

Technology and ZEV: Trip Planning/GTFS* Builder Data Powers Innovation

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Support for National Rural Transit Assistance Program
(National RTAP) GTFS Builder

<https://www.nationalrtap.org/Web-Apps/GTFS-Builder/Support>

*General Transit Feed Specification

National Transit Assistance Program

- Technical assistance center funded by FTA through Section 5311
- Managed by the Neponset Valley Transportation Management Assoc.
- Offices in MA and DC
- **Free training materials and technical assistance products and services for rural and tribal transit providers and state RTAPs**
- Review Board – state DOT and rural/tribal transit staff

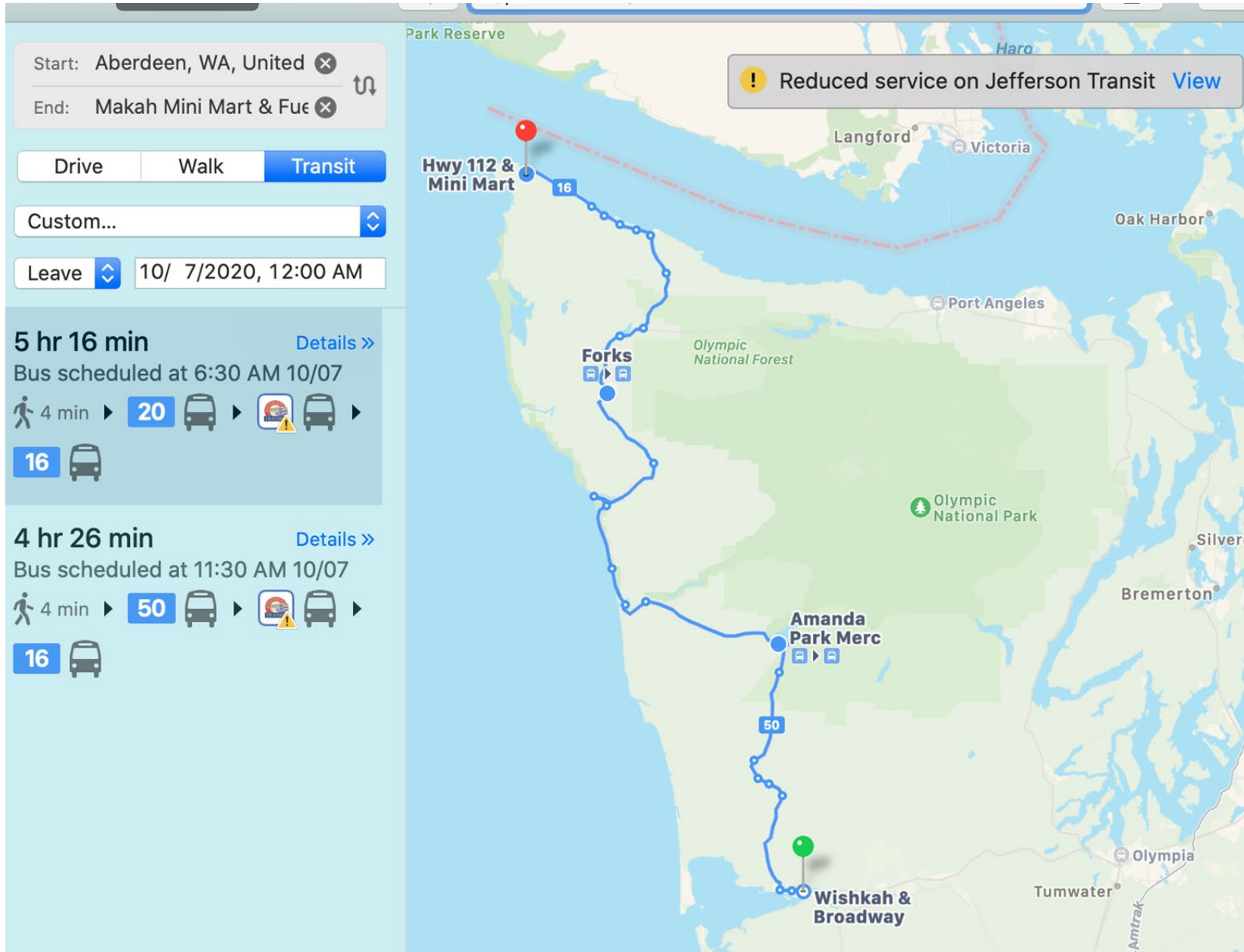
Learn more at nationalrtap.org



U.S. Department of Transportation
Federal Transit Administration

Let's Discuss

- How GTFS Builder powers standardized, digitized: GTFS-"Static"?
- How riders can discover on-demand, flex transit services today?
- Can you "jump the line" with GPS and GTFS-Realtime "RT"?
- Innovation, Analysis & the National Transit Map



Aberdeen, Washington

Neah Bay, Washington

Leave now

OPTIONS

Public transport services may be impacted due to COVID-19.

[Send directions to your phone](#)

6:30 AM—11:44 AM

5 h 14 min

20

50

>

Olympic Connection

>

16

6:30 AM from Aberdeen Station

\$2.00

1 min

[DETAILS](#)

[SCHEDULE EXPLORER](#)

A map of the coastal region of Washington state, showing a transit route from Neah Bay in the north to Aberdeen in the south. The route is highlighted with a thick line that is red in the north, black in the middle, and blue in the south. Key locations marked include Neah Bay, Ozette, La Push, Forks Transit Center, Port Angeles, Port Renfrew, Duncan, Sidney, Victoria, Amanda Park Me, Ocean Shores, Westport, and Aberdeen. Highway shields for 18, 17, 14, 101, and 16 are visible. A callout box with a bus icon and the text '5 h 14 min' is positioned over the southern part of the route.

5



6:30 AM—11:44 AM

5 h 14 min



20

50



Olympic Connection



16

6:30 AM from Aberdeen Station

\$2.00



1 min

[DETAILS](#)



Los servicios de transporte público pueden verse afectados por la crisis del COVID-19.



[Enviar al teléfono instrucciones sobre cómo llegar](#)



06:30—11:44

5 h 14 min



20

50



Olympic Connection



16

06:30 desde Aberdeen Station

USD 2.00



1 min

[DETALLES](#)

Trip Plan (GTFS) Data



Step 1:
Bus stops

stop_id	stop_code	stop_name	stop_lat	stop_lon	zone_id
40_1		Prairie and Sequim Avenue	48.076932	-123.102080	SEQ
40_2		Prairie and Sunnyside	48.077296	-123.100162	SEQ
40_3		Sunnyside	48.078341	-123.100183	SEQ
40_7		Blake Street	48.082352	-123.086051	SEQ
40_15		Fir Street	48.083351	-123.101917	SEQ
40_8		Library	48.085956	-123.102181	SEQ

Trip Plan (GTFS) Data

Clallam_GTFSSchedules_V3_20201001_wDAR												
	B	C	D	E	F	G	H	P	Q	R	S	T
1	route_id	service_id	direction_id	trip_headsign	stop_id	stop_desc		T01	T02	T03	T04	T05
176	Rt40	mtwtf	0	In-town Shuttle	333	Sequim Transit Ctr.		8:35:00	9:20:00	10:05:00	11:35:00	12:20:00
177	Rt40		0		40_1	Prairie & Sequim Ave		*	*	*	*	*
178	Rt40		0		40_2	Prairie & Sunnyside		8:38:00	9:23:00	10:08:00	11:38:00	12:23:00
179	Rt40		0		40_3	Sunnyside		*	*	*	*	*
180	Rt40		0		52E_1	E. Washington St At Pioneer Park		*	*	*	*	*
181	Rt40		0		40_7	Blake St		*	*	*	*	*
182	Rt40		0		40_15	Fir St		*	*	*		
183	Rt40		0		40_8	Library		8:45:00	9:30:00	10:15:00		

Step 2:
Schedules

Trip Plan (GTFS) Data

agency_id	agency_name	agency_url	agency_timezone	agency_lang	agency_phone	agency_fare_url
CTS	Clallam Transit System	http://www.clallamtransit.com	America/Los_Angeles	en	(360) 452-4511	http://clallamtransit.com/Fares-Passes

service_id	monday	tuesday	wednesday	thursday	friday	saturday	sunday	start_date	end_date
mtwtf	1	1	1	1	1	0	0	20200901	20210915
mtwtfs	1	1	1	1	1	1	0	20200901	20210915
sat	0	0	0	0	0	1	0	20200901	20210915
sun_the_ss	0	0	0	0	0	0	1	20200901	20210915

service_id	date	exception_type
mtwtf	20200907	2
mtwtf	20201126	2
mtwtf	20201225	2
mtwtf	20210101	2

Step 3:
Generate GTFS

Validate GTFS

GTFS Meta-Validator

Web-based. Runs multiple validators. Shareable report.

upload > meta-validate > reports

CHOOSE A GTFS ZIP FILE TO UPLOAD

Download, no-cost toolkit + Hosting

The screenshot shows the GTFS Builder Dashboard. On the left is a navigation menu with links: Home, About, News, Resource Center, Training, Toolkits, Web Apps, Webinars, and Technical Assistance. Below these are sections for Web Apps Overview, Cloud Dashboard, Cost Allocation Calculator, ProcurementPRO, GTFS Builder (highlighted), Dashboard, Introduction, Support, Website Builder, and Cloud Account. The main content area is titled 'GTFS Builder Dashboard' and features a 'Download GTFS Builder' section with a green 'Download' button. Below this is an 'Upload Zip' section with a 'ZIP' icon and the text 'Upload GTFS Zip File'. A large grey arrow labeled 'Hosting Stable URL' points from the 'Upload Zip' section to a box on the right. This box lists four files for download: BLANK_GTFSImportExport_20200515.xlsm, BLANK_GTFS Schedules_V3_202005015.xlsm, GTFSBuilder_Task_Wheel_20130501.PDF, and GTFS_Builder_Annotated_Sheets_20151001.pdf. A note at the bottom of the dashboard states: 'When downloading the .zip toolkit, use "extract all" in your C: drive (do not merely "double click" to open in Excel)'.

Home About News Resource Center Training Toolkits Web Apps Webinars Technical Assistance

Web Apps Overview
Cloud Dashboard
Cost Allocation Calculator
ProcurementPRO
GTFS Builder
Dashboard
Introduction
Support
Website Builder
Cloud Account

GTFS Builder Dashboard

Download GTFS Builder

Download

When downloading the .zip toolkit, use "extract all" in your C: drive (do not merely "double click" to open in Excel)

Upload Zip

ZIP

Upload GTFS Zip File

Uploading your file is optional. National RTAP offers no-cost hosting and a stable URL for your standardized, GTFS data. You may choose to post this URL at your website so that any trip planner or mobile app will download your most current GTFS data.

BLANK_GTFSImportExport_20200515.xlsm
BLANK_GTFS Schedules_V3_202005015.xlsm
GTFSBuilder_Task_Wheel_20130501.PDF
GTFS_Builder_Annotated_Sheets_20151001.pdf

Hosting Stable URL

Short Videos + 1:1 Technical Assistance



National
RTAP
Rural Transit Assistance Program

 eLearning Login  Cloud Login

 Chat Online  Email  888-589-6821

[Home](#) [About](#) [News](#) [Resource Center](#) [Training](#) [Toolkits](#) [Web Apps](#) [Webinars](#) [Technical Assistance](#)

[Tribal Transit](#) [State RTAP](#)

[Web Apps Overview](#)

[Cloud Dashboard](#)

[Cost Allocation Calculator](#)

[ProcurementPRO](#)

[GTFS Builder](#)

Step 3 Instructional Videos: Generate GTFS

 [Step 3 Workshop Webinar](#)
 [3.1 Overview: Build one Route, Validate, Host & Post File](#)
 [3.2 Agency \(red tab ImportExport Workbook\)](#)

Soon? Future: GTFS-Flex (full-function)

The image shows a screenshot of a transit application interface overlaid on a map of Vermont. The interface displays a transit route for 'Option 1' departing on Oct 4th at 7:07am, with a duration of 1 hr, 55 min +. The route is labeled 'Rural Community Transportation' and 'Dial-a-Ride'. The departure is from Spaulding Road (approx. Oct 4th 7:00am to 7:13am) and the arrival is at St. Johnsbury Welcome Center (approx. Oct 4th 7:26am to 7:40am). A service note instructs users to call 802-748-8170 two days before the trip. The map shows a blue route line connecting various locations including Walden, Danville, St. Johnsbury, Waterford, Marshfield, and Barnet. Callouts with arrows point to specific features: 'Service areas' points to a 'START' button on the map; 'Service times and speeds' points to the departure and arrival time ranges in the interface; and 'Rider instructions' points to a 'Dial-a-Ride' button on the map.

Option 1: departs approximately Oct 4th 7:07am 1 hr, 55 min +

Rural Community Transportation Dial-a-Ride

Depart	From	Service note:
approximately Oct 4th 7:00am to 7:13am	Spaulding Road	Call 802-748-8170 two days before your trip to request pickup.
Arrive	To	
approximately Oct 4th 7:26am to 7:40am	St. Johnsbury Welcome Center	

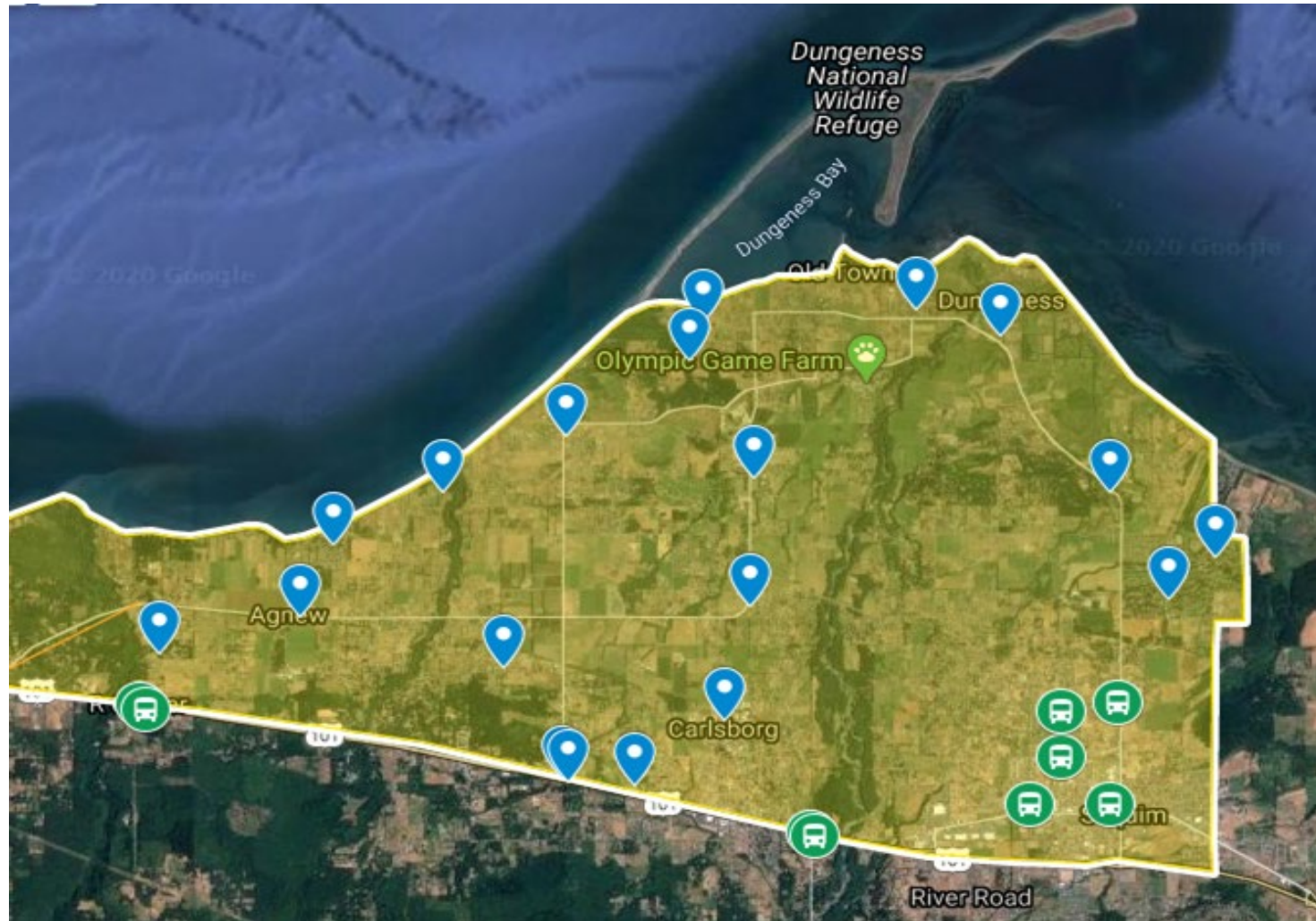
Green Mountain Transit to National Life

Service areas

Service times and speeds

Rider instructions

Flex? On-Demand? = GTFS Builder Lite



Continuous pick-up/drop = Discovery

The screenshot displays a Google Maps interface with a transit route highlighted in green. The route starts at 'Woodland Dr call Dial-A-Ride 3604524511' and ends at 'Sequim, Washington 98382'. The estimated travel time is 19 minutes. The route passes through 'Old Olympic Hwy and Sequim Avenue'. A warning message states: 'Public transport services may be impacted due to COVID-19.' Below this, there is a link to 'Send directions to your phone'. The transit schedule shows a departure at 8:34 AM (Monday) and an arrival at 8:53 AM. The fare is \$3.00. A yellow highlight on the text reads: '3604524511 for pickup 24 hours ahead'. The map shows the area around Sequim, WA, with labels for 'Old Town', 'Dungeness', and 'Sequim, WA 98382'. A satellite view inset is visible in the bottom left corner of the map area.

Woodland Dr call Dial-A-Ride 3604524511

Sequim, Washington 98382

Leave now

OPTIONS

Public transport services may be impacted due to COVID-19.

Send directions to your phone

8:34 AM (Monday)—8:53 AM 19 min

Sequim Dial-a-Ride > 40

8:34 AM from Woodland Dr call Dial-A-Ride 3604524511 for pickup 24 hours ahead

\$3.00

DETAILS

Woodland Dr call Dial-A-Ride...

Woodland Dr call Dial-A-Ride...

Old Olympic Hwy and Sequim Avenue

Sequim, WA 98382

Sequim

Satellite

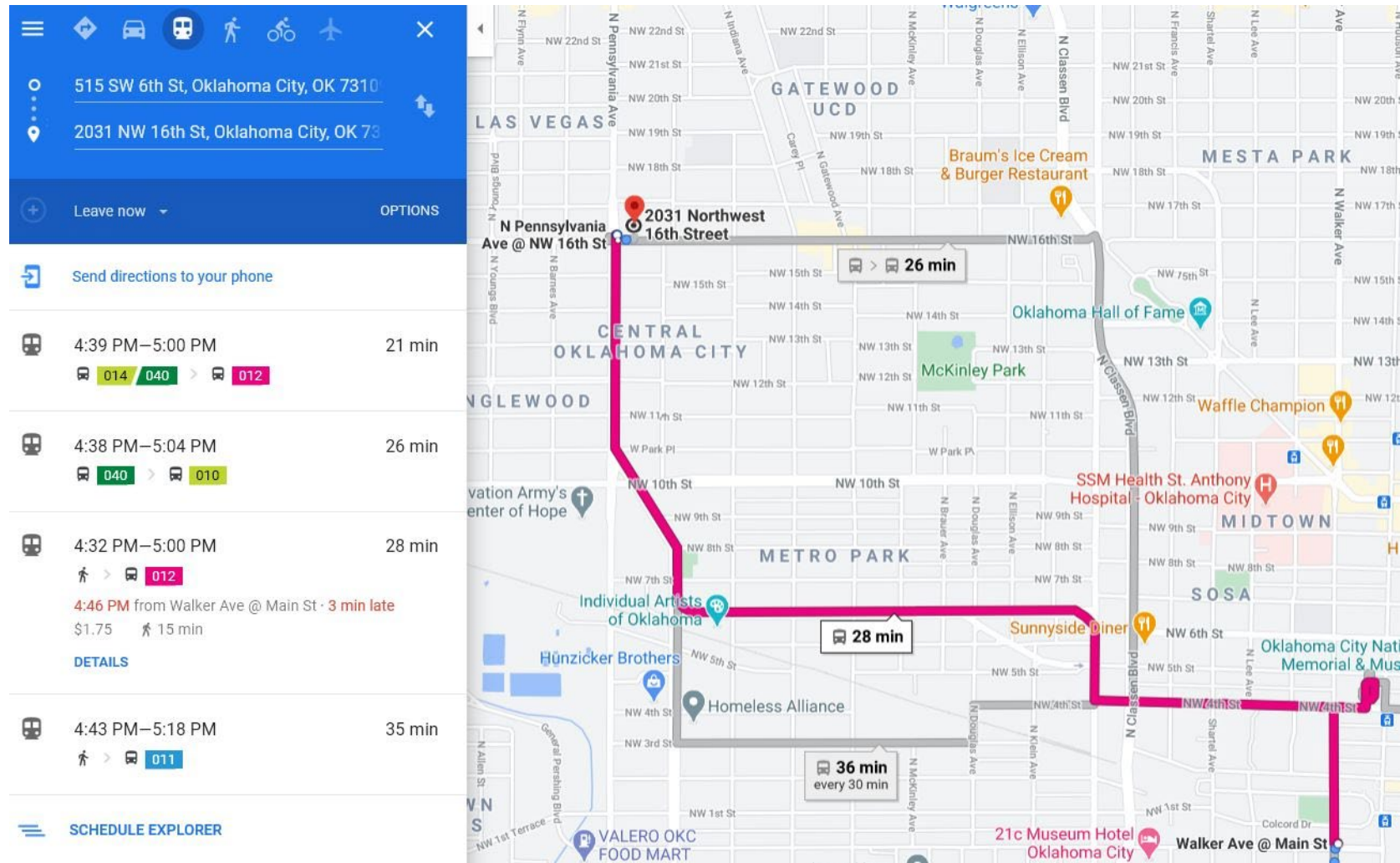
Map data ©2020 Google United States Terms

In-house GTFS Data Management

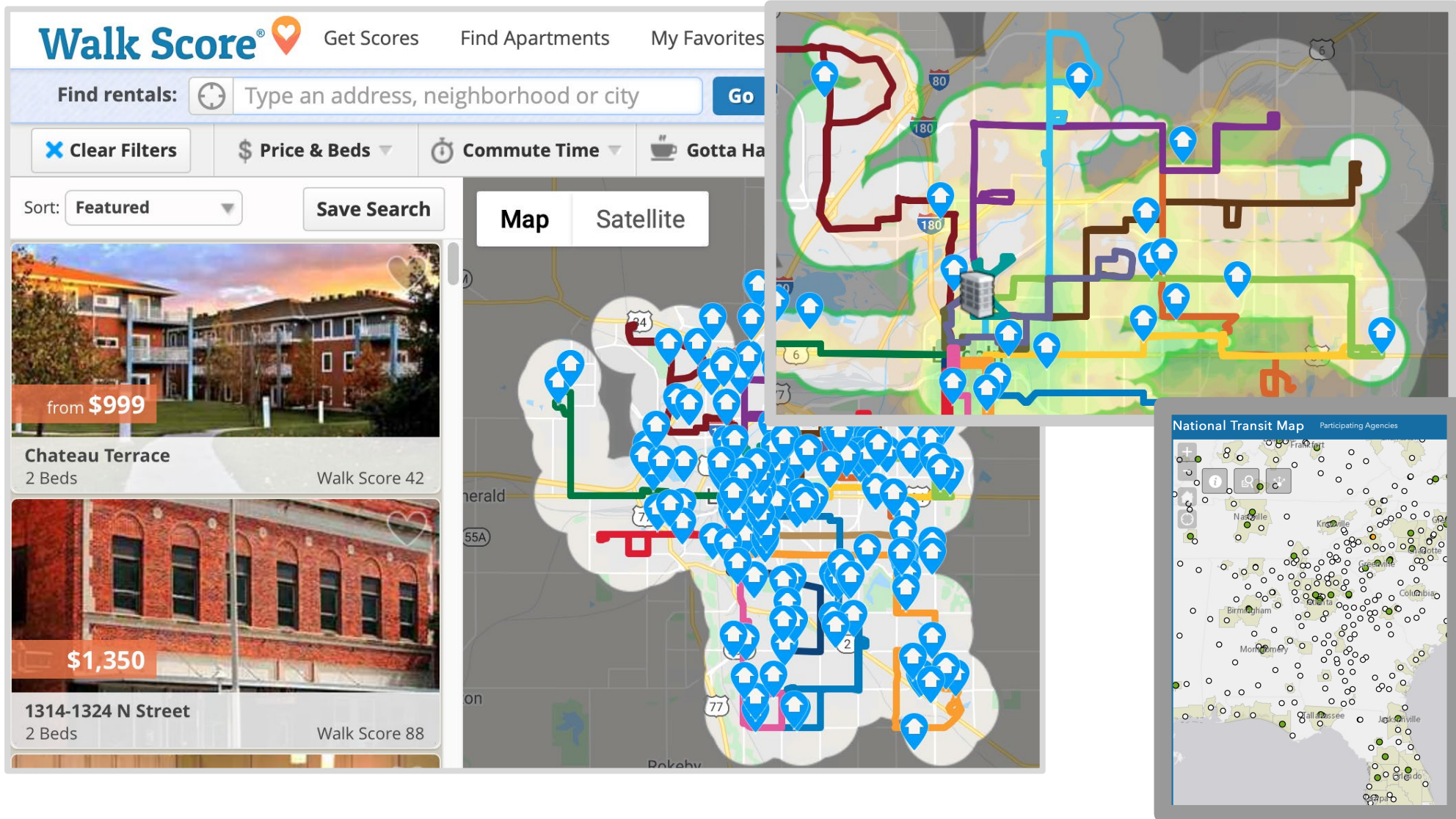
- Website is up-to-date
- Consistent brochures between routes and counties
- Removed bus stops that were not used anymore
- Renamed bus stops



With a GPS locator - do I need GTFS-static?



Innovate/Publish @the National Transit Map



Next Steps

National Transit Map: <https://www.bts.gov/content/national-transit-map>

National Rural Transit Assistance Program 888-589-6821

nationalrtap.org

<https://www.nationalrtap.org/Web-Apps/GTFS-Builder/Support>
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Find us on Facebook, Twitter, YouTube, LinkedIn & Instagram

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GTFS Builder Tech Support

GTFS-realtime (on-contract)

marcy@mjcation.com

360-643-1002



U.S. Department of Transportation
Federal Transit Administration