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**METROPOLITAN
TRANSPORTATION
COMMISSION**

GTFS+ Format Specification for (+) files

Version 1.7

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Document Description	Date	Author	Version Number
First draft of Document.	January 18, 2011	Deepa Mani	1.0
Added specifications for Rider Categories, Fares and Calendar attributes	March 22, 2011	Deepa Mani	1.1
Added specification for realtime_trips.txt	February 08, 2012	Deepa Mani	1.2
Made timepoints.txt optional file	November 19, 2012	Deepa Mani	1.3
Added direction field to realtime_trips.txt. Added City field to Stop Attributes file Removed Pattern Headsign section Added FareZone Attributes file specification Other minor textual changes and reformatting	August 7, 2013	Deepa Mani	1.4
Added Field Type and Length to all files Added Descriptions for all files	August 16, 2013	Deepa Mani	1.5
Revisions to real-time files based on discussion with MTC	September 13, 2013	Deepa Mani	1.6
Review by MTC	September 25, 2013	Nisar Ahmed	1.6
Revisions based on recommendation from MTC: Added directions.txt to specify directions at a route level Made realtime_routename field in realtime_routes.txt optional Made realtime_directioncode in realtime_directions.txt optional	April 7, 2014	Deepa Mani	1.7
Revised text to specify that directions.txt is required for users of versions 1.7 and above	May 29, 2014	Deepa Mani Nisar Ahmed	1.7

Overview

This document defines the format for additional (+) files to be provided by transit agencies along with GTFS feed. The general format of the additional files will be the same as the GTFS files format (defined in http://code.google.com/transit/spec/transit_feed_specification.html#transitFileRequirements).

- All files must be saved as comma-delimited text.
- The first line of each file must contain field names.
- All field names are case-sensitive.
- Field values may not contain tabs, carriage returns or new lines.
- Field values that contain quotation marks or commas must be enclosed within quotation marks. In addition, each quotation mark in the field value must be preceded with a quotation mark. This is consistent with the manner in which Microsoft Excel outputs comma-delimited (CSV) files.
- Field values must not contain HTML tags, comments or escape sequences.
- Remove any extra spaces between fields or field names.
- Each line must end with a CRLF or LF line break character.

The following sections contain the field definitions for the (+) files.

File Name - realtime_routes.txt

This file contains additional real-time information for a route.

Field Name	Required	Type	Length	Details
route_id	Required	Character	12	From GTFS routes.txt file. This is necessary to maintain relationship between routes in this file and routes in the standard GTFS routes.txt file.
realtime_enabled	Required	Integer	1	0 = route is not real-time enabled 1 = route is real-time enabled Standard GTFS does not include a field to indicate real-time status of a route. This allows the flexibility for agencies to identify routes that may not have real-time predictions.
realtime_routename	Optional	Character	100	This field may be empty if route_long_name in GTFS routes.txt file is provided. Otherwise, it should contain the data defined for route_long_name in GTFS routes.txt file.
realtime_routecode	Required	Character	12	This field can be empty if real-time

				route code in MTC's real-time feed is the same as <code>route_short_name</code> in GTFS <code>routes.txt</code> file.
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File Name - `realtime_stops.txt`

This file helps map regional real-time stop identifiers with the `stop_id` in `stops.txt` file in GTFS. This file can be omitted if GTFS file `stops.txt` contains the regional real-time stop id in the optional `stop_code` field.

Field Name	Required	Type	Length	Details
<code>trip_id</code>	Required	Character	15	From GTFS <code>stop_times.txt</code> file.
<code>stop_id</code>	Required	Character	15	From GTFS <code>stop_times.txt</code> file when the <code>stop_code</code> in standard GTFS is different from the <code>stop_code</code> used in real-time feed for MTC.
<code>realtime_stop_id</code>	Required	Integer	15	Corresponding <code>stop_code</code> used in real-time feed for MTC.

File Name - `directions.txt`

Users of version 1.7 or later must use this file and ignore `realtime_directions.txt` file.

In the standard GTFS, trip direction can be specified as '0' or '1' only. It does not allow for indication of specific directions such as North, South, etc. This file captures the direction text for each of the directions in a route.

Route direction information can be provided through either this `directions.txt` OR `realtime_directions.txt` file, but not both. Users of GTFS+ version 1.7 and above are required to provide `directions.txt` file and ignore `realtime_directions.txt` file. Users of version 1.6 or earlier may continue to use `realtime_directions.txt`, unless they voluntarily choose to upgrade to `directions.txt`. Only one of `directions.txt` or `realtime_directions.txt` should be included. Also, `trip-headsign` field in GTFS `trips.txt` file should be populated in order to distinguish patterns within a direction and to provide destination information to passengers.

When `directions.txt` file is used, optional `direction_id` field in GTFS `trips.txt` must be filled in.

Field Name	Required	Type	Length	Details
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route_id	Required	Character	12	From GTFS routes.txt file.
direction_id	Required	Integer	1	Binary direction_id from GTFS trips.txt file. Each (route_id, direction_id) pair can only appear once in directions.txt.
Direction	Required	Character	25	Corresponding direction name (Provided direction text should match exactly from the list below) North South East West Northeast Northwest Southeast Southwest Clockwise Counterclockwise Inbound Outbound Loop A Loop B Loop

File Name - realtime_directions.txt

Users of version 1.6 or earlier may continue to use this file and ignore directions.txt; or upgrade to directions.txt file and ignore this file.

This file contains direction information for a trip. **Note that direction can be provided using this file or the directions.txt file, described above.** Only one of directions.txt or realtime_directions.txt should be included. This file is being retained to maintain backward compatibility for users of GTFS+ versions 1.6 and earlier. Users of version 1.6 or earlier may continue to use this file, unless they voluntarily choose to upgrade to directions.txt. Also, trip-headsign field in GTFS trips.txt file should be populated in order to distinguish patterns within a direction and to provide destination information to passengers.

Field Name	Required	Type	Length	Details
trip_id	Required	Character	15	From GTFS trips.txt file.
direction_id	Optional	Integer	1	Direction of trip from GTFS trips.txt file.
direction	Required	Character	2	Corresponding direction N - North

				S - South E - East W - West NE - Northeast NW - Northwest SE - Southeast SW - Southwest CL - Clockwise CC - Counterclockwise IB - Inbound OB - Outbound LP - Loop A - A Loop B - B Loop
realtime_directioncode	Optional	Character	100	Direction code as recognized by Real-time system. If real-time predictions provided to MTC are based on trip_id, this field can be empty. (This field is optional and is being retained for backward compatibility)

File Name - realtime_trips.txt

This file contains real-time identifiers for trips. **This file can be omitted if the GTFS trips.txt file contains the same Trip IDs included in real-time feed for MTC within the trip_id field.**

Field Name	Required	Type	Length	Details
trip_id	Required	Character	15	From GTFS trips.txt file
realtime_trip_id	Required	Character	15	Corresponding trip_id provided in real-time feed for MTC.

File Name - stop_attributes.txt

This file contains additional attributes for a stop. This file is needed because standard GTFS does not include these fields.

Field Name	Required	Type	Length	Details
stop_id	Required	Character	15	From GTFS stops.txt file
accessibility_id	Optional	Integer	2	defines accessibility parameters for

				stop 0 - Unknown 1 - No ADA 2 - Full ADA 3 - Wheel Chair 4 - Blind 5 - Deaf 6 - Blind/Wheel Chair 7 - Deaf/Blind 8 - Deaf/Wheel Chair
cardinal_direction	Optional	Character	2	Direction definition of stop position NO, SO, EA, WE, NE, NW, SE, SW
relative_position	Optional	Character	2	Stop position relative to stop name NS = nearside of intersection FS = farside of intersection AT = stop is at position OP = stop is across street
stop_city	Required	Character	60	City corresponding to the stop

File Name - timepoints.txt

This file can be omitted if the GTFS file `stop_times.txt` has blank values for `arrival_time` and `departure_time` for all the stops that are NOT time points. This file is needed because standard GTFS does not include these fields.

Field Name	Required	Type	Length	Details
trip_id	Required	Character	15	From GTFS <code>stop_times.txt</code> file
stop_id	Required	Character	15	From GTFS <code>stop_times.txt</code> file (Include Time point stops only)

File Name - rider_categories.txt

This file lists the rider categories for fares other than the *Regular* category. This file is needed because standard GTFS does not include these fields.

Field Name	Required	Type	Length	Details
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rider_category_id	Required	Integer	3	Unique rider category ID 2 - Senior 3 - Child 4 - Student 5 - Youth 6 - Disabled 7 - Promotional category 11 - Military 15 to 25 - Custom categories (agency can assign categories that do not fall under standard categories mentioned above)
rider_category_description	Required	Character	256	Rider category as it should appear on 511.org, such as <i>Child (ages 5-11)</i> , <i>Seniors (Ages 62 & Up)</i>

File Name - fare_rider_categories.txt

This file specifies attributes for the fares for rider categories.

GTFS file `fare_attributes.txt` contains the fares for the *Regular* rider category. Fares for other rider categories such as *Child*, *Senior*, etc will be provided in this plus file `fare_rider_categories.txt`. The combination of `fare_id` and `rider_category_id` should be unique in this file. This file is needed because standard GTFS does not include these fields.

Field Name	Required	Type	Length	Details
fare_id	Required	Character	15	From GTFS <code>fare_attributes.txt</code> file
rider_category_id	Required	Integer	3	From Plus file <code>rider_categories.txt</code>
price	Required	Decimal	7 (5,2)	Fare for the specified fare id and rider category id in USD

File Name - calendar_attributes.txt

This file contains calendar attributes. This file is needed because standard GTFS does not include these fields.

Field Name	Required	Type	Length	Details
service_id	Required	Character	15	From GTFS <code>calendar.txt</code> file

service_description	Required	Character	30	Description of the service, as it should appear on 511.org such as <i>Weekdays, Sunday/Holiday</i>
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File Name - farezone_attributes.txt

This file contains fare zone attributes. This file is needed because standard GTFS does not include these fields.

Field Name	Required	Type	Length	Details
zone_id	Required	Character	15	From GTFS stops.txt file
zone_name	Required	Character	35	Public name of the fare zone, as it should appear on 511.org such as <i>EastBay, WestBay, etc</i>