

Changes in peak ridership demand before, during, and after the pandemic on TransLink's buses

Northwest Transit Exchange, October 3, 2024

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Transit Planning

TransLink



Outline

Part I - Changes in peak ridership

Part II - Geographic changes in ridership

Part III - Temporal changes in ridership

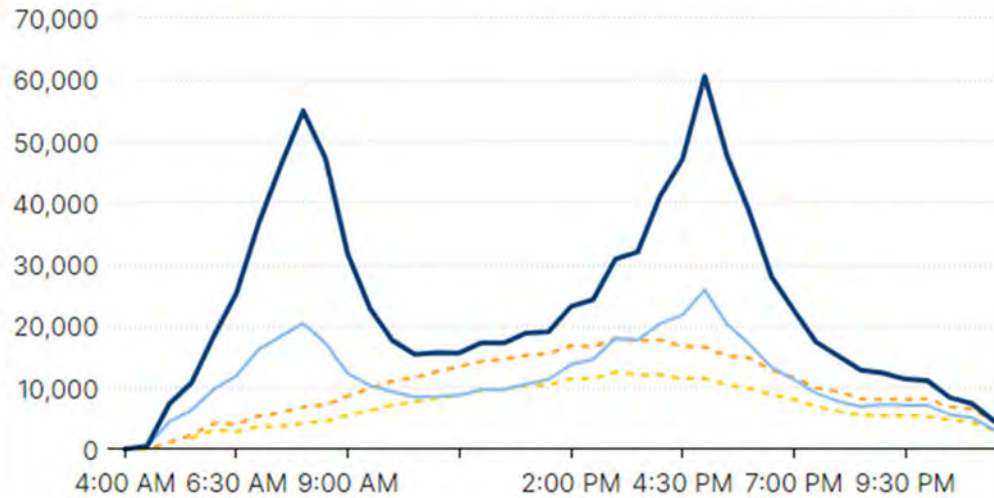


Part I: Changes to peak ridership have been widely discussed

Off-peak and weekend transit ridership in Boston has recovered better than peak ridership

Average system entries per hour

— 2019 Weekday — 2019 Weekend — 2022 Weekday — 2022 Weekend



Source: Brookings analysis of MBTA "Blue Book" Open Data Portal

Brookings

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It's time to stop comparing US public transit ridership to 2019, because that world is gone and not coming back. Transit agencies in the US are rebalancing to grow their new markets, which are all-day, all-direction trips of many purposes, but of course this takes time.

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It's misleading to compare pandemic ridership recovery for urban transit with that of intercity rail, as Oregon DoT is doing here. The pandemic caused a decline of white-collar commuting, which affects transit but not intercity rail. [@NigelJaquiss](#) 1/ [wweek.com/news/2024/08/0...](#)

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Nation Jun 10, 2021 5:54 PM EDT

By —

Peaked too soon? Analyzing the shifting patterns of PM peak period travel in Southern California

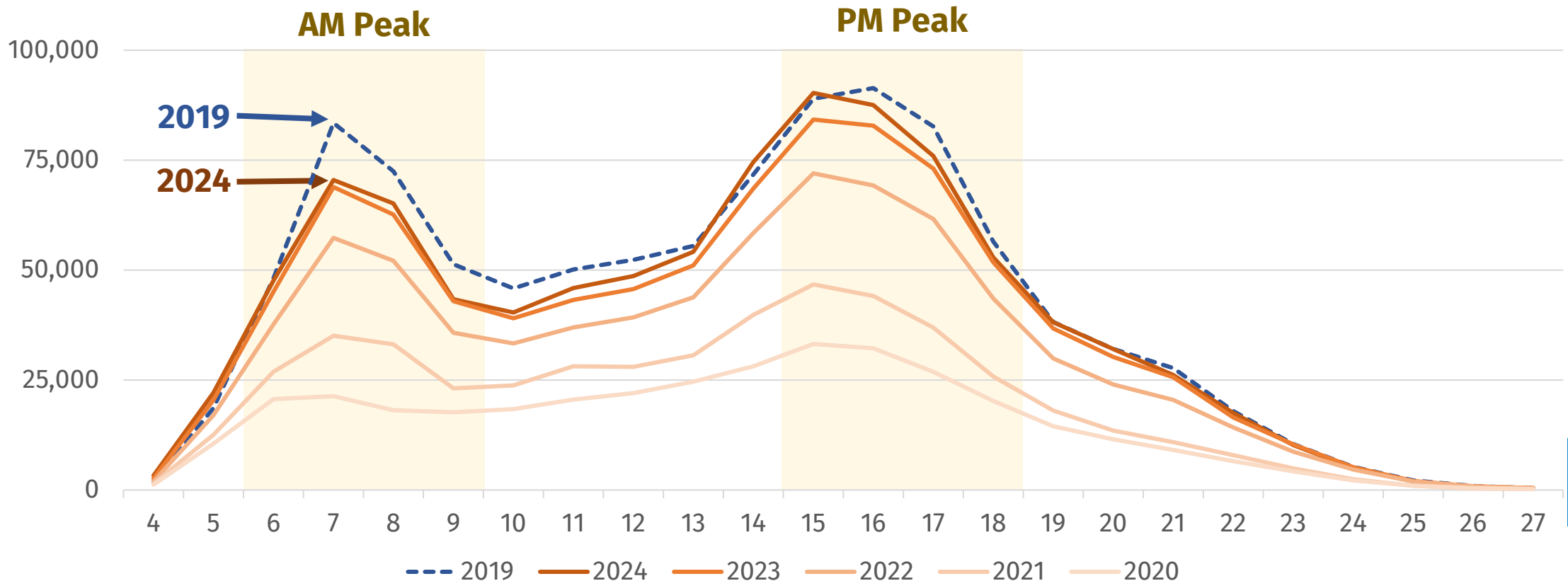
Samuel Speroni ^{a 1}, Fariba Siddiq ^{a 2}, Julene Paul ^{b 3}, Brian D. Taylor ^{a 4}



In the past five years, these changes in peak travel demand have not materialized in Metro Vancouver

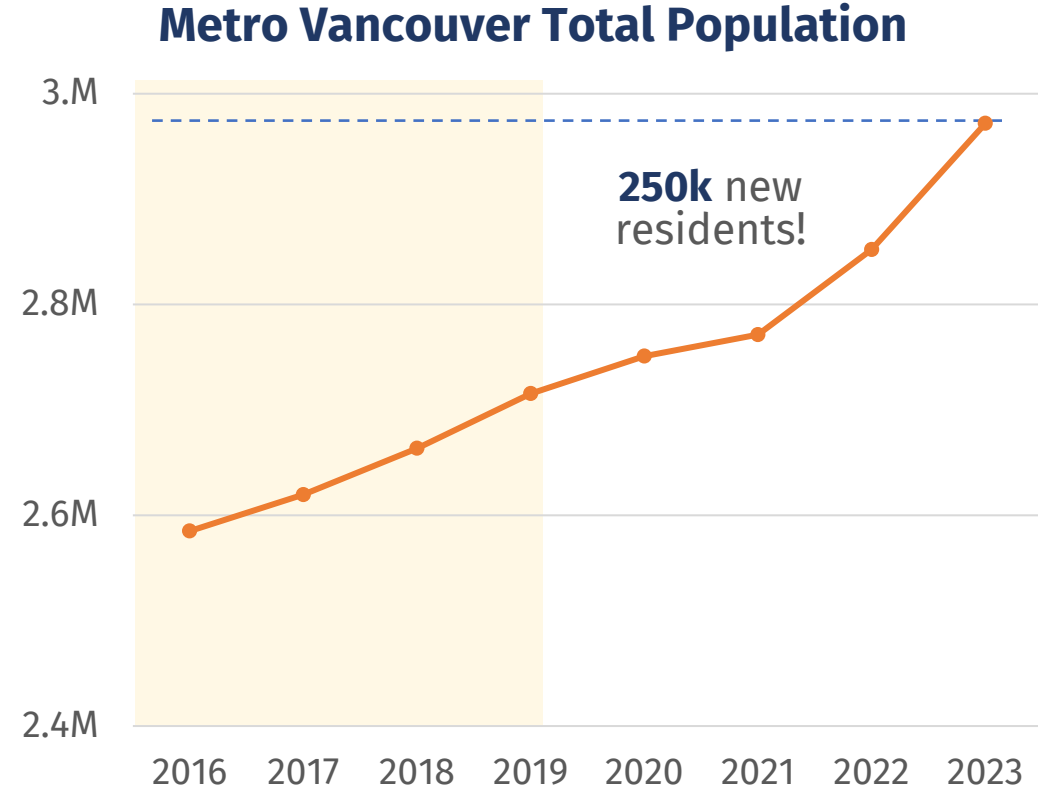
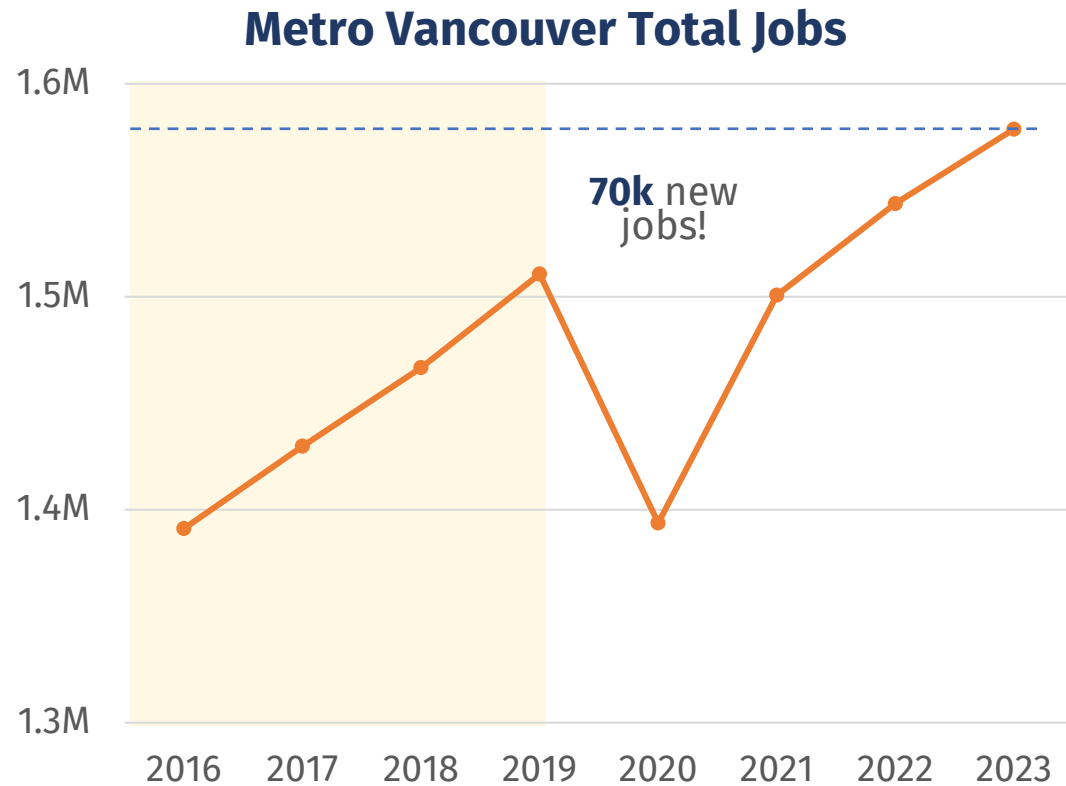
Our peak ridership recovery has been unexpectedly strong, resulting in a continued peak-oriented ridership pattern with a **larger difference** in PM peak vs. midday demand than in 2019.

System-wide boardings per hour by year



Why? – One potential reason

Metro Vancouver has still been impacted by the same losses in ridership due to working from home. However, the region has been growing fast enough to **offset the loss** of remote worker trips with **new employment trips**.



Source: Statistics Canada *Labour Force Survey* and *Population Annual Estimates*.

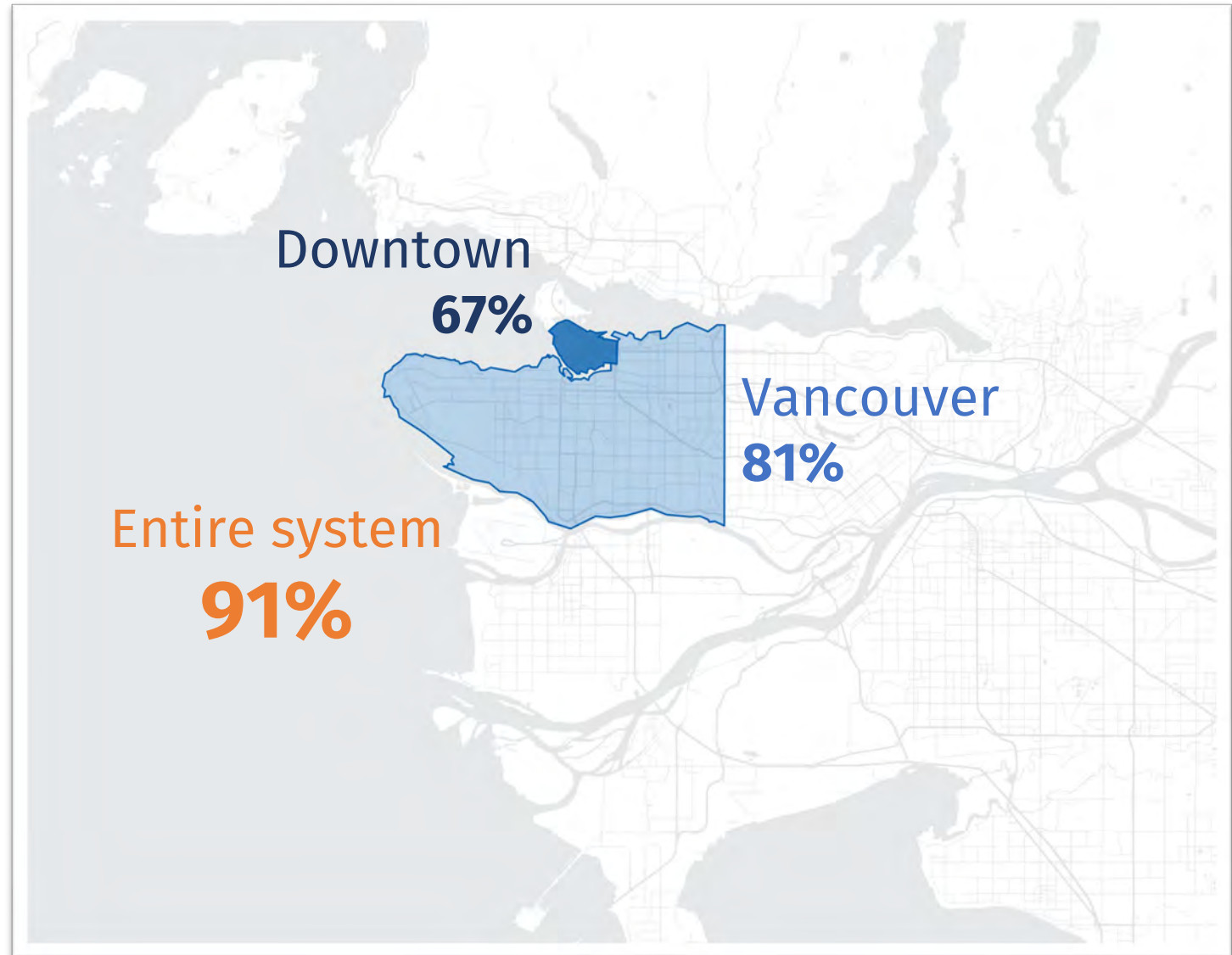
Downtown trips are an indicator of this trend

Relative to the rest of the system, downtown trips have lagged in ridership recovery.

Most of the office space in Metro Vancouver is located downtown, suggesting that office trips, potentially region-wide, have declined.

Despite this, ridership recovery is strong, so the decline in office trips has likely been **replaced by new employment-related trips** in other areas of the system, mitigating the expected loss in peak trips

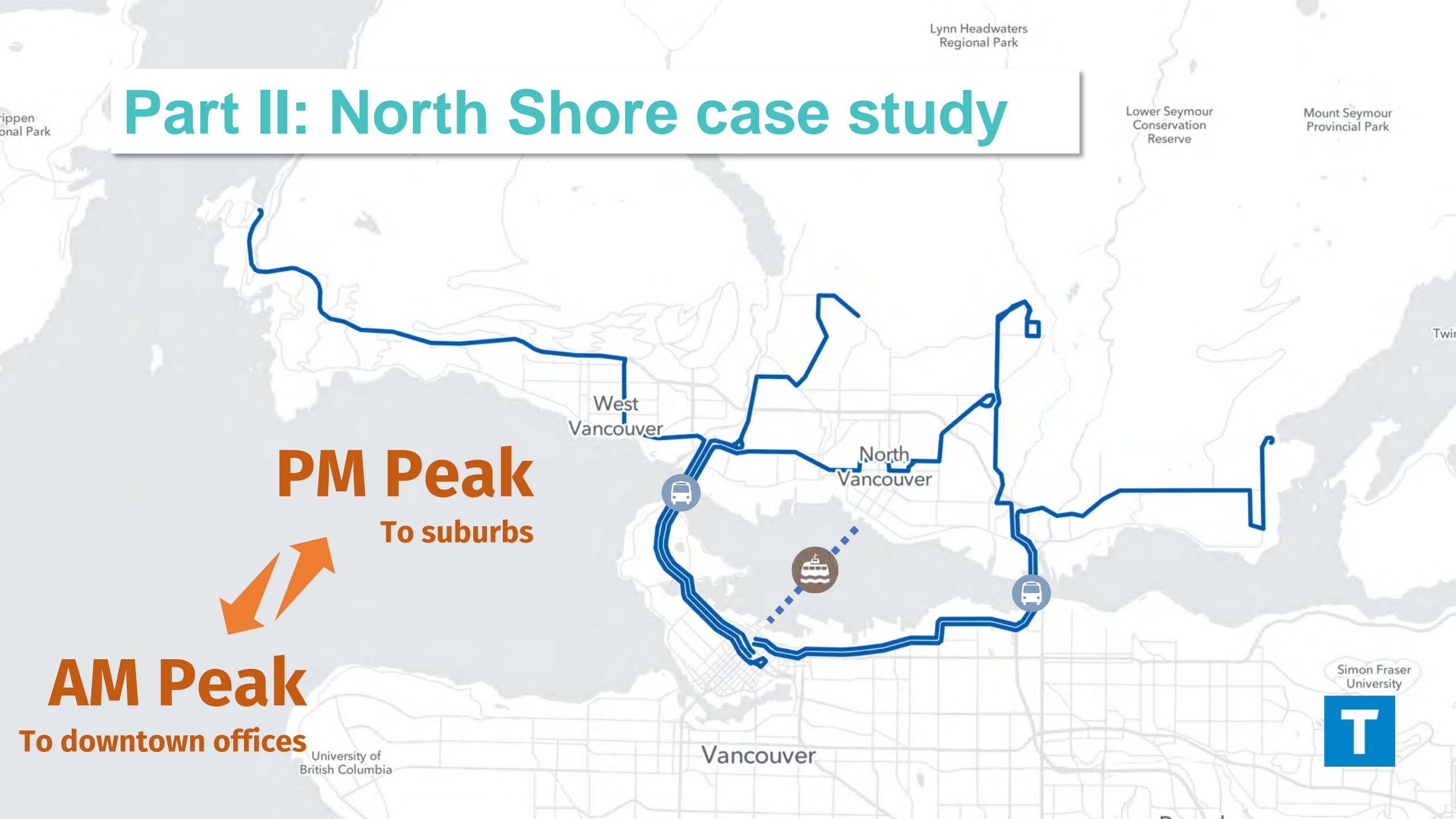
Sept 2023 bus daily alightings compared to 2019



Part II: North Shore case study

PM Peak
To suburbs

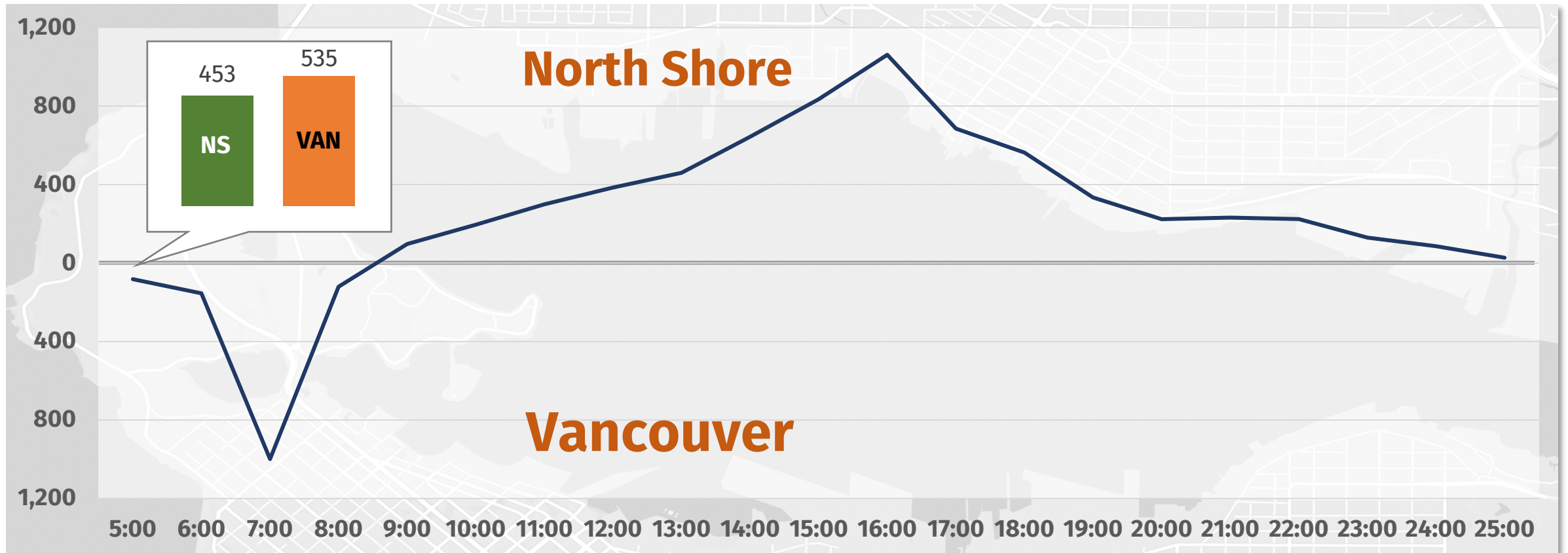
AM Peak
To downtown offices



In 2019, net passenger movement followed typical suburban commuter patterns

According to our bus and ferry data, more riders alighted in downtown Vancouver in the morning, followed by more riders alighting in the North Shore in the evening.

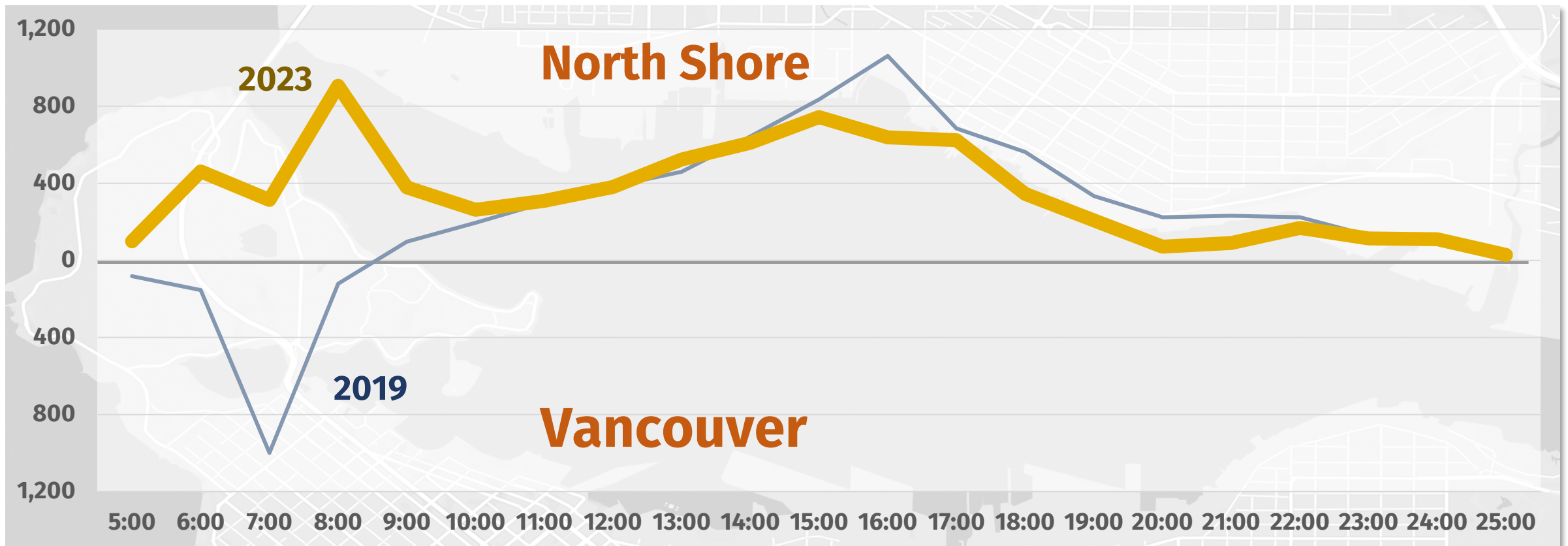
Net daily alightings by hour for selected routes, Sep-Dec 2019



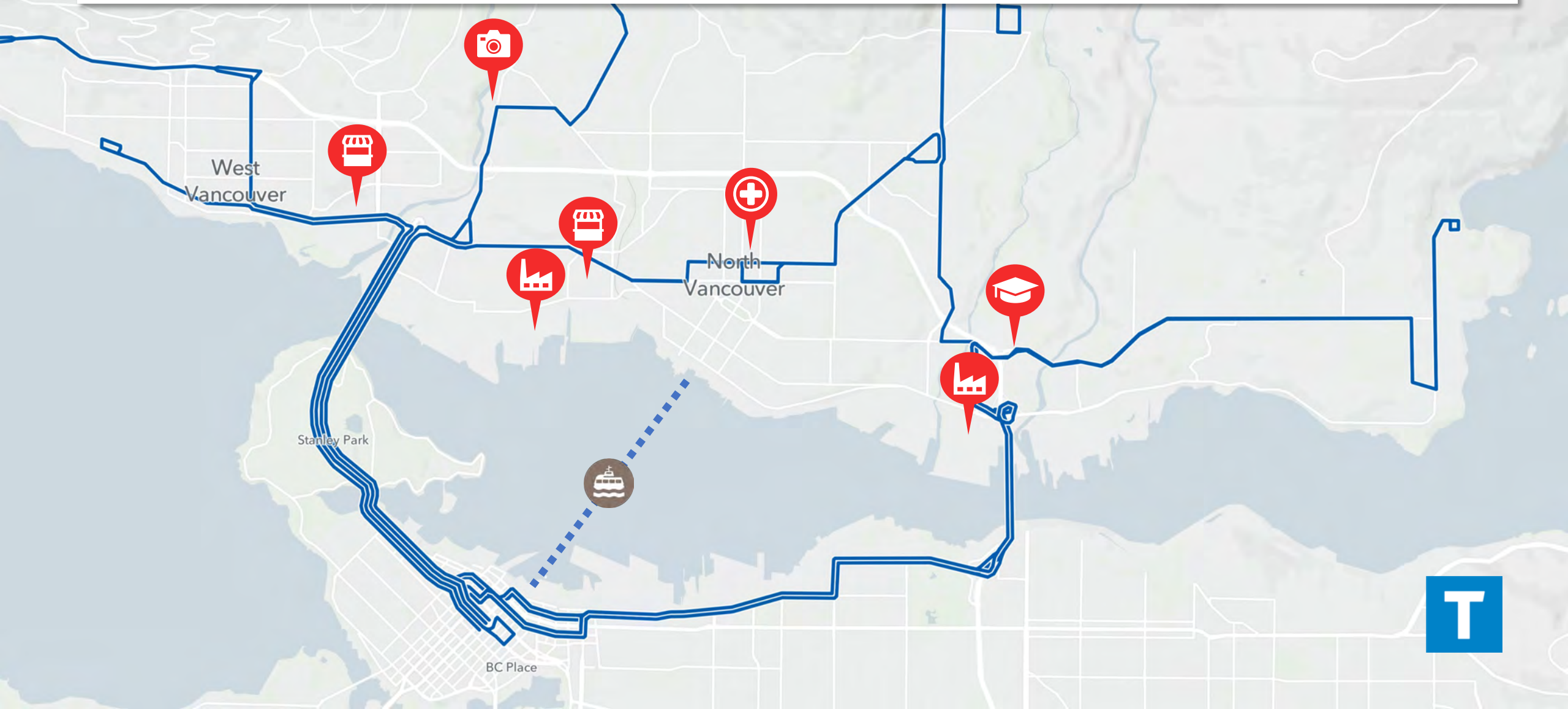
Net passenger movement has shifted to the North Shore in the AM peak

This trend flipped in 2023, with more passengers now alighting in the North Shore at virtually all hours of the day.

Net daily alightings by hour for selected routes, Sep-Dec 2023 vs Sep-Dec 2019



Employment lands in North Vancouver are serving as key destinations, driving weekday demand.

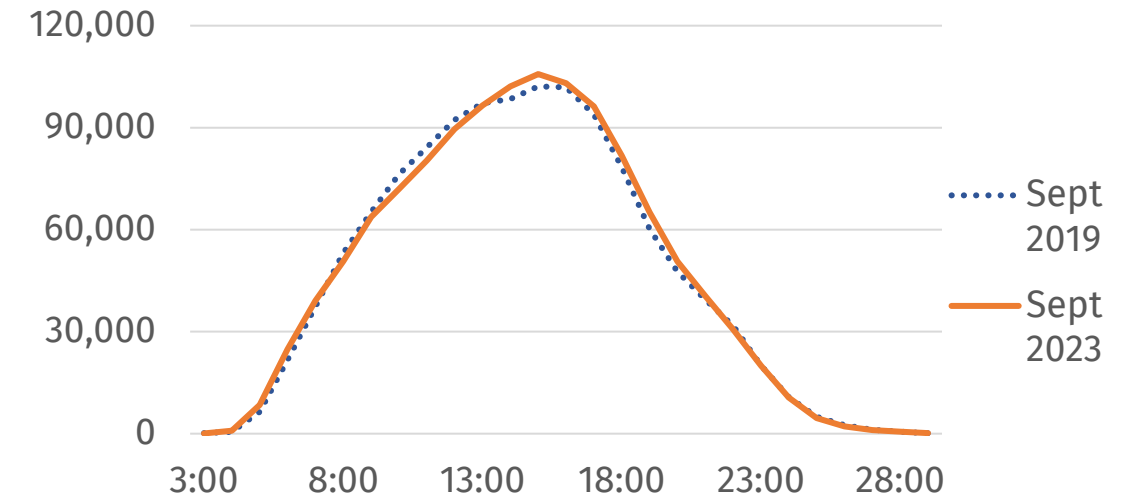


Part III: Weekend changes

System-wide, weekend ridership has mostly recovered and is distributed in a similar pattern to 2019.

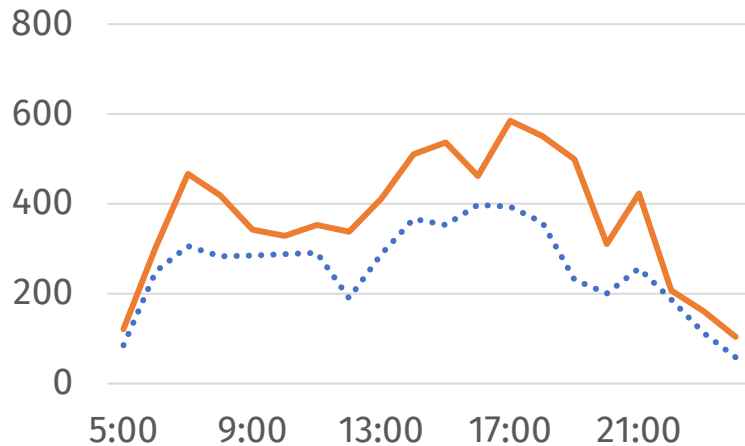
However, certain routes show **unusual ridership distributions** with minor peaks in the AM.

System-wide weekend boardings

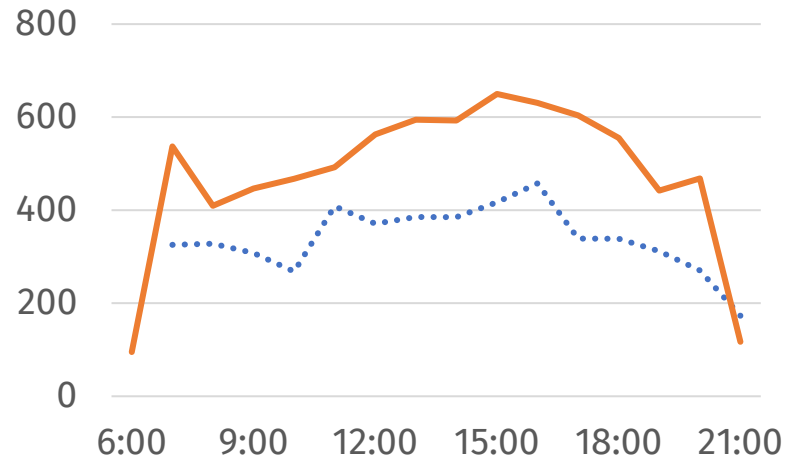


Weekend boardings for 3 example routes

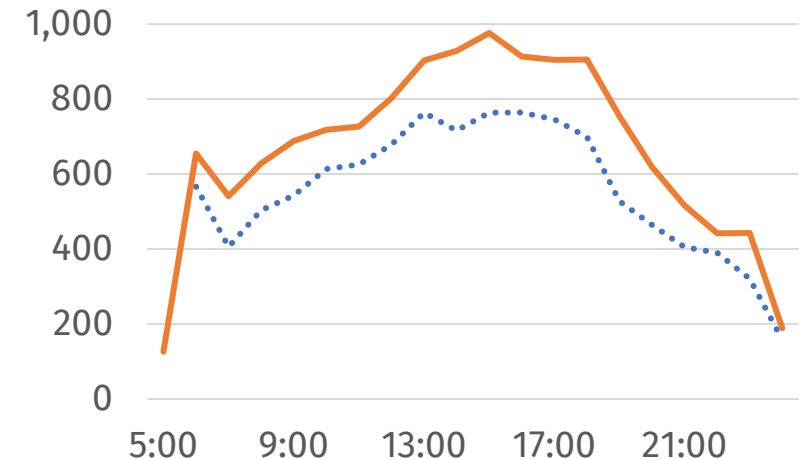
Route 340



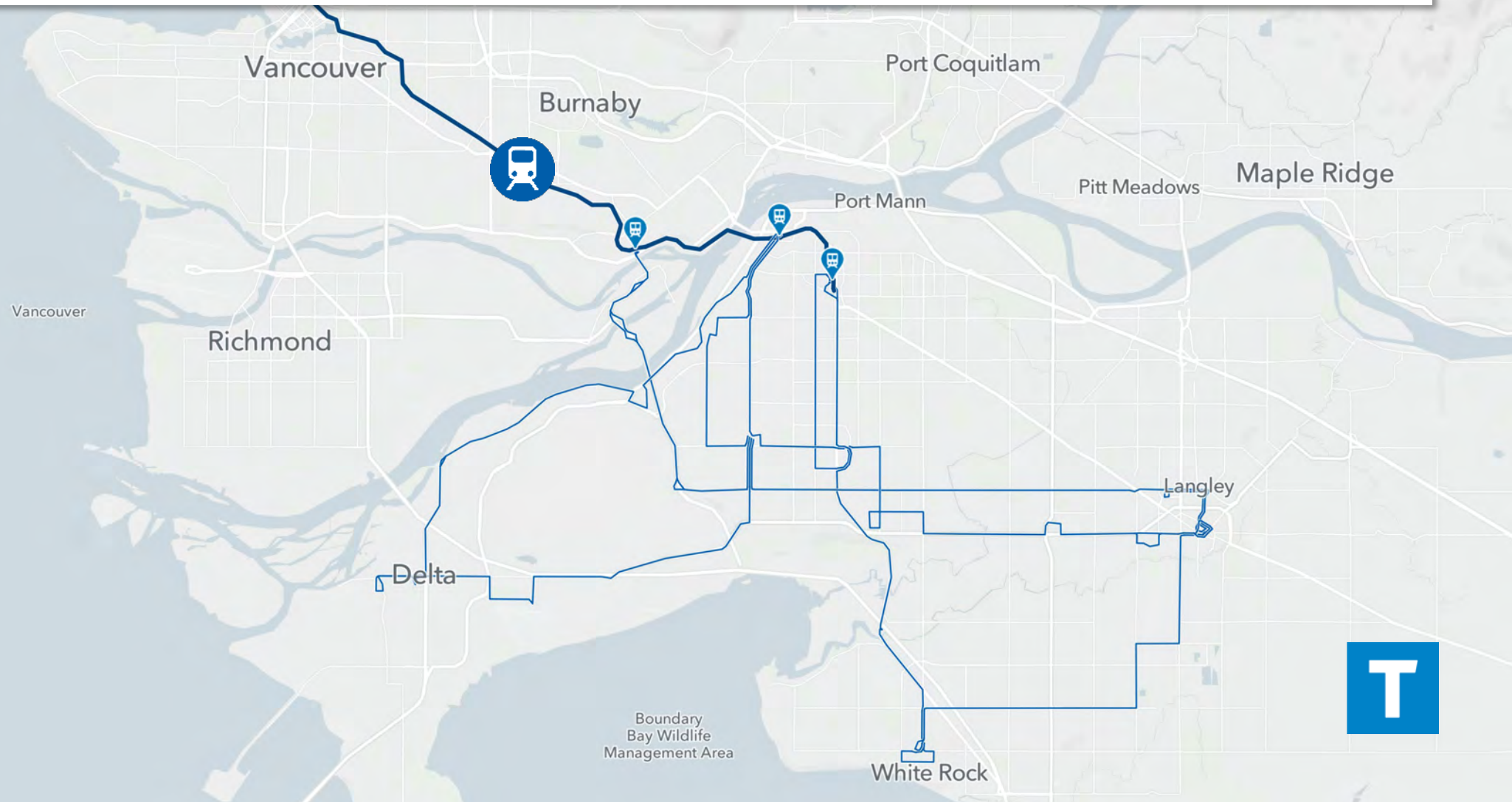
Route 342



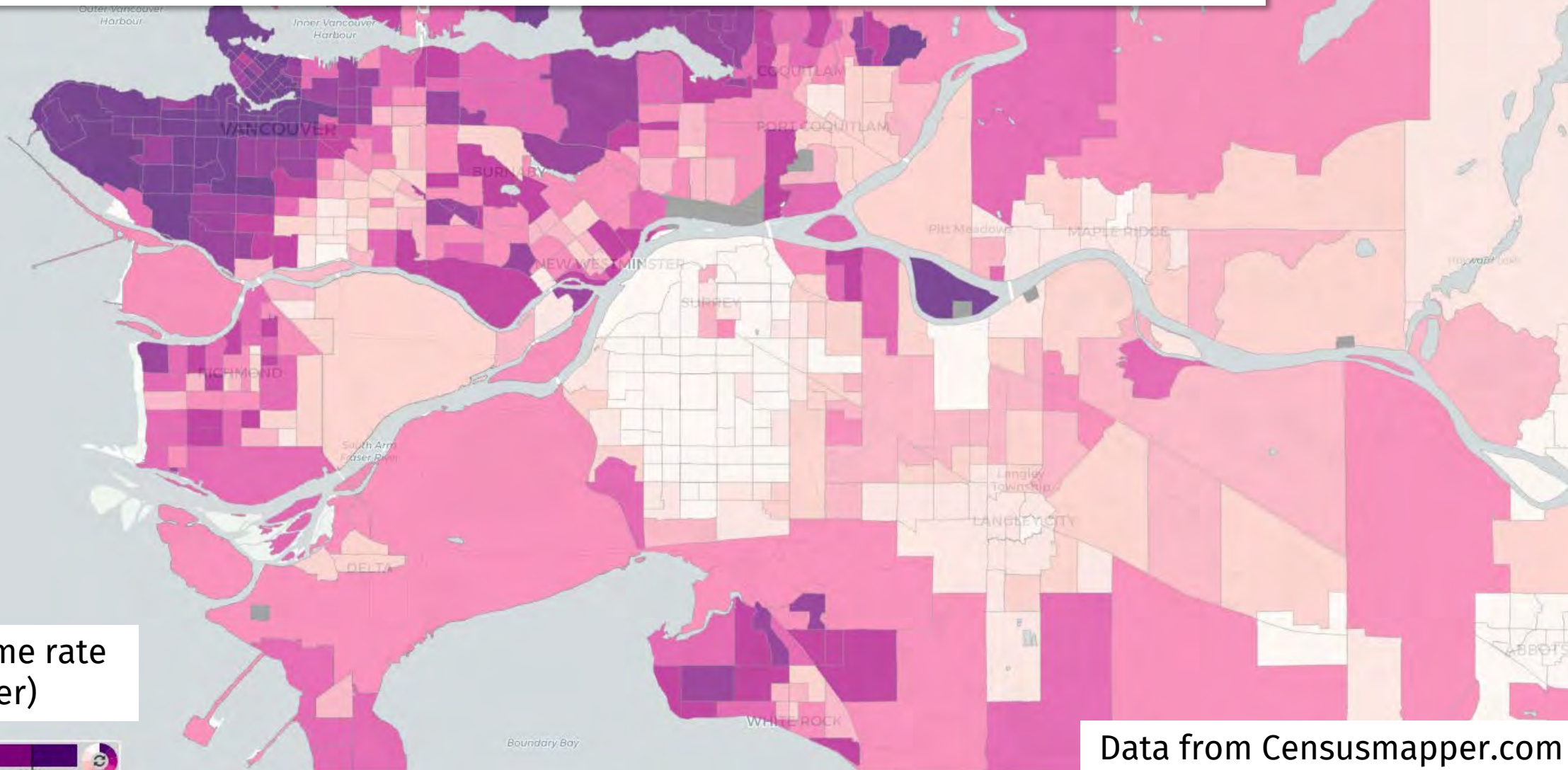
Route 502



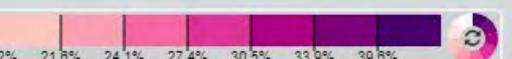
Routes with weekend AM peaks are predominantly located in the Southeast



The Southeast region has the lowest rate of remote employment



Work from home rate
(Darker = higher)

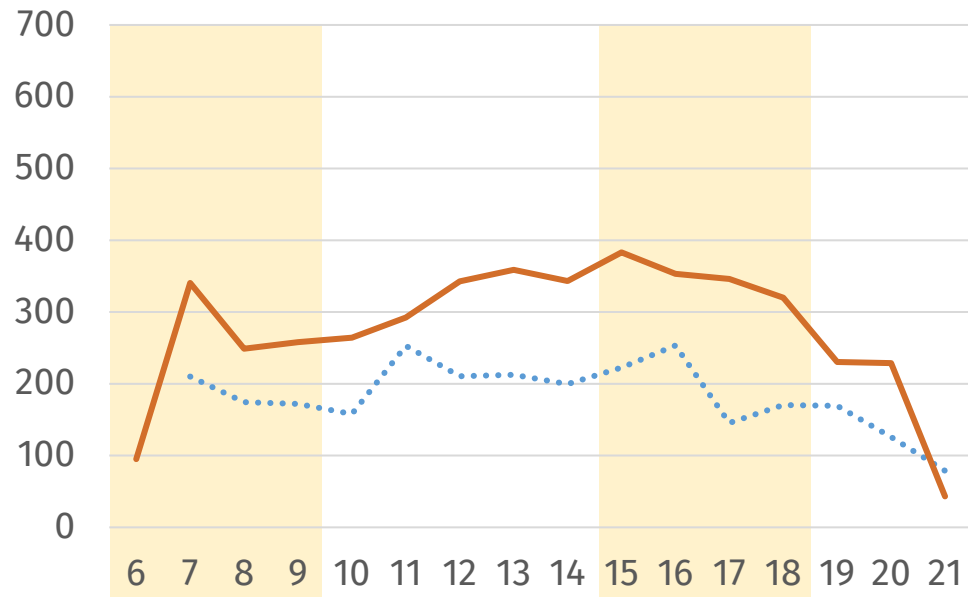


Data from [Censusmapper.com](https://www.censusmapper.com)

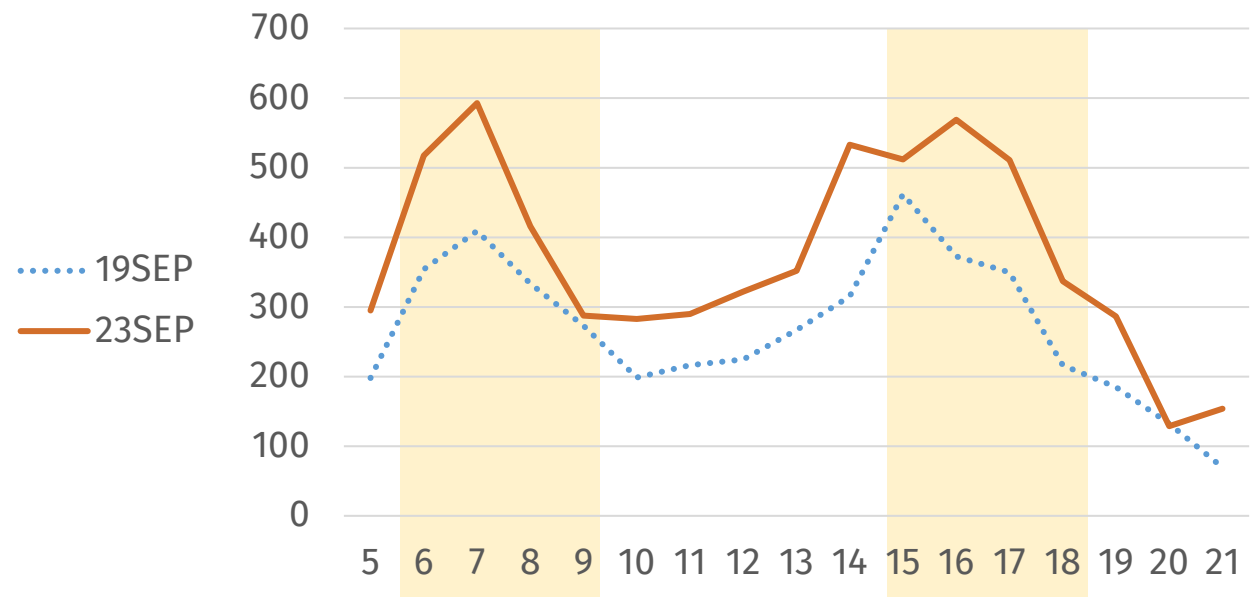
This trend suggests that weekend employment has grown

- Weekend trip distribution on these routes is now beginning to **resemble weekday trip distribution**, suggesting that employment-related travel patterns are emerging.
- Trips with a pronounced AM peak tend to also be peak-dominated on the weekdays. It is likely that these routes serve employment destinations that operate all week.

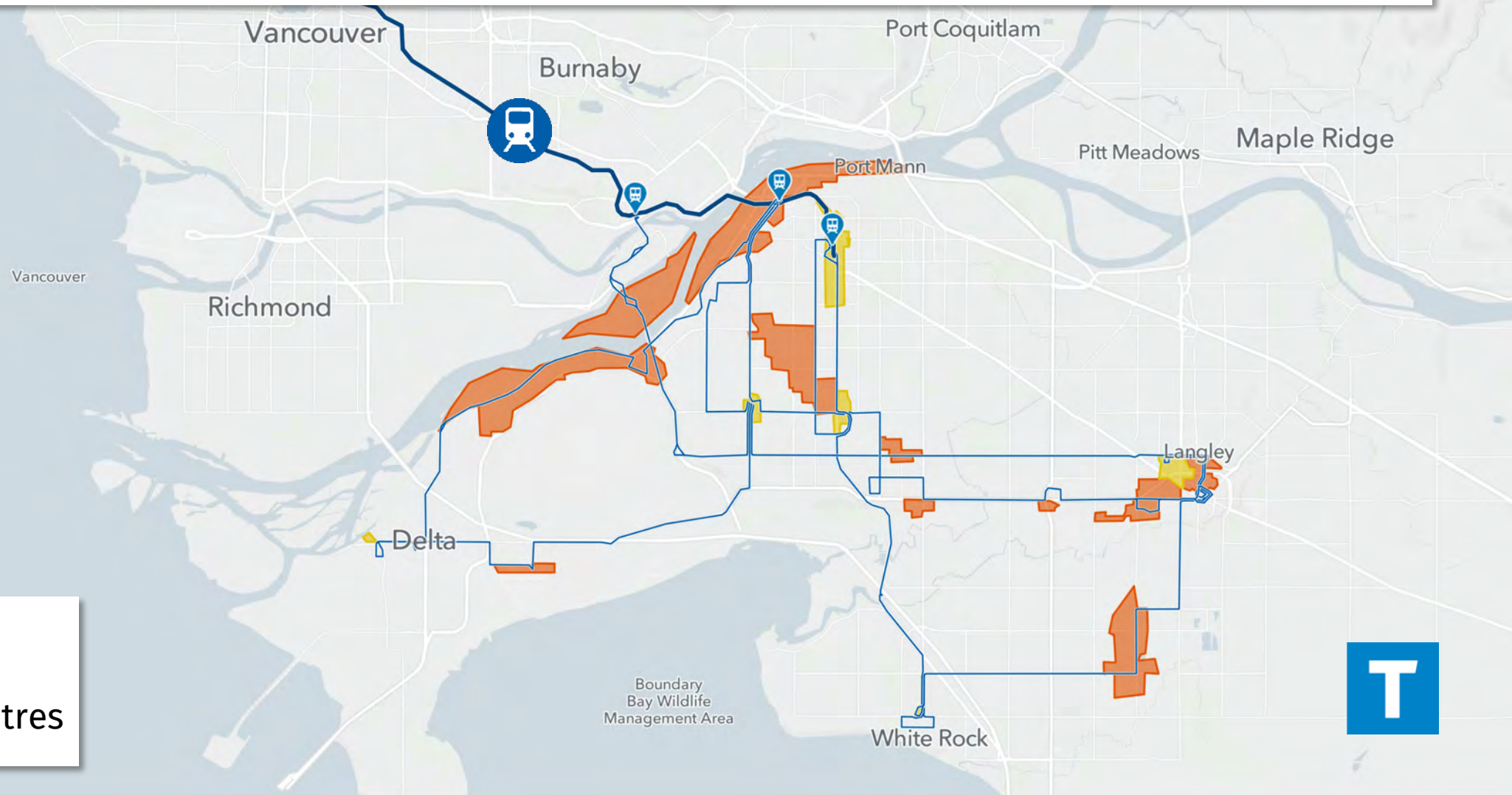
Route 342 - Weekends



Route 342 - Weekdays

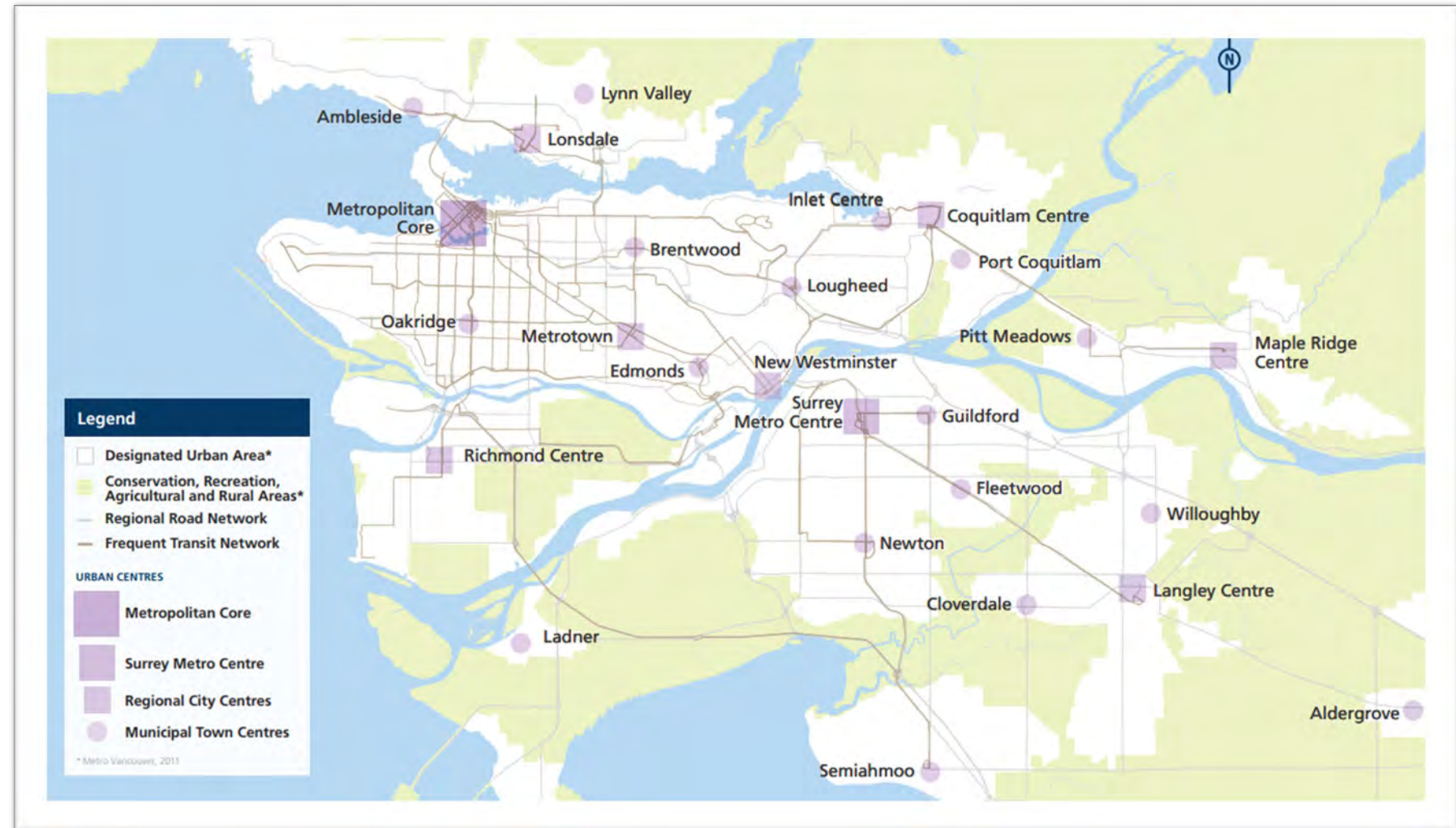


Weekend peak routes connect to SkyTrain and employment lands



Wild speculation: Metro Vancouver's polycentric growth may be a contributor

- Mixed-use residential and commercial lands are deliberately concentrated in **multiple regional centres** instead of a single metropolitan one
- Employment and ridership due to this land use pattern is **more resilient** against decreased activity in any one area.



Conclusion

- It's likely not accurate to view the changes in trip distribution as individuals changing their travel patterns. Instead, this distribution reflects **growth in residents, jobs, and ridership**, offsetting losses induced by remote and hybrid work.
- Employment-related trips continue to be a major component of total ridership. However, within this category, **non-office trips located outside of downtown Vancouver** have become more prevalent.

