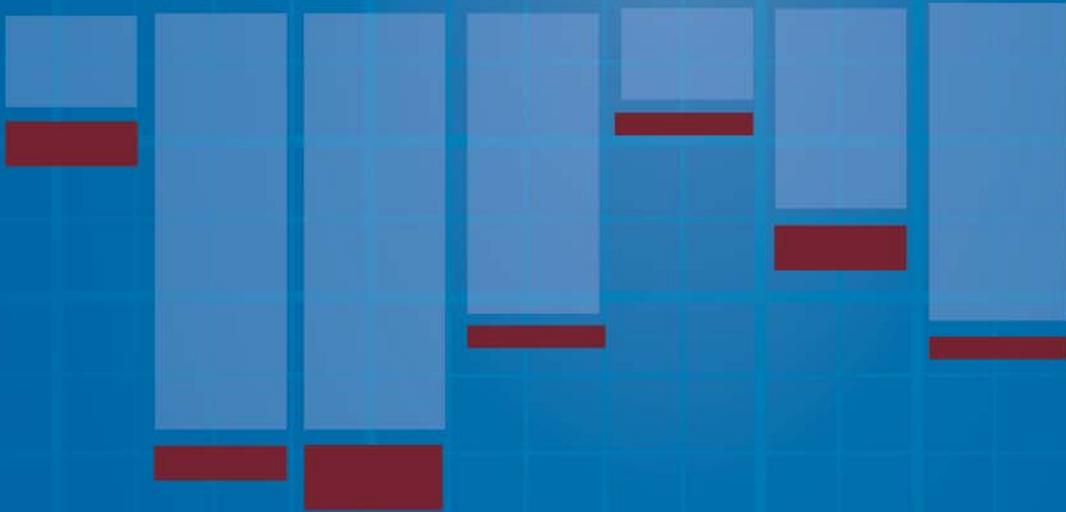




2019 SUB-REGIONAL PEER REVIEW



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EXECUTIVE SUMMARY

The Sub-Regional Peer Review has been developed by the RTA as part of its oversight function to support the evaluation and management of the region's public transportation system. Since there are no federal or industry standards for transit performance metrics, peer comparisons provide the best way to benchmark performance and identify best practices; further research can then be conducted to gain a better understanding of the factors contributing to observed levels of performance. The selection of appropriate peers was carefully performed to allow for the closest possible match of operating characteristics. For each service mode operated in the RTA region – urban bus, heavy rail, commuter rail, suburban bus, and ADA paratransit – a peer group of five agencies has been chosen. This report is based on published data from the National Transit Database (NTD) to ensure as much comparability between agencies in definition and collection of data elements as possible. It covers data reported for 2019, the most current year available, which was released in November 2020. The impacts of the COVID-19 pandemic are not apparent in the data contained within this report, but will greatly affect every aspect of transit performance in subsequent report years.

RTA staff, in cooperation with a Performance Measurement Task Force, periodically re-evaluates the process by which peer agencies are included for comparison within this report. The primary selection criteria for the peer agencies were determined to be: vehicle revenue hours and miles, unlinked passenger trips, number of vehicles operated in maximum service, and directional route miles (for rail modes). Although much care was used in selecting meaningful peers, no two transit agencies are perfectly comparable. Each agency has unique circumstances and a unique operating environment, and those differences should be kept in mind when making comparisons. Each modal section of the report contains additional information about service initiatives of the peer agencies -- such as fare increases, service changes, and capital projects -- which helps to provide context for the performance metrics. The goal of the RTA performance measurement program is to point toward areas of potential improvement within the constraints and resources of our region.

Overall, the Chicago transit agencies performed well in 2019 in comparison to their peers. The Chicago operators are consistently among the largest of their peers, not surprising given the area's geographic breadth and large population. As in prior years' reports, special strengths were noted across modes in the service efficiency and effectiveness category.

CTA Bus performed better than or equal to the peer average for nine of twelve measures. CTA's 2.8% drop in ridership outperformed two of its peers, maintaining CTA's third-place rank for passenger trips per vehicle revenue mile and moving CTA to second rank for passenger trips per vehicle revenue hour. CTA performed well in the efficiency and effectiveness measures, maintaining top rankings for operating cost per vehicle revenue hour and operating cost per passenger trip, although dropping one position for operating cost per passenger mile. CTA

ranked lowest among its peers for the two measures of maintenance and capital investment: average age and the reliability indicator miles between major mechanical failures. CTA again performed well in the solvency area, maintaining a rank of first or second for the three measures related to fare revenue. A 26% reduction in capital expenditures for CTA led to a drop of two rank positions to the lowest capital expenditure per passenger trip among its peers.

CTA Rail performed better than or equal to its peers for five of the twelve measures examined, one fewer compared to 2018. As it has in the past, CTA performed most strongly in the service efficiency and effectiveness area: CTA maintained top ranking for operating cost per vehicle revenue hour for the eleventh consecutive year, maintained top ranking for operating cost per passenger mile, and equaled the peer average for operating cost per passenger trip. For the seventh consecutive year, CTA ranked in the top two for average fleet age, a metric of service maintenance and capital investment. CTA rail performed below the peer average for each solvency measure related to fares but gained two rank positions for capital fund expenditures per passenger trip as spending increased 47% in 2019.

Metra Commuter Rail performed better than or equal to its peers for two of twelve measures. Metra had consistently performed strongly for all measures of service coverage and efficiency and effectiveness, but its 2019 change in methodology (see Notes, p. 6) for counting ridership negatively impacted its rankings among peers for many of the performance measures included in this report. While Metra's vehicles are older compared to its peer average, reliability (as indicated by miles between major mechanical failures) remained better than the peer average. Metra maintained its rank positions for each measure related to fare revenue in 2019, remaining below the peer average for each measure. Metra expended the least capital funds per passenger trip among its peer group for the year.

Pace Suburban Bus performed better than or equal to its peers for six of twelve measures examined. Pace experienced a 5.4% drop in ridership while service hours and miles remained roughly equal to 2018. Pace's large coverage area (up to ten times the size of its peer agencies) negatively impacts its service effectiveness, as shown by its consistently ranking last for passenger trips per hour and trips per mile. Efficiency and effectiveness performance was mixed, with no results in top or bottom ranking, and no rank changes since 2016. Pace ranked second for average fleet age and for the reliability measure miles between major mechanical failures, and fourth for the percent of vehicles in service beyond the useful life benchmark. In the solvency area, Pace again had the second-highest average fare but was below the peer average and dropped in rank position for fare revenue per passenger mile, fare recovery ratio, and capital expenditures per passenger trip.

Pace ADA Paratransit performed better than or equal to its peers for nine of eleven metrics. With its large geographic coverage, Pace provided 13.6% more vehicle revenue miles compared to the peer average and retained its rank positions for both service coverage measures. Having the lowest increase in operating cost for the year allowed Pace to improve its rank position for one measure (and maintain its rank for two measures) of service efficiency and effective effectiveness. Pace had the third-youngest fleet and ranked fourth for the reliability measure

miles between major mechanical failures. Pace maintained its position for average fare and improved one rank position for fare revenue per passenger mile. Pace Paratransit recovered 6.5% of its operating cost from passenger fares, exceeding the peer average for the year by a full percentage point.

NOTES/METHODOLOGY

1. This analysis is based on 2019 published data from the National Transit Database (NTD), the most currently available data released in November 2020. The data submission by transit agencies is a requirement of receiving federal funding and thus follows guidelines and procedures established by the Federal Transit Administration.
2. On the opening page for each mode chapter, a snapshot table summarizes performance of the Chicago service operator relative to its peers, with a highlight reflecting performance better than or equal to the peer average. A designation of 'equal' is defined as being within +/- 10% of one standard deviation of the peer average.
3. The recovery ratio used in this report follows the NTD definition, which is the proportion of operating costs that are recovered by fare revenues paid by passengers. The NTD recovery ratio differs from the RTA recovery ratio, which takes into account certain adjustments as enumerated in the RTA Act, such as the exclusion of various costs, the treatment of depreciation, and the inclusion of in-kind services. The RTA recovery ratio also includes system-generated revenue other than fares in its formula calculation.
4. In 2019, Metra began using new methodology to calculate unlinked passenger trips which uses data from mobile tickets sold through the Ventra App to estimate the number of trips taken using these passes. Metra engaged a qualified statistician to confirm that this methodology meets the FTA's statistical sampling requirements and has the attestation documentation on file.
5. 2019 data reflect a change to report the *percent of vehicles beyond their useful life benchmark*, which shifts reporting from the lower limit of a vehicle's useful life expectation to an upper limit expectation, in lieu of the measure *percentage of vehicles beyond useful life*. Benchmark data reflect unique operating environments and circumstances of individual transit agencies, which will change as vehicles are rebuilt or overhauled. Where no benchmark was stated for a revenue vehicle, the default Federal Transit Administration (FTA) benchmark specific to the revenue vehicle type was used.

PEER AGENCIES

MODE	PEER GROUP
CTA Urban Bus	METRO: Los Angeles County Metropolitan Transportation Authority, Los Angeles MBTA: Massachusetts Bay Transportation Authority, Boston NYCT: Metropolitan Transportation Authority – New York City Transit, New York SEPTA: Southeastern Pennsylvania Transportation Authority, Philadelphia WMATA: Washington Metropolitan Area Transit Authority, Washington, DC
CTA Heavy Rail	MARTA: Metropolitan Atlanta Rapid Transit Authority, Atlanta MBTA: Massachusetts Bay Transportation Authority, Boston NYCT: Metropolitan Transportation Authority – New York City Transit, New York SEPTA: Southeastern Pennsylvania Transportation Authority, Philadelphia WMATA: Washington Metropolitan Area Transit Authority, Washington, DC
Metra Commuter Rail	LIRR: Metropolitan Transportation Authority-Long Island Rail Road, New York City metropolitan area/Long Island MBTA: Massachusetts Bay Transportation Authority, Boston MNCR: Metropolitan Transportation Authority-Metro-North Commuter Railroad, New York City metropolitan area/Connecticut NJT: New Jersey Transit, New York City metropolitan area/New Jersey SEPTA: Southeastern Pennsylvania Transportation Authority, Philadelphia
Pace Suburban Bus	ACT: Alameda-Contra Costa Transit, Oakland, CA BCT: Broward County Transit Division, Plantation, FL (Miami) OCTA: Orange County Transportation Authority, Orange, CA (Los Angeles) VTA: Santa Clara Valley Transportation Authority, San Jose, CA (San Francisco) RIDE ON: Ride-On Montgomery County Transit, Rockville, MD (Washington, DC)
Pace ADA Paratransit	MBTA: Massachusetts Bay Transportation Authority, Boston MM: Metro Mobility, St. Paul, MN NYCT: Metropolitan Transportation Authority – New York City Transit, New York ACCESS: Access Services, El Monte, CA (Los Angeles) WMATA: Washington Metropolitan Area Transit Authority, Washington, DC

DEFINITIONS

Average Age of Fleet: the mean of the difference between year of manufacture and year under consideration for all vehicles in the active fleet.

Average Vehicle Passenger Capacity: the mean number of passengers that can be carried per revenue vehicle, computed by adding seating capacity plus standing capacity and dividing that number by the number of active vehicles in the fleet. For the commuter rail mode, this calculation excludes standing passenger capacity to conform to industry standards and the expected provision of one seat per passenger.

Average Speed: the miles that vehicles travel while in revenue service divided by the hours that vehicles travel while in revenue service.

Average Trip Length: the average distance ridden for an unlinked passenger trip.

Capital Funds Expended: the expenses related to the purchase of capital assets; it does not include capital funds transferred to cover operating expenses.

Capital Funds Expended per Passenger Trip: expenses related to the purchase of capital assets divided by the total number of unlinked passenger trips provided.

Directional Route Miles: the mileage in each direction over which public transportation vehicles travel while in revenue service. Directional route miles (DRM) are:

- A measure of the route path over a facility or roadway, not the service carried on the facility; e.g., number of routes, vehicles, or vehicle revenue miles.
- Computed with regard to direction of service, but without regard to the number of traffic lanes or rail tracks existing in the right-of-way (ROW). Directional route miles (DRM) do not include staging or storage areas at the beginning or end of a route.

Fare Recovery Ratio: the recovery ratio used in this report follows the NTD definition, which is the proportion of operating costs that are covered by fare revenue paid by passengers. The NTD recovery ratio differs from the RTA recovery ratio, which takes into account other system-generated revenue and adjustments as enumerated in the RTA Act.

Fare Revenue: all income received directly from passengers, either paid in cash or through pre-paid tickets, passes, etc.

Fare Revenue per Passenger Mile: all income received from passengers divided by the total number of miles traveled by passengers.

Fare Revenue per Passenger Trip: all income received from passengers divided by the total number of unlinked passenger trips provided.

Miles between Major Mechanical Failures: the average number of miles that vehicles travel while in service between failures of some mechanical element or a safety concern that prevents the vehicle from completing a scheduled trip or from starting the next scheduled trip.

Operating Cost: the expenses associated with the operation of the transit agency.

Operating Cost Components: the allocation of costs among specific categories of expenses:

- General administration: all costs associated with the general administration of the transit agency
- Vehicle maintenance: all costs associated with revenue and non-revenue service vehicle maintenance
- Non-vehicle maintenance: all costs associated with facility maintenance
- Vehicle operations: all costs associated with vehicle operations

Operating Cost per Passenger Mile: total operating cost divided by the total number of miles traveled by passengers.

Operating Cost per Passenger Trip: total operating cost divided by the total number of unlinked passenger trips taken on public transportation vehicles.

Operating Cost per Vehicle Revenue Hour: total operating cost divided by the hours that vehicles travel while in revenue service.

Passenger Miles: cumulative sum of the distances ridden by each passenger: average trip length multiplied by total passenger trips.

Passenger Trips: unlinked passenger trips reported as the number of passengers who board public transportation vehicles, counted each time they board a vehicle used to travel from their origin to their destination.

Passenger Trips per Vehicle Revenue Hour: total number of unlinked passenger trips divided by the total number of hours of transit service provided.

Passenger Trips per Vehicle Revenue Mile: total number of unlinked passenger trips divided by the miles that vehicles travel while in revenue service.

Population: the population of the area served by the transit agency as reported to NTD by the agency.

Population Density: the service area population divided by the service area square miles.

Revenue Components of Trip Cost: the cost of a trip viewed as the percentage and actual dollar amounts covered by fare and non-fare revenue (system-generated revenue and other subsidies).

Service Area: A measure of access to transit service in terms of population served and area coverage (square miles). The reporting transit agency determines the service area boundaries and population for most transit services using the definitions contained in the Americans with Disabilities Act of 1990 (ADA), i.e. a corridor surrounding the routes $\frac{3}{4}$ of a mile on either side, or for rail, a series of circles of radius $\frac{3}{4}$ mile centered on each station.

Vehicle Revenue Hours: hours that vehicles travel while in revenue service.

Vehicle Revenue Miles: miles that vehicles travel while in revenue service, including layover/recovery time, but excluding deadhead time.

Vehicles Operated in Maximum Service: the revenue vehicle count during the peak season of the year, on the week and day that maximum service is provided; excludes atypical days or one-time special events.

URBAN BUS

The peers selected for urban bus are those that serve the nation’s largest urbanized areas with the most extensive, well-developed transit systems. These cities – Boston, Los Angeles, New York, Philadelphia, and Washington, DC – rank within the top ten in the country for metropolitan area population and bus ridership. They each also have both urban rail and bus services, which provide coordinated service throughout the metropolitan area.

CTA performed better than the peer average for seven of twelve measures, equaled the peer average for two measures, and performed below the peer average for three measures. CTA’s 2.8% drop in ridership outperformed two of its peers, maintaining CTA’s third-place rank for passenger trips per vehicle revenue mile and moving CTA to second rank for passenger trips per vehicle revenue hour. CTA performed well in the efficiency and effectiveness measures, maintaining top rankings for operating cost per vehicle revenue hour and operating cost per passenger trip, although dropping one position for operating cost per passenger mile. CTA ranked lowest among its peers for the two measures of maintenance and capital investment: average age and the reliability indicator miles between major mechanical failures. CTA again performed well in the solvency area, maintaining a rank of first or second for the three measures related to fare revenue. A 26% reduction in capital expenditures for CTA led to a drop of two rank positions to the lowest capital expenditure per passenger trip among its peers.

Peer Comparison Snapshot

Service Area	Performance Measure	Performs better than peer average	
		2018	2019
Coverage	Passenger Trips per Vehicle Revenue Hour	EQUAL	EQUAL
	Passenger Trips per Vehicle Revenue Mile	EQUAL	EQUAL
Efficiency and Effectiveness	Operating Cost per Vehicle Revenue Hour	YES	YES
	Operating Cost per Passenger Trip	YES	YES
	Operating Cost per Passenger Mile	YES	YES
Maintenance and Capital Investment	Average Age	NO	NO
	Miles between Major Mechanical Failures	NO	NO
	Percent of Vehicles Beyond Useful Life Benchmark	N/A	YES
Solvency	Fare Revenue per Passenger Trip	YES	YES
	Fare Revenue per Passenger Mile	YES	YES
	Fare Recovery Ratio	YES	YES
	Capital Funds Expended per Passenger Trip	NO	NO

A designation of ‘equal’ is defined as being within +/- 10% of one standard deviation of the peer average

Peer Modal Characteristics

In comparison to their peers, New York and Chicago have the smallest and most densely-populated operating environments. CTA ranks third, behind NYCT and Los Angeles Metro, for miles and hours of service provided, passenger trips, passenger miles traveled, and operating cost.

Urban Bus Overview

Modal Characteristics	CTA	MBTA	METRO	NYCT	SEPTA	WMATA
	Chicago	Boston	Los Angeles	New York	Philadelphia	Washington, DC
Service Area Population	3,240,768	3,109,308	8,621,928	8,398,748	3,426,793	3,719,567
Service Area (square miles)	310	3,244	1,469	321	839	950
Population Density	10,454	958	5,869	26,164	4,084	3,915
Vehicle Revenue Miles	52,816,557	23,860,262	73,091,103	99,482,824	41,307,488	37,413,280
Vehicle Revenue Hours	5,814,122	3,004,445	6,948,117	13,349,678	4,133,391	3,784,849
Passenger Trips	237,276,400	111,743,818	273,747,759	733,789,473	153,956,354	123,333,115
Passenger Miles	581,741,988	280,891,688	1,149,053,457	1,688,894,932	479,782,635	367,558,782
Operating Cost	\$824,288,048	\$457,380,559	\$1,288,440,283	\$3,031,510,458	\$649,703,440	\$731,946,008
Fare Revenue	\$279,224,950	\$107,231,355	\$190,876,135	\$954,979,394	\$168,096,462	\$124,011,141
Capital Funds Expended	\$94,328,968	\$86,773,331	\$192,552,104	\$535,568,998	\$169,147,941	\$182,850,687
Average Speed (miles per hour)	9.1	7.9	10.5	7.5	10.0	9.9
Average Trip Length (miles)	2.5	2.5	4.2	2.3	3.1	3.0
Average Vehicle Passenger Capacity	87	94	61	79	83	67
Average Vehicle Age (years)	9.6	9.1	9.3	5.6	8.4	7.8
Vehicles Operated in Maximum Service	1,566	891	1,944	3,845	1,191	1,379

Modal Characteristics Highlights

Vehicle Revenue Miles: CTA increased its vehicle revenue miles by 1% compared to 2018, one of five agencies to offer increased service in 2019; LA Metro was the only agency to see a decrease and was 0.1% below 2018 service levels. MBTA began implementation of its Better Bus Project during this review period, which resulted in a 19.1% increase in vehicle revenue hours and 5.6% increase in vehicle revenue miles as it significantly expanded late night service, added more bus lanes, and implemented priority treatments.

Passenger Trips: Five agencies experienced ridership declines in 2019, ranging from 0.1% (NYCT) to 5.0% (METRO). CTA's decrease of 2.0% was steeper than the average peer ridership decrease, and amounted to a difference of nearly five million trips. WMATA was the only bus service to see an increase in ridership, up 3.1%, as riders responded to ongoing safety issues and delays on Metrorail service.

Operating Cost: CTA's operating cost in 2019 had the lowest percentage increase at 1.2%, compared to a peer average increase of 4.8%.

Fare Revenue: CTA did not implement a fare increase in 2019, and fare revenue declined for the year by 0.1%. NYCT was the only peer agency to implement a fare increase in 2019, and realized a 0.6% increase in fare revenue although ridership decreased by 0.1%.

Capital Funds Expended: CTA's capital fund expenditure per passenger trip decreased by 24% in 2019, one of two agencies that significantly decreased capital expenditure. Capital fund expenditures fluctuate greatly from year to year, generally corresponding to large capital outlays for new rolling stock or construction projects. In 2019, CTA's largest capital expenditures were: \$81.6 million for new bus rolling stock, \$5.9 million on systems and guideway, and \$5.2 million on facilities and stations.

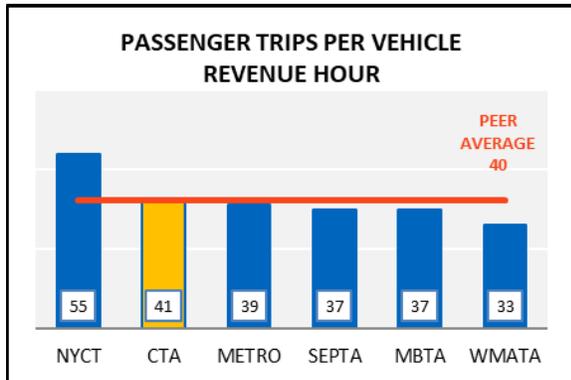
Average Speed: Four agencies, including CTA, saw increased average bus speeds in 2019, all amounting to less than one percentage point difference compared to 2018. CTA's average speed of 9.1 miles per hour is the third-lowest average speed among its peers.

Average Trip Length: CTA bus riders travel an average 2.5 miles per trip, compared to the peer average of 3.0 miles. Over the past five years, CTA passenger average trip lengths have decreased 0.4%; CTA is one of five agencies seeing downward trends for this indicator.

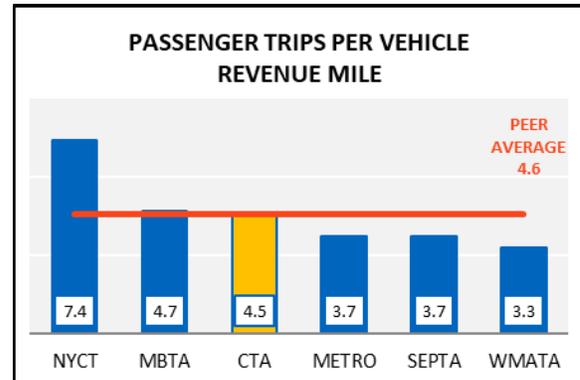
Average Vehicle Passenger Capacity: CTA operates the second-largest vehicles with an average passenger capacity of 87. Average passenger capacities vary from a low of 61 at METRO to 94 at MBTA.

URBAN BUS Service Coverage

A 2.0% drop in bus ridership coupled with relatively flat service levels resulted in unfavorable results for the two performance measures shown below; however, CTA moved up one position for the productivity measure passenger trips per vehicle revenue hour and retained its third-place position for passenger trips per vehicle revenue mile in 2019.



Each bus agency except WMATA reported lower ridership in 2019. CTA saw one of the steeper drops in ridership at -2.0%, while its vehicle revenue hours increased by 0.3%. CTA’s passenger trips per vehicle revenue hour decreased 2.4% in 2019, outperforming the peer average of -5%.

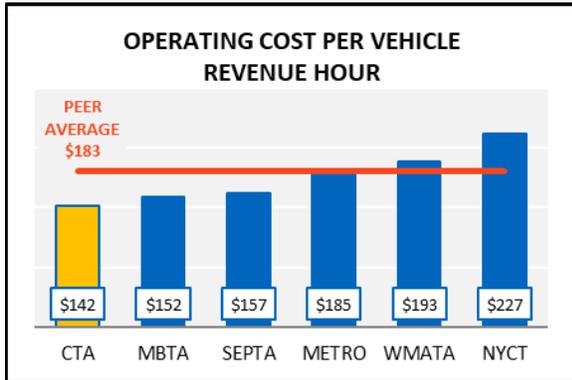


CTA’s vehicle revenue miles increased by 1.0% compared to 2018; that, combined with its ridership decrease, resulted in a 3.0% drop for this measure compared to 2018. CTA maintained its rank position with performance equal to the peer average.

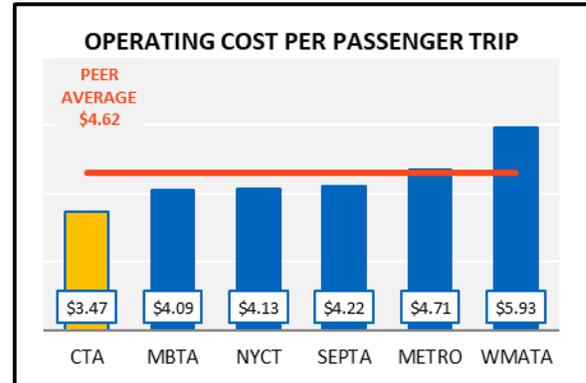
URBAN BUS

Service Efficiency and Effectiveness

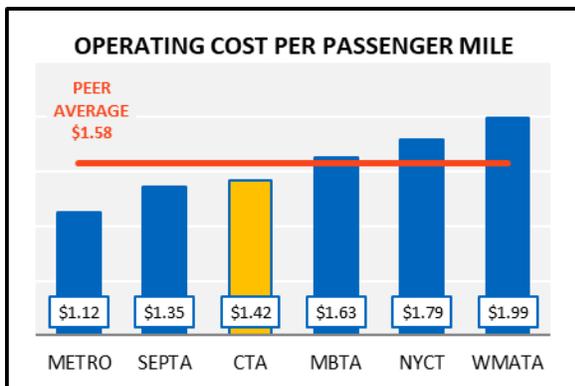
In 2019, CTA bus operating expense was held to a 1.2% increase, the lowest percentage increase among its peers, which saw decreases ranging from 1.7% to 8.0%. CTA performed favorably to the peer average for each measure of service efficiency and effectiveness.



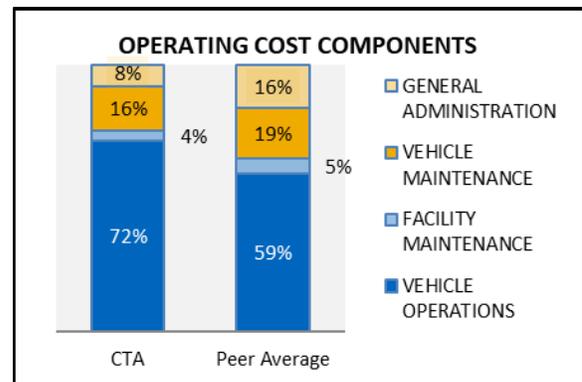
A 0.3% increase in vehicle revenue hours, combined with a 1.2% operating cost increase, resulted in a 0.8% increase for this measure for CTA. CTA has held the top spot for this measure for eleven consecutive years.



CTA's operating cost per passenger trip remained the lowest for the fifth consecutive year, and at \$3.47, was 25% below the peer average.



CTA was one of three agencies to see a decrease in passenger miles traveled in 2019. CTA saw a 1.7% decrease, and moved down one rank position from 2018. CTA's cost per passenger mile was 10.2% below the peer average.

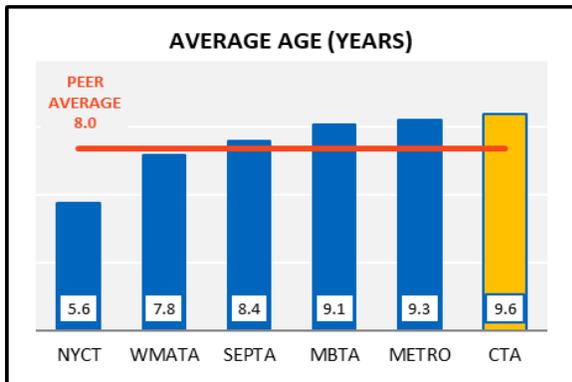


CTA bus expended 72% of its budget on vehicle operations, a significantly larger portion than the peer average of 59%, and about half what its peers expend for general administration compared to its peers.

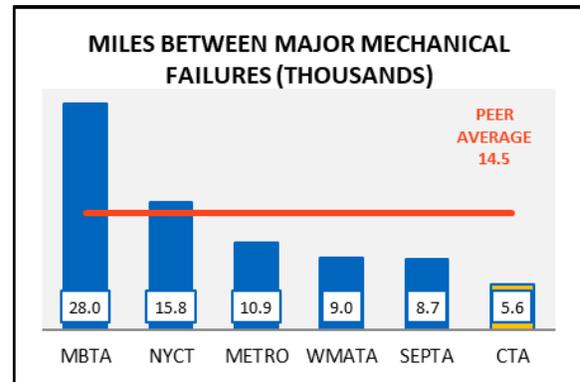
URBAN BUS

Service Maintenance and Capital Investment

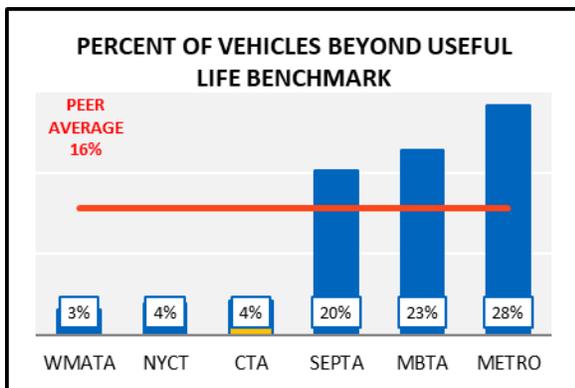
In 2019, CTA added 25 new buses into its active vehicle fleet of over 1,800 vehicles. The number of major mechanical failures saw a 4.0% increase compared to 2018, largely due to significant impacts of polar vortex weather events early in the year. CTA did not meet the peer average for the two measures of service maintenance and capital investment.



In 2019, the average age of a CTA bus was 9.6 years, the oldest average age among its peers. 79 of CTA’s active fleet of 1,861 (or 4.2%) have exceeded their expected useful life benchmark of 14 or 15 years.



NYCT was the only agency to see an improvement for this metric in 2019; CTA saw a 2.5% decrease in miles between failures and subsequently stayed at the lowest rank position for this measure. CTA has ranked sixth for this measure for four consecutive years.

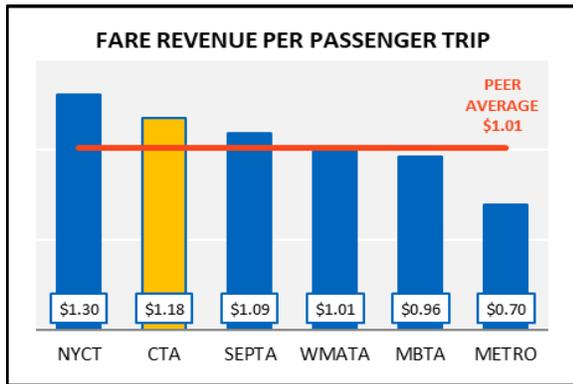


By year-end 2019, 4% of CTA’s bus fleet was beyond its useful life benchmark, compared to a peer average of 16%. Since each agency is allowed to determine its own benchmark to reflect its unique operating environment, this measure is reflective of an agency’s capital investment strategy. CTA, SEPTA, and MBTA have an average benchmark of 14 years, WMATA uses 15 years, NYCT uses 12 years, and METRO vehicles are expected to operate between 12-18 years.

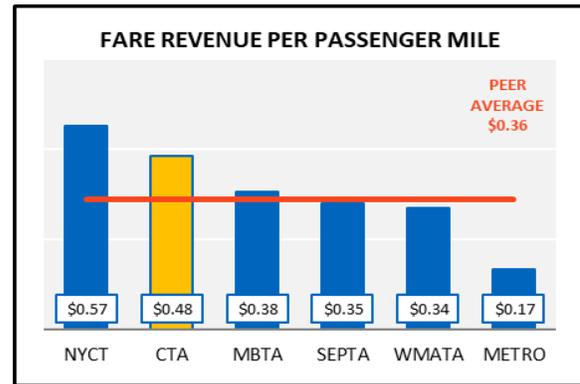
URBAN BUS

Service Level Solvency

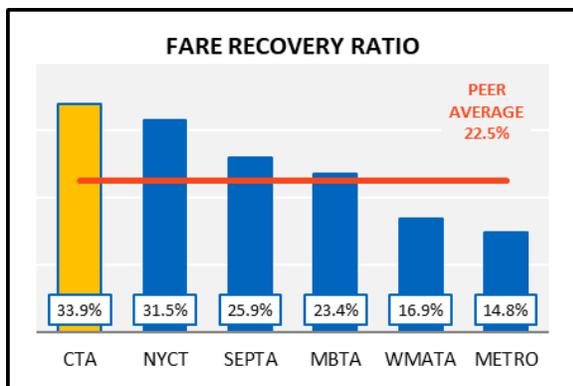
CTA has consistently performed well compared to its peers in the service level solvency area. CTA maintained or improved its rank position for each solvency measure in 2019.



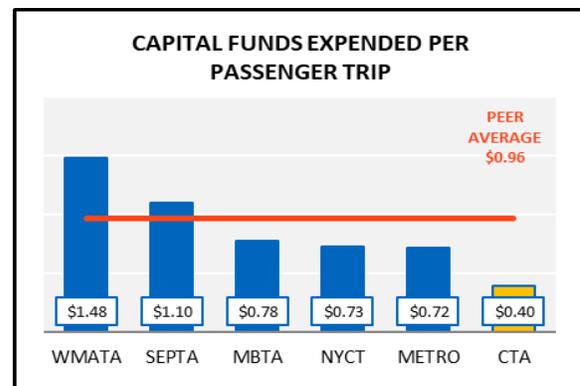
CTA maintained its rank position for this measure, also known as average fare, with a fare revenue decrease of 0.1%. There were no ranking changes in 2019 for any of the agencies.



CTA has held the second-rank position for this measure since peer reporting began in 2009. CTA saw a 1.5% increase for this measure in 2019 and received \$0.12, or 33%, more than the peer average for this metric.



Following its January 2018 fare increase, CTA regained the top rank position and retained it in 2019 by recovering nearly 34% of its operating expenses through rider-paid fares and exceeding the peer average by 11.4 percentage points. CTA has held the top spot for nine of the past 10 years.



CTA dropped two rank positions in 2019 as capital expenditures decreased by 25.6%. With a capital fund expenditure of \$0.40 per passenger trip, CTA ranked last and was about 59% below the peer average.

HEAVY RAIL

The peers selected for CTA heavy rail were chosen from the largest rapid transit systems in the country. The number of cities with urban rail systems is much smaller than those with bus systems, limiting the group of potential peers. NYCT, MBTA, and SEPTA are all natural peers as older rail systems serving the urban center of large metropolitan areas. MARTA and WMATA, although relatively newer heavy rail systems, were chosen as peers due to their large sizes and mostly urban settings.

CTA rail operated better than or equal to its peers for four of the twelve measures examined, two fewer compared to 2018. As it has in the past, CTA performed most strongly in the service efficiency and effectiveness area: CTA maintained top ranking for operating cost per vehicle revenue hour for the eleventh consecutive year, maintained top ranking for operating cost per passenger mile, and equaled the peer average for operating cost per passenger trip. For the seventh consecutive year, CTA ranked in the top two for average fleet age, a metric of service maintenance and capital investment. CTA rail performed below the peer average for each solvency measure related to fares but gained two rank positions for capital fund expenditures per passenger trip as spending increased 47% in 2019.

Peer Comparison Snapshot

Service Area	Performance Measure	Performs better than peer average	
		2018	2019
Service Coverage	Passenger Trips per Vehicle Revenue Hour	NO	NO
	Passenger Trips per Vehicle Revenue Mile	NO	NO
Service Efficiency and Effectiveness	Operating Cost per Vehicle Revenue Hour	YES	YES
	Operating Cost per Passenger Trip	EQUAL	EQUAL
	Operating Cost per Passenger Mile	YES	YES
Service Maintenance and Capital Investment	Average Age	YES	YES
	Miles between Major Mechanical Failures	YES	NO
	Percent of Vehicles Beyond Useful Life Benchmark	N/A	NO
Service Level Solvency	Fare Revenue per Passenger Trip	NO	NO
	Fare Revenue per Passenger Mile	NO	NO
	Fare Recovery Ratio	NO	NO
	Capital Funds Expended per Passenger Trip	NO	NO

A designation of 'equal' is defined as being within +/- 10% of one standard deviation of the peer average

Peer Modal Characteristics

CTA operates heavy rail in the nation’s second-most densely-populated area, after New York City. CTA ranks third among its peers for ridership, directional route miles, vehicle revenue miles, operating cost, and fare revenue.

Heavy Rail Overview

Modal Characteristics	CTA Chicago	MARTA Atlanta	MBTA Boston	NYCT New York	SEPTA Philadelphia	WMATA Washington, DC
Service Area Population	3,240,768	2,020,636	3,109,308	8,398,748	3,426,793	3,719,567
Service Area (square miles)	310	936	3,244	321	839	950
Population Density	10,454	2,159	958	26,164	4,084	3,915
Directional Route Miles	208	96	76	494	75	234
Vehicle Revenue Miles	73,574,040	22,511,413	23,062,016	354,616,371	17,078,643	85,106,645
Vehicle Revenue Hours	4,065,132	845,478	1,524,626	19,430,373	933,376	3,667,616
Passenger Trips	218,467,141	65,217,325	160,351,814	2,712,521,697	90,754,189	228,974,810
Passenger Miles	1,378,128,437	450,023,139	572,046,325	10,462,782,577	399,537,395	1,313,511,151
Operating Cost	\$623,416,178	\$206,202,856	\$304,267,766	\$5,206,727,193	\$200,486,444	\$1,112,675,403
Fare Revenue	\$309,516,440	\$77,048,839	\$224,415,154	\$3,643,213,720	\$113,235,243	\$533,518,013
Capital Funds Expended	\$330,818,659	\$187,913,649	\$321,932,148	\$3,421,105,258	\$123,951,791	\$747,654,472
Average Speed (miles per hour)	18.1	26.6	15.1	18.3	18.3	23.2
Average Trip Length (miles)	6.3	6.9	3.6	3.9	4.4	5.7
Average Vehicle Passenger Capacity	80	95	216	142	112	223
Average Vehicle Age (years)	19.2	29.5	31.0	24.4	26.8	12.8
Vehicles Operated in Maximum	1,164	212	338	5,413	287	920

Modal Characteristics Highlights

Directional Route Miles: There were no changes in any directional route miles for any of the agencies in this report.

Vehicle Revenue Miles: Five agencies, including CTA, provided roughly the same vehicle revenue miles in comparison to 2018; WMATA reported 4.1% more miles traveled as new service improvements were initiated.

Passenger Trips: Following record high ridership in 2015, CTA rail ridership experienced a fourth consecutive year of decreased ridership, down 3.3% in 2019. SEPTA experienced the largest ridership decrease of 3.5%, which it attributes to competitive factors such as ride hailing and bike sharing services, increased use of telecommuting, and low gas prices which make car use more likely – factors that affect all transit agencies nationwide to varying degrees.

Operating Cost: CTA's operating cost increase was 0.9% in 2019, equal to MBTA and outperforming MARTA, NYCT, and WMATA increases.

Fare Revenue: CTA's fare revenue decreased 1.4% in 2019, one of two agencies to see a decrease (MARTA was the other). NYCT was the only peer agency to implement a fare increase in 2019, producing a 4% improvement in fare revenue for the year.

Capital Funds Expended: Each agency reported increases in capital fund expenditures in 2019; however, CTA's increase of 42.1% was the largest among its peer group. Despite this significant increase, CTA's capital expenditures were 4% lower than the average combined expenditure of MARTA, MBTA, SEPTA, and WMATA, and 90% lower than NYCT's.

Average Speed: CTA's average speed improved by 0.2% in 2019, one of five agencies to report improvements ranging from 0.1% to 1.5%. At 18.1 miles per hour, CTA rail speed was 10.8% slower compared to its peers, which averaged 20.3 miles per hour.

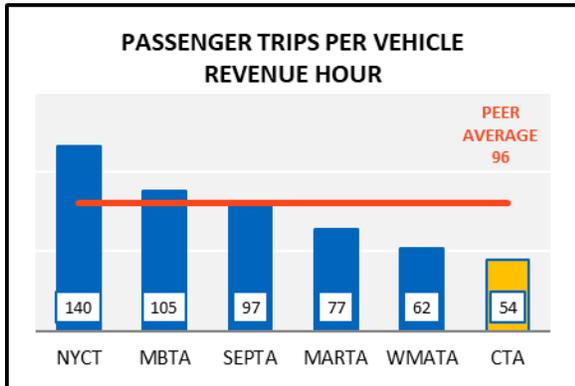
Average Trip Length: At 6.3 miles, CTA average trip lengths are 29% longer than the peer average of 4.9 miles. SEPTA reported a 15.1% increase for this measure in 2019 as passenger miles traveled was reported to increase by 11% for the year.

Average Vehicle Passenger Capacity: CTA cars are smaller in terms of the number of seats, length, and width compared to its peers due to its need to navigate tighter turns on its 'L' tracks. The average seating capacity of a CTA rail car is 80, roughly 50% smaller than its peer average capacity.

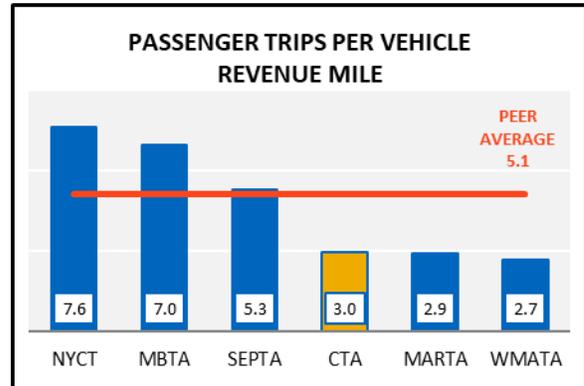
HEAVY RAIL

Service Coverage

CTA performance for the service coverage measures consistently falls below that of its peer agencies, as its cars are 50% smaller than the peer average.



Four agencies saw a fewer passenger trips per vehicle revenue hour in 2019. CTA experienced a 0.1% decrease in vehicle hours and 3.3% decrease in ridership, resulting in a 3.2% decline in performance for this measure. CTA carries 44% fewer passengers per vehicle hour than its peer average.

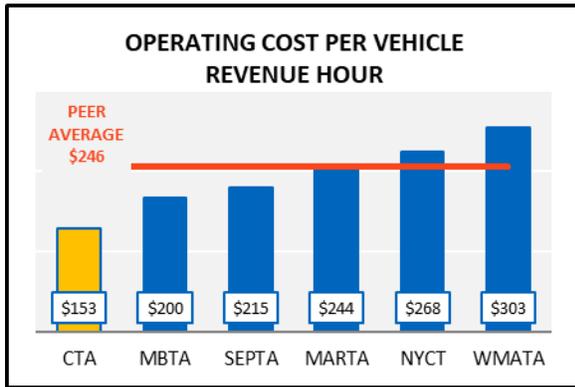


CTA operated 0.2% more vehicle revenue miles in 2019. The ridership decrease resulted in a 3.4% decrease in performance for this measure, yet CTA maintained its rank position as four other agencies also reported decreases.

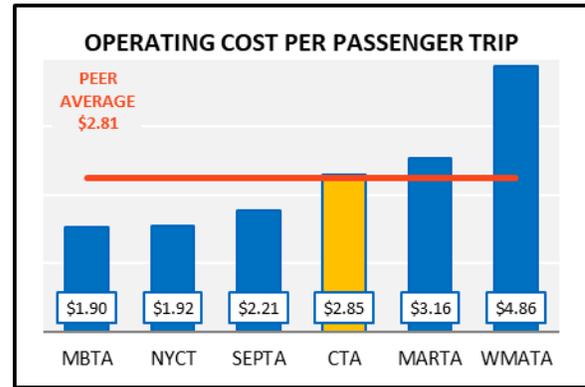
HEAVY RAIL

Service Efficiency and Effectiveness

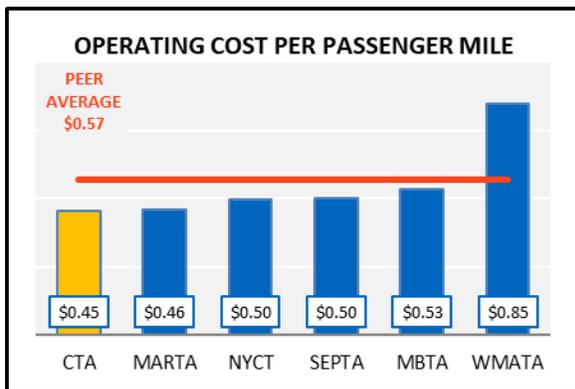
Smaller vehicles and longer average trip lengths contribute to CTA's relative strong performance for these measures of service efficiency and effectiveness.



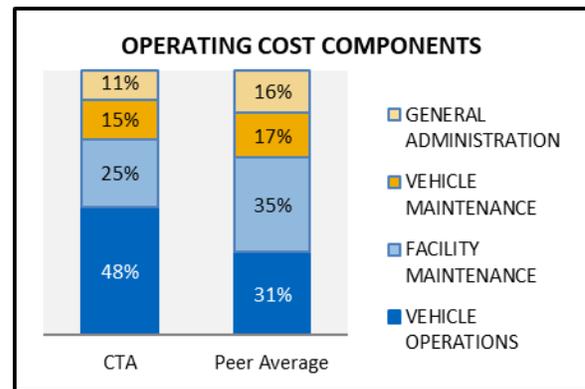
A 0.1% decrease in vehicle revenue hours paired with a 0.9% increase in operating cost resulted in a 1.0% increase in operating cost per vehicle hour for 2019. CTA has ranked first for this metric for eleven consecutive years, with an operating cost per hour 37.6% lower than the peer average.



CTA's operating cost per trip increased 4.3% in 2019. 2019 was the ninth consecutive year that CTA ranked fourth for this measure, although CTA has performed equal to or better than the peer average, which is significantly skewed by WMATA.



CTA has had the lowest operating cost per passenger mile for eight of the past nine years. CTA was one of two agencies (including MBTA) to report a decrease in passenger miles traveled for 2019, but a lower than average operating cost increase kept CTA in the top rank position.

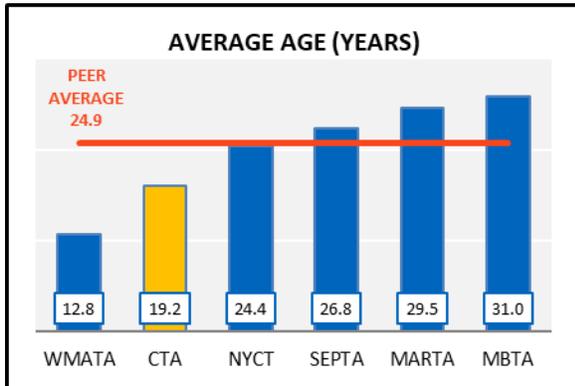


CTA spends a significantly larger portion of its budget on vehicle operations than the peer average (48% vs. 31%) and less for each of the other three operating cost categories.

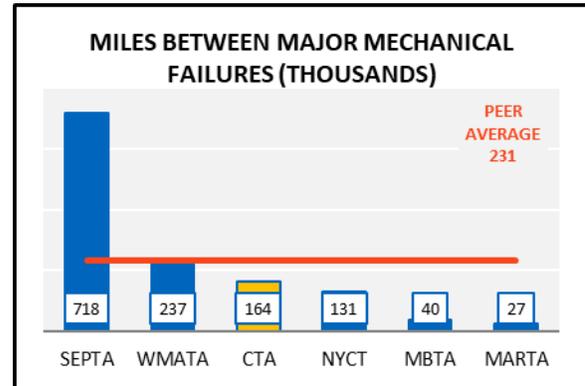
HEAVY RAIL

Service Maintenance and Capital Investment

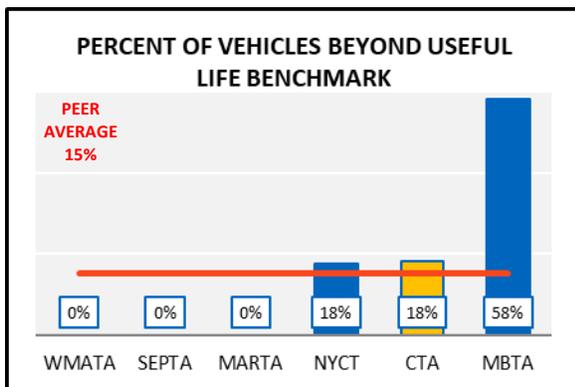
CTA consistently ranked either first or second for both measures of service maintenance and capital investment 2013-2018 following a major fleet modernization effort, but dropped one rank position for the reliability indicator in 2019.



CTA did not put any new rail vehicles into service in 2019; NYCT and WMATA were the only peers to add to their fleets with 146 and 50 new rail cars, respectively. CTA’s average rail fleet age of 19.2 years is 23% lower than the peer average.



In 2019, CTA saw a 0.7% increase for this measure, yet dropped one rank position. CTA rail vehicles traveled an average of 164,000 miles between major mechanical failures versus its peer average of 230,000 miles, which is heavily skewed by SEPTA.

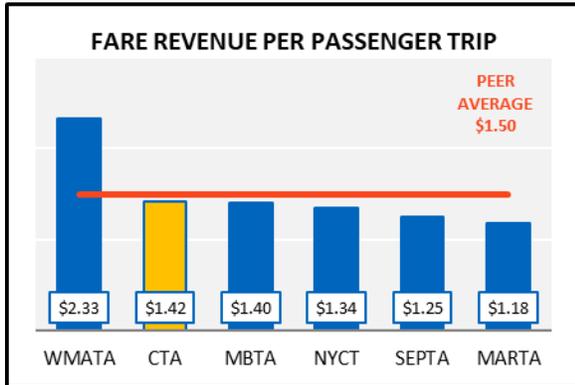


By year-end 2019, 18% of CTA’s rail car fleet was beyond its useful life benchmark, higher than the peer average of 15%. Since each agency is allowed to determine its own benchmark to reflect its unique operating environment, this measure is reflective of an agency’s capital investment strategy. CTA has a benchmark of 34 years, MBTA uses 31 years, and the other four agencies use an average of 40 years as a benchmark.

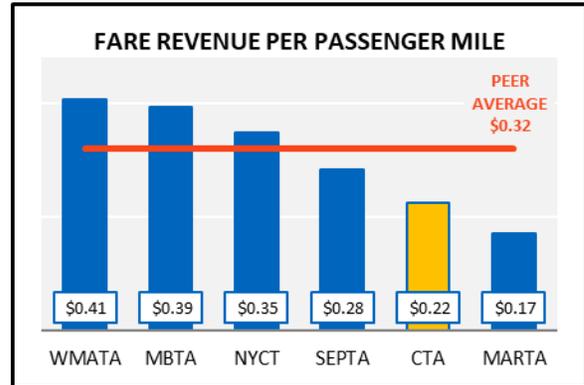
HEAVY RAIL

Service Level Solvency

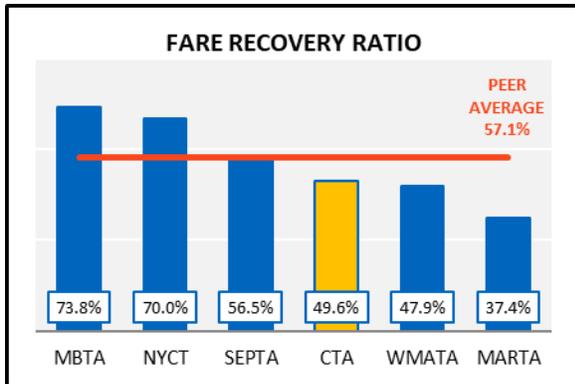
CTA’s fare revenues as shown below do not reflect the free and discounted rides subsidized by the State of Illinois, which negatively impacts its performance compared to peers. CTA last implemented a fare increase in January 2018, its first in five years.



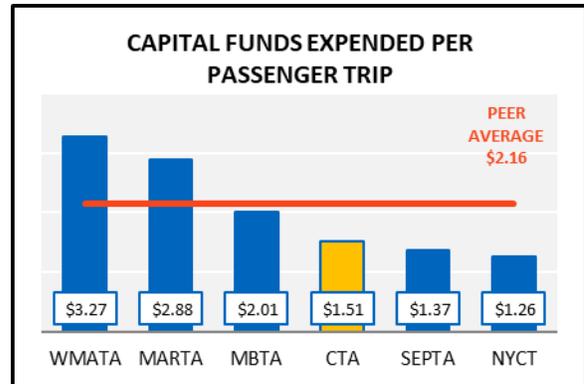
CTA realized a gain of \$0.03 in fare revenue per passenger trip in 2019. WMATA, with a zone-based and peak/off-peak fare schedule, has the highest average fare and skews the peer average to \$1.50.



CTA’s fare revenue per passenger mile remained at \$0.22 in 2019 and remained 30% below the peer average for this measure, as its fare revenues are spread over an average trip length that is 29% longer than the peer average.



Although its recovery ratio decreased by 1.2 percentage points, CTA moved up one position for this measure in 2019 as WMATA moved one position downward.



A 42% increase in capital fund expenditures resulted in CTA moving from sixth to fourth place for this metric in 2019. Compared to its peers, CTA expended 66% less funds in 2019, a difference of \$0.64 per trip. WMATA has ranked first for this measure for five consecutive years, after adopting a plan in 2015 to double the pace of capital investment to meet critical needs.

COMMUTER RAIL

Peers selected for this mode represent the largest commuter rail systems in the United States; all are traditional systems that can trace their roots to rail passenger services in operation since the late 19th century. Three peers provide service to New York City from the states of New York, New Jersey, and Connecticut, with Boston and Philadelphia being the other cities served. Each operate in distinct geographies that present unique challenges to the operating environment of each railroad, affecting service delivery and cost structure. Metra operates predominantly diesel services with one electric line, contends with more intermingling with freight operations than the other railroads, and benefits from the use of bi-level cars on all trains (enabling it to carry large passenger loads more cost-effectively).

Metra's 2019 methodology change for counting ridership (see p. 6) negatively impacted its rankings among peers for many of the performance measures included in this report. While Metra's vehicles are older compared to its peer average, reliability (as indicated by miles between major mechanical failures) remained better than the peer average. Metra maintained its rank positions for each fare-related measure, remaining below the peer average for each measure, and expended the least amount of capital funds per passenger trip among its peers.

Peer Comparison Snapshot

Service Area	Performance Measure	Performs better than peer average	
		2018	2019
Service Coverage	Passenger Trips per Vehicle Revenue Hour	YES	NO
	Passenger Trips per Vehicle Revenue Mile	YES	NO
Service Efficiency and Effectiveness	Operating Cost per Vehicle Revenue Hour	EQUAL	EQUAL
	Operating Cost per Passenger Trip	YES	NO
	Operating Cost per Passenger Mile	YES	NO
Service Maintenance and Capital Investment	Average Age	NO	NO
	Miles between Major Mechanical Failures	YES	YES
	Percent of Vehicles Beyond Useful Life Benchmark	N/A	NO
Service Level Solvency	Fare Revenue per Passenger Trip	NO	NO
	Fare Revenue per Passenger Mile	NO	NO
	Fare Recovery Ratio	NO	NO
	Capital Funds Expended per Passenger Trip	NO	NO

A designation of 'equal' is defined as being within +/- 10% of one standard deviation of the peer average

Peer Modal Characteristics

Metra operates the largest commuter rail system in the country, as measured by directional route miles. The three agencies that service the New York area (LIRR, MNCR, and NJT) each provide more vehicle revenue hours and miles, passenger trips, and passenger miles than Metra. The New York systems also each spent the most operating dollars and collected more fare revenue.

Commuter Rail Overview

Modal Characteristics	Metra	MBTA	LIRR	MNCR	NJT	SEPTA
	Chicago	Boston	New York	New York	Newark	Philadelphia
Service Area Population	7,261,176	3,109,308	11,170,342	6,503,894	10,594,013	3,426,793
Service Area (square miles)	1,940	3,244	2,967	527	5,325	839
Population Density	3,743	958	3,765	12,341	1,989	4,084
Directional Route Miles	975	776	638	546	920	447
Vehicle Revenue Miles	44,605,656	24,935,847	67,942,021	67,938,044	58,567,859	20,325,604
Vehicle Revenue Hours	1,507,232	829,590	2,207,645	2,129,670	1,797,179	991,458
Passenger Trips	61,456,663	31,177,738	114,241,364	91,433,762	89,562,931	34,730,053
Passenger Miles	1,365,137,921	653,570,994	3,929,859,957	2,034,489,613	2,006,197,776	465,744,543
Operating Cost	\$782,173,784	\$384,352,038	\$1,507,026,548	\$1,257,847,085	\$1,024,848,749	\$311,891,969
Fare Revenue	\$365,935,097	\$238,575,681	\$768,917,681	\$756,678,075	\$566,604,397	\$141,365,210
Capital Funds Expended	\$306,118,698	\$344,230,880	\$1,305,856,724	\$566,998,073	\$504,746,163	\$273,581,078
Average Speed (miles per hour)	29.6	30.1	30.8	31.9	32.6	20.5
Average Trip Length (miles)	22.2	21.0	34.4	22.3	22.4	13.4
Average Vehicle Passenger Capacity	126	122	107	106	108	113
Average Vehicle Age (years)	26.9	25.2	17.3	17.1	20.8	30.1
Vehicles Operated in Maximum Service	1,066	436	1,026	1,135	923	348

Modal Characteristics Highlights

Directional Route Miles: Following a recalculation of its directional route miles in 2019, NJT reported an 8% reduction, the only agency to report any change for the year.

Vehicle Revenue Miles: Metra reported a 2.1% increase in vehicle revenue miles in 2019, one of five agencies to offer more service. NJT was the only peer to see a decrease, down 5.8% compared to 2018.

Passenger Trips: Four agencies reported ridership losses for 2019: Metra (-10.2%), MBTA (-5.1%), and MNCR (-0.5%). Most of Metra's ridership decrease can be attributed to a modified methodology to calculate ridership (see p. 6). LIRR posted its highest ridership since 1949, and MNCR posted its second-highest annual ridership ever; improved ridership is reported to be in response to programs that focused on improvement of on-time performance and reduction of incidents which cause delays.

Operating Cost: Four agencies reported operating cost increases of over 1% in 2019; Metra reported an increase of 2.7% versus the average peer increase of 1.7%.

Fare Revenue: A fare increase averaging 4% was implemented at LIRR and MNCR in April 2019; they reported fare revenue gains of 3.8% and 2.2%, respectively. Metra saw a 1.1% decrease in fare revenue for the year; Metra has not raised fares since February 2018.

Capital Funds Expended: Metra saw a 17.5% increase in capital fund expenditures in 2019, one of five agencies among its peer group to see an increase for this indicator (only SEPTA decreased). MBTA's capital expenditure increased over 250% as the agency began early action construction projects related to the new South Coast Rail Phase 1 contract.

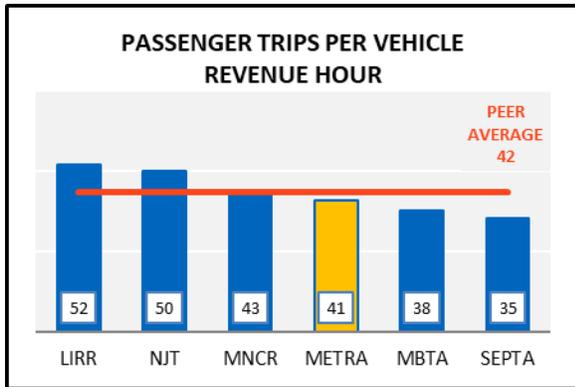
Average Speed: Metra experienced a 1.6% decrease in average speed compared to 2018, one of three agencies to report a decline. Metra's average speed of 29.6 mph was 1.5% faster than the peer average.

Average Trip Length: Metra's average trip length for 2019 was 22.2 miles, roughly equal to 2018 and 2.1% shorter than the peer average of 22.7 miles.

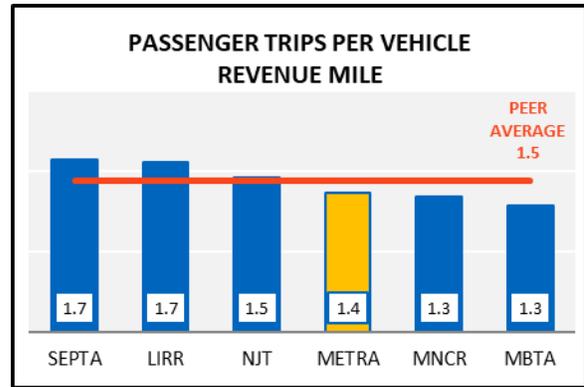
Average Vehicle Passenger Capacity: For the commuter rail mode, this comparison excludes standing passenger capacity to conform to industry standards and the expected provision of one seat per passenger. Metra, with its full fleet of double-decker cars, offers the highest average passenger seating capacity of its peers, with 13% more capacity than the peer average.

COMMUTER RAIL Service Coverage

Metra had consistently performed better than the peer average for the two measures of service coverage shown below through 2018; a new ridership counting methodology (see p. 6) implemented in 2019 resulted in performance below the peer average for each measure and a drop in position rankings for both measures.



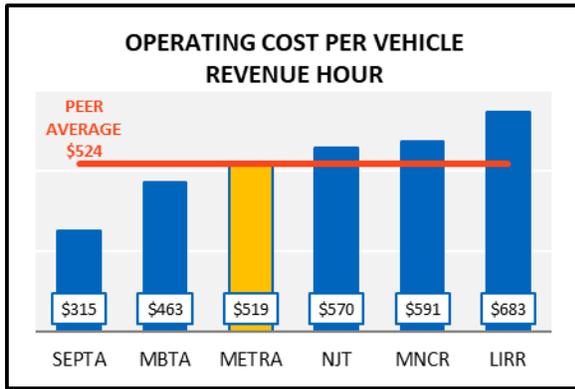
Metra was one of two agencies to report lower calculated productivity in 2019, resulting largely from the ridership reporting change. In 2019, Metra carried an average of 41 passengers per hour of revenue service, 6.1% fewer than the peer average, and moved down two rank positions in 2019.



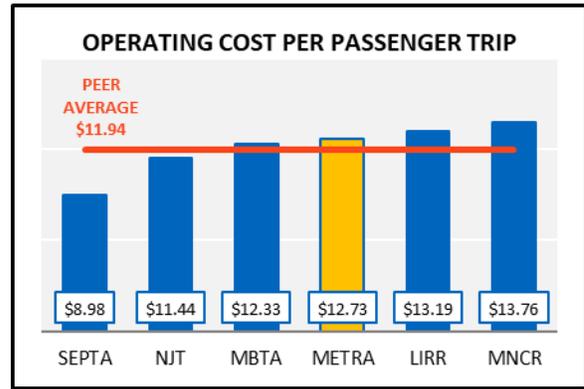
Metra’s 2019 performance was 8.3% lower than the peer average of 1.5 passenger trips per vehicle revenue mile. Metra dropped one rank position as its performance for 2019 was 12.1% lower compared to 2018.

COMMUTER RAIL Service Efficiency and Effectiveness

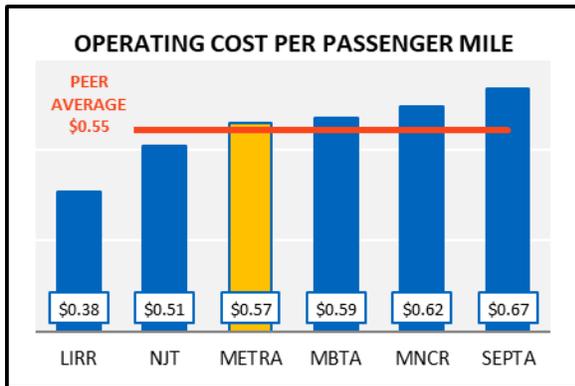
Metra’s operating cost increase of 2.7% in 2019 was unfavorable to the peer average increase of 1.5%.



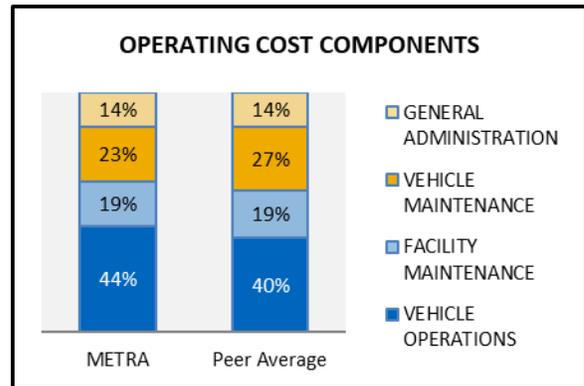
Four agencies reported increases in operating cost per vehicle revenue hour in 2019; Metra reported a 1.1% decrease. With an operating cost per vehicle revenue hour of \$519, Metra’s performance was roughly equal to the peer average for this metric; Metra maintained its rank position for the second consecutive year.



Metra’s ridership methodology change led to a drop of two rank positions in 2019 and performance below the peer average. Metra’s operating cost per passenger trip was 6.6% higher compared to the peer average. LIRR and MNCR consistently have the highest operating cost per passenger trip.



Four agencies reported increased operating cost per passenger mile in 2019. Metra’s cost per passenger mile increased 14.2% versus the peer average increase of 5.8%; Metra maintained its third-place rank position with an operating cost per passenger mile that was \$0.02 higher than the peer average.

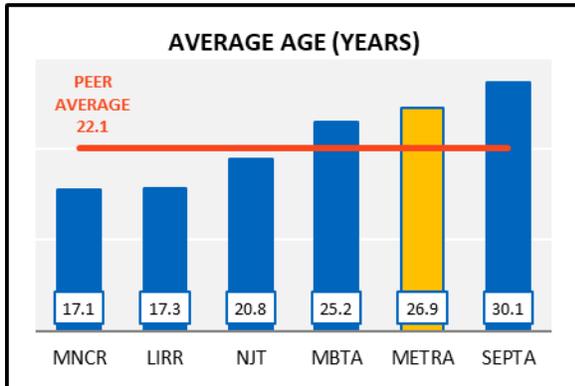


Metra’s operating cost components are shown relative to peer average allocations among four categories of costs. Metra’s proportion of operating expenditure for the general administration and facility maintenance categories equaled its peers, ran four percentage points higher for vehicle operations, and four percentage points lower for vehicle maintenance.

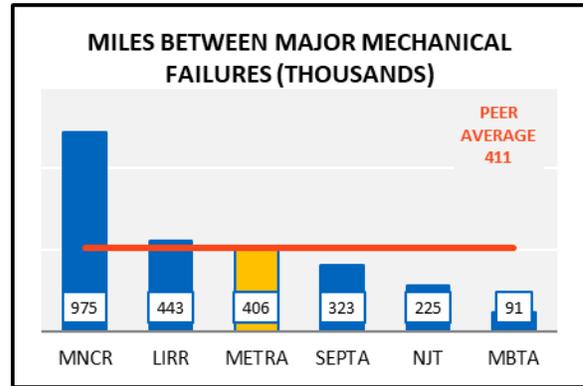
COMMUTER RAIL

Service Maintenance and Capital Investment

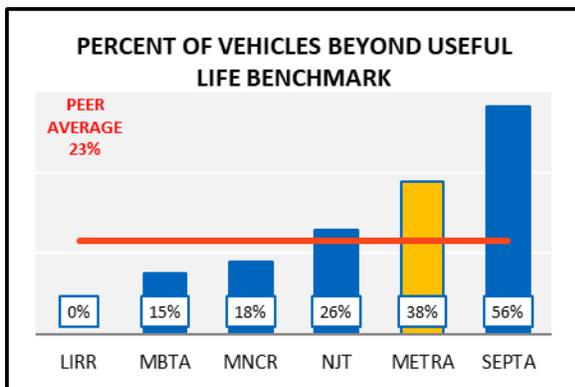
Vehicle mid-life rehabilitation and end-of-life rebuild schedules have enabled Metra to maintain its older fleet in a relative state of good repair and equal the peer average for the reliability indicator, miles between major mechanical failures.



With an average fleet age of 26.9 years, Metra's revenue vehicles are more than 4½ years older than the peer average. Metra has ranked fifth for this measure for six consecutive years.



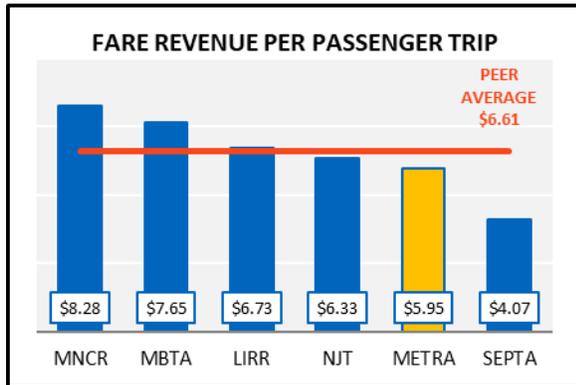
Metra rail cars operated an average 406,000 miles between major mechanical failures in 2019, roughly equal to its peer average. Metra lost one rank position as its number of major mechanical failures saw a 20% increase for the year versus the average decrease of 6.6%.



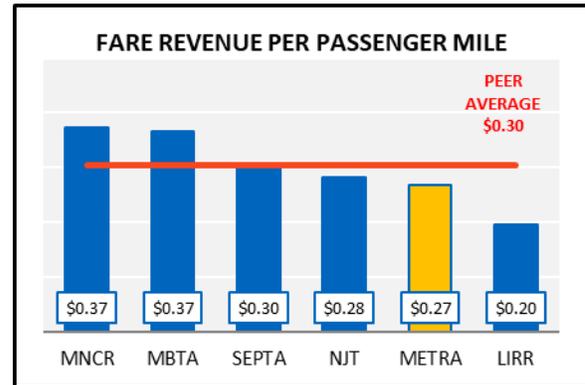
By year-end 2019, 38% of Metra's rail car fleet was beyond its useful life benchmark, compared to a peer average of 23%. Since each agency is allowed to determine its own benchmark to reflect its unique operating environment, this measure is reflective of an agency's capital investment strategy. Metra and NJT both set their average benchmark age at 30 years, MNCR and LIRR use 35, and MBTA and SEPTA use 39 years.

COMMUTER RAIL Service Level Solvency

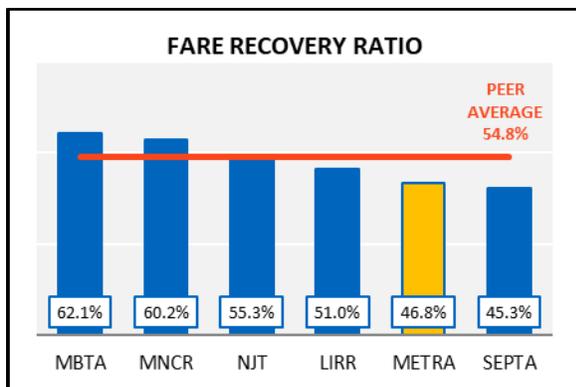
Metra’s position for the three solvency measures related to fares remained unchanged in 2019; Metra lost two rank positions for the capital investment measure.



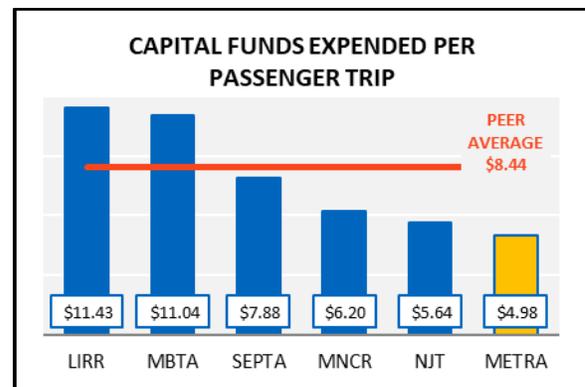
Metra maintained its rank position for this measure for the seventh consecutive year despite a 10.1% increase resulting primarily from the change in ridership calculation. Metra’s fare revenue per passenger trip was 10%, or \$0.66, below the peer average.



In 2019, fare increases were implemented at MNCR and LIRR. Metra fare revenue per passenger mile improved to \$0.27 resulting from a reported decline in passenger miles traveled. Metra’s 2019 result was 11.7% below the peer average, a difference of \$0.03.



Metra’s fare recovery ratio increased 1.8 percentage points to 46.8% in 2019, maintaining its rank position from the prior year. While Metra met its RTA-mandated recovery ratio, Metra’s performance was below the peer average as calculated per NTD-reported data.



Metra dropped two rank positions in 2019 despite a 17.5% increase in capital expenditures. Metra’s capital expenditures of \$4.98 per passenger trip was 41% below the peer average for this measure. The passing of Rebuild Illinois in 2019 will allow for significant improvements in this measure for Metra in the coming years.

SUBURBAN BUS

The most comparable peers for inclusion for the suburban bus mode are relatively large bus systems that operate in predominantly suburban areas adjacent to a major U.S. city, with Pace serving a geographic region more than six times the size of the next largest peer.

In 2019, Pace experienced a 5.4% drop in ridership while service hours and miles remained roughly equal to 2018. Pace's large coverage area negatively impacts its service effectiveness, as shown by its consistently ranking last for passenger trips per hour and trips per mile. Efficiency and effectiveness performance was mixed, with no results in top or bottom ranking, and no rank changes since 2016. Pace ranked second for average fleet age and for the reliability measure miles between major mechanical failures, and fourth for the percent of vehicles in service beyond the useful life benchmark. In the solvency area, Pace again had the second-highest average fare but was below the peer average and dropped in rank position for fare revenue per passenger mile, fare recovery ratio, and capital expenditures per passenger trip.

Peer Comparison Snapshot

Service Area	Performance Measure	Performs better than peer average	
		2018	2019
Service Coverage	Passenger Trips per Vehicle Revenue Hour	NO	NO
	Passenger Trips per Vehicle Revenue Mile	NO	NO
Service Efficiency and Effectiveness	Operating Cost per Vehicle Revenue Hour	YES	YES
	Operating Cost per Passenger Trip	NO	NO
	Operating Cost per Passenger Mile	YES	YES
Service Maintenance and Capital Investment	Average Age	YES	YES
	Miles between Major Mechanical Failures	EQUAL	EQUAL
	Percent of Vehicles Beyond Useful Life Benchmark	N/A	YES
Service Level Solvency	Fare Revenue per Passenger Trip	YES	YES
	Fare Revenue per Passenger Mile	NO	NO
	Fare Recovery Ratio	NO	NO
	Capital Funds Expended per Passenger Trip	YES	NO

A designation of 'equal' is defined as being within +/- 10% of one standard deviation of the peer average

Peer Modal Characteristics

Pace Suburban Bus provides service to a much larger population than its peers, spread over a far broader network, as evidenced by having the largest service area and the lowest population density of its peers. Pace operates the most vehicle revenue miles, yet reports the second-lowest number of passenger trips.

Suburban Bus Overview

Modal Characteristics	Pace	BCT	OCTA	ACT	VTA	RIDE ON
	Chicago	Broward Co	Orange County	Oakland	Santa Clara	DC
Service Area Population	5,666,540	1,951,260	2,870,886	1,425,275	1,954,286	971,777
Service Area (square miles)	3,519	410	436	364	346	495
Population Density	1,610	4,759	6,585	3,916	5,648	1,963
Vehicle Revenue Miles	24,385,456	14,964,976	19,258,483	21,399,083	15,948,425	13,549,154
Vehicle Revenue Hours	1,719,742	1,171,740	1,626,394	2,058,964	1,375,803	1,061,712
Passenger Trips	26,191,884	26,371,330	37,846,066	53,303,040	27,472,086	20,596,520
Passenger Miles	165,101,025	129,778,725	144,567,836	210,762,501	137,216,139	82,518,001
Operating Cost	\$205,801,840	\$121,378,054	\$203,469,078	\$431,099,189	\$266,964,372	\$124,622,335
Fare Revenue	\$31,856,640	\$27,893,729	\$40,977,557	\$70,175,009	\$26,969,177	\$20,508,757
Capital Funds Expended	\$24,050,204	\$6,928,032	\$26,866,780	\$72,095,524	\$71,650,331	\$21,457,376
Average Speed (miles per hour)	14.2	12.8	11.8	10.4	11.6	12.8
Average Trip Length (miles)	6.3	4.9	3.8	4.0	5.0	4.0
Average Vehicle Passenger Capacity	50	53	73	76	65	50
Average Vehicle Age (years)	6.5	7.3	8.3	7.8	8.2	5.9
Vehicles Operated in Maximum Service	639	317	460	566	394	307

Modal Characteristics Highlights

Vehicle Revenue Miles: Pace had its eighth consecutive year of increases in vehicle revenue miles in 2019, increasing 0.7% compared to 2018. Two peer agencies also reported increased vehicle miles; ACT and Ride On, which increased service by 2.5% and 1.9% in 2019, respectively.

Passenger Trips: Pace and four of its peer agencies saw ridership declines in 2019, ranging from -3.5% at VTA to -5.4% at Pace. Only ACT experienced a ridership increase, up 2.5%, for the year.

Operating Cost: Pace's costs were 4.5% higher compared to 2018, compared to a peer average increase of 5.2%. Each agency reported higher operating costs in 2019.

Fare Revenue: AC Transit and VTA were the only peers to implement a fare increase in the 2019 report year and thus were the only two to see increased fare revenue for the year.

Capital Funds Expended: Pace saw a 57% decrease in capital fund expenditures in 2019, one of four agencies to report less expenditure for the year. OCTA and VTA increased capital expenditure 57% and 116%, respectively.

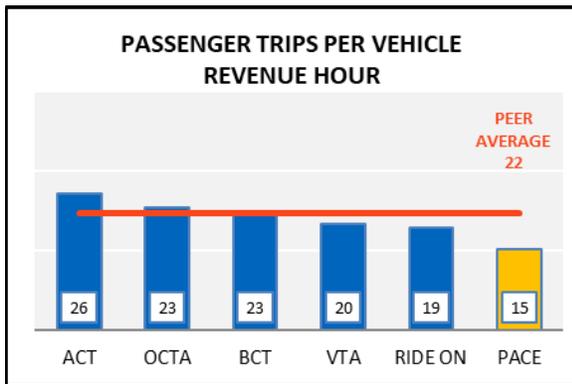
Average Speed: Pace's average speed of 14.2 miles per hour was slightly higher compared to 2018 and remained the fastest among its peers, whose speeds ranged from 10.4 to 12.8 miles per hour.

Average Trip Length: Pace's riders travel the longest trip lengths with an average of 6.3 miles versus its peer average of 4.3 miles.

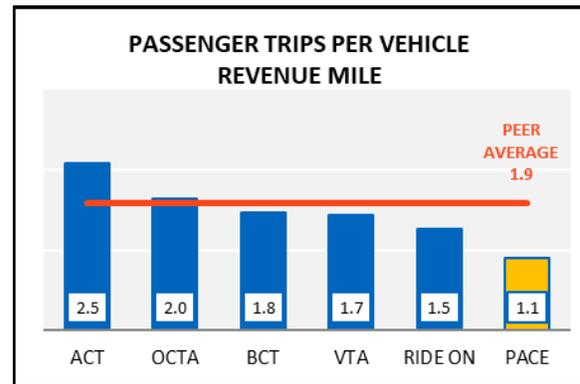
Average Vehicle Passenger Capacity: Pace's peer agencies run vehicles that are up to 52% larger. With an average vehicle passenger capacity of 50.1, Pace runs the second-smallest capacity buses of its peer group, which is possible given its lower population density compared to peers.

SUBURBAN BUS Service Coverage

Pace experienced its second consecutive year of decreased ridership in 2019, down 5.4%, the largest decrease among its peer group. Pace stayed at the sixth-place rank position for both measures for the seventh consecutive year. Although Pace serves the largest population of its peer group, the geographic spread of that population produces the lowest population density, requiring Pace to operate significantly more service to achieve similar ridership levels as its peers, and subsequently negatively impacting measures of productivity.



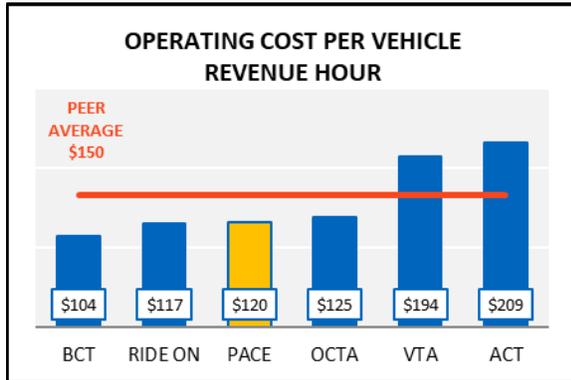
Pace’s performance worsened by 4.8% for this measure in 2019, keeping Pace at the lowest rank position. At 15.2 passenger trips per vehicle revenue hour, Pace’s performance is 31.4% below the peer average, a wider gap compared to 2018 performance.



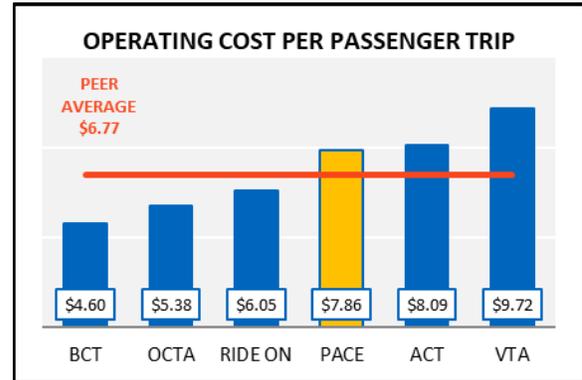
Pace averaged 1.1 passenger trips per vehicle revenue mile, 4.0% lower than 2017, and retained the lowest rank position. Pace’s performance for this metric is 41.5% below the peer average and is reflective of Pace’s much lower population density, roughly one-third the peer average.

SUBURBAN BUS Service Efficiency and Effectiveness

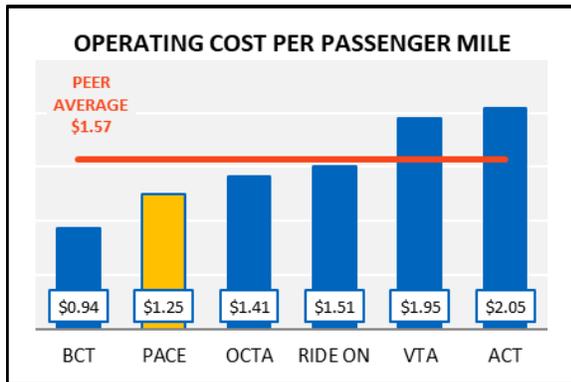
Pace maintained its peer rank position for each service efficiency and effectiveness measure for the fourth consecutive year. Each agency reported worse performance for each measure of service efficiency and effectiveness in 2019.



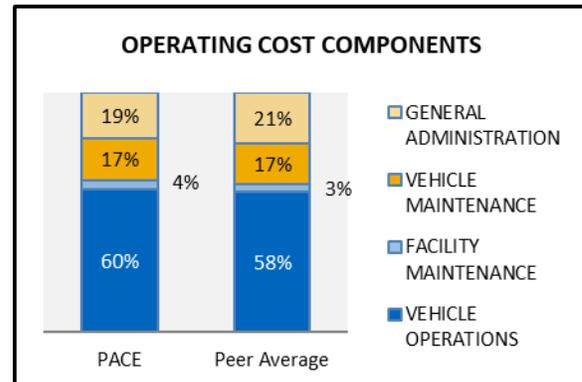
Pace saw an unfavorable 5.1% decrease in cost per vehicle revenue hour in 2019, versus its peer average increase of 4.3%. With an operating cost per vehicle revenue hour of \$120, Pace was 20%, or \$30, below the peer average.



Five agencies experienced ridership losses in 2019, and each agency saw an unfavorable increase for this metric, ranging from a 4.4% increase at ACT to a 10.8% increase at BCT. Pace’s operating cost per trip was 16.1% higher than the peer average.



Each of the six agencies saw increases for this measure in 2019. At \$1.25, Pace’s operating cost per passenger mile is 20.5% below the peer average and \$0.10 higher compared to 2018. This metric is favorably impacted by Pace passengers’ average trip length being 45.3% longer than the peer average.

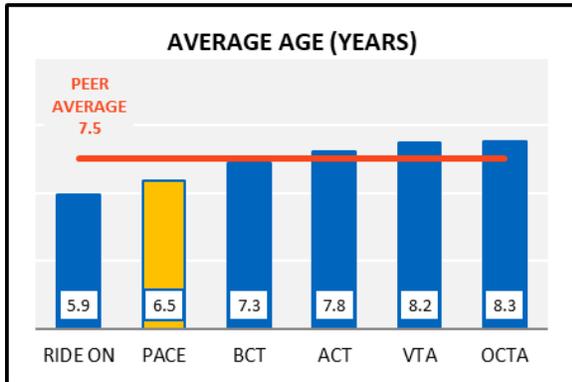


This chart shows the distribution of operating cost components of Pace compared to its peer agencies. Vehicle operations comprise the largest expense for Pace and its peers, roughly 60% of all operating costs. General administration and vehicle maintenance costs each comprise about 20% of operating cost.

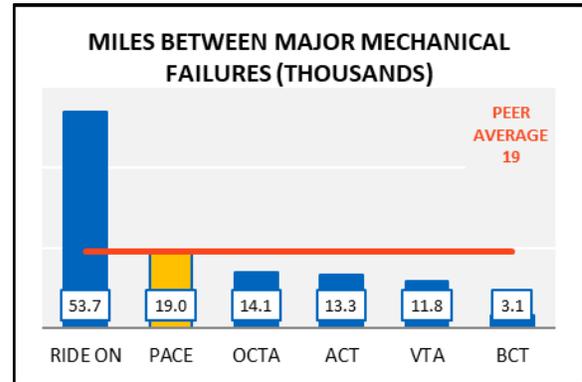
SUBURBAN BUS

Service Maintenance and Capital Investment

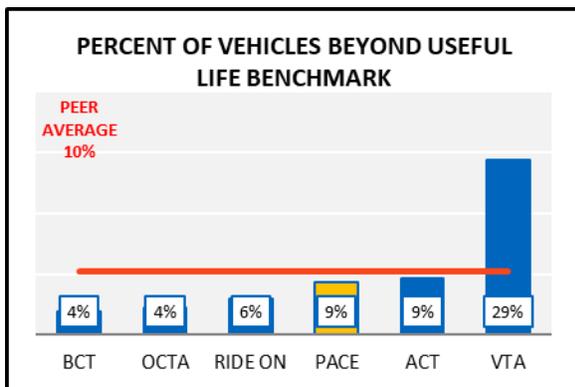
Pace dropped one rank position for average age and maintained its second-place rank for the reliability measure.



Pace did not add any new buses into its active fleet in 2019. Pace’s average fleet age of 6.5 years is 13% younger than the peer average.



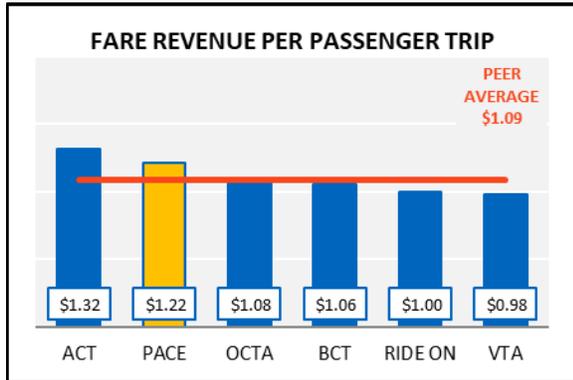
Pace was one of four agencies to see an unfavorable decrease for this measure in 2019, down 16.7% compared to 2018. The peer average is heavily skewed by Ride On, which reports a similar average age as Pace but one-fifth the number of mechanical failures.



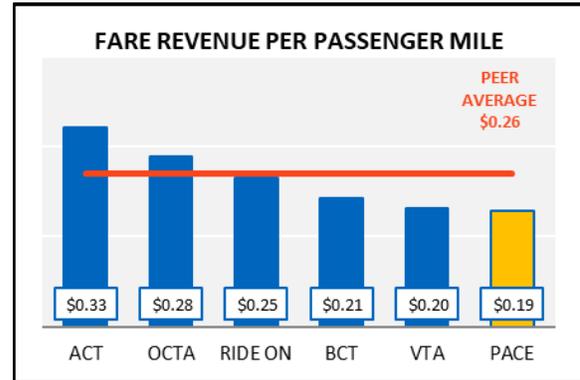
By year-end 2019, 9% of Pace buses were beyond their useful life benchmark, compared to a peer average of 10%. Since each agency is allowed to determine its own benchmark to reflect its unique operating environment, this measure is reflective of an agency’s capital investment strategy. Pace and Ride On use a 12-year benchmark, whereas BCT, VTA, and ACT all use 14 years on average. OCTA is unique in having most of its buses benchmarked at 18 years of service.

SUBURBAN BUS Service Level Solvency

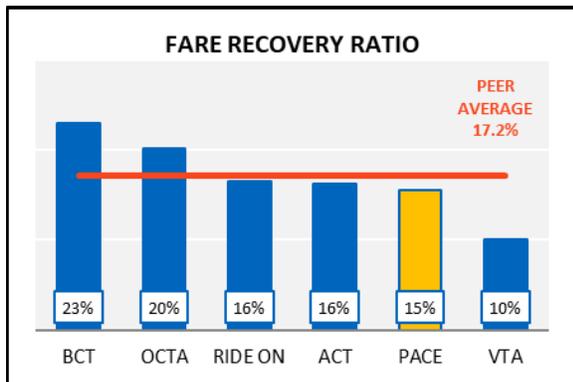
Following a fare increase 2018, Pace saw a decrease in fare revenue in 2019 yet retained its position for one measure while dropping one rank position in two others. A significant drop in capital fund expenditures also led to a loss of rank position for Pace.



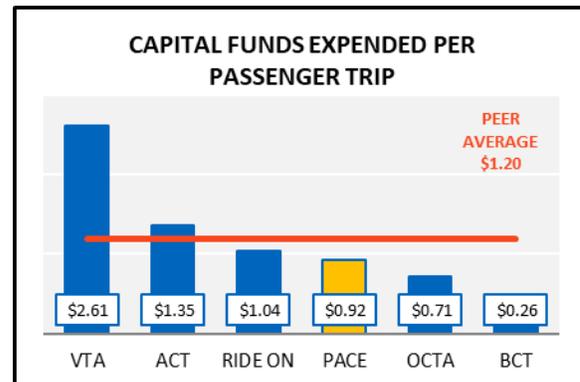
Pace’s fare revenue per passenger trip remained at \$1.22 in 2019, 11.9% above the peer average of \$1.09. Pace’s base cash fare of \$2.25 is 3.7% higher compared to its peer average fare. Pace has ranked second for this metric for five consecutive years.



Pace’s fare revenue per passenger mile decreased 1.9% in 2019 as fare revenue and passenger miles traveled decreased. Pace’s passengers ride 45% longer average distances compared to its peers, which negatively impacts this result.



Pace’s fare recovery ratio decreased by 1.6 percentage points in 2019 as fare revenue decreased by 5.3% and operating cost increased 4.5%. At 15.5%, Pace’s fare recovery ratio falls 1.7 percentage points below the peer average.



Capital fund expenditures at Pace decreased by 57% in 2019, moving Pace from the top rank position to fourth for this metric. At \$0.92, Pace’s capital fund expenditure per passenger trip is 23% lower than the peer average, which is heavily skewed by VTA as they expended nearly \$57 million for new rolling stock in 2019.

ADA PARATRANSIT

The NTD category “demand-response” includes services that are initiated through a passenger request. These services encompass ADA paratransit programs, which are operated with smaller vehicles and use a reservation system, and can include programs such as Pace’s dial-a-ride program, which is not restricted to ADA-certified passengers. Since Pace reports its ADA paratransit service as a separate entity from other demand-response service, this report focuses exclusively on Pace’s ADA paratransit program.

The peers selected for Pace ADA paratransit service were chosen from systems that provide complementary ADA paratransit service for a fixed-route system of similar size and complexity as the combination of Pace and CTA services that exists in the Chicago area. Potential peer agencies were ranked on the basis of: vehicle revenue hours and miles, passenger trips, and number of vehicles operated in maximum service; the top six ranked agencies are included in this review, with Pace having the second-highest overall ranking. Compared to its peers, Pace performs at or above the peer average for nine of eleven measures.

Peer Comparison Snapshot

Service Area	Performance Measure	Performs better than peer average	
		2018	2019
Coverage	Passenger Trips per Vehicle Revenue Hour	YES	YES
	Passenger Trips per Vehicle Revenue Mile	YES	YES
Efficiency and Effectiveness	Operating Cost per Vehicle Revenue Hour	YES	YES
	Operating Cost per Passenger Trip	YES	YES
	Operating Cost per Passenger Mile	YES	YES
Maintenance & Capital Investment	Average Age	YES	YES
	Miles between Major Mechanical Failures	NO	NO
	Percent of Vehicles Beyond Useful Life Benchmark	N/A	YES
Solvency	Fare Revenue per Passenger Trip	NO	NO
	Fare Revenue per Passenger Mile	EQUAL	YES
	Fare Recovery Ratio	YES	YES

A designation of ‘equal’ is defined as being within +/- 10% of one standard deviation of the peer average

Peer Modal Characteristics

The Pace ADA Paratransit program is the third-largest among its peers, in terms of service area population, vehicle revenue miles, passenger trips, and passenger miles. Pace’s ridership has remained roughly unchanged over the past five years. Since paratransit service is demand-responsive, all indicators and metrics are tied to program usage and fluctuate with ridership changes.

ADA Paratransit Overview

Modal Characteristics	PACE Chicago	MM Minneapolis	MBTA Boston	NYCT New York	ACCESS LA	WMATA Washington, DC
Service Area Population	6,603,537	2,849,712	3,109,308	8,398,748	11,638,106	3,719,567
Service Area (square miles)	1,337	1,111	3,244	321	1,621	950
Population Density	4,939	2,565	958	26,164	7,180	3,915
Vehicle Revenue Miles	31,854,748	26,408,522	15,610,789	37,759,280	38,418,373	21,969,382
Vehicle Revenue Hours	2,340,196	1,451,319	1,417,991	3,989,579	2,171,933	2,214,347
Passenger Trips	4,008,770	2,573,189	1,862,279	4,828,423	4,458,330	2,348,324
Passenger Miles	36,810,202	29,755,037	14,589,884	43,330,163	57,718,216	24,377,770
Operating Cost	\$168,239,908	\$84,642,049	\$128,696,163	\$516,470,491	\$163,937,151	\$174,766,760
Fare Revenue	\$11,173,167	\$8,770,453	\$6,045,296	\$9,781,667	\$10,259,713	\$8,781,139
Capital Funds Expended	\$0	\$10,337,308	\$6,508,479	\$43,184,744	\$5,753,245	\$19,760,604
Average Speed (miles per hour)	13.6	18.2	11.0	9.5	9.6	9.9
Average Trip Length (miles)	9.2	11.6	7.8	9.0	12.9	10.4
Average Vehicle Passenger Capacity	8.0	8.9	7.1	4.8	3.6	4.7
Average Vehicle Age (years)	3.3	2.5	5.4	4.8	4.6	2.4
Vehicles Operated in Maximum Service	1,348	585	617	1,627	1,221	1,092

Modal Characteristics Highlights

Vehicle Revenue Miles: In 2019, Pace ADA Paratransit experienced its fourth year of decreased vehicle revenue miles, down 2.6% for the year, one of four agencies to see a decrease. Access Services and Metro Mobility expanded service in 2019, by 1.4% and 14%, respectively.

Passenger Trips: Pace ADA Paratransit experienced its fourth consecutive year of decreased ridership, down 1.2% from 2018. The only peers to see improvements in ridership were Access Services and Metro Mobility, both of which had expanded vehicle miles in the year.

Operating Cost: Every agency experienced unfavorable operating cost increases in 2019. Pace saw the lowest increase at 4.9%, versus the average increase of 15.6%.

Fare Revenue: None of the agencies raised paratransit fares in 2019. Three agencies, including Pace, saw fare revenue decreases in 2019.

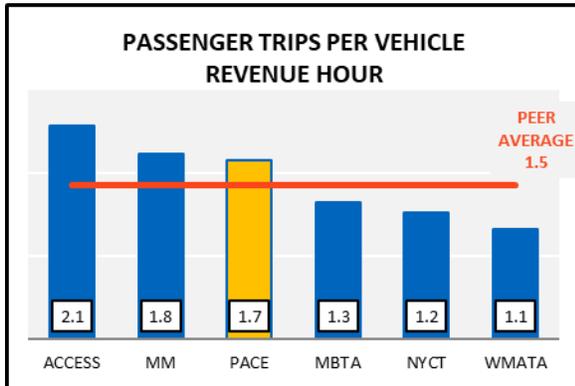
Average Speed: Pace ADA paratransit service has seen declines in average speed each year since 2013, to an average of 13.6 miles per hour, still 2.7% higher than the peer average.

Average Trip Length: Pace ADA passengers rode an average trip length of 9.2 miles, 11.2% shorter than the peer average.

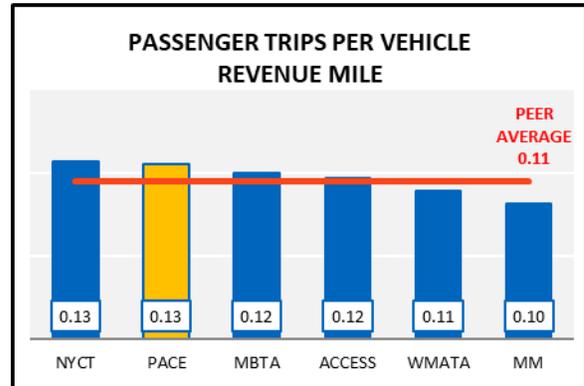
Average Vehicle Passenger Capacity: Pace uses vehicles with an average capacity of eight passengers, compared to a peer average of 5.8.

ADA PARATRANSIT Service Coverage

Pace ADA Paratransit has ranked either second or third for the two measures of service coverage for each of the past seven years.



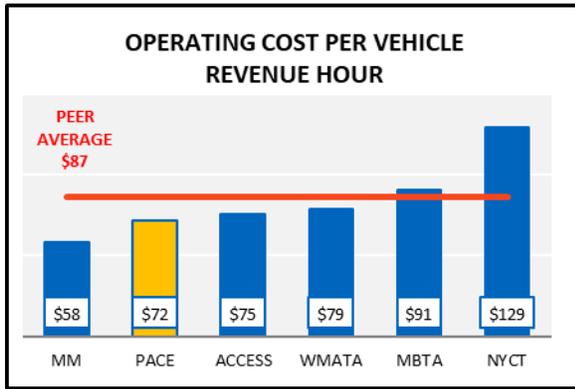
Pace ADA paratransit ridership decreased 1.2% in 2019, while service hours were down 1.5%. This produced a favorable service efficiency result for the year but kept Pace at the same rank position for the sixth consecutive year. Pace’s productivity was 15.6% higher compared to the peer average.



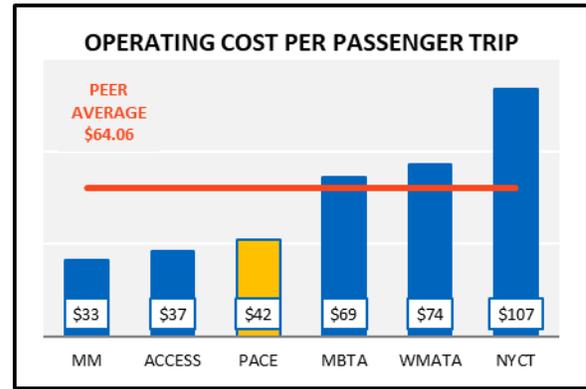
Pace maintained its second rank position for this metric in 2019 with a 1.5% improvement resulting as vehicle revenue miles decreased at a steeper rate compared to ridership. There is little variance among the results for this measure; Pace and its peers are about equally effective at scheduling these notably expensive passenger trips.

ADA PARATRANSIT Service Efficiency and Effectiveness

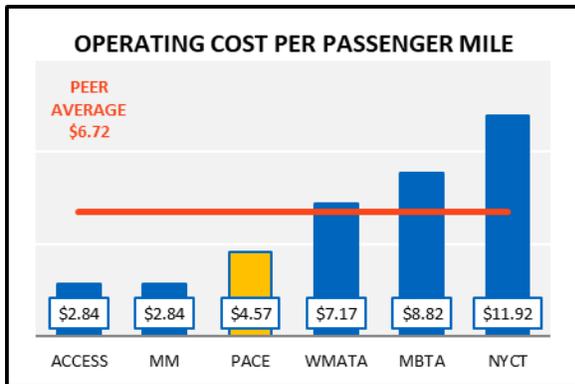
Pace moved up two rank positions for operating cost per vehicle revenue hour and held steady at third position for cost per trip and cost per mile, both for the 7th consecutive years.



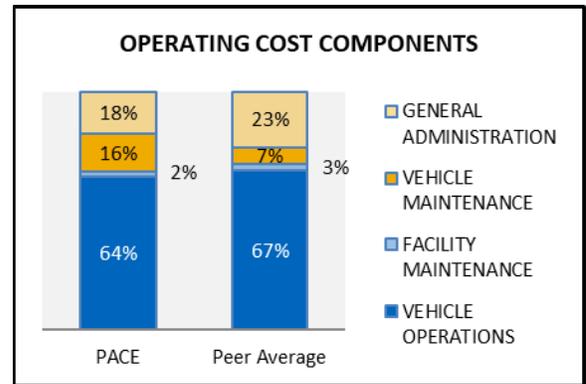
Pace ranked fourth for this metric for six consecutive years, then switched spots with WMATA as its costs soared in 2019. At \$71.89, Pace ADA cost per hour was 17% favorable to the peer average of \$86.59.



Pace ADA Paratransit maintained its position among peers by having an operating cost per passenger trip 34.5% below the peer average. NYCT skews the peer average for this measure with annual operating expenses exceeding \$516 million, nearly triple the next-highest.



For the seventh consecutive year, Pace ranked third for this measure. Pace’s operating cost of \$4.57 per passenger mile was 11% higher compared to 2018 and was 32% below the peer average.

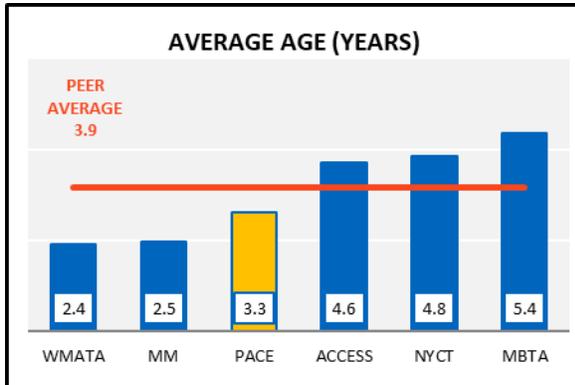


As with other modes, vehicle operations constitute most of the operating budget. Pace expends a significantly lower proportion of its operating cost on general administration, five percentage points less than the peer average, with most of that difference going toward vehicle maintenance costs.

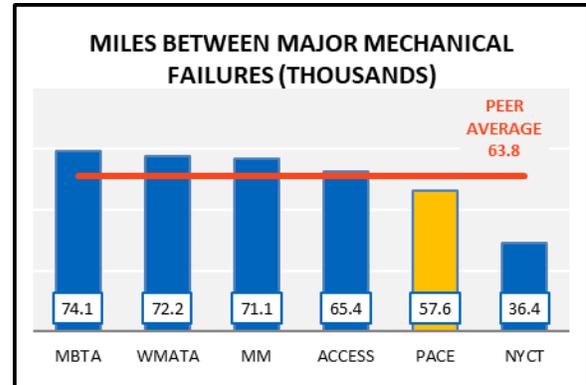
ADA PARATRANSIT

Service Maintenance and Capital Investment

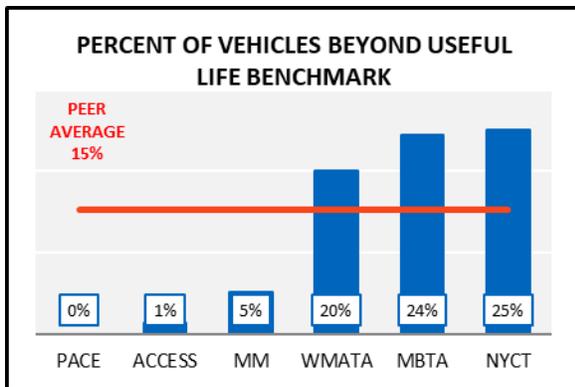
Pace fleet vehicles ranked among the youngest of its peers, yet moved down one position to third after ranking second for five consecutive years. Pace experienced a decrease in the number of miles between major mechanical failures and moved down one rank position for this metric in 2019.



The average age of Pace vehicles increased by 0.8 years in 2019. Pace’s paratransit fleet is 42% younger than the peer average age of 3.9.



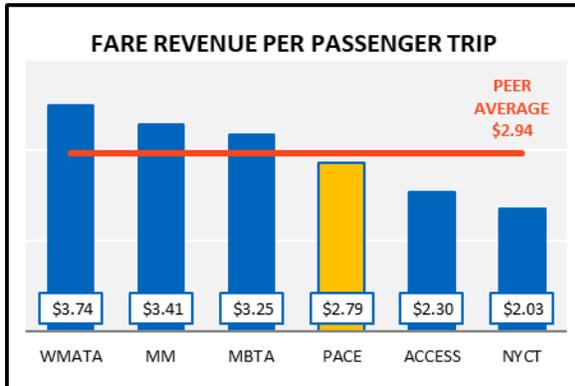
Pace ADA Paratransit service experienced an unfavorable 3% decrease in miles between major mechanical failures in 2019, however, four of its peers saw improvements for this metric. At 9.8% below the peer average, Pace ADA Paratransit moved down one rank position.



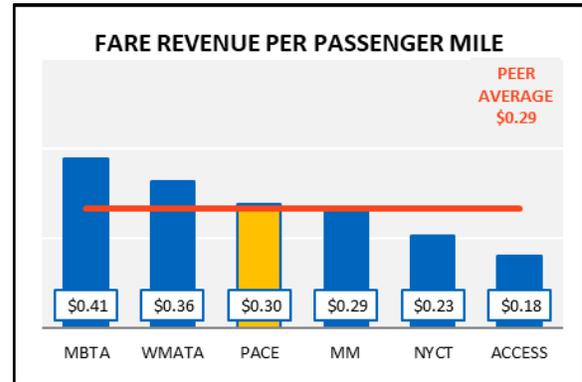
As of year-end 2019, 0% of Pace paratransit vehicles were in service beyond their useful life benchmark, compared to a peer average of 15%. Since each agency is allowed to determine its own benchmark to reflect its unique operating environment, this measure is reflective of an agency’s capital investment strategy. Pace and ACCESS have the highest benchmarks at 8.9 and 8.1 years, respectively, rank the highest among peers for this measure. In comparison, the remaining peers’ benchmarks range from 4 years (WMATA) to 7.9 years (NYCT).

ADA PARATRANSIT Service Level Solvency

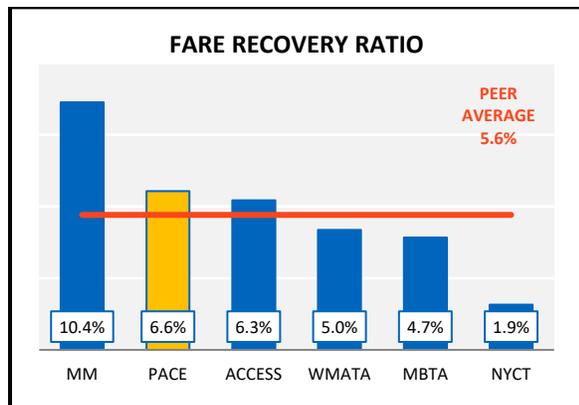
Pace’s fare revenues fell by 1.7% in 2019, yet Pace maintained its rank position for average fare and recovery ratio, and dropped one rank position for fare revenue per passenger mile.



Pace maintained its rank position in 2019 for this metric. The average fare paid for Pace ADA Paratransit services decreased to \$2.79, 5.3% lower than the peer average of \$2.94. The Pace average fare is below its official \$3.25 fare because approved ADA companions ride free of charge, a practice also followed by peers.



Pace ADA Paratransit fare revenue increased to \$0.30 per passenger mile, beating the peer average and moving Pace up one rank position. The peer average is skewed by the higher fares charged by MBTA and WMATA, which can be as high as \$5.60 and \$6.50 per trip, respectively.



Pace ADA Paratransit fare recovery ratio decreased by 0.44 percentage points but exceeded the peer average of 5.6% by a full percentage point. Pace maintained its rank positions in 2019 for the second consecutive year. Metro Mobility has consistently ranked first for this metric, aided by an operating cost per passenger trip that is 49% lower than the peer average.



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