

Top Quality GTFS Data Files Checklist

Powerful Rider Trip Planning with Top-Quality GTFS Data-

Lets bring your data up a notch!



Transit Data, like transit itself, is dynamic - moving within the ever-changing communities we serve. GTFS should reflect those changes - and so should this guide to data quality. Available online, together identify and address key data quality concerns that, while not scanned in the standardized validation process are important to empowering travelers.

GTFS needs to be accurate from a web link. From that web link you can validate the data is internally consistent.

HOST WITH PERMALINK:

Trip planners and the NTD report require a stable or “permalink” to your GTFS data file. The file is zipped.

The file may be hosted at your agency’s website.

NOTE: Websites that use Wordpress often change the file name or URL each time a file is uploaded. That will not offer a “permalink”. Ask the IT for your agency if there is another option. Explain this web link cannot change each time a file is uploaded

National Rural Transit Assistance Program hosts your GTFS to generate a permalink.

<https://www.nationalrtap.org/Technology-Tools/GTFS-Builder#UploadGTFS>

Reach out if you need assistance:

support@nationalrtap.org

VALIDATE:

Mobility Data Validator

<https://gtfs-validator.mobilitydata.org>

GTFS is a zipped or compressed file of the text files (agency, calendar, routes, stops, etc.) It is not a zip of the folder containing these files./

The GTFS (.zip) file could be uploaded, dragged or dropped and our suggested best practice is to test the GTFS .zip file from the agency’s web link, as a permalink, where the URL does not change. Your agency updates the data, keeps the file name and URL unchanged.

Errors must be resolved (see below for an exception to the rule “Errors must be resolved”)

Warnings should be reviewed and where possible, correct

Info should also be scanned in case they will improve the rider experience.

<https://gtfsvtor.mecatran.com/utw-test/web/pub/gtfsvtor>

Upload your zipped file to this validator which highlights stops that may be too close and should be one stop_id as well as inconsistencies in your calendar (days of the week incorrectly assigned, dates out of range, etc)

Suggested in this guide are primarily rider-focused data quality improvements, not identified using the Canonical GTFS Schedule Validator. These are not data inconsistencies, tested by the validator, but rather data within your GTFS that may not represent your agency accurately. Please remember at all times when you certify in your NTD the GTFS is accurate you are responsible if data is not as expected.

We trust that the few minutes it may take for you to improve your data will return massive dividends, giving your riders a safer and more reliable, more complete, trip.



Canonical GTFS Schedule Validator

GTFS Data Quality Topics in this Checklist include:

- Errors (from Mobility Data Validation) that can be ignored
 - `decreasing_or_equal_stop_time_distance`
- Summary Mobility Data Validation Report
- Stop Locations/Stop Accessibility
 - Bus stop locations
 - ADA / Wheelchair Icon Omitted
 - Duplicate lat/long
 - Shared stops with adjacent agencies
- Calendar/Calendar_dates/Holidays
 - Service_end Date is Expired in calendar
 - Holiday dates
 - Reduced Service Dates
- Display / View
 - Route colors/text contrast are readable
- Shapes / Snap to the Road
 - Bus not on the road
- Reduce Rider Frustration
 - Extra hour or more waiting for a transfer
 - Fares are free - riders cannot see that
 - Web links to route_url within routes fail
 - Web links to agency_url within agency fails
 - Agency phone number fails
- References, Published GTFS Best Practices

Errors (from Mobility Data Validation) that can be ignored

The general rule is that validation errors must be resolved. Errors in the validation are missing data or data inconsistencies.

decreasing_or_equal_stop_time_distance

Along the shapes line, there are two points that are so close together, they are “equal” and cause this error. This error will not impact trip planning and can be ignored. Decreasing values indicates there is a zig zag, and that should be addressed. A related error only identifies decreasing_or_equal_stop_time_distance and that should be resolved.

The workaround for this error is to omit the optional, `shape_distance_traveled` when generating the `stop_times` data. Just leave that blank while shapes are assigned to each trip.

From the validation report:

- Decreasing or equal `shape_dist_traveled` in `stop_times.txt`.
- When sorted by `stop_times.stop_sequence`, two consecutive entries in `stop_times.txt` should have increasing distance, based on the field `shape_dist_traveled`. If the values are equal, this is considered as an error.





References:

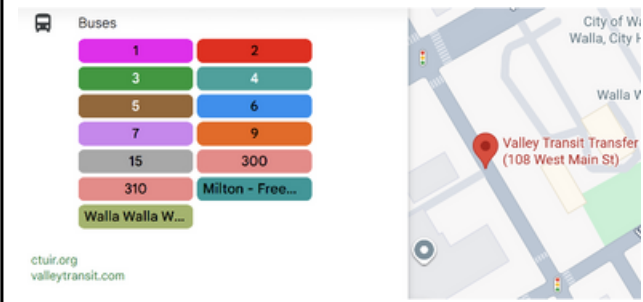
- [Stop_times.txt](#)
- [shapes.shape_dist_traveled](#)

Summary Mobility Data Validation Report


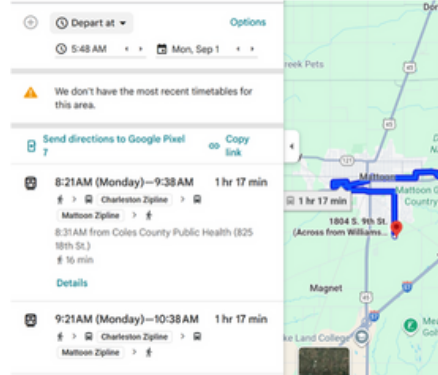
Part of GTFS Feed	How to check it is correct	Check
Agency name and Agency URL/website	Confirm spelling & click on the url, is it https? Update if needed	
Phone number	Dial it, honestly, confirm or update, if needed	
Agency_email	While optional, consider adding an email for riders who prefer not to call or other agencies needing to reach you	
Feed Info Contacts	Highly recommend you enter data to share the contact of who can answer GTFS data quality questions	
Service dates	Is your feed valid in both data elements until the end of 2026?	
Number of routes, stops, trips	Are these matching? If not look into missing data and resolve	
Shapes = zero or too few	Learn how to create and publish shapes at National RTAP or through your vendor	

Stop Locations/Stop Accessibility

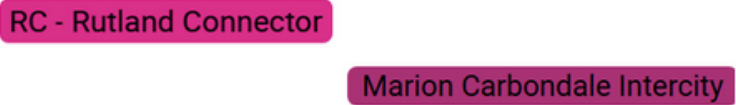
Part of GTFS Feed	How to check it is correct & What to do	Images	Check
Bus stop locations	<ul style="list-style-type: none"> are in the road or parking lot or center of a building, unclear to a rider or person with limited vision guided to the location as specified when not safely at the sidewalk Use precise satellite imagery (mymaps.google.com) Place stop at the pole, bench, shelter updated lat/long in stops.txt Move from travel lanes where rider could be harmed 		
ADA / Wheelchair Icon Omitted	<ul style="list-style-type: none"> Bus stops are not identified as wheelchair accessible (the ADA icon is omitted) <i>wheelchair_boarding = blank or 0</i> Leaving this blank or entering zero confuses riders if the stop may allow mobility devices For accessible bus stops update stops.txt with wheelchair_boarding = 1; enter =2 when not accessible In some cases the trip planner app should be contacted; it may be a data glitch 	<div>  <p>SR 20 at Coupeville Ferry Terminal 3.0 ★★★★★ (2) Bus stop</p> </div> <div>  <p>Port Townsend Plaza Stop ID: 178 Bus stop • </p> </div> <p><i>This stop does not have the ADA bus stop icon after the words "Bus Stop"</i></p>	

Duplicate lat/long	<ul style="list-style-type: none">• Bus stop locations should be one place for a shared stop; not a constellation of points• Assign one stop_id & stop_name for shared stops and update stop_times.txt to the single, shared stop_id		
Shared stops with adjacent agencies	<ul style="list-style-type: none">• Co-locate the stop (perhaps ask your adjacent agency for the lat/long) so riders see all next departures from that shared location and know where to stand	 <p>The screenshot shows the Valley Transit website interface. On the left, under the heading 'Buses', there is a list of routes: 1, 2, 3, 4, 5, 6, 7, 9, 15, 300, 310, Milton - Free..., and Walla Walla W... Each route is represented by a colored button. On the right, there is a map showing the 'Valley Transit Transfer (108 West Main St)' location with a red pin. The map also shows nearby streets and landmarks like 'City of Walla Walla, City Hall' and 'Walla Walla V...'. At the bottom left of the screenshot, the text 'ctuir.org valleytransit.com' is visible.</p>	


Calendar/Calendar_dates/Holidays

Part of GTFS Feed	How to check it is correct & What to do	Images	Check
Service_end Date is Expired in calendar	<ul style="list-style-type: none"> Expired day may be extended as published with riders uncertain which agency on the page is expired Confirm both calendar and feed_info for start and end dates 	 <p>We don't have the most recent timetables for this area.</p>	
Holiday dates	<ul style="list-style-type: none"> Dates with no service are not updated or accurate from year to year (Example shown is service showing on Labor Day and there is no service) Keep calendar_dates accurate with exception_type=2 for no service on that date entered as YYYYMMDD 		
Reduced Service Dates	<ul style="list-style-type: none"> Riders do not know there is reduced service on “pre-holidays” or other dates Reduce service with unique service_id for “holiday” and replace regular service (weekday, service_id) in the calendar_dates with the holiday service so riders are not trying to read a footnote 		

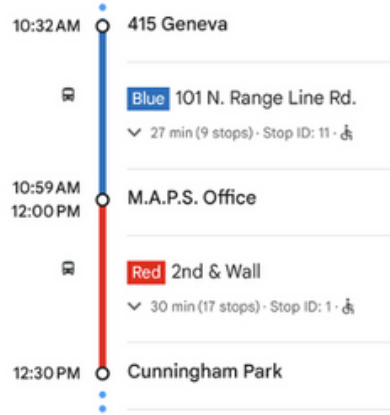
Display / View

Part of GTFS Feed	How to check it is correct & What to do	Images	check
Route colors/text contrast are readable	<ul style="list-style-type: none"> Replace route_text_color with '000000 (black) or FFFFFFFF (white) or vice versa to read route_name 		

Shapes / Snap to the Road

Part of GTFS Feed	How to check it is correct & What to do	Images	Check
Bus not on the road - validator accepts	<ul style="list-style-type: none"> Path over a lake, confusing to see bus jump over river or road or your neighbor's house and validator will not not need highlight Snap the route to the road - ask your GTFS manager to adjust, If no other options, National RTAP offers tech support with free mapping tools 		

Reduce Rider Frustration

Part of GTFS Feed	How to check it is correct & What to do	Images and Code	Check
Extra hour or more waiting for a transfer	<ul style="list-style-type: none"> Riders are directed to wait an hour for a transfer when in less than 5 minutes the next bus departs. The transfers.txt is omitted Specify stop_id, for example Transit Center "1" to "1" is guaranteed "1" The other example is a two minute transfer time and the stop_id need to be both directions 	 <p>from_stop_id,to_stop_id,transfer_type,min_transfer_time 1,1,1, { the M.A.P.S. Offices is stop_id 1} 22,22,2,120 { transfer possible in 2 min., or 120 seconds} 10,10,2,120</p>	
Fares are free - riders cannot see that	<ul style="list-style-type: none"> Update the following two data files fare_rules and fare_attributes, as shown 	<pre>fare_rule fare_id,route_id,origin_id,destination_id,contains_id,agency_id free,,,your<agency_id> fare_attributes fare_id,price,currency_type,payment_method,transfers,agency_id,transfer_duration (how long a ticket is valid) free,0.00,USD,0,your<agency_id></pre>	

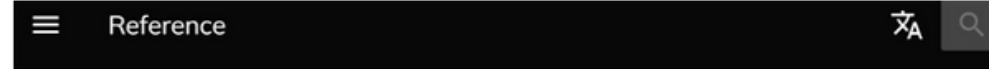
Web links to route_url within routes fail	<ul style="list-style-type: none"> • Test ALL URL or weblinks and update, for example the route_url in the routes.txt 		
Web links to agency_url within agency fails	<ul style="list-style-type: none"> • In the validation report or agency_name with a hyperlink, if it fails, update and update to https:// as some browsers warn this is unsafe to view 		
Agency phone number fails	<ul style="list-style-type: none"> • Dial the phone number that a rider will use to call for help. Update to your agency's current customer service phone number • Best not to use letters for numbers • Consider the local not toll free number as toll free may be blocked from certain area codes or international callers 		

References & Published GTFS Best Practices

- Adopted GTFS-Static Specification: <https://gtfs.org/documentation/schedule/reference/>
- Mobility Data Validator: <https://gtfs-validator.mobilitydata.org/>

For even deeper dive on best practices visit

- <https://gtfs.org/documentation/schedule/schedule-best-practices/>
- <https://dot.ca.gov/cal-itp/california-transit-data-guidelines#section-checklist>
- <https://resources.transitapp.com/article/458-guidelines-for-producing-gtfs-static-data-for-transit>
- <https://support.google.com/transitpartners/answer/6377364?hl=en&sjid=18253138810268968368-NC>



General Transit Feed Specification Reference ¶

Revised July 9, 2025. See [Revision History](#) for more details.

This document defines the format and structure of the files that comprise a GTFS dataset.

If you have any questions, reach out to the N-CATT team at helpdesk@n-catt.org