



# Addendum to GTFS Real-Time Reference

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NextBus provides the ability to export data via several interfaces including XML, REST and GTFS-RT. NextBus provides an implementation of [GTFS-realtime](#) specification, an extension to [General Transit Feed Specification](#).

NextBus' implementation provides three distinct [types](#) of realtime data, as specified by GTFS-realtime.

This document points out what optional data elements are available and supported, and changes that may impact current implementations as well as security guidelines for transit agency partners and 3rd party developers interested to utilize these data feeds.

## Message FeedEntity

The ID field of the message FeedEntity is unique for each entity in an instance of the data feed. Each data feed consists of stream of entities, each of which must have an id unique within that feed.

We implement this ID differently depending on which type of feed it is, TripUpdate, VehiclePosition or Alert.

NextBus provides one TripUpdate for each trip/vehicle with all available arrival/departure predictions for that trip and vehicle.

The required ID field for FeedEntity is constructed by concatenating the Trip ID and the Vehicle ID.

The required ID for message VehiclePositions is the agency-specified ID for their vehicle.

The required ID for message Alert is an internal representation of the Message ID within the NextBus system.



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## Message TripUpdate

The “stop\_time\_update” field of TripUpdate message includes only future predictions. Past predictions are not included and update to predictions for StopTimes include times that may be the same as published schedule. The optional Delay field is experimental as of this writing and not provided.

## Message StopTimeUpdate

The optional ‘departure’ and ‘arrival’ data fields for message StopTimeUpdate is provided by NextBus when data is available. NextBus updates are supplied for future event. Past events are dropped. By default, the relation between StopTime and the static schedule is “SCHEDULED”, therefore NextBus omits this setting.

## Message StopTimeEvent

The ‘delay’ and ‘uncertainty’ data fields for message StopTimeEvent are not provided.

## Message Alert

The optional cause, effect, url and header\_text data fields for message Alert are not currently provided.

## Message EntitySelector

The route\_type and trip data fields for message EntitySelector are not provided by NextBus data feed.

## Message VehiclePosition

The optional “congestion\_level” and “occupancy\_status” data fields for message VehiclePosition are not currently provided by NextBus data feed. All other optional fields are provided and vehicle’s ‘current\_status’ is set to IN\_TRANSIT\_TO value. Other VehicleStopStatus values are not currently used for vehicle’s current status.

## Message TripDescriptor

The optional start\_date data field for message TripDescriptor is provided in YYYYMMDD format but the optional start\_time data fields for message TripDescriptor are not provided by NextBus.

Predictions for vehicles follow it’s static schedule of stops. Schedule\_relationship data field for message TripDescriptor is set to SCHEDULED. ADDED, UNSCHEDULED and CANCELED values are not used.

## Message VehicleDescriptor

The ID and label data fields for message VehicleDescriptor are populated as a unique vehicle number which is specified by each transit agency.