LA Metro Vanpool Subsidies: A Case for Increased Investment

Larry Ramirez

California State Polytechnic University, Pomona

Abstract

This white paper presents a data-driven case for increasing the monthly subsidy cap of the Los Angeles Metro Vanpool Program. Using detailed analysis of vanpool invoices, Consumer Price Index (CPI) data, termination records, and ridership metrics, the report demonstrates that the current $600 cap is no longer sufficient to cover rising lease costs. CPI-adjusted estimates indicate the subsidy would need to increase to maintain its 2022 value, with costs for insurance and leased vehicles rising even faster. Additionally, GIS mapping shows that nearly one in four vanpool riders originate in Equity Focus Communities (EFCs) or Disadvantaged Communities (DACs), and 10.53% of destinations fall within EFC's. The paper concludes that raising the subsidy ceiling and expanding targeted outreach can enhance affordability, improve retention, and align the program more closely with Metro's sustainability and equity goals.

Table of Contents

List of Tables

List of Figures

Background

Overview of Vanpooling

Vanpooling is a shared mobility option where a group of individuals commute together in a van on a regular basis, typically for work-related travel. The Federal Transit Administration (FTA) defines vanpooling as a public transportation mode that operates as a ride sharing arrangement, providing transportation to a pre-arranged group of individuals (Federal Transit Administration, 2024b). To qualify as a vanpool, the vehicle must have a minimum seating capacity of seven people, be open to the public, and 80% of the vehicle's yearly mileage must come from commuting. According to the National Transit Database (NTD), the vanpool (VP) mode has the longest average trip length (38.5 miles), seating occupancy percentage (53%), fastest average speed (41.5 mph), and lowest operating expense per passenger mile traveled ($0.20) out of any mode (Federal Transit Administration, 2024a). Vanpool participation is influenced by factors such as fuel prices, employer incentives, and transit agency subsidies. Vanpooling offers several benefits, including reducing traffic congestion, lowering greenhouse gas emissions, and providing cost savings for commuters. Vanpooling reduces vehicle miles traveled, which in turn decreases roadway congestion and contributes to sustainability goals.

Vanpooling also supports regional transportation equity by expanding access to reliable commuting options for individuals who may live far from traditional transit corridors. This is especially important in suburban and rural areas, where fixed-route transit services are often limited or unavailable. By pooling resources and coordinating schedules, vanpools can bridge the gap between home and job centers, particularly for workers with long or irregular commutes. In some cases, vanpools can complement existing transit infrastructure by serving as first- or last-

mile connections to major transit hubs. As agencies and employers seek to address rising transportation costs and climate challenges, vanpooling presents a flexible, scalable solution that meets diverse mobility needs.

History of the LA Metro Vanpool Program

The LA Metro Vanpool Program was officially launched in May 2007 by the Los Angeles County Metropolitan Transportation Authority (LACMTA) as a new mode to alleviate traffic congestion, reduce emissions, and offer more sustainable commuting alternatives in the car-dependent Los Angeles region (Los Angeles County Metropolitan Transportation Authority, 2007). At its core, the program was designed to incentivize commuters to share rides over longer distances—especially those traveling to employment centers poorly served by fixed-route transit—by offering financial subsidies to offset the cost of leasing a van. Vanpools also fill in gaps in service for commuters that work graveyard shifts, such as nurses and bus drivers. Vanpools in the program are required to have their final destination in Los Angeles County and cannot receive subsidies from other agencies (but employer subsidies are okay). The LA Metro Vanpool Program generates federal funding for the agency in exchange for providing ridership data to the FTA's National Transit Database.

Staff explored the option of buying and managing vanpool vehicles themselves (directly operated), but found it would demand a large upfront investment, greater maintenance responsibilities, and higher costs for insurance and unexpected repairs. Peer reviews at that time showed that some transit agencies do own and operate vanpool fleets, allowing them to offer commuters slightly lower fares. However, the need to fund vehicle replacements has made it difficult for those programs to expand, and in some cases, even to keep up with current service

demand. Consequently, LA Metro decided to go with a Purchased Transportation (PT) model instead of a directly operated (DO) model, where customers lease their vehicles with vendors on Metro's bench (such as Enterprise) and Metro reimburses the subsidy to the vendors.

At its inception, the program provided a modest subsidy of $400 per van per month. Metro launched several marketing efforts to promote the Vanpool Program early on. They sent invitations to nearly 400 vanpool operators through their contracted leasing companies, encouraging them to apply (Los Angeles County Metropolitan Transportation Authority, 2008). Also, Metro hosted a workshop for employers at their headquarters, where they discussed the program and provided materials to help spread the word at their workplaces. Metro staff also participated in a variety of national, regional, and local forums to promote the program and highlight its benefits. To raise even more public awareness, Metro held a media event that got coverage from several TV, radio, and print news outlets. Finally, Metro built a dedicated section of their website at metro.net/vanpool to introduce commuters to the program, explain the cost savings, and provide ongoing support for participants.

Over time, the program adapted to shifting economic and operational landscapes. In August 2018, responding to inflationary pressures and rising vehicle lease costs, Metro increased the subsidy to $500 (Los Angeles County Metropolitan Transportation Authority, 2018). The most recent adjustment came in January 2022, when the subsidy was raised again to $600 (Los Angeles County Metropolitan Transportation Authority, 2021). This increase came in the wake of the COVID-19 pandemic, a period marked by dramatic shifts in commuting patterns and increased demand for health-conscious transit options. The higher subsidy aimed to ease financial strain on returning commuters, encourage participation amid persistent uncertainty, and

retain the environmental benefits that had been achieved during periods of lower traffic congestion.

Throughout its evolution, the LA Metro Vanpool Program has remained focused on balancing fiscal responsibility with public benefit. Each incremental subsidy increase has been carefully calibrated to keep pace with rising costs and signal Metro's commitment to sustainable, equitable mobility. The program's adaptability over nearly two decades underscores its value as a flexible and cost-effective component of the region's transportation infrastructure.

Table 1. Key Dates of Subsidy Changes

Date	Subsidy Change
May 2007	Initial launch with $400 subsidy.
August 2018	Subsidy increased to $500.
January 2022	Subsidy increased to $600.

Note. Adapted from Executive, Management, and Audit Committee Item 33 (Los Angeles County Metropolitan Transportation Authority, 2008), Board of Directors Regular Board Meeting (Los Angeles County Metropolitan Transportation Authority, 2018, 2021).

Literature Review

Environmental and Equity Benefits

The environmental case for vanpooling is well-supported across a range of academic and governmental sources. By consolidating trips that would otherwise be made by single-occupancy vehicles, vanpooling substantially cuts greenhouse gas (GHG) emissions and fossil fuel consumption. Vanpools on average reduce 20.4% of GHG emissions (California Air Pollution Control Officers Association, 2021). When implemented at scale, these programs can contribute meaningfully to regional air quality improvement efforts—particularly in urban areas like Los Angeles, where transportation is a primary source of air pollution.

Vanpooling also generates significant equity benefits. For instance, vanpool programs often serve last-mile and first-mile gaps in transit deserts—areas where public buses or rail systems are inaccessible or unreliable. This makes them especially valuable for low-income or rural populations, who might otherwise be excluded from economic opportunities due to a lack of mobility. Access to reliable transportation is directly tied to upward socioeconomic mobility (González & Hidalgo, 2013). Vanpooling, when subsidized and marketed effectively, offers a cost-effective mode of transportation helping to close opportunity gaps.

Health and Well-being Impacts

Long solo commutes—especially in traffic-heavy regions like Los Angeles—are associated with elevated stress, anxiety, and even increased cardiovascular risk. Vanpooling, by contrast, offers several buffers against these effects. Shared rides often allow commuters to

alternate driving responsibilities, reducing fatigue. Participants can use the non-driving days to read, rest, check e-mails, or prepare for the day, effectively reclaiming otherwise stressful travel time (Mangan, 2018). One study revealed that vanpoolers experienced a 21% lower rate of self-reported commuting stress than their single-occupant vehicle counterparts (Ditmore & Deming, 2018).

Another well-being impact is the effects of social interaction. The structure of vanpools lends itself to daily, low-stakes socializing—an element that can improve mental well-being and reduce the sense of isolation that long commutes often bring (Boniface & Scantlebury, 2015). In the post-COVID context, this has become especially relevant, since remote work has diminished daily social contact for many. Commuting in a small, consistent group can reintroduce a degree of social routine that supports emotional health. Furthermore, the shared experience of commuting together can foster a sense of community, helping individuals feel more connected and supported in their daily lives.

Vanpool Users

Understanding who participates in vanpool programs and why they participate is essential for improving accessibility and targeting incentives (Higgins & Rabinowitz, 2002). Key user groups include:

- Nine-to-five Commuters: Individuals seeking cost-effective and reliable transportation for their nine-to-five job.
- Late-Shift/Alternate Schedule Commuters: Individuals seeking transportation accommodation when public transit service often lacks during these hours. This includes bus operators and nurses.

- University: Users such as staff, professors, and students traveling to university campus, where parking is often scarce.
- ADA Commuters: Commuters needing specialized transportation and accommodation. Vanpool vehicles must provide ADA accommodations when requested.

Effects of Subsidies on Vanpooling

Subsidies play a critical role in encouraging vanpool participation. Increasing subsidies can lead to higher ridership, as lower costs make vanpooling a more attractive option compared to driving alone. One study found that when employees are offered a subsidy, the predicted probability of choosing a vanpool more than doubles (Brown & Garrison, 2005). Furthermore, the study found that the predicted value of the direct elasticity of vanpool demand and fare pricing is -0.73. In other words, a 10% increase in vanpool fare price is associated with a 7.3% decrease in demand.

Effects of COVID-19 on Vanpooling

The COVID-19 pandemic significantly disrupted vanpooling services, leading to a sharp decline in ridership and operational challenges. Nationally, vanpool ridership experienced substantial reductions, with LA Metro continuing to provide a subsidy for vans from March 2020 to July 2020 even if they did not operate. This decline was attributed to factors such as stay-at-home orders, remote work policies, and heightened health concerns among commuters. For instance, UCLA Transportation discontinued its vanpool program in July 2020 due to these challenges (Hewitt, 2020). In response to the pandemic, vanpool providers implemented safety measures, including reduced vehicle capacities and enhanced cleaning protocols, to mitigate

health risks and rebuild commuter confidence (Boarnet, Rodnyansky, Wang, & Comandon, 2022). Despite these efforts, the long-term viability of vanpooling remains uncertain, with ongoing challenges in adapting to shifting transportation patterns and commuter preferences in a post-pandemic landscape.

Methodology

Data Sources

This analysis utilizes multiple data sources, including:

- **Legistar Documents**: LACMTA board reports containing historical program records.
- **RidePro TripSpark**: Reporting portal where vanpool information from leasing vendor, program participant, and vanpool program staff is stored.
- **LACMTA Invoices:** Financial data containing the lease and subsidy amounts for vanpools.
- **Bureau of Labor Statistics:** Federal data regarding CPI (Consumer Price Index) metrics.
- **NTD Data**: Ridership statistics (UPT, VRM, PMT) collected by the FTA.

Key Metrics

- **Lease Amount:** Monthly lease price set by vendor.
- **Subsidy Amount:** Monthly subsidy provided by LA Metro to be paid towards the lease.
- **Unlinked Passenger Trips (UPT)**: Total boardings per reporting period.
- **Vehicle Revenue Hours (VRH):** Total hours vehicles travel while in revenue service.
- **Vehicle Revenue Miles (VRM):** Total miles vehicles travel while in revenue service.
- **Passenger Miles Traveled (PMT)**: Total miles traveled by all passengers.
- **Operating Expense (OE):** Expenses to operate the mode.

Data Analysis

Invoice and Subsidy Amounts Analysis

Using information from RidePro TripSpark and LACMTA invoices, I conducted an analysis of the current state of invoice and subsidy amounts for active vanpools. There are currently 800 vanpools enrolled in the program. The goal of this analysis was to understand how the current $600 maximum subsidy threshold affects participants and to explore the potential impact of increasing the subsidy ceiling to $700 or $800.Under current program rules, Metro covers 50% of a vanpool's lease amount, capped at $600. This means that any lease costing $1,200 or more results in participants absorbing the additional cost beyond the cap. With inflationary pressure, newer vehicle models, and the introduction of electric vans, an increasing number of vanpools now exceed this threshold. As a result, participants are often paying more out-of-pocket despite being in a subsidized program.

Table 2. Key Invoice and Subsidy Statistics

Number of Vanpools Enrolled	800
Average Lease Amount	$1547.51
Average Subsidy Amount	$594.59
Leases ≥ $1200	727 (90.87%)
Leases ≥ $1400	603 (75.38%)
Leases ≥ $1600	294 (36.75%)

Note. Adapted from LA Metro invoice documents and TripSpark ad-hoc reports.

I examined how many vanpools are currently receiving the full $600 subsidy, which applies to any lease amount of $1,200 or more. I then compared this against hypothetical scenarios where the subsidy cap is raised to $700 and $800, using the same lease data to estimate how these changes would shift subsidy distributions. This comparison helps visualize how many more vanpools would qualify for a higher subsidy and whether a higher ceiling would reduce the out-of-pocket burden for participants.

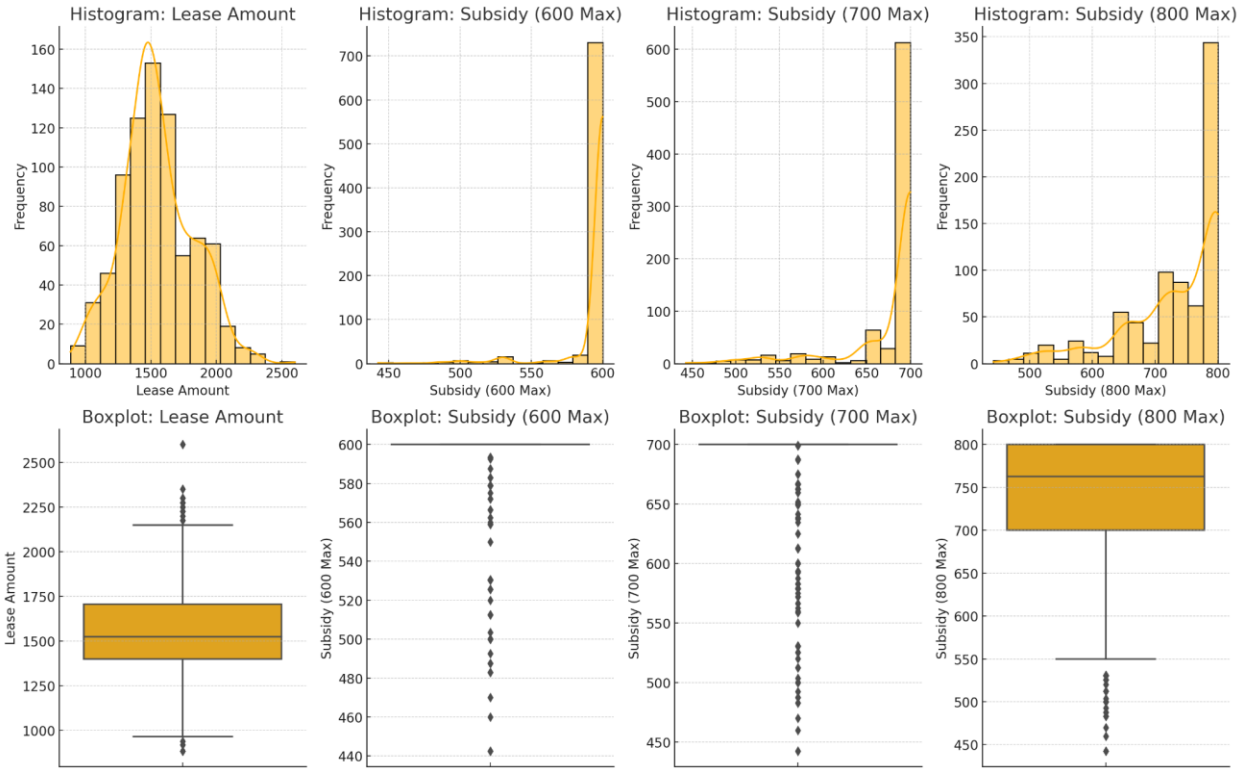
Table 3. Descriptive Statistics of Lease Amount & Subsidies

Metric	Lease Amount	Subsidy (600 Max)	Subsidy (700 Max)	Subsidy (800 Max)
Count	800	800	800	800
Mean	1,547.51	594.59	678.27	731.72
Std Dev	269.18	20.70	48.86	81.06
Min	885.00	442.50	442.50	442.50
25%	1,400.00	600.00	700.00	700.00
Median	1,525.00	600.00	700.00	762.50
75%	1,706.25	600.00	700.00	800.00
Max	2,600.00	600.00	700.00	800.00

Note. Adapted from LA Metro invoice documents and TripSpark ad-hoc reports.

To support this analysis, I created histograms and box plots illustrating the distribution of lease amounts and corresponding subsidies under each maximum cap scenario. These visuals help clarify where most vanpools fall within the lease amount range, and how sharply subsidy amounts are constrained by the current $600 cap.

Figure 1. Histograms and Boxplots of Lease Amounts and Subsidies



Note. Adapted from LA Metro invoice documents and TripSpark ad-hoc reports.

The histograms and boxplots show how lease amounts and subsidy distributions behave under the current and proposed policy caps. The lease amount histogram shows a roughly bell-shaped distribution, with most values clustered between $1,400 and $1,700. This suggests a typical range for vanpool lease costs, though a few outliers extend past $2,000, pulling the distribution slightly to the right. The corresponding boxplot confirms this, showing a tight interquartile range (IQR) and a few higher lease values marked as mild outliers. Overall, the data indicate that while most lease amounts are fairly consistent, a small portion of vanpools lease at much higher rates.

The subsidy visualizations under $600, $700, and $800 cap scenarios reveal the limiting effect of the current maximum and the potential benefits of increasing it. Under the $600 cap, the

histogram is heavily left-skewed, with most vanpools receiving the full amount and a sharp drop-off for those below. As the cap is raised to $700 and then $800, the distributions become more spread out, and the boxplot for $800 shows much greater variability in subsidy amounts. Raising the subsidy ceiling would reduce the number of vanpools reaching the cap and shift more of the cost burden away from participants.

Termination Analysis

Using information from the Vanpool Listing report on TripSpark, I performed an analysis of the termination reasons for vanpools. I used data from September 2023 - March 2025 as the former date is when LA Metro began applying more detailed termination reason codes. The termination of a vanpool means that the vanpool group ended their participation with the Metro Vanpool Program. Between September 2023 and March 2025, there were a total of 247 vanpool terminations. These terminations were categorized using a set of predefined reason codes, allowing us to identify patterns and understand the challenges that vanpools face in sustaining operations.

Table 4. Termination Reasons and Counts

Termination Reason Code	Count	Description
RIDERS	69	Loss of riders.
INCENT	55	Loss of employer incentive.
VENDOR	26	Leasing vendor switch.
NONCOM	18	Non-compliance.
OTHER	15	No specific reason provided.
NODRIV	13	Driver quit, no replacement.
SELF-Q	12	Self-quit.
SCHED	10	Schedule change.
SUPPL	9	Supplier alerted Metro of termination (non-vendor switch).
LAYOFF	9	Hours cut/layoff.
COST	6	Cost.
PASSCX	4	Passenger conflicts.
CMOVE	1	Employer moved/closed.

Note. Adapted from TripSpark ad-hoc reports.

The most common reason for termination was RIDERS (69 terminations), indicating that many vanpools ended due to a decline in the number of passengers. This points to a recurring challenge in maintaining rider engagement or recruitment, which could be influenced by job changes (layoffs or telecommuting) or shifting commute preferences.

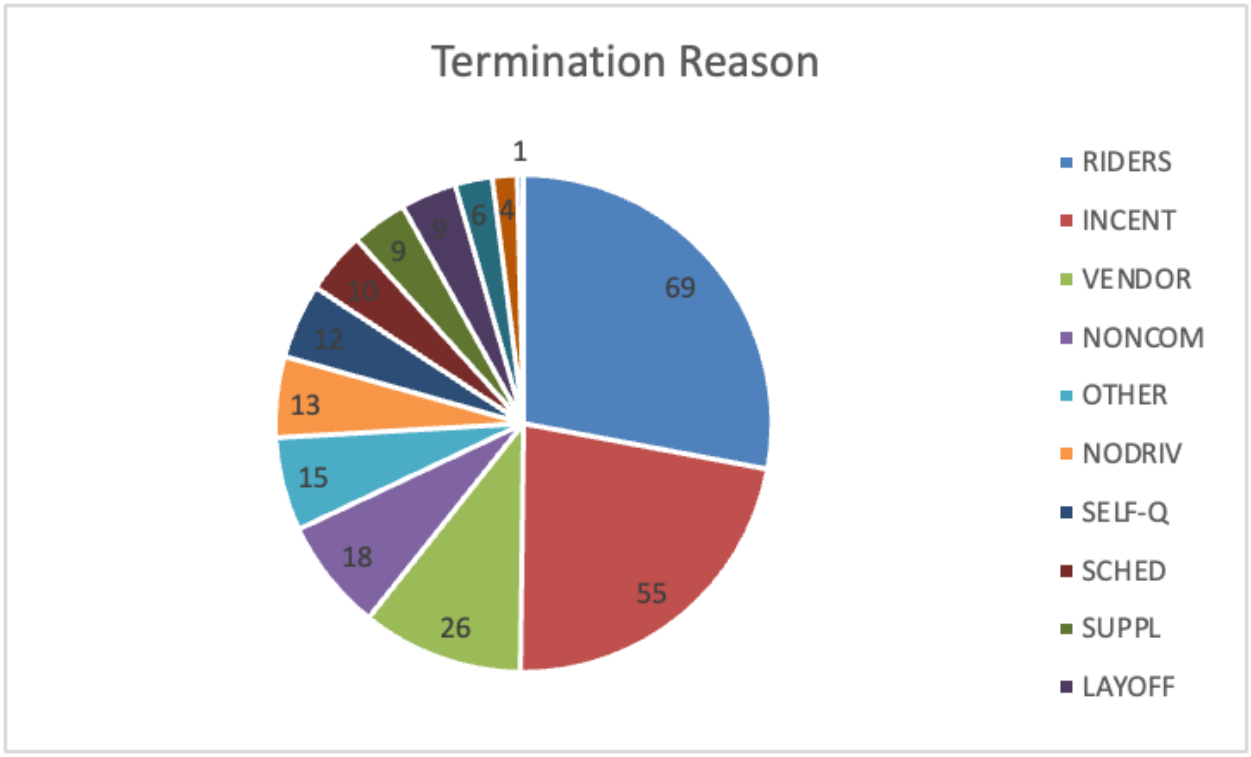
The second most frequent cause was INCENT (55 terminations), which is the loss of employer-sponsored incentives. This suggests that employer support plays a significant role in the sustainability of vanpools, as there are some employers in Los Angeles County that provide an additional subsidy or parking benefits for their employees on top of the Metro Vanpool

Program subsidy. When subsidies or benefits are withdrawn, it appears many riders choose not to continue commuting via vanpool.

The third most frequent cause was VENDOR (26 terminations), which are terminations due to switching leasing vendors. These terminations may indicate friction or transitions within the vendor contracting process. These switches likely occurred due to participants wanting to switch to lower priced leases. While these do not necessarily reflect program participant dissatisfaction, they may indicate dissatisfaction with the service of a leasing vendor.

Other notable reasons include NONCOM (18 terminations) for non-compliance with program rules, NODRIV (13) where the designated driver quit and no replacement was found, and SELF-Q (12) which refers to participants voluntarily withdrawing. SCHED (10) shows schedule changes can also affect vanpool continuity, while SUPPL (9) indicates instances where a supplier, independent of a vendor switch, notified Metro of a termination. Economic factors also showed up in LAYOFF (9) and COST (6) terminations, where riders faced layoffs, reduced hours, or rising expenses. Less common reasons include PASSCX (4) for passenger conflicts and CMOVE (1) where the employer relocated or closed, which are circumstances largely beyond the control of Metro or the vanpool participants.

Figure 2. Termination Reason Code Count



Note. Adapted from LA Metro invoice documents and TripSpark ad-hoc reports.

CPI Inflation Analysis

To account for the effects of inflation on vanpool lease costs and Metro's current subsidy structure, I conducted a CPI (Consumer Price Index) analysis. The $600 maximum subsidy has remained unchanged for several years, despite rising costs across the transportation sector and Los Angeles Area in general. To evaluate how inflation has affected the real value of this subsidy, I used CPI data from the U.S. Bureau of Labor Statistics (U.S. Bureau of Labor Statistics, 2025). Specifically, I compared the CPI from when the last subsidy increase occurred (January 2022) to the CPI for January 2025, in order to minimize seasonal variations. This comparison provides a way to adjust the original subsidy amount to reflect current economic conditions. For this analysis, I measured key metrics that would impact the costs of vanpooling in Los Angeles: overall inflation in the area, motor vehicle insurance, leased cars, and gasoline.

Table 5. CPI Comparison

Metric	Jan. 2022 CPI	Jan. 2025 CPI	CPI Increase
Los Angeles	301.209	337.508	12.05%
Motor Vehicle Insurance	574.042	887.651	54.65%
Leased Cars	103.603	119.810	15.65%
Gas	291.767	276.532	-5.22%

Note. Adapted from Consumer Price Index (U.S. Bureau of Labor Statistics, 2025).

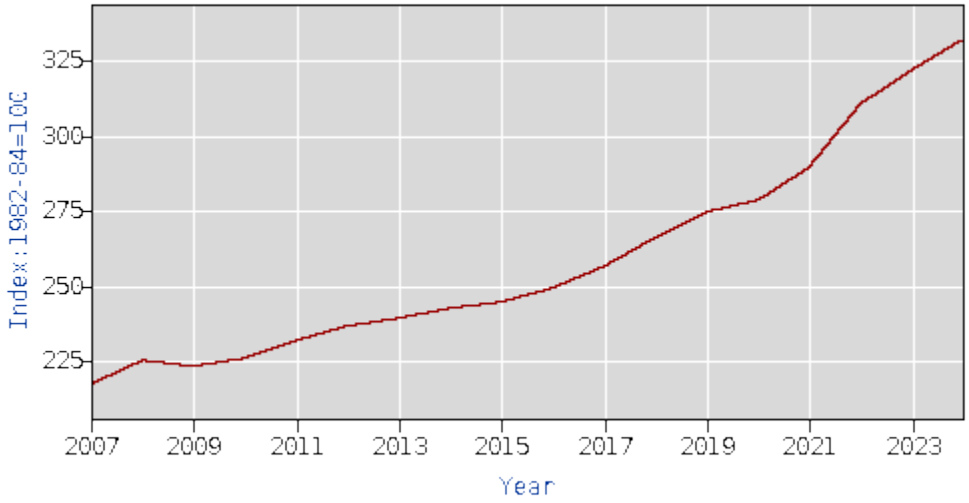
The adjusted subsidy calculations show how the real value of the $600 cap has eroded in recent years and has become misaligned with the actual cost trends in specific transportation-related categories. The general CPI increase for the Los Angeles area between January 2022 and January 2025 is 12.05%, meaning that to maintain the same purchasing power, the vanpool subsidy would need to rise to $672.30. However, some cost categories relevant to vanpooling have increased even more dramatically. For example, the CPI for motor vehicle insurance rose by 54.65%, suggesting that leasing vendors and participants are now facing much steeper insurance-related expenses, as vendors include insurance as part of the lease price. This would push the adjusted subsidy in that category up to nearly $874 if it were to keep pace.

On the other hand, gasoline costs decreased slightly over the same period, with a CPI decline of 5.22%. This may offer some short-term relief for vanpoolers, but lower gas prices may also make driving alone a more attractive option. The leased cars category consists of consumer spending on new leased cars and trucks. This category increased by 15.65%, implying that even without an increase in the cap, participants are paying more out of pocket just to maintain their existing vanpools. Together, these CPI comparisons illustrate that the $600 subsidy is no longer

adequate to cover the typical costs of vanpool participation. An inflation-informed adjustment—raising the ceiling to $700 or $800—would help ensure the subsidy remains meaningful and responsive to the real financial pressures vanpools face in 2025.

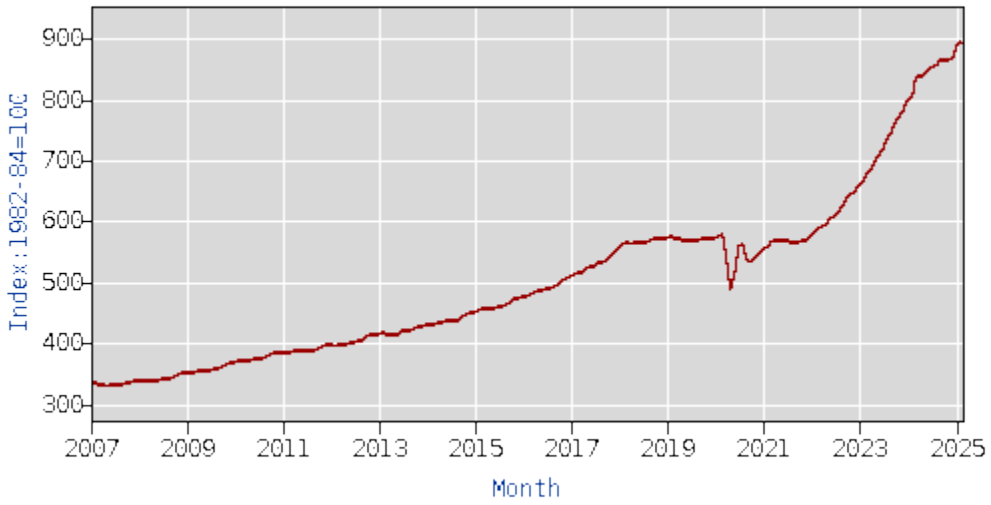
To provide greater context, below are graphs showing the overall increases in CPI for the key metrics since the Metro Vanpool Program's inception in 2007.

Figure 3. Los Angeles Area CPI



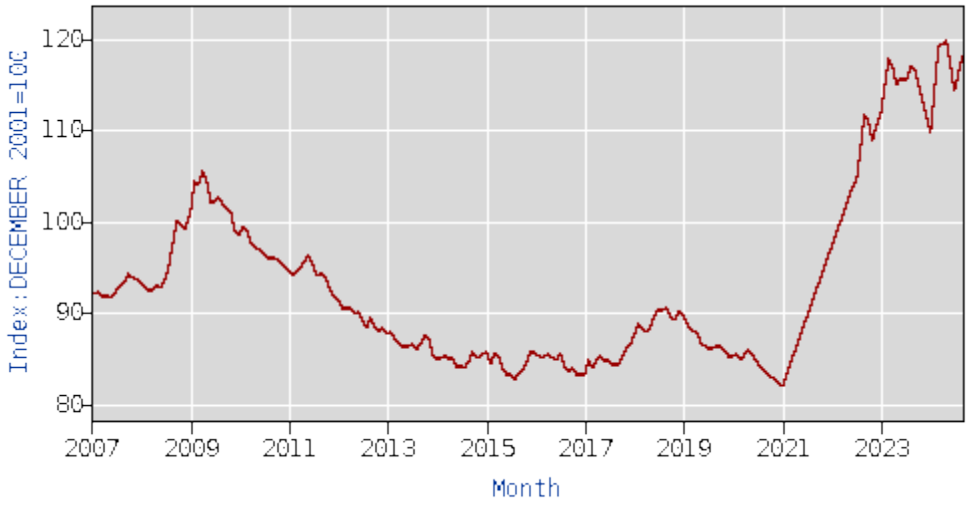
Note. From Consumer Price Index (U.S. Bureau of Labor Statistics, 2025).

Figure 4. Motor Vehicle Insurance CPI



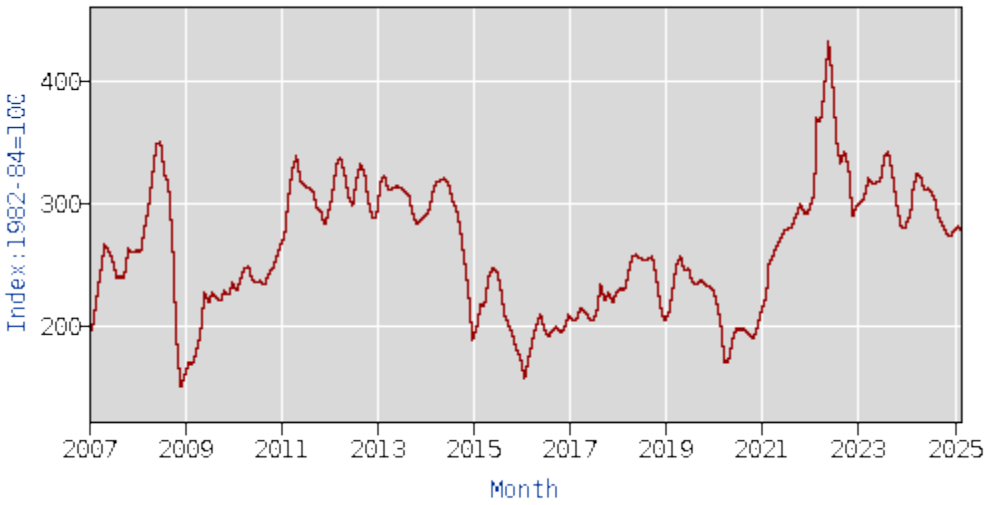
Note. From Consumer Price Index (U.S. Bureau of Labor Statistics, 2025).

Figure 5. Leased Cars CPI



Note. From Consumer Price Index (U.S. Bureau of Labor Statistics, 2025).

Figure 6. Gasoline CPI



Note. From Consumer Price Index (U.S. Bureau of Labor Statistics, 2025).

Ridership Analysis: Vanpool Mode vs Other Modes

Using data from the FTA NTD, I compared key ridership and operational statistics between the vanpool mode and other modes of transportation at Los Angeles. I looked at the most recent finalized published federal data, which is FY2023. Vanpool service in Los Angeles stands out for its exceptional cost efficiency compared to all other modes. Despite relatively low ridership, vanpool achieves this with minimal operating expenses and high productivity per dollar spent. For service efficiency by mode, a lower ratio is better as it signifies more service offered at a lower operating expense.

Table 6. Key Statistics by Mode

Mode	Annual Passenger Miles Traveled (PMT)	Annual Unlinked Passenger Trips (UPT)	Annual Vehicle Revenue Miles (VRM)	Annual Vehicle Revenue Hours (VRH)	Operating Expenses (OE)
Bus	717,395,442	206,240,433	66,288,883	6,457,517	$1,414,106,281
Bus Rapid Transit	26,699,520	4,371,929	1,497,703	97,142	$48,337,940
Demand Response	2,670,379	696,080	2,843,992	187,310	$33,146,738
Heavy Rail	133,671,083	26,854,945	6,085,994	297,856	$192,351,180
Light Rail	240,434,763	36,587,977	14,618,325	722,180	$497,457,985
Vanpool	69,855,494	1,551,083	18,132,574	458,155	$11,224,263
Total	**1,190,726,681**	**276,302,447**	**109,467,471**	**8,220,160**	**$2,196,624,387**

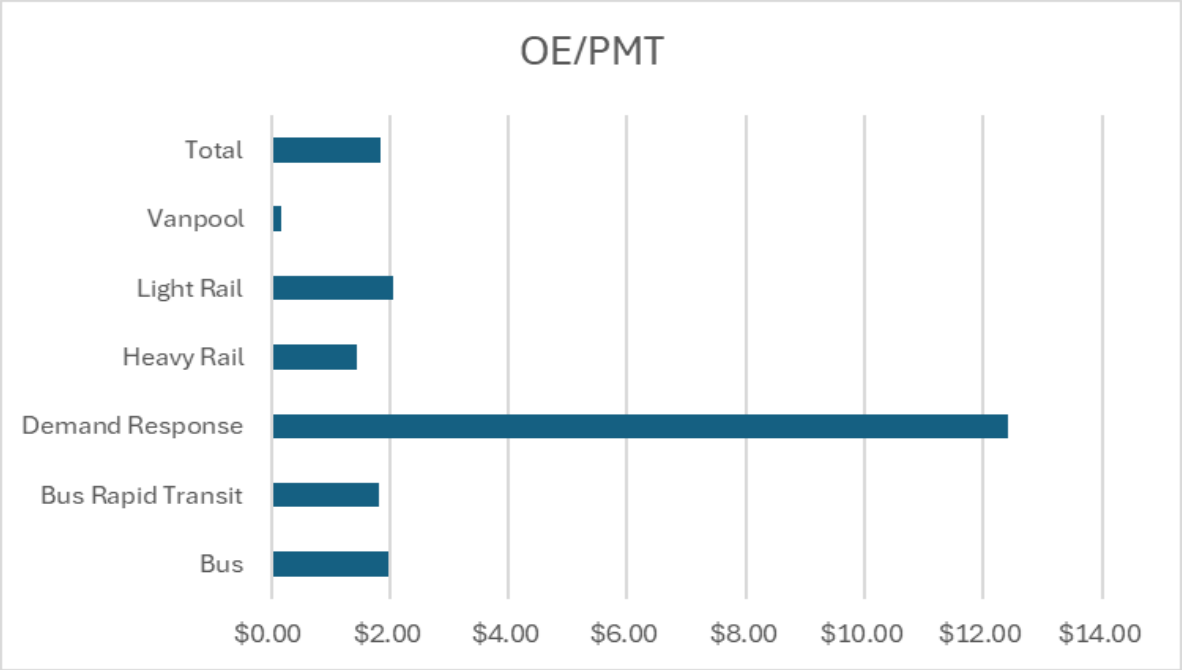
Note. Adapted from TS2.1 – Service Data and Operating Expenses Time Series by Mode (Federal Transit Administration, 2023).

Table 7. Service Efficiency by Mode

Mode	OE/PMT	OE/UPT	OE/VRM	OE/VRH
Bus	$1.97	$6.86	$21.33	$218.99
Bus Rapid Transit	$1.81	$11.06	$32.27	$497.60
Demand Response	$12.41	$47.62	$11.66	$176.96
Heavy Rail	$1.44	$7.16	$31.61	$645.79
Light Rail	$2.07	$13.60	$34.03	$688.83
Vanpool	$0.16	$7.24	$0.62	$24.50
Total	**$1.84**	**$7.95**	**$20.07**	**$267.22**

Note. Adapted from TS2.1 – Service Data and Operating Expenses Time Series by Mode (Federal Transit Administration, 2023).

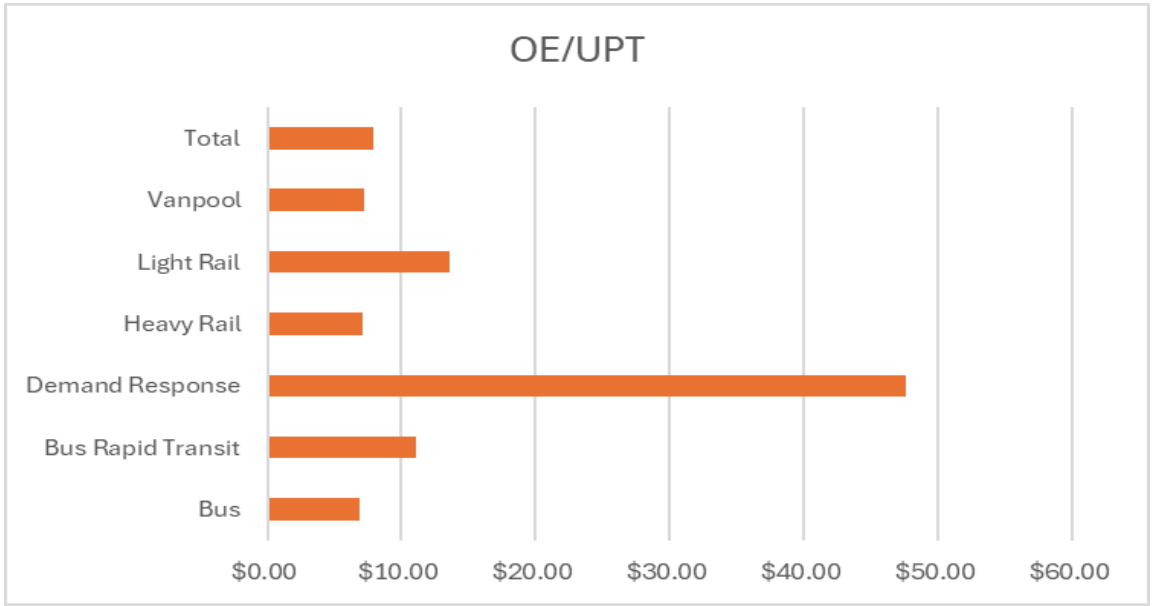
Figure 7. Operating Expenses/Passenger Miles Traveled



Note. Adapted from TS2.1 – Service Data and Operating Expenses Time Series by Mode (Federal Transit Administration, 2023).

Vanpool service has the lowest cost per passenger mile at just $0.16, making it by far the most cost-efficient mode in this category. For comparison, the second smallest value is Heavy Rail at $1.44, and the highest value is Demand Response at $12.41. This low OE/PMT reflects vanpool's focus on long-distance commuting, where each trip covers significantly more mileage than typical urban modes. Because passengers tend to ride in full or nearly full vehicles for long trips, the system spreads costs across a greater number of miles traveled, resulting in highly efficient use of operating funds. This metric demonstrates vanpool's strong value for connecting distant communities to employment centers.

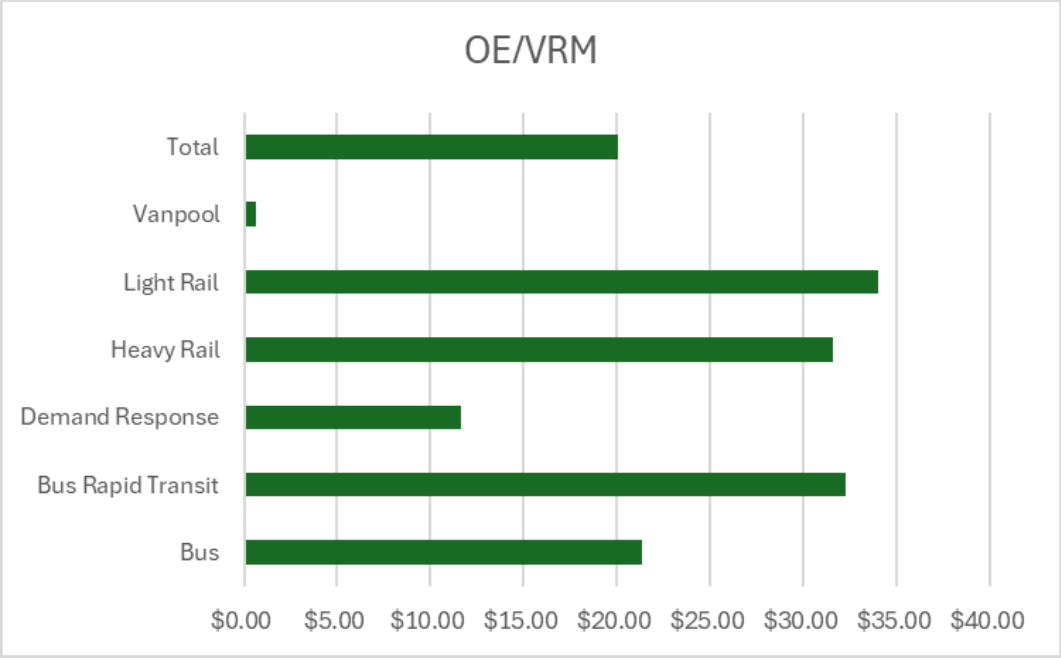
Figure 8. Operating Expenses/Unlinked Passenger Trips



Note. Adapted from TS2.1 – Service Data and Operating Expenses Time Series by Mode (Federal Transit Administration, 2023).

At $7.24 per unlinked passenger trip, vanpool is similar in cost per rider to heavy rail ($7.16), but more costly than bus ($6.86). However, this measure can be misleading for vanpools because of the nature of the trips taken, where each vanpool trip tends to be long, in contrast to the shorter, more frequent transfers seen in fixed-route systems. While OE/UPT provides a useful comparison, it doesn't fully account for the intensity or length of each trip, and in vanpool's case, a single trip may substitute for multiple transfers on other modes. Still, the competitive OE/UPT shows vanpool's ability to move people at reasonable cost per ride. To lower this ratio, the Metro Vanpool Program can also work on ensuring vanpools have more passengers in them.

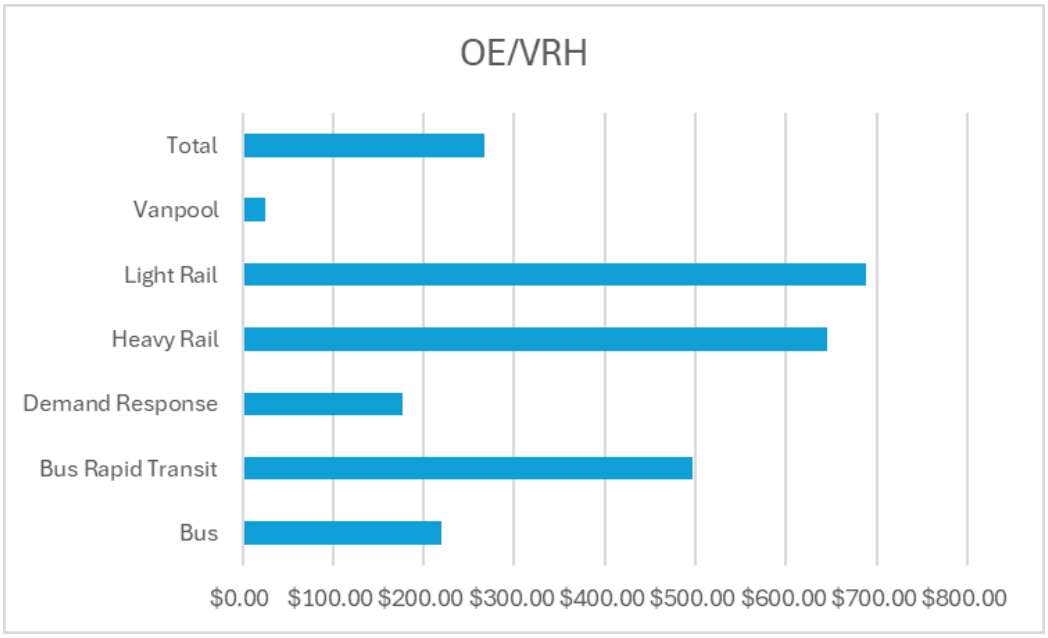
Figure 9. Operating Expenses/Vehicle Revenue Miles



Note. Adapted from TS2.1 – Service Data and Operating Expenses Time Series by Mode (Federal Transit Administration, 2023).

With an OE/VRM of only $0.62, vanpool far surpasses all other modes in operational cost-efficiency per mile driven. Bus and rail modes range from about $21 to $34 per mile, which reflects the higher costs of labor, maintenance, and infrastructure associated with those systems. Vanpools typically operate with leased vehicles and without paid drivers, reducing costs significantly. This metric highlights how vanpooling delivers a high volume of service for very low cost, making it especially well-suited for low-density areas where the cost of running buses or rail can be prohibitive.

Figure 10. Operating Expenses/Vehicle Revenue Hours



Note. Adapted from TS2.1 – Service Data and Operating Expenses Time Series by Mode (Federal Transit Administration, 2023).

Vanpool also leads in OE/VRH with an operating expense of $24.50 per vehicle revenue hour, an order of magnitude lower than heavy rail ($645.79), light rail ($688.83), and bus service ($218.99). This reflects both the lower operating overhead of vanpooling and its decentralized, demand-driven structure. With fewer support staff, no dedicated stations, and shared vehicle

responsibilities among riders, vanpool services can deliver significant time-based coverage at minimal cost. For agencies managing tight budgets, this ratio shows how vanpools can extend service hours without a proportional increase in expenditure.

Across all key efficiency metrics, vanpool service in Los Angeles stands out as a cost-effective, and high-impact mode. While it carries fewer passengers overall, the length and purpose of vanpool trips (primarily long-distance commuting) make them an essential part of a well-balanced regional transit strategy. The extremely low operating expenses per mile, trip, and hour demonstrate that vanpools can deliver meaningful access and mobility at a fraction of the cost of fixed-route services. As LA Metro continues to address growing travel demand, rising costs, and the need for sustainable solutions, investing in and expanding the vanpool program represents a strategic opportunity to increase systemwide efficiency while better serving the dispersed communities of Los Angeles.

Equity Consideration: GIS Analysis of Vanpool Origins and Destinations

To better understand the equity impacts of vanpool, I conducted a GIS analysis of the vanpool pick-up locations and final destinations. I overlaid this data with Metro's Equity Focus Communities (EFC) layer to assess how well the program serves communities with the greatest mobility needs. EFC's are communities identified by Metro as having the greatest transportation needs. EFCs consider where there are "higher concentrations of resident and household demographics associated with mobility barriers: low-income households earning less than $60,000 per year; Black, Indigenous, or People of Color (BIPOC) populations; and households that do not have a car" (Los Angeles County Metropolitan Transportation Authority, 2024, p. 3).

Many of the vanpools begin or pick-up passengers outside of Los Angeles County. Since EFC's only cover Los Angeles County, I will be using the disadvantaged communities (DACs) outside of LA County. DAC's were created by the California Environmental Protection Agency (CalEPA) and are based on "geographic, socioeconomic, public health, and environmental hazard criteria" (California Environmental Protection Agency, 2022, p. 1). By identifying the proportion of vanpool riders that begin or end their trips in EFC's/DAC's, I will evaluate the impact of the Metro Vanpool Program on equity.

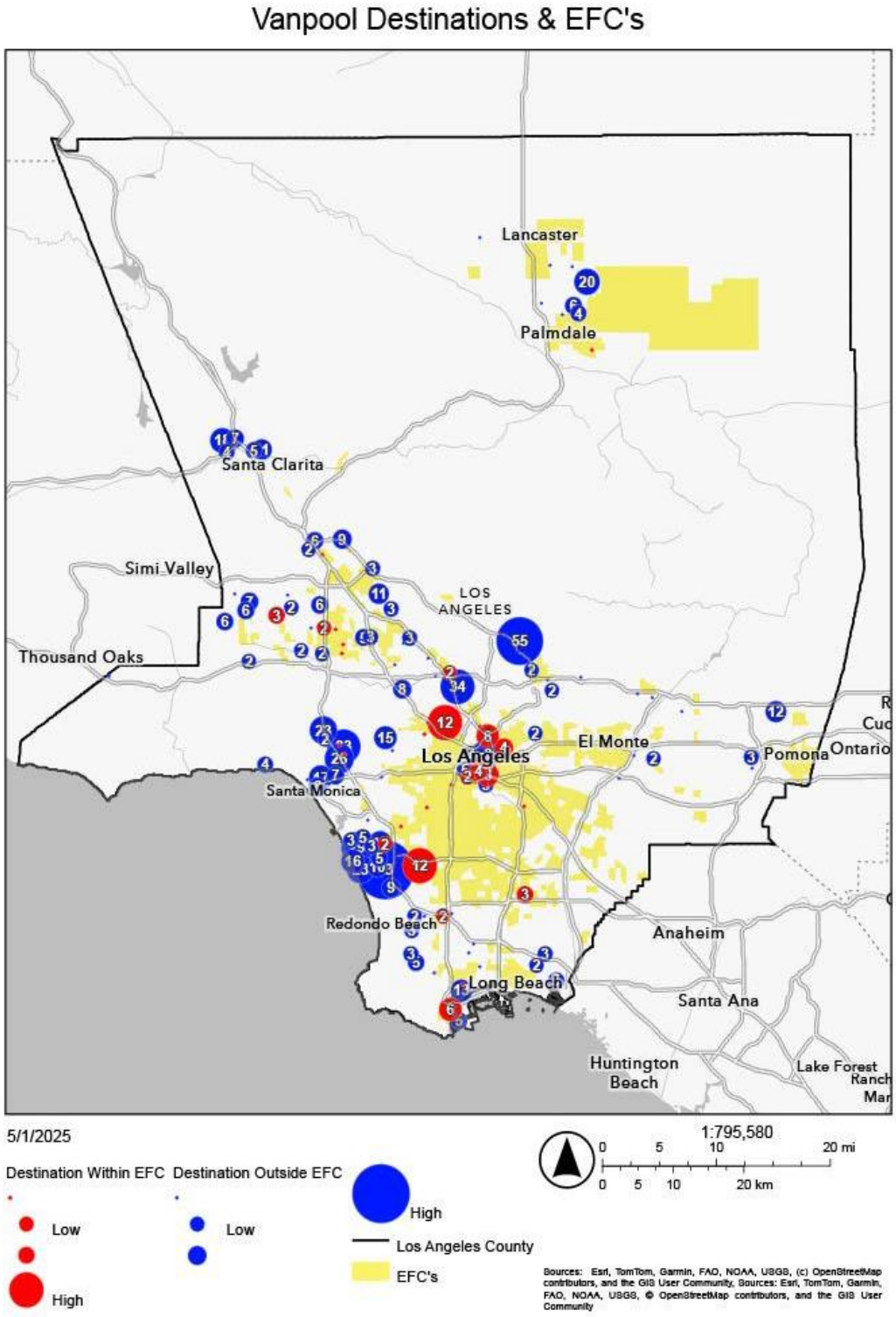
Table 8. Vanpool Destinations & EFC's

Metric	Value	Percentage
Total Number of Vanpools	807	100%
Vanpool Destinations in EFC’s	85	10.53%
Vanpool Destinations not in EFC’s	722	89.47%

Note. Adapted from TripSpark ad-hoc reports.

Using data from April 1, 2025, the analysis shows that a considerable portion of vanpools end in EFCs. Of the 807 active vanpools, 85 (10.53%) had destinations within EFCs, while 722 (89.47%) ended outside of them. This metric alone may not be the best to measure equity as the destinations are mostly employers. The GIS analysis was completed by creating two layers based on whether or not the vanpool destinations were located completely within an EFC. The results were clustered as many vanpools have the same destinations (same employers).

Figure 11. Map of Vanpool Destinations & EFC's



Note. Adapted from TripSpark ad-hoc reports.

Table 9. Vanpool Pickups & EFC's/DAC's

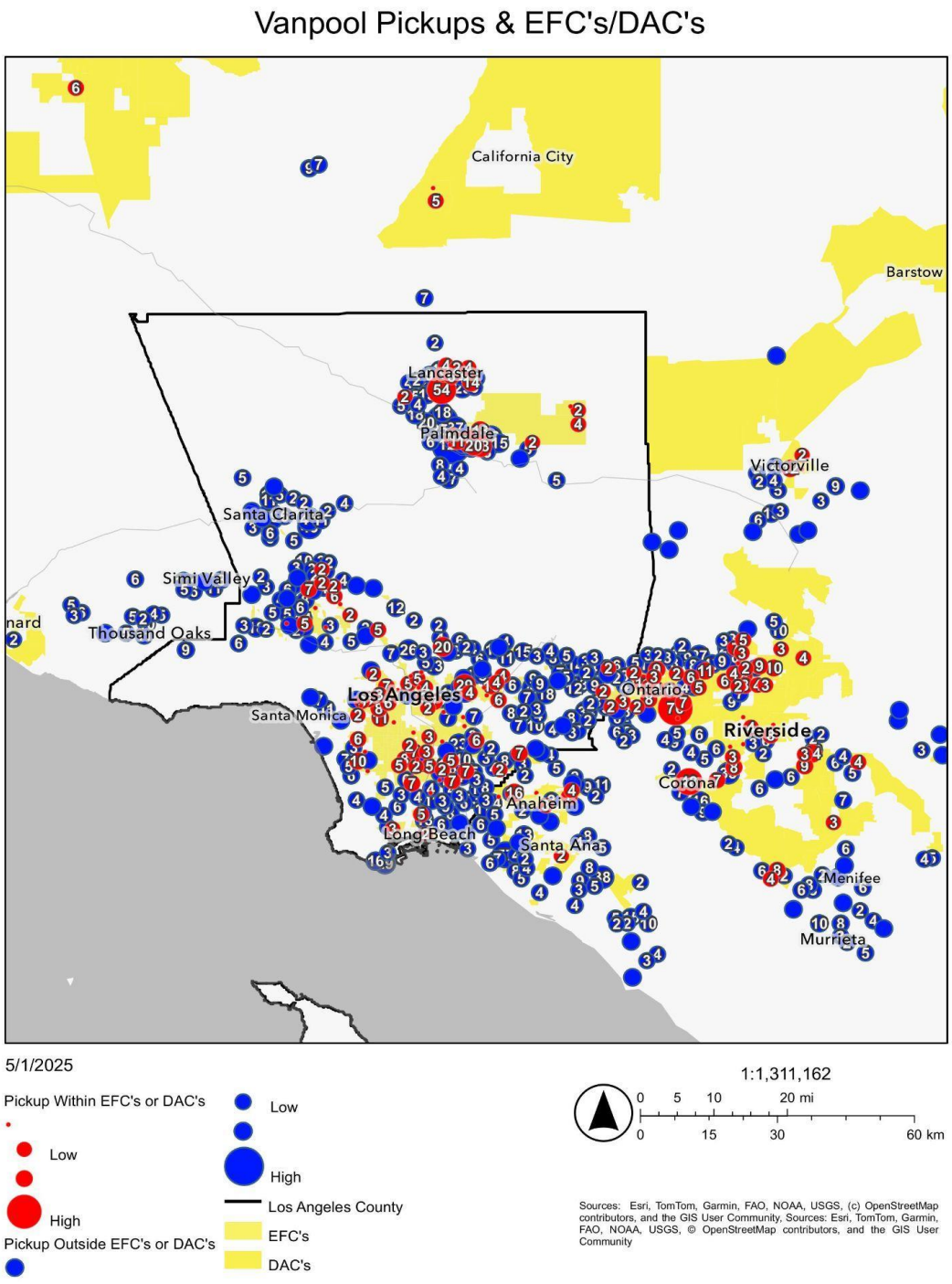
Metric	Value	Percentage
Total Number of Pickups	4,107	100%
Vanpool Pickups in EFC's	538	13.10%
Vanpool Pickups in DAC's	443	10.79%
Vanpool Pickups in EFC's or DAC's	981	23.89%
Vanpool Pickups not in EFC's or DAC's	3,126	76.11%

Note. Adapted from TripSpark ad-hoc reports.

When evaluating vanpool pickups from April 1, 2025, the analysis reveals that 981 of the 4,107 total pick-up locations (23.89%) were located in either an EFC or a DAC. Specifically, 538 pick-ups (13.10%) were located in EFCs and 443 (10.79%) in DACs. Almost one in four vanpool participants are picked up within an EFC. The pickup location is usually the home address of the participant, but may also include meet-up spots near the participant's home.

The GIS analysis was completed by creating two layers based on whether or not the vanpool pickups were completely within an EFC or DAC. The results were clustered as many pickups were near each other.

Figure 12. Map of Vanpool Pickups & EFC's/DAC's



Note. Adapted from TripSpark ad-hoc reports.

To increase the impact of the Vanpool Program in Equity Focus Communities (EFCs), Metro could pursue a combination of outreach and programmatic strategies. Targeted outreach through community-based organizations, multilingual materials, and culturally relevant messaging can raise awareness and reduce participation barriers. Partnering with major employers that hire from EFCs, especially in low-wage sectors, could further expand access. To serve workers with non-traditional schedules, Metro can also partner with other county transportation commissions to potentially jointly offer subsidies in DAC's. Finally, incorporating equity-focused performance metrics—such as the percentage of trips serving EFCs or Disadvantaged Communities (DACs)—would help Metro track progress and adjust the program to better meet its equity goals.

Recommendations and Conclusion

1. **Increase the Subsidy Ceiling to $700 (or even $800)**

With 90.87% of vanpools leasing at $1,200 or more and an average lease amount of $1,547.51, the current $600 subsidy cap is insufficient for most participants. CPI-adjusted calculations show the subsidy should be at least $672.30 to match inflation since 2022. Raising the cap to $700 or $800 would more accurately reflect the financial reality of today's leasing market and reduce out-of-pocket costs for the majority of riders.

2. **Respond to Termination Trends by Supporting Rider Retention and Employer Incentives**

The leading reasons for vanpool termination—loss of riders (69 instances) and loss of employer incentives (55 instances)—suggest that retention is a key challenge. Metro should explore new strategies such as ride-matching support, employer outreach, and flexible vanpool models to reduce churn and sustain participation.

3. **Leverage Operational Efficiency to Justify Increased Investment**

According to FY2023 FTA data, vanpooling has the lowest cost per passenger mile ($0.16) and lowest cost per revenue hour ($24.50) among all transit modes in Los Angeles. These findings affirm that additional investment in vanpool subsidies would yield high returns in terms of cost efficiency, especially for long-distance and underserved commuters.

4. **Monitor Equity Metrics in Line with Pick-up and Destination Data**

10.53% of vanpool destinations fall within Metro's Equity Focus Communities (EFCs) and nearly 24% of pick-ups occur in either EFCs or Disadvantaged Communities (DACs). This suggests that vanpooling does reach equity-priority riders. Metro should incorporate EFC/DAC metrics into ongoing performance tracking and direct outreach to support more equitable participation.

The Metro Vanpool Program provides a high-impact, low-cost commuting option that supports environmental sustainability and systemwide efficiency. However, the data clearly shows that the current $600 subsidy cap is outdated. Most vanpools now lease well above this threshold, and inflation has further eroded the value of Metro's contribution. The analysis also highlights rising termination rates due to cost and rider loss, as well as opportunities to expand equity impact through targeted support. Increasing the subsidy ceiling and reinforcing employer partnerships are data-driven steps that would improve retention, affordability, and access. These changes will ensure the Vanpool Program continues to meet the region's evolving mobility needs while advancing Metro's broader equity and sustainability goals.

References

Boarnet, M. G., Rodnyansky, S., Wang, B., & Comandon, A. (2022). *Commuting during and after COVID-19: The impact of COVID-19 on shared mobility and extreme commuting in the Bay Area - Central Valley* (Report No. PSR-21-10). California Department of Transportation. https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/final-reports/ca22-task3458-a11y.pdf

Boniface, S., & Scantlebury, R. (2015). Evidence of effects of transport on social interactions. *Journal of Transport & Health, 2*(3), 441–446. https://doi.org/10.1016/j.jth.2015.05.005

Brown, J. A., & Garrison, W. L. (2005). Fare pricing elasticity, subsidies, and demand for vanpool services. *Transportation Research Record: Journal of the Transportation Research Board, 1924*(1), 1–7. https://doi.org/10.1177/0361198105192400127

California Air Pollution Control Officers Association. (2021). *Handbook for analyzing greenhouse gas emission reductions, assessing climate vulnerabilities, and advancing health and equity*. California Air Pollution Control Officers Association. https://www.airquality.org/ClimateChange/Documents/Handbook%20Public%20Draft_2021-Aug.pdf

California Environmental Protection Agency. (2022, May). *Final designation of disadvantaged communities pursuant to Senate Bill 535*. https://calepa.ca.gov/wp-content/uploads/2022/05/Updated-Disadvantaged-Communities-Designation-DAC-May-2022-Eng.a.hp_-1.pdfCalEPA+1CalEPA+

Ditmore, C. J., & Deming, D. M. (2018). Vanpooling and its effect on commuter stress. *Research in Transportation Business & Management, 27*, 98–106. https://doi.org/10.1016/j.rtbm.2018.11.001

Federal Transit Administration. (2023). *TS2.1 - Service Data and Operating Expenses Time Series by Mode*. U.S. Department of Transportation. https://www.transit.dot.gov/ntd/data-product/ts21-service-data-and-operating-expenses-time-series-mode-2

Federal Transit Administration. (2024b). *2024 NTD full reporting policy manual*. U.S. Department of Transportation. https://www.transit.dot.gov/sites/fta.dot.gov/files/2024-07/2024%20NTD%20Full%20Reporting%20Policy%20Manual.pdf

González, R., & Hidalgo, D. (2013). A measure of equity for public transit connectivity. *Transportation Research Part A: Policy and Practice, 50*, 1–10. https://doi.org/10.1016/j.tra.2013.01.003

Higgins, L. L., & Rabinowitz, R. I. (2002). *Transit-operated vanpools in the United States: Selected case studies* (Report No. SWUTC/02/167122-1). Texas A&M Transportation Institute. https://rosap.ntl.bts.gov/view/dot/37260

Los Angeles County Metropolitan Transportation Authority. (2007, January 17). *Executive, Management, and Audit Committee Item 23.* https://boardarchives.metro.net/Items/2007/01_January/20070117EMACItem23.pdf

Los Angeles County Metropolitan Transportation Authority. (2008, January 16). *Executive, Management, and Audit Committee Item 33*. https://boardarchives.metro.net/Items/2008/01_January/20080116EMACItem33.pdf

Los Angeles County Metropolitan Transportation Authority. (2018, July 26). *Board of Directors Regular Board Meeting.*

Los Angeles County Metropolitan Transportation Authority. (2021, July 22). *Board of Directors Regular Board Meeting.*

Los Angeles County Metropolitan Transportation Authority. (2024). *Equity platform overview.* *https://www.dropbox.com/scl/fi/oz1n8wxvvxeey7bh9n47e/24-XXXX_ntc_2024-Updated_EquityPlatform_Overview_tih.pdf?rlkey=s8p9px1xubpfzp138eo8koh1c&e=1&dl=0*

Mangan, M. (2018, February). *The value of vanpooling as a strategic, cost-effective, and sustainable transportation option*. Institute of Transportation Engineers. https://www.enterprisemobility.com/content/dam/ehicom/docs/ITE_Vanpooling_Feb2018.pdf

U.S. Bureau of Labor Statistics. (2025). *Consumer Price Index*. U.S. Department of Labor. https://www.bls.gov/cpi/