Speed Limit Type (83)

Time Override

Vehicle Type for the Condition

Date Time Modifier

#### Cardinality

1:0:1:M

#### Value

Transport Special Speed Situation condition publishes the applicable Transport Speed Limit (km/hr or miles/hr), with optionally additional attributes that identify specific situations when the transport speed limit is in effect.

#### Usage

Transport Special Speed Situation can be used to alert the truck driver for truck specific speed limits applicable to the road.

#### Specification

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- The Transport Special Speed Situation is published as a single link condition in the Condition / Driving Manoeuvre (Cdms) layer, with a (direction dependent) Transport Speed Limit attribute and various modifiers that define when the applicable speed limit is in effect.
  - Transport Special Speed Situation is coded for the link to which the truck specific speed limit applies.
  - Transport Special Speed Situation can be different per driving direction. This is modelled through the condition modifier Direction.
  - Transport Special Speed Situations are only coded for situations where trucks specific speed limits are signposted.
- ① **Note:** The Transport Special Speed Situation may also apply to other vehicle types. This is reflected in the Access Characteristics columns applicable to the Transport Special Speed Situation condition.
- Transport Special Speed Situation is coded for the link to which the truck specific speed limit applies.
  - Date/Time dependent speed limits will have a Date Time Modifier published for the Transport Special Speed Situation condition.
  - Transport Special Speed Situations can exist for specific types of Trucks only, or for specific weather conditions only. This is modelled through various sub-attributes for the Transport Special Speed Situation.
  - Time Override is published when transport speed limits are only applicable from Dawn to Dusk or Dusk to Dawn (Time Override = 1 – Dawn to Dusk or 2 – Dusk to Dawn). This sub-attribute can be published with any type of Transport Special Speed Situation, Transport Restricted Driving Manoeuvre or Transport Access Restriction.

## A.7.4.5 Transport Restricted Driving Manoeuvre (Condition Type = 26)

### Definition

The Transport Restricted Driving Manoeuvre condition is used to model turn restrictions applicable to trucks. Additional condition attributes can be used to further restrict the applicability of the turn restriction to specific truck types only.

### Layer

Condition/Driving Manoeuvres (Cdms)

### Participants in Condition

Link(s)

Node(s)

### Related Attributes

Hazardous Material Type (39)

Height Restriction (41)

Weight Restriction (42)

Weight per Axle Restriction (43)

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Length Restriction (44)

Width Restriction (45)

Trailer Type (46)

Weather Type (62)

Number of Axles (75)

KPRA Length (81)

Access Characteristics in Condition/Driving Manoeuvre (Cdms)

Date / Time Modifiers

Time Overrides

## Related Condition

Transport Access Restriction (Condition Type = 23)

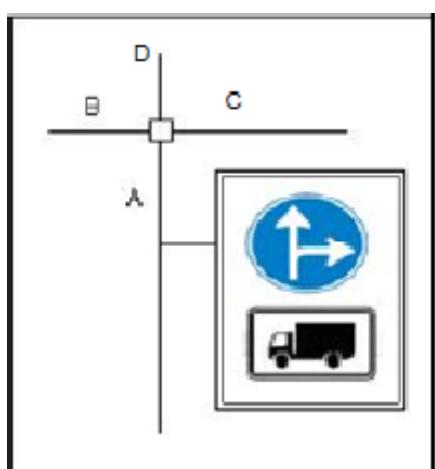
## Usage

Transport Restricted Driving Manoeuvre can be used to avoid illegal turns for all trucks or trucks with defined characteristics.

## Specification

- Transport Restricted Driving Manoeuvre is coded where signposted. It is coded for situations where trucks are not allowed to turn onto roads due to legally imposed restrictions.
- ① **Note:** The Transport Restricted Driving Manoeuvre may also apply to other vehicle types. This is reflected in the Access Characteristics coded for the Transport Restricted Driving Manoeuvre.
- When a sign indicates a compulsory driving manoeuvre for trucks, the remaining links in the crossing are coded with a Transport Restricted Driving Manoeuvre.
  - Signs may indicate the positive driving direction in a crossing for trucks. The implication of positive coding is that all non-indicated turns are not allowed at that crossing. In the figure below, the sign indicates that trucks should traverse A to D, or A to C through the crossing. A Transport Restricted Driving Manoeuvre will be coded from A to B, see [Figure 377](#): on page 999 below.

**Figure 377:**



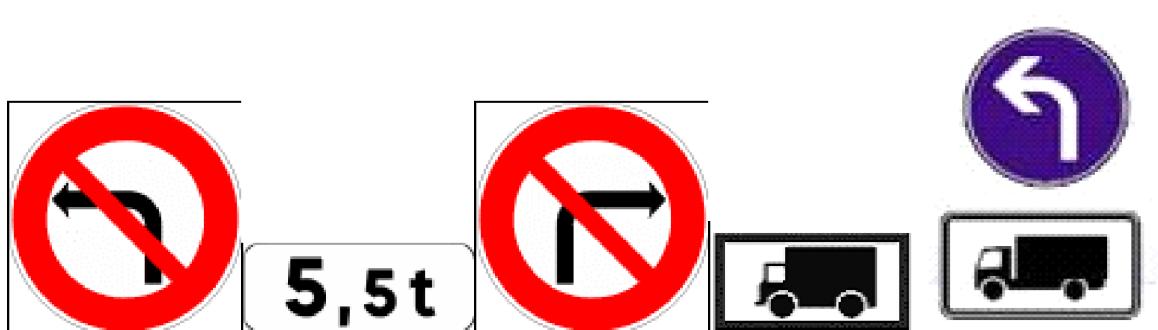
# Reference Guide

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- In Europe, legally imposed turn restrictions exist indicating ‘forbidden for trucks’ with a supplemental sign indicating ‘except deliveries’, ‘except residents’, ‘except residents and deliveries’ or ‘except public vehicles’. For these specific exceptions, the following will be published:
  - ‘Except deliveries’: Origin and destination link will be coded Access Trucks = Y and Access Deliveries = Y. The Transport Restricted Driving Manoeuvre will apply to Trucks only.
  - ‘Except residents’: Origin and destination link will be coded Access Trucks = Y and Access Deliveries = Y. The Transport Restricted Driving Manoeuvre will apply to Trucks only.
  - ‘Except residents and deliveries’: Origin and destination link will be coded Access Trucks = Y and Access Deliveries = Y. The Transport Restricted Driving Manoeuvre will apply to Trucks only.
  - ‘Except public vehicles’: Origin and destination link will be coded Access Trucks = Y and Access Deliveries = Y. The Transport Restricted Driving Manoeuvre will apply to Trucks and Deliveries.
- ① **Note:** In case any of these exceptions is additionally signposted with a weight restriction or a trailer type, then the Transport Restricted Driving Manoeuvre will additionally be published with the Weight or Trailer Type attribute.
- A Transport Restricted Driving Manoeuvre condition may have an associated Date Time Modifier.
- Examples of truck specific restricted driving manoeuvre signage are provided in [Figure 378](#): on page 1000 below.

**Figure 378:**



## A.7.4.6 Transport Preferred Route (Condition Type = 27)

### Definition

Transport Preferred Route is a new single-link condition (Condition Type = 27) that identifies links as being part of a transport preferred route network.

### Record

Condition / Driving Manoeuvres (Cdms) with Condition Type = 27

### Cardinality

1:0:1:M

### Related Attributes

Preferred Route Type (49)

Weight Dependent (61)

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## Direction (60)

### Usage

The Transport Preferred Route condition can be used to highlight links that are part of a transport preferred route.

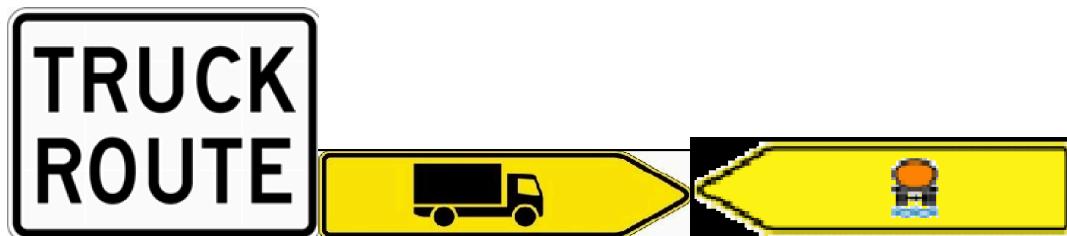
### Specification

- Transport Preferred Route a single link condition.
- For Europe, Transport Preferred Route conditions are coded for preferred routes for all trucks and preferred routes for trucks with hazardous goods
- For the U.S., Transport Preferred Route conditions are coded for government defined routes of type:
  - STAA: highway network as defined by the Surface Transportation Assistance Act
  - TD: state designated highway network for trucks
  - Hazardous Material Routes with various sub-types
- The Transport Preferred Route condition is only coded on Functional Class 1 – 4 links.
- Compulsory driving manoeuvre for trucks, as indicated on sign, are not coded as Trucks Preferred Route conditions.
- The Transport Preferred Route applies to trucks only (AR Trucks = Y).
- Transport Preferred Routes can additionally be signposted with a weight indication. In that case the attribute Weight Dependent will be published with the applicable weight indication.
- Transport Preferred Route can be direction dependent. Condition attribute Direction is used to model direction dependency.
- Transport Preferred Route can apply to trucks of specific weights only. If sign-posted in reality, the Transport Preferred Route will publish a Weight Dependent condition attribute.
- Examples signage related to transport preferred routes are provided below in [Figure 379:](#) on page 1001.

**Figure 379:**



**Figure 380:**



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# A.7.5 Transport Condition Modifiers

## A.7.5.1 Traffic Sign Type (Modifier Type = 22)

### Definition

The Traffic Sign condition attribute Traffic Sign Type identifies the type of warning sign.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 22

### Value

11 – Road Narrows

12 – Sharp Curve Left

13 – Sharp Curve Right

14 – Winding Road starting Left

15 – Winding Road starting Right

16 - Start of No Overtaking for Trucks

17 - End of No Overtaking for Trucks

18 – Steep Hill Upwards

19 – Steep Hill Downwards

21 – Lateral Wind

22 - General Warning

23 - Risk of Grounding

24 - General Curve

26 - General Hill

53 - No Engine Brake

54 - End of No Engine Brake

55 - No Idling

56 - Truck Rollover

57 - Low Gear

58 - End of Low Gear

### Cardinality

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## Related Attributes

Traffic Sign Category (Condition Modifier = 28)

Supplemental Sign Category (Condition Modifier = 47)

Traffic Sign Value (Condition Modifier = 51)

## Related Condition

Traffic Sign (Condition Type = 17)

## Usage

The Traffic Sign Type can be used to give specific Signs, Signals & Warnings alert messaging using the sign type. Traffic Sign Type can also be used to display the *Traffic Sign*.

## Specification

- Certain Traffic Sign Types do not have a corresponding sign in all countries.
- The actual posted traffic sign for a given Traffic Sign Type can differ between countries.

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- The *Traffic Sign* condition is published with Condition Modifier 22 equal to one of the following:
  - Traffic Sign Type = 11 – Road Narrows is applied when a sign is present indicating that a road is narrowing. This can be from both sides or from the left or right side only. See an example of a road narrowing on both sides in Table A-9, sign 11.
  - Traffic Sign Type = 12 – Sharp Curve Left is applied when a sign is present indicating a sharp curve to the left.
  - Traffic Sign Type = 13 – Sharp Curve Right is applied when a sign is present indicating a sharp curve to the right.
  - Traffic Sign Type = 14 – Winding Road starting Left is applied when a sign is present indicating a winding road with the first curve starting to the left.
  - Traffic Sign Type = 15 – Winding Road starting Right is applied when a sign is present indicating a winding road with the first curve starting to the right.
  - Traffic Sign Type = 16 - Start of No Overtaking for Trucks is applied when trucks are not permitted to pass.
  - Traffic Sign Type = 17 - End of No Overtaking for Trucks is applied when trucks are once again allowed to pass.
  - Traffic Sign Type = 18 – Steep Hill Upwards is applied when a sign is present indicating a steep ascent.
  - Traffic Sign Type = 19 – Steep Hill Downwards is applied when a sign is present indicating a steep descent.
  - Traffic Sign Type = 21 – Lateral Wind is applied when a sign is present indicating possible strong cross wind.
  - Traffic Sign Type = 22 – General Warning Sign is applied when a sign is present indicating a general warning. General Warning Signs will always be published with a corresponding General Warning Sign Type attribute defining the nature of the general warning.
  - Traffic Sign Type = 23 – Risk of Grounding can also be published as a General Warning Sign (Traffic Sign Type = 22) with General Warning Sign Type = 2 when supplemental signs are used for signage in reality.
  - Traffic Sign Type = 24 – General Curve is applied when a sign is present indicating a curve warning, without an indication in which direction the curve is heading.
  - Traffic Sign Type = 26 – General Hill is applied when a sign is present indicating a hill warning, without an explicit indication for uphill or downhill travel.
  - Traffic Sign Type = 53 - No Engine Brake is applied when a sign is present indicating that engine brakes should not be used.
  - Traffic Sign Type = 54 - End of No Engine Brake is applied when a sign exists that indicates that engine brakes can once again be used.
  - Traffic Sign Type = 55 - No Idling is applied when a sign exists that indicates that trucks may not sit and idle (park with the engine running).
  - Traffic Sign Type = 56 - Truck Rollover is applied when a sign exists that indicates that trucks are prone to rollovers.
  - Traffic Sign Type = 57 - Low Gear is applied when a sign exists that indicates that the driver should stay in low gear.

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- Traffic Sign Type = 58 - End of Low Gear is applied when a sign exists that indicates that it is once again safe to use higher gears.
  - Traffic Sign Type = 59 - Bicycle Crossing is applied when a sign exists that indicates that the driver is approaching an intersection with bicycles.
  - Traffic Sign Type = 60 - Yield to Bicycles is applied when a sign exists that indicates that the driver has to give priority (yield) to bicycles.
  - Traffic Sign Type = 61 - No towed caravan allowed is applied when a sign exists that indicates that vehicles towing a caravan are prohibited access.
  - Traffic Sign Type = 62 - No towed trailer allowed is applied when a sign exists that indicates that vehicles towing a trailer are prohibited access.
  - Traffic Sign Type = 63 - No camper or motorhome allowed when a sign exists that indicates that vehicles towing a motorhome are prohibited access.
  - Traffic Sign Type = 64 - No Turn on Red when a sign exists that indicates that turning on red light is prohibited.
  - Traffic Sign Type = 65 - Turn on Red Permitted when a sign exists that indicates that turning on red light is allowed.
- ① **Note:** The appearance of the signs listed above can vary depending on the situation in reality. There are also differences in the appearance of signs between countries. Therefore, a given Traffic Sign Type may have various corresponding real-world signage.

Value	Description	E.U. Examples	U.S. Examples
11	Road Narrows	<p>Figure 381:</p> 	<p>Figure 382:</p>  <p>Figure 383:</p> 
12	Curve Left	<p>Figure 384:</p> 	<p>Figure 385:</p> 

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Value	Description	E.U. Examples	U.S. Examples
13	Curve Right	<b>Figure 386:</b> 	<b>Figure 387:</b> 
14	Winding Road Starting Left	<b>Figure 388:</b> 	<b>Figure 389:</b> 
15	Winding Road Starting Right	<b>Figure 390:</b> 	<b>Figure 391:</b> 

Value	Description	E.U. Examples	U.S. Examples
16	Start of No Overtaking for Trucks	<b>Figure 392:</b> 	
17	End of No Overtaking for Trucks	<b>Figure 393:</b> 	
18	Steep Hill Upwards	<b>Figure 394:</b> 	

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Value	Description	E.U. Examples	U.S. Examples
19	Steep Hill Downwards	<b>Figure 395:</b> 	<b>Figure 396:</b> 
21	Lateral Wind	<b>Figure 397:</b> 	

Value	Description	E.U. Examples	U.S. Examples
22	General Warning Sign	<b>Figure 398:</b> 	<b>Figure 399:</b> 
23	Risk of Grounding	<b>Figure 400:</b> 	<b>Figure 401:</b> 
24	General Curve		<b>Figure 402:</b> 

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Value	Description	E.U. Examples	U.S. Examples
25	General Hill		<b>Figure 403:</b> 
53	No Engine Brake	<b>Figure 404:</b> 	<b>Figure 405:</b> 

Value	Description	E.U. Examples	U.S. Examples
54	End of No Engine Brake		<b>Figure 406:</b> 
55	No Idling	<b>Figure 407:</b> 	<b>Figure 408:</b> 
56	Truck Rollover		<b>Figure 409:</b> 

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Value	Description	E.U. Examples	U.S. Examples
57	Low Gear		<b>Figure 410:</b> 
58	End of Low Gear		<b>Figure 411:</b> 

## A.7.5.2 Supplemental Sign Duration (Modifier Type = 23)

### Definition

The Traffic Sign attribute Supplemental Sign Duration indicates additional sign shields that are displayed below the Traffic Sign indicating the duration of the warning.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 23

### Value

Text (maximum 10 characters)

### Cardinality

1:0,1,M

### Usage

The Supplemental Sign Duration can be used for map display or to indicate the duration of the warning in the Signs, Signals & Warnings messaging.

### Specification

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- Supplemental signs indicating the duration are typically showing the distance information with arrows on either side of the distance information. See the following example.

Figure 412:



- The distance information in the Modifier Type 23 - Supplemental Sign Duration is published including the measurement indication. The supplemental sign text for duration will be represented as spelled on the sign, excluding spaces. The example above would be represented as '2400m'.
- Modifier Type 23 – Supplemental Sign Duration will publish the supplemental sign text in the required language code. The language code is newly added to the Condition Modifier (CndMod) layer. The language code can be used to differentiate the supplemental sign text in case multiple modifier of the same type (e.g. in bi-lingual areas) are coded for one Traffic Sign.

The new layout of the Condition Modifier (CndMod) layer, with the Language Code, is provided below:

Attribute	Field Name	Format
Condition ID	COND_ID	Decimal(10,0)
Language Code	LANG_CODE	Char(3), Optional
Modifier Type	MOD_TYPE	Decimal(10,0)
Modifier Value	MOD_VAL	Character(100,0)

- Supplemental sign text for Modifier Type 23 – Supplemental Sign Duration is only published in Latin-1. The supplemental sign text represents the actual text in Latin-1.

In case more than one Latin-1 sign text is present on the sign, then multiple supplemental sign text of the same modifier type can be published.

## A.7.5.3 Supplemental Sign Pre-Warning (Modifier Type = 24)

### Definition

The Traffic Sign condition attribute Supplemental Sign Pre-Warning indicates additional sign shields that are displayed below the Traffic Sign indicating an upcoming warning or regulation. These signs are only included when no additional Traffic Sign is present at the actual start of the warning or regulation.

### Layer

Condition Modifiers (CndMod)

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## Field

Modifier Type = 24

## Value

Text (maximum 10 characters)

## Usage

The Supplemental Sign Pre-Warning can be used for map display or to indicate a pre-warning for an upcoming warning or regulation in Signs, Signals & Warnings messaging.

## Specification

- Traffic Signs with supplemental signs indicating the distance to an upcoming warning or regulation will not be included in case an additional Traffic Sign is present at the actual start of the warning. In case no Traffic Sign is present at the actual start of the warning, then the Traffic Sign with the supplemental sign indicating the distance to the upcoming warning or regulation will be included. These types of supplemental signs are typically showing the distance information without the arrows on either side of the distance information.

**Figure 413:**



- The distance information in the condition Modifier Type 24 - Supplemental Sign Pre-Warning will be published including the measurement indication. The supplemental sign text for pre-warning will be represented as spelled on the sign, excluding spaces. The example above would be represented as '400m'.
- Supplemental Sign Pre-Warning will publish the supplemental sign text in the required language code. The language code can be used to differentiate the supplemental sign text in case multiple modifiers of the same type (e.g., in bilingual areas) are coded for one Traffic Sign.
- The new layout of the Condition Modifier (CndMod) layer, with the Language Code, is provided below:

Attribute	Field Name	Format
Condition ID	COND_ID	Decimal(10,0)
Language Code	LANG_CODE	Char(3), Optional
Modifier Type	MOD_TYPE	Decimal(10,0)
Modifier Value	MOD_VAL	Character(100,0)

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- Supplemental sign text for Modifier Type 24 – Supplemental Sign Pre-Warning will only be published in Latin-1. The supplemental sign text will represent the actual text in Latin-1.  
① **Note:** In case more than one Latin-1 sign text is present on the sign, then multiple supplemental sign text of the same modifier type can be published.

### A.7.5.4 Traffic Sign Category (Modifier Type = 28)

#### Definition

Traffic Sign Category identifies the main sign category to which the sign belongs.

#### Layer

Condition Modifiers (CndMod)

#### Field

Modifier Type = 28

#### Value

1 – Regulatory Sign

2 – Informative Sign

3 – Warning Sign

#### Cardinality

1:1

#### Related Attributes

Traffic Sign Type (Modifier Type = 22)

General Warning Sign Type (Modifier Type = 47)

#### Related Condition

Traffic Sign (Condition Type = 17)

#### Usage

Traffic Sign Category can be used to give specific informative messaging using the traffic sign category.

#### Specification

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- The *Traffic Sign* condition is published with Condition Modifier 28 equal to one of the following:
  - Traffic Sign Category = 1 - Regulatory Sign is applied when the Traffic Sign indicates a regulation. The following traffic sign types are defined as Regulatory signs:
    - 53 - No Engine Brake
    - 54 - End of No Engine Brake
    - 55 - No Idling
  - Traffic Sign Category = 2 - Informative Sign is applied when the Traffic Sign provides safety information. The following traffic sign types are defined as Informative Signs:
    - 57 - Low Gear
    - 58 - End of Low Gear
  - Traffic Sign Category = 3 – Warning Sign is applied when the Traffic Sign is indicating a warning. The following traffic sign types are defined as warning signs:
    - 11 – Road Narrows
    - 12 – Sharp Curve Left
    - 13 – Sharp Curve Right
    - 14 – Winding Road starting Left
    - 15 – Winding Road starting Right
    - 16 - Start of No Overtaking for Trucks
    - 17 - End of No Overtaking for Trucks
    - 18 – Steep Hill Upwards
    - 19 – Steep Hill Downwards
    - 21 – Lateral Wind
    - 22 – General Warning Sign
    - 23 – Risk of Grounding
    - 24 – General Curve
    - 26 – General Hill
    - 56 - Truck Rollover

## A.7.5.5 Direction Closure (Modifier Type = 38)

### Definition

Direction Closure (38) is an attribute to the Transport Access Restriction condition and defines the direction of the link or lane closed for vehicles with specific legal or physical restrictions.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 38

### Value

1 = Closed in both directions

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2 = Closed in positive direction (Closed in direction from reference node)

3 = Closed in negative direction (Closed in direction towards reference node)

## Cardinality

1:0:1

## Related Condition

Transport Access Restriction (Condition Type = 23)

## Usage

Direction Closure can be used to close links or lanes in the specified direction, for trucks with a specific usage or vehicles with specific loads. Direction Closure is used only to close links for a specific direction, it is not used to 'open' links in a specific direction.

## Specification

- Direction Closure indicates the closure of a link or lane in the specified direction for a specific usage. Direction Closure is using a different concept than the Direction of Travel condition modifier, which is positive coding indicating the direction in which travel is allowed.

## A.7.5.6 Hazardous Material Type (Modifier Type = 39)

### Definition

Hazardous Material Type is a sub-attribute to the Transport Access Restriction or Transport Restricted Driving Manoeuvre condition and defines the type of hazardous good(s) for which a specific link or lane is closed.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 39

### Value

- 1 – Explosives
- 2 – Gas
- 3 – Flammable
- 4 – Flammable solid/Combustible
- 5 – Organic
- 6 – Poison
- 7 – Radioactive
- 8 – Corrosive
- 9 – Other

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- 20 – Any Hazardous Material
- 21 – Poisonous Inhalation Hazard (PIH)
- 22 – Goods Harmful for Water
- 23 – Explosive and Flammable
- 24 - Tunnel Category B
- 28 - Tunnel Category C
- 32 - Tunnel Category D
- 34 - Tunnel Category E

## Cardinality

1:0:1

## Related Condition

Transport Access Restriction (Condition Type = 23)

Transport Restricted Driving Manoeuvre (Condition Type = 26)

## Usage

Hazardous Material Type can be used to detail the Transport Access Restriction to vehicles with specific goods.

## Specification

- Hazardous Material Type defines a restriction to a road for any vehicle carrying the specified hazardous material. Any vehicles carrying the material aligning with the specified Hazardous Material Type are legally not allowed to enter the road.
- Transport Access Restriction or Transport Restriction Driving Manoeuvre condition for which the Hazardous Material Type is published is applicable to all vehicles allowed on the link (as coded in Access Characteristics in the Streets layer), except Emergency Vehicles.
- Hazardous material restrictions are government regulations, and are not always posted on signs. The signage for hazardous material restrictions can be different per country.
- When imposed by government regulations, Hazardous Material Type restrictions can be included for situations where no sign posted restriction is present.
- When no Hazardous Material Type is published for a Transport Access Restriction condition, no hazardous goods restrictions exist for the link.

## A.7.5.7 Height Restriction (Modifier Type = 41)

### Definition

Height Restriction specifies the occurrence of a height restriction on a link or lane limiting access to vehicles exceeding a specific height.

### Layer

Condition Modifiers (CndMod)

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## Field

Modifier Type = 41

## Value

Modifier Value publishes Height Restriction in units of measure as adopted for a country.

U.S.: Inches, with precision zero

Rest of World: Centimetres, with precision zero

## Cardinality

1:0:1

## Related Attributes

Physical Structure Type (53)

Weight Restriction (42)

Weight per Axle Restriction (43)

Length Restriction (44)

Width Restriction (45)

## Related Condition

Transport Access Restriction (Condition Type = 23)

Transport Restricted Driving Manoeuvre (Condition\_Type = 26)

## Usage

- Height Restriction can be used to restrict access of vehicles to specific links or lanes based on the vehicle's height.

## Specification

- Height Restrictions posted at the location of a physical structure are applied. The link or lane where the height restriction applies has a Transport Access Restriction condition published with a Physical Structure Type attribute when a physical structure is present at the link or lane. The initial phase will not have all Height Restrictions applied that are signposted at the start of a road. Going forward all height restrictions will be included.
- To provide a numeric value allowing for computation, Height Restrictions for the U.S. are coded in inches and Height Restrictions in the rest of the world are coded in centimetres. The signage for height restrictions is generally in metres and feet/inches (see figure below).
- A Transport Access Restriction condition with Height Restriction applies to all vehicle types, except Pedestrians.
- When multiple height restrictions are present on the same sign, the lowest (most restrictive) Height Restriction is published.

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- Examples of height restrictions are provided below in [Figure 414:](#) on page 1017.

**Figure 414:**



## A.7.5.8 Weight Restriction (Modifier Type = 42)

### Definition

Weight Restriction specifies the occurrence of a (total) weight restriction on a link or lane limiting access to vehicles exceeding a specific (total) weight.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 42

### Value

Modifier Value publishes Weight Restriction in units of measure as adopted for a country.

U.S.: Pounds (lbs) with precision zero - one ton is 2000 lbs.

Rest of World: Kilograms (kg) with precision zero - one tonne is 1000 kg.

### Cardinality

1:0:1

### Related Attributes

Physical Structure Type (53)

Weight per Axle Restriction (43)

Height Restriction (41)

Length Restriction (44)

Width Restriction (45)

### Related Condition

Transport Access Restriction (Condition\_Type = 23)

Transport Restricted Driving Manoeuvre (Condition Type = 26)

### Usage

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- Weight Restriction can be used to restrict access of vehicles to specific links or lanes based on the vehicle's weight.

## Specification

- Weight Restrictions posted at the location of a physical structure are applied. The link or lane where the weight restriction applies has a Transport Access Restriction condition published with a Physical Structure Type attribute when a physical structure is present at the link or lane. The initial phase will not have all Weight Restrictions applied that are signposted at the start of a road. Going forward all weight restrictions will be included.
- If the Weight Restriction is only signposted per axle, the Weight per Axle attribute is published for the link or lane. In these cases no Weight Restriction attribute is published.
- The EU sign "No Trucks", as in the following figure, implies for some European countries a restriction for trucks over 3,5 tonnes. This 'default' weight restriction of 3,5 tons is published only as a Transport Access Restriction with a Weight Restriction (42) when explicitly signposted in reality. If no explicit Weight limit is signposted with the No Truck sign then no Transport Access Restriction is published.
- To provide a numeric value allowing for computation, Weight Restrictions in the U.S are published in pounds (lbs) and Weight Restrictions in the rest of the world are published in kilograms (kg). The signage for weight restrictions is generally in tons and metric tonnes.
- The following table provides an overview of the Signage for Weight Restrictions and the corresponding coding in the Trucks product.

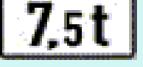
Sign as Posted in Reality	Access Characteristics at Link Level	Transport Access Restriction Coding	Vehicles to Which Transport Access Condition Applies
<b>Figure 415:</b> 	Access Trucks = N	Not Coded	N/A
<b>Figure 416:</b> 	Access Trucks = Y & Access Deliveries = Y	Transport Access Restriction with corresponding Weight Restriction (42) as signposted (3500)	AR Trucks = Y & Access Deliveries = Y
<b>Figure 417:</b> 	Access Trucks = Y & Access Deliveries = Y	Transport Access Restriction with corresponding Weight Restriction (42) as signposted (6500)	AR Trucks = Y & Access Deliveries = Y

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Sign as Posted in Reality	Access Characteristics at Link Level	Transport Access Restriction Coding	Vehicles to Which Transport Access Condition Applies
<b>Figure 418:</b> 	Access Trucks = Y & Access Deliveries = Y	Transport Access Restriction with corresponding Weight Restriction (42) as signposted (5400)	All Vehicles allowed on the link except Pedestrians
<b>Figure 419:</b> 	Access Trucks = Y & Access Deliveries = Y	Transport Access Restriction with corresponding Weight Restriction (42) as signposted (7500)	AR Trucks = Y & Access Deliveries = Y
<b>Figure 420:</b> 			

- When a restriction for gross weight and a restriction for weight per axle are posted on the same sign, two Transport Access Restriction conditions are published, each with the appropriate condition attribute (Weight and Weight per Axle). See the following example.

**Figure 421:**



- Examples of Weight Restrictions signage are provided below. All signs are modelled as a Transport Access Restriction with a weight restriction. See the following examples.

**Figure 422:**



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### A.7.5.9 Weight per Axle Restriction (Modifier Type = 43)

#### Definition

Weight per Axle Restriction specifies the occurrence of a weight per axle restriction on a link or lane limiting access to trucks where the weight per axle is exceeding a specific weight.

#### Layer

Condition Modifiers (CndMod)

#### Field

Modifier Type = 43

#### Value

Modifier Value publishes Weight per Axle Restriction in units of measure as adopted for a country.

U.S.: Pounds (lbs) with precision zero - one ton is 2000 lbs.

Rest of World: Kilograms (kg) with precision zero - one tonne is 1000 kg.

#### Cardinality

1:0:1

#### Related Attributes

Physical Structure Type (53)

Height Restriction (41)

Weight Restriction (42)

Length Restriction (44)

Width Restriction (45)

#### Related Condition

Transport Access Restriction (Condition Type = 23)

Transport Restricted Driving Manoeuvre (Condition Type = 26)

#### Usage

- Weight per Axle Restriction can be used to restrict access of trucks to specific links or lanes based on the truck's weight per axle.

#### Specification

- Weight per Axle Restrictions posted at the location of a physical structure are applied. The link or lane where the weight per axle restriction applies has a Transport Access Restriction condition published with a Physical Structure Type attribute when a physical structure is present at the link. Going forward all weight per axle restrictions will be included.

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- To provide a numeric value allowing for computation, Weight per Axle Restriction in the U.S are published in pounds (lbs) and Weight per Axle Restriction in the rest of the world are published in kilograms (kg). The signage for weight restrictions is generally in tons and metric tonnes.
- When a restriction for gross weight and a restriction for weight per axle are posted on the same sign, two Transport Access Restriction conditions are published, each with the appropriate condition attribute
- A Transport Access Restriction condition with Weight per Axle applies to all vehicles except Pedestrians.
- See the following examples of weight per axle signage.

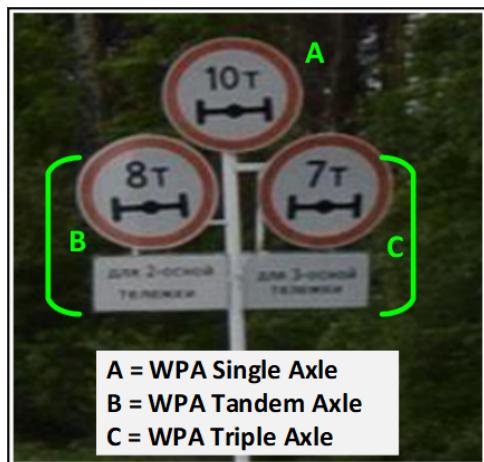
**Figure 423:**



### Example

For the signs below, three Transport Access Restriction conditions with Weight per Axle Restrictions = 1, 2, and 3, resp., are published.

- ① **Note:** Additional information is provided in an additional sign, which provides insight necessary to select the correct Restriction Type and is implicitly included. These are not added.



## A.7.5.10 Length Restriction (Modifier Type = 44)

### Definition

Length Restriction specifies the occurrence of a length restriction on a link or lane limiting access to vehicles exceeding a specific length.

### Layer

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## Condition Modifiers (CndMod)

### Field

Modifier Type = 44

### Value

Modifier Value publishes Length Restriction in units of measure as adopted for a country.

U.S.: Inches with precision zero

Rest of World: Centimetres with precision zero

### Cardinality

1:0:1

### Related Attributes

Physical Structure Type (53)

Height Restriction (41)

Weight Restriction (42)

Weight per Axle Restriction (43)

Width Restriction (45)

### Related Condition

Transport Access Restriction (Condition Type =23)

Transport Restricted Driving Manoeuvre (Condition\_Type = 26)

### Usage

- Length Restriction can be used to restrict access of vehicles to specific links or lanes based on the vehicle's length.

### Specification

- Length Restrictions posted at the location of a physical structure are applied. The link or lane where the length restriction applies has a Transport Access Restriction condition published with a Physical Structure Type attribute when a physical structure is present at the link or lane. The initial phase will not have all Length Restrictions applied that are signposted at the start of a road. Going forward all length restrictions will be included.
- To provide a numeric value allowing for computation, Length Restrictions in the U.S. are published in inches and Length Restrictions in the rest of the world are published in centimetres. The signage for length restrictions is generally in metres and feet/inches.
- A Transport Access Restriction with Length Restriction applies to all vehicle types, except Pedestrians.

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- The following are examples of length restriction signage.

**Figure 424:**



## A.7.5.11 Width Restriction (Modifier = 45)

### Definition

Width Restriction specifies the occurrence of a width restriction on a link or lane limiting access to vehicles exceeding a specific width.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 45

### Value

Modifier Value publishes Width Restriction in units of measure as adopted for a specific country.

U.S.: Inches with precision zero

Rest of World: Centimetres with precision zero

### Cardinality

1:0:1

### Related Attributes

Physical Structure Type (53)

Height Restriction (41)

Weight Restriction (42)

Weight per Axle Restriction (43)

Length Restriction (44)

### Related Condition

Transport Access Restriction (Condition Type = 23)

Transport Restricted Driving Manoeuvre (Condition\_Type = 26)

### Usage

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- Width Restriction can be used to restrict access of vehicles to specific links or lanes based on the vehicle's width.

## Specification

- Width Restrictions posted at the location of a physical structure are applied. The link or lane where the width restriction applies has a Transport Access Restriction condition published with a Physical Structure Type attribute when a physical structure is present at the link or lane. The initial phase will not have all Width Restrictions applied that are signposted at the start of a road. Going forward all width restrictions will be included.
- To provide a numeric value allowing for computation, Width Restrictions in the U.S. are published in inches and Width Restrictions in the rest of the world are published in centimetres. The signage for width restrictions is generally in metres and feet/inches.
- A Transport Access Restriction with Width Restriction applies to all vehicle types, except Pedestrians.
- An example of width restriction signage is provided in the following illustration.

Figure 425:



## A.7.5.12 Trailer Type (Modifier Type = 46)

### Definition

Trailer Type specifies the occurrence of a restriction on a link or lane related to trucks with a specified number of trailers.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 46

### Value

- 1 = Truck with one or more trailers
- 2 = Truck with two or more trailers
- 3 = Truck with three or more trailers
- 4 = Semi or tractor with one or more trailers
- 5 = Truck with no trailer(s)
- 6 = Truck with one trailer

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7 = Truck with two trailers

8 = Truck with three trailers

9 = Truck with four trailers

10 = Straight Truck with one or more trailers

11 = Straight Truck with two or more trailers

12 = Straight Truck with three or more trailers

13 = Straight Truck with or without trailers

14 = Straight Truck with no trailer(s)

15 = Straight Truck with one or trailer

16 = Straight Truck with two trailers

17 = Straight Truck with three trailers

18 = Straight Truck with four trailers

19 = Semi-Truck with one or more trailers

20 = Semi-Truck with two or more trailers

21 = Semi-Truck with three or more trailers

22 = Semi-Truck with or without trailers

23 = Semi-Truck with no trailer(s)

24 = Semi-Truck with one trailer

25 = Semi-Truck with two trailers

26 = Semi-Truck with three trailers

27 = Semi-Truck with four trailers

## Cardinality

1:0:1

## Related Condition

Transport Access Restriction (Condition Type = 23)

Transport Restricted Driving Manoeuvre (Condition Type = 26)

## Usage

- Trailer Type can be used to restrict access of vehicles to specific links or lanes based on the number of trailers attached to a truck.

## Specification

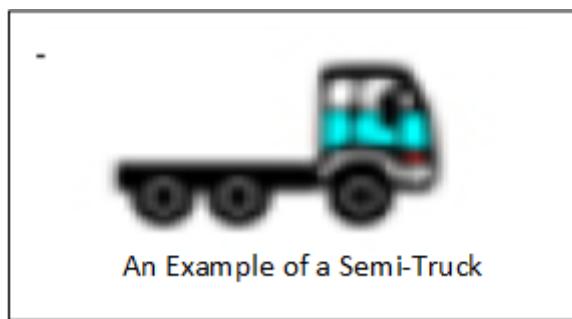
### Terminology:

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- Alternate references may be observed on signs:
  - Multi-Trailer Trucks - Trucks with two or more trailers
  - Single Unit Trucks - Trucks with no trailers
  - Single-Trailer Trucks - Trucks with one trailer
  - Combination Truck - Trucks with one or more trailers
- The Trailer Type restriction is published on the link or lane where the trailer limit is applicable rather than at the signposted location.
- If no Trailer Type is published for a link or lane, no posted trailer restrictions exist.
- Trailer Type is applied according to the sign's meaning in the specific country and based on the following definitions:
  - "Truck" as defined in values 1 through 9, can either be a straight truck (see left figure below) or a semi-truck (see right figure below).
  - "Straight Truck" as defined in values 10 through 18 specifies a truck on a single frame with a "cube" shaped cargo area.
  - "Semi-Truck" as defined in values 19 through 27 specifies that the towing vehicle is a tractor unit that can pull one, or more, semi-trailers to carry freight. Most of the weight of the semi-trailer is carried by the tractor unit. The semi-trailer is attached to the tractor unit with a type of hitch.
  - Truck signs exist indicating restrictions for "single unit". A single unit truck is a truck on a single frame, without a trailer (see **Examples of Single Unit Trucks** section). This includes straight trucks and semi-trucks without a trailer. Trailer Type = Truck with no trailer(s) is applied for these.
  -



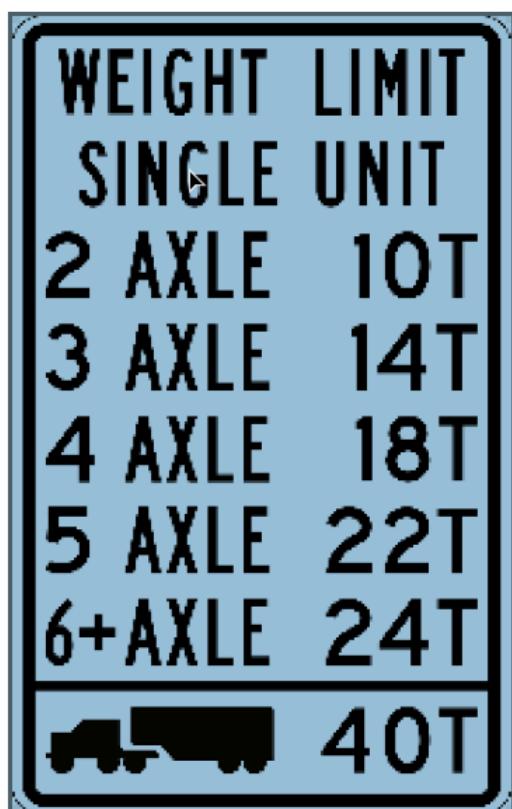
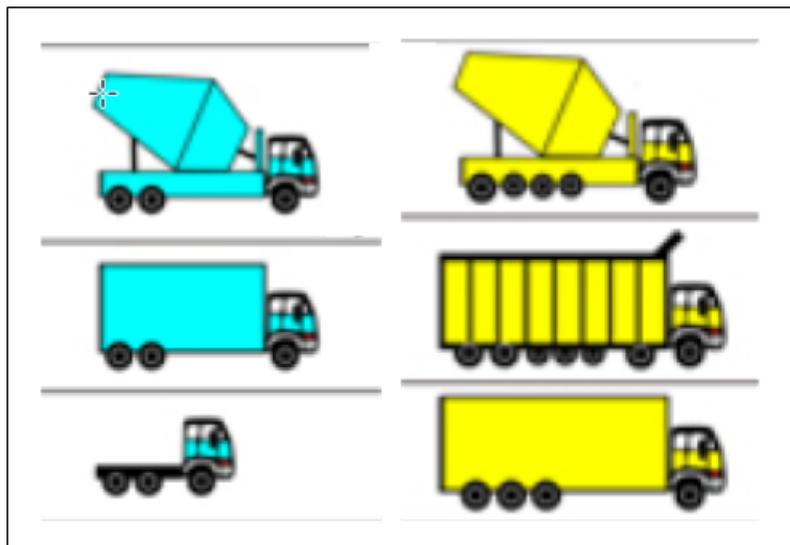
An Example of a Single-Unit Truck

## Examples of Single Unit Trucks

## Reference Guide

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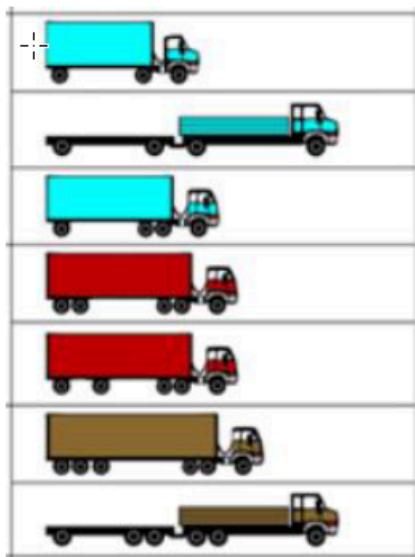
Example of axle restrictions for "single unit" trucks

### Examples of Trucks with Trailers

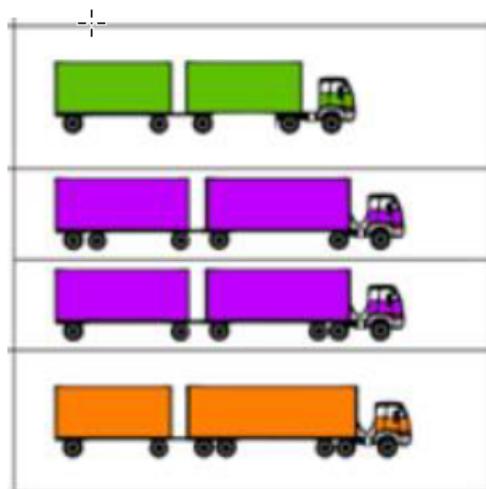
## Reference Guide

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Examples of Trucks with one Trailer (Single-Trailer Truck)



Examples of trucks with two trailers



Example of a truck with three trailers

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- Truck signs in the United States often use truck silhouettes to indicate to which type of truck the restriction applies. In the example below, the truck silhouettes have the following definitions (from top to bottom). Note that this is just an example, these definitions can vary by state.



Silhouette	Trailer Type
8T	Straight Truck with no trailer(s)(Value 14)
12T	Semi-Truck with one or more trailer(s) (Value 19)
16T	Straight Truck with one or more trailer(s)(Value 10)

- Signs indicating "no trailers" (see figure below) are applied as *Transport Access Restriction* condition with Trailer Type = 1(Truck with one or more trailers).



### A.7.5.13 General Warning Sign Type (Modifier Type = 47)

#### Definition

The Traffic Sign modifier General Warning Sign Type is used to specify the nature or a general warning sign (Traffic Sign Type = 22).

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## Layer

Condition Modifiers (CndMod)

## Field

Modifier Type = 47

## Value

1 - Object Overhang

2 - Risk of Grounding

## Related Attributes

Traffic Sign Type (Modifier Type = 22)

## Related Condition

Traffic Sign (Condition Type = 17)

## Usage

General Warning Sign Type can be used to explicitly indicate the type of warning for a General Warning sign.

## Specification

- All traffic signs of Traffic Sign Type = 22 – General Warning Sign are published with General Warning Sign Type.
- General Warning Sign Type = 1 – Object Overhang is published when an overhang of any type is signposted on a supplemental sign in reality.
- General Warning Sign Type = 2 – Risk of Grounding is published when the risk of grounding signage is signposted on a supplemental sign in reality.

## A.7.5.14 Transport Speed Limit (Modifier Type = 48)

### Definition

The Transport Speed Limit is a Transport Special Speed Situation condition attribute and indicates the speed limit applicable to transportation vehicles.

## Layer

Condition Modifiers (CndMod)

## Field

Modifier Type = 48

## Values

U.S. and U.K.: Miles / Hour

Rest of World: Kilometers / Hour

## Cardinality

# Reference Guide

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1:1

## Related Attributes

Direction (60)

Hazardous Material Type (39)

Trailer Type (46)

Weight Dependent (61)

Weather Type (62)

Time Override

## Related Condition

Transport Special Speed Situation (Condition Type = 25)

## Usage

The Transport Speed Limit can be used to alert the truck driver for truck specific speed limits applicable to the road.

## Specification

- To provide a numeric value allowing for computation, Transport Speed Limit in the U.S. and the U.K. is coded in miles per hour and in kilometers per hour in the rest of the world.
- Transport Speed Limit applicable to a specific lane only is not included.

## A.7.5.15 Preferred Route Type (Modifier Type = 49)

### Definition

Preferred Route Type is an attribute of the Transport Preferred Route condition and defines the type of preferred route coded.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 49

### Value

1 – STAA

2 – TD

3 – NRHM (National Repository of non-radioactive Hazardous Materials)

4 – Class 1 hazardous materials (explosives)

5 – PIH (Poisonous Inhalation Hazard materials)

6 – Medical Waste materials

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- 7 – Radioactive material
- 8 – General Hazardous Goods
- 9 - Local
- 15 - Functional Class 1 Override
- 16 - Functional Class 2 Override
- 17 - B-Double Route
- 18 - B-Triple Route
- 19 - 50MAX
- 20 - HPMV
- 21 - LHV GERMANY
- 22 - LHV DENMARK
- 23 - LHV NORWAY
- 24 - PBS 2A Australia
- 25 - PBS 2B Australia
- 26 - PBS 3A Australia
- 27 - PBS 3B Australia
- 28 - PBS 4A Australia
- 29 - B-Double\_HML
- 30 - B-Double\_19
- 31 - B-Double\_21
- 32 - B-Double\_23
- 33 - B-Double\_25
- 34 - B-Double\_26
- 35 - B-Double\_26\_HML
- 36 - B-Double\_27.5
- 37 - AB-Triple
- 38 - AB-Triple\_HML
- 39 - B-Triple\_HML

## Cardinality

1:0:1

## Related Condition

Transport Preferred Route (Condition Type = 27)

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## Direction (60)

### Usage

Preferred Route Type can be used to refine the preferred route to specific trucks or trucks with specific goods. This allows for tuning the preferred route options to the qualifications of the applicable truck.

### Specification

- Preferred Route Type is always coded in for a Transport Preferred Route condition. However, the Transport Preferred Route can exist without a Transport Preferred Route Type. This implies that the preferred route applies to all trucks.
- When a preferred route is applicable to all trucks, the Preferred Route Type modifier is not coded for the Transport Preferred Route condition.
- When a link is part of different preferred routes, then multiple Preferred Route conditions are coded each condition with their own Preferred Route Type modifier.
- Transport Preferred Route Type = 1 – STAA Route is coded when the preferred route belongs to the highway network as defined by the Surface Transportation Assistance Act in the U.S.
- Transport Preferred Route Type = 2 – TD Route is coded when the preferred route is part of a state designated highway network for trucks in the U.S.
- The following designations apply to routes with specific designations for hazardous materials (Hazmats), in the U.S.:
  - Transport Preferred Route Type = 3 – NRHM: All National Repository of non-radioactive Hazardous Materials routes.
  - Transport Preferred Route Type = 4 – Class 1 hazardous materials (explosives) routes.
  - Transport Preferred Route Type = 5 – PIH: Preferred route for trucks transporting Poisonous Inhalation Hazard materials
  - Transport Preferred Route Type = 6 – Preferred route for trucks transporting Medical Waste materials
  - Transport Preferred Route Type = 7 – Preferred route for trucks transporting Radioactive material
- Transport Preferred Route Type values 1 – 7 are only coded for the U.S. Transport Preferred Route Type = 8 is only coded for EU.
- Transport Preferred Route Type = 9 - locally preferred routes in the U.S. are published with this route type.
- Transport Preferred Route Type = 15 & 16 - The Functional Class overrides are applied when a small section of Functional Class 1 or 2 road is restricted for Trucks. This is published based on local knowledge.

### Example:

The left side of the “Drechtunnel” in Netherlands is a Functional Class = 1 road and is restricted to trucks. Trucks should take the right side of the tunnel which is a Functional Class = 3 road.

Functional Class = 3 roads are often not considered in route planning for long distance Transport routes. As a result, a new route , that avoids the “Drechtunnel” is planned. That route is much longer. The Functional Class override will indicate the preferred route for trucks in these situations.

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- Transport Preferred Route Type = 17 - is only published for routes that allow articulated vehicles with a second semi-trailer attached to the rear of the first semi-trailer by means of a turntable. Single semi-trailers and delivery vehicles that adhere to the same length, height and width restrictions are permitted to use B-Double routes.
  - Generally the vehicle must adhere to the following specifications in order to traverse the B-Double Routes:<sup>169</sup>
    - Height equal or less than 4.6 metres
    - Width equal or less than 2.5 metres
    - Length equal or less than 26 metres (27.5 metres in Western Australia)
    - Weight equal or less than 68 tons
  - No permit is required to traverse the B-Double Route if the vehicle complies with the above specifications. B-Double Routes that are published do not include Higher Mass Limit (HML) roads requiring a permit, and Road Trains.
- Transport Preferred Route Type = 18 (B-Triple Route) is only applied for articulated vehicles with a second and third semi-trailer attached to the rear of the first semi-trailer, by means of a turntable. Single semi-trailers and delivery vehicles that comply to the same length, height, and width restrictions are permitted to use B-Triple routes.

The vehicle specifications differ per state and are specified on the regional transport websites.

- Transport Preferred Route Type = 19 (50 Max)
- Transport Preferred Route Type = 20 (HPMV)

## Long and Heavy Vehicles

- Transport Preferred Route Type also represent routes based on Long and Heavy Vehicle Regulations:
- Transport Preferred Route Type = 21 (LHV Germany)
- Transport Preferred Route Type = 22 (LHV Denmark)
- Transport Preferred Route Type = 23 (LHV Norway)

See the accompanying *Country Specific Rules* for the details.

## Various Australian Performance-Based, Mass and Length Regulations

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<sup>169</sup> States may set their own values for these restrictions.

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- Transport Preferred Route Type also represents routes based on Performance-Based Scheme, High Mass and Length, or National Heavy Vehicle Regulation as listed below:
  - Transport Preferred Route Type = 24 (PBS 2A Australia)
  - Transport Preferred Route Type = 25 (PBS 2B Australia)
  - Transport Preferred Route Type = 26 (PBS 3A Australia)
  - Transport Preferred Route Type = 27 (PBS 3B Australia)
  - Transport Preferred Route Type = 28 (PBS 4A Australia)
  - Transport Preferred Route Type = 29 (B-Double\_HML)
  - Transport Preferred Route Type = 30 (B-Double\_19)
  - Transport Preferred Route Type = 31 (B-Double\_21)
  - Transport Preferred Route Type = 32 (B-Double\_23)
  - Transport Preferred Route Type = 33 (B-Double\_25)
  - Transport Preferred Route Type = 34 (B-Double\_26)
  - Transport Preferred Route Type = 35 (B-Double\_26\_HML)
  - Transport Preferred Route Type = 36 (B-Double\_27.5)
  - Transport Preferred Route Type = 37 (AB-Triple)
  - Transport Preferred Route Type = 38 (AB-Triple\_HML)
  - Transport Preferred Route Type = 39 (B-Triple\_HML)
- In case a posted sign for Height, Length, Weight or Width is present on a road that is part of a preferred route network, then multiple Transport Access Restriction conditions are published, one reflecting the legal restriction and one reflecting the posted restriction. Note that this is only true when the restriction values differ. One exception to this rule are Height Restriction values. Both legal and posted values are published, even if they are the same.

The legal restrictions are predefined and can be distinguished from the posted restrictions based on its value. For Height Restrictions, the Physical Structure Type indicates the posted value.

## A.7.5.16 Traffic Sign Value (Modifier Type = 51)

### Definition

The Traffic Sign modifier Traffic Sign Value provides values visible on the sign related to specific sign types.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 51

### Value

Textual description of the value visible on the sign.

### Related Attributes

Traffic Sign Type (Modifier Type = 22)

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## Related Conditions

Traffic Sign (Condition Type = 17)

## Usage

Traffic Sign Value can be used to display the traffic signs with the exact restriction or information as provided on the sign.

## Specification

- Traffic Sign Value can initially be published for the following Traffic Sign Types:
  - 18 - Steep Hill Upwards
  - 19 - Steep Hill Downwards
- Incline values for Traffic Sign Type = 18 – Steep Hill Upwards and 19 – Steep Hill Downwards have a unit of measure included when visible on the sign in reality (e.g., 9% on the sign post is published as Traffic Sign Value = '9%').

## A.7.5.17 Physical Structure Type (Modifier Type = 53)

### Definition

Physical Structure Type (53) is used to specify if a Transport Access Restriction is caused by a Bridge (Overpass) or Tunnel (Underpass) or any other type of structure like cables, pipelines etc.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 53

### Value

1 – Bridge (Overpass)

2 – Tunnel (Underpass)

3 – Arch Bridge

4 – Arch Tunnel

5 – Other

### Cardinality

1:0:1

### Related Attributes

Weight Restriction (42)

Weight per Axle Restriction (43)

Height Restriction (41)

Length Restriction (44)

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Width Restriction (45)

### Related Condition

Transport Access Restriction (Condition Type = 23)

### Usage

Physical Structure Type can be used to refine the guidance in case of physical restrictions present on a road.

### Specification

- Physical restrictions related to overpasses and underpasses are published with Physical Structure Type = 1 – Bridge or Physical Structure Type = 2 – Tunnel.
- Arch Bridge and Arch Tunnel is only be published when the height restriction is different per lane. If this is not the case then Bridge or Tunnel is published.
- Physical Structure Type = 5 - Other is published when a physical restriction is caused by pipelines, overhanging cliffs, buildings, and trolley/tram/railroad cables.
- When Physical Structure Type is not published for a Transport Access Restriction with weight, weight per axle, height, length or width specified, then it is unknown which of the Physical Structure Types the restriction applies to, or the restriction is not related to a physical structure in reality.

## A.7.5.18 Transport Speed Situation Type (Modifier Type = 59)

### Definition

The Transport Speed Situation Type condition attribute indicates the type of transport speed limit. This includes special speed limits for trucks with hazardous goods, weather dependent transport speed limits etc.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 59

### Values

1 – Hazardous Material

2 – Trailer

3 – Weight

4 – Weather

### Cardinality

1:0:1

### Related Attributes

Transport Speed Limit (48)

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Direction (60)

Hazardous Material Type (39)

Trailer Type (46)

Weight Dependent (61)

Weather Type (62)

Time Override

## Related Condition

Transport Special Speed Situation (Condition Type = 25)

## Usage

The Transport Speed Situation Type can be used to give specific speed limit warning messages based on the type of speed limit.

## Specification

- Transport Special Speed Situation can be published with Transport Speed Situation Type with the following values:
  - Transport Speed Situation Type = 1 – Hazardous Material is published when the speed limit is only applicable to trucks carrying hazardous goods. Speed limits only applicable to hazardous goods are not included for the initial phase. Transport Speed Situation Type = 1 – Hazardous Material is always published with a Hazardous Material Type modifier.
  - Transport Speed Situation Type = 2 – Trailer is published when the speed limit is only applicable to trucks with a trailer of any type. Transport Speed Situation Type = 2 – Trailer is always published with a Trailer Type modifier.
  - Transport Speed Situation Type = 3 – Weight is published when the speed limit is only applicable to trucks of a specified weight. Transport Speed Situation Type = 3 – Weight is always published with a Weight Dependent modifier.
  - Transport Speed Situation Type = 4 – Weather is published when the speed limit is only applicable to trucks during certain weather conditions like snow for example. Transport Speed Situation Type = 4 – Weather is always published with a Weather Type modifier.
- Absence of the Transport Speed Situation Type implies that the speed limit is a regular transport speed limit.

## A.7.5.19 Direction (Modifier Type = 60)

### Definition

Direction is a general condition modifier used for select single-link conditions and indicates the link direction for which a direction-dependent attribute is applicable. Direction is a sub-attribute to direction dependent condition coding.

### Layer

Condition Modifiers (CndMod)

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### Field

Modifier Type = 60

### Values

1 – Positive direction

2 – Negative direction

3 – Both direction

### Cardinality

1:0:1

### Related Conditions

Transport Special Speed Situation (Condition Type 25)

Transport Preferred Route (Condition Type 27)

### Usage

Direction can be used to retrieve the link direction for which a specific attribute is applicable.

### Specification

- Direction = 1 – Positive is published when the direction dependent attribute is applicable in the positive direction of the link (from reference node towards non-reference node)
- Direction = 2 – Negative is published when the direction dependent attribute is applicable in the negative direction (from non-reference node towards reference node)
- Direction = 3 – Both is published when the direction dependent attribute is applicable in both driving directions.

## A.7.5.20 Weight Dependent (Modifier Type = 61)

### Definition

Weight Dependent is a general condition attribute used for select single-link conditions and provides the weight related to specific Transport conditions. Weight Dependent is used as a sub-attribute to specific restrictions, and is not used to model weight restrictions on roads.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 61

### Values

Weight Dependent is specified in units of measure as adopted for a country.

U.S.: Pounds (lbs) with precision zero. One ton is 2000 lbs.

Rest of the World: Kilograms (kg) with precision zero. One metric tonne is 1000 kg.

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## Cardinality

1:0,1

## Related Conditions

Transport Special Speed Situation (Condition Type = 25)

Transport Preferred Route (Condition Type = 27)

## Usage

Weight Dependent can be used to display the weight together with the transport condition for which a weight dependency exists.

## Specification

- Weight Dependent is published when the transport restriction is posted in combination with a weight value.
- For Transport Special Speed Situation conditions, Weight Dependent is only published in combination with Transport Speed Situation Type = 3 – Weight.
- Weight Dependent is currently modelled for:
  - Transport Special Speed Situation (Condition Type = 25)
- Transport Preferred Route (Condition Type = 27)

## A.7.5.21 Weather Type (Modifier Type = 62)

### Definition

Weather Type provides the weather type related to the Transport Special Speed Situation condition. This sub-attribute indicates the type of weather condition that is affecting the transport speed limit.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 62

### Value

1 – Rain

2 – Snow

3 – Fog

## Cardinality

1:0,1

## Related Attributes

Transport Speed Limit (48)

Transport Speed Situation Type (59)

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## Time Override

### Usage

Weather Type can be used to display the type of weather condition affecting the truck specific speed limit or to alert the driver for truck specific speed limits on the road.

### Specification

- Weather Type is published when the transport speed limit is posted in combination with one of the following weather conditions:
  - 1 – Rain
  - 2 – Snow
  - 3 – Fog

## A.7.5.22 Number of Axles (Modifier Type = 75)

### Definition

Number of Axles is used to model signs specifying the number of axles that are restricted.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 75

### Values

- 1 - Two or more axles
- 2 - Three or more axles
- 3 - Four or more axles
- 4 - Five or more axles
- 5 - Six or more axles
- 6 - Single axle
- 7 - Tandem axle
- 8 -Triple Axle
- 9 -Quad Axle
- 10 -Quint Axle
- 11 -Two Axles
- 12 -Three Axles
- 13 -Four Axles
- 14 -Five Axles

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15 -Six Axles

16 -Seven Axles

17 -Dually

## Format

Numeric

## Default Value

None

## Cardinality

1:0,1

## Specification

- If the sign indicating the Number of Axles has an additional weight indicated, then attribute Weight Restriction is published with the Number of Axles attribute.
- Axle-related restrictions are applied according to regulations specific to the country. See the table below for examples:

Sign Example	Description
	Transport Access Restriction condition with Weight Per Axle if weight restrictions with weight information per single axle is present.
	Two Transport Access Restriction conditions, one with Weight Restriction and one with Weight per Axle
	Transport Access Restriction with Number of Axles= 8(Triple Axle)

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Sign Example	Description
	<p>Transport Access Restriction with Number of Axles=7(Tandem Axle) if the restriction is applicable to a tandem axle and tandem Axle is written on the sign.</p>

- Signs indicating weight per axle restrictions for axle groups are applied as a Transport Access Restriction with Number of Axles that represents an "axle group" (e.g., Tandem Axle, Triple Axle, etc.) and a Weight per Axle Restriction that defines the weight per axle group.
- Signs indicating gross weight restrictions for axle groups are applied as a Transport Access Restriction with Number of Axles that represents an "axle group" (e.g., Single or Tandem Axle as in the Figure below) and a Weight per Axle Restriction that defines the maximum gross weight of the vehicle.



Sign with axle groups and gross weight

- In case signs indicate a range for Axles (e.g., 2-3 Axles), multiple *Transport Access Restriction* conditions are applied, one for each number of axles: TAR with Number of Axles=11(two axles) and TAR with Number of Axles=12(three axles), each with their posted Weight Restriction).
- ① **Note:** The exception to this rule is when the range for axles includes a number higher than six. In that case Number of Axles=5(Six or More Axles) is applied since this is the highest group range.

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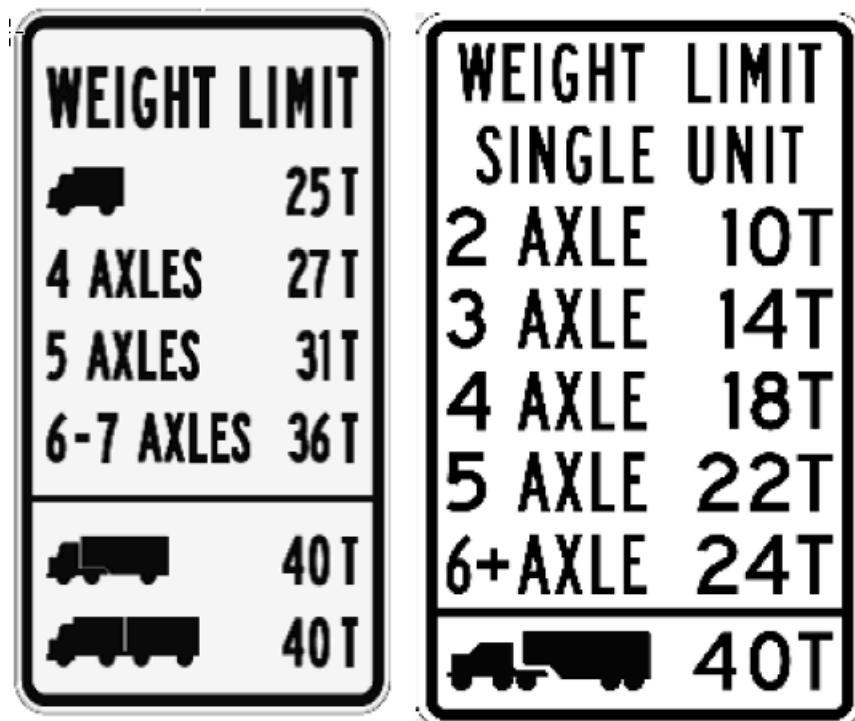
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- The following examples illustrate how complex signs indicating number of axles and trucks with or without trailers are represented.

### Example 1:

In the left example below, the number of axles have to be grouped to avoid gaps in the representation.



*Weight restrictions for explicit number of axles*

The examples on the left are represented as follows:

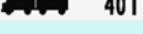
Silhouette	Trailer Type	Weight(gross)	Number of Axles
25T	14(Straight Truck with no trailer(s))	25	11(Two Axles)
No silhouette: gap is filled	14(Straight Truck with no trailer(s))	25	12(Three Axles)
4 AXLES 27T	14(Straight Truck with no trailer(s))	27	13(Four Axles)
5 AXLES 31T	14(Straight Truck with no trailer(s))	31	14(Five Axles)
6-7 AXLES 36T	14(Straight Truck with no trailer(s))	36	5(Six or More Axles) ① <b>Note:</b> Note: Fills a gap for more than 7 axles)

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Silhouette	Trailer Type	Weight(gross)	Number of Axles
 40T	19(Semi-Truck with one or more trailers)	40	N/A  ① <b>Note:</b> This single silhouette for semi-trucks is not intended for axle restriction information.
 40T	10(Straight Truck with one or more trailers)	40	N/A  ① <b>Note:</b> Straight Truck axle restrictions are already covered in the top part of the sign

The examples on the right are represented as follows:

Silhouette	Trailer Type	Weight(gross)	Number of Axles
<b>2 AXLE 10T</b>	5(Truck with no trailer(s))	10	11(Two Axles)
<b>3 AXLE 14T</b>	5(Truck with no trailer(s))	14	12(Three Axles)
<b>4 AXLE 18T</b>	5(Truck with no trailer(s))	18	13(Four Axles)
<b>5 AXLE 22T</b>	5(Truck with no trailer(s))	22	14(Five Axles)
<b>6+AXLE 24T</b>	5(Truck with no trailer(s))	24	5(Six or More Axles)
 40T	19(Semi-Truck with one or more trailers)	40	N/A  ① <b>Note:</b> Straight Truck axle restrictions are already covered in the top part of the sign.

## Example 2:

Complex signs can exist indicating number of axles and trucks with or without trailers as in the figure below.

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Silhouette	Trailer Type	Weight(gross)	Number of Axles
	14(Straight Truck with no trailer(s) )	20	11(Two Axles)
	14(Straight Truck with no trailer(s) )	29	2(Three or more Axles)
	14(Straight Truck with no trailer(s) )	29	2(Three or more Axles)
No silhouette: need to fill gap (This truck configuration is not specified by the sign. It has to be added to avoid coding gap as this is a typical semi-trailer configuration.)	19(Semi-Truck with one or more trailers)	29	12(Three Axles)
	19(Semi-Truck with one or more trailers)	33	13(Four Axles)
	19(Semi-Truck with one or more trailers)	33	4(Five or more Axles)

### A.7.5.23 KPRA Length (Modifier = 81)

#### Definition

KPRA Length is used to model signs specifying the “Kingpin to Rear Axle” length.

#### Layer

Condition Modifiers (CndMod)

#### Field

Modifier Type = 81

#### Length

10

#### Format

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Numeric

### Default Value

None

### Cardinality

1:0,1

### Specification

- To provide a numeric value allowing for computation, Length Restrictions in the US are published in inches while Length Restrictions in the rest of the world are published in centimetres.
- A Transport Access Restriction with KPRA Length applies to all Vehicle Types except Pedestrians.

## A.7.5.24 Speed Limit Type (Modifier Type = 83)

### Definition

Speed Limit Type indicates if the Speed Limit is either Legal or Advisory.

### Layer

Condition Modifiers (CndMod)

### Field

Modifier Type = 83

### Values

1 - Legal

2 - Advisory

### Default Value

1 - Legal

### Cardinality

1:1

### Specification

Speed Limit Type is always published for Transport Special Speed Situation conditions.

## A.7.6 Transport Verified

### Definition

Transport Verified indicates if the link has been verified for the attribution as defined in the Trucks specification.

### Layer

Streets

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A.7 Trucks

here

## Field

Transport Verified (Ver\_Trans)

## Type

Char(1)

## Values

Y – Link is validated to be compliant with the Trucks specifications and thereby enables transport routing.

N – Link is not validated to be compliant with the Trucks specifications and does not allow for reliable transport routing.

## Usage

Transport Verified attribute can be used to determine if the link can be reliably used for transport routing.

## Rules

- Transport Verified is coded at navigable link level.
- A link coded with Transport Verified = Y does not necessarily have Transport specific attribution. A link flagged as Transport Verified = Y but with no further transport restrictions, is reliable for transport routing. Such a link however has no transport-specific restrictions.
- A link coded with Transport Verified = N does not have Transport-specific attribution coded, but may have transport restrictions in reality. HERE has not verified if such roads have transport-specific restrictions.
- The following table explains the coding of Transport Verified vis-a-vis Transport Restrictions:

Transport Verified	Transport Restrictions Coded	Meaning
Y	Y	<ul style="list-style-type: none"><li>- Link is verified for Transport Restrictions.</li><li>- Transport Restrictions apply to this link.</li></ul>
Y	N	<ul style="list-style-type: none"><li>- Link is verified for Transport Restrictions.</li><li>- Transport Restrictions do not apply to this link.</li></ul>
N	N	<ul style="list-style-type: none"><li>- Link is not verified for transport restrictions.</li><li>- In reality transport restrictions may apply to this link.</li></ul>
N	Y	<ul style="list-style-type: none"><li>- Link has only been partly verified for transport restrictions.</li><li>- In reality more restrictions may apply to this link.</li></ul>

- Links coded with Transport Verified = Y do not necessarily form a closed network. Full connectivity cannot be guaranteed for links flagged as Transport Verified = Y.

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## Loading Dock Locations

- Transport Verified = Y is applied to delivery roads, as well as to roads leading from the nearest truck route to the loading area.

## A.7.7 Examples

### A.7.7.1 Number of Axles

Modifier Type	Modifier Value	Modifier Type Description	Modifier Value Description	Lang Code	Code
75	1	Number of Axles	Two or more Axles	ENG	CODE
75	2	Number of Axles	Three or more Axles	ENG	CODE
75	3	Number of Axles	Four or more Axles	ENG	CODE
75	4	Number of Axles	Five or more Axles	ENG	CODE
75	5	Number of Axles	Six or more Axles	ENG	CODE
75	6	Number of Axles	Single Axle	ENG	CODE
75	7	Number of Axles	Tandem Axle	ENG	CODE
75	8	Number of Axles	Triple Axle	ENG	CODE
75	9	Number of Axles	Quad Axle	ENG	CODE
75	10	Number of Axles	Quint Axle	ENG	CODE
75	11	Number of Axles	Two Axles	ENG	CODE
75	12	Number of Axles	Three Axles	ENG	CODE
75	13	Number of Axles	Four Axles	ENG	CODE
75	14	Number of Axles	Five Axles	ENG	CODE
75	15	Number of Axles	Six Axles	ENG	CODE
75	16	Number of Axles	Seven Axles	ENG	CODE

### A.7.7.2 KPRA Length

Modifier Type	Modifier Value	Modifier Type Description	Modifier Value Description	Lang Code	Code
81		KPRA Length			NUMERIC

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### A.7.7.3 Trailer Type

Modifier Type	Modifier Value	Modifier Type Description	Modifier Value Description	Lang Code	Code
46	1	TRAILER TYPE	TRUCK WITH ONE OR MORE TRAILERS	ENG	CODE
46	2	TRAILER TYPE	TRUCK WITH TWO OR MORE TRAILERS	ENG	CODE
46	3	TRAILER TYPE	TRUCK WITH THREE OR MORE TRAILERS	ENG	CODE
46	4	TRAILER TYPE	SEMI OR TRACTOR WITH 1 OR MORE TRAILERS	ENG	CODE
46	5	TRAILER TYPE	TRUCK WITH NO TRAILER(S)	ENG	CODE
46	6	TRAILER TYPE	TRUCK WITH ONE TRAILER	ENG	CODE
46	7	TRAILER TYPE	TRUCK WITH TWO TRAILERS	ENG	CODE
46	8	TRAILER TYPE	TRUCK WITH THREE TRAILERS	ENG	CODE
46	9	TRAILER TYPE	STRAIGHT TRUCK WITH FOUR TRAILERS	ENG	CODE
46	10	TRAILER TYPE	STRAIGHT TRUCK WITH ONE OR MORE TRAILERS	ENG	CODE
46	11	TRAILER TYPE	STRAIGHT TRUCK WITH TWO OR MORE TRAILERS	ENG	CODE
46	12	TRAILER TYPE	STRAIGHT TRUCK WITH THREE OR MORE TRAILERS	ENG	CODE
46	13	TRAILER TYPE	STRAIGHT TRUCK WITH OR WITHOUT TRAILERS	ENG	CODE
46	14	TRAILER TYPE	STRAIGHT TRUCK WITH NO TRAILER(S)	ENG	CODE
46	15	TRAILER TYPE	STRAIGHT TRUCK WITH ONE TRAILER	ENG	CODE

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Modifier Type	Modifier Value	Modifier Type Description	Modifier Value Description	Lang Code	Code
46	16	TRAILER TYPE	STRAIGHT TRUCK WITH TWO TRAILERS	ENG	CODE
46	17	TRAILER TYPE	STRAIGHT TRUCK WITH THREE TRAILERS	ENG	CODE
46	18	TRAILER TYPE	STRAIGHT TRUCK WITH FOUR TRAILERS	ENG	CODE
46	19	TRAILER TYPE	SEMI-TRUCK WITH ONE OR MORE TRAILERS	ENG	CODE
46	20	TRAILER TYPE	SEMI-TRUCK WITH TWO OR MORE TRAILERS	ENG	CODE
46	21	TRAILER TYPE	SEMI-TRUCK WITH THREE OR MORE TRAILERS	ENG	CODE
46	22	TRAILER TYPE	SEMI-TRUCK WITH OR WITHOUT TRAILERS	ENG	CODE
46	23	TRAILER TYPE	SEMI-TRUCK WITH NO TRAILER(S)	ENG	CODE
46	24	TRAILER TYPE	SEMI-TRUCK WITH ONE TRAILER	ENG	CODE
46	25	TRAILER TYPE	SEMI-TRUCK WITH TWO TRAILERS	ENG	CODE
46	26	TRAILER TYPE	SEMI-TRUCK WITH THREE TRAILERS	ENG	CODE
46	27	TRAILER TYPE	SEMI-TRUCK WITH FOUR TRAILERS	ENG	CODE

## A.7.7.4 Preferred Route Type

Modifier Type	Modifier Value	Modifier Type Description	Modifier Value Description	Lang Code	Code
49	1	PREFERRED ROUTE TYPE	STAA	ENG	CODE
49	2	PREFERRED ROUTE TYPE	TD	ENG	CODE

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Modifier Type	Modifier Value	Modifier Type Description	Modifier Value Description	Lang Code	Code
49	3	PREFERRED ROUTE TYPE	NRHM (NATIONAL REPOSITORY OF NON-RADIOACTIVE HAZARDOUS MATERIALS)	ENG	CODE
49	4	PREFERRED ROUTE TYPE	CLASS 1 HAZARDOUS MATERIALS (EXPLOSIVES)	ENG	CODE
49	5	PREFERRED ROUTE TYPE	PIH (POISONOUS INHALATION HAZARD MATERIALS)	ENG	CODE
49	6	PREFERRED ROUTE TYPE	MEDICAL WASTE MATERIALS	ENG	CODE
49	7	PREFERRED ROUTE TYPE	RADIOACTIVE MATERIAL	ENG	CODE
49	8	PREFERRED ROUTE TYPE	GENERAL HAZARDOUS GOODS	ENG	CODE
49	9	PREFERRED ROUTE TYPE	LOCAL	ENG	CODE
49	15	PREFERRED ROUTE TYPE	FUNCTIONAL CLASS 1 OVERRIDE	ENG	CODE
49	16	PREFERRED ROUTE TYPE	FUNCTIONAL CLASS 2 OVERRIDE	ENG	CODE
49	17	PREFERRED ROUTE TYPE	B-DOUBLE ROUTE	ENG	CODE
49	18	PREFERRED ROUTE TYPE	B-TRIPLE ROUTE	ENG	CODE

## A.7.7.5 Traffic Sign Type

Modifier Type	Modifier Value	Modifier Type Description	Modifier Value Description	Lang Code	Code
22	11	TRAFFIC SIGN TYPE	ROAD NARROWS	ENG	CODE
22	12	TRAFFIC SIGN TYPE	SHARP CURVE LEFT	ENG	CODE
22	13	TRAFFIC SIGN TYPE	SHARP CURVE RIGHT	ENG	CODE
22	14	TRAFFIC SIGN TYPE	WINDING ROAD STARTING LEFT	ENG	CODE

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Modifier Type	Modifier Value	Modifier Type Description	Modifier Value Description	Lang Code	Code
22	15	TRAFFIC SIGN TYPE	WINDING ROAD STARTING RIGHT	ENG	CODE
22	16	TRAFFIC SIGN TYPE	START OF NO OVERTAKING FOR TRUCKS	ENG	CODE
22	17	TRAFFIC SIGN TYPE	END OF NO OVERTAKING FOR TRUCKS	ENG	CODE
22	18	TRAFFIC SIGN TYPE	STEEP HILL UPWARDS	ENG	CODE
22	19	TRAFFIC SIGN TYPE	STEEP HILL DOWNWARDS	ENG	CODE
22	21	TRAFFIC SIGN TYPE	LATERAL WIND	ENG	CODE
22	22	TRAFFIC SIGN TYPE	GENERAL WARNING	ENG	CODE
22	23	TRAFFIC SIGN TYPE	RISK OF GROUNDING	ENG	CODE
22	24	TRAFFIC SIGN TYPE	GENERAL CURVE	ENG	CODE
22	26	TRAFFIC SIGN TYPE	GENERAL HILL	ENG	CODE
22	53	TRAFFIC SIGN TYPE	NO ENGINE BRAKE	ENG	CODE
22	54	TRAFFIC SIGN TYPE	END OF NO ENGING BRAKE	ENG	CODE
22	55	TRAFFIC SIGN TYPE	NO IDLING	ENG	CODE
22	56	TRAFFIC SIGN TYPE	TRUCK ROLLOVER	ENG	CODE
22	57	TRAFFIC SIGN TYPE	LOW GEAR	ENG	CODE
22	58	TRAFFIC SIGN TYPE	END OF LOW GEAR	ENG	CODE

## A.7.7.6 Number of Axles (Example of Truck Access Restriction)

Table 2: Cdms Layer

Attribute	Field Name	Value
Link ID	LINK_ID	2227933
Condition ID	COND_ID	703275891
Condition Type	COND_TYPE	23
...		

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Attribute	Field Name	Value
AR-Auto	AR_AUTO	N
AR-Bus	AR_BUS	N
AR-Taxis	AR_TAXIS	N
AR-Carpools	AR_CARPOOL	N
AR-Pedestrians	AR_PEDSTRN	N
AR-Trucks	AR_TRUCKS	Y
AR-Through Traffic	AR_THRUTR	N
AR-Deliveries	AR_DELIVER	N
AR-Emergency Vehicles	AR_EMERVEH	N
AR-Motorcycles	AR_MOTORCYCLE	N

**Table 3: CndMod Layer**

Attribute	Field Name	Value
Condition ID	COND_ID	703275891
Language Code	LANG_CODE	ENG
Modifier Type	MOD_TYPE	38
Modifier Value	MOD_VAL	1

Attribute	Field Name	Value
Condition ID	COND_ID	703275891
Language Code	LANG_CODE	ENG
Modifier Type	MOD_TYPE	42
Modifier Value	MOD_VAL	4000

Attribute	Field Name	Value
Condition ID	COND_ID	703275891
Language Code	LANG_CODE	ENG
Modifier Type	MOD_TYPE	75
Modifier Value	MOD_VAL	2

## A.7.7.7 KPRA Length (Example of Truck Access Restriction)

**Table 4: Cdms Layer**

Attribute	Field Name	Value
Link ID	LINK_ID	2227933
Condition ID	COND_ID	703275891
Condition Type	COND_TYPE	23
...		
AR-Auto	AR_AUTO	N
AR-Bus	AR_BUS	N
AR-Taxis	AR_TAXIS	N
AR-Carpools	AR_CARPOOL	N
AR-Pedestrians	AR_PEDSTRN	N
AR-Trucks	AR_TRUCKS	Y
AR-Through Traffic	AR_THRUTR	N
AR-Deliveries	AR_DELIVER	N
AR-Emergency Vehicles	AR_EMERVEH	N
AR-Motorcycles	AR_MOTORCYCLE	N

**Table 5: CndMod Layer**

Attribute	Field Name	Value
Condition ID	COND_ID	703275891
Language Code	LANG_CODE	ENG
Modifier Type	MOD_TYPE	38
Modifier Value	MOD_VAL	1

Attribute	Field Name	Value
Condition ID	COND_ID	703275891
Language Code	LANG_CODE	ENG
Modifier Type	MOD_TYPE	42
Modifier Value	MOD_VAL	4000

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Attribute	Field Name	Value
Condition ID	COND_ID	703275891
Language Code	LANG_CODE	ENG
Modifier Type	MOD_TYPE	75
Modifier Value	MOD_VAL	2

## A.7.7.8 Speed Limit Type (Example of Transport Special Speed Situation)

**Table 6: Cdms Layer**

Attribute	Field Name	Value
LInk ID	LINK_ID	2255117
Condition ID	COND_ID	993275777
Condition Type	COND_TYPE	25
...		
AR-Auto	AR_AUTO	N
AR-Bus	AR_BUS	N
AR-Taxis	AR_TAXIS	N
AR-Carpools	AR_CARPOOL	N
AR-Pedestrians	AR_PEDSTRN	N
AR-Trucks	AR_TRUCKS	Y
AR-Through Traffic	AR_THRUTR	N
AR-Deliveries	AR_DELIVER	N
AR-Emergency Vehicles	AR_EMERVEH	N
AR-Motorcycle	AR_MOTORCYCLE	N

**Table 7: CndMod Layer**

Attribute	Field Name	Value
Condition ID	COND_ID	993275777
Language Code	LANG_CODE	ENG
Modifier Type	MOD_TYPE	60

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Attribute	Field Name	Value
Modifier Value	MOD_VAL	1

Attribute	Field Name	Value
Condition ID	COND_ID	993275777
Language Code	LANG_CODE	ENG
Modifier Type	MOD_TYPE	48
Modifier Value	MOD_VAL	80

Attribute	Field Name	Value
Condition ID	COND_ID	993275777
Language Code	LANG_CODE	ENG
Modifier Type	MOD_TYPE	83
Modifier Value	MOD_VAL	2

## A.7.8 Loading Dock Locations

### Product Description

Loading Dock Locations is a map content set that includes the location of loading docks, truck/delivery entrances, delivery parking, and associated geometry. This enables truck drivers to get their actual final destination (the loading/unloading location) using all truck-appropriate avenues. The product supports the following use cases;

- The ability to select a dock, truck/delivery entrance, or loading zone as a destination.
- The ability to route and be guided directly to a loading dock, loading zone or truck/delivery entrance (or to a loading dock via a truck/delivery entrance from the main road).
- Provide map display of loading docks, loading zones, and truck/delivery entrance locations.

### A.7.8.1 Design Overview

#### Attribute

- Delivery Road

#### Layer

- Transport

#### POI Categories

- Delivery Entrance
- Dock

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- Loading Zone

## A.7.8.2 Attributes Overview

### Loading Dock Locations

#### Definition

Map content that includes the location of loading docks, delivery entrances, and loading zones as well as associated geometry.

#### Usage

Loading Dock Locations can be used to provide the most efficient route to the exact location for loading and unloading.

### Delivery Road

#### Note:

This attribute is only published in the MapInfo format.

#### Definition

A Delivery Road is a road leading from a main path to the loading/unloading area for a business.

#### Layer

Streets Layer

#### Values

Y - Delivery Road

N - Not Delivery Road

#### Format

Boolean

#### Cardinality

1:1

#### Default Value

N

#### Usage

Delivery Road can be used for route calculation, route guidance, and map display.

#### Specification

- Delivery Road = Y is published on roads dedicated to the access of loading/unloading locations of business POIs.
- Roads that are part of the standard road network, in addition to providing access to loading/unloading areas are published with Delivery Road = N.

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- **Delivery** Road geometry receives the following standard attribution:
  - Speed Category = 8
  - Functional Class = 5
  - Thru Traffic = N
  - Trucks = Y
  - Deliveries = Y
- **Delivery Roads** are unnamed.
- **Delivery Roads** are published with **Transport Verified** = Y, as well as links leading from the nearest truck route to the loading area.
- All other Transport specific attributions are published according to reality.

### A.7.8.3 POIs

#### Delivery Entrance

##### Feature Code

9722

##### Definition

Delivery Entrance identifies a location at a business facility where trucks enter to access the loading/unloading area.

##### Layer

Transport

##### Inclusion

A Delivery Entrance POI is included when trucks must be guided to a specific loading/unloading area located off the main driving path.

##### Naming

The Delivery Entrance POI carries the street name of the business POI address corresponding to the delivery entrance.

##### Specification

- One Delivery Entrance POI is located on a link published with **Delivery Entrance** = N leading to the delivery area.
- Each Delivery Entrance POI is published as a child of the corresponding business POI(s) utilising the related delivery road(s).

##### Phone Number

- Not required

#### Dock

##### Feature Code

9723

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## Definition

Dock identifies the location of a loading dock, or group of docks for one or more businesses.

## Layer

Transport

## Inclusion

One Dock POI is included for every delivery road containing one or more loading docks.

## Naming

The Dock POI carries the name of the dock number/letter, or range of dock numbers/letters located along the same delivery road path.

## Specification

- One Dock POI is published fro every dock or group of docks at the same delivery location.  
If a group of loading docks are located at the same location, only one Dock POI is published.
- Each Dock POI is published as a child of the corresponding Delivery Entrance POI.

## Phone Number

Not required

# Loading Zone

## Facility Type

9724

## Definition

Loading Zone identifies specified parking spaces or areas restricted for use by those making deliveries to a nearby business.

## Layer

Transport

## Inclusion

A Loading Zone POI is included for each loading zone space or group of adjacent spaces.

## Naming

Loading Zone POIs are named with the proper term for LOADING ZONE as it appears on the sign marking the location.

## Specification

- One Loading Zone POI is published to represent each loading zone servicing one or more business POIs.

## Phone Number

Not required

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A.8 Off-Road Africa

# A.8 Off-Road Africa

Off-Road Africa consists of additional geometry with the following attribution:

### Minor Roads

- Speed Category = 7 (11-30 KPH / 6-20 MPH)
- Paved = Y (Paved)
- Four-wheel Drive = N (not Four-wheel Drive)
- Access Characteristics: Autos = Y, Buses = Y, Taxis = Y, Carpools = Y, Pedestrians = Y, Trucks = Y, Through Traffic = Y, Deliveries = Y, Emergency Vehicles = Y

### Minor Gravel Roads

- Speed Category = 6 (31-50 KPH / 21-30 MPH) or 7 (11-30 KPH / 6-20 MPH)
- Paved = N (Not Paved)
- Four-wheel Drive = N (not Four-wheel Drive)
- Access Characteristics: Autos = Y, Buses = Y, Taxis = Y, Carpools = Y, Pedestrians = Y, Trucks = Y, Through Traffic = Y, Deliveries = Y, Emergency Vehicles = Y

### Hiking/Mountain Biking Trail

- Speed Category = 8 (<11 KPH / <6 MPH)
- Paved = N (Not Paved)
- Four-wheel Drive = N (not Four-wheel Drive)
- Access Characteristics: Autos = N, Buses = N, Taxis = N, Carpools = N, Pedestrians = Y, Trucks = N, Through Traffic = N, Deliveries = N, Emergency Vehicles = N

### Off-Road (Four-wheel Drive)

- Speed Category = 7 (11-30 KPH / 6-20 MPH) or 8 (<11 KPH / <6 MPH)
- Paved = N (Not Paved)
- Four-wheel Drive = Y (Four-wheel Drive)
- Access Characteristics: Autos = Y, Buses = Y, Taxis = Y, Carpools = Y, Pedestrians = Y, Trucks = Y, Through Traffic = N, Deliveries = Y, Emergency Vehicles = Y

The following Coverage Indicator value is published on this additional geometry in order to allow Off-Road Africa customers flexibility in developing applications with this data:

Value	Description
WO	Tracks4Africa

Off-Road Africa Rich Content, a separate XML product, can be linked to the additional geometry.

## A.9 Disputed Territories

### A.9.1 Introduction

The purpose of this section is to provide the specification for Disputed Territories Product.

The map data for a particular country licensed to a customer under such customer's Data License Agreement identifies the borders and/or areas recognized by such country. Sometimes, however, disputes arise between or among adjacent countries with respect to the recognized borders and/or areas causing each country to recognize a different border and/claim different areas. When this situation arises, oftentimes various international government agencies, such as the United Nations, will enact laws and regulations to identify the borders and/or areas recognized by such international governmental agencies<sup>170</sup>

These disputes make it difficult for customers to create multi-country products. Therefore, the Disputed Territories Product was created. The Disputed Territories Product is offered for the countries that contain disputes borders and/or areas and enables customers to select the manner in which end-users view the map of a country which contains any disputed borders/territories. Specifically, the product allows the customer to identify the borders and/or areas recognized by the applicable countries involved in the dispute and/or the borders and/or areas recognized by the applicable international governmental agency (if any).

This specification document therefore outlines the product characteristics for such disputed areas to help customers customize their product. The specifications discussed herein are mostly concerned with the inclusion / exclusion of disputed areas from specific country deliverables, the identification of disputed areas for map display purposes, and the special administrative and naming required for disputed areas.

This document only sets forth the various options you have when compiling a map of a country containing disputed borders and/or disputed areas and customers are responsible for using the options discussed herein in such a manner that complies with the rules and regulations of the applicable country containing disputed borders and/or disputed areas. HERE expressly disclaims any liability with respect to the manner in which customers compile their map product, including, without limitation, any liability arising in connection with the failure to comply with the rules and regulations of the applicable country containing disputed borders and/or disputed areas.

### A.9.2 Disputed Boundaries model

The map data for a particular country licensed to a customer under such customer's Data License Agreement identifies the borders and/or areas recognized by such country. Sometimes, however, disputes arise

<sup>170</sup> Please note that the release notes for any country contained in the Disputed Territories Product will identify the applicable international governmental agency that has established the internationally recognized border and/or area. Any reference in this document to the border and/or area recognized by the applicable international governmental agency refers to the agency identified in release note with respect to such country.

between or among adjacent countries with respect to the recognized borders and/or areas causing each country to recognize a different border and/claim different areas. When this situation arises, oftentimes various international government agencies, such as the United Nations, will enact laws and regulations to identify the borders and/or areas recognized by such international governmental agencies.

These disputes make it difficult for customers to create multi-country products. Therefore, the Disputed Territories Product was created. The Disputed Territories Products is offered for the countries that contain disputes borders and/or areas and enables customers to select the manner in which end-users view the map of a country which contains any disputed borders/territories. Specifically, the product allows the customer to identify the borders and/or areas recognized by the applicable countries involved in the dispute and/or the borders and/or areas recognized by the applicable international governmental agency (if any).

While the Disputed Territories Product provides additional data for a customer to address boundaries and/or areas that are in dispute, it remains the customer's responsibility to ensure that its products which contain HERE Map Content, including the Disputed Territory Product, are used by its end-users in any country in a manner that complies with such country's rules and regulations.

## What is a disputed area?

A disputed area is an area that is claimed by different countries, following a dispute over the territorial boundaries. Disputed areas typically have an internationally recognized border and country-specific disputed borders.

## Why do disputed areas impact HERE's products?

As indicated above, sometimes certain countries disagree with respect to its borders and other areas. The Disputed Territories Product was created to enable customers to create multi-country products which display the borders and/or areas recognized by the applicable countries involved in the dispute and/or the applicable international governmental agency (if any).

## What is added to the HERE Map Content?

The Disputed Territories Product is only available upon request with respect to the countries and/or areas that contain disputed boundaries and/or areas and includes the following new attributes.

- Cartographic representation of internationally recognized boundaries and disputed boundaries.
- Country-specific administrative coding for the disputed area
- Country-specific naming for select map features
- Multi-country view and country specific views of the disputed areas which allow the customer to create products that identify the internationally recognized borders and/or the borders recognized by the applicable country.

It is important to note that while the Disputed Territories Product provides additional data for a customer to address boundaries and/or areas that are in dispute, it remains the customer's responsibility to ensure its products which contain HERE Map Content, including the Disputed Territory Product, are used by its end-users in any country in a manner that complies with such country's applicable rules and regulations.

## A.9.3 Changes to NAVSTREETS Layers

Some existing layers in NAVSTREETS are slightly modified to represent the disputed territories product. In addition, a new layer is published.

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A.9 Disputed Territories

## Modifications to Existing Layers (AdminBndy and CartoCountry)

The Administrative Area Boundary layers (AdminBndy 1-5) are modified to enable publication of the Disputed Territories Product.

The changes involve:

- Addition of a **Claimed By** attribute
- Addition of a **Controlled By** attribute

The Cartographic Country layer is modified to enable publication of the Disputed Territories Product.

- Addition of a **Line Of Control** attribute
- Addition of a **Claimed By** attribute
- Addition of a **Controlled By** attribute
- Addition of Admin Area Description and Admin Feature Code fields to allow for differentiation between Cartographic Country(908000) and Disputed Cartographic Country(908004).
- Cartographic Disputed Country (908004) are published in the Cartographic Country layer (CartoCountry)

The Cartographic State layer is modified to enable publication of the Disputed Territories Product.

- Addition of a **Line Of Control** attribute
- Addition of a **Claimed By** attribute
- Addition of a **Controlled By** attribute
- Addition of Admin Area Description and Admin Feature Code fields to allow for differentiation between Cartographic State (908001) and Cartographic Disputed State (908005)
- Cartographic Disputed State (908005) are published in the Cartographic Country layer (CartoState)

The Metadata Country Reference (MtdCntryRef) layer has a new field ISO Country Code (ISO\_CODE). This new field allows country identification based on the ISO Country Code, which is simplifying the usage of the new **Claimed By** and **Controlled By** attributes that are also ISO Country Code based.

## A.9.4 New Administrative Linear Boundaries Layers

### Administrative Linear Boundaries 1 (AdminLine1)

Shapefile

The AdminLine1 (.shp, .shx, .dbf) files represent the Administrative Linear Boundaries 1 layer.

MapInfo

The AdminLine1 table represents the Administrative Linear Boundaries 1 layer.

Display Graphics

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A.9 Disputed Territories

here

**Figure 426:**

Object	Font/Pen/Brush/Symbol
Lines (Country)	2 pixels wide, Solid Black
Lines (Disputed)	2 pixels wide, Dashed Red
Points	N/A
Fill Patterns	N/A

## Attributes and Structure<sup>171</sup>

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>172</sup>
Admin <i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Area ID</i> on page 842	AREA_ID	AREA_ID	Decimal(10,0)
<i>Admin Area Name</i> on page 843	ADMIN_NM	ADMIN_NM	Char(80) , (105)
<i>Language Code</i> on page 618	NM_LANGCD	NM_LANGCD	Char(3)
<i>Admin Area Description</i> on page 844	FEAT_TYPE	FEAT_TYPE	Char(40)
Admin <i>Feature Code</i> on page 888	FEAT_CODE	FEAT_CODE	Decimal(10,0)
<i>Detailed City</i> on page 468	DETAIL_CTY	DETAIL_CTY	Char(1)
<i>Coverage Indicator</i> on page 486	COV_IND	COV_IND	Char(2)
<i>Line of Control</i> on page 1076	LINE_CNTRL	LINE_CNTRL	Char(1)
<i>Claimed By</i> on page 1071	CLAIMED_BY	CLAIMED_BY	Char(3)
<i>Controlled By</i> on page 1074	CONTROL_BY	CONTROL_BY	Char(3)

## Administrative Linear Boundaries 2 (AdminLine2)

### Shapefile

The AdminLine2 (.shp, .shx, .dbf) files represent the Administrative Linear Boundaries 2 layer.

### MapInfo

The AdminLine2 table represents the Administrative Linear Boundaries 2 layer.

<sup>171</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>172</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

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## Display Graphics

**Figure 427:**

Object	Font/Pen/Brush/Symbol
Lines (Province)	2 pixels wide, Solid Black
Lines (Disputed)	2 pixels wide, Dashed Red
Points	N/A
Fill Patterns	N/A

## Attributes and Structure<sup>173</sup>

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format <sup>174</sup>
Admin <i>Link ID</i> on page 367	LINK_ID	LINK_ID	Decimal(10,0)
<i>Area ID</i> on page 842	AREA_ID	AREA_ID	Decimal(10,0)
<i>Admin Area Name</i> on page 843	ADMIN_NM	ADMIN_NM	Char(80), (105)
<i>Language Code</i> on page 618	NM_LANGCD	NM_LANGCD	Char(3)
<i>Admin Area Description</i> on page 844	FEAT_TYPE	FEAT_TYPE	Char(40)
Admin <i>Feature Code</i> on page 888	FEAT_CODE	FEAT_CODE	Decimal(10,0)
<i>Detailed City</i> on page 468	DETAIL_CTY	DETAIL_CTY	Char(1)
<i>Coverage Indicator</i> on page 486	COV_IND	COV_IND	Char(2)
<i>Line of Control</i> on page 1076	LINE_CNTRL	LINE_CNTRL	Char(1)
<i>Claimed By</i> on page 1071	CLAIMED_BY	CLAIMED_BY	Char(3)
<i>Controlled By</i> on page 1074	CONTROL_BY	CONTROL_BY	Char(3)

## A.9.5 Disputed Country Boundary (907197)

### Definition

Disputed Country Boundary (907197) is a new Feature Code for country boundaries that are under dispute.

### Layer

Administrative Linear Boundaries 1 (AdminLine1)

### Value

<sup>173</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

<sup>174</sup> The number in the second set of parenthesis is the field width for the UTF-8 enabled shapefiles.

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907197

## Related Attribute

Claimed By

## Usage

Disputed Country Boundary (907197) can be used for map display to render country boundaries in compliance with the country specific regulations in relation to disputed areas.

## Specification

- Disputed Country Boundary (907197) is only published when a territorial area is under dispute.
- A specific section of a country boundary in a disputed region may be defined as a Country Boundary (907196) and as a Disputed Country Boundary (907197). In such situations then, either the Country Boundary (907196) or the Disputed Country Boundary (907197) is to be used, depending on the type of product generated (Multi-country or Country view).
- The Disputed Country Boundary (907197) administrative boundary can be used in conjunction with the regular Country Boundary (907196) to form a closed country boundary. The Country Boundary (907196) administrative boundary links coded with Line Of Control = 'Y' are to be excluded from the selection when generating country-specific views of country boundaries (see table below).

	Country(907196) Links with Line of Control - N	Country(907196) Links with Line of Control - Y	Disputed Country (907197)
Create a Country product 'A' (e.g., <i>Figure 430: Indian Country view using disputed country boundaries</i> on page 1069)	Include, with Area ID for 'A'	Exclude, with Area ID for 'A'	Include, with Area ID for 'A'
Create a Country product 'B' (e.g., <i>Figure 431: Pakistan Country view using disputed country boundaries</i> on page 1069)	Include, with Area ID for 'B'	Exclude, with Area ID for 'B'	Include with Area ID for 'B'
Create a Multi-country product showing disputed border (e.g., <i>Figure 428: Country Boundary coding for multi-country view of disputed area</i> on page 1068)	Include	Include	Include
Create a Multi-country product not showing disputed border (e.g., <i>Figure 429: Country Boundary coding for Country level view of disputed area</i> on page 1068)	Include	Include	Exclude

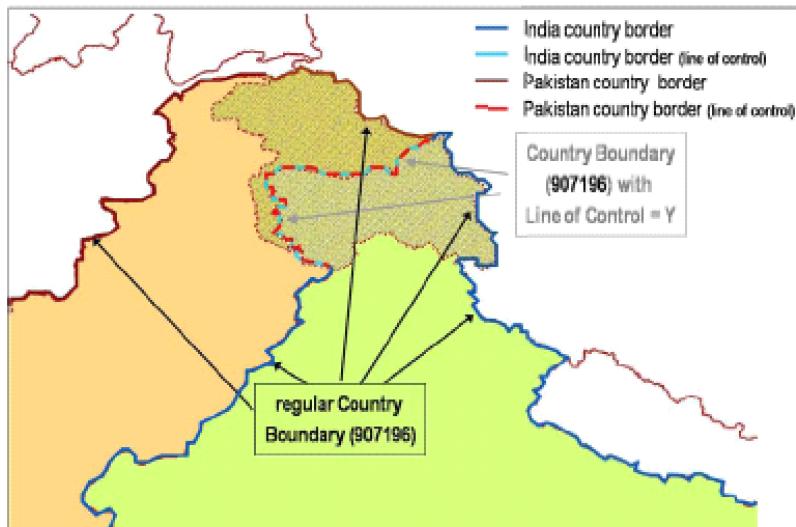
# Reference Guide

NAVSTREETS Product Variations

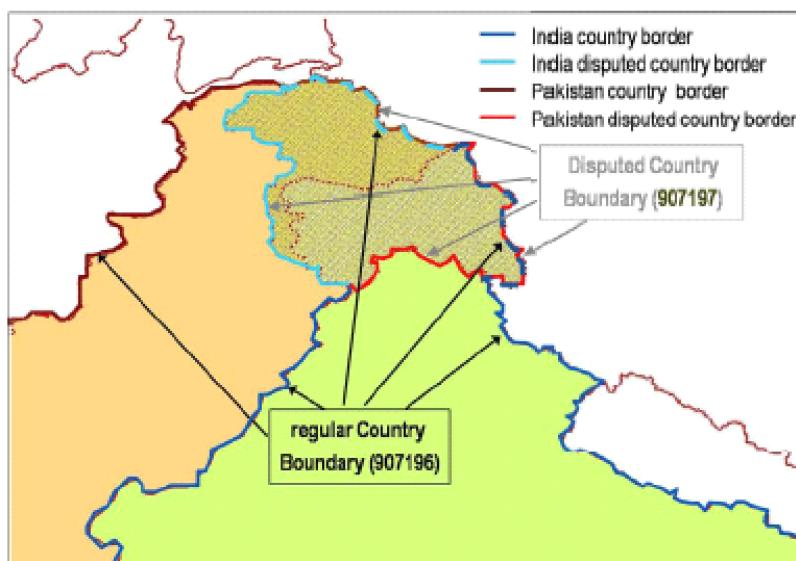
A.9 Disputed Territories

- A Disputed Country Boundary (907197) is coded with the Claimed By attribute to indicate to which country the Disputed Country Boundary applies.

**Figure 428: Country Boundary coding for multi-country view of disputed area**



**Figure 429: Country Boundary coding for Country level view of disputed area**



[Figure 428: Country Boundary coding for multi-country view of disputed area](#) on page 1068 and [Figure 429: Country Boundary coding for Country level view of disputed area](#) on page 1068 outline the Country Boundary coding for the disputed areas between Pakistan and India.

[Figure 428: Country Boundary coding for multi-country view of disputed area](#) on page 1068 shows the internationally recognised country boundaries for Pakistan and India, coded as regular Country Boundary (907196).

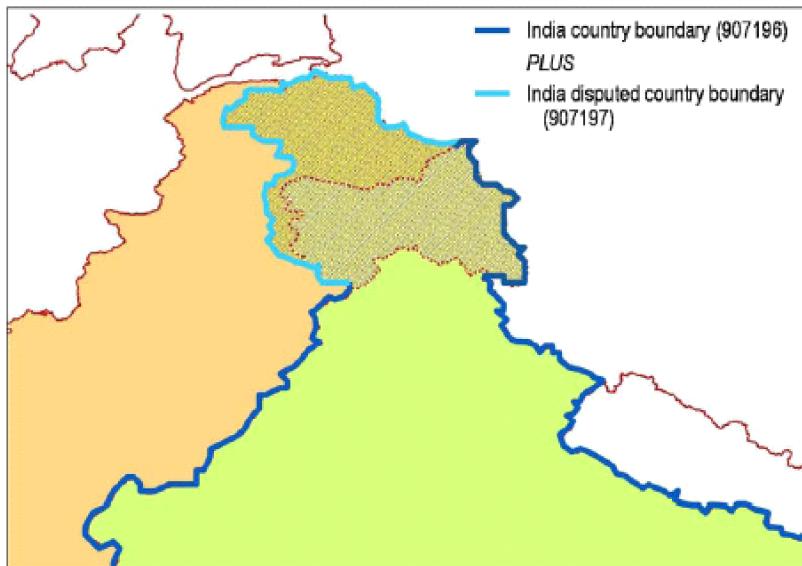
[Figure 429: Country Boundary coding for Country level view of disputed area](#) on page 1068 shows the country level views of the disputed areas between Pakistan and India, coded as Disputed Country Boundary (907197).

# Reference Guide

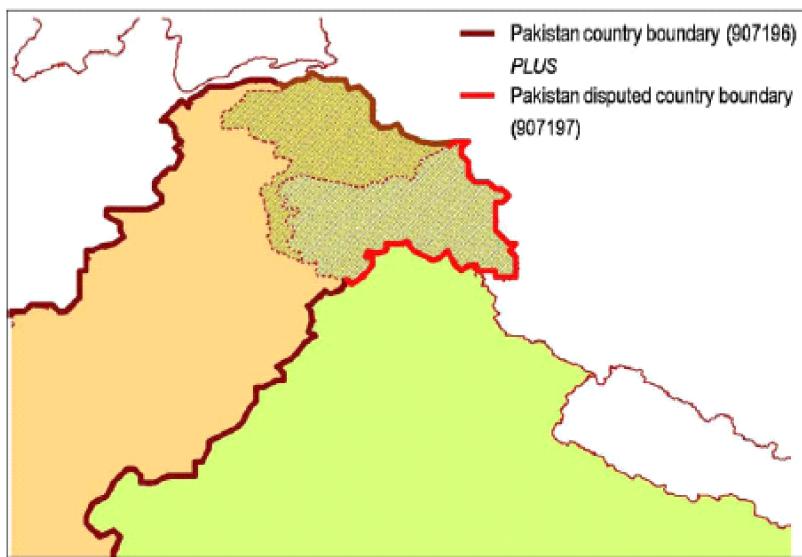
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**Figure 430: Indian Country view using disputed country boundaries**



**Figure 431: Pakistan Country view using disputed country boundaries**



In [Figure 430: Indian Country view using disputed country boundaries](#) on page 1069 the Country border view as seen by India is generated based on a combination of regular Country Boundary (907196) links flagged with Line Of Control - 'N' named 'INDIA' and Disputed Country Boundary (907197) named 'INDIA'.

In [Figure 431: Pakistan Country view using disputed country boundaries](#) on page 1069 the Country border view as seen by Pakistan is generated based on a combination of regular Country Boundary (907196) links flagged with Line Of Control - 'N' named 'PAKISTAN' and Disputed Country Boundary (907197) named 'PAKISTAN'.

## A.9.6 Disputed State Boundary (909997)

### Definition

Disputed State Boundary (909997) is a Feature Type used for state boundaries that are under dispute.

### Layer

Administrative Linear Boundaries 2 (AdminLine2)

### Value

909997

### Related Attribute

Claimed By

### Usage

Disputed State Boundary (909997) can be used for map display to render state boundaries in compliance with the country specific regulations in relation to disputed areas.

### Specification

- Disputed State Boundary (909997) is only published when a territorial area is in dispute.
- A link may be part of both a regular State Boundary (909996) and a Disputed State Boundary (909997). In such situations, either the State Boundary (909996) or the Disputed State Boundary (909997) is to be used, depending on the type of product generated (International or Country view).
- The Disputed State Boundary (909997) can be used in conjunction with the regular State Boundary (909996) to form a closed state boundary. The State Boundary (909996) links published with Line Of Control = 'Y' in Administrative Linear Boundaries 2 (AdminLine2) are to be excluded from the selection when generating country-specific views of state boundaries. See the table below:

	<b>State(909996) link with no Line Of Control attribute</b>	<b>State(909996) link with Line Of Control = 'Y'</b>	<b>Disputed State(909997)</b>
Create State X Boundary for country product view	Include with Area ID for 'X'	Exclude	Include with Area ID for 'X'
Create State Z Boundary for country product view	Include with Area ID for 'Z'	Exclude	Include with Area ID for 'Z'
Create a Multi-country product showing disputed border	Include	Include	Include
Create a Multi-country product not showing disputed border <i>(Figure 428: Country Boundary coding for multi-country view of disputed area on page 1068)</i>	Include	Include	Exclude

- A Disputed State Boundary (909997) is published with the Claimed By attribute to indicate to which country the Disputed State Boundary applies.

## A.9.7 Claimed By

### Definition

Claimed By indicates which country claims an administrative area boundary in a disputed territory.

### Value

ISO Country Code to indicate the country that claims a specific area or boundary that is under dispute. (For example, IND - India, PAK - Pakistan).

### Layer Name

Administrative Area Boundaries 1-5 (AdminLine1-5)

Cartographic Country (CartoCountry)

Cartographic State (CartoState)

Named Place (NamedPlc)

### Usage

Claimed By can be used for map display purposes to select the relevant administrative polygons and boundaries when generating a country-specific map for areas that are under dispute.

### Specification

- Claimed By is published for areas that are under dispute. When an area is not under dispute, the Claimed By field is empty for the administrative area boundary.
- Cartographic administrative area boundaries are duplicated when different countries claim the disputed area. This duplication allows for an explicit coding of the Claimed By attribute per cartographic feature, and enables explicit association to the administrative area of the respective mother country. See [Figure 432: Administrative Areas in a disputed area following the international boundary](#) on page 1072 and [Figure 433: Administrative Area Boundary representation for disputed areas following the International Boundary](#) on page 1072.
- Claimed By can be coded for all administrative cartographic features within a disputed area. This concerns the following cartographic features:

Cartographic Feature	Feature Code
Built-up Area	900156
City	900101
County	900170
State Boundaries	909996
Country Boundaries	907196
Cartographic State Boundaries	908001
Cartographic Country Boundaries	908000

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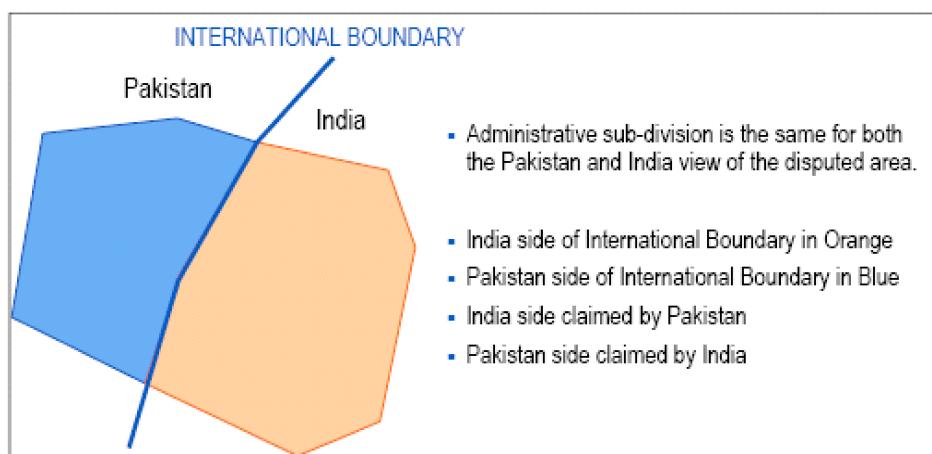
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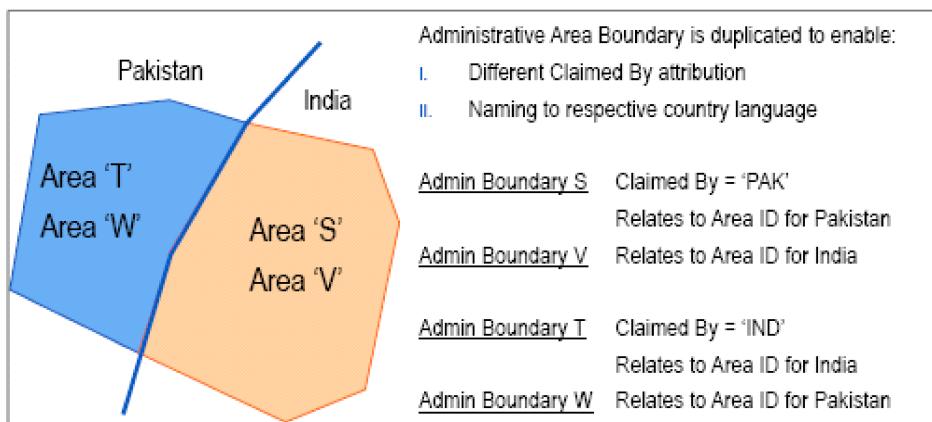
Cartographic Feature	Feature Code
Disputed State Boundaries	909997
Disputed Country Boundaries	907197
Cartographic Disputed State Boundaries	908005
Cartographic Disputed Country Boundaries	908004

- **Claimed By** can be coded for polygonal and linear cartographic features, and can be coded for cartographic features at various levels in the administrative hierarchy.
- **Claimed By** can be coded for a Named Place POI in a disputed area.
- For the creation of a Country Level product, those cartographic administrative features flagged with the required country in the **Claimed By** attribute need to be included (e.g., **Claimed By** = 'IND').
- For a multi-country product all cartographic administrative features not coded with a **Claimed By** attribute need to be used.

**Figure 432: Administrative Areas in a disputed area following the international boundary**



**Figure 433: Administrative Area Boundary representation for disputed areas following the International Boundary**



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- When only a part of an administrative area is under dispute, the Administrative Area Boundary and the administrative area is split into two pieces.
  - Either piece (e.g. A1 and A2 in [Figure 435: Administrative Area Boundary representation for Administrative Areas crossing the International Boundary on page 1074](#)) results in a Metadata - Administrative Area (MtdArea) entry, both with the same name and same Government Code.
  - Either piece (e.g. A1 and A2 in [Figure 435: Administrative Area Boundary representation for Administrative Areas crossing the International Boundary on page 1074](#)) results in an Administrative Area Boundary (AdminBndy) entry, which references the corresponding Area ID of the administrative equivalent via the AREA\_ID field in the AdminBndy layer.

The common Name and common Government Code allows for the grouping of the two pieces. See [Figure 434: Administrative Area crossing the International Boundary on page 1074](#) and [Figure 435:](#)

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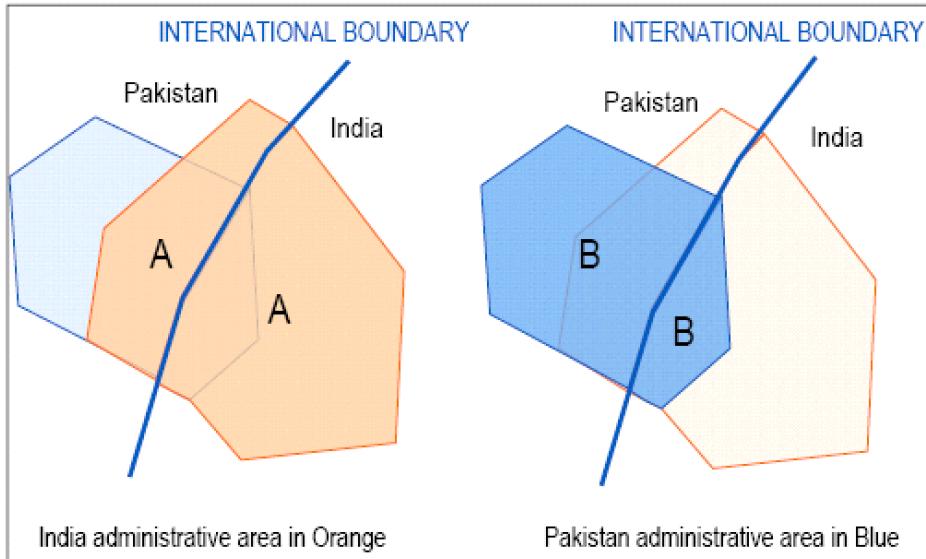
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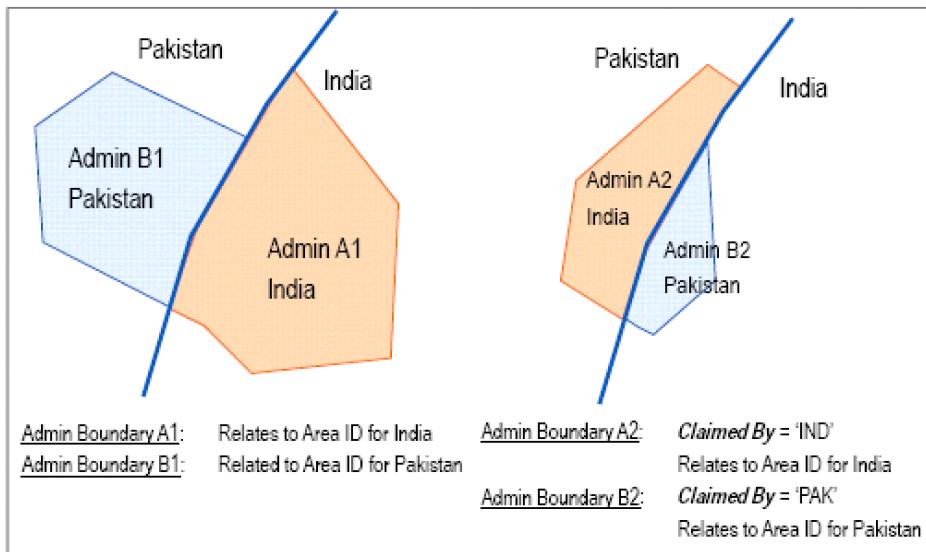
here

*Administrative Area Boundary representation for Administrative Areas crossing the International Boundary on page 1074.*

**Figure 434: Administrative Area crossing the International Boundary**



**Figure 435: Administrative Area Boundary representation for Administrative Areas crossing the International Boundary**



## A.9.8 Controlled By

### Definition

The **Controlled By** attribute is used to indicate (for cartographic features in disputed areas) which country is in control of the area according to international agreements. **Controlled By** identifies cartographic features located in a Disputed Area and not claimed by another country.

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## Layer Name

Administrative Area Boundaries 1-5 (AdminLine1-5)

Cartographic Country (CartoCountry)

Cartographic State (CartoState)

Named Place (NamedPlc)

## Value

ISO Country Code (Example: IND - India, PAK - Pakistan)

## Usage

The Controlled By attribute can be used to remove cartographic features located in a disputed area when creating a country product.

## Specification

- Controlled By can be coded for all administrative cartographic features located in a disputed area. This concerns the following cartographic features:

Cartographic Feature	Feature Code
Built-up Area	900156
City	900101
County	900170
State Boundaries	909996
Country Boundaries	907196
Cartographic State Boundaries	908001
Cartographic Country Boundaries	908000

- Controlled By is published for the entire disputed area, on either side of the internationally accepted line of control.
- Controlled By can be published for a Named Place POI in a disputed area.
- Cartographic administrative features are duplicated when different countries claim the disputed area. This duplication allows for explicit coding of the Controlled By attribute per cartographic feature.
- A cartographic feature in a Disputed Area is either coded with Claimed By or Controlled By. Claimed By and Controlled By will not co-exist for one cartographic feature.
- For the creation of a Country-Level product, those cartographic administrative features flagged with the required country in the Claimed By attribute need to be used (e.g., Claimed By = 'IND'), and those cartographic features flagged with Controlled By of the other claiming country (e.g., Controlled By = 'PAK') are to be ignored.

For the creation of a multi-country product, all cartographic administrative features flagged with the Claimed By attribute need to be ignored.

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# A.9.9 Line of Control

## Definition

The Line of Control attribute is used to identify an administrative linear cartographic feature that represents an internationally accepted boundary in an area that is under dispute.

Line of Control is coded for Country Boundaries (907196 and 908000) and for State Boundaries (909996 and 908001).

## Layer Name

Administrative Linear Boundary 1 (AdminLine1)

Administrative Linear Boundary 2 (AdminLine2)

Cartographic Country (CartoCountry)

Cartographic State (CartoState)

## Value

Y - Country or State Boundary link is an internationally accepted boundary in a disputed area

N - Country or State Boundary link represents a standard, non-disputed country boundary (default)

## Usage

The Line of Control attribute can be used to remove the Country Boundary (907196) or Cartographic Country (908000) links that represent internationally accepted boundaries in a disputed area, when creating a Country Product.

The Disputed Country Boundary (907197) can replace the Line of Control - Y flagged Country Boundary (907196) links to generate a country-specific view of the country boundary.

The Cartographic Disputed Country (908004) can replace the Line of Control - Y flagged Cartographic Country (908000) links to generate a country-specific view of the country boundary.

## Specification

- A link representing the Country Boundary (907196) or Cartographic Country (908000) is published with the Line of Control attribute.

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- In the example of India/Pakistan the following Country Boundary (907196) administrative boundaries coding combinations are used:
  - Administrative boundary link for Country Boundary(907196) named 'INDIA' and flagged Line of Control - N.
  - Administrative boundary link for Country Boundary(907196) named 'INDIA' and flagged Line of Control - Y.
  - Administrative boundary link for Country Boundary(907196) named 'PAKISTAN' and flagged Line of Control - N.
  - Administrative boundary link for Country Boundary(907196) named 'PAKISTAN' and flagged Line of Control - Y.

This corresponds to the highlighted country borders in [Figure 436: on page 1078](#).

Similarly, the following entries in the Cartographic Country layer are defined:

- A Cartographic Country(908000) link named 'INDIA' and flagged Line of Control - N.
- A Cartographic Country(908000) link named 'INDIA' and flagged Line of Control - Y.
- A Cartographic Country(908000) link named 'PAKISTAN' and flagged Line of Control - N.
- A Cartographic Country(908000) link named 'PAKISTAN' and flagged Line of Control - Y.

If state boundaries cross the Line of Control, similar coding is published for State Boundary(90996) and Cartographic State Boundary(908001).

- A single link may be coded as Line of Control = Y for one country, but Line of Control = N for another country. The Line of Control is not automatically the same for both countries sharing the linear administrative boundary. [Figure 437: Example of Line of Control difference depending on the Country to which the linear Administrative Boundary is associated on page 1078](#) provides an example

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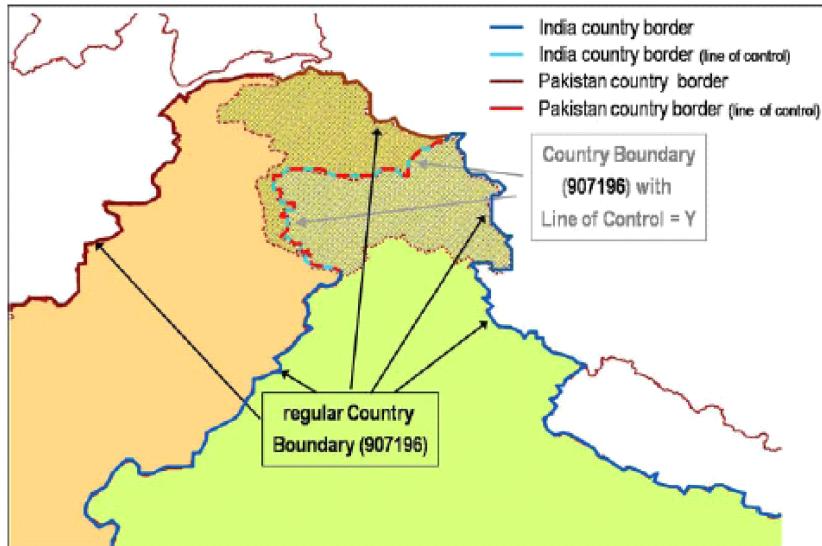
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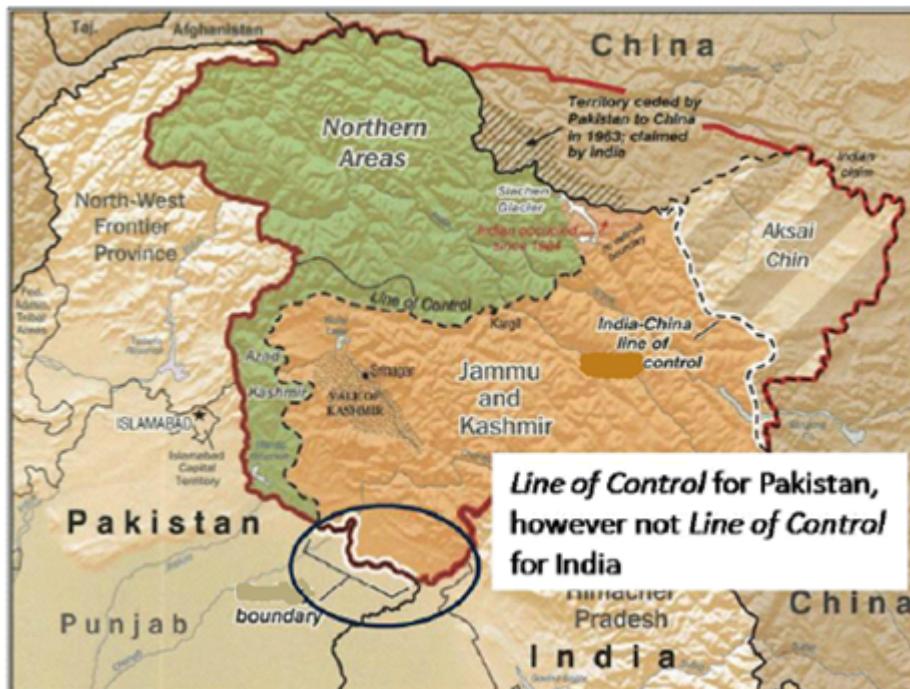
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of a linear boundary with different Line of Control settings depending on the country to which the boundary is associated.

**Figure 436:**



**Figure 437: Example of Line of Control difference depending on the Country to which the linear Administrative Boundary is associated**



## A.9.10 Administrative Coding and Disputed Area Zone

### Definition

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A Disputed Area Zone is a new Zone Type used to associate an alternate administrative hierarchy to a link. The Disputed Area Zone is only used to relate a link to its alternate administrative hierarchy.

Standard administrative rules apply to disputed areas. However, for specific disputed areas it is possible that multiple administrative coding is applied, to comply with the administrative sub-division of each mother country.

Depending on the type of product that is to be created, the user must decide on using a specific administrative hierarchy when compiling.

## Value

Standard administrative areas coding is applied to disputed areas, in compliance with data specifications.

A new Disputed Area Zone is introduced, in Metadata - Zone Records (MtdZoneRec).

ZONE\_TYPE = 'DA'

## Layer Name

Metadata - Zone Records (MtdZoneRec)

## Usage

Disputed Area Zone has no application level use-case; it is only used to enable multiple administrative coding for a link.

## Specification

### General

- Multiple administrative coding is only provided through the Disputed Area Zone for areas that are under dispute.
- The internationally accepted administrative hierarchy is modelled through regular Link - Admin coding.
- Alternate administrative hierarchies, specific to countries involved in the disputed area, are modelled through the Disputed Area Zone.
- Prior to compiling, the developer must decide which specific administrative hierarchy to use, depending on the product that is to be created. The Country Name of the administrative hierarchy should be used when deciding to publish a Country product with the disputed area view for that specific country. This means:
  - Use the Link - Admin coding when the Country corresponding to the Area ID is the desired country or

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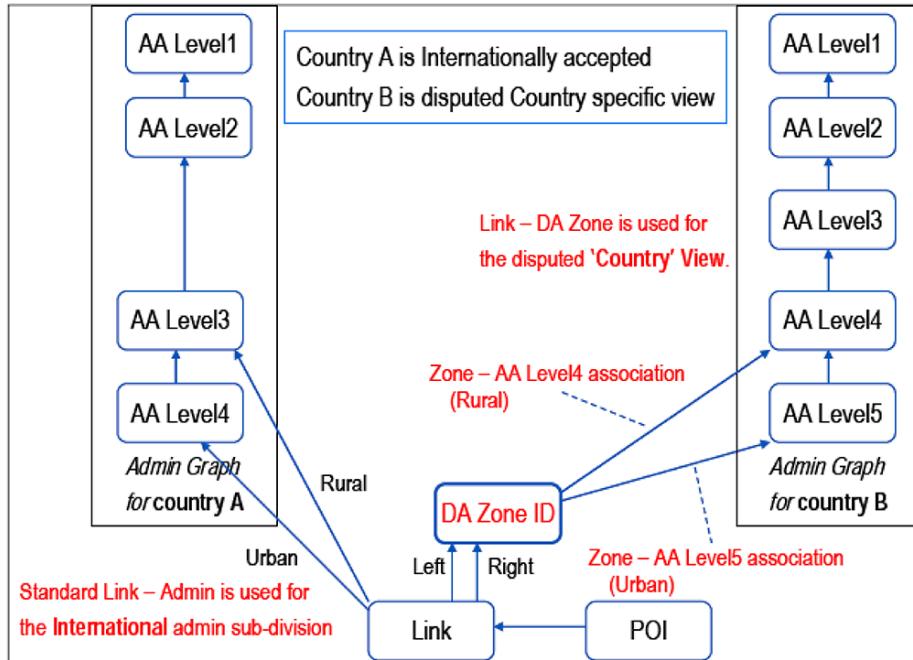
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- Add the alternate administrative hierarchy as referenced by the Link - Disputed Area Zone coding, when the Disputed Area Zone reference an Area ID in the desired country (via Area\_ID in the Metadata - Zone Records layer)

## Multiple Administrative Coding model - Disputed Area Zone

The overview in [Figure 438: Model of Multiple Administrative Hierarchy Associations to Links](#) on page 1080 explains the conceptual model of associating multiple administrative sub-divisions to a link.

**Figure 438: Model of Multiple Administrative Hierarchy Associations to Links**



The key points in this model:

- The standard, full administrative hierarchy is defined for each country (i.e., two administrative hierarchies in this example):
  - Country A -> AA Level 2 ->...lowest AA Level
  - Country B -> AA Level 2 ->...lowest AA Level
- The regular Link - Admin coding is only coded to the internationally accepted administrative sub-division of the area. Therefore, only one administrative area is coded to a specific Link - Side. Alternate administrative coding is handled through the Disputed Area Zone concept.
- A new entity (Disputed Area Zone) is introduced to support a multiple administrative sub-division for one link. In [Figure 438: Model of Multiple Administrative Hierarchy Associations to Links](#) on page 1080 this entity is referenced as DA Zone ID.
- The Disputed Area Zone is used to model a country-specific view of the disputed area.
- Each administrative hierarchy needed for the disputed territory results in a new Disputed Area Zone. In this example, one Disputed Area Zone is needed to model one alternate administrative hierarchy.
- A Disputed Area Zone has no name associated and must not be used for destination input purposes. It only serves as an entity to tie an alternate administrative hierarchy to a link.

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- The Disputed Area Zone must only be used to retrieve the country-specific administrative hierarchy for the targeted product. For example, if the product needs to offer an administrative structure applicable to Country 'B', only the Disputed Area Zone linkage (branch) to the administrative structure for Country 'B' is to be selected.
- Links are associated to the Disputed Area Zone through the regular Link - Zone coding (Zones layer).
- The Disputed Area Zone is published in the Metadata - Zone Records (MtdZoneRec) layer, and has a corresponding administrative area ID (field AREA\_ID in Metadata - Zone Records). This AREA\_ID field reference provides the linkage between the Disputed Area Zone and the alternate administrative hierarchy.

In the table below three Disputed Area Zones are shown, each with their AREA\_ID reference. The AREA\_ID referenced in the Metadata - Zone Records represents the lowest admin level in the alternate administrative hierarchy.

ZONE_ID	ZONE_NAME	LANG_CODE	Z_NMTYPE	ZONE_TYPE	AREA_ID
141727667				DA	136527174
141727476				DA	139525367
141727986				DA	139770901

- The Metadata - Administrative Area (MtdArea) publishes the standard hierarchy (Country -> lowest level) for the defined administrative hierarchies. In the example of [Figure 438: Model of Multiple Administrative Hierarchy Associations to Links](#) on page 1080, Metadata - Administrative Area entries are created for the various administrative levels in Country 'A' and Country 'B'.
- The Disputed Area Zone must not be used for geocoding, and therefore, the Disputed Area Zone must not be integrated in destination trees generated at compilation time.
- A Disputed Area Zone has no corresponding Named Place POI.

## Example Situation

An example of the Disputed Area Zone coding is provided in [Figure 439: Schematic Example of Disputed Area with Dual Administrative Sub-divisions](#) on page 1082.

In this example two disputed administrative areas are defined:

- Pakistan has an administrative area X.
  - India claims administrative area X.

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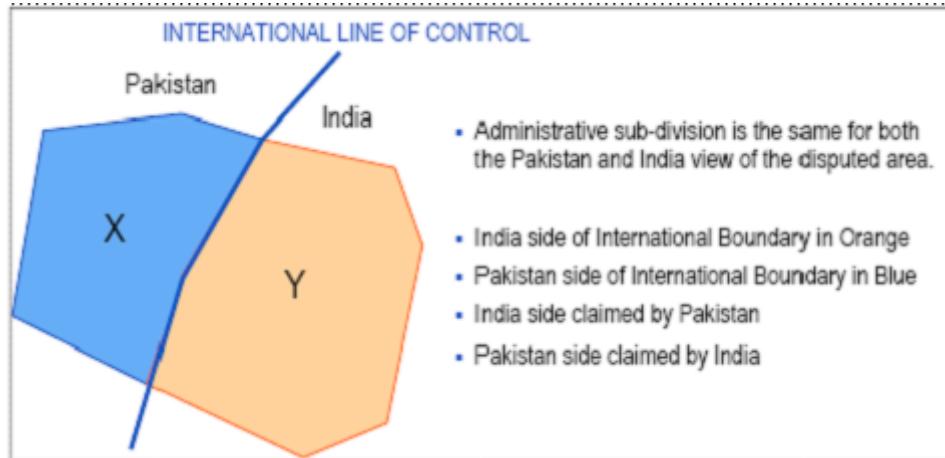
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- India has an administrative area Y.
  - Pakistan claims administrative area Y.

**Figure 439: Schematic Example of Disputed Area with Dual Administrative Sub-divisions**

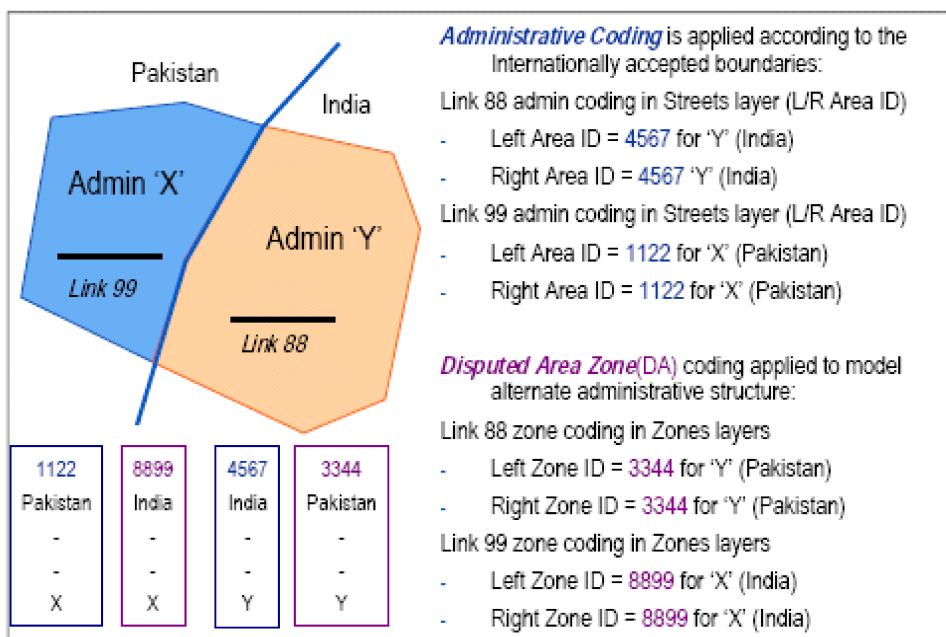


In this example the geographic unit Admin Area 'X' is used by both India and Pakistan. The administrative coding however is duplicated to associate Admin 'X' to both the Indian and the Pakistani hierarchies.

Admin 'X' - Pakistan is the standard Link - Admin coding for all links associated inside Admin 'X', since this represents the internationally accepted administrative hierarchy.

All links inside Admin 'X' are also coded with a Disputed Area Zone, to model that 'X' is located in India. The Disputed Area Zone (ZoneID = 8899 in the example) is associated to Admin 'X' - India through Zone - Admin association (AREA\_ID in Metadata - Zone Records). See [Figure 440: Administrative and Disputed Area Zone Coding for Disputed Area](#) on page 1082 for more details.

**Figure 440: Administrative and Disputed Area Zone Coding for Disputed Area**



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### A.9.11 Cartographic Disputed Country Boundary (908004)

#### **Definition**

The Cartographic Disputed Country (908004) is a cartographic feature that identifies the country boundaries on land between adjacent countries.

#### **Layer**

Cartographic Country (CartoCountry)

#### **Feature Code**

908004

#### **Related Attribute**

Claimed By

#### **Usage**

The Cartographic Disputed Country can be used to provide country boundary display in areas under disputed.

Usage of Cartographic Disputed Country (908004) is similar to the Disputed Country Boundary (907197), where the Cartographic Disputed Country only provides the borders between countries on land.

#### **Specification**

- Cartographic Disputed Country feature is only coded when there is also a corresponding Disputed Country Boundary (907197) coded which is not shared with a major water feature (i.e., oceans, Great Lakes, etc.).
- A Cartographic Disputed Country is coded with the Claimed By attribute to indicate for which country a specific Cartographic Disputed Country is applicable.
- The Cartographic Disputed Country is named only in the language of the country referenced by the Claimed By attribute.

### A.9.12 Cartographic Disputed State Boundary (908005)

#### **Definition**

The Cartographic Disputed State Boundary is a cartographic feature that identifies disputed state boundaries on land between adjacent countries.

#### **Layer**

Cartographic State (CartoState)

#### **Feature Code**

908005

#### **Related Attribute**

Claimed By

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## Usage

The Cartographic Disputed State Boundary can be used to provide state boundary display in areas under dispute.

Usage of Cartographic Disputed State Boundary (908005) is similar to the Disputed State Boundary (909997), where the Cartographic Disputed State Boundary only provides the borders between states on land.

## Specification

- Cartographic Disputed State Boundary features are coded on links that have the following:
  - No major water features (i.e., oceans, Great Lakes, etc.) and
  - State Boundary Feature (Feature Type = 0909996) or
  - County Boundary Feature (Feature Type = 0900170, when the Country has 4 Administrative Levels and the lowest is Settlement).
- Since Cartographic Disputed State Boundary features are published on links with the State feature (Feature Type = 0909996) or County Boundary Feature (Feature Type = 0900170), the rules for administrative coding are the same as for the State Boundary or County Boundary features.
  - ① **Note:** The County Boundary is only applicable when the Country has 4 Administrative Levels and the lowest is Settlement, for example: Australia.
- A Cartographic Disputed State Boundary is coded with the Claimed By attribute to indicate for which country a specific Cartographic Disputed State Boundary is applicable.
- The Cartographic Disputed State Boundary is named only in the language of the country referenced by the Claimed By attribute.

## A.9.13 Named Place POI in Disputed Areas

### Definition

Cities in disputed areas have a Named Place POI for each country that claims the area.

### Usage

Based on the Claimed By attribute, the necessary Named Place POIs for the desired product can be obtained.

The Claimed By attribute can be used to select those Named Place POIs that are needed for a specific country view of the area.

Those Named Place POIs coded with the Claimed By attribute are to be excluded when generating an internationally accepted view of the area.

The Controlled By attribute coded for the Named Place POI should be used to remove Named Places in a disputed area when creating a country product.

### Specification

- The Named Place POI is named in the language code corresponding to the language of the Claimed By or Controlled By country.

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For example: A Named Place POI in a disputed area flagged with **Claimed By - IND** is only named with the Indian spelling of the Named Place POI. The Named Place POI flagged with **Claimed By - PAK** is only named with the Pakistani spelling of the Named Place POI.

- The multiple occurrence of a Named Place POI for a city is only published within disputed areas. In a non-disputed area a city remains only published with one Named Place POI.
- The multiple occurrence of a Named Place POI is done to:
  - Enable **Claimed By** and **Controlled By** attribution at individual Named Place POI level.
  - Enable association of the Named Place POI to the appropriate administrative hierarchy.
- When creating a Country Product, the developer needs to select the appropriate Named Place POI for the product created. This selection is based on the **Claimed By** and **Controlled By** attributes associated to the Named Place POI.

## A.9.14 Naming in Disputed Areas

### Definition

Within disputed areas select features may be additionally included with the languages of the countries claiming the area.

### Usage

Based on the **Claimed By** and **Controlled By** attributes, the required map features with their appropriate spelling for the desired product can be obtained.

The **Claimed By** attribute-based selection will pull features with naming that complies with the country view of the area.

Features, with their names, coded with the **Claimed By** attribute are to be ignored when generating a product that complies with the internationally accepted view of the area.

The **Controlled By** attribute can be used to remove features, with their names, when creating a country view of the disputed area.

### Specification

- The following features may have multiple occurrences, and each occurrence provides naming in the languages of the countries that claim a disputed area:
  - Named Place POI
  - Administrative Areas
  - Administrative Area Boundary
  - Administrative Linear Boundary
- Other map features follow standard naming rules, and are not translated into the other country's language(s). This means that naming is included as posted in reality and in the language considered the default language of the area under dispute.
- When creating a country product, the user needs to select the appropriate feature for the product created. This selection is based on the **Claimed By** and **Controlled By** attributes associated to the administrative area boundary and to the Named Place POI. An administrative area boundary and Named

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Place POI is only named in the language corresponding to the country referenced by the Claimed By or Controlled By attributes.

For example: A Named Place POI in a disputed area flagged with Claimed By - IND is only named with the Indian spelling of the Named Place POI. The Named Place POI flagged with Claimed By - PAK is named with the Pakistani spelling of the Named Place POI.

### A.9.15 Summary of Actions using the Disputed Territories Product

When generating products for a country that contains disputes borders and/or areas, customers need to decide which market is targeted and design the compilation process in such a way that appropriate products are generated in accordance with the rules and regulations of applicable country.

This section provides a summary of the steps involved to create a product using the Disputed Territories Product. It, however, remains the customer's responsibility to ensure that its products which contain HERE Map Content, including the Disputed Territory Product, are used by its end-users in the applicable country in a manner that complies with such country's applicable rules and regulations. As stated in the introduction, HERE expressly disclaims any liability with respect to the manner in which the customer compiles its map product, including, without limitation, any liability arising in connection with the failure to comply with the rules and regulations of the applicable country.

#### Creation of a Multi-country Product

To enable the generation of a product for the international market that complies with the internationally accepted view of the area, take the following actions:

- Standard Link - Admin coding can be used, as in a regular NAVSTREETS deliverable. The Link - Admin coding complies with the internationally accepted administrative division.
- Ignore the Disputed Area Zone coding.
- Use standard Country Boundaries (907196) from the Administrative Linear Boundaries 1 (AdminLine1) layer; also include those links coded with Line Of Control - Y.
- Ignore the Disputed Country Boundaries (907197) or Disputed State Boundaries (909997) from the Administrative Linear Boundaries (AdminLine1/AdminLine2) layers, if it is not desired to show disputed country boundaries in the multi-country product.
- When desired, use the Cartographic Country (908000) or Cartographic State (9080001) feature, including those links published with Line Of Control - Y. Ignore the Cartographic Disputed Country (9080004) and Cartographic Disputed State (9080005).
- Select those Administrative Area Boundaries (AdminBndy1-5) not attributes with the Claimed By attribute for the countries involved in the disputed area (e.g., exclude those flagged with Claimed By - PAK or Claimed By - IND for a multi-country product of India - Pakistan).
- Select those Named Place POIs not coded with the Claimed By attribute for the countries involved in the disputed area.

#### Creation of a Country Product

To enable the generation of a product for the market of one of the countries involved in the dispute that complies with such country's view of the area, take the following actions:

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- Use existing Link - Admin coding where the Admin has a parent of the country for which the product is to be generated. For example, when generating an India product, only select the Link - Admin coding where the Area ID is located inside Country India.
- Adopt the alternate administrative hierarchy as referenced by the Disputed Area Zone for those links that have Link - Admin coding related to Country 'Pakistan'. When generating an India product, the Link - Disputed Area Zone is to be used, since Link - Admin relation relates to a different country than India.

The Area ID for the Disputed Area Zone associates the links to the alternate administrative hierarchy.

- Ignore Link - Admin coding when the Area ID is in another country than the desired country product.
- Ignore those Country Boundaries (907196) and State Boundaries (909996) in the Administrative Linear Boundaries (AdminLine1/AdminLine2) layers flagged with Line of Control - Y. Include the Disputed Country Boundaries (907197) and Disputed State Boundaries (909997) in the Administrative Linear Boundaries (AdminLine1/AdminLine2) layers named with the desired country in combination with Country Boundaries (907196) and State Boundaries (909996) that are not flagged with Line Of Control - Y.
- When desired, use the Cartographic Disputed Country (908004) with the Claimed By attribute of the desired country (e.g., when creating an India product, select administrative area boundaries flagged with Claimed By - 'IND').
- Ignore the Cartographic Administrative Area Boundaries published with a Controlled By attribute of other countries than the desired country (e.g., where creating an India product, ignore the cartographic features flagged with Controlled By - 'PAK').
- Select those Named Place POIs published with a Claimed By attribute of the desired country (e.g., when creating an India product, select Named Place POIs flagged with Claimed By - 'IND').
- Ignore the Named Place POIs coded with Controlled By attribute of other countries than the desired country (e.g., where creating an India product, ignore the Named Place POIs flagged with Controlled By - 'PAK').

### A.9.16 Examples

#### Example: Dual Administrative Coding

The following example explains the dual administrative coding model for a fictive disputed area situation between India and Pakistan.

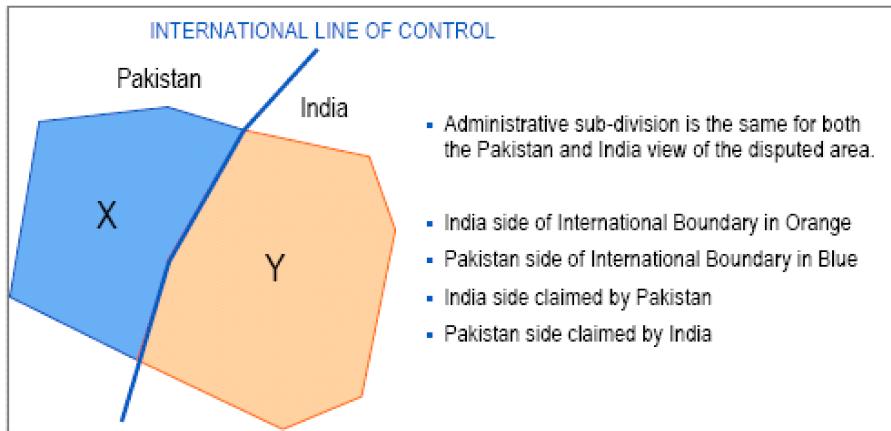
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Figure 441:



A Metadata - Administrative Area entry is present for the AA Level 4 'X' area in Pakistan. In addition a Metadata - Administrative Area entry is present for the AA Level 4 'X' area in India. The two Administrative Areas are defined to model that AA Level 4 'X' is claimed by two countries.

Attribute	Field Name	Value	Value
Area ID	AREA_ID	789987	882654
Area Code 1	AREACODE_1	217	229
Area Code 2	AREACODE_2	28	97
Area Code 3	AREACODE_3	536	336
Area Code 4	AREACODE_4	736	820
Area Code 5	AREACODE_5	0	0
Area Code 6	AREACODE_6	0	0
Area Code 7	AREACODE_7	0	0
Administrative Level	ADMIN_LVL	4	4
Area Name	AREA_NAME	X	X
Area Name Language Code	LANG_CODE	PAK	IND
Area Name Type	AREA_TYPE	B	B
Government Code	GOVT_CODE	56245	56245

Note that the AREA ID references respectively the AA Level4 in Pakistan (789987) and AA Level4 in India (882658).

The Administrative Area Boundaries under dispute are attributed with Claimed By or Controlled By.

This coding indicates that the 900101 'X' administrative area (1283582736) is claimed by India. The second instance of the 900101 'X' administrative area (1283582735) is Controlled By Pakistan.

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Similarly two entries are created in Administrative Area Boundary 4 for 'Y' polygon (9001010), once for controlled by India and once for claimed by Pakistan.

## Example: Disputed Linear Cartographic Administrative Boundary

Figure 442: Disputed State Boundary

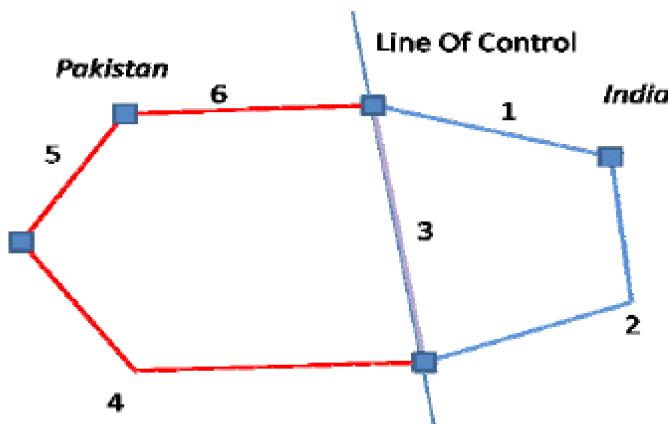


Figure 442: *Disputed State Boundary* on page 1089 is a fictive simplified schematic example of a State (Province) boundary crossing a line of control between Pakistan and India. Links 4, 5 and 6 are located in Pakistan; Links 1 and 2 are located in India; Link 3 is the internationally accepted boundary (so called Line of Control).

Both Pakistan and India claim the entire State boundary to be part of their territory.

The coding is shown in the tables below.

Four types of cartographic features are created:

- State Boundary (909996) referencing Area ID 444444 for the Pakistan State
- Disputed State Boundary (909997) referencing the Area ID 444444 for Pakistan State
- State Boundary (909996) referencing Area ID 77777 for the India State
- Disputed State Boundary (909997) referencing the Area ID 77777 for India State

The following entries are generated for State Boundaries for Pakistan:

Administrative Linear Boundaries (AdminLine)						
Attribute	Value	Value	Value	Value	Value	Value
Admin Link ID	1	2	3	4	5	6
Area ID	44444	44444	44444	44444	44444	44444
Admin Area Name	Pakistan State					
Language Code	PAK	PAK	PAK	PAK	PAK	PAK
Admin Area Description						

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## Administrative Linear Boundaries (AdminLine)

Attribute	Value	Value	Value	Value	Value	Value
Admin Feature Code	909996	909996	909996	909996	909996	909996
Detailed City						
Coverage Indicator						
Line of Control	N	N	Y	N	N	N
Claimed By	PAK	PAK				
Controlled By			PAK	PAK	PAK	PAK

Similarly, the following entries are generated for State Boundaries for India:

## Administrative Linear Boundaries (AdminLine)

Attribute	Value	Value	Value	Value	Value	Value
Admin Link ID	1	2	3	4	5	6
Area ID	77777	77777	77777	77777	77777	77777
Admin Area Name	India State					
Language Code	ENG	ENG	ENG	ENG	ENG	ENG
Admin Area Description						
Admin Feature Code	909996	909996	909996	909996	909996	909996
Detailed City						
Coverage Indicator						
Line of Control	N	N	Y	N	N	N
Claimed By				IND	IND	IND
Controlled By	IND	IND	IND			

Similar entries are created in the Cartographic State (CartoState) layer for the Pakistan and India version of the State Boundaries. Coding is similar to the examples above with Claimed By and Line Of Control.

When only the standard State Boundary (909996) is used, an International View of the disputed area is shown, for example for Pakistan:

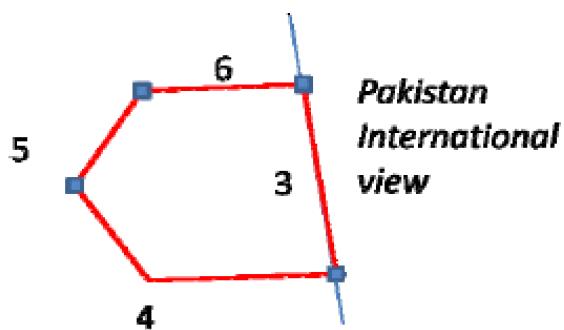
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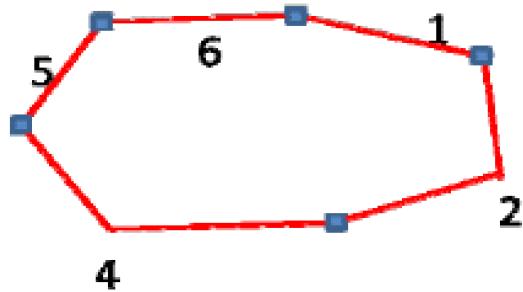
Figure 443:



When both the standard State Boundary (909996) and the Disputed State Boundary (909997) are combined, a country-specific (disputed) view can be constructed. The Line of Control - Y links are to be removed.

Figure 444:

## Pakistan Country Product



## A.9.17 Metadata

The following metadata entries are required in Metadata Reference (MtdRef) layer for the following.

Reference Class	Code	Description	Language Code
FEATURE	907197	DISPUTED COUNTRY BOUNDARY	ENG
FEATURE	9099970	DISPUTED STATE BOUNDARY	ENG
FEATURE	908004	CARTOGRAPHIC DISPUTED COUNTRY BOUNDARY	ENG
FEATURE	908005	CARTOGRAPHIC DISPUTED STATE BOUNDARY	ENG
ISOCODE	<Entry for ISO Country Code> IND PAK	<Description of ISO Country Code meaning> INDIA PAKISTAN	ENG

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Reference Class	Code	Description	Language Code
ZONETYPE	DA	DISPUTED AREA ZONE	ENG

## A.10 Lane Model

### A.10.1 Lane Model

#### Definition

Lane Model identifies the usage of lanes on a road.

#### Related Record and Attributes

- Lane Layer
  - Link ID
  - Lane ID
  - Width
  - Height
  - Speed
  - Lane Forming/Ending
  - Transition Area
  - Lane Type
  - Lane Number
  - Lane Travel Direction
  - Lane Divider Marker
  - Center Divider Marker
  - Direction Category
- Streets Layer
  - Transition Area
  - Physical Number of Lanes
- Condition Driving Manoeuvres (LnCdms)
- Condition Modifier (CndMod)
- Condition/Driving Manoeuvres - Date/Time Modifiers (CdmsDtmod)
- Lane Connectivity (LnCndConn)

#### Usage

Lane level attribution can be used for cartographic representation and for proper lane guidance.

#### Specification

- Lane objects represent the lane(s) on a link.

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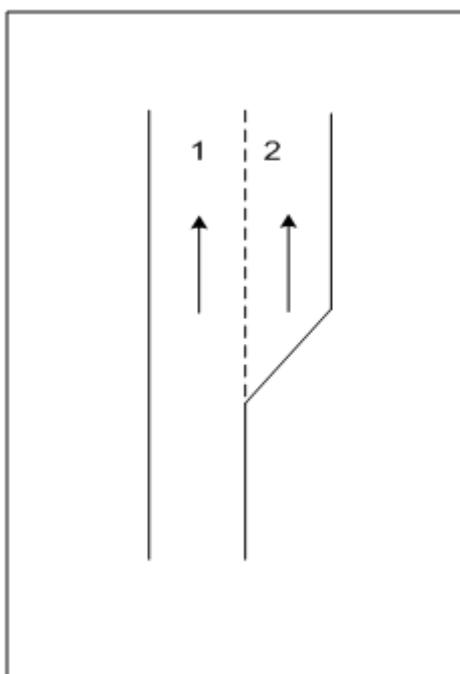
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A.10 Lane Model

- Lane objects are published when:
  - Lane Model information is present on the Link
  - Lane specific attributes differ from the general Link attributes.
  - Any of the following traffic situations occurs:
    - HOV Lanes
    - Express Lanes
    - Reversible Lanes
- Lane objects are published for each lane on a Link if at least one of the lanes on the Link requires a Lane Object. Whenever Lane Objects are published, the following attributes are published for the Lane:
  - Lane Number
  - Lane Travel Direction
  - Lane Type
  - Access Characteristics (same as the link's Access Characteristics unless specified otherwise).

In [Figure 445:](#) on page 1093, only Lane 2 (Deceleration Lane) requires a Lane object in order to determine the Lane Type for Lane 2.

**Figure 445:**



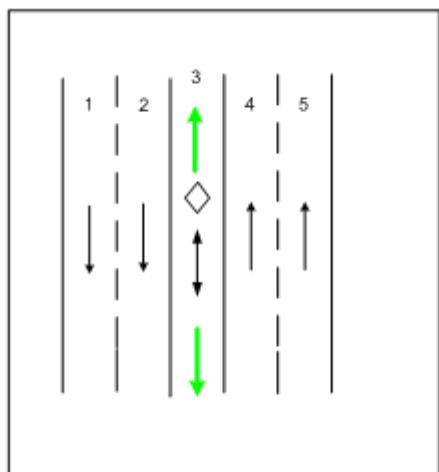
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- Lane Objects are published for all the lanes of a Link in case of Reversible Lanes (including HOV reversible lanes) see [Figure 446: on page 1094](#).

**Figure 446:**



- Lane Objects are published for a Lane on Internal Intersection, Manoeuvre or Indescribable Links when the Link is internal to a Lane Connectivity condition, independently of the number of lanes of the link.
- The lane object in this case publishes only the following information:
  - Lane Number (Defaulted to "1")
  - Lane Travel Direction
  - Lane Type "Regular"
  - Access Characteristics (same as the link's Access Characteristics unless otherwise specified)

## A.10.2 Lane Access Characteristics

### Definition

Identifies the types of traffic allowed on a Lane.

### Related Attributes

Lane Number

### Usage

Lane Access Characteristics enable correct Route Calculation and Map Display.

### Specification

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A.10 Lane Model

- Lane Access Characteristics are only published when they differ from the Link Access Characteristics published in the Streets layer.

Example: on a single direction of travel link two lanes, the leftmost lane is never permitted to Trucks.

Streets layer publishes:

Column	Value
.....	...
AUTOMOBILES	Y
BUSES	Y
TAXIS	Y
CARPOOLS	Y
PEDESTRIANS	Y
TRUCKS	Y
THROUGH_TRAFFIC	Y
DELIVERIES	Y
EMERGENCY_VEHICLES	Y
MOTORCYCLES	Y
.....	...

Lane layer publishes:

Column	Value
LANE NUMBER	2
.....	...
AUTOMOBILES	Y
BUSES	Y
TAXIS	Y
CARPOOLS	Y
PEDESTRIANS	Y
TRUCKS	N
THROUGH_TRAFFIC	Y
DELIVERIES	Y
EMERGENCY_VEHICLES	Y

Column	Value
MOTORCYCLES	Y

## A.10.3 Lane Connectivity (LnCndConn)

Lane Connectivity (LnConnectivty) Layer publishes the Lane involved in a Lane Condition in case of multi-Link condition such as Lane Traversal Conditions and Lane Toll Structure conditions.

Attribute	dbf Field Name	tab Field Name	Format
Condition ID	COND_ID	COND_ID	Decimal(10)
Traversal Number	TRAV_NUM	TRAV_NUM	Decimal(2)
Source Lane ID	S_LANE_ID	S_LANE_ID	Decimal(10)
Source Travel Direction	S_LDIR_TRV	S_LDIR_TRV	Char(1)
Destination Lane ID	D_LANE_ID	D_LANE_ID	Decimal(10)
Destination Travel Direction	D_LDIR_TRAV	D_LDIR_TRV	Char(1)

When multiple lane strands are identified by the same condition having the same originating Lane, multiple records are published in Lane Connectivity layer. The Traversal Number attribute identifies the different Lane strands.

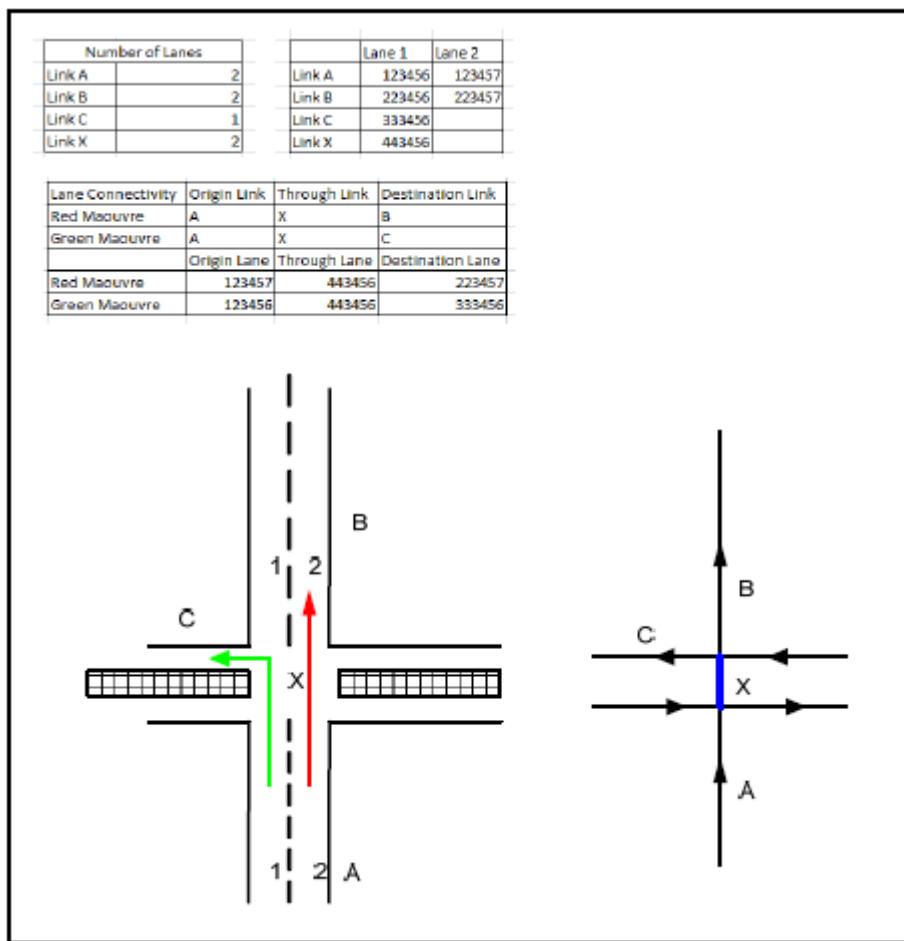
For Lane Traversal Conditions, when more than two Links are involved in the same Lane Traversal condition, see [Figure 447](#): on page 1097, a default Lane object for the intermediate Link(s) is used to ensure lane connectivity. Lane Number 1 is used as default for the lane(s) present on the link(s) internal to the Lane Connectivity condition, independently of the total number of lanes on the links.

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**Figure 447:**



## Lane Category

Lane Category in the Streets Layer continues to be based on the current specification defined in the Attributes section.

## Lane Counting

The Lane Count is based on the Physical Number of Lanes in the Streets layer. See the figures below;

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Figure 448:

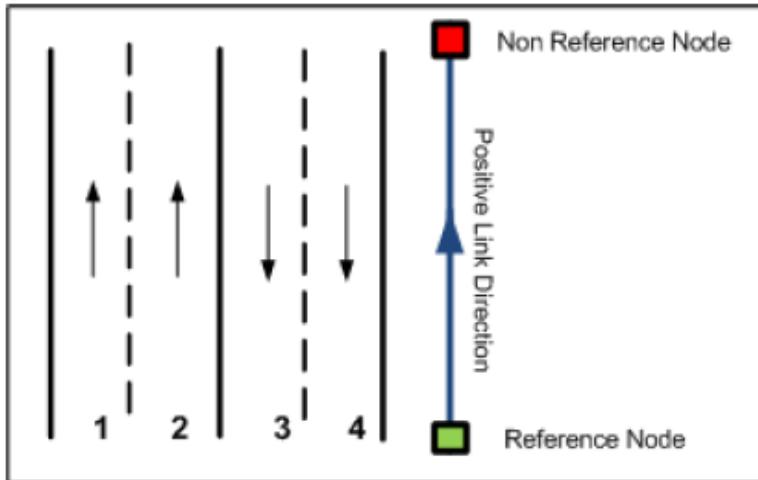
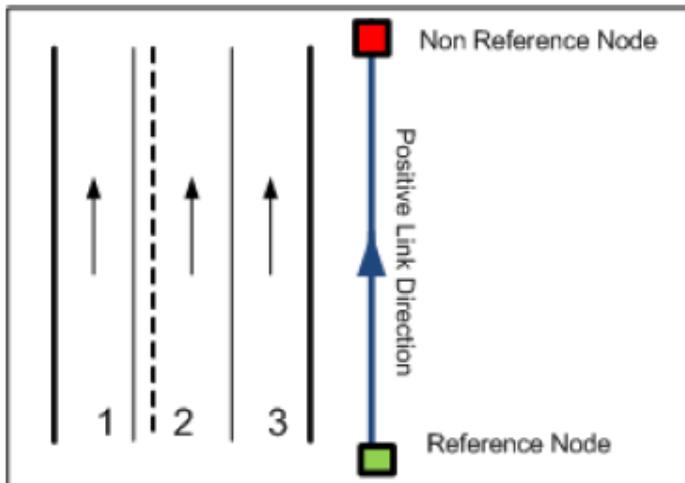


Figure 449:



## From/To Number of Lanes

From/To Number of Lanes in the Streets Layer continues to be based on the current specification defined in the Attributes section.

Example: Single Travel Direction

	Two Lanes (Regular Lane + HOV Lane)	Two Lanes (Regular Lane + Turn Lane)	Two Lanes (Regular Lane + Acceleration Lane)
Number of Lanes	2	1	1

Example: Bidirectional Link

Three Lanes	From: Regular Lane	From: Regular Lane
	To: Regular Lane, HOV Lane	To: Regular Lane, Acceleration Lane
From Number of Lanes	1	1

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Three Lanes	From: Regular Lane	From: Regular Lane
To Number of Lanes	To: Regular Lane, HOV Lane	To: Regular Lane, Acceleration Lane
2		1

## Lane attribute “Lane Divider Marker”

Lane Divider Marker in the Lane Layer continues to be based on the current specification defined in the Attributes section.

## Lane attribute “Center Divider Marker”

Center Divider Marker in the Lane Layer continues to be based on the current specification defined in the Attributes section.

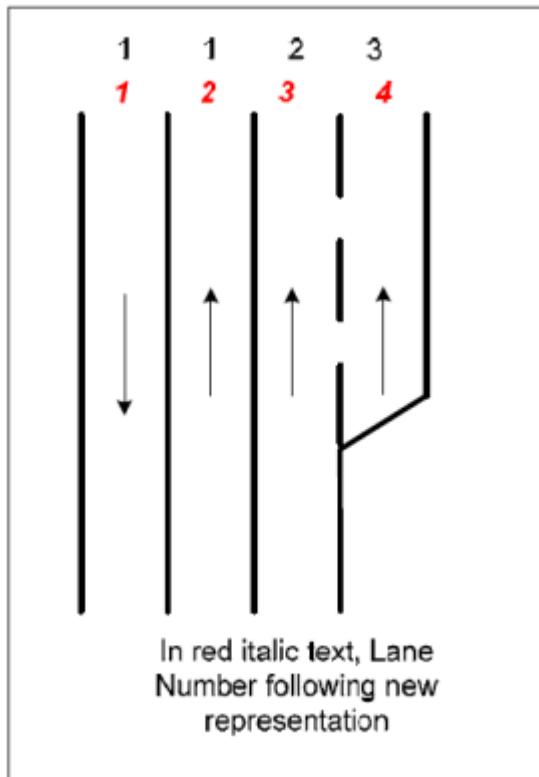
## Lane attribute “Direction Category”

Direction Category in the Lane Layer continues to be based on the current specification defined in the Attributes section.

## A.10.4 Examples

### Bi-directional Road with Lane Markings and Deceleration Lane

Figure 450:



LINK_ID	23593560	23593560	23593560
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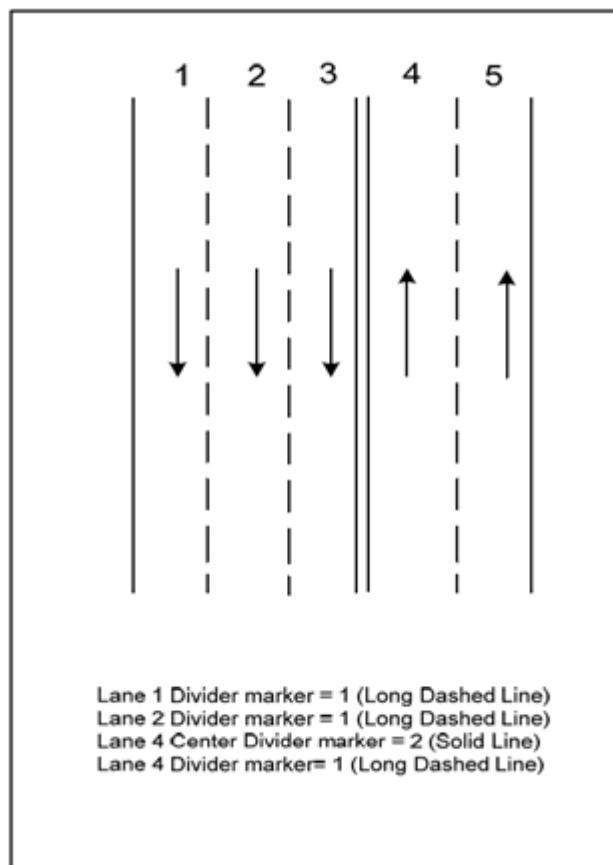
A.10 Lane Model

LANE_ID	50012012546	50012012547	50012012548
LANE_NR	2	3	4
DIR_TRAV	F	F	F
DIV_MRK	2	2	1
CNT_MRK	3	0	0
DIR_CAT	0	0	0
LANE_TYP	1	1	1
TRANS_AREA	N	N	N
LANE_FORM			1

## Bi-directional Road with Lane Markings

Lane Model Representation

Figure 451:



LINK_ID	23593103	23593103	23593103	23593103	23593103
LANE_ID	50012012544	50012012545	50012012546	50012012547	50012012548
LANE_NR	1	2	3	4	5

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DIR_TRAV	T	T	T	F	F
DIV_MRK	1	1	1	1	0
CNT_MRK	0	0	2	2	0
DIR_CAT	0	0	0	0	0
LANE_TYP	1	1	1	1	1
TRANS_AREA	N	N	N	N	N
LANE_FORM					
AR_AUTO	Y	Y	Y	Y	Y
AR_BUS	Y	Y	Y	Y	Y
AR_TAXIS	Y	Y	Y	Y	Y
AR_CARPPOOL	Y	Y	Y	Y	Y
AR_PEDSTRN	Y	N	Y	Y	Y
AR_TRUCKS	Y	Y	Y	Y	Y
AR_THRUTR	Y	Y	Y	Y	Y
AR_DELIVER	Y	Y	Y	Y	Y
AR_EMERVEH	Y	Y	Y	Y	Y
AR_MOTORCYCLE	Y	Y	Y	Y	Y
HEIGHT	0	0	0	0	0
WIDTH	0	0	0	0	0
FROM_SPEED	0	0	0	0	0
TO_SPEED	0	0	0	0	0

## Bi-directional Road with Lane Markings and Truck Limitation on Lane 4

Using the example in the picture above, Lane Markers are not present on the Link; Lane Level attributes are published only for Lane Number 3 and 4 since the access characteristics on this Lane are different than the Link access characteristics.

LINK_ID	23593560	23593560
LANE_ID	50012012546	50012012547
LANE_NR	3	4
DIR_TRAV	F	F
DIV_MRK	0	1

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CNT_MRK	2	0
DIR_CAT	0	0
LANE_TYP	1	1
TRANS_AREA	N	N
LANE_FORM		
AR_AUTO	Y	Y
AR_BUS	Y	Y
AR_TAXIS	Y	Y
AR_CARPOOL	Y	Y
AR_PEDSTRN	Y	Y
AR_TRUCKS	Y	N
AR_THRUTR	Y	Y
AR_DELIVER	Y	Y
AR_EMERVEH	Y	Y
AR_MOTORCYCLE	Y	Y
HEIGHT	0	0
WIDTH	0	0
FROM_SPEED	0	0
TO_SPEED	0	0

If however, Trucks are Not Allowed Only at Certain Times, then:

LINK_ID	23593560	23593560
LANE_ID	50012012546	50012012547
LANE_NR	3	4
DIR_TRAV	F	F
DIV_MRK	0	0
CNT_MRK	2	0
DIR_CAT	0	0
LANE_TYP	1	1
TRANS_AREA	N	N

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LANE_FORM		
AR_AUTO	Y	Y
AR_BUS	Y	Y
AR_TAXIS	Y	Y
AR_CARPOOL	Y	Y
AR_PEDSTRN	Y	Y
AR_TRUCKS	Y	Y
AR_THRUTR	Y	Y
AR_DELIVER	Y	Y
AR_EMERVEH	Y	Y
AR_MOTORCYCLE	Y	Y
HEIGHT	0	0
WIDTH	0	0
FROM_SPEED	0	0
TO_SPEED	0	0

LANE_ID	50012012547
COND_ID	555354063
COND_TYPE	8
COND_VAL1	
COND_VAL2	
COND_VAL3	
COND_VAL4	
END_OF_LINK	
AR_AUTO	N
AR_BUS	N
AR_TAXIS	N
AR_CARPOOL	N
AR_PEDSTRN	N
AR_TRUCKS	Y

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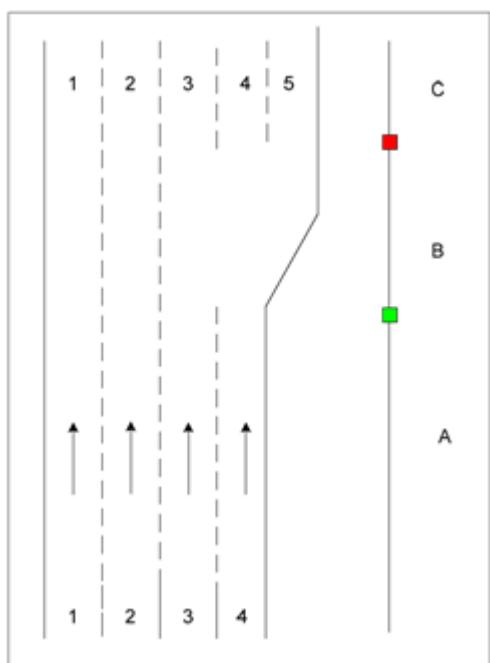
here

AR_THRUTR	N
AR_DELIVER	N
AR_EMERVEH	N
AR_MOTORCYCLE	N

LINK_ID	23593560
COND_ID	555354063
DTTME_TYPE	1
EXCL_DATE	N
FROMEND	N
REF_DATE	YYYYYYY
EXP_DATE	
STARTTIME	0000
ENDTIME	1330

## Transition Area on a Subset of Lanes

Figure 452:



LINK_ID	23593560	23593560	23593560	23593560	23593560
LANE_ID	50012012546	50012012547	50012012548	50012012549	50012012550
LANE_NR	1	2	3	4	5

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DIR_TRAV	F	F	F	F	F
DIV_MRK	1	1	0	0	0
CNT_MRK	2	0	0	0	0
DIR_CAT	0	0	0	0	0
LANE_TYP	1	1	1	1	1
TRANS_AREA	N	N	Y	Y	Y
LANE_FORM					
AR_AUTO	Y	Y	Y	Y	Y
AR_BUS	Y	Y	Y	Y	Y
AR_TAXIS	Y	Y	Y	Y	Y
AR_CARPOL	Y	Y	Y	Y	Y
AR_PEDSTRN	Y	Y	Y	Y	Y
AR_TRUCKS	Y	Y	Y	Y	Y
AR_THRUTR	Y	Y	Y	Y	Y
AR_DELIVER	Y	Y	Y	Y	Y
AR_EMERVEH	Y	Y	Y	Y	Y
AR_MOTORCYCLE	Y	Y	Y	Y	Y
HEIGHT	0	0	0	0	0
WIDTH	0	0	0	0	0
FROM_SPEED	0	0	0	0	0
TO_SPEED	0	0	0	0	0

## A.10.5 Lane Traversal

Currently used Condition Lane Traversal layer will continue to be used for records in Cdms layer with Condition Type 13 – Lane Traversal.

Comprehensive Lane Representation

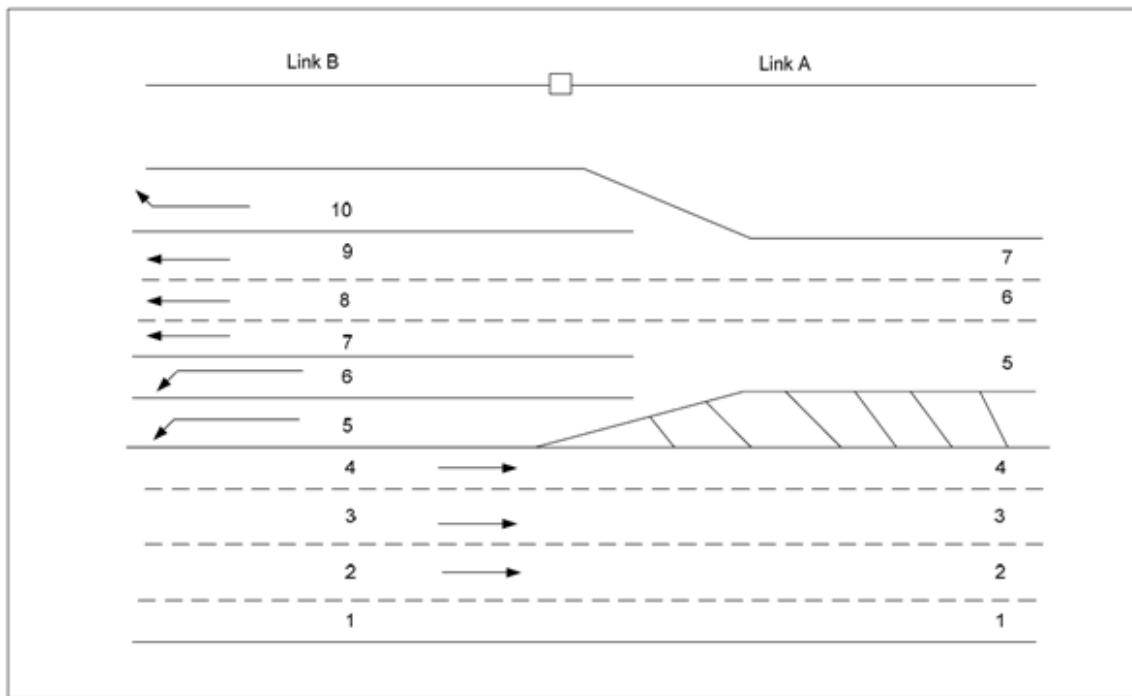
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**Figure 453:**



In the tables below, only lane connectivity between the following lanes is shown.

Link A, Lane 7 – Lane ID 1213154655

Link B, Lane 9 – Lane ID 1213154655

Link B, Lane 10 – Lane ID 1213154790

**Table 8: Cdms Layer**

LINK_ID	28416095
COND_ID	33224929
COND_TYPE	13
COND_VAL1	
COND_VAL2	
COND_VAL3	
COND_VAL4	
END_OF_LINK	R
AR_AUTO	Y
AR_BUS	Y
AR_TAXIS	Y
AR_CARPOOL	Y

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AR_PEDSTRN	N
AR_TRUCKS	Y
AR_THRUTR	Y
AR_DELIVER	Y
AR_EMERVEH	Y
AR_MOTORCYCLE	Y

**Table 9: LnCdms Layer**

LANE_ID	1213154655
COND_ID	33224930
COND_TYPE	13
COND_VAL1	
COND_VAL2	
COND_VAL3	
COND_VAL4	
END_OF_LINK	R
AR_AUTO	Y
AR_BUS	Y
AR_TAXIS	Y
AR_CARPPOOL	Y
AR_PEDSTRN	N
AR_TRUCKS	Y
AR_THRUTR	Y
AR_DELIVER	Y
AR_EMERVEH	Y
AR_MOTORCYLCE	Y

**Table 10: LnCndConn Layer**

COND_ID	33224930	33224930
TRAV_NUM	1	2
S_LANE_ID	1213154655	1213154655

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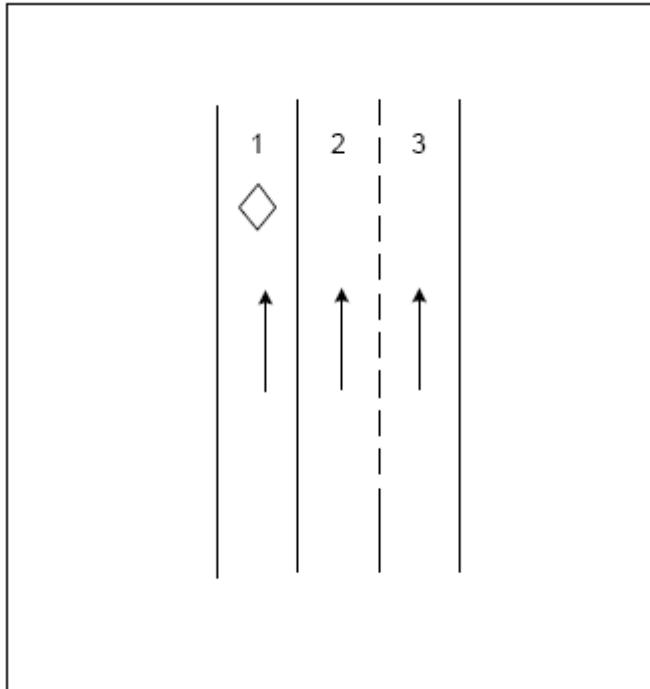
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S_LDIR_TRV	T	T
D_LANE_ID	1213154657	1213154790
D_LDIR_TRV	T	T

## Three Lane Road with an HOV Lane 24 Hours 7 Days a Week

Figure 454:



Lane Model Representation

Table 11: Lane Layer

LINK_ID	23593560	23593560	23593560
LANE_ID	50012012546	50012012547	50012012548
LANE_NR	1	2	3
DIR_TRAV	F	F	F
DIV_MRK	1	1	0
CNT_MRK	2	0	0
DIR_CAT	0	0	0
LANE_TYP	2	1	1
TRANS_AREA	N	N	N
LANE_FORM			

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AR_AUTO	Y	Y	Y
AR_BUS	Y	Y	Y
AR_TAXIS	Y	Y	Y
AR_CARPOOL	Y	Y	Y
AR_PEDSTRN	Y	Y	Y
AR_TRUCKS	Y	Y	Y
AR_THRUTR	Y	Y	Y
AR_DELIVER	Y	Y	Y
AR_EMERVEH	Y	Y	Y
AR_MOTORCYCLE	Y	Y	Y
HEIGHT	0	0	0
WIDTH	0	0	0
FROM_SPEED	0	0	0
TO_SPEED	0	0	0

**Table 12: LnCdms Layer**

LANE_ID	50012012546
COND_ID	555354064
COND_TYPE	8
COND_VAL1	SEASONAL CLOSURE = NO
COND_VAL2	
COND_VAL3	
COND_VAL4	
END_OF_LINK	
AR_AUTO	Y
AR_BUS	N
AR_TAXIS	N
AR_CARPOOL	N
AR_PEDSTRN	N
AR_TRUCKS	Y
AR_THRUTR	N

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AR_DELIVER	Y
AR_EMERVEH	N
AR_MOTORCYCLE	N

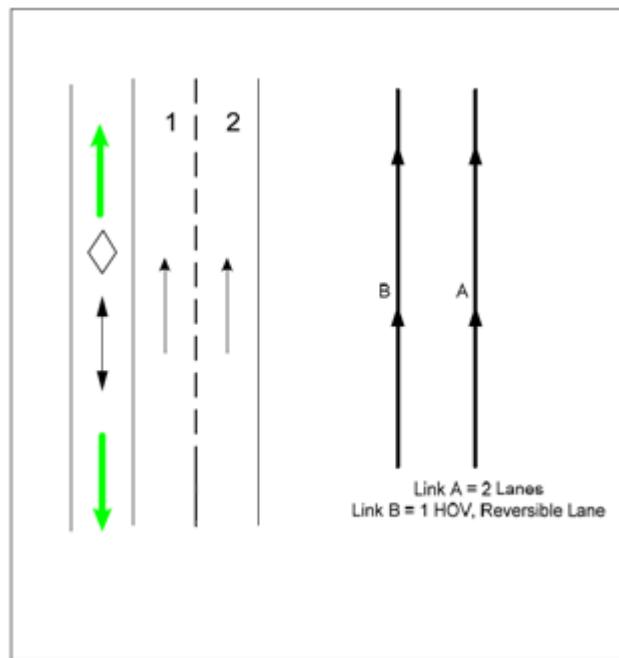
**Table 13: CndMod Layer**

COND_ID	LANG_CODE	MOD_TYPE	MOD_VAL
555354064		58	0
555354064		11	1
555354064		10	3
555354064		57	0
555354064		12	1

## Three Lane Road with Reversible HOV Lane

See the figure below.

**Figure 455:**



Lane Model Representation

**Table 14: Lane Layer**

LINK_ID	23593560	23593560	23593560
LANE_ID	50012012546	50012012547	50012012548
LANE_NR	1	2	3

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DIR_TRAV	B	T	F
DIV_MRK	1	3	0
CNT_MRK	0	0	0
DIR_CAT	0	0	0
LANE_TYP	6	1	1
TRANS_AREA	N	N	N
LANE_FORM			
AR_AUTO	Y	Y	Y
AR_BUS	Y	Y	Y
AR_TAXIS	Y	Y	Y
AR_CARPOL	Y	Y	Y
AR_PEDSTRN	Y	Y	Y
AR_TRUCKS	Y	Y	Y
AR_THRUTR	Y	Y	Y
AR_DELIVER	Y	Y	Y
AR_EMERVEH	Y	Y	Y
AR_MOTORCYCLE	Y	Y	Y
HEIGHT	0	0	0
WIDTH	0	0	0
FROM_SPEED	0	0	0
TO_SPEED	0	0	0

**Table 15: LnCdms Layer**

LANE_ID	50012012546	50012012546	50012012546	50012012546
COND_ID	634838574	634838575	634838577	634838578
COND_TYPE	8	8	5	5
COND_VAL1			FROM REFERENCE NODE	TO REFERNCE NODE
COND_VAL2				
COND_VAL3				
COND_VAL4				
END_OF_LINK	R	R		

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AR_AUTO	Y	Y	Y	Y
AR_BUS	Y	N	Y	Y
AR_TAXIS	Y	Y	Y	Y
AR_CARPOOL	Y	N	Y	Y
AR_PEDSTRN	N	N	N	N
AR_TRUCKS	Y	Y	Y	Y
AR_THRUTR	Y	Y	Y	Y
AR_DELIVER	Y	Y	Y	Y
AR_EMERVEH	N	N	Y	Y
AR_MOTORCYCLE	Y	Y	Y	Y

**Table 16: CndMod Layer**

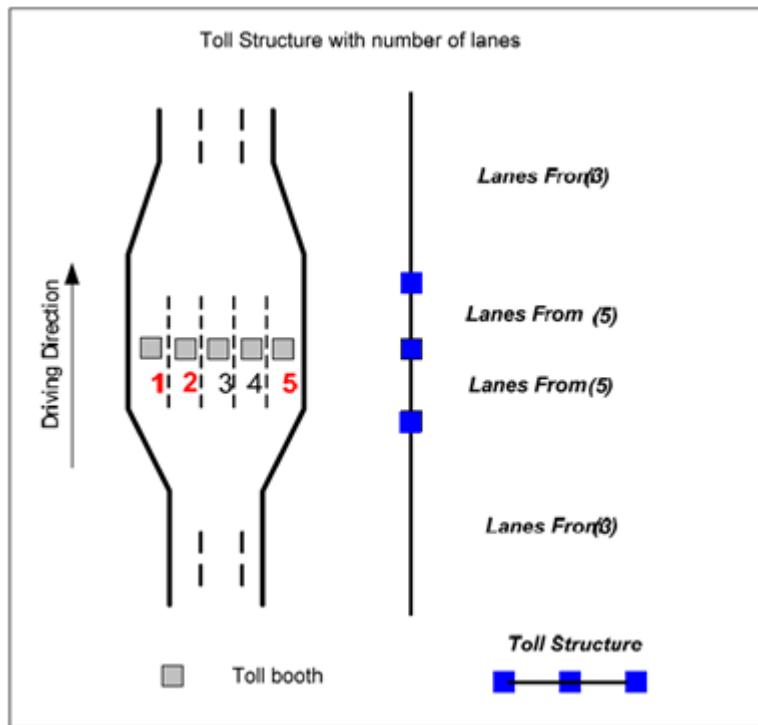
COND_ID	LANG_CODE	MOD_TYPE	MOD_VAL
6348385765		58	0
6348385765		11	1
6348385765		10	3
6348385765		57	0
6348385765		12	1

**Table 17: CdmsDtmmod**

LINK_ID	COND_ID	DTTME_TYPE	EXCL_DATE	FROMEND	REF_DATE	EXP_DATE	STARTTIME	ENDTIME
23593560	634838574	1	N	N	YYYYYYN		0	545
23593560	634838574	1	N	N	YYYYYYN		1100	1200
23593560	634838574	1	N	N	YYYYYYN		1900	2400
23593560	634838577	1	N	N	YYYYYYN		545	1100
23593560	634838565	1	N	N	YYYYYYN		545	1100
23593560	634838578	1	N	N	YYYYYYN		1200	1900
23593560	634838565	1	N	N	YYYYYYN		1200	1900

## A.10.6 Lane Toll Structure

**Figure 456:**



**Table 18: Lane Layer**

LINK_ID	587923456	587923456	587923456	587923456	587923456
LANE_ID	5012012544	5012012545	5012012546	5012012547	5012012548
LANE_NR	1	2	3	4	5
DIR_TRAV	F	F	F	F	F
...					
AR_AUTO	Y	Y	Y	Y	N
AR_BUS	Y	Y	Y	Y	Y
AR_TAXIS	Y	Y	Y	Y	N
AR_CARPOOL	Y	Y	Y	Y	N
AR_PEDSTRN	N	N	N	N	N
AR_TRUCKS	Y	Y	Y	Y	Y
AR_THRUTR	Y	Y	Y	Y	Y
AR_DELIVER	Y	Y	Y	Y	Y

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AR_EMERVEH	Y	Y	Y	Y	N
AR_MOTORCYCLE	Y	Y	Y	Y	Y
...					

**Table 19: LnCdms Layer**

LANE_ID	587923456	587923457	587923458	587923459	587923460
COND_ID	544424424	544424424	544424425	544424425	544424426
COND_TYPE	1	1	1	1	1
COND_VAL1					
COND_VAL2					
COND_VAL3					
COND_VAL4					
END_OF_LINK					
AR_AUTO	Y	Y	Y	Y	Y
AR_BUS	Y	Y	Y	Y	Y
AR_TAXIS	Y	Y	Y	Y	Y
AR_CARPOOL	Y	Y	Y	Y	Y
AR_PEDSTRN	Y	Y	Y	Y	Y
AR_TRUCKS	Y	Y	Y	Y	Y
AR_THRUTR	Y	Y	Y	Y	Y
AR_DELIVER	Y	Y	Y	Y	Y
AR_EMERVEH	Y	Y	Y	Y	Y
AR_MOTORCYCLE	Y	Y	Y	Y	Y

**Table 20: CndMod Layer**

COND_ID	LANG_CODE	MOD_TYPE	MOD_VAL
544424424		30	1
544424424		31	1
544424425		30	1
544424425		31	8
544424426		27	1

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COND_ID	LANG_CODE	MOD_TYPE	MOD_VAL
544424426		30	8

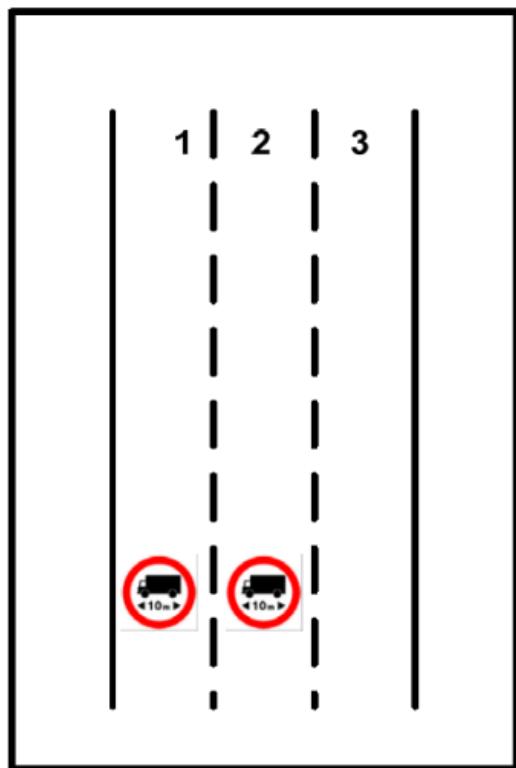
**Table 21: LnCndConn Layer**

COND_ID	33224930	33224930	33224930	33224930	33224930
TRAV_NUM	1	2	2	2	2
S_LANE_ID	587923456	587923457	587923457	587923458	587923459
S_LDIR_TRV	T	T	T	T	T
D_LANE_ID	687923456	687923456	687923456	687923456	687923456
D_LDIR_TRV	T	T	T	T	T

## A.10.7 Lane Transport Access Restriction

On a three lane road open only in the positive direction, trucks with two or more trailers are not permitted on Lanes 1 or 2.

**Figure 457:**



**Table 22: Streets Layer**

LINK_ID	587923456
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PHYS_LANES	3
...	...
AR_AUTO	Y
AR_BUS	Y
AR_TAXIS	Y
AR_CARPPOOL	Y
AR_PEDSTRN	Y
AR_TRUCKS	Y
AR_THRUTR	Y
AR_DELIVER	Y
AR_EMERVEH	Y
AR_MOTORCYCLE	Y
...	...

**Table 23: Lane Layer**

LINK_ID	587923456	587923456
LANE_ID	5012012546	5012012547
LANE_NR	1	2
DIR_TRAV	F	F
DIV_MRK	0	0
CNT_MRK	0	0
DIR_CAT	0	0
LANE_TYP	1	1
TRANS_AREA	N	N
LANE_FORM		
AR_AUTO	Y	Y
AR_BUS	Y	Y
AR_TAXIS	Y	Y
AR_CARPPOOL	Y	Y
AR_PEDSTRN	N	N
AR_TRUCKS	Y	Y

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AR_THRUTR	Y	Y
AR_DELIVER	Y	Y
AR_EMERVEH	Y	Y
AR_MOTORCYCLE	Y	Y
HEIGHT	0	0
WIDTH	0	0
FROM_SPEED	0	0
TO_SPEED	0	0

**Table 24: LnCdms Layer**

LANE_ID	5012012546	5012012547
COND_ID	555354063	555354063
COND_TYPE	23	23
COND_VAL1		
COND_VAL2		
COND_VAL3		
COND_VAL4		
END_OF_LINK		
AR_AUTO	N	N
AR_BUS	N	N
AR_TAXIS	N	N
AR_CARPOOL	N	N
AR_PEDSTRN	N	N
AR_TRUCKS	Y	Y
AR_THRUTR	N	N
AR_DELIVER	N	N
AR_EMERVEH	N	N
AR_MOTORCYCLE	N	N

COND_ID	LANG_CODE	MOD_TYPE	MOD_VAL
555354063		46	2

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COND_ID	LANG_CODE	MOD_TYPE	MOD_VAL
555354063		38	2

## A.10.8 Processing of Lane Model

### Introduction

When compiling NAVSTREETS, attention must be paid to the order in which the information is provided in the format itself since each step overrides the one preceding. The logic to process this information can be summarized as follows:

Link:

- 1. Link based Direction of Travel and Access Characteristics
- 2. Link conditions (Direction of Travel and Access Characteristics)

Lane:

- 1. Lane based Direction of Travel and Access Characteristics
- 2. Lane conditions (Direction of Travel and Access Characteristics)

### Processing Logistics

- Link information is processed first:

Step	Applies To:	Table	Description	Related Tables
1	Link	Streets (Streets)	Provides Direction of Travel and Access Characteristics	None
2	Link	Condition/Driving Manoeuvres (Cdms)	Use the Link Direction of Travel and Access Characteristics	None

- Lane information is processed second:

Step	Applies To:	Table	Description	Related Tables
1	Lane	Lane (Lane)	Use the Lane Direction of Travel and Access Characteristics	None
2	Lane	Condition/Driving Manoeuvres (LnCdms)	Use the Lane Direction of Travel and Access Characteristics	Condition Modifiers (CndMod)

- Two exceptions exist for this process:
- Reversible Roads, identifiable when Streets attribute REVERSIBLE = Y
- Specialized Lane, identifiable as those lanes for which the Access Characteristics of the Lane Connectivity Condition is a subset of the Access Characteristics of the Link.
- In Case of Reversible and Reversible HOV Roads (Streets REVERSIBLE = Y)

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- The Lane Direction of Travel and Access Characteristics are ignored and the process becomes:

Step	Table	Description	Related Tables
1	Streets (Streets)	Provides Direction of Travel and Access Characteristics	None
2	Condition/Driving Manoeuvres (Cdms)	Use the Link Direction of Travel and Link Access Characteristics condition Access Characteristics fields.	None
3	Lane (Lane)	Ignore the Lane Direction of Travel and Access Characteristics	None
4	Lane Condition/Driving Manoeuvres (LnCdms)	Use the Lane Condition Direction of Travel and Lane Access Characteristics condition Access Characteristics fields.	Condition Modifiers (CndMod)

- In Case of Specialized Lanes
- The process should not consider the Lane Access Characteristics and should instead use the Access Characteristics of the Lane Traversal Condition.
- Link information is processed first:

Step	Table	Description	Related Tables
1	Streets (Streets)	Provides Direction of Travel and Access Characteristics	None
2	Condition/Driving Manoeuvres (Cdms)	Use the Link Condition Direction of Travel and Link Access Characteristics condition Access Characteristics fields.	None

- Lane information is processed second:

Step	Table	Description	Related Tables
1	Lane (Lane)	Use the Lane Direction of Travel and Access Characteristics	None
2	Lane Condition/Driving Manoeuvres (LnCdms) having CONDITION_TYPE = 13	If a Lane Traversal condition exists having the lane as source lane, override the Access Characteristics at step 1 with the access characteristics of the Lane Traversal condition.	Lane Connectivity (LnCndConn)

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Step	Table	Description	Related Tables
3	Lane Condition/Driving Manoeuvres (LnCdms)	Use the Lane Condition Direction of Travel and Lane Access Characteristics condition Access Characteristics field.	Condition Modifiers (CndMod)

## Example 1 - Four Lane Road (non reversible)

- Link Processing
- Step 1: Link based Direction of Travel and Access Characteristics
- Link ID 799407994 has four lanes in the negative direction of travel and four physical lanes total.

**Table 25: Streets Table (only relevant columns shown)**

LINK_ID	TO_LANES	FROM_LANES	DIR_TRAVEL	PHYSICAL_NUM_LANES
799407994	4	0	T	4

- The Access Characteristics in the Streets table allow traffic to all vehicles.

**Table 26: Streets Table (Continued)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH
Y	Y	Y	Y	Y	Y	Y	Y	Y

- Step 2: Link Conditions
- None are present on the link.
- Lane Processing
- Step 1: Lane based Direction of Travel and Access Characteristics are processed.
- Lanes 1 through 4 are open to traffic in the negative direction of travel and allow traffic to all vehicles.

**Table 27: Lane Table (not all columns shown)**

LANE_ID	LINK_ID	LANE_NR	DIR_TRAV	LANE_TYP
21592940	799407994	1	T	1
21592939	799407994	2	T	1
21592938	799407994	3	T	1
21592937	799407994	4	T	1

**Table 28: LnCdms Table (only relevant columns shown)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH
Y	Y	Y	Y	Y	Y	Y	Y	Y

- Step 2: Lane Conditions
- None are present on the lanes.
- Conclusion

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- Lane information is processed after the Link information is processed. In this situation, the Lane Direction of Travel and Access Characteristics, although overriding, do not change its basic setting.

## Example 2 - Non-Separately Digitized HOV Lane (non-reversible)

- Step 1: Link based Direction of Travel and Access Characteristics
- Link ID 883644879 has four lanes in the negative Direction of Travel and four physical lanes in total.

**Table 29: Streets Table (only relevant columns shown)**

LINK_ID	TO_LANES	FROM_LANES	DIR_TRAVEL	PHYSICAL_NUM_LANES
883644879	4	0	T	4

- The Access Characteristics in the Streets table allow traffic to all vehicles except pedestrians.

**Table 30: Streets Table (only relevant columns shown)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH
Y	Y	Y	Y	N	Y	Y	Y	Y

- Step 2: Link Conditions
- None are present on the Link.
- Lane Processing
- Step 1: Lane based Direction of Travel and Access Characteristics are processed.
- Lanes 1 through 4 are open to traffic in the negative direction of travel and allow traffic to all vehicles except pedestrians.

**Table 31: Lane Table (only relevant columns shown)**

LANE_ID	LINK_ID	LANE_NR	DIR_TRAV	LANE_TYP
23472281	883644879	1	T	1
23472283	883644879	2	T	1
23472285	883644879	3	T	1
23472287	883644879	4	T	1

**Table 32: Lane Table (only relevant columns shown)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH
Y	Y	Y	Y	N	Y	Y	Y	Y

- Step 2: Lane conditions are processed.

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- On Lane 4 an HOV Access Restriction (Condition Type 8) prohibits traffic at all times to all traffic except HOVs, Buses, Pedestrians, Emergency Vehicles and Motorcycles.

**Table 33: LnCdms Table (only relevant columns shown)**

LANE_ID		CONDITION_ID			COND_TYP			
23472287		700296297			8			

**Table 34: LnCdms Table (only relevant columns shown)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH	AR_MOTO
Y	N	Y	N	N	Y	Y	Y	N	N

- Conclusion
- Lane information is processed after the Link information is processed. In this situation, the Lane Direction of Travel and Access Characteristics for Lane 4 override the basic Link setting and identify the lane as an HOV lane.

### Example 3 - Specialized Lane (non-reversible)

- Specialized lanes are lanes that are dedicated to some specific vehicles, for instance a bus lane, usually dedicated to buses, taxies and emergency vehicles, or motorcycle lanes.
- The typical lane configuration on these links is:
  - A. The link is one way
  - B. Condition Direction of Travel published at the Link level only specifies that the Link is bidirectional for some vehicle types.
- Link Processing
- Step 1: Link based Direction of Travel and Access Characteristics
- Link ID 833583704 has two lanes in the negative direction of travel and three physical lanes in total.

**Table 35: Streets Table (only relevant columns shown)**

LINK_ID		TO_LANES		FROM_LANES		DIR_TRAVEL		PHYSICAL_NUM_LANES	
833583704		2		0		T		3	

- The Access Characteristics in the Streets table allow traffic to all vehicle types.

**Table 36: Streets Table (only relevant columns shown)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH	AR_MOTO
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

- Step 2: Link conditions
- None are present on the Link.
- Lane Processing
- Step 1: Lane based Direction of Travel and Access Characteristics are processed.

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- Lanes 1 and 2 are open to traffic in the negative direction of travel, Lane 3 is open in the positive direction of travel, and all lanes allow traffic to all vehicles.

**Table 37: Lane Table (only relevant columns shown)**

LANE_ID	LINK_ID	LANE_NR	DIR_TRAV	LANE_TYP
21813925	833583704	1	T	1
21813923	833583704	2	T	1
21951187	833583704	3	F	1

**Table 38: Lane Table (only relevant columns shown)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH	AR_MOTO
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

- Step 2: The Lane Traversal Conditions (Condition Type 13) are used to override the Access Characteristics of Lane 3. The Lane Traversal conditions (Condition Type 13) on Lane 1 and 2 do not override the Link Access Characteristics since they are not a subset.

**Table 39: LnCdms Table (only relevant columns shown)**

LANE_ID	CONDITION_ID	COND_TYP
21951187	718750506	13
21813925	718035375	13
21813923	718035373	13

**Table 40: LnCdms Table (only relevant columns shown)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH	AR_MOTO
N	Y	Y	N	N	N	N	Y	Y	N
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

- Step 3: Lane conditions
- None are present on the lanes.
- Conclusion
- Lane information is processed after the Link information is processed. The Lane Traversal Access Characteristics of Lane 3 override the Lane Access Characteristics since these are a subset of the first. Lane 3 is therefore a one way (From Reference Node) and Lanes 1 and 2 are one way in the opposite direction (To Reference Node).

## Example 4 - Separately Digitized Reversible HOV Roads

- A. The Link is one way

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- B. Condition Direction of Travel published at Link level only specifies the Direction of Travel in given days/times of the day
- C. Condition Access Characteristics published at Link level only specifies closure of the link in given days/time of the day
- D. HOV Condition published at Link level specifies closure of the link in given days/time of day with exceptions for HOV vehicles
- E. The HOV Condition mentioned in point "D" above is replicated at the lane level
- Step 1: Link based Direction of Travel and Access Characteristics are taken from the Streets table.
- Link ID 895281574 has two lanes in the negative direction of travel and three physical lanes in total. The Link is a Carpool Reversible road.

**Table 41: Streets Table (only relevant columns shown)**

LINK_ID	TO_LANES	FROM_LANES	CARPOOL	REVERSIBLE	DIR_TRAVEL	PHYSICAL_NUM_LANES
895281574	2	1	Y	Y	B	3

- The Access Characteristics in the Streets table allow traffic to all vehicles except pedestrians.

**Table 42: Streets Table (only relevant columns shown)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH	AR_MOTO
Y	Y	Y	Y	N	Y	Y	Y	Y	Y

- Step 2: Two Direction of Travel conditions, one Access Restriction and one Usage Fee Condition are present on the Link.

**Table 43: Streets Table (only relevant columns shown)**

LINK_ID	CONDITION_ID	COND_TYP
895281574	726051124	5
895281574	726051128	5
895281574	726051125	8
895281574	726051126	12

- The Direction of Travel conditions (Condition Type 5) provide the travel direction at specific time of day/day of week. The Access Restriction condition (Condition Type 8 ) provides information regarding the closure of the link. All conditions apply to all vehicle types.
- Step 3: Lane based Direction of Travel and Access Characteristics
- Lane travel direction in the Lane table and its access characteristics are skipped because the link is a reversible link.

**Table 44: Lane Table (only relevant columns shown)**

LINK_ID	LANE_ID	LANE_NR	DIR_TRAV	LANE_TYP
895281574	23794097	1	B	

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NAVSTREETS Product Variations

A.10 Lane Model

here

LINK_ID	LANE_ID	LANE_NR	DIR_TRAV	LANE_TYP
895281574	23794098	2	B	1

**Table 45: Lane Table (only relevant columns shown)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH	AR_MOTO
Y	Y	Y	Y	N	Y	Y	Y	Y	Y

- Step 4: Lane HOV Access Restriction conditions (Condition Type 8) are found that apply to both lanes. The LnCdms table and CndMod table specify the usage of the lane for HOV vehicles, buses, pedestrians, emergency vehicles and motorcycles only.

**Table 46: LnCdms Table (only relevant columns shown)**

LANE_ID	CONDITION_ID	COND_TYP
23794097	726051123	8
23794098	726051127	8

**Table 47: LnCdms Table (only relevant columns shown)**

AR_AUTO	AR_BUS	AR_TAXI	AR_CARPOOL	AR_PEDEST	AR_TRUCKS	AR_TRAFFIC	AR_DELIV	AR_EMERVEH	AR_MOTO
Y	N	Y	N	N	Y	Y	Y	N	N

COND_ID	LANG_CODE	MOD_TYPE	MOD_VAL
726051123		57	0
726051123		58	10
726051123		10	2
726051123		11	1
726051123		12	0
726051127		57	0
726051127		58	10
726051127		10	2
726051127		11	1
726051127		12	0

- Conclusion
- Lane information is processed as a continuation of the Link information processed. The conditions on the lane are therefore overriding Link/Lane setting. The lane is closed except HOV, Mon-Fri 5:45-11am & Midnight to 7pm & Sat-Sun all day. The Lanes are also open in the negative direction to all but

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NAVSTREETS Product Variations

A.11 Distance Marker (DistMarker)

pedestrians Mon-Fri 5:45-11am and open in the positive direction to all but pedestrians Mon-Fri 12-7pm & Sat-Sun all day.

# A.11 Distance Marker (DistMarker)

## A.11.1 Distance Marker (General Information)

### Definition

Distance Markers are sequentially numbered markers placed along roads at regular intervals that serve as reference location signs.

### Layer

Distance Marker (DistMarker)

### Related Attributes

Distance Marker Value

Direction on Sign

Direction

Unit of Measure

Enhanced

Distance Marker X/Y Coordinates (geometry object)

### Usage

Distance Markers can be used for:

- Route Guidance (for example “2 miles to Mile Marker 75”)
- Destination selection (ability to choose from a list of mile marker locations)
- Location Referencing (“geocode” to Mile marker locations)

Distance Markers can be used in three different use cases.

- To assist drivers in estimating their progress.
- To provide location information in emergency and roadside assistance scenarios.
- To assist in highway maintenance and servicing.

### Specification

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A.11 Distance Marker (DistMarker)

- Distance Marker is only published on links with at least one route number or road name.
  - Feature Names may be retrieved from the Streets or AltStreets layers.
    - A Distance Marker is only associated to one Route Number or Street Name when multiple names exist on a link.
    - Where routes overlap, Distance Marker sign continuity is generally established for only one of the routes.
    - For example, when on a road an interstate route number is present along with a federal route number, a distance marker for one of the two route numbers will be published (generally the interstate route number is used in the U.S.)
    - Multiple Distance Markers are published when different Distance Marker values exist at the same location in reality.
  - Distance Marker is associated to a Route Number or Feature Name by the Feature ID.
- Distance Marker is placed with a minimum accuracy of 15 metres.
  - Distance Marker that might not meet the accuracy above, are flagged Enhanced “N”.
- The following Distance Marker attributes are always published:
  - Distance Marker
  - Enhanced
  - Direction
  - Unit Of Measure
- The following Distance Marker attributes may be published when applicable:
  - Direction on Sign
- Distance Markers are included at an interval of 1 Mile/1 Kilometre.
  - Only integer Distance Marker is published. This may include alphanumeric mile markers.
  - Fractions of miles/kilometres are not included.
- On Multiply Digitised roads, a Distance Marker per direction of travel is published.

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A.11 Distance Marker (DistMarker)

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- On bi-directional roads:

- A single Distance Marker for both directions of travel is published when the Distance Marker shield does not display route direction.

**Figure 458:**



- A Distance Marker per travel direction is published when the Distance Marker shield displays a route direction. In these instances **Direction on Sign** is always published.

**Figure 459:**



- A Distance Marker per travel direction is also published when the relative distance of the distance marker shields for each travel direction are positioned as such that positional accuracy of 15 metres may not be granted.

Bi-Directional Links			
Multiply Digitised Road		Direction on Sign Not Posted	Direction on Sign is Posted
Number Distance Marker	2 <sup>175</sup>	1	21
Direction on Sign	Y <sup>176</sup>	N	Y2
Direction	F = From T = To (According to link travel direction)	B = Both Directions	F = From T = To (According to link travel direction)

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A.11 Distance Marker (DistMarker)

- Distance Marker point geometry is located along the link without any offset.
- Distance Marker progressive numbering scheme is defined for every country. Distance Marker renumbering scheme information is provided in the Country Profile documentation.

### A.11.2 Distance Marker (DistMarker) - Layer Layout

The DistMarker files represent the Distance Marker layer.

#### Display Graphics

This layer does not have any graphic objects associated with the data.

#### Attributes and Structure<sup>177</sup>

This layer contains the following attributes.

Attribute <i>(Italic text is a link)</i>	dbf Field Name	tab Field Name	Format
Link ID	LINK_ID	LINK_ID	Decimal(10,0)
Feature ID	FEAT_ID	FEAT_ID	Decimal(10,0)
Distance Marker Value	DIST_MARK	DIST_MARK	Char(10)
Direction On Sign	DIRONSIGN	DIRONSIGN	Char(1)
Direction	DIRECTION	DIRECTION	Char(1)
Unit Of Measure	UNITMEASURE	UNITMEASURE	Char(1)
Enhanced	ENHANCED	ENHANCED	Char(1)

#### Link ID

##### Definition

Link ID identifies the Link ID associated with the Distance Marker. The link is used to retrieve the Route Number, Direction on Sign, Street Name coding for the Distance Marker.

##### Related Attributes

Feature ID

Feature\_Name (Through Link\_ID and/or Feat\_ID)

Direction on Sign

Condition

Unit Of Measure

<sup>175</sup> One per direction of travel (if existing in reality).

<sup>176</sup> If posted.

<sup>177</sup> In NAVSTREETS shapefile, if a layer contains no content in that product, the layer is not published at all.

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NAVSTREETS Product Variations

A.11 Distance Marker (DistMarker)

Enhanced

Geometry

## Usage

Link ID can be used to identify the position of a Distance Marker for Route Calculation and Route Guidance.

## Feature ID

### Definition

Feature ID identifies the Feature Name to use in conjunction with the Distance Marker.

### Value

Feature ID of the associated Street Name.

### Related Attributes

Feature\_Name (Through Link\_ID and/or Feat\_ID)

Direction on Sign

Direction

Unit Of Measure

Enhanced

Geometry

## Usage

Feature ID can be used to retrieve the road name relative to the Distance Marker for destination selection and map display.

The Street Name may be retrieved from the Streets or AltStreets layers.

## Distance Marker Value

### Definition

Distance Marker Value represents the Distance Marker Value.

### Value

Value representing the distance along the road.

### Related Attributes

Feature Name (Through Link\_ID and/or Feat\_ID)

Direction on Sign

Direction

Unit Of Measure

Enhanced

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NAVSTREETS Product Variations

A.11 Distance Marker (DistMarker)

## Geometry

### Usage

Distance Marker Value can be used for destination selection and location referencing.

### Specification

- Distance Marker Value does not publish decimal values (for example, Distance Marker = "11,00" is published as "11").
- Distance Marker Value may contain alphanumeric text when alphanumeric text is displayed on the Distance Marker shield (for example, a mile marker may display a distance as "109A".)

## Direction on Sign

### Definition

Direction on Sign indicates the official direction identifiers assigned to the distance marker.

### Value

E - East

N - North

W - West

S - South

### Related Attributes

Distance Marker Value

Feature Name

### Usage

Direction on Sign can be used for destination selection based on Distance Marker.

### Specification

- Direction on Sign is only published on bi-directional roads when the distance marker shield indicates the route direction.
- Direction on Sign is published on single directional roads when present on the sign.
- Direction on Sign does not have a language code associated.
  - English (ENG) route directions are published in Direction on Sign.
  - Route directions for other languages are published in Direction on Sign metadata.

## Direction

### Definition

Identifies the applicable link direction of travel for the Distance Marker.

### Value

F - From Reference Node

T - Toward Reference Node

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A.11 Distance Marker (DistMarker)

B - Both Directions

N - Closed in Both Directions

## Related Attributes

Distance Marker Value

## Usage

Direction can be used for routing and guidance to determine the applicable direction of travel for the distance marker.

## Specification

- Direction is established using the Reference and Non-Reference node. The Reference node is located at the “beginning” of a link. The Non-Reference node is located at the “end” of a link.

# Unit of Measure

## Definition

Identifies the unit of measure mostly used in that country to describe road and traffic conditions.

## Value

M - Metric (kilometres and metres)

E - English (miles and feet)

## Related Attributes

Distance Marker Value

## Usage

This attribute can be used to determine the distance marker unit of measure.

## Specification

- Unit of Measure is published when the unit of measure on the distance markers shield is different than the country's default Unit of Measure.

# Enhanced

## Definition

Enhanced is an attribute that indicates whether a distance marker meets the positional accuracy requirements.

## Value

Y - Distance marker meets positional accuracy of 15 metres

N - Distance marker might not meet positional accuracy of 15 metres

## Related Attributes

Distance Marker Value

## Geometry

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A.11 Distance Marker (DistMarker)

## Usage

The Enhanced attribute can be used to differentiate between interpolated and non-interpolated distance markers in order to determine the reliability of the distance marker location.

## Specification

- When Enhanced = "Y", the Distance Marker meets specified positional accuracy of 15 metres.
- When Enhanced = "N", the Distance Marker might not meet specified positional accuracy within 15 metres.
  - Distance Marker may not be placed with Enhanced accuracy when no posted sign was found in reality; hence distance marker location on the link is generated by interpolation with closest enhanced distance markers.
    - Example: Mile marker 12Mi is not found posted along the road; Mile Marker 12Mi is calculated based on the position of the closest Enhanced mile marker (11 or 13, for example).

# Appendix B

## General Naming Rules

---

**Topics:**

- *General Naming Rules*

## B.1 General Naming Rules

In South Africa, street names are applied per digital source.

### B.1.1 Capital Letters

- NAVSTREETS only publishes text in capital letters.

 **Note:**

Email and URL addresses are an exception to this rule.

### B.1.2 Abbreviations

- Abbreviations are not used unless the name entry exceeds 35 characters. When this occurs words are abbreviated backward, from the last word in the entry. Only the number of words necessary to fit the Feature Name entry into the field are abbreviated.
- In the U.S., words that are covered by the name normalising rules are not abbreviated.
- Spaces are not used between acronyms e.g., “IBM Blvd” not “I B M Blvd”.

### B.1.3 Bilingual Areas

A country or administrative area is considered bilingual when both of the following apply:

- More than one language is defined as an Official Language.
- Of the Official Languages, more than one is modelled by HERE.

Bilingualism is defined at any particular administrative level (from country to settlement). The Country Profile document contains a complete listing of bilingual administrative areas for each country. Different levels of bilingualism (Level 1 through 4) exist. These are also listed in the same document for all bilingual administrative areas.

These are defined as follows:

#### Level 1 Bilingual Area

This is an administrative area that has more than one Official Language (that is modelled by HERE), and more than one of these can be defined as a Regional Primary language (e.g., Brussels in Belgium, where both Dutch and French are the Official Languages). These areas are usually officially recognised by the government as bilingual.

#### Multiple Names

Two names with Name Type = *Base* are published if different administrative names exist for each Official Language. Additional names in a language different from the Official Languages are published with Name Type = *Exonym*. See the following as an example for the city of Brussels (Belgium).

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General Naming Rules

B.1 General Naming Rules

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Name	Language Code	NameType
BRUSSEL	DUT	Base
BRUXELLES	FRE	Base
BRUSELAS	SPA	Exonym
BRUSSELS	ENG	Exonym
BRUXELAS	POR	Exonym
BRYssel	SWE	Exonym
BRYssel	FIN	Exonym
BRÜSSEL	GER	Exonym

## Single Name

One name of Name Type = *Base* with the default Language Code is published if one administrative name exists, which is the same in both Official Languages.

## Level 2 Bilingual Area

This is an administrative area that has more than one Official Language (that is modelled by HERE), but only one regional primary language (e.g. Wales).

## Multiple Names

The name in the regional primary language is published with Name Type = *Base* if different administrative names exist for each Official Language. Names in a language different from the regional primary language are published Name Type = *Exonym*. For example, the city of Helsinki (Finland) would have "Helsinki" as Name Type = *Base* with the FIN Language Code. "Helsingfors" (SWE) is published with Name Type = *Exonym*.

## Single Name

- The name in the regional primary language is published with Name Type = *Base* if one name exists that is the same in both Official Languages.
- The name with the corresponding Language Code is published with Name Type = *Base* if one administrative name exists in a language that is defined in the Country Profile Document as official, but is clearly not the regional primary language. For example, the regional primary language in Wales is English (ENG). A Welsh administrative name in Wales is published with the WEL Language Code.
- Exonyms (i.e. names in Foreign Languages) when they exist are published with Name Type = *Exonym*. For example, "Helsínquia" (POR) would be published as an *Exonym*.

## Level 2 Bilingual Areas - Canada

The administrative representation for the following Canadian Level 2 Bilingual Areas supports Language Code = ENG and Language Code = FRE.

Alberta

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General Naming Rules

B.1 General Naming Rules

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Manitoba

New Brunswick

Ontario

Quebec

For these provinces:

- FRE is the preferred Language Code in Quebec. ENG is the preferred Language Code in all other provinces.
- The administrative area names are published in both languages even if the name spellings are the same.
- All administrative area names are published as Name Type = Base.
- Some administrative area names that had been published previously with Name Type = Exonym are published as Name Type = Base.
- The Cartographic Country Boundary and Cartographic State/Province Boundary are published in both languages.

Example:

Q2, 2009 Administrative Name Representation			Q3, 2009 Administrative Name Representation		
Level 1	Name	Language Code	Level 1	Name	Language Code
Base Name/Official Name	CANADA	ENG	Base Name/Official Name	CANADA	ENG
				CANADA	FRE
Exonym/Alternate Name	CANADÁ	SPA	Exonym/Alternate Name	CANADÁ	SPA
	CANADÁ	POR		CANADÁ	POR
	KANADA	FIN		KANADA	FIN
	KANADA	GER		KANADA	GER
	KANADA	SWE		KANADA	SWE
Level 2	Name	Language Code	Level 2	Name	Language Code
Base Name/Official Name	NEW BRUNSWICK	ENG	Base Name/Official Name	NEW BRUNSWICK	ENG
				NOUVEAU-BRUNSWICK	FRE
Exonym/Alternate Name	NOUVEAU-BRUNSWICK	FRE			
Level 4	Name	Language Code	Level 4	Name	Language Code
Base Name/Official Name	BEAUMONT	ENG	Base Name/Official Name	BEAUMONT	ENG
				BEAUMONT	FRE

## Level 3 Bilingual Area

This is an administrative area that has more than one Official Language (that is modelled by HERE), but no regional primary language (e.g., Luxembourg).

## Multiple Names

- The name in the Default Language is published with Name Type = *Base* if different administrative names exist for each Official Language. Names in a language different from the Regional Primary language are published with Name Type = *Exonym*. For example, at the country level, “Luxembourg” would a *Base name* with the FRE Language Code. “Luxemburg” (GER) would be published as an Exonym.
- Names in Foreign Languages, when they exist, are published as Exonyms. For example, “Lussemburgo” (ITA) would be published as an Exonym.

## Single Names

- The name with the default Language Code is published with Name Type = *Base* if one administrative name exists that is the same in both Official Languages.
- The name with the corresponding Language Code is published with Name Type = *Base* if one administrative name exists in a language that is defined in the Country Profile Document as official.
- Names in Foreign Languages, when they exist, are published as Exonyms.

## Level 4 Bilingual Area

This is an administrative area that has one Official Language (so is not technically bilingual), but this is not the same as the Default Language. For example, (Bezirk) Bernina in Switzerland has ITA as the only Official Language, while the Default Language for Switzerland is GER.

### Single Name

- The name in the regional primary language code is published with Name Type = *Base*. For example, Neuchâtel (Switzerland) is published as a Base name with the FRE Language Code.
- Exonyms (i.e. names in Foreign Languages) when they exist are published as Exonyms.

## B.1.4 Non-Latin Names

HERE publishes UTF-8 encoded data conforming to the Unicode Standard Normalization Form C (NFC). For a listing of published characters per language code, see the Customer Technical Reference Guide (CTRG). Note that characters not listed may be published in order to represent reality.

### Transliteration

Transliteration means Latin-1 representation of a name in a non-Latin character set. It is defined to enable Latin-1 keyboard entry for non-Latin names. Each non-Latin Character set requires a transliteration. Therefore, when a non-Latin language is used for a country, a corresponding Transliteration Type is defined.

### Transcription

Transcription also means to represent (letters or words) using corresponding characters from a different alphabet, that most closely represent the pronunciation in the original language. In HERE Map Content, transcription is used to refer to names that appear in reality in Latin-1 characters in countries that use a different character set by default (e.g., Mc Donalds, Shell, Pizza Hut, etc.).

- ① **Note:** In the context of voice representation, where Transcription means the phonetic representation of a name string, Transcriptions can also exist for non-Latin languages where Voice content is supported.

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### General Naming Rules

### B.1 General Naming Rules

The Transliteration Type indicates a HERE-generated Latin representation (whether Transliteration or Transcription) of a word in a language that does not use Latin-1 characters.

#### Rules

- Each name with a MARC language code that contains Unicode characters always have a corresponding transliteration with a HERE Transliteration Type. For example, all names with the Language Code RUS also have a name with the Transliteration Type RUX.
- In Europe, names with Transliteration Types are generated by HERE.
- In Arabic and some Asian countries, the names with Transliteration Type (e.g., ARE, THE, etc.) represent either a translation or a transliteration. Transliterated Names are based on ground truth, i.e., as sign posted, unlike countries in Europe where HERE generates the Transliteration. As a result, a native non-Latin Name (e.g., a Street Name in THA) can have more than one associated Transliteration Name: a translation and a transliteration, or various transliterations.
- See Country Profiles for countries with their corresponding Transliteration Type.

## B.1.5 Translations

- For countries defined by HERE as multilingual (see the Country Profiles: Regional Bilingual/Multilingual Information for listing), translations either in English or French are also published. These translations for various feature names are published in the Name columns of the various layers. Additionally, transliterations are also published in the various “trans” layers.

## B.1.6 Punctuation

- Punctuation (e.g., apostrophes, hyphens, etc.) is included if indicated in the source material. The following characters are valid: ~ ! @ # \$ % ^ & \* ( ) \_ + | ^ - = \ { } [ ] ; : ' " , . < > ? / unless noted otherwise in the country specific rules.
- Feature Names do not begin with a “-”. If the street type creates a Feature Name which begins with a dash, then the whole name is put into the Feature Name and no Street Type is applied. Example: “Plein-Zuid” and “Platz-der-Deutschen-Einheit”

## B.1.7 Naming Rules for Specific Features

#### RDS-TMC Code

For Feature Type 9992000 publishes an RDS-TMC code. The RDS-TMC code is published in the Traffic layer in the format: ABCCDEEEEE, where:

A	<p>is the one character Direction of Road. This is based on the Direction of Travel on the link. “+” if the link direction is To. “-” if the link direction is From.</p>
---	--

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## General Naming Rules

### B.1 General Naming Rules

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B	is the one character EBU Country Code.  Note: EBU are defined for European Countries. There are no official EBU codes for Canada and the U.S. HERE has defined "C" for Canada and "1" for the U.S.
CC	is the two digit Location Table number.
D	is the one character RDS direction, where:  + is in the positive direction and external to the Problem Location.  - is in the negative direction and external to the Problem Location.  P is in the positive direction and internal to the Problem Location.  N is in the negative direction and internal to the Problem Location.
EEEEEE	is the five digit Location Code. This has leading zeros if necessary.

 **Note:**

RDS-TMC codes do not exist in South Africa.

#### Ferry Routes (Feature Type = 9999999)

When a boat or rail ferry is named, the name is applied to each link that comprises the route. When the route itself has no name, the name of the ports connecting the two ends of the ferry route (e.g., Vlissingen-Breskens), or an E-route number when the ferry connects two countries, is applied.

#### Frontage Roads (Feature Type = 9999999)

- When the name of the frontage road is supplied by source material, that name is applied to the road.

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## General Naming Rules

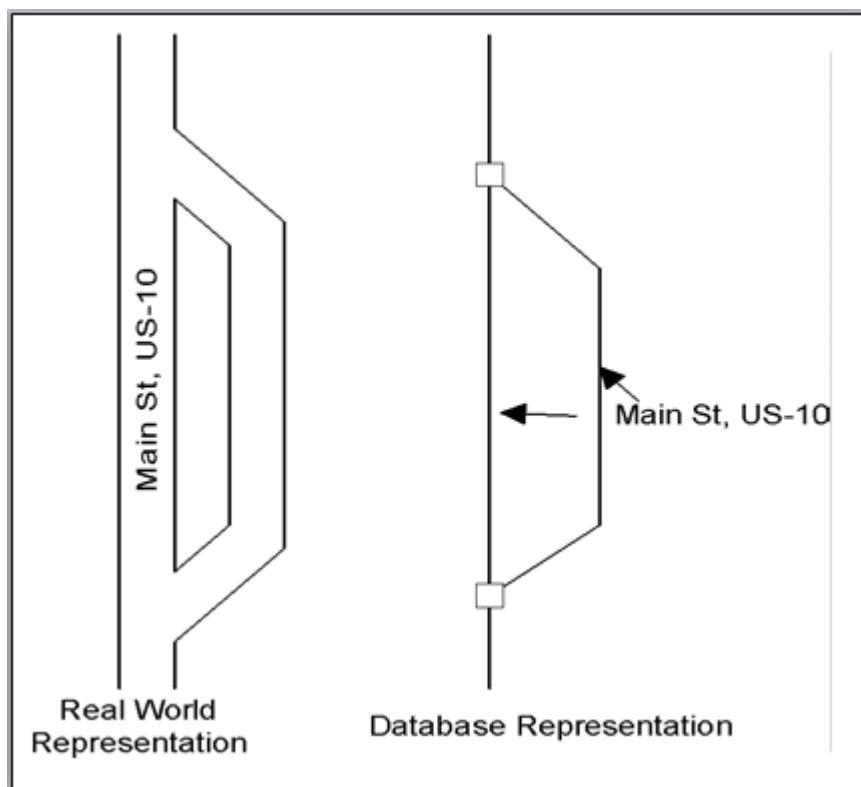
### B.1 General Naming Rules

- Route names applied to frontage roads have no Named Route Type information unless there are posted route type signs. Additionally, if no Named Route Type is applied to a highway name on the frontage road then any directional in the name (N, S, E, W) is applied as a Suffix.

#### Frontage Roads-North America

When the name of the frontage road cannot be determined from the source material, all the names and route numbers assigned to the associated main road are applied to the frontage road, as shown in [Figure 460: on page 1141](#).

**Figure 460:**

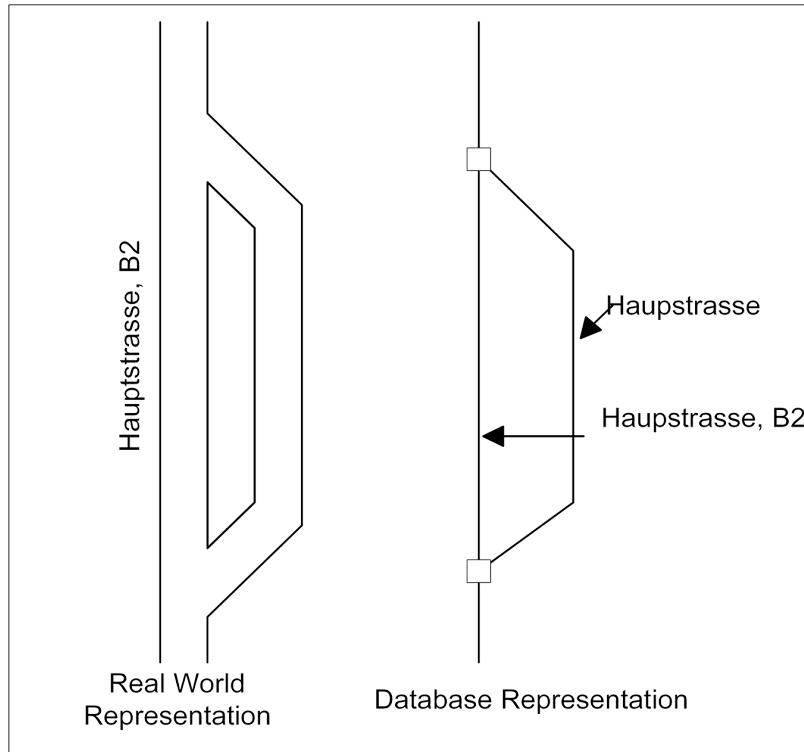


#### Frontage Roads-Europe

In Europe, route numbers are generally not assigned to frontage roads.

When the name of the frontage road cannot be determined from the source material, only the non-route road name assigned to the associated main road is applied to the frontage road, as shown in [Figure 461: on page 1142](#).

**Figure 461:**



### **Hurricane Prone Area (Feature Type = 600101)**

- Names are included based on government sources if available.

### **Flood Prone Area (Feature Type = 600102)**

- Names are included based on government sources if available.

### **Tsunami Prone Area (Feature Type = 600103)**

- Names are included based on government sources if available.

### **Intersections in India**

These features are named "Chowk" and "Circle" in Mumbai and New Delhi, respectively.

### **Intersection Internal Links (Feature Type = 9999999)**

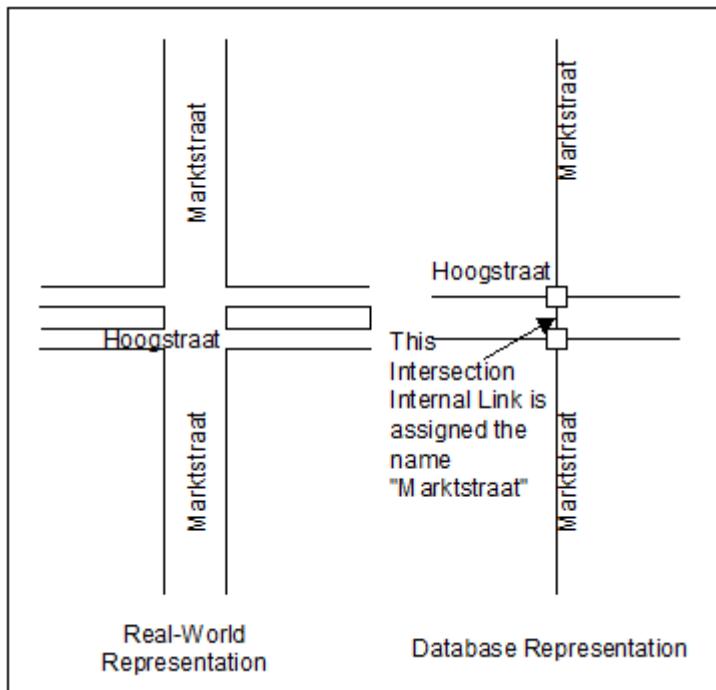
# Reference Guide

## General Naming Rules

### B.1 General Naming Rules

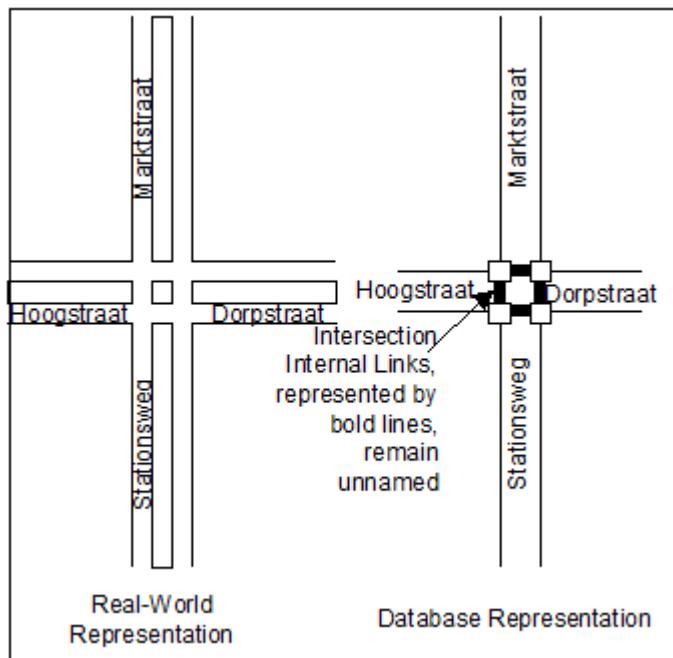
- If the name of a road is the same on both sides of an Intersection Internal link, that road name is applied to the intersection internal link, as shown in [Figure 462](#): on page 1143.

**Figure 462:**



- If, however, the name of the road is different on both sides of the intersection, as illustrated in [Figure 463](#): on page 1143, the intersection internal link remains unnamed.

**Figure 463:**



# Reference Guide

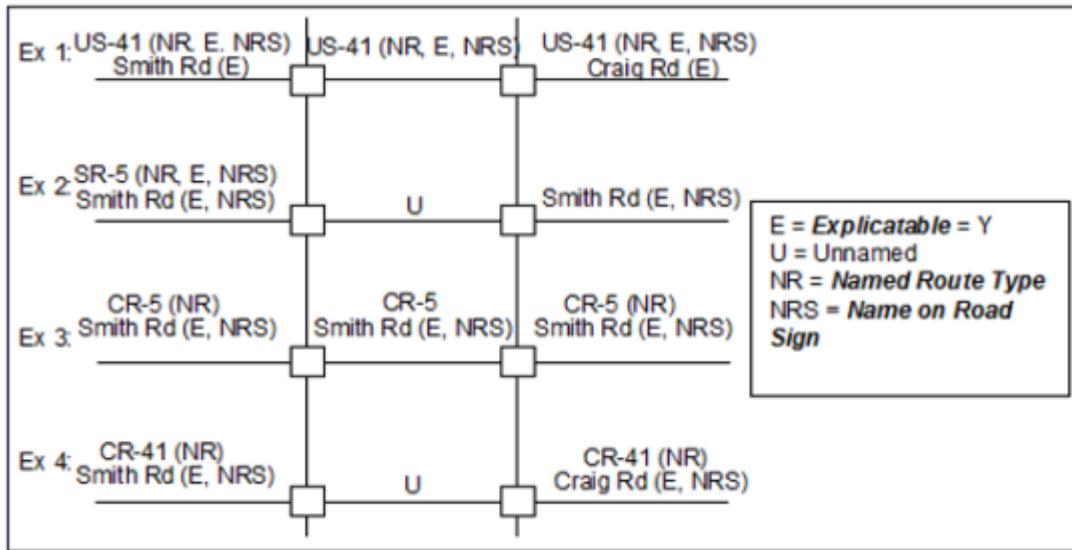
## General Naming Rules

## B.1 General Naming Rules

here

- [Figure 464:](#) on page 1144 provides examples of how names are applied to intersection internal links. Examples 2 and 4 are unnamed because of the change in the name.

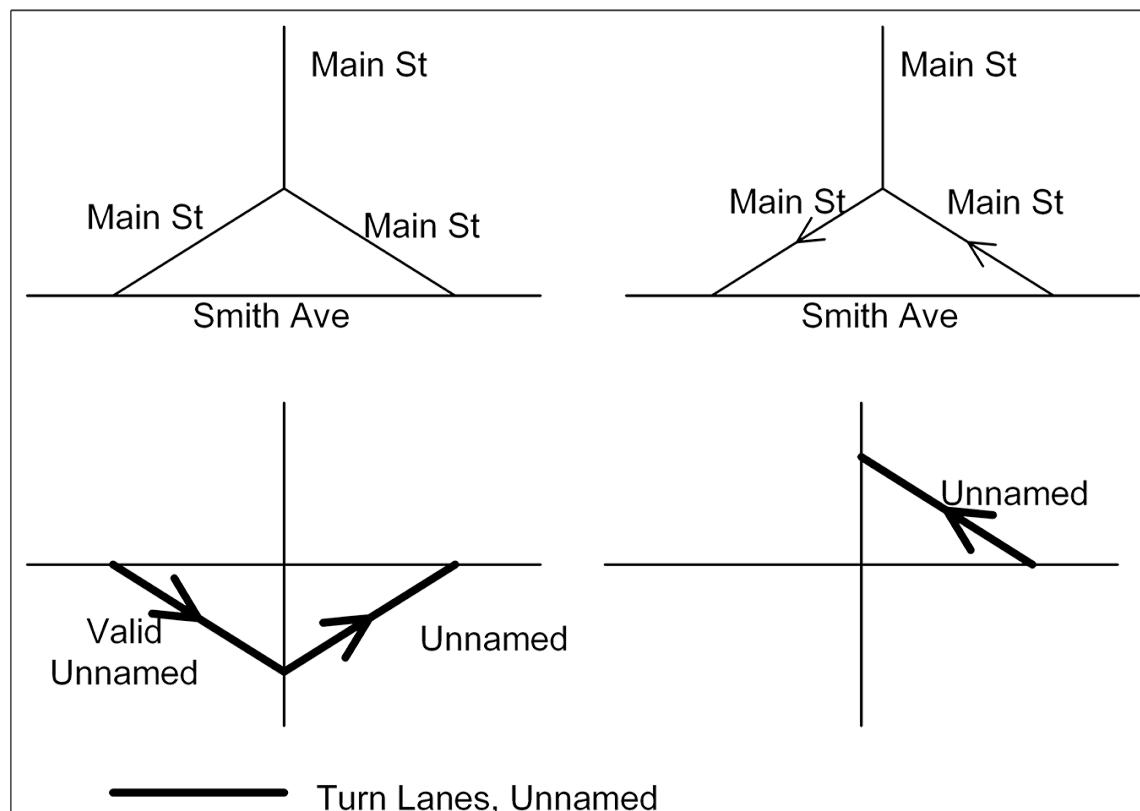
**Figure 464:**



### Manoeuvre (Feature Type = 99999999)

When a road ends with two splitters, the links of the splitters are named. If a road were to have one turn lane that link is unnamed. See [Figure 465:](#) on page 1144.

**Figure 465:**



# Reference Guide

## General Naming Rules

## B.1 General Naming Rules

### Ramps (Feature Type = 9999999)

- Ramps are named with the Exit Number and/or the Junction Name from a posted sign. If neither an Exit Number nor a Junction Name exists, the ramp is unnamed.

### Route Numbers (Feature Type = 9999999)

- The appropriate Route Number is applied for each numeric or alphanumeric route. See section [Name Route Type](#) on page 476.
- In Europe the convention is to use E# for all European Route Numbers.
- For standard naming conventions for the U.S. State Routes. See State Route in the section [Name Route Type](#) on page 476.

### Mountain Passes (Feature Type = 9999999)

In Europe only, the names of mountain passes are entered on short links of about 200 metres/656 feet, with the middle of the link at the location of the pass on the map.

### Rest Areas (Feature Type = 9999999)

- Rest Area roads are unnamed. Even if the Rest Area has a name (e.g. Lincoln Oasis), the links are unnamed.

### Roundabouts and Special Traffic Figures (Feature Type = 9999999)

- If a Roundabout or a Special Traffic Figure is named, that name is applied to each Link that comprises the Roundabout or Special Traffic Figure, as shown in [Figure 466:](#) on page 1146, otherwise the links are coded as unnamed.

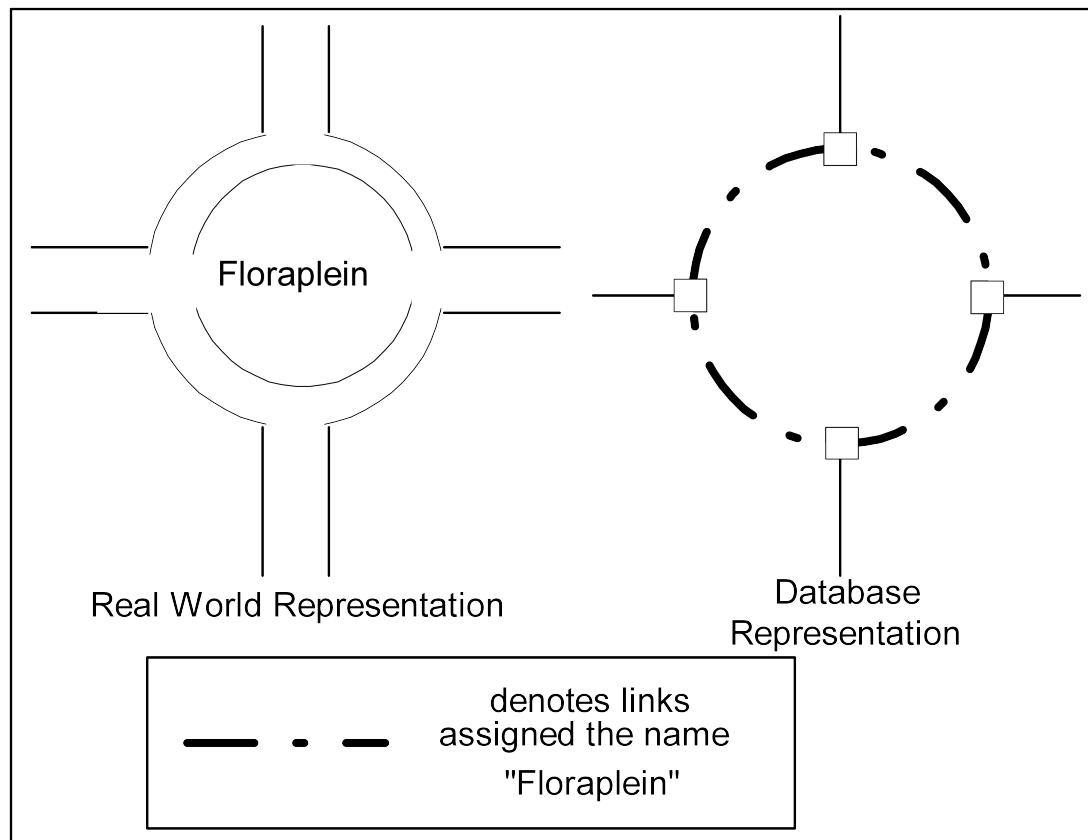
# Reference Guide

## General Naming Rules

### B.1 General Naming Rules

- The names or route numbers of the streets that connect to the Roundabout or Special Traffic Figure are not included except when necessary for addressing.

**Figure 466:**



#### **POI Access Roads (Feature Type = 9999999)**

- POI access roads are generally unnamed.

#### **Turn Lanes and U-Turn Lanes (Feature Type = 9999999)**

A name is not assigned to turn lanes or U-turn lanes, as shown in [Figure 467](#): on page 1147 and [Figure 468](#): on page 1147. The only exception is when there are addresses present.

# Reference Guide

## General Naming Rules

### B.1 General Naming Rules

here

Figure 467:

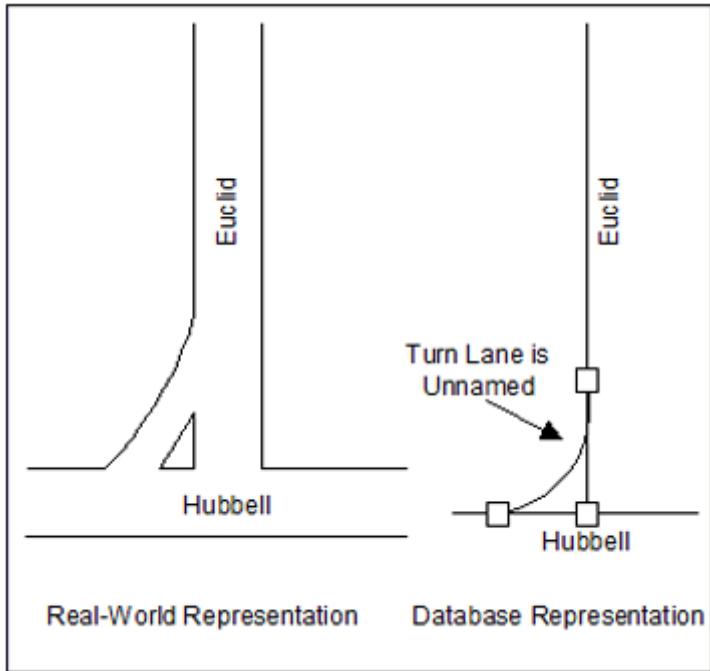
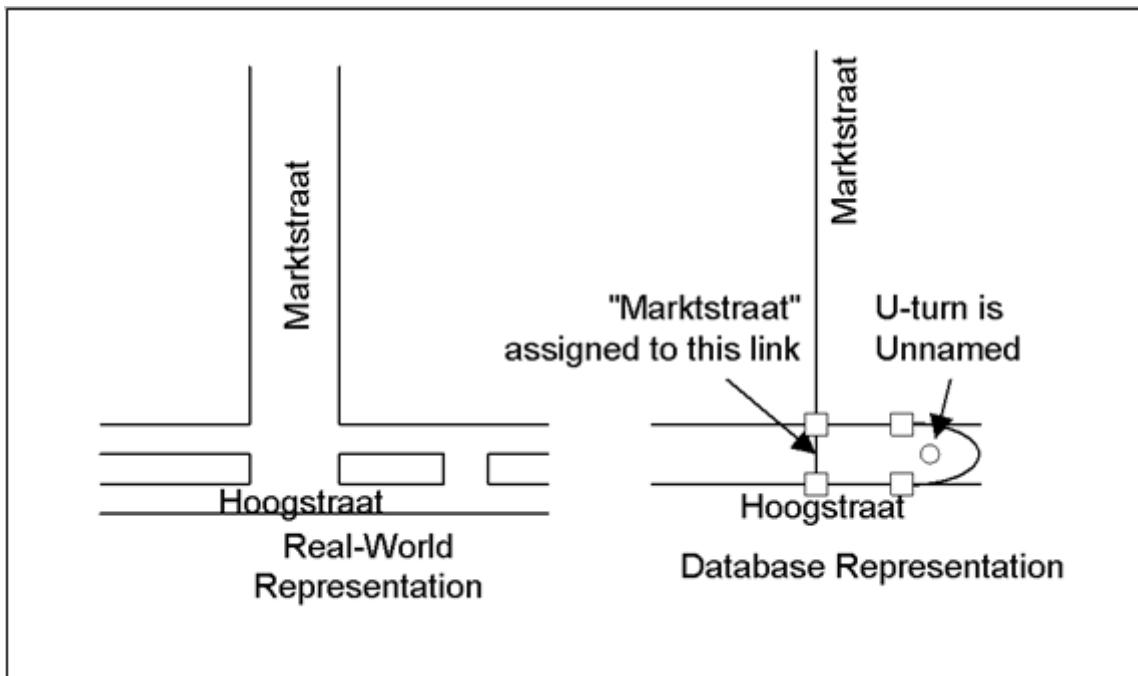


Figure 468:



#### Undefined Traffic Areas (Feature Types: 9999999 (internal links) and 0900159 (polygon links))

- If an Undefined Traffic Areas (UTA) is named, that name is applied to each link within the UTA and the UTA polygon, as shown in [Figure 469](#): on page 1148. If the Undefined Traffic Area is unnamed, no name is applied to each link within the UTA or to the UTA polygon.

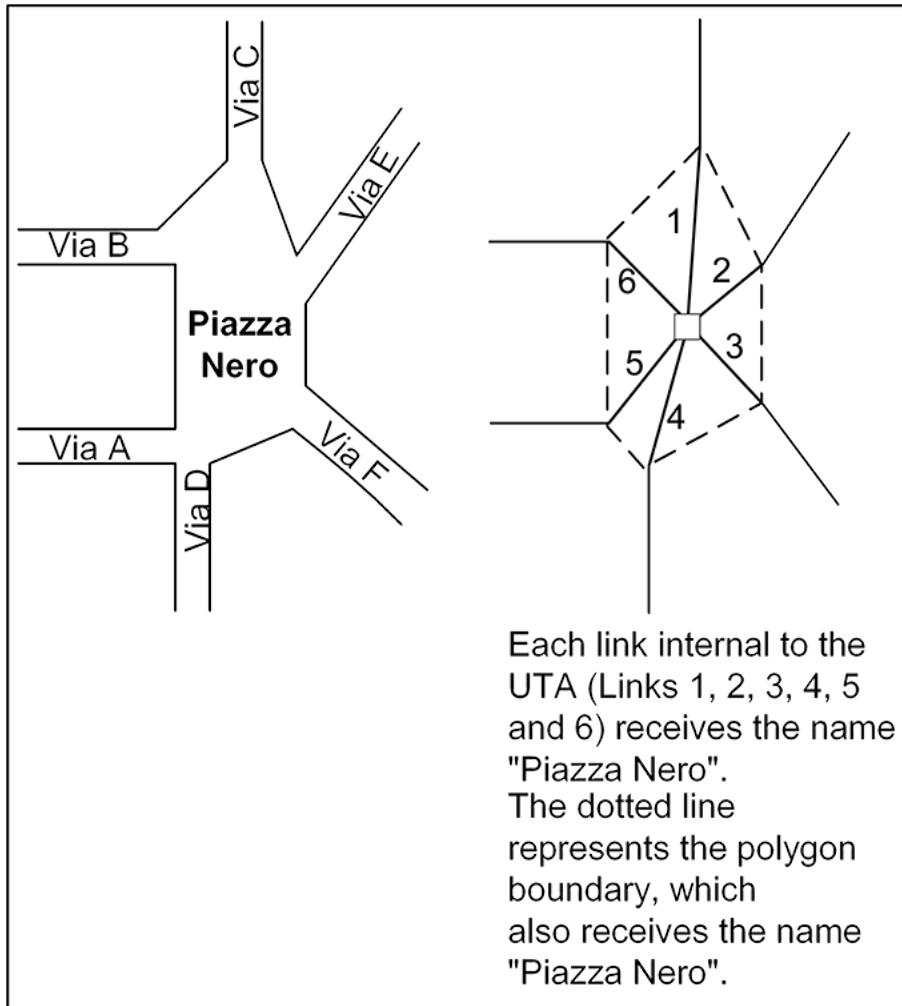
# Reference Guide

## General Naming Rules

### B.1 General Naming Rules

here

Figure 469:



#### Roads within Airports (Feature Type = 9999999)

- Posted street names within the airport are coded with Explicable = Y and Name On Road Sign = Y.
- If no posted street names exist, the links are unnamed.

#### Roads within Higher Education (Feature Type = 9999999)

- In the U.S. only, Road Geometry within a Higher Education is named when:
  - Names are posted on a street sign.
  - Names are listed in the postal file.
- When the names in the postal file are academic building or residence hall names, rather than street names, the names are applied with the following name status:
  - When the postal file name is one of the multiple names on a link, Postal Name = Y is applied to the Postal Name. All other name status is set to N.
  - When the postal file name is the only name on the link, Explicable = Y, Name on Road Sign = Y, Vanity Name = Y, and Postal Name = N are applied.

#### Roads in Complex POIs in the U.S.

- Names are coded as signed in reality. If a sign does not exist in reality, then the road is Valid Unnamed.

## Reference Guide

### General Naming Rules

### B.1 General Naming Rules

- All driving lanes within parking lots are Valid Unnamed.

 **Note:** If the shopping mall name exists on a street sign for the main entrance road, this is applied as Vanity Name to the entrance link.

#### Express, High Occupancy Vehicle (HOV) or Bus Lanes (Feature Type = 9999999)

- When Express, HOV or Bus lanes are digitised separately from the main links of a controlled access road, the appropriate local term ("EXPRESS", "HOV", "BUS") is included in the Feature Name for each Link to differentiate these lanes from the main part of the roadway. Also, "LN" is applied in the Street Type field. For example:

Feature Name	Kennedy Express	I-10 HOV	I-94 BUS
Street Type	LN	LN	LN
Route Type	N/A	N/A	N/A

#### Unnamed Roads Added for Connectivity (Feature Type = 9999999)

- If it is determined from all source material that the link is not named, the link remains unnamed in the database.
- A name is applied for an unnamed connector road leading to named roads within apartment complexes, etc., based on the name of the apartment complex or other relevant signs. If unnamed road(s) connect a named road to an entrance ramp, no name is created for the unnamed road(s). In France, name information found on "Lieux-dits" is not included.

#### Oceans (Feature Type = 0500116)

- The ocean polygon receives the ocean name in the corresponding country's language. For the Pacific Ocean off the coast of California, the name would be "Pacific Ocean" with ENG as the Language Code.
- If there is a nearby country, the ocean polygon geometry coincides with that country's land mass. However, the nearby administrative names are not added to the ocean links.

Administrative Features (Feature Types = 0907196, 0909996, 0900170, 0900101, 0900156)

See [Administrative Features](#) on page 1152 for specific rules.

Cartographic Country Boundary Feature (Feature Type = 0908000)

See [Cartographic Country Boundary](#) on page 1154 for specific rules.

Cartographic State/Province Boundary Feature (Feature Type = 0908001)

See [Cartographic State/Province Boundary](#) on page 1155 for specific rules.

Building/Landmark Polygons (Feature Types = 2005000 through 2005899).

See [Feature Type](#) on page 844 for descriptions and rules for these Feature Types.

## B.1.8 Naming Rules for POIs

- POIs are generally named with their official names if available. However, there are country-specific conventions in naming if these are unnamed in reality.

# Reference Guide

## General Naming Rules

### B.1 General Naming Rules

- The following categories may be unnamed:
  - Parking Lots
  - Parking Garage/House
  - Place of Worship
  - Public Restroom
  - Taxi Stand

## Punctuation

- POI Names may contain periods, e.g., names that include “.com.”
- Apostrophes may be included if they indicate possession, e.g., Frankie’s Restaurant.”
- If dashes or hyphens exist in the POI name, spaces are not included before or after the dash/hyphen, e.g., “Tied-House Cafe and Brewery.”
- Commas may be included, e.g., “Wright, Jones, and Smith.”
- Spaces or apostrophes are not included in names such as: Mc\_/\_Mac\_/\_O\_/\_O’ or similar letter combinations in POI names. For example, POI names are entered as “McDonnel” and “OBrien.”
- If a POI name has double parenthesis in reality, only single parenthesis are used. For example, “Wild Bills (Best Bison) Burgers” would be included as “Wild Bills (Best Bison Burgers).”

## Location Identifier

- A Location Identifier can be added to a POI name. Conventions can vary by country and by POI category. The following are examples of Location Identifiers added to POI Names:
  - Extended Navigation
    - Example: Macy’s-Woodfield Mall, Home Depot-Mall 205, etc.

# Appendix C

## Administrative/Zone Rules

---

**Topics:**

- *Introduction*
- *Administrative Features*
- *Zones*
- *Administrative Level Coding and Boundary Features*

## C.1 Introduction

---

This chapter contains the rules for administrative and zone coding.

This chapter contains the following sections:

- Administrative Features
- Zones
- Administrative Level Coding and Boundary Features

## C.2 Administrative Features

---

### C.2.1 Administrative Area Level 1

#### **Feature Type**

0907196

#### **Description**

Country

#### **Rules**

##### **Administrative Boundary Feature**

- AA *Level 1* features are linear features.

# Reference Guide

Administrative/Zone Rules

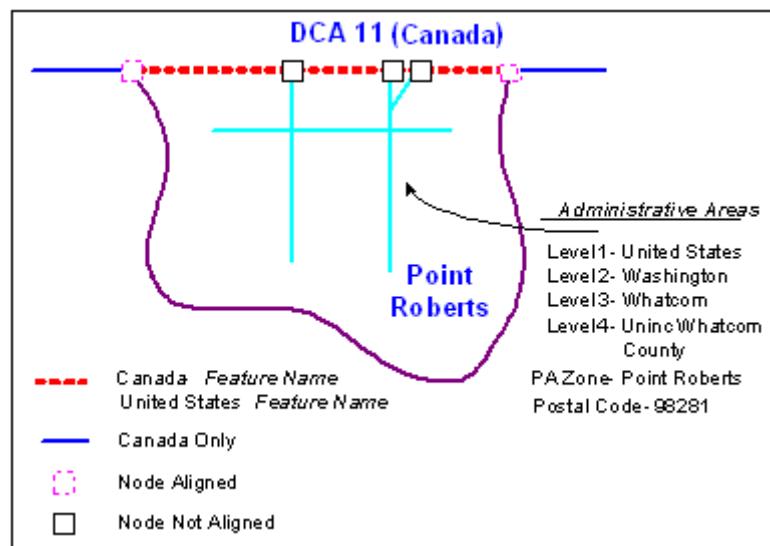
C.2 Administrative Features

here

- Unless otherwise described below, only one AA *Level 1* feature exists in a database. For example AA *Level 1* feature for Canada does not appear in NAVSTREETS of the U.S. even though they physically share borders. Examples of exceptions to this are as follows:

- In Europe, two AA *Level 1* features exist in NAVSTREETS on the boundary link, if there is a country fully contained within another country (in the HERE products). For example, the Vatican City exists fully within Italy. Therefore, NAVSTREETS for Italy has two *Country* features on the Vatican City border.
- In Canada, the U.S. feature also exists for the portions of the U.S./Canadian border that connect Point Roberts, WA and the Red Lake Indian Reservation in Minnesota to Canada. The remainder of the border only represents Canada.

**Figure 470:**



## Bilingual Areas

- In countries with multiple official languages, multiple features are published for AA *Level 1* if the names are different for each language.

**① Note:**

For Canada, the administrative names are published in both ENG and FRE Language Codes even if the names are the same. The feature with the default Language Code is always published first.

## Non-Latin Admin Names and Phonetic Transcriptions

- In countries where names are represented using non-Latin characters (e.g., Russian, Greek, etc.), additional names are published for Admin Names. These are the following:
  - Transliteration, which has a “transliterated” Language Code (e.g., RSX for Russian Transliteration) is published.
  - Transcription, which has a “transcribed” Language Code (e.g., SCT for Serbian Transcribed) represents an alternative Latin-1 representation.

# Reference Guide

Administrative/Zone Rules

C.2 Administrative Features

- For languages where phonetic transcription is available (e.g., Spanish, French, etc.), Admin Names are transcribed into phonemes and are also published.
  - Note:** Transcription Records for these names are also supported by the delivery of external “look-aside” voice files.

## Administrative Coding of a Link

- The Country level is coded for all links.
- In Europe, the *Left* and *Right Area IDs* are different on a boundary link if that country is fully contained within another country (in the HERE products). For example, Vatican City exists fully within Italy. Therefore, Italy has different *Left* and *Right Area IDs* on the Vatican City border link.
- In Canada, the portions of the U.S./Canadian border that connect Point Roberts, WA and the Red Lake Indian Reservation in Minnesota to Canada, have different Left and Right Area ID to represent the two countries respectively. The remainder of the border only represents Canada. See [Figure 470:](#) on page 1153.
- In all other cases, the *Left* and *Right Area IDs* are the same on a country border link. For example, in Canada, the *Left* and *Right Area IDs* are identical on the country border with the U.S.; there is no U.S. Administrative Coding in the Canadian database for any link.

## C.2.2 Cartographic Country Boundary

### Feature Type

908000

### Description

Cartographic Country Boundary

### Usage

Cartographic Country Boundary can be used to display the Country boundaries on land between adjacent countries. For example, these are highlighted in red.

**Figure 471:**



# Reference Guide

Administrative/Zone Rules

C.2 Administrative Features

## Rules

### Cartographic Country Boundary Feature

- *Cartographic Country Boundary* features are only coded on links that have the *Country Boundary Feature* (*Feature Type* = 907196) and no major water features (e.g. oceans, Great Lakes, etc.).
- A separate Country feature is published for external territories (i.e., areas that are controlled by, but are not part of another country).
- In countries with multiple official languages, multiple features are coded if the names are different in each language.
- Note however, that for countries that do not share land borders with other countries ( e.g., U.S.V.I., Puerto Rico, New Zealand, Macau-China, and Hong Kong-China), no Feature Name for *Cartographic Country Boundary* is published.
- Since *Cartographic Country Boundary* features are always coded on links with *Country Boundary Feature* (*Feature Type* = 907196), the rules for administrative coding is the same as for *Country Boundary* features.

## C.2.3 Cartographic State/Province Boundary

### Feature Type

0908001

### Description

Cartographic State/Province Boundary

### Usage

*Cartographic State/Province Boundary* can be used to display the State/Province boundaries on land between adjacent states and provinces.

## Rules

- *Cartographic State/Province Boundary* features are coded on links that are not ocean features or bay/harbor features that are adjacent to ocean features (non-land bound features).
- Since *Cartographic State/Province Boundary* features are published on links with the *State* feature (*Feature Type* = 0909996) or *County Boundary Feature* (*Feature Type* = 0900170), the rules for administrative coding are the same as for the *State Boundary* or *County Boundary* features.
  - ① **Note:** The *County Boundary* is only applicable when the Country has 4 Administrative Levels and the lowest is Settlement, for example: Australia.

## C.2.4 Administrative Area Level 2

### Feature Type

Varies by Country, see [Administrative Level Coding and Boundary Features](#) on page 1169

### Description

Varies by Country, see [Administrative Level Coding and Boundary Features](#) on page 1169.

- AA Level 2 features are linear features.

# Reference Guide

Administrative/Zone Rules

C.2 Administrative Features

- Two *AA Level 2 Features* exists for every boundary link in the database at this level. However, if the boundary represents the edge of the database, only one *AA Level 2 Feature Name* exists.
  - For example, on the Oregon and Californian border, California is published as the *AA Level 2 Feature Name* in DCA 1 and Oregon is published as the *AA Level 2 Feature Name* in DCA 2.

## Administrative Coding of a Link

- The Administrative Level 2 is coded for all links.
- Different *Left* and *Right Area IDs* exist for every *AA Level 2* boundary link in the database at this level except in the case described below:
  - The *Left* and *Right Area IDs* are the same on database boundary links. For example, on a U.S. country border link, the *Left* and *Right Area IDs* are identical; there is no Canadian administrative coding in the U.S. databases for any link.

## C.2.5 Administrative Area Level 3

### Feature Type

Varies by Country, see [Administrative Level Coding and Boundary Features](#) on page 1169

### Description

Varies by Country, see [Administrative Level Coding and Boundary Features](#) on page 1169

### Rules

#### Administrative Boundary Feature

- Two *AA Level 3 Feature Names* exist for every boundary link in the database at this level. However, if the boundary represents the edge of the database, only one *AA Level 3 Feature Name* exists.
- *AA Level 3* features are associated with *Polygon IDs*. The *Polygon ID* can be used to generate polygons.  
For example, a NAVSTREETS file of the U.S. that ends at the border with Canada, only contains the information for the U.S. levels. Canadian boundary features are not included.

#### Administrative Coding of a Link

- The Administrative Level 3 is coded for all links.
- If duplicate addresses exist at a lower level (such as *AA Level 4* or *AA Level 5*), the higher level (*AA Level 3*) may be needed for a refined address resolution.

# Reference Guide

Administrative/Zone Rules

C.2 Administrative Features

here

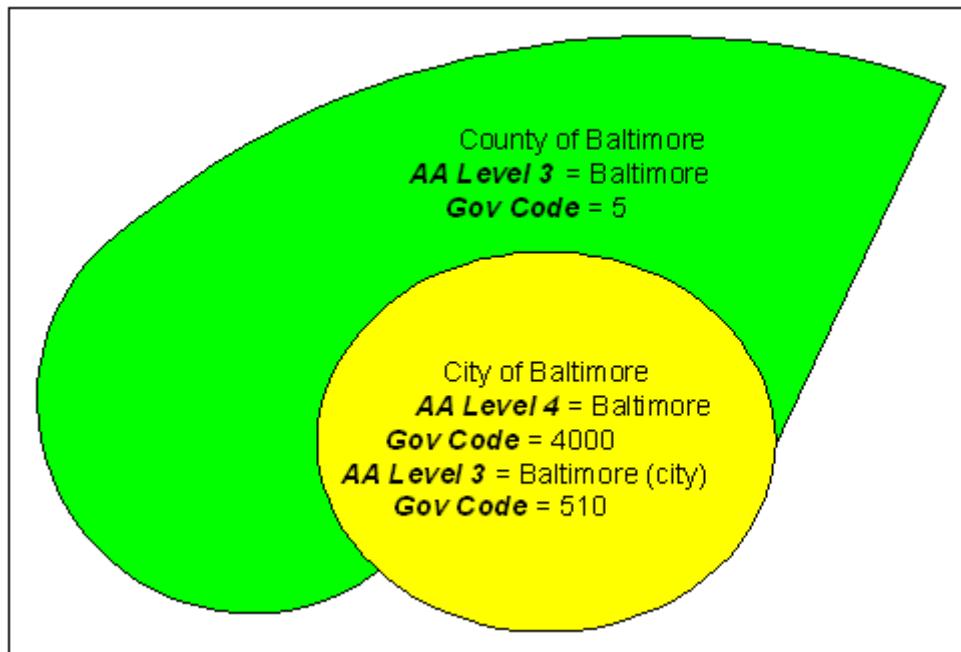
- In the U.S. where *AA Level 3* = County, there are independent cities such as Baltimore, MD, St Louis, MO, Carson City, NV, etc., which are not officially in any *AA Level 3*. In these cases, “(city)” is specified in the *AA Level 3* name.

For example, the city of Baltimore would be published as:

*AA Level 4 Feature* for Baltimore, with Government Code of 4000 *AA Level 3 Feature* for Baltimore (city), with Government Code of 510

- However, do not confuse this *AA Level 3 Feature* with the county of Baltimore (Gov Code = 5). See [Figure 472](#): on page 1157.

**Figure 472:**



- Different *Left* and *Right Area IDs* exist for every *AA Level 3* boundary link in the database at this level except in the case of database boundary links.
- The *Left* and *Right Area IDs* are the same on database boundary links, regardless of whether or not the adjacent country is part of the HERE product set. For example, on a U.S. country border link the *Left* and *Right Area IDs* are identical; there is no Canadian administrative coding in the U.S. databases for any link.

## Reference Guide

Administrative/Zone Rules

C.2 Administrative Features

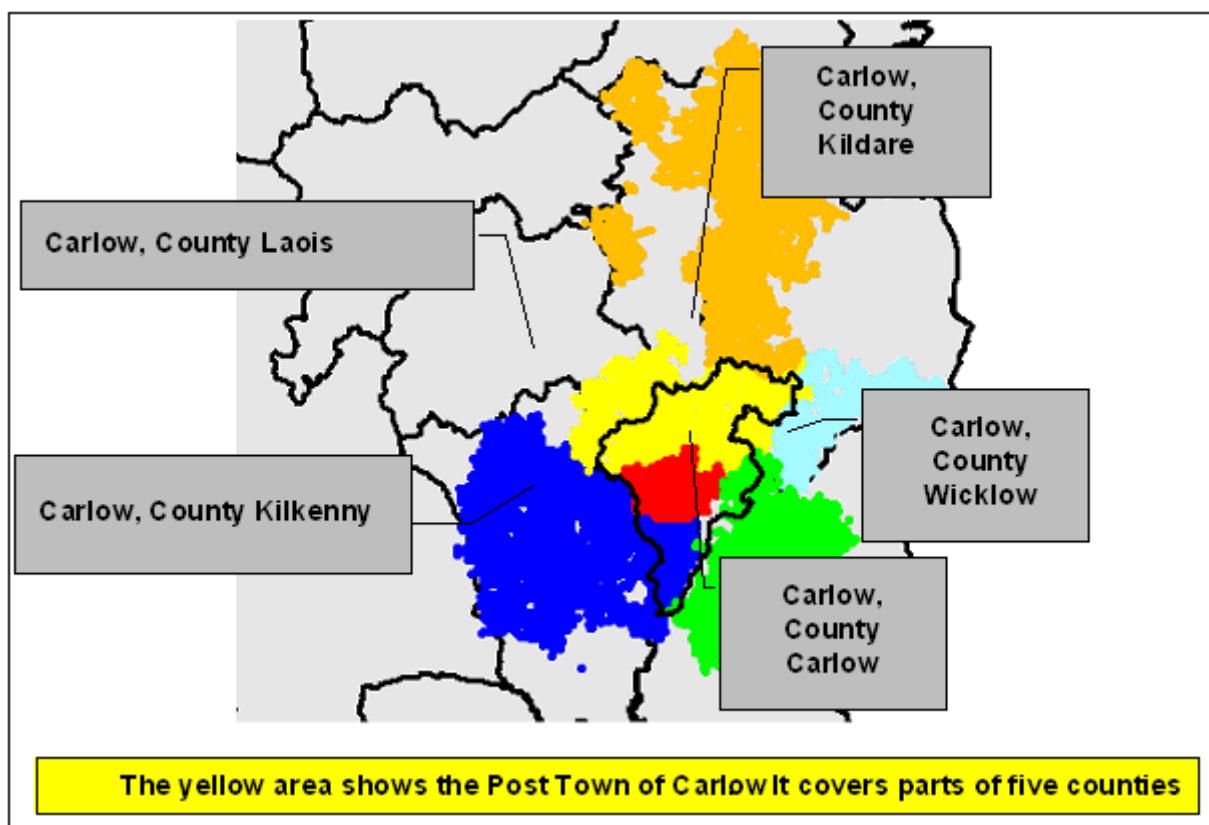
- In the Republic of Ireland where AA Level 3 = Post Town, a number of Post Towns span multiple Counties. For example, the Post Town of Carlow spans the following: County Wicklow, County Kildare, County Kilkenny, County Carlow, and County Laois. See [Figure 473:](#) on page 1158.

The administrative coding reflects this situation.

For example:

- Country: Ireland
  - Post County: County Carlow
  - Post Town: Carlow
  - Locality: Agha
- Country: Ireland
  - Post County: County Laois
  - Post Town: Carlow
  - Locality: Ardateggle

**Figure 473:**



## C.2.6 Administrative Area Level 4

### Feature Type

Varies by Country, see [Administrative Level Coding and Boundary Features](#) on page 1169

### Description

Varies by Country, see [Administrative Level Coding and Boundary Features](#) on page 1169

## Rules

### Administrative Boundary Feature

- AA *Level 4* features are associated with *Polygon IDs*. The *Polygon ID* can be used to generate polygons.
- This feature exists in Prime Inclusion Areas, Network, In-Process Data/Integrated, and Connector Road/City-to-City areas (Network/In-Process Data inclusion is dependent on the particular country).
- When AA *Level 4* represents a spanning set of polygonal features, two AA *Level 4* Features exist in NAVSTREETS for every AA *Level 4* boundary link in the database. However, if the boundary is the edge of the database, only one AA *Level 4* Feature exists.
- When AA *Level 4* represents a non-spanning set of polygonal features (e.g. built-up area boundaries in Europe, South Africa, and Canada), one AA *Level 4* feature exists for every AA *Level 4* boundary link unless the link is the boundary between two AA *Level 4* areas (two AA *Level 4* features exist). See [Administrative Area Level 5](#) on page 1161 for more information.
- In administrative areas with multiple official languages, multiple *Base Names* are published if the official names are different in each language.

 **Note:**

The *Base Name* with the default *Language Code* is always published first.

- In the U.S. where AA *Level 4* = City, a city may exist in multiple counties. In this case, only one polygon is created to represent the city. For example, Portland, OR exists in 3 counties. However, there is only one polygon for the entire city of Portland.

 **Note:**

Spanning set of polygons for AA *Level 4* does not exist in the U.S.

- In the following states, township boundaries exist as *City Boundaries*:
  - Connecticut
  - New Hampshire
  - New Jersey
  - New York
  - Maine (Township coding does not cover 100% of the state.)
  - Massachusetts
  - Michigan
  - Pennsylvania
  - Rhode Island
  - Vermont
  - Wisconsin (Township coding only exists in Prime Inclusion Areas.)

### Administrative Coding of a Link

- The Administrative Level 4 is coded for all links.
- When AA *Level 4* represents a spanning set of polygonal features, different *Left* and *Right Area IDs* exist for every AA *Level 4* boundary link in the database. However, if the boundary is the edge of the database,

# Reference Guide

Administrative/Zone Rules

C.2 Administrative Features

the *Left* and *Right Area IDs* are the same. For example, on a U.S. country border link the *Left* and *Right Area IDs* are identical; there is no Canadian administrative coding in the U.S. databases for any link.

- When *AA Level 4* represents a non-spanning set of polygonal features (e.g. built-up area boundaries in Europe, South Africa, and Canada), the *Left* and *Right Area IDs* are the same unless the link is the boundary between two *AA Level 4* areas (different *Left* and *Right Area IDs* exist). See [Administrative Area Level 5](#) on page 1161 for more information.
- In administrative areas with multiple official languages, multiple *Base Names* are published if the official names are different in each language.

 **Note:**

The *Base Name* with the default *Language Code* is always published first.

- When additional names exist for an *AA Level 4* area, in the official language(s) and/or foreign language(s), these are published as *Synonyms* and *Exonyms*, respectively.
- In the U.S., incorporated cities, townships/towns, and unincorporated county areas are coded at this level.

 **Note:**

Unincorporated county administrative information serves as a filler for *AA Level 4*.

- In the U.S., the “City” level was designed to model incorporated places. However, in some states, there are other legally defined entities called “towns” or “townships” that are similar to incorporated cities. Towns and townships are both labelled by the U.S. Census Bureau as townships and are treated as cities in the database.
  - In states where townships exist, cities and townships form a spanning set of the lowest administrative level. This means whenever you are within any county, you are always within either a township or a city.
  - All townships and towns are named using “Twp” or “Town of” e.g., Scotch Plains Twp and Hempstead, Town of.
  - Townships exist in the following States:
    - Connecticut
    - New Hampshire
    - New Jersey
    - New York
    - Maine (Township coding does not cover 100% of the state.)
    - Massachusetts
    - Michigan
    - Pennsylvania
    - Rhode Island
    - Vermont
    - Wisconsin (Township coding only exists in Prime Inclusion Areas.)

 **Note:** Michigan - Township boundaries are included only in cases where in reality, they are incorporated as a city. If unincorporated, the boundary features are not included because they are not displayed on road maps.

- An *AA Level 4* feature may exist in more than one *AA Level 3* feature. For instance in the U.S., this is the case when a city spans multiple counties. For example, the city of Portland, OR, exists in three counties.

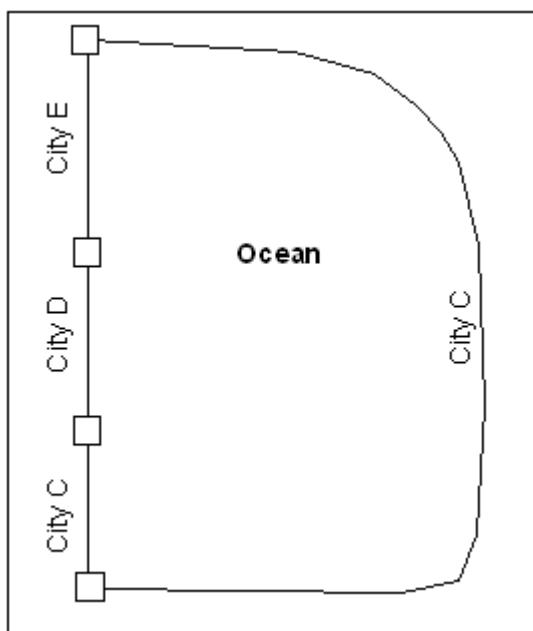
## U.S. Example

The city of Hampstead (Gov Code: 36500) exists in both Carroll county and Baltimore county.

What is published?

- AA *Level 3 Feature* for Carroll, with Gov Code of 13
  - AA *Level 3 Feature* for Baltimore, with Gov Code of 5
  - Two AA *Level 4 Features* for Hampstead (each with its own *Area ID*, but with the same Gov Code of 36500) are published.
  - The two AA *Level 4 Features* for Hampstead can be combined based on the same *Government Code*, as opposed to two separate cities which would have different *Government Codes*.
  - Each AA *Level 4 feature* has a corresponding Named Place POI. However, in the case of the one AA *Level 4* in multiple AA *Level 3s*, only one Named Place POI is published.
  - Administrative coding for Oceans: The link(s) in the ocean are assigned with the administrative code of the link that is the southern most end point of the coast (land). See [Figure 474:](#) on page 1161.
- ① **Note:** Due to the consolidation of the links when the seamless regions are created, the administrative coding along the links in the overlap area may differ.

**Figure 474:**



## C.2.7 Administrative Area Level 5

### Feature Type

Varies by Country, see [Administrative Level Coding and Boundary Features](#) on page 1169

### Description

Varies by Country, see [Administrative Level Coding and Boundary Features](#) on page 1169

### Rules

# Reference Guide

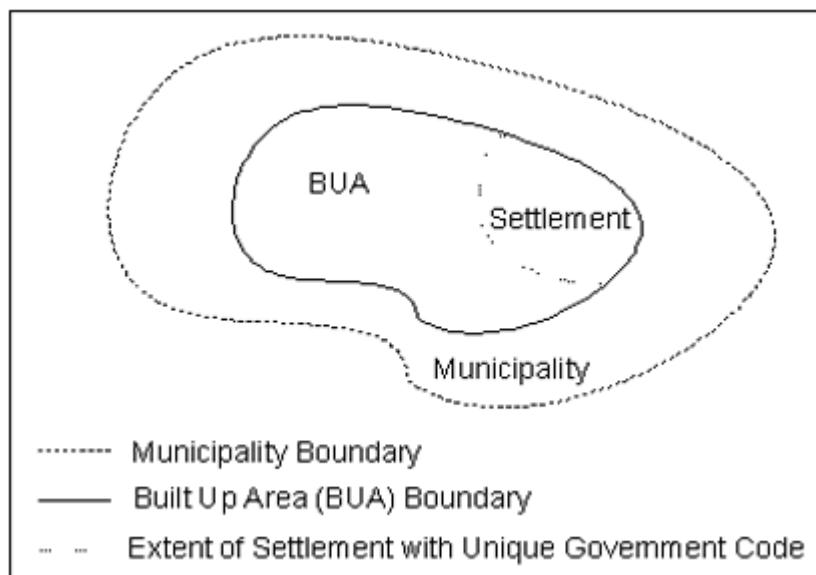
Administrative/Zone Rules

C.2 Administrative Features

## Administrative Boundary Feature

- AA *Level 5* features are associated with *Polygon IDs*. The *Polygon ID* can be used to generate polygons.
- AA *Level 5* always represents a non-spanning set of polygonal features (e.g. built-up area boundaries in Europe, South Africa, and Canada). One AA *Level 5* feature exists for every AA *Level 5* boundary link unless the link is the boundary between two AA *Level 5* areas (two AA *Level 5* features exist).
- In administrative areas with multiple official languages, multiple Base Names are published if the official names are different in each language.
  - ① **Note:** The Base Name feature with the default Language Code is always published first.
- When additional names exist for an AA *Level 5* area, in the official language(s) and/or foreign language(s), these are published as Synonyms and Exonyms, respectively.
- In Europe and Canada, these areas are usually clearly defined on commercial maps. The boundary does not reflect an actual administrative boundary.
- In Europe and Canada, built-up areas greater than 250.000 square metres/2.700.000 square feet are included. Smaller built-up areas are included where significant. All named settlements are included as built-up area features in South Africa.
- When the same named built-up area is separated by an empty area that is wider than 200 metres/656 feet, two separate polygons are created with the same name.
- A separate built-up area polygon is not created for settlements whose built-up area is completely within the built-up area of the municipality. See *Figure 475:* on page 1162.

**Figure 475:**



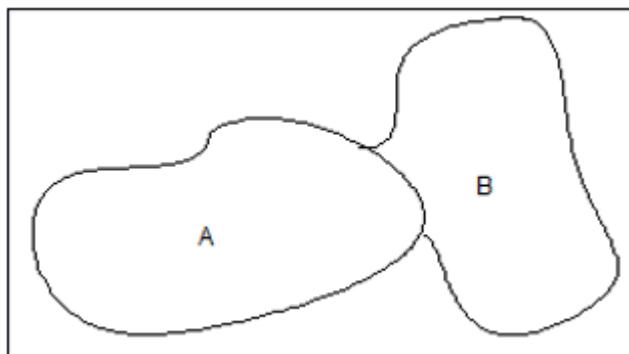
# Reference Guide

Administrative/Zone Rules

C.2 Administrative Features

- Built-up areas that are adjacent to one another are made into separate polygons with the name of the built-up area they represent. See [Figure 476:](#) on page 1163.

**Figure 476:**



- Industrial areas are considered part of the built-up areas.
- In the UK, a built-up area can contain more than one Locality, if it is viewed as one built-up area of a particular name.
- In cases where a built-up area cannot be defined because the houses are scattered, no Built-up Area feature is included.
- Built-up Area boundaries are generalised.
- Built-up areas are not coded in the U.S., Puerto Rico, and U.S. Virgin Islands, because cities, not Built-up Areas, are important for map display in the U.S.

## Administrative Coding of a Link

- The Administrative Level 5 is coded for all links.
- Different *Left* and *Right Area IDs* exist for every *AA Level 5* boundary link in the database at this level except in the case described below:
  - The *Left* and *Right Area IDs* are the same on database boundary links. For example, on a U.S. country border link the *Left* and *Right Area IDs* are identical; there is no Canadian administrative coding in the U.S. databases for any link.
- A built-up area feature may exist in more than one municipality feature. For instance in Germany, this is the case when a settlement spans multiple municipalities.

## European Example

The built-up area of Obertauern exists in both the Untertauern municipality and the Tweng municipality.

What is published?

- AA Level 4* feature for Untertauern, with *Gov Code* of 224
- AA Level 4* feature for Tweng, with *Gov Code* of 125
- Two *AA Level 5* features for Obertauern (each with its own *Area ID*, but with the same *Gov Code* of 3008)
- The two *AA Level 5* features for Obertauern can be combined based on the same Government Code as opposed to two separate cities, which would have different Government Codes.
- Each *AA 5 Level* feature has a corresponding Named Place Point of Interest. However, in the case of the one *AA Level 5* feature in multiple *AA Level 4s*, only one Named Place POI is published.

# Reference Guide

Administrative/Zone Rules

C.3 Zones

## C.3 Zones

### Feature

Zones

### Rules

#### General Rules for all Zones = PA, KA, KD, GC and NB

- There are no boundary features for zones (except for NB).
- Zones identify clearly or fuzzy bounded areas, covering a region having its own commonly used name to identify it. This allows the user of a navigation system to specify a destination when the administrative name is not the sole name commonly used by the general public. Zones are non-hierarchical.
- All zones (Zone Types = PA, KA, KD, NB, and GC) and cities/settlements should be recognised for destination selection. They can also be used for geocoding. For reverse geocoding, Zone Types = PA and KA can be used.
- In all cases, the zone is an additional name to the city/settlement name for destination selection. Systems should recognise the association of a link to all of the cities/settlements and zones when allowing destination input.
- Zones are further defined by the Zone Type. Zone Type can equal;
  - KA – Known As (Replaces Administrative Area)
  - KD – Known As (Does Not Replace Administrative Area)
  - PA – Postal Area
  - GC - Greater City
  - NB - Neighbourhood
  - DA - Disputed Area Zone
- ① **Note:** The Disputed Area Zone (DA) is not directly used for destination selection.
- Each side of a link may have from 0 to 10 zones associated with it.
- A Named Place POI is included for each zone (Zone Type = PA, KA, and KD).
- A Neighbourhood POI is included for each NB Zone, unless it already exists as a Named Place POI.
- Named Place POIs are not included for the following; GC Zones, PA Zones (such as O'Hare Airport, and KD Zones in the UK).
- If there are multiple occurrences of an address within a city/settlement, zones can be used for refined address resolution.

### C.3.1 Postal Area (Zone Type = PA)

- Postal Area Zones are assigned to areas the postal service designates for mail delivery. They reflect names of incorporated cities, military bases, unincorporated communities or entities such as O'Hare Airport.

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Administrative/Zone Rules

C.3 Zones

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- A Postal Named Area is not published if its name matches the Administrative Name of the city or settlement.
  - ① **Note:** This does not apply to the U.S.
- In the U.S. and Puerto Rico, Postal Area Zones identify the post office which is responsible for the mail delivery in the particular area. (These are also referred to as Last Line City in the U.S. and Puerto Rico. In the United States Postal Service (USPS) file, the Postal Area is identified by the term “acceptable default”.)
- A link can be associated with more than one PA Zone (i.e. on the border). For example, on a postal code boundary, each side of the link may have a different PA Zone.
- In some cases, residents may refer to their postal area name rather than the city in which they live or they may use the postal area name because they are not located within a city.
- In the U.S. and Puerto Rico, when a Postal Area for a postal code is also a city in multiple counties, only one PA Zone would exist for the city regardless in which county the postal code exists. For instance, the city of Portland exists in three counties. However, there would only be one PA Zone for Portland with the Government Code of 59000 for all postal codes that have Portland as the Postal Area.
- In Sweden, Finland, Denmark and Norway, PA Zones are included for the names associated to the postal areas. A zone is only included when its name is different from the Kommun or built-up area name.
- PA Zones do not indicate the actual Postal Code, but reflect the location name used by the appropriate postal service.

## C.3.2 Known As (Zone Type = KA/KD)

- The Known As zone types identify what most end-users feel is the “place” name, regardless of whether or not it is the true administrative name. The zone types are:
  - Known As that Replaces Admin (Zone Type = KA)
  - Known As that Does Not Replace Admin (Zone Type = KD)
- The KA and KD information is used when deciding which name to display or return to the user.
  - KA indicates that the zone name should be used in conjunction with the city or settlement name since that is what is more commonly used as the area's name.
  - KD indicates that the Zone Name should NOT be used when displaying or returning the name back to the user. In the KD situation, the Zone Name is not used since the boundaries for it may not be clear.
- The Named Place POI that corresponds to the KA zone is placed within the largest built-up area for that zone. For the KD zone, it is placed logically for that area.
- Known As Zones (either KA or KD zones) are assigned to named places that are significant for destination selection and may not be represented in the administrative hierarchy. Moreover, a KA Zone may be the same as the PA Zone on the same link.

# Reference Guide

Administrative/Zone Rules

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- It may be the case that the Zone does not exist in the administrative structure, however for links outside of that administrative area. Therefore a KA or KD zone may be applied to represent the administrative area though officially the links belong to another administrative area.

For example, the area outlined in red officially belongs to City B, it is often referred to as City A. Therefore a KD or KA Zone is applied to represent City A. This allows for a street or POI in this area to either be selected under City A or City B.

**Figure 477:**



## Examples of KA Zones:

New York: New York city actually spans five counties. It is comprised of five boroughs that are applied as KA Zones. The AA Level 4 Feature is New York city (Gov Code = 51000). The five boroughs are:

Borough applied as KA Zone	Gov Code
Bronx	8510
Brooklyn	10022
Manhattan	44919
Queens	60323
Staten Island	70915

Boston: The city of Boston is comprised of twelve settlements that are applied as KA Zones. The AA Level 4 Feature is Boston (Gov Code = 7000). The twelve settlements of Boston, MA, are:

Settlement applied as KA Zone	Gov Code
Allston	1150
Brighton	8330
Charlestown	12645
Dorchester	17090
East Boston	18280
Hyde Park	31960

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Administrative/Zone Rules

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Settlement applied as KA Zone	Gov Code
Jamaica Plain	32520
Mattapan	39380
Roslindale	58265
Roxbury	58475
South Boston	63200
West Roxbury	77710

## Examples of KD Zones:

Southern California: In Southern California, Zone Type = KD are included for the following named communities which are significant for destination selection. However, these communities are not incorporated cities or Zone Type = PA.

KD Zone	Gov Code
Bel Air	4828
Brentwood	8150
Hollywood	34162
Saugus	70350
Westwood	84935
Coto De Caza	16580
Dove Canyon	18192
El Toro	22468
Las Flores	32268
Rossmoor	63050

United Kingdom: Zones (Zone Type = KD) are included for named communities in UK and the London boroughs. For example, the following are being published for the UK:

KD Zone	Gov Code
Abbey Wood	40059
Acton	40120
Avery Hill	40075
Balham	40086
Barnes	40087

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KD Zone	Gov Code
Battersea	40085
Bayswater	40119

### C.3.3 Neighbourhood (Zone Type = NB) (Premium Core Map Data)

- Identifies streets belonging to a specific neighbourhood within a city.
- Neighbourhood Zones identify local areas within a city and provide an alternate name to the city/settlement name for destination selection.
- Neighbourhood Zones are published with a corresponding Neighbourhood polygon. However, there is no direct association published between the zone and the polygon feature.
- Neighbourhood Zones can overlap in areas where neighbourhood boundaries are not clearly defined.
- A Neighbourhood Zone has a corresponding Government Code.
- Neighbourhood Zones will not duplicate other zones or administrative information on a link.
- A corresponding Neighbourhood POI is included at the centre of the Neighbourhood Zone.

### C.3.4 Greater City (Zone Type = GC)

- Greater City Zones are applied to all links that define a metropolitan area.
- Addresses are not unique within Greater City zones.
- Greater City Zones are coded per link. They do not necessarily span an entire administrative level nor are they published on contiguous links. For example, Los Angeles Metro Area Greater City Zone does not exist for every link in Los Angeles County.
- Greater City Zones receive the name of the metropolitan area. For example, Los Angeles Metro Area, San Francisco Bay Area, Gran Santiago, Chennai Metropolitan Area etc. However, exceptions may exist.
- The metro area of Chicago is represented by a Greater City Zone with the name, Chicagoland. Since the city of Chicago is represented in the administrative structure and by a Named Place POI, this Greater City Zone does not receive a Named Place POI.
- Government Codes are assigned to Greater City Zones.
- Named Place POIs are not required for Greater City Zones.

Examples:

The city of Delhi exists at Administrative Level 2 which is not available for destination selection. However, the city of Delhi is widely known and is therefore needed for destination selection. In this case, a Greater City Zone is published as "Delhi". Additionally, a Named Place POI for Delhi is also published.

The Metro area of Chicago is represented by a Greater City Zone with the name "Chicagoland". Since the city of Chicago is represented in the administrative structure and by a Named Place POI, this Greater City Zone does not receive a Named Place POI.

# C.4 Administrative Level Coding and Boundary Features

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Please see the Country Profiles database for Administrative Level Coding information.

## C.4.1 Boundary Features published per Country

Please see the Country Specific Rules document for this information.

# Appendix D

## Permanent IDs

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**Topics:**

- *Overview*
- *Entities with Permanent IDs*
- *Numeric Range of Permanent IDs*
- *Rules for Permanent IDs*

## Reference Guide

Permanent IDs

D.1 Overview

## D.1 Overview

This chapter contains information on permanent identifiers in the extracts. The specific areas covered include the following:

- Entities that have permanent IDs
- Numeric range of permanent IDs
- Rules for permanent IDs

## D.2 Entities with Permanent IDs

Generally, the following Map Objects and entities have permanent IDs in the HERE Map products:

- Node
- Link
- Lane
- Polygon Feature
- Point Feature (e.g., Points of Interests, Point Addresses, Distance Markers, etc.)
- Administrative Areas (for Zones, Built-up Areas, and Administrative Areas)
- Complex Features (this includes Complex Administrative Area Features as well as Complex Intersections and Complex Roads)
- Sign Information
- Feature Names (e.g., road and ferry names)
- POI Chain Names
- Conditions

Permanent IDs are globally unique within a specific Object, e.g., a Link ID occurs once globally. However, the same Permanent ID can be used among different Object types (e.g. Node, Link, condition, etc.).

## D.3 Numeric Range of Permanent IDs

Map object IDs (PVIDs) in the extracts use 32-bit integer values to fit in a N(10) scheme.

The entire range is divided as follows:

Range	Designation
0000000001 - 0016777215	Non-permanent IDs
0016777216 - 2147483647	Permanent IDs

The range dedicated to permanent IDs are used for any entity.

# Reference Guide

Permanent IDs

D.4 Rules for Permanent IDs

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The range dedicated to non-permanent IDs are used in rare situations when an update is made in a copy of the database instead of in the live database itself and this update results in a new ID. This new ID in the database copy would be in the non-permanent range. The update would also be applied into the live database and this update would receive a permanent ID available in the next scheduled release. A cross-reference is not provided between non-permanent IDs and the eventual permanent ID from the live database.

## D.4 Rules for Permanent IDs

Creation of new permanent IDs follow some rules. These are contained in the table below.

Rule	Entities Affected
When a link is split, the original permanent ID is discarded and two new permanent IDs are created. The discarded ID is never used again. The existing Node IDs remain unchanged.	Link Linear Features - Road link - Ferry Connection - Administrative boundaries (e.g., City Boundary, County Boundary and Built-up Area Boundary) - Railway - Waterway
When two links are merged, one new permanent ID is created. The two old IDs are discarded and never used again. The remaining Node IDs stay the same.	Node
When a Node is moved, but the topology of the connected links and Nodes is unchanged, then the permanent ID is unchanged.	Point Feature (e.g., Point of Interest, Point Address, Distance Marker)
When a POI Chain Name is changed, then the Chain Name permanent ID is unchanged.	Chain Name
When two POI Chain Names are merged, then a new permanent ID is created. For example, Daimler and Chrysler became DaimlerChrysler. (Note: This is just an example that may not be valid now in reality.)	Chain Name

# Appendix E

## Reference Data

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**Topics:**

- *Introduction*
- *Simple Reference Classes*
- *Compound Reference Classes*

## E.1 Introduction

---

### Simple Reference Classes

The first section of this appendix describes the Simple Reference Classes. Simple implies that a single coded value is used to look up a description. The Simple Reference Classes are presented in alphabetical order.

### Compound Reference Classes

The second section of this appendix describes the Compound Reference Classes. Compound implies that both a type value and a modifier value are used to look up a modifier description. The Compound Reference Classes are presented in alphabetical order.

## E.2 Simple Reference Classes

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### E.2.1 AANAMTYP - Administrative Area Name Type

Code	Description
A	Abbreviation
B	Base Name
E	Exonym
F	Additional Exonym
S	Synonym

### E.2.2 ADDRFTM - Address Format

Code	Description	Format
(space)	UNADDRESSED	
A	ALPHANUMERIC-N	12N123
B	BLOCK	A123
C	ALPHANUMERIC-1	2M89
D	SLASH <sup>178</sup>	34/134
E	ALPHANUMERIC-E	12E123
H	HYPHENATED	123-123

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Code	Description	Format
I	ALPHANUMERIC-NW	N123W12312
J	ALPHANUMERIC-NE	N123E12312
K	ALPHANUMERIC-SW	S123W12312
L	ALPHANUMERIC-SE	S123E12312
N	NUMERIC	123456
O	ALPHANUMERIC-ES	E123S12312
P	ALPHANUMERIC-EN	E123N12312
Q	ALPHANUMERIC-WS	W123S12312
R	ALPHANUMERIC-WN	W123N12312
S	ALPHANUMERIC-S	12S123
W	ALPHANUMERIC-W	12W123
X	ALPHANUMERIC SLASH <sup>179</sup>	A8/5
Z	LEADING ZERO	012345
1	ALPHAHYPHENATED-5	AB-12
3	ALPHANUMERIC 3	AH34
4	NUMERIC ALPHA	12A
5 <sup>180</sup>	DOUBLE SLASH	50/99/101
6 <sup>180</sup>	TRIPLE SLASH	22/22/22/22
7 <sup>181</sup>	KILOMETER MARKER	Km 18.2
8 <sup>180</sup>	Numeric Slash Alpha	1/A
9 <sup>180</sup>	Slash Numeric Alpha	1/1A
AA <sup>180</sup>	Numeric Slash Alpha Numeric	1/1A1
AB <sup>180</sup>	Numeric Double Slash	2/A/100

<sup>178</sup> This format is commonly used in Thailand.

<sup>179</sup> This format is commonly used in Indonesia.

<sup>180</sup> This format is commonly used in Vietnam

<sup>181</sup> This format is used in Puerto Rico.

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### E.2.3 ADDRSCH - Address Scheme

Code	Description
(Space)	UNDEFINED
E	EVEN
M	MIXED
O	ODD

### E.2.4 ADDRTYPE - Address Type

Code	Description
B	BASE
C	CITY
D	COUNTY
O	OLD
H	ALTERNATE BASE
T	COMMERCIAL
A	ACTUAL

### E.2.5 AGGREGTYP-Aggregation Type

Code	Description
1	GROUPED STRUCTURE
2	GROUPED COMPLEX
3	3D JUNCTION OBJECT - MOTORWAY

### E.2.6 AIRPTYPE - Airport Type

Code	Description
1	TERMINAL

## Reference Guide

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### E.2.7 ASSOCTYPE - Association Type

Code	Description
1	IDENTITY
2	LOCATION

### E.2.8 ASSONMTP - Association Name Type

Code	Description
B	BASE NAME

### E.2.9 ATTCHTYP-Attachment Type

Code	Description
DAE	DIGITAL ASSET EXCHANGE
GIF	GIF FILE FORMAT
JPG	JPEG FILE FORMAT
MTL	MATERIAL PROPERTIES FILE FORMAT
OBJ	APPLICATION WAVEFRONT
TGA	TARGA FILE FORMAT
SVG	SVG FILE FORMAT

### E.2.10 BEARING- Direction of Travel

Code	Description
(space)	NOT APPLICABLE
B	BOTH DIRECTIONS
F	FROM REFERENCE NODE
T	TO REFERENCE NODE
N	CLOSED IN BOTH DIRECTIONS

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## E.2.11 CENSTYPE - Census Type

Value	Description
1	Census Code
2	Census Class Code
3	GNIS Feature ID
4	CBSA Metropolitan Statistical Area
5	CBSA Micropolitan Statistical Area
6	NECTA Metropolitan Statistical Area
7	NECTA Micropolitan Statistical Area
8	Metropolitan Division
9	NECTA Division

## E.2.12 COMPTYPE - Component Type

Code	Description
P	POI
L	LINK
C	CARTOGRAPHY - LAND USE FEATURE
A	AGGREGATED FEATURE
F	FEATURE POINT

## E.2.13 CONDTYPE-Condition Type

Code	Description
1	Toll Structure
3	Construction Status Closed
4	Gate
5	Direction of Travel
7	Restricted Driving Manoeuvre
8	Access Restriction
9	Special Explication

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Code	Description
10	Special Speed Situation
11	Variable Speed Sign
12	Usage Fee Required Condition
13	Lane Traversal
14	Through Route
16	Traffic Signal
17	Traffic Sign
18	Railway Crossing
19	No Overtaking
20	Junction View
21	Protected Overtaking
22	Evacuation Route
23	Transport Access Restriction
25	Transport Special Speed Situation
26	Transport Restricted Driving Manoeuvre
27	Transport Preferred Route
34	Environmental Zone
38	Blackspot

## E.2.14 CONTYPE - Contact Type

Code	Description
1	PHONE NUMBER
2	TOLL FREE NUMBER
3	URL or WEB ADDRESS
4	EMAIL ADDRESS
5	MOBILE PHONE

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## E.2.15 COV\_IND - Coverage Indicator Type

Content Level	Coverage Indicator Description	Coverage Indicator Value	Road Inclusion	Road Verification
HERE Map Content	Prime	N0	FC 1-5	FC 1-5
	Complete	N1	FC 1-5 (all FC = 5 roads are included)	FC 1-4
	Network	N2	FC 1-5 (not all FC = 5 roads are included)	FC 1-4
	City-To-City	N4	FC 1-5 (not all FC = 5 roads are included)	FC 1-2
	Base - Urban Routing/ Point2Point	B6	FC 1-4 roads included to the Intermediate Map specification. FC-5 roads may be included and may have limited connectivity.	None
	Base - Search and Display	B8	FC 1-2 roads included to the Intermediate Map specification. FC 3-5 roads may be included and have limited connectivity.	None
	Base - Display Only	B9	FC 1-2 roads included to the Intermediate Map specification. FC 3-5 roads may be included and may have limited connectivity.	None
Intermediate Map Content	Urban Routing/ Point2Point	I1	FC 1-4 roads included to the Intermediate Map specification. FC-5 roads may be included.	None
	Search and Display	I2	FC 1-4 roads included to the Intermediate Map specification. FC-5 roads may be included and may have limited connectivity.	None
	Display Only	I3	FC 1-2 roads included to the Intermediate Map specification. FC 3-5 roads may be included and may have limited connectivity.	None

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Content Level	Coverage Indicator Description	Coverage Indicator Value	Road Inclusion	Road Verification
Entry Map Content	Entry Map	E7	FC 1-3 (included to Entry Map specification)	None
Not Content Level Specific	Global Ocean Layer	O1	N/A	N/A
	Tracks4Africa	W0	N/A	N/A

## E.2.16 CURRTYPE-Currency Type

Code	Description
AED	UNITED ARAB EMIRATES DIRHAM
AFN	AFGHANISTAN AFGHANI
ALL	ALBANIAN LEK
AMD	ARMENIAN DRAM
ANG	NETHERLANDS ANTILLIAN GUILDER
AOA	ANGOLAN KWANZA
ARA	ARGENTINIAN AUSTRAL
ARS	ARGENTINE PESO
AUD	AUSTRALIAN DOLLAR
AWG	ARUBAN FLORIN
AZN	AZERBAIJANI NEW MANAT
BAM	BOSNIA and HERZEGOVINA MARK
BBD	BARBADOS DOLLAR
BDN	BANGLADESHI TAKA
BGL	BULGARIAN LEV
BHD	BAHRAINI DINAR
BIF	BURUNDI FRANC
BMD	BERMUDIAN DOLLAR
BND	BRUNEI DOLLAR
BOB	BOLIVIAN BOLIVIANO
BCR	BRAZILIAN CRUZEIRO

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Code	Description
BRL	BRAZILIAN REAL
BSD	BAHAMIAN DOLLAR
BTN	BHUTAN NGULTRUM
BUK	BURMA KYAT
BWP	BOTSWANA PULA
BYR	BELARUSIAN ROUBLE
BZD	BELIZE DOLLAR
CAD	CANADIAN DOLLAR
CDF	CONGOLESE FRANC
CHF	SWISS FRANC
CLF	CHILEAN UNIDADES DE FOMENTO
CLP	CHILEAN PESO
CNY	YUAN (CHINESE) RENMINBI
COP	COLOMBIAN PESO
CRC	COSTA RICAN COLON
CUP	CUBAN PESO
CVE	CABO VERDE ESCUDO
CYP	CYPRIOT POUND
CZK	CZECH KORUNA
DJF	DJIBOUTI FRANC
DKK	DANISH KRONE
DOP	DOMINICAN PESO
DZD	ALGERIAN DINAR
ECS	ECUADOR SUCRE
EEK	ESTONIAN EESTI KROON
EGP	EGYPTIAN POUND
ERN	ERITREA NAKFA
EST	ESTONIAN EESTI KROON
ETB	ETHIOPIAN BIRR

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Code	Description
EUR	EURO
FJD	FIJI DOLLAR
FKP	FALKLAND ISLANDS POUND
GBP	BRITISH POUND
GEL	GEORGIAN LARI
GHS	GHANAIAN CEDI
GIP	GIBRALTAR POUND
GMD	GAMBAIN DALASI
GNF	GUINEA FRANC
GTQ	GUATEMALAN QUETZAL
GWP	GUINEA-BISSAU PESO
GYD	GUYANAN DOLLAR
HKD	HONG KONG DOLLAR
HNL	HONDURAN DOLLAR
HRK	CROATIAN KUNA
HTG	HAITIAN GOURDE
HUF	HUNGARIAN FORINT
IDR	INDONESIAN RUPIAH
ILS	ISRAELI SHEKEL
INR	INDIAN RUPEE
IQD	IRAQI DINAR
IRR	IRANIAN RIAL
ISK	ICELAND KRONA
JMD	JAMAICAN DOLLAR
JOD	JORDANIAN DINAR
JPY	JAPANESE YEN
KES	KENYAN SCHILLING
KGS	KYRGYZSTANI SOM
KHR	CAMBODIAN RIEL

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Code	Description
KMF	COMOROS FRANC
KPW	NORTH KOREAN WON
KRW	(SOUTH) KOREAN WON
KWD	KUWAITI DINAR
KYD	CAYMANIAN DOLLAR
KZT	KAZAKHSTANI TENGE
LAK	LAO KIP
LBP	LEBANON POUND
LKR	SRI LANKA RUPPE
LRD	LIBERIAN DOLLAR
LSL	LESOTHO LOTI
LTL	LITHUANIAN LITAI
LYD	LIBYAN DINAR
MAD	MOROCCAN DIRHAM
MDL	MOLDOVAN LEU
MGA	MALAGASY ARIARY
MGF	MALAGASY FRANC
MKD	MACEDONIAN DENAR
MMK	MYANMAR KYAT
MNT	MONGOLIAN TUGIRK
MOP	MACAU PATACA
MRO	MAURITANIAN OUGUIYA
MTL	MALTESE LIRA
MUR	MAURITIUS RUPEE
MVR	MALDIVIAN RUFIYAA
MWK	MALAWIAN KWACHA
MXN	MEXICAN PESO
MYR	MALAYSIAN RINGGIT
MZN	MOZAMBIQUE METICAL

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Code	Description
NAD	NAMIBIA DOLLAR
NGN	NIGERIAN NAIRA
NIO	NICARAGUAN CORDOBA
NOK	NORWEGIAN KRONER
NPR	NEPALESE RUPEE
NZD	NEW ZEALAND DOLLAR
OMR	OMANI RIAL
PAB	PANAMANIAN BALBOA
PEN	PERUVIAN NUEVO SOL
PGK	PAPUA NEW GUINEA KINA
PHP	PHILIPPINE PESO
PKR	PAKISTAN RUPEE
PLN	POLISH ZLOTYCH
PYG	PARAGUAY GUARANI
QAR	QATARI RIAL
RON	ROMANIAN LEU
RSD	SERBIA DINAR
RUB	RUSSIAN RUBLES
RWF	RWANDA FRANC
SAR	SAUDI ARABIAN RIYAL
SBD	SOLOMON ISLANDS DOLLAR
SCR	SEYCHELLES RUPEE
SDG	SUDANESE POUND
SEK	SWEDISH KRONA
SGD	SINGAPORE DOLLAR
SHP	SAINT HELENA POUND
SLL	SIERRA LEONE LEONE
SOS	SOMALI SCHILLING
SRD	SURINAME DOLLAR

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Code	Description
SSP	SOUTH SUDANESE POUND
STD	SAO TOME AND PRINCIPE DOBRA
SUR	USSR ROUBLE
SVC	EL SALVADOR COLON
SYP	SYRIAN POUND
SZL	SWAZILAND EMALANGENI
THB	THAI BHAT
TJS	TAJIKISTANI SOMONI
TMT	TURKMENISTANI MANAT
TND	TUNISIAN DINAR
TOP	TONGAN PA'ANGA
TPE	EAST TIMOR ESCUDO
TRY	TURKISH NEW LIRA
TTD	TRINIDAD & TOBAGO DOLLAR
TVD	TUVALUAN DOLLAR
TWD	TAIWAN DOLLAR
TZS	TANZANIAN SCHILLING
UAH	UKRAINE HRYVNIA
UGX	UGANDA SHILLING
USD	US DOLLAR
UYU	URUGUAYAN PESO
UZS	UZBEKISTANI SUM
VDF	VENEZUELAN BOLIVAR FUERTE
VND	VIETNAMESE DONG
VUV	VANUATU VATU
WST	SAMOAN TALA
XAF	COMMUNAUTÉ FINANCIÈRE AFR. FRANC BEAC
XCD	EAST CARIBBEAN DOLLAR
XPF	COMPTOIRS FRANÇAIS DU PACIFIQUE FRANCS

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Code	Description
YDD	DEMOCRATIC YEMENI DINAR
YER	YEMENI RIAL
YUD	NEW YUGOSLAVIA DINAR
ZAR	SOUTH AFRICAN RAND
ZMW	ZAMBIAN KWACHA
ZRZ	ZAIRE ZAIRE

## E.2.17 DATETYPE- Date Type

Code	Description
A	DATE RANGES
C	DAY OF MONTH
D	DAY OF WEEK OF MONTH
E	DAY OF WEEK OF YEAR
F	WEEK OF MONTH
H	MONTH OF YEAR
I	DAY OF MONTH OF YEAR
1	DAY OF WEEK
2	EXTERNAL

## E.2.18 DATUM- NAVSTREETS datum

Code	Description
WGS84	WORLD GEODETIC SYSTEM OF 1984

## E.2.19 DIRSIGN - Direction on Sign

Code	Description	Language code
(space)	NOT APPLICABLE	NOT APPLICABLE
E	EAST	ENG
E	EST	FRE
E	ESTE	SPA

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Code	Description	Language code
N	NORTH	ENG
N	NORD	FRE
N	NORTE	SPA
O	UEST	FRE
O	OESTE	SPA
S	SOUTH	ENG
S	SUD	FRE
S	SUR	SPA
W	WEST	ENG

## E.2.20 DISPCLAS - Display Class

Code	Description
(blank)	NOT APPLICABLE
1	FIRST CLASS
2	SECOND CLASS
3	THIRD CLASS
4	FOURTH CLASS
5	FIFTH CLASS
6	SIXTH CLASS
7	SEVENTH CLASS
8	EIGHTH CLASS

## E.2.21 DIVLOC - Divider Location

Code	Description
(space)	NOT APPLICABLE
A	BOTH NODES AND LINK
L	LINK ONLY
N	NO DIVIDER
1	REF NODE AND LINK

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Code	Description
2	NREF NODE AND LINK

### E.2.22 DRIVSIDE- Driving Side

Code	Description
L	LEFT SIDE DRIVING
R	RIGHT SIDE DRIVING

### E.2.23 DSTDAY- Daylight Saving Time Day

Code	Description
1	DAY 1 OF MONTH
2	DAY 2 OF MONTH
3	DAY 3 OF MONTH
4	DAY 4 OF MONTH
5	DAY 5 OF MONTH
6	DAY 6 OF MONTH
7	DAY 7 OF MONTH
8	DAY 8 OF MONTH
9	DAY 9 OF MONTH
10	DAY 10 OF MONTH
11	DAY 11 OF MONTH
12	DAY 12 OF MONTH
13	DAY 13 OF MONTH
14	DAY 14 OF MONTH
15	DAY 15 OF MONTH
16	DAY 16 OF MONTH
17	DAY 17 OF MONTH
18	DAY 18 OF MONTH
19	DAY 19 OF MONTH
20	DAY 20 OF MONTH

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Code	Description
21	DAY 21 OF MONTH
22	DAY 22 OF MONTH
23	DAY 23 OF MONTH
24	DAY 24 OF MONTH
25	DAY 25 OF MONTH
26	DAY 26 OF MONTH
27	DAY 27 OF MONTH
28	DAY 28 OF MONTH
29	DAY 29 OF MONTH
30	DAY 30 OF MONTH
31	DAY 31 OF MONTH
41	FIRST
42	SECOND
43	THIRD
44	FOURTH
45	FIFTH
46	LAST

## E.2.24 DSTMONTH- Daylight Saving Time Month

Code	Description
1	JANUARY
2	FEBRUARY
3	MARCH
4	APRIL
5	MAY
6	JUNE
7	JULY
8	AUGUST
9	SEPTEMBER

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Code	Description
10	OCTOBER
11	NOVEMBER
12	DECEMBER

## E.2.25 DSTWKDAY- Daylight Saving Time Weekday

Code	Description
1	SUNDAY
2	MONDAY
3	TUESDAY
4	WEDNESDAY
5	THURSDAY
6	FRIDAY
7	SATURDAY
8	DAY OF MONTH

## E.2.26 ENTRTYPE - Entrance Type

Code	Description
1	PREFERRED ENTRANCE

## E.2.27 EVACCODE - Evacuation Code

Code	Description
1	ALLIGATOR ALLEY NORTHBOUND
2	ALLIGATOR ALLEY SOUTHBOUND

## E.2.28 EXPAND\_INC - Expanded Inclusion (Not Available in Shapefile)

Code	Description
1	Meets Expanded Inclusion

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Code	Description
2	Supplemental Only

## E.2.29 FACILITY - Facility Type

### Note:

The following POI Categories and Subcategories have published exonyms in Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Portuguese, Russian, Slovak, Spanish and Swedish. See the table immediately following the Facility Type table.

Facility Code	Description
2084	Winery
3578	ATM
4013	Train Station
4100	Commuter Rail Station
4170	Bus Station
4444	Named Place
4482	Ferry Terminal
4493	Marina
4580	Public Sport Airport
4581	Airport
5000	Business Facility
5400	Grocery Store
5511	Automobile Dealership
5512	Auto Dealership-Used Cars
5540	Petrol/Gasoline Station
5571	Motorcycle Dealership
5800	Restaurant
5813	Nightlife
5999	Historical Monument
6000	Bank
6512	Shopping
7011	Hotel

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Facility Code	Description
7012	Ski Resort
7014	Ski Lift
7389	Tourist Information
7510	Rental Car Agency
7520	Parking Lot
7521	Parking Garage/House
7522	Park & Ride
7538	Auto Service & Maintenance
7832	Cinema
7897	Rest Area
7929	Performing Arts
7933	Bowling Centre
7940	Sports Complex
7947	Park/Recreation Area
7985	Casino
7990	Convention/Exhibition Centre
7992	Golf Course
7994	Civic/Community Centre
7996	Amusement Park
7997	Sports Centre
7998	Ice Skating Rink
7999	Tourist Attraction
8060	Hospital
8200	Higher Education
8211	School
8231	Library
8410	Museum
8699	Automobile Club
9050 <sup>182</sup>	Bicycle Sharing Location

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Facility Code	Description
9051 <sup>182</sup>	Bicycle Parking
9052 <sup>182</sup>	Trailhead
9121	City Hall
9211	Court House
9221	Police Station
9517	Campground
9522	Truck Stop/Plaza
9525	Government Offices
9527	Fire Department
9530	Post Office
9532	Bar or Pub
9535	Convenience Store
9537	Clothing Store
9545	Department Store
9560	Home Specialty Store
9565	Pharmacy
9567	Specialty Store
9568	Sporting Goods
9573	Golf Practice Range
9583	Medical Service
9589	Public Restroom
9590	Residential Area/Building
9591	Cemetery
9592	Highway Exit
9593	Transportation Service
9595	Repair Services
9596	Training Centre/Institute
9707 <sup>183</sup>	Public Transit Stop

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Facility Code	Description
9708 <sup>183</sup>	Public Transit Access
9709	Neighbourhood
9710	Weigh Station
9714	Cargo Centre
9715	Military Base
9717	Tollbooth
9718	Animal Park
9719	Truck Dealership
9720	Truck Parking
9722 <sup>184</sup>	Delivery Entrance
9723 <sup>184</sup>	Dock
9724 <sup>184</sup>	Loading Zone
9725	Meeting Point
9730	Named Intersection
9986	Home Improvement & Hardware Store
9987	Consumer Electronics Store
9988	Office Supply & Services Store
9989	Taxi Stand
9991	Industrial Zone
9992	Place of Worship
9993	Embassy
9994	County Council
9995	Bookstore
9996	Coffee Shop
9998	Hamlet
9999	Border Crossing

<sup>182</sup> Metadata is present, but no information is currently published in this Facility Type.

<sup>183</sup> Not published in the regular NAVSTREETS extract, but only in conjunction with Transit and Pedestrian.

<sup>184</sup> Not published in the regular NAVSTREETS extract, but only in conjunction with Loading Dock Locations.

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Language	Language Code	Transliteration Code	Phonetic Transcription
Czech	CZE	CZX	YES
Danish	DAN	N/A	YES
Dutch	DUT	N/A	YES
Finnish	FIN	N/A	YES
French	FRE	N/A	YES
German	GER	N/A	YES
Greek	GRE	GRX	N/A
Hungarian	HUN	HUX	N/A
Italian	ITA	N/A	YES
Norwegian	NOR	N/A	YES
Polish	POL	POX	YES
Portuguese	POR	N/A	YES
Russian	RUS	RUX	N/A
Slovak	SLO	SLX	N/A
Spanish	SPA	N/A	YES
Swedish	SWE	N/A	YES

## E.2.30 FEATCAT - Feature Category

Code	Description
01	CARTO
02	ADMIN AREA
03	BUILDING TYPE

## E.2.31 FEATURE - Feature Type

Feature Code	Description
500116	Ocean
500412	River
500413	Intermittent River
500414	Canal/Water Channel

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Feature Code	Description
500421	Lake
507116	Bay/Harbour
509997	Glacier
509998	Beach
509999	Island
600101	Hurricane Prone Area
600102	Flood Prone Area
600103	Tsunami Prone Area
900101	City
900103	Park/Monument (National)
900107	Native American Reservation
900108	Military Base
900130	Park (State)
900140	Park in Water
900150	Park (City/County)
900151	Allotment
900152	National Forest
900156	Built Up Area
900158	Pedestrian Zone
900159	Undefined Traffic Area
900160 <sup>185</sup>	Apartment Complex
900170	County
900202	Woodland
907196	Country
907197 <sup>186</sup>	Disputed Country Boundary
908000	Cartographic Country Boundary
908001	Cartographic State/Province Boundary
908002	Neighbourhood Boundary

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Feature Code	Description
908003	Cartographic Settlement Boundary
908004 <sup>186</sup>	Cartographic Disputed Country Boundary
908005 <sup>186</sup>	Cartographic Disputed State Boundary
909996	State
909997 <sup>186</sup>	Disputed State Boundary
1700215	Parking Lot
1800201	Railroad
1900403	Airport
1907403	Aircraft Roads
2000123	Golf Course
2000124	Shopping Centre
2000200	Industrial Complex
2000403	University/College
2000408	Hospital
2000420	Cemetery
2000461	Animal Park
2000457	Sports Complex
2000460	Amusement Park
2005000	Business/Commerce Building/Landmark
2005001	Bank Building/Landmark
2005002	Business Facility Building/Landmark
2005003	Hotel or Motel Building/Landmark
2005004	Rental Car Agency Building/Landmark
2005005	Automobile Dealership Building/Landmark
2005006	Auto Service & Maintenance Building/Landmark
2005007	Petrol Station Building/Landmark
2005050	Convention/Exhibition Centre Building/Landmark
2005100	Cultural Building/Landmark

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Feature Code	Description
2005101	Cultural Building/Landmark
2005102	Museum Building/Landmark
2005103	Theatre Building/Landmark
2005104	Civic/Community Centre Building/Landmark
2005150	Education Building/Landmark
2005151	University or College Building/Landmark
2005152	School Building/Landmark
2005200	Emergency Service Building/Landmark
2005201	Police Station Building/Landmark
2005250	Government Building/Landmark
2005251	Embassy Building/Landmark
2005252	Post Office Building/Landmark
2005253	City Hall Building/Landmark
2005254	Court House Building/Landmark
2005255	Government Office Building/Landmark
2005256	County Council Building/Landmark
2005300	Historical Building/Landmark
2005301	Historical Monument Building/Landmark
2005350	Medical Building/Landmark
2005351	Hospital/Polyclinic Building/Landmark
2005352	Medical Service Building/Landmark
2005400	Park/Leisure Building/Landmark
2005401	Bar or Pub Building/Landmark
2005402	Bowling Centre Building/Landmark
2005403	Casino Building/Landmark
2005404	Cinema Building/Landmark
2005405	Nightlife Building/Landmark
2005406	Winery Building/Landmark
2005407	Amusement Park Building/Landmark

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Feature Code	Description
2005408	Golf Course Building/Landmark
2005409	Ice Skating Rink Building/Landmark
2005410	Marina Building/Landmark
2005411	Park/Recreation Area Building/Landmark
2005412	Public Sports Airport Building/Landmark
2005413	Ski Resort Building/Landmark
2005450	Residential Building/Landmark
2005451	Residential Area Building/Landmark
2005452 <sup>185</sup>	Housing Building/Landmark
2005453 <sup>185</sup>	Apartment Building/Landmark
2005500	Retail Building/Landmark
2005501	Pharmacy Building/Landmark
2005502	Restaurant Building/Landmark
2005503	Bookstore Building/Landmark
2005504	Clothing Store Building/Landmark
2005505	Consumer Electronics Store Building/Landmark
2005506	Convenience Store Building/Landmark
2005507	Department Store Building/Landmark
2005508	Grocery Store Building/Landmark
2005509	Home Improvement & Hardware Store Building/Landmark
2005510	Home Specialty Store Building/Landmark
2005511	Office Supply & Services Store Building/Landmark
2005512	Shopping Centre Building/Landmark
2005513	Specialty Store Building/Landmark
2005514	Sporting Goods Store Building/Landmark
2005550	Sports Building/Landmark
2005551	Sports Centre Building/Landmark
2005552	Sports Activity Building/Landmark

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Feature Code	Description
2005600	Tourist Building/Landmark
2005601	Tourist Attraction Building/Landmark
2005602	Tourist Office Building/Landmark
2005603	Bridge/Landmark
2005650	Transportation Building/Landmark
2005651	Airport Building/Landmark
2005652	Bus Station Building/Landmark
2005653	Commuter Rail Station Building/Landmark
2005654	Ferry Terminal Building/Landmark
2005655	Railway Station Building/Landmark
2005656	Transportation Service Building/Landmark
2005657	Toll Structure Building/Landmark
2005700	Unclassified Building/Landmark
2005750	Place of Worship Building/Landmark
2005751	Church Building/Landmark
2005752	Mosque Building/Landmark
2005753	Temple Building/Landmark
2005754	Synagogue Building/Landmark
2005755	Ashram Building/Landmark
2005756	Gurdwara Building/Landmark
2005800	Industrial Building/Landmark
2005801	Factory Building/Landmark
2005850	Parking Building/Landmark
2005900	Miscellaneous Building/Landmark
2005901	Skyway Building/Landmark <sup>187</sup>
9992000	RDS-TMC
9997004 <sup>188</sup>	Congestion Zone
9997007	Railyard

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Feature Code	Description
9997008	Seaport/Harbour
9997010	Environmental Zone
9997021	Water Boundary
9999999	Road Network

## E.2.32 FILEDESC - File Description

Code	Description
1	2D PATTERN
2	2D ARROW
3	3D PATTERN
4	3D ARROW
5	LANDMARK ICON
6	ICON CHANNEL ALPHA BITMAP
7	SIGN WAVE VALUE
8	ROAD NAME WAVE FILE
9	POI CATEGORY ICON
10	ANNOTATION CATEGORY ICON LOW RES
11	3D LANDMARK MODEL STANDARD
12	3D LANDMARK MODEL LIGHT
13	HEG PATTERN
14	HEG ARROW
18	ANNOTATION CATEGORY ICON HI RES
19	POI CATEGORY ICON HI RES
20	POI CATEGORY ICON LOW RES
21	POI ICON HI RES

<sup>185</sup> Only available in South Korea.

<sup>186</sup> Only the metadata for this Feature Type is published in the standard extract. This Feature Code is published only in conjunction with Disputed Territories.

<sup>187</sup> Only included in the 3D City Model product.

<sup>188</sup> This Feature Code is only published for select cities.

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Code	Description
22	POI ICON MED RES
23	POI ICON LOW RES
24	LANDMARK ICON LOW RES
25	SIGN AS REAL
26	LANDMARK ICON HI RES
27	COLLADA FILE - LOW LEVEL OF DETAIL
28	COLLADA FILE - MEDIUM LEVEL OF DETAIL
29	COLLADA FILE - HIGH LEVEL OF DETAIL
30	LANDMARK ICON MED RES
31	2D LOW RES VIEW (KOREA)
32	2D HIGH RES VIEW (KOERA)
33	3D VIEW (KOREA)
34	2D Junction View
35	POI EXTENDED NAVIGATION GUIDE MAPS
36	SIGN BOARD (CHINA)
37	SIGN BOARD ARROW (CHINA)
38	BUILDING TEXTURE PATTERN (KOREA)

## E.2.33 FPNTTYPE - Feature Point Type

Code	Description
GP	GUIDANCE POINT
RG	ROUTE GUIDANCE POINT
RC	RAILWAY CROSSING

## E.2.34 FTATTTYPE - Feature Attribute Type

Code	Description
2	MAIN FEATURE TYPE
3	ALTERNATE FEATURE TYPE
4	UNKNOWN

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### E.2.35 FUNCLASS - Functional Classification

Code	Description
(space)	NOT APPLICABLE
1	LEVEL 1
2	LEVEL 2
3	LEVEL 3
4	LEVEL 4
5	LEVEL 5

### E.2.36 HSENBFMT - House Number Format

Code	Description
A	HOUSE NUMBER IS AFTER THE STREET NAME
B	HOUSE NUMBER IS BEFORE THE STREET NAME

### E.2.37 LAFCOMP - Landmark Feature Component

Code	Description
F	STRUCTURE FOOTPRINT
L	LINK
S	GROUPED STRUCTURE

### E.2.38 LANECAT - Lane Category

Code	Description
(space)	NOT APPLICABLE
1	ONE LANE
2	TWO OR THREE LANES
3	FOUR OR MORE LANES

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## E.2.39 LANETYPE - Lane Type

Code	Description
1	REGULAR
2	HOV
4	REVERSIBLE
8	EXPRESS
16	ACCELERATION
32	DECELERATION
64	AUXILIARY
128	SLOW
256	PASSING/OVERTAKING
512	DRIVABLE SHOULDER
1024	REGULATED LANE ACCESS
2048	TURN
4096	CENTER TURN
8192	TRUCK PARKING
16348	PARKING
32768	VARIABLE DRIVING
65536	BICYCLE

## E.2.40 LANGCODE - Language Code

Value	Attribute Description
ALB	ALBANIAN
AMT	ARMENIAN TRANSCRIBED
ARA	ARABIC
ARE	ARABIC ENGLISH
ARM	ARMENIAN
AMT	ARMENIAN TRANSCRIBED
ARX	ARMENIAN TRANSLITERATION

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Value	Attribute Description
ASM	ASSAMESE
ASX	ASSAMESE TRANSLITERATION
AZE	AZERI
AZX	AZERI TRANSLITERATION
IND	BAHASA INDONESIA
BAQ	BASQUE
BEL	BELARUSIAN
BEX	BELARUSIAN TRANSLITERATION
BEN	BENGALI
BGX	BENGALI TRANSLITERATION
BOS	BOSNIAN
BOX	BOSNIAN TRANSLITERATION
BUL	BULGARIAN
BUT	BULGARIAN TRANSCRIBED
BUX	BULGARIAN TRANSLITERATION
CAT	CATALAN
BUR	BURMESE
BUE	BURMESE ENGLISH
CHI	CHINESE (MODERN)
CHT	CHINESE (TRADITIONAL)
SCR	CROATIAN
SRX	CROATIAN TRANSLITERATION
CZE	CZECH
CZX	CZECH TRANSLITERATION
DAN	DANISH
DUT	DUTCH
ENG	ENGLISH
EST	ESTONIAN
ESX	ESTONIAN TRANSLITERATION

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Value	Attribute Description
FIN	FINNISH
FAO	FAROESE
FRE	FRENCH
GLG	GALICIAN
GEO	GEORGIAN
GET	GEORGIAN TRANSCRIBED
GEX	GEORGIAN TRANSLITERATION
GER	GERMAN
GRE	GREEK
GRT	GREEK TRANSCRIBED
GRX	GREEK TRANSLITERATION
GRN	GUARANÃ
GUJ	GUJARATI
GJX	GUJARATI TRANSLITERATION
HEB	HEBREW
HEX	HEBREW TRANSLITERATION
HIN	HINDI
HIX	HINDI TRANSLITERATION
HUN	HUNGARIAN
HUX	HUNGARIAN TRANSLITERATION
ICE	ICELANDIC
GLE	IRISH GAELIC
ITA	ITALIAN
JPN	JAPANESE
KAN	KANNADA
KNX	KANNADA TRANSLITERATION
KAZ	KAZAKH
KAT	KAZAKH TRANSCRIBED
KAX	KAZAKH TRANSLITERATION
KHE	KHMER ENGLISH

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Value	Attribute Description
KIR	KYRGYZ
KIT	KYRGYZ TRANSCRIBED
KIX	KYRGYZ TRANSLITERATION
KOR	KOREAN
KOX	KOREAN TRANSLITERATION
LAV	LATVIAN
LAX	LATVIAN TRANSLITERATION
LIT	LITHUANIAN
LIX	LITHUANIAN TRANSLITERATION
MAC	MACEDONIAN
MAT	MACEDONIAN TRANSCRIBED
MAX	MACEDONIAN TRANSLITERATION
MAL	MALAYALAM
MYX	MALAYALAM TRANSLITERATION
MAY	MALAYSIAN
MLT	MALTESE
MLX	MALTESE TRANSLITERATION
MAR	MARATHI
MRX	MARATHI TRANSLITERATION
MOL	MOLDOVAN
MOX	MOLDOVAN TRANSLITERATION
MON	MONGOLIAN
MGX	MONGOLIAN TRANSLITERATION
MNE	MONTENEGRIN
MNX	MONTENEGRIN TRANSLITERATION
NOR	NORWEGIAN
ORI	ORIYA
ORX	ORIYA TRANSLITERATION
PAN	PANJABI

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Value	Attribute Description
PNX	PANJABI TRANSLITERATION
PYN	PINYIN
POL	POLISH
POX	POLISH TRANSLITERATION
POR	PORTUGUESE
RUM	ROMANIAN
RMX	ROMANIAN TRANSLITERATION
RUS	RUSSIAN
RST	RUSSIAN TRANSCRIBED
RUX	RUSSIAN TRANSLITERATION
SRB	SERBIAN
SCT	SERBIAN TRANSCRIBED
SCX	SERBIAN TRANSLITERATION
SLO	SLOVAK
SLX	SLOVAK TRANSLITERATION
SLV	SLOVENIAN
SIX	SLOVENIAN TRANSLITERATION
SPA	SPANISH
SWE	SWEDISH
TAM	TAMIL
TMX	TAMIL TRANSLITERATION
TEL	TELUGU
TLX	TELUGU TRANSLITERATION
THA	THAI
THE	THAI ENGLISH
TUR	TURKISH
TKT	TURKISH TRANSCRIBED
TUX	TURKISH TRANSLITERATION
UKR	UKRAINIAN

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Value	Attribute Description
UKT	UKRAINIAN TRANSCRIBED
UKX	UKRAINIAN TRANSLITERATION
UND	UNDEFINED
UZB	UZBEK
VIE	VIETNAMESE
VIX	VIETNAMESE TRANSLITERATION
WEL	WELSH
WEN	WORLD ENGLISH

## E.2.41 LINKEND - Link End

Code	Description
(space)	CONDITION APPLIES TO WHOLE LINK
N	CONDITION APPLIES TO NON-REF END OF LINK
R	CONDITION APPLIES TO REF END OF LINK

## E.2.42 LINKSIDE - Link Side

Code	Description
L	LEFT
R	RIGHT
B	BOTH

## E.2.43 LNCROSREST - Lane Crossing Restriction

Code	Description
1	LEFT LANE CROSSING RESTRICTION
2	RIGHT LANE CROSSING RESTRICTION
3	BOTH LANE CROSSING RESTRICTION

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### E.2.44 LNDIRCAT - Lane Direction Category

Code	Description
1	STRAIGHT
2	SLIGHT RIGHT
4	RIGHT
8	HARD RIGHT
16	U-TURN LEFT
32	HARD LEFT
64	LEFT
128	SLIGHT LEFT
256	MERGE RIGHT
512	MERGE LEFT
1024	MERGE UNKNOWN
2048	U-TURN RIGHT
4096	SECOND RIGHT
8192	SECOND LEFT

### E.2.45 LNDIVMRK - Lane Divider Marker

Code	Description
0	NO MARKER
1	LONG DASHED
2	DOUBLE SOLID
3	SINGLE SOLID
4	INNER SOLID, OUTER DASHED
5	INNER DASHED, OUTER SOLID
6	SHORT DASHED
7	SHADED AREA MARKING
8	DASHED BLOCKS
9	PHYSICAL DIVIDER

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Code	Description
10	DOUBLE DASHED
11	NO DIVIDER
12	CROSSING ALERT

## E.2.46 LNFORMEND - Lane Forming/Ending

Code	Description
0	NOT APPLICABLE
1	LANE FORMING
2	LANE ENDING
3	LANE FORMING ENDING

## E.2.47 LOWMOBIL - Low Mobility

Code	Description
1	DRIVING CONDITION IS LOW MOBILITY
2	DRIVING CONDITION IS NOT LOW MOBILITY
3	DRIVING CONDITION IS NOT KNOWN

## E.2.48 OBJASSOTYP - Object Association Type

Code <sup>189</sup>	Description
3	PASSING GUIDANCE
4	JUNCTION GUIDANCE

## E.2.49 PHONE\_CNTRYCODE - Phone Country Code

Country Code	Country
355	Albania
1	American Samoa
376	Andorra

<sup>189</sup> Values 1 and 2 are not used.

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Country Code	Country
54	Argentina
297	Aruba
61	Australia
43	Austria
994	Azerbaijan
242	Bahamas
973	Bahrain
880	Bangladesh
375	Belarus
32	Belgium
441	Bermuda
591	Bolivia
387	Bosnia and Herzegovina
267	Botswana
55	Brazil
673	Brunei
359	Bulgaria
266	Burkina Faso
257	Burundi
238	Cabo Verde
237	Cameroon
1	Canada
345	Cayman Islands
236	Central African Republic
235	Chad
56	Chile
86	China
57	Colombia
269	Comoros

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Country Code	Country
236	Congo, Democratic Republic of the
242	Congo, Republic of the
506	Costa Rica
385	Croatia
357	Cyprus
420	Czechia
45	Denmark
253	Djibouti
20	Egypt
593	Ecuador
240	Equatorial Guinea
291	Eritrea
372	Estonia
251	Ethiopia
500	Falkland Islands
298	Faroe Islands
679	Fiji
596	French Antilles & Guadeloupe
358	Finland
33	France
241	Gabon
220	Gambia
970	Gaza Strip
995	Georgia
49	Germany
350	Gibraltar
30	Greece
590	Guadeloupe
1	Guam

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Country Code	Country
224	Guinea
90	Guinea-Bissau
594	Guyana
852	Hong Kong
852	Hong Kong-China
36	Hungary
354	Iceland
91	India
62	Indonesia
964	Iraq
353	Ireland
44	Isle of Man
972	Israel
39	Italy
867	Jamaica
962	Jordan
007	Kazakhstan
254	Kenya
381	Kosovo
965	Kuwait
371	Latvia
961	Lebanon
266	Lesotho
231	Liberia
218	Libya
423	Liechtenstein
370	Lithuania
352	Luxembourg
853	Macau

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Country Code	Country
853	Macau-China
389	Macedonia, Former Yugoslav Republic of
261	Madagascar
265	Malawi
60	Malaysia
960	Maldives
223	Mali
356	Malta
222	Mauritania
230	Mauritius
262	Mayotte
52	Mexico
373	Moldova
377	Monaco
382	Montenegro
976	Mongolia
212	Morocco
258	Mozambique
264	Namibia
31	Netherlands
64	New Zealand
505	Nicaragua
227	Niger
234	Nigeria
1	Northern Mariana Islands
47	Norway
968	Oman
507	Panama
92	Pakistan

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Country Code	Country
595	Paraguay
51	Peru
63	Philippines
48	Poland
351	Portugal
787	Puerto Rico
974	Qatar
262	Réunion
40	Romania
7	Russia
250	Rwanda
290	Saint Helena, Ascension, and Tristan da Cunha
378	San Marino
239	Sao Tome and Principe
590	Saint Barthélemy
869	Saint Kitts and Nevis
784	Saint Vincent and the Grenadines
966	Saudi Arabia
221	Senegal
381	Serbia
248	Seychelles
232	Sierra Leone
65	Singapore
421	Slovakia
386	Slovenia
252	Somalia
27	South Africa
82	South Korea
34	Spain

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Country Code	Country
94	Sri Lanka
268	Swaziland
46	Sweden
41	Switzerland
963	Syria
866	Taiwan
66	Thailand
676	Tonga
868	Trinidad and Tobago
216	Tunisia
90	Turkey
380	Ukraine
971	United Arab Emirates
44	United Kingdom (same code and value apply individually for England, Northern Ireland, Scotland, Wales, and Channel Islands)
1	United States
598	Uruguay
678	Vanuatu
39	Vatican City State
58	Venezuela
84	Vietnam
1	Virgin Islands, U.S.
260	Zambia
263	Zimbabwe

## E.2.50 POIASSOC - POI Association Type

Code	Description
L	LOGICAL RELATION
P	PHYSICAL RELATION

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## E.2.51 POISIDE - POI Side

Code	Description
L	LEFT SIDE
N	NOT APPLICABLE
R	RIGHT SIDE

## E.2.52 POLYRES - Polygon Restriction

Code	Description
1	TRUCKS ONLY
2	AUTOS
3	AUTOS AND TRUCKS
4	TRUCKS ONLY

## E.2.53 PONAMTYP - POI Name Type

Code	Description
B	BASE NAME
E	EXONYM
J	SHORTENED BASE NAME
K	SHORTENED EXONYM/SYNONYM
S	SYNONYM
U	UNNAMED

## E.2.54 PREFSUFF - Prefix / Suffix Street Direction

Code	Description	Language Code
(space)	PREFIX/SUFFIX = SPACES	NOT APPLICABLE
E	EAST	ENG
E	EST	FRE
N	NORTH	ENG
N	NORD	FRE

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Code	Description	Language Code
NE	NORTHEAST	ENG
NE	NORD-EST	FRE
NO	NORD-OUEST	FRE
NW	NORTHWEST	ENG
O	OUEST	FRE
S	SOUTH	ENG
S	SUD	FRE
SE	SOUTHEAST	ENG
SE	SUD-EST	FRE
SO	SUD-OUEST	FRE
SW	SOUTHWEST	ENG
W	WEST	ENG

## E.2.55 RTETYPE - Route Type

Code	Description
(space)	NOT APPLICABLE
1	LEVEL 1 ROAD
2	LEVEL 2 ROAD
3	LEVEL 3 ROAD
4	LEVEL 4 ROAD
5	LEVEL 5 ROAD
6	LEVEL 6 ROAD

## E.2.56 SPDMSRC - Speed Limit Source

Code	Description
(space)	NOT APPLICABLE
1	POSTED
2	DERIVED

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### E.2.57 SPDUNIT - Speed Limit Unit

Code	Description
KPH	KILOMETERS PER HOUR
MPH	MILES PER HOUR

### E.2.58 SPEEDCAT - Speed Category

Code	Description
(space)	NOT APPLICABLE
1	> 130 KPH > 80 MPH
2	101-130 KPH 65-80 MPH
3	91-100 KPH 55-64 MPH
4	71-90 KPH 41-54 MPH
5	51-70 KPH 31-40 MPH
6	31-50 KPH 21-30 MPH
7	11-30 KPH 6-20 MPH
8	< 11 KPH < 6 MPH

### E.2.59 STRTYPE - Street Type

A street type abbreviation is published in the Street Type field of the Streets layer. The full spelling is given for each abbreviation in the metadata. For all languages other than English, the full spelling for the street type is published directly in the Street Type Before and Street Type After fields of the Streets layer.

Please see Street Type Abbreviation.xlsx for a list of Street Type abbreviations.

### E.2.60 SUPGEOBT - Supplemental Geometry Bitset

Code	Description
1	Race Track
2	Undetermined Geometry Type
4	Driveway
8	Alley
16	Bicycle Path

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Code	Description
32	Walking Path
64	Private Road for Service Vehicle
128	Mountain Bike Trail
256	Hiking Trail
512	Cross Country Ski Trail
1024	Golf Course Trail

## E.2.61 TEXTTYPE - Sign Text Type

Code	Description
B	BRANCH TO A STREET
T	TOWARDS AN EVENTUAL DESTINATION LINK

## E.2.62 TRACCLVL - Transit Access Level

Code	Description
1	ABOVE STREET LEVEL
2	BELOW STREET LEVEL
3	AT STREET LEVEL

## E.2.63 TRACCMTH - Transit Access Method

Code	Description
0	NOT APPLICABLE
1	STAIRS
2	ESCALATOR
3	STAIRS AND ESCALATOR
4	ELEVATOR
5	STAIRS AND ELEVATOR
6	ESCALATOR AND ELEVATOR
7	STAIRS AND ESCALATOR AND ELEVATOR
9	STAIRS AND PEDESTRIAN RAMP

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Code	Description
10	ESCALATOR AND PEDESTRIAN RAMP
11	STAIRS AND ESCALATOR AND PEDESTRIAN RAMP

## E.2.64 TRACCTYP - Transit Access Type

Code	Description
1	ENTRANCE ONLY
2	EXIT ONLY
3	ENTRANCE AND EXIT

## E.2.65 TRVLFLOW - Travel Flow

Code	Description
1	FROM REFERENCE NODE
2	TO REFERENCE NODE
3	BOTH DIRECTIONS
4	CLOSED BOTH DIRECTIONS

## E.2.66 UOM - Unit of Measure

Code	Description
E	ENGLISH
M	METRIC

## E.2.67 ZNNAMTYP - Zone Name Type

Code	Description
A	Abbreviation
B	BASE NAME
E	EXONYM
S	SYNONYM

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## E.2.68 ZONETYPE - Zone Type

Code	Description
KA	KNOWN AS – REPLACES ADMIN
KD	KNOWN AS – DOES NOT REPLACE ADMIN
PA	POSTAL AREA
NBO.	NEIGHBOURHOOD
GC	GREATER CITY
TA <sup>190</sup>	TRAFFIC AREA

## E.3 Compound Reference Classes

### E.3.1 ASSOATTRTYP - Association Attribute Type

ASSOATTRTYP	Modifier	Modifier Description
1 - Direction	F	Positive Direction
	T	Negative Direction
	B	Both Directions
2 - Visibility	0	Not Applicable
	1	Clearly Visible
	2	Partly Visible
	3	Not Visible But Relevant
3 - Seasonal Dependency	N	No Seasonal Dependency Defined
	Y	Seasonal Dependency Applies
4 - Distance	0	Not Applicable
	1	Relatively Close to the Guidance Location
	2	Relatively Distant from the Guidance Location

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ASSOATRTYP	Modifier	Modifier Description
5 - Calculated Importance	Numeric	Points on a scale of 0 to 10 indicating importance

## E.3.2 Overview of Compound Reference Classes

Condition Type/Value	Condition Modifier/Value
1 - Toll Structure	<p>When Modifier = 30 - Toll Structure Type</p> <ul style="list-style-type: none"><li>1 - Fixed Fee</li><li>2 - Obtain Ticket</li><li>3 - Pay per Ticket</li><li>4 - Electronic</li></ul>
	<p>When Modifier = 31 - Method of Payment</p> <ul style="list-style-type: none"><li>1 - Cash</li><li>2 - Bank Card</li><li>3 - Credit Card</li><li>4 - Pass/Subscription</li><li>5 - Transponder</li><li>6 - Video Toll Charge</li><li>7 - Exact Cash</li><li>8 - Travel Card</li></ul>
3 - Construction Status Closed	
4 - Gates	<p>When Modifier = 1 - Gate Type</p> <ul style="list-style-type: none"><li>1 - Key Access</li><li>2 - Permission Required</li><li>3 - Emergency Gates</li></ul>
5 - Direction of Travel	<p>When Modifier = 1 - Direction of Travel</p> <ul style="list-style-type: none"><li>1 - From Reference Node</li><li>2 - To Reference Node</li><li>3 - Both</li></ul>
7 - Restricted Driving Manoeuvre	<p>When Modifier = 1 - RDM Type</p> <ul style="list-style-type: none"><li>1 - RDM Type = Legal</li><li>2 - RDM Type = Physical</li><li>3 - RDM Type = Logical</li><li>4 - RDM Type = Observed</li></ul>

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Condition Type/Value	Condition Modifier/Value
	When Modifier = 2 - Time Override 1 - Time Override = Dawn to Dusk 2 - Time Override = Dusk to Dawn
8 - Access Restriction	When Modifier = 1 - Approximate Seasonal Closure 0 - Approximate Seasonal Closure = No 1 - Approximate Seasonal Closure = Yes
	When Modifier = 10 - HOV Minimum Passengers Number (Minimum Number of Passengers - used in conjunction with HOV vehicles)
	When Modifier = 11 - HOV Motorcycles Allowed 0 - Motorcycles Considered Carpool = No 1 - Motorcycles Considered Carpool = Yes
	When Modifier = 12 - HOV Hybrids Allowed 0 - Hybrids Considered Carpool = No 1 - Hybrids Considered Carpool = Yes
	When Modifier = 57 - HOV Alternate Fuel Approved 0 - Alternate Fuel Considered Carpool = No 1 - Alternate Fuel Considered Carpool = Yes
	When Modifier = 58 - HOV Fee Pay Approved 0 - Fee Pay Considered Carpool = No 1 - Fee Pay Considered Carpool = Yes
	When Modifier = 87 - Dependent Access Type 0 - Dependent Access Type = No 1 - Dependent Access Type = Y
9 - Special Explication	
10 - Special Speed Situation	When Modifier = 1 - Special Speed Type 1 - Special Speed Type = Advisory 2 - Special Speed Type = Dependent 3 - Special Speed Type = Speed Bumps Present
	When Modifier = 2 - Time Override 1 - Time Override = Dawn to Dusk 2 - Time Override = Dusk to Dawn

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Condition Type/Value	Condition Modifier/Value
	<p>When Modifier = 3 - Dependent Special Speed Type</p> <p>1 - Dependent Speed Type = School</p> <p>2 - Dependent Speed Type = Rain</p> <p>3 - Dependent Speed Type = Snow</p> <p>4 - Dependent Speed Type = Time Dependent</p> <p>5 - Dependent Speed Type = Approximate Seasonal Time</p> <p>6 - Dependent Speed Type = Lane Dependent</p> <p>7 - Dependent Speed Type = Fog</p>
11 - Variable Speed Sign	<p>When Modifier = 4 - Special Speed Limit</p> <p>Number (mph or kph)</p>
12 - Usage Fee Required	<p>When Modifier = 1 - Sign Location</p> <p>1 - Sign Location = Left</p> <p>2 - Sign Location = Right</p> <p>3 - Sign Location = Overhead</p>
13 - Lane Traversal	<p>When Modifier = 33 - Toll Feature Type</p> <p>1 - Toll Road</p> <p>2 - Bridge</p> <p>3 - Tunnel</p> <p>4 - Park</p> <p>5 - Mountain Pass</p> <p>6 - Scenic Route</p> <p>7 - Vignette Road</p> <p>8 - Toll Zone</p> <p>9 - Ferry</p>
14 - Through Route	<p>When Modifier = 34 - Toll System Type</p> <p>ID number in XML look-aside file.</p>
16 - Traffic Signal	<p>When Modifier = 1 - Signal/Sign Location</p> <p>1 - Signal/Sign Location = Right</p> <p>2 - Signal/Sign Location = Left</p> <p>3 - Signal/Sign Location = Overhead</p>
	<p>When Modifier = 72 - NG Indicator</p> <p>Numeric value of 0 to 10.</p>

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Condition Type/Value	Condition Modifier/Value
17 - Traffic Sign	When Modifier = 22 Traffic Sign Type 1 - Start of No Overtaking 2 - End of No Overtaking 3 - Protected Overtaking - Extra Lane 4 - Protected Overtaking - Extra Lane Right Side 5 - Protected Overtaking - Extra Lane Left Side 6 - Lane Merge Right 7 - Lane Merge Left 8 - Lane Merge Centre 9 - Railway Crossing Protected 10 - Railway Crossing Unprotected 11 - Road Narrows 12 - Sharp Curve Left 13 - Sharp Curve Right 14 - Winding Road Starting Left 15 - Winding Road Starting Right 16 - Start of No Overtaking Trucks 17 - End of No Overtaking Trucks 18 - Steep Hill Upwards 19 - Steep Hill Downwards 20 - Stop Sign 21 - Lateral Wind 22 - General Warning 23 - Risk of Grounding 24 - General Curve 25 - End of All Restrictions 26 - General Hill 27 - Animal Crossing 28 - Icy Conditions 29 - Slippery Road

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Condition Type/Value	Condition Modifier/Value
	30 - Falling Rocks 31 - School Zone 32 - Tramway Crossing 33 - Congestion Hazard 34 - Accident Hazard 35 - Priority Over Oncoming Traffic 36 - Yield to Oncoming Traffic 37 - Crossing with Priority from the Right 41 - Pedestrian Crossing 42 - Yield 53 - No Engine Brake 54 - End of No Engine Brake 55 - No Idling 56 - Truck Rollover 57 - Low Gear 58 - End of Low Gear 59 - Bicycle Crossing 60 - Yield to Bicycles 61 - No towed caravan allowed 62 - No towed trailer allowed 63 - No camper or motorhome allowed 64 - No Turn on Red 65 - Turn on Red Permitted
	When Modifier = 23 Traffic Sign Duration Supplemental Sign Duration (Text)
	When Modifier = 24 Traffic Sign Prewarning Supplemental Sign Pre-Warning
17 - Traffic Sign (continued)	When Modifier = 25 - Traffic Sign Applicable Vehicles 1 - Truck 2 - Truck Over 3.5 Tons, Trailers or Semi-Trailers 3 - Bus 4 - Passenger Vehicle with Trailer 5 - Motor Home 6 - Motorcycle
	When Modifier = 26 Traffic Sign Validity Time Supplemental Sign Validity Time

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Condition Type/Value	Condition Modifier/Value
	<p>When Modifier = 28 - Traffic Sign Category</p> <p>1 - Regulatory Sign</p> <p>2 - Informative Sign</p> <p>3 - Warning Sign</p>
	<p>When Modifier = 47 - Traffic Sign General Warning Type</p> <p>1 - Object Overhang</p> <p>2 - Risk of Grounding</p> <p>3 - Animal Crossing</p> <p>4 - Accident Hazard</p>
	<p>When Modifier = 51 - Traffic Sign Value</p> <p>Text - as it appears on traffic sign</p>
	<p>When Modifier = 62 - Weather Type</p> <p>1 - Rain</p> <p>2 - Snow</p> <p>3 - Fog</p>
	<p>When Modifier = 71 - Traffic Sign Sub Category</p> <p>1 - Priority Sign</p>
	<p>When Modifier = 72 - Importance Indicator</p> <p>Numeric value of 0 to 10.</p>
18 - Railway Crossing	<p>When Modifier = 27 - Railway Crossing Type</p> <p>1 - Protected</p> <p>2 - Unprotected</p>
19 - No Overtaking	<p>When Modifier = 60 - Direction</p> <p>1 - Positive Direction</p> <p>2 - Negative Direction</p> <p>3 - Both Directions</p> <p>4 - Unknown</p> <p>When Modifier = 62 - Weather Type</p> <p>1 - Rain</p> <p>2 - Snow</p> <p>3 - Fog</p>
20 - Junction View	

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Condition Type/Value	Condition Modifier/Value
21 - Protected Overtaking	When Modifier = 60 - Direction 1 - Positive Direction 2 - Negative Direction 3 - Both Directions
22 - Evacuation Route	When Modifier = 35 - Evacuation Event Type 1 - Hurricane 2 - Floods 3 - Nuclear Incidents 4 - Terrorist Incidents 5 - Earthquakes 6 - Snow Advisories 7 - Wildfires 8 - Volcanic Eruptions 9 - Tsunami
	When Modifier = 36 - Evacuation Travel Flow 1 - From 2 - To 3 - Both 4 - Closed
	When Modifier = 37 - Event Code 1 - Alligator Alley Northbound 2 - Alligator Alley Southbound
23 - Transport Access Restriction	When Modifier = 38 - Direction Closure 1 - Closed in Both Directions 2 - Closed in Positive Direction 3 - Closed in Negative Direction

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Condition Type/Value	Condition Modifier/Value
	When Modifier = 39 - Hazardous Material Type 1 - Explosives 2 - Gas 3 - Flammable 4 - Flammable Solid/Combustible 5 - Organic 6 - Poison 7 - Radioactive 8 - Corrosive 9 - Other 20 - Any Hazardous Material 21 - Poisonous Inhalation Hazard (PIH) 22 - Goods Harmful to Water 23 - Explosive and Flammable 24 - Tunnel Category B 28 - Tunnel Category C 32 - Tunnel Category D 34 - Tunnel Category E
	When Modifier = 41 - Height Restriction Number (in inches or centimetres)
	When Modifier = 42 - Weight Restriction Number (in pounds or kilograms)
	When Modifier = 43 - Weight per Axle Restriction Number (in pounds or kilograms)
	When Modifier = 44 - Length Restriction Number (in inches or centimetres)
	When Modifier = 45 - Width Restriction Number (in inches or centimetres)

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Condition Type/Value	Condition Modifier/Value
23 - Transport Access Restriction (continued)	<p>When Modifier = 46 - Trailer Type</p> <p>1 - Truck with one or more trailers</p> <p>2 - Truck with two or more trailers</p> <p>3 - Truck with three or more trailers</p> <p>4 - Semi or tractor with 1 or more trailers</p> <p>5 - Truck with no trailer(s)</p> <p>6 - Truck with one trailer</p> <p>7 - Truck with two trailers</p> <p>8 - Truck with three trailers</p> <p>9 - Truck with four trailers</p> <p>10 - Straight Truck with one or more trailers</p> <p>11 - Straight Truck with two or more trailers</p> <p>12 - Straight Truck with three or more trailers</p> <p>13 - Straight Truck with or without trailers</p> <p>14 - Straight Truck with no trailer(s)</p> <p>15 - Straight Truck with one trailer</p> <p>16 - Straight Truck with two trailers</p> <p>17 - Straight Truck with three trailers</p> <p>18 - Straight Truck with four trailers</p> <p>19 - Semi-Truck with one or more trailers</p> <p>20 - Semi-Truck with two or more trailers</p> <p>21 - Semi-Truck with three or more trailers</p> <p>22 - Semi-Truck with or without trailers</p> <p>23 - Semi-Truck with no trailer(s)</p> <p>24 - Semi-Truck with one trailer</p> <p>25 - Semi-Truck with two trailers</p> <p>26 - Semi-Truck with three trailers</p> <p>27 - Semi-Truck with four trailers</p>
	<p>When Modifier = 53 - Physical Structure Type</p> <p>1 - Bridge (Overpass)</p> <p>2 - Tunnel (Underpass)</p> <p>3 - Arch Bridge</p> <p>4 - Arch Tunnel</p> <p>5 - Other</p>
	<p>When Modifier = 61 - Weight Dependent</p> <p>Number (in pounds or kilograms)</p>

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Condition Type/Value	Condition Modifier/Value
	When Modifier = 62 - Weather Type 1 - Rain 2 - Snow 3 - Fog
	When Modifier = 75 - Number of Axles 1 - Two or more axles 2 - Three or more axles 3 - Four or more axles 4 - Five or more axles 5 - Six or more axles 6 - Single axle 7 - Tandem axle 8 - Triple Axle 9 - Quad Axle 10 - Quint Axle 11 - Two Axles 12 - Three Axles 13 - Four Axles 14 - Five Axles 15 - Six Axles 16 - Seven Axles
	When Modifier = 81 - KPRA Length Length value (inches in US, cm outside US)
	Time Override 1 - Dawn to Dusk 2 - Dusk to Dawn

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Condition Type/Value	Condition Modifier/Value
25 - Transport Special Speed Situation	<p>When Modifier = 46 - Trailer Type</p> <p>1 - Truck with one or more trailers</p> <p>2 - Truck with two or more trailers</p> <p>3 - Truck with three or more trailers</p> <p>4 - Semi or tractor with 1 or more trailers</p> <p>5 - Truck with no trailer(s)</p> <p>6 - Truck with one trailer</p> <p>7 - Truck with two trailers</p> <p>8 - Truck with three trailers</p> <p>9 - Truck with four trailers</p> <p>10 - Straight Truck with one or more trailers</p> <p>11 - Straight Truck with two or more trailers</p> <p>12 - Straight Truck with three or more trailers</p> <p>13 - Straight Truck with or without trailers</p> <p>14 - Straight Truck with no trailer(s)</p> <p>15 - Straight Truck with one trailer</p> <p>16 - Straight Truck with two trailers</p> <p>17 - Straight Truck with three trailers</p> <p>18 - Straight Truck with four trailers</p> <p>19 - Semi-Truck with one or more trailers</p> <p>20 - Semi-Truck with two or more trailers</p> <p>21 - Semi-Truck with three or more trailers</p> <p>22 - Semi-Truck with or without trailers</p> <p>23 - Semi-Truck with no trailer(s)</p> <p>24 - Semi-Truck with one trailer</p> <p>25 - Semi-Truck with two trailers</p> <p>26 - Semi-Truck with three trailers</p> <p>27 - Semi-Truck with four trailers</p>
	<p>When Modifier = 48 - Transport Speed Limit</p> <p>Number (in mph or kph)</p>
	<p>When Modifier = 59 - Transport Speed Situation Type</p> <p>1 - Hazardous Material</p> <p>2 - Trailer</p> <p>3 - Weight</p> <p>4 - Weather</p>

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Condition Type/Value	Condition Modifier/Value
	<p>When Modifier = 60 - Direction</p> <p>1 - Positive Direction</p> <p>2 - Negative Direction</p> <p>3 - Both Directions</p>
	<p>When Modifier = 61 - Weight Dependent</p> <p>Number (in pounds or kilograms)</p>
	<p>When Modifier = 62 - Weather Type</p> <p>1 - Rain</p> <p>2 - Snow</p> <p>3 - Fog</p>
	<p>When Modifier = 83 - Speed Limit Type</p> <p>1 - Legal</p> <p>2 - Advisory</p>
26 - Transport RDM	<p>When Modifier = 39 - Hazardous Material Type</p> <p>1 - Explosives</p> <p>2 - Gas</p> <p>3 - Flammable</p> <p>4 - Flammable Solid/Combustible</p> <p>5 - Organic</p> <p>6 - Poison</p> <p>7 - Radioactive</p> <p>8 - Corrosive</p> <p>9 - Other</p> <p>20 - Any Hazardous Material</p> <p>21 - Poisonous Inhalation Hazard (PIH)</p> <p>22 - Goods Harmful to Water</p> <p>23 - Explosive and Flammable</p> <p>24 - Tunnel Category B</p> <p>28 - Tunnel Category C</p> <p>32 - Tunnel Category D</p> <p>34 - Tunnel Category E</p>
	<p>When Modifier = 41 - Height Restriction</p> <p>Number (in inches or centimetres)</p>
	<p>When Modifier = 42 - Weight Restriction</p> <p>Number (in pounds or kilograms)</p>

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Condition Type/Value	Condition Modifier/Value
	When Modifier = 43 - Weight per Axle Restriction Number (in pounds or kilograms)
	When Modifier = 44 - Length Restriction Number (in inches or centimetres)
	When Modifier = 45 - Width Restriction Number (in inches or centimetres)
	When Modifier = 46 - Trailer Type 1 - Truck with one or more trailers 2 - Truck with two or more trailers 3 - Truck with three or more trailers 4 - Semi or tractor with 1 or more trailers 6 - Truck with one trailer 7 - Truck with two trailers 8 - Truck with three trailers 9 - Truck with four trailers 10 - Straight Truck with one or more trailers 11 - Straight Truck with two or more trailers 12 - Straight Truck with three or more trailers 13 - Straight Truck with or without trailers 14 - Straight Truck with no trailer(s) 15 - Straight Truck with one trailer 16 - Straight Truck with two trailers 17 - Straight Truck with three trailers 18 - Straight Truck with four trailers 19 - Semi-Truck with one or more trailers 20 - Semi-Truck with two or more trailers 21 - Semi-Truck with three or more trailers 22 - Semi-Truck with or without trailers 23 - Semi-Truck with no trailer(s) 24 - Semi-Truck with one trailer 25 - Semi-Truck with two trailers 26 - Semi-Truck with three trailers 27 - Semi-Truck with four trailers
	When Modifier = 62 - Weather Type 1 - Rain 2 - Snow 3 - Fog

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Condition Type/Value	Condition Modifier/Value
	<p>When Modifier = 75 - Number of Axles</p> <p>1 - Two or more axles</p> <p>2 - Three or more axles</p> <p>3 - Four or more axles</p> <p>4 - Five or more axles</p> <p>5 - Six or more axles</p> <p>6 - Single axle</p> <p>7 - Tanem axle</p>
	<p>When Modifier = 81 - KPRA Length</p> <p>Length value (inches in US, cm outside US)</p>
26 - Transport RDM (continued)	<p>Time Override</p> <p>1 - Dawn to Dusk</p> <p>2 - Dusk to Dawn</p>

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Condition Type/Value	Condition Modifier/Value
27 - Transport Preferred Route	When Modifier = 49 - Transport Preferred Route Type 1 - STAA 2 - TD 3 - NRHM 4 - Class 1 HazMats 5 - PIH 6 - Medical Waste Materials 7 - Radioactive Material 8 - General Hazardous Goods 9 - Local 15 - Functional Class 1 Override 16 - Functional Class 2 Override 17 - B-Double Route 18 - B-Triple Route 19 - 50 Max 20 - HPMV 21 - LHV Germany 22 - LHV Denmark 23 - LHV Norway 24 - PBS 2A Australia 25 - PBS 2B Australia 26 - PBS 3A Australia 27 - PBS 3B Australia 28 - PBS 4A Australia 29 - Transport Preferred Route Type = B-Double_HML 30 - Transport Preferred Route Type = B-Double_19 31 - Transport Preferred Route Type = B-Double_21 32 - Transport Preferred Route Type = B-Double_23 33 - Transport Preferred Route Type = B-Double_25 34 - Transport Preferred Route Type = B-Double_26 35 - Transport Preferred Route Type = B-Double_26_HML 36 - Transport Preferred Route Type = B-Double_27.5 37 - Transport Preferred Route Type = AB-Triple 38 - Transport Preferred Route Type = AB-Triple_HML 39 - Transport Preferred Route Type = B-Triple_HML

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Condition Type/Value	Condition Modifier/Value
	When Modifier = 60 - Direction 1 - Positive Direction 2 - Negative Direction 3 - Both Directions
	When Modifier = 61 - Weight Restriction Number (in pounds or kilograms)
34 - Environmental Zone	When Modifier = 69 - Environmental Zone ID Number (Environmental Zone ID))
38 - Blackspot	When Modifier = 60 - Direction 1 - Positive Direction 2 - Negative Direction 3 - Both Directions
	When Modifier = 73 - Blackspot Source 1 - Posted 2 - Sourced
39 - Permitted Driving Manoeuvre	When Modifier = 1 - PDM Type 1 - Legal
	When Modifier = 2 Time Override 1 - Dawn to Dusk 2 - Dusk to Dawn

## E.3.3 CNDMOD1 - Condition / Driving Manoeuvre Modifier

CNDMOD1	Modifier	Modifier Description
4 = Gate	1	Gate Type = Key Access
	2	Gate Type = Permission Required
	3	Gate Type = Emergency Gates
5 = Direction of Travel	1	Direction of travel = From Reference Node
	2	Direction of travel = To Reference node
	3	Direction of travel = Both Directions
7 = Restricted Driving Manoeuvre	1	RDM Type = Legal
	2	RDM Type = Physical
	3	RDM Type = Logical

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CNDMOD1	Modifier	Modifier Description
	4	RDM Type = Observed
8 = Access Restriction	0	Approximate Seasonal Closure = No
	1	Approximate Seasonal Closure = Yes
10 = Special Speed Situation	1	Special Speed Type = Advisory
	2	Special Speed Type = Dependent
	3	Special Speed Type = Speed Bumps Present
11 = Variable Speed Sign	1	Variable Sign Location = Left
	2	Variable Sign Location = Right
	3	Variable Sign Location = Overhead
16 = Traffic Signal/Sign Location	1	Signal/Sign Location = Right
	2	Signal/Sign Location = Left
	3	Signal/Sign Location = Overhead

## E.3.4 CNDMOD2 - Condition / Driving Manoeuvre Modifier 2

CNDMOD2	Modifier	Modifier Description
7 = Restricted Driving Manoeuvre	1	Time Override = Dawn to Dusk
23 = Transport Access Restriction	2	Time Override = Dusk to Dawn
25 = Transport Special Speed Situation		
26 = Transport Restricted Driving Manoeuvre		
10 = Special Speed Situation	Numeric	kilometres or miles per hour

## E.3.5 CNDMOD3 - Condition / Driving Manoeuvre Modifier 3

CNDMOD3	Modifier	Modifier Description
10 = Special Speed Situation	1	Dependent Speed Type = School
	2	Dependent Speed Type = Rain
	3	Dependent Speed Type = Snow
	4	Dependent Speed Type = Time Dependent

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CNDMOD3	Modifier	Modifier Description
	5	Dependent Speed Type = Approximate Seasonal Time
	6	Dependent Speed Type = Lane Dependent
	7	Dependent Speed Type = Fog

### E.3.6 CNDMOD4 - Condition / Driving Manoeuvre Modifier 4

CNDMOD4	Modifier	Modifier Description
10 = Special Speed Situation	Numeric	Number (mph or kph)

### E.3.7 CNDMOD10 - Condition / Driving Manoeuvre Modifier 10

CNDMOD10	Modifier	Modifier Description
8 = Access Restriction	Numeric	Minimum Number of Passengers (used in conjunction with HOV vehicles)

### E.3.8 CNDMOD11 - Condition / Driving Manoeuvre Modifier 11

CNDMOD11	Modifier	Modifier Description
8 = Access Restriction	0	Motorcycles Considered Carpool = No
	1	Motorcycles Considered Carpool = Yes

### E.3.9 CNDMOD12 - Condition / Driving Manoeuvre Modifier 12

CNDMOD12	Modifier	Modifier Description
8 = Access Restriction	0	Hybrids Considered Carpool = No
	1	Hybrids Considered Carpool = Yes

## E.3.10 CNDMOD22 - Condition / Driving Manoeuvre Modifier 22

CNDMOD22	Modifier	Modifier Description
17 = Traffic Sign	1	Traffic Sign Type = Start of No Overtaking
	2	Traffic Sign Type = End of No Overtaking
	3	Traffic Sign Type = Protected Overtaking - extra lane
	4	Traffic Sign Type = Protected Overtaking - extra lane right side
	5	Traffic Sign Type = Protected Overtaking - extra lane left side
	6	Traffic Sign Type = Lane Merge Right
	7	Traffic Sign Type = Lane Merge Left
	8	Traffic Sign Type = Lane Merge Center
	9	Traffic Sign Type = Railway Crossing Protected
	10	Traffic Sign Type = Railway Crossing Unprotected
	11	Traffic Sign Type = Road Narrows
	12	Traffic Sign Type = Sharp Curve Left
	13	Traffic Sign Type = Sharp Curve Right
	14	Traffic Sign Type = Winding Road starting Left
	15	Traffic Sign Type = Winding Road starting Right
	16	Traffic Sign Type = Start of No Overtaking Trucks
	17	Traffic Sign Type = End of No Overtaking Trucks
	18	Traffic Sign Type = Steep Hill Upwards
	19	Traffic Sign Type = Steep Hill Downwards
	20	Traffic Sign Type = Stop Sign
	21	Traffic Sign Type = Lateral Wind

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CNDMOD22	Modifier	Modifier Description
	22	Traffic Sign Type = General Warning
	23	Traffic Sign Type = Risk of Grounding
	24	Traffic Sign Type = General Curve
	25	Traffic Sign Type = End of all Restrictions
	26	Traffic Sign Type = General Hill
	27	Traffic Sign Type = Animal Crossing
	28	Traffic Sign Type = Icy Conditions
	29	Traffic Sign Type = Slippery Road
	30	Traffic Sign Type = Falling Rocks
	31	Traffic Sign Type = School Zone
	32	Traffic Sign Type = Tramway Crossing
	33	Traffic Sign Type = Congestion Hazard
	34	Traffic Sign Type = Accident Hazard
	35	Traffic Sign Type = Priority over Oncoming Traffic
	36	Traffic Sign Type = Yield to Oncoming Traffic
	37	Traffic Sign Type = Crossing with Priority from the Right
	41	Traffic Sign Type = Pedestrian Crossing
	42	Traffic Sign Type = Yield
	53	Traffic Sign Type = No Engine Brake
	54	Traffic Sign Type = End of No Engine Brake
	55	Traffic Sign Type = No Idling
	56	Traffic Sign Type = Truck Rollover
	57	Traffic Sign Type = Low Gear
	58	Traffic Sign Type = End of Low Gear
	59	Traffic Sign Type = Bicycle Crossing
	60	Traffic Sign Type = Yield to Bicycles
	61	Traffic Sign Type = No towed caravan allowed

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CNDMOD22	Modifier	Modifier Description
	62	Traffic Sign Type = No towed trailer allowed
	63	Traffic Sign Type = No camper or motorhome allowed
	64	Traffic Sign Type = No Turn on Red
	65	Traffic Sign Type = Turn on Red Permitted

## E.3.11 CNDMOD23 - Condition / Driving Manoeuvre Modifier 23

CNDMOD23	Modifier	Modifier Description
17 = Traffic Sign	Text	Supplemental Sign Duration

## E.3.12 CNDMOD24 - Condition / Driving Manoeuvre Modifier 24

CNDMOD24	Modifier	Modifier Description
17 = Traffic Sign	Text	Supplemental Sign Pre-Warning

## E.3.13 CNDMOD25 - Condition / Driving Manoeuvre Modifier 25

CNDMOD25	Modifier	Modifier Description
17 = Traffic Sign	1	Supplemental Sign Applicable Vehicle = Truck
	2	Supplemental Sign Applicable Vehicle = Truck over 3.5 tons, trailers or semi-trailers
	3	Supplemental Sign Applicable Vehicle = Bus
	4	Supplemental Sign Applicable Vehicle = Passenger Vehicle with trailer
	5	Supplemental Sign Applicable Vehicle = Motor Home
	6	Supplemental Sign Applicable Vehicle = Motorcycle

## E.3.14 CNDMOD26 - Condition / Driving Manoeuvre Modifier 26

CNDMOD26	Modifier	Modifier Description
17 = Traffic Sign	Text	Supplemental Sign Validity Time

## E.3.15 CNDMOD27 - Condition / Driving Manoeuvre Modifier 27

CNDMOD27	Modifier	Modifier Description
18 = Railway Crossing	1	Railway Crossing Type = 1 (Protected)
	2	Railway Crossing Type = 2 (Unprotected)

## E.3.16 CNDMOD28 - Condition / Driving Manoeuvre Modifier 28

CNDMOD28	Modifier	Modifier Description
17 = Traffic Sign	1	Traffic Sing Category = Regulatory Sign
	2	Traffic Sing Category = Informative Sign
	3	Traffic Sing Category = Warning Sign

## E.3.17 CNDMOD30 - Condition / Driving Manoeuvre Modifier 30

CNDMOD30	Modifier	Modifier Description
1 = Toll Structure	1	Toll Structure Type = Fixed Fee
	2	Toll Structure Type = Obtain Ticket
	3	Toll Structure Type = Pay per Ticket
	4	Toll Structure Type = Electronic

## E.3.18 CNDMOD31 - Condition / Driving Manoeuvre Modifier 31

CNDMOD31	Modifier	Modifier Description
1 = Toll Structure	1	Method of Payment = Cash
	2	Method of Payment = Bank Record
	3	Method of Payment = Credit Card
	4	Method of Payment = Pass/Subscription
	5	Method of Payment = Transponder
	6	Method of Payment = Video Toll Charge
	7	Method of Payment = Exact Cash
	8	Method of Payment = Travel Card

## E.3.19 CNDMOD33 - Condition / Driving Manoeuvre Modifier 33

CNDMOD33	Modifier	Modifier Description
12 = Usage Fee Required	1	Toll Feature Type = Toll Road
	2	Toll Feature Type = Bridge
	3	Toll Feature Type = Tunnel
	4	Toll Feature Type = Park
	5	Toll Feature Type = Mountain Pass
	6	Toll Feature Type = Scenic Route
	7	Toll Feature Type = Vignette Road
	8	Toll Feature Type = Toll Zone
	9	Toll Feature Type = Ferry

## E.3.20 CNDMOD34 - Condition / Driving Manoeuvre Modifier 34

CNDMOD34	Modifier	Modifier Description
12 = Usage Fee Required	ID #	Toll System Type ID = An ID number in XML look-aside file defining the Toll System Type ID.

## E.3.21 CNDMOD35 - Condition / Driving Manoeuvre Modifier 35

CNDMOD35	Modifier	Modifier Description
22 = Evacuation Route	1	Evacuation Event Type = Hurricane
	2	Evacuation Event Type = Floods
	3	Evacuation Event Type = Nuclear Incidents
	4	Evacuation Event Type = Terrorist Incidents
	5	Evacuation Event Type = Earthquakes
	6	Evacuation Event Type = Snow Advisories
	7	Evacuation Event Type = Wildfires
	8	Evacuation Event Type = Volcanic Eruptions
	9	Evacuation Event Type = Tsunami

## E.3.22 CNDMOD36 - Condition / Driving Manoeuvre Modifier 36

CNDMOD36	Modifier	Modifier Description
22 = Evacuation Route	1	Evacuation Travel Flow = From
	2	Evacuation Travel Flow = To
	3	Evacuation Travel Flow = Both
	4	Evacuation Travel Flow = Closed

## E.3.23 CNDMOD37 - Condition / Driving Manoeuvre Modifier 37

CNDMOD37	Modifier	Modifier Description
22 = Evacuation Route	1	Evacuation Event Code = Alligator Alley Northbound
	2	Evacuation Event Code = Alligator Alley Southbound

## E.3.24 CNDMOD38 - Condition / Driving Manoeuvre Modifier 38

CNDMOD38	Modifier	Modifier Description
23 = Transport Access Restriction	1	Direction Closure = Closed in Both Directions
	2	Direction Closure = Closed in Positive Direction
	3	Direction Closure = Closed in Negative Direction

## E.3.25 CNDMOD39 - Condition / Driving Manoeuvre Modifier 39

CNDMOD39	Modifier	Modifier Description
23 = Transport Access Restriction	1	Hazardous Material Type = Explosives
26 = Transport Restricted Driving Manoeuvre	2	Hazardous Material Type = Gas
	3	Hazardous Material Type = Flammable
	4	Hazardous Material Type = Flammable solid/Combustible
	5	Hazardous Material Type = Organic
	6	Hazardous Material Type = Poison
	7	Hazardous Material Type = Radioactive
	8	Hazardous Material Type = Corrosive

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CNDMOD39	Modifier	Modifier Description
	9	Hazardous Material Type = Other
	20	Hazardous Material Type = Any Hazardous Material
	21	Hazardous Material Type = Poisonous Inhalation Hazard (PIH)
	22	Hazardous Material Type = Goods Harmful to Water
	23	Hazardous Material Type = Explosive and Flammable
	24	Tunnel Category B
	28	Tunnel Category C
	32	Tunnel Category D
	34	Tunnel Category E

## E.3.26 CNDMOD41 - Condition / Driving Manoeuvre Modifier 41

CNDMOD41	Modifier	Modifier Description
23 = Transport Access Restriction 26 = Transport Restricted Driving Manoeuvre 27 - Transport Preferred Route	Numeric	Height Restriction (in inches or centimetres)

## E.3.27 CNDMOD42 - Condition / Driving Manoeuvre Modifier 42

CNDMOD42	Modifier	Modifier Description
23 = Transport Access Restriction 26 = Transport Restricted Driving Manoeuvre	Numeric	Weight Restriction (in pounds or kilograms)

## E.3.28 CNDMOD43 - Condition / Driving Manoeuvre Modifier 43

CNDMOD43	Modifier	Modifier Description
23 = Transport Access Restriction	Numeric	Weight per Axle Restriction (in pounds or kilograms)
26 = Transport Restricted Driving Manoeuvre		

## E.3.29 CNDMOD44 - Condition / Driving Manoeuvre Modifier 44

CNDMOD44	Modifier	Modifier Description
23 = Transport Access Restriction	Numeric	Length Restriction (in inches or centimetres)
26 = Transport Restricted Driving Manoeuvre		

## E.3.30 CNDMOD45 - Condition / Driving Manoeuvre Modifier 45

CNDMOD45	Modifier	Modifier Description
23 = Transport Access Restriction	Numeric	Width Restriction (in inches or centimetres)
26 = Transport Restricted Driving Manoeuvre		

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## E.3.31 CNDMOD46 - Condition / Driving Manoeuvre Modifier 46

CNDMOD46	Modifier	Modifier Description
23 = Transport Access Restriction	1	Trailer Type = Truck with one or more trailers
25 - Transport Special Speed Situation		
26 = Transport Restricted Driving Manoeuvre	2	Trailer Type = Truck with two or more trailers
	3	Trailer Type = Truck with three or more trailers
	4	Trailer Type = Semi or Tractor with one or more trailers
	5	Truck with no trailer(s)
	6	Truck with one trailer
	7	Truck with two trailers
	8	Truck with three trailers
	9	Truck with four trailers
	10	Straight Truck with one or more trailers
	11	Straight Truck with two or more trailers
	12	Straight Truck with three or more trailers
	13	Straight Truck with or without trailers
	14	Straight Truck with no trailer(s)
	15	Straight Truck with one trailer
	16	Straight Truck with two trailers
	17	Straight Truck with three trailers
	18	Straight Truck with four trailers
	19	Semi-Truck with one or more trailers
	20	Semi-Truck with two or more trailers
	21	Semi-Truck with three or more trailers
	22	Semi-Truck with or without trailers
	23	Semi-Truck with no trailer(s)
	24	Semi-Truck with one trailer
	25	Semi-Truck with two trailers
	26	Semi-Truck with three trailers
	27	Semi-Truck with four trailers

## E.3.32 CNDMOD47 - Condition / Driving Manoeuvre Modifier 47

CNDMOD47	Modifier	Modifier Description
17 = Traffic Sign	1	General Warning Sign Type = Object Overhang
	2	General Warning Sign Type = Risk of Grounding
	3	General Warning Sign Type = Animal Crossing
	4	General Warning Sign Type = Accident Hazard

## E.3.33 CNDMOD48 - Condition / Driving Manoeuvre Modifier 48

CNDMOD48	Modifier	Modifier Description
25 = Transport Special Speed Situation	Numeric	Transport Speed Limit (in mph or kph)

## E.3.34 CNDMOD49 - Condition / Driving Manoeuvre Modifier 49

CNDMOD49	Modifier	Modifier Description
27 = Transport Preferred Route	1	Transport Preferred Route Type = STAA
	2	Transport Preferred Route Type = TD
	3	Transport Preferred Route Type = NRHM (Nat'l Repos Non-Radioactive HazMats)
	4	Transport Preferred Route Type = Class 1 HazMats (Explosives)
	5	Transport Preferred Route Type = PIH (Poisonous Inhalation HazMats)
	6	Transport Preferred Route Type = Medical Waste Materials
	7	Transport Preferred Route Type = Radioactive Material
	8	Transport Preferred Route Type = General Hazardous Goods
	9	Transport Preferred Route Type = Local

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CNDMOD49	Modifier	Modifier Description
	15	Transport Preferred Route Type = Functional Class 1 Override
	16	Functional Class 2 Override
	17	Transport Preferred Route Type = B-Double Route
	18	Transport Preferred Route Type = B-Triple Route
	19	Transport Preferred Route Type = 50 Max
	20	Transport Preferred Route Type = HPMV
	21	Transport Preferred Route Type = LHV Germany
	22	Transport Preferred Route Type = LHV Denmark
	23	Transport Preferred Route Type = LHV Norway
	24	Transport Preferred Route Type = PBS 2A Australia
	25	Transport Preferred Route Type = PBS 2B Australia
	26	Transport Preferred Route Type = PBS 3A Australia
	27	Transport Preferred Route Type = PBS 3B Australia
	28	Transport Preferred Route Type = PBS 4A Australia
	29	Transport Preferred Route Type = B-Double_HML
	30	Transport Preferred Route Type = B-Double_19
	31	Transport Preferred Route Type = B-Double_21
	32	Transport Preferred Route Type = B-Double_23
	33	Transport Preferred Route Type = B-Double_25
	34	Transport Preferred Route Type = B-Double_26
	35	Transport Preferred Route Type = B-Double_26_HML
	36	Transport Preferred Route Type = B-Double_27.5
	37	Transport Preferred Route Type = AB-Triple
	38	Transport Preferred Route Type = AB-Triple_HML
	39	Transport Preferred Route Type = B-Triple_HML

## E.3.35 CNDMOD51 - Condition / Driving Manoeuvre Modifier 51

CNDMOD51	Modifier	Modifier Description
17 - Traffic Sign	Text	Traffic Sign Value - Text as it appears on traffic sign

## E.3.36 CNDMOD53 - Condition / Driving Manoeuvre Modifier 53

CNDMOD53	Modifier	Modifier Description
23 = Transport Access Restriction	1	Physical Structure Type = Bridge (Overpass)
	2	Physical Structure Type = Tunnel (Underpass)
	3	Physical Structure Type = Arch Bridge
	4	Physical Structure Type = Arch Tunnel
	5	Physical Structure Type = Other

## E.3.37 CNDMOD57 - Condition / Driving Manoeuvre Modifier 57

CNDMOD57	Modifier	Modifier Description
8 = Access Restriction	0	Alternate Fuel Considered Carpool = N
	1	Alternate Fuel Considered Carpool = Y

## E.3.38 CNDMOD58 - Condition / Driving Manoeuvre Modifier 58

CNDMOD58	Modifier	Modifier Description
8 = Access Restriction	0	Fee Pay Considered Carpool = N
	1	Fee Pay Considered Carpool = Y

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### E.3.39 CNDMOD59 - Condition / Driving Manoeuvre Modifier 59

CNDMOD59	Modifier	Modifier Description
25 = Transport Special Speed Situation	1	Transport Speed Situation Type = Hazardous Material
	2	Transport Speed Situation Type = Trailer
	3	Transport Speed Situation Type = Weight
	4	Transport Speed Situation Type = Weather

### E.3.40 CNDMOD60 - Condition / Driving Manoeuvre Modifier 60

CNDMOD60	Modifier	Modifier Description
19 = No Overtaking 21 = Protected Overtaking 25 = Transport Special Speed Situation 27 = Transport Preferred Route	1	Direction = Positive Direction
	2	Direction = Negative Direction
	3	Direction = Both Directions
	4	Direction = Unknown <sup>191</sup>

### E.3.41 CNDMOD61 - Condition / Driving Manoeuvre Modifier 61

CNDMOD61	Modifier	Modifier Description
23 = Transport Access Restriction 27 = Transport Preferred Route	Numeric	Weight Dependent (in pounds or kilograms)

<sup>191</sup> Applicable for Signs, Signals & Warnings only - not available for Trucks.

## E.3.42 CNDMOD62 - Condition / Driving Manoeuvre Modifier 62

CNDMOD62	Modifier	Modifier Description
17 = Traffic Sign	1	Weather Type = Rain
19 = No Overtaking	2	Weather Type = Snow
23 = Transport Access Restriction		
25 = Transport Special Speed Situation		
26 = Transport Restricted Driving Manoeuvre		
	3	Weather Type = Fog

## E.3.43 CNDMOD69 - Condition / Driving Manoeuvre Modifier 69

CNDMOD69	Modifier	Modifier Description
34 = Environmental Zone	Numeric	The Environmental Zone ID

## E.3.44 CNDMOD71 - Condition / Driving Manoeuvre Modifier 71

CNDMOD71	Modifier	Modifier Description
17 = Traffic Sign	1	Traffic Sign Sub Category = Priority Sign

## E.3.45 CNDMOD72 - Condition / Driving Manoeuvre Modifier 72

CNDMOD72	Modifier	Modifier Description
16 = Traffic Signal		Importance Indicator
17 = Traffic Sign	Numeric	A numeric value of 0 to 10

## E.3.46 CNDMOD75 - Condition / Driving Manoeuvre Modifier 75

CNDMOD75	Modifier	Modifier Description
23 = Transport Access Restriction	1	Number of Axles = Two or more Axles
25 = Transport Special Speed Situation	2	Number of Axles = Three or more Axles
	3	Number of Axles = Four or more Axles
	4	Number of Axles = Five or more Axles
	5	Number of Axles = Six or more Axles
	6	Number of Axles = Single Axle
	7	Number of Axles = Tandem Axle
	8	Number of Axles = Triple Axle
	9	Number of Axles = Quad Axle
	10	Number of Axles = Quint Axle
	11	Number of Axles = Two Axles
	12	Number of Axles = Three Axles
	13	Number of Axles = Four Axles
	14	Number of Axles = Five Axles
	15	Number of Axles = Six Axles
	16	Number of Axles = Seven Axles
	17	Number of Axles = Dually

## E.3.47 CNDMOD81 - Condition / Driving Manoeuvre Modifier 81

CNDMOD81	Modifier	Modifier Description
23 = Transport Access Restriction	Numeric	KPRA (Kingpin to Rear Axle) Length
26 = Transport Restricted Driving Manoeuvre		

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## E.3.48 DTMDATE - Date / Time Modifiers

DTMDATE Type	Modifier	Modifier Description
A = Date Range	YYYYMMDD Value	Date in the form YYYYMMDD where YYYY is the year MM is the month DD is the day  A Date Range is specified by two values in the above format (i.e., the Reference Date and Expiration Date fields in the Condition/Driving Manoeuvres - Date Time Modifiers (CdmsDtmod) layer).
C = Day of Month	DDDD Value	Date in the form DDDD0000 where DDDD is a value in the range 0001-0031  Example 1: Ref Date = 00150000 End Date = 00000000 The 15th day of every month.  Example 2: Ref Date = 00010000 End Date = 00150000 Days 1-15 of every month.
D = Day of Week of Month	DDDDWWWW Value	Date in the form DDDDWWWW where DDDD is a value in the range 0001-0007 WWWW is a value in the range 0001-0005  Example 1: Ref Date = 00010001 End Date = 00000000 Sunday of the 1st week of every month.  Example 2: Ref Date = 00020001 End Date = 00060002 Monday-Friday of weeks 1-2 of every month.
E = Day of Week of Year	DDDDWWWW Value	Date in the form DDDDWWWW where DDDD is a value in the range 0001-0007 WWWW is a value in the range 0001-0052  Example 1: Ref Date = 00020052 End Date = 00000000 Monday of the 52nd week of every year.  Example 2: Ref Date = 00050027 End Date = 00060000 Thursday-Friday of week 27 of every year.

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DTMDATE Type	Modifier	Modifier Description
F = Week of Month	WWWW Value	Date in the form WWWW0000 where WWWW is a value in the range 0001-0005 Example 1: Ref Date = 00010000 End Date = 00000000 The 1st week of every month. Example 2: Ref Date = 00020000 End Date = 00040000 Weeks 2-4 of every month.
H = Month of Year	MMMM Value	Date in the form MMMM0000 where MMMM is a value in the range 0001-0012 Example 1: Ref Date = 00030000 End Date = 00000000 The 3rd month of every year. Example 2: Ref Date = 00060000 End Date = 00100000 Months 6-10 of every year.
I = Day of Month of Year	DDDDMMMM Value	Date in the form DDDDMMMM where DDDD is a value in the range 0001-0031 MMMM is a value in the range 0001-0012 Example 1: Ref Date = 00250012 End Date = 00000000 The 25th day of the 12th month of every year. Example 2: Ref Date = 00160003 End Date = 00310006 Days 16-31 of months 3-6 of every year.
1 = Day Mask	Seven Boolean Value	Date in the form XXXXXX where each X is a Boolean flag starting with Sunday Example: NYYYYYN = Monday thru Friday

## E.3.49 LANEMOD - Lane Model Modifiers

LANEMOD	Modifier	Modifier Description
1 = Lane Divider Marker	1	Long Dashed Line
2 = Center Divider Marker	2	Double Solid Line
	3	Single Solid Line

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LANEMOD	Modifier	Modifier Description
	4	Double Line, combination of inner single solid line and outer dashed line
	5	Double Line, combination of inner dashed line and outer single solid line
	6	Short Dashed Line
	7	Shaded Area Marking
	8	Dashed Blocks
	9	Physical Divider < 3M
	10	Double Dashed Line
	11	No Divider Marker
	12	Crossing Alert
3 = Direction Category	1	Straight
	2	Slight Right
	4	Right
	8	Hard Right
	16	U-turn Left
	32	Hard Left
	64	Left
	128	Slight Left
	256	Merge Right
	512	Merge Left
	1024	Merge Lanes
	2048	U-turn Right
	4096	Second Right
	8192	Second Left
4 = Lane Width	Numeric	Width restriction. US; Inches. Rest of World; Centimetres
5 = Lane Height	Numeric	Width restriction. US; Inches. Rest of World; Centimetres
6 = Lane From Speed	Numeric	Speed Limit in positive direction
7 = Lane To Speed	Numeric	Speed Limit in negative direction

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LANEMOD	Modifier	Modifier Description
8 = Lane Transition Area	Y	Is a Transition Area
	N	Not a Transition Area
9 = Lane Forming/Ending	1	Lane Forming
	2	Lane Ending
	3	Lane Forming/Ending

## E.3.50 POIATTR - POI Attributes

POI ATTR Type	Modifier	Modifier Description
1 = Food Type	1	American Food
	2	Californian Food
	3	Chinese Food
	4	Continental Food
	5	French Food
	6	German Food
	7	Greek Food
	8	Indian Food
	9	Italian Food
	10	Japanese Food
	11	Mexican Food
	12	Other
	13	Seafood
	14	Thai Food
	15	Vegetarian Food
	16	Vietnamese Food
	18	Austrian Food
	19	Barbecue/Southern
	20	Belgian Food
	21	Bistro <sup>192</sup>
	22	Brewpub

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POI ATTR Type	Modifier	Modifier Description
	23	British Isles Food
	24	Cajun/Caribbean Food
	25	Dutch Food
	26	East European Food
	27	Fast Food <sup>192</sup>
	28	Grill
	29	Hawaiian/Polynesian Food
	30	Hungarian Food
	31	Indonesian/Malaysian Food
	32	Jewish/Kosher Food
	33	Korean Food
	34	Latin American Food
	35	Maltese Food
	36	Middle Eastern Food
	37	Filipino Food
	38	Polish Food
	39	Portuguese Food
	40	Russian Food
	41	Sandwich
	42	Scandinavian Food
	43	South American Food
	44	Southeast Asian Food
	45	Southwestern Food
	46	Surinamese Food
	47	Spanish Food
	48	Steak House
	49	Swiss Food
	50	Turkish Food
	51	African Food

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POI ATTR Type	Modifier	Modifier Description
	52	Canadian Food
	53	International Food
	54	Bohemian Food
	55	Balkan Food
	56	Finnish Food
	57	Australian Food
	58	Pizza
	59	Punjabi
	60	Rajasthani
	61	Moghrai
	62	Bengali
	63	Goan
	64	Jain
	65	Konkani
	66	Gujarati
	67	Parsi
	68	South Indian
	69	Maharashtrian
	70	North Indian
	71	Malvani
	72	Hyderabadi
	73	Snacks & Beverages
	74	Breakfast
	75	Chicken
	76	Ice Cream
	77	Tapas
	78	Irish Food
	79	Caribbean Food
	80	Malaysian Food

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POI ATTR Type	Modifier	Modifier Description
	81	Moroccan Food
	82	Fusion
	83	Brazilian Food
	84	Criolla Food
	85	Burgers
	86	Creperie
	87	Pastries
	88	Sushi
	89	Vegan Food
	91	Cajun Food
	92	Indonesian Food
	93	Fondue
	95	Argentinean Food
	96	Chilean Food
	97	Azerbaijan Food
	98	Baltic Food
	99	Belorussian Food
	100	Caucasian Food
	101	Ukrainian Food
	102	Venezuelan Food
	103	Bruneian Food
	104	Pakistani Food
3 = Vanity City ID	Area ID Value	
4 = Population	Numeric Value	Population
5 = Capital Indicator	1	ADMINISTRATIVE LEVEL 1
	2	ADMINISTRATIVE LEVEL 2
	3	ADMINISTRATIVE LEVEL 3
	4	ADMINISTRATIVE LEVEL 4
	5	ADMINISTRATIVE LEVEL 5

# Reference Guide

Reference Data

E.3 Compound Reference Classes

here

POI ATTR Type	Modifier	Modifier Description
	6	ADMINISTRATIVE LEVEL 6
	7	ADMINISTRATIVE LEVEL 7
11 - Diesel	0	Diesel not sold
	1	Diesel sold
15 = 24 Hour Indicator	0	Not Open 24 Hours
	1	Open 24 Hours
16 = Building Type	1	Mosque
	2	Church
	3	Temple
	4	Synagogue
	5	Ashram
	6	Other
	7	Gurdwara
	8	Pagoda
18 = Rest Area Type	1	Complete Rest Area
	2	Parking and Restroom only
	3	Parking only
	4	Motorway Service Area
	5	Scenic Overlook
22 = Airport Terminal	1	Terminal
25 = Transit Access Level <sup>193</sup>	1	Above Street Level
	2	Below Street Level
	3	At Street Level
26 = Transit Access Type2	1	Entrance Only
	2	Exit Only
	3	Entrance and Exit
27 = Transit Access Method2	0	Not Applicable
	1	Stairs
	2	Escalator

# Reference Guide

Reference Data

E.3 Compound Reference Classes

here

POI ATTR Type	Modifier	Modifier Description
	3	Stairs and Escalator
	4	Elevator
	5	Stairs and Elevator
	6	Escalator and Elevator
	7	Stairs, Escalator, and Elevator
28 = Alternate Food Type	(See Food Type for Values)	
29 = Regional Food Type	1	Szechuan
	2	Cantonese
	3	Tandoori
	4	Punjabi
	5	Yucateca
	6	Oaxaqueña
	7	Veracruzana
	8	Poblana
	9	Baiana
	10	Capixaba
	11	Mineira
	12	Rajasthani
	13	Mughlai
	14	Bengali
	15	Goan
	16	Jain
	17	Konkani
	18	Gujarati
	19	Parsi
	20	South Indian
	21	Maharashtrian
	22	North Indian
	23	Malvani

# Reference Guide

Reference Data

E.3 Compound Reference Classes

here

POI ATTR Type	Modifier	Modifier Description
	24	Hyderabadi
	25	Alsacian
	26	Auvergnate
	27	Basque
	28	Corse
	29	Lyonnaise
	30	Provençale
	31	Sud-ouest
	32	Bakery
30 = Restaurant Type	(NULL)	No Description Published
	1	Fast Food
	2	Casual Dining
	3	Fine Dining
	4	Take-out And Delivery Only
	5	Food Market/Stall
	6	Taqueria
	7	Deli
	8	Cafeteria
	9	Bistro
33 = Subcategory	1	Car Wash
	2	Auto Parts
	3	Car Repair
	4	Truck Repair
	5	Tire Repair
	6	Emission Testing
	7	Fitness & Health Club
	8	Racket Ball Court
	9	Shooting Range
	10	Indoor Ski

# Reference Guide

Reference Data

E.3 Compound Reference Classes

here

POI ATTR Type	Modifier	Modifier Description
	11	Soccer Club
	12	Squash
	13	Swimming Pool
	14	Tennis Court
	15	Indoor Sports
	16	Hockey
	17	Hotel
	18	Motel
	19	Guest House
	20	Hostel
	21	Holiday Park
	22	Bed & Breakfast
	23	Family/General Practice
	24	Dentist
	25	Clinic/Medical Centre
	26	Nursing Home
	27	Psychiatric Institute
	28	Underground Train/Subway
	29	Commuter Train
	30	Pharmacy
	31	Drugstore
	32	Cemetery
	33	Crematorium
	34	Bar/Pub/Stube/Biergarten
	36	Night Club
	37	Dancing
	38	Karaoke
	39	Entertainment/Cabaret/Live Music
	40	Billiards/Pool Hall

# Reference Guide

Reference Data

E.3 Compound Reference Classes

here

POI ATTR Type	Modifier	Modifier Description
	41	Video/Arcade/Gaming Room
	42	Jazz Club
	44	Pet Supply
	45	Warehouse/Wholesale
	46	Food/beverage
	47	Men's Apparel
	48	Women's Apparel
	49	Children's Apparel
	50	Shoes Apparel
	51	Short-time Motel
	52	Seaport/Harbour
	53	Railyard
	54	Airport Cargo
	55	Zoo
	56	Wild Animal Park
	57	Wildlife Refuge
	58	Aquarium
	59	Garden
	60	Bay
	61	Sports Field
	62	Boat Ferry
	63	Rail Ferry
	64	Van Repair
	65	Gallery
	66	Science
	67	Children's
	68	History
	69	Art
	70	Mobile Repair

# Reference Guide

Reference Data

E.3 Compound Reference Classes

here

POI ATTR Type	Modifier	Modifier Description
	71	Mobile Service Centre
	72	Basketball
	73	Badminton
	74	Cellphone Parking Lot
	75	Rugby
	76	Diving Centre
	77	Power Equipment Dealer
	78	Trailhead
	79	Off Road Vehicle Area
	80	Hobby, Toy, and Game Store
	81	Pediatrician
	82	Bakery
	83	Butcher
	84	Dairy Goods
	85	Sweets Shop
	86	Pre-School
	87	Coaching Institute
	88	Fine Arts
	89	Language Studies
	90	Electrical
	91	Plumbing
	92	Blood Bank
	93	Outdoor Market
	94	Indoor Market
	1026	Non-Star Hotel
	1027	5 Star
	1028	4 Star
	1029	3 Star
	1030	1-2 Star

# Reference Guide

Reference Data

E.3 Compound Reference Classes

here

POI ATTR Type	Modifier	Modifier Description
	1035	Fishing
	1091	Ping Pong
	1092	Sauna
	1093	Condo
	1094	Home Lodging
	1097	Funeral Hall
	1098	Cinerarium
	1099	LPG Only
34 = Entrance Type	1	Preferred Entrance
37 = Family Chain ID	Numeric	
10001 = Display Location X	Signed Numeric	The longitude coordinate of a POI's location.
10002 = Display Location Y	Signed Numeric	The latitude coordinate of a POI's location.

<sup>192</sup> Not published in Canada, EMEA, Mexico, Puerto Rico, the United States, and the U.S. Virgin Islands.

<sup>193</sup> These attributes are used in conjunction with Transit and Pedestrian.

## Reference Guide

POIs Listed Alphabetically and by Feature Code

# Appendix F

## POIs Listed Alphabetically and by Feature Code

---

### Topics:

- *POI Inclusion per Region/Country*
- *Alphabetical Listing of POIs*
- *Listing of POIs by Feature Code*

## Reference Guide

POIs Listed Alphabetically and by Feature Code

F.1 POI Inclusion per Region/Country

here

## F.1 POI Inclusion per Region/Country

Please refer to the accompanying global country specific Standard POI Inclusion List (SPIL) document in the CTRG package.

The global SPIL document uses the following naming convention:

SPIL\_CTRG\_YYYY-QN.xls (where "YYYY" = Year and "N" = Release Quarter)

## F.2 Alphabetical Listing of POIs

Feature Code	Feature Name
4581	Airport
7996	Amusement Park
9718	Animal Park
3578	ATM
7538	Auto Service & Maintenance
8699	Automobile Club
5511	Automobile Dealership
5512	Auto Dealership-Used Cars
6000	Bank
9532	Bar or Pub
9051 <sup>194</sup>	Bicycle Parking
9050 <sup>194</sup>	Bicycle Sharing Location
9995	Bookstore
9999	Border Crossing
7933	Bowling Centre
4170	Bus Station
5000	Business Facility
9517	Campground
9714	Cargo Centre

# Reference Guide

POIs Listed Alphabetically and by Feature Code

F.2 Alphabetical Listing of POIs

here

Feature Code	Feature Name
7985	Casino
9591	Cemetery
7832	Cinema
9121	City Hall
9537	Clothing Store
9996	Coffee Shop
7994	Civic/Community Centre
4100	Commuter Rail Station
9987	Consumer Electronics Store
9535	Convenience Store
7990	Convention/Exhibition Centre
9994	County Council
9211	Court House
9722 <sup>195</sup>	Delivery Entrance
9545	Department Store
9723 <sup>195</sup>	Dock
9993	Embassy
4482	Ferry Terminal
9527	Fire Department
7992	Golf Course
9573	Golf Practice Range
9525	Government Office
5400	Grocery Store
9998	Hamlet
8200	Higher Education
9592	Highway Exit
5999	Historical Monument
9986	Home Improvement & Hardware Store

# Reference Guide

POIs Listed Alphabetically and by Feature Code

F.2 Alphabetical Listing of POIs

here

Feature Code	Feature Name
9560	Home Specialty Store
8060	Hospital
7011	Hotel
7998	Ice Skating Rink
9991	Industrial Zone
8231	Library
9724 <sup>195</sup>	Loading Zone
4493	Marina
9583	Medical Service
9725	Meeting Point
9715	Military Base
5571	Motorcycle Dealership
8410	Museum
9730	Named Intersection
4444	Named Place
9709	Neighbourhood
5813	Nightlife
9988	Office Supply & Services Store
7013	Other Accommodation
7522	Park & Ride
7947	Park/Recreation Area
7521	Parking Garage/House
7520	Parking Lot
7929	Performing Arts
5540	Petrol/Gasoline Station
9565	Pharmacy
9992	Place of Worship
9221	Police Station
9530	Post Office

# Reference Guide

POIs Listed Alphabetically and by Feature Code

F.2 Alphabetical Listing of POIs

here

Feature Code	Feature Name
9589	Public Restroom
4580	Public Sports Airport
9708 <sup>196</sup>	Public Transit Access
9707 <sup>196</sup>	Public Transit Stop
7510	Rental Car Agency
9595	Repair Services
9590	Residential Area/Building
7897	Rest Area
5800	Restaurant
8211	School
6512	Shopping
7014	Ski Lift
7012	Ski Resort
9567	Specialty Store
9568	Sporting Goods Store
7997	Sports Centre
7940	Sports Complex
9989 <sup>196</sup>	Taxi Stand
9717	Tollbooth
7999	Tourist Attraction
7389	Tourist Information
9052 <sup>194</sup>	Trailhead
4013	Train Station
9596	Training Centre/Institute
9593	Transportation Service
9719	Truck Dealership
9522	Truck Stop/Plaza
9710	Weigh Station

## Reference Guide

POIs Listed Alphabetically and by Feature Code

F.3 Listing of POIs by Feature Code

here

Feature Code	Feature Name
2084	Winery

## F.3 Listing of POIs by Feature Code

Feature Code	Feature Name
2084	<i>Winery</i>
3578	<i>ATM</i>
4013	<i>Train Station</i>
4100	<i>Commuter Rail Station</i>
4170	<i>Bus Station</i>
4444	<i>Named Place</i>
4482	<i>Ferry Terminal</i>
4493	<i>Marina</i>
4580	<i>Public Sports Airport</i>
4581	<i>Airport</i>
5000	<i>Business Facility</i>
5400	<i>Grocery Store</i>
5511	<i>Automobile Dealership</i>
5512	<i>Auto Dealership-Used Cars</i>
5540	<i>Petrol/Gasoline Station</i>
5571	<i>Motorcycle Dealership</i>
5800	<i>Restaurant</i>
5813	<i>Nightlife</i>
5999	<i>Historical Monument</i>
6000	<i>Bank</i>

<sup>194</sup> Metadata is present, but no information is currently published in this POI Category.

<sup>195</sup> Not published in the regular NAVSTREETS extract, but only in conjunction with Loading Dock Locations. See [Trucks](#) on page 990 for more information.

<sup>196</sup> Not published in the regular NAVSTREETS extract, but only in conjunction with Transit and Pedestrian. See [Transit and Pedestrian](#) on page 956 for more information.

# Reference Guide

POIs Listed Alphabetically and by Feature Code

F.3 Listing of POIs by Feature Code

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Feature Code	Feature Name
6512	<i>Shopping</i>
7011	<i>Hotel</i>
7012	<i>Ski Resort</i>
7013	<i>Other Accommodation</i>
7014	<i>Ski Lift</i>
7389	<i>Tourist Information</i>
7510	<i>Rental Car Agency</i>
7520	<i>Parking Lot</i>
7521	<i>Parking Garage/House</i>
7522	<i>Park &amp; Ride</i>
7538	<i>Auto Service &amp; Maintenance</i>
7832	<i>Cinema</i>
7897	<i>Rest Area</i>
7929	<i>Performing Arts</i>
7933	<i>Bowling Centre</i>
7940	<i>Sports Complex</i>
7947	<i>Park/Recreation Area</i>
7985	<i>Casino</i>
7990	<i>Convention/Exhibition Centre</i>
7992	<i>Golf Course</i>
7994	<i>Civic/Community Centre</i>
7996	<i>Amusement Park</i>
7997	<i>Sports Centre</i>
7998	<i>Ice Skating Rink</i>
7999	<i>Tourist Attraction</i>
8060	<i>Hospital</i>
8200	<i>Higher Education</i>
8211	<i>School</i>
8231	<i>Library</i>

# Reference Guide

POIs Listed Alphabetically and by Feature Code

F.3 Listing of POIs by Feature Code

here

Feature Code	Feature Name
8410	<i>Museum</i>
8699	<i>Automobile Club</i>
9050 <sup>197</sup>	Bicycle Sharing Location
9051 <sup>197</sup>	Bicycle Parking
9052 <sup>197</sup>	Trailhead
9121	<i>City Hall</i>
9211	<i>Court House</i>
9221	<i>Police Station</i>
9517	Campground
9522	Truck Stop/Plaza
9525	Government Office
9527	Fire Department
9530	Post Office
9532	Bar or Pub
9537	Clothing Store
9535	Convenience Store
9545	Department Store
9560	Home Specialty Store
9565	Pharmacy
9567	Specialty Store
9568	Sporting Goods Store
9573	Golf Practice Range
9583	Medical Service
9589	Public Restroom
9590	Residential Area/Building
9591	Cemetery
9592	Highway Exit
9593	Transportation Service

# Reference Guide

POIs Listed Alphabetically and by Feature Code

F.3 Listing of POIs by Feature Code

here

Feature Code	Feature Name
9595	Repair Services
9596	Training Centre/Institute
9707 <sup>198</sup>	Public Transit Stop
9708 <sup>198</sup>	Public Transit Access
9709	Neighbourhood
9710	Weigh Station
9714	Cargo Centre
9715	Military Base
9717	Tollbooth
9718	Animal Park
9722 <sup>199</sup>	Delivery Entrance
9723 <sup>199</sup>	Dock
9724 <sup>199</sup>	Loading Zone
9725	Meeting Point
9730	Named Intersection
9986	Home Improvement & Hardware Store
9987	Consumer Electronics Store
9988	Office Supply & Services Store
9989 <sup>198</sup>	Taxi Stand
9991	Industrial Zone
9992	Place of Worship
9993	Embassy
9994	County Council
9995	Bookstore
9996	Coffee Shop
9998	Hamlet
9999	Border Crossing

# Reference Guide

POIs Listed Alphabetically and by Feature Code

F.3 Listing of POIs by Feature Code

here

- 
- <sup>197</sup> Metadata is present, but no information is currently published in this POI Category ID.
- <sup>198</sup> Not published in a regular NAVSTREETS extract but only in conjunction with Transit and Pedestrian. See section *Transit and Pedestrian* on page 956 for more information.
- <sup>199</sup> Not published in the regular NAVSTREETS extract, but only in conjunction with Loading Dock Locations. See *Trucks* on page 990 for more information.

# Appendix G

## NT SAMPA Approach & Rules

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Topics:

- *NT-SAMPA-Approach*

## G.1 NT-SAMPA-Approach

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There is no suitable standard to represent phonetic data to support both Automatic Speech Recognition (ASR) and Text-to-Speech (TTS) applications. Consequently, a code set for each language is defined by HERE for phonetic representation of the entries in the HERE database through NT-SAMPA, a HERE adaptation of SAMPA. See <http://www.phon.ucl.ac.uk/home/sampa/home.htm>. The website describes the SAMPA phonetic alphabet, including recommended subsets of SAMPA for the different languages.

There are other existing standards (e.g., IPA, SAMPA, X-SAMPA). However, SAMPA was chosen to derive NT-SAMPA for the following reasons:

- IPA (International Phonetic Alphabet) is not represented in ASCII, but in Unicode.
- SAMPA does not have either syllable boundary markers or word boundary markers.
- Standard SAMPA symbols defined for a specific language may not be sufficient for representing sounds for foreign language words.
- Many of the X-SAMPA symbols (or IPA symbols) represent sounds that are not necessary for the languages that NT intends to support.

ASR and TTS technology vendors use their own phonetic coding representation. NT-SAMPA was defined keeping in mind that it should be easy to translate the technology vendor's symbols to NTSAMPA and vice versa.

### NT-SAMPA Rules

NT-SAMPA is an enhanced version of SAMPA. Specific rules in defining NT-SAMPA are as follows:

1. Start with standard SAMPA set for each language.
2. Simplify SAMPA set as necessary.
3. Enhance the standard SAMPA set with additional SAMPA symbols from different languages to support foreign sounds that have been introduced in the specific language (i.e. French nasalization /~/ in German) as necessary.
4. Add custom-defined conventions as necessary.

These modifications are derived based on inputs from phoneticians, linguists as well as our customers.

### NT-SAMPA Tables

Please see the Voice Phonetic Transcriptions Reference Guide for additional information and language-specific NT-SAMPA charts.

# Appendix H

## RDS-TMC

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### Topics:

- *Introduction*
- *RDS-TMC (All Traffic Tables)*
- *Internal Codes on Multiply Digitised Roads*
- *Internal Codes on Multiply Digitised Roads with Intersection*
- *Internal Codes on Bidirectional Roads with Ramps*
- *Point Locations at the Start or End of a Linear Location*
- *Internal Codes where a TMC Path Turns at a Junction or Intersection*
- *RDS-TMC Path with One-Ways*
- *Placement of Internal Codes for Specific Features*
- *RDS-TMC Link Road*
- *RDS-TMC for POIs*
- *Parking Lot/Garage POI*

## H.1 Introduction

---

The inclusion of RDS-TMC codes in the HERE extracts allows applications to receive traffic messages and communicate this information to the driver. RDS is an acronym for Radio Data System. This system broadcasts traffic information about specific locations along a road. TMC is the acronym for Traffic Message Channel. This is the radio channel that transmits the digital traffic messages.

HERE provides different types of traffic tables: Government Tables, Third Party Tables, and HERE Tables. Each table uses either the European or the North American style of coding. See the table below.

**Table 48:**

Type	Source	Style	Country Example
Government	Official	European	Europe Singapore South Africa Thailand
Third Party	Third Party	North American	Australia
HERE	HERE	North American	U.S Canada Mexico Puerto Rico Brazil New Zealand Russia Portugal

The database includes RDS-TMC Problem Locations, known as PLOCs. A PLOC is a pre-defined location along a road that receives its own unique code - an RDS-TMC code.

The RDS-TMC table typically contains a number of columns. They may vary for each country, but HERE extracts the relevant information required for correct coding. Codes are typically divided into main types, such as P1 (Junctions), P2 (Intermediate points), P3 (Landmarks), etc., where 'P' refers to the Point Location. Within each type there are further sub-types such as P1.3 (motorway junction), P1.4 (motorway exit), etc. The sub-type information can help to determine the exact position of the PLOC. For example, P3.4 = Rest Area so the PLOC's location is a rest area.

For all figures in this appendix, see *Figure 478:* on page 1287 for the legend:

# Reference Guide

RDS-TMC

H.1 Introduction

here

Figure 478:

Note: The RDS-TMC codes in the figures of this appendix are abbreviated. Only the Directional Indicator and Location ID are given.	
--	Links between PLOCs. These links receive the code of the next PLOC preceded by a "+" if they are on the positive side of the road and a "-" if they are on the negative side.
-	Links inside the PLOC. These links receive the code of the next PLOC preceded by a "P" if they are on the positive side of the road and a "N" if they are on the negative side.
PLOC	Problem Location number based on the country RDS-TMC table.

Location Code	Type	Road-Number	Road Name	First Name	Second Name	Negative Offset	Positive Offset
02099	P1.0	M20	Junction 1	A38 / Red Interchange	A Road	<blank>	2100
02100	P1.0	M20	Junction 2 (Eastbound)	Circle Hill	B Road/C road	2099	2101
02101	P1.0	M20	Junction 2	Chester	D Road/F Road	2100	2102
02102	P1.0	M20	Junction 3	Z Motorway Interchange	Z Motorway	2101	2103
02103	P1.0	M20	Junction 4	WestVille	G Road	2102	2104
02104	P1.0	M20	Junction 5	City D (West)	K Road	2103	2105
02105	P1.0	M20	Junction 6	City D (Central)	L Street	2104	2106
02106	P1.0	M20	Junction 7	City D	N Road	2105	2107
02107	P1.0	M20	Junction 8	City D (East)	N Road/City D	2106	2108
02108	P1.0	M20	Junction 9	City C (West)	O Road	2107	2109
02109	P1.0	M20	Junction 10	City C (East)	S Street/T Street/X Street	2108	2110

This section describes the application of RDS-TMC codes to navigable features.

## H.2 RDS-TMC (All Traffic Tables)

### H.2.1 General Coding

RDS-TMC Codes consist of the parts contained in the following table. The publication of the different fields however varies per extract.

Part	Description
AA	Location Table Number, unique for each table provider within a country.
B	Directional indicator, internal or external to a Problem Location (PLOC). Values are: <ul style="list-style-type: none"> <li>• + in the positive direction and external to PLOC</li> <li>• - in the negative direction and external to PLOC</li> <li>• P in the positive direction and internal to PLOC</li> <li>• N in the negative direction and internal to PLOC</li> <li>• Positive refers to the next PLOC along the road. Negative refers to the previous</li> <li>• PLOC along the road.</li> <li>• Internal to the location indicates links that are within the actual PLOC.</li> <li>• External indicates links that are located between PLOCs.</li> </ul>
CCCCC	Location Code:
D	Direction of Road: This is only necessary for singly digitised roads that are bidirectional. Values are: <ul style="list-style-type: none"> <li>• T</li> <li>• F</li> <li>• To (T) and From (F) direction is based on the Reference Node, the same as Direction of Travel is coded.</li> </ul> <p>Note: For NA coding style tables only, one-ways are treated as bidirectional roads thus they are applied with both To and From</p>

### Example

AABCCCCD: 01+29345T

- Internal to a location indicates the links that are within the actual Problem Location(PLOC). External to a location indicates the links that are located between the PLOCs. See [Table 48](#): on page 1286.
- Every Linear Location starts and ends with an internal code.
- On motorways, all Problem Locations (PLOCs) must have both a positive and a negative internal code.
- One-way roads are coded with both a positive and negative direction.
- International border crossings usually receive a location code.

# Reference Guide

RDS-TMC

H.2 RDS-TMC (All Traffic Tables)

here

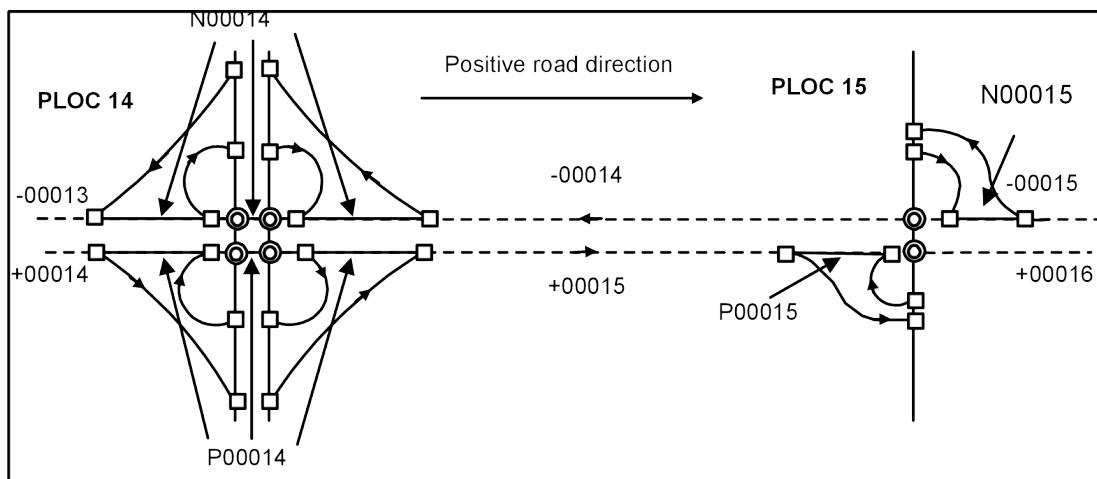
- TMC codes are applied to pedestrian ferry routes but not to walkways, pedestrian roads, and pedestrian zones.

For all figures below, the following legend is used:

<b>Note:</b> The <b>RDS-TMC</b> codes in the figures below are abbreviated. Only the Directional Indicator and Location ID are given.	
	Links between PLOCs. These links receive the code of the next PLOC preceded by a "+" if they are on the positive side of the road and a "-" if they are on the negative side.
	Links inside the PLOC. These links receive the code of the next PLOC preceded by a "P" if they are on the positive side of the road and a "N" if they are on the negative side.
PLOC	Problem Location number based on the country RDS-TMC table.

[Figure 479](#): on page 1289 shows examples of internal and external codes.

**Figure 479:**



## H.2.2 RDS-TMC Codes (N.A. Style Traffic Tables)

### Inclusion

#### Rules

Problem Locations exist along a linear path at least every 16 kilometres/10 miles at the following features:

- Functional Class = 1 - 3 Functional Road Class = 0 - 2 roads
- Specified Functional Class = 4 Functional Road Class = 3
  - Problem Locations at Functional Class = 4 roads that are more than 1.6 kilometres/1 mile from any other Problem Location are included.
- Specified Functional Class = 5 Functional Road Class = 4 roads
  - Problem Locations at Functional Class = 5 Functional Road Class = 4 roads if existing locations are more than 3.2 kilometres/2 miles apart are included. These are at least 600m from another Problem Location.

# Reference Guide

RDS-TMC

H.2 RDS-TMC (All Traffic Tables)

- Named Tunnels and Bridges (in some cases there may be multiple Problem Locations for a single tunnel or bridge)
- Toll Booths (except Toll booths on exit ramps)
- Named Rest Areas
- The beginning and end of all non-linked Linear Locations
- Administrative Boundaries (Level 1 & 2)
- End of Table Boundaries
- All Ramp interchanges Functional Class = 1 to 5Functional Road Class = 1 to 5 on roads with Controlled Access = Y
- Connections with express, reversible, and carpool roads on roads with Controlled Access = Y
- Additional locations are included as necessary in cases where points are greater than 16 kilometres/10 miles apart and there are no other locations that meet the inclusion criteria. They are unambiguous, and may include:
  - Railroads
  - Rivers
  - Functional Class = 5Functional Road Class = 4 roads

## Linear Location

### Definition

A Linear Location is a path of consecutive links along a road whose RDS-TMC codes correspond to a named road such as I-35. The extent of a Linear Location is defined in the Traffic Table.

A typical Linear Location consists of consecutive links where the locally known name may be a Route Number or a local name and this name remains consistent.

 **Note:**

The Direction of Road, EBU Country Code, and Location Table Number are not included in the examples. Refer to the chapter on naming rules for description of the RDS-TMC code.

### Extent of Linear Location

### Rules

- A new Linear Location is created when crossing a Table Boundary.
- A Linear Location has exactly one starting point and one ending point.
- When more than one Linear Location is defined for a specific road and there is a gap between the end of one Linear Location and the start of another (with no other coding in between), the gap between the locations receives coding by one of the following methods:
  - One of the Linear Locations is intended to fill the gap. Two Linear Locations are linked if there is a common base name by creating an internal code where the two locations meet.
  - If the base names are exactly the same, two Linear Locations are made into one Linear Location and points are added to fill the gap if necessary.
  - If the base names are not the same and it is not possible to link the Linear Locations, the Linear Locations are bookended by ending one Linear Location with an internal code and beginning the next Linear Location with an internal code.

# Reference Guide

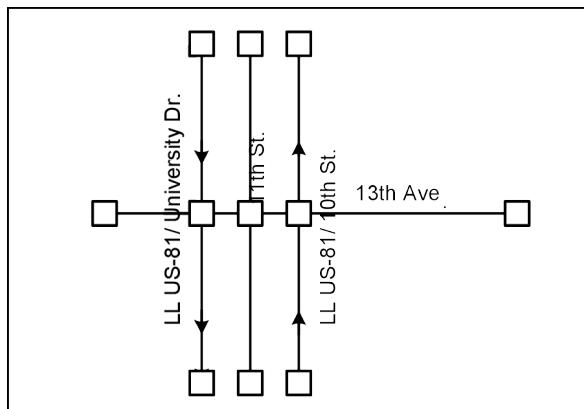
RDS-TMC

H.2 RDS-TMC (All Traffic Tables)

here

- The prefix or suffix of the road name may change along a Linear Location as long as the base name remains the same.
- Linear Locations may be coded against the direction of travel.
  - If all or part of a Linear Location is one-way, the one-way links have both the positive and negative RDS codes applied to the Location.
  - Linear Locations may exist on two separate roads (not multiply-digitised) when they share a common name, such as a route name, making them a single Linear Location rather than separate Linear Locations. See [Figure 480: on page 1291](#)

**Figure 480:**



- Linear Locations generally do not overlap.

## Ring Roads

### **Rules**

- For roads that form a loop around a metropolitan area, the extent of the Linear Location depends on the presence of sign direction.
- If sign direction changes on each side of the loop, four separate linked Linear Locations are created. See [Figure 481: on page 1292](#) and [Figure 482: on page 1292](#).
- The preferred direction for Linear Locations on Ring Roads is clockwise.
- If the sign direction does not change or the road is generally referred to as one road, the road is coded as one Linear Location. In this case, the start point is also the end point and the first and last points should be linked.

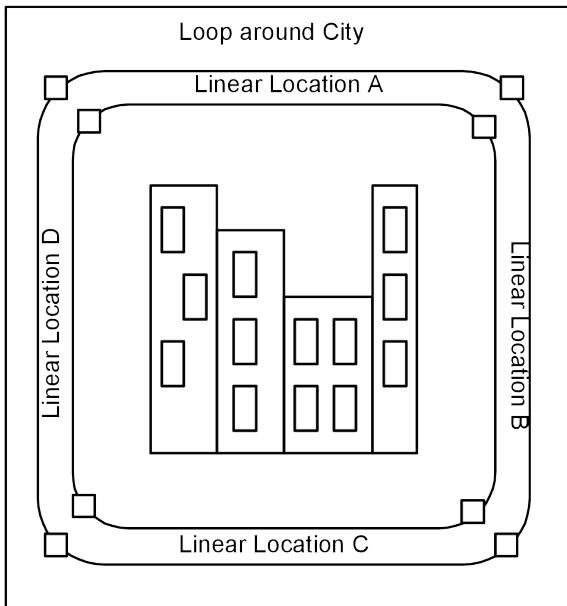
# Reference Guide

RDS-TMC

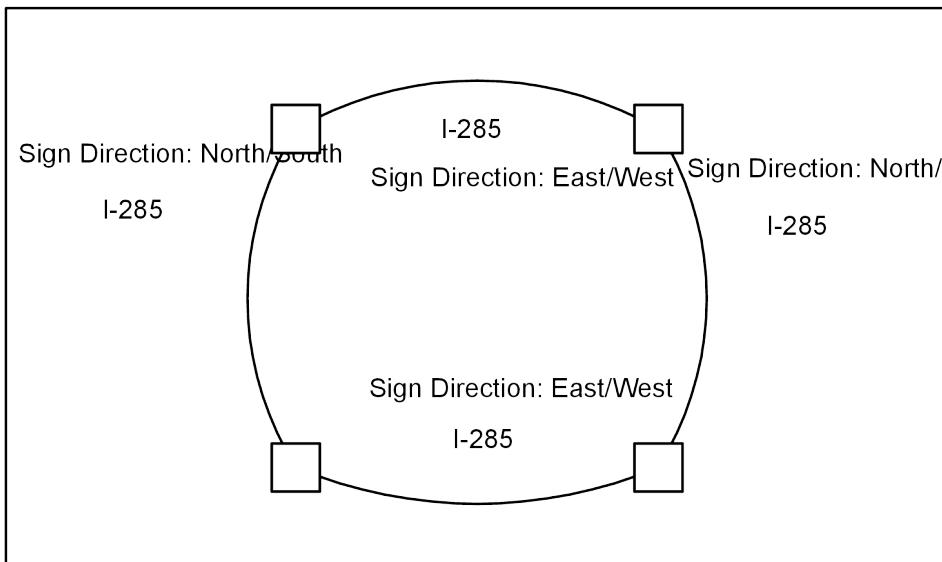
H.2 RDS-TMC (All Traffic Tables)

here

**Figure 481:**



**Figure 482:**



## Adjacent Linear Locations

### **Rules**

- When two Linear Locations meet at an intersection, the first Linear Location is coded to the middle of the intersection and the second Linear Location is coded from the middle of the intersection.

## Linking of Linear Locations

### **Definition**

Linking exists when two Linear Locations, sharing a common base name, are connected with a single internal code, rather than having an internal code for the end of one Linear Location and the beginning of the other Linear Location.

### **Rules**

# Reference Guide

RDS-TMC

H.3 Internal Codes on Multiply Digitised Roads

- Linking of Linear Locations and their respective Point Locations is required when one or more of the base names of the Linear Locations are the same and the road continues.
- Linear Locations with the same name that meet, but have opposing positive directions are not be linked.
- Linear Locations and Point Locations are not linked when the base names of the Linear Locations are different.

## H.3 Internal Codes on Multiply Digitised Roads

### Tables

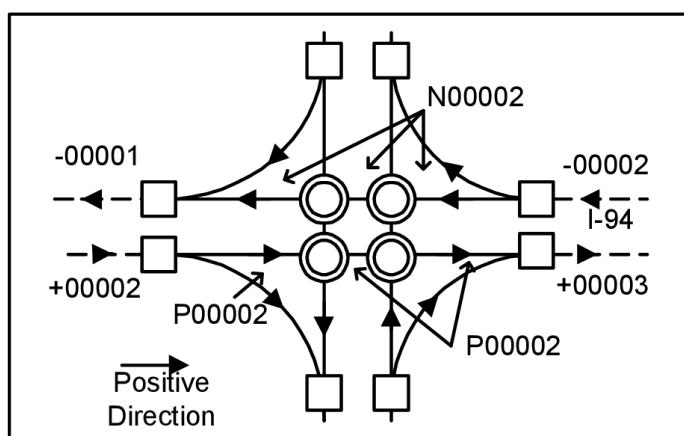
All Traffic Tables.

### H.3.1 Between Entrance and Exit Ramps

#### Rules

- Internal RDS-TMC codes are located between the entrance and exit ramps on each side of the multiply-digitised road, as shown in [Figure 483: on page 1293](#) and [Figure 484: on page 1294](#).

**Figure 483:**



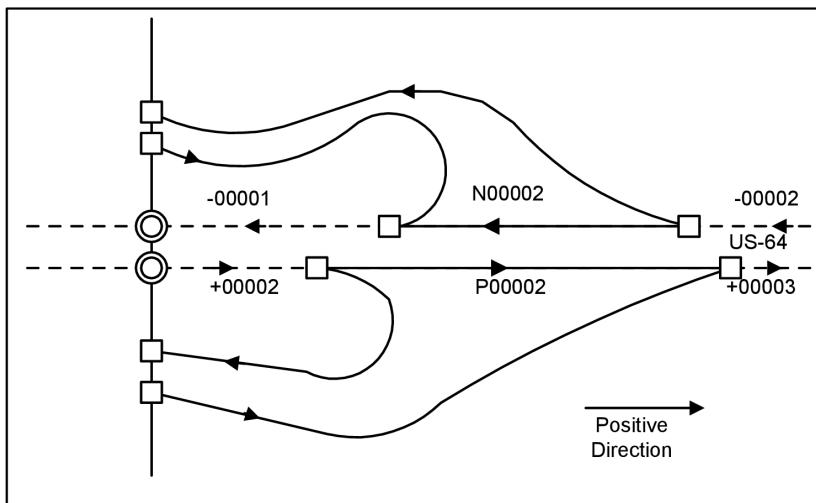
# Reference Guide

RDS-TMC

H.3 Internal Codes on Multiply Digitised Roads

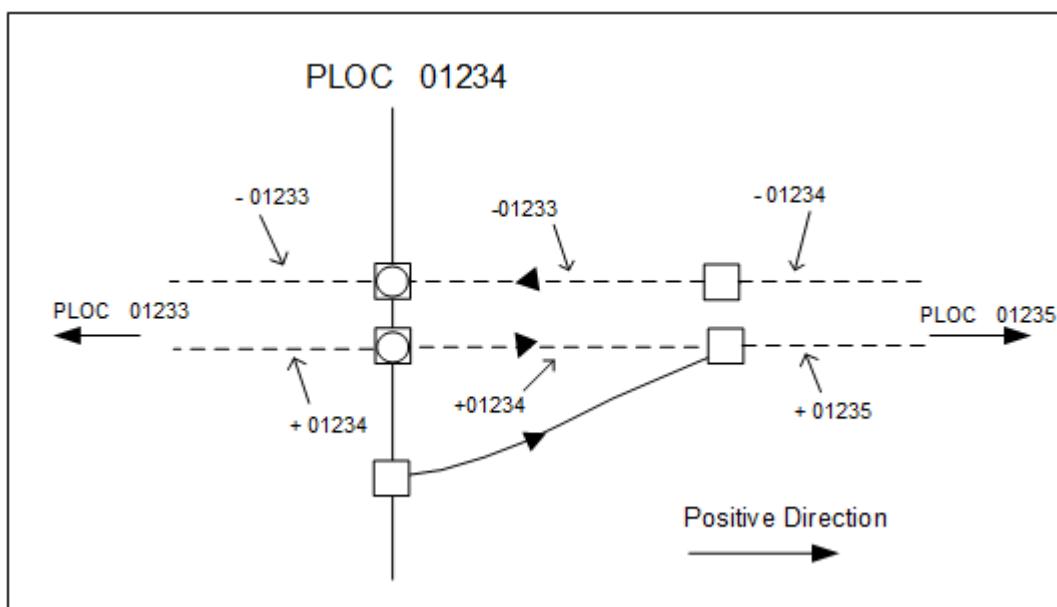
here

Figure 484:

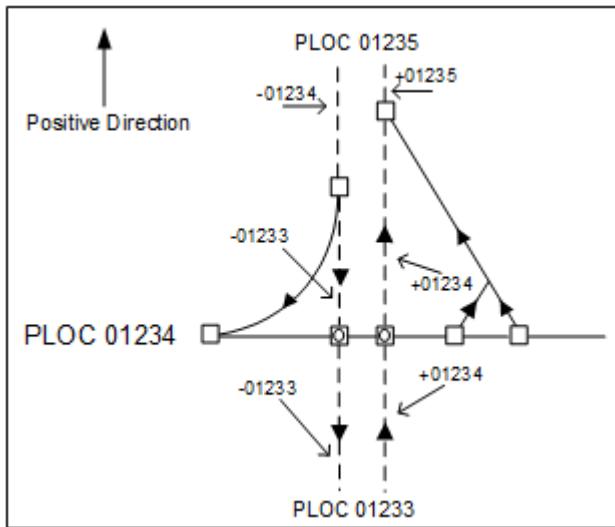


- In cases where only one exit or one entrance ramp exist on a multiply digitised road, internal codes are not added if the crossing road does not meet at grade. See the following figure.

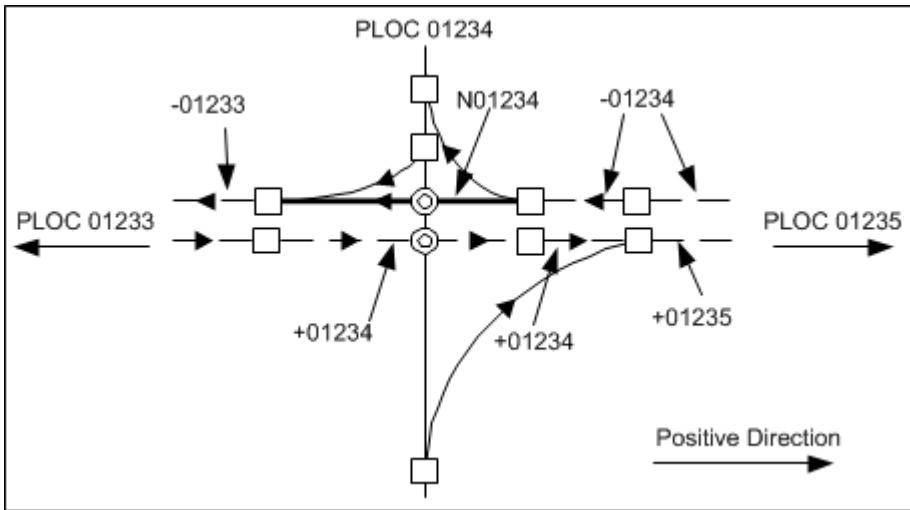
Figure 485:



- Internal codes are not added if the crossing roads do not meet at grade, even if there are ramps on either side. See the following figure.

**Figure 486:**

- In cases where two ramps exist on one side of the road, and the other side has one ramp (exit or entrance), internal codes are not applied for the side with the single entrance ramp. See the following figure.

**Figure 487:**

## H.3.2 Overlapping Problem Locations

### Rules:

- Linear Locations generally do not overlap.

## H.4 Internal Codes on Multiply Digitised Roads with Intersection

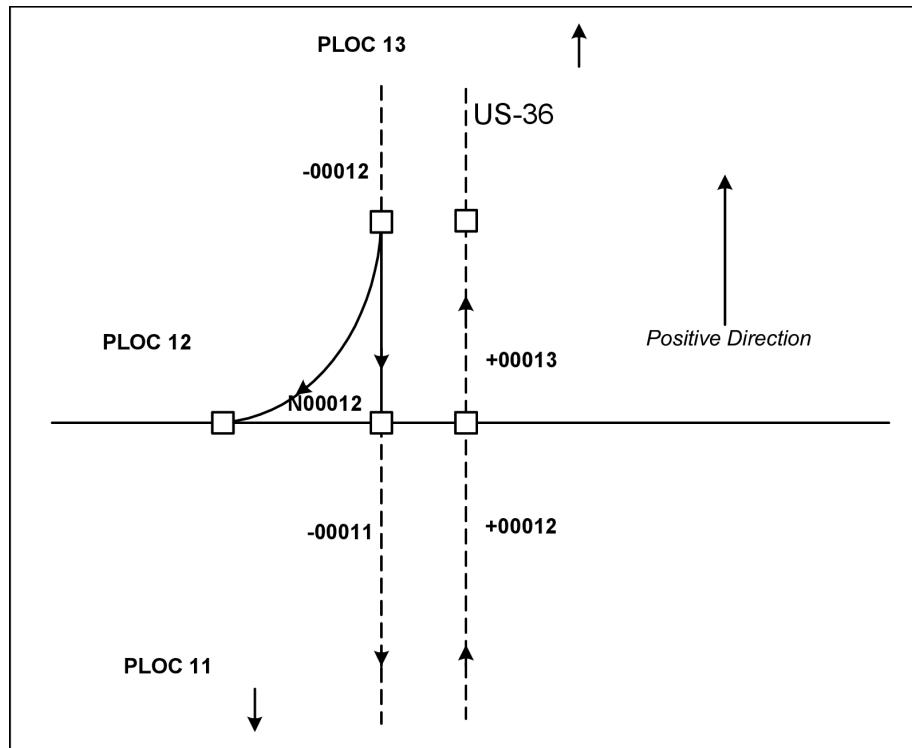
This entire section applies to all traffic tables.

### H.4.1 Intersections at Grade

#### Rules

- Only one internal code is applied when a multiply digitised road is crossing at grade and only one turn lane exists. See [Figure 488:](#) on page 1296.

**Figure 488:**



## H.5 Internal Codes on Bidirectional Roads with Ramps

#### Table

All Traffic Tables

#### Rules

## Reference Guide

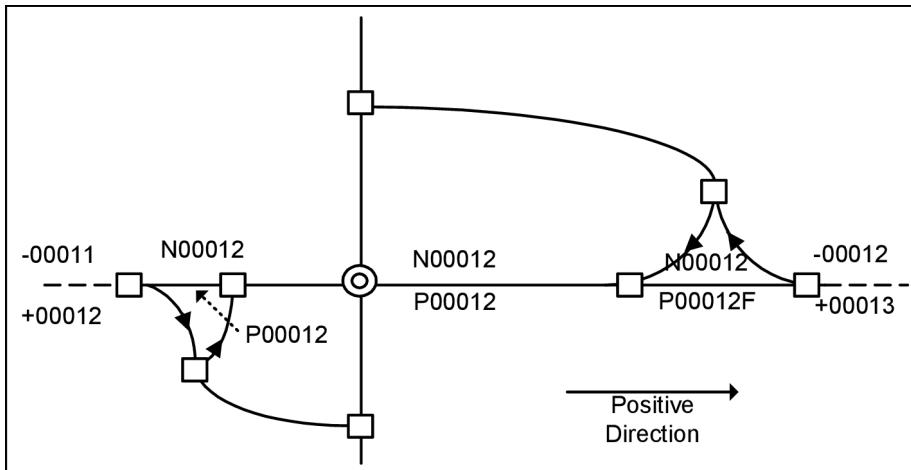
RDS-TMC

H.5 Internal Codes on Bidirectional Roads with Ramps

here

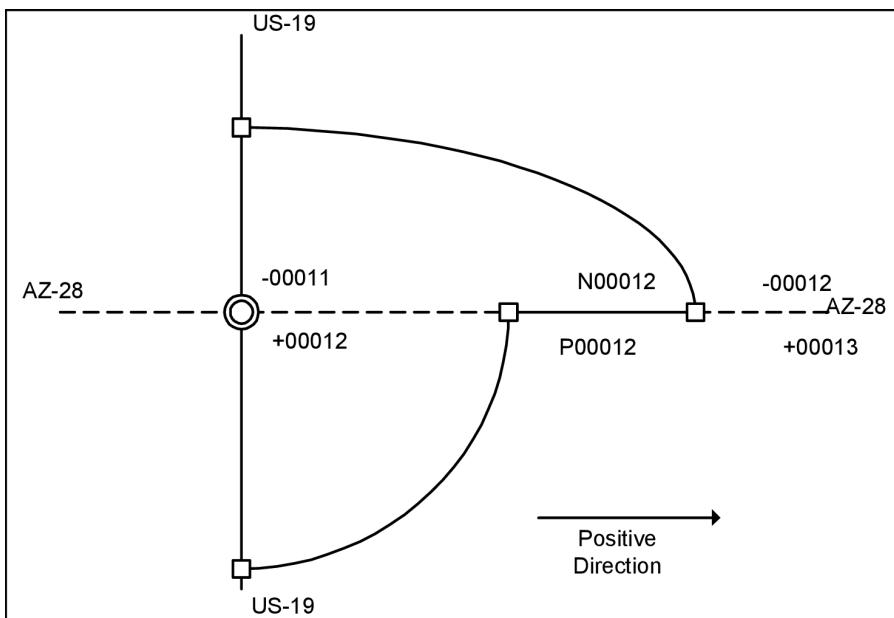
- Internal codes are added on all the links between the outer ramp links of the junction. See [Figure 489](#): on page 1297.

**Figure 489:**



- When two ramps are present and do not meet at the same node, the internal code is located between the two ramps. See [Figure 490](#): on page 1297.

**Figure 490:**



### H.5.1 Internal Codes on Bidirectional Roads with Intersections

#### Rules

- [Figure 491](#): on page 1298 shows how to add internal codes on bidirectional roads.
  - Nodes are not added in order to include internal codes when intersection geometry does not exist. See [Figure 491](#): on page 1298, diagram 2.

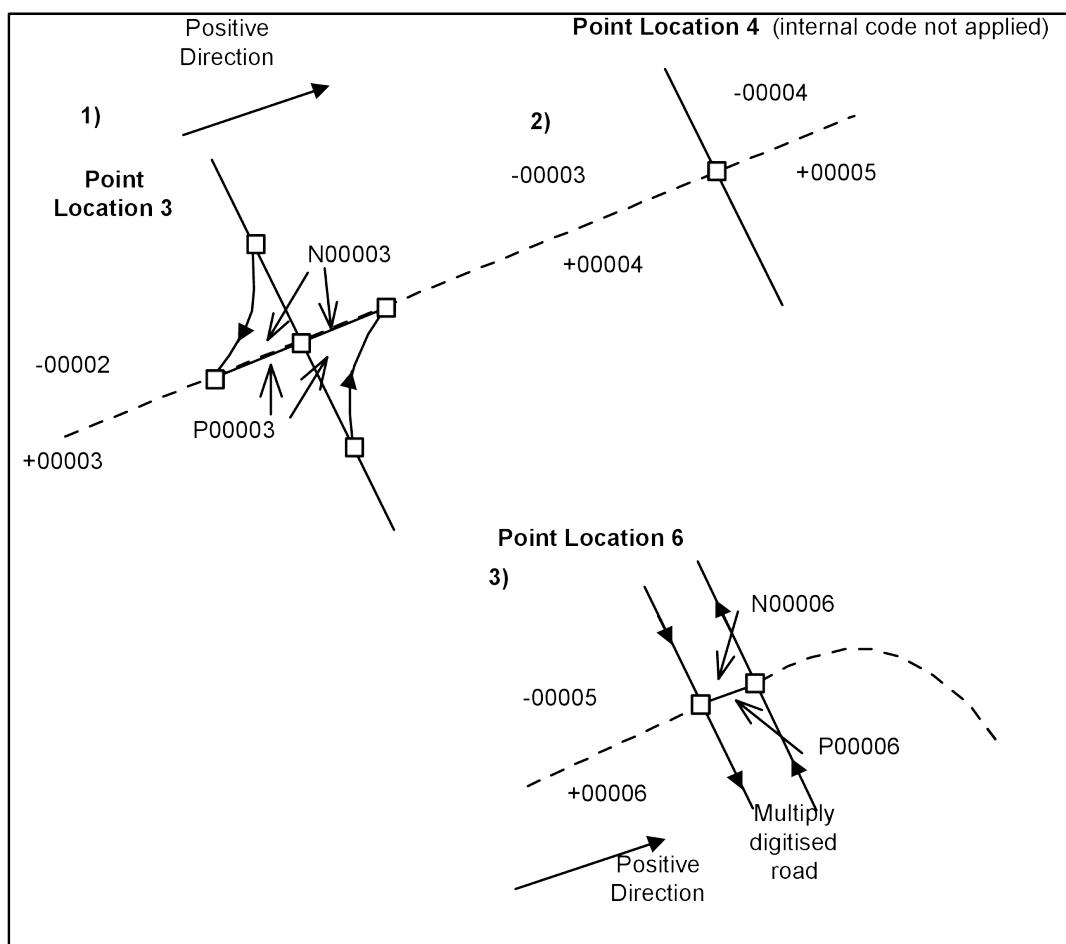
# Reference Guide

RDS-TMC

H.5 Internal Codes on Bidirectional Roads with Ramps

here

Figure 491:



# Reference Guide

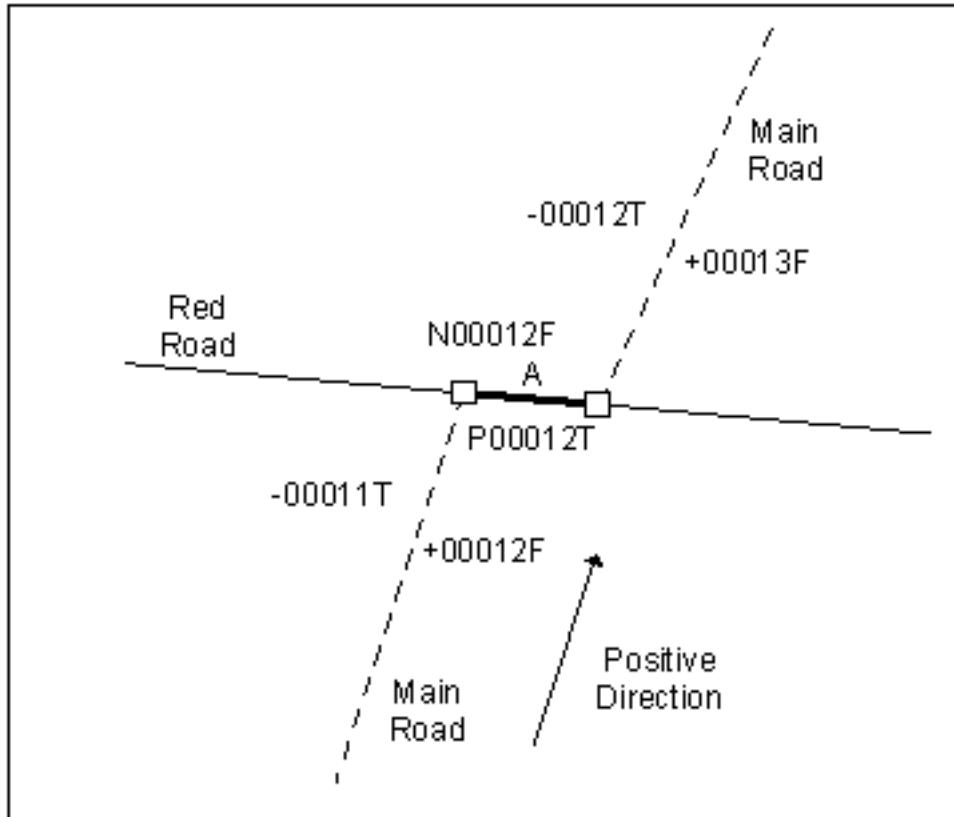
RDS-TMC

H.5 Internal Codes on Bidirectional Roads with Ramps

here

- In the following figure, "Main Road" is the RDS-TMC path. The internals are applied on A; the PLOC is the intersection of "Main Road" and "Red Road."

**Figure 492:**



## Reference Guide

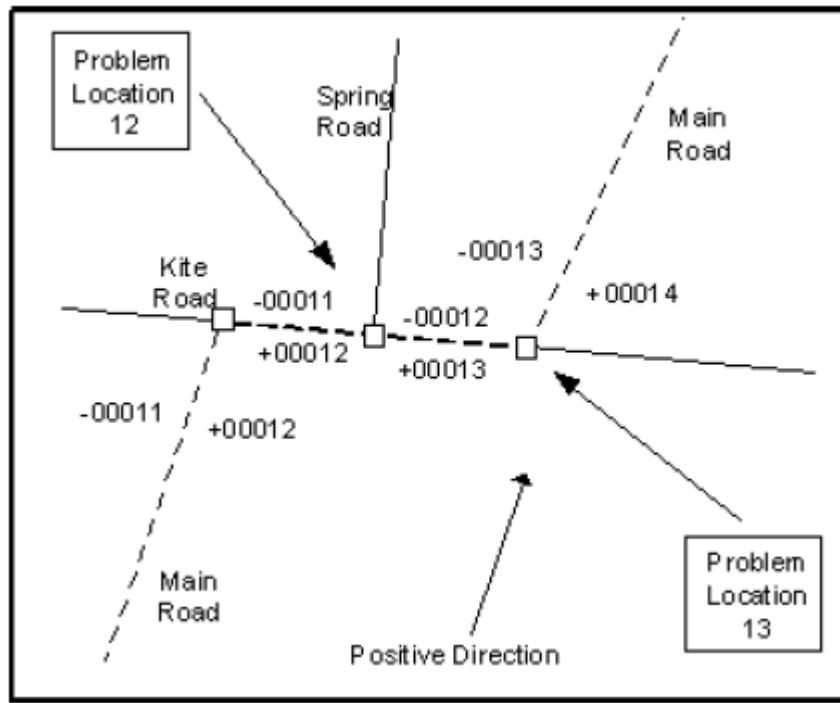
RDS-TMC

H.6 Point Locations at the Start or End of a Linear Location

here

- If the offset is greater than 300 metres or there are intervening roads between the offset roads of the Linear Location, two Problem Locations are applied, one at each intersection with the crossing road. See the following figure.

Figure 493:



## H.6 Point Locations at the Start or End of a Linear Location

### Tables

All Traffic Tables.

### H.6.1 At the Start/End of a Singly Digitised Road

#### Rules

If the start or end of the RDS-TMC path is a singly digitised road and the road geometry does not continue, the internal codes are applied as shown in [Figure 495: on page 1301](#) and [Figure 496: on page 1301](#). A node is added if there are no existing nodes available within 50 metres.

# Reference Guide

RDS-TMC

H.6 Point Locations at the Start or End of a Linear Location

here

Figure 494:

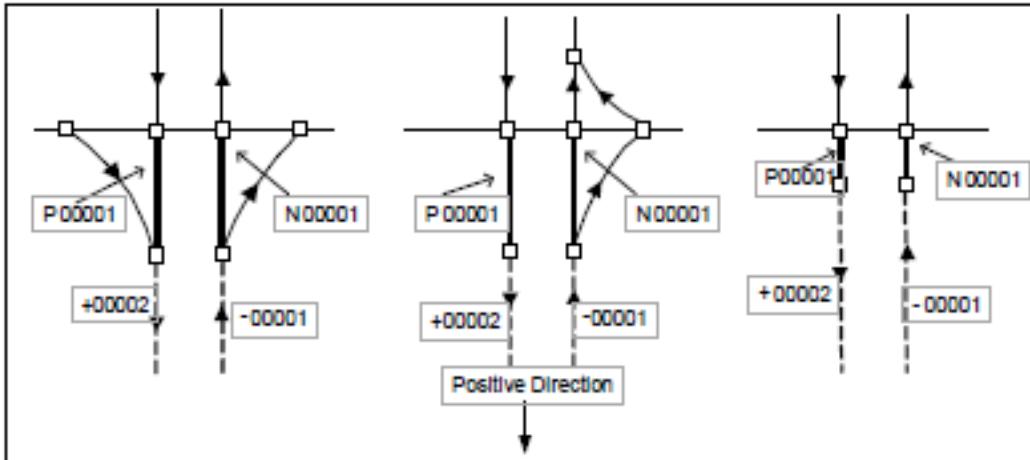


Figure 495:

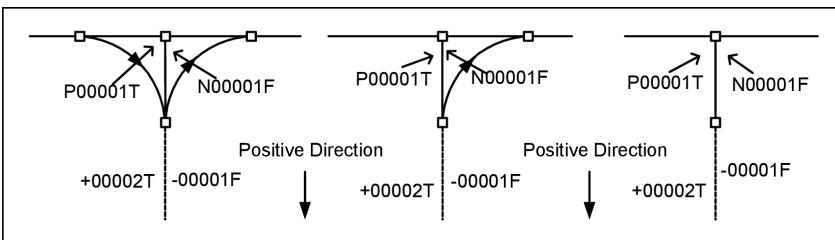
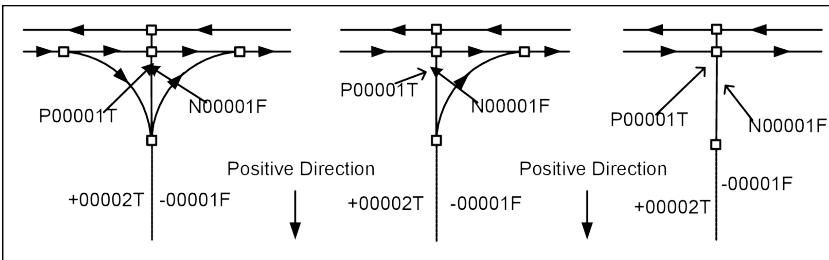


Figure 496:



## H.6.2 At the Start/End of a Separately Digitised Road

### Rules

If the start or end of the RDS-TMC path is a multiply digitised road and the road geometry does not continue, the internal codes are applied as shown in [Figure 497: on page 1302](#) through [Figure 500: on page 1303](#). A node is added if there are no existing nodes available within 50 metres.

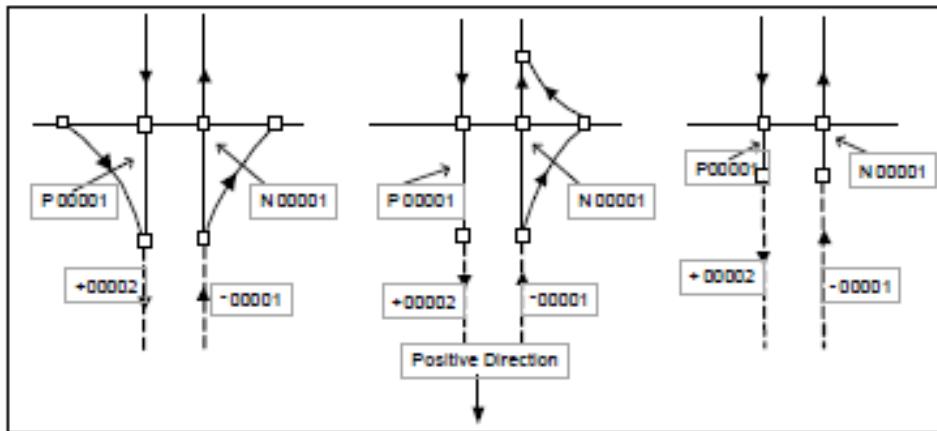
# Reference Guide

RDS-TMC

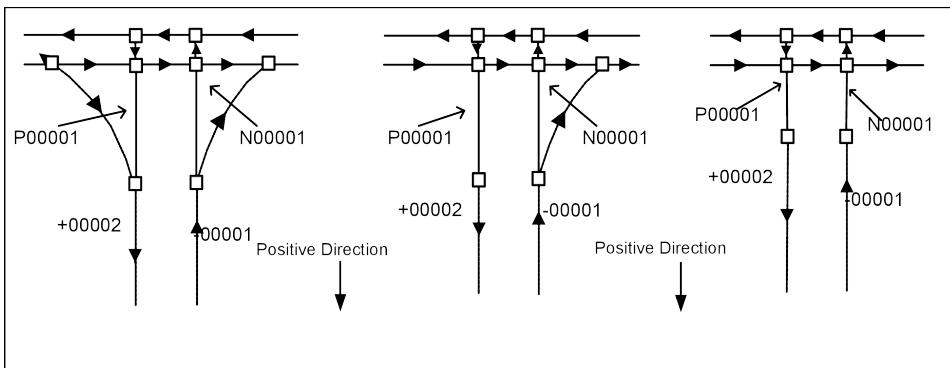
H.6 Point Locations at the Start or End of a Linear Location

here

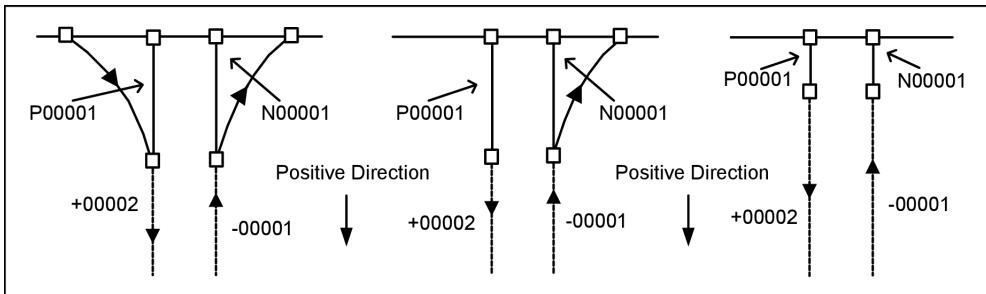
**Figure 497:**



**Figure 498:**



**Figure 499:**



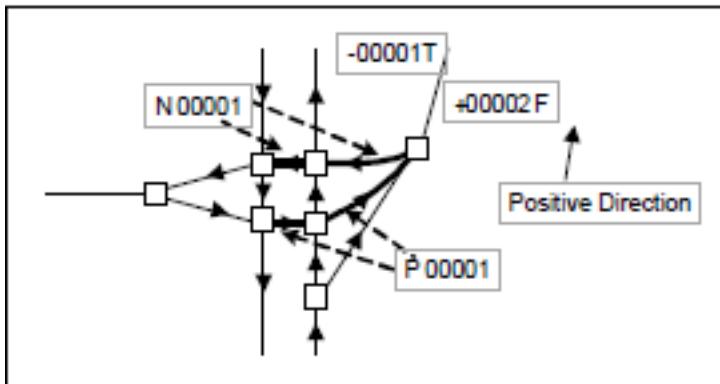
# Reference Guide

RDS-TMC

H.6 Point Locations at the Start or End of a Linear Location

here

**Figure 500:**

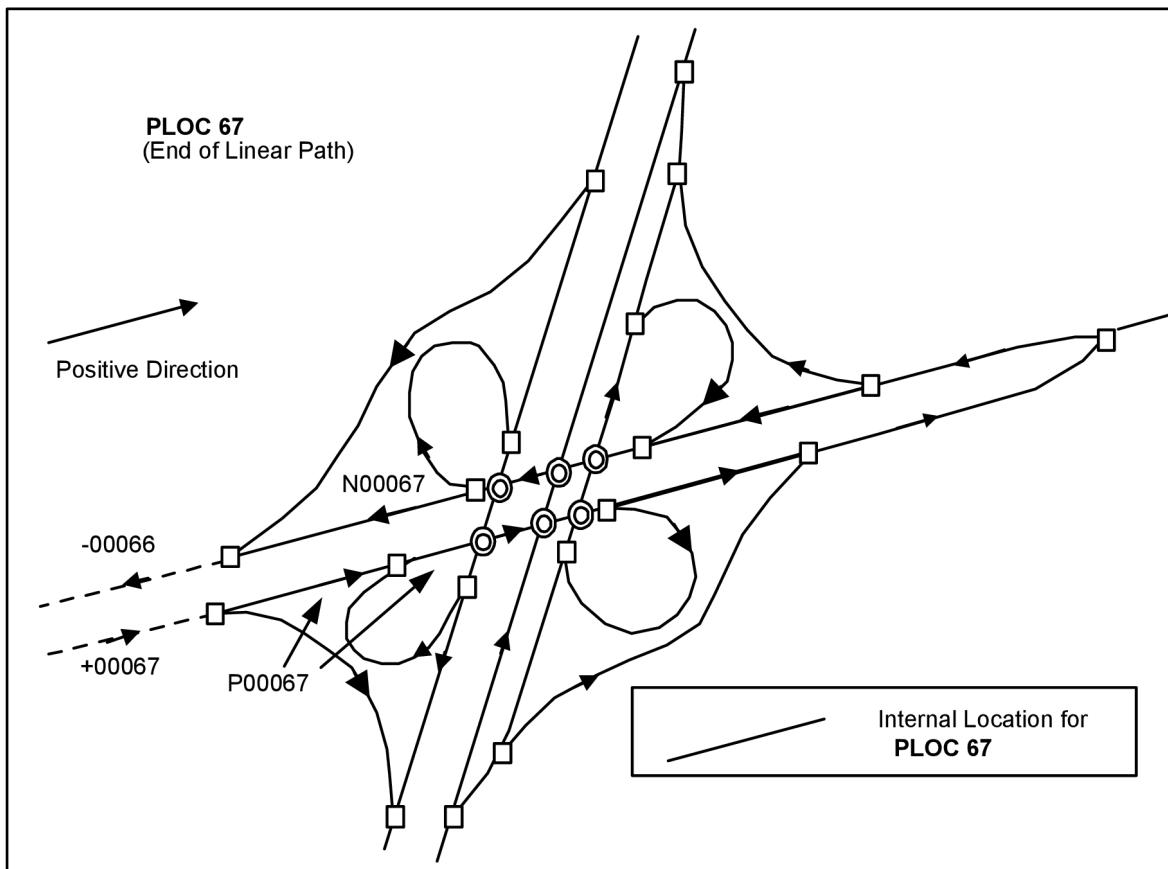


## H.6.3 At the Start/End of a Junction

### Rules

- Internal codes are not applied to ramps when the Point Location is the start or end of the RDS-TMC path and the road geometry continues. See [Figure 501: on page 1303](#).

**Figure 501:**



# Reference Guide

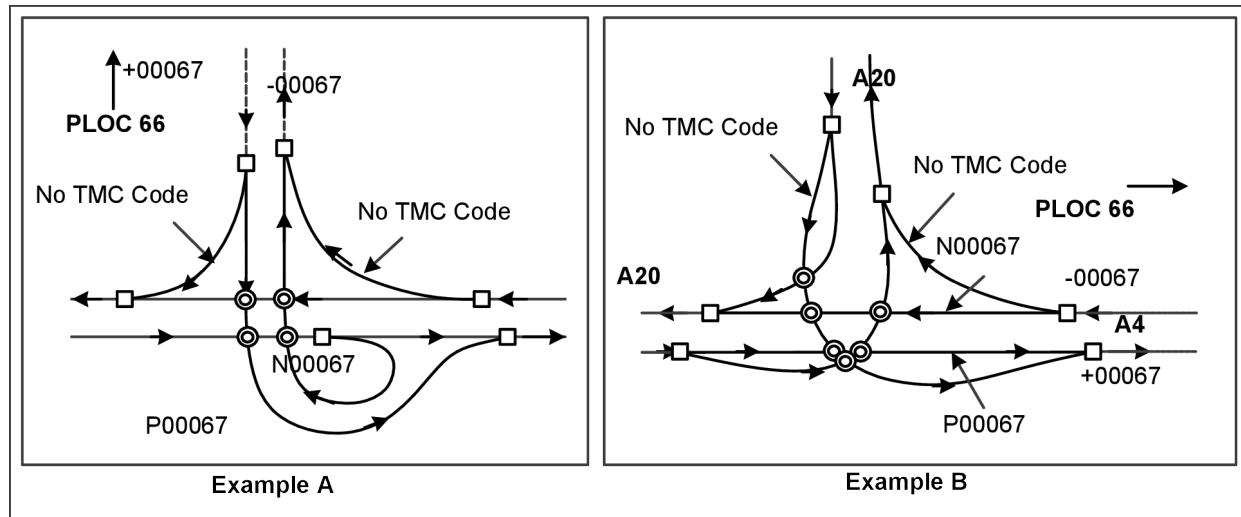
RDS-TMC

H.6 Point Locations at the Start or End of a Linear Location

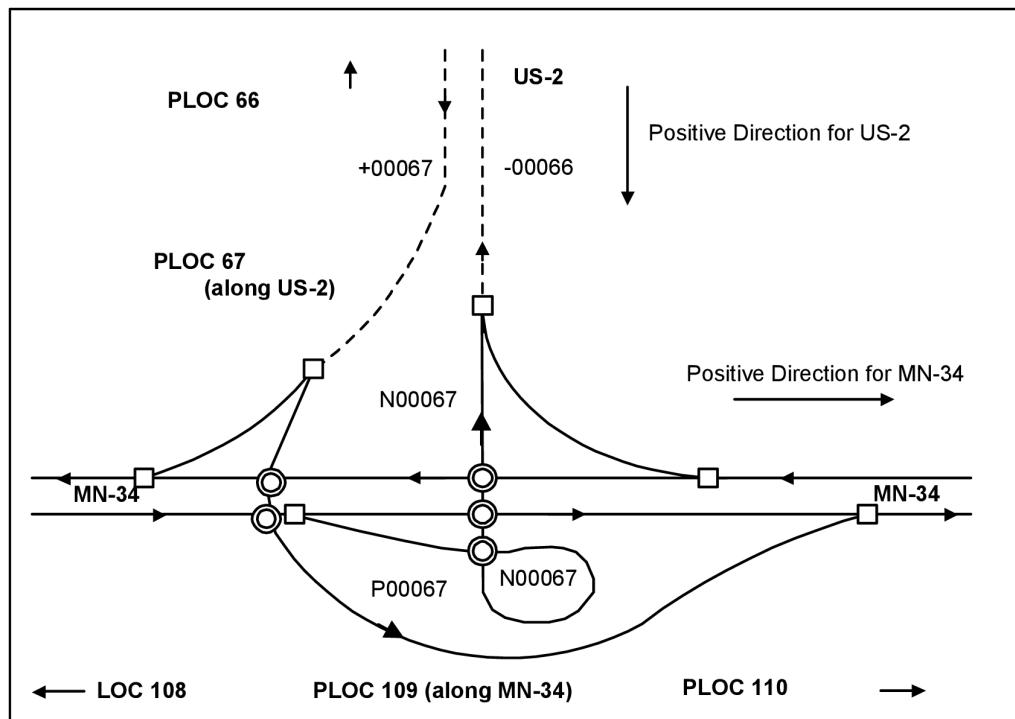
here

- Internal codes are applied only to the inner ramp or highway-to-highway connector links if a TMC path ends at a junction. See [Figure 502](#): on page 1304 and [Figure 503](#): on page 1304.

**Figure 502:**



**Figure 503:**



# Reference Guide

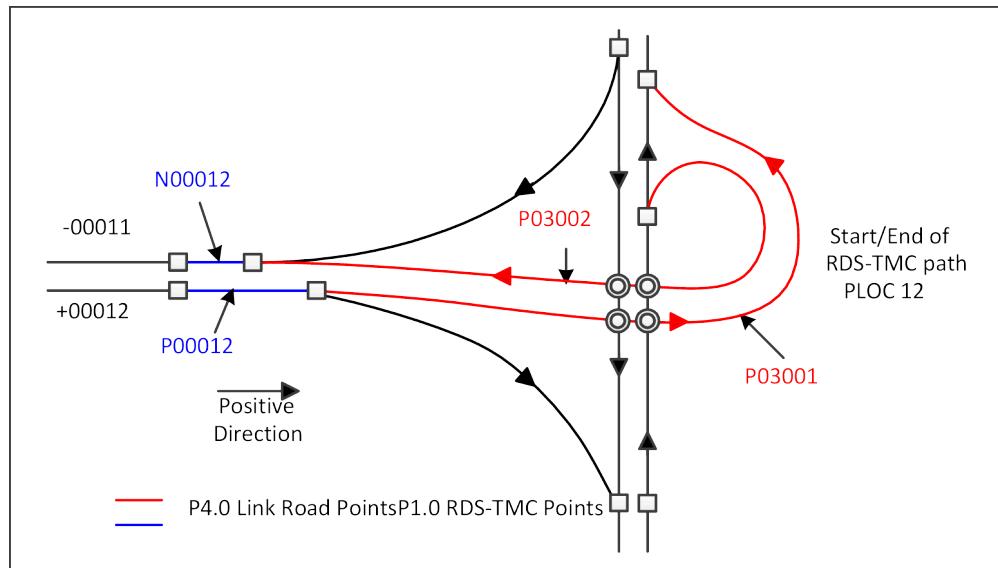
RDS-TMC

H.6 Point Locations at the Start or End of a Linear Location

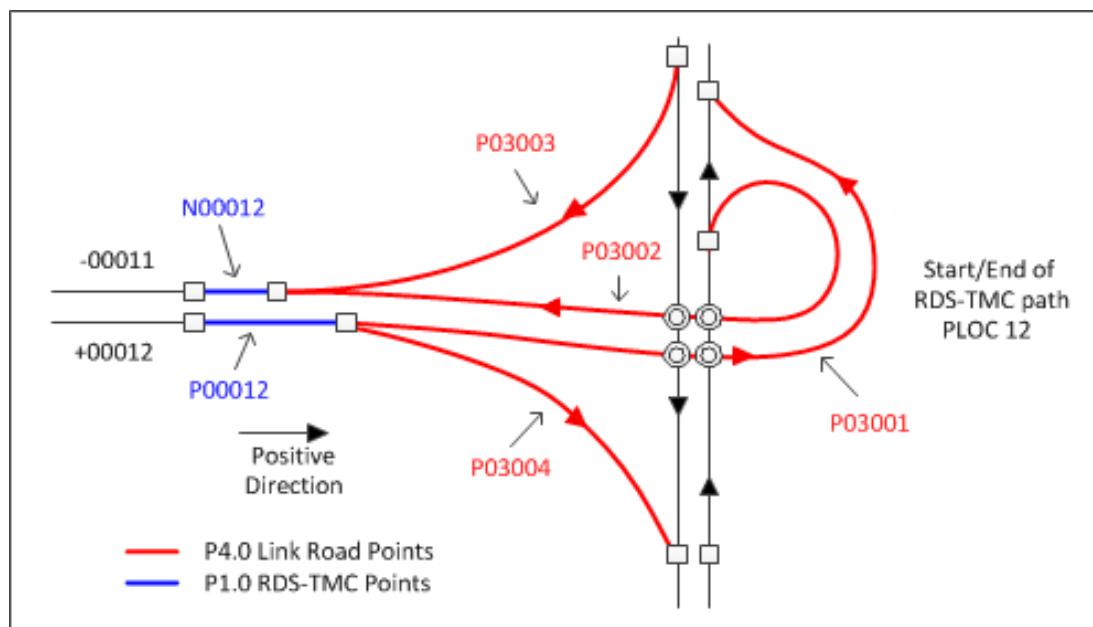
here

- P1.0 internal codes are applied to a short link prior to the junction if the TMC path ends at a junction and the ramp link(s) have P4.0 Link Road Points identified. See [Figure 504: on page 1305](#) and [Figure 505: on page 1305](#).

**Figure 504:**



**Figure 505:**



# Reference Guide

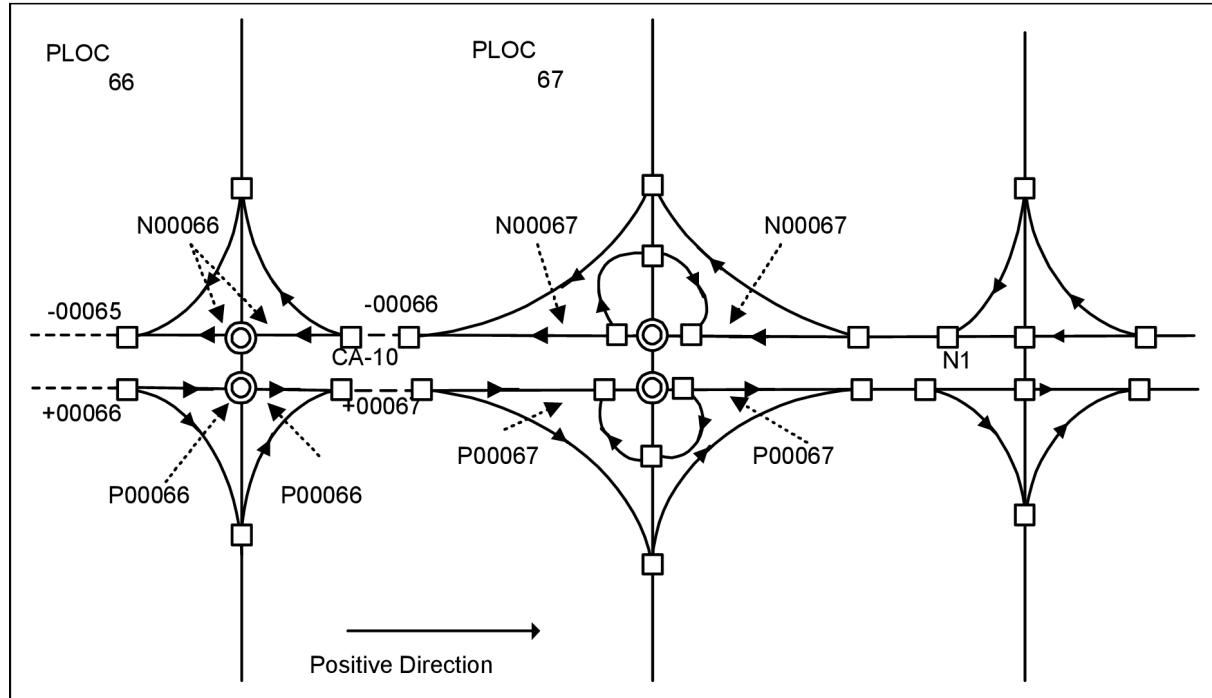
RDS-TMC

H.6 Point Locations at the Start or End of a Linear Location

here

- Problem Location 67 is the last code along CA-10. Internals are coded as indicated in [Figure 506](#): on page 1306. The ramps are not coded in this situation.

**Figure 506:**

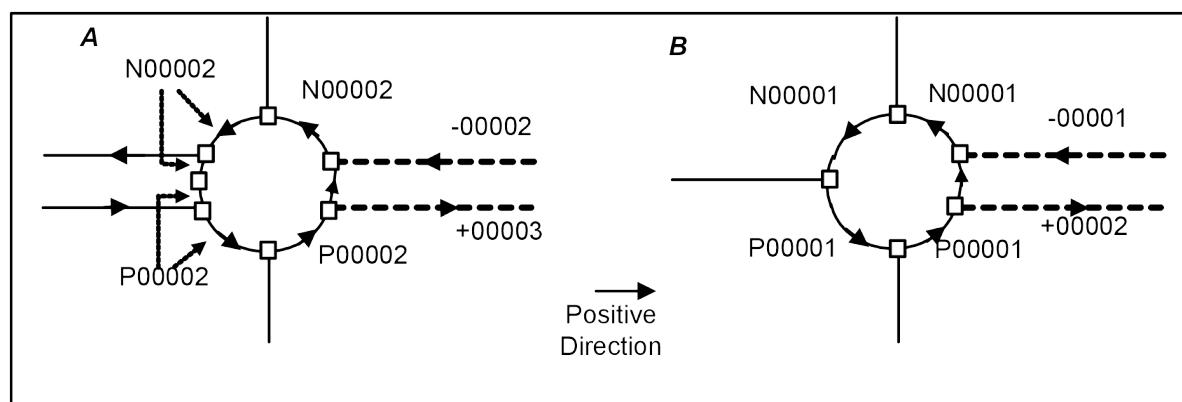


## H.6.4 At the Start/End of a Roundabout

### Rules

- In cases where a roundabout is the start or end of the RDS-TMC path, the roundabout is split in half by dropping a node. The positive internal is applied on one side of the roundabout and the negative internal on the other side, depending on the positive direction of the Linear Location. See [Figure 507](#): on page 1306, diagram A. In cases where an existing node can be used, this node is reused to split the roundabout. See [Figure 507](#): on page 1306, diagram B.

**Figure 507:**

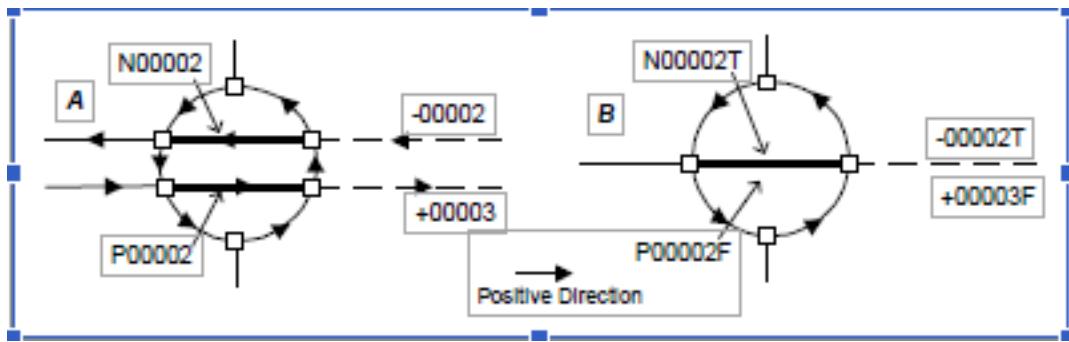


## H.6.5 At the Start/End of a Special Traffic Figure

### Rules

- When a Special Traffic Figure is the start or end of an RDS-TMC path, both the positive and negative internal codes are applied on the inner link of the Special Traffic Figure. See [Figure 508](#): on page 1307.

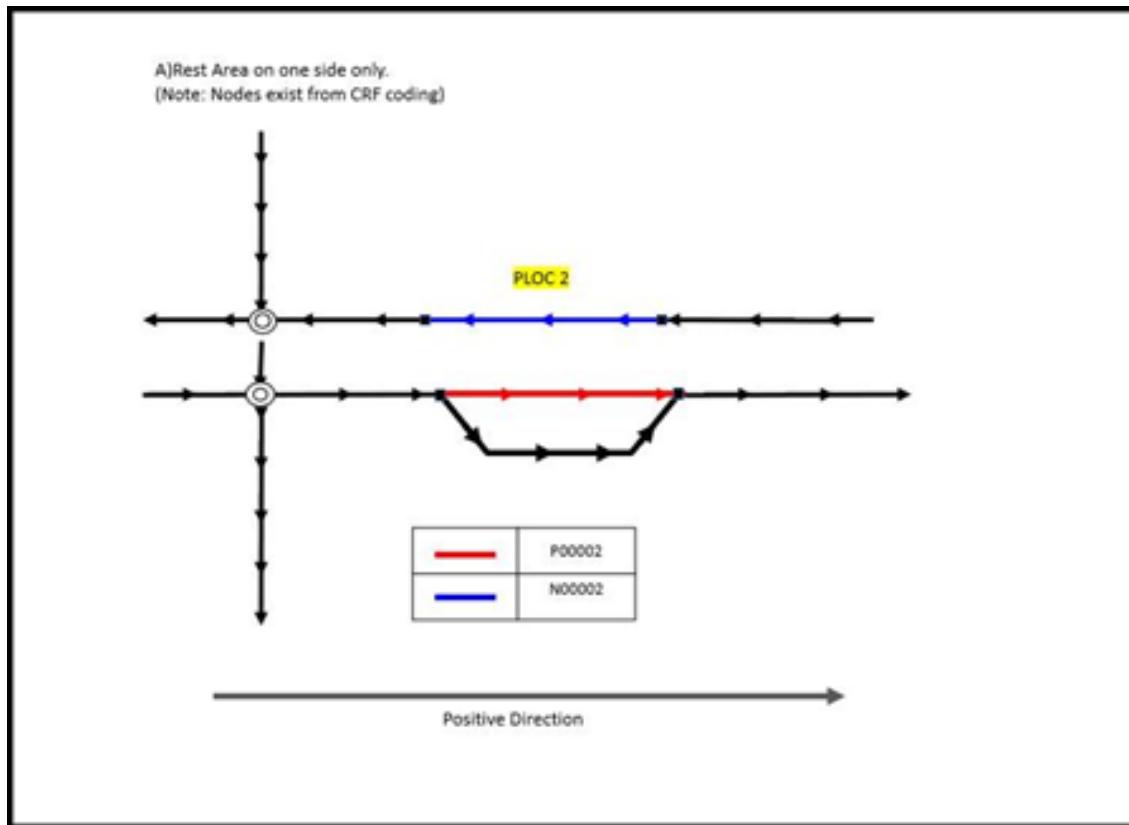
**Figure 508:**



## H.6.6 Start or End at a T-intersection and Frontage Road

### Rules

- When the beginning of a RDS-TMC path begins at a T-intersection involving a road flagged as Frontage Road, an internal code is applied as seen in the following figure.

**Figure 509:**

## H.7 Internal Codes where a TMC Path Turns at a Junction or Intersection

This entire section applies to all traffic tables.

### H.7.1 TMC Path Turns at a Junction

#### Rules

- Figure 510:* on page 1309 shows the I-76 turning instead of going straight through the junction. The internal codes are applied to the road and ramp links that are part of the RDS-TMC path (i.e., I-76).

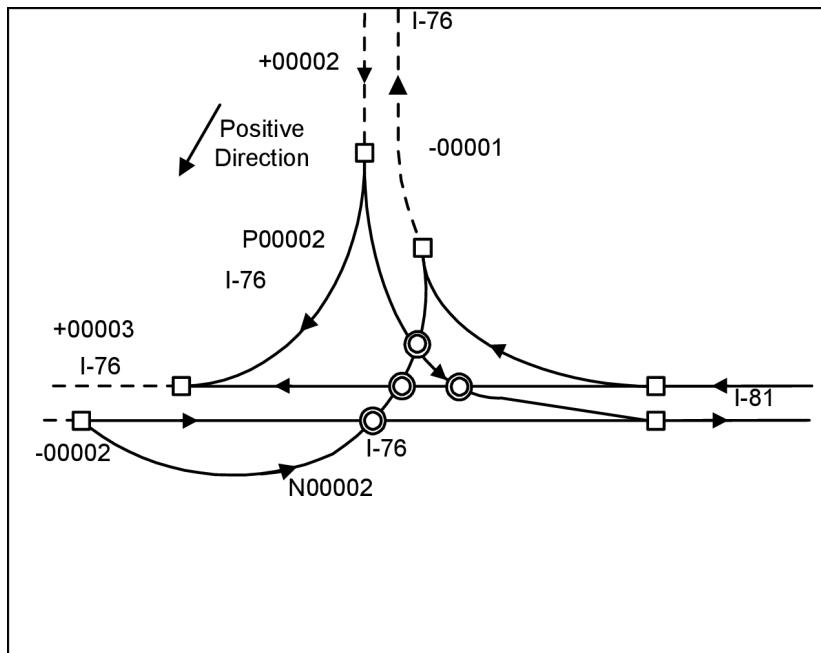
## Reference Guide

RDS-TMC

H.7 Internal Codes where a TMC Path Turns at a Junction or Intersection

here

**Figure 510:**



### H.7.2 TMC Path Turns at an Intersection

- The RDS-TMC path follows the path that is driven.
  - *Figure 511:* on page 1310 shows US-56 turning instead of going straight through the intersection. Internal codes are placed on the turn lane because that is the driving path the car would follow.
  - Internal and external codes are applied as in *Figure 512:* on page 1310 and *Figure 513:* on page 1311 when the RDS-TMC path changes direction.
  - *Figure 514:* on page 1311 shows the US-36 changing direction instead of going straight through the intersection.

# Reference Guide

RDS-TMC

H.7 Internal Codes where a TMC Path Turns at a Junction or Intersection

here

Figure 511:

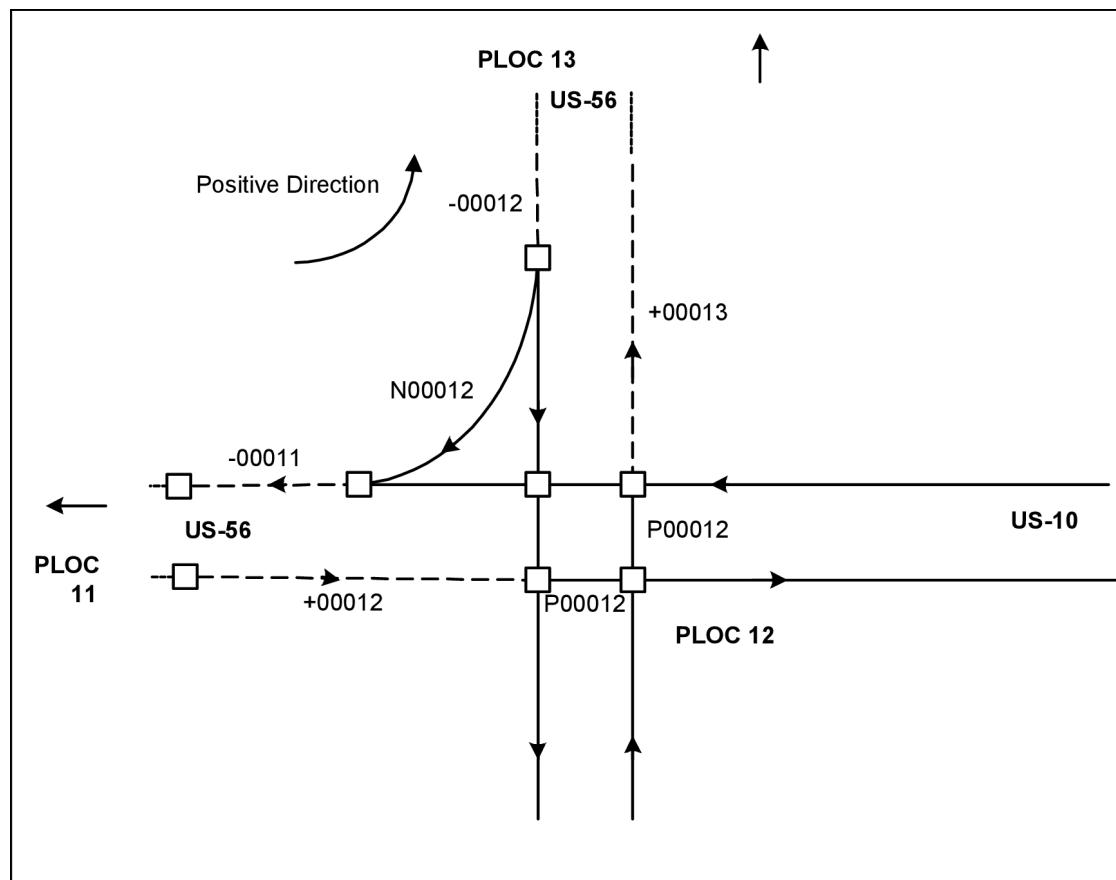
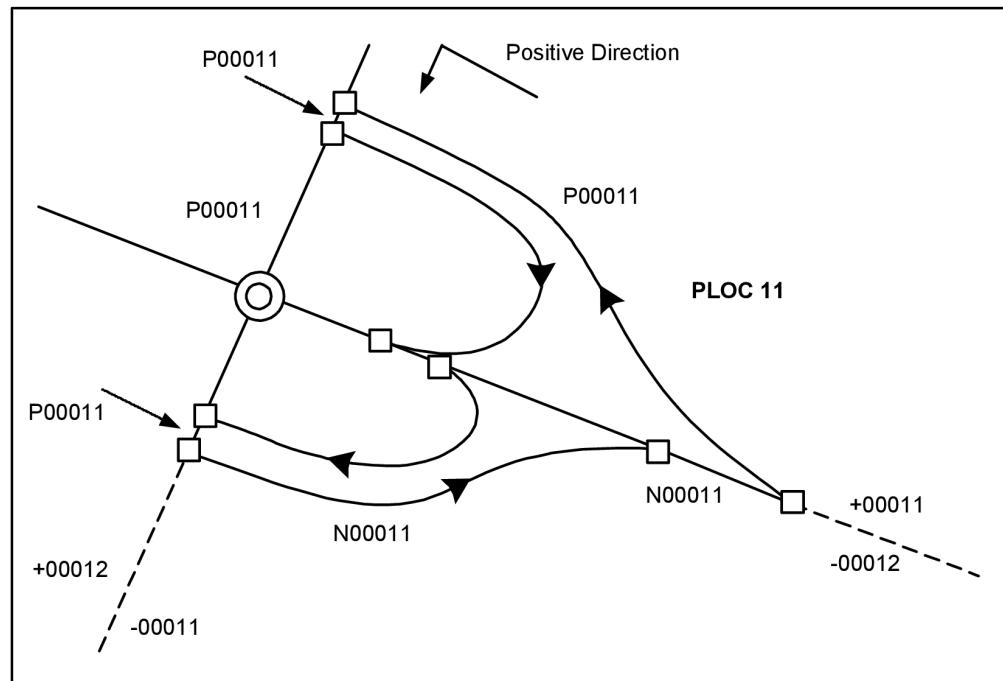


Figure 512:



# Reference Guide

RDS-TMC

H.8 RDS-TMC Path with One-Ways

here

Figure 513:

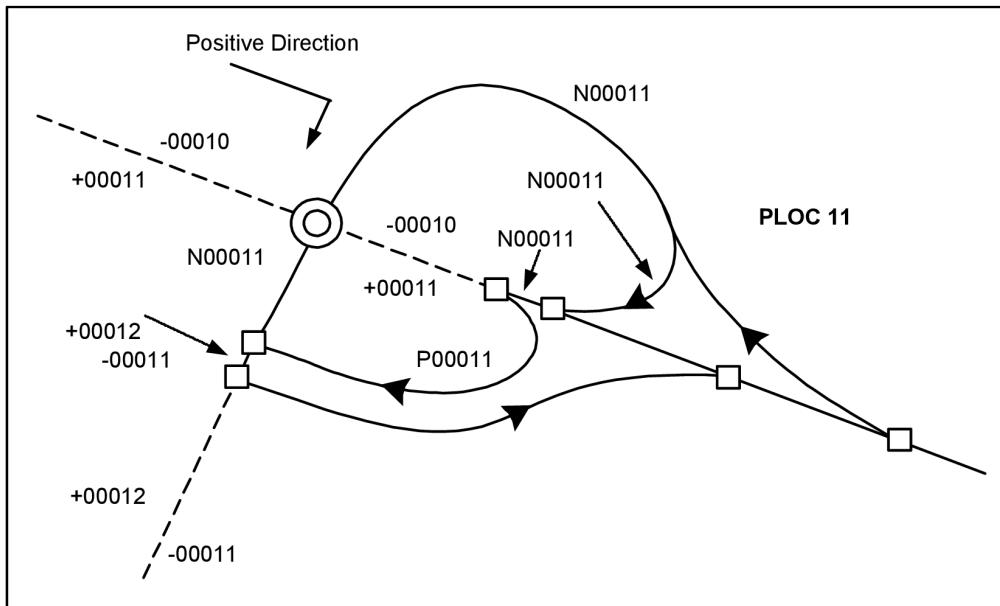
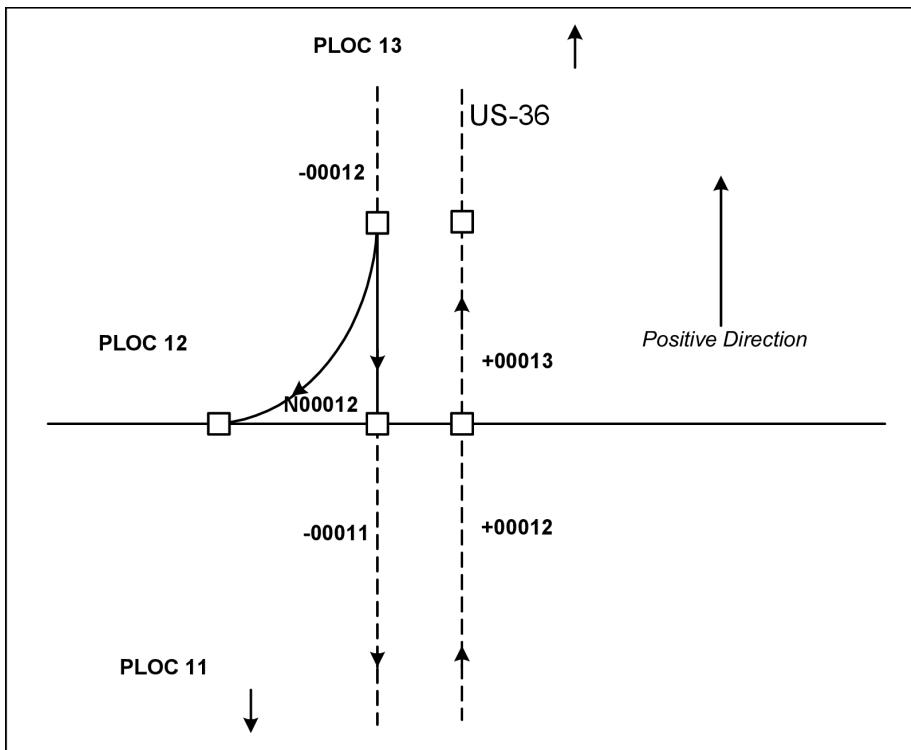


Figure 514:



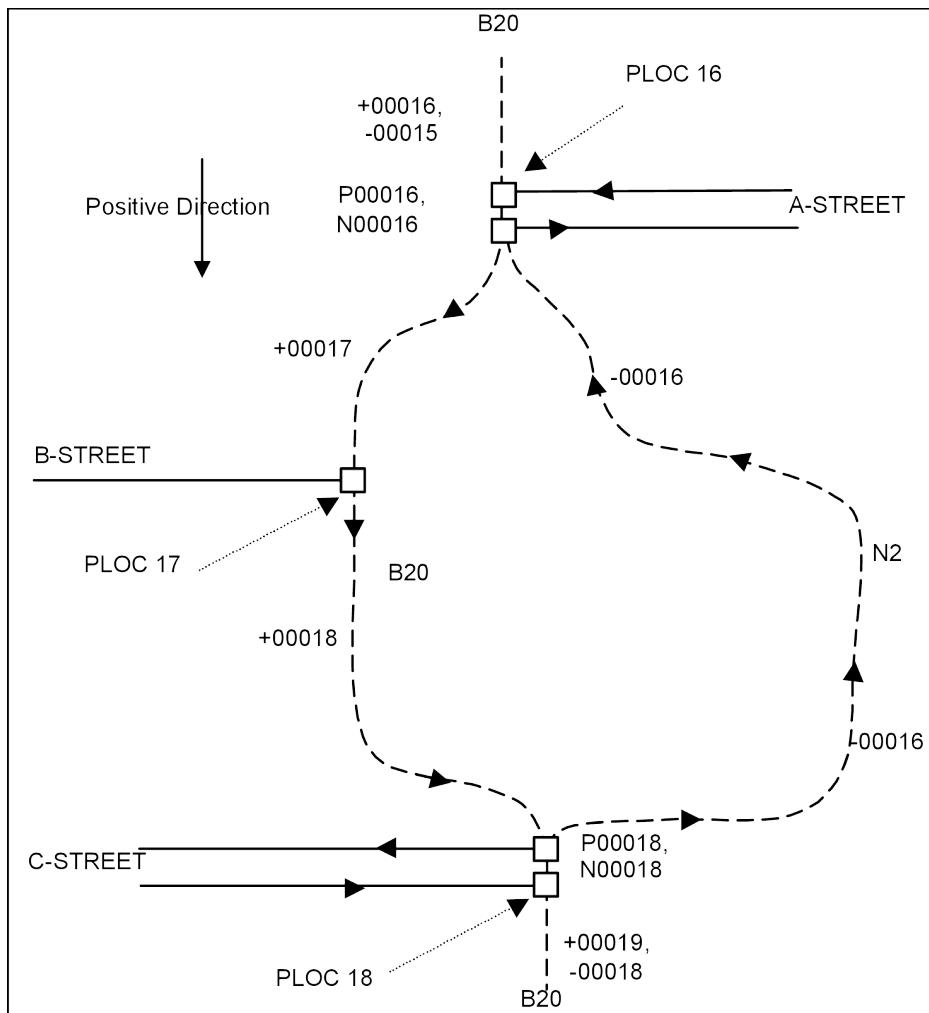
## H.8 RDS-TMC Path with One-Ways

### H.8.1 Problem Location within One-way Systems

#### Tables

## EU coding style tables

In [Figure 515](#): on page 1312, PLOC 17 is not coded in the negative direction since "B-street" does not intersect in the negative direction.

**Figure 515:**

## H.8.2 RDS-TMC Path in Only One Direction

### Rules

- In some cases, a certain route number is applied in one direction (one-way) only for a certain stretch of road. In these cases, the RDS-TMC path still needs a positive and a negative external. Since only one direction is defined for applying the external, the corresponding external needs is applied to the logical route, reflecting the other direction of the RDS-TMC path. See [Figure 516](#): on page 1313.

**① Note:**

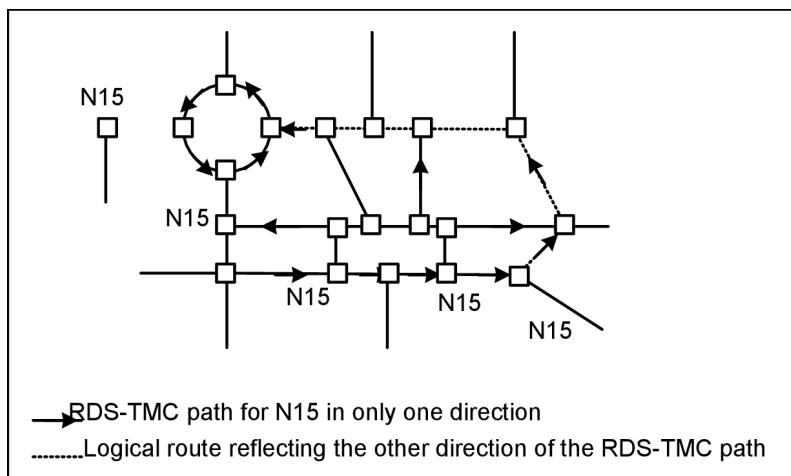
This example is only applicable for Government Tables, i.e., European tables.

# Reference Guide

RDS-TMC

H.9 Placement of Internal Codes for Specific Features

**Figure 516:**



## H.9 Placement of Internal Codes for Specific Features

This section applies to all traffic tables.

### H.9.1 Administrative Boundaries

#### Tables

All traffic tables

#### Rules

- Country (Administrative Level 1), state and province (Administrative Level 2) boundaries are included as Point Locations.

# Reference Guide

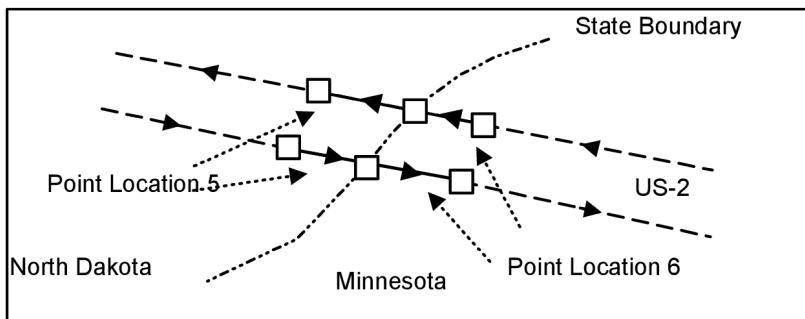
RDS-TMC

H.9 Placement of Internal Codes for Specific Features

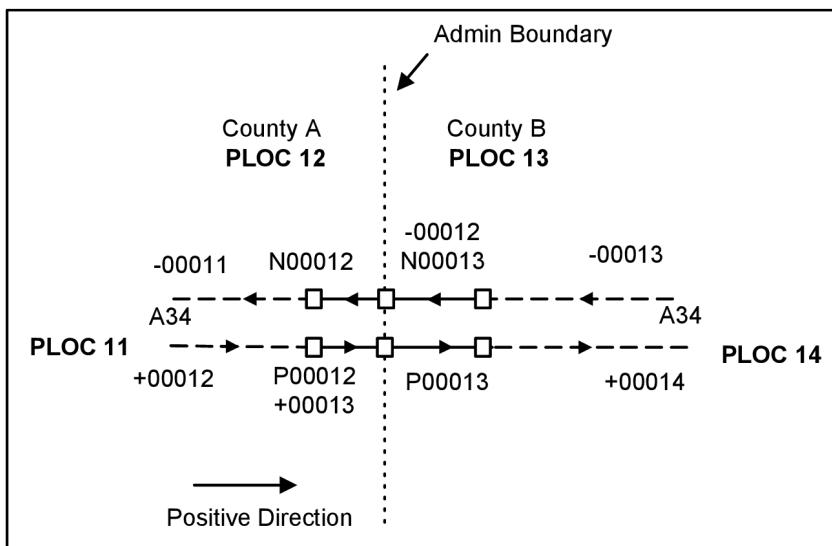
here

- When the Linear Location is Controlled Access = 1, nodes are added to place internal codes. See [Figure 517](#): on page 1314 thru [Figure 519](#): on page 1314.

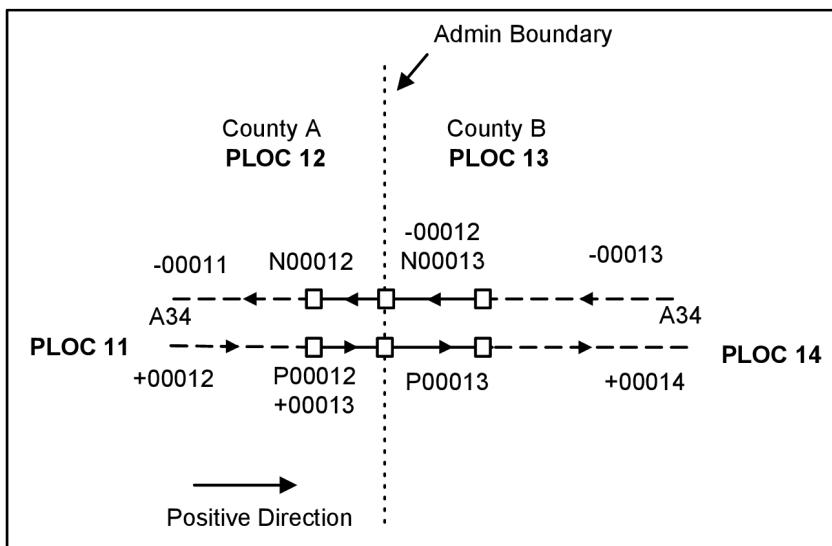
**Figure 517:**



**Figure 518:**



**Figure 519:**



# Reference Guide

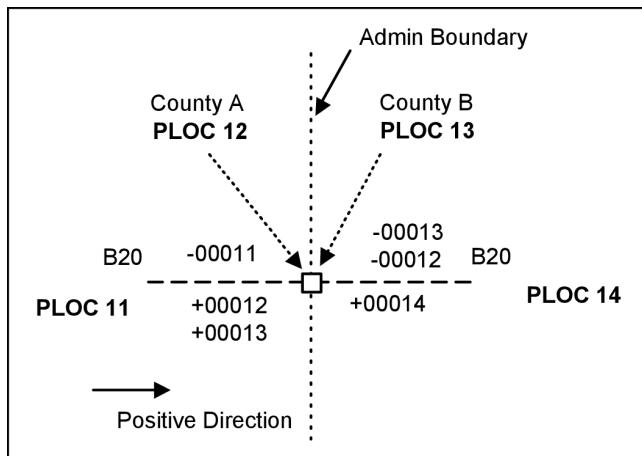
RDS-TMC

H.9 Placement of Internal Codes for Specific Features

here

- Where an Administrative Boundary crosses a bidirectional road, only external codes are applied. See [Figure 520](#): on page 1315.

**Figure 520:**

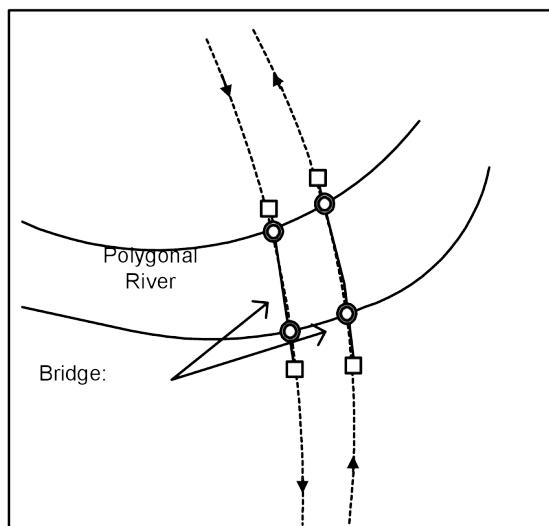


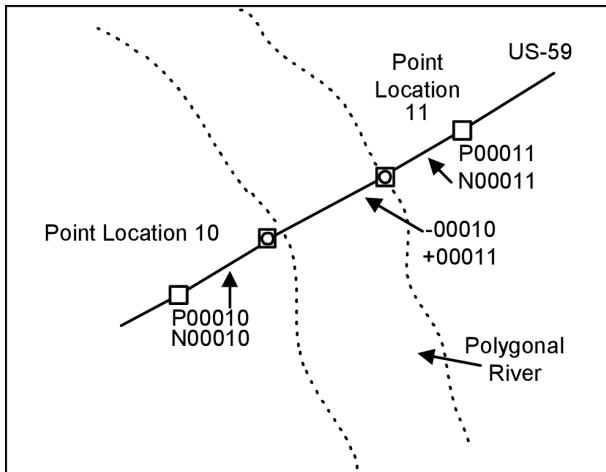
## H.9.2 Bridge/Tunnel/Ferry Route

### Rules

- Internal codes are applied to bridges, tunnels and ferry routes on all that have as shown in [Figure 521](#): on page 1315. When a bridge, tunnel or ferry is longer than 1/2 mile (800 metres), one Point Location is coded at each end of the feature. See [Figure 522](#): on page 1316.
- If the ends of a bridge, tunnel, or ferry are commonly referred to independently in traffic reports, such as "North Tower of Spencer Bridge" or "South Tower of Spencer Bridge," two Point Locations may have been added.
- Multiple Point Locations may be required if the midpoint of a bridge, tunnel, or ferry is also referred to during traffic reports.

**Figure 521:**

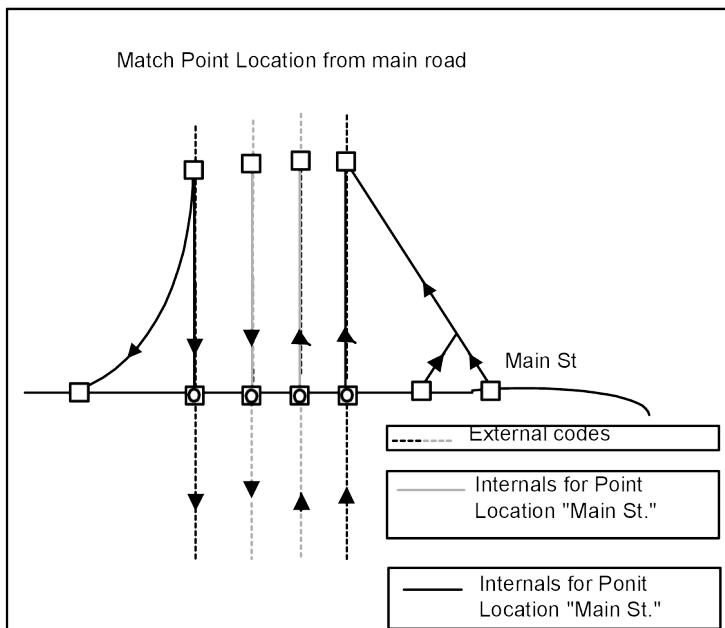


**Figure 522:**

## H.9.3 HOV Lanes

### Rules

- For HOV roads that are Linear Paths, Point Locations are included which correspond to the main road, even if the Point Location is not accessible via the HOV lane. See [Figure 523](#): on page 1316.

**Figure 523:**

## H.9.4 Built Up Area

### Tables

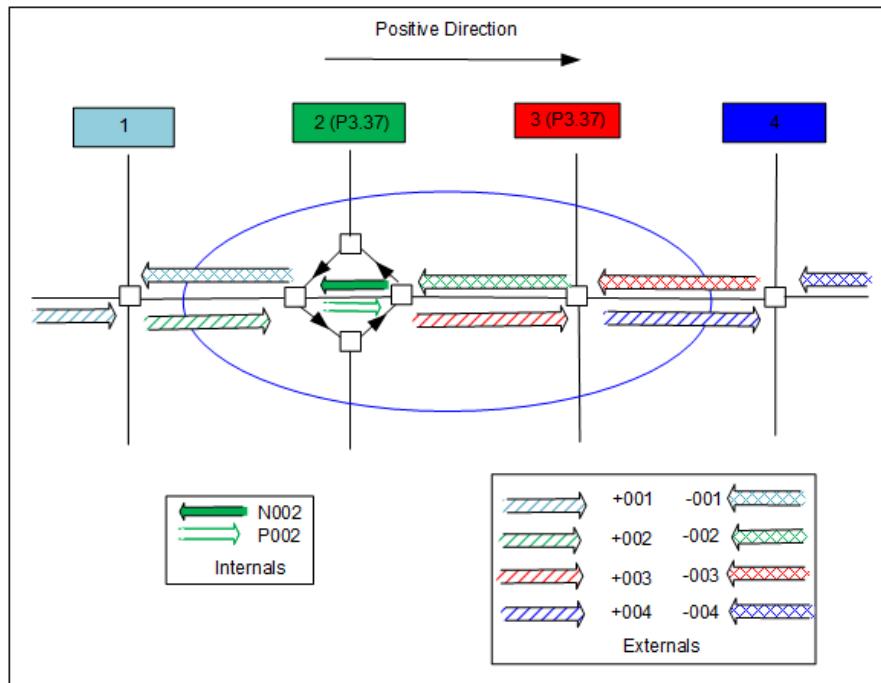
EU coding style tables

## RDS-TMC Path that Travels Through a Built-up Area

### Rules

Internal codes are applied only to specific features, e.g., junction, bridge, tunnel, etc. and not to the whole path inside the Built-up Area boundary. See [Figure 524:](#) on page 1317.

**Figure 524:**



## RDS-TMC Path that Passes a Built-up Area

### Rules

- In cases where the RDS-TMC table clearly refers to a junction outside the BUA as a P3.37, only the junction that leads to the BUA is applied with internal codes. See [Figure 525:](#) on page 1318.

# Reference Guide

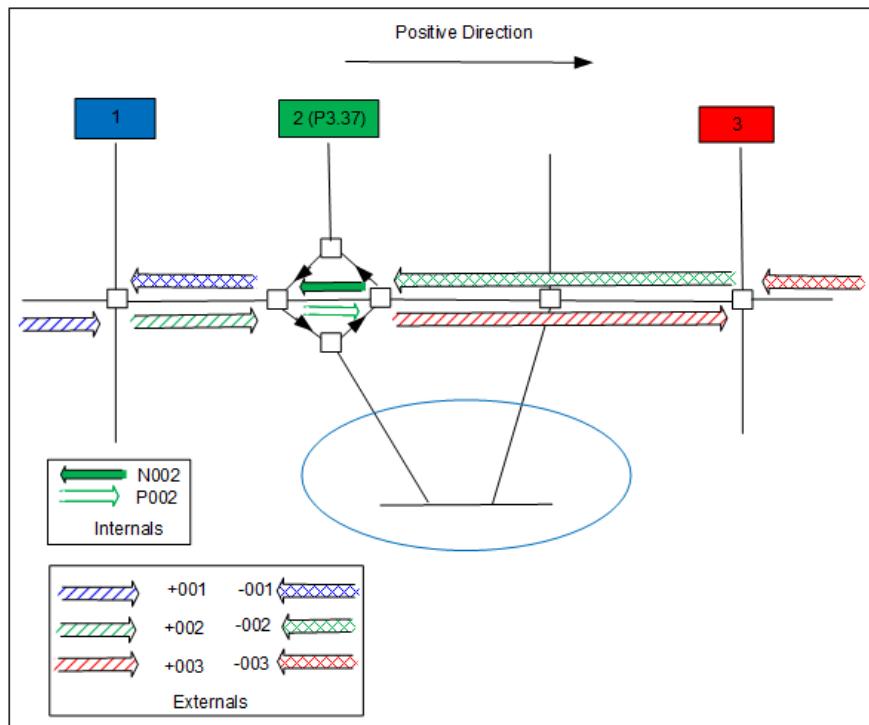
RDS-TMC

H.9 Placement of Internal Codes for Specific Features

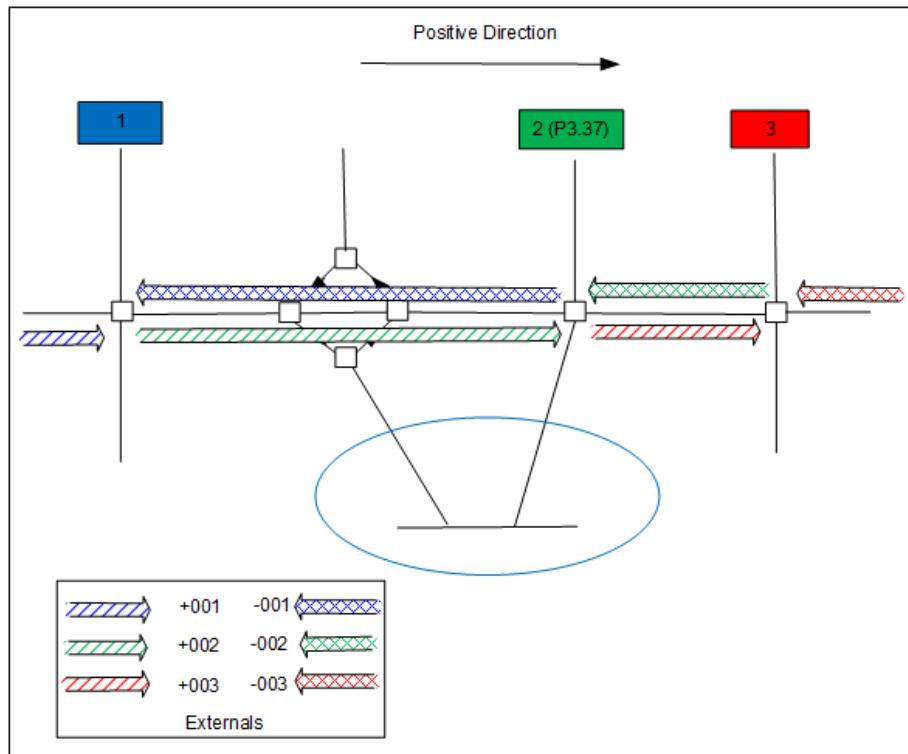
here

- In cases where the RDS-TMC table refers to a crossing road and not a junction as a P3.37, only external codes are applied. See [Figure 526](#): on page 1318.

**Figure 525:**



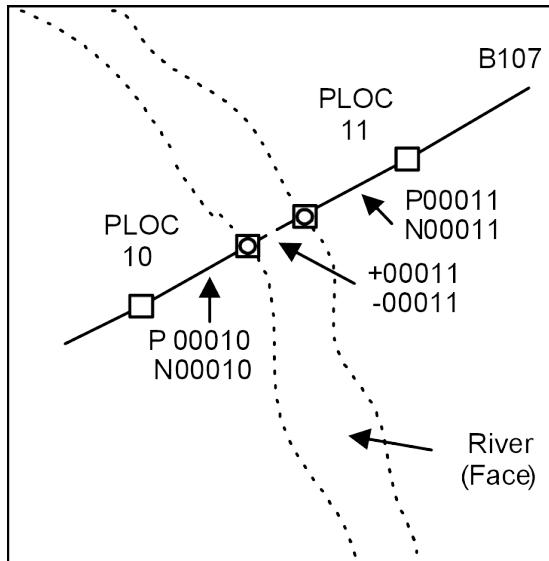
**Figure 526:**



## H.9.5 Ferry Routes

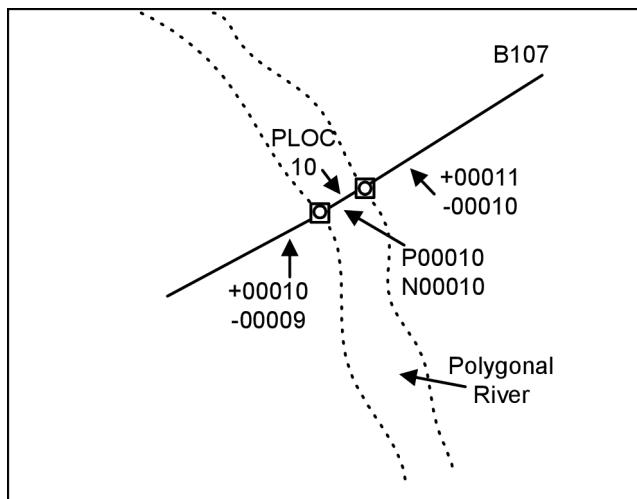
Ferry Connections are treated the same as links, both internal and external codes are applied to them. The internal codes are placed on the link(s) crossing the water feature. See [Figure 527:](#) on page 1319.

**Figure 527:**



In [Figure 528:](#) on page 1319, the internal codes are applied to the link crossing the polygonal river, as there is only one PLOC.

**Figure 528:**



## H.9.6 Rest Area

### Rules

- Internal codes are applied to named rest areas as shown in [Figure 529:](#) on page 1320 and [Figure 530:](#) on page 1320.

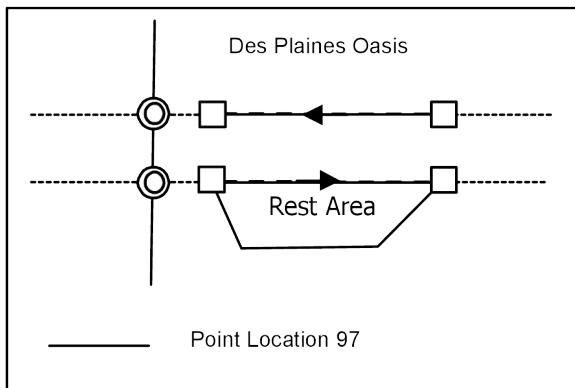
## Reference Guide

RDS-TMC

H.9 Placement of Internal Codes for Specific Features

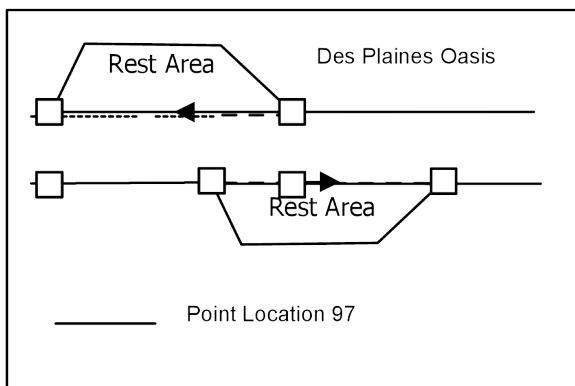
- If a Point Location exists for a rest area along only one side of a multiply digitised road, opposing nodes are created on the opposite side of the road and the appropriate internal code is applied to those links, as shown in [Figure 529](#): on page 1320.

**Figure 529:**



- If the rest area exists on both sides of the multiply digitised road, the internal codes are placed on the links interior to the rest area on each side. See [Figure 530](#): on page 1320.

**Figure 530:**



## H.9.7 River

### Rules

# Reference Guide

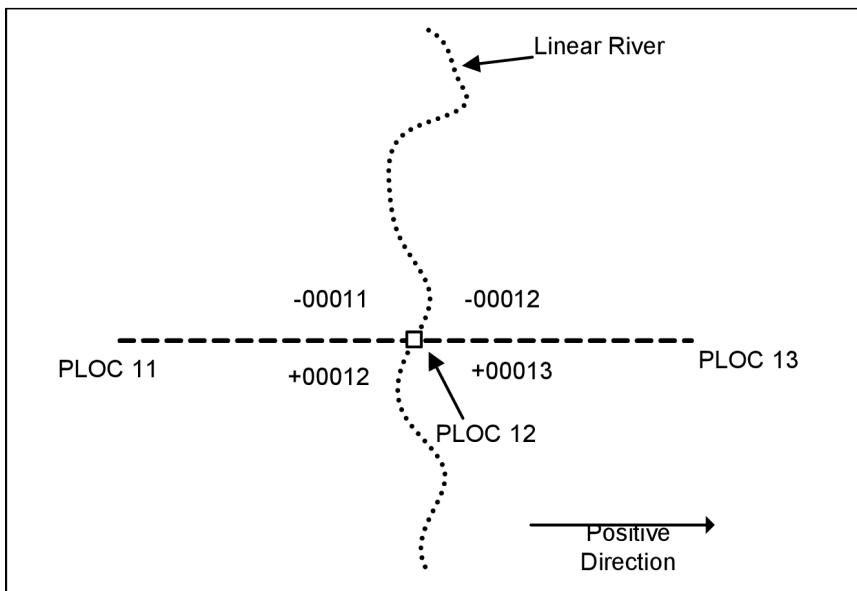
RDS-TMC

H.9 Placement of Internal Codes for Specific Features

here

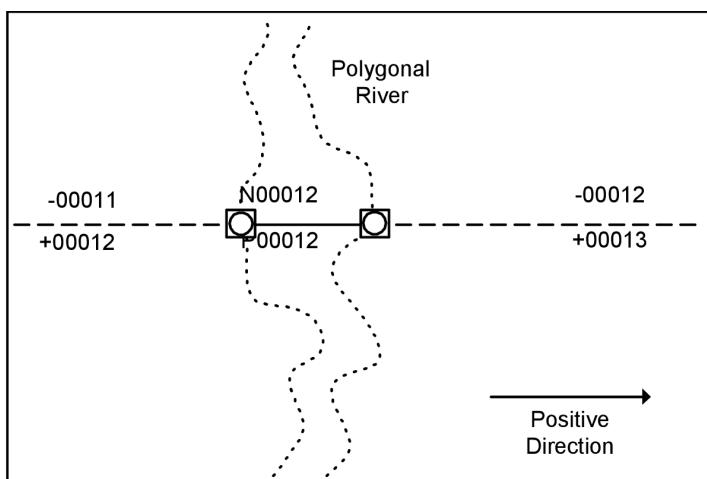
- Where a singly digitised road crosses a singly digitised river, internal codes are not required. If the nodes exist internals are applied. See [Figure 531:](#) on page 1321.

**Figure 531:**



- Where a road (multi-dig or bidirectional) crosses a polygonal river (or lake) internal codes are placed on the small link as indicated in [Figure 532:](#) on page 1321.

**Figure 532:**



## H.9.8 Roundabout

### Rules

# Reference Guide

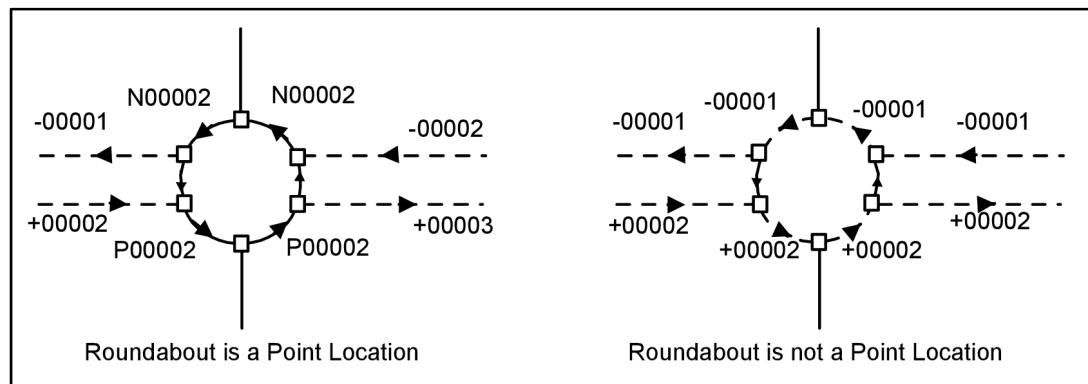
RDS-TMC

H.9 Placement of Internal Codes for Specific Features

here

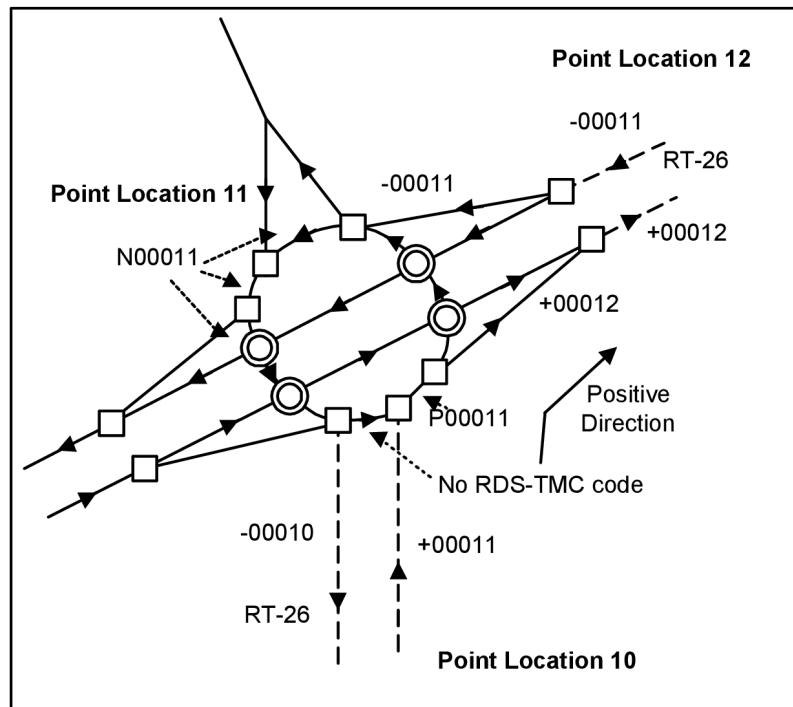
- Only the positive and negative internal codes are coded along the 'outside' links of the roundabout. See [Figure 533](#): on page 1322.

**Figure 533:**



- In [Figure 534](#): on page 1322 the roundabout is a Point Location and the Linear Path continues from the south to the north-east. The positive and negative internal codes are applied to the roundabout following the driving path. The internal codes are applied to the ramps.

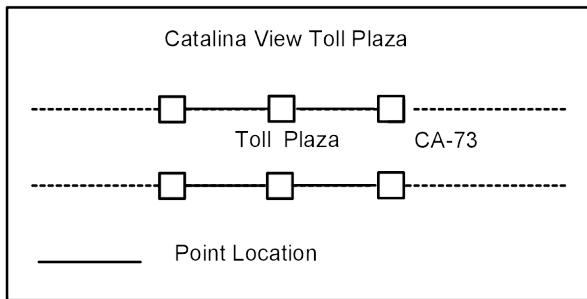
**Figure 534:**



## H.9.9 Toll Booth

### Rules

- Internal codes are applied to Toll Booth areas as shown in [Figure 535](#): on page 1323.

**Figure 535:**

## H.10 RDS-TMC Link Road

### Definition

A Link Road is a uni-directional connection between two different motorways. A Link Road Point is a point referring to a link road.

① **Note:**

Depending on the traffic table, there can also be Link Roads and Link Road Points identified for bidirectional ramps or manoeuvre links in Complex Intersections.

### Coding

L7.0 - Link Road

P4.0 - Link Road Point

### Rules

- *Link Road Points* only consist of a Positive Internal Code. Negative Internal, Positive External, and Negative External codes do not exist.
- The Positive Internal code for a *Link Road Point* are added to the already existing RDS-TMC codes.
- Positive Internal codes for a *Link Road Point* are not part of a chain and therefore, the negative and positive offsets do not exist.
- See [Figure 536:](#) on page 1324 for a reality example with all Link Road Points. See [Figure 537:](#) on page 1325 for the coding representation in the database.

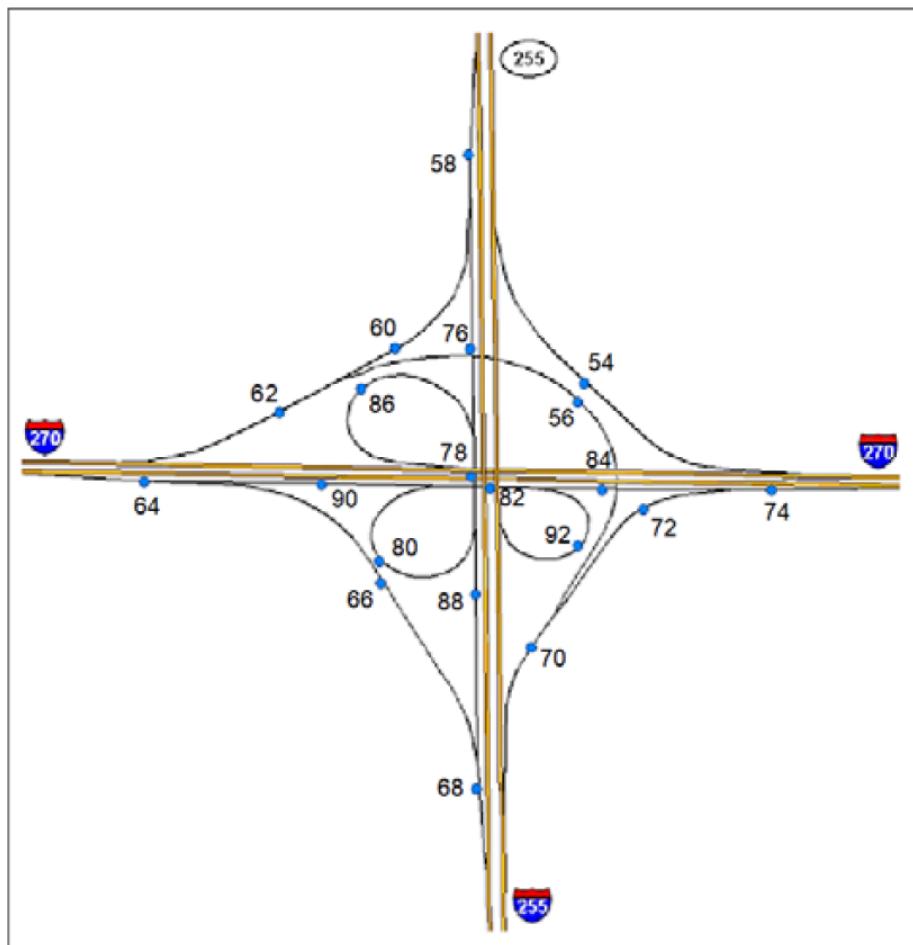
# Reference Guide

RDS-TMC

H.10 RDS-TMC Link Road

here

Figure 536:

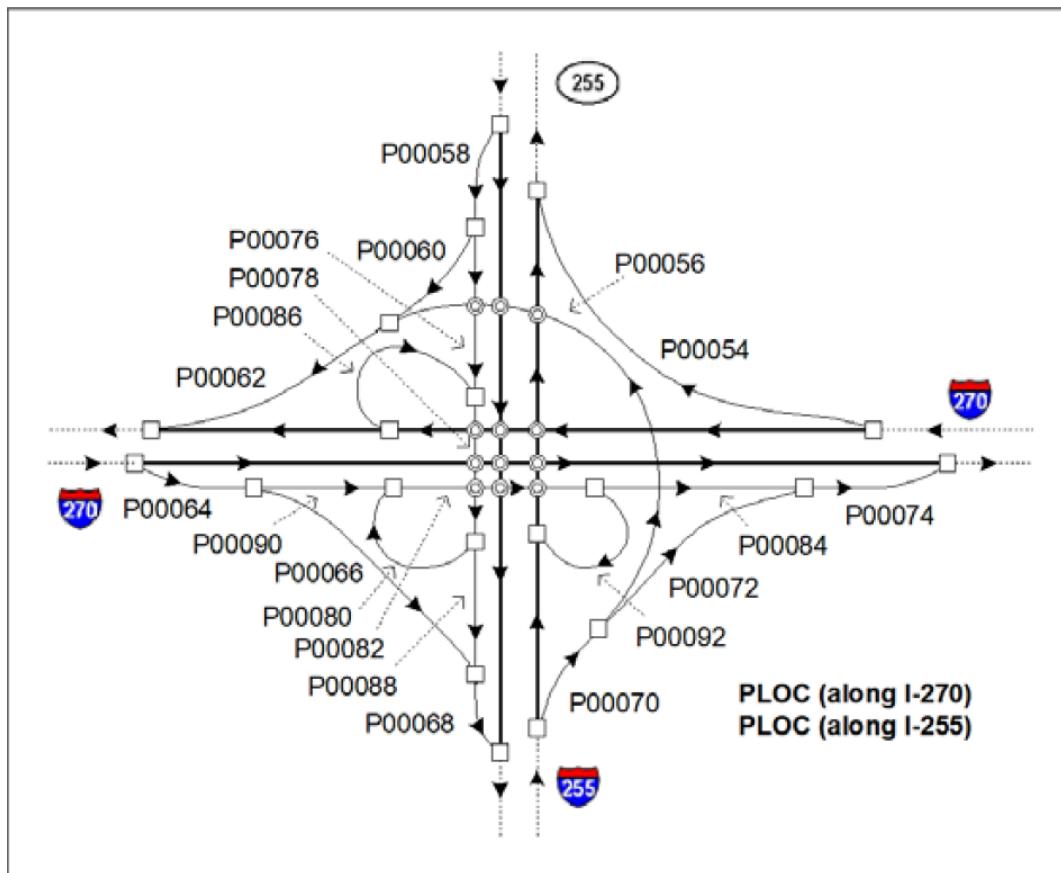


## Reference Guide

RDS-TMC

H.11 RDS-TMC for POIs

Figure 537:



## H.11 RDS-TMC for POIs

## H.12 Parking Lot/Garage POI

### Values

P5.1 - Parking Garage Underground

P5.2 - Parking Lot

P5.3 - Parking Garage

P5.4 - Carpool Point

P5.5 - Park and Ride

P5.6 - Parking on Rest Area

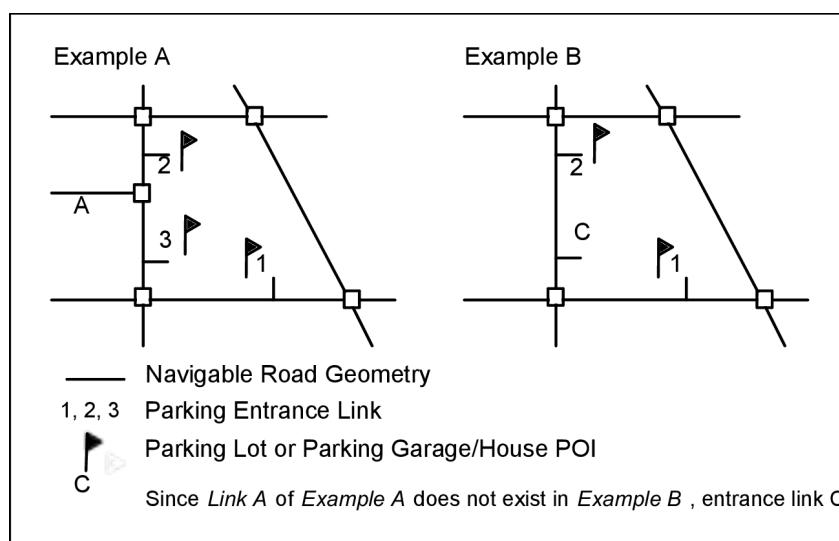
P5.7 - Parking to Camp

P5.8 - Motorway Service Area

## Rules

- An entrance link is required for Parking Lots and Parking Garages with Point locations.
- Note:**  
Additional links are not added for exits.
- The entrance links are coded with the following:
  - Valid Unnamed
  - Direction of Travel =B
  - Speed Category = 7
  - Functional Class =5Functional Road Class = 4
  - POI Access = Y
  - Access characteristics and Conditions (e.g., Access Restrictions) are the same as those of the road it connects to.
  - With a Parking Lot or Parking Garage POI
- Point locations referring to Parking Lot and Parking Garages are:
  - Added with Positive Internal codes only (e.g., RDS1755381T and RDS1755381F).
  - Not part of a RDS-TMC chain
- The Internal codes are added on the entrance link and not on the main road.
- When multiple entrances exist on different streets, all entrances require an entrance link, Positive Internal codes, and a Parking Lot/Parking Garage POI. The same Internal codes are used for all entrances. See [Figure 538: on page 1326, Example A](#).
- When multiple entrances exist on the same street, only one entrance link is added. See [Figure 538: on page 1326, Example B](#).
- The Parking Lot or Parking Garage POI is moved to the entrance link. New POIs are added for possible additional entrances. See [Figure 538: on page 1326](#).

**Figure 538:**



# Reference Guide

RDS-TMC

H.12 Parking Lot/Garage POI

here

- The entrance attached to the highest rdf, fgdb, navstreetsFunctional Road Class road is chosen as the Parent POI. A Physical Parent/Child relationship(s) are added between all the other entrance POIs.

 **Note:**

If all entrances are attached to roads with the same rdf, fgdb, navstreetsFunctional Road Class, any entrance can be chosen as the Parent POI.

## H.12.1 RDS-TMC for Other Categories

### Value

P6.0

### Rules

- Included: Only in Germany until further notice.
- PLOCs for POIs are not part of any RDS-TMC chain and therefore, consist of Positive Internal Code(s) only. Positive External, Negative Internal, and Negative External codes do not exist.
- The RDS-TMC table can contain PLOCs for the facilities listed in the table below.

Facility	
Airport	Retail Park
Bridge	Square
Exhibition/Convention Centre	Stadium
Fair <sup>200</sup>	Station
Ferry	Theme Park
Harbour <sup>200</sup>	Tourist Attraction
Place Name <sup>200</sup>	Tunnel

- When the PLOC is located on a bidirectional link, both the To and From Positive Internal Codes are added, e.g., RDS01P17553T and RDS01P17553F. See Example 1 in [Figure 539](#): on page 1328 for an example.
- When the PLOC is located on a one-way link, the Positive Internal Code without To and From information are added, e.g., RDS01P17553.
- The Positive Internal Code are not coded against the Direction of Travel.
- See below for detailed specifications on where the PLOC is added for each facility type.

### Airport

### Rules

<sup>200</sup> Modelled but not yet populated.

# Reference Guide

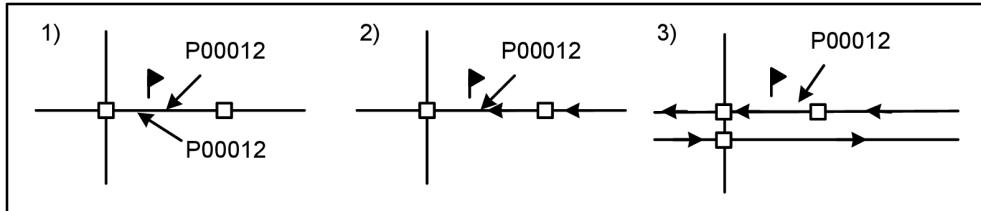
RDS-TMC

H.12 Parking Lot/Garage POI

here

- The Positive Internal Code(s) is/are located on the same link as the Airport POI. See [Figure 539:](#) on page 1328.

**Figure 539:**

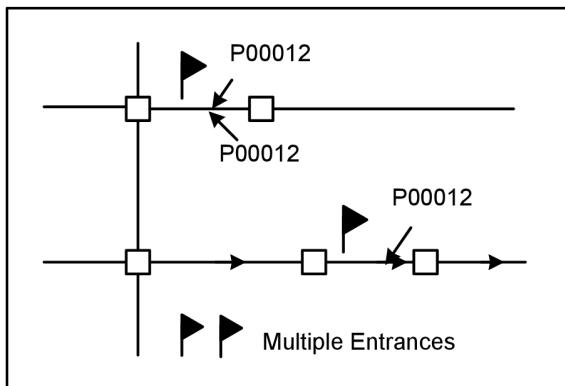


- If the Airport has multiple entrances, the Positive Internal Code(s) is/are added for all entrances that have an Airport POI. See [Figure 540:](#) on page 1328.

**Note:**

Additional Airport POIs are not added.

**Figure 540:**



## Bridge

### Rules

- The Positive Internal Code(s) is/are added on all links coded with Bridge = Y.
- A link is created for PLOCs of bridges smaller than 200 metres. Nodes are added where needed. The Positive Internal Code(s) is/are added as indicated in [Figure 541:](#) on page 1329.

**Note:**

# Reference Guide

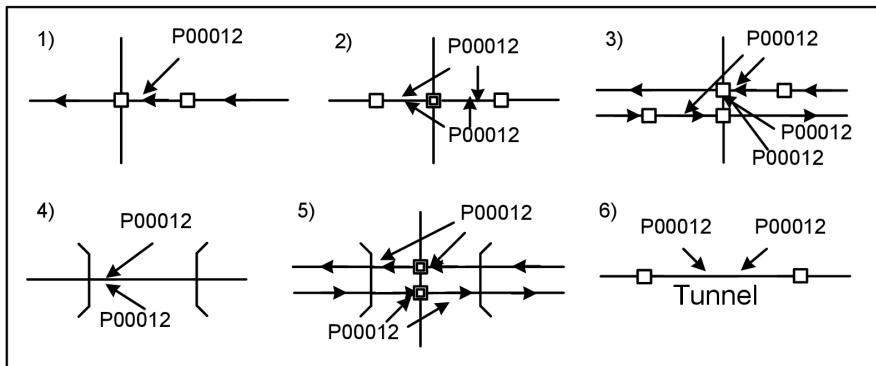
RDS-TMC

H.12 Parking Lot/Garage POI

here

The Bridge attribute is published for these links.

**Figure 541:**



## Exhibition/Convention Centre

### Rules

- The Positive Internal Code(s) is/are located on the same link as the Convention/Exhibition POI. See [Figure 539: on page 1328](#).
- If the Exhibition/Convention Centre has multiple entrances, the Positive Internal Code(s) are added for all entrances that have a Convention/Exhibition Centre POI. See [Figure 540: on page 1328](#).

① **Note:**

Additional Convention/Exhibition Centre POIs are not added.

## Fair

### Rules

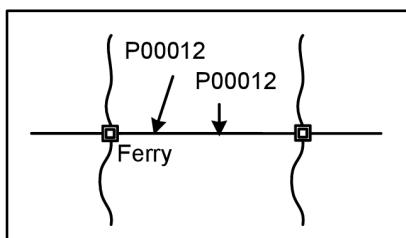
- Positive Internal Code(s) for Fair are not coded.

## Ferry

### Rules

- The Positive Internal Codes are added on links with Boat Ferry = Y. See [Figure 542: on page 1329](#).

**Figure 542:**



- The PLOCs for Ferries are only defined for small National ferries.

## Harbour

### Rules

# Reference Guide

RDS-TMC

H.12 Parking Lot/Garage POI

- Until further notice, Positive Internal Code(s) for Harbours are not coded.

## Named Place

### Rules

- Until further notice, Positive Internal Code(s) for Named Places are not coded.

## Retail Park

### Rules

- The Positive Internal Code(s) for Retail Park are located on the same link as the Shopping Centre POI(s). See [Figure 539:](#) on page 1328.
- If the Shopping Centre has multiple entrances, the Positive Internal Code(s) are added for all entrances that have a Shopping POI. See [Figure 540:](#) on page 1328.

**Note:**

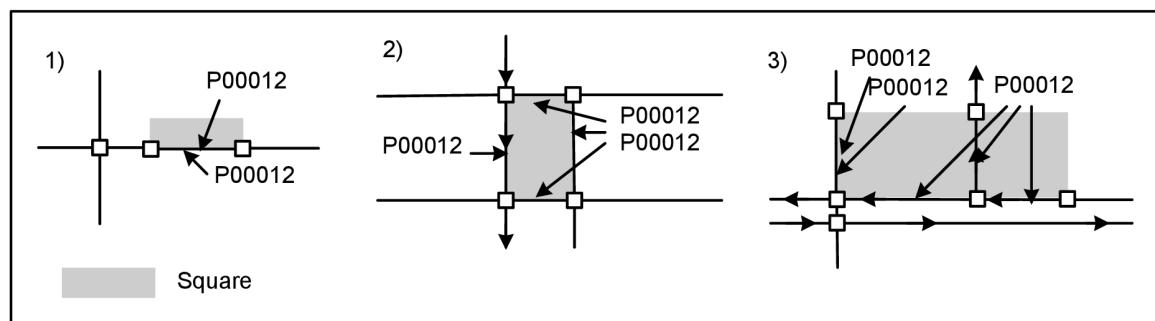
Additional Shopping POIs are not added.

## Square

### Rules

- All links around or inside a Square is coded with the Positive Internal Code(s). See [Figure 543:](#) on page 1330.

**Figure 543:**



## Stadium

### Rules

- The Positive Internal Code(s) for Stadium are coded on the same link as the Sports Centre or Sports Complex POI. See [Figure 539:](#) on page 1328.
- An entrance link is not added.

## Station

### Rules

- The Positive Internal Code(s) for Station are added on the same link as the Train Station POI. See [Figure 539:](#) on page 1328.

## Theme Park

### Rules

- The Positive Internal Code(s) are located on the same link as the Amusement Park POI. See [Figure 539:](#) on page 1328.
- If the Amusement Park has multiple entrances, the Positive Internal Code are added for all entrances that have an Amusement Park POI. See [Figure 540:](#) on page 1328.

① **Note:**

Additional Amusement Park POIs are not added.

## Tourist Attraction

### Rules

- The Positive Internal Code(s) for Tourist Attraction are added on the same link as the Tourist Attraction POI. See [Figure 539:](#) on page 1328.

## Tunnel

### Rules

- The Positive Internal Code for Tunnel is added on all links coded with Tunnel = Y. See [Figure 541:](#) on page 1329.
- A link is created for PLOCs of tunnels smaller than 200 metres. Nodes are added where needed. The Positive Internal Code(s) are added as indicated in [Figure 541:](#) on page 1329.

① **Note:**

The Tunnel = Y attribute is added to these links.

# Appendix I

## NAVSTREETS Supplemental Products

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**Topics:**

- *Introduction*
- *Digital Terrain Model (DTM)*
- *Enhanced Elevation Contours*
- *Motorway Junction Objects Overview*
- *Non-Latin-1 Name Representation*
- *Voice Phonetic Transcriptions*
- *Here South Korea NAVSTREETS LAT*
- *Other Available Documents*

## I.1 Introduction

---

There are other products that are delivered in other formats. They are used to either supplement or enhance other products such as the core extracts, or as standalone information. They can range from LAT supplements, imageries, to XML and miscellaneous files.

The following NAVSTREETS Supplemental Products are described in this chapter:

- Digital Terrain Model
- Enhanced Elevation Contours
- Motorway Junction Objects
- Voice Phonetic Transcriptions (including Transcriptions for POIs)
- Voice Phonetic Transcriptions for Traffic
- Non-Latin-1 Name Representation
- HERE South Korea NAVSTREETS LAT

## I.2 Digital Terrain Model (DTM)

---

This file is separate from the core map data. It is used to enhance map display by enabling 3-dimensional bird view perspective and/or hill shading.

① **Note:** This file is not linked to the core map data.

### Definition

DTM is a representation of height data in raster format.

### File Format

External data

Regularly spaced raster GeoTIFF (16-bit)

WGS84, decimal degree

### Usage

DTM can be used to enhance map display by enabling a 3-dimensional bird view perspective and/or hill shading.

### Specification

- Worldwide coverage is <60°N and <56°S with 90 m spatial resolution. Latitude/ longitude grid. The absolute vertical accuracy of the elevation data is 16 meters (at 90% confidence).
- 1000 m Grid for >60°N and >56°S (polar regions)
- U.S. coverage is 1 arc second (30 meter x 30 meter grid cells).
- The rest of world coverage is 3 arc second (90 meter x 90 meter grid cells).
- Void elimination was done.

## Reference Guide

NAVSTREETS Supplemental Products

I.3 Enhanced Elevation Contours

- The DTM data is delivered as a regularly spaced GRID.

## I.3 Enhanced Elevation Contours

This product spans worldwide and contains elevation contour lines and elevation polygons. This product is only available in .shp files.

### Naming

- For lines, shapes are named by the minimum lat long value (left bottom corner) of the cell.
- For polygons, shapes are named by the minimum lat long value (left bottom corner) of the cell + elevation level.

[Figure 544:](#) on page 1334 compares maps with and without Enhanced Elevation Contours.

**Figure 544:**



## I.4 Motorway Junction Objects Overview

### Definition

A Motorway Junction Object is a 3D model of all crossings in an intersection, such as where a road crosses over or under another road and a connection exists between the roads via one or more ramps, frontage roads, etc. Locations such as motorway bifurcations will also be represented.

In NAVSTREETS the Motorway Junction Object representation comprises two main elements

- A Motorway Junction Object Aggregated (Complex) Feature (MJO-CF) This element represents the collection of features that form the basis of the MJO-COLLADA and that must be used for positioning the MJO-COLLADA and to map features to the underlying map.

# Reference Guide

NAVSTREETS Supplemental Products

I.4 Motorway Junction Objects Overview

- A 3D model constructed out of the collection of features that make up the MJO-CF delivered as auxiliary COLLADA files (MJO-COLLADA).

The MJO-COLLADA file is tied to the MJO-CF using the Aggregated Feature File Association Model.

## Related Layers

Aggregated Feature (AggrFeature)

Aggregated Feature Component (AggrFeatComp)

Aggregated Feature File Association (AggrFeatFile)

## External Data

Auxiliary files (delivered as external content) referenced from NAVSTREETS, via the Aggregated Feature File Association (AggrFeatFile) layer.

## Usage

The MJO will provide a 3D model of a complex intersection that can be used to provide drivers a real 3D display of upcoming complex locations.

## I.4.1 Motorway Junction Object Aggregated (Complex) Feature (MJO-CF)

### Definition

The Motorway Junction Object Aggregated (Complex) Feature (MJO-CF) represents the collection of features that are used to create the MJO-COLLADA.

### Related Layers

Aggregated Feature (AggrFeature)

Aggregated Feature Component (AggrFeatComp)

Aggregated Feature File Association (AggrFeatFile)

### Usage

A MJO-CF ties the MJO-COLLADA 3D representation of a junction to the corresponding road geometry so that an application is able to display the MJO-COLLADA graphics for a junction prior to the desired manoeuvre.

The MJO-CF enables the user to identify the collection of features that are part of the associated MJO-COLLADA.

### Specification

The MJO-CF contains all features of a Junction that form the basis for the creation of the MJO-COLLADA.

### Inclusion:

A MJO-CF is published in the following situations:

# Reference Guide

NAVSTREETS Supplemental Products

I.4 Motorway Junction Objects Overview

- A MJO-CF is published for locations along Functional Class (1 and 2) roads where a junction exists with one or more roads that are Functional Class (1 through 5).  
A MFO-CF is published for locations along Functional Class (1 and 2) roads where one or more Special Explication conditions are present.
- For all locations where a Junction View condition is published, a MJO-CF is also published. The MJO-CF may cover more than one Junction View condition.
- For all cases where a MJO-CF is published and the MJO-CF contains decision points, one or more Junction View conditions are also published. The node in a Junction View condition explicitly defines the location of a decision point in the MJO-CF.
- Non-navigable links are not included in the MJO-CF.

## Rules

Overall, the MJO-CF will include all of the links that reflect what the driver perceives as important when traversing through a motorway/highway junction or bifurcation.

- All of the links that form the Intersection at the junction or bifurcation should be included in the MJO-CF.
- All of the links that participate in any Junction View condition(s) at the junction or bifurcation should be included in the MJO-CF.

# Reference Guide

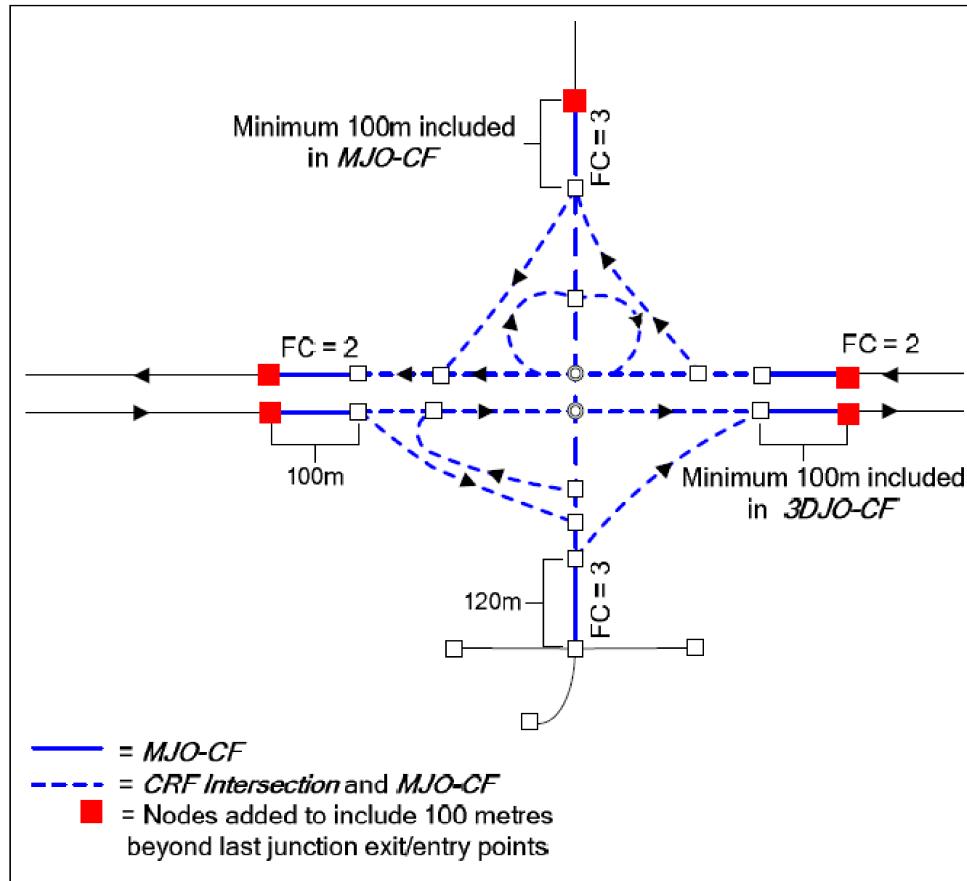
NAVSTREETS Supplemental Products

I.4 Motorway Junction Objects Overview

here

- All links are included that are Functional Class (1 through 5) up to a minimum of 100 metres beyond the furthest exit or entry point of the intersection. See [Figure 545: Minimum 100 metre distance included](#) on page 1337.

**Figure 545: Minimum 100 metre distance included**



- Additional geometry is included when significant for display and driver orientation. The inclusion of this geometry enables the driver to see additional road geometry in the 3D object when travelling into, out of, or through the junction/bifurcation. All navigable links that exist within the extent of the junction along the motorway/highway are included.

For example, the rest area geometry within the ramp system or petrol station geometry along the ramp system that is only accessible from the ramps is included if it is important for driver orientation. Also,

# Reference Guide

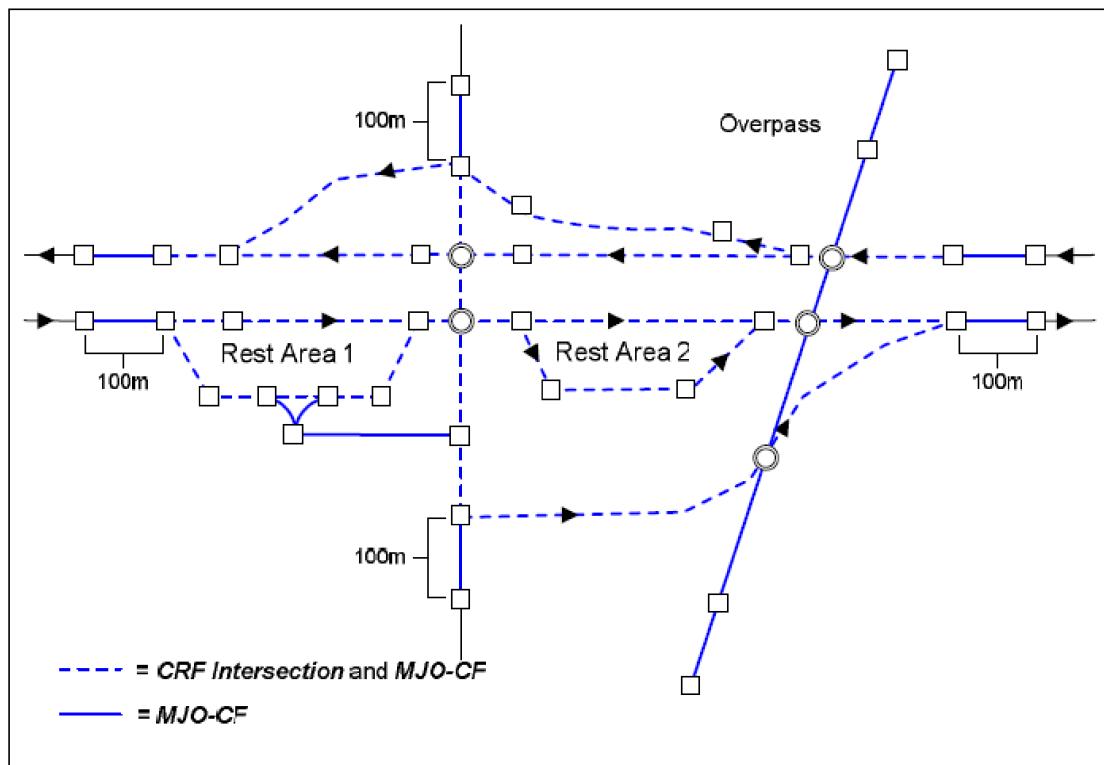
NAVSTREETS Supplemental Products

I.4 Motorway Junction Objects Overview

here

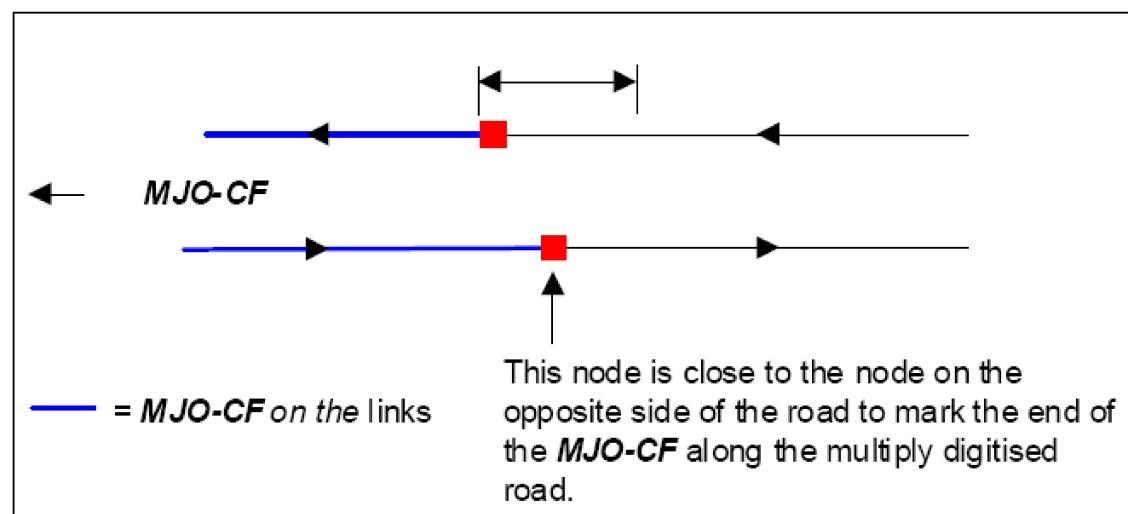
all overpassing or underpassing roads that are within the spatial extent of the junction/bifurcation are included.

**Figure 546: Possible inclusion of extra geometry for display and driver orientation**



- Nodes which end the MJO-CF are always close to each other on each side of a multiply digitised road. This creates an equally visible display of both sides of the road in the MJO-CF.

**Figure 547: Opposed nodes**



- MJO-CF Objects do not overlap, i.e., a link cannot be part of more than one MJO-CF.

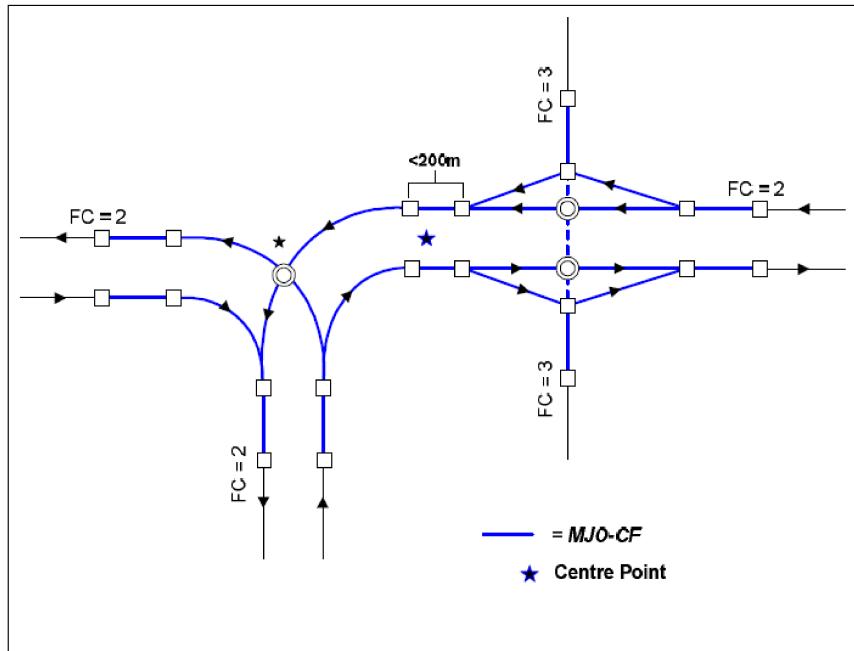
# Reference Guide

NAVSTREETS Supplemental Products

I.4 Motorway Junction Objects Overview

- When two or more motorway/highway junctions or bifurcations are close together, i.e., there is less than 200 metres of Functional Class (1 and 2) links that exist between the nearest exit or entry points of each junction, one MJO-CF is published which includes the multiple junctions. Additional Functional Class (1 through 5) links are included to a minimum guideline of 100 metres beyond the furthest exit or entry points of the junction.

**Figure 548: Multiple junctions combined in on MJO-CF**



- Two MJO-CF objects cannot spatially overlap. If they do, they will be combined and published as one MJO-CF.

# Reference Guide

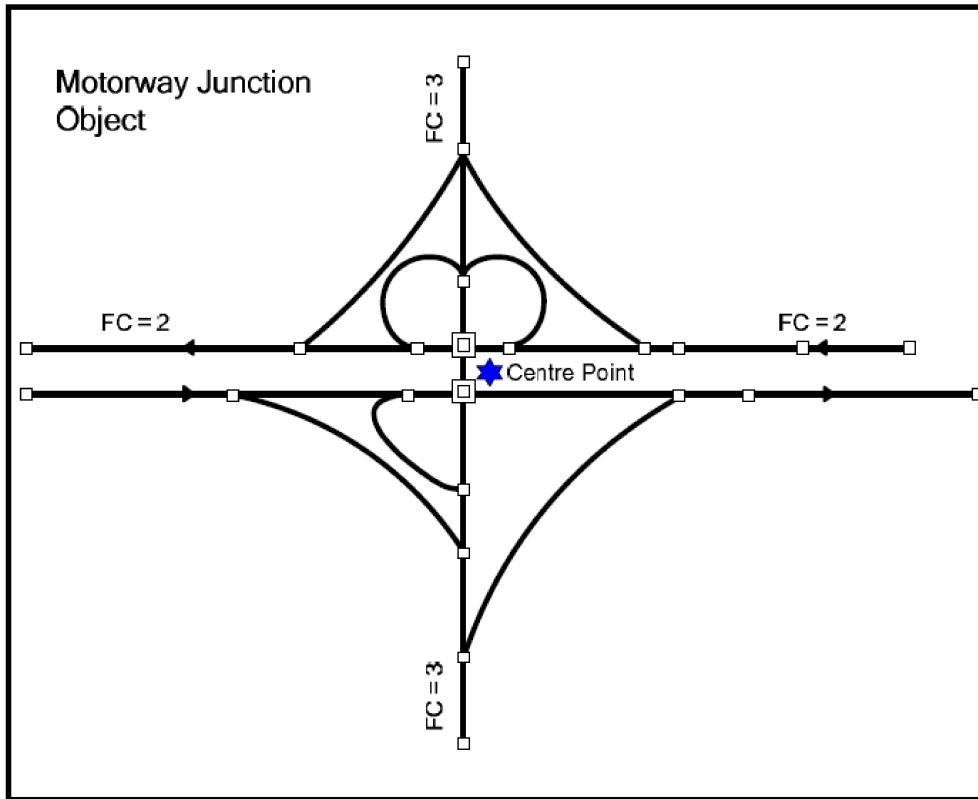
NAVSTREETS Supplemental Products

I.4 Motorway Junction Objects Overview

here

- The MJO-CF includes the centre point that defines the centre coordinates of the MJO-COLLADA. The location corresponds to the real world location of the origin of the COLLADA File. This information is essential for positioning the MJO-COLLADA on the right location in the Map.

Figure 549: Centre point in the MJO-CF



- For the representation of the Location Reference a new attribute is added to the Aggregated Feature (AggrFeature) Layer.
- MJO-CF objects have a permanent ID.

## I.4.2 Motorway Junction Objects COLLADA (MJO-COLLADA)

### Definition

The Motorway Junction Object COLLADA (MJO-COLLADA) is a 3D model constructed out of the collection of features that make up the MJO-CF, delivered as auxiliary COLLADA files.

### Usage

Using MJO-COLLADA it is possible to provide the driver with real time guiding assistance in a visual form, based on reference and orientation principles.

### Specification

The MJO-COLLADA objects are given in a 3D Cartesian Coordinate System whose origin is placed at the geolocation of the MJO-CF reference coordinates.

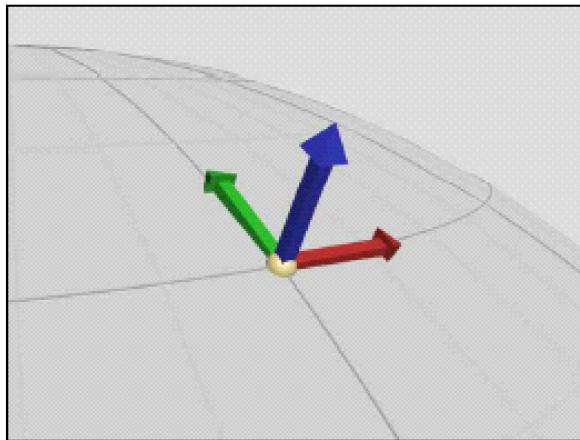
# Reference Guide

NAVSTREETS Supplemental Products

I.4 Motorway Junction Objects Overview

The X-axis points eastward along the parallel, the Y-axis points northward along the meridian, and the Z-axis points up (away from the Earth's surface); See the figure below.

**Figure 550: (red: X-axis, green: Y-axis, blue: Z-axis)**



All geolocations are mapped using a planar mapping, i.e., all locations at the same height are mapped to the same Z value.

The basis for the MJO-COLLADA are the features as defined in the MJO-CF. To enable efficient processing, the MJO-COLLADA also includes the identification of:

- The exiting and entering links with their corresponding direction of travel information.

# Reference Guide

NAVSTREETS Supplemental Products

I.5 Non-Latin-1 Name Representation

here

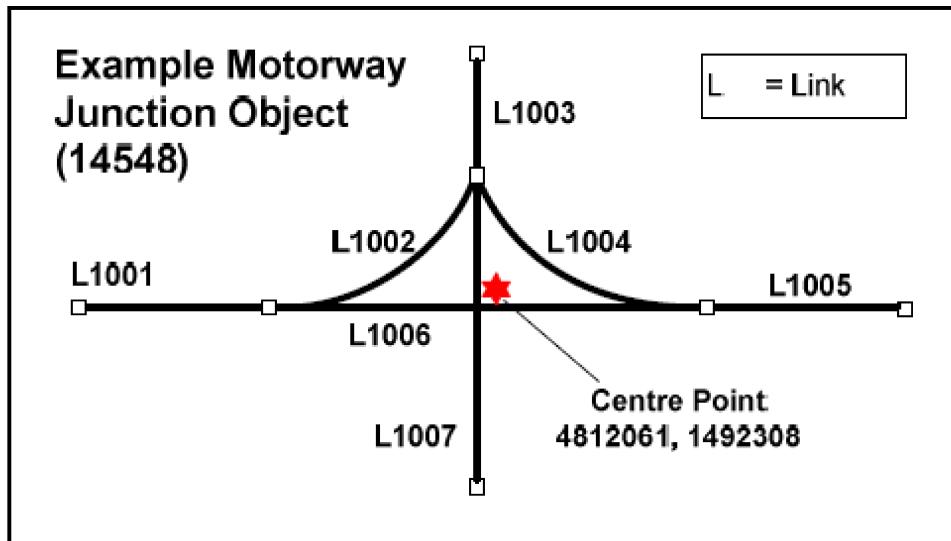
- The boundary nodes, to give explicit information about beginning and end of the COLLADA Model in terms of Database features.

In addition to the MJO-COLLADA file(s) that are specific in the Aggregated Feature File Association (AggrFeatFile) Layer, there will be an extra COLLADA (.DAE) file that contains auxiliary spline curve data and which is not referenced in NAVSTREETS.

For a detailed description of the HERE-specific details of the MJO-COLLADA and the auxiliary spline curve data, please refer to the supporting document “Motorway Junction Objects COLLADA Specification.”

See [Figure 551](#): on page 1342 below for an example.

**Figure 551:**



## I.5 Non-Latin-1 Name Representation

### I.5.1 Introduction

NAVSTREETS supports Unicode. However, as a limited term additional support, a companion External Unicode “look-aside” file is created per database Sub-Region to publish names requiring non-Latin-1 characters represented in Unicode (hereafter referred to as “Unicode” characters). The companion External Unicode look-aside file is generated specifically for NAVSTREETS and is included on the same media as the file.

NAVSTREETS Unicode does not yet support all fields in the DNDC database.

#### Definition of Terms

- Transliteration - To represent (letters or words) using corresponding characters from a different alphabet.
  - In data, transliteration is used to refer to names generated from non-Latin-1 names.

# Reference Guide

NAVSTREETS Supplemental Products

I.5 Non-Latin-1 Name Representation

here

- Transcription - To represent (letters or words) using corresponding characters from a different alphabet, that most closely represent the pronunciation in the original language.
  - In HERE Map Content, transcription is used to refer to names that appear in reality in Latin-1 characters in countries that use a different character set by default.
- Latin-1 - Short-hand name referring to the character set using standard Latin symbols. This is also called ISO-8859-1. All characters published within NAVSTREETS are Latin-1.
- Unicode - Officially this is an industry standard designed to allow text and symbols from all of the writing systems of the world to be consistently represented and manipulated by computers. For the purpose of this document, “unicode” refers to characters that do not exist in the Latin-1 character set.

## References

The Unicode Consortium is a non profit organization that maintains the Unicode standard. Consult the Consortium website for more information <http://www.unicode.org>. HERE Map Content Unicode characters are compatible with versions 3.0 and higher of the Unicode standard. The current version, as of May 2004, is 4.0.1.

## I.5.2 Supported Languages

HERE supports the languages in their original Unicode representation.

Language Code	Language Description
ARA	Arabic
BEL	Belarusian
BOS	Bosnian
BUL	Bulgarian
CZE	Czech
CHT	Traditional Chinese
SCR	Croatian
EST	Estonian
GRE	Greek
HUN	Hungarian
LAV	Latvian
LIT	Lithuanian
MAC	Macedonian
MNE	Montenegrin
MOL	Moldovan

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Language Code	Language Description
POL	Polish
RUM	Romanian
RUS	Russian
SRB	Serbian
SLO	Slovak
SLV	Slovenian
THA	Thai
TUR	Turkish
UKR	Ukrainian

See Country Profiles database for official language(s) per country.

## Use of Transcriptions in NAVSTREETS

- The following Language Codes are created by HERE to represent Latin-1 characters that appear in reality, in countries where Unicode also exists.

Language Code	Language Description	Countries Used
BET	Belarusian Transcribed	Belarus
BUT	Bulgarian Transcribed	Bulgaria
GET	Georgian Transcribed	Georgia
GRT	Greek Transcribed	Greece
KAT	Kazakh Transcribed	Kazakhstan
MAT	Macedonian Transcribed	Macedonia
RST	Russian Transcribed	Russia
SCT	Serbian Transcribed	Serbia
TKT	Turkish Transcribed	Turkey
UKT	Ukrainian Transcribed	Ukraine

- There is no one-to-one relationship between names with these transcribed language codes, and names with the corresponding 3-character ISO language code. For example, there is no RST (Russian Transcribed) name for every RUS (Russian) name.
- Names with these language codes are published in the NAVSTREETS extract, independent of the extract variation. They are not published in the Unicode look-aside file.

## Use of Transliterations in NAVSTREETS

- Names with a “Transliterated” Language Code (e.g., BEX, BUX, etc.) represent names generated by HERE from the original non-Latin-1 name. These names are created by transliterating the original Cyrillic names into Latin-1 characters. See [Non-Latin Names](#) on page 1138..
- Note:** The following table contains transliterations for both uppercase and lowercase characters NAVSTREETS publishes names (both the native and the transliterated name) in all uppercase however.
- Names with “Transliterated” Language Codes are usable in their published form for display and destination input. The following table contains examples of “Transliterated” Language Codes for the corresponding countries. See the *Country Profiles* document for the complete list.

Language Code	Language Description	Countries Used
BEX	Belarusian Transliteration	Belarus
BOX	Bosnian Transliteration	Bosnia and Herzegovina
BUX	Bulgarian Transliteration	Bulgaria
SRX	Croatian Transliteration	Croatia
CZX	Czech Transliteration	Czechia
ESX	Estonian Transliteration	Estonia
GRX	Greek Transliteration	Greece
HUX	Hungarian Transliteration	Hungary

- There is a one-to-one relationship between names with these Language Codes, and names with the corresponding 3-character ISO Language Code. For example, there is a Transliterated name for every BEL (Belarusian), BUL (Bulgarian), MAC (Macedonian), GRE (Greek), RUS (Russian), SRB (Serbian), and UKR (Ukrainian) name.
- Names with these Language Codes are only published in the NAVSTREETS extract variation B. They are always published in the Unicode look-aside file, alongside the Unicode equivalent names.

## I.5.3 NAVSTREETS Extract Variations

There are three delivery options for NAVSTREETS extracts:

- NAVSTREETS with Latin-1 names in the Text fields which are intended to be used without Unicode look-aside files. For this variation, the corresponding “transliterated” Language Code is published (e.g., RUX).
- NAVSTREETS with identifiers (numerical IDs in the Text Fields) intended to be used with Unicode look-aside files. For this variation, the ISO Language Code is published (e.g., RUS).

For extracts with look-aside files, linking to the original Unicode names can be done by matching:

- The Latin-1 character strings within the look-aside file and the first NAVSTREETS variation.
- The IDs within the look-aside file and the second NAVSTREETS variation.

## I.5.4 Street Type Representation

Street Types for the languages listed in the following table are not located in the Street Type File. Instead, they are represented in the base name. For the indicated languages, Street Types are separated by brackets {}. This representation is consistent, whether the Street Types precede or follow the base name.

Languages
Arabic (ARA)
Belarusian (BEL)
Bosnian (BOS)
Bulgarian (BUL)
Czech (CZE)
Traditional Chinese (CHT)
Croatian (SCR)
Estonian (EST)
Greek (GRE)
Hungarian (HUN)
Latvian (LAV)
Lithuanian (LIT)
Macedonian (MAC)
Montenegrin (MNE)
Moldovan (MOL)
Polish (POL)
Romanian (RUM)
Russian (RUS)
Serbian (SRB)
Slovak (SLO)
Slovenian (SLV)
Thai (THA)
Turkish (TUR)
Ukrainian (UKR)

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For languages where the Street Type is attached to the Base Name, this is indicated by entering the name without a space between the Name and the bracket. Conversely, when a Street Type is unattached, this is indicated by entering the Name with a space between the Name and the bracket that encloses the Street Type, as shown in the following table.

Name	Parsing
ïÊÔÙÃÑÉÏÖ[ÉÁÑÍÉÏÖ]	Attached
ïÊÔÙÃÑÉÏÖ {ÉÁÑÍÉÏÖ}	Unattached

## I.5.5 Sign Representation

Each sign record is published with one ID number in the look-aside file. When a sign record has multiple destinations and/or multiple sign entries within a destination, each sign text and sign route ID is published as a separate record in the look-aside file. These records are assigned the ID relating to the sign record, plus a sequentially assigned sequence number (separated with a hyphen). The sequence numbering starts from 1 thru n for each sign record.

For example, if the sign record has ID 99, and two destinations, the sign text relating to destination 1 is assigned ID 99-1, and the sign text relating to destination 2 is assigned ID 99-2.

The sign entries are published in a prescribed order; destination 1 before destination 2, and sign text/route ID 1 before sign text/route ID 2.

## I.5.6 Unicode Specifications

"UTF" refers to "Unicode Transformation Format." UTF-8 and UTF-16 are two different methods using a variable number of bytes per character to reduce the amount of storage space required for Unicode text files. UTF-8 (8-bit UCS/Unicode Transformation Format) is a variable-length character encoding for Unicode. It is able to represent any character in the Unicode standard, yet the initial encoding of byte codes and character assignments for UTF-8 is backwards compatible with ASCII-7. Therefore, for strings fitting in ASCII-7, customers can convert between the UTF-8 representation without any loss of information.

## I.5.7 File Specifications

The output file is a UTF-16 tab delimited text file following the same naming conventions used for NAVSTREETS file format A file extension of ".UNI" is used.

## I.5.8 Record Specification

Each External Unicode look-aside file contains 3 record types:

- Header Record - Tab delimited record describing the contents of the file
- Data Record - Tab delimited data
- Termination Record - End of file indicator

## I.5.9 Inclusion

All attributes are provided on a data record of Type 10. At this time, HERE supports the languages listed in [Supported Languages](#) on page 1343 using “Transliterated” Language Codes.

HERE only supports text for the following fields:

Supported Field	Layer	Comments
Aggregated Feature Name	Aggregated Feature	Street Type information is included in the <i>Feature Name</i> attribute always indicated in braces {}. Feature names for junction names for landmark points are also included.
Area Name	Metadata - Administrative Area	
Zone Name	Metadata - Zone Records	
POI Name	All of the POI layers.	
Street Name	Streets Alternate Street Names and Addresses All of the POI layers.	
Sign Text	Signs	
Branch Route ID	Signs	
Toward Route ID	Signs	

Supported Reference Class	Layer	Comments
ZONETYPE	Metadata - Reference Classes	
PREFSUFF	Metadata - Reference Classes	
DIRSIGN	Metadata - Reference Classes ]	
STRTYPE	Metadata - Reference Classes	Both Official and Alternate Street Types can have transliterations.

## I.5.10 Usage

The Unicode data can be used with the database as described below.

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## NAVSTREETS Extract Variation A

The Look-Aside ID allows matching between the External Unicode look-aside file and the NAVSTREETS product. An ID exists as a placeholder in the HERE Map Content product instead of a name. When processing a supported record in the extract, the record contains an identifier that is found in the External Unicode File.

When different features share a common name (for example, *Named Place POI* and *Built-up Area*), a single ID is published in the look-aside file which is referenced multiple times in the NAVSTREETS extract.

## NAVSTREETS Extract Variation B

The *Transliterated Text* field allows matching between the External Unicode look-aside file and the NAVSTREETS product. The transliterated text will appear as a name in the extract file. When NAVSTREETS Extract Variation B is used, there is a one-to-one relationship between a Unicode name and a transliterated name.

When different features share a common name (for example, *Named Place POI* and *Built-up Area*), multiple entries are published in the look-aside file which correspond to the multiple entries in the NAVSTREETS extract.

## I.5.11 Attributes

This section describes the data from the External Unicode File. For each data element, the following is described:

- **Definition:** This describes the data in real world terms
- **Value:** The type of characters allowed
- **Specification:** This refers to the usage of the data

### Look-Aside ID

#### Definition

Look-Aside ID is the identifier used to relate a Unicode text string with the rest of the data in the HERE Map Content.

#### Value

Character, variable length (only numeric characters and the dash “-” character within the “Basic Latin” code point range as identified by the Unicode standard).

#### Specification

- The Look-Aside ID provides a unique identifier within the External Unicode File that matches the same identifier that is published within a text string field of the NAVSTREETS product. The ID appears as if it is the “name” of the feature in the DNDC, but actually the name can be found within the External Unicode File in the *UTF Text* field (described below). The Language Code used in the extract indicates that the field is Unicode.

ⓘ **Note:**

The External Unicode File Look-Aside ID does not identify which type of field is referred to from the extract. The extract should be read and used to retrieve an ID from the External Unicode look-

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aside file. (There is no possibility that two different text strings use the same ID, regardless of the type of field in the extract.)

## UTF Language Code

### Definition

The language code associated with the UTF text.

### Value

See [Supported Languages](#) on page 1343.

Character, length 3.

### Specification

- Each name receives a language code which identifies the language of the text.

## UTF Text

### Definition

UTF Text provides the Unicode supported characters.

### Value

Character, variable length. Any character within the Unicode Standard.

### Specification

The UTF Text field includes all of the text information needed for the matching field from the NAVSTREETS product. See [Inclusion](#) on page 1348.

## Latin-1 Language Code

### Definition

The language code associated with the Latin-1 text. It is also known as the Transliteration Type.

### Value

Language Code	Language Description
BEX	Belarusian Transliteration
BOX	Bosnian Transliteration
BUX	Bulgarian Transliteration
CZX	Czech Transliteration
ESX	Estonian Transliteration
GRX	Greek Transliteration
HUX	Hungarian Transliteration
LAX	Latvian Transliteration

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Language Code	Language Description
LIX	Lithuanian Transliteration
MAX	Macedonian Transliteration
MNX	Montenegrin Transliteration
MOX	Moldovan Transliteration
RMX	Romanian Transliteration
RUX	Russian Transliteration
SCX	Serbian Transliteration
SLX	Slovak Transliteration
TUX	Turkish Transliteration
UKX	Ukrainian Transliteration
ENG	English
POR	Portuguese
PYN	Pinyin

Character, length 3

## Specification

Each name receives a language code which identifies the language of the text.

## Latin-1 Text

### Definition

Representation of letters or words in the corresponding characters of another alphabet.

### Value

Character, variable length. Any character within the “Basic Latin” code point range as identified by the Unicode standard.

## Specification

For the languages listed in [Supported Languages](#) on page 1343, each name is represented as a Latin-1 character string.

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### I.5.12 Example File

Figure 552:

01	UTF-16	040503	2010	(C)NAVTEQ NORTH AMERICA, LLC	
10	1	RUS	сильный	RUX	SIL'NYJJ
10	2	RUS	мыс	RUX	MYS
10	3	RUS	святой	RUX	SVJATOJJ
10	4	RUS	источник	RUX	ISTOCHNIK
10	5	RUS	русская ёлка	RUX	RUSSKAJA JOLKA
10	6	RUS	ночь	RUX	NOCH'
10	7	RUS	шипящий	RUX	SHIPJASHHIJJ
10	8	RUS	свистящий	RUX	SVISTJASHHIJJ
10	9	RUS	заботливый	RUX	ZABOTLIVYJJ
10	10	RUS	здание	RUX	ZDANIE
10	11	RUS	цоколь	RUX	COKOL'
10	12	RUS	вьюга	RUX	V'JUGA
10	13	RUS	подъезд	RUX	POD"EZD
10	14	RUS	монитор	RUX	MONITOR
10	15	RUS	гофрированный	RUX	GOFRIROVANNYJJ
10	16	RUS	хороший	RUX	KHOROSHIJJ
10	17	RUS	тополь	RUX	TOPOL'
10	18	RUS	сигарета	RUX	SIGARETA
10	19	RUS	книжка	RUX	KNIZHKA
10	20	RUS	лампа	RUX	LAMPA
10	21	RUS	счёт	RUX	SCHJOT
10	22	RUS	яшма	RUX	JASHMA
10	23	RUS	батарейка	RUX	BATAREJJKA
10	24	RUS	кирпич	RUX	KIRPICH
10	25	RUS	электроника	RUX	E HLE KTRONIKA
99			END OF FILE 27		

## I.6 Voice Phonetic Transcriptions

### I.6.1 Overview

Voice Phonetic Transcriptions is available in look aside table (VIF/VAF) format for NAVSTREETS for certain countries/regions.

- Voice Phonetic Transcriptions data is published in the look aside tables (VIF/VAF files) format for the following names:
  - Road Names
  - Named Place and Hamlet POI Names
  - Transcriptions are provided for all Core POIs.
  - Administrative Names
  - Zone Names
  - Metadata
  - Sign Text
- Geo-Qualifier content, which is used to define different preferred phonetic spellings for names in specific geographic areas (former GEO file). This content is only available in the U.S.
- Super Category data (available in certain countries only).
- Base Name for Street Names (available in certain countries only).

All VIF/VAF files are Latin-1 (ISO - 8859-1) with the exception of VIF/VAF files that are UTF-8 to support special characters in Unicode.

 **Note:** Currently only the VIF/VAF files for the Czechia are UTF-8.

Definition of name-pairs to explicitly associate a Phonetic representation to its plain text (parent name).

A one-to-many relationship exists between a Name and the Phonetic representation: multiple transcriptions can be associated to a single Name.

#### Considerations

- Current Voice data is generated from the quarter prior to the delivered NAVSTREETS product. This results in unmatched Voice entries.
- One name can have multiple Phonetic transcriptions associated (1:M relation).
- Phonetic transcriptions can be flagged as Preferred or Not Preferred.

#### Definition of Terms

- Transliteration
  - Latin-1 representation of a name in a non-Latin-1 character set
  - Defined to enable Latin-1 keyboard entry for non-Latin-1 names
  - Each non-Latin-1 character set requires a transliteration. Therefore, when a non-Latin-1 language is required for a country, a corresponding Transliteration Type is defined.

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- Transcription
  - Phonetic representation of a name string.
  - Transcriptions can exist for names in Latin-1 or non-Latin-1 languages.
- The following table contains examples of how various phonetic languages correspond to national and regional languages. The complete overview of phonetic language codes can be found in the Voice Phonetic Transcriptions Reference Guide. OTH is not an actual language code, it stands for any other language.

Country	Map Language Code <sup>201</sup>	Phonetic Language Code	Language Description
Argentina	SPA	ARS	Argentine Spanish
	SPA	ENG	American English
	OTH	ARS	Argentine Spanish
Bahrain	ARA	GFA	Gulf Arabic
	ENG	UKE	UK English
	OTH	GFA	Gulf Arabic

## I.7 Here South Korea NAVSTREETS LAT

### I.7.1 Introduction

NAVSTREETS South Korea LAT files are an interim solution provided with the purpose of publishing content which is currently not supported in the NAVSTREETS product.

### I.7.2 Product Description

NAVSTREETS South Korea LAT files consist of three tables publishing the following content:

South Korea Link Attribute LAT file:

- Road Class
- Overpass/Underpass

South Korea Street Name Status LAT file:

- Bridge/Tunnel Name Status
- Overpass/Underpass Name Status

TPEG LAT File Publishing TPEG IDs

<sup>201</sup> Map Language Codes (except OTH) are MARC Language Codes.

## I.7.3 Design Overview

NAVSTREETS South Korea LAT is provided as CSV based look-aside tables and are meant to be used in conjunction with the NAVSTREETS extracts.

## I.7.4 Definitions, Acronyms and Abbreviations

Term	Definition
TPEG	Transport Protocol Experts Group (Traffic Information)
CSV	Comma Separated Values

## I.7.5 South Korea Link Attribute LAT (SK\_Link\_Attribute.CSV)

The table below illustrates the structure of the NAVSTREETS South Korea Link Attribute LAT.

Attribute	Field Name	Format
<a href="#">Link ID</a> on page 1356	LINK_ID	N(10)
<a href="#">Road Class</a> on page 1356	Road_Class	N(2)
<a href="#">Overpass/Underpass</a> on page 1357	Overpass_Underpass	C(1)

## I.7.6 South Korea Street Name Status LAT (SK\_Street\_Name\_Status.CSV)

The table below illustrates the structure of the NAVSTREETS South Korea Street Name Status LAT.

Attribute	Field Name	Format
<a href="#">Link ID</a> on page 1358	LINK_ID	N(10)
<a href="#">Feature ID</a> on page 1358	Feature_ID	N(10)
<a href="#">Name Status</a> on page 1359	Name_Status	C(1)

## I.7.7 TPEG LAT (SK\_TPEG.CSV)

The table below illustrates the structure of the NAVSTREETS South Korea TPEG LAT file.

Attribute	Field Name	Format
<a href="#">Link ID</a> on page 1359	LINK_ID	N(10)

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Attribute	Field Name	Format
TPEG ID POS on page 1360	TPEG_ID_Pos	C(10)
TPEG ID NEG on page 1360	TPEG_ID_Neg	C(10)

## I.7.8 Attributes - South Korea Link Attribute LAT (SK\_Link\_Attribute.CSV)

### Link ID

#### Definition

Unique identifier for the Link.

#### Format

N(10)

#### Values

#####

#### Usage

Link ID may be used to cross reference the CSV file content with the Streets layer in the NAVSTREETS product.

#### Specification

- Link ID always publishes a Road Class value in the corresponding Road Class field.
- Link ID may publish null values in the Overpass/Underpass field when the Link ID does not represent an overpass or an underpass.

### Road Class

#### Definition

Identification of the road network based in governmental classification.

#### Format

N(10)

#### Values

1 - Urban Expressway

2 - Express Highway

3 - National Road

4 - Currently not in use

5 - Regional Road

6 - General Road 1

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7 - General Road 2

8 - Ferry

9 - Alley

## Specification

- In South Korea the following Road Classifications are applicable:
  - Road Class 1 - Urban Expressway
  - Road Class 2 - Express Highway
  - Road Class 3 - National Road
  - Road Class 4 - Currently not in use
  - Road Class 5 - Regional Road
  - Road Class 6 - General Road 1
  - Road Class 7 - General Road 2
  - Road Class 8 - Ferry
  - Road Class 9 - Alley
- Road Class = 1 to 5 is an identification of the road network based on governmental classification.
- For other Road Class, identification of the road network is based upon the number of lanes on roads and for the optimization of route calculations.
- Road Class = 6: General roads with two or more lanes. If the road is one way or it is significant for route calculation, it can be General Road 1 although the lane count of the road is less than two.
- Road Class = 7: General roads with one lane where it is wide enough for two vehicles to pass. Some roads in complex areas can be General Road 2 although the lane count of the road is more than one.

## Overpass/Underpass

### Definition

Identifies when a road goes over/under another road.

### Format

C(1)

### Values

O - Overpass

U - Underpass

(Null) - Regular road network

### Usage

The Korean transliteration of an intersection name may be used for map display or guidance purposes.

## Specification

- Overpass/Underpass is not published on ramps (Streets layer - Ramp attribute = 'Y')
- If a road is over/under other road(s) for more than two intersections, it is not considered an Overpass/Underpass.

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- If the driver does not perceive a change in the elevation when moving along the road, even though it crosses over or under another road, Overpass/Underpass is not published. In other words, if a road is level (without any change in elevation), Overpass/Underpass is not valid.
- Overpass/Underpass is independent of any bridge or tunnel attribution.

## I.7.9 Attributes -South Korea Street Name Status LAT (SK\_Street\_Name\_Status.CSV)

### Link ID

#### Definition

Unique identifier of the link.

#### Format

N(10)

#### Values

#####

#### Usage

Link ID may be used to cross reference the CSV file content with the Streets layer in the NAVSTREETS product.

#### Specification

- Only the Link IDs associated with street names having a Name Status = Bridge Name, Tunnel Name, Overpass Name or Underpass Name are published.

### Feature ID

#### Definition

Unique identifier of the feature name.

#### Format

N(10)

#### Values

#####

#### Usage

Feature ID may be used to cross reference the CSV file content with the appropriate Street Name in the Streets layer in the NAVSTREETS product.

#### Specification

- Only one occurrence for each Feature ID may be published.

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## Name Status

### Definition

Identification of the name status.

### Format

C(1)

### Values

1 - Is a Tunnel Name

2 - Is a Bridge Name

3 - Is an Overpass Name

4 - Is an Underpass Name

### Usage

May be used to display a named label for an intersection.

### Specification

- When multiple names exist, only the name usually associated with the Tunnel, Bridge, Underpass or Overpass is published.
  - Tunnel, Bridge, Underpass and Overpass names can be associated with any Name Type applicable on the road.
- A Street Name may only be associated with one of the Name Status valid values.
- The Name Status field may not be 'null'.

### Bridge Name and Tunnel Name

- Bridge Name is flagged on the road name that represents the name of a bridge.
- Bridge Name is flagged only on road segments that are also flagged as Bridge.
- Bridge Name and Tunnel Name are mutually exclusive. For example, if a name is flagged as Bridge Name, the name automatically does not get flagged as Tunnel Name.

## I.7.10 Attributes - TPEG LAT (SK\_TPEG.CSV)

### Link ID

### Definition

Unique identifier for the link.

### Format

N(10)

### Values

#####

### Usage

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I.8 Other Available Documents

Link ID may be used to cross reference the CSV file content with the Streets layer in the NAVSTREETS product.

## TPEG ID POS

See [Positive/Negative TPEG ID](#) on page 1360.

## TPEG ID NEG

See [Positive/Negative TPEG ID](#) on page 1360.

## Positive/Negative TPEG ID

### Definition

Identification of the name status.

### Format

C(10)

### Values

#####

### Usage

The inclusion of Positive/Negative TPEG ID allows applications to receive traffic messages and communicate this information to the driver by displaying real-time traffic situations (traffic flow, congestion status, or actual average speed). The attribution can also be used for route calculation.

### Specification

- TPEG (Transport Protocol Expert Group) is standard technology for providing traffic and travel information through the DMB (Digital Multimedia Broadcasting) network.
- HERE supports TPEG Link IDs by RTIC. Originally, TPEG Link IDs are provided by the MLTM (Ministry of Land, Transport and Maritime Affairs), named as Government Standard Node/Link IDs.
- HERE supports the ID in both the positive and negative direction of the road.
- POS\_TPEG\_ID represents the real-time traffic information for the link ID for the positive direction (from the Reference Node to the Non-Reference Node).
- NEG\_TPEG\_ID represents the real-time traffic information link ID for the negative direction (from the Non-Reference Node to the Reference Node).
- A link may have both a positive and a negative TPEG ID, or just one.

## I.8 Other Available Documents

### I.8.1 XML Products

The following are examples of available products via XML files. Documentation for these files is delivered separately.

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I.8 Other Available Documents

- Fuel Types
- Lonely Planet Travel Guide
- Parking Preview
- Safety Cameras
- Toll Cost
- Off-Road Africa
- Truck POIs

Refer to the HERE Product Catalog for the comprehensive list.

### 1.8.2 Other Cross References

The list below represents further product documentation available to NAVSTREETS customers:

- Census Boundaries ArcView
- Census Boundaries MapInfo
- HERE Traffic Patterns
- Voice Phonetic Transcriptions for POIs
- Voice Phonetic Transcriptions for Traffic
- Netherlands Postal Guide
- Postal Code Boundaries
- Postal Code Points ArcView
- Postal Code Points MapInfo
- Telecom for NAVSTREETS ArcView
- Telecom for NAVSTREETS MapInfo
- UK Postal Guide

# Appendix J

## Revision History

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Topics:

- *Changes Made for v15.9*
- *Changes Made for v15.8*
- *Changes Made for v15.7*
- *Changes Made for v15.6*

## J.1 Changes Made for v15.9

Date	Description
1-Jan-2024	Supplied information on accuracy for <a href="#">Toll Structure</a> on page 547. Updated information on accuracy for <a href="#">Centreline Digitisation</a> on page 79.
1-Jan-2024	Updated rules for <a href="#">Speed Limit Source</a> on page 503.
1-Jan-2024	Clarified rules for Regular Lane under <a href="#">Lane Type</a> on page 704.
1-Jan-2024	Added rule for ramps under <a href="#">Separately Digitised</a> on page 83.

## J.2 Changes Made for v15.8

Date	Description
1-Oct-2023	Updated <a href="#">Traffic Sign</a> on page 588.
1-Oct-2023	Updated <a href="#">Supplemental Geometry Bitset</a> on page 510
1-Oct-2023	Updated <a href="#">Multiply Digitised</a> on page 466: removed tunnel from exclusion.
1-Oct-2023	Removed references to the HERE Outdoor Recreation product.
1-Oct-2023	Removed the following from Expanded Inclusion: Supplemental Geometry. <ul style="list-style-type: none"> <li>• Mountain Bike Trail</li> <li>• Running Track</li> <li>• BMX Track</li> <li>• Outdoor Activity Road</li> <li>• Horse Trail</li> </ul>
1-Oct-2023	Removed the following from POI listing: <ul style="list-style-type: none"> <li>• Bike Park</li> <li>• BMX Track</li> <li>• Campsite</li> <li>• Outdoor Service</li> <li>• Ranger Station</li> <li>• Running Track</li> </ul>

## J.3 Changes Made for v15.7

Date	Description
1-Jul-2023	Updated <a href="#">Ramp</a> on page 444.

Date	Description
1-Jul-2023	Updated <i>Special Explication</i> on page 569.

## J.4 Changes Made for v15.6

Date	Description
1-Apr-2023	No content update