Schema documentation for massdot-itms-events-feed.xsd

february 22, 2019

Table of Contents

Schema(s)

Main schema `massdot-itms-events-feed.xsd`

Properties	attribute form default:	unqualified
	element form default:	unqualified

Element(s)

Element `latlon` / `Latitude`

Diagram	

Type	restriction of xs:decimal
Properties	content: simple
Facets	maxInclusive 90
	minInclusive -90
| Source | ```xml
<xs:element name="Latitude">
  <xs:simpleType>
    <xs:restriction base="xs:decimal">
      <xs:minInclusive value="-90"/>
      <xs:maxInclusive value="90"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
``` |

Element `latlon` / `Longitude`

Diagram	

Type	restriction of xs:decimal
Properties	content: simple

Facets	maxInclusive	180
	minInclusive	-180

Source	
| | ```
<xs:element name="Longitude">
  <xs:simpleType>
    <xs:restriction base="xs:decimal">
      <xs:minInclusive value="-180"/>
      <xs:maxInclusive value="180"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
``` |

Element `locationPoint` / `RoadwayName`

Annotations	Name of the roadway for the location including direction (e.g. I-93 NB).
Diagram	
Type	xs:string
Properties	content: simple
| Source | ```
<xs:element name="RoadwayName" type="xs:string">
  <xs:annotation>
    <xs:documentation>Name of the roadway for the location including direction (e.g. I-93 NB).</xs:documentation>
  </xs:annotation>
</xs:element>
``` |

Element `locationPoint` / `Coordinates`

Annotations	The coordinates of the start/end/decision point.
Diagram	
Type	latlon
Properties	content: complex
Model	Latitude , Longitude
Children	Latitude, Longitude
| Instance | ```
<Coordinates>
  <Latitude>{1,1}</Latitude>
  <Longitude>{1,1}</Longitude>
</Coordinates>
``` |
| Source | ```
<xs:element name="Coordinates" type="latlon">
  <xs:annotation>
    <xs:documentation>The coordinates of the start/end/decision point.</xs:documentation>
  </xs:annotation>
</xs:element>
``` |

Element `eventLocation` / `Point`

Annotations	The location for a point event.

Diagram	
Type	locationPoint
Properties	content: complex
Model	RoadwayName , Coordinates
Children	Coordinates, RoadwayName
Instance	```<Point>
<RoadwayName>{1,1}</RoadwayName>
<Coordinates>{1,1}</Coordinates>
</Point>```
Source	```<xs:element name="Point" type="locationPoint">
<xs:annotation>
<xs:documentation>The location for a point event.</xs:documentation>
</xs:annotation>
</xs:element>```

Element `eventLocation` / `Range`

Annotations	The location for a range event.
Diagram	
Properties	content: complex
Model	Start , Waypoint* , End
Children	End, Start, Waypoint
Instance	```<Range>
<Start>{1,1}</Start>
<Waypoint>{0,unbounded}</Waypoint>
<End>{1,1}</End>
</Range>```
Source	```<xs:element name="Range">
<xs:annotation>
<xs:documentation>The location for a range event.</xs:documentation>
</xs:annotation>
<xs:complexType>
<xs:sequence>
<xs:element name="Start" type="locationPoint">```

```
            <xs:annotation>
              <xs:documentation>The point on the roadway that indicates the beginning of the event.</
xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="Waypoint" type="locationPoint" minOccurs="0" maxOccurs="unbounded">
            <xs:annotation>
              <xs:documentation>A point on the roadway that indicates a waypoint.</xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="End" type="locationPoint">
            <xs:annotation>
              <xs:documentation>The point on the roadway that indicates the end of the event.</
xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
</xs:element>
```

Element eventLocation / Range / Start

Annotations	The point on the roadway that indicates the beginning of the event.
Diagram	
Type	locationPoint
Properties	content: complex
Model	RoadwayName , Coordinates
Children	Coordinates, RoadwayName

Instance	`<Start>`
	`  <RoadwayName>{1,1}</RoadwayName>`
	`  <Coordinates>{1,1}</Coordinates>`
	`</Start>`

Source	`<xs:element name="Start" type="locationPoint">`
	`  <xs:annotation>`
	`    <xs:documentation>The point on the roadway that indicates the beginning of the event.</`
	`xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element eventLocation / Range / Waypoint

Annotations	A point on the roadway that indicates a waypoint.

Diagram	
Type	locationPoint
Properties	content: `complex` minOccurs: 0 maxOccurs: `unbounded`
Model	RoadwayName , Coordinates
Children	Coordinates, RoadwayName

Instance	`<Waypoint>`
	  `<RoadwayName>{1,1}</RoadwayName>`
	  `<Coordinates>{1,1}</Coordinates>`
	`</Waypoint>`

Source	`<xs:element name="Waypoint" type="locationPoint" minOccurs="0" maxOccurs="unbounded">`
	  `<xs:annotation>`
	    `<xs:documentation>A point on the roadway that indicates a waypoint.</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `eventLocation / Range / End`

Annotations	The point on the roadway that indicates the end of the event.
Diagram	
Type	locationPoint
Properties	content: `complex`
Model	RoadwayName , Coordinates
Children	Coordinates, RoadwayName

Instance	`<End>`
	  `<RoadwayName>{1,1}</RoadwayName>`
	  `<Coordinates>{1,1}</Coordinates>`
	`</End>`

Source	`<xs:element name="End" type="locationPoint">`
	  `<xs:annotation>`
	    `<xs:documentation>The point on the roadway that indicates the end of the event.</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element **eventLocation / Area**

Annotations	The location for an area event.
Diagram	
Properties	content:　　　　　　　complex
Model	AreaType , AreaValue+
Children	AreaType, AreaValue
| Instance | ```
<Area>
  <AreaType>{1,1}</AreaType>
  <AreaValue>{1,unbounded}</AreaValue>
</Area>
``` |
| Source | ```
<xs:element name="Area">
  <xs:annotation>
    <xs:documentation>The location for an area event.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="AreaType" type="areaEventType">
        <xs:annotation>
          <xs:documentation>The type of area region impacted by an event.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="AreaValue" type="xs:string" maxOccurs="unbounded">
        <xs:annotation>
          <xs:documentation>The name/value of the specific area (type indicated by AreaType)
 impacted by an event.</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
``` |

Element **eventLocation / Area / AreaType**

Annotations	The type of area region impacted by an event.
Diagram	
Type	areaEventType
Properties	content:　　　　　　　simple
Facets	enumeration　　TOWN
	enumeration　　COUNTY
	enumeration　　SUBDISTRICT
	enumeration　　DISTRICT
	enumeration　　STATEWIDE
| Source | ```
<xs:element name="AreaType" type="areaEventType">
  <xs:annotation>
    <xs:documentation>The type of area region impacted by an event.</xs:documentation>
  </xs:annotation>
</xs:element>
``` |

Element `eventLocation / Area / AreaValue`

Annotations	The name/value of the specific area (type indicated by AreaType) impacted by an event.
Diagram	
Type	xs:string
Properties	content: simple
	maxOccurs: unbounded

Source	`<xs:element name="AreaValue" type="xs:string" maxOccurs="unbounded">`
	  `<xs:annotation>`
	    `<xs:documentation>`The name/value of the specific area (type indicated by AreaType) impacted by an event.`</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `laneInfo / Direction`

Annotations	The direction for each lane on the start roadway, including both direction of travel for bidirection roadways; e.g. NNN from three northbound lanes and SSSNNN for three southbound lanes and three northbound lanes. The convention is: – For northbound lanes, the first letter indicates the leftmost travel lane, which is closest to the median; – For southbound lanes, the first letter indicates the rightmost lane, which is closest to entry and exit ramps; – For eastbound lanes, the first letter indicates the leftmost travel lane, which is closest to the median; – For westbound lanes, the first letter indicates the rightmost lane, which is closest to entry and exit ramps.
Diagram	
Type	xs:string
Properties	content: simple

Source	`<xs:element name="Direction" type="xs:string">`
	  `<xs:annotation>`
	    `<xs:documentation>`The direction for each lane on the start roadway, including both direction of travel for bidirection roadways; e.g. NNN from three northbound lanes and SSSNNN for three southbound lanes and three northbound lanes. The convention is: – For northbound lanes, the first letter indicates the leftmost travel lane, which is closest to the median; – For southbound lanes, the first letter indicates the rightmost lane, which is closest to entry and exit ramps; – For eastbound lanes, the first letter indicates the leftmost travel lane, which is closest to the median; – For westbound lanes, the first letter indicates the rightmost lane, which is closest to entry and exit ramps.`</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element `laneInfo / LanesAffected`

Annotations	Lanes affected, where open lanes will be represented by X and closed lanes by O. For example, if the rightmost two lanes are closed, then the string will be OOOOXX.

Diagram	
	LanesAffected / Type xs:string — xs:string Lanes affected, where open lanes will be represented by X and closed lanes by O. For example, if the rightmost two... Built-in primitive type. The string datatype represents character strings in XML.
Type	xs:string
Properties	content: simple

Source	`<xs:element name="LanesAffected" type="xs:string">`
	`  <xs:annotation>`
	`    <xs:documentation>Lanes affected, where open lanes will be represented by X and closed lanes by O. For example, if the rightmost two lanes are closed, then the string will be OOOOXX.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element eventOccurence / StartDateTime

Annotations	The start Date/Time for the occurrence.
Diagram	StartDateTime / Type xs:dateTime — xs:dateTime The start Date/Time for the occurrence. Built-in primitive type. The dateTime datatype represents a specific instant of time.
Type	xs:dateTime
Properties	content: simple

Source	`<xs:element name="StartDateTime" type="xs:dateTime">`
	`  <xs:annotation>`
	`    <xs:documentation>The start Date/Time for the occurrence.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element eventOccurence / EndDateTime

Annotations	The end Date/Time for the occurrence.
Diagram	EndDateTime / Type xs:dateTime — xs:dateTime The end Date/Time for the occurrence. Built-in primitive type. The dateTime datatype represents a specific instant of time.
Type	xs:dateTime
Properties	content: simple

Source	`<xs:element name="EndDateTime" type="xs:dateTime">`
	`  <xs:annotation>`
	`    <xs:documentation>The end Date/Time for the occurrence.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element event / Name

Annotations	Short name given to an event.
Diagram	Name / Type xs:string — xs:string Short name given to an event. Built-in primitive type. The string datatype represents character strings in XML.

Type	xs:string
Properties	content: simple

Source	```xml
	<xs:element name="Name" type="xs:string">
	  <xs:annotation>
	    <xs:documentation>Short name given to an event.</xs:documentation>
	  </xs:annotation>
	</xs:element>
	``

Element event / CreatedAt

Annotations	Date/Time an event was created.
Diagram	
Type	xs:dateTime
Properties	content: simple

Source	```xml
	<xs:element name="CreatedAt" type="xs:dateTime">
	  <xs:annotation>
	    <xs:documentation>Date/Time an event was created.</xs:documentation>
	  </xs:annotation>
	</xs:element>
	``

Element event / ConfirmedAt

Annotations	Date/Time an event was confirmed.
Diagram	
Type	xs:dateTime
Properties	content: simple

Source	```xml
	<xs:element name="ConfirmedAt" type="xs:dateTime">
	  <xs:annotation>
	    <xs:documentation>Date/Time an event was confirmed.</xs:documentation>
	  </xs:annotation>
	</xs:element>
	``

Element event / UpdatedAt

Annotations	Date/Time an event was updated.
Diagram	
Type	xs:dateTime
Properties	content: simple

Source	```xml
	<xs:element name="UpdatedAt" type="xs:dateTime">
	  <xs:annotation>
	    <xs:documentation>Date/Time an event was updated.</xs:documentation>
	  </xs:annotation>
	</xs:element>
	``

Element event / StartDate

Annotations	The start Date/Time for an event.

Diagram	
Type	xs:dateTime
Properties	content: `simple`

Source	```<xs:element name="StartDate" type="xs:dateTime">```
	``` <xs:annotation>```
	``` <xs:documentation>The start Date/Time for an event.</xs:documentation>```
	``` </xs:annotation>```
	```</xs:element>```

Element event / Location

Annotations	The location defined for an event.
Diagram	
Type	eventLocation
Properties	content: `complex`
Model	Point | Range | Area
Children	Area, Point, Range

Instance	```<Location>```
	``` <Point>{1,1}</Point>```
	``` <Range>{1,1}</Range>```
	``` <Area>{1,1}</Area>```
	```</Location>```

Source	```<xs:element name="Location" type="eventLocation">```
	``` <xs:annotation>```
	``` <xs:documentation>The location defined for an event.</xs:documentation>```
	``` </xs:annotation>```
	```</xs:element>```

Element event / Status

Annotations	The current status of an event.
Diagram	
Type	eventStatus
Properties	content: `simple`
Facets	enumeration `ACTIVE`

	enumeration	FUTURE	
	enumeration	TERMINATED	

Source	`<xs:element name="Status" type="eventStatus">`
	  `<xs:annotation>`
	    `<xs:documentation>The current status of an event.</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`		

Element event / LaneInfo

Annotations	Parent element for lane-level information for the location of an event.
Diagram	
Type	laneInfo
Properties	content: complex minOccurs: 0
Model	Direction , LanesAffected
Children	Direction, LanesAffected

Instance	`<LaneInfo>`
	  `<Direction>{1,1}</Direction>`
	  `<LanesAffected>{1,1}</LanesAffected>`
	`</LaneInfo>`

Source	`<xs:element name="LaneInfo" type="laneInfo" minOccurs="0">`
	  `<xs:annotation>`
	    `<xs:documentation>Parent element for lane-level information for the location of an event.</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Element specialEventSpecifics / SpecialEventCharacteristics

Annotations	The characteristics specific to a Special Event.

Diagram	
Type	xs:string
Properties	content: simple minOccurs: 0

Type Alternatives	Type	Test	XPath default namespace
	stadiumArenaEventType	@subtype = 'STADIUM/ARE-NA_EVENT'	
	outdoorEventType	@subtype = 'OUTDOOR_EVENT'	
	athleticEventType	@subtype = 'ATHLETIC_EVENT'	
	xs:anyAtomicType *[Default Type]*		

| Source | ```xml
<xs:element name="SpecialEventCharacteristics" type="xs:string" minOccurs="0">
  <xs:annotation>
    <xs:documentation>The characteristics specific to a Special Event.</xs:documentation>
  </xs:annotation>
  <xs:alternative test="@subtype = 'STADIUM/ARENA_EVENT'" type="stadiumArenaEventType"/>
  <xs:alternative test="@subtype = 'OUTDOOR_EVENT'" type="outdoorEventType"/>
  <xs:alternative test="@subtype = 'ATHLETIC_EVENT'" type="athleticEventType"/>
</xs:element>
``` |
|---|---|

Element `plannedEvent / EndDate`

Annotations	The end Date/Time for a planned event.
Diagram	
Type	xs:dateTime
Properties	content: simple
| Source | ```xml
<xs:element name="EndDate" type="xs:dateTime">
  <xs:annotation>
    <xs:documentation>The end Date/Time for a planned event.</xs:documentation>
  </xs:annotation>
</xs:element>
``` |

Element `plannedEvent / TypeSpecific`

Annotations	Details specific to the type of Planned Event.

Diagram	
Type Alternatives	

Type Alternatives	Type	Test	XPath default namespace
	constructionMaintenanceSpecifics	@type = 'CONSTRUCTION/MAINTE-NANCE'	
	specialEventSpecifics	@type = 'SPECIAL_EVENT'	

Source	`<xs:element name="TypeSpecific">`
	`  <xs:annotation>`
	`    <xs:documentation>Details specific to the type of Planned Event.</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:alternative test="@type = 'CONSTRUCTION/MAINTENANCE'" type="constructionMaintenanceSpecifics"/`
	`>`
	`  <xs:alternative test="@type = 'SPECIAL_EVENT'" type="specialEventSpecifics"/>`
	`</xs:element>`

Element `plannedEvent / Occurrences`

Annotations	A list of all occurrences for a single event. Up to 20 per event (arbitrary cap).
Diagram	
Properties	content: complex
Model	Occurrence
Children	Occurrence

Instance	`<Occurrences>`
	`  <Occurrence>{1,1}</Occurrence>`
	`</Occurrences>`

Source	`<xs:element name="Occurrences">`
	`  <xs:annotation>`
	`    <xs:documentation>A list of all occurrences for a single event. Up to 20 per event (arbitrary`
	`cap).</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:complexType>`
	`    <xs:sequence maxOccurs="20">`
	`      <xs:element name="Occurrence" type="eventOccurence">`
	`        <xs:annotation>`
	`          <xs:documentation>A single occurrence of a reurring event.</xs:documentation>`
	`        </xs:annotation>`
	`      </xs:element>`
	`    </xs:sequence>`
	`  </xs:complexType>`
	`</xs:element>`

Element `plannedEvent / Occurrences / Occurrence`

Annotations	A single occurrence of a reurring event.

Diagram	
Type	eventOccurence
Properties	content: complex
Model	StartDateTime , EndDateTime
Children	EndDateTime, StartDateTime

Instance	```xml
	<Occurrence>
	  <StartDateTime>{1,1}</StartDateTime>
	  <EndDateTime>{1,1}</EndDateTime>
	</Occurrence>
	``

Source	```xml
	<xs:element name="Occurrence" type="eventOccurence">
	  <xs:annotation>
	    <xs:documentation>A single occurrence of a reurring event.</xs:documentation>
	  </xs:annotation>
	</xs:element>
	``

Element `advisoryWatchWarningCharacteristics / ID`

Annotations	An identifier for the specific weather category, event, and location.
Diagram	
Type	xs:integer
Properties	content: simple

Source	```xml
	<xs:element name="ID" type="xs:integer">
	  <xs:annotation>
	    <xs:documentation>An identifier for the specific weather category, event, and location.</xs:documentation>
	  </xs:annotation>
	</xs:element>
	``

Element `advisoryWatchWarningCharacteristics / Category`

Annotations	The category of the advisory/watch/warning, (either ADVISORY, WATCH, or WARNING).	
Diagram		
Type	restriction of xs:string	
Properties	content:	simple
Facets	enumeration	ADVISORY
	enumeration	WATCH

	enumeration	WARNING
Source	```<xs:element name="Category">
<xs:annotation>
<xs:documentation>The category of the advisory/watch/warning, (either ADVISORY, WATCH, or
WARNING).</xs:documentation>
</xs:annotation>
<xs:simpleType>
<xs:restriction base="xs:string">
<xs:enumeration value="ADVISORY"/>
<xs:enumeration value="WATCH"/>
<xs:enumeration value="WARNING"/>
</xs:restriction>
</xs:simpleType>
</xs:element>```	

Element `advisoryWatchWarningCharacteristics / EventType`

Annotations	The type of weather event (e.g. Tornado, Hurricane).
Diagram	
Type	xs:string
Properties	content: simple
Source	```<xs:element name="EventType" type="xs:string">
<xs:annotation>
<xs:documentation>The type of weather event (e.g. Tornado, Hurricane).</xs:documentation>
</xs:annotation>
</xs:element>```

Element `advisoryWatchWarningCharacteristics / Location`

Annotations	The specified location of the advisory/watch/warning. This could be a county name, 'STATEWIDE', or many county names.
Diagram	
Properties	maxOccurs: unbounded
Source	```<xs:element name="Location" maxOccurs="unbounded">
<xs:annotation>
<xs:documentation>The specified location of the advisory/watch/warning. This could be a county
name, 'STATEWIDE', or many county names.</xs:documentation>
</xs:annotation>
</xs:element>```

Element `advisoryWatchWarningCharacteristics / StartDateTime`

Annotations	The specified start time for the advisory/watch/warning.
Diagram	
Type	xs:dateTime
Properties	content: simple
Source	```<xs:element name="StartDateTime" type="xs:dateTime">```

```
    <xs:annotation>
      <xs:documentation>The specified start time for the advisory/watch/warning.</xs:documentation>
    </xs:annotation>
</xs:element>
```

Element advisoryWatchWarningCharacteristics / EndDateTime

Annotations	The specified end time for the advisory/watch/warning.
Diagram	
Type	xs:dateTime
Properties	content: simple

Source	`<xs:element name="EndDateTime" type="xs:dateTime">`
	`  <xs:annotation>`
	`    <xs:documentation>The specified end time for the advisory/watch/warning.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element roadwayTrafficCharacteristics / HasSpeedRestriction

Annotations	Specifies if there is a speed restriction associated with the event.
Diagram	
Type	xs:boolean
Properties	content: simple

Source	`<xs:element name="HasSpeedRestriction" type="xs:boolean">`
	`  <xs:annotation>`
	`    <xs:documentation>Specifies if there is a speed restriction associated with the event.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element roadwayTrafficCharacteristics / IsWithinWorkZone

Annotations	Specifies if the event is within a work zone.
Diagram	
Type	xs:boolean
Properties	content: simple

Source	`<xs:element name="IsWithinWorkZone" type="xs:boolean">`
	`  <xs:annotation>`
	`    <xs:documentation>Specifies if the event is within a work zone.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`

Element roadwayTrafficCharacteristics / IsBoreClosureRequired

Annotations	Specifies if there is a bore closure required for the event.

Diagram	

Type	xs:boolean
Properties	content: simple
| Source | ```xml
<xs:element name="IsBoreClosureRequired" type="xs:boolean">
  <xs:annotation>
    <xs:documentation>Specifies if there is a bore closure required for the event.</xs:documentation>
  </xs:annotation>
</xs:element>
``` |

Element `roadwayTrafficSpecifics / Subtype`

Annotations	The ascribed sub-type of the ROADWAY/TRAFFIC Unplanned Event.
Diagram	

Type	xs:string
Properties	content: simple

Type Alternatives	Type	Test	XPath default namespace
	roadwayTrafficFireSubtype	@type = 'FIRE'	
	roadwayTrafficRoadwayDamageSubtype	@type = 'ROADWAY_DAMAGE'	
	roadwayTrafficRoadwayObstructionSubtype	@type = 'ROADWAY_OBSTRUCTION'	
	xs:anyAtomicType *[Default Type]*		

| Source | ```xml
<xs:element name="Subtype" type="xs:string">
  <xs:annotation>
    <xs:documentation>The ascribed sub-type of the ROADWAY/TRAFFIC Unplanned Event.</xs:documentation>
  </xs:annotation>
  <xs:alternative test="@type = 'FIRE'" type="roadwayTrafficFireSubtype"/>
  <xs:alternative test="@type = 'ROADWAY_DAMAGE'" type="roadwayTrafficRoadwayDamageSubtype"/>
  <xs:alternative test="@type = 'ROADWAY_OBSTRUCTION'" type="roadwayTrafficRoadwayObstructionSubtype"/>
</xs:element>
``` |
|---|---|

Element `roadwayTrafficSpecifics / Characteristics`

Annotations	The specifc characteristics of a ROADWAY/TRAFFIC Unplanned Event.

Diagram	
Type	roadwayTrafficCharacteristics
Properties	content: complex minOccurs: 0
Model	HasSpeedRestriction , IsWithinWorkZone , IsBoreClosureRequired
Children	HasSpeedRestriction, IsBoreClosureRequired, IsWithinWorkZone
| Instance | ```xml
<Characteristics>
  <HasSpeedRestriction>{1,1}</HasSpeedRestriction>
  <IsWithinWorkZone>{1,1}</IsWithinWorkZone>
  <IsBoreClosureRequired>{1,1}</IsBoreClosureRequired>
</Characteristics>
``` |
| Source | ```xml
<xs:element name="Characteristics" type="roadwayTrafficCharacteristics" minOccurs="0">
  <xs:annotation>
    <xs:documentation>The specifc characteristics of a ROADWAY/TRAFFIC Unplanned Event.</xs:documentation>
  </xs:annotation>
</xs:element>
``` |

Element `actsOfNatureSpecifics` / `Characteristics`

Annotations	The specific characteristics of an ACTS_OF_NATURE Unplanned Event.
Diagram	

Type	advisoryWatchWarningCharacteristics	
Properties	content:	complex
	minOccurs:	0
Model	ID , Category , EventType , Location+ , StartDateTime , EndDateTime	
Children	Category, EndDateTime, EventType, ID, Location, StartDateTime	

Instance	`<Characteristics>`
	`  <ID>{1,1}</ID>`
	`  <Category>{1,1}</Category>`
	`  <EventType>{1,1}</EventType>`
	`  <Location>{1,unbounded}</Location>`
	`  <StartDateTime>{1,1}</StartDateTime>`
	`  <EndDateTime>{1,1}</EndDateTime>`
	`</Characteristics>`	

Source	`<xs:element name="Characteristics" type="advisoryWatchWarningCharacteristics" minOccurs="0">`
	`  <xs:annotation>`
	`    <xs:documentation>The specific characteristics of an ACTS_OF_NATURE Unplanned Event.</`
	`xs:documentation>`
	`  </xs:annotation>`
	`</xs:element>`	

Element `unplannedEvent / CategorySpecific`

Annotations	Details specific to the category of the Unplanned Event.
Diagram	

Type Alterna-tives	Type	Test	XPath default namespace
	roadwayTrafficSpecifics	@category = 'ROADWAY/TRAFFIC'	
	actsOfNatureSpecifics	@category = 'ACTS_OF_NATURE'	

Source	`<xs:element name="CategorySpecific">`
	`  <xs:annotation>`
	`    <xs:documentation>Details specific to the category of the Unplanned Event.</xs:documentation>`
	`  </xs:annotation>`
	`  <xs:alternative test="@category = 'ROADWAY/TRAFFIC'" type="roadwayTrafficSpecifics"/>`
	`  <xs:alternative test="@category = 'ACTS_OF_NATURE'" type="actsOfNatureSpecifics"/>`
	`</xs:element>`

Element `EventsFeed`

Annotations	Root element for the feed.	
Diagram		
Properties	content:	complex
Model	UpdateTimestamp , Events	
Children	Events, UpdateTimestamp	
Instance	`<EventsFeed>` `  <UpdateTimestamp>{1,1}</UpdateTimestamp>`	

```
        <Events>{1,1}</Events>
    </EventsFeed>
```

| Source | ```
<xs:element name="EventsFeed">
  <xs:annotation>
    <xs:documentation>Root element for the feed.</xs:documentation>
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>
      <xs:element name="UpdateTimestamp" type="xs:dateTime">
        <xs:annotation>
          <xs:documentation>Date/Time when this instance of the feed was published.</
xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="Events">
        <xs:annotation>
          <xs:documentation>Includes all published planned/unplanned events.</xs:documentation>
        </xs:annotation>
        <xs:complexType>
          <xs:choice minOccurs="0" maxOccurs="unbounded">
            <xs:element name="PlannedEvent" type="plannedEvent">
              <xs:annotation>
                <xs:documentation>A planned event that affects the roadway – e.g. planned
 construction work.</xs:documentation>
              </xs:annotation>
            </xs:element>
            <xs:element name="UnplannedEvent" type="unplannedEvent">
              <xs:annotation>
                <xs:documentation>An unplanned event that is affecting the roadway – e.g. a crash.</
xs:documentation>
              </xs:annotation>
            </xs:element>
          </xs:choice>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
``` |

Element **EventsFeed / UpdateTimestamp**

Annotations	Date/Time when this instance of the feed was published.
Diagram	
Type	xs:dateTime
Properties	content: simple
| Source | ```
<xs:element name="UpdateTimestamp" type="xs:dateTime">
  <xs:annotation>
    <xs:documentation>Date/Time when this instance of the feed was published.</xs:documentation>
  </xs:annotation>
</xs:element>
``` |

Element **EventsFeed / Events**

Annotations	Includes all published planned/unplanned events.
Diagram	

Properties	content: complex
Model	PlannedEvent | UnplannedEvent
Children	PlannedEvent, UnplannedEvent

Instance	```xml
	<Events>
	  <PlannedEvent type="">{1,1}</PlannedEvent>
	  <UnplannedEvent category="">{1,1}</UnplannedEvent>
	</Events>
	``

Source	```xml
	<xs:element name="Events">
	  <xs:annotation>
	    <xs:documentation>Includes all published planned/unplanned events.</xs:documentation>
	  </xs:annotation>
	  <xs:complexType>
	    <xs:choice minOccurs="0" maxOccurs="unbounded">
	      <xs:element name="PlannedEvent" type="plannedEvent">
	        <xs:annotation>
	          <xs:documentation>A planned event that affects the roadway – e.g. planned construction work.</xs:documentation>
	        </xs:annotation>
	      </xs:element>
	      <xs:element name="UnplannedEvent" type="unplannedEvent">
	        <xs:annotation>
	          <xs:documentation>An unplanned event that is affecting the roadway – e.g. a crash.</xs:documentation>
	        </xs:annotation>
	      </xs:element>
	    </xs:choice>
	  </xs:complexType>
	</xs:element>
	``

Element EventsFeed / Events / PlannedEvent

Annotations	A planned event that affects the roadway – e.g. planned construction work.

Diagram

plannedEvent

Base Type | event

event (extension base)

Name

Type | xs:string

Short name given to an event.

CreatedAt

Type | xs:dateTime

Date/Time an event was created.

ConfirmedAt

Type | xs:dateTime

Date/Time an event was confirmed.

UpdatedAt

Type | xs:dateTime

Date/Time an event was updated.

StartDate

Type | xs:dateTime

The start Date/Time for an event.

Location

Type | eventLocation

The location defined for an event.

Status

Type | eventStatus

The current status of an event.

LaneInfo

Type | laneInfo

Parent element for lane-level information for the
location of an event.

PlannedEvent

Type | plannedEvent

A planned event that affects
the roadway - e.g. planned
construction work.

@ Attributes

@ type

Type | plannedEventType

The ascribed type of a planned event.

EndDate

Type | xs:dateTime

The end Date/Time for a planned event.

TypeSpecific

Details specific to the type of Planned Event.

Occurrences

A list of all occurrences for a single event. Up to
20 per event (arbitrary cap).

Type	plannedEvent
Type hierar-chy	• event • plannedEvent
Properties	content: complex
Model	Name , CreatedAt , ConfirmedAt , UpdatedAt , StartDate , Location , Status , LaneInfo{0,1} , EndDate , TypeSpecific , Occur-rences
Children	ConfirmedAt, CreatedAt, EndDate, LaneInfo, Location, Name, Occurrences, StartDate, Status, TypeSpecific, UpdatedAt
Instance	<pre><PlannedEvent type="">\n <Name>{1,1}</Name>\n <CreatedAt>{1,1}</CreatedAt>\n <ConfirmedAt>{1,1}</ConfirmedAt>\n <UpdatedAt>{1,1}</UpdatedAt>\n <StartDate>{1,1}</StartDate>\n <Location>{1,1}</Location>\n <Status>{1,1}</Status>\n <LaneInfo>{0,1}</LaneInfo>\n <EndDate>{1,1}</EndDate>\n <TypeSpecific>{1,1}</TypeSpecific>\n <Occurrences>{1,1}</Occurrences>\n</PlannedEvent></pre>

Attributes	QName	Type	Use	
	type	plannedEventType	required	
	The ascribed type of a planned event.			

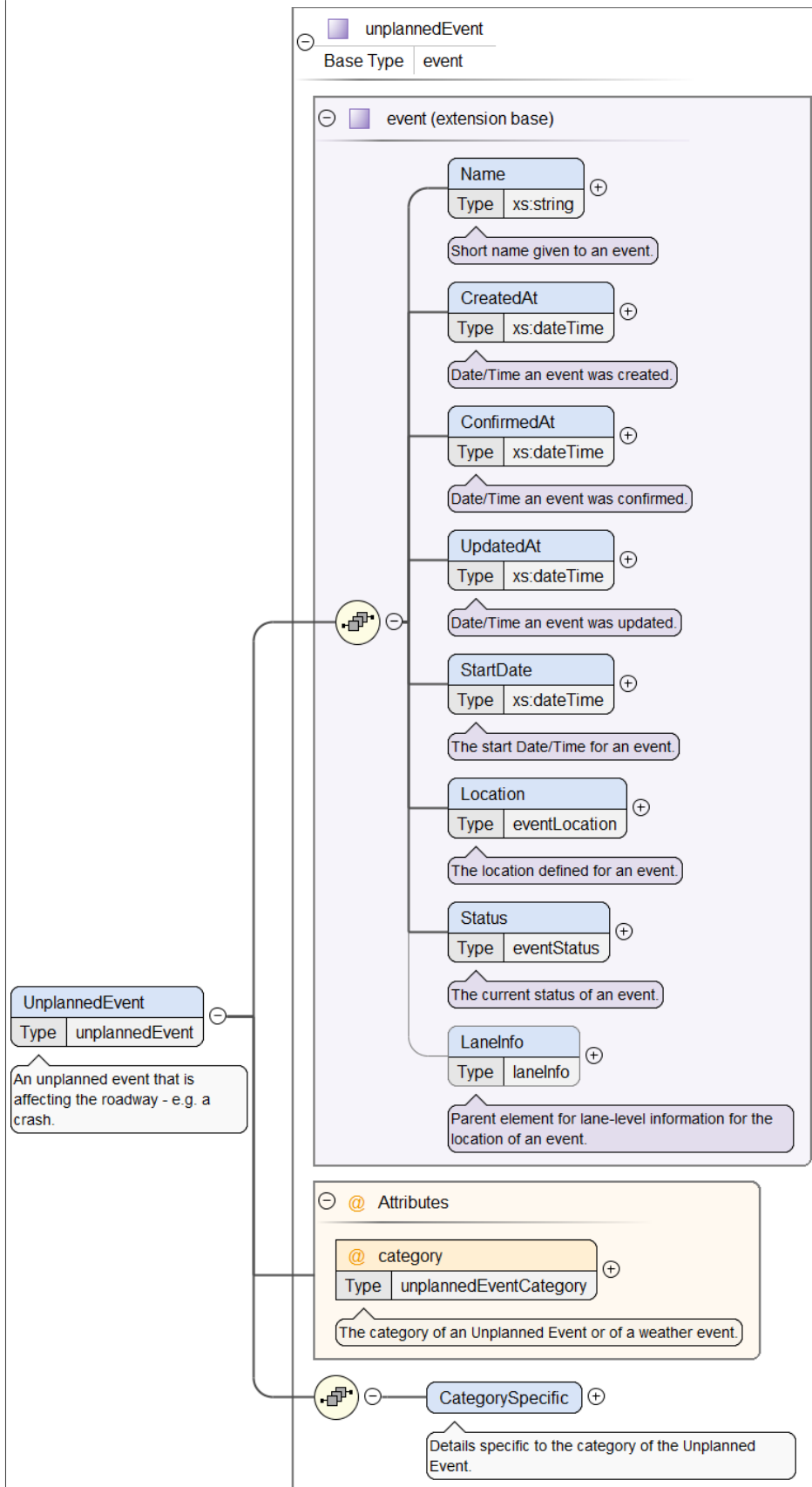| Source	<pre><xs:element name="PlannedEvent" type="plannedEvent">\n <xs:annotation>\n <xs:documentation>A planned event that affects the roadway – e.g. planned construction work.</xs:documentation>\n </xs:annotation>\n</xs:element></pre>

Element `EventsFeed / Events / UnplannedEvent`

Annotations	An unplanned event that is affecting the roadway – e.g. a crash.

Diagram	

Type	unplannedEvent
Type hierarchy	• event • unplannedEvent

Properties	content: complex
Model	Name , CreatedAt , ConfirmedAt , UpdatedAt , StartDate , Location , Status , LaneInfo{0,1} , CategorySpecific
Children	CategorySpecific, ConfirmedAt, CreatedAt, LaneInfo, Location, Name, StartDate, Status, UpdatedAt

Instance	`<UnplannedEvent category="">`
	  `<Name>{1,1}</Name>`
	  `<CreatedAt>{1,1}</CreatedAt>`
	  `<ConfirmedAt>{1,1}</ConfirmedAt>`
	  `<UpdatedAt>{1,1}</UpdatedAt>`
	  `<StartDate>{1,1}</StartDate>`
	  `<Location>{1,1}</Location>`
	  `<Status>{1,1}</Status>`
	  `<LaneInfo>{0,1}</LaneInfo>`
	  `<CategorySpecific>{1,1}</CategorySpecific>`
	`</UnplannedEvent>`

Attributes	QName	Type	Use	
	category	unplannedEventCategory	required	
		The category of an Unplanned Event or of a weather event.		

Source	`<xs:element name="UnplannedEvent" type="unplannedEvent">`
	  `<xs:annotation>`
	    `<xs:documentation>`An unplanned event that is affecting the roadway – e.g. a crash.`</xs:documentation>`
	  `</xs:annotation>`
	`</xs:element>`

Simple Type(s)

Simple Type `eventStatus`

Annotations	`ACTIVE: The event is currently active.`
	`FUTURE: The event is scheduled to occur in the future.`
	`TERMINATED: The event has been terminated.`

Diagram	
Type	restriction of xs:string
Facets	enumeration `ACTIVE`
	enumeration `FUTURE`
	enumeration `TERMINATED`
Used by	Element event/Status

Source	`<xs:simpleType name="eventStatus">`
	  `<xs:annotation>`
	    `<xs:documentation>`ACTIVE: The event is currently active. FUTURE: The event is scheduled to occur in the future. TERMINATED: The event has been terminated.`</xs:documentation>`
	  `</xs:annotation>`
	  `<xs:restriction base="xs:string">`
	    `<xs:enumeration value="ACTIVE"/>`
	    `<xs:enumeration value="FUTURE"/>`
	    `<xs:enumeration value="TERMINATED"/>`
	  `</xs:restriction>`
	`</xs:simpleType>`

Simple Type `areaEventType`

Annotations	`Subdistricts defined at: https://geo-massdot.opendata.arcgis.com/`
	`datasets/2bd2e8188d2941c692ca0b882cbd9aea_0`
	`Districts defined at: https://geo-massdot.opendata.arcgis.com/`
	`datasets/3399393a72f3424082dc5974f001cad8_0`

Diagram	
Type	restriction of xs:string
Facets	enumeration TOWN
	enumeration COUNTY
	enumeration SUBDISTRICT
	enumeration DISTRICT
	enumeration STATEWIDE
Used by	Element eventLocation/Area/AreaType
| Source | ```xml
<xs:simpleType name="areaEventType">
  <xs:annotation>
    <xs:documentation>Subdistricts defined at: https://geo-massdot.opendata.arcgis.com/
datasets/2bd2e8188d2941c692ca0b882cbd9aea_0 Districts defined at: https://geo-
massdot.opendata.arcgis.com/datasets/3399393a72f3424082dc5974f001cad8_0</xs:documentation>
  </xs:annotation>
  <xs:restriction base="xs:string">
    <xs:enumeration value="TOWN"/>
    <xs:enumeration value="COUNTY"/>
    <xs:enumeration value="SUBDISTRICT"/>
    <xs:enumeration value="DISTRICT"/>
    <xs:enumeration value="STATEWIDE"/>
  </xs:restriction>
</xs:simpleType>
``` |

Simple Type `plannedEventType`

Diagram	
Type	restriction of xs:string
Facets	enumeration CONSTRUCTION/MAINTENANCE
	enumeration SPECIAL_EVENT
Used by	Attribute plannedEvent/@type
| Source | ```xml
<xs:simpleType name="plannedEventType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="CONSTRUCTION/MAINTENANCE"/>
    <xs:enumeration value="SPECIAL_EVENT"/>
  </xs:restriction>
</xs:simpleType>
``` |

Simple Type `constructionMaintenanceType`

Diagram	
Type	restriction of xs:string
Facets	enumeration ROADWAY_ACTIVITY
	enumeration BRIDGE_ACTIVITY
	enumeration TUNNEL_ACTIVITY
	enumeration FACILITY_ACTIVITY
	enumeration UTILITY_ACTIVITY

Used by	Attribute	constructionMaintenanceSpecifics/@subtype
Source		

```xml
<xs:simpleType name="constructionMaintenanceType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="ROADWAY_ACTIVITY"/>
    <xs:enumeration value="BRIDGE_ACTIVITY"/>
    <xs:enumeration value="TUNNEL_ACTIVITY"/>
    <xs:enumeration value="FACILITY_ACTIVITY"/>
    <xs:enumeration value="UTILITY_ACTIVITY"/>
  </xs:restriction>
</xs:simpleType>
```
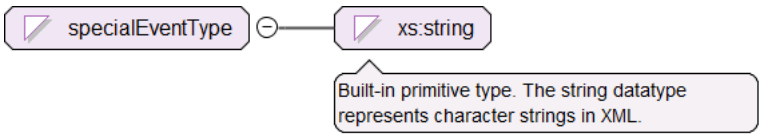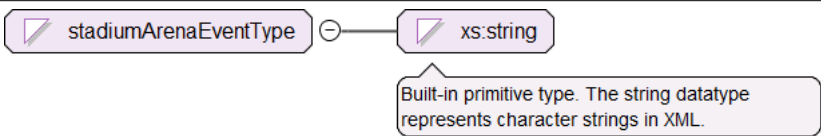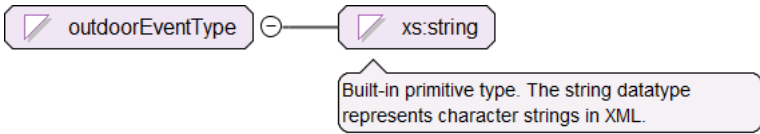
Simple Type `specialEventType`

Diagram	
	Built-in primitive type. The string datatype represents character strings in XML.
Type	restriction of xs:string
Facets	enumeration STADIUM/ARENA_EVENT
	enumeration OUTDOOR_EVENT
	enumeration VIP_VISIT
	enumeration ATHLETIC_EVENT
	enumeration FUNERAL_PROCESSION
	enumeration TRAINING/DRILL
	enumeration OTHER
Used by	Attribute specialEventSpecifics/@subtype
Source	

```xml
<xs:simpleType name="specialEventType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="STADIUM/ARENA_EVENT"/>
    <xs:enumeration value="OUTDOOR_EVENT"/>
    <xs:enumeration value="VIP_VISIT"/>
    <xs:enumeration value="ATHLETIC_EVENT"/>
    <xs:enumeration value="FUNERAL_PROCESSION"/>
    <xs:enumeration value="TRAINING/DRILL"/>
    <xs:enumeration value="OTHER"/>
  </xs:restriction>
</xs:simpleType>
```
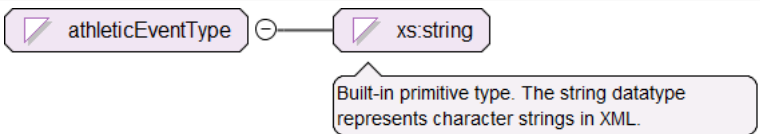
Simple Type `stadiumArenaEventType`

Diagram	
	Built-in primitive type. The string datatype represents character strings in XML.
Type	restriction of xs:string
Facets	enumeration PAVILION_EVENT
	enumeration GILLETTE_STADIUM_EVENT
	enumeration BCEC_EVENT
	enumeration OTHER
Source	

```xml
<xs:simpleType name="stadiumArenaEventType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="PAVILION_EVENT"/>
    <xs:enumeration value="GILLETTE_STADIUM_EVENT"/>
    <xs:enumeration value="BCEC_EVENT"/>
    <xs:enumeration value="OTHER"/>
  </xs:restriction>
</xs:simpleType>
```
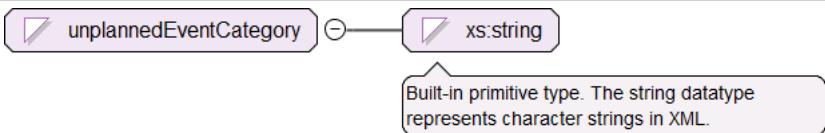
Simple Type `outdoorEventType`

Diagram	
Type	restriction of xs:string
Facets	enumeration AIRSHOW
	enumeration FIREWORKS_DISPLAY
	enumeration MOVIE_FILMING
	enumeration GENERAL_OUTDOOR_EVENT

Source	`<xs:simpleType name="outdoorEventType">`
	`  <xs:restriction base="xs:string">`
	`    <xs:enumeration value="AIRSHOW"/>`
	`    <xs:enumeration value="FIREWORKS_DISPLAY"/>`
	`    <xs:enumeration value="MOVIE_FILMING"/>`
	`    <xs:enumeration value="GENERAL_OUTDOOR_EVENT"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`
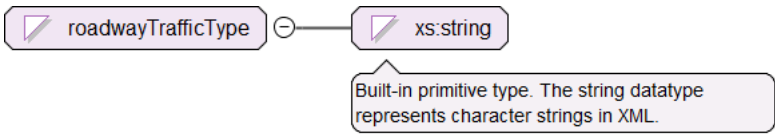
Simple Type `athleticEventType`

Diagram	
Type	restriction of xs:string
Facets	enumeration MARATHON
	enumeration ROAD_RACE
	enumeration BIKE_RACE
	enumeration CHARITY_WALK

Source	`<xs:simpleType name="athleticEventType">`
	`  <xs:restriction base="xs:string">`
	`    <xs:enumeration value="MARATHON"/>`
	`    <xs:enumeration value="ROAD_RACE"/>`
	`    <xs:enumeration value="BIKE_RACE"/>`
	`    <xs:enumeration value="CHARITY_WALK"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`
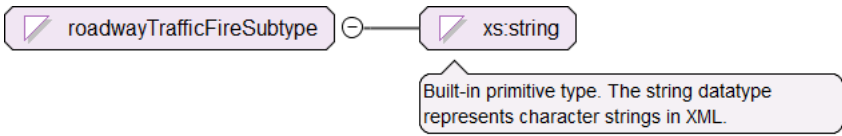
Simple Type `unplannedEventCategory`

Diagram	
Type	restriction of xs:string
Facets	enumeration ROADWAY/TRAFFIC
	enumeration ACTS_OF_NATURE
Used by	Attribute unplannedEvent/@category

Source	`<xs:simpleType name="unplannedEventCategory">`
	`  <xs:restriction base="xs:string">`
	`    <xs:enumeration value="ROADWAY/TRAFFIC"/>`
	`    <xs:enumeration value="ACTS_OF_NATURE"/>`
	`  </xs:restriction>`
	`</xs:simpleType>`
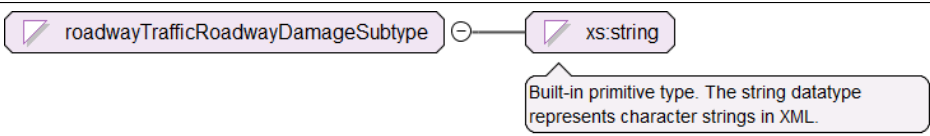
Simple Type `roadwayTrafficType`

Diagram	
	roadwayTrafficType ⊖ — xs:string Built-in primitive type. The string datatype represents character strings in XML.
Type	restriction of xs:string
Facets	enumeration	CRASH
	enumeration	DISABLED_MOTOR_VEHICLE
	enumeration	FIRE
	enumeration	ROADWAY_DAMAGE
	enumeration	ROADWAY_OBSTRUCTION
	enumeration	CONGESTION
	enumeration	GENERAL_ROADWAY/TRAFFIC
Used by	Attribute	roadwayTrafficSpecifics/@type

Source	`<xs:simpleType name="roadwayTrafficType">`
	  `<xs:restriction base="xs:string">`
	    `<xs:enumeration value="CRASH"/>`
	    `<xs:enumeration value="DISABLED_MOTOR_VEHICLE"/>`
	    `<xs:enumeration value="FIRE"/>`
	    `<xs:enumeration value="ROADWAY_DAMAGE"/>`
	    `<xs:enumeration value="ROADWAY_OBSTRUCTION"/>`
	    `<xs:enumeration value="CONGESTION"/>`
	    `<xs:enumeration value="GENERAL_ROADWAY/TRAFFIC"/>`
	  `</xs:restriction>`
	`</xs:simpleType>`

Simple Type `roadwayTrafficFireSubtype`

Diagram	
	roadwayTrafficFireSubtype ⊖ — xs:string Built-in primitive type. The string datatype represents character strings in XML.
Type	restriction of xs:string
Facets	enumeration	VEHICLE_FIRE
	enumeration	FACILITY_FIRE_AFFEC- TING_ROADWAY
	enumeration	BRUSH/FOREST_FIRE

Source	`<xs:simpleType name="roadwayTrafficFireSubtype">`
	  `<xs:restriction base="xs:string">`
	    `<xs:enumeration value="VEHICLE_FIRE"/>`
	    `<xs:enumeration value="FACILITY_FIRE_AFFECTING_ROADWAY"/>`
	    `<xs:enumeration value="BRUSH/FOREST_FIRE"/>`
	  `</xs:restriction>`
	`</xs:simpleType>`

Simple Type `roadwayTrafficRoadwayDamageSubtype`

Diagram	
	roadwayTrafficRoadwayDamageSubtype ⊖ — xs:string Built-in primitive type. The string datatype represents character strings in XML.
Type	restriction of xs:string
Facets	enumeration	STORM_DAMAGE
	enumeration	ROAD_SURFACE_COLLAPSE
	enumeration	POTHOLE

	enumeration	WATER_DAMAGE
	enumeration	SEWER_DAMAGE
	enumeration	GAS_LEAK

Source	
| | ```xml
<xs:simpleType name="roadwayTrafficRoadwayDamageSubtype">
  <xs:restriction base="xs:string">
    <xs:enumeration value="STORM_DAMAGE"/>
    <xs:enumeration value="ROAD_SURFACE_COLLAPSE"/>
    <xs:enumeration value="POTHOLE"/>
    <xs:enumeration value="WATER_DAMAGE"/>
    <xs:enumeration value="SEWER_DAMAGE"/>
    <xs:enumeration value="GAS_LEAK"/>
  </xs:restriction>
</xs:simpleType>
``` |

Simple Type `roadwayTrafficRoadwayObstructionSubtype`

Diagram	
	 roadwayTrafficRoadwayObstructionSubtype — xs:string Built-in primitive type. The string datatype represents character strings in XML.

Type	restriction of xs:string

Facets		
	enumeration	FALLEN_TREES
	enumeration	DOWNED_SIGN
	enumeration	DOWNED_UTILITY_POLE
	enumeration	DOWNED_POWER_LINE
	enumeration	DOWNED_CABLES
	enumeration	CRASH_INVESTIGATION_WORK
	enumeration	GENERAL_OBSTRUCTION/DE-BRIS

Source	
| | ```xml
<xs:simpleType name="roadwayTrafficRoadwayObstructionSubtype">
  <xs:restriction base="xs:string">
    <xs:enumeration value="FALLEN_TREES"/>
    <xs:enumeration value="DOWNED_SIGN"/>
    <xs:enumeration value="DOWNED_UTILITY_POLE"/>
    <xs:enumeration value="DOWNED_POWER_LINE"/>
    <xs:enumeration value="DOWNED_CABLES"/>
    <xs:enumeration value="CRASH_INVESTIGATION_WORK"/>
    <xs:enumeration value="GENERAL_OBSTRUCTION/DEBRIS"/>
  </xs:restriction>
</xs:simpleType>
``` |

Simple Type `actsOfNatureType`

Diagram	
	 actsOfNatureType — xs:string Built-in primitive type. The string datatype represents character strings in XML.

Type	restriction of xs:string

Facets		
	enumeration	LOCAL_WEATHER_EVENT
	enumeration	ADVISORY/WATCH/WARNING

Used by		
	Attribute	actsOfNatureSpecifics/@type

Source	
| | ```xml
<xs:simpleType name="actsOfNatureType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="LOCAL_WEATHER_EVENT"/>
    <xs:enumeration value="ADVISORY/WATCH/WARNING"/>
  </xs:restriction>
</xs:simpleType>
``` |

Complex Type(s)

Complex Type `latlon`

Diagram	
Used by	Element locationPoint/Coordinates
Model	Latitude , Longitude
Children	Latitude, Longitude
Source	(see below)

```xml
<xs:complexType name="latlon">
  <xs:sequence>
    <xs:element name="Latitude">
      <xs:simpleType>
        <xs:restriction base="xs:decimal">
          <xs:minInclusive value="-90"/>
          <xs:maxInclusive value="90"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="Longitude">
      <xs:simpleType>
        <xs:restriction base="xs:decimal">
          <xs:minInclusive value="-180"/>
          <xs:maxInclusive value="180"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `locationPoint`

Diagram	
Used by	Elements eventLocation/Point, eventLocation/Range/End, eventLocation/Range/Start, eventLocation/Range/Waypoint
Model	RoadwayName , Coordinates
Children	Coordinates, RoadwayName
Source	(see below)

```xml
<xs:complexType name="locationPoint">
  <xs:sequence>
    <xs:element name="RoadwayName" type="xs:string">
      <xs:annotation>
        <xs:documentation>Name of the roadway for the location including direction (e.g. I-93 NB).</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="Coordinates" type="latlon">
      <xs:annotation>
        <xs:documentation>The coordinates of the start/end/decision point.</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `eventLocation`

Diagram	
Used by	Element event/Location
Model	Point | Range | Area
Children	Area, Point, Range
Source	(see code below)

```xml
<xs:complexType name="eventLocation">
  <xs:choice>
    <xs:element name="Point" type="locationPoint">
      <xs:annotation>
        <xs:documentation>The location for a point event.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="Range">
      <xs:annotation>
        <xs:documentation>The location for a range event.</xs:documentation>
      </xs:annotation>
      <xs:complexType>
        <xs:sequence>
          <xs:element name="Start" type="locationPoint">
            <xs:annotation>
              <xs:documentation>The point on the roadway that indicates the beginning of the
 event.</xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="Waypoint" type="locationPoint" minOccurs="0" maxOccurs="unbounded">
            <xs:annotation>
              <xs:documentation>A point on the roadway that indicates a waypoint.</xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="End" type="locationPoint">
            <xs:annotation>
              <xs:documentation>The point on the roadway that indicates the end of the event.</
xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="Area">
      <xs:annotation>
        <xs:documentation>The location for an area event.</xs:documentation>
      </xs:annotation>
      <xs:complexType>
        <xs:sequence>
          <xs:element name="AreaType" type="areaEventType">
            <xs:annotation>
              <xs:documentation>The type of area region impacted by an event.</xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="AreaValue" type="xs:string" maxOccurs="unbounded">
            <xs:annotation>
              <xs:documentation>The name/value of the specific area (type indicated by AreaType)
 impacted by an event.</xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:choice>
</xs:complexType>
```

Complex Type `laneInfo`

Diagram	

Used by	Element event/LaneInfo
Model	Direction , LanesAffected
Children	Direction, LanesAffected
Source	

```xml
<xs:complexType name="laneInfo">
  <xs:sequence>
    <xs:element name="Direction" type="xs:string">
      <xs:annotation>
        <xs:documentation>The direction for each lane on the start roadway, including both direction
of travel for bidirection roadways; e.g. NNN from three northbound lanes and SSSNNN for three
southbound lanes and three northbound lanes. The convention is: – For northbound lanes, the first
letter indicates the leftmost travel lane, which is closest to the median; – For southbound lanes,
the first letter indicates the rightmost lane, which is closest to entry and exit ramps; – For
eastbound lanes, the first letter indicates the leftmost travel lane, which is closest to the
median; – For westbound lanes, the first letter indicates the rightmost lane, which is closest to
entry and exit ramps.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="LanesAffected" type="xs:string">
      <xs:annotation>
        <xs:documentation>Lanes affected, where open lanes will be represented by X and closed
lanes by O. For example, if the rightmost two lanes are closed, then the string will be OOOOXX.</
xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
```

Complex Type `eventOccurence`

Diagram	

Used by	Element plannedEvent/Occurrences/Occurrence
Model	StartDateTime , EndDateTime
Children	EndDateTime, StartDateTime
Source	

```xml
<xs:complexType name="eventOccurence">
  <xs:sequence>
    <xs:element name="StartDateTime" type="xs:dateTime">
      <xs:annotation>
        <xs:documentation>The start Date/Time for the occurrence.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="EndDateTime" type="xs:dateTime">
      <xs:annotation>
        <xs:documentation>The end Date/Time for the occurrence.</xs:documentation>
```

```
          </xs:annotation>
        </xs:element>
      </xs:sequence>
  </xs:complexType>
```

Complex Type event
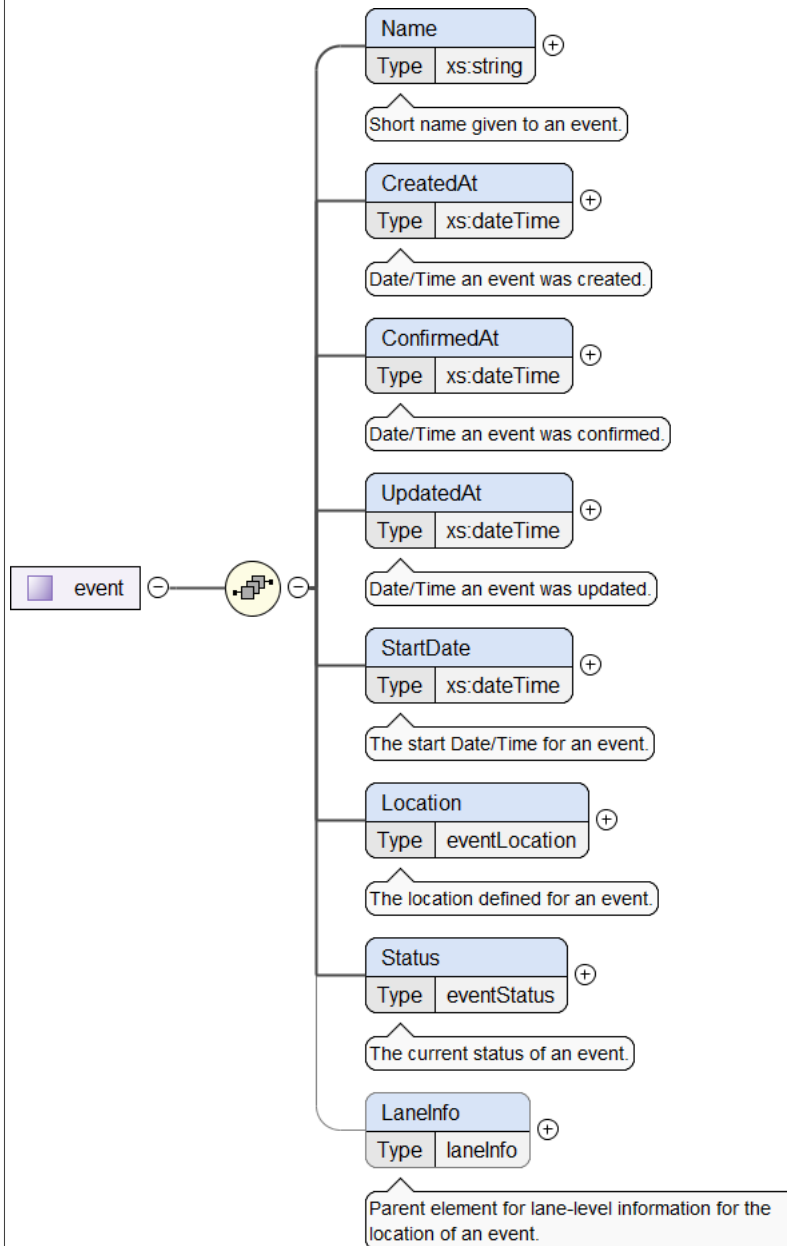
Diagram	
Used by	Complex Types plannedEvent, unplannedEvent
Model	Name , CreatedAt , ConfirmedAt , UpdatedAt , StartDate , Location , Status , LaneInfo{0,1}
Children	ConfirmedAt, CreatedAt, LaneInfo, Location, Name, StartDate, Status, UpdatedAt
Source	

```xml
<xs:complexType name="event">
  <xs:sequence>
    <xs:element name="Name" type="xs:string">
      <xs:annotation>
        <xs:documentation>Short name given to an event.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="CreatedAt" type="xs:dateTime">
      <xs:annotation>
        <xs:documentation>Date/Time an event was created.</xs:documentation>
      </xs:annotation>
    </xs:element>
    <xs:element name="ConfirmedAt" type="xs:dateTime">
```

```xml
        <xs:annotation>
          <xs:documentation>Date/Time an event was confirmed.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="UpdatedAt" type="xs:dateTime">
        <xs:annotation>
          <xs:documentation>Date/Time an event was updated.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="StartDate" type="xs:dateTime">
        <xs:annotation>
          <xs:documentation>The start Date/Time for an event.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="Location" type="eventLocation">
        <xs:annotation>
          <xs:documentation>The location defined for an event.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="Status" type="eventStatus">
        <xs:annotation>
          <xs:documentation>The current status of an event.</xs:documentation>
        </xs:annotation>
      </xs:element>
      <xs:element name="LaneInfo" type="laneInfo" minOccurs="0">
        <xs:annotation>
          <xs:documentation>Parent element for lane-level information for the location of an event.</
xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
</xs:complexType>
```

Complex Type `constructionMaintenanceSpecifics`

Diagram	

Attributes	QName	Type	Use	
	subtype	constructionMaintenanceType	required	
		The ascribed subtype of a Planned Event.		

Source	
| | ```xml
<xs:complexType name="constructionMaintenanceSpecifics">
  <xs:attribute name="subtype" type="constructionMaintenanceType" use="required">
    <xs:annotation>
      <xs:documentation>The ascribed subtype of a Planned Event.</xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
``` |

Complex Type `specialEventSpecifics`

Diagram	

Model	
	SpecialEventCharacteristics{0,1}

Children	SpecialEventCharacteristics			
Attributes	**QName**	**Type**	**Use**	
	subtype	specialEventType	required	
		The ascribed subtype of a Planned Event.		

Source	`<xs:complexType name="specialEventSpecifics">`
	  `<xs:sequence>`
	    `<xs:element name="SpecialEventCharacteristics" type="xs:string" minOccurs="0">`
	      `<xs:annotation>`
	        `<xs:documentation>The characteristics specific to a Special Event.</xs:documentation>`
	      `</xs:annotation>`
	      `<xs:alternative test="@subtype = 'STADIUM/ARENA_EVENT'" type="stadiumArenaEventType"/>`
	      `<xs:alternative test="@subtype = 'OUTDOOR_EVENT'" type="outdoorEventType"/>`
	      `<xs:alternative test="@subtype = 'ATHLETIC_EVENT'" type="athleticEventType"/>`
	    `</xs:element>`
	  `</xs:sequence>`
	  `<xs:attribute name="subtype" type="specialEventType" use="required">`
	    `<xs:annotation>`
	      `<xs:documentation>The ascribed subtype of a Planned Event.</xs:documentation>`
	    `</xs:annotation>`
	  `</xs:attribute>`
	`</xs:complexType>`

Diagram	
Complex T	

event (extension base)

Name
Type | xs:string
Short name given to an event.

CreatedAt
Type | xs:dateTime
Date/Time an event was created.

ConfirmedAt
Type | xs:dateTime
Date/Time an event was confirmed.

UpdatedAt
Type | xs:dateTime
Date/Time an event was updated.

StartDate
Type | xs:dateTime
The start Date/Time for an event.

Location
Type | eventLocation
The location defined for an event.

Status
Type | eventStatus
The current status of an event.

LaneInfo
Type | laneInfo
Parent element for lane-level information for the location of an event.

plannedEvent
Base Type | event

@ Attributes

@ type
Type | plannedEventType
The ascribed type of a planned event.

EndDate
Type | xs:dateTime
The end Date/Time for a planned event.

TypeSpecific
Details specific to the type of Planned Event.

Occurrences
A list of all occurrences for a single event. Up to 20 per event (arbitrary cap).

Type	extension of event
Type hierar-chy	• event • plannedEvent
Used by	Element EventsFeed/Events/PlannedEvent
Model	Name , CreatedAt , ConfirmedAt , UpdatedAt , StartDate , Location , Status , LaneInfo{0,1} , EndDate , TypeSpecific , Occur-rences
Children	ConfirmedAt, CreatedAt, EndDate, LaneInfo, Location, Name, Occurrences, StartDate, Status, TypeSpecific, UpdatedAt

Attributes	**QName**	**Type**	**Use**	
	type	plannedEventType	required	
		The ascribed type of a planned event.		

Source

```xml
<xs:complexType name="plannedEvent">
  <xs:complexContent>
    <xs:extension base="event">
      <xs:sequence>
        <xs:element name="EndDate" type="xs:dateTime">
          <xs:annotation>
            <xs:documentation>The end Date/Time for a planned event.</xs:documentation>
          </xs:annotation>
        </xs:element>
        <xs:element name="TypeSpecific">
          <xs:annotation>
            <xs:documentation>Details specific to the type of Planned Event.</xs:documentation>
          </xs:annotation>
          <xs:alternative test="@type = 'CONSTRUCTION/MAINTENANCE'"
 type="constructionMaintenanceSpecifics"/>
          <xs:alternative test="@type = 'SPECIAL_EVENT'" type="specialEventSpecifics"/>
        </xs:element>
        <xs:element name="Occurrences">
          <xs:annotation>
            <xs:documentation>A list of all occurrences for a single event. Up to 20 per event
(arbitrary cap).</xs:documentation>
          </xs:annotation>
          <xs:complexType>
            <xs:sequence maxOccurs="20">
              <xs:element name="Occurrence" type="eventOccurence">
                <xs:annotation>
                  <xs:documentation>A single occurrence of a reurring event.</xs:documentation>
                </xs:annotation>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
      <xs:attribute name="type" type="plannedEventType" use="required">
        <xs:annotation>
          <xs:documentation>The ascribed type of a planned event.</xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```
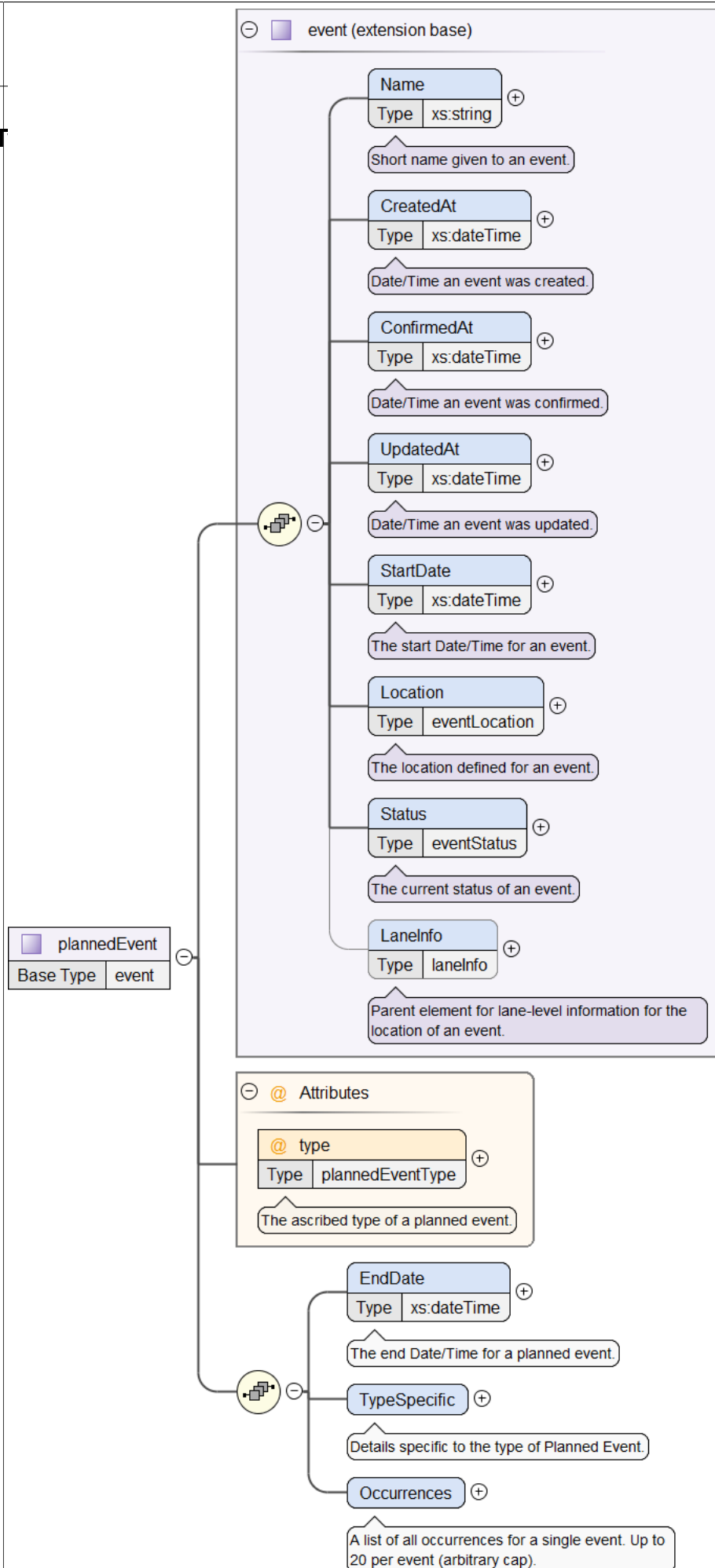
Complex Type `advisoryWatchWarningCharacteristics`

Diagram	

Used by	Element	actsOfNatureSpecifics/Characteristics

Model	ID , Category , EventType , Location+ , StartDateTime , EndDateTime
Children	Category, EndDateTime, EventType, ID, Location, StartDateTime

Source	<pre><xs:complexType name="advisoryWatchWarningCharacteristics">
<xs:sequence>
<xs:element name="ID" type="xs:integer">
<xs:annotation>
<xs:documentation>An identifier for the specific weather category, event, and location.</xs:documentation>
</xs:annotation>
</xs:element>
<!-- ensure this is described in the docs -->
<xs:element name="Category">
<xs:annotation>
<xs:documentation>The category of the advisory/watch/warning, (either ADVISORY, WATCH, or WARNING).</xs:documentation>
</xs:annotation>
<xs:simpleType>
<xs:restriction base="xs:string">
<xs:enumeration value="ADVISORY"/>
<xs:enumeration value="WATCH"/>
<xs:enumeration value="WARNING"/>
</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="EventType" type="xs:string">
<xs:annotation>
<xs:documentation>The type of weather event (e.g. Tornado, Hurricane).</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="Location" maxOccurs="unbounded">
<xs:annotation>
<xs:documentation>The specified location of the advistory/watch/warning. This could be a county name, 'STATEWIDE', or many county names.</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="StartDateTime" type="xs:dateTime">
<xs:annotation>
<xs:documentation>The specified start time for the advisory/watch/warning.</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="EndDateTime" type="xs:dateTime"></pre>

```
        <xs:annotation>
          <xs:documentation>The specified end time for the advisory/watch/warning.</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
</xs:complexType>
```

Complex Type `roadwayTrafficCharacteristics`

Diagram	
Used by	Element roadwayTrafficSpecifics/Characteristics
Model	HasSpeedRestriction , IsWithinWorkZone , IsBoreClosureRequired
Children	HasSpeedRestriction, IsBoreClosureRequired, IsWithinWorkZone

Source	`<xs:complexType name="roadwayTrafficCharacteristics">`
	`  <xs:sequence>`
	`    <xs:element name="HasSpeedRestriction" type="xs:boolean">`
	`      <xs:annotation>`
	`        <xs:documentation>Specifies if there is a speed restriction associated with the event.</`
	`xs:documentation>`
	`      </xs:annotation>`
	`    </xs:element>`
	`    <xs:element name="IsWithinWorkZone" type="xs:boolean">`
	`      <xs:annotation>`
	`        <xs:documentation>Specifies if the event is within a work zone.</xs:documentation>`
	`      </xs:annotation>`
	`    </xs:element>`
	`    <xs:element name="IsBoreClosureRequired" type="xs:boolean">`
	`      <xs:annotation>`
	`        <xs:documentation>Specifies if there is a bore closure required for the event.</`
	`xs:documentation>`
	`      </xs:annotation>`
	`    </xs:element>`
	`  </xs:sequence>`
	`</xs:complexType>`

Complex Type `roadwayTrafficSpecifics`

Diagram	

Model	Subtype , Characteristics{0,1}			
Children	Characteristics, Subtype			
Attributes	**QName**	**Type**	**Use**	
	type	roadwayTrafficType	required	
		The type of the Unplanned Event.		
| Source | ```xml
<xs:complexType name="roadwayTrafficSpecifics">
  <xs:sequence>
    <xs:element name="Subtype" type="xs:string">
      <xs:annotation>
        <xs:documentation>The ascribed sub-type of the ROADWAY/TRAFFIC Unplanned Event.</xs:documentation>
      </xs:annotation>
      <xs:alternative test="@type = 'FIRE'" type="roadwayTrafficFireSubtype"/>
      <xs:alternative test="@type = 'ROADWAY_DAMAGE'" type="roadwayTrafficRoadwayDamageSubtype"/>
      <xs:alternative test="@type = 'ROADWAY_OBSTRUCTION'" type="roadwayTrafficRoadwayObstructionSubtype"/>
    </xs:element>
    <xs:element name="Characteristics" type="roadwayTrafficCharacteristics" minOccurs="0">
      <xs:annotation>
        <xs:documentation>The specifc characteristics of a ROADWAY/TRAFFIC Unplanned Event.</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="type" type="roadwayTrafficType" use="required">
    <xs:annotation>
      <xs:documentation>The type of the Unplanned Event.</xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
``` | | | |

Complex Type `actsOfNatureSpecifics`

Diagram	

Model	Characteristics{0,1}			
Children	Characteristics			
Attributes	**QName**	**Type**	**Use**	
	type	actsOfNatureType	required	
		The type of the Unplanned Event.		
| Source | ```xml
<xs:complexType name="actsOfNatureSpecifics">
  <xs:sequence>
    <xs:element name="Characteristics" type="advisoryWatchWarningCharacteristics" minOccurs="0">
      <xs:annotation>
        <xs:documentation>The specific characteristics of an ACTS_OF_NATURE Unplanned Event.</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="type" type="actsOfNatureType" use="required">
    <xs:annotation>
      <xs:documentation>The type of the Unplanned Event.</xs:documentation>
    </xs:annotation>
  </xs:attribute>
</xs:complexType>
``` | | | |

Complex Type `unplannedEvent`

Diagram	
Type	extension of event

Type hierar-chy	• event			
	• unplannedEvent			
Used by	Element	EventsFeed/Events/UnplannedEvent		
Model	Name , CreatedAt , ConfirmedAt , UpdatedAt , StartDate , Location , Status , LaneInfo{0,1} , CategorySpecific			
Children	CategorySpecific, ConfirmedAt, CreatedAt, LaneInfo, Location, Name, StartDate, Status, UpdatedAt			
Attributes	**QName**	**Type**	**Use**	
	category	unplannedEventCategory	required	
		The category of an Unplanned Event or of a weather event.		

Source	`<xs:complexType name="unplannedEvent">`
	`  <xs:complexContent>`
	`    <xs:extension base="event">`
	`      <xs:sequence>`
	`        <xs:element name="CategorySpecific">`
	`          <xs:annotation>`
	`            <xs:documentation>Details specific to the category of the Unplanned Event.</`
	`xs:documentation>`
	`          </xs:annotation>`
	`          <xs:alternative test="@category = 'ROADWAY/TRAFFIC'" type="roadwayTrafficSpecifics"/>`
	`          <xs:alternative test="@category = 'ACTS_OF_NATURE'" type="actsOfNatureSpecifics"/>`
	`        </xs:element>`
	`      </xs:sequence>`
	`      <xs:attribute name="category" type="unplannedEventCategory" use="required">`
	`        <xs:annotation>`
	`          <xs:documentation>The category of an Unplanned Event or of a weather event.</`
	`xs:documentation>`
	`        </xs:annotation>`
	`      </xs:attribute>`
	`    </xs:extension>`
	`  </xs:complexContent>`
	`</xs:complexType>`			

Attribute(s)

Attribute `constructionMaintenanceSpecifics / @subtype`

Annotations	The ascribed subtype of a Planned Event.	
Type	constructionMaintenanceType	
Properties	use:	required
Facets	enumeration	ROADWAY_ACTIVITY
	enumeration	BRIDGE_ACTIVITY
	enumeration	TUNNEL_ACTIVITY
	enumeration	FACILITY_ACTIVITY
	enumeration	UTILITY_ACTIVITY
Used by	Complex Type	constructionMaintenanceSpecifics

Source	`<xs:attribute name="subtype" type="constructionMaintenanceType" use="required">`
	`  <xs:annotation>`
	`    <xs:documentation>The ascribed subtype of a Planned Event.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`	

Attribute `specialEventSpecifics / @subtype`

Annotations	The ascribed subtype of a Planned Event.	
Type	specialEventType	
Properties	use:	required
Facets	enumeration	STADIUM/ARENA_EVENT
	enumeration	OUTDOOR_EVENT
	enumeration	VIP_VISIT
	enumeration	ATHLETIC_EVENT
	enumeration	FUNERAL_PROCESSION

	enumeration	TRAINING/DRILL
	enumeration	OTHER
Used by	Complex Type	specialEventSpecifics

Source	`<xs:attribute name="subtype" type="specialEventType" use="required">`
	`  <xs:annotation>`
	`    <xs:documentation>The ascribed subtype of a Planned Event.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`	

Attribute `plannedEvent / @type`

Annotations	The ascribed type of a planned event.	
Type	plannedEventType	
Properties	use:	required
Facets	enumeration	CONSTRUCTION/MAINTENANCE
	enumeration	SPECIAL_EVENT
Used by	Complex Type	plannedEvent

Source	`<xs:attribute name="type" type="plannedEventType" use="required">`
	`  <xs:annotation>`
	`    <xs:documentation>The ascribed type of a planned event.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`	

Attribute `roadwayTrafficSpecifics / @type`

Annotations	The type of the Unplanned Event.	
Type	roadwayTrafficType	
Properties	use:	required
Facets	enumeration	CRASH
	enumeration	DISABLED_MOTOR_VEHICLE
	enumeration	FIRE
	enumeration	ROADWAY_DAMAGE
	enumeration	ROADWAY_OBSTRUCTION
	enumeration	CONGESTION
	enumeration	GENERAL_ROADWAY/TRAFFIC
Used by	Complex Type	roadwayTrafficSpecifics

Source	`<xs:attribute name="type" type="roadwayTrafficType" use="required">`
	`  <xs:annotation>`
	`    <xs:documentation>The type of the Unplanned Event.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`	

Attribute `actsOfNatureSpecifics / @type`

Annotations	The type of the Unplanned Event.	
Type	actsOfNatureType	
Properties	use:	required
Facets	enumeration	LOCAL_WEATHER_EVENT
	enumeration	ADVISORY/WATCH/WARNING
Used by	Complex Type	actsOfNatureSpecifics

Source	`<xs:attribute name="type" type="actsOfNatureType" use="required">`
	`  <xs:annotation>`
	`    <xs:documentation>The type of the Unplanned Event.</xs:documentation>`
	`  </xs:annotation>`
	`</xs:attribute>`	

Attribute `unplannedEvent / @category`

Annotations	The category of an Unplanned Event or of a weather event.
Type	unplannedEventCategory
Properties	use: required

Facets		
	enumeration	ROADWAY/TRAFFIC
	enumeration	ACTS_OF_NATURE

Used by		
	Complex Type	unplannedEvent

Source	

	`<xs:attribute name="category" type="unplannedEventCategory" use="required">`
	   `<xs:annotation>`
	     `<xs:documentation>The category of an Unplanned Event or of a weather event.</xs:documentation>`
	   `</xs:annotation>`
	 `</xs:attribute>`