Denver Region Data Brief

The COVID-19 pandemic's effect on high-frequency transit: reset and recovery

May 2022

High-frequency transit

Transit frequency is the time between buses or trains at a stop or a station. High-frequency service results in high ridership because it reduces wait time, makes connections between lines faster and supports reliable service (Jarrett Walker, The Transit Ridership Recipe — Human Transit). High-frequency transit service supports access to jobs, goods and services.

Definitions of high-frequency transit vary. DRCOG's Metro Vision plan identifies high-frequency transit stops as those with 96 or more departures on a typical weekday (an average of one bus every 15 minutes or less); those with close proximity fall within a quarter-mile catchment area of a transit stop.

Just the numbers

- *In 2014, the Denver region had 835 transit stops with high-frequency transit service, serving a nearby catchment area of 134,800 housing units.*
- *Service cutbacks in 2020 due to the COVID-19 pandemic reduced the number of transit stops with high-frequency transit service by 65% or below 300, serving a nearby catchment area of just 78,900 housing units, a 41% reduction.*
- *Service levels are beginning to rebound. By 2021, at least 39,500 more housing units – a 50% increase – were served by high-frequency transit service compared to 2020 as the number of stops with high frequency transit service began to recover from the effects of the COVID-19 pandemic along with the size of the catchment area.*

Denver region high-frequency transit service, 2014 to 2021

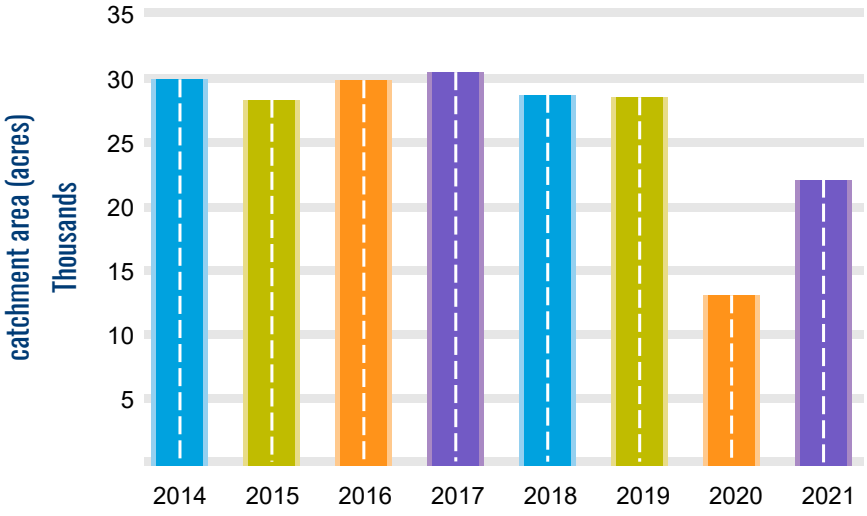
Year	Number of stops with high-frequency transit service	Catchment area of high-frequency transit service (in acres)	Number of housing units proximate to high-frequency transit service (within 1/4-mile)
2014	835	29,900	134,800
2015	766	28,300	131,800
2016	810	30,000	147,200
2017	805	30,600	151,600
2018	716	28,800	146,700
2019	710	28,700	145,000
2020	291	13,300	78,900
2021	551	22,100	118,400*
Change from 2014 to 2021	-284	-7,800	-16,400
Percent change from 2014 to 2021	**-34.0%**	**-26.1%**	**-12.2%**

Data sources: General Transit Feed Specification for RTD transit service, 2014 to 2021; frequency reflects last service change of the year shown. DRCOG Master Housing Dataset (2014 to 2020), compiled from local parcel, land use, and building data; supplemented by proprietary data where necessary. *Note: Housing unit information is not yet available for 2021; calculation based on the 2020 housing data with 2021 transit service levels.

Transit stops and catchment area

The number of transit stops with high-frequency service dropped from more than 700 in 2019 to under 300 in 2020, a nearly 60% decrease in stops with high-frequency service. The quarter-mile catchment area for high-frequency transit service remained around 30,000 acres in the region from 2014 to 2019, but then dropped to 13,300 acres in 2020 (see Figure 1). This drop in area served by high-frequency transit service coincided with RTD's transit service reduction in response to the COVID-19 pandemic in spring 2020. 2021 shows only a partial recovery.

High-frequency transit service catchment area, 2014 to 2021



In practice: System optimization plan

As part of its Reimagine RTD effort, the Regional Transportation District is completing a system optimization plan. After a comprehensive assessment of current service, travel pattern analysis and short-range financial capacity forecast, RTD sought input in how to focus resources as it increases service 20% by 2027. The draft systemwide route redesign would focus 41% of service resources on high-frequency bus and rail routes.

The Denver Regional Council of Governments is a planning organization where local governments collaborate to make the region a great place to live, work and play. To support decision-making, DRCOG staff maintains and analyzes various data sets. This briefing is an opportunity to highlight insights from the data sets.

Questions? Ideas for topics? Contact Andy Taylor at ataylor@drcog.org. For more data, visit data.drcog.org.

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