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| REVISED Change Notice #268.2 Advisory Notice |



Vicmap Transport

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| **Document version control**

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| --- | --- | --- | --- |
| **Version Number** | **Author**  | **Comment**  | **Date** |
| 268  | M OBrien | Initial notice | 06/05/2021 |
| 268.1 | M OBrien | Revised schedule & scope | 01/07/2021 |
| 268.2 | M OBrien | Model 4.0 | 19/07/21 |

**Amendment notes** This amendment explains the revision of Vicmap Change Notice #268.1 published 01/07/2021.1. Revised implemented date from 15/07/2021 to 23/07/2021.
2. VEHICULAR\_ACCESS datatype changed from NUMBER(1) to VARCHAR2(1).
3. Naming of the URBAN\_ROAD attribute corrected in documentation to URBAN as per data model version 4.0 for Vicmap Transport.
4. Chairlift removed from TR\_ROAD\_USE table.
 |

## What is happening

After extensive consultation with various road management authorities including representatives from Local Government Authorities, VicRoads, Parks Victoria, Department of Transport and Department of Environment, Land, Water & Planning, the following changes will be made to Vicmap Transport in a phased approach from 23rd July 2021.

Note: Vicmap Custodians (those who supply data for integration into Vicmap) are not required to populate the new model by 23rd July 2021. The change to the proposed data model will be carried out in one of two ways:

1. Attributes will have data 'applied' by the Vicmap Maintenance Contractor mapping data and content from the current data model. For example, 2WD and 4WD were once class codes, they will be mapped to the proposed VEHICULAR\_ACCESS attribute for the appropriate road segments, or
2. Attributes will be left empty (null entry). Initially some new attributes, such as RESPONSIBLE\_AUTH\_CODE, will be left empty as provision ‘shelving’ to enable, overtime, DELWP in collaboration with Vicmap Custodians to populate and review an ongoing maintenance regime.

The table below is a summary of the significant changes being made to Vicmap Transport.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Dataset** |  | **Attribute** | **Change type** |
|  | \*TR\_ROAD & TR\_ROAD\_INFRASTRUCTURE |  | \*ROAD\_MANAGEMENT (Responsible Authority and Coordinating Authority) | Add attribute |
|  | TR\_ROAD |  | [ROAD\_CLASS](#_Toc64037591) | Modify code list |
|  | TR\_[ROAD\_USE](#_Toc64037593) |  |  | Add table |
|  | TR\_ROAD |  | [ROAD\_SEAL](#_Toc64037594)  | Modify code list |
|  | \*TR\_ROAD & TR\_ROAD\_INFRASTRUCTURE |  | [URBAN](#_Toc64037595) | Add attribute |
|  | \*TR\_ROAD and TR\_ROAD\_INFRASTRUCTURE |  | \*[BRIDGE\_DETAIL](#_Toc64037596)S | Add attributes |
|  | TR\_ROAD |  | VEHICULAR\_ACCESS | Add attribute |
|  | TR\_ROAD |  | [ROAD\_STATUS](#_Toc64037597)  | Add attribute |
|  | TR\_ROAD |  | [SEASONAL\_CLOSE](#_Toc64037598)\_DATE | Add attribute |
|  |  TR\_ROAD |  | [SEASONAL\_OPEN](#_Toc64037599) \_DATE | Add attribute |
|  | TR\_ROAD |  | RESTRICTIONS | Modify code list |
|  | TR\_ROAD\_LOCALITY |  | [ROAD\_NAME\_USE](#_Toc64037600)  | Add attribute |
|  | TR\_ROAD\_LOCALITY |  | ROAD\_NAME\_GENDER | Add attribute |
|  | TR\_ROAD\_LOCALITY |  | VICNAMES\_ID | Add attribute |
|  | TR\_ROAD\_INFRASTRUCTURE |  | Dip | Additional Road Node Type |

*\* included to assist with structuring the data schema for new data and analytics, these datasets will be populated overtime.*

Table 1: Planned changes to Vicmap Transport.

Due to the significance of this change, please refer to the supporting documentation in Appendix A of this document and the accompanying proposed data model.

## Why this change is occurring

To enable road management information to be held in Vicmap Transport and significantly improve the representation of trails, such as bike paths and walking trails.

## Who will it affect

This change will affect all users of Vicmap Transport.

## When the change will occur | How to provide feedback |

The change will be implemented **on the 23/07/2021.**

For Vicmap Product change notices and updates, visit [Vicmap change notices (land.vic.gov.au)](https://www.land.vic.gov.au/maps-and-spatial/spatial-data/updates-to-vicmap/vicmap-change-notices). For further information & feedback please email vicmap.help@delwp.vic.gov.au

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# Appendix A: Technical details

The following outlines the details of the changes proposed for Vicmap Transport.

## Road Management (Add attribute)

Identifies what constitutes a local road. The ability to differentiate between Responsible Authority and Coordinating Authority is required to identify these roads.

The table below describes the new attributes that are will be added to the Vicmap Transport dataset (TR\_ROAD and TR\_ROAD INFRASTRUCTURE).

|  |  |  |  |
| --- | --- | --- | --- |
| **Feature Type** | **Attribute** | **Definition** | **Value** |
| Road or Bridge | RESPONSIBLE\_AUTH\_CODE  | The authority that is responsible for maintaining the road segment or asset.  |  Code from reference table VMREFTAB\_FT\_AUTHORITATVIVE\_ORGANISATION  |
| COORDINATING\_AUTH\_CODE  | The authority that the owns the road segment  |

 **Table 2: Details of the new attributes planned for Vicmap Transport.**

***Additional changes***

Use current LGA Codes and apply new codes for other Road Managers in the reference table (List of new codes TBD) VMREFTAB\_FT\_AUTHORITATVIVE\_ORGANISATION

## Road Class (Modify code list)

Historically the Victorian Grants Commission (VGC) uses Vehicle count Per Day (VPD) to categorise roads into hierarchy i.e. Link, Collector, Local Access and Minor Access. To maintain conformity in the road classification, road hierarchy will be derived from the road class code provided by councils.

As a part of this change to TR\_ROAD:

* new road class codes ***‘Minor Road’, Major Tracks’ and ‘Minor Track’*** will be added to the class code list. Refer to definitions below in **Road Class Code Definitions**, and
* Major Track, Minor Track and Trail will be given a new Class Code # numbers of 7, 8 and 9 respectively.

|  |  |  |
| --- | --- | --- |
| **CLASS\_CODE**  | **Class**  | **Definition**  |
| 0  | Freeway  | Hard surface formation, high volume, high speed roads declared as “Freeway”; comprising dual carriageway and full access control and grade separated intersections; i.e. no direct access from adjoining properties or side roads and all crossings are by means of overpass or underpass bridges with traffic entering or leaving carriageways by means of ramps.  Single carriageway sections forming part of declared freeways may be included within this category.  |
| 1  | Highway  |    Hard surface roads which: * Are of importance in a national sense, and/or
* Are of a major interstate through route, and/or
* Are principal connector roads between capitals and/or major regions and/or key towns.
 |
| 2  | Arterial  | Well maintained and widely used hard surface formation roads which are major connectors between: Freeways and/or National Highways, and/or Major centres, and/or key towns, or Have major tourist importance or Which main function is to form the principle avenue of communication for metropolitan traffic movements, not catered for by freeways.  |
| 3  | Sub-Arterial  | Hard surface formation road, which acts as: A connector between highways and/or arterial roads, or An alternate route for class 2 roads, or A principal avenue for massive traffic movements.  |
| 4  | Collector Road  | Hard surface or improved, loose surface formation road acting to: Provide for traffic movement (connects class 3 to class 5), or To distribute traffic to local street systems.  |
| \*5  | \*Local Road  | Original definition Hard surface or improved, loose surface formation road providing property access. **Revised definition** Hard surface or improved, loose surface formation road providing access to properties or public land. Caters for moderate travel speed of a full range of vehicles including large vehicles. All weather two-lane road includes: sealed, formed and gravelled or single lane sealed road with gravel shoulders.  |
| \*6  | \*Minor Road  | A hard surface, improved or unformed road usually with a dry weather or natural surface. A road that services a small number of properties, is a dead end road, or provides access to low to moderate use sites within public land. Caters for low travel speed and a range of vehicles in dry weather. It may be seasonally closed.  Generally an all weather single lane two-way unsealed formed road usually lightly gravelled.A fair quality of service road. Designed for moderate to low speed standards according to terrain. Minimum carriageway width is 4 m.  |
| \*7  | \*Major Track  | Provides access to low use visitor sites, parks and forest areas. Can be a short term, temporary or a feeder road. Will cater for low travel speeds and a range of vehicles in dry weather, it may be seasonally closed. A formed (natural materials), generally dry-weather track/road that is substantially single lane and two way, or A low quality of service track with a minimum carriageway width of 4 m Includes forest tracks and may be restricted to four wheel-drive vehicles.  |
| \*8  | \*Minor Track  | Provides access primarily for four wheel-drive vehicles. Will cater for very low travel speeds and may be seasonally closed. Predominantly single lane two way earth tracks (unformed) at or near the natural surface level, or A very low quality of service track, predominantly not conforming to any geometric design standards. Includes forest tracks, access to, and within, private properties. Minimum cleared width is 3 m.  |
| \*9  | \*Trail  | Not designed for vehicular traffic.  |
| 14  | Ferry Route  | A route across a river or lake used by a vessel for the regular transport of vehicles or passengers from one terminal point to another.  |

*\*Altered/new definition*

 **Table 3: Modified class code definitions for TR\_ROAD.**

Former CLASS\_CODES ‘relocated’ to new tables as shown below.  Relocated CLASS\_CODES are detailed further in this document.

|  |  |  |
| --- | --- | --- |
| **Former CLASS\_CODE**  | **Former Class** | **Definition                                      New Table** |
| 6  | 2WD  | 2wd                                           VEHICULAR\_ACCESS  |
| 7  | 4WD  | 4wd                                           VEHICULAR\_ACCESS  |
| 9  | PROPOSED  | Proposed                                  ROAD\_STATUS  |
| 11  | WALKING TRACK  | Walking Track                          TR\_ROAD\_USE  |
| 12  | BICYCLE TRACK  | Bicycle Track                            TR\_ROAD\_USE  |

**Table 4: Relocated class codes.**

## TR\_ROAD\_USE (Add table)

To display trail names and ignore road names associated with a single network segment it is necessary to qualify the ROAD\_NAME with a road use.

|  |  |  |
| --- | --- | --- |
| **ROAD\_USE code value** | **Term** | **Definition**  |
| 1  | Walking track  | A pathway designed for traffic on foot.  |
| 2  | On road bike path  | A pathway allowing bicycle traffic.  This is a shared roadway with vehicular traffic.  Painted/marked lanes.  |
| 3  | Separated bike path  | Bike path on road separated by road formed barriers.  |
| 4  | Off road bike path  | Bike path designed for bicycle use and not shared with motor vehicles.  |
| 5  | Mountain bike track  | A pathway designed for and allowing mountain bike traffic in the main.  |
| 6  | Horse riding trail  | A pathway designed for and allowing horse riding traffic in the main.   |
| 7  | Ski trail  | A pathway for cross country or downhill skiing.  |
| 8  | Beach access  | An undefined pathway providing access to bathing boxes and boatsheds.  |

  **Table 5: Road Class Code Definitions.**

Feature Type Code – Trail (Additional)

A new Feature Type Code of “Trail” to be created for use with Class Code of “Trail” (9).

## ROAD\_SEAL (Modify code list)

To accommodate correct road representation and to increase correct road representation a new classification ‘Natural’ will be added to the existing code list. Refer to definition in the table below.

This data will be supplied and maintained by councils themselves.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Feature Type** | **Attribute** | **Definition** |  |  |
| Road | Sealed  | The road surface has been sealed e.g. bitumen road, board walk.  | Reference Table  | 1 |
| Unsealed  | The road surface has been improved but is not sealed  | 2 |
| Unknown  | No information is available about the road surface for these roads   | 3 |
| \*Natural  | A formed or unformed road consisting  of locally available earth material with no imported material such as crushed rock or processed gravel.  | 4 |

*\*Altered definition*

**Table 6: Modified code list to VMREFTAB.TR\_ROAD\_SEAL**

## URBAN (Add attribute)

The assignment of urban and rural classification to roads is currently undertaken by councils based on rules contained in the **Road Management Act 2004**. To resolve issues identified in relation to consistencies and data currency between councils a new flag to indicate urban/rural classification will be added to TR\_ROAD.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Feature Type** | **Attribute** | **Definition** |  |  |
| **Road or Bridge** | URBAN  | A flag to indicate whether the road is located within an urban centre or not  | Flag  | Y |
| N |

**Table 7: Add of the URBAN attribute to TR\_ROAD.**

**Representation sample**

*Business rule:* The road segment will be broken at the Urban/Rural interface.



## Bridge Details (Add attribute)

Construction material of a bridge and the bridge deck area. To capture all relevant information from councils and other agencies, additional new attributes will be added to the Vicmap dataset (TR\_ROAD and TR\_ROAD INFRASTRUCTURE).

Refer to table below for details.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Feature Type** | **Attribute** | **Definition** | **Data Type** | **Value type** |
| Bridge  | LOAD\_LIMIT   | The latest recorded level 3 load limit of the bridge  | Number (5,2) | Tonnes  |
| LOAD\_LIMIT\_ASSESS\_DATE  | The date of the last recorded assessment of the bridges load limit. Null if not ‘Y’ to Assessed.  | Date  | dd/mm/yyyy or Unknown  |
| WIDTH\_M  | The width of the actual bridge structure  | Number (4,2) |  metres  |
| LENGTH\_M  | The length of the actual bridge structure  | Number (6,2) |  metres  |
| DECK\_AREA  | The surface area of the trafficable space on the bridge. Not including pedestrian walkways  | Number (9,2) |  Sq metres  |
| CONSTRUCTION\_MATERIAL  | The material that the bridge has been constructed from. Ref to table below  | Refer to reference table values below (Table 9). |

**Table 8: Addition of Bridge attributes to TR\_ROAD & TR\_ROAD\_INFRASTRUCTURE.**

Bridge Construction Material reference table (CONSTRUCTION\_MATERIAL)

|  |  |
| --- | --- |
| **Value** | **Type** |
| 1 | Concrete |
| 2 | Timber |

**Table 9: Code values.**

## VEHICULAR\_ACCESS (Add attribute)

Applied across all TR\_ROAD segments.

|  |  |  |  |
| --- | --- | --- | --- |
| **Feature Type** | **Attribute** | **Definition** | **Value** |
| Vehicular Access | 2WD  | The road is accessible by 2 wheel drive vehicles. All year round. Default for Road Class 1 to 5.  New subdivision roads would default to 5.  | 1 |
| Dry Weather Only  | Road that can only be accessed by 2WD during dry weather.  | 2 |
| 4WD  | The road is accessible by 4 wheel drive vehicles only.  | 3 |
| No Vehicular access  | The road has been assessed as being not accessible by a vehicle.  | 4 |
| Not Assessed  | The road has not been assessed for vehicular access. Minor Road, Class Code 6 would default to not assessed. Requires PV and DELWP road to advise. Trails class code would default to 1.  | 5 |

**Table 10: Addition of Vehicular access attributes to all TR\_ROAD segments.**

Where the road has not been assessed for vehicular access:

* Minor Road, Class Code 6, 7 & 8 would default to not assessed. Requires Parks Victoria and DELWP to advise.
* Trail, Class code 9, would default to 4.
* Trails that are 4WD and Dry Weather Only will be classified as 4WD.

##  ROAD\_STATUS (Add attribute)

Added to TR\_ROAD.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Feature Type** | **Attribute** | **Definition** |  | **Value** |
| Road Status   | Proposed  | Road centreline alignments have been received from plans of subdivision or VicRoads and are yet to be constructed or construction is not complete​.  | Reference table  | P |
| Open  | Road centreline alignment that is currently in use.  | O |
| Closed  | Road centreline alignment that has been permanently closed to traffic.  | C |

**Table 11: Addition of road status to TR\_ROAD.**

## SEASONAL\_CLOSE\_DATE (Add attribute)

Added to TR\_ROAD.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Feature Type** | **Attribute** | **Definition** |  | **Format value**  |
| Seasonal Close  | SEASONAL\_CLOSE\_DATE  | Date when road is closed.  |  Date | dd/mm/yyyy |

**Table 12: Addition of seasonal close attribute to TR\_ROAD.**

## SEASONAL\_OPEN (Add attribute)

Add to TR\_ROAD.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Feature Type** | **Attribute** | **Definition** |  | **Format value** |
| Seasonal Open  | SEASONAL\_OPEN\_DATE  | Date when road is re-opened.  |  Date | dd/mm/yyyy |

 **Table 13: Addition of seasonal open attribute to TR\_ROAD.**

## VMREFTAB.TR\_ROAD\_RESTRICTION (Modified)

Inclusion of UNMAINTAINED and COMPLEX SITE to VMREFTAB.TR\_ROAD\_RESTRICTION.

|  |  |  |
| --- | --- | --- |
| **Value description** | **Definition** | **Value** |
| MANAGEMENT VEHICLES | Management Vehicles Only  | 1 |
| HT OR WT LIMIT | Subject To Height Or Weight Limits  | 2 |
| \*UNMAINTAINED | Unmaintained, not for vehicular use  | 3 |
| PRIVATE | Private Access Only  | 4 |
| \*COMPLEX SITE | Road on Complex Address Site  | 5 |

*\*Altered/new definition*

**Table 14: Modification to VMREFTAB.TR\_ROAD\_RESTRICTION.**

To be removed from VMREFTAB.TR\_ROAD\_RESTRICTION and ‘relocated’ to the respective tables listed below.

|  |  |
| --- | --- |
| **Value description** | **Definition                                        New Table** |
| SEASONAL CLOSURE  | Subject To Seasonal Closure              ROAD\_STATUS  |
| PERMANENTLY CLOSED  | Road Permanently Closed                   ROAD\_STATUS  |
| DWO  | Dry weather only                                  VEHICULAR\_ACCESS  |

 **Table 15: The relocation of values from VMREFTAB.TR\_ROAD\_RESTRICTION.**

## ROAD\_NAME\_USE / TR\_ROAD\_LOCALITY (Modify)

ROAD\_NAME\_USE is an attribute to be added to TR\_ROAD\_LOCALITY and redundantly populate TR\_ROAD ROAD\_NAME\_USE\_X values as per all road names.

This attribute is required to label ‘trails’ with the appropriate name where it has multiple names i.e. where, say, the Alpine Walking Track is on a named road.

Where Trails have been given a name the associated ROAD\_NAME\_USE code will be populated.

##  ROAD\_NAME\_GENDER (Add attribute)

Inclusion of ROAD\_NAME\_GENDER and VICNAMES\_ID attribute added to TR\_ROAD\_LOCALITY table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Feature Type** | **Attribute** | **Definition** |  |  |
|  | MAN | A place or road named after a man. |
| WOMAN | A place or road named after a woman. |
| SELF DESCRIBED | A place or road named after a person who does not associate as either a man or a woman. |
| MULTI GENDER | A place or road named after more than one gender e.g. a man and a woman or a family. |
| NO GENDER | A place or road named with No Gender, e.g. Hanging Rock |

**Table 16: The addition of ROAD\_NAME\_GENDER and VICNAMES\_ID attribute added to TR\_ROAD\_LOCALITY.**

Note: Field is optional. Null if Gender unknown.

##  VICNAMES\_ID (Add)

VICNAMES\_ID will be added to the TR\_ROAD\_LOCALITY table to link between Vicmap Transport and the VICNAMES register.

## Road Node Type (Add)

In addition to the existing road node types available such Ford, Level Crossing and Gate a new node type of ‘Dip’ will be included to TR\_ROAD\_INFRASTRUCTURE.

## Slope Calculations

ROAD\_SLOPE\_FACTOR will be added to VMREFTAB.LGA.  Initially this will be unpopulated but ultimately each LGA will have a slope factor calculated and added to VMREFTAB.LGA reference table.

To obtain the slope factor we will look at total ‘flat’ road length per LGA, (as Vicmap currently holds it) and use Vicmap DEM25 to find ‘slope’ road lengths for each LGA. We will then compute the average percentage difference for all road features in each LGA and then apply this as the value for ROAD\_SLOPE\_FACTOR.