

How Transportation Impacts Retail

Vehicle and foot traffic inform post-COVID recovery of local business

AN ANALYSIS OF THREE WASHINGTON, D.C., NEIGHBORHOODS

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Washington, D.C., has seen a particularly challenging pandemic recovery. The portion of people working from home is higher than any large city in the U.S., according to Census Bureau data¹. And this massive shift in people's weekday travel has remade the retail footprints of neighborhoods throughout the city.

[Bringing people back to city neighborhoods](#) is essential to economic recovery. And when it comes to transportation, a neighborhood's vitality is often linked to its car traffic.

But we know that in many cities, **walkability offers another way to quantify how transportation translates into the health of local retail.**

StreetLight used its pedestrian and vehicle traffic counts to analyze three neighborhoods in Washington, D.C., to understand how the pandemic bounce-back looks across vehicle and pedestrian travel. The analysis also looked at how these patterns may shift according to time of day and trip purpose.

In this report, we compare street activity to retail vacancy data by neighborhood to glean insights about how vehicle and pedestrian travel activity correlate to the local business climate.

KEY INSIGHTS

- In Capitol Hill, we see a tough recovery for vehicle activity. But 7th St. SE, with its proximity to a walkable market, sees a significant pedestrian bounce-back.
- On Georgetown's M St. NW, a broad recovery in foot traffic and a weekend recovery in driving are starting to pay off, as evidenced by improving retail vacancy rates.
- In D.C.'s downtown, driving has significantly recovered. But much of that driving activity appears to be passing through, enroute to elsewhere. Walking trips, on the other hand, are still low. And retail vacancies? They're still on the rise.

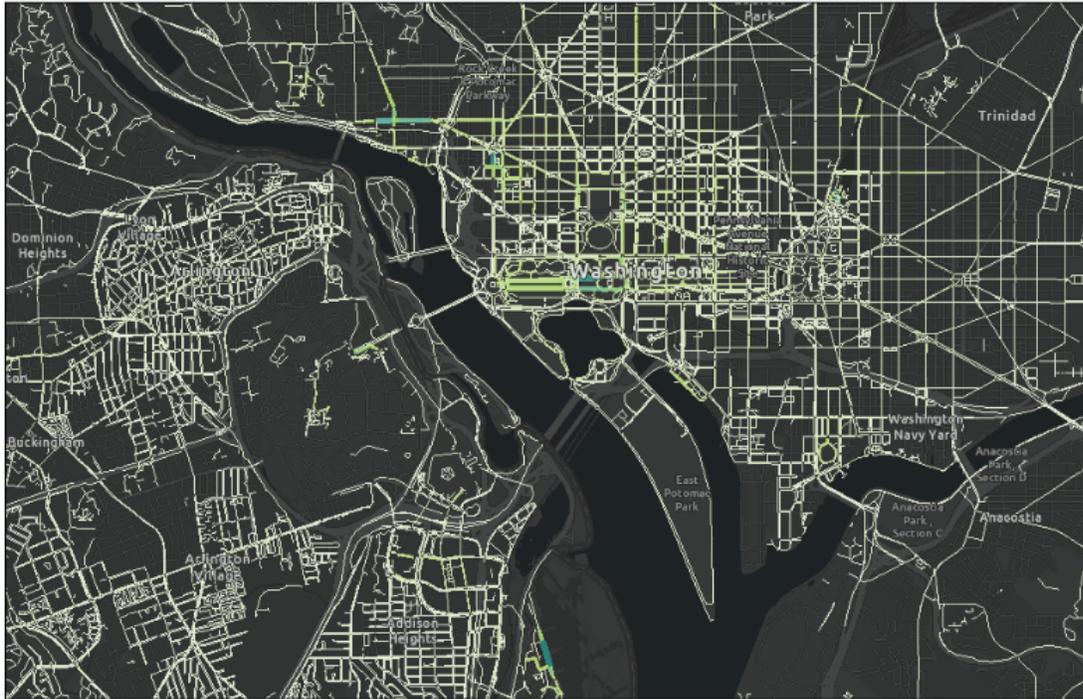
¹Bharrampour, Tara. *The Washington Post*. "D.C. was the top city for remote work in 2021, census data shows," September 2022.



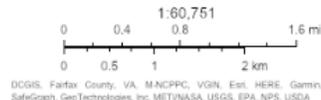
WASHINGTON D.C. WALKING AND DRIVING HEAT MAPS

To see pedestrian and driving activity in the area at a high level, StreetLight used its Advanced Traffic Counts data exported to ArcGIS mapping. This allows us to view heat maps of annualized activity across the entire city in 2021. (Click on the maps below to see GIFs showing the difference between 2019 and 2021 activity.)

Washington D.C. Pedestrian Heat Map 2021

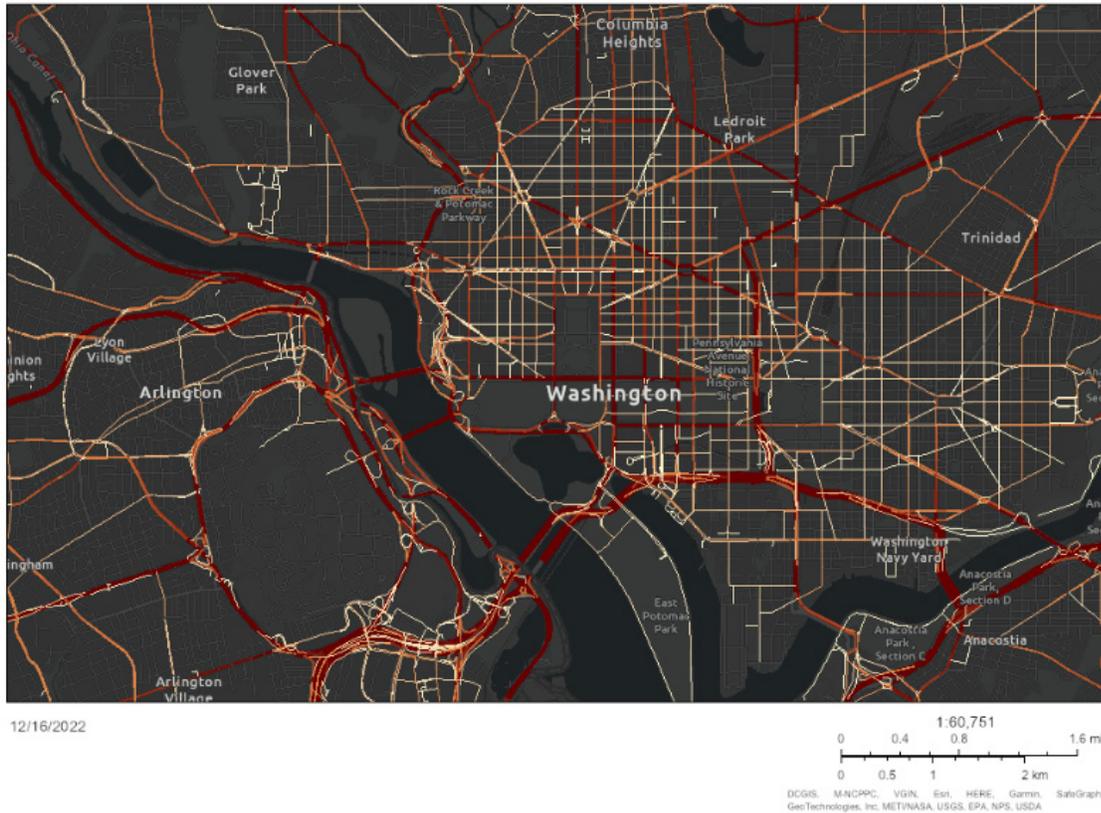


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Pedestrian traffic counts in Washington, D.C., in 2021. Click on the heat map to access a [GIF](#) showing the change in activity between 2019 and 2021.

Washington D.C. Vehicle Heat Map 2021



Vehicle traffic counts in Washington, D.C., in 2021. Click on the heat map to access a [GIF](#) showing the change in activity between 2019 and 2021.

Zooming out to see citywide and neighborhood-level transportation data provides a comparative lens critical for prioritizing where to locate new retail. From there, analysts can go deeper to compare individual streets or districts by mode (car and pedestrian), demographics, and even trip purpose (e.g., commute or leisure).

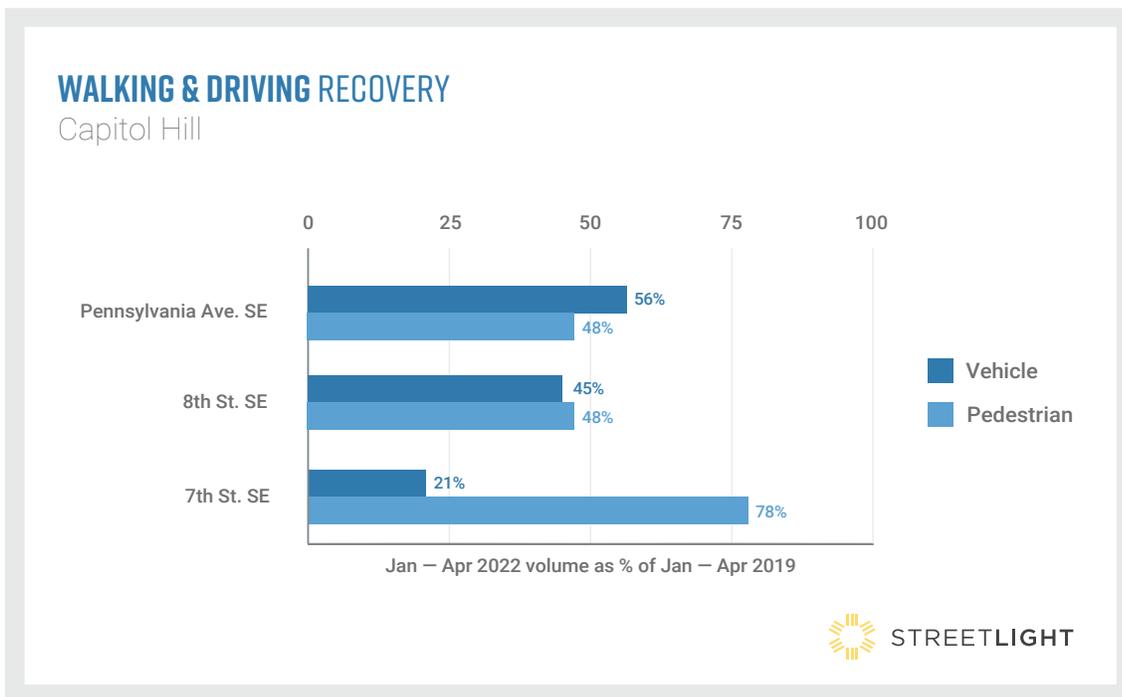


After reviewing high-level annualized pedestrian and vehicle heat maps, we zeroed in on three neighborhoods to analyze seasonal street-level data on key retail corridors in January–April 2019 versus January–April 2022.

CAPITOL HILL

In the D.C. neighborhood of Capitol Hill, vehicle activity along three main corridors remains notably unrecovered. Only Pennsylvania Ave. SE sees vehicle activity at half of pre-pandemic levels. This six-lane road leads directly to the Capitol.

Vehicle traffic was still down on average—Pennsylvania Ave SE has only reached 56% of pre-pandemic levels. But that’s significantly more recovered than 7th St. SE, a more residential street, which sees vehicle activity at 21% of pre-pandemic levels.



Compare that to walking activity and the picture is quite different.

7th St. SE is seeing pedestrian activity return to 78% of pre-pandemic levels, a far stronger recovery than vehicle volumes on any of the streets studied. Compared to the other streets studied, this street sees the biggest disparity in pedestrian versus vehicle recovery.

The Eastern Market is a bright spot here, helping bring back walking activity. This walkable market area is likely drawing people in on foot from nearby streets.

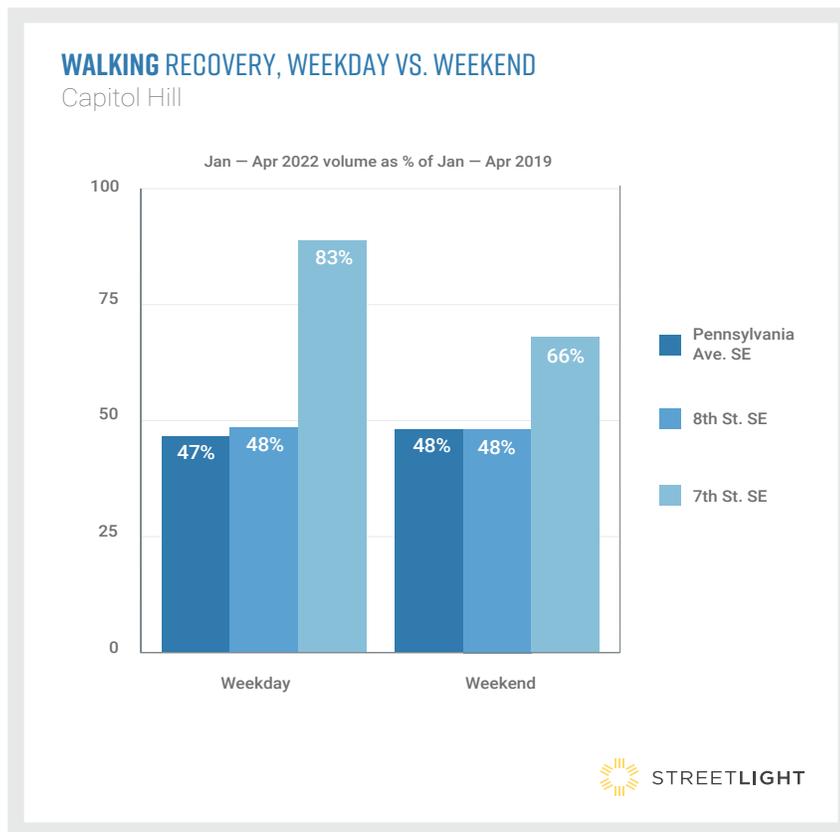
8th St. SE, on the other hand, sees approximate parity between the loss of vehicle activity and pedestrian activity. And on Pennsylvania Ave. SE, walking recovery is slightly behind vehicle recovery.

HOW DOES THIS COMPARE TO RETAIL VACANCIES?

Retail vacancies in the neighborhood are slowly improving, but remain significantly higher than pre-pandemic, at around 14% as of this summer, according to data from Dochter & Alexander Retail Advisors. This is an improvement on the fall 2021 vacancy rate of 16.7%.

Few neighborhoods in D.C. have seen more substantial retail vacancy recoveries than this. And data from USPS² suggests that Capitol Hill saw among the biggest uptick in people moving into the neighborhood during summer and fall 2021, so a further bounce-back in travel activity and a further decline in retail vacancies could be on the horizon.

One surprising trend is the extent to which 7th St. SE is seeing a significant pedestrian recovery on the weekdays. Pedestrian activity on 7th St. SE was only 17% below pre-pandemic levels between Monday through Thursday, compared to 34% below on the weekend. 8th St. SE and Pennsylvania Ave. SE saw no notable change in walking activity from weekday to weekend.

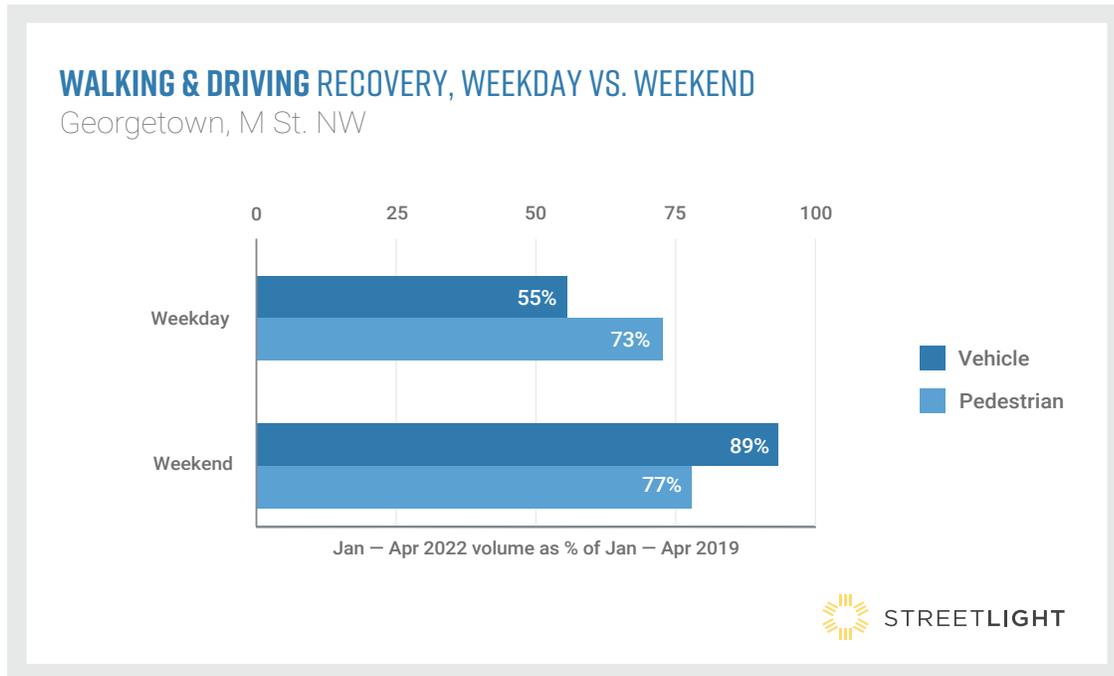


²Moored, Ginger. Office of Revenue Analysis, DC.gov. "Pandemic led to DC population loss, but data suggests population rebound last summer," February 2022.

GEORGETOWN

The upscale retail and college neighborhood is a relative bright spot for the return of both vehicle and pedestrian activity on the popular M St. NW retail corridor.

Vehicle volumes were down 17% overall between January and April 2022 compared to the same period in 2019, and only 11% on the weekends.



Walking activity is also showing a relatively strong recovery, at 77% of pre-pandemic levels on the weekends and 73% during the Monday through Thursday time frame.

Vacancy rates, though, are just beginning to come down in the neighborhood, falling to 16.5% in the summer from 17.8% in fall 2021, according to the Dochter & Alexander Market Report.

On M St. specifically, the drop in retail vacancy was slightly bigger, falling from 20.3% in fall 2021 to 17.9% in summer 2021—a good sign of momentum for the strip, though still high overall. This tracks with the overall positive trend in transportation recovery, which is especially visible in pedestrian activity and weekend vehicle activity.

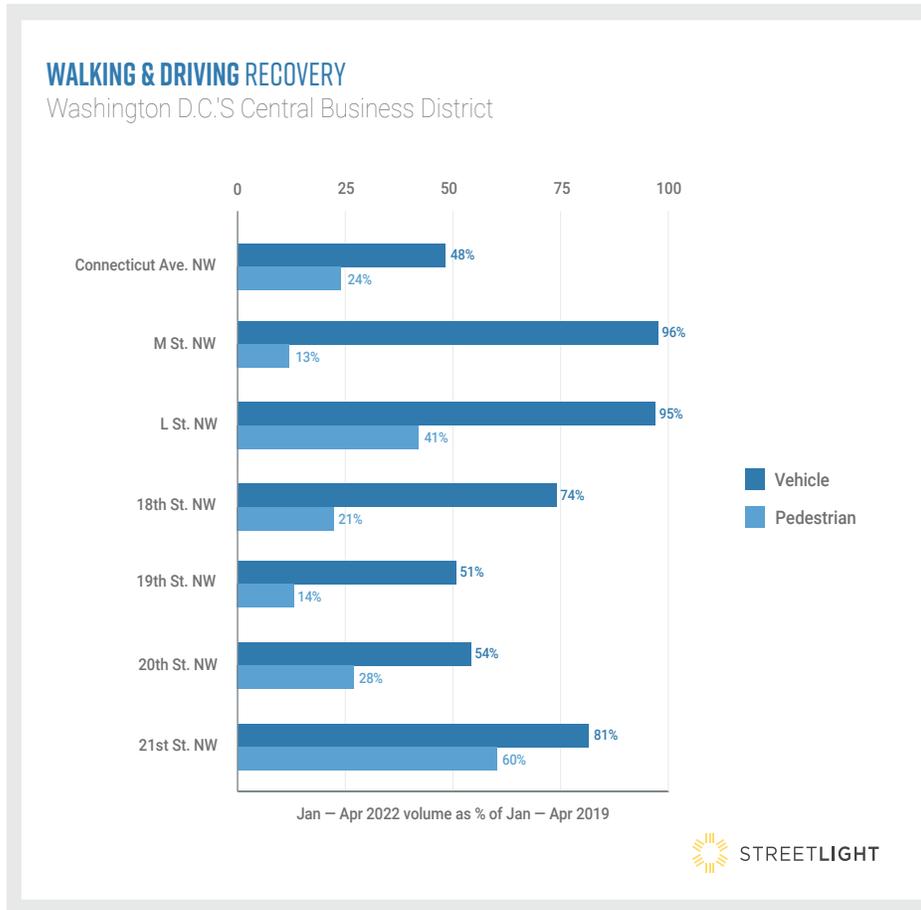
That said, USPS data indicates that Georgetown was seeing higher “out migration” between summer and fall 2021 compared to pre-pandemic, which could further impede recovery. (The report notes that this could reflect the presence of a university, but did not pick up a similar trend in other college zip codes.)

DOWNTOWN

In Washington, D.C.'s Central Business District, also referred to as downtown, we see the biggest discrepancy between vehicle activity and pedestrian activity.

Overall vehicle volumes across the roads studied are down 38%.

Drilling down, M St. NW and L St. NW saw the biggest recovery in driving activity, nearing parity with pre-pandemic. Connecticut Ave. NW, on the other hand, was still at only 48% of pre-pandemic levels.

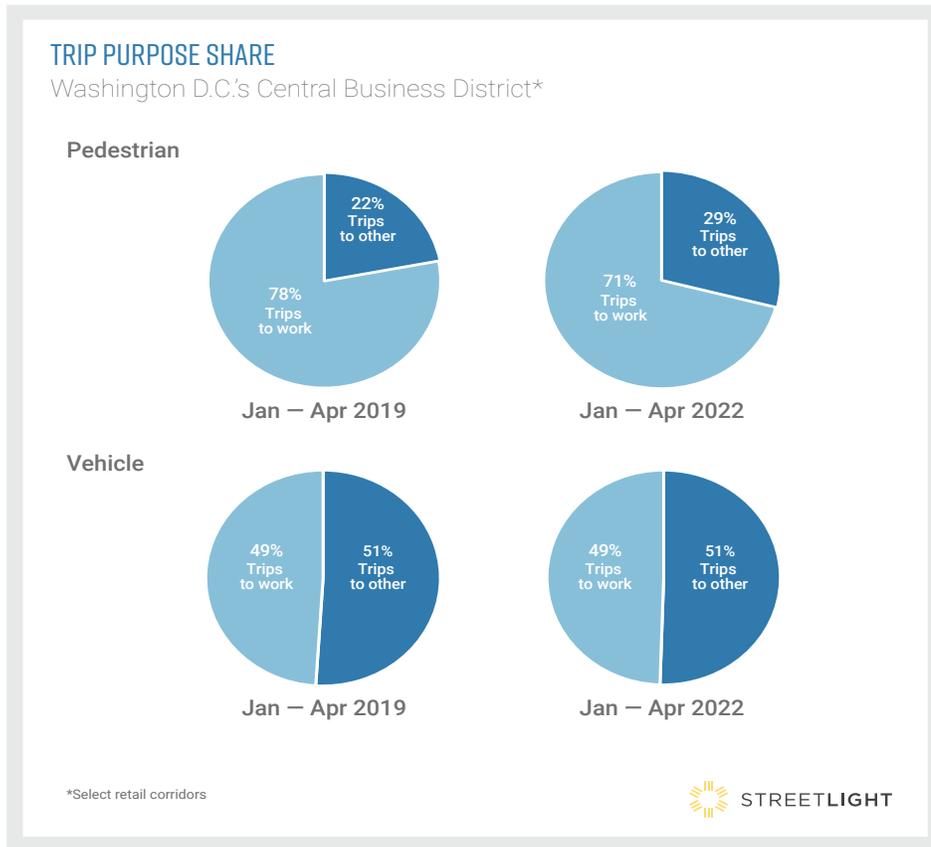


On the same streets, however, pedestrian recovery is a fraction of previous activity:

- 41% on L St. NW
- 13% on M St NW
- 24% on Connecticut Ave. NW

Of the seven roads studied, six saw pedestrian activity still less than halfway to pre-pandemic levels.

By examining StreetLight’s trip purpose metrics, it’s possible to see how the share of walking trips to downtown for non-work purposes has increased since the pandemic as work-from-home culture has persisted.



Lack of robust foot traffic overall is likely having a significant impact on retail vacancies, which skyrocketed from a pre-pandemic 6.6% vacancy rate to 19% by the fall of 2021—and actually increased further to 21% by the summer of 2022.

The urgency of attracting travelers with destinations in the district is also glaring when looking at passthrough versus non-passthrough traffic.

While M St. NW and L St. NW saw near-parity in overall vehicle volumes in January–April 2022 as compared to two years earlier, the share of those trips with destinations on those streets had been cut in half. **This suggests that a once bustling urban destination has become a convenient driving route to elsewhere.**

While cars and trucks may be returning on certain streets, they may be passing through on the way to other neighborhoods and not benefiting local businesses. This is a stark illustration of how critical foot traffic specifically is to retail recovery, and to businesses focused on site selection. It will be vitally important for city neighborhoods that once relied on office workers for economic activity to attract non-commuting visitors on foot.

To see slider maps of annualized 2019 versus 2021 vehicle and walking activity across D.C., as well as seasonal changes on a selection of roads studied, access [our article](#).

For organizational leaders identifying high-priority neighborhoods and street segments for investment, [StreetLight Advanced Traffic Counts](#) provides an unprecedented level of clarity on comparative transportation trends.

For more information on the tool, contact us [here](#).