Regional Transportation Safety Information Management System (RTSIMS) Phase I

Technical Memorandum 1
Working Paper on ALISS Data Fields Analysis

Prepared for

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Executive Summary

Maricopa Association of Governments (MAG) has embarked on developing a Regional Transportation Safety Information Management System (RTSIMS) that will serve as the primary crash data analysis tool for MAG. The RTSIMS will provide an efficient and user-friendly interface to perform various statistical analyses to improve transportation safety in the region. Development of RTSIMS will be accomplished in three phases. Phase I will develop a Table of Common Definitions (TCD) that will be used to the software application (Phase II) and then be integrated with GIS for more effective and efficient crash analysis. This document focuses on the results of Task 1 of Phase I. Task 2 examined the Accident Location Identification Surveillance System (ALISS) maintained by ADOT and documented the following for all of the data fields in ALISS.

- Definitions
- Range of Values
- Default Value
- Reasons for Not Coding

Task 2 also included identifying ambiguities in the definitions of data elements in ALISS as published by ADOT. The following data elements were identified to have ambiguous definitions or other ambiguities.

- Intersection Related (Arizona Traffic Accident Report form item # 20) and Type of Location (Arizona Traffic Accident Report form item # 19)
- ALISS Values for Manner of Collision (collision_ manner)
- Left Turn Crashes in ALISS
- Direction of Travel
- Unusual Road Condition
- "Other" Values for Different Data Fields

The ambiguities related to the definitions of the above data fields will be compared to the definitions of MMUCC and any supplemental definitions that MAG member agencies use in the next two tasks.

In Summary, this task analyzed the data fields in MS Access based ADOT ALISS database in close conjunction with the Arizona Traffic Accident Report: Instruction Manual and Glossary, 7th Edition (Manual) and a sample database provided by MAG ITS and Safety Program. This task identified range of values, the existing definitions of values that the ALISS data fields can take, the default values along with reasons for any data fields not being coded into ALISS. This information is provided in *Appendix A*. The results of this task indicate that the existing definitions of some of the data fields are ambiguous.

The ambiguities identified by the project team are illustrated in section 3 of this document. The subsequent Tech Memos will compare ALISS data fields with MMUCC and local agency definitions of the data fields and identify the differences. The final Tech Memo will contain a Table of Common Definitions (TCD).

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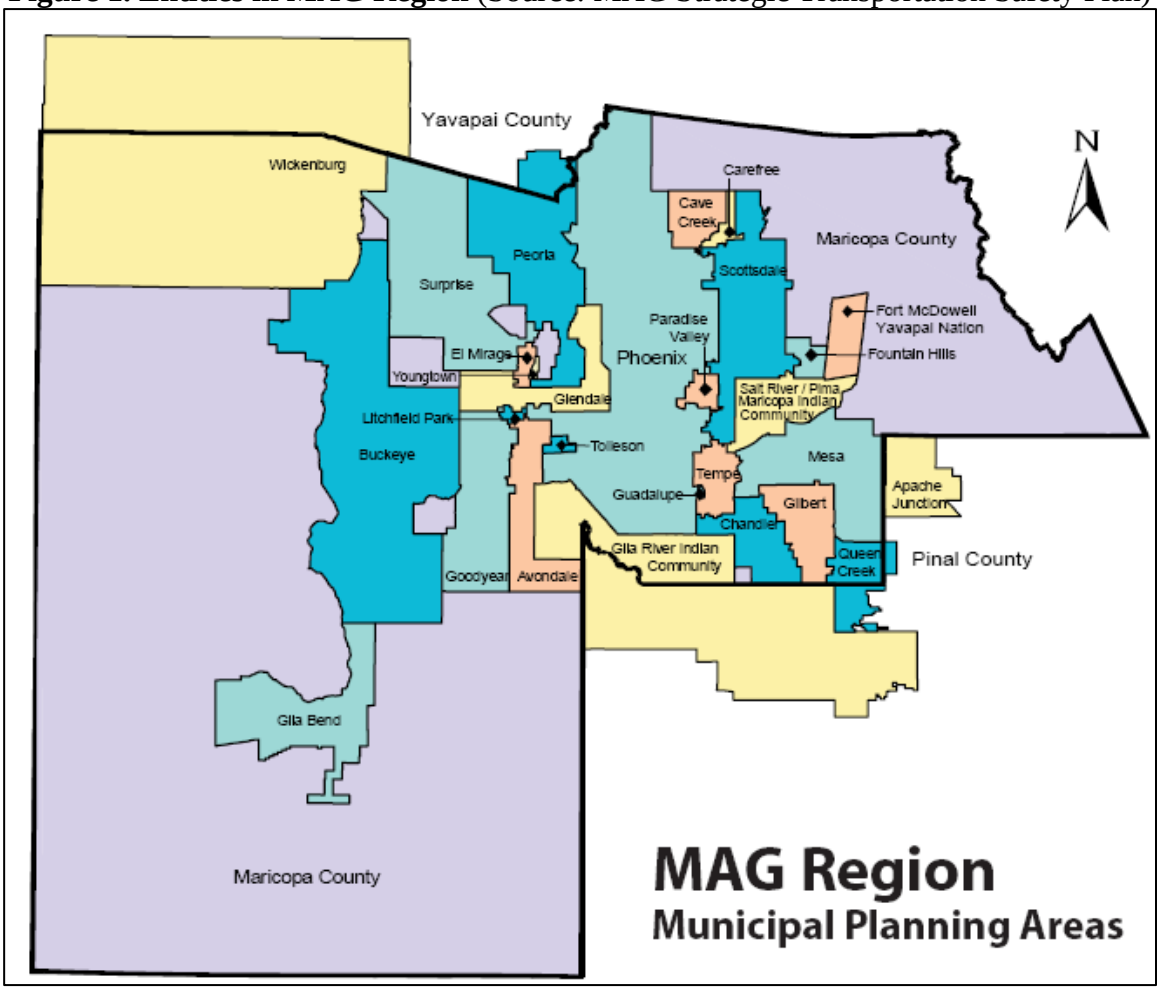
1 Introduction

The Maricopa Association of Governments' (MAG) region currently includes all entities within Maricopa County and City of Apache Junction as shown in Figure 1 and MAG serves the designated Metropolitan Planning Organization for the Maricopa Region. MAG has embarked on developing a Regional Transportation Safety Information management System (RTSIMS) that will serve as the primary crash data analysis tool. The RTSIMS will provide an efficient and user-friendly interface to perform various statistical analyses to improve the transportation safety in the region.

Figure 1. Entities in MAG Region (Source: MAG Strategic Transportation Safety Plan)



The Accident Location Identification Surveillance System (ALISS) database is maintained by ADOT and contains all of the crash reports provided to ADOT by the cities, counties and other local law enforcement entities within the State. RTSIMS will contain ALISS crash data updates provided to MAG by ADOT and other non-ALISS transportation data that are pertinent to the MAG region. It will also have the ability to integrate new crash data into the crash data archive in an efficient manner and the ability to generate statistics and the corresponding graphics required for inclusion in MAG

reports and for other purposes. The RTSIMS will also facilitate specific corridor safety analyses and the forecasting safety consequences of transportation planning alternatives.

Development of RTSIMS is to be carried out in the following three phases.

Phase I: Development of a Table of Common Definitions (TCD).

Phase II: Develop a software application that would support the analysis of historical crash data for the generation of customized reports and an annual report on road safety in the MAG region and help develop models (based on current practice) to forecast future crashes/safety outcomes of regional transportation planning alternatives.

Phase III: Develop and incorporate within RTSIMS, the ability to perform spatial analysis utilizing geo-coded crash data in a GIS environment. Such analyses would help identify road safety issues based on past data and also in evaluating the effectiveness of road safety improvements.

The goal of RTSIMS Phase I is to develop a Table of Common Definitions (TCD) for all the crash data fields currently included in MS Access® based ALISS database and involves five tasks as follows.

Task 1: Kick-off Meeting and Briefings to MAG Transportation Safety Committee (TSC)

Task 2: Identify all of the Variables/Data Fields of Safety Data in ADOT ALISS Database

Task 3: Compare Data Fields in ADOT ALISS Database with Similar Fields in MMUCC (Model Minimum Uniform Crash Criteria) Guidelines and Identify Similarities and Differences.

Task 4: Identify Crash Data Definitions Used by Local Agencies Differing from ADOT's ALISS Definitions

Task 5: Generate Consensus on the Definitions of Crash Data Fields and Develop a Table of Common Definitions (TCD) Applicable for All MAG Member Agencies as Appropriate

The Model Minimum Uniform Crash Criteria (MMUCC) was developed by the National Highway Traffic Safety Administration (NHTSA), the Federal Motor Carrier Safety Administration (FMCSA), the Federal Highway Administration (FHWA), and the Governors Highway Safety Association (GHSA). When implemented voluntarily in a state, the MMUCC provides a minimum, standardized data set for describing crashes of motor vehicles that will generate the information necessary to improve highway safety within each state and nationally.

ADOT and MAG have recently completed comparisons of ALISS with MMUCC. Task 3 will synthesize the findings of these comparisons and others from other states. If

consensus on a common definition for a particular data field is not possible, Task 5 will clearly identify and document the different definitions used and the agencies that use those definitions.

This Technical Memorandum 1 focuses on the results of Task 2 of Phase I of RTSIMS development. In the following section, the structure of MS Access® based ADOT ALISS database is presented. Section 3 illustrates some of the data fields that can be found to be ambiguous with examples. *Appendix A* provided with this document shows all the data fields in each of the main tables in MS Access® based ADOT ALISS Database. *Appendix B* shows relevant pages from Arizona Traffic Accident Report: Instruction Manual and Glossary, 7th Edition.

2 ADOT ALISS Data Structure

The Accident Location Identification Surveillance System (ALISS) database is maintained by ADOT and contains all of the crash reports provided to ADOT by the cities, counties and other local law enforcement entities within the State. Traffic Accident Reports are mailed by the investigating entity to ADOT Traffic Records Section. ADOT separates the bus/truck supplements and supplements for fatal crashes. Fatal crash reports are photocopied and retained in files. All crash reports are then microfilmed and the hard copies of accident reports are recycled except for fatal crashes.

Some of the cities, counties and other entities in the State may also maintain their own crash databases in electronic format.

An annual update of ALISS database pertinent to crashes within the particular jurisdiction is provided to the transportation agencies that request an update in Arizona. This update is provided in different formats as requested (i.e. SQR, SQL, InFaccs, Text files, MS Access® files, and GIS Shape files linked with Access). The Maricopa Association of Governments (MAG) has been requesting and receiving the annual ALISS database updates in MS Access® format and this project focuses on the MS Access® version of the ALISS database provided to MAG.

ALISS database has the crash data entered into several tables. A list of all of the tables in ALISS is shown in Figure 2. This list was obtained from a sample ALISS database that was provided in MS Access® format. There are a total of seventy-two tables of which twelve tables (i.e. primary tables) house the data while the other sixty tables (i.e. secondary tables) define the range of values for the data fields of the twelve primary tables. The twelve primary tables are related through the common data field “microfilm” that exists in all tables. Details of the twelve primary tables are provided in Table 1.

Table 1. Primary Tables in ADOT ALISS Database

	Table Name	Number of Data Fields (including "microfilm")
1	dbo_change_log	5
2	dbo_dtproperties	7
3	dbo_emergency_service	4
4	dbo_hazmat	27
5	dbo_incident	27
6	dbo_incident_location	18
7	dbo_nonvehicle_data	3
8	dbo_person	17
9	dbo_road_chracteristic	13
10	dbo_traffic_control_devc	3
11	dbo_traffic_unit	14
12	dbo_vehicle	18

There is one data field (i.e. "microfilm") that is common to all of the primary and secondary tables. All of the data fields in each table are identified in *Appendix A* along with the following four details for each data field.

a. **Definition**: Definitions or descriptions of the data fields were obtained from the Arizona Manual of Instructions for the Use of Traffic Accident Report forms (1).

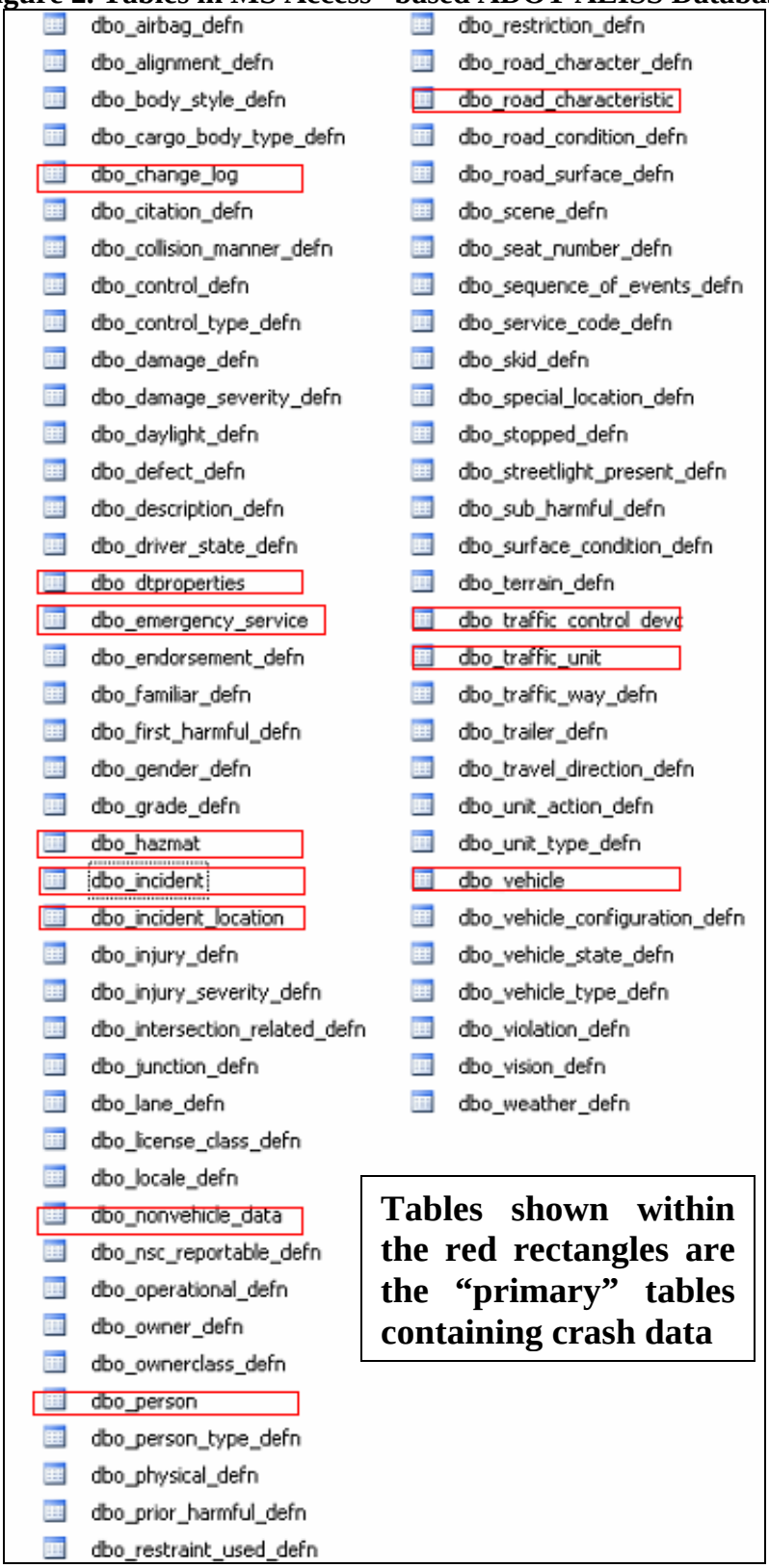
b. **Range of values**: The set of values the particular data field can take in ALISS database. This information was primarily gleaned from the sample ALISS database provided to the project team.

c. **Default values**: The value that is assigned to a particular data field when no value is either indicated or entered in the crash report (Arizona Traffic Accident Report). This information was primarily obtained from the documentation obtained from Works Consulting® on the development of the data entry application for Arizona Department of Public Safety (2).

d. **Reasons for not coding**: The reason for the data fields that are left blank or not entered in the ALISS database.

e. **Comments, if any**: Any other observations abut the data field.

Figure 2. Tables in MS Access® based ADOT ALISS Database



3 Data Fields with Ambiguity

An examination of ALISS data fields shows certain ambiguities that are part of some of the current ALISS data fields. This section focuses on a these ambiguities. The following ambiguities were identified by the study team.

a. Intersection Related (Arizona Traffic Accident Report form item # 20) and Type of Location (Arizona Traffic Accident Report form item # 19)
b. ALISS Values for Manner of Collision (collision_ manner)
c. Left Turn Crashes in ALISS
d. Direction of Travel
e. Unusual Road Condition
f. "Other" Values for Different Data Fields

These ambiguities are illustrated with examples in the following sections.

3.1 Intersection Related Crashes and Type of Location

"Intersection Related" is item # 20 in the Arizona Traffic Accident Report form and is entered as a data field named "intersection_related" in the primary table named "dbo_incident". This variable ranges the following five values and ***does not correspond*** one-to one with the values on the Arizona Traffic Accident Report form.

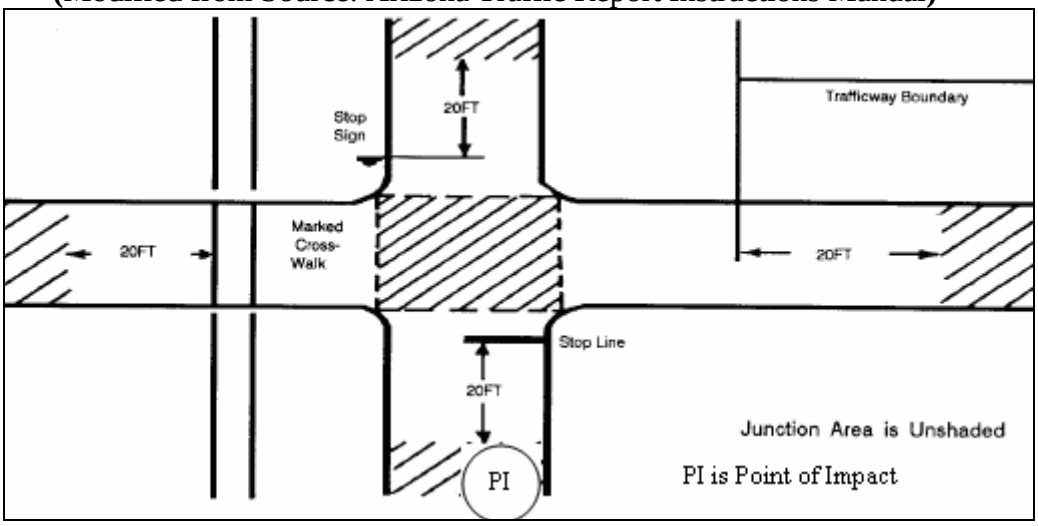
Table 2. Range of Values for "intersection_related" in ALISS

Value	Definition	Description	Comments
0	Not Reported		
1	No Relationship	Not defined in the AZ Traffic Accident Report – Instruction Manual and Glossary – 7th Edition	
2	Intersection Related	A traffic crash where the first harmful event (1) occurs on an approach to, movement through or exit from an intersection and (2) has resulted from an activity, behavior, or control related to the intersection.	This generic definition contributes to the ambiguity.
3	Driveway Access	A roadway by which motor vehicles may enter or leave a traffic way and limited to the portion that is entirely within the confines of the traffic way, Includes driveways and entrances to and exits from property adjacent to the traffic way (as in ADOT Manual).	
4	Alley Intersection	Not defined in the AZ Traffic Accident Report – Instruction Manual and Glossary – 7th Edition	

In the Arizona Traffic Accident Report form, "Intersection Related" (i.e. item # 20) has only two boxes to be filled out. The first box is "yes" and the second is "no". "yes" in accident report may correspond to "Intersection Related" (i.e. value 2) in ALISS database. "no" can correspond to "No Relationship", "Driveway Access" and "Alley Intersection" in ALISS. It is not clear how this transformation from the accident reports to ALISS is made at this time.

From Table 3 and Table 2 , the range of values for the two variables "junction" and "intersection_related" overlap significantly. This overlap results in ambiguity. For example, one motor vehicle hitting a utility pole that occurred in non-junction area can be intersection related. The current definition of "intersection related" value does not clearly define how this crash can be determined to be "Intersection Related" or otherwise. As shown in Figure 3, when a crash occurred outside of the junction but on an approach to the intersection will have to be subjectively determined whether it is an intersection related crash or not. Similar ambiguities can also be present when the crash occurs in a junction area.

Figure 3. Illustration of Ambiguity in identifying "intersection_related" Crash
(Modified from Source: Arizona Traffic Report Instructions Manual**)**



Determining Whether a Crash is "Intersection Related"

When the Traffic Records Section of ADOT receives a request for a list of crashes related to a specific intersection, ADOT provides the requester with the records of all crashes within 250 ft. of the center of the specified intersection on all approaches unless it is specified otherwise by the requestor.

Identifying crashes related to a specific intersection can be performed by more than one method. Generally, the Crashes related to a specified intersection can be identified as the ones that are identified to have occurred on one of the roads of the specified intersection and the intersecting feature is identified as the other road of the specified intersection. The list of crashes identified can then be narrowed by selecting only the crashes that are listed to be "intersection related".

Another way of identifying crashes related to a specified intersection can be to develop a list of all crashes within a certain distance from the center of the specified intersection (e.g. 250 ft. from the center of the intersection) and then manually determine whether each of these crashes were related to the specific intersection.

The Arizona Manual of Instructions for the Use of Traffic Accident Report forms contains instructions for filling the accident report forms. It is expected that all of the MAG member agencies have police officers in their jurisdictions using these instructions in this manual. A subsequent technical memorandum will document any special or additional instructions used by police officers in different jurisdictions.

Type of Location Definitions:

"Type of Location" is item # 19 in the Arizona Traffic Accident Report form and is entered as a data field named "junction" in the primary table named "dbo_incident". This variable ranges the following six values in ALISS database and corresponds one-to-one with the values on the Arizona Traffic Accident Report form.

Table 3. Range of Values for "junction" in ALISS

Value	Definition	Description
0	Not Reported	
1	Intersection	When two or more roadways cross or connect, the area contained within the extension of curb lines, or, if none then the lateral roadway boundary lines is defined as the intersection. Driveway accesses are not classified as intersections. When the distance along a roadway between two areas meeting the criteria of an intersection is less than 30 feet, the two areas and the roadway connecting them are considered to be parts of a single intersection. If the two areas as described above are more than 30 feet apart, then the areas are considered to be separate intersections. Explained with a diagram on page 55 of AZ Traffic Accident Report – Instruction Manual and Glossary – 7th Edition

2	Junction Area	The area in the vicinity of the intersection of two or more roadways. A. At unchannelized at-grade junctions, the junction area is within twenty (20) feet beyond the crosswalk(whether marked or unmarked), a stop-line marking, a stop sign or yield sign, whichever is farthest from the intersection. Whenever these limits are not present, use projections of the boundaries of the traffic way. B. At channelized junctions, the junction area is within twenty (20) feet beyond the gore of islands, or the point at which the turn lane attains full width. Disregard advance warning signs in determining limits of junction area. C. At an interchange the junction area is within 100 feet beyond the farthest gore or curb return of the turning roads in each direction. Do not consider painted or reflectorized separation or barrier lines as gores for this purpose. D. At connectors to frontage or service roads, the junction area includes the connector and parts of the frontage or service road within one hundred (100) feet in either direction of the gore or curb return and between the connector and service or frontage road. Explained with diagrams on pages 56 and 57 of AZ Traffic Accident Report – Instruction Manual and Glossary – 7th Edition
3	Non-Junction Area	Not defined in the AZ Traffic Accident Report – Instruction Manual and Glossary – 7th Edition
4	Driveway Access	A roadway by which motor vehicles may enter or leave a traffic way and limited to the portion that is entirely within the confines of the traffic way, Includes driveways and entrances to and exits from property adjacent to the traffic way (as in ADOT Manual).
5	Alley Access	Not defined in the AZ Traffic Accident Report – Instruction Manual and Glossary – 7th Edition
6	Alley	Traffic accidents that take place in an alley are considered just like any other crash that involves a motor vehicle, except that the location of such an accident is reported in the following manner. Explained with diagrams and an example on page 8 of AZ Traffic Accident Report – Instruction Manual and Glossary – 7th Edition.

“Intersection”, “Junction Area”, “Driveway Access”, and “Alley” are clearly defined in the Arizona Traffic Accident Report – Instruction Manual and Glossary. But, the values “Non-Junction Area” and “Alley Access” are not defined in the Manual.

3.2 ALISS Values for Manner of Collision (collision_manner)

The "collision_manner" is a data field within "dbo_incident" table in ALISS database that can be assigned fourteen different values. The corresponding item on the Arizona Traffic Accident Record form is "Manner of Collision" numbered "15" in the form. "Manner of Collision" has fifteen values as options and only one option is required to be chosen. A one-to-one correspondence between the variables in "collision_manner" in ALISS and "Manner of Collision" in Arizona Traffic Accident Report form ***does not exist***. There are the following three values for "Manner of Collision" in the accident report form that does not have a corresponding value in ALISS.

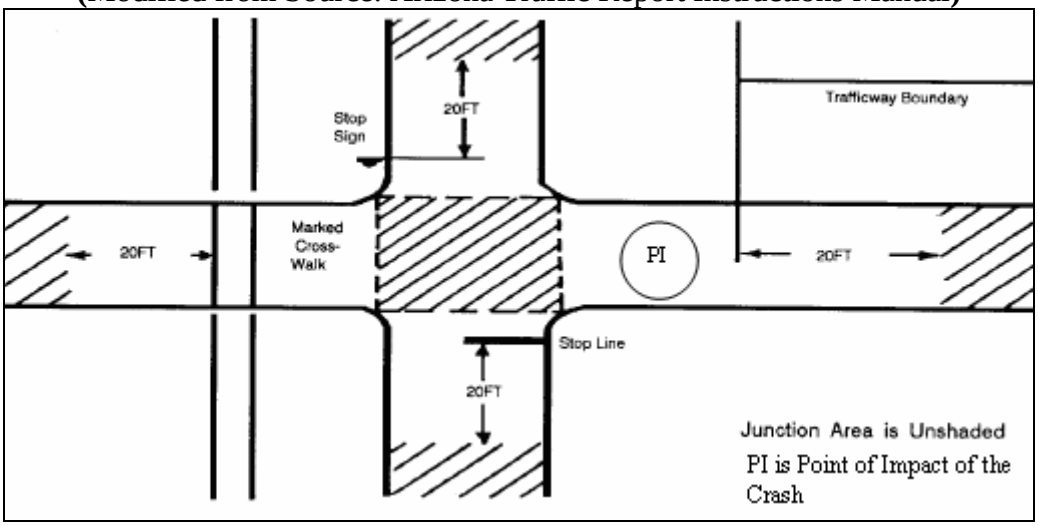
a. Right Turn (involving a right turn movement vehicle)
b. Pedestrian (Any person who is not an occupant or driver of a motor vehicle or other road vehicle. Includes: person walking, sitting, lying, working, or operating a pedestrian conveyance)
c. Pedalcycle (Non-motorized vehicle operated by pedals and propelled by human power. Includes: bicycles, tricycles, unicycles, pedal cars, etc.)

There is also a value (i.e. Driveway / Alley related) for "collision_manner" in ALISS that does not have a corresponding value with the values for "Manner of Collision" in Arizona Traffic Accident Report form. It is seen that the "first_harmful" variable (i.e. First harmful event) from ALISS indicates whether the crash involved a pedestrian or a pedal cyclist.

While the variable "unit_action" in the "dbo_traffic_unit" table in ALISS database will indicate whether a vehicle involved in the crash was making a right turn or not, it is not clear what value for "collision_manner" will be chosen for a crash indicated as "right turn" in the accident report. From a quick scan of possible values for the "collision_manner" in ALISS, it can be seen that the possible values include "not reported", "single vehicle", "angle", "rear-end" and "other". This results in ambiguity when an analysis relating to right turn crashes are performed, especially when the "not reported" or "other" values are chosen.

For example, a rear-end crash involving a right-turn movement vehicle as shown in Figure 4 that is recorded as "right turn" in accident report form may be coded as "rear-end", "other" or "not reported" in ALISS. This can lead to ambiguities while an analysis of rear-end crashes or right-turn crashes is performed.

Figure 4. Illustration of a Rear-End Crash involving a Right Turn Movement
(Modified from Source: Arizona Traffic Report Instructions Manual**)**



This ambiguity may partly be resolved by defining what a right turn crash is in a clearer way.

3.3 Left Turn Crashes in ALISS

As noted above, the "collision_manner" is a data field within "dbo_incident" table in ALISS database can be assigned fourteen different values. The corresponding item on the Arizona Traffic Accident Record form is "Manner of Collision" numbered "15" in the form. "Manner of Collision" has fifteen values as options and only one option is required to be chosen. Definitions for the "Angle" and "Left Turn" values for "Manner of Collision" are as follows:

Angle: Vehicles involved in the crash must be traveling on roadways that intersect each other (i.e. T-bone). A typical angle crash is shown in

Figure 5.

Left Turn: A left turn movement vehicle should be involved. Some may appear to be angle or head on. A typical left turn crash is shown in Figure 6.

These definitions are from the "Arizona Traffic Accident Report: Instruction Manual and Glossary, 7th Edition" and the definitions do not provide any particular methodology other than the definitions for selecting the "Manner of Collision".

Figure 5. Illustration of a Typical "Angle" Crash

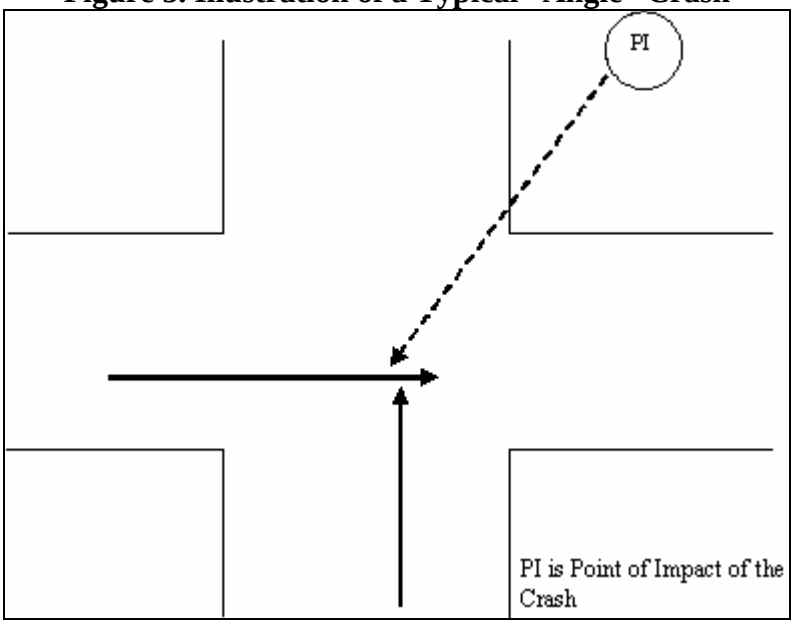
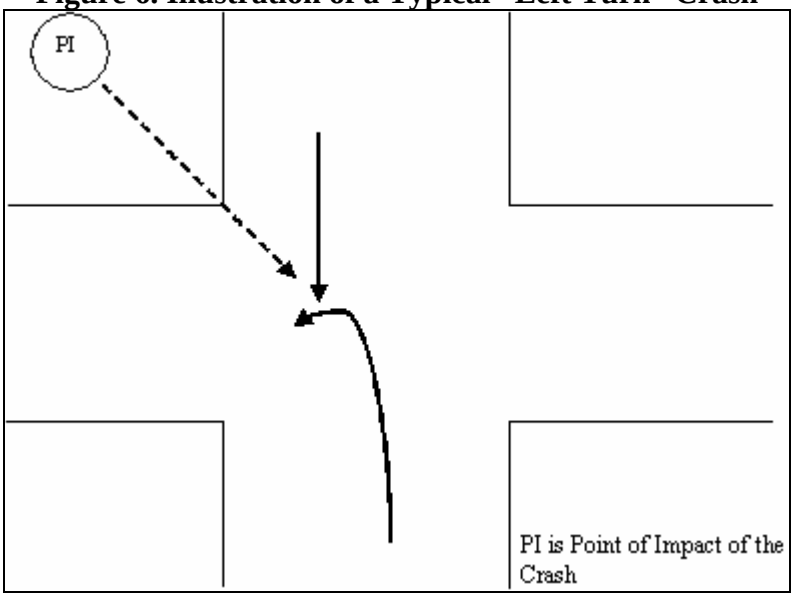


Figure 6. Illustration of a Typical "Left Turn" Crash

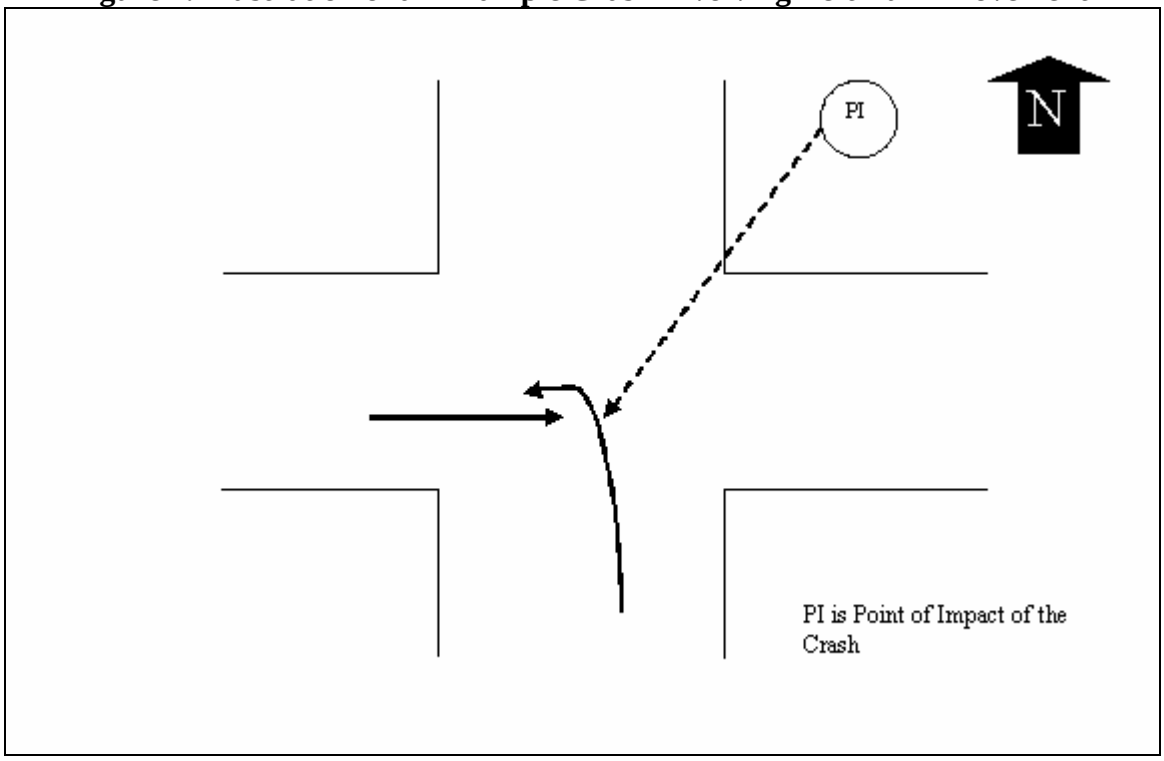


The above definitions are broad enough to create an ambiguity in categorizing crashes of the type shown in Figure 7. This is a crash that involves a northbound vehicle turning left and another vehicle going through the intersection eastbound.

As shown in Figure 7, this crash involves a left turn movement and also involves vehicles traveling on roadways that intersect each other. This satisfies the definitions of both "Angle" and "Left Turn" crashes in "Arizona Traffic Accident Report: Instruction Manual and Glossary, 7th Edition". So, this crash may be recorded as "Angle accident" and be left out of an analysis involving left turn crashes.

This broader definition of these two crash types can lead some of each of these two types of crashes to be recorded as the other type (i.e. error) in ALISS database.

Figure 7. Illustration of an Example Crash Involving Left Turn Movement



This ambiguity may partly be solved by proving a more stringent definition for both of the types of crashes. There may also be an order (e.g. select the first value applicable from top down) defined in the manual that helps determine the value for "Manner of Collision".

3.4 Direction of Travel

"Direction of Travel" is item numbered 32 in Arizona Traffic Accident Report form and has nine options for its values for each traffic unit (e.g. vehicle, pedestrian, etc.). These values have a one-to-one correspondence with the values for "travel_direction" data field in ALISS database.

Table 4. "Direction of Travel" and "travel_direction"

Value in ALISS	Value in Accident Report	Comments
E	East	
N	North	

NE	NE	
NW	NW	
S	South	
SE	SE	
SW	SW	
U	Unknown	
W	West	
Blank		Not Reported; Present only in ALISS

It is described as follows in the Arizona Traffic Accident Report: Instruction Manual and Glossary, 7th Edition.

Direction of Travel: "Mark the appropriate box for each traffic unit. The direction indicated should be the compass direction just prior to the onset of the unstabilized situation. Be sure to include the pedestrians, pedalcyclists, or animal rider's direction of travel"

As an example, the vehicles involved in the crash shown in Figure 7 are northbound and eastbound prior to the occurrence of the unstable event. A scan of some of the accident reports of similar crashes show that the "Direction of Travel" for the left turning vehicle is sometimes indicated to be "NW" (i.e. northwest). This also satisfies the description of "direction of travel" in the Manual. There may also be crashes on highways that run northwest that are recorded as "NW".

This ambiguity in the direction of travel can lead to inconsistencies in an analysis of crashes involving vehicles traveling in a particular direction at an intersection. This ambiguity may partly be resolved by a clearer definition of the direction of travel with specific allusion to ambiguous scenarios such as above.

3.5 Unusual Road Conditions

The "road_condition" data fields in "dbo_road_chracteristic" table in ALISS corresponds with the "Unusual Road Condition" (i.e. Item 22) in Arizona Traffic Accident Report form. There is a one-to-one correspondence between the values for "road_condition" in ALISS and "Unusual Road Condition" in the Accident Report Form. But, "road_condition" has a "Not Reported" (i.e. blank) value in addition to the ones in the form. The range of values for "road_condition" is shown in Table 5. Table 5 also indicates the potential ambiguities associated with the definition of these values.

Table 5. "road_condition" in ALISS

Value	Description	Potential Ambiguities
0	Not Reported, No Unusual Conditions	This value does not distinguish between the absence of any unusual conditions and any unusual conditions not being reported.

1	Under Construction, Traffic Allowed	A definition of this value provided in the manual is shown below. This definition does not make it clear whether the crashes occurring in the "advance warning area" of work zones / construction zones will take this value or not.
2	Under Construction, Traffic Not Allowed	None
3	Under Repairs	The definition shown below from the Manual does not specify whether the crash should occur within the repair zone encompassed by the traffic cones and other temporary devices.
4	Holes, Ruts, Bumps	None
5	Obstruction (protected)	None
6	Obstruction (unprotected)	None
7	Obstruction (unlighted at night)	None
8	Defective Shoulders	None
9	Changing Roadwidth	None
10	Flooded	None
11	Temporary Lane Closure	The definition shown below does not specify whether this will include the crashes occurring in the advance warning area.

Under Construction, Traffic Allowed: Area of roadway under construction marked with appropriate construction zone signing with motor vehicle traffic permitted to travel through the construction zone either continuously or intermittently by flag person or a pilot car.

Under Repair: Area where roadway and/or utilities in the roadway are undergoing maintenance or repair. The repair zone is usually identified by temporary signs and channeling devices, such as cones which are generally in place for a short time such as a few hours or a few days.

Temporary Lane Closure: When a lane of a multiple lane roadway is closed to traffic by using cones, barricades, etc. This category is not intended for two-lane, two-way roadways where traffic control is handled by flag person or a pilot car. (See Under Construction, Traffic Allowed)

These ambiguities may partially be resolved by a more stringent definition of these unusual conditions.

3.6 "Other" Values

Numerous data fields in ALISS database have "other" as a value. For some of these data fields, the most common value chosen is "other". This results in difficulties when a specific analysis focusing on that particular data field is performed. The data fields that have "other" as a value are as follows.

Table 6. Data Fields with "Other" Value in ALISS

Table	Variable	Comment
dbo_hazmat		
	cargo_body_type	
	event_sequence	
dbo_nonvehicle_data		
	description	
dbo_person		
	person_type	
	seat_number	
	restraint_used	
	restriction	
dbo_road_chracteristic		
	surface_condition	
	road_surface	
	lane	
dbo_traffic_control_devc		
	control_type	
dbo_traffic_unit		
	prior_harmful	
	unit_action	
	vision	
	physical	
	violation	
dbo_vehicle		
	body_style	
	defect	
	stopped	
	trailer	

4 Reasons for Not Coding

Some of the items on the accident reports are not coded into ALISS. For example, the information on witnesses available on the Arizona Traffic Accident Report is not entered into ALISS database. This may be due to the fact that information on witnesses is not needed for the purposes of ADOT. The following other information recorded in Arizona Traffic Accident Report are also not entered into ALISS:

a. Insurance Company

b. Telephone Number (Ins. Company)
c. Policy Number
d. Effective Date / Expiry Date

For example, the MS Access based ALISS database update provided to MAG and other entities at their request do not contain any values for the following data fields in order to protect the privacy of the citizens involved in crashes.

a. "plate_number" in the "dbo_vehicle" table in ALISS (i.e. license plate number of vehicle involved)
b. "id_number" in "dbo_person" table in ALISS (i.e. ID number of the driver involved)
c. "birth date" in "dbo_person" table in ALISS (i.e. Date of Birth of the person involved)

These data fields may not be included in the ALISS update provided to MAG for protecting the privacy of the personal information of persons involved in those crashes.

Items left Blank on Arizona Traffic Accident Report Forms:
One of the data fields in item 3 on accident reports is also left blank. In item 3, the "3f" field is always to be left bank as indicated in the Arizona Traffic Accident Report Instruction Manual. This field has "plus" and "minus" as the options to be selected.

"Obstruction-Unlighted at Night" under Item 22 in Arizona Traffic Accident Report form is not in use anymore. So, an accident report showing this value for "Unusual Road Condition" will not get coded into corresponding "road_condition" data field in "dbo_road_chracteristic" table in ALISS.

Other reasons for not coding certain data fields into ALISS are identified in *Appendix A* as applicable.

5 Summary of Findings

This technical memorandum documents the results of Task 1 of RTSIMS Phase I. This task analyzed the data fields in MS Access based ADOT ALISS database in close conjunction with the Arizona Traffic Accident Report: Instruction Manual and Glossary, 7th Edition (Manual) and a sample database provided by MAG ITS and Safety Program. This task also identified range of values, the existing definitions of values that the ALISS data fields can take, the default values along with reasons for any data fields not being coded into ALISS. This information is provided in *Appendix A*. The results of this task indicate that the existing definitions of some of the data fields are ambiguous.

Another major part of this task was to identify ambiguities in the definitions of data fields in ALISS. The ambiguities identified by the project team are illustrated in section 3 of

this document. The subsequent Tech Memos will compare ALISS data fields with MMUCC and local agency definitions of the data fields and identify the differences. The final Tech Memo will contain a Table of Common Definitions (TCD).

Appendix A: ALISS Data Fields' Range of Values, Definitions, Default Values and Reasons for Not Coding

Table 7. Data Fields in the Table "dbo_emergency_service"

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
microfilm					
	00000000 to 99999999	Unique id linked to each accident report and serves as an index field to relate all table			
service_code					
	A	Ambulance			
	O	Other			
	P	Police			
	U	Unknown			
time_called			Blank		
	0000 to 2359	Time when the police or ambulance company was first notified of the incident.			
time_arrived			Blank		
	0000 to 2359	Time at which the police or ambulance company arrived at the scene of the incident.			

Table 8. Data Fields in the Table "dbo_hazmat"

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
microfilm					
	00000000 to 99999999	Unique id linked to each accident report and serves as an index field to relate all table			
unit_number		Vehicle reference number as referenced in picture in crash report form			
	1 to 8		1		
usdot					
		US DOT ID of 3 to 8 digits			
icc					
		Interstate Commerce Commission ID Number		Not in use anymore - may not be included in the accident form anymore	
vehicle_type					
		Not Reported	Blank		
	A1	Single Unit Truck, Box			
	A2	Single Unit Truck, Tank			
	A3	Single Unit Truck, Platform			
	B1	Single Unit & Trailer, Box			
	B2	Single Unit & Trailer, Tank			
	B3	Single Unit & Trailer, Platform			
	C1	Tractor & Trailer, Box			
	C2	Tractor & Trailer, Tank			
	C3	Tractor & Trailer, Platform			
	D1	Tractor & Double Trailer, Box			
	D2	Tractor & Double Trailer, Tank			
	D3	Tractor & Double Trailer, Platform			
	E1	Misc Truck Tractor Only			
	E2	Misc Triple Trailer			
	E3	Misc Bus			
	F1	Cement Mixers, Dump Trucks, etc			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
axles		A supporting shaft or rod on which a vehicle's wheels revolve. Number of shafts on a commercial vehicle (truck) can vary due to the length of the vehicle.			
			Blank		
	0				
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	25				
	55				
placard		A diamond shaped placard appearing on the outside of MATERIAL a commercial truck that is carrying hazardous material. PLACARD The placard has a four digit classification code identifying the material being transported.			
			Blank		
	1017				
	1075				
	1203				
	1268				
	1824				
	1830				
	1993				
	3077				
	3257				

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
class_code		Codes from the safety device table located on the front of the Arizona Accident Report Form should indicate whether the driver and occupants were or were not using a safety device at the time of the accident.			
			Blank		
	0	0 Select this code only if unable to determine if a restraint was or was not used.			
	1	1 Select this code if no safety device was used even though the vehicle may be equipped with restraints.			
	2	2-9 Select these codes if a safety device was used at the time of the accident.			
	3				
	4	4 Airbag deployed. Should be used along with any other relevant device.			
	5				
	6				
	7				
	8				
	9				
haz_released					
	-1	yes	0		
	0	No			
vehicle_configuration		Check the appropriate box to best describe the configuration of the vehicle involved. Passenger car and light pickup will normally not qualify for inclusion on this form except when displaying a hazardous material placard.			
	0	Not Reported	0		
	1	Passenger Car			
	2	Light Truck			
	3	Bus (seats for 9-15 people, including driver)			
	4	Bus (seats for >15 people, including driver)			
	5	Single Unit Truck (2 axle/6 or more tires)			
	6	Single Unit Truck (3 or more axles)			
	7	Truck with Trailer			
	8	Truck Tractor Only (Bobtail)			
	9	Truck Tractor with Semi-Trailer			
	10	Tractor with Double Trailers			
	11	Tractor with Triple Trailers			
	12	Unknown Truck - Unable to Classify			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
cargo_body_type		Check the cargo body style that best describes the manufacturer's design of this vehicle with or without it's intended cargo			
	0	Not Reported	0		
	1	Not Applicable			
	2	Bus (seats for 9-15 people, including driver)			
	3	Bus (seats for >15 people, including driver)			
	4	Van/Enclosed Box			
	5	Cargo Tank			
	6	Pole			
	7	Flatbed			
	8	Dump			
	9	Grain, chips, gravel			
	10	Concrete Mixer			
	11	Auto Transporter			
	12	Garbage or Refuse			
	13	Other			
vin		Manufacturer's Vehicle Identification Number			
	0		0		
	17 character string	Actual VIN Number of the vehicle			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
event_sequence_1		List up to (4) event sequences that this vehicle may have experienced during the duration of the unstabilized situation.			
	0	Not Reported	0		
	1	Ran Off Road			
	2	Jackknifed			
	3	Overturned or Rollover			
	4	Downhill Runaway			
	5	Cargo Loss or Shift			
	6	Explosion or fire			
	7	Separation of Units			
	8	Cross Median/Centerline			
	9	Equipment Failure (brake failure, blown tires, etc.)			
	10	Other Noncollision			
	11	Unknown Noncollision			
	12	Collision with Pedestrian			
	13	Collision with Motor Vehicle in Transport			
	14	Collision with Parked Vehicle			
	15	Collision with Train			
	16	Collision with Bicycle			
	17	Collision with Animal			
	18	Collision with Fixed Object			
	19	Collision with Work Zone Maintenance Equipment			
	20	Collision with Other Moveable Object			
	21	Collision with Unknown Moveable Object			
	22	Other			
event_sequence_2					
		same as event_sequence_1			
event_sequence_3					
		same as event_sequence_1			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
event_sequence_4					
		same as event_sequence_1			
carrier_name					
		Carrier Name. This will not necessarily be the same as any visible lettering on the vehicle due to contract agreements.			
carrier_street_address					
		Principal place of business of the carrier listed in 2b			
carrier_city_name					
		Principal place of business of the carrier listed in 2b			
carrier_state					
		Principal place of business of the carrier listed in 2b			
carrier_zip_code					
		Principal place of business of the carrier listed in 2b			
driver_last_name					
		self explanatory			
driver_first_name					
		self explanatory			
driver_middle_initial					
		self explanatory			
missingsupplement					
	-1	yes	0		
	0	No			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
exportdate					
		date in MM/DD/YYYY format and may include time			
multseqnumber					
	0		0		
	1				
	2				
	3				

Table 9. Data Fields in the Table "dbo_incident"

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
microfilm					
	00000000 to 99999999	Unique id linked to each accident report and serves as an index field to relate all table			
acc_date_time		The date and time the accident occurred	20		
		date in MM/DD/YYYY format and may include time			
officer_ncic					
		Jurisdiction code of officer reporting the Crash			
officer_id					
		ID of the Officer investigating the crash			
total_units					
	1	Number of Units involved in the Crash	0		
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
total_injury		Number of persons injured in the crash			
	0	No Injuries	0		
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
total_fatal		Number of persons killed in the crash			
	0		0		
	1				
	2				
	3				
	4				

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
junction		The area in the vicinity of the intersection of two or more roadways.			
	0	Not Reported	0		
	1	Intersection		A. At unchannelized at-grade junctions, the junction area is within twenty (20) feet beyond the crosswalk(whether marked or unmarked), a stop-line marking, a stop sign or yield sign, whichever is farthest from the intersection. Whenever these limits are not present, use projections of the boundaries of the trafficway. B. At channelized junctions, the junction area is within twenty (20) feet beyond the gore of islands, or the point at which the turn lane attains full width. Disregard advance warning signs in determining limits of junction area. C. At an interchange the junction area is within 100 feet beyond the farthest gore or curb return of the turning roads in each direction. Do not consider painted or reflectorized separation or barrier lines as gores for this purpose. D. At connectors to frontage or service roads, the junction area includes the connector and parts of the frontage or service road within one hundred (100) feet in either direction of the gore or curb return and between the connector and service	
	2	Junction Area			
	3	Non-Junction Area		A roadway by which motor vehicles may enter or leave a trafficway and limited to the portion that is entirely within the confines of the trafficway, Includes driveways and entrances to and exits from property adjacent to the trafficway.	
	4	Driveway Access			
	5	Alley Access		An unnamed road, usually narrow, through the middle of a block giving access to the rear of buildings.	
	6	Alley			
intersection_related		.		Mark the appropriate box indicating if the accident was related to the intersection	
	0	Not Reported	0		
	1	No Relationship			
	2	Intersection Related		A traffic accident where the first harmful event (1) occurs on an approach to, movement through, or exit from an intersection (2) has resulted from an activity, behavior, or control related to the intersection.	
	3	Driveway Access		A roadway by which motor vehicles may enter or leave a trafficway and limited to	
	4	Alley Intersection			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
nsc_reportable				Check the appropriate box to indicate if the estimated total damage is over or under the $1,000. minimum reporting level as required by Arizona Revised Statute 28-667. Any injury class 2 through 5 indicates over minimum.	
	1	Fatals, Injuries, Or Property Damage Over $1000	1		
	2	Property Damage Under $1000 With No Injuries			
	3	Not Reportable			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
first_harmful		The first occurrence of damage, injury, or death in the series of events that constitute a motor vehicle traffic accident	0		
	0	Not Reported			
	1	Overturning			
	2	Exhaust Fume Poisoning			
	3	Breakage of Vehicle			
	4	Explosion of Vehicle			
	5	Fire in Vehicle			
	6	Occupant Fall from Vehicle			
	7	Occupant Hit by Object			
	8	Injured from Moving Part of Vehicle			
	9	Object Falling from, or in Vehicle			
	10	Vehicle			
	11	Object Fall on Vehicle			
	12	Toxic Chemical Leak			
	13	All Other Non-Collision		A motor vehicle traffic accident that does not involve a collision, but does include accidents such as overturning, jackknifing, carbon monoxide, vehicle breakage, explosion, fire, toxic chemical leakage, falling or jumping from a vehicle, object falling from, on, in, or thrown against a vehicle, etc.	
	14	Collision with Pedestrian		Any person who is not an occupant or driver of a motor vehicle or other road vehicle. Includes: person walking, sitting, lying, working, or operating a pedestrian conveyance	
	15	Collision with Pedestrian Conveyance		Human powered device, other than pedaling, by which a pedestrian may move himself or other pedestrians. Includes, but non limited to: baby carriage, child's wagon, roller skates, sleds, push carts, non-motorized wheel chairs, scooters, skateboards, etc.	
	16	Collision with other Motor Vehicle			
	17	Collision with Motor Vehicle Other Roadway			
	18	Collision with Motor Vehicle Parked Properly			
	19	Improperly			
	20	Collision with Train, Forward			
	21	Collision with Train, Stopped			
	22	Collision with Train, Backward			
	23	Collision with Wild Animal			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
	24	Collision with Wild Game			
	25	Collision with Animal Pets			
	26	Collision with Animal Livestock			
	27	Collision with Tree			
	28	Collision with Boulder			
	29	Collision with Utility Pole			
	30	Collision with Luminaire			
	31	Collision with Traffic Signal			
	32	Collision with Traffic Sign			
	33	Collision with Median Barrier			
	34	Collision with Guard Rail			
	35	Collision with Fence			
	36	Collision with Bridge Abutment			
	37	Collision with Traffic Barricade			
	38	Collision with Machinery			
	39	Collision with Bridge Culvert			
	40	Collision with Curb			
	41	Collision with Other Fixed Object			
	42	Collision with Object Dropped from Vehicle			
	43	Collision with Spec Devices			
	44	Collision with Fallen Tree or Stone			
	45	Collision with Landslide			
	46	Collision with Pedalcycle			
	47	Collision with Animal with Person			
	48	Collision with Animal Draw Conveyance			
	49	Collision with Other Non-Fixed			
	50	Collision with Pedalcyclist			
	51	Collision with Unknown			
	52	Collision with Machine Transport			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
collision_manner		This is the type of crash that causes the damage. Most of the choices are self-explanatory but some basic guidelines follow. Vehicle action also gives a clue to manner.			
		Not Reported	Blank		
	0	Single Vehicle		Single Vehicle- Usually ran off road, fixed object, overturning.	
	1	Sideswipe (same)		Sideswipe Same Direction – Examples include: a Passing movement or drifting in the travel lane.	
	2	Sideswipe (opposite)		Sideswipe Opposite Direction- Does not change direction of momentum, less than 4 inches of contact.	
	3	Angle		Angle- Vehicles must be traveling on roadways that intersect each other. T-bone.	
	4	Left Turn		Left Turn- A left turn movement. Some may appear to be angle or head on.	
	5	Rear-End		Rear-End- Must be traveling in the same direction.	
	6	Head-On		Head-On- Must be traveling in opposite directions. Contact does not necessarily have to be front to front.	
	7	Backing		Backing- Self explanatory	
	8	Other		Other- None of the above.	
	A	Driveway/Alley Related			
	B	Non-Contact (mc)		Non-Contact Motorcycle- Lay down to avoid or during slide.	
	C	Non-Contact (not mc)		Non-Contact Non-Motorcycle- Example; Vehicle breakage or fire.	
	D	U-Turn		U Turn- Attempting to travel in the opposite direction.	

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
scene		Check the appropriate box, whether or not the accident was investigated at the scene.			
	0	Not Reported	0		
	1	Investigated			
	2	Not Investigated			
daylight		If the accident occurred during hours of darkness, mark the appropriate box to indicate if streetlights were present and whether or not they were functioning.			
	0	Not Reported	0		
	1	Daylight			
	2	Dawn or Dusk			
	3	Darkness			
weather		Mark the appropriate box indicating the weather condition at the time of the accident. Check severe crosswind if the accident was a direct result of the wind during clear or cloudy weather. Severe crosswinds should be considered secondary to other inclement weather, such as, rain, snow, fog, or dust. Check the appropriate weather category (rain, snow, fog, dust). If more than one category is applicable please describe the conditions in the narrative portion of the report.			
	0	Not Reported, No Adverse Conditions	0		
	1	Clear			
	2	Cloudy			
	3	Sleet/Hail			
	4	Rain			
	5	Snow			
	6	Severe Crosswinds			
	7	Blowing Sand, Soil, Dirt, Snow			
	8	Fog, Smog, Smoke			
extended_ncic					
	XXXX			Four Digit Number	

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
traffic_way		Any land way open to the public as a matter of right or custom for moving persons or property from one place to another.			
	0	Not Reported	0		
	1	Roadway/Alley			
	2	Shoulder			
	3	Roadside			
	4	Frontage Road			
	5	Turning Road			
	6	Non-Trafficway			
	7	Median			
	8	Outer Separator			
	9	Sidewalk/Bike Path			
damage_severity					
	0	Not Reported	0		
	1	Left at Scene			
	2	Drivable			
	3	Disabled/Towed			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
injury_severity					
	0	Not Reported	1		
	1	No Injury Accident		A situation where there is no reason to believe that the person received any bodily harm from the motor vehicle traffic accident in which they were involved.	
	2	Possible Injury Accident		Any injury reported or claimed which is not a fatal, incapacitating, or non-incapacitating evident injury. Includes such situations as nausea, hysteria, complaint of pain, and injuries not evident.	
	3	Non-Incapacitating Injury Accident		Any injury other than fatal and incapacitating which is evident to any observer at the scene of the accident. Includes bumps, abrasions, bruises and minor lacerations. The person receiving these injuries is still able to leave the scene under their own power.	
	4	Incapacitating Injury Accident		Is an injury, other that a fatal, Which prevents the injured person from walking, driving or normally continuing the activities which he was capable of performing prior to the motor vehicle traffic accident. Includes severe lacerations, broken or distorted limbs, unconsciousness, inability to leave accident scene without assistance.	
	5	Fatal Accident			
	6	Unknown		Should be used only if the person is not present at the time of investigation. All efforts should be made to make accurate determination.	
hit_and_run					
	-1	yes	0		
	0	No			
hazardous		if the incident involved one or more vehicles carrying hazardous materials			
	-1	yes	0		
	0	No			
run_off_road					
	-1	yes	0		
	0	No			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
file_number					
	0 to 999999			A six digit number	
received_date		Date the accident report was received by ADOT	20		
				MM/DD/YYYY Format	
medicaltransport					
	-1	yes	0		
	0	no			
towaway		if the incident resulted in disabling one or more vehicles to the extent that they were transported from the scene by a tow truck or another vehicle			
	-1	yes	0		
	0	no			
has_errors					
	-1	yes	0		
	0	no			

Table 10. Data Fields in the Table "dbo_incident_location"

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
microfilm					
	00000000 to 99999999	Unique id linked to each accident report and serves as an index field to relate all table			
onroad					
	Road Name	Road name where crash occurred			
crossing_feature				near intersections only	
		Nearest Cross Road or Mile Post			
offset			0		
		offset from the crossing feature (Check the direction for +ve and -ve Signs)			
event_measure					
	-10 to 199		999		
	999				
event_x_coord					
	0		0		
	100000.0 to 999999.9				
event_y_coord					
	0		0		
	100000.0 to 999999.9				
reference_measure					
	0 to 199				
	999		999		
reference_x_coord					
	0		0		
	100000.0 to 999999.9				
reference_y_coord					
	0		0		
	100000.0 to 999999.9				

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
o_validation_code					
	0		0		
	1				
	9				
c_validation_code					
	0		0		
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
longitude					
	0		0		
latitude					
	0		0		
nc					
	00 to 99			a two digit number stored as text	
city_name					
	Blank		Blank		
	City	Name of the city			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
int_filename					
	Blank		Blank		
	c07int.dbf				
	tavnint.dbf				
	tchnint.dbf				
	tgilint.dbf				
	tglnint.dbf				
	tmesint.dbf				
	tphxint.dbf				
	tsctint.dbf				
	tsurint.dbf				
	ttmpint.dbf				
int_filedate					
		date in MM/DD/YYYY format and may include time			

Table 11. Data Fields in the Table "dbo_nonvehicle_data"

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
microfilm					
	00000000 to 99999999	Unique id linked to each accident report and serves as an index field to relate all table			
owner					
	0	Not Reported	0		
	1	Private			
	2	Public Utility			
	3	Federal Government			
	4	State Of Arizona			
	5	County In Arizona			
	6	City In Arizona			
	7	Other Government			
	8	Unknown			
description					
	0	Not Reported	0		
	1	Same as First Harmful Event			
	2	Building			
	3	Sign			
	4	Landscaping			
	5	Animal			
	6	Machinery			
	7	Utility Pole			
	8	Other			

Table 12. Data Fields in the Table "dbo_person"

Data Field	Range of Values	Definitions	Default Values	Comments	Reason for not coding?
microfilm					
	00000000 to 99999999	Unique id linked to each accident report and serves as an index field to relate all table			
unit_number		Vehicle reference number as referenced in picture in crash report form	1		
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
person_number					
	1 thru 58				
age					
	0		0		
	1 thru 100	age of the person involved			
	255				
sex		sex of person referred		Sort Order	
	F	Female		2	
	M	Male		1	
	U	Unknown, Not Reported		3	
id_number					
	Blank	Driver ID number of the person			Not in ALISS update provided to MAG due to privacy of data

Data Field	Range of Values	Definitions	Default Values	Comments	Reason for not coding?
birthdate					
	MM/DD/YYYY	Date of Birth of the person	Jan. 1 of appropriate year based on age		Not in ALISS update provided to MAG due to privacy of data
person_type					
	0	Not Reported	0		
	1	Driver			
	2	Pedestrian			
	3	Pedalcyclist			
	4	Passenger			
	5	Other			
seat_number					
	0	Not Reported	0		
	1	Front Left			
	2	Front Center			
	3	Front Right			
	4	Middle Left			
	5	Middle Center			
	6	Middle Right			
	7	Rear Left			
	8	Rear Center			
	9	Rear Right			
	10	Not in Passeng			
	11	Motorcycle/Bus			
	12	Other			
	13	Unknown			
	14	Pedalcycle			
restraint_used					
	0	Not Reported	0		
	1	None Used			
	2	Lap Belt			
	3	Lap and Shoulder			
	4	Airbag Deployed			
	5	Child Restraint			
	6	Protective Helmet			
	7	Passive Belt			
	8	Passive and Lap			
	9	Other			

Data Field	Range of Values	Definitions	Default Values	Comments	Reason for not coding?
injury					
	0	Not Reported	1		
	1	No Injury		a situation where there is no reason to believe that the person received any bodily harm from the motor vehicle traffic accident in which they were involved.	
	2	Possible Injury		Any injury reported or claimed which is not a fatal, incapacitating, or non-incapacitating evident injury. Includes such situations as nausea, hysteria, complaint of pain, and injuries not evident.	
	3	Non-Incapacitating Injury		Any injury other than fatal and incapacitating which is evident to any observer at the scene of the accident. Includes bumps, abrasions, bruises and minor lacerations. The person receiving these injuries is still able to leave the scene under their own power.	
	4	Incapacitating		driving or normally continuing the activities which he was capable of performing prior to the motor vehicle traffic accident. Includes severe lacerations, broken or distorted limbs, unconsciousness, inability to leave accident scene without assistance.	
	5	Fatal			
	6	Unknown		Should be used only if the person is not present at the time of investigation. All efforts should be made to make accurate determination.	
license_class					
		Not Reported	Blank		
	1	Motorcycle Only			
	2	Operator			
	3	Operator and Motorcycle			
	4	Chauffeur			
	5	Chauffeur and Motorcycle			
	A	Commercial Driver			
	B	Commercial Driver			
	C	Commercial Driver			
	D	Operator			
	G	Graduated License			
	M	Motorcycle			

Data Field	Range of Values	Definitions	Default Values	Comments	Reason for not coding?
driver_state					
	0	Not Reported	57		
	52	U.S. Territory			
	53	U.S.Government			
	54	Canada			
	55	Mexico			
	56	Other Foreign			
	57	Unknown			
	AB	Alberta			
	AG	Aguascalientes			
	AK	Alaska			
	AL	Alabama			
	AR	Arkansas			
	AS	American Samoa			
	AZ	Arizona			
	BC	British Columbia			
	BN	Baja California Norte			
	BS	Baja California Sur			
	BZ	Belize			
	CA	California			
	CH	Coahuila			
	CI	Chihuahua			
	CL	Colima			
	CO	Colorado			
	CP	Campeche			
	CR	Costa Rica			
	CS	Chiapas			
	CT	Connecticut			
	CZ	Canal Zone			
	DC	District of Columbia			
	DE	Delaware			
	DF	Distrito Federal			
	DG	Durango			
	ES	El Salvador			
	FL	Florida			
	GA	Georgia			
	GE	Guerrero			
	GJ	Guanajuato			
	GT	Guatemala			
	GU	Guam			
	HD	Hidalgo			
	HI	Hawaii			
	HO	Honduras			
	IA	Iowa			
	ID	Idaho			
	IL	Illinois			
	IN	Indiana			
	JA	Jalisco			
	KS	Kansas			
	KY	Kentucky			
	LA	Louisiana			
	MA	Massachusetts			
	MB	Manitoba			

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MC	Michoacan
MD	Maryland
ME	Maine
MI	Michigan
MN	Minnesota
MO	Missouri
MP	Northern Marianas
MR	Morelos
MS	Mississippi
MT	Montana
MX	Mexico
NA	Nayarit
NB	New Brunswick
NC	North Carolina
ND	North Dakota
NE	Nebraska
NF	Newfoundland
NH	New Hampshire
NI	Nicaragua
NJ	New Jersey
NL	Nuevo Leon
NM	New Mexico
NS	Nova Scotia
NT	Northwest Territories
NV	Nevada
NY	New York
OA	Oaxace
OH	Ohio
OK	Oklahoma
ON	Ontario
OR	Oregon
OT	Other
PA	Pennsylvania
PE	Prince Edward
PN	Panama
PQ	Quebec
PR	Puerto Rico

Continued on Next Page

	PU	Puebla	
	QE	Queretaro	
	QI	Quintana Roo	
	RI	Rhode Island	
	SC	South Carolina	
	SD	South Dakota	
	SI	Sinaloa	
	SK	Saskatchewan	
	SL	San Luis Potosi	
	SO	Sonora	
	TA	Tamaulibas	
	TB	Tabasco	
	TL	Tlaxcala	
	TN	Tennessee	
	TX	Texas	
	UK	Unknown	
	UT	Utah	
	VA	Virginia	
	VC	Veracruz	
	VI	Virgin Islands	
	VT	Vermont	
	WA	Washington	
	WI	Wisconsin	
	WV	West Virginia	
	WY	Wyoming	
	YT	Yukon Territory	
	YU	Yucatan	
	ZA	Zacatecas	

Data Field	Range of Values	Definitions	Default Values	Comments	Reason for not coding?
endorsement					
		Not Reported	Blank		
	D	Operator			
	H	Hazardous Materials			
	M	Motorcycle			
	N	Tank Vehicle			
	P	Bus/School Bus			
	T	Double/Triple Trailer			
	X	Tank/Vehicle Carrying Hazardous Materials			
restriction_1		All Arizona and out of state driver license restrictions should conform to the standards used on the CDL license.			
		Not Reported	Blank		
	A	Corrective Lenses			
	B	Left Outside Mirror			
	C	Automatic Transmission			
	D	Daylight Hours Only			
	E	Golf Cart Only			
	F	Full Hand Controls			
	G	Mechanical Signals			
	I	Right, Left and Inside Mirrors			
	J	Motorcycle 100cc or Less			
	K	CDL Intrastate Only			
	L	Non-Air Brake Vehicles Only			
	M	Moped, Motorized Cart Only			
	N	None			
	O	Other			
	P	Instruction Permit			
	R	Restricted Instruction Permit			
restriction_2					
		same as restriction_1			
airbag					
	0	Unknown, Not Reported	0		
	1	Present/Deployed			
	2	Present/Not Deployed			
	3	Not Present			

Table 13. Data Fields in the Table "dbo_road_characteristic"

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
microfilm					
	00000000 to 99999999	Unique id linked to each accident report and serves as an index field to relate all tables			
road_character					
	0	Not Reported	0		
	1	Two-Way Striped Center Line		Traffic traveling in opposite directions is separated by double solid lines where passing is prohibited in both directions, a double line consisting of a broken and a solid line where passing is permitted in one direction, or one broken line where passing is permitted in both directions. The lines may be formed with paint, raised pavement markings, or both.	
	2	Two-Way No Stripe		Either an unpaved roadway or a paved roadway with no travel lanes designated by paint or other pavement markings.	
	3	Two-Way Painted Median		An area flush with the pavement and outlined with paint, raised pavement markings, or both. Includes a two way left turn lane and may include diagonal stripes for better definition.	
	4	Two-Way Raised Median		The median consists of a paved or landscaped island higher than the adjacent roadway surface. The boundary between the median and the road may or may not have a curb.	
	5	Two-Way Concrete Median		A concrete barrier of any kind designed specifically to prevent traffic from entering the opposing lanes. Sometimes called a "jersey barrier".	
	6	Two-Way Cable Barrier		A wire cable barrier periodically anchored in the ground and Designated to prevent or deter a vehicle from entering the opposing lane.	
	7	Two-Way Depressed Median		The opposing traffic roadway surfaces are separated by a constructed depression, usually shallow, and wide enough to impede traffic from intentionally crossing the median.	
	8	Two-Way Extended Median		The opposing traffic roadway surfaces are separated by natural geographic features such as hills, mountains, gorges, etc. The width is greater than what a normally designed median would be.	
	9	One-Way Street		There are no opposing roadway surfaces. All traffic moves in the same direction.	

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
grade					
	0	Not Reported	0		
	1	Level			
	2	Downgrade			
	3	Upgrade			
	4	Hillcrest			
	5	Dip			
surface_condition		Check the condition present at the time of the crash.			
	0	Not Reported, No Unusual Conditions	0		
	1	Dry			
	2	Wet			
	3	Sand, Mud, Dirt, Oil or Gravel			
	4	Snow			
	5	Slush			
	6	Ice			
	7	Other			
	8	Unknown			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
road_surface		Mark the appropriate surface chracteristic			
	0	Not Reported	0		
	1	Asphalt			
	2	Concrete			
	3	Gravel			
	4	Dirt			
	5	Other			
special_location		Mark the appropriate box indicating the type of special location involved.			
	0	Not Reported, None	0		
	1	School Crossing		A specially signed area preceding and including the crosswalk where speed is reduced. This box should be used only while school is in session or a school related function is in progress.	
	2	Pedestrian Crosswalk (striped)		The area within the striped boundaries of the crosswalk	
	3	Pedestrian Crosswalk (not striped)		Areas where pedestrians may legally cross the roadway adjacent to the intersection area	
	4	Bridge		Includes the road on the bridge structure and the approaches to the bridge if the road width changes.	
	5	Tunnel		Includes the road within the tunnel and the approaches to the tunnel if the road width changes. Railroad or roadway underpasses are not considered tunnels	
	6	RR Crossing		where the railroad right-of-way and the trafficway overlap. The trafficway must be at the same grade as the railroad and not an overpass or underpass.	
	7	Gore Area		An area of the trafficway where two roadways diverge or converge, and is bounded on at least two sides by the edges of those roadways.	
	8	Bike Path		A place reserved for bicycle travel and marked either by signs, painted markings, or physical barriers or a combination thereof.	
	9	Two-Way Left Turn Lane		Where there is a commonly used lane only for left turns by traffic traveling in opposing directions.	

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
road_condition		Mark the appropriate box if an unusual condition existed. If none, leave blank (0)	0		
	0	Not Reported, No Unusual Conditions			
	1	Under Construction, Traffic Allowed		Area of roadway under construction marked with appropriate construction zone signing with motor vehicle traffic permitted to travel through the construction zone either continuously or intermittently by flag person or a pilot car	
	2	Under Construction, Traffic Not Allowed		Area of roadway under construction that is closed to through traffic by barricades or other traffic controls. The accident must occur within the closed construction zone	
	3	Under Repairs		Area where roadway and/or utilities in the roadway are undergoing maintenance or repair. The repair zone is usually identified by temporary signs and channeling devices, such as cones which are generally in place for a short time such as a few hours or a few days.	
	4	Holes, Ruts, Bumps		Area of roadway surface in need of immediate repair due to pot holes, pavement upheaval, or cracking. It does not include roadway surfaces worn down by normal wear and tear.	
	5	Obstruction (protected)		Obstacles on the roadside (such as bridge supports, poles, sign posts, gore areas) that are protected by impact attenuator devices such as crash cushions, guard rails, barriers etc.	
	6	Obstruction (unprotected)		Obstacles on the roadside (such as bridge support, poles, signs posts, gore areas) that are **not** protected by impact attenuator devices such as crash cushions, guard rails, or barriers.	
	7	Obstruction (unlighted at night)			**Not in Use**
	8	Defective Shoulders		The shoulder portion of the roadway that is either not maintained or is signed with "low shoulder" or “soft shoulder" signs.	
	9	Changing Roadwidth		The pavement width is tapered either for the addition or deletion of a traffic lane or a turn lane. This does not include a tapering in the width of a traffic lane where no lanes are added or deleted.	
	10	Flooded		Water on a roadway backed up from a curb, drainage area, or wash and sufficient enough to result in vehicle control problems, and is other than wet surface from rain	
	11	Temporary Lane Closure		When a lane of a multiple lane roadway is closed to traffic by using cones, barricades, etc. This category is not intended for two lane, two way roadways where traffic control is handled by flag person or a pilot car. (See Under Construction Traffic Allowed-#1).	

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
lane					
	0	Other, or Unknown	0		
	1	Lane 1			
	2	Lane 2			
	3	Lane 3			
	4	Lane 4			
	5	Lane 5			
	6	Lane 6			
	7	Exclusive Left Turn Lane			
	8	Exclusive Right Turn Lane			
	9	Non-Roadway			
sector_number					
	0		0		
	1				
	21				
	32				
control		Indicate areas with special traffic and access controls			
	0	Not Reported	0		
	1	Non-Controlled Access			
	2	Mainline			
	3	Off-Ramp			
	4	On-Ramp			
	5	Frontage Road			
	6	Acceleration Area			
	7	Deceleration Area			
	8	Crossroad			
	9	Rest Area/Inspection			
locale					
	0	Not Reported	0		
	1	Urban			
	2	Rural			
	3	Unknown			
alignment					
	0	Not Reported	0		
	1	Straight Road			
	2	Curved Road			
	3	Unknown			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
terrain					
	0	Not Reported	0		
	1	Level			
	2	Hilly			
	3	Mountains			
	4	Unknown			

Table 14. Data Fields in the Table "dbo_traffic_control_devc"

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
microfilm					
	00000000 to 99999999	Unique id linked to each accident report and serves as an index field to relate all table			
control_type		Indicate the traffic control present at the scene.			
	0	Not Reported	0		
	1	Signal			
	2	Regulatory Sign			
	3	Stop Sign			
	4	Warning Sign			
	5	Railroad Signal			
	6	Flashing Signal			
	7	Human			
	8	Illumination			
	9	Striping			
	10	Other Device			
operational		Indicate whether the traffic control was functioning prior to the accident. If it is unknown whether the device was non-functional prior to the accident assume it was working.			
	0	Not Reported	0		
	1	Functional			
	2	Not Functional			

Table 15. Data Fields in the Table "dbo_traffic_unit"

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
microfilm					
	00000000 to 99999999	Unique id linked to each accident report and serves as an index field to relate all tables			
unit_number		Vehicle reference number as referenced in picture in crash report form		Used as an identifier for each motor vehicle.	
	1		1	1. Motor vehicles - automobiles, trucks, vans, motorcycles, motor homes, mopeds, buses, taxis, ambulances, police vehicles, fire trucks, golf carts, etc. Includes electrically powered.	
	2			2. Pedestrians - people on foot or on human powered non-motorized devices such as: skateboards, roller skates, baby carriages, etc.	
	3			3. Pedalcyclists - people on non-motorized devices propelled by pedaling such as: bicycles, tricycles, unicycles, pedalcars, etc.	
	4			4. Animal and rider - person on a horse, mule, etc. or sitting in a cart drawn by an animal or team of animals.	
	5			5. Construction. farm. or industrial - machinery while in transport upon a trafficway for the purpose of moving people, the device itself, or property from one place to another	
	6				
	7				
	8				
	9				
	10				
	11				
	12				

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
prior_harmful		Event occuring prior to first harmful event			
	0	Not Reported	0		
	1	Swerved/Braked to Avoid Object or Animal			
	2	Swerved/Braked to Avoid Pedestrian			
	3	Swerved/Braked to Avoid Other Vehicle			
	4	Driver Distraction Within Vehicle			
	5	Driver Distraction Outside Vehicle			
	6	NOT IN USE			
	7	NOT IN USE			
	8	Reckless Driving (only if stated by officer)			
	9	Exceeded Lawful Speed			
	10	Other			
	11	Unknown			
	12	Stopped			
	13	Exhaust Fume Poisoning			
	14	Breakage of Any Part of Vehicle Causing Damage Only			
	15	Explosion of Any Part of Vehicle Causing Damage Only			
	16	Fire in Vehicle Causing Damage Only			
	17	Toxic or Corrosive Chemical Leaking from Vehicle			
	18	Laying Down Motorcycle to Avoid Collision			
	19	No Improper Driving			
	20	Left Roadway			

Data Field	Values	Definitions	Default Values	Comments	for Not
sub_harmful		Event occuring subsequent to first harmful event			
	0	Not Reported	0		
	1	Overturning			
	2	Exhaust Fume Poisoning			
	3	Breakage of Vehicle			
	4	Explosion of Vehicle			
	5	Fire in Vehicle			
	6	Occupant Fall from Vehicle			
	7	Occupant Hit by Object			
	8	Injured from Moving Part of Vehicle			
	9	Object Falling from, or in Vehicle			
	10	Object Thrown towards,in or on Vehicle			
	11	Object Fall on Vehicle			
	12	Toxic Chemical Leak			
	13	All Other Non-Collision			
	14	Collision with Pedestrian			
	15	Collision with Pedestrian Conveyance			
	16	Collision with other Motor Vehicle			
	17	Collision with Motor Vehicle other Roadway			
	18	Collision with Motor Vehicle Parked Properly			
	19	Collision with Motor Vehicle Parked Improperly			
	20	Collision with Train, Forward			
	21	Collision with Train, Stopped			
	22	Collision with Train, Backward			
	23	Collision with Wild Animal			
	24	Collision with Wild Game			
	25	Collision with Animal Pets			
	26	Collision with Animal Livestock			
	27	Collision with Tree			
	28	Collision with Boulder			
	29	Collision with Utility Pole			
	30	Collision with Luminaire			
	31	Collision with Traffic Signal			
	32	Collision with Traffic Sign			
	33	Collision with Median Barrier			
	34	Collision with Guard Rail			
	35	Collision with Fence			
	36	Collision with Bridge Abutment			
	37	Collision with Traffic Barricade			
	38	Collision with Machinery			
	39	Collision with Bridge Culvert			
	40	Collision with Curb			
	41	Collision with Other Fixed Object			
	42	Collision with Object Dropped from Vehicle			
	43	Collision with Spec Devices			
	44	Collision with Fallen Tree			
	45	Collision with Landslide			
	46	Collision with Pedalcycle			
	47	Collision with Animal w/Person			
	48	Collision with Animal Draw Conveyance			
	49	Collision with Other Non-Fixed			
	50	Collision with Pedalcyclist			
	51	Collision with Unknown			
	52	Collision with Machine Transport			
	53	Unknown or No Further Action			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
unit_type		Type of vehicle involved in the crash	0		
	0	Not Reported			
	1	Motor Vehicle			
	2	Pedestrian			
	3	Pedalcycle			
unit_action		Mark the appropriate box indicating the vehicle, pedestrian, pedalcyclist, or animal rider action at the moment of and/or which most directly affected the accident.	0		
	0	Not Reported			
	1	Going Straight Ahead			
	2	Slowing in Trafficway			
	3	Stopped in Trafficway			
	4	Making Left Turn			
	5	Making Right Turn			
	6	Making U-Turn			
	7	Entering Alley or Driveway			
	8	Leaving Alley or Driveway			
	9	Overtaking/Passing			
	10	Changing Lanes			
	11	Backing			
	12	Avoiding Vehicle, Objects, etc.			
	13	Entering Parking Position			
	14	Leaving Parking Position			
	15	Properly Parked			
	16	Improperly Parked			
	17	Driverless Moving Vehicle			
	18	Crossing Road			
	19	Walking With Traffic			
	20	Walking Against Traffic			
	21	Standing			
	22	Lying			
	23	Getting on/off Vehicle			
	24	Working on/pushing Vehicle			
	25	Working on Road			
	26	Other			
	27	Unknown			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
vision		Mark the appropriate box for each traffic unit indicating if there was a vision obscurement.	0		
	0	Not Reported			
	1	Not Obscured			
	2	By Parked Stopped Vehicle			
	3	By Moving Vehicle			
	4	By Building			
	5	By Embankment			
	6	By Signboard			
	7	By Hillcrest			
	8	By Load on Vehicle			
	9	By Trees, Bushes			
	10	By Headlight			
	11	By Sun Glare			
	12	Because of Bad Weather			
	13	Other			
	14	Rain, Snow, Fog on Windshield			
	15	Windshield Obscured, Other			
	16	Unknown			
familiar					
	0	Not Reported	0		
	1	Yes			
	2	No			
	3	Unknown			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
physical_1		Mark the appropriate box indicating the physical condition of the DRIVER, PEDESTRIAN, PEDALCYCLIST, OR ANIMAL RIDER at the time of the accident.		Two selections may be made	
	0	Not Reported	0		
	1	No Apparent Influence		The appearance and behavior of the person reveals no apparent influences	
	2	Had Been Drinking		The investigator has reason to believe the person had been drinking and alcohol. The person does not need to meet ARS 28-1381 criteria	
	3	Appeared to be Under Influence of Drugs		The investigator has reason to believe that drugs or narcotics have influenced the person's action	
	4	Ill-Ability Influenced		Physical and/or mental impairment other than bodily defects or infirmities.	
	5	Sleepy-Fatigued		When the officer believes from his investigation that the person was sleepy or fatigued. This determination can be made from driver statements, manner in which vehicle left roadway, etc.	
	6	Physical Impairment		Any temporary or permanent disability. Describe specific defect in accident narrative	
	7	Prescription Drugs		Those prescribed by medical personnel.	
	8	Other		An influencing factor not included above. Describe in narrative.	
	9	Unknown		This classification should be selected if the investigator is unable to make a valid determination without further information.	
physical_2					
		same as physical_1			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
violation_1		Mark the appropriate box or boxes indicating the driver, pedestrian, pedalcyclist, or animal rider violations/behavior. (Two selections may be made for each driver, pedestrian, pedalcyclist, or animal rider)			
	0	Not Reported	0		
	1	No Improper Driving			
	2	Speed Too Fast for Conditions			
	3	Exceeded Lawful Speed			
	4	Failed to Yield Right-Of-Way			
	5	Followed Too Closely			
	6	Ran Stop Sign			
	7	Disregarded Traffic Signal			
	8	Made Improper Turn			
	9	Drove in Opposing Traffic Lane			
	10	Knowingly Operated with Faulty or Missing Equipment			
	11	Required Motorcycle Safety Equipment Not Used			
	12	Pass in No-Passing Zone			
	13	Unsafe Lane Change			
	14	Other Unsafe Passing			
	15	Inattention			
	16	Did Not Use Crosswalk			
	17	Walking Against Traffic			
	18	Other			
	19	Unknown			
violation_2					
	same as violation_1	same as violation_1	same as violation_1		

Data Field	Range of Values	Definitions	Default Vales	Comments	Reasons for Not Coding
travel_direction		The direction indicated should be the compass direction just prior to the onset of the unstabilized situation. Be sure to include the pedestrians, pedalcyclists, or animal rider's direction of travel			
		Not Reported	Blank		
	E	East			
	N	North			
	NE	Northeast			
	NW	Northwest			
	S	South			
	SE	Southeast			
	SW	Southwest			
	U	Unknown			
	W	West			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
citation		List the identifying statute numbers of the citations issued. Do not identify the person receiving the statute, only the assigned unit number to which the citation applies	Blank	Display Order	
	14-1107	Drunk Driving (Tribal)		26	
	14-1108	Reckless Driving (Tribal)		27	
	28-1381A1	DUI (driving while intoxicated)		17	
	28-1381A2	DUI (BAC over 0.10)		18	
	28-1381A3	Driving Under the Influence of Drugs		19	
	28-1382	DUI Extreme		20	
	28-3151A	Driving without License		21	
	28-3473C	Driving while License Suspended/Revoked/Cancelled		22	
	28-4135C	Motor Vehicle Financial Responsibility Required		23	
	28-645A3A	Red Light		1	
	28-662A1	Failure to Stop		2	
	28-665A1	Striking fixtures on Hwy		3	
	28-693A	Reckless Driving		4	
	28-701A	Failure to Control Speed		5	
	28-721A	Failure to Drive on Right		6	
	28-729.1	Unsafe Lane Change		7	
	28-730A	Following to Close		8	
	28-751	Turning Methods		9	
	28-754A	Failure to turn Midblock in Safety		10	
	28-771A	Right of Way Uncontrolled Intersection		11	
	28-772	Turning left in Intersection		12	
	28-773B	Vehicle Entering Through Highways at Stop Signs		13	
	28-774	Failure to Yield		14	
	28-855B	Failure to Yield from Stop Sign		15	
	28-891A	Limitations on Backing		16	
	4-244.22	Driving Motor Vehicle while Consuming Liquor		24	
	4-244.34	Under 21 Driving with Liquor in Body		25	

Table 16. Data Fields in the Table "dbo_vehicle"

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
microfilm					
	00000000 to 99999999	Unique id linked to each accident report and serves as an index field to relate all table			
unit_number		Vehicle reference number as referenced in picture in crash report form	1		
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
plate_number			Blank		
		license plate number of the vehicle			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
vehicle_state					
	0	Not Reported	57		
	52	U.S. Territory			
	53	U.S.Government			
	54	Canada			
	55	Mexico			
	56	Other Foreign			
	57	Unknown			
	AB	Alberta			
	AG	Aguascalientes			
	AK	Alaska			
	AL	Alabama			
	AR	Arkansas			
	AS	American Samoa			
	AZ	Arizona			
	BC	British Columbia			
	BN	Baja California Norte			
	BS	Baja California Sur			
	BZ	Belize			
	CA	California			
	CH	Coahuila			
	CI	Chihuahua			
	CL	Colima			
	CO	Colorado			
	CP	Campeche			
	CR	Costa Rica			
	CS	Chiapas			
	CT	Connecticut			
	CZ	Canal Zone			
	DC	District of Columbia			
	DE	Delaware			
	DF	Distrito Federal			
	DG	Durango			
	ES	El Salvador			
	FL	Florida			
	GA	Georgia			
	GE	Guerrero			
	GJ	Guanajuato			
	GT	Guatemala			
	GU	Guam			
	HD	Hidalgo			
	HI	Hawaii			
	HO	Honduras			
	IA	Iowa			
	ID	Idaho			
	IL	Illinois			
	IN	Indiana			
	JA	Jalisco			
	KS	Kansas			

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KY	Kentucky
LA	Louisiana
MA	Massachusetts
MB	Manitoba
MC	Michoacan
MD	Maryland
ME	Maine
MI	Michigan
MN	Minnesota
MO	Missouri
MP	Northern Marianas
MR	Morelos
MS	Mississippi
MT	Montana
MX	Mexico
NA	Nayarit
NB	New Brunswick
NC	North Carolina
ND	North Dakota
NE	Nebraska
NF	Newfoundland
NH	New Hampshire
NI	Nicaragua
NJ	New Jersey
NL	Nuevo Leon
NM	New Mexico
NS	Nova Scotia
NT	Northwest Territories
NV	Nevada
NY	New York
OA	Oaxace
OH	Ohio
OK	Oklahoma
ON	Ontario
OR	Oregon
OT	Other
PA	Pennsylvania
PE	Prince Edward
PN	Panama
PQ	Quebec
PR	Puerto Rico
PU	Puebla
QE	Queretaro
QI	Quintana Roo
RI	Rhode Island
SC	South Carolina
SD	South Dakota
SI	Sinaloa
SK	Saskatchewan
SL	San Luis Potosi
SO	Sonora
TA	Tamaulibas
TB	Tabasco
TL	Tlaxcala

Continued on Next Page

	TN	Tennessee			
	TX	Texas			
	UK	Unknown			
	UT	Utah			
	VA	Virginia			
	VC	Veracruz			
	VI	Virgin Islands			
	VT	Vermont			
	WA	Washington			
	WI	Wisconsin			
	WV	West Virginia			
	WY	Wyoming			
	YT	Yukon Territory			
	YU	Yucatan			
	ZA	Zacatecas			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
ownerclass					
	0	Not Reported	7		
	1	Private			
	2	Federal Government			
	3	State of Arizona			
	4	County in Arizona			
	5	City in Arizona			
	6	Other Government			
	7	Unknown			
body_style					
	0	Not Reported	0		
	1	Passenger Car, regular			
	2	Passenger Car, medium			
	3	Passenger Car, small			
	4	Pick-Up Truck (including panel & mini-bus)			
	5	Pick-Up with Camper			
	6	Other Vehicle with Camper			
	7	Truck Tractor and Semi-Trailer			
	8	Truck Tractor Only			
	9	Farm Tractor of Other Farm Vehicle			
	10	Taxicab			
	11	Commercial Bus			
	12	Non-Commercial Bus			
	13	School Bus, Type 1			
	14	School Bus, Type 2			
	15	Motorcycle (two or three wheel)			
	16	Motorscooter of Motor Bicycle			
	17	RV (all wheel drive, dune buggy, jalopy, custom made)			
	18	Motor Home or House Car			
	19	Military			
	20	Special Controls			
	21	Emergency Vehicle			
	22	Other Truck Combination			
	23	Other Vehicle			
	24	Moped			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
posted_speed		The posted speed limit for the street, section or highway on which the accident occurred	0		
	0	Posted speed limit of the roadway		in 5 mph increments	
	5				
	10				
	15				
	20				
	25				
	30				
	35				
	40				
	45				
	50				
	55				
	60				
	65				
	70				
	75				
estimated_speed		The officer's estimate of the vehicle traveling speed prior to the chain of events that led to the collision	0		
	0				
	1 thru 200				
safe_speed					
			Blank		
	0				
	1 thru 80				

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
defect_1		Indicate any vehicle related defects			
	0	Not Reported	0		
	1	No Apparent Defects			
	2	Defective Brakes			
	3	Defective Steering			
	4	Defective Headlights			
	5	Defective Tail Lights			
	6	Defective Turn-Signal			
	7	Puncture or Blowout			
	8	One or More Smooth Tires			
	9	Fire			
	10	Defective Windshield Wiper			
	11	Defective Exhaust System			
	12	Other Defects			
	13	No Trailer Brakes			
	14	Unknown			
defect_2					
		same as defect_1			
skid		Check the appropriate box to indicate whether or not a vehicle involved in the collision skidded because of braking or other evasive movements prior to the collision.	0		
	0	Not Reported			
	1	Skidding			
	2	No Skidding			
common_carrier					
	-1	yes	0		
	0	no			
damage		Any harm to property that reduces the monetary value of that property.			
	0	Not Reported	0		
	1	Left at Scene			
	2	Drivable			
	3	Disabled/Towed			

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
stopped					
	0	Not Reported	0		
	1	Vehicle in Motion			
	2	At Stop/Yield Sign			
	3	Waiting to Turn Left			
	4	Waiting to Turn Right			
	5	Waiting for Traffic Signal			
	6	Waiting for Pedestrian			
	7	Waiting for Vehicle(s) to Turn			
	8	Waiting for Vehicle(s) Ahead			
	9	Other			
trailer					
		Not Reported	Blank		
	0	None			
	1	Commercial			
	2	Boat Trailer			
	3	Utility Trailer (rental type)			
	4	Utility Trailer (privately owned)			
	5	Tent Trailer			
	6	House Trailer (recreational)			
	7	Mobile Home (being transported)			
	8	Other Trailer			
	9	Other Motor Vehicle			
gwwr		Gross Vehicle Weight Rating			
	0		0		
	1 thru				
hazmat_placard		A diamond shaped placard appearing on the outside of MATERIAL a commercial truck that is carrying hazardous material. PLACARD The placard has a four digit classification code identifying the material being transported.			
	-1	yes	0		
	0	no			

Table 17. Data Fields in the Table "dbo_dtproperties"

Data Field	Range of Values	Definitions	Default Values	Comments	Reasons for Not Coding
Objectid					
property					
value					
uvalue					
lvalue					
version					

References

1. Manual of Instructions for the Use of State of Arizona Traffic Accident Report Forms, 7th Edition, Traffic Records Section, Arizona Department of Transportation, December 2000.

2. ALISS Data Entry Help files, Works Consulting, Gilbert, AZ