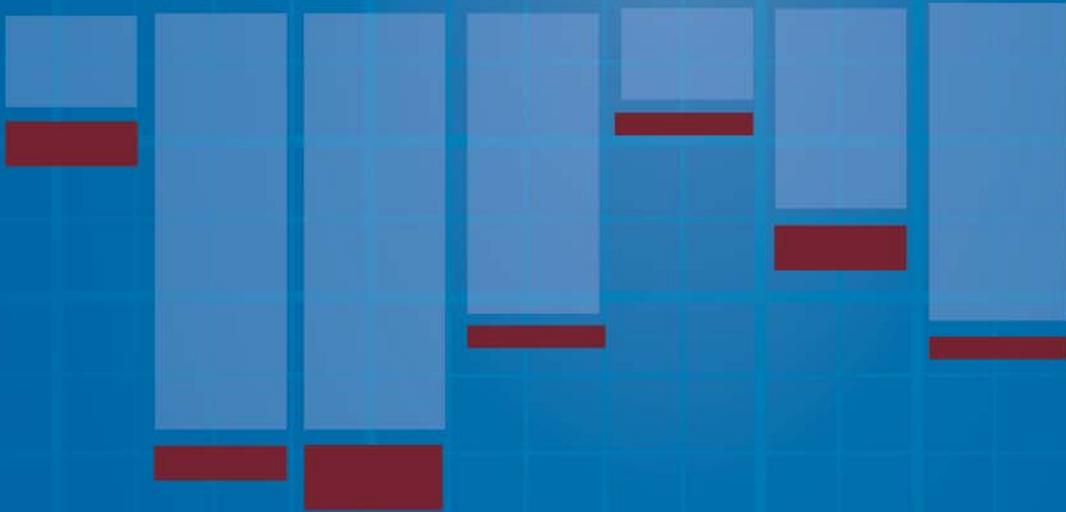




# 2018 SUB-REGIONAL PEER REVIEW





# CONTENTS

EXECUTIVE SUMMARY .....	3
NOTES/METHODOLOGY.....	6
PEER AGENCIES .....	7
DEFINITIONS.....	8
URBAN BUS .....	11
Peer Comparison.....	11
Peer Modal Characteristics.....	12
Service Coverage.....	14
Service Efficiency and Effectiveness .....	15
Service Maintenance and Capital Investment .....	16
Service Level Solvency .....	17
HEAVY RAIL .....	18
Peer Comparison.....	18
Peer Modal Characteristics.....	19
Service Coverage.....	21
Service Efficiency and Effectiveness .....	22
Service Maintenance and Capital Investment .....	23
Service Level Solvency .....	24
COMMUTER RAIL .....	25
Peer Comparison.....	25
Peer Modal Characteristics.....	26
Service Coverage.....	28
Service Efficiency and Effectiveness .....	29
Service Maintenance and Capital Investment .....	30
Service Level Solvency .....	31

SUBURBAN BUS..... 32

- Peer Comparison..... 32
- Peer Modal Characteristics ..... 33
- Service Coverage..... 35
- Service Efficiency and Effectiveness ..... 36
- Service Maintenance and Capital Investment ..... 37
- Service Level Solvency ..... 38

ADA PARATRANSIT ..... 39

- Peer Comparison..... 39
- Peer Modal Characteristics ..... 40
- Service Coverage..... 42
- Service Efficiency and Effectiveness ..... 43
- Service Maintenance and Capital Investment ..... 44
- Service Level Solvency ..... 45

# 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 2018, the most current year available, which was released in December 2019.

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 2018 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** continued to perform well in comparison to its peer group, performing at or above the peer average for eight of eleven measures. For the tenth consecutive year, CTA ranked first for having the lowest operating cost per vehicle revenue hour; CTA also ranked first for operating cost per passenger trip for the fourth consecutive year. For the third consecutive year, CTA reported a decrease in the reliability measure miles between major mechanical failures; CTA finished sixth place for this measure. In the solvency area, CTA ranked second among its peer group for two measures, fare revenue per passenger trip and fare revenue per passenger mile, and achieved the top ranking for fare recovery ratio. With a 92% increase in capital fund

expenditure in 2018, CTA bus improved two rank positions for capital expenditures per passenger trip.

**CTA Rail** continued to show strong performance for service efficiency and effectiveness, maintaining its first-place ranking for operating cost per vehicle revenue hour (for the tenth consecutive year) and recapturing top ranking for operating cost per passenger mile. CTA also continued to perform well in the service maintenance and capital investment metrics, with the second-youngest average fleet age and second-highest miles between major mechanical failures. CTA rose two rank positions for fare revenue per passenger trip and maintained its fifth-place rankings for fare revenue per passenger mile and fare recovery ratio. Capital fund expenditures per passenger trip decreased by 27% in 2018, resulting in a drop of three rank positions to last place for this measure of solvency.

**Metra Commuter Rail** has consistently performed better than the peer average for all service coverage and service efficiency and effectiveness measures since peer reporting began in 2009. In 2018, Metra dropped one rank position for the two coverage measures, ranking second for passenger trips per vehicle revenue hour and third for passenger trips per vehicle revenue mile. Metra ranked second for operating cost per passenger trip for the eighth consecutive year but lost two rank positions for operating cost per vehicle revenue hour and remained in third place for operating cost per passenger mile. Metra maintained its ranking for average age while improving one rank position for miles between major mechanical failures. A fare increase implemented in February 2018 resulted in improvements for all three solvency measures related to fares, and Metra improved its rank positions for two of them. A significant increase in capital fund expenditures moved Metra up one rank position for capital expenditures per passenger trip.

**Pace Suburban Bus** saw a ridership decrease in 2018, maintaining its sixth-place position for both measures of service coverage; rankings for these measures are hampered by Pace's large geographic service area and low population density. Pace performed better than the peer average for two measures in the service efficiency and effectiveness area: operating cost per vehicle revenue hour and operating cost per passenger mile. Pace also performed well in the maintenance and capital investment category, keeping the top ranking for average fleet age and second-place ranking for miles between major mechanical failures. Although Pace ranked second for average fare, it ranked fifth for fare revenue per passenger mile as its revenue is spread over substantially more passenger miles. The 2018 fare increase improved Pace's ranking for fare recovery ratio. Capital expenditures, which were down by nearly 44%, remained strong compared to peer agencies; Pace maintained the top rank for capital expenditures per passenger trip as its expenditures were 63% higher than the peer average.

**Pace ADA Paratransit** continued its favorable performance, equaling or exceeding the performance of its peers for eight of ten metrics. With its large geographic coverage, Pace provided 17% more vehicle revenue miles compared to the peer average, and retained its rank positions for both service coverage measures. A reduction in operating cost for the year allowed Pace to retain its favorable and rank positions for each measure of service efficiency

and effectiveness. Pace had the second-youngest fleet for the fifth consecutive year but ranked fourth for the reliability measure miles between major mechanical failures. Pace maintained its position for average fare but dropped one position for fare revenue per passenger mile. Pace Paratransit recovered 7.1% of its operating cost from passenger fares, exceeding the peer average for the year and moving Pace up two rank positions for this measure of solvency.

# NOTES/METHODOLOGY

1. This analysis is based on 2018 published data from the National Transit Database (NTD), the most currently available data released in December 2019. 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. 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.

# PEER AGENCIES

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

# 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 the number of transit trips taken. They each also have both urban rail and bus services, which provide coordinated service throughout the metropolitan area. New York City Transit is the most analogous to CTA bus in that it has a service area largely defined by city boundaries. The bus systems serving the other cities also serve surrounding suburban areas, but are predominantly urban systems.

CTA performed better than the peer average for six of eleven measures and equaled the peer average for two measures. CTA's 2.8% drop in ridership outperformed three of its peers, maintaining CTA's third-place rank for passenger trips per vehicle revenue hour and per vehicle revenue mile. 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, and improving one position for operating cost per passenger mile. The average age of CTA's bus fleet dropped two positions to fourth, and CTA remained in last place for the reliability indicator miles between major mechanical failures. CTA performed well in the solvency area, ranking first or second for the three measures related to fare revenue. Although CTA saw a 92% increase in capital expenditures, improving its rank for capital fund expenditure per trip by two positions, annual spending was nearly 38% below the peer average for 2018.

## Peer Comparison

Service Area	Performance Measure	Performs better than peer average	
		2017	2018
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	Miles between Major Mechanical Failures	NO	NO
	Average Age	YES	NO
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

## 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	8,595,119	8,622,698	3,836,896	3,719,567
Service Area (square miles)	310	3,244	1,459	321	839	950
Population Density	10,454	958	5,891	26,862	4,573	3,915
Vehicle Revenue Miles	52,314,606	22,613,584	73,191,891	98,385,713	40,330,203	37,061,070
Vehicle Revenue Hours	5,794,197	2,523,652	6,911,094	13,223,758	4,070,068	3,767,231
Passenger Trips	242,173,010	113,231,973	280,793,935	734,660,697	161,535,177	119,681,096
Passenger Miles	591,323,738	285,305,403	1,158,789,512	1,687,094,714	455,641,154	366,498,831
Operating Cost	\$814,581,632	\$449,793,559	\$1,213,432,803	\$2,889,698,428	\$630,851,254	\$677,631,392
Fare Revenue	\$279,555,025	\$107,253,146	\$218,621,211	\$949,504,339	\$172,268,526	\$123,209,808
Capital Funds Expended	\$126,735,881	\$63,281,213	\$100,135,647	\$377,617,697	\$247,980,360	\$147,495,511
Average Speed (miles per hour)	9.0	9.0	12.6	7.4	9.9	9.8
Average Trip Length (miles)	2.4	2.5	4.1	2.3	2.8	3.1
Average Vehicle Passenger Capacity	87	94	54	77	83	67
Average Vehicle Age (years)	8.9	9.2	8.9	6.5	8.6	7.6
Vehicles Operated in Maximum Service	1,569	817	1,916	3,890	1,178	1,278

## Modal Characteristics Highlights

**Vehicle Revenue Miles:** CTA kept its vehicle revenue miles even to 2018, while four agencies (MBTA, METRO, NYCT, and WMATA) reduced service and SEPTA increased service.

**Passenger Trips:** Each agency experienced ridership declines in 2018, ranging from 0.1% (NYCT) to 3.2% (METRO). CTA's decrease of 2.8% was steeper than the average peer ridership decrease and amounted to a decrease of 7 million trips.

**Operating Cost:** CTA's operating cost increase was held to 0.5% in 2018 compared to a peer average increase of 1.9%.

**Fare Revenue:** CTA implemented a fare increase in January 2018 (its first increase since 2013) and achieved a 3.4% fare revenue increase for the year, the largest increase of its peer group. SEPTA and WMATA also implemented fare increases for the fiscal year being reported, although only SEPTA reporting increased annual fare revenue as WMATA saw steeper ridership losses for the year.

**Capital Funds Expended:** CTA's capital fund expenditure per passenger trip increased by 97.6% in 2018, one of four agencies that significantly increased 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 2018, CTA expended over \$84.4 million on new bus rolling stock and \$21.8 million on systems and guideway.

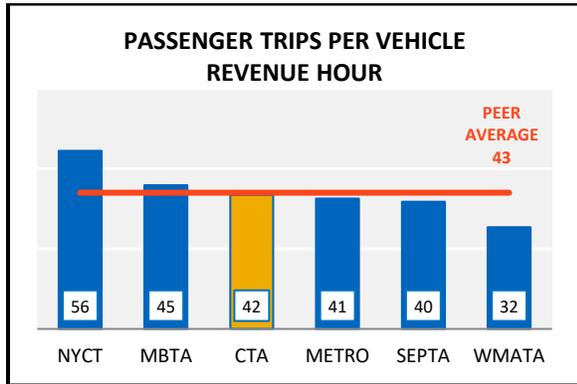
**Average Speed:** Five agencies, including CTA, saw decreased average bus speeds in 2018 and all reported slower average speeds over the five-year time period. At 9.0 miles per hour, CTA has the second-lowest average speed among its peers, unchanged from 2017.

**Average Trip Length:** CTA bus riders travel an average of 2.4 miles per trip, compared to the peer average of 3.0 miles. Over the past five years, CTA passenger average trip lengths have decreased by 1.5%, on par with the peer average decrease.

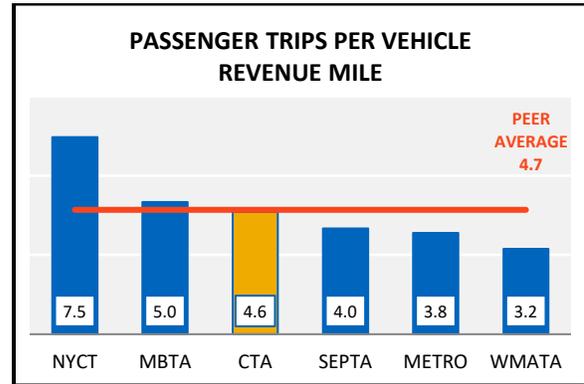
**Average Vehicle Passenger Capacity:** CTA operates the second-largest vehicles with an average passenger capacity of 87. Average passenger capacities vary from a low of 54 at METRO to 94 at MBTA.

## URBAN BUS Service Coverage

A 2.8% drop in bus ridership resulted in unfavorable results for the two performance measures shown below; however, CTA retained its third-place positions for both measures in 2018.



Each bus agency reported lower ridership in 2018. CTA saw one of the steepest drops in ridership at -2.8%, while its vehicle revenue hours increased by 0.4%. Passenger trips per vehicle revenue hour decreased 3.2% in 2018, roughly equal to the peer average performance.

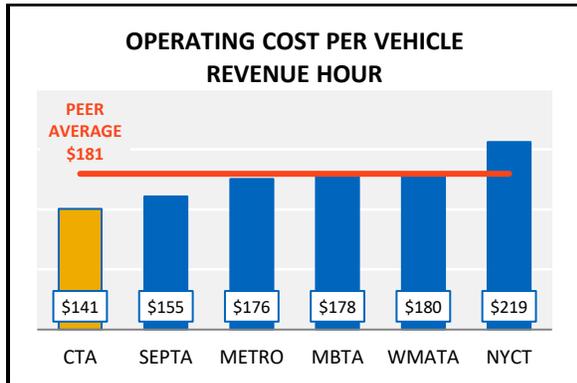


CTA's vehicle revenue miles remained equal to 2017, so its ridership decrease resulted in a 2.9% drop for this measure compared to 2017. CTA maintained its rank position with performance roughly equal to the peer average.

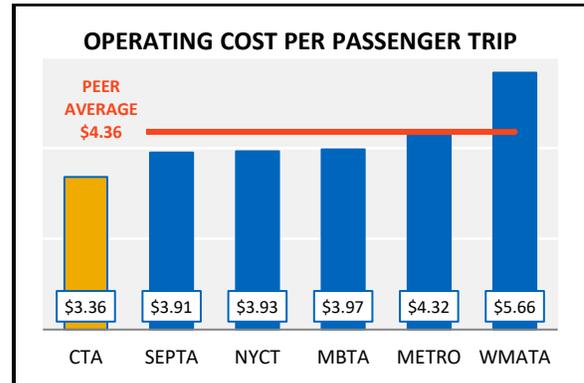
## URBAN BUS

### Service Efficiency and Effectiveness

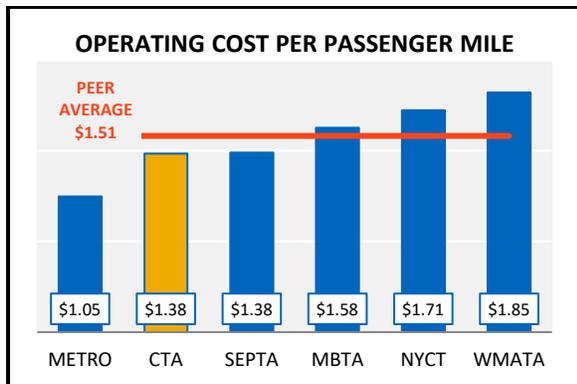
In 2018, CTA bus operating expense was held to a 0.5% increase; CTA performed favorably to its peers for each measure of service efficiency and effectiveness.



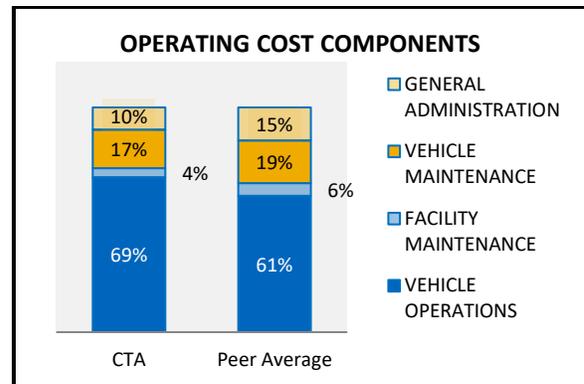
A 0.4% increase in vehicle revenue hours, combined with a 0.5% operating cost increase, resulted in a 0.1% increase for this measure for CTA. CTA has held the top spot for this measure for ten consecutive years.



CTA's operating cost per passenger trip remained the lowest for the fourth consecutive year, and at \$3.36, was 23% below the peer average.



New York was the only bus peer agency to see an increase in passenger miles traveled in 2018, up 1.3%. CTA saw a 3.5% decrease, yet moved up one rank position from 2017 as SEPTA and MBTA saw steeper increases in this measure.

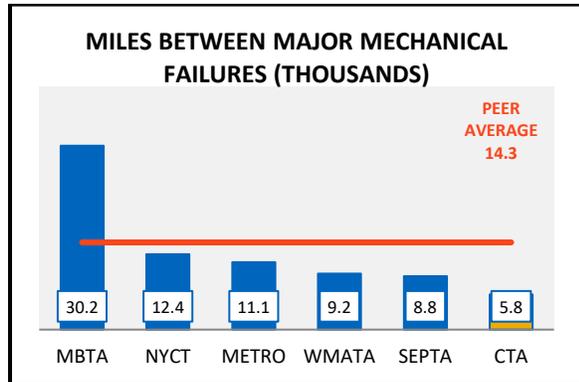


CTA bus expended 69% of its budget on vehicle operations, significantly more than the peer average of 61%, and proportionally less on general administration and vehicle maintenance compared to its peers.

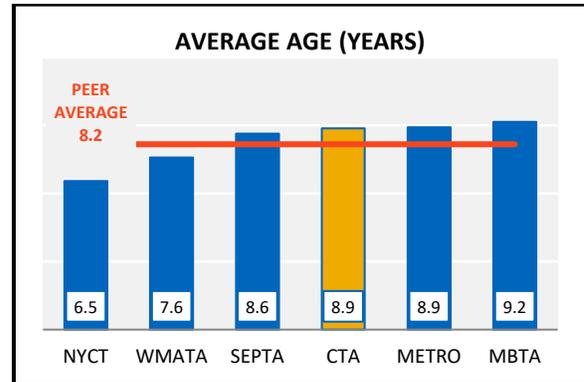
## URBAN BUS

### Service Maintenance and Capital Investment

CTA did not add any new buses into its active vehicle fleet in 2018 and saw a 4.9% increase in the number of major mechanical failures; both factors contributed to unfavorable performance that did not meet the peer averages for the two measures of service maintenance and capital investment.



SEPTA and MBTA experienced improvement for this measure in 2018. CTA, however, saw a 5.0% decrease in miles between failures and subsequently stayed at the lowest rank position for this measure. CTA has ranked sixth for this measure for three consecutive years.

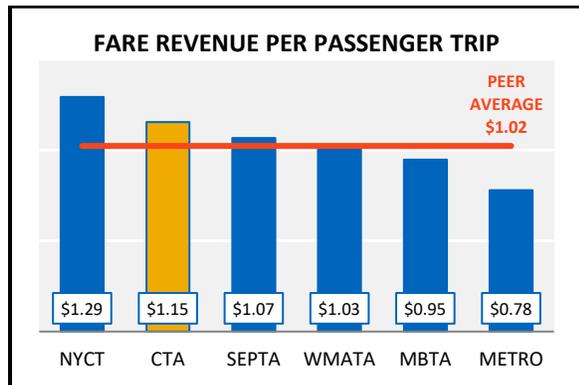


In 2018, the average age of a CTA bus was 8.9 years. 103 of CTA's active fleet of 1,859 (or 5.5%) have exceeded their expected minimum useful life of 12 years. CTA had ranked either first or second for this metric since peer reporting began in 2009, but dropped to fourth rank in 2018 as WMATA and SEPTA introduced significant numbers of new buses into their fleets.

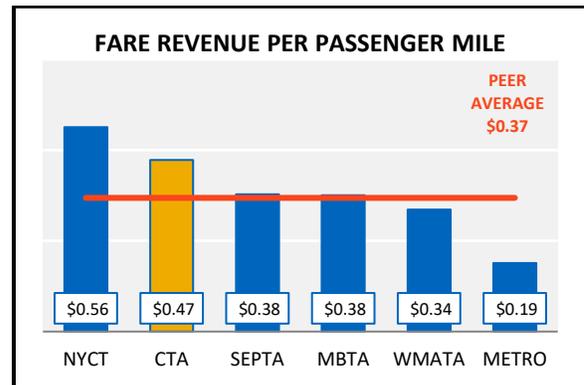
## URBAN BUS

### Service Level Solvency

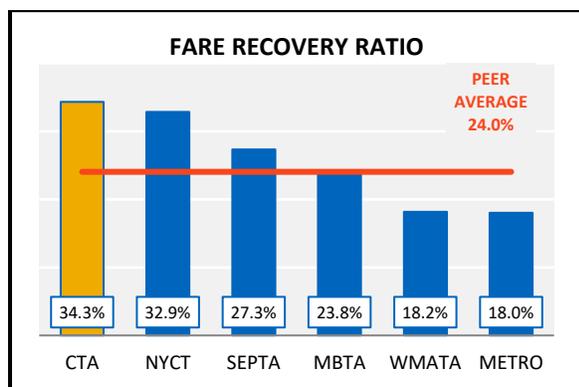
CTA has consistently performed well compared to its peers in the service level solvency area. CTA maintained or improved its rank position for each solvency measure in 2018.



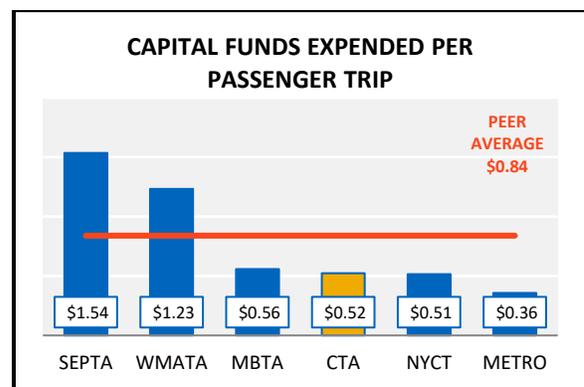
CTA maintained its rank position for this measure, also known as average fare, although its fare revenue increased 3.4%. CTA's 6.4% improvement for this measure was the largest increase among its peers in 2018.



CTA has held the second-rank position for this measure since peer reporting began in 2009. CTA saw a 7.2% increase for this measure in 2018 and received \$0.10, or 28%, more than the peer average for this metric.



Following its January 2018 fare increase, CTA regained the top rank position by recovering over 34% of its operating expenses through rider-paid fares and exceeding the peer average by 10.3 percentage points. CTA has held the top spot for eight of the past 10 years.



CTA and SEPTA each moved up two rank positions for this metric in 2018. CTA increased capital expenditures by 92% in the year while SEPTA improved 184%. On a per-trip basis, CTA expends about 38% less capital compared to its peer agencies.

# 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 five of the eleven measures examined, one fewer compared to 2017. 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 tenth consecutive year, regained top ranking for operating cost per passenger mile, and equaled the peer average for operating cost per passenger trip. For the sixth consecutive year, CTA ranked in the top two for average fleet age and miles between major mechanical failures, metrics of service maintenance and capital investment. CTA rail performed below the peer average for each solvency measure related to fares and dropped to the lowest rank for capital fund expenditures per passenger trip as spending fell 28% in 2018.

## Peer Comparison

Service Area	Performance Measure	Performs better than peer average	
		2017	2018
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	Miles between Major Mechanical Failures	YES	YES
	Average Age	YES	YES
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	EQUAL	NO

## 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	MARTA	MBTA	NYCT	SEPTA	WMATA
	Chicago	Atlanta	Boston	New York	Philadelphia	Washington, DC
Service Area Population	3,240,768	1,967,468	3,109,308	8,622,698	3,836,896	3,719,567
Service Area (square miles)	310	936	3,244	321	839	950
Population Density	10,454	2,102	958	26,862	4,573	3,915
Directional Route Miles	208	96	76	494	75	234
Vehicle Revenue Miles	73,461,555	22,334,099	23,313,396	348,452,183	16,971,260	81,751,483
Vehicle Revenue Hours	4,068,066	839,670	1,564,423	19,108,654	927,014	3,537,625
Passenger Trips	225,894,953	65,086,630	163,515,168	2,628,355,851	94,005,114	229,233,254
Passenger Miles	1,401,502,999	449,895,831	576,500,980	9,989,099,073	359,405,111	1,314,002,629
Operating Cost	\$617,865,221	\$203,912,692	\$301,638,488	\$5,068,977,553	\$200,674,425	\$1,044,384,320
Fare Revenue	\$314,065,224	\$80,253,269	\$223,384,553	\$3,503,324,236	\$113,037,368	\$536,496,025
Capital Funds Expended	\$232,783,864	\$166,930,722	\$307,764,378	\$3,242,025,944	\$106,863,210	\$592,215,529
Average Speed (miles per hour)	18.1	26.6	14.9	18.2	18.3	23.1
Average Trip Length (miles)	6.2	6.9	3.5	3.8	3.8	5.7
Average Vehicle Passenger Capacity	80	95	230	139	112	218
Average Vehicle Age (years)	18.0	28.6	30.0	24.0	25.9	13.5
Vehicles Operated in Maximum Service	1,142	212	336	5,364	285	888

## 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 2017; WMATA reported 4.3% more miles traveled as new service improvements were initiated.

**Passenger Trips:** Following record high ridership in 2015, CTA rail ridership experienced a third consecutive year of decreased ridership, down 1.9% in 2018. MARTA experienced the largest ridership decrease of 4.7%.

**Operating Cost:** CTA's operating cost increase was 2.3% in 2018, outpaced by MARTA, NYCT, and WMATA.

**Fare Revenue:** Each agency except MBTA reported increased fare revenue for the 2018 report year although fare increases were only implemented at CTA, SEPTA, and WMATA in the year. Compared to 2017, CTA fare revenue was up 6.6% in 2018, following its fare increase implemented in January.

**Capital Funds Expended:** CTA saw a 28.1% decrease in capital funds expended in 2018, the largest decline in capital spending among its peer group. Four agencies reported double-digit increases in annual capital fund expenditure: MARTA, MBTA, NYCT, and WMATA. The passing of Rebuild Illinois in 2019 will allow for improved capital funding in ensuing years.

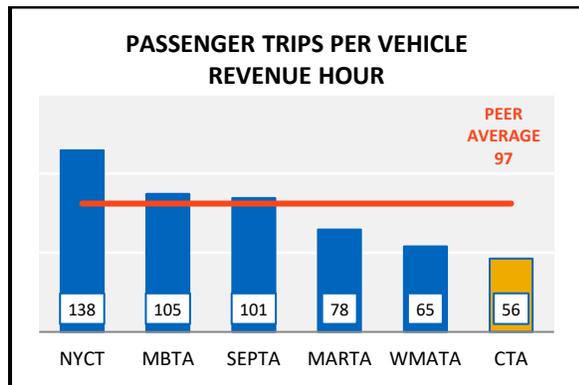
**Average Speed:** CTA's average speed improved by 0.3% in 2018, with MARTA and NYCT each reporting improvements of 0.1%. The other three peers reported declines ranging from 1.2% to 5.4%. At 18.1 miles per hour, CTA rail speed was 10.7% slower compared to its peers, which averaged 20.2 miles per hour.

**Average Trip Length:** At 6.2 miles, CTA average trip lengths are 30% longer than the peer average of 4.8 miles. However, CTA rail trips in 2018 were 5.1% longer compared to 2017, the largest increase in trip length among its peer group. Over the past five years, CTA rail trips have trended over 2% longer.

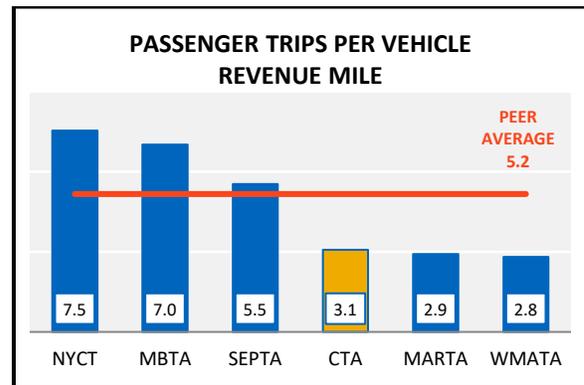
**Average Vehicle Passenger Capacity:** CTA cars are smaller in terms of the number of seats, length, and width compared to its peers due to its need to navigate tighter turns on its 'L' tracks. The average seating capacity of a CTA rail car is 80, roughly 50% smaller than its peer average capacity.

## HEAVY RAIL Service Coverage

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



Each agency saw a fewer passenger trips per vehicle revenue hour in 2018. CTA experienced a 0.5% decrease in vehicle hours and 1.9% decrease in ridership, resulting in a 1.4% decline in performance for this measure. CTA carries 43% fewer passengers per vehicle hour than its peer average.

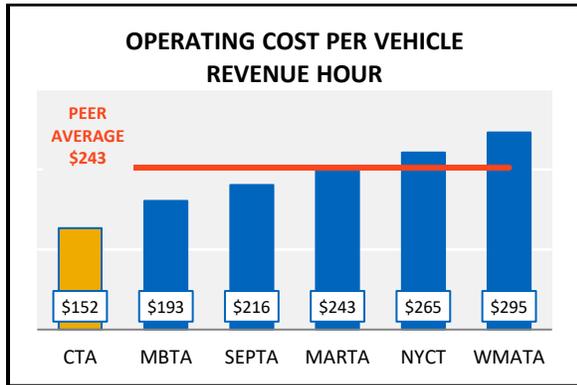


Along with the decrease in vehicle revenue hours, CTA operated 0.2% fewer vehicle revenue miles in 2018. The ridership decrease produced a 1.7% decrease in performance for this measure, yet CTA maintained its rank position as four other agencies also reported decreases.

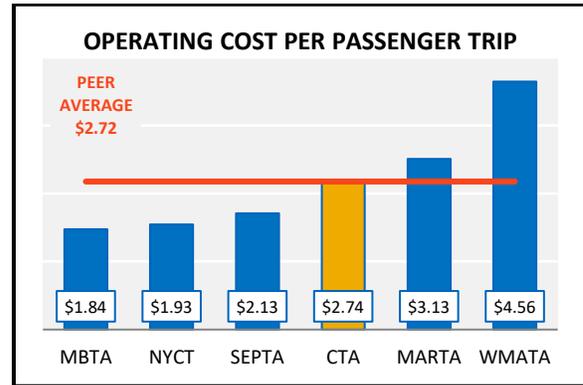
## HEAVY RAIL

### Service Efficiency and Effectiveness

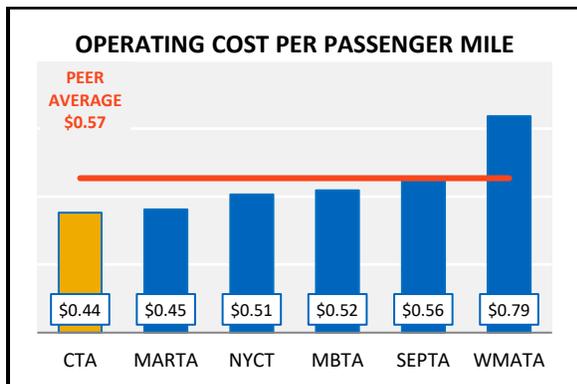
Smaller vehicles and longer average trip lengths contribute to CTA's relative strong performance for these measures of service efficiency and effectiveness.



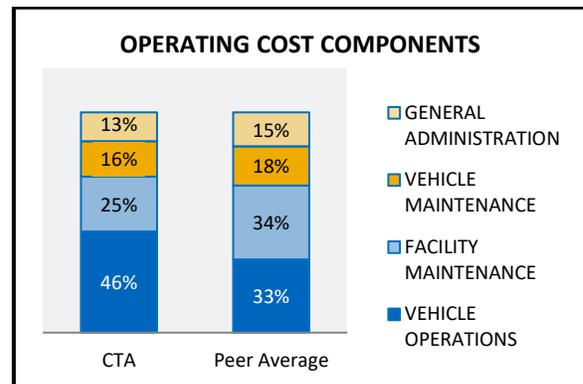
A 0.5% decrease in vehicle revenue hours paired with a 2.3% increase in operating cost resulted in a 2.8% increase in operating cost per vehicle hour for 2018. CTA has ranked first for this metric for ten consecutive years, with an operating cost per hour 37% lower than the peer average.



CTA's operating cost per trip increased 4.2% in 2018. 2018 was the eighth 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 seven of the past eight years. CTA was one of three agencies (including MBTA and SEPTA) to report an increase in passenger miles traveled for 2018. A 3.1% increase in passenger miles traveled in 2018 returned CTA to the top spot.

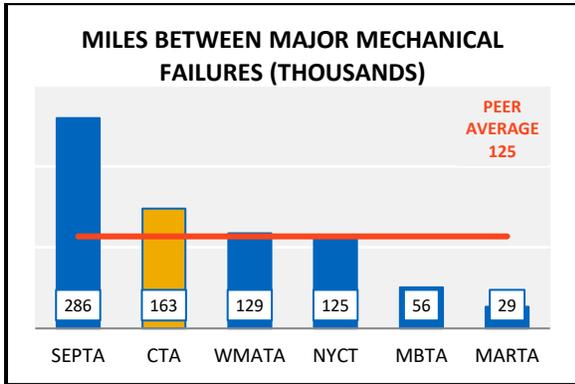


CTA spends a significantly larger portion of its budget on vehicle operations than the peer average (46% vs. 33%) and less for each of the other three operating cost categories.

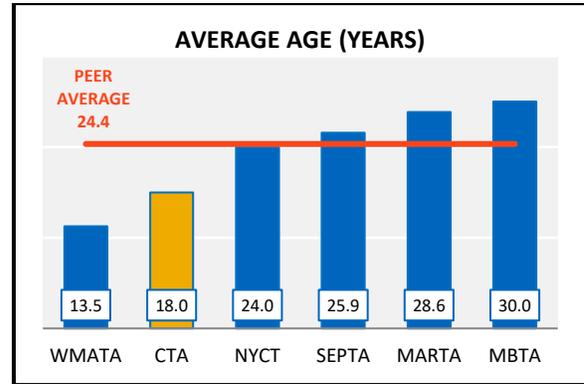
## HEAVY RAIL

### Service Maintenance and Capital Investment

CTA has ranked either first or second for both measures of service maintenance and capital investment for the past six years following a major fleet modernization effort.



In 2018, CTA saw a 36% decrease for this measure, largely due to a 55% increase in the number of major mechanical failures. CTA dropped one rank position for this metric, with vehicles traveling an average of 163,000 miles between major mechanical failures versus its peer average of 125,000 miles.

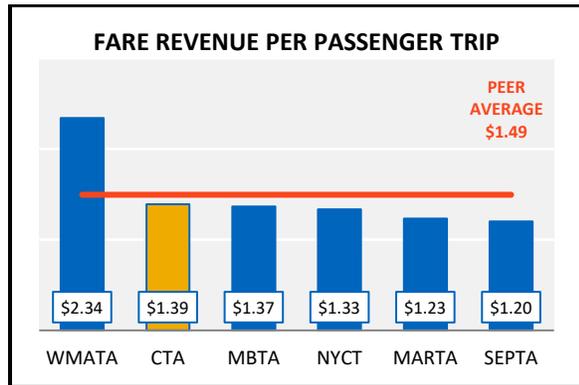


CTA did not put any new rail vehicles into service in 2018; NYCT was the only peer to add to its fleet with 136 new rail cars, about 2% of its fleet.

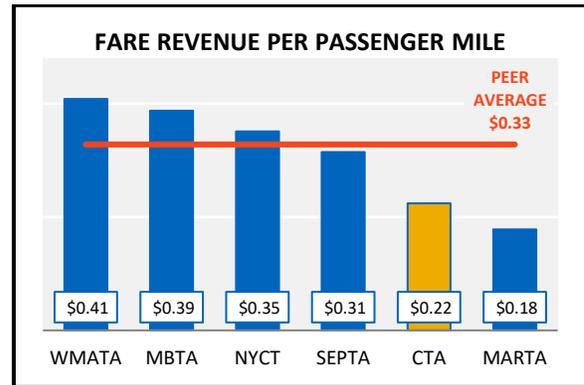
## HEAVY RAIL

### Service Level Solvency

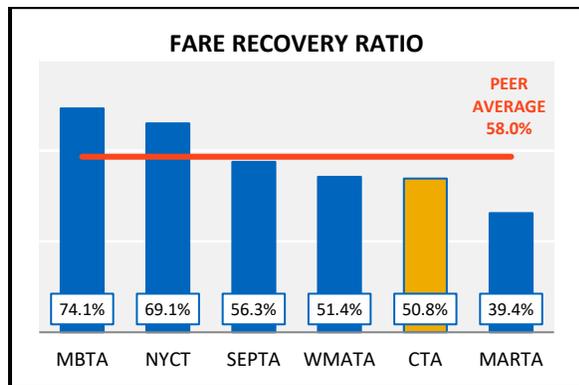
CTA's fare revenues are negatively impacted by a state mandate to provide free rides to qualifying passengers, which is not a factor for its peers. CTA implemented a fare increase in January 2018, its first in five years.



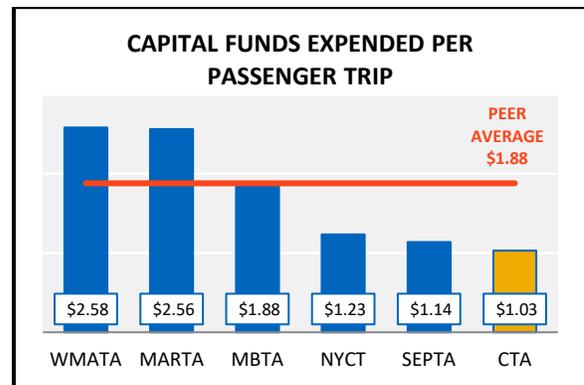
CTA realized a gain of \$0.11 in fare revenue per passenger trip in 2018. WMATA, with a zone-based and peak/off-peak fare schedule, has the highest average fare and skews the peer average to \$1.49.



CTA's fare revenue per passenger mile remained at \$0.22 in 2018 and remained 32% below the peer average for this measure, as its fare revenues are spread over an average trip length that is 30% longer than the peer average.



Although its recovery ratio increased by 2.1 percentage points, CTA maintained its fifth-place rank for this measure in 2018 for the fifth consecutive year. Fare increases were also implemented at SEPTA and WMATA for the 2018 report year; the peer average fare recovery ratio increased by almost two full percentage points compared to 2017.



A 28% decrease in capital fund expenditures resulted in CTA dropping to sixth place for this metric in 2018. Compared to its peers, CTA expended 45% less funds in 2018, a difference of \$0.85 per trip. WMATA has ranked first for this measure for four consecutive years, after adopting a plan in 2015 to double the pace of capital investment to meet critical needs.

# COMMUTER RAIL

The peers selected for commuter rail represent the largest commuter rail systems in the United States; all are traditional systems that can trace their roots to rail passenger services that have operated since the late 19<sup>th</sup> century. Three of the peers provide service to New York City from the states of New York, New Jersey, and Connecticut, with Boston and Philadelphia being the other major cities served. There are differences in the operating environment of each railroad affecting its service delivery and cost structure. Metra operates predominantly diesel services with one electric line and contends with more intermingling with freight operations than the other railroads. It benefits from the use of bi-level cars on all trains, enabling it to carry large passenger loads more cost-effectively. It also operates with a mix between directly-operated and contracted services. The New York peers have less interference with freight traffic, but confront greater capacity constraints and less operating flexibility due of the need to operate through tunnels or over bridges to New York City's center in Manhattan. SEPTA is unique in operating a fully electric service, which yields cost savings during times of high diesel prices.

Metra performed equal to or better than the peer average for each of the measures in the service coverage and service efficiency and effectiveness categories, ranking second or third. Metra's average fleet age increased; however, reliability (as indicated by miles between major mechanical failures) improved one rank position as the number of breakdowns decreased. Although Metra saw increased fare revenue in 2018 and improved its rank position for two fare measures, Metra remained below the peer average for each measure in the service level solvency category.

## Peer Comparison

Service Area	Performance Measure	Performs better than peer average	
		2017	2018
Service Coverage	Passenger Trips per Vehicle Revenue Hour	YES	YES
	Passenger Trips per Vehicle Revenue Mile	YES	YES
Service Efficiency and Effectiveness	Operating Cost per Vehicle Revenue Hour	EQUAL	EQUAL
	Operating Cost per Passenger Trip	YES	YES
	Operating Cost per Passenger Mile	YES	YES
Service Maintenance and Capital Investment	Miles between Major Mechanical Failures	YES	YES
	Average Age	NO	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

## Peer Modal Characteristics

Metra operates the second-largest commuter rail system in the country, as measured by 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	11,238,184	6,503,894	10,594,013	3,836,896
Service Area (square miles)	1,940	310	2,967	527	5,325	839
Population Density	3,743	10,030	3,788	12,341	1,989	4,573
Directional Route Miles	975	776	638	546	1,002	447
Vehicle Revenue Miles	43,674,979	24,565,346	66,508,822	67,798,388	62,182,061	20,153,941
Vehicle Revenue Hours	1,452,101	827,523	2,098,218	2,182,316	1,889,904	1,028,269
Passenger Trips	68,446,239	32,859,741	105,538,101	91,873,366	87,059,367	32,245,981
Passenger Miles	1,518,703,416	680,949,680	3,405,961,936	2,154,521,183	2,148,639,449	436,335,049
Operating Cost	\$761,950,311	\$371,909,742	\$1,482,474,624	\$1,258,638,462	\$1,016,958,264	\$303,658,609
Fare Revenue	\$370,028,145	\$229,103,721	\$740,646,842	\$740,271,044	\$561,748,246	\$144,711,466
Capital Funds Expended	\$260,503,166	\$102,748,456	\$1,028,651,046	\$463,479,355	\$285,585,128	\$281,542,236
Average Speed (miles per hour)	30.1	29.7	31.7	31.1	32.9	19.6
Average Trip Length (miles)	22.2	20.7	32.3	23.5	24.7	13.5
Average Vehicle Passenger Capacity	127	120	108	106	108	115
Average Vehicle Age (years)	26.0	24.1	16.6	16.6	19.8	30.3
Vehicles Operated in Maximum Service	1,062	436	1,026	1,157	1,185	349

## Modal Characteristics Highlights

**Directional Route Miles:** There were no changes among any of the peers for this metric in 2018.

**Vehicle Revenue Miles:** Metra reported no change in vehicle revenue miles in 2018, while LIRR, MNCR, and MBTA reported decreases of up to 1.4%.

**Passenger Trips:** Four agencies reported ridership losses for 2018: Metra (-3.0%), MBTA (-3.2%), New Jersey Transit (-1.7%), and SEPTA (-2.9%). MNCR, which implemented the largest service expansion in its history six years ago in an initiative to increase usage in its off-peak, intermediate, and weekend markets, has reported six consecutive years of ridership increases including a 6.4% surge in 2018. LIRR saw its highest annual ridership since 1949, which it attributes to strong economic conditions and a significant growth in discretionary trips.

**Operating Cost:** Five agencies reported operating cost increases in 2018; Metra reported the lowest increase of 2.6% versus the average peer increase of 4.5%.

**Fare Revenue:** Fare increases were implemented at Metra and SEPTA that affect the 2018 reported revenue. NJT was the only agency to report a loss of fare revenue, down 2.9% from 2017.

**Capital Funds Expended:** Metra saw a 17.6% increase in capital fund expenditures in 2018, one of four agencies among its peer group to see an increase for this indicator. For the second consecutive year, Long Island Rail Road led the group with a 68.2% increase as it continued its LIRR *Forward* project, a \$5.6 billion modernization program.

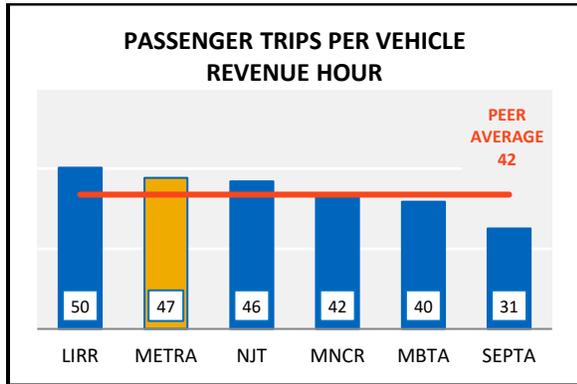
**Average Speed:** Metra experienced a 1.0% decrease in average speed compared to 2017, one of four agencies to report a decline. MBTA, MNCR, and SEPTA each reported larger decreases of up to 7.5%.

**Average Trip Length:** Metra's average trip length for 2018 was 22.2 miles, roughly equal to 2017 and 3.2% shorter than the peer average of 22.9 miles.

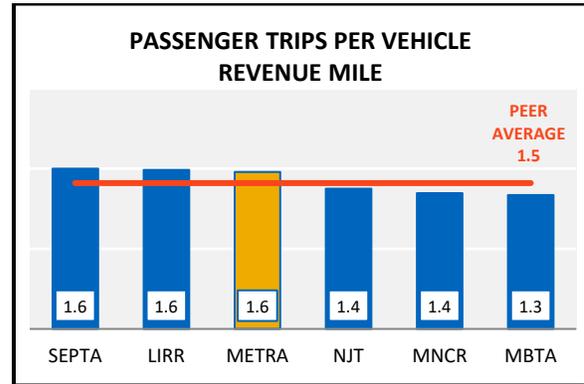
**Average Vehicle Passenger Capacity:** For the commuter rail mode, this comparison excludes standing passenger capacity to conform to industry standards and the expected provision of one seat per passenger. Metra, with its full fleet of double-decker cars, offers the highest average passenger seating capacity of its peers, with over 13.8% more capacity than the peer average.

## COMMUTER RAIL Service Coverage

Metra has consistently performed better than the peer average for the two measures of service coverage shown below since peer reporting began in 2009.



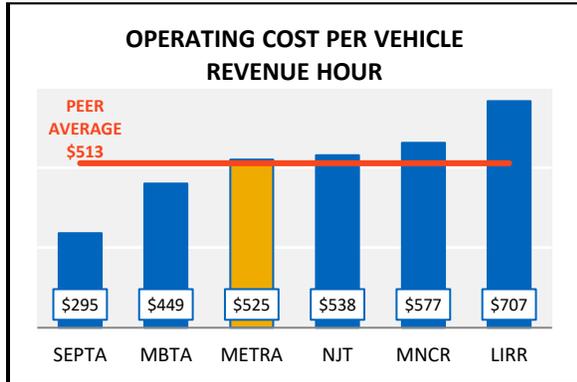
Following four consecutive years in the top position, Metra dropped one rank position as LIRR improved its service effectiveness by 3.1% in 2018. Metra’s performance for this measure was 12.5% higher than the peer average.



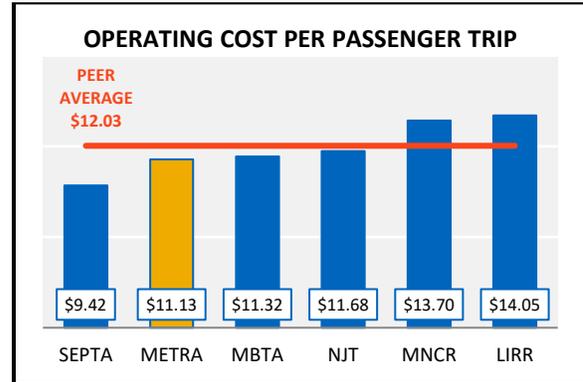
Metra also dropped one position for this measure in 2018, after eight consecutive years in the second position. Metra’s performance was 7.6% favorable to the peer average of 1.5 passenger trips per vehicle revenue mile.

## COMMUTER RAIL Service Efficiency and Effectiveness

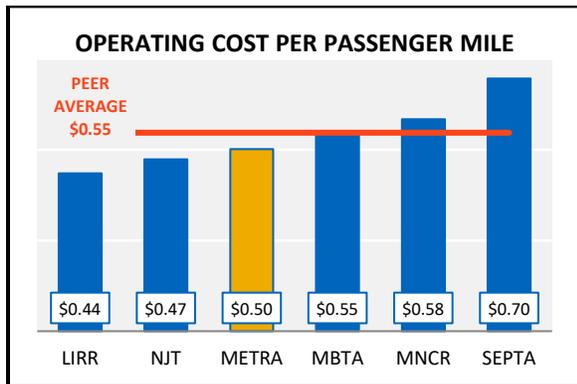
Metra has historically performed very well compared to its peers for the service efficiency and effectiveness measures. Metra’s operating cost increase of 2.6% in 2018 was significantly less than the peer average increase of 4.5%.



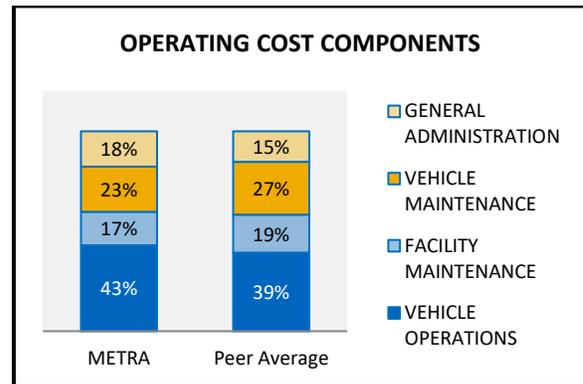
Four agencies reported increases in operating cost per vehicle revenue hour in 2018, including Metra, with a 1.6% increase. With an operating cost per vehicle revenue hour of \$525, Metra was roughly equal to the peer average for this metric.



For the eighth consecutive year, Metra maintained its position for this measure with a 5.8% increase from 2017. Metra’s operating cost per passenger trip was \$0.90 favorable to the peer average and 23% less than LIRR, which has the highest cost per passenger trip.



Four agencies reported increased operating cost per passenger mile, including Metra. Metra’s cost increased 6.6% versus the peer average increase of 2.2%; Metra maintained its third place rank position with an operating cost per passenger mile that was \$0.05 favorable to the peer average.

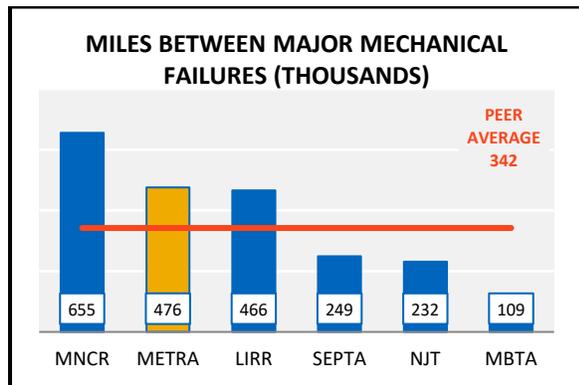


Vehicle operations make up the largest proportion of each peer agency budget. Vehicle maintenance constitutes roughly one-fourth of each agency’s operating budget, the second-largest category of expenditure. The remainder is split among general administration and non-vehicle maintenance costs; Metra’s proportional expenditures are not significantly different from the peer averages.

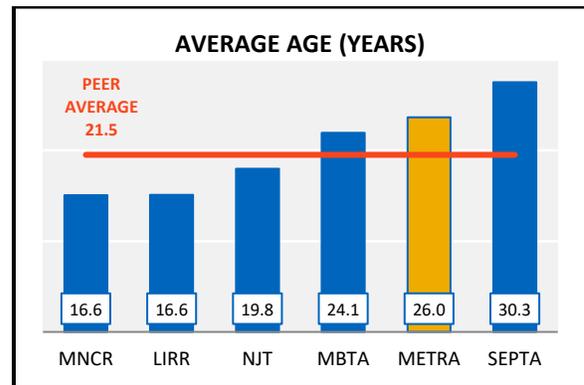
## COMMUTER RAIL

### Service Maintenance and Capital Investment

Although roughly 41% of its vehicles have reached their minimum useful life, 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.



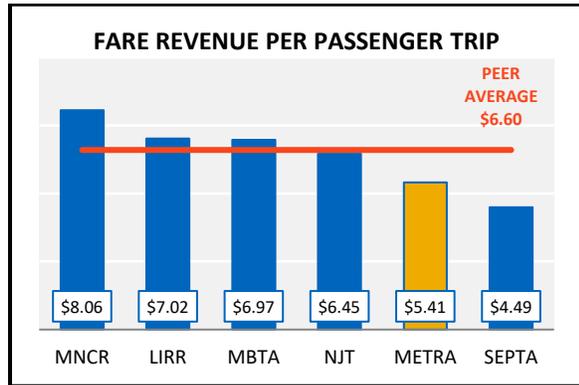
Metra moved up one rank position for this measure in 2018 following a 2% reduction in the number of breakdowns compared to 2017. MBTA is the only all-diesel fleet among the peers and has ranked last for this measure each year since peer reporting began.



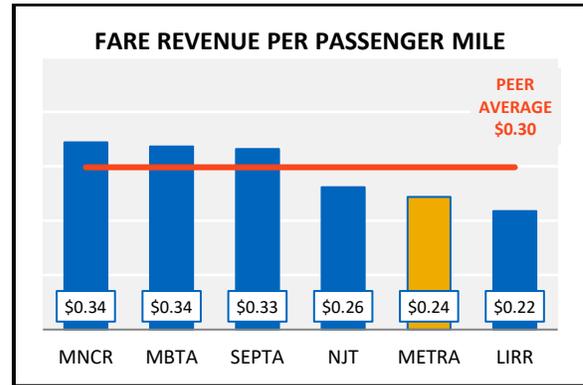
With an average fleet age of 26.0 years, Metra’s revenue vehicles are more than four years older than the peer average and roughly unchanged from its average fleet age of 2014. SEPTA has consistently ranked last for this measure although has undertaken a fleet modernization initiative that will see the replacement of about 18% of its fleet, which began in Spring 2018.

## COMMUTER RAIL Service Level Solvency

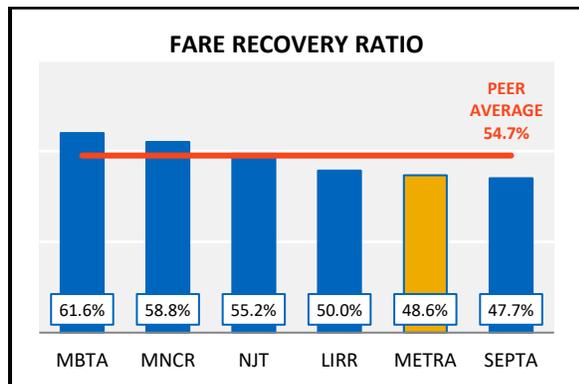
Metra’s position for three solvency measures improved in 2018 following implementation of a fare increase and increase in capital fund expenditures.



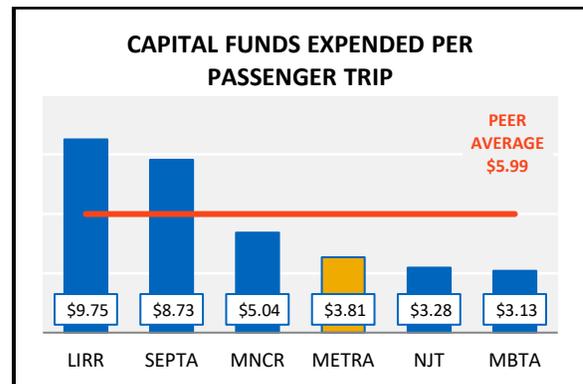
Metra maintained its rank position for this measure for the sixth consecutive year despite a 7.4% improvement following the 2018 fare increase that improved its average collected fare by \$0.38. Metra’s fare revenue per passenger trip remained 18%, or \$1.19, below the peer average.



In 2018, fare increases were implemented at Metra and SEPTA. Metra fare revenue per passenger mile improved to \$0.24 resulting from increased fare revenue and a decline in passenger miles traveled, and Metra moved up one position for this measure. Metra’s 2018 result was 18% below the peer average.



Metra’s fare recovery ratio increased 0.7 percentage points to 48.6% in 2018, improving its rank position to fifth. It is 6.1 percentage points below the peer average, a narrower gap compared to 2017 results. Metra’s ratio has steadily increased over the past five years, up 2.6 percentage points, while the peer average has risen 0.7 percentage points over the same time period.



Metra gained one rank position in 2018 as capital expenditures increased over 17%. With capital expenditures of \$3.81 per passenger trip, Metra’s performance was 36% below the peer average for this measure. The passing of Rebuild Illinois in 2019 will allow for improvements in this measure for Metra in the coming years.

# SUBURBAN BUS

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 2018, Pace experienced a 3.9% drop in ridership despite increases in service hours and miles. Pace's large coverage area negatively impacts its service effectiveness, as shown by 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. Pace again ranked first for having the youngest fleet and second for the reliability measure miles between major mechanical failures. In the solvency area, Pace again had the second-highest average fare and highest capital expenditure per trip but was below the peer average for fare revenue per passenger mile and fare recovery ratio, despite a fare increase in 2018.

## Peer Comparison

Service Area	Performance Measure	Performs better than peer average	
		2017	2018
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	Miles between Major Mechanical Failures	NO	EQUAL
	Average Age	YES	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	YES

## 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	SCVTA	RIDE-ON
	Chicago	Broward Co	Orange County	Oakland	Santa Clara	DC
Service Area Population	5,666,540	1,935,878	2,869,428	1,425,275	1,956,598	971,777
Service Area (square miles)	3,519	410	435	364	346	495
Population Density	1,610	4,722	6,596	3,916	5,655	1,963
Vehicle Revenue Miles	24,215,872	15,052,388	19,358,179	20,872,614	16,077,715	13,294,018
Vehicle Revenue Hours	1,729,684	1,159,953	1,601,022	2,036,677	1,379,113	1,051,439
Passenger Trips	27,673,427	27,796,289	39,272,746	52,019,068	28,473,346	21,594,040
Passenger Miles	171,090,145	136,768,313	153,632,371	200,203,365	138,466,771	81,258,497
Operating Cost	\$196,915,423	\$115,476,224	\$191,136,844	\$402,933,173	\$260,258,360	\$118,857,849
Fare Revenue	\$33,636,617	\$29,681,696	\$41,916,868	\$66,134,484	\$26,479,369	\$21,663,817
Capital Funds Expended	\$58,894,090	\$52,540,826	\$17,064,323	\$74,470,393	\$33,240,829	\$34,220,187
Average Speed (miles per hour)	14.0	13.0	12.1	10.2	11.7	12.6
Average Trip Length (miles)	6.2	4.9	3.9	3.8	4.9	3.8
Average Vehicle Passenger Capacity	50	60	74	76	63	50
Average Vehicle Age (years)	5.7	6.6	7.5	8.1	8.7	5.8
Vehicles Operated in Maximum Service	636	291	455	578	396	307

## Modal Characteristics Highlights

**Vehicle Revenue Miles:** Pace had its seventh consecutive year of increases in vehicle revenue miles in 2018, increasing 0.1% compared to 2017. Three peer agencies also reported increased vehicle miles while OCTA and Broward County reduced service by 2.0% and 0.3% in 2018, respectively.

**Passenger Trips:** Pace and each of its peer agencies saw ridership declines in 2018, ranging from -1.3% at ACT to -6.0% at Ride-On. Pace experienced a ridership loss of 3.9%.

**Operating Cost:** Pace's costs were equal to 2017 although there was a slight increase in service hours and miles in the year. Four peer agencies had operating cost increases, with only OCTA showing a decrease of 0.8% as their service hours and miles also decreased.

**Fare Revenue:** Three suburban bus agencies implemented a fare increase in 2018: Pace, SCVTA, and Ride-On, and each of them realized gains in fare revenue for the year. Although OCTA did not have a general fare increase, it did double the fare for its intercounty express buses and restructured a handful of bus routes to be express buses, boosting fare revenue.

**Capital Funds Expended:** Pace saw a 43.6% decrease in capital fund expenditures in 2018, yet maintained its first-place ranking for the capital fund expenditure per passenger trip measure, spending nearly double the peer average.

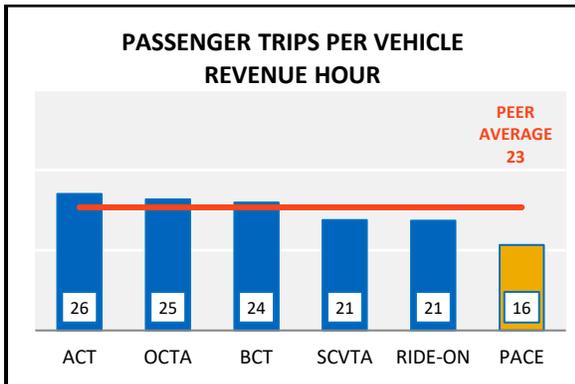
**Average Speed:** Pace's average speed of 14.0 miles per hour was slightly lower compared to 2017 but remained the fastest among its peers, whose speeds ranged from 10.2 to 13.0 miles per hour.

**Average Trip Length:** Pace's riders have the longest trip lengths with an average of 6.2 miles versus its peer average of 4.3 miles.

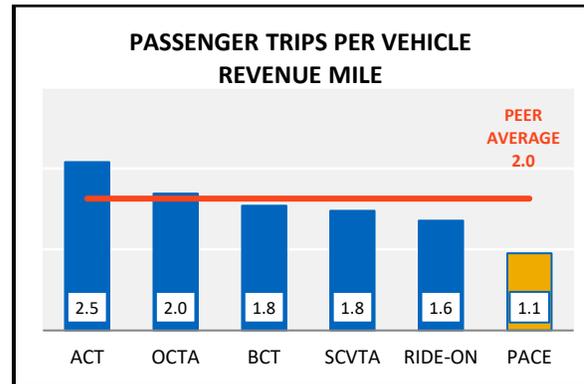
**Average Vehicle Passenger Capacity:** Pace's peer agencies run vehicles that are up to 52% larger. With an average vehicle passenger capacity of 50.2, Pace runs the second-smallest capacity buses of its peer group, which is possible given its lower population density compared to peers.

## SUBURBAN BUS Service Coverage

Following three years of declining ridership, Pace bus ridership increased by 1.4% in 2017 and then decreased by 3.9% in 2018. Pace stayed at the sixth-place rank position for both measures for the sixth 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.



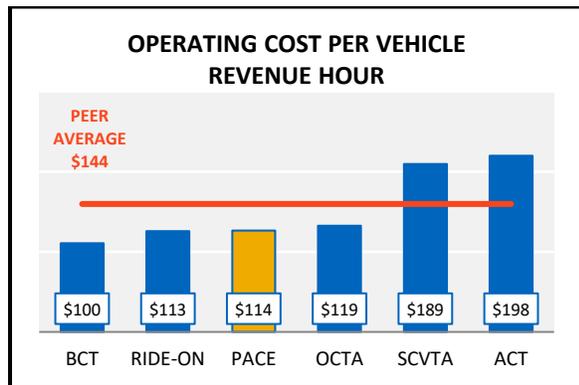
Pace’s performance worsened by 4.5% for this measure in 2018, keeping Pace at the lowest rank position. At 16 passenger trips per vehicle revenue hour, Pace’s performance is 30.6% below the peer average.



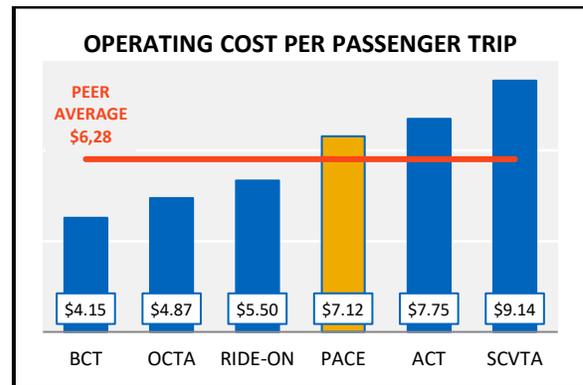
Pace averaged 1.1 passenger trips per vehicle revenue mile, 4.0% lower than 2017, and retained the lowest rank position. Pace’s performance for this metric is 41.5% below the peer average and is reflective of Pace’s much lower population density, roughly one-third the peer average.

## SUBURBAN BUS Service Efficiency and Effectiveness

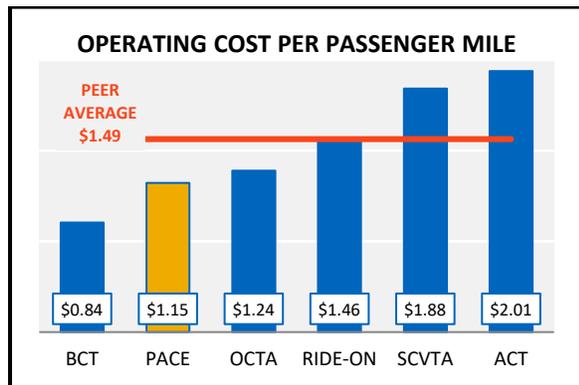
Pace maintained its peer rank position for each service efficiency and effectiveness measure in 2018.



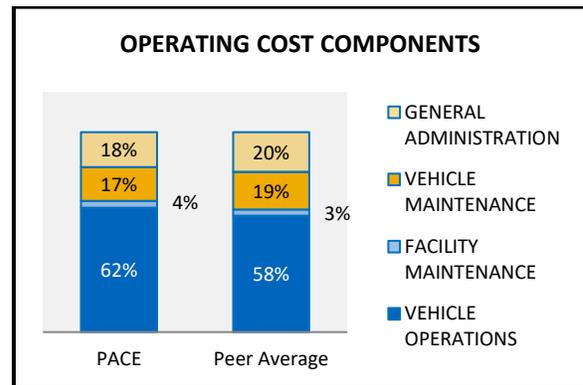
Pace saw a favorable 0.5% decrease in cost per vehicle revenue hour in 2018, the only agency to see a decrease. Pace maintained its third-place position for this measure for the third consecutive year. With an operating cost per vehicle revenue hour of \$114, Pace was 21%, or \$30, below the peer average.



Each peer agency experienced ridership losses in 2018, and each agency saw an unfavorable increase for this metric, ranging from a 0.9% increase at OCTA to a 12% increase at Ride-On, which experienced the largest drop in ridership in 2018 despite increased service hours and miles.



Five of the six agencies saw increases for this measure in 2018. At \$1.15, Pace's operating cost per passenger mile is 23% below the peer average.

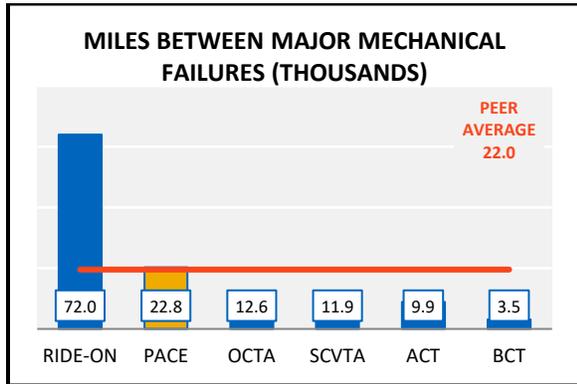


This chart shows the distribution of operating cost components of Pace compared to its peer agencies. Vehicle operations comprise the largest expense for Pace and its peers, roughly 62% of all operating costs. General administration and vehicle maintenance costs each comprise about 20% of operating cost.

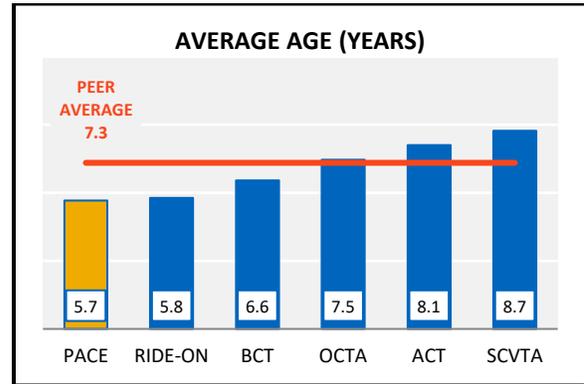
## SUBURBAN BUS

### Service Maintenance and Capital Investment

Pace remained in the top position for average age for the fifth consecutive year and maintained its second-place rank for the reliability measure.



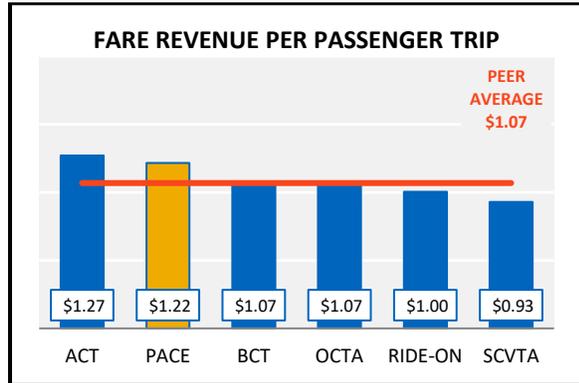
Pace outperformed four peers for this measure of reliability and was one of two agencies to see an improvement in miles between major mechanical failures in 2018, up 21% compared to 2017. The peer average is heavily skewed by Ride-On, which reports a similar average age as Pace but one-sixth the mechanical failures.



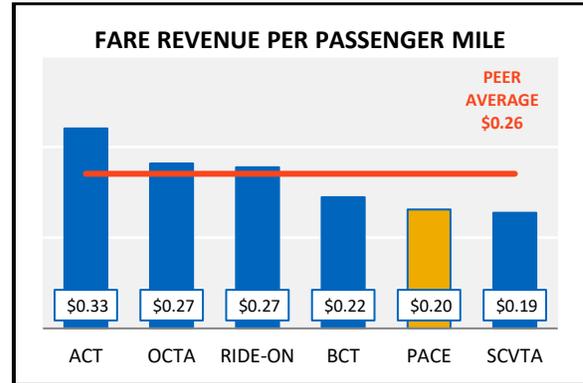
Pace added eight new buses into its active fleet in 2018. Pace's average fleet age of 5.7 years is 23% younger than the peer average.

## SUBURBAN BUS Service Level Solvency

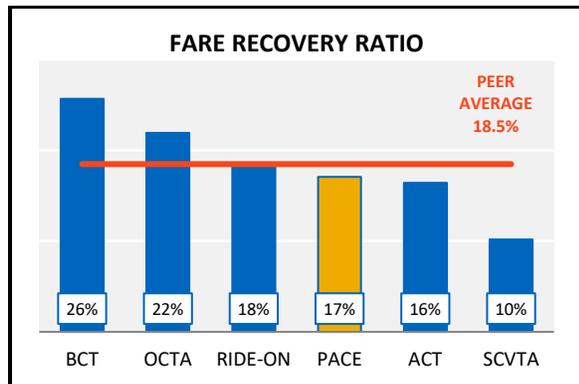
A fare increase implemented in January 2018 resulted in favorable performance for each of Pace’s solvency measures and moved the agency up one rank position for fare recovery ratio. Capital fund expenditures per passenger stayed top-ranked for the sixth consecutive year.



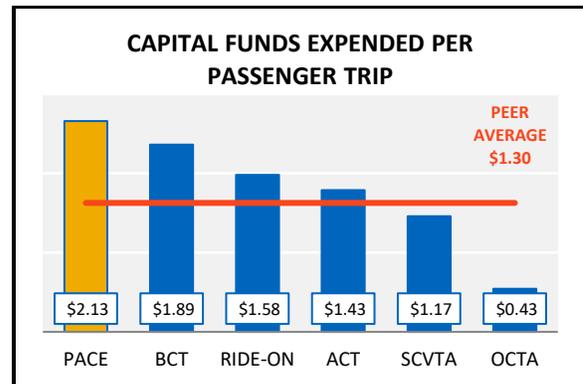
Pace’s fare revenue per passenger trip increased \$0.11 to \$1.22, 13.8% above the peer average of \$1.07. Pace and two of its peers charge a \$2.25 base fare. Pace has ranked second for this metric for four consecutive years.



Pace’s fare revenue per passenger mile increased 13.4% in 2018 as fare revenue increased and passenger miles decreased. Pace’s passengers ride 45% longer average distances compared to its peers, which negatively impacts this result.



Pace’s fare recovery ratio increased by 0.8 percentage points in 2018 as fare revenue increased by 5.0% and operating cost remained level to 2017. At 17.1%, Pace’s fare recovery ratio falls 1.4 percentage points below the peer average.



Capital fund expenditures at Pace decreased by 44% in 2018, yet Pace stayed in the top rank position for this metric. At \$2.13, Pace’s capital fund expenditure per passenger trip is 63% higher than the peer average.

# 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, as well as programs such as Pace’s Dial-A-Ride program, which is a pre-arranged trip service not restricted to ADA-certified passengers, but supporting similar community goals of providing fuller transportation access. Since Pace reports its ADA paratransit service as a separate entity from its demand-response service, this report focuses on Pace’s ADA paratransit program specifically.

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, vehicle revenue miles, unlinked passenger trips, and number of vehicles operated in maximum service. Based on the average ranking for those indicators, the top six 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 eight of ten measures.

## Peer Comparison

Service Area	Performance Measure	Performs better than peer average	
		2017	2018
Coverage	Passenger Trips per Vehicle Revenue Hour	YES	YES
	Passenger Trips per Vehicle Revenue Mile	EQUAL	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	Miles between Major Mechanical Failures	NO	NO
	Average Age	YES	YES
Solvency	Fare Revenue per Passenger Trip	NO	NO
	Fare Revenue per Passenger Mile	EQUAL	EQUAL
	Fare Recovery Ratio	EQUAL	YES

## 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	MM	MBTA	NYCT	ACCESS	WMATA
	Chicago	Minneapolis	Boston	New York	LA	Washington, DC
Service Area Population	6,603,537	2,314,701	3,109,308	8,622,698	11,638,106	3,719,567
Service Area (square miles)	1,337	1,111	310	321	1,621	950
Population Density	4,939	2,083	10,030	26,862	7,180	3,915
Vehicle Revenue Miles	32,721,854	23,075,245	16,315,237	39,961,650	37,903,473	22,414,842
Vehicle Revenue Hours	2,376,589	1,285,474	1,438,886	4,276,565	2,204,098	2,220,627
Passenger Trips	4,055,615	2,297,680	1,955,578	5,086,003	4,383,256	2,384,612
Passenger Miles	38,903,413	26,103,531	15,540,423	45,490,979	57,420,402	26,203,663
Operating Cost	\$160,338,976	\$73,617,031	\$113,410,825	\$456,195,515	\$148,179,609	\$139,108,297
Fare Revenue	\$11,361,583	\$7,976,511	\$5,737,517	\$10,235,744	\$9,926,432	\$9,700,286
Capital Funds Expended	\$0	\$8,641,555	\$0	\$225,106	\$1,323,502	\$17,805,157
Average Speed (miles per hour)	13.8	18.0	11.3	9.3	8.9	10.1
Average Trip Length (miles)	9.6	11.4	7.9	8.9	13.1	11.0
Average Vehicle Passenger Capacity	9.5	8.1	7.1	4.5	3.5	4.9
Average Vehicle Age (years)	2.5	2.3	5.3	6.2	4.1	3.9
Vehicles Operated in Maximum Service	1,025	532	653	1,602	1,144	973

## Modal Characteristics Highlights

**Vehicle Revenue Miles:** In 2018, Pace ADA Paratransit experienced its third year of decreased vehicle revenue miles, down 2.9% for the year. Two other agencies, MBTA and NYCT, also saw decreased vehicle revenue miles, down 7.7% and 8.3%, respectively. WMATA and Metro Mobility expanded service in 2018 and over the five-year time frame, had grown service by 15.5% and 34%, respectively.

**Passenger Trips:** Pace ADA Paratransit ridership was down 1.5% from 2017. NYCT and MBTA have taken active steps to stem ridership growth for this service; NYCT now requires in-person certification and recertifications, which has led to a significant 21% ridership decrease over the past five years. In September 2016, MBTA implemented partnerships with Lyft, Uber, and Curb to provide paratransit trips, reducing its ridership by 9.3% in 2017 and another 1.5% in 2018.

**Operating Cost:** Pace and NYCT reported operating cost decreases in 2018. Metro Mobility's sharp 14.7% increase reflects its continued service expansion. Pace saw a 1.5% reduction in operating expense as vehicle revenue hours and miles decreased in the year. NYCT was the only other agency to report a lower operating cost for the year, owing to the previously-mentioned paratransit initiatives, which resulted in a 3.8% decrease in 2018.

**Fare Revenue:** Pace, MM, and WMATA all raised fares in 2018, and each reported increased fare revenue for the year. MBTA and NYCT, with significant ridership decreases, saw corresponding decreases in fare revenue.

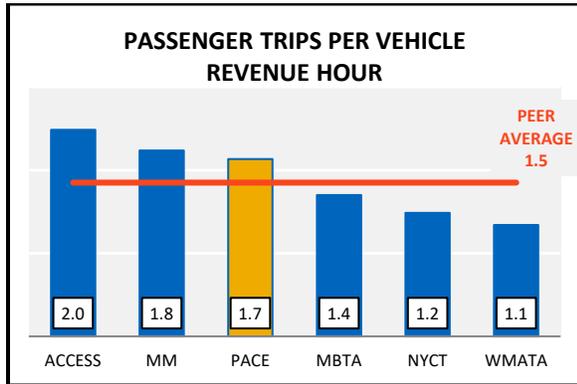
**Average Speed:** Pace ADA paratransit service has seen declines in average speed each year since 2013, to an average of 13.8 miles per hour, still 4.4% higher than the peer average.

**Average Trip Length:** Pace ADA passengers rode an average trip length of 9.6 miles, 8.4% shorter than the peer average.

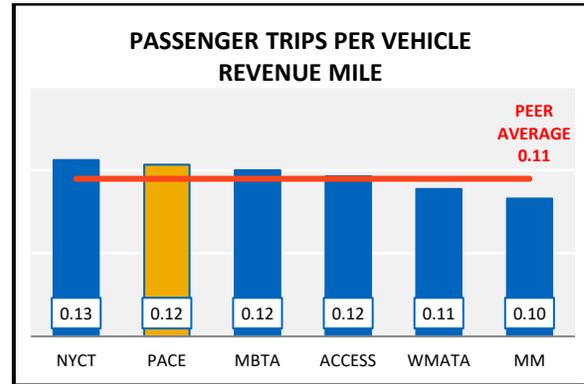
**Average Vehicle Passenger Capacity:** Pace uses vehicles with an average passenger capacity of 9.5, compared to a peer average of 5.6.

## 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 six years.



Pace ADA paratransit ridership decreased 1.5% in 2018, while service hours were down 2.5%. This produced a favorable service efficiency result for the year but kept Pace at the same rank position for the fifth consecutive year. Pace’s productivity was 15.3% higher compared to the peer average.

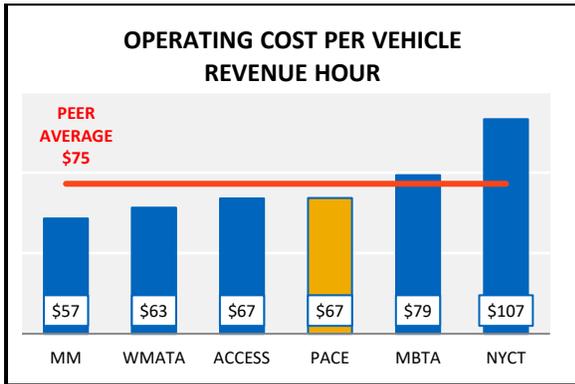


Pace maintained its second rank position for this metric in 2018 with a 1.5% improvement resulting as vehicle revenue miles decreased at a steeper rate compared to ridership. There is little variance among the results for this measure; Pace and its peers are about equally effective at scheduling these notably expensive passenger trips.

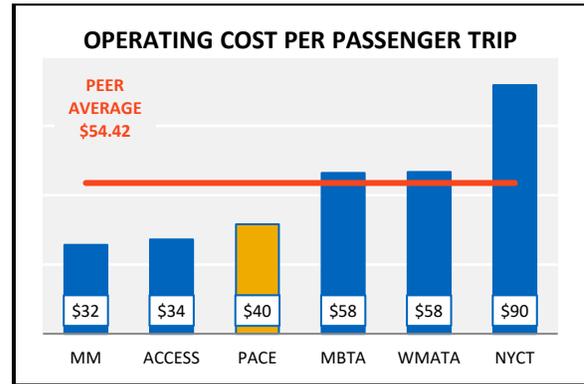
## ADA PARATRANSIT

### Service Efficiency and Effectiveness

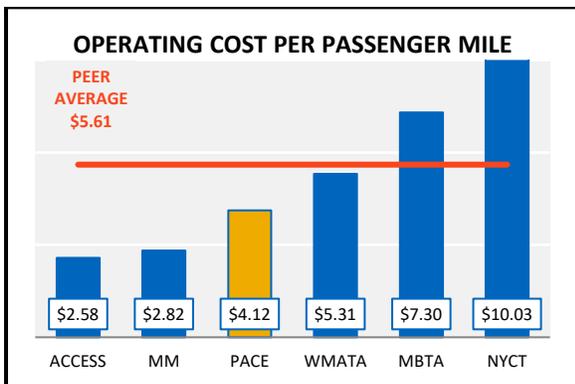
Pace did not have any rank changes in 2018 for any of the operating cost measures despite reporting a lower operating cost for the year, one of two agencies to do so.



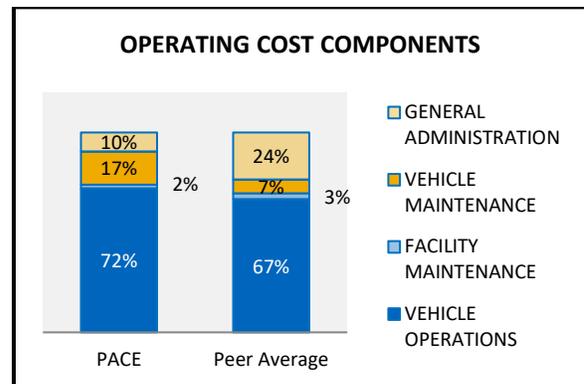
Pace has ranked fourth for this metric for six consecutive years. The Pace ADA cost per vehicle revenue hour was 1% higher compared to 2017. At \$67.47, Pace ADA cost per hour was 9.5% favorable to the peer average of \$74.53.



Pace ADA Paratransit maintained its position among peers by having an operating cost per passenger trip 27.3% below the peer average. NYCT skews the peer average for this measure with annual operating expenses exceeding \$450 million.



For the sixth consecutive year, Pace ranked third for this measure. Pace's operating cost of \$4.12 per passenger mile was unchanged from 2017 and was 26% below the peer average.

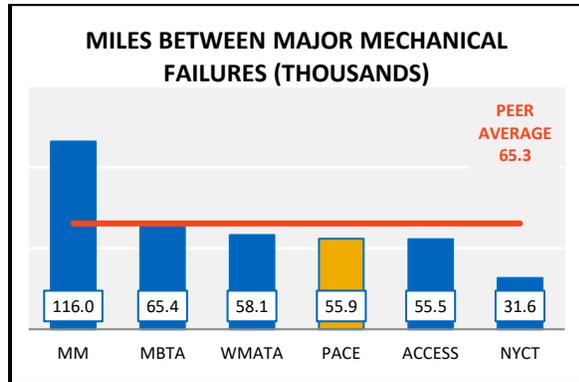


As with other modes, vehicle operations constitute most of the operating budget. Pace expends a significantly lower proportion of its operating cost on general administration, 14 percentage points less than its peers, with most of that difference going toward vehicle maintenance costs.

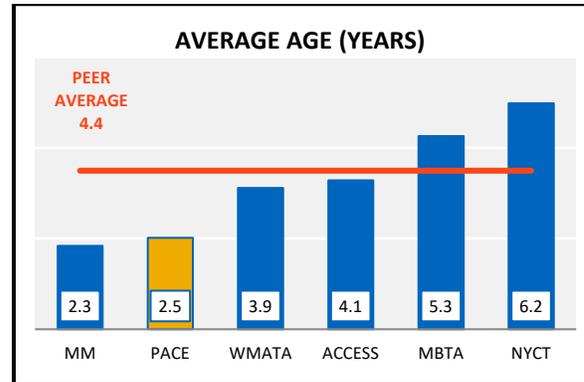
## ADA PARATRANSIT

### Service Maintenance and Capital Investment

Pace fleet vehicles are ranked among the youngest of its peers, ranking second for the fifth consecutive year. Pace experienced a significant decrease in the number of miles between major mechanical failures but maintained its fourth-place rank position for this metric.



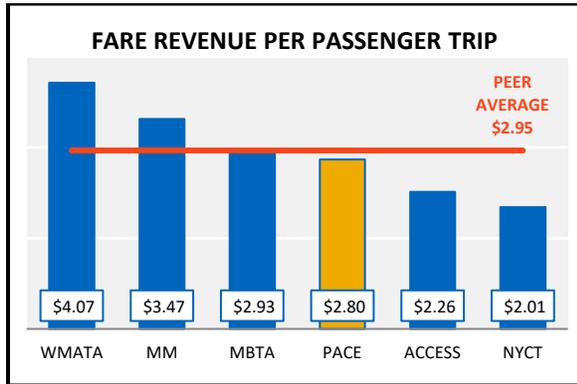
Pace ADA Paratransit service experienced an unfavorable 15% decrease in miles between major mechanical failures in 2018, with more failures spread over fewer vehicle miles traveled. At 14% below the peer average, Pace ADA Paratransit kept its fourth rank position.



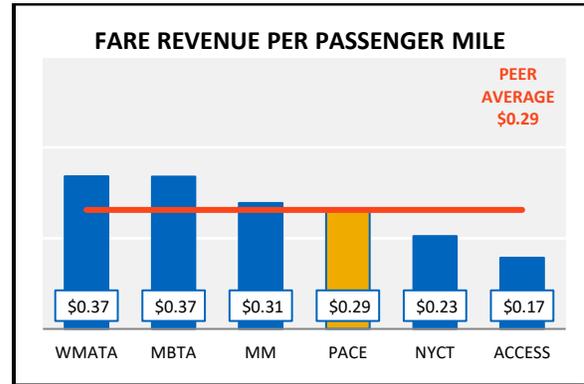
The average age of Pace vehicles decreased by 0.3 years in 2018. Pace’s paratransit fleet is 42% younger than the peer average age of 4.4.

## ADA PARATRANSIT Service Level Solvency

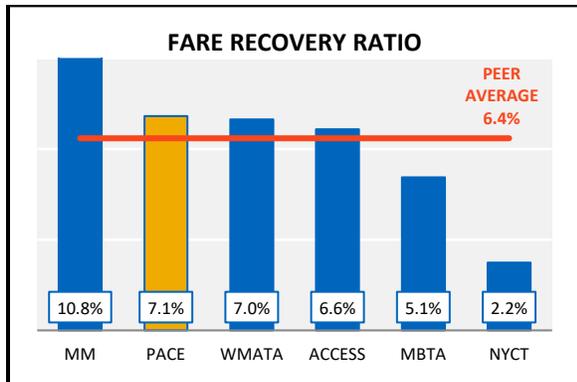
Pace’s fare increase implemented in January 2018 resulted in favorable year-over-year results for each of the solvency measures although there were two rank changes in the year.



Pace maintained its rank position in 2018 for this metric. The average fare paid for Pace ADA Paratransit services increased to \$2.80, 5% lower than the peer average of \$2.95. 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 \$0.29 per passenger mile, equaling the peer average and dropping Pace 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.



The ADA paratransit fare recovery increased by 0.6 percentage points and exceeded the peer average of 6.4%. Pace rose two rank positions in 2018, displacing Access and WMATA. Metro Mobility has ranked first for this metric for each of the past five years, aided by an operating cost per passenger trip that is 41% lower than the peer average.



175 West Jackson Boulevard, Suite 1650  
Chicago, Illinois 60604  
Phone: 312-913-3200  
[RTAChicago.org](http://RTAChicago.org)

Follow us on



Chicago Transit Authority  
567 W. Lake St.  
Chicago, IL 60661  
888-968-7282  
[www.transitchicago.com](http://www.transitchicago.com)



Metra  
547 W. Jackson Blvd.  
Chicago, IL 60661  
312-322-6777  
[www.metrarail.com](http://www.metrarail.com)



Pace  
550 W. Algonquin Rd.  
Arlington Heights, IL 60005  
847-364-7223  
[www.pacebus.com](http://www.pacebus.com)