From Sorry to Superb: Everything You Need to Know about Great Bus Stops

TransitCenter works to improve public transit in ways that make cities more just, environmentally sustainable, and economically vibrant. We believe that fresh thinking can change the transportation landscape and improve the overall livability of cities. We commission and conduct research, convene events, and produce publications that inform and improve public transit and urban transportation. For more information, please visit www.transitcenter.org.

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Introduction

Bus stops are the front door to American public transit systems: they are where half of transit riders wait for service, they are a visual representation of transit service in every region in the country, and they can and do serve all transit riders. Great bus stops are comfortable places to wait, surrounded by safe and accessible walking conditions—and they are important drivers of bus ridership and customer satisfaction. Great bus stops result from collaboration; careful design and placement; and continuous funding, maintenance, and improvement.[1]

Buses are the foundation of America's public transit system. In the United States, half of all transit rides are taken on buses, and buses provide the only fixed-route transit services for the majority of U.S. agencies.[2] Buses serve more economically and racially-diverse populations than rail and are accessible to people with physical disabilities, while some rail service—particularly in cities with old rail networks—is not.[3,4]

Figure 1. Transit Riders by Mode and Household Income

	≥ $110K	$75K–$100K	$50K–$75K	$25K–$50K	$15K–$25K	< $15K
Bus	12%	7%	12%	23%	16%	30%
Rail	29%	12%	17%	20%	9%	13%
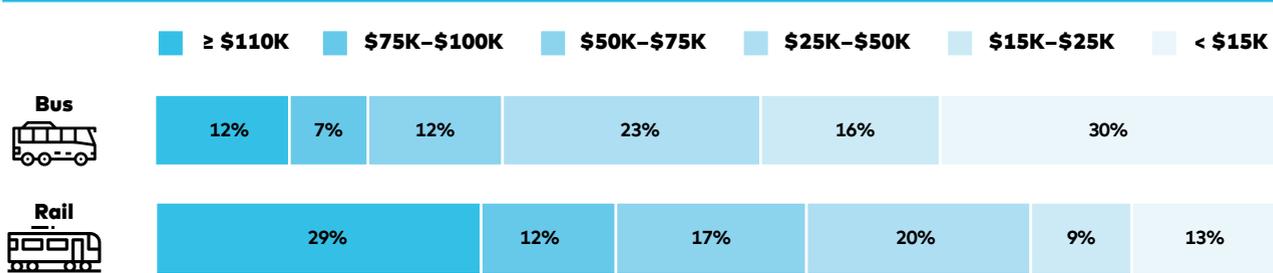
Figure 2. Transit Riders by Mode and Race/Ethnicity

	White	Black	Hispanic	Asian	Other
Bus	35%	30%	21%	6%	9%
Rail	46%	19%	17%	8%	9%
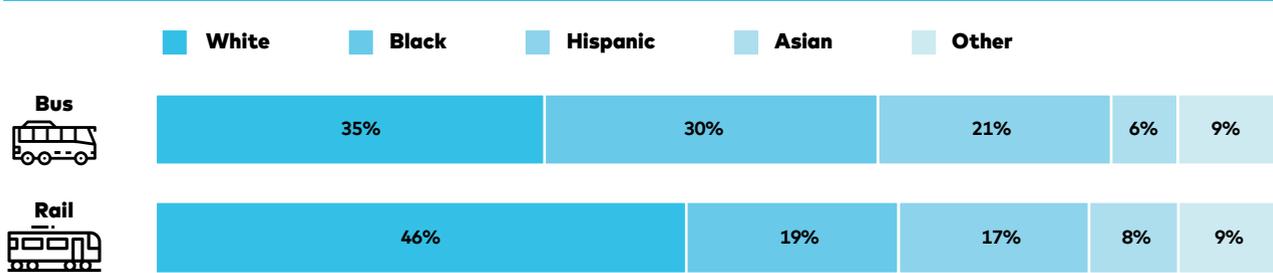
Source: American Public Transportation Association, 2017

This research brief details how transit agencies and cities build great bus stops by explaining obstacles to managing bus stops, best practices for designing and prioritizing stop improvements, and ways in which transit agencies can work with city staff to make great bus stops. Case studies, informed by policy documents and interviews with experts, explore how five regions—Minneapolis St-Paul, Portland, Pittsburgh, Los Angeles, and New York City—manage their bus stops. The brief concludes with actions that transit agencies and their partners can take to improve bus stops.

Better bus stops create better transit

An overall decrease in transit use across the country, driven by plummeting bus ridership, underlies the urgency in addressing bus stops.[5] Research suggests that better stops and walks to stops can encourage ridership and improve the transit experience. Transit agencies and their city partners should invest in the entire transit experience, including before the rider gets on the bus, to stymie falling ridership and to make transit a viable option for all.

Americans are more likely to use transit if they can walk to it and have a comfortable place to wait. A TransitCenter survey of transit riders revealed that general upgrades to transit stop facilities and adding real-time information are among the most desired improvements to transit service.[6] The study also suggests that people are more likely to use transit frequently if they can walk to get there, highlighting the importance of safe and comfortable walking environments near transit. For example, 80 percent of people who use transit for most trips walk to access service, compared to 55 percent of occasional transit riders.

Amenities at bus stops make the wait easier to endure, according to a University of Minnesota study.[7] The study found that transit riders tend to overestimate the amount of time they wait for the vehicle by 1.5 to 4 times, but stop amenities go far in reducing the perceived waiting time. Researchers found that on average, riders at stops without amenities who waited for 10 minutes perceived that time to be 21 minutes. Amenities markedly reduced the perceived time for the same wait, to 13 minutes at stops with shelters and benches, and to 11 minutes at stops with shelters, benches, and real-time information. The study also suggests that amenities can make riders feel safer: for women who perceived their surroundings to be unsafe, stop amenities cut the perceived wait time in half.

Great bus stops encourage ridership and improve the experience of taking the bus.

A University of Utah study found that at stops with shelters, benches, and sidewalk connections, ridership grew more than at stops without those.[8] While researchers are unsure how much of the increase was from regular users who switched to better stops or from new riders who were enticed by better service, the study shows the value riders place on good stops and supports balancing bus stop spacing, wherein closely-placed bus stops are consolidated. The study also found that demand for paratransit service declined within a quarter mile radius of stops with amenities. This suggests that better bus stops might shift some users of paratransit to fixed-route bus service, which is more convenient and frequent.

Bus stops also market the existence and quality of the service itself, both helping to retain existing riders and attract new ones. Transportation Cooperative Research Program report notes that a bus stop sign with good design and placement can inform and attract potential customers.[9] The same can be said for bus stops themselves—smartly-placed and responsibly-managed stops indicate a customer-focused agency that considers its riders as it plans service. A poorly-managed stop communicates the opposite: that the agency does not prioritize riders' needs and may suggest to riders that buses are lower quality.

Many transit agencies are redesigning their bus networks to provide more direct and frequent bus service. This approach generally makes transferring between routes more commonplace for riders and therefore, quality bus stops at connection points more important.[10] Transit agencies investing in network redesigns to foster service improvements should not overlook the value that good bus stops also contribute.

Agencies should invest more money and time in bus stops

Transit agencies invest paltry resources in bus facilities compared to other modes, despite substantial bus ridership and the importance of facilities in supporting ridership. At the U.S. transit agencies that operate both bus and rail service, bus facilities get far less investment than rail facilities—less than a tenth as much on a per-trip basis (not to mention the staggering per-trip spending on ferry docks).[11]

Table 1. Capital Expenditures on Transit Stops at Major Transit Agencies in 2016[12]

	2016 Station & Stop Spending	% of Agency Station & Stop Spending	2016 Ridership (Unlinked Passenger Trips)	2016 Station & Stop Spending per Trip
Bus	$135,844,820	6.2%	3,078,446,303	$0.04
Rail	$2,064,271,579	93.6%	4,418,393,707	$0.47
Other (Ferry, Inclined Plane)	$4,496,461	0.2%	2,998,782	$1.50

Source: National Transit Database, 2016

While agencies develop visions, carefully plan, and approve high budgets for sleek designs, innovative art, and digitized information in rail stations or transit centers, they often forgo appropriately-matched efforts for basic improvements to bus stops.[13,14] Standard features for highly-used bus stops should include amenities such as benches, shelters, and trash cans; information on schedules, service, wayfinding; and sidewalks and lighting nearby.[15] Yet most bus stops are little more than a pole with a sign, and many are placed on inaccessible or even dangerous stretches of road.

All transit users, including bus riders, deserve a place to wait that improves their experience rather than diminishes it. Transit agencies must devote more funding and better planning efforts towards bus stop improvements. And because buses reach nearly every neighborhood in every city, network-wide investment in stops benefits a majority of transit users and makes transit systems more equitable and accessible.

Bus stops are easy to do well and worth doing right

As far as transit investments go, enhancing bus stops is a low-cost, high-impact way to make system-wide upgrades to a transit network. Infrastructure for bus stops is significantly cheaper and faster to construct than for rail facilities. The cost of one bus shelter ranges considerably depending on factors such as design, size, and place, but typically amounts to between $2,000 and $15,000.[16] Smaller upgrades—such as benches, trash cans, or signage

improvements—cost much less. Typically, once materials and permits have been acquired, upgrading bus stops can be done in a day. Annual maintenance costs per shelter hover around a thousand dollars.[17]

Upgrading rail facilities (not to mention maintaining them) requires magnitudes more in money and time. For example, over the course of 2017, Houston's Metro spent around $2.5 million to construct 200 new bus shelters and refurbish or relocate another 200 shelters—about $6,000 per shelter. In contrast, upgrades to one rail facility—adding escalators and expanding the canopy at the Burnett Plaza Transit Center—cost $4.6 million.[18]

"A bus shelter is not a luxury; it provides a basic level of comfort and dignity to people waiting for transit."

— Who's On Board 2016

National Association of City Transportation Officials
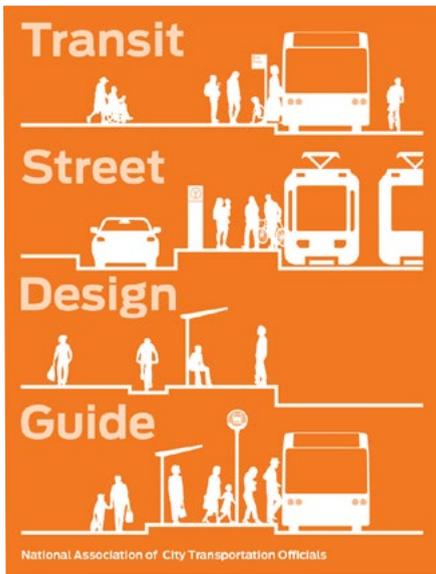
Designing a Great Bus Stop

The National Association of City Transportation Officials (NACTO) Transit Streets Design Guide details the basic elements of a great bus stop.[19] The document sets recommendations for bus stop locations, including spacing between stops; extending sidewalks to allow buses to stop in travel lanes; and placing stops on intersections' far sides, near transfer points or ridership hubs, and where riders can easily access and board vehicles.

The guide also describes the design elements of a model bus stop. It elevates features that make stops accessible to everyone. Crosswalks and connections to other sidewalks give pedestrians safe access to stops. Wide and level sidewalks, curb cuts, and concrete landing pads for bus ramps are necessary for those using wheelchairs or strollers to get to the bus. For some riders, having a place to sit while waiting is essential. Other design characteristics improve the experience of taking the bus, including shelters that give protection from the elements, lighting that makes stops feel safer and helps drivers to see riders, and schedules and real-time information that help customers to navigate the system.

More specific guidance on bus stop design and amenities can be found at https://nacto.org/publication/transit-street-design-guide/

National guides (like NACTO's) are great resources, but it is valuable for agencies to develop locally specific bus stop guidelines as well. Guidelines drive agencies to think through, then codify, their specific plans for bus stop placement and physical design elements. In addition to boosting bus stop planning efforts, guidelines can be used to communicate a long-term vision for bus stops, support spending decisions, and to manage stakeholder expectations for improvements.

NACTO's six principles for great bus stops
— Treat bus stops as gateways to your system
— Facilitate movement, ease interactions
— In-lane stops save time
— Universal design is equitable design
— Design for safety
— Integrate vehicle design and platform design

Balancing Bus Stop Spacing

Buses spend a lot of time at stops. In New York City, for example, the average bus is at a stop 22% of the time.[20] That is why stop placement is crucial to providing fast and reliable bus service—the more often a bus has to stop along a route, the slower it will move. Despite national and local guidelines that recommend between ½ to ⅛ mile between stops, many bus stops around the country are spaced far closer together.[21,22,23] This slows down the ride for everyone and leaves fewer resources to spend on each stop.

Bus routes became overburdened with stops because riders asked their elected officials and agencies for bus stops— and transit agency staff found it difficult to say no to riders asking for bus stops. But over time, this has resulted in a bus stop on every corner, buses that spend a lot of time stopping, and slower trips for everyone.

Transit agencies like SFMTA in San Francisco, Denver RTD, TriMet in Portland, and Maryland MTA are taking steps to rebalance existing bus stop networks.

This entails setting regimented guidelines for spacing between stops, identifying important stops that uphold that spacing, and consolidating service to those stops.

Bus stop balancing typically preserves stops that are key transfer points, as well as stops with high ridership or that are close to community and senior centers. Thresholds for distances between stops generally vary by the type of service, with longer spacing between stops on routes designed to provide faster service.

Strategically spacing bus stops is essential to improve bus speed and reliability and to concentrate capital and maintenance spending at higher ridership stops. As research from the University of Utah demonstrates, if transit planners invest more in a small number of stops and provide better amenities there, riders willingly switch to those better bus stops.[24]

Along with all-door boarding, off-board fare payment, dedicated bus lanes, and high-quality stops, stop balancing can help to make reliable and fast bus service.

Figure 3. Guide to Balanced Stop Spacing

Points of Interest
Hospitals
Schools
Shopping Centers
Senior Centers
Apartment Buildings
and so on...

Intersecting Bus Routes
Maintaining the ability to transfer

Highly Utilized Stops
Particularly those serving high proportions of seniors and persons with disabilities

Stops with Low Utilization Spaced One Block Apart

Stops with accessibility and pedestrian safety issues

Source: Maryland Transit Administration

Case Studies

The approach to improving bus stops is unique in every city and success varies. To understand what works and what does not, this brief examines how five regions of different sizes manage the front door to transit.

Minneapolis-St. Paul, Portland, Pittsburgh, Los Angeles, and New York City were chosen based on their distinctive approach to bus stops and the challenges and successes they have had in managing them. A major distinction between each is the allocation of responsibility to the transit agency on one hand and the city government on the other hand. Private contractors also play a role determined by the leading agency or city government.

The authors spoke with city and transit agency staff responsible for the planning, placement, and maintenance of bus stops in each region. The authors spoke with staff at the advertising firm JCDecaux about its work in Los Angeles and New York City.

Interviewees were asked to describe the logistics of placing a stop and maintaining it, how stops are planned and prioritized for improvements, and what steps they would take to further improve bus stops in their regions.

Figure 4. Transit Agency Involvement

TriMet, Portland

Metro Transit, Minneapolis-St. Paul

Port Authority of Allegheny County, Pittsburgh

LA Metro, Los Angeles

New York MTA, New York City

Heavy agency involvement in stops

Involved in stops in certain parts of the service area

Little agency involvement in stops
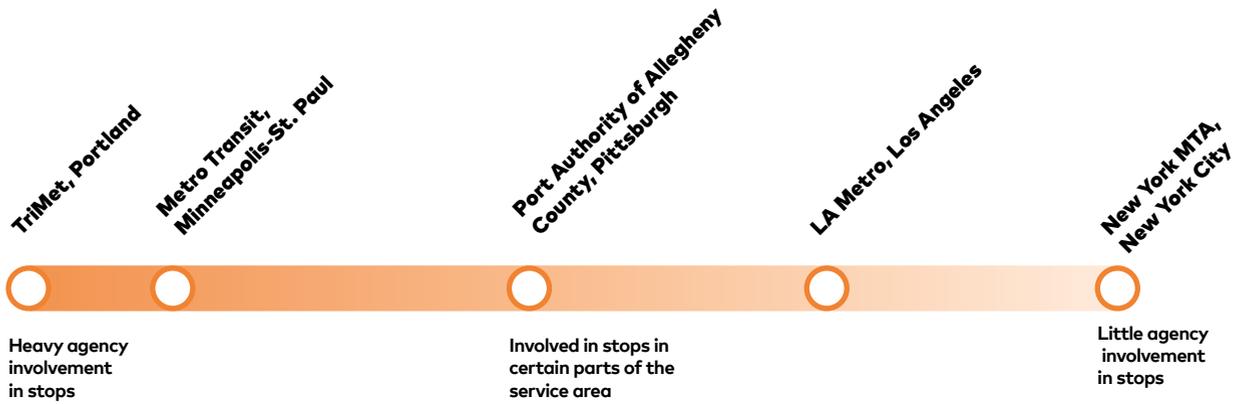
Figure 5. City Government Involvement

Department of Transportation, New York City

Bureau of Street Services, Los Angeles

Department of Mobility & Infrastructure, Pittsburgh

PBOT, Portland

DPW, Minneapolis-St. Paul

Heavy city involvement in stops

Involved in stops in certain parts of the service area

Little city involvement in stops
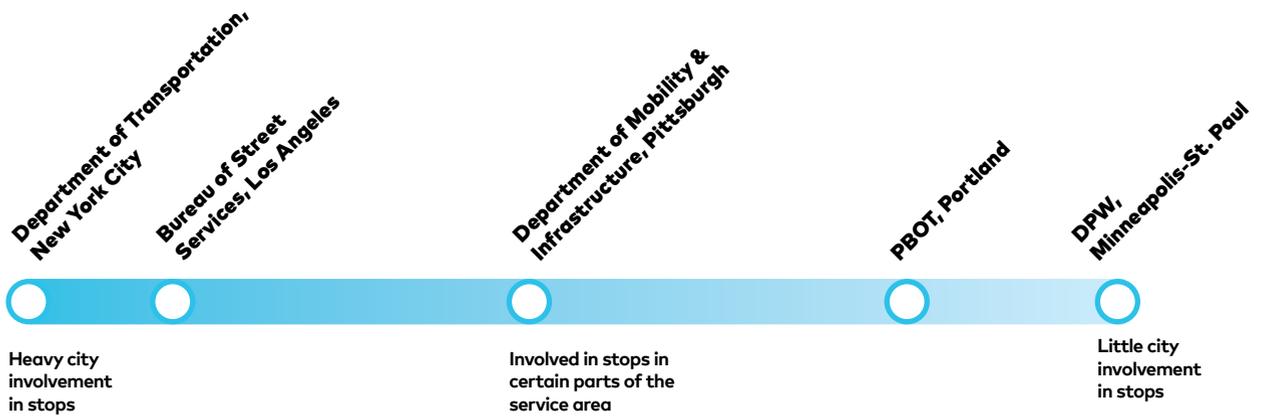
Minneapolis-St. Paul, Minnesota:
Rewriting the Rules to Fix Bus Stop Inequity

Metro Transit's authoritative control over stops, its prioritization of bus amenities, and its effort to engage the community in decision-making have allowed effective planning and execution of stop improvements. Metro Transit proves that when a transit agency supports its bus stop program with a vision, a long-term plan, funding, and a committed and cooperative staff, it can quickly improve bus stops across the region.

Using staff-developed guidelines, the transit agency itself decides where to put improvements. Since 2016 and with support of the FTA Ladders of Opportunity grant, the agency has also been including transit riders' voices in the evaluation process. This focus bolsters the agency's equity strategy and helps benefit underserved neighborhoods. The engagement effort influenced how Metro Transit has planned the hundreds of improvements to bus stops over the past few years. Metro Transit's decision to apply for this grant also illustrates the importance of an agency's willingness to prioritize stops and resourcefully seek out revenues to make it happen.

Metro Transit's positive outcomes are partly due to its decision to involve few external partners in the bus stop program. However, better coordination and maintenance of data—currently dispersed across different departments—would result in better management of the bus stop program. This could help to allocate sufficient funding to bus stop maintenance, a challenge for Metro Transit.

Metro Transit and its bus system

Metro Transit is the major transit service provider in the 3.6 million-resident Minneapolis-St. Paul region of Minnesota. The agency runs service to 7 counties and 90 municipalities over 907 square miles. Metro Transit is a division of the Twin Cities' Metropolitan Planning Organization (MPO), the Metropolitan Council. The council's 17 appointed members govern the transit agency and approve its annual budget.

The agency operates over 120 bus routes, two light rail lines, and one commuter rail line. In 2016, Metro Transit provided around 195,000 bus rides on the average weekday. The bus service is the workhorse of the network, serving 12,100 stops and comprising 72 percent of the average system-wide weekday boardings.[25] There are around 1,000 bus shelters in the system, of which Metro Transit owns 970.

Responsibility for bus stops

Metro Transit has primary responsibility for its bus stops system-wide. It negotiates with municipalities when placing new bus stops but retains control of stops once they are established. Its authority extends to stop amenities, including the planning, funding, siting, installation, and ongoing maintenance for each bus shelter.

Within the agency, departments divide and coordinate responsibilities for bus stops. Street Operations decides locations, Transit Information provides signage, and Engineering and Facilities manages improvements, including shelters. Informal but effective interdepartmental exchanges of conversations, emails, and meetings create effective, "un-siloed" communications about the bus stop program.

Intersection, a private company on contract, sells advertising space on all Metro Transit commuter rail, light rail and bus vehicles, and properties. According to the contract, Metro Transit receives 65 percent of the total revenues that Intersection earns from the advertising space. The revenue goes to the operating budget for each mode (so earnings from ads on bus vehicles and shelters supplement the bus operating budget). The ad revenues are an important part of Metro Transit's budget, totaling around $4.3 million for all modes in 2016, according to the National Transit Database.[26]

Funding and planning for bus stops

Metro Transit recently developed a well-defined plan for bus stops, which also addresses social equity. Before 2014, the agency had loosely evaluated the need for bus stop amenities based on where service was less frequent (with potentially longer waits at stops), equal geographic distribution of resources, and requests from local leaders. These practices led to disproportionately high placement of amenities in low-ridership areas with infrequent service but vocal constituents, and correspondingly suboptimal service in areas with many transit riders. And until 2015, over 200 shelters were out of Metro Transit's control, managed by a private advertising company that failed to maintain or replace shelters as needed.

In 2014, Metro Transit applied for and received a grant from the Federal Transit Administration's Ladders of Opportunity initiative. The now-defunct Obama administration program funded vehicles or facilities of bus service that connects low-income, veteran, or senior

Figure 6. Responsibility for Bus Stops in Minneapolis-St. Paul

MAIN / 150TH ST.

16A	Downtown	1 min
54	Grand Station	4 min
16A	Downtown	9 min

Ad

Metro Transit

- Placing the sign
- Info on the sign
- Chooses bus stop location
- Bus Shelter location
- Installing bus shelter and attached seating
- Maintenance of bus stop
- Trash can

Private Sector

- Ads in shelter (Intersection)
- Sidewalk bench (U.S. Bench)

Department of Public Works

- Sidewalk
- Crosswalk

Twin Cities' Metro Transit collects community input to inform bus stop planning.

individuals to jobs, health care, and other services. The grant plus Metro Transit's required 20 percent match totaled $4 million and created the Better Bus Stops program.

Metro Transit was one of a few agencies that used the Ladders of Opportunity program to implement widespread, modest upgrades—via bus stops—instead of purchasing big-ticket items like new vehicles or transit center renovations.[27] The Better Bus Stops program's objectives are to install ADA-compliant pads at all stops, replace aged shelters, add new amenities, heat and light bus stops, and improve route and stop information available system-wide. It targets improvements in neighborhoods where the majority of residents are people of color experiencing poverty.

A strength of Metro Transit's grant application and the ensuing Better Bus Stops program is the agency's commitment to garner community input to inform the planning effort. Metro Transit devoted 10 percent of its grant funding to hire local organizations to engage over 7,000 transit riders in discussions or surveys about stop improvements. Riders' feedback on which amenities are most valuable, where improvements should be prioritized, and shelter designs—among other topics—were collected.[28]

This year-long campaign helped to translate the Better Bus Stops vision into a reality. Metro Transit adjusted its placement guidelines to evaluate all stops uniformly before placing shelters. To evaluate agency success in meeting its equitable planning goals, Metro Transit also created internal measures that assess how many riders use amenities, replacing the former method of counting the number of amenities per geographic area.

The Better Bus Stops program has resulted in more equitable bus stop planning, due to the revised Shelter Placement Guidelines and internal performance measures. Over 200 shelters have been added or improved in neighborhoods with concentrated poverty.

Listening closely to riders also yielded important yet predictable insight. Survey participants ranked simple amenities like benches, schedules, and safe street crossings at bus stops as essential as shelters. For some potential riders, benches are crucial because they cannot use the bus if they are not sure there is a place to sit while they wait at the stop. As a result, Metro Transit is assessing how other cities provide public benches near bus stops to determine how it could provide benches itself.

Table 2. Metro Transit's Amenity Performance Measures

Performance Measure	Performance as of 2018
The percent of bus boardings at stops with shelters	60%
The percent of boardings at stops with light	30%
The percent of boardings at stops with heat	10%
The percent of boardings at stops with real-time information	15%

Source: Metro Transit staff, 2018

Better Bus Stops' one-time grant funding to enhance bus stops will run out in 2019. But the program has spawned an institutional intention to commit to bus stops over the long term. According to Metro Transit staff, the agency has more modest Capital Improvement Program (CIP) funds to support limited improvements to bus stops after 2019.

Implementing bus stop improvements

Given its singular control over its established bus stops, Metro Transit follows a relatively straightforward process to implement stop improvements (its authority does not extend to improvements to sidewalks around stops). Metro Transit engineers draft a design of the improvement, which is shared with the local municipality. The municipal public works department determines if the new amenity allows acceptable pedestrian clearance, road clearance, and vehicle sightlines and if so, approves the design. The Metro Transit Engineering & Facilities Director then notifies the city council member whose district is affected, but a public hearing isn't required for approval.

With the approvals in place, Metro Transit implements the improvements to the bus stop. Metro Transit designs and builds its shelters in-house. Shelters carry Metro Transit branding to aid wayfinding and are made from vandalism-resistant materials.

Riders ranked simple amenities like bus stop benches, schedules, and safe street crossings as essential as shelters.

Metro Transit Shelter Placement Guidelines

Under the new guidelines, all stops must have at least 30 average daily boardings to be eligible for a new shelter.[29] Other ridership and physical factors are then weighed to decide which stops get shelters. Stops with high ridership that are close to an electrical connection are also considered for heated or lit shelters. Meanwhile, low-use existing shelters are considered for removal.

The stop has at least 30 average daily boardings per day.

Ridership Considerations
— Very high ridership (100+ daily boardings)
— Ridership of people with disabilities
— Ridership of older people
— Share of no-car households nearby
— Major transfer points nearby

Physical Considerations
— Concrete surface or possible to install pad
— Shelter doesn't obstruct sidewalk clearance for pedestrians
— Shelter doesn't obstruct road clearance
— Shelter doesn't block traffic and building sightlines
— Site is/can be made ADA compliant
— Site is not on private property

Metro Transit's control over its bus stops results in straightforward improvements.

Different-sized models are used to adapt to various space constraints. Shelters are carefully placed with respect to riders as space allows—facing south or east to protect from the elements and maximize sunlight, opening towards the sidewalk to keep snow out, and clear of obstructions to keep a line of sight between riders and bus drivers.

Maintaining bus stops and the bus stop program

Metro Transit is responsible for regular maintenance at the 970 bus stops where it owns shelters. This includes repairing structural damage, attending to vandalism, clearing snow, and picking up litter. Metro Transit's maintenance department is responsible for all of the system's public bus and rail facilities, yet has limited funding and staff. This inhibits them from providing sufficient care to all shelters system-wide, and stops without shelters are not maintained at all. A growing number of shelters increases the maintenance burden. The agency lacks a reliable metric for the cost of maintaining any level of stops or shelters, which makes it difficult to dedicate appropriate funding for incremental increases in shelter numbers. Without clear cost estimates for maintenance, the department has not been able to effectively meet maintenance needs.

A legacy database of Metro Transit's stops links stop ID to shelter information: the availability of a shelter, including shelter ID and the type of shelter; the availability of heat or light and the power source; and the Metro Transit employee responsible for stop maintenance. The database does not track each stop's ADA accessibility. Engineering & Facilities maintains these shelter data, while the Service Developments and Transit Information departments manage stop data and stop signage data, respectively. All three data types—stops, shelters and signage—are in different databases that connect the relationship by stop ID.

More streamlined and detailed data management about each bus stop could support more data-driven plans for bus stop improvements and help inform an accurate budget. For example, Metro Transit might be able to estimate bus stop maintenance costs if it could mine its work-order data to determine the maintenance history of bus stops (including how often bus stops were maintained).

Case Study

Portland, Oregon: Fewer Stops, With a Better Walk & Wait at Each

TriMet prioritizes safe walking to bus stops.

TriMet's strong control of bus stops, meticulous stop guidelines, and substantial funding have resulted in a high ratio of amenities to bus stops across the region.

Of the agencies studied, TriMet uniquely prioritizes the riders' pre-boarding experience. It asserts that if the walk to a stop is uncomfortable or inaccessible for pedestrians, then its amenities will go unused. Improvements to sidewalks, crossings, signage, and lighting at and around bus stops aim to address the quality of the walk. To improve these conditions, which are technically outside its purview, TriMet uses its own funding and intergovernmental agreements with local jurisdictions and Oregon State Highway Department, depending upon which entity owns the right of way.

On bus stop investment trade-offs, TriMet takes decisive, customer-focused stances that differ from many agencies. The agency places shelters where they will serve customers best, rather than where they will generate the most revenue. TriMet also evaluates and adjusts its stops in an effort to maintain a high ratio of amenities to stops. By balancing stop spacing, it can provide amenities at a higher percentage of stops.

Introduction to TriMet and its bus system

TriMet is the transit agency for the Portland, Oregon metropolitan region. Its operations serve a region of 2 million people across 27 local jurisdictions. On an average weekday, Portland-area residents take 312,000 rides on TriMet's 79 bus routes and 5 light rail lines. Bus ridership makes up 59 percent of the agency's total transit ridership.[30] TriMet's service area includes 6,600 stops, including 1,100, or 17 percent, with a bus shelter.

Responsibility for bus stops and improvements

TriMet spearheads the process to build bus stops in Portland. Compared to other regions' transit agencies, the agency plays an exceptionally active role in its bus stop program. The agency approves stop locations, places signage, and retains ownership of all shelters; it also contributes a large amount of funding for bus stop improvements.

TriMet contracts with Lamar, an advertising agency, to place advertisements within a small share of its shelters. Unlike other agencies, TriMet retains ownership of its shelters but bids out

Figure 7. Responsibility for Bus Stops in Portland

TriMet	Private Sector	PBOT, ODOT or other city street agency. Funding for improvements provided by TriMet
• Placing the sign • Info on the sign • Chooses bus stop location • Bus shelter location • Installing bus shelter and attached seating • Trash can • Real-time signs	• Maintenance of bus stop (paid by TriMet) • Ads in shelter (Lamar)	• Sidewalk • Crosswalk

TriMet's bus stop guidelines weigh ridership and the locations of schools and senior centers to determine where amenities go.

advertising space within them. TriMet contracts with Lamar, an advertiser, to place advertisements within a small share of its shelters. The contract generates advertising revenue for TriMet, though the funds are not earmarked for bus stop amenities. Under the program, Lamar invested half a million dollars in infrastructure for shelters and benches but does not maintain them. This agreement only applies to the 143, or 13 percent, of TriMet's shelters that have advertising.[31]

Long-term planning for bus stop improvements

TriMet's strong role in planning bus stops dates to 1992, when the agency received a federal grant to replace 500 of its existing bus shelters. Rather than take down and rebuild in the same spots, TriMet decided to reevaluate its methods of shelter placement and locate the new shelters accordingly. Previously shelters and other amenities were distributed geographically throughout the region, without consideration for usage. A staff convening resulted in guidelines for placing bus stops and shelters, which are still used today. The guidelines weigh ridership, wheelchair lift usage, and the locations of schools and senior centers to determine where bus stop amenities should go.

Last updated in 2010, TriMet's bus stop guidelines lay out a meticulously-detailed vision for siting and improving bus stops. The overall goal is to locate bus stops, signs, and amenities consistently among all communities. Priorities for TriMet's bus stops are:

— Evaluate all stops for placement of amenities before selecting sites that are most consistent with guidelines, e.g. where it is physically feasible, inexpensive, and equitable to place amenities, and where other protections (e.g. awnings) are not available
— Upgrade pavement and other conditions so that stops are accessible before adding shelters and other customer amenities
— Provide printed schedules at bus stops to improve customer information
— Update or replace old bus stop signage so that information is visible from both directions
— Identify unsafe or uncomfortable pedestrian conditions near bus stops and work with property owners to improve them
— Seek agreements with private property owners to fund or place bus stop amenities

Within five years, TriMet aims for half of its 6,000 stops to have quality lighting, seating, or a shelter.

— Generate revenue with ads on shelters and benches
— Maintain and expand public outreach programs and find more effective ways to solicit process and respond to community and customer input
— Balance bus stop spacing to speed up bus service

Unique amongst approaches to bus stop management is TriMet's focus on keeping the amenity to stop ratio high through consistent evaluation of stops and periodic rebalancing. Since 2008, TriMet has reduced bus stops from 7,800 to 6,600. TriMet has a five-year goal to reduce stops by 10 percent more, to 6,000 stops. Within five years, TriMet aims for half of the 6,000 stops to have an amenity—quality lighting, seating, a trash bin, or a shelter. As part of that goal, TriMet plans to add 100 new shelters by the end of the five years.

TriMet backs the guidelines with an $800,000-900,000 annual capital budget for bus stop development. This includes $115,000 to install from 15 to 20 new shelters per year and salaries for five full-time employees to manage stops. The agency uses its own staff to place bus stop signs but contracts out some duties, including shelter installation and maintenance, to private companies or local jurisdictions.

Implementation of bus stop amenities

Generally, shelters are only placed at stops with a minimum of 50 weekday boardings. Shelters may be placed at stops with 35 weekday boardings or more, if the stop is proximate to a senior facility, has at least 15-20 lift uses per month, or is on a route with a 17-minute-or-more headway.

The process for shelter placement varies by municipality. TriMet has had blanket permission to place them in the City of Portland since the 1990s. In an intergovernmental agreement, the City of Portland approved TriMet's standard shelter design and developed criteria by which TriMet could adhere to place shelters without seeking approval for each one. Some suburban jurisdictions have followed with their own blanket permits for shelters, but in others TriMet has to win approval for each one.

TriMet uses a few standard shelter designs, all meant to be modular and replaceable, with stop needs determining the model used. Where ridership is higher, wider shelters are installed. At 59 lower-ridership stops, TriMet installed seating for one rider built into the bus stop

Zone 2

4
Frequent Service
To Gresham TC

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Table 3. TriMet Bus Stop Amenities, as of 2010

	# of Bus Stops[32]
With shelters	**1,046** **143 with advertisements**
With benches	**1,775** **969 are in shelters** **728 are advertising benches** **59 are integrated with the bus stop pole** ***Non-exclusive categories**
With additional lights installed by TriMet	**411**
With trash can	**739**

Source: TriMet, 2010

pole. The inexpensive cost of installation allowed the amenities to be included at bus stops with less than 10 boardings per weekday. TriMet staff say that while real-time information is popular among riders, the agency is moving away from installing it due to the high cost of electrifying shelters.

TriMet plans on refurbishing each shelter every five years and replacing the estimated 10 shelters destroyed in car crashes annually. On the other hand, the agency is not expanding shelter numbers significantly; TriMet staff contend that the stops where shelters could easily be installed already have them. The bus stop design guidelines identify 150 stops that have high ridership but which are ineligible for a shelter without large capital investments like widening sidewalks.

The Oregon Legislature also requires that developers seek TriMet's comment on any new development proposed along a transit route. This allows TriMet to encourage developers to include bus stop improvements in their development designs, including overhangs, benches, or sidewalk extensions.

Maintaining bus stops and the bus stop program

TriMet contracts bus stop maintenance out under three separate five-year agreements, one for each third of its service area. The latest contract, signed in 2018, is for $1.2 million over five years and commits the contractor to cleaning stops in its section once a week. The contractor is only required to actively clean bus stops that have shelters or trash cans.

TriMet also organizes an Adopt-a-Stop program to encourage residents or businesses to keep nearby stops clean. Through the program, TriMet provides the trash bin and adds a plaque acknowledging the sponsoring group. The group must provide the trash bags and empty the trash regularly.

TriMet maintains a database of stops that describes the condition of each stop and its boardings. It uses the database to plan and maintain its bus stop program.

Improving the Walk to Transit

TriMet identifies 32 percent of its stops as lacking adequate pedestrian connections, due to lack of pavement, interrupted sidewalks, or no sidewalk or crosswalk connections.[33] But the agency has created a process to implement pedestrian improvements around those stops. In 2010 TriMet conducted a Pedestrian Network Analysis to address inaccessibility and bolster ridership. The analysis evaluated the comfort level of the walking environment around transit stops. TriMet committed to improving the ten worst areas, then conducted walking audits at those stops to identify which improvements should be made.

TriMet has worked in partnership with Portland Bureau of Transportation to improve the walk to transit at locations identified by the Pedestrian Network Analysis. Under an intergovernmental agreement, TriMet pays for the capital improvements to stops, including flashing beacons and paint for crosswalks. Portland Bureau of Transportation uses its staff and contractors to install the improvements and maintain them.

This is similar to how TriMet and municipalities maintain conditions near bus stops outside of Portland. Municipalities are responsible for pouring concrete pads at bus stops and for maintaining the sidewalks and crosswalks near bus stops, and TriMet provides funding for those improvements through intergovernmental agreements. TriMet's Corridor Safety & Access to Transit program supports improvements on bus routes that travel on Oregon DOT-controlled state roads. The initiative installs flashing beacons, sidewalk extensions, and marked crosswalks at bus stops on state roads. State grants fund 90 percent of the program, while TriMet and local jurisdictions fund the remainder.

Pittsburgh, Pennsylvania: Fighting for Bus Riders, But Lacking a Coordinated Bus Stop Plan

Pittsburgh and its transit agency lack long-term plans for bus stops.

The Port Authority of Allegheny County (PAAC) and the City of Pittsburgh split responsibility for bus stops, with the city managing stops within its boundaries and the PAAC responsible for the rest. Separate decision-making, investment, implementation, and transit cultures have led to an incomplete regional vision and varied outcomes for bus stops. Organizational changes in stop management could foster more improvements.

The Port Authority of Allegheny County and the City of Pittsburgh (which are controlled by different elected officials) both try to consider ridership and other factors in amenity placement but lack public guidelines or long-term plans for bus stops. This inhibits their abilities to support investment decisions for bus stops and to guarantee the provision of good bus stops in the future.

Facing opposition to stop improvements from some property owners, PAAC frames the benefits of stop amenities to the whole community, not just for riders. Its message is that transit users will wait at stops regardless of those stops' amenities; when shelters, benches, and receptacles are provided, riders will use them, rather than a private property's awnings, stoops, trash cans, etc.

The City has contracted with advertisers to build and maintain its shelters. But past agreements have been weakly connected to a goal of improving the transit experience, resulting in limited and poorly-managed amenities. Last year, Pittsburgh's new Department of Mobility and Infrastructure took over management of bus stops and worked on a new contract that will empower it to provide high-quality bus stop amenities through an advertising company. The new contract reasserts the city's control over bus stops. It will unbundle shelter advertising from billboards, give the City more authority on placement, and hold the advertiser accountable for building and maintenance.

Introduction to the Port Authority of Allegheny County and its bus system

The Port Authority of Allegheny County provides public transit service to Pittsburgh and its suburbs. The PAAC's service area is 775 square miles, covering Allegheny County and parts of Beaver, Washington, and Westmoreland Counties—an area of around 1.3 million residents. The network provides fixed route bus, light rail, and incline plane service.

In 2015, riders took on average 180,000 bus trips per weekday, accounting for 84 percent of all transit trips.[34] The network has around 7,000 bus stops, and about 600, or 8.5 percent, have shelters.

Responsibility for bus stops

Responsibility for bus stops in the Pittsburgh region is split between the PAAC and the City of Pittsburgh. The PAAC manages bus stops in the suburbs and on busways in Pittsburgh—in total, around 5,000

Figure 8. Responsibility for Bus Stops in Pittsburgh (In the City)
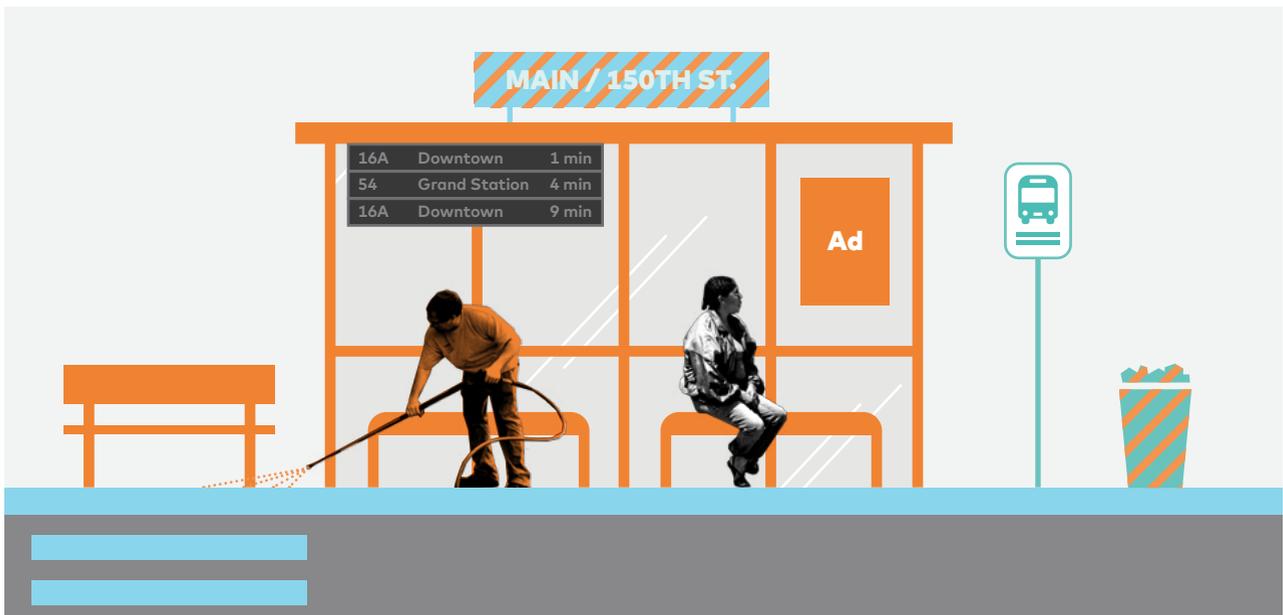
PAAC

- Placing the sign
- Info on the sign
- Trash can (or Private Company)
- Choosing bus stop location

Private Sector

- Bus shelter location (with City of Pittsburgh)
- Installing bus shelter and attached seating
- Maintenance of bus stop
- Ads in shelter
- Trash can (or PAAC; will be private advertising company once new relationship goes into effect)
- Sidewalk bench (once new relationship goes into effect)

City of Pittsburgh

- Bus shelter location (with private company)
- Sidewalk
- Crosswalk

stops and 200 shelters. The agency's Service Development group works with Allegheny County municipalities excluding Pittsburgh to locate bus stops; the Facilities and Technical Support teams install amenities and maintain them. The Port Authority funds the bus stop program with its own budget, directed by its executives and board. Within city limits but outside the busways, the City of Pittsburgh's Department of Mobility and Infrastructure is responsible for bus stops.

Figure 9. Responsibility for Bus Stops in Pittsburgh (Outside the City)

PAAC

- Placing the sign
- Info on the sign
- Choosing bus stop location
- Bus shelter location
- Installing bus shelter and attached seating (or private property owner)
- Maintenance of bus stops
- Trash can (or private property owner or municipality)
- Sidewalk bench (or private property owner or municipality)

Private Sector

- Trash can (or PAAC or municipality)
- Sidewalk bench (or PAAC or municipality)

Local Jurisdiction

- Trash can (or PAAC or private property owner)
- Sidewalk bench (or PAAC or private property owner)
- Sidewalk
- Crosswalk

Planning for Allegheny County bus stops outside of Pittsburgh

The Port Authority of Allegheny County envisions bus stop improvements as an extension of the bus service it provides, making the ridership experience easier more pleasant for all of their customers.

Accordingly, the Port Authority of Allegheny County evaluates requests for shelters outside the city of Pittsburgh—which mostly come from transit riders themselves—based on actual ridership counts. For each stop, it considers boardings, proximity to transfer points or park and ride lots, and accessibility to senior citizen and people with disabilities. Staff use their professional judgement in weighing these criteria. In line with their use-based shelter placement criteria, Port Authority planners would like to consider relocating shelters at low ridership stops. However, this objective is not officially part of the planning process.

PAAC planners also examine physical characteristics—like narrow rights-of-way and steep slopes that cannot support an ADA-compliant shelter—and exposure to the elements. Hilly regional topography limits the places where sidewalks are flat

and wide enough to host shelters. Some of the most-used stops cannot support shelters because of steep slopes and narrow sidewalks.

As of summer 2018, the PAAC does not have bus stop guidelines, shelter placement guidelines, nor a long-term bus stop plan. The agency also does not have a public platform to describe how bus stop improvements further its objective to provide services to its constituents, or how it plans to prioritize bus stop improvements. That being said, the PAAC has stipulated future plans for bus stops: beginning in FY19, it will devote $475,000 to small improvements at bus stops, including concrete repair, repainting, and adding benches or trash cans. However, these investment locations are to be determined. The agency is in the initial stages of drafting bus stop design guidelines.

Table 4. Principles for Shelter Placement: Port Authority of Allegheny County, City of Pittsburgh

High Ridership	**Stops serving high numbers of passengers**
Vulnerable Populations	**Stops serving high numbers of seniors and/or persons with disabilities**
Transfer Points	**Stops in locations where high numbers of passengers transfer between vehicles**
High Wait Time	**Inbound stops in the outer system & outbound stops in Downtown and Oakland**
Park and Ride	**Stops close to park and ride lots**
Topography	**Stops in locations where a shelter will not interfere with pedestrian or vehicle clearance**
Weather	**Stops in locations with high winds or other harsh weather effects**

Source: City of Pittsburgh and Port Authority of Allegheny County, 2018

Pittsburgh is re-negotiating its shelter contract to produce better bus stops.

Port Authority staff underscore the importance of bus stop upgrades to the community.

Implementing bus stop improvements

The PAAC purchases, installs, and maintains its shelters. Depending on ridership, the PAAC may provide and empty trash receptacles or leave that to the municipality. The speed of implementation varies depending on the partner party; red tape can prolong the process when the PAAC works with other governments.

In October 2017, Port Authority officials approved the $1.5 million purchase of 295 new shelters. The structures will be installed starting in Summer 2018; some will replace old structures and others will be sited in new locations, based on criteria for shelter need.[35]

The PAAC (as well as the City of Pittsburgh) encourages developers and businesses to assume some responsibility for bus stops that their clientele may use. The governing bodies can leverage developmental variances or transit service in return for shelters or other stop amenities.

Negative perceptions of bus riders have hindered implementing improvements to bus stops in the past, as property owners have questioned if shelters will bring unwanted traffic to their neighborhood. Port Authority staff counteract this theme by underscoring the importance of bus stop upgrades to the community at large, including to non-transit users. The Port Authority consistently argues in public meetings that providing more complete waiting areas for transit riders will decrease the need for riders to seek shelter or dispose of trash on private property.

Maintaining bus stops and the bus stop program

The PAAC maintains all of its shelters. Depending on maintenance needs, staff attend to shelters up to twice per week; less-used shelters are serviced less frequently. The PAAC removes snow from shelters on public rights-of-way; on private property, landowners are responsible for shoveling. Under the contract between the landowner and the PAAC, shelters can be removed if they become too costly to maintain due to excessive vandalism. To track this, the PAAC manages an internal bus shelter database that records the shelter owner and history of vandalism or other maintenance issues.

The Port Authority of Allegheny County also makes spatial bus stop information available to the public on its website. For each stop in the system, the spatial database tracks boardings and alightings, ADA status, curb cuts, and amenities present (benches, phones, and shelters), and shelter owners.[36]

The City Government's Role in Pittsburgh Bus Stops

For its part, the City of Pittsburgh is responsible for maintaining and improving most bus stops within its borders—totaling around 3,000 stops and 250 bus shelters. The City has contracted with private advertisers, who earn revenues from placing ads on bus shelters in return for installing and maintaining them. Because the advertiser shares a cut of profits and does maintenance, bus shelters are a revenue stream for the City's general budget. But the City is also beholden to the contracted relationship; due to cost constraints, City staff say it cannot afford to expand shelters by itself.

In 1998, the City entered a 20-year contract that made Lamar Advertising the proprietor of City-owned advertising space. This included billboards—the primary revenue stream—and its bus shelters. The agreement stipulated that Lamar build shelters and share revenues; it suggested that Lamar maintain shelters but did not require it. Lamar played a role in placement but in general, it treated managing shelters as a secondary concern to its advertising business. This resulted in poor outcomes, like putting shelters where the ads would be most visible to passers-by rather than where they were needed by transit riders, subpar maintenance, and failure to replace old shelters (the City's newest are twenty years old).

In Fall 2017 the City sought a new bus shelter advertising partner for the next ten years.[37] The $1.4 million request for proposals awards the right to advertise on the City's bus shelters and other street furniture, in exchange for replacing the 250 existing shelters and adding 50 new ones to new locations. This RFP process also reorganized the shelter program, putting bus shelters, information kiosks, and stop amenities on a separate contract from other advertising formats. The Department of Mobility and Infrastructure, which manages transportation and the public right-of-way, has taken over the shelter program from Finance, a department without expertise or enthusiasm for improving bus stops.

In the recent RFP, the City clarified its objective to provide "safe, attractive and well-maintained shelters" for transit riders over maximizing advertising revenues.[38] The City also expressed its expectations for an advertising partner and the division of responsibilities. It has final discretion on shelter locations and requires that the advertiser follow its design principles. The advertiser must obtain permits for shelters, but City staff will expedite the process and minimize council member input on approvals. The advertiser must proactively install, maintain, repair, and remove snow from the amenities. Finally, the RFP set a timeline for shelter implementation (for example, the number of shelters to be replaced in two years) and empowers the City to hold the advertiser accountable through financial penalties.

This vision for the bus stop program contrasts favorably with the outcomes of the old contract. The City has reprioritized bus stop improvements, viewing shelters as a necessary, city-provided service rather than a revenue add-on. City staff indicate that 50 new shelters will be placed according to revised criteria that weigh ridership and equity heavily. In short, the City used the re-negotiation process to reassert its own authority in its bus stop program and to prioritize the customer's experience at bus stops.
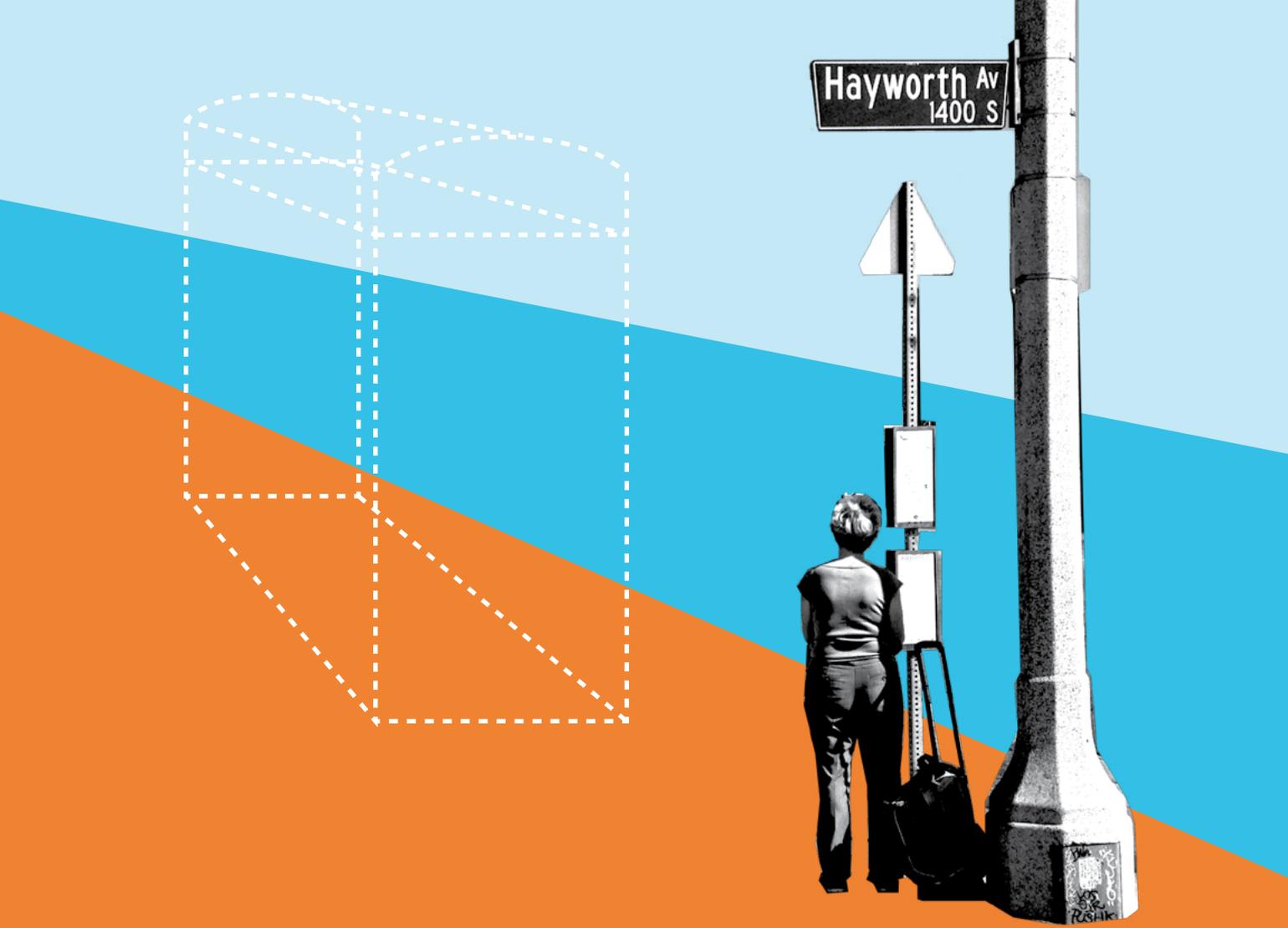
Los Angeles, California: When Everyone Has a Say on Shelters, Few Get Built

LA Metro leaves stop upgrades on local routes to individual cities. The quality of bus stops varies widely.

In Los Angeles, complex ownership and an elaborate approval process hamstring widespread improvements to bus stops. In the City of Los Angeles, LA Metro and the City's Bureau of Street Services (BSS) work independently from each other to manage and upgrade bus stops depending on the service type. Outside the city, LA Metro negotiates every bus stop placement with each municipality and leaves amenity planning to them, which slows approval and implementation of improvements that riders need.

Contractual stipulations and the Los Angeles City Council have severely limited the number of bus shelters built recently in the City of LA. The locations of built shelters have largely been chosen for their advertising value, rather than their value to riders. The experience in Los Angeles makes a definitive case for rewriting contracts that unbundle transit amenities from other advertising products, limiting the parties involved, approving shelters with blanket permits, and focusing on building amenities rather than placing ads. It also reinforces that bus stop improvements should be made with the transit customer first in mind.

LA Metro has ceded authority to the nearly one hundred jurisdictions it works with on bus stops, taking a hands-off role in planning and funding for amenities. But as the agency tasked with public transit in the region, LA Metro should lead on all measures that improve the transit experience (including the planning of stop improvements), work actively with jurisdictions to place shelters, set agency-wide standards for placement and design, and organize intra-agency communications.

Despite its history of bus stop mismanagement, LA Metro is laying the foundation to improve, building a detailed bus stop database with information on amenities, accessibility, and surroundings. The data will aid in service provision and planning efforts—such as guiding LA Metro's grant funding to cities to improve stops. This will be valuable in the City of LA, where 20 percent of LA Metro's existing stops are not ADA compliant and cannot fit a shelter.

LA Metro and its bus system

LA Metro plans and operates the largest bus and rail system for Los Angeles County, a 1,433 square mile service area with 88 municipalities and over 10 million residents. The City of Los Angeles is the heart of the region, with a population of about 4 million. The LA Metro bus system is the second largest in the country, with 170 bus routes and nearly 16,000 bus stops.[39] On an average weekday in 2017, riders took 900,000 trips on LA Metro's buses, more than twice the ridership on the rail network. Bus service centers around the City of LA, where half of all bus stops are located and three-quarters of total bus ridership is within the City.[40] Twenty-four percent of stops in the city have shelters.

Responsibility for bus stops

As a state-created entity, LA Metro can site or relocate stops without consent from any of the 88 municipalities that its bus system serves. However the transit agency's responsibility ends at placing the bus stop.

LA Metro has largely left stop upgrades on local routes to each individual city and the quality and distribution of bus stop amenities vary widely across the county. Most municipalities are responsible for planning, funding, installing, and maintaining any additional improvements to local-service stops or nearby sidewalks. LA Metro takes on these duties from some municipalities, based on requests from municipalities.

LA Metro is using funding from Measure M, a ballot measure approved by voters in 2016, and federal funds to design and implement unique shelters along BRT routes (see page 63). But its involvement in local service bus stops does not extend beyond placing signage, despite numerous ways it could support stop improvements. Measure M is expected to raise $361 million for first-last mile capital investments, including improvements to transit stops and stations and a commitment from the board to improve connections to the 100 busiest bus stops in
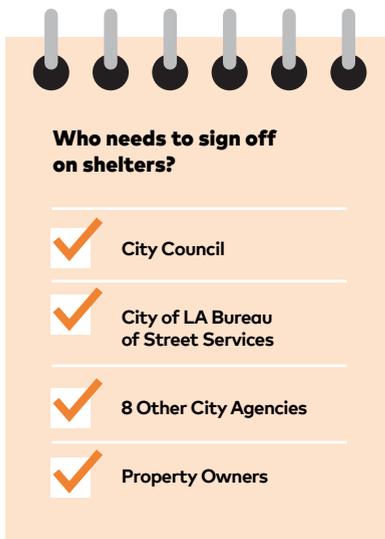
Who needs to sign off on shelters?

- ✓ City Council
- ✓ City of LA Bureau of Street Services
- ✓ 8 Other City Agencies
- ✓ Property Owners

## Figure 10. Responsibility for Bus Stops in Los Angeles (In the City)

LA Metro
- Placing the sign
- Info on the sign
- Chooses bus stop location

City of LA DOT
- Crosswalk

Private Sector
- Installing bus shelter and attached seating (contracted by City of LA BSS)
- Trash can (contracted by City of LA BSS)
- Sidewalk bench (Martin Outdoor Media, contracted by City of LA BSS)
- Maintenance of bus shelter
- Ads in shelter
- Real-time sign

City of LA Bureau of Street Services
- Bus shelter location (with approval from City Council + 8 cities agencies + public appeals process)
- Installing bus shelter and attached seating (contractor)
- Trash can (contractor)
- Sidewalk bench (contractor)
- Sidewalk

Figure 11. Responsibility for Bus Stops in Los Angeles (Outside the City)
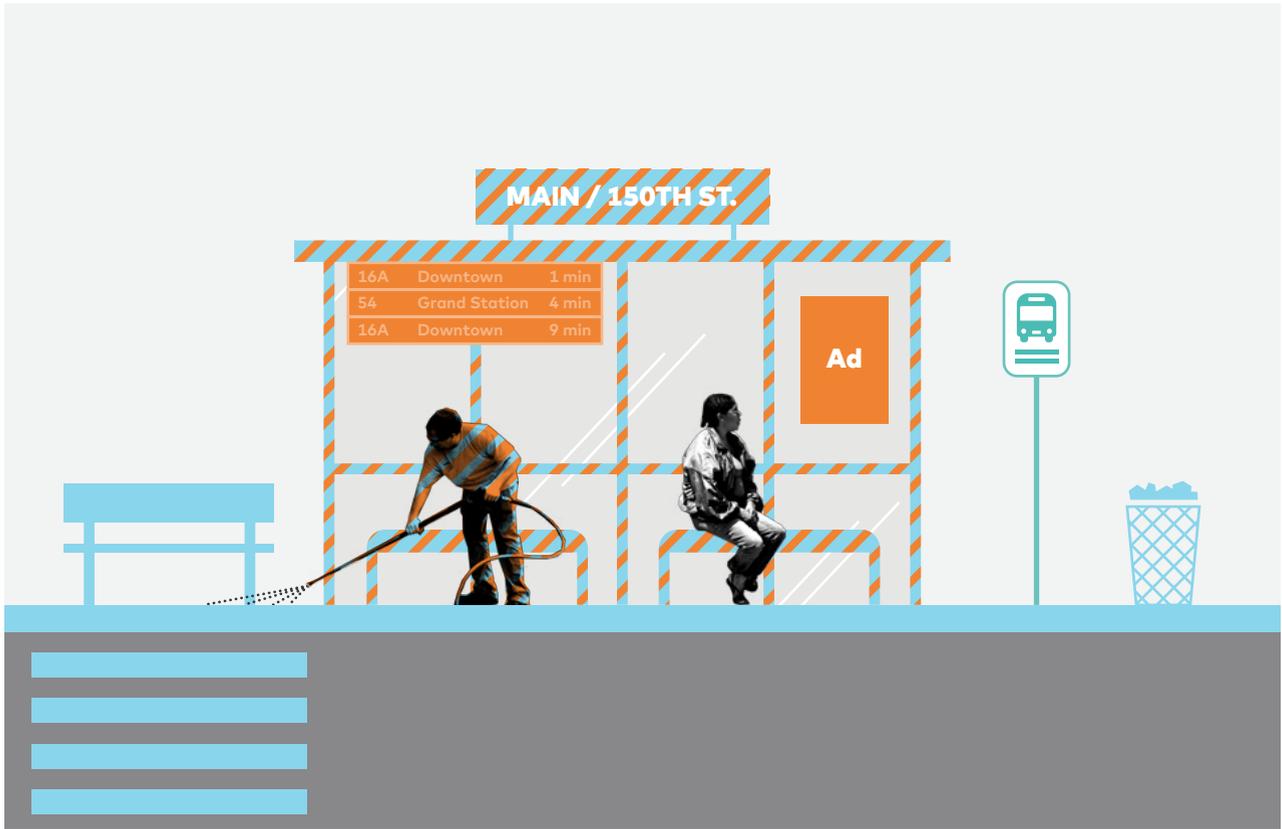
MAIN / 150TH ST.

16A	Downtown	1 min
54	Grand Station	4 min
16A	Downtown	9 min

Ad

LA Metro

- Placing the sign
- Info on the sign
- Choosing bus stop location

Private Sector

- Bus shelter location (or local jurisdiction)
- Installing bus shelter and attached seating (or local jurisdiction)
- Maintenance of bus stop (or local jurisdiction)
- Ads in shelter
- Real-time info

Local Jurisdiction

- Bus Shelter location (and maybe private advertising company)
- Installing bus shelter and attached seating (or private advertising company)
- Maintenance of bus stop (or private company)
- Trash can
- Sidewalk bench
- Sidewalk
- Crosswalk

Figure 12. Responsibility for Bus Stops in Los Angeles (Rapid Bus in the City)

MAIN / 150TH ST.

16A	Downtown	1 min
54	Grand Station	4 min
16A	Downtown	9 min

Ad

LA Metro
- Placing the sign
- Info on the sign
- Choosing bus stop location
- Bus shelter location
- Trash can
- Real-time info

Private Sector
- Installing bus shelter and attached seating
- Maintenance of shelter
- Ads in shelter

Local Jurisdiction
- Sidewalk bench
- Sidewalk
- Crosswalk

LA Metro is evaluating the accessibility of all bus stops in the county.

the system.[41] But plans do not identify increased spending for local stop improvements outside those 100. The agency also lacks criteria for evaluating bus stops for amenities. Consequently, LA Metro doesn't have an agenda or even a clear vision of where or what type of improvements would best serve riders.

Planning and implementing bus stops

LA Metro's Transit Service Policy outlines the preferred bus stop spacing for each of its service categories and suggests a general preference for stops on the far side of intersections (which speed up bus service).[42] The document calls out ways to speed up the agency's Metro Rapid service, including separating stops for rapid and local service and eliminating low ridership stops. However, it does not provide similar guidance for local services, and LA Metro does not have any other recent set of guidelines for local bus stops.

LA Metro's Stops and Zones team is tasked with deciding where to place bus stops and providing signage along all of its routes. The team evaluates new stop requests based on potential ridership, physical feasibility, and necessary service changes. Stops and Zones also reviews stop locations twice a year and moves stops as necessary. It is currently focused on adjusting all stops to the far side of intersections. When Stops and Zones decides to place or move a stop, it notifies the impacted city but sometimes does so after the fact. LA Metro doesn't make bus stop improvements themselves, instead leaving them up to the cities.

Maintaining bus stops and the bus stop program

LA Metro is currently revamping its bus stop database. Following a lawsuit over stop accessibility, the agency launched a qualitative review of all bus stops in the county in 2015. The primary goals of this Bus Stop Usability Initiative are to document the physical conditions at and around each stop, to determine its accessibility, record its amenities, and estimate the funding municipalities would need to bring it to new usability standards.[43] LA Metro, the paratransit operator, and the County Commission on Disabilities determine these standards. However, the project is time- and cost-intensive. Teams of two assess each stop using a 96-question survey, and only 7,000 of the total 25,000 stops were assessed as of Spring 2018.

Ultimately, LA Metro plans to digitize the database and make it public. Survey data on accessibility and amenities would be integrated with the agency's GTFS feed, allowing transit riders using smartphones to view stop conditions before planning a trip. The database would also give responsible groups—such as shelter advertisers or municipalities—a baseline to keep track of their stops' maintenance needs.

Stops in the City of Los Angeles

Managing and improving the 8,000 bus stops within city limits fall to the City Public Works Department's Bureau of Street Services, which is in charge of sidewalks and street furniture.

M Metro

33
40
55
355
733

G TRANS

A cumbersome approval process is responsible for 640 fewer shelters in the City of LA than the contract promised.

Leveraging LA's valuable media market, the BSS manages a long-term franchise advertising agreement that provides for the City's street furnishings, including bus shelters, and brings in net revenue for the municipal government. The current Coordinated Street Furniture Program launched in 2001, under a 20-year contract with Outfront/Decaux, an outdoor advertising company. Outfront/Decaux designs, purchases, installs, and maintains the City of LA's street furniture. In exchange, the group earns revenue from selling advertising space on the furnishings. Outfront/Decaux then shares 20 percent of its ad revenues with the City, which goes to its general fund. The contract details that Outfront/Decaux must inspect shelters multiple times per week and clean out trash, remove graffiti, power wash structures, and repair damage to shelters as needed. Outfront/Decaux is managing nineteen types of shelters in LA.

The Bureau of Street Services and Outfront/Decaux jointly decide where bus stop shelters (as well as other stop improvements and amenities) should go. The Bureau of Street Services aims to place an equal number of shelters per City Council district, at the stops with the highest ridership. Other factors—such as right-of-way constraints, ADA requirements, private property interference, and overlap with historic zones—are considered as needed. Outfront/Decaux observes the physical conditions around each stop during site visits and uses the information to plan feasible shelter placements. Outfront/Decaux also prefers to place shelters where pedestrian or vehicle traffic is highest—in other words, where the most people will see advertisements. This sometimes contradicts with the BSS's goal of equitable shelter expansion across the city; however the two parties agreed that advertisements will only be placed on a third of shelters. This benefits Outfront/Decaux by not oversaturating the advertising market and BSS by allowing them to place the remaining shelters where they want.

The original contract promised 2,500 new bus shelters as well as information kiosks, newsstands, and public toilets. The deal was estimated to bring in over $150 million in revenues to the city over 20 years (through 2021), yet it has fallen far short of that. As of 2018, the annual revenue from the franchise was about $6 million, and there are still 640 fewer shelters in the city than the contract promised. The contract's shelter approval process is largely responsible for the weak results.

Shelters in LA require approval from the City Council, Public Works, eight other city agencies along with nearby property owners.

Barriers to improving bus stops in the City of LA

The existing street furniture contract stipulates a bloated and inefficient process for adding shelters or making other improvements to City of LA bus stops. It has resulted in many fewer bus shelters installed than negotiated.

Currently, obtaining a permit for any single piece of street furniture—including bus shelters—requires approval from the City Council, Public Works and eight other city agencies, and nearby property owners. A single veto from a Council member or an appeals process from a constituent can effectively kill a permit. Shelters and other street furniture can take six months or more to be approved and installed—if they are approved at all. For the first ten years of the contract, the rollout of the shelters moved glacially behind schedule. For example, the contract aimed to install 1,300 shelters by 2003, by which time less than 400 had even been permitted. It was not until the City Controller raised the constraints of the process in 2012 that the council began to approve shelters more quickly.[44] Still, as of 2018, Outfront/Decaux has only installed 1,700 of the promised 2,500 shelters.

By comparison, New York City installed 3,500 shelters in five years under a recent Outfront/Decaux contract. And the City of LA's bus bench program contract has rolled out thousands of benches at bus stops since 2010. The bench contract's structure has some similarities to the street furniture contract's—it is managed by BSS, and Martin Outdoor Media places ads on benches in exchange for installing them and sharing revenues. The company also has to prioritize locations for benches as agreed to with the City. Yet thanks to the blanket permit for benches, over 800 were installed in the contract's first 5 months, and over 6,000 have been installed as of 2018.[45]

When the bus shelter contract took effect in 2001, City Council planned to give the Bureau of Street Services a blanket permit, so that all negotiated street furniture could be installed under one approval process. But community concern over placement of public toilets induced City Council to amend the contract, creating the current overwrought process for all street furniture. Both City and Outfront/Decaux staff describe this contract as structurally flawed, owing to its bundling of street furniture and lengthy permitting process. Many interviewees noted that it is a case study in how not

to structure a contract for implementing bus shelters. City Council will decide on extending the contract in 2021. The Bureau of Street Services will recommend that the extension allow all bus shelters to be approved at once under a blanket permit, and that shelters be exempted from the public review process.

The condition of the built environment is another obstacle to a quality pre-bus boarding experience for Angelenos. The city has decent coverage of sidewalks at bus stops, but sidewalk conditions is a recognized problem. In 2015, the City committed to spending $31 million annually to repair cracked sidewalks. Yet the program doesn't prioritize investments around bus stops, despite an increase in pedestrian fatalities on the City's busiest transit streets. Nineteen of LA Metro's 20 highest-ridership bus routes run along streets with high incidents of pedestrian injuries.[46] City of LA staff calculate that 20 percent of bus stops would be impossible to improve with shelters (and are currently not ADA-accessible), given their locations on narrow right-of-ways.

LA Metro Rapid and Stops Outside the City

LA Metro has begun to purchase and install bus shelters on Metro Rapid lines outside of the City of LA, with federal grant funding for rapid bus transit projects. The Engineering and Facilities team designed a new shelter type—distinct from the designs of Outfront/Decaux and others—that reflects the aesthetic of their rail stations. The shelters are solar-powered, which means they can be placed regardless of access to power. As of Spring 2018, it had installed around 100 of these new Metro Rapid bus shelters, in cities that would commit to subsequent shelter maintenance. Those shelters were sited based on physical attributes rather than ridership levels. LA Metro assessed which stops met limitations set by right-of-way clearance, ADA requirements, property owners' concerns, and interest from municipalities. Of stops that met the criteria, the agency compared ridership levels and stop spacing. Since most rapid bus stops have relatively high ridership, LA Metro justified placing shelters at about every mile.

As of 2018, Outfront/Decaux has installed and maintained Metro Rapid shelters in the City of LA. LA Metro plans to install and maintain its own shelters on its new Metro Rapid lines within the City. However, LA Metro also plans to install and maintain its own shelters on its Metro Rapid lines within the City of LA. However, the current Outfront/Decaux contract prevents the agency from placing any shelters within city boundaries, since that potential advertising space legally belongs to the City and its advertising partner. LA Metro plans to ask the City of LA to exempt Metro Rapid stops from that contract, in order to maintain a consistent design for all Metro Rapid shelters.

New York, New York: Lots of Stops and Shelters, But are They in the Right Places?

Leveraging the region's massive media market, New York City Department of Transportation (NYC DOT) successfully contracted an advertising group to install thousands of shelters in a short timeframe and frequently maintain them. But NYC DOT, which installs and manages stops, and the Metropolitan Transportation Authority (MTA), which selects their location, lack coordinated visions for bus stops. NYC DOT is at the cap of the number of shelters that can be placed in the current contract. Which stops are chosen for amenities beyond shelters are determined by city council members, rather than where they are most needed. This has prevented the agencies from more actively improving stops citywide.

NYC DOT's shelter advertising contract was particularly successful—with all shelters installed by deadline—in part because it held its advertiser accountable to the responsibilities stipulated in the contract. NYC DOT also included a data sharing agreement in the contract with the advertiser, giving it access to data belonging to the advertisers that helps inform improvements for riders.

The original advertising contract contributed revenue from shelters back to the municipal budget. But given the great demand for quality bus service in New York City, NYC DOT should put advertisement earnings back into bus stops or even expense bus stop spending on the budget.

The MTA takes a non-strategic approach towards its stops, having ceded all authority to the City. The transit agency provides little guidance on how it determines placement of bus stops and has disregarded the few guidelines it has. This has led to a proliferation of closely-spaced stops—leading to slower and less reliable bus service—and poor information sharing with NYC DOT. MTA's commitment to turn around New York City's buses will only be a success if DOT and MTA work together to create a strategic plan for bus stops and implement it.

Introduction to the MTA

The Metropolitan Transportation Authority provides bus, subway, and commuter rail service to New York City and surrounding suburbs. The MTA's network in New York City is the largest bus system in the country by all measures.[47] The MTA includes two operators of bus service—New York City Transit and the MTA Bus Company—which this report will refer to collectively. Together, they move over 2 million

Bus shelter ad revenue could allow NYC to improve more bus stops.

riders a day on 322 bus routes. The MTA serves over 16,000 bus stops, and 21 percent of those, or around 3,500 stops, have shelters.[48]

Responsibility and funding of bus stops and improvements

The MTA has unilateral control over stop placement and can decide stop locations without external approval. It also provides printed schedule information, a route map, and a number to call for real-time information—but its role in shaping stops ends there. The agency plays a minimal role in establishing amenities including shelters, benches or lighting.

The leading role on bus stop design and construction belongs to New York City's Department of Transportation. As part of its oversight of the city's sidewalks, NYC DOT is responsible for installing bus stop signs and all bus shelters into the sidewalk. Leveraging the massive market potential of New York City's streets, DOT signed a 20-year contract with Cemusa in 2006 to place advertising on the city's street furniture in return for installations, maintenance, and sharing revenues. JCDecaux acquired Cemusa in 2015 and became the owner of the street furniture agreement. The contract stipulated that JCDecaux replace the 3,300 existing shelters and install an additional 200 shelters; it also provided for newsstands and public toilets.

The agreement means that bus stops are revenue positive for the city: the agency does not have to spend any of its own budget on bus stops but actually earns revenue from shelters' advertisements. The ad revenues the contract generates are not earmarked for bus stop improvements—instead, they are contributed back to the City's general fund. Given massive bus ridership in New York City, marked by a substantial reduction in recent years, NYC DOT could improve the bus riders' experience by bolstering its investment in bus stops.[49] In practice, this means the City could put ad revenues back into bus stops and even expense bus stop improvements in its budget (rather than using them as a revenue source).

Planning for bus stops

In the city with the most bus stops in the country, there is little directive for managing stops or improving them. Neither New York City Transit nor the MTA Bus Company has a long-term bus stop

Figure 13. Responsibility for Bus Stops in New York City

MAIN / 150TH ST.

16A	Downtown	1 min
54	Grand Station	4 min
16A	Downtown	9 min

Ad

NYCT
- Info on the sign
- Choosing bus stop location

Private Sector
- Installing bus shelter and attached seating (JCDecaux, contracted by NYC DOT Franchise Department)
- Maintenance of sus stop
- Placing advertisements

NYC DOT
- Placing the sign
- Real-time bus signs (with elected officials)
- Bus shelter location (with elected officials)
- Sidewalk bench (NYC DOT City Bench Program)
- Sidewalk
- Crosswalk

Elected Officials
- Real-time bus signs (with NYC DOT)
- Bus shelter location (with NYC DOT)

Close stop spacing spreads finite resources over more stops.

plan or a program for bus stop consolidation or balancing. MTA's guidelines merely give a minimum spacing of 750 feet between bus stops, and this is inconsistently applied. According to a New York City Comptroller report, 30 percent of routes have an average stop spacing that falls below the 750 foot minimum standard.[50]

Irregular application of the guidelines has led to an average distance of 845 feet between New York City bus stops, with Brooklyn and Manhattan averaging 776 and 757 feet respectively. In addition to slowing down bus service, the close stop spacing results in more stops and fewer resources for improvements to each.

In early 2018, New York City Transit leadership committed to redesigning the bus routes in all five boroughs in its Fast Forward plan. The plan's first redesign, of Staten Island Express buses, included the removal of bus stops.[51] The launch of a new citywide bus network provides an opportunity for both the city and the nation's largest bus operator to jointly develop a new plan to balance their bus stop spacing and recommit to improving their bus stops.

NYC DOT has also displayed little strategic planning in deciding where new bus amenities should be placed. The majority of new shelters replaced existing shelters, whose locations had been decided years ago. For the 200 additional shelters, NYC DOT didn't set criteria for prioritizing which stops should get a new shelter. Instead, the department was required to consult City Council members and community boards, a stark contrast to Metro Transit's approach of asking the riders—the people with the most direct concern and knowledge. As the Select Bus Service program developed, NYC DOT ended up placing many of those additional 200 shelters at Select Bus Service stops.[52] In fairness to the agency, the team responsible for placing shelters did not have complete ridership information

NYC DOT's Franchise Division manages the contract to hold JCDecaux accountable.

by stop or long-term service plans from the MTA, which would have aided prioritization of amenities.

DOT has also installed bus stop signs with real-time information at 220 bus stops as of 2018. City councilmembers, state assembly members, and borough presidents request and fund the signs out of their budgets at the highest ridership stops in their districts. DOT has committed to installing 150 more of these signs by the end of 2018. This commitment is cited in the MTA's 2018 Fast Forward plan. The specific stops will be determined by the elected officials willing to fund them.[53] Again, this method of placing infrastructure at the whim of elected officials leads to disparities across the city and contrasts with systems that place infrastructure based on objective assessments of the best results for transit riders.

Implementing bus stop improvements

From an implementation standpoint, the NYC DOT and JCDecaux contract has been a success. The City Council and Public Design Commission gave NYC DOT and JCDecaux blanket approval to install shelters, so council approval was not required to place them at specific locations. The contract called for JCDecaux to replace the old shelters, at a rate of 650 per year, within its first five years. Staff reflected afterwards that this was an ambitious schedule, but JCDecaux installed the shelters nearly within the timeframe. The 200 new shelters were also constructed in a timely manner.

Maintaining bus stops and the bus stop program

The NYC DOT and JCDecaux contract falls under the jurisdiction of the NYC DOT's Franchise Division. It mainly deals with the legal aspects of managing franchises and has limited experience with transit operations. Though an unconventional fit, the group has been able to use its legal expertise to hold JCDecaux to the contract terms.

A major function of the contract is to outline JCDecaux's responsibility for maintaining bus shelters: regular cleanings, repairs as needed, and clearing snow from shelters within four hours. JCDecaux also keeps a database of shelters for ads sales and maintenance purposes, which it shares with NYC DOT. Additionally, the city agency manages an internal database that lists all shelter locations and when they were last inspected by staff, as well as a separate database that lists stop locations to manage sign placement.

Advertising Strategies for Smaller Cities

Advertisements were placed on all 3,500 shelters throughout the five boroughs. According to DOT staff, the contract would also have succeeded by concentrating ads at high-visibility bus stops (in Manhattan, for example), using the revenue to build shelters across the city, and forgoing advertisements at some low traffic, outer-borough shelters that that yield less valuable advertisements. Staff advised that small and medium-sized cities could concentrate ads at urban-core bus stops and use those revenues. This approach may appease members of residential neighborhoods who oppose commercial advertising on their streets. As of 2018, the contract's cap—3,500 installed shelters—had been reached. NYC DOT staff expressed that if they had known the shelters would be installed so quickly, they would have increased the number of new shelters included in the original contract. The City has the right to negotiate for more shelters, but JCDecaux has indicated that they will not pay for them. Staff are evaluating budgeting for the purchase of additional shelters from JCDecaux to use on new Select Bus Service routes. In a new contract, NYC DOT would want to be able to include displays for real-time information, a design element that was missing in the original contract.

Select Bus Service and Stops

New York City Transit's Select Bus Service routes are a model for how the NYC DOT and MTA can work together to improve bus stops across the city. NYC DOT's Transit Development Group coordinates with MTA staff to implement bus bulbs, shelters, real-time information, and fare machines (converted from parking meters) for stops along SBS routes. Stops feature bus network information and pedestrian wayfinding.

The high ridership routes selected for SBS service take advantage of improvements that include bus stop balancing, off-board payment, all-door boarding, and bus bulbs. These have led to 10-30 percent improvements in bus travel time, including a 40 percent reduction in dwell time.[54]

Quick Build Bus Stop Improvements

New York City Department of Transportation has been piloting quick-build strategies to improve bus stops. Bus bulbs speed up buses and make them more reliable by allowing them to stop in traffic and not have to fight their way back into the travel lane. They also provide level boarding for riders using strollers or wheelchairs and creates more space at the bus stop.

However, concrete bus bulbs are expensive to construct, so there are only a few on New York's streets. Since 2016, NYC DOT has been piloting rubber bus boarding islands that cost a fraction of a concrete bus bulb and can be installed in a day. NYC DOT is expanding its use of them, notably on 14th Street in Manhattan where it is also creating bus priority lanes.

Action Items for Cities and Agencies on Bus Stops
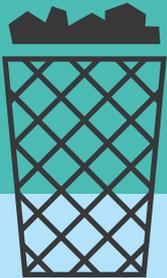
Be an expert on your bus stops

Bus stops deserve to be treated and managed like other agency assets. Inconsistent and inaccurate databases of agency property like vehicles or garages would not pass an audit. Applying the same or greater level of documentation to stops is essential for managing them well and improving them.

Agency expertise on bus stops has to extend beyond where they are located, to the conditions of the stop and the environment around them. At minimum, agencies must build an accurate and complete database of the location of bus stops and the investments made to them, along with the ridership at each stop. Linking information on stops' ADA accessibility, amenities, and maintenance history will help to prioritize stops for future improvements. Expanding the database may need interdepartmental cooperation and could catalyze future collaborations on bus stops. Making this up-to-date data publicly accessible builds a foundation from which transit agencies can work with DOTs, property owners, and advertisers.

What to do:

- **Document** where stops are located, their conditions, the conditions surrounding them, and temporary or permanent physical changes to the stop and vicinity. Conduct regular field visits to bolster observations and keep stop information up-to-date.

  - **Information** should include availability of amenities such as benches, shelters, and trash cans; route, schedule, fare, and wayfinding information; accessibility; lighting; nearby sidewalk and crosswalk conditions; bus bulbs and bus pads; and temporary changes to stop locations.

- **Sync stop condition data** with tracking of maintenance history, construction work order systems, ridership figures, and any other relevant information to streamline bus data management.

- **Input, manage, and update data** in an interactive database format that can be edited and analyzed, and share it publicly and with municipal, advertising, or other partners.

- **Evaluate bus stop-level ridership data** to identify stops that serve many riders

- **Analyze pedestrian injury data** to identify where riders are getting injured on the way to bus stops

- Give riders an **easy way to share** stop conditions to alert maintenance crews such as 311 and over Twitter.

Make a plan to balance bus stop spacing and prioritize improvements

Elevating the standards for bus stops takes a sustained commitment of funding and agency focus. A plan for bus stops helps agencies rally staff and leadership to achieve that goal. Informed by an accurate and comprehensive database, a bus stop plan defines a transit agency's priorities around bus stops by establishing guidelines for how to design a better bus stop, how to space them to speed up service, and how investments in amenities will be allocated at each stop.

These plans and guidelines can also be used as a communication tool to internal staff and to other agencies. It demonstrates the forethought the agency has put into bus stops and the features to be expected with bus stop improvements.

Transit agencies should build a mandate for these guidelines by asking riders what they want from bus stops and for feedback on tradeoffs. Riders interact with bus stops every day, so they may have input informed by experience that is helpful for improving bus stops. Riders should be engaged throughout the planning process and notified about service changes, through in-person surveys and interactions at stops and on buses.

What to do:

- **Develop guidelines** to shape decisions on how bus stops should be placed, how they should be spaced, and where amenities should be implemented. Inform bus stop guidelines with considerations of existing ridership patterns, rider demographics, physical conditions of stops, nearby walking environment, and other data.

  - **Determine** the levels of daily ridership that warrant specific amenities at a bus stop. Higher ridership could warrant more total amenities like benches, trash cans, and real-time information. Higher ridership from specific groups—such as the elderly—could warrant certain amenities like benches or lighting.

  - In walkable neighborhoods, **balance bus stop spacing** to an average of ¼ -½ mile separation between bus stops to increase speed and reliability of bus service and to afford higher quality amenities at remaining stops. Use more frequent bus stop spacing on streets where it may be less comfortable to walk.

- **Use guidelines** to communicate an agency vision and long-term plan for bus stops to outside stakeholders and to defend decisions to invest in particular stops and amenities.

- **Update guidelines** regularly to align with changing agency priorities.

- **Garner feedback** from riders on bus stop conditions, qualities, and needs. Don't rely solely on public meetings (which are difficult for some riders to attend), but "meet riders where they are" by surveying them at stops, on buses, and at community events.

- **Use public input** to inform these guidelines, but not to determine specific locations that should or should not have amenities. Creating the impression that there is a "public veto" over where amenities are located privileges the stakeholders who have the most time to engage in public processes, and can lead to lengthy appeals.

Establish ground rules for collaborating internally and with other agency partners on bus stops

The case studies demonstrate that within transit agencies, different departments are responsible for planning, implementing, and maintaining stops. And while the transit agency places the stop, the municipality (usually its department of transportation) looks after the surrounding area. With so many parties involved, it is easy for each one to overlook or de-prioritize its own role in bus stops. Stop conditions deteriorate in part because those responsible have let them fall through the cracks.

Sealing those cracks involves identifying the key players in implementing bus stop improvements across the region (and potentially reducing the number of players involved), clarifying how the responsibilities are divvied up, winning commitments to make improvements, and meeting regularly to hold each other accountable. Increased communication within and across responsible agencies are key to successful collaborations.

Open channels of communication, commitments of funding, and intergovernmental agreements are essential to carry out improvements that require cross-agency collaboration. Most powerfully, simplified approval processes are a boon to shelter expansion and large-scale bus stop improvements.

What to do:

▸ **Identify** which municipal, transit, or private agencies in your region do (or can) contribute to bus stop objectives and understand the ways in which they do (or can) contribute to bus stops. Assess which actually help further the bus stop program. The fewer agencies involved, the easier it will be to make quick changes in line with your vision.

▸ Convene an **interagency bus stop working group** that will coordinate decisions on planning or removing stops, placing amenities, and maintaining stops. This group should include staff from each organization involved in bus stop decisions, who have the authority to speak for the agency and can actively take part in mutual planning and decision-making processes.

▸ Draft **intergovernmental agreements** with city agencies and contracts with other partners to delineate who is responsible for which aspects of investment and maintenance for bus stops and surroundings.

　　▸ Define which agencies are willing to contribute **funding** to which bus stop improvements.

　　▸ **Hold the responsible agency accountable** for the conditions of stops.

▸ **Negotiate a simple process** for permitting stop amenities to decrease time and costs to implement them. Unbundle transit amenities from other street furniture in approval processes. Strive for blanket permits for types of stop amenities, so they can be approved in batches rather than individually. Limit the number of parties who must give approval for bus stop amenities to reduce the risk that an amenity will be denied.

▸ **Communicate regularly** with staff in your organization and external partners about the bus stop program and changes to it that impact others' work. Construct an email list-serve, a regular phone call check-in, or other communication tools to ensure that you keep in touch.

▸ **Expand** the group responsible for bus stops and zones to focus on bus stop amenities and conditions (or develop a new group to focus on bus stops if it doesn't already exist).

Increase the budget for bus stops and create an on-going program to guide that investment
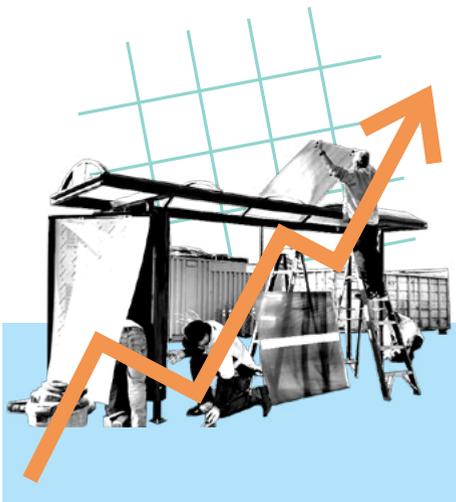
As the front door to transit service, bus stops deserve a level of investment and organizational importance that reflects that status. The lack of regular, substantial funding has resulted in the unsafe, inaccessible, and unattractive bus stops that are common today.

To elevate the standard for bus stops, agencies need to place their bus stop programs in a supportive home. This means identifying and devoting regular, ongoing funding sources to an official bus stop program. A team with a customer-focused vision and the expertise to navigate service planning and contractual agreements should oversee the bus stop program. The program will also need a strong vision, guidance, and metrics to ensure investments continue to make the greatest impact.

Bus stop improvements shouldn't be all or nothing. Bus stops can (and should) be improved incrementally, especially if shelters are not financially or physically feasible.

What to do:

- **Identify funding sources** that are available and appropriate to devote to your bus stop program. Look into internal budgets; collaborations with regional bodies; grants from local, state, or federal governments; or partnerships with private property owners for funds.

- **Increase spending** on bus stops and create an annual budget item for bus stop amenities and sidewalk, crosswalk, and street improvements. This program should fund varied types of stop amenities that riders value and maintenance of bus stops.

- **Regularly reassess** the bus stop program's goals and funding to make sure appropriate resources are committed to improving bus stops. Define and use metrics so it is clear how the bus stop program's outcomes help accomplish agency goals.

- Piggyback on **planned street construction** to improve stop sites, nearby sidewalks, and crossings to reduce your own costs and speed up your timeline for improvements.

- **Get creative** with amenity design and size in the face of space or funding constraints. Remember that riders also value benches, trash cans, lighting, detailed service information, and other improvements that are cheaper than shelters.

- Ensure the **maintenance budget** is large enough to maintain the stops you have, and understand how a change in the number of amenities changes the cost of maintenance. Schedule maintenance as frequently as needed to ensure each stop is comfortable and clean. Maintenance schedules will vary for different stops but at least once a week is ideal.

Leverage advertising contracts to fund bus stop improvements across the region, not the general budget

There will always be a tradeoff between maximizing bus stops' advertising revenue potential and distributing stop amenities fairly and usefully with riders in mind. It is crucial to remember that bus shelters and benches are not city-owned billboards but a public benefit.

When drafting a bus stop advertising contract, the transit agency should ensure that maximizing customer benefit is prioritized over earning revenues. It also should carefully engage its advertising partner, making clear what the responsibilities are and choosing a partner that agrees to those terms. These contracts are once-in-a-decade opportunities that are important to get right. As the owner of the advertising market, the agency has leverage over advertisers—working carefully on an appropriate contract can result in provision of the desired service for free.

What to do:

▸ Construct a clear, comprehensive bus shelter **advertising contract** that invests in bus stop amenities and maintenance, and select an appropriate advertiser who agrees to these terms.

▸ **Write a contract** that:

  ▸ **Leverages** your advertising market to win benefits for riders.

  ▸ Communicates your agency's **vision** for bus stops and enables you to prioritize shelters accordingly.

  ▸ Enumerates the **responsibilities** the advertiser will assume, including your expectations for the number of shelters to be installed by certain deadlines and how often maintenance will be done.

  ▸ **Provides metrics** by which to measure the performance of the advertiser.

  ▸ **Holds your advertiser accountable** for delays or inability to meet terms (typically through financial penalties).

  ▸ Includes a **data sharing agreement** with the advertiser.

▸ Treat bus stop shelters and benches as a **capital investment**, not a revenue generator. Devote net revenue from shelter advertising to bus stop amenities, rather than using it for other expenses. Go beyond advertising revenue and invest additional agency funds in bus stop amenities.

▸ **Unbundle** street furniture advertising from billboard advertising packages to ensure that shelters and benches are being built to benefit the majority of riders.

▸ **Concentrate** advertising in highly-trafficked core neighborhoods, and require that advertisers fund shelters in peripheral neighborhoods with bus service but low advertisement revenue potential.

▸ **Use advertisers' data** about bus stops and shelters—including maintenance history—to help to inform improvements for riders.

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Appendix

Interviewees for case studies:

Metro Transit
Minneapolis-St. Paul, Minnesota

Los Angeles County Metropolitan Transportation Authority (LA Metro)
Los Angeles, California

Outfront/Decaux
Los Angeles, California

City of Los Angeles Bureau of Streets Services
Los Angeles, California

Port Authority of Allegheny County
Pittsburgh, Pennsylvania

City of Pittsburgh Department of Mobility and Infrastructure
Pittsburgh, Pennsylvania

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Portland, Oregon

Portland Bureau of Transportation
Portland, Oregon

New York City Department of Transportation
New York City, New York

The New York Metropolitan Transportation Authority
New York City, New York

San Francisco Municipal Transportation Agency (SFMTA)
San Francisco, California

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14	Transportation for America
15	NACTO
17	NACTO; Metro Transit
20	Minneapolis Highrise Representative Council
26	Harrison Neighborhood Association
27	Metro Transit
29	Metro Transit (both images)
30	TriMet
35	TriMet (both images)
36	J. Daniel Malouff
38	TriMet
39	TriMet
40	Zicla
44	Mary Buchanan
46	Darcy Cleaver
49	Christine Sowa
50	Outfront/JCDecaux
51	Outfront/JCDecaux
57	Outfront/JCDecaux
58	Outfront/JCDecaux
61	Outfront/JCDecaux
62	Outfront/JCDecaux
63	LA Metro
64	Scott Shaw
68	NYC DOT
71	NACTO
72	NYC DOT
73	Zicla