Appendix

Figure 1. Accident Data Tables Description

Table	Description
accident	“basic accident details, time, severity, location”
person	“person based details, age, sex etc”
vehicle	“vehicle based data, vehicle type, make etc”
accident_event	“sequence of events e.g. left road, rollover, caught fire”
road_surface_cond	“whether road was wet, dry, icy etc”
atmospheric_cond	“rain, winds etc”
sub_dca	detailed codes describing accident
accident_node	master location table - NB subset of accident table
Node	Lat/Long references

Figure 2. Accident Data Tables Description

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
ACCIDENT_DATE	Text	255	Accident Date	dd/mm/yyyy. (e.g.: 10 July 1995 = 10/07/1995)
ACCIDENT_TIME	Text	255	Accident Time	hh.mm.ss
STAT_DIV_NAME	Text	40	STAT_DIV_NAME is a character field indicating the Metro Melbourne or Country region where the crash occurred.	"Metro, Country."
ACCIDENT_NO	Text	12	"From November 2005 the accident number field was changed to be 12 character field, starting with T (for example, T20060123456) Where characters 2 to 5 are the year in which accident was registered; Where characters 6 to 12 are a numeric sequencing numbers"	"Example: 12001012345, T20060006259"
ACCIDENTDATE	Date		Date of accident. Australian format DD/MM/YYYY	(e.g.: 10 July 1995 = 10/07/1995)
ACCIDENTTIME	Text	225	"hh.mm.ss. Original date stored in 24 hour format (ie 1pm = 1300 hours) Note the common practice used by the Police, when originally coding up the accident details, of 'rounding off the time' to the nearest 5 minutes or even nearest hour. This naturally occurs because in the vast majority of accidents police arrive at the scene well after the accident occurred and so the 'REAL' time of the accident is never precisely known."	Examples of various PC time formats: 24 Hour format 2:35:00 PM = 14:35 or 12 Hour format 2:35:00 PM = 02:35PM 9999 Unknown time midnight = 00:00
ACCIDENT_TYPE	Number		"the type of accident. It is a basic description of what occurred, based on nine categories."	1 Collision with vehicle 2 Struck pedestrian 3 Struck animal 4 Collision with a fixed object 5 Collision with some other object 6 Vehicle overturned (no collision) 7 Fall from or in moving vehicle 8 No collision and no object struck 9 Other accident
DAY_OF_WEEK	Number		the day of the week upon which the accident occurred	1 Sunday 2 Monday 3 Tuesday 4 Wednesday 5 Thursday

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
				6 Friday
				7 Saturday
DCA_CODE Part 1	Text	3	the Definitions for Classifying Accidents	
LIGHT_CONDITION	Number		the light condition or level of brightness at the time of the accident.	1 Day
				2 Dusk/dawn
				3 Dark street lights on
				4 Dark street lights off
				5 Dark no street lights
				6 Dark street lights unknown
				9 Unknown
NO_PERSONS	Number	4	the number of people involved in the accident	
NO_PERSONS_KILLED	Number	4	Number of people with a given injury level	
NO_PERSONS_INJ_2	Number	4	Number of people with a given injury level	
DCA_CODE Part 2	Text	3		
NO_PERSONS_INJ_3	Number	4	Number of people with a given injury level	
NO_PERSONS_NOT_INJ	Number	4	the number of people that were not injured in the accident	
NO_OF_VEHICLES	Number	4	“the number of vehicles involved in the accident. Includes bicycles but not objects, property, toys (skate boards), etc.”	
POLICE_ATTEND	Number		Whether or not the police attended the scene of the accident.	1 Yes
				2 No
				9 Not known
ROAD_GEOMETRY	Number		The layout of the road where the accident occurred	1 Cross intersection
				2 ‘T’ Intersection
				3 ‘Y’ Intersection
				4 Multiple intersections
				5 Not at intersection
				6 Dead end
				7 Road closure
				8 Private property
				9 Unknown
SEVERITY	Text		VicRoads estimation of the severity or seriousness of the accident	1 Fatal accident
				2 Serious injury accident
				3 Other injury accident
				4 Non injury accident
DIRECTORY	Text		indicates the name of the street directory used to provide a map reference for the accident.	MEL Melway directory
				VCD Vic Roads directory

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
EDITION	Text	70	the edition or version of the street directory used to provide a map reference for the accident	MEL Melway directory VCD Vic Roads directory e.g. ED30
PAGE	Text	70	the page number of the street directory used to provide a map reference for the accident	MEL Melway directory VCD Vic Roads directory e.g. 91A
GRID_REFERENCE_X	Text	70	the grid reference in the x direction of the cell in the street directory used to provide a map reference for the accident.	
GRID_REFERENCE_Y	Text	70	the grid reference in the y direction of the cell in the street directory used to provide a map reference for the accident.	
SPEED_ZONE	Text	3	the speed zone at the location of the accident. The speed zone is generally assigned to the main vehicle involved.	040 40 km/hr 050 50 km/hr 060 60 km/hr 075 75 km/hr 080 80 km/hr 090 90 km/hr 100 100 km/hr 110 110 km/hr 777 Other speed limit “888 Camping grounds, off road” 999 Not known
NODE_ID	Text	70	The node id of the accident. It starts with 1 and incremented by one when a new accident location is indentified.	e.g. 43078
EVENT_SEQ_NO	Number	4	It starts with 1 and incremented for more than one event in the same accident.	
EVENT_TYPE	Text	1	type of incident event	0 Not applicable 1 Rollover on/off carriageway 2 Fell from vehicle 3 Ran off carriageway 4 Mechanical failure 5 Struck by stone/projectile/load 6 Fell in vehicle 8 Other 9 Not known C Collision
VEHICLE_1_ID	Text	1	first vehicle involved in the event	

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
VEHICLE_1_COLL_PT	Text	1	collision point on the vehicle.	0 Towed unit 1 Right front corner 2 Right side (forwards) 3 Right side (rearwards) 4 Right rear corner 5 Left front corner 6 Left side (forwards) 7 Left side (rearwards) 8 Left rear corner 9 Not known or Not Applicable F Front N None R Rear S Sidecar T Top/Roof U Undercarriage
VEHICLE_2_ID	Text	1	second vehicle involved in the event.	
VEHICLE_2_COLL_PT	Text	1	collision point on the vehicle.	0 Towed unit 1 Right front corner 2 Right side (forwards) 3 Right side (rearwards) 4 Right rear corner 5 Left front corner 6 Left side (forwards) 7 Left side (rearwards) 8 Left rear corner 9 Not known or Not Applicable F Front N None R Rear S Sidecar T Top/Roof U Undercarriage
PERSON_ID	Text	2	person involved in the specific accident event	
OBJECT_TYPE	Text	2	object involved in the specific accident event	1 Pole (telephone/electricity) 2 Tree (shrub/scrub) 3 Fence/Wall (including gates) 17 Traffic island
COMPLEX_INT_NO	Number	4	“the segment is part of a complex intersection. If accident is located in complex intersection, the field has non zero value.”	0 Not part of a complex intersection 1-n Valid complex intersection number
ROAD_ROUTE_1	Number	4	This is the primary road/route number for road_name_1.	Group Classifications are: 2000-2999 Freeways or Highways 3000-3999 Forest Rds 4000-4999 Tourist Rds 5000-5999 Main Rds 7000-7999 Ramps (mainly Freeway ramps) 9999 Unclassified Roads e.g. Council / Local roads
ROAD_NAME	Text	45	highest priority road at intersection OR road on which accident took place.	
ROAD_TYPE	Text	15	type of Road_Name	
ROAD_NAME_INT	Text	45	the primary name of the intersecting road	
ROAD_TYPE_INT	Text	15	the type or suffix of the intersecting road	
DISTANCE_LOCATION	Number	4	the distance (in metres) of the accident from the nearest intersecting road (if the crash is a non-intersection or mid-block accident).	Eg: 153

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
DIRECTION_LOCATION	Text	2	the direction of the accident from the nearest intersecting road (if the crash is a non-intersection or mid-block accident)	N North NE North East E East SE South East S South SW South West W West NW North West UK Not known
NEAREST_KM_POST	Number	4	the distance (in metres) of the accident to the nearest or closest kilometre post	
NEAREST_KM_POST	Number	4	the distance (in metres) of the accident to the nearest or closest kilometre post	
OFF_ROAD_LOCATION	Text	40	the name of the closest landmark or marker to the accident	
ATMOSPH_COND	Text	1	atmospheric condition	1 Clear 2 Raining 3 Snowing 4 Fog 5 Smoke 6 Dust 7 Strong winds 9 Not known
ATMOSPH_COND_SEQ	Number	4	1 and incremented by 1 if more than one atmospheric condition is entered for the same incident	
LONGITUDE	Double	8	Geographical coordinates	
LATITUDE	Double	8	Geographical coordinates	
NODE_TYPE	Number	1	location type identified by the RCIS spatial system	I Intersection N Non-Intersection O Off Road U Unknown
AMG_X	Double	8	"AMG coordinate X value. With the emergence of digital mapping (mid 1980s), the (then) Lands Department of Victoria defined a projection which would allow Victoria to be viewed as a single, continuous map coverage, rather than as multiple zones. This projection, known in VicRoads as Pseudo AMG, is based on AGD 66, but uses a UTM modified to have scale distortion of 1.0 at its centre, a centre based on 145 degrees longitude (Melbourne) and a single zone covering the whole state."	e.g. 2519154.655

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
AMG_Y	Double	8	"AMG coordinate Y value. With the emergence of digital mapping (mid 1980s), the (then) Lands Department of Victoria defined a projection which would allow Victoria to be viewed as a single, continuous map coverage, rather than as multiple zones. This projection, known in VicRoads as Pseudo AMG, is based on AGD 66, but uses a UTM modified to have scale distortion of 1.0 at its centre, a centre based on 145 degrees longitude (Melbourne) and a single zone covering the whole state."	e.g. 2390265.155
LGA_NAME	Text	25	the LGA name	e.g. DANDENONG
SEX	Text	1	the sex or gender of the person	M Male F Female U Not known
AGE	Number	4	how old the person was at the time of the accident. It is calculated by subtracting the person's birth date from the accident date to give the person's age in years	
INJ_LEVEL	Text	1	the level or degree of injury that the person has experienced as a result of the accident. It is calculated field using inj_police_level and taken_hospital	1 Fatality 2 Serious injury 3 Other injury 4 Not injured
SEATING_POSITION	Text	2	where the person was located on the vehicle	CF Centre-front CR Centre-rear D Driver or rider LF Left-front LR Left-rear NA Not applicable NK Not known OR Other-rear PL Pillion passenger PS Motorcycle sidecar passenger RR Right-rear
HELMET_BELT_WORN	Text	1	whether or not the person was wearing a helmet or seatbelt at the time of the accident	1 Seatbelt worn 2 Seatbelt not worn 3 Child restraint worn 4 Child restraint not worn 5 Seatbelt/restraint not fitted 6 Crash helmet worn 7 Crash helmet not worn 8 Not appropriate 9 Not known

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
ROAD_USER_TYPE	Text	2	the role of the person was at the time of the accident. It is calculated field using person_status and vehicle_type from vehicle table	1 Pedestrian 2 Driver (of V-type 1-9 17 60-63 70-71) 3 Passenger (of V-type 1-9 17 60-63 70-71) 4 Motorcyclist 5 Pillion Passenger 6 Bicyclist (incl. passengers) 7 Other driver (V-type 14-16 99) 8 Other passenger (V-type 14-16 99) 9 Not known
LICENCE_STATE	Text	1	the state of issue of the person's driver license	A Australian Capital Territory B Commonwealth D Northern Territory N New South Wales O Overseas Q Queensland S South Australia T Tasmania V Victoria W Western Australia Z Not known _ Not available (Blank value entered)
PEDEST_MOVEMENT	Text	1	"indicates the movement or travel of the person, if classified as a pedestrian"	0 Not applicable 1 Crossing carriageway 2 Working/playing/lying or standing on carriageway 3 Walking on carriageway with traffic 4 Walking on carriageway against traffic 5 Pushing or working on vehicle 6 Walking to/from or boarding tram 7 Walking to/from or boarding other vehicle 8 Not on carriageway (e.g. footpath) 9 Not known
POSTCODE	Number	4	the postcode where the owner of the vehicle resides	
TAKEN_HOSPITAL	Text	1	whether or not the person was taken to hospital	Y Yes N No

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
EJECTED_CODE	Text	1	whether or not the person was ejected or thrown out of the vehicle	_ Not Known 0 Not applicable 1 Total ejected 2 Partially ejected 3 Partial ejection involving extraction
SURFACE_COND	Text	1	road surface condition	_ Not known 1 Dry 2 Wet 3 Muddy 4 Snowy 5 Icy 9 Unknown
SURFACE_COND_SEQ	Number	4	starts with 1 and incremented by 1 if more than one road surface condition is entered for the same incident.	
SUB_DCA_CODE	Text	3	SUB_DCA code of the accident. Link to DCA Chart and Sub DCA Codes https://vicroads-public.sharepoint.com/InformationAccess/Shared%20Documents/Road%20Safety/Crash/Accident/DCA_Chart_and_Sub_DCA_Codes.PDF	
SUB_DCA_CODE_SEQ	Number	4	starts with 1 and incremented by 1 if more than one sub_dca is entered for the same incident Link to DCA Chart and Sub DCA Codes https://vicroads-public.sharepoint.com/InformationAccess/Shared%20Documents/Road%20Safety/Crash/Accident/DCA_Chart_and_Sub_DCA_Codes.PDF	
VEHICLE_YEAR_MANUF	Number	4	indicates the year in which the vehicle was built or manufactured. The data is stored in yyyy format.	
VEHICLE_DCA_CODE	Text	1	“links the vehicle with the movement depicted in the DCA table. For example, if the DCA code for the accident is 111 and the vehicle DCA code is 2, then an inspection of the DCA chart will show that the second vehicle involved in the accident was turning right.”	1 Vehicle 1 2 Vehicle 2 3 Not known which vehicle was number 1 8 Not involved in initial event

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
INITIAL_DIRECTION	Text	2	"the initial or first direction of travel of the vehicle. For a vehicle that is turning, the initial direction will be different to the final direction. For a non-turning vehicle, the initial direction will be the same as the final direction."	E East N North NE North east NW North west S South SE South east SW South west W West NK Not known
ROAD_SURFACE_TYPE	Text	1	Prior to 1990 only one road surface was stored. This value is stored with the first vehicle. Road surface for 1990 is available for each vehicle in the collision.	1 Paved 2 Unpaved 3 Gravel 9 Not known
REG_STATE	Text	1	the state which is the vehicle is registered in	A Australian Capital Territory B Commonwealth D Northern Territory N New South Wales O Overseas Q Queensland S South Australia T Tasmania V Victoria W Western Australia Z Not known _ (Blank value entered)/Not available
VEHICLE_BODY_STYLE	Text	6	the body type of the vehicle	
VEHICLE_MAKE	Text	6	the vehicle make or manufacturer	
VEHICLE_MODEL	Text	6	the model of the vehicle	E.g. FALCON 0 Unknown 66 Sleeper 75 Tow
VEHICLE_POWER	Number	4	"the power of the vehicle, in CCs or horsepower. For motor cycles, motor scooters and mopeds, the units will be CCs and for all other vehicles the units are rated horsepower."	0 Unknown 1-1000 Horsepower 1-9999 CCs
VEHICLE_TYPE	Text	2	the type or category of vehicle	
VEHICLE_WEIGHT	Number	4	the weight or mass of the vehicle. The unit of measurement is kilograms.	
CONSTRUCTION_TYPE	Text	1	the construction or formation of the vehicle	A Articulated P Interpretation is not known R Rigid _ (Blank value entered) Unknown
FUEL_TYPE	Text	1	the type of fuel used by the vehicle	D Diesel E Electric G Gas M Multi P Petrol

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
				R Rotary Z Unknown
NO_OF_WHEELS	Number	4	the number of wheels that the vehicle has	
NO_OF_CYLINDERS	Number	4	the number of engine cylinders that the vehicle has	
SEATING_CAPACITY	Number	4	the number of seats in the vehicle	
TARE_WEIGHT	Number	4	the tare or unladen weight of the vehicle. The unit of measurement is kilograms	
TOTAL_NO_OCCUPANTS	Number	4	indicates the number of occupants or people in the vehicle at the time of the accident	
CARRY_CAPACITY	Number	4	the carry or load capacity of the vehicle. The unit of measurement is kilograms	
CUBIC_CAPACITY	Number	4	indicates the cubic capacity of the engine of the vehicle. The unit of measurement is cubic centimetres	
FINAL_DIRECTION	Text	2	"the final or last direction of travel of the vehicle. For a vehicle that is turning, the initial direction will be different to the final direction. For a non-turning vehicle, the initial direction will be the same as the final direction"	E East
				N North NE North east NW North west S South SE South east SW South west W West NK Not known
FINAL_DIRECTION	Text	2	what the driver of the vehicle was attempting to undertake at the time of the accident. This information is meant to obtain via an interview of the vehicle's driver.	
VEHICLE_MOVEMENT	Text	2	the actual movement of the vehicle prior to the accident.	
TRAILER_TYPE	Text	1	"the type of trailer towed by the vehicle involved in the accident, as reported by the police."	
VEHICLE_COLOUR_1	Text	3	the primary or main colour of the vehicle.	
VEHICLE_COLOUR_2	Text	3	the secondary colour of the vehicle	
CAUGHT_FIRE	Text	1	whether or not the vehicle caught fire as a result of the accident.	0 Not applicable
				1 Yes 2 No 9 Not known

FIELD NAME	TYPE	WIDTH	DEFINITION	DOMAIN
INITIAL_IMPACT	Text	1	the position on the vehicle where the initial impact occurred.	
LAMPS	Text	1	whether the lamps or headlights for the vehicle (under the ambient lighting conditions) were alight (on).	0 Not applicable 1 Yes 2 No 9 Not known
LEVEL_OF_DAMAGE	Text	1	the damage level of the vehicle.	1 Minor 2 Moderate (driveable vehicle) 3 Moderate (unit towed away) 4 Major (unit towed away) 5 Extensive (unrepairable) 6 Nil damage 9 Not known
OWNER_POSTCODE	Number	4	the postcode where the owner of the vehicle resides.	