ELECTRONIC SUBMISSION RELEASE NOTES

This document contains information for the Electronic Submission for CDSXML2.DTD. The previous version was CDSXML.DTD (version 1). High level changes/updates are as follows:

Differences between CDSXML.DTD and CDSXML2.DTD

- Additional Element requirements enforced by DTD
    - At least one vehicle supplied in XML
    - At Intersection or Not At Intersection Location required
    - Person Last name **REQUIRED**

- New attributes added:
    - Road_Contributing_Code
    - Non_Public_Way
    - Driver_Distracted_By_Code
    - Alcohol_Test_Status_Code
    - Alcohol_Type_Of_Test_Code
    - Alcohol_Test_Result_Code
    - Driver_Suspected_Alchol_Use
    - Driver_Suspected_Drug_Use
    - Bus_Use
    - Crash_Diagram_Encoded (This is a removal of a separate JPG file and embed the diagram in the XML)

- New elements added:
    - Graphics

- Attributes removed:
    - Diagram_Name
    - Carrier_Issuing_Authority_Code
    - Underride_Override_Code

XML Code Changes

- Driver Contributing Codes have changed
    - 23,24,25,26,27 codes have been removed

- Towed from Scene codes have changed
    - 1 and 2 have been changed to 1,2,3,99

- Updated Injury Status codes
    - Fatal Injury
    - 7 **Suspected Serious Injury***
    - 8 Suspected minor injury
    - 9 Possible injury
    - 10 No apparent injury
    - 99 Unknown

***Suspected Serious Injury** is any injury other than fatal which results in one or more of the following:

- Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood
- Broken or distorted extremity (arm or leg)
- Crush injuries
- Suspected skull, chest, or abdominal injury other than bruises or minor lacerations
- Significant burns (second and third degree burns over 10% or more of the body)
- Unconsciousness when taken from the crash scene
- Paralysis

Sample Files
- Cleaned up sample files
  - Change to 2018 crash dates
  - Edit to use correct License Restriction codes
  - Took out POLICE_PRECINCT_BARRACKS from sample files as its only used by State Police

Crash Requirements

There are 3 levels of requirements: 1st level: DTD required, 2nd level: Accept Rules Required and 3rd level: "Business rules" Required

1st level: DTD

A DTD defines what makes a "valid" XML file, the layout of data and the relationship of the data (eg a person is part of an occupant which is part of a vehicle) and defines "required" fields that can be submitted and processed by our systems. The field and a sample value are listed below.

For example, in the DTD v1:
To have a valid Crash XML, must have a Crash_Report section, a Police section, and may have a single Location Section

For example, in the DTD v2.0:
To have a valid Crash XML, must have a Crash_Report section, a Police section, a Location Section, At least one vehicle and may have a single Diagram.

The fields required by the DTD are:

- DTD_VERSION_NUMBER

  For example, DTD_VERSION_NUMBER="2"

- CRASH_DATE

  For example, CRASH_DATE="06/19/2018"

- CRASH_TIME

  For example, CRASH_TIME="0731"

- CITY_TOWN_CODE

  For example, CITY_TOWN_CODE="014"

- POLICE_OFFICER_FIRST_NAME

  For example, POLICE_OFFICER_FIRST_NAME="Edward"

- POLICE_OFFICER_LAST_NAME

  For example, POLICE_OFFICER_LAST_NAME="Smith"

- POLICE_AGENCY_TYPE_CODE (valid values are : 1-State police, 2-Local police, 3-MBTA police, 4-Campus police, 9-Other)

For example, `POLICE_AGENCY_TYPE_CODE`=**"2"**

- POLICE_DEPARTMENT

  For example, `POLICE_DEPARTMENT`=**"Danvers Police Department"**

- *Only required for DTD v2.0*, PERSON_LAST_NAME (for any type Person: Driver, Occupant, Witness and NonMotorist). Person_Last_Name can be any value or even a blank (this is the nature of an XML file)

  For example, `PERSON_LAST_NAME`=**"PORTER"**

2ⁿᵈ level : Accept Rules

There are about 267 configurable rules that can be set to Accept ("A"), Accept with Warning ("W") or Reject ("R"). The Crash web service uses these values to determine what messages (no message if set to "ACCEPT") should be returned to the submitter based upon the value supplied. Or if set to Reject ("R"), the entire submission will be rejected.

See the attached excel file, CrashAll_Rules.xls, for ALL the current rules.
The excel file has the Validation Use Case Number, the Description, the OutCome (A,W,R), Error Use Case Number and the "Error" message returned to the submitter. The message indicates what is actually being validated.

In the outcome Column the "R", indicates what fields are "REJECTED", meaning if the value files validation, the xml file will be rejected. These can be considered "required".
Since we can't guarantee the Vendor software actually uses the DTD, we've had to duplicate some rules.

VALIDATION USE CASE NO	DESC	OUT COME
1.1	Crash City Code	R
1.2	Crash Date	R
3.31	Drivers Per Vehicle*	R
3.32	At least one Vehicle in Crash	R
6.4	Police Agency Type	R
9.27	Police Officer Last Name	R
9.36	Police Department	R
14.4	Driver Last Name Missing**	R
15.1	Crash Report ID***	R

*Drivers Per Vehicle : special rule that checks for only 1 Driver is designated per Vehicle
   **Driver Last Name Missing : special rule to reject if Driver Last Name was missing
   ***Crash Report ID is a vendor software unique number created by the vendor software per submission per police agency.

3rd level: "Business rules"

Lastly there is business logic built into the Crash web service that determines some additional checks. At this level, **it does not outright "reject" submissions but rather put the submissions to a work queue.** The Electronic Review Queue is when there is something "wrong enough" with the submission that needs manual intervention by a clerk to review/process the submission. These are "conditional" checks but can also be considered "required"…meaning if they were done "correctly" it would not require manual intervention.

- Citation Number is missing Check, required, IF driver has CITED code = 1 (yes)   [Use Case #12.8]

- Violation Code 1 is missing Check, required IF Driver has a Citation   [Use Case #12.9]

- IF Mass Driver, Valid Mass License required

- IF Mass Vehicle, Valid Mass Registration required

- IF Hit & Run, vehicle configuration is required

- IF vehicle configuration code 4 thru 13, towed indicator is required

- IF vehicle configuration code 4 thru 13 AND injury status code is 1,2,3,4, 7,8 ,9 , Transport Code is required