NORTHWEST TRANSIT EXCHANGE
EUGENE, OR • 2023

WELCOME

to the

Northwest Transit Exchange

Conference 2023

Hosted by Lane Transit District &
the City of Eugene

Session One

City of Eugene

Franklin Boulevard Transformation

FRANKLIN BOULEVARD TRANSFORMATION

City of Eugene- Public Works Engineering

PRESENTATION TOPICS

1. Project Overview
2. Why Transform Franklin Blvd?
3. Public Involvement
4. Preferred Design Concept
5. Roundabouts

FRANKLIN BLVD *Transformation*

PROJECT OVERVIEW

PROJECT AREA MAP

PROJECT SCHEDULE

EmX Opens	2007
Design Concept Development	2019 – 2020
Grant Applications	2020 & 2021
Design Concept Refinement	2020 - 2023
Corridor Analysis and Recommendation Report	2023
NEPA (National Environmental Policy	2023

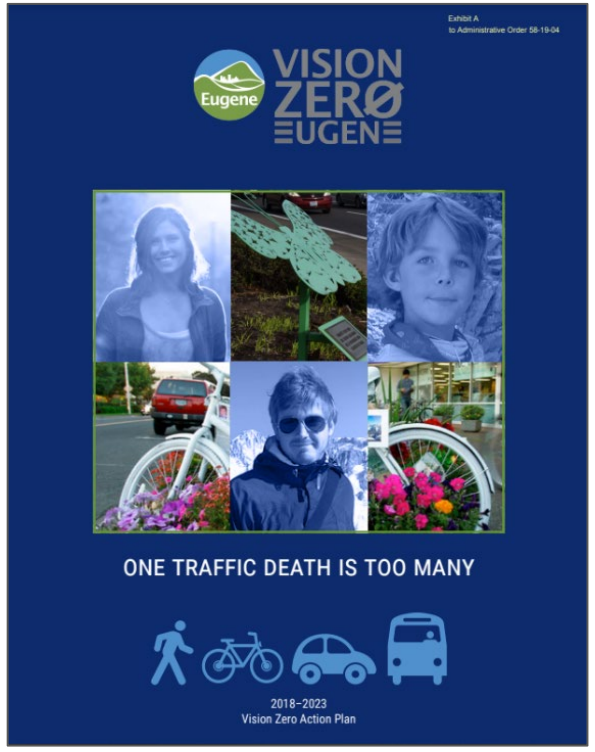
PURPOSE of TRANSFORMING FRANKLIN BOULEVARD from a street focused on moving automobiles to:

1. A safe, comfortable, and high-quality street designed for people walking, biking, and taking the bus while also accommodating people who drive;
2. Be consistent with adopted land use and transportation plans;
3. Be supportive of changes in urban form and mixed-use development.

WHY TRANSFORM FRANKLIN?

WHY TRANSFORM FRANKLIN?

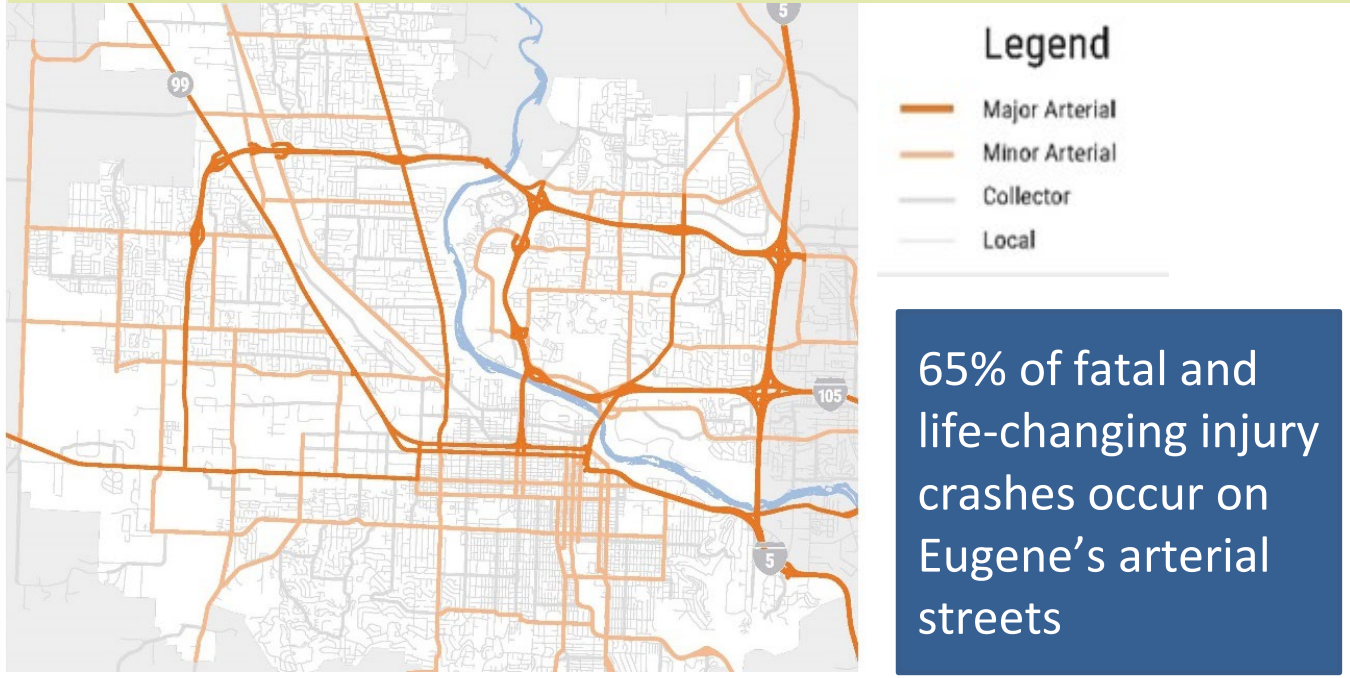
1. Safety



Total Crashes on Franklin Blvd: 2016 – 2020

Severity Level	Number of Crashes
Fatal	1 (Pedestrian)
Serious Injury	2 (1 Bicyclist)
Moderate Injury	14 (4 Pedestrians, 4 Bicyclists)
Minor Injury	28 (2 Pedestrians, 1 Bicyclist)
Property Damage Only	34

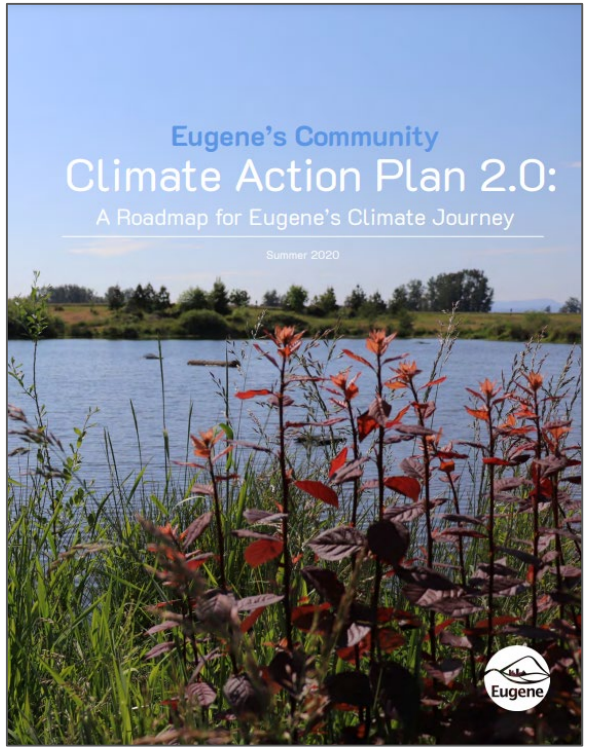
Eugene Roadway Classifications

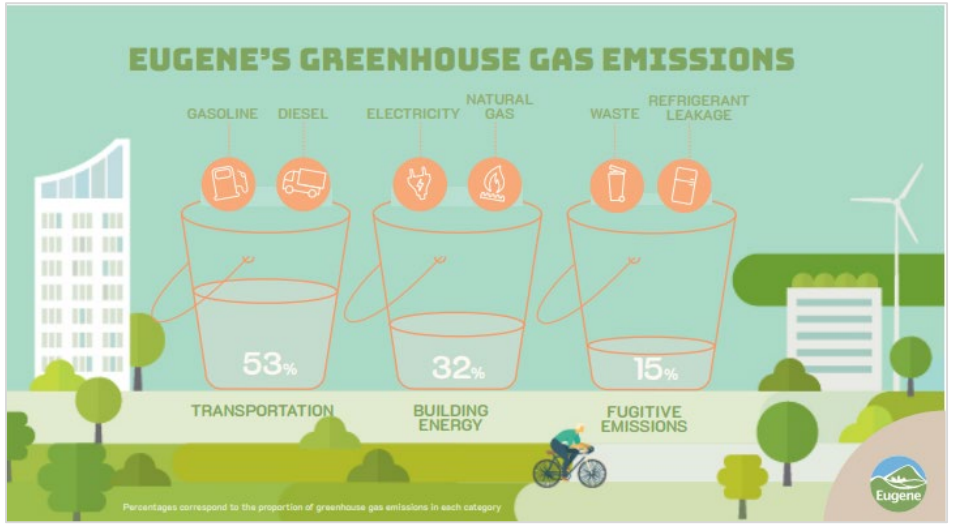


65% of fatal and life-changing injury crashes occur on Eugene's arterial streets

WHY TRANSFORM FRANKLIN?

2. Climate





Climate Recovery Ordinance	Eugene 2035 Transportation System Plan
Reduce community fossil fuel use by 50% of 2010 levels by 2030	By the year 2035 triple the percentage of trips made on foot, by bicycle, and by transit from 2014 levels

FRANKLIN BLVD
Transformation

WHY TRANSFORM FRANKLIN?

3. Urban Growth

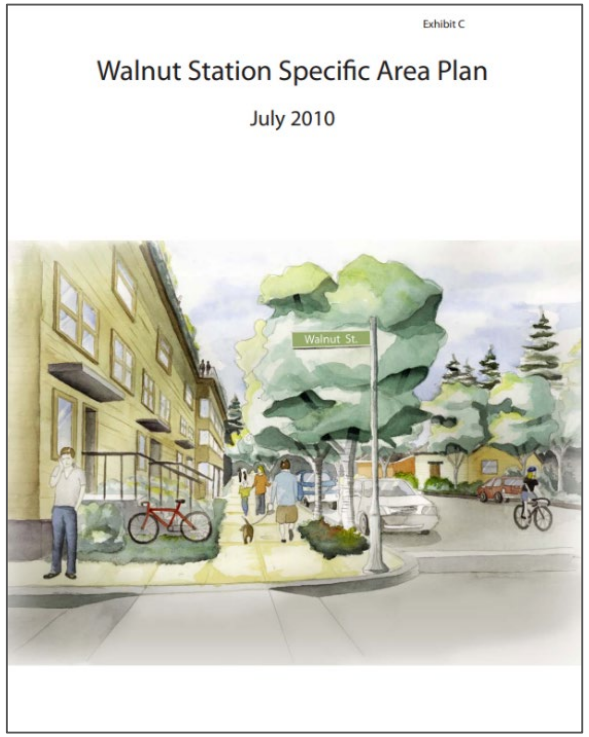
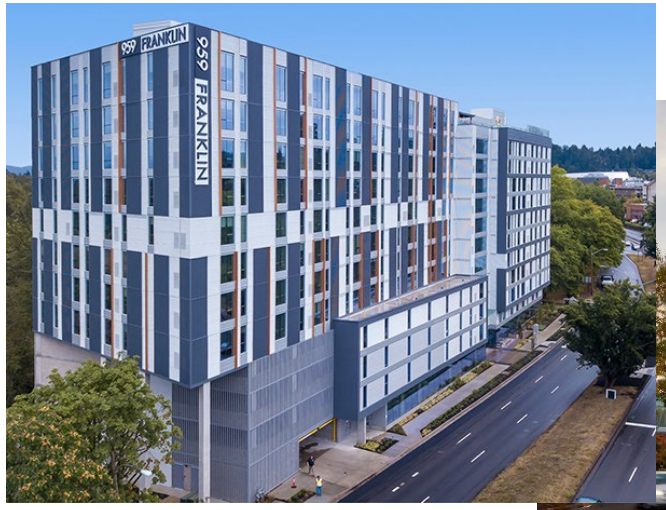


Exhibit C

Walnut Station Specific Area Plan

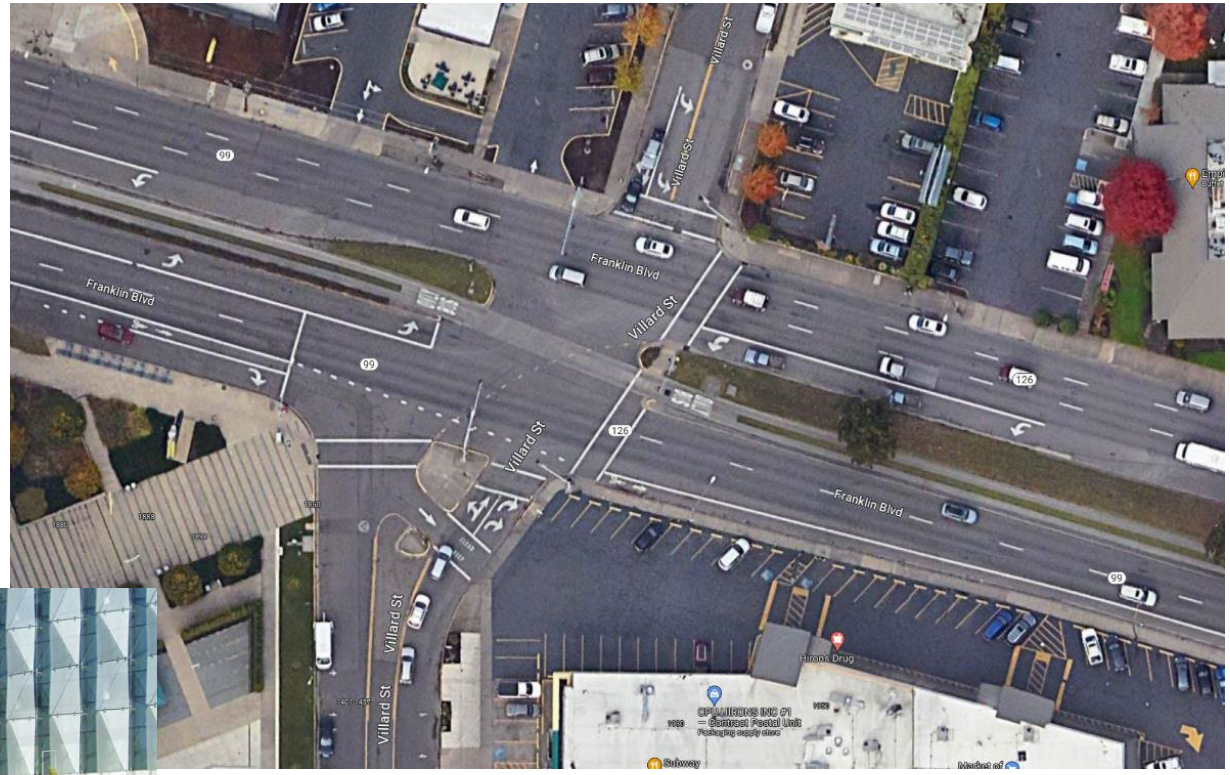
July 2010



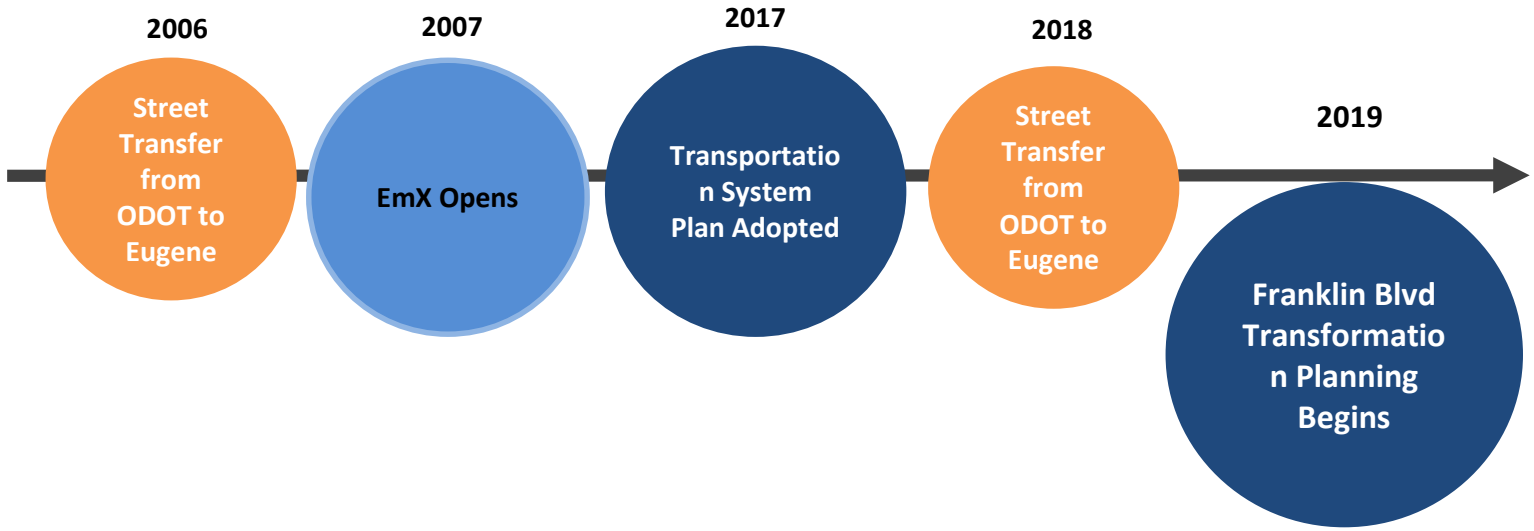
FRANKLIN BLVD Transformation

WHY TRANSFORM FRANKLIN?

3. Bus Rapid Transit

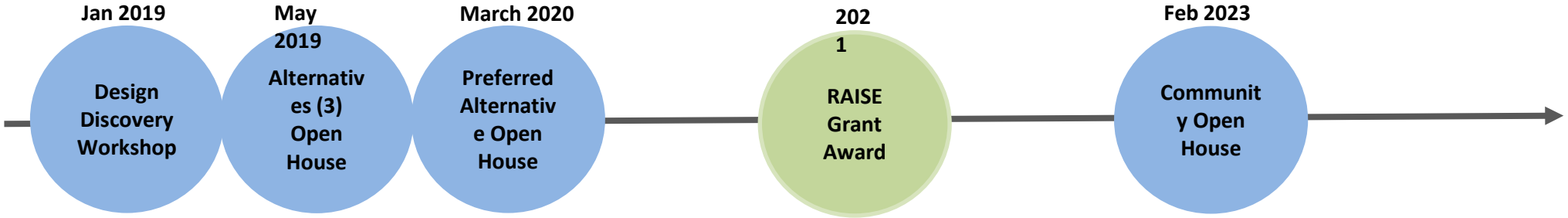


FRANKLIN BLVD TRANSFORMATION BEGINS



High Level Design Concept Development

Preferred Alternative Design Refinement



FRANKLIN BLVD *Transformation*

PUBLIC INVOLVEMENT

High Level Design Concept Development

Preferred Alternative Design Refinement

Jan 2019
Design Discovery Workshop

May 2019
Alternatives (3) Open House

March 2020
Preferred Alternative Open House

2021
RAISE Grant Award

Feb 2023
Community Open House

FRANKLIN BLVD Transformation

ALTERNATIVE A – ALL ROUNDABOUTS

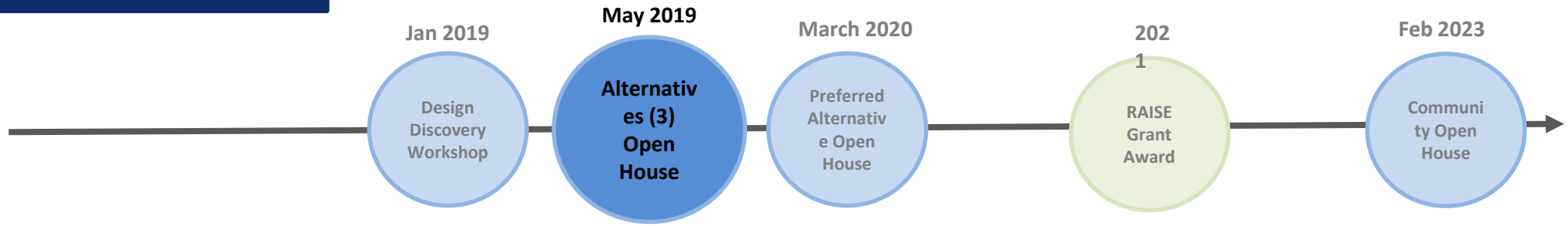
ALTERNATIVE B – ALL SIGNALS

ALTERNATIVE C – HYBRID

FRANKLIN BLVD *Transformation*

PUBLIC INVOLVEMENT

High Level Design Concept Development | **Preferred Alternative Design Refinement**



Franklin Boulevard Corridor
Summary of Alternatives

	Alternative A	Alternative B	Alternative C
Traffic Flow	✓✓	✓✓	✓✓
Transit Flow	✓✓	✓	✓✓✓
Landscape Area	✓✓✓	✓	✓✓✓
Ease of Pedestrian Crossings	✓✓	✓✓✓	✓
Safety and Lower Traffic Speeds	✓✓✓	✓✓	✓✓

Franklin Boulevard Corridor
Summary of Alternatives

	Alternative A	Alternative B	Alternative C
Automobile Ease of Access	✓✓✓	✓✓	✓
Less ROW Impact	✓	✓✓✓	✓✓
Connectivity for People Walking and Bicycling	✓✓	✓✓✓	✓✓
Less Out-of-Direction Travel for Motorists	✓✓	✓✓✓	✓
Gateway Opportunities	✓✓✓	✓✓	✓✓✓

FRANKLIN BLVD *Transformation*

PUBLIC INVOLVEMENT

High Level Design Concept Development

Preferred Alternative Design Refinement

Jan 2019 — Design Discovery Workshop

May 2019 — Alternatives (3) Open House

March 2020 — **Preferred Alternative Open House**

2021 — RAISE Grant Award

Feb 2023 — Community Open House

FRANKLIN BLVD *Transformation*

PUBLIC INVOLVEMENT

High Level Design Concept Development | **Preferred Alternative Design Refinement**

- **Jan 2019** — Design Discovery Workshop
- **May 2019** — Alternatives (3) Open House
- **March 2020** — Preferred Alternative Open House
- **202** — **RAISE Grant Award**
- **Feb 2023** — Community Open House

PUBLIC INVOLVEMENT

High Level Design Concept Development

Preferred Alternative Design Refinement

Jan 2019 — Design Discovery Workshop

May 2019 — Alternatives (3) Open House

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2021 — RAISE Grant Award

Feb 2023 — Community Open House

PREFERRED DESIGN CONCEPT

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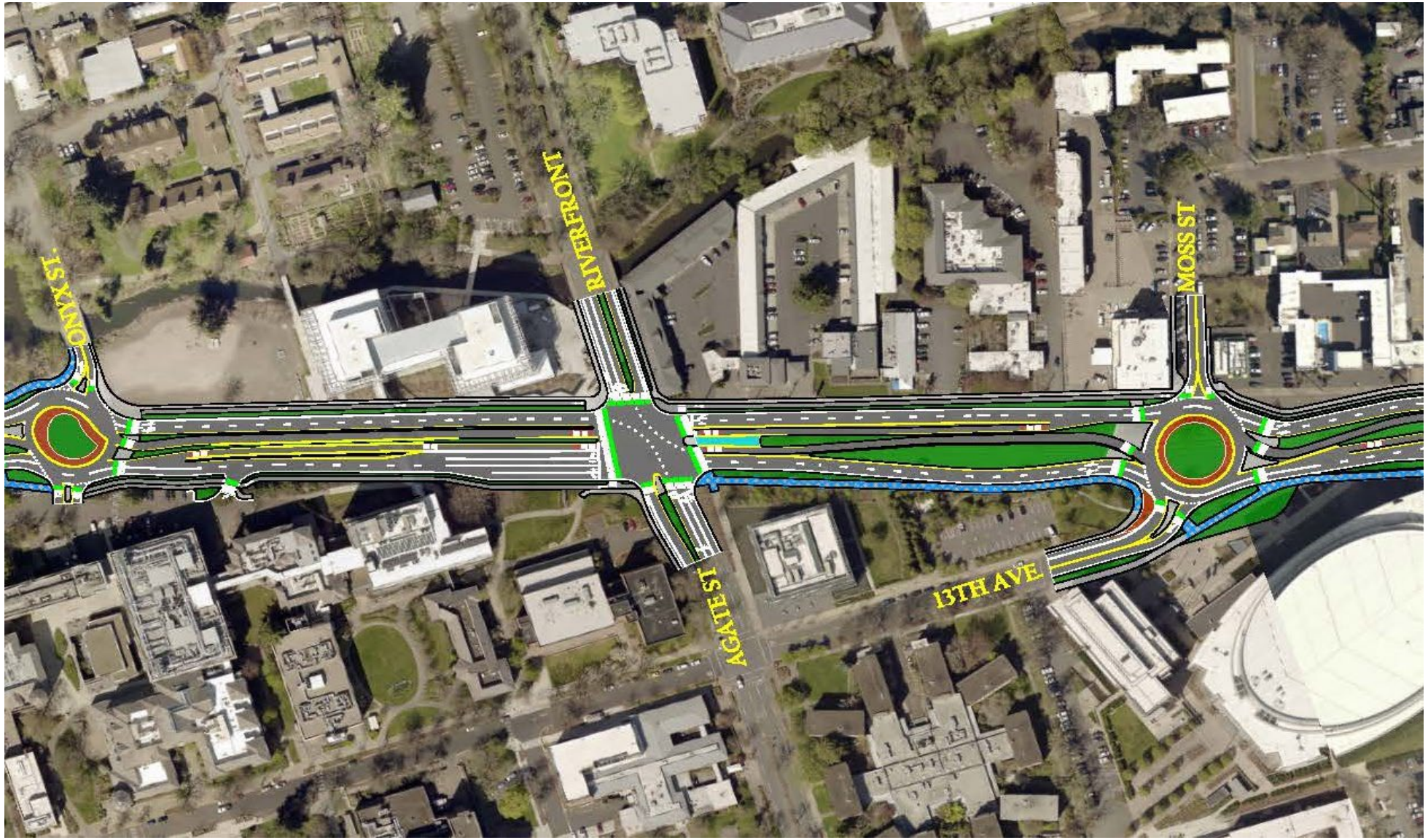
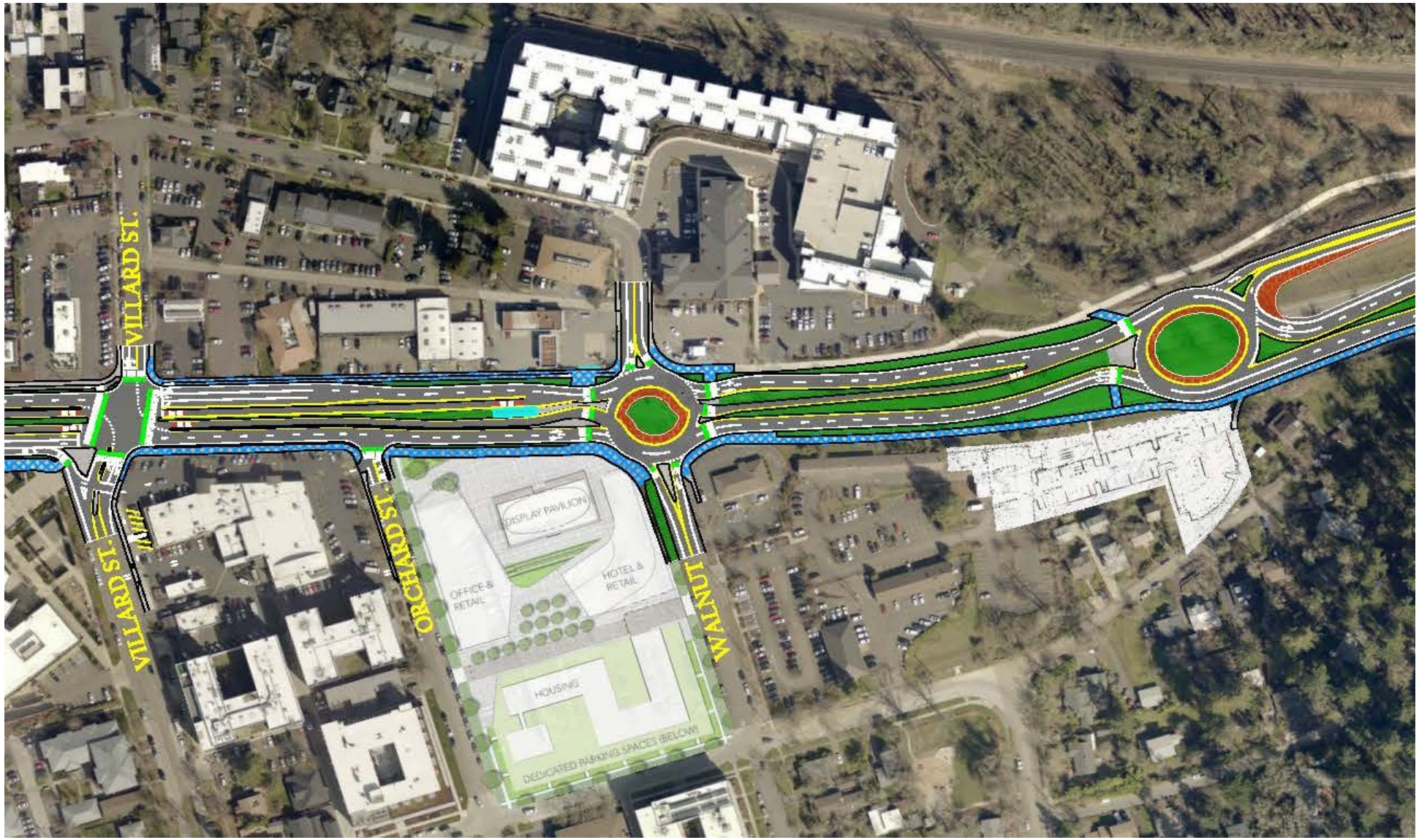


PREFERRED DESIGN CONCEPT



BENEFITS OF ROUNDABOUTS

1. Safety

VISION ZERO EUGENE

2. Climate

3. Money Saved

BENEFITS OF ROUNDABOUTS

1. Safety

VISION ZERO EUGENE

- 35% fewer crashes overall
- 90% fewer fatalities
- 75% fewer injuries

BENEFITS OF ROUNDABOUTS

2. Climate

- Less air and noise pollution
- Less fuel used
- Landscaping/Art potential

BENEFITS OF ROUNDABOUTS

3. Money Saved

- Reduced fuel used = money saved at pump
- No traffic signals = money saved on power

ROUNDABOUTS & PEOPLE WALKING

FRANKLIN BLVD & WALNUT ST

Looking southwest from the northwest corner of Walnut Street and Franklin Boulevard.

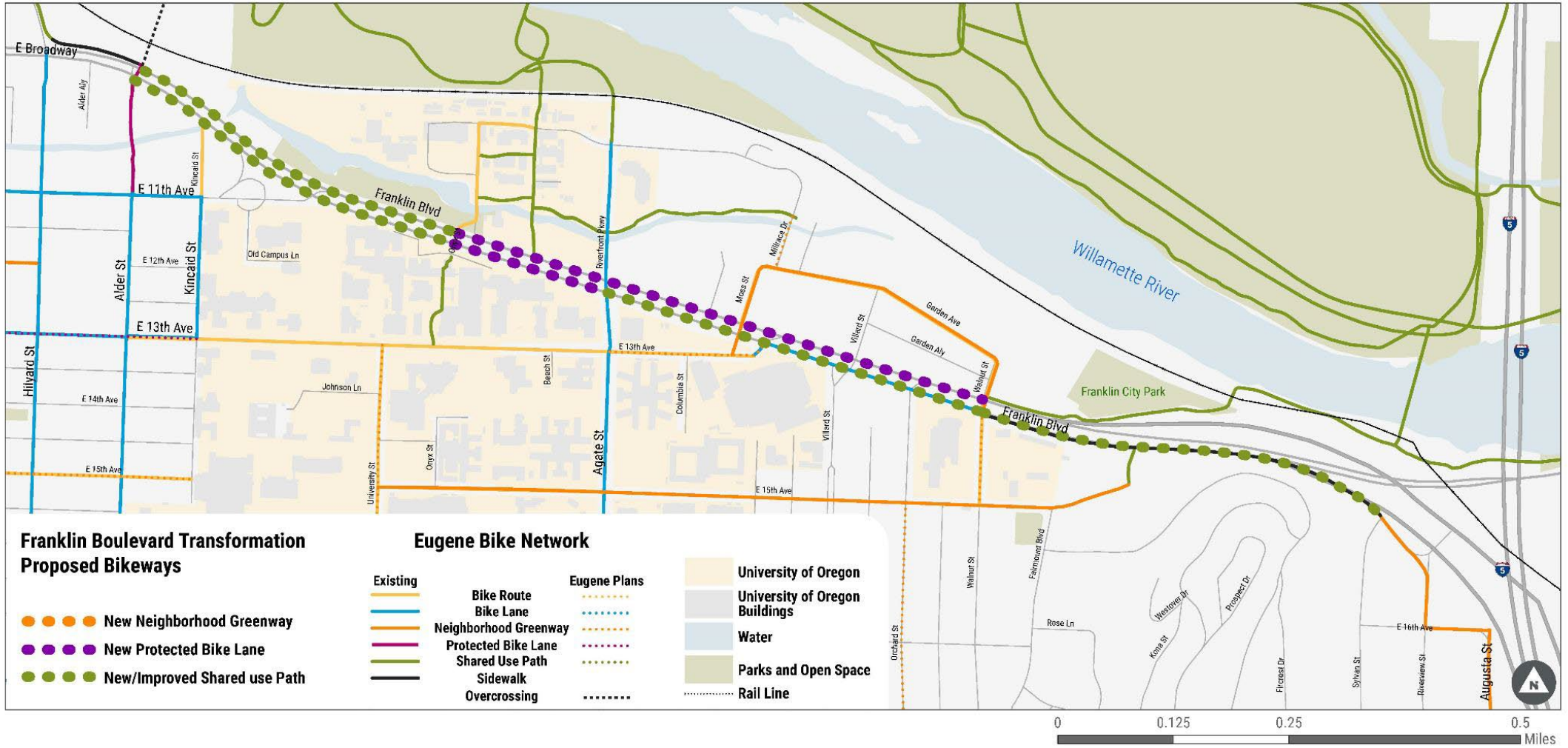
FRANKLIN BLVD Transformation

BIKE FACILITIES

PROTECTED BIKEWAYS

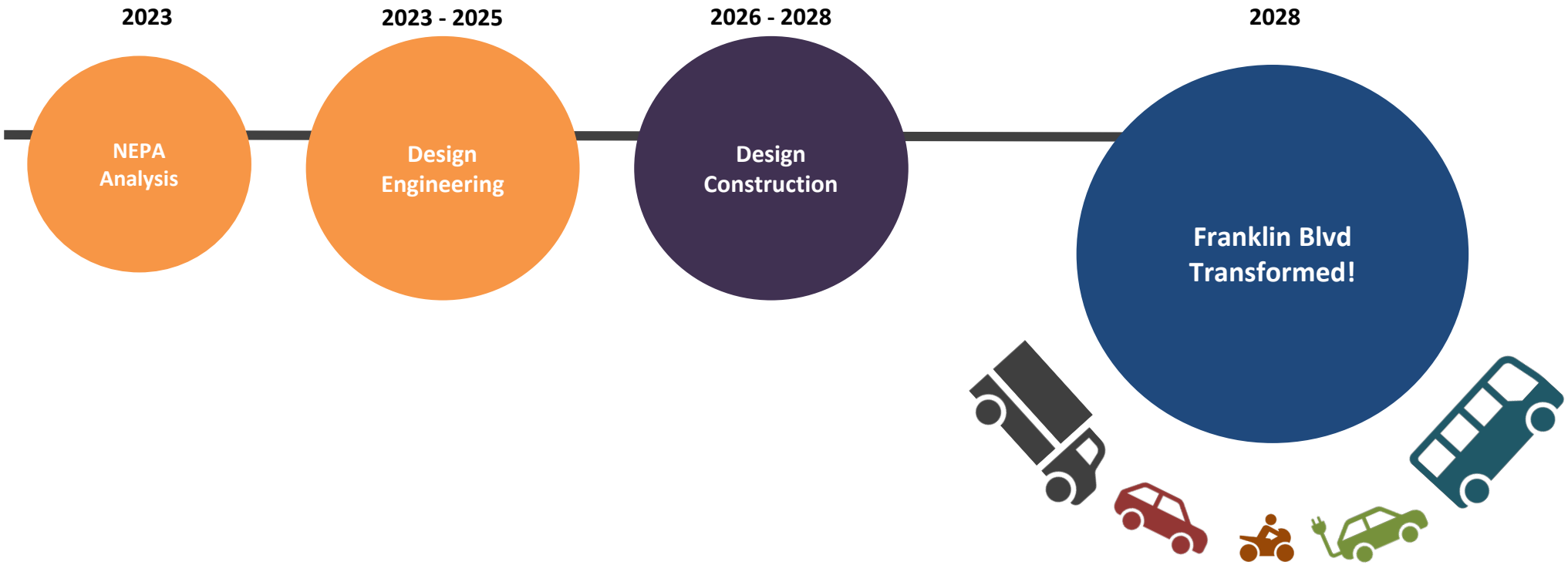
SHARED-USE PATHS

BIKE FACILITIES
FACILITIES

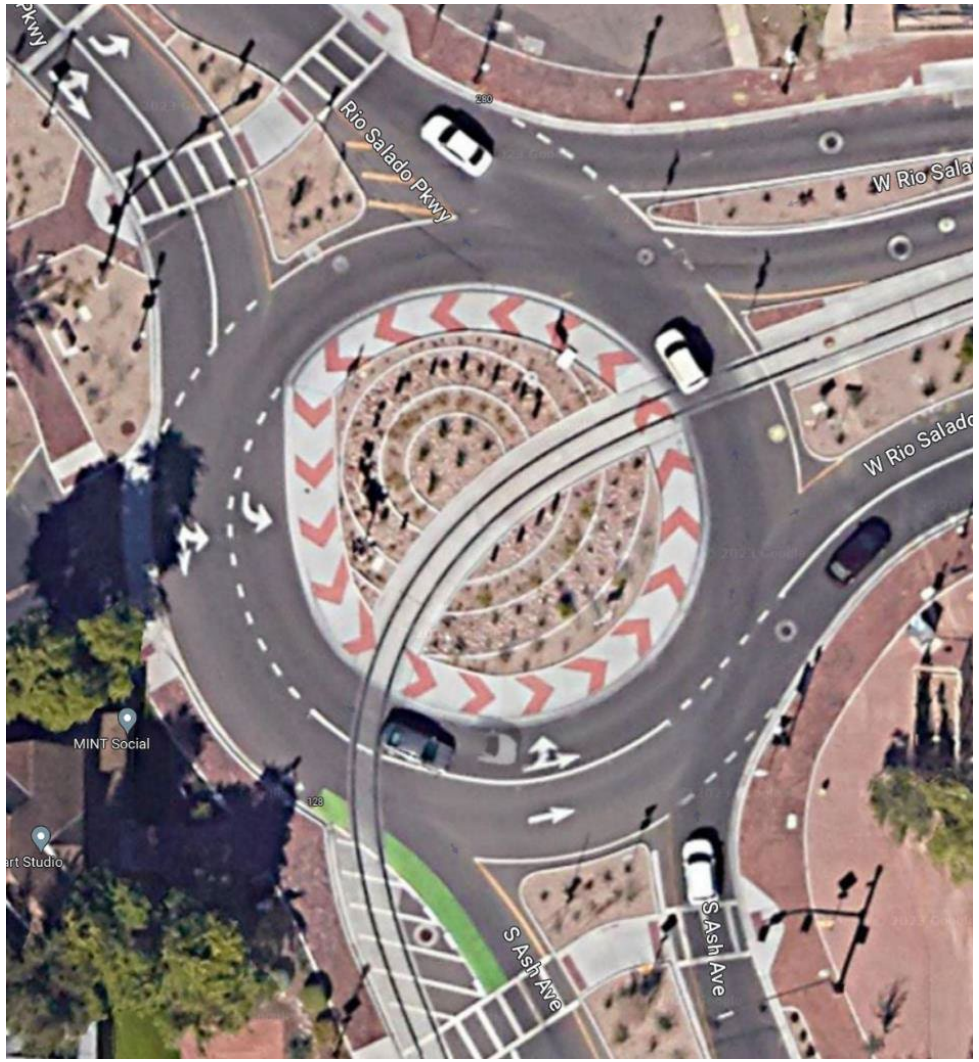


WHAT'S NEXT?

PHASE 1: FUNDED THROUGH RAISE GRANT

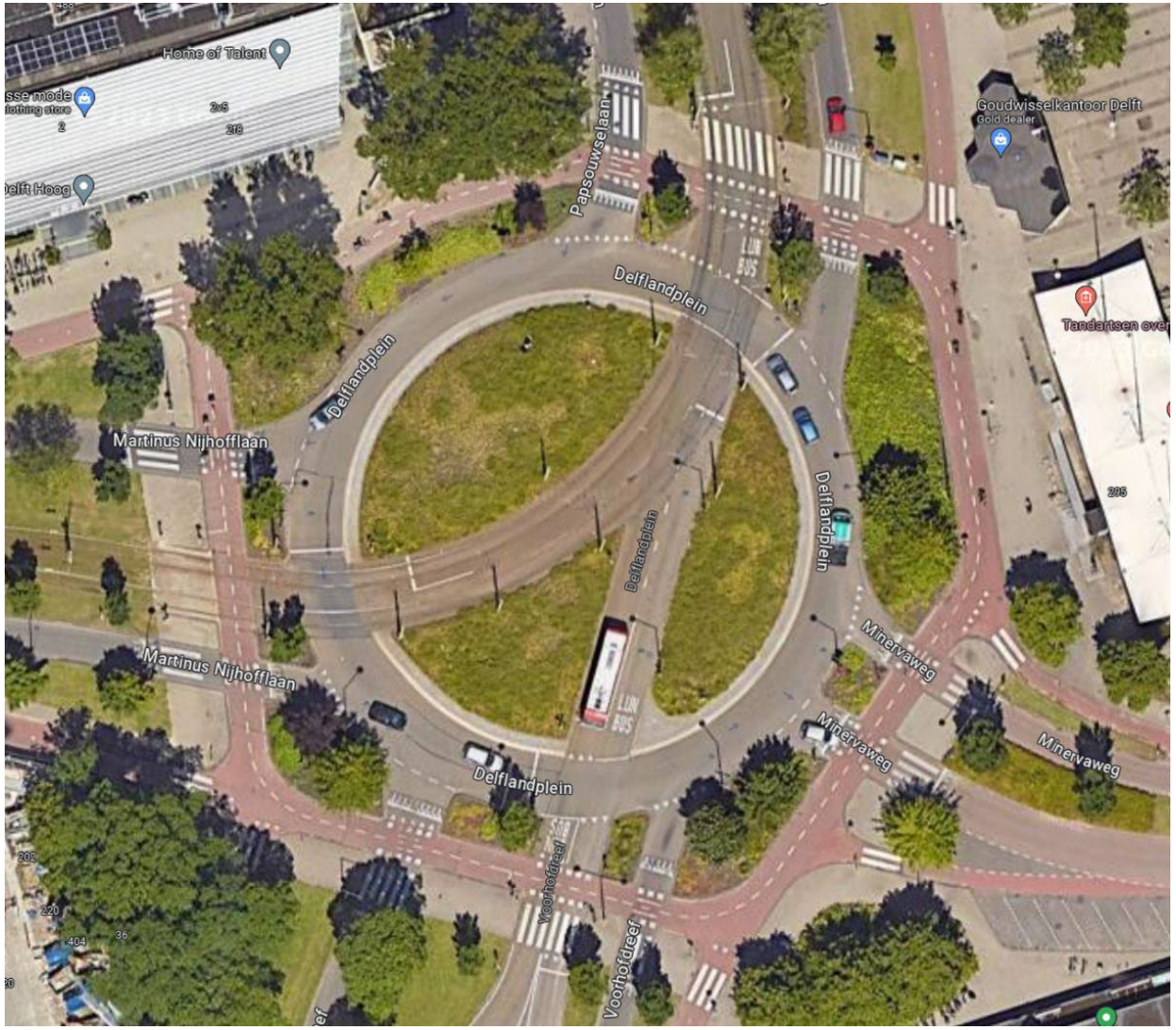


Transit & Roundabouts in Other Places



Tempe, Arizona

Transit & Roundabouts in Other Places



Delft, Netherlands

Transit & Roundabouts in Other Places

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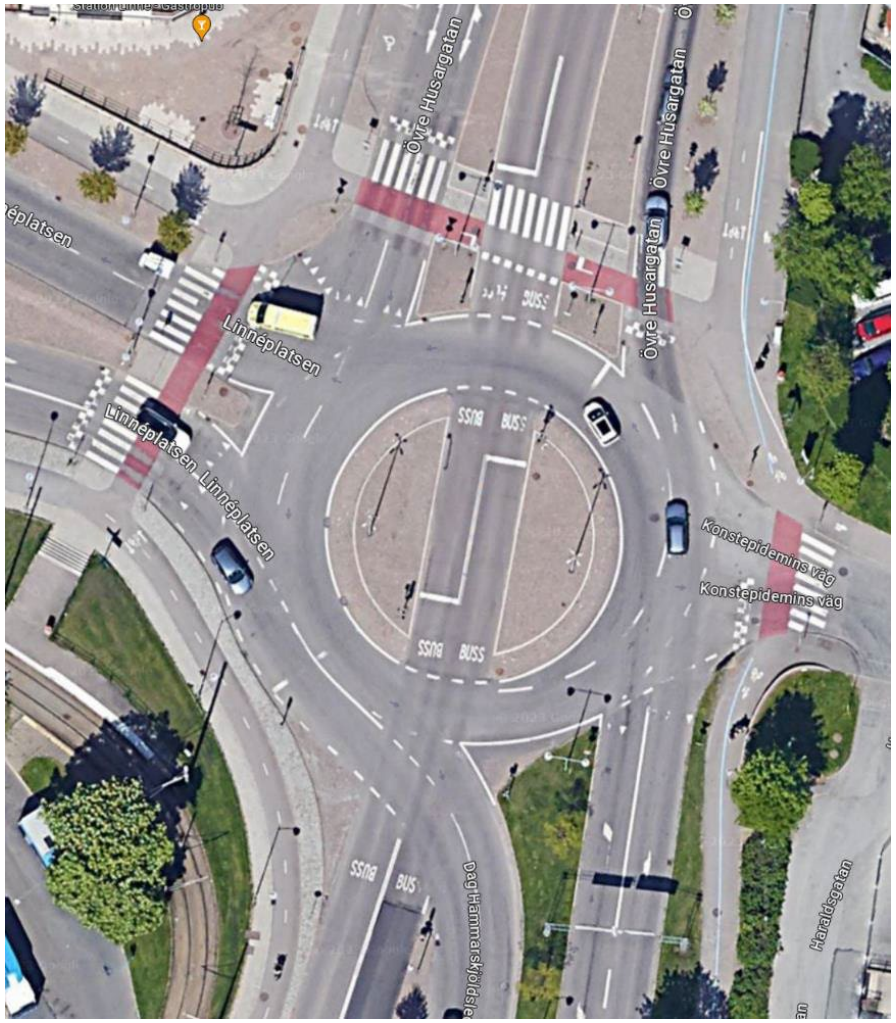
Transit & Roundabouts in Other Places



Gothenburg, Sweden

Transit & Roundabouts in Other Places

Gothenburg, Sweden

WHAT'S NEXT?

CONTACT

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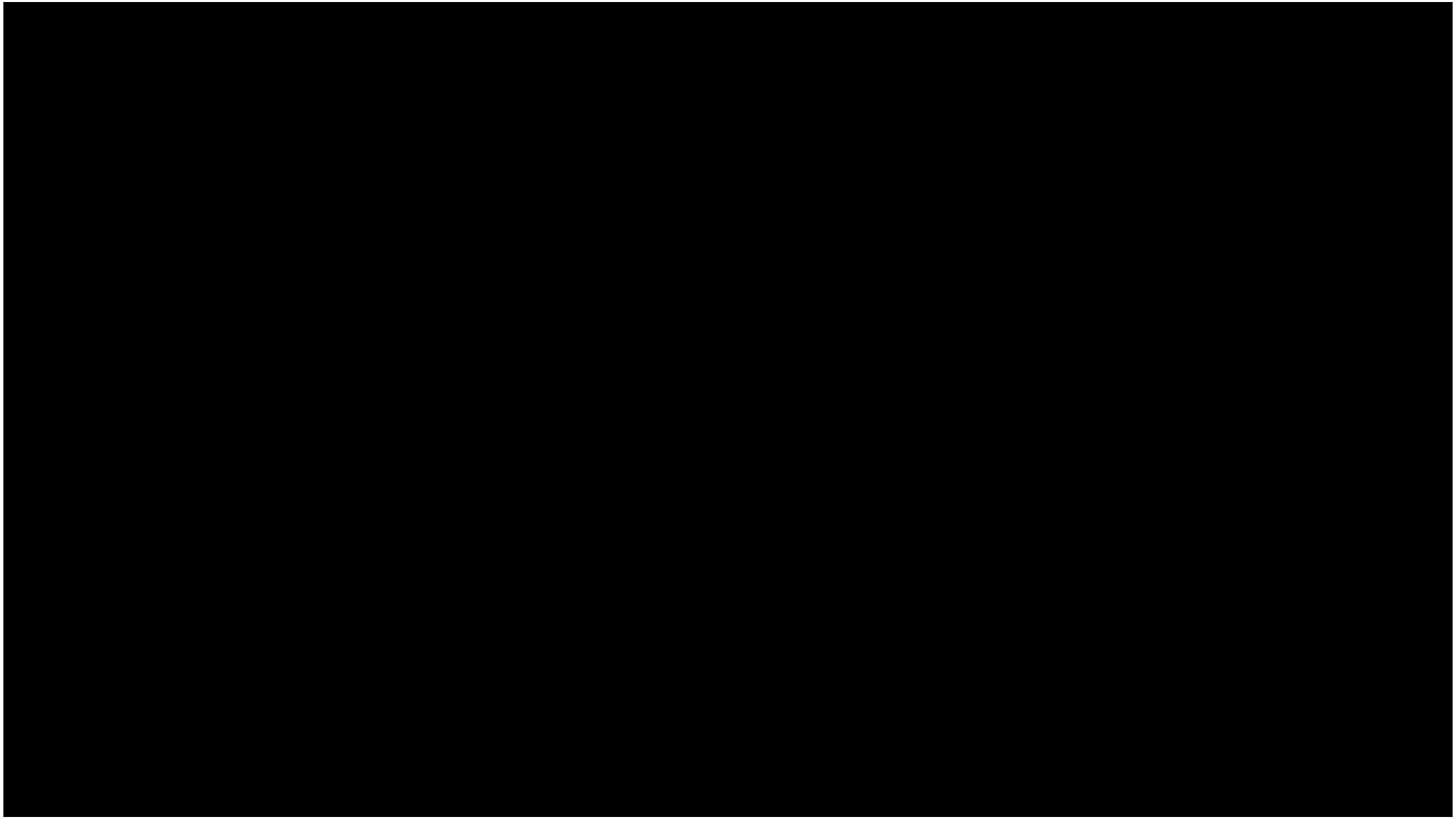


Up Next:

LTD

Ridership Survey Results

Discussion Forum

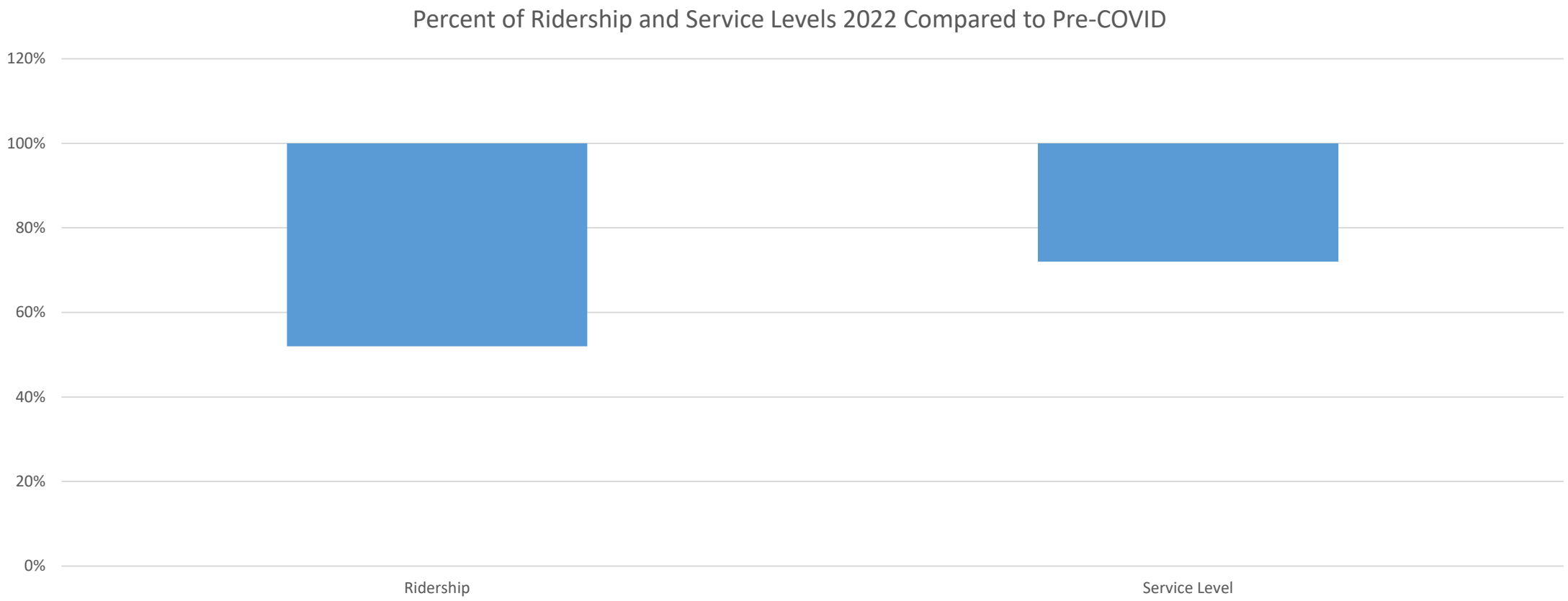
Ridership and Service Survey

Northwest Transit Exchange 2023

Lane Transit District

LTD.org

Ridership and Service Levels



Ridership Recovery

- Most agencies began to see recovery in later 2021, with quick growth that has since slowed
- Agencies reported increase driven by:
  - Students returning to classes (high school and university)
  - Return to office

Reasons for lower service level

- Not enough operators
- Less demand for transit

- Questions:
  - Has anyone had any success in programs to hire more operators?
  - If lower demand is driving lower service levels, is that based on your service policy?
  - How are your service levels lower? Less span? Less frequency? Less coverage?

Changes in Ridership Patterns

- Most, but not all, agencies reported changes in ridership patterns
- Fewer peaks, “flatter” demand throughout the day, more weekend trips relative to weekday

- Questions:
  - Has anyone done on-board surveying to see if their ridership has changed? What are your new demographics?
  - Has anyone studied how changes in remote work policies are impacting their ridership (e.g. areas with more remote workers vs areas with fewer)?

Activities to Boost Ridership

- Most agencies engaged in multiple tactics including:
  - Marketing campaigns
  - Network redesigns
- Some agencies trying:
  - Employer programs
  - Safety programs – more officers in the system

- Questions:
  - Of these programs, have you been able to determine what has been effective?
  - If you are doing network redesigns, how are you changing the service to meet the needs of the changed ridership?

Up Next:

TransLink

Adapting to Shifting Travel Patterns & Managing Ridership Recovery

Adapting to Shifting Travel Patterns and Managing Ridership Recovery: Metro Vancouver's Experience

Michael Ohnemus (michael.ohnemus@translink.ca)
Senior Planner, Transit Network Management
TransLink

Outline

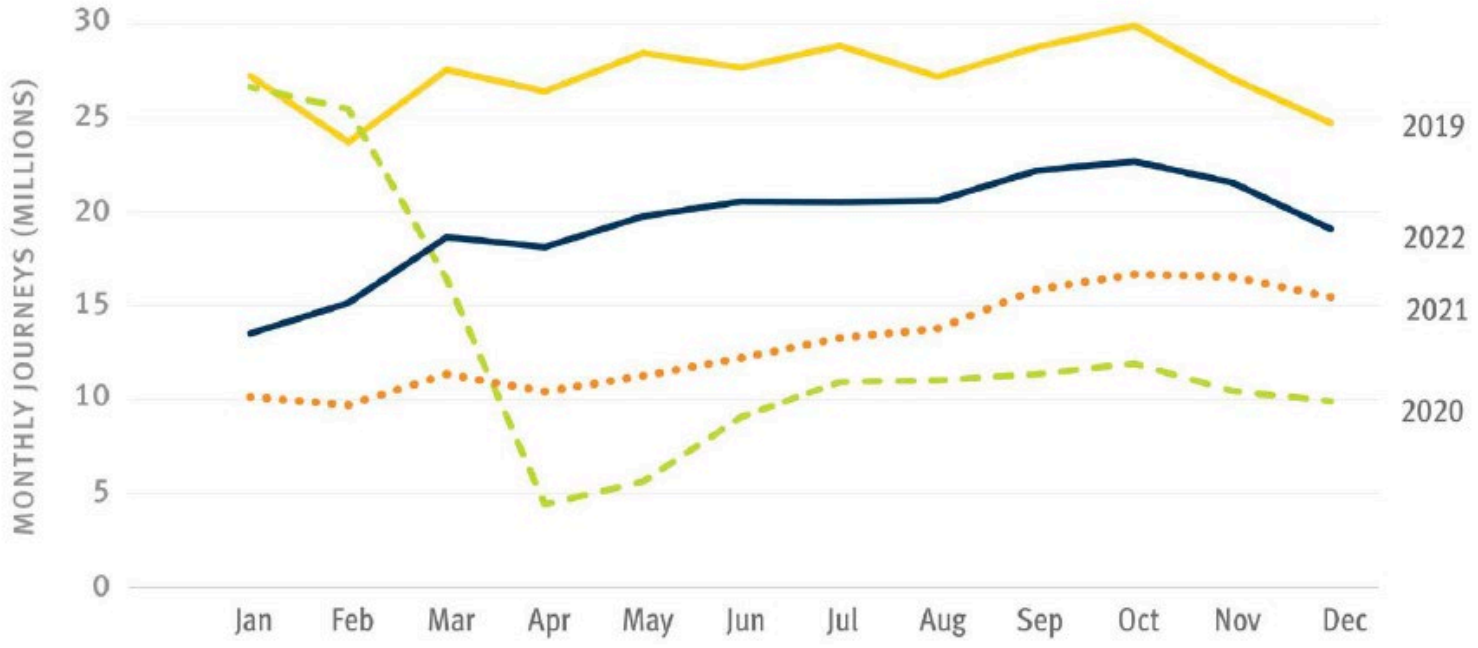
Part I – Overview of ridership trends

Part II – Approach to managing ridership recovery

Part I

Overview of Ridership Trends

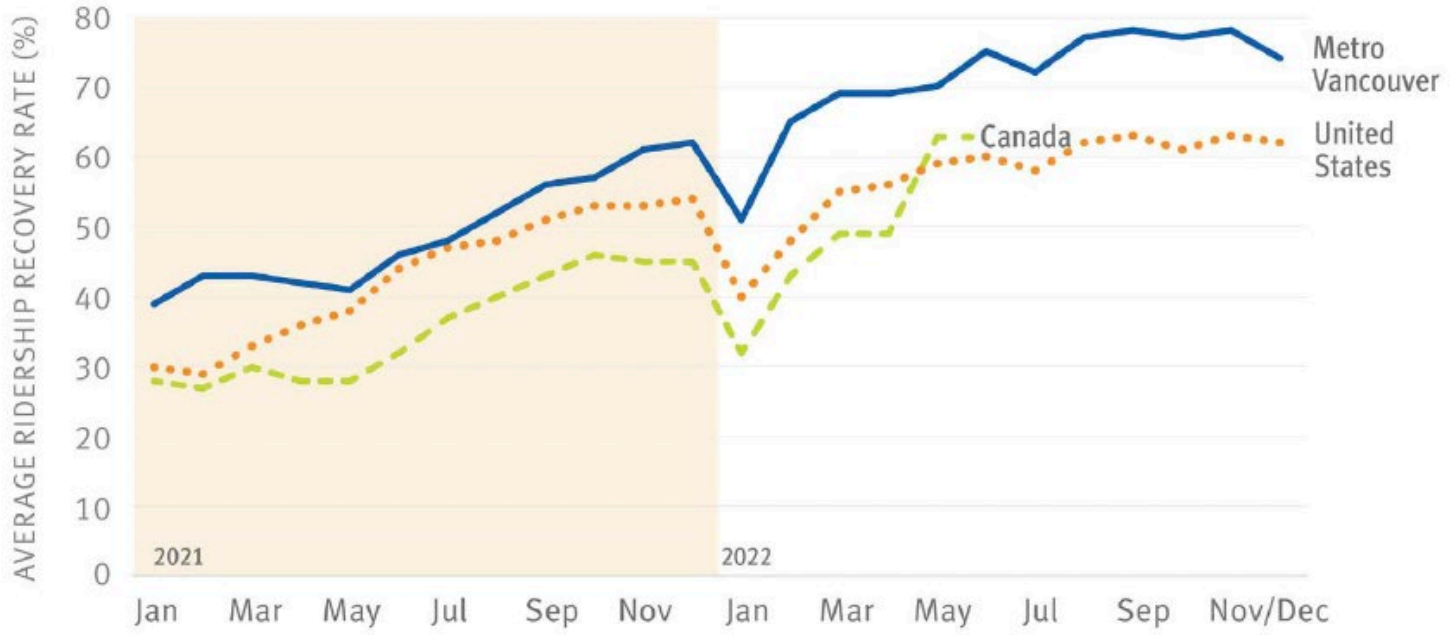
System-wide transit ridership recovered significantly in 2022. Recovery has continued throughout 2023.



Note: Journeys are measured as a complete transit trip using Compass fare media or other proof of payment, regardless of the number of transfers

- System-wide ridership reached **80% of pre-pandemic levels** in fall 2022.
- Annual journeys totalled 193.6 million in 2022, a **48% increase** over 2021.
- Early fall 2023 figures indicate ridership has recovered to **88% of pre-pandemic levels**.

Ridership recovery continued to outpace most peer systems in Canada and the United States.



Note: Estimated based on data sourced from the International Association of Public Transport (UITP) and the Federal Transit Administration (FTA). Canada-wide average ridership recovery estimates provided by UITP stopped in July 2022.

- TransLink **ranked 5th in Canada and the United States** for transit boardings despite ranking 24th in total regional population.

Recovery driven by ridership return across nearly all modes.

Transit Mode	System Wide	Bus	SeaBus	Expo & Millennium Lines	Canada Line	West Coast Express	HandyDART
Ridership Recovery	**89%**	**89%**	**90%**	**92%**	**84%**	**54%**	**85%**
Average Daily Boardings (Mon-Fri)	808,000 (Journeys)	842,000	16,900	345,100	133,100	5,800	4,800
Average Daily Boardings (Weekend)	528,000 (Journeys)	523,900	15,800	228,100	101,600	n/a	1,600

Ridership recovery & boardings by mode, Sept 18-22, 2023

- Ridership has continued to increase throughout 2023, with **ridership up between 12% and 15% compared to fall 2022.**
- Buses continue to be the system "work horses": approximately **62% of system-wide boardings are made on bus**.
- Ridership recovery on the commuter-oriented West Coast Express continues to be below system-wide average, reflecting on-going work-from-home patterns and habits.

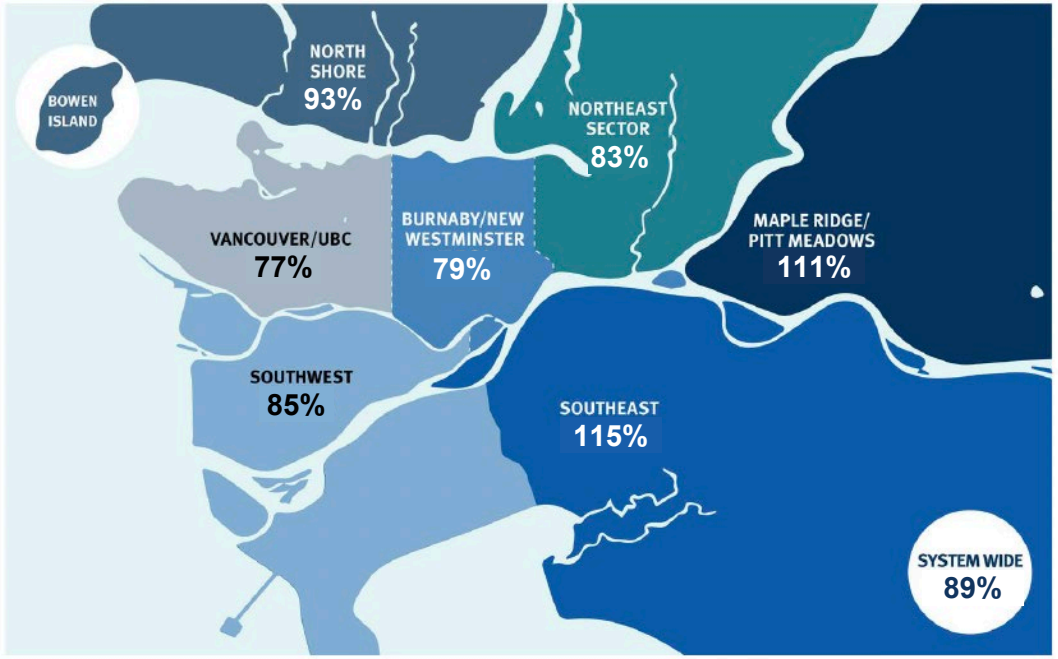
The transit system is moving more people throughout the day than earlier in the pandemic.

Ridership recovery by time of day, Fall 2022 vs 2019

- System-wide weekday ridership during the AM and PM peak periods during fall 2022 **recovered at similar rates** to midday and evening, reflecting a greater number of people returning to their usual place of work or school.

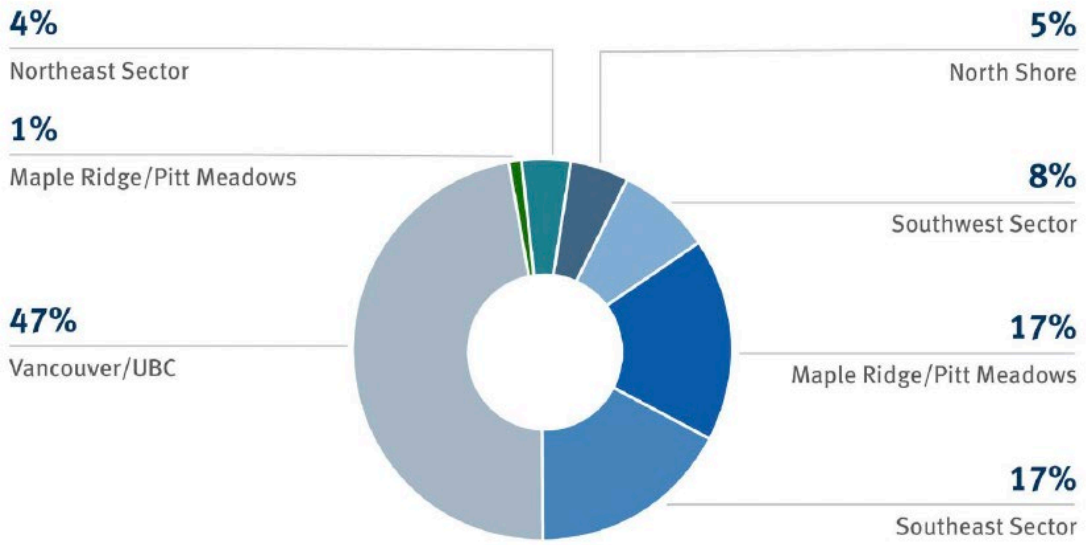
Ridership is returning the most in fast-growing areas of the region, but overall ridership remains highest in the busiest areas of Metro Vancouver.

Bus ridership recovery by sub-region, Sept 18-22, 2023



Note: Data is preliminary for fall 2023. Includes bus Compass boardings only. Excludes customers under 12 who ride free and cash payments or paper transfers.

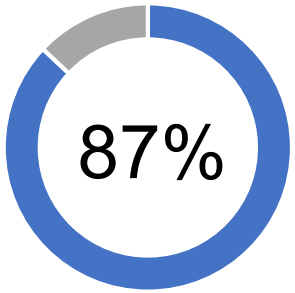
Share of overall ridership (boardings), fall 2022



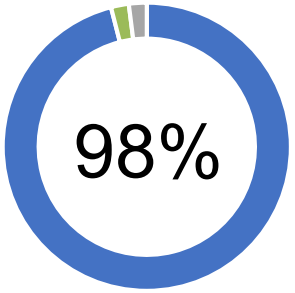
Note: Includes bus and SeaBus boardings and Expo-Millennium line, Canada Line, and West Coast Express station entries. HandyDART boardings are not included as the service has different sub-regional boundaries.

Weekend ridership has recovered the strongest, many sub-regions are seeing higher weekend ridership than in 2019.

Weekday Journeys



Weekend Journeys



Sub-Region	MF Recovery	Sat Recovery	Sun/Hol Recovery
Burnaby/New Westminster	79%	81%	102%
Maple Ridge / Pitt Meadows	111%	113%	128%
North Shore	93%	81%	124%
Northeast Sector	83%	87%	110%
Southeast	115%	118%	140%
Southwest	85%	90%	114%
Vancouver/UBC	77%	78%	94%

Note: Ridership recovery for the week of Sept 18-24, 2023. Systemwide journeys includes all modes. Recovery by sub-region includes bus Compass boardings only. Excludes customers under 12 who ride free and cash payments or paper transfers.

Part II

Approach to managing ridership recovery

Our ridership recovery can be attributed to a combination of inherent and strategic factors

Inherent

1. provincial funding
2. regional focus on transit-oriented development

Strategic

3. analysis and monitoring of ridership trends
4. make necessary service reallocations

1 Federal and provincial governments extended pandemic relief funding to strengthen public transit services

- TransLink's finances faced significant challenges during the pandemic due to:
  - Loss in ridership revenue
  - Increased service costs due to inflation
  - Supply chain disruptions
- Emergency funding from provincial and federal governments allowed us to:
  - Maintain region-wide service levels
  - Prevent early pandemic service cuts
  - Ensure reliable, affordable transit for returning customers

2 Metro Vancouver also owes its resilience to its focus on transit-oriented development

Marine Gateway redevelopment at Marine Drive Station in Vancouver, Opened in 2016

- TransLink's *Transit-Oriented Communities Design Guidelines* serve as a tool and a resource to developers and city staff.
- TransLink's Partner Planning and Real Estate departments work with municipalities and developers on land use policies, rezoning, and development applications.
- Regional Growth Strategy focuses growth and development in urban centres and frequent transit development areas.
- Supportive policy agreements for recent and planned SkyTrain extensions to promote transit-oriented development.

Rendering of Gilmore Place redevelopment at Gilmore Station in Burnaby, currently under construction

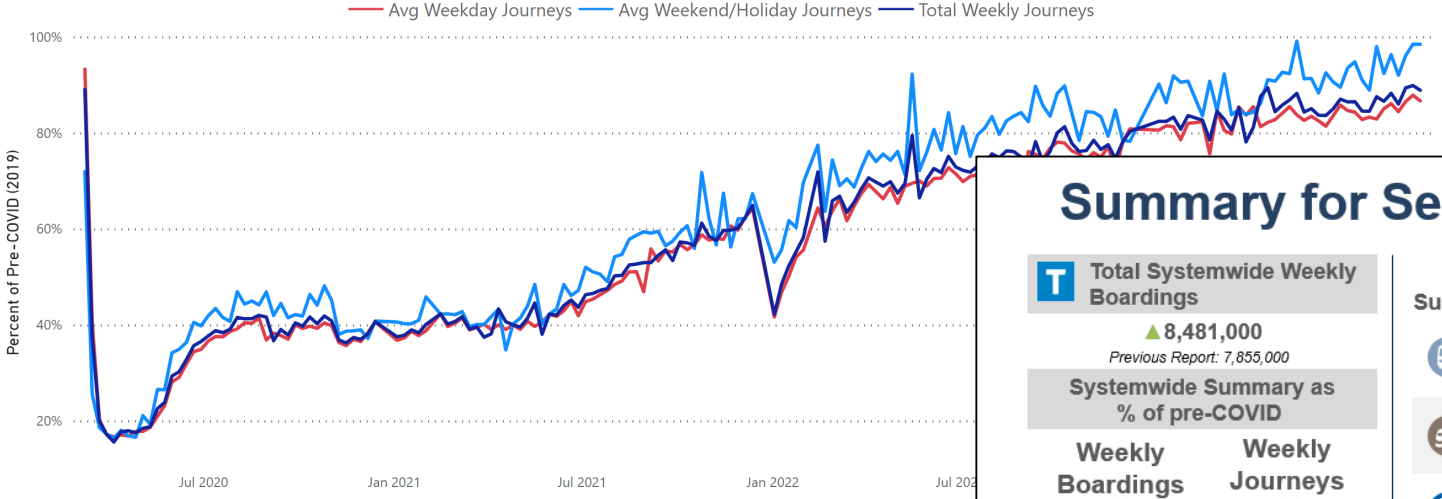
3 Our teams conduct regular weekly and monthly analysis and monitoring of ridership trends

TRANSIT JOURNEYS RECOVERY CHART

Preliminary Weekly Ridership Report

Chart Date Range
09-Mar-2020 Start Date
24-Sep-2023 End Date

Transit Journeys Recovery as a Percent of Pre-COVID



Data Notes:

- Percent of pre-COVID may fluctuate due to misaligning holidays or severe weather events. Spikes in the data are likely anomalies caused
- Data is removed for Weeks 52, 53, and 1 due to the Christmas holiday season causing irregularities in the data.
- Data is removed for Week 7 (the second week of February) due to severe weather in 2019 causing irregularities.
- In 2019, Ridership during Weeks 46-50 was impacted by CMBC and BCRTC Labour Action. The percent of pre-COVID recovery presented ridership levels would have been at had there been no Labour Action.

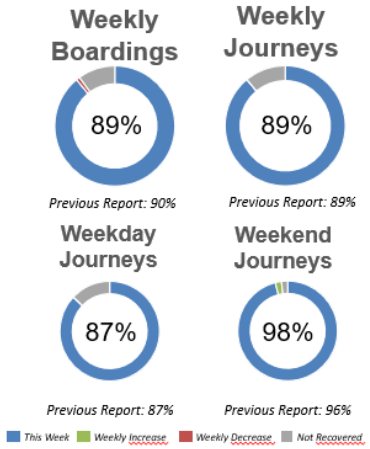
Summary for September 18 - 24, 2023

Total Systemwide Weekly Boardings

▲8,481,000

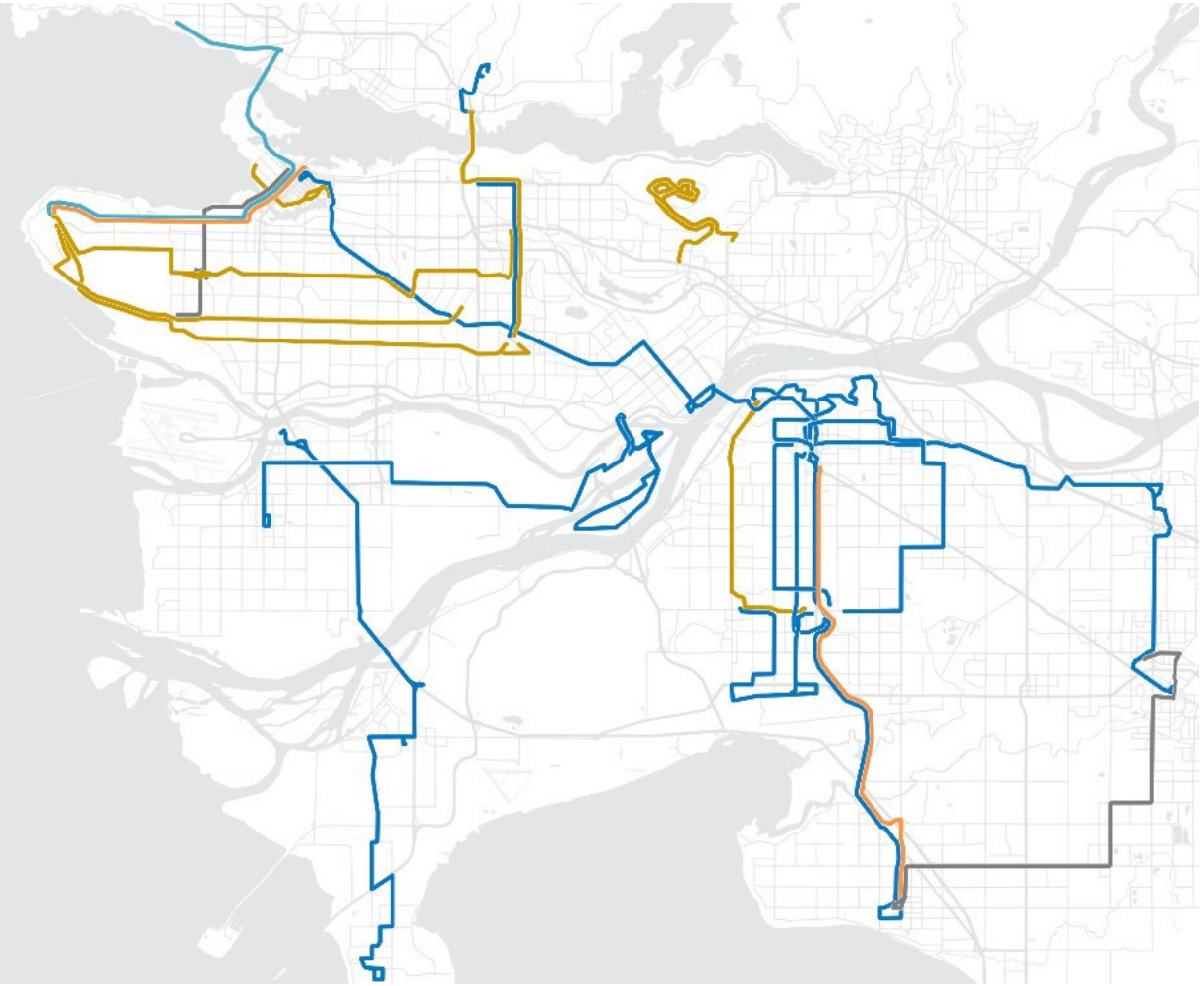
Previous Report: 7,855,000

Systemwide Summary as % of pre-COVID



Summary by Mode	*Recommendation*	*Overcrowding*
Bus	No recommended service change.	11.4% of weekday trips overcrowded
SeaBus	No recommended service change.	4 lockouts
Expo Line	No recommended service change	No overcrowding
Millennium Line	No recommended service change	No overcrowding
Canada Line	No recommended service change	No overcrowding
WCE	BCRTC monitoring and adding cars as trips become overcrowded.	0 trips with overcrowding
HandyDART	No recommended service change.	Limited refusals and denials

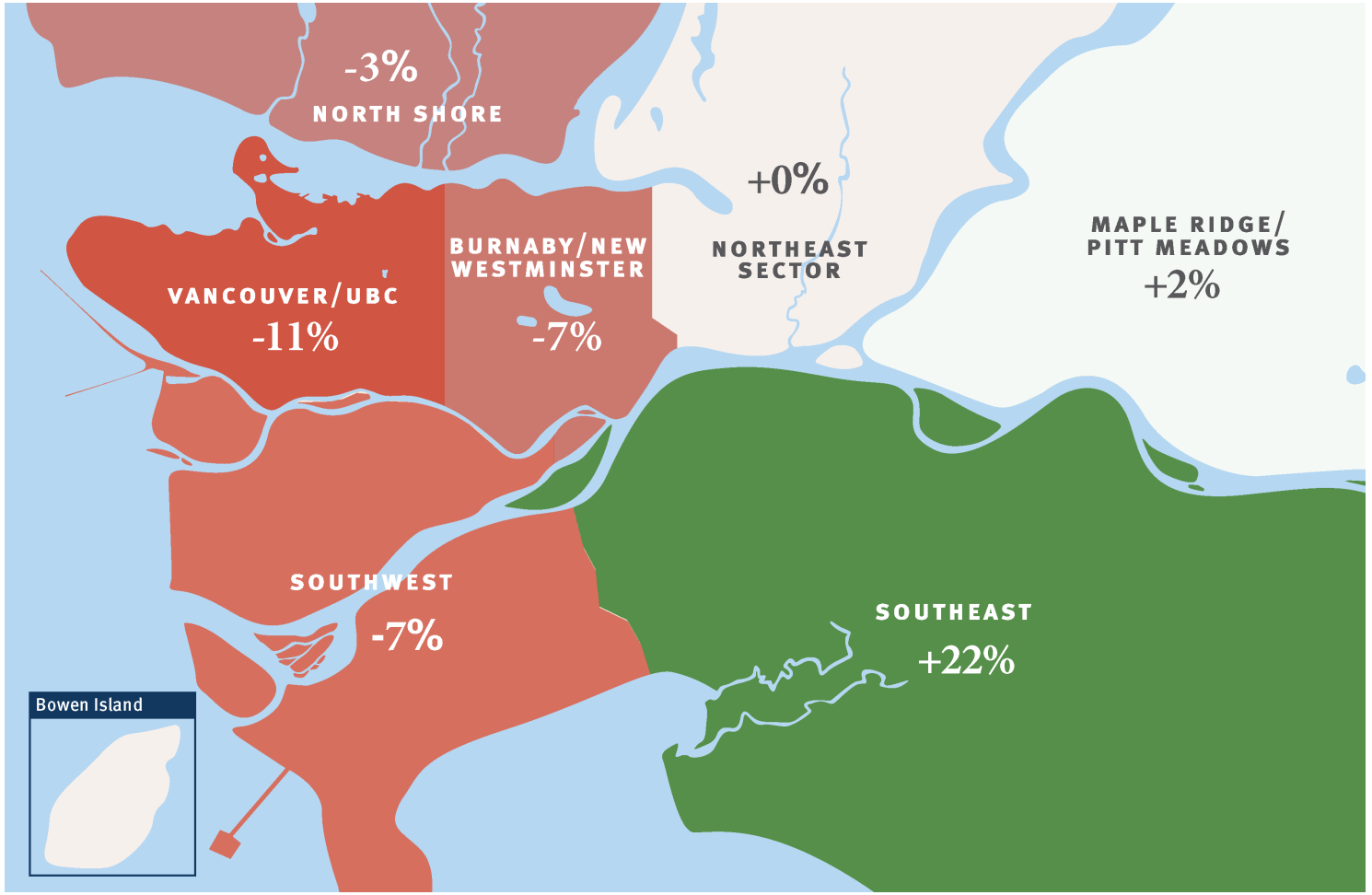
4 Service changes, including reallocations are made every quarter to best match service with demand



Map of routes with service changes in Fall 2023

Project Type	Route(s)
Increase to address overcrowding	**104, 130, 245, 321, 322, 323, 324, 335, 371, 373, 410, 501, 601, N19**
Introduce new service pattern	**44***
Increase for overcrowding & reduce where capacity exists	**23, 25, 49, 143,145, 222, 319, R4**
Reduce frequent service	**44*, 394**
Vehicle upsizing	**2**
Cost-neutral rerouting	**103, 531**

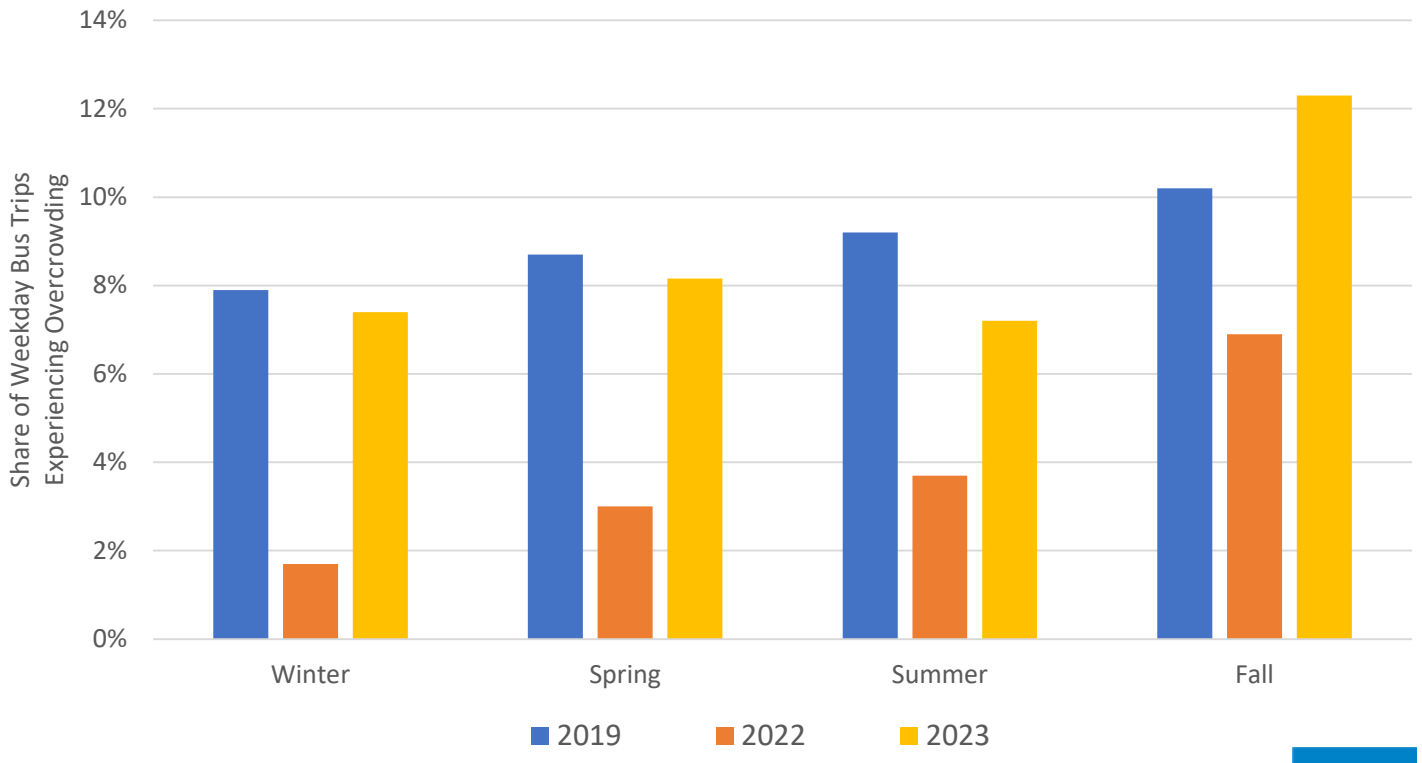
4 Service has been reallocated to routes which have seen increased demand and overcrowding.



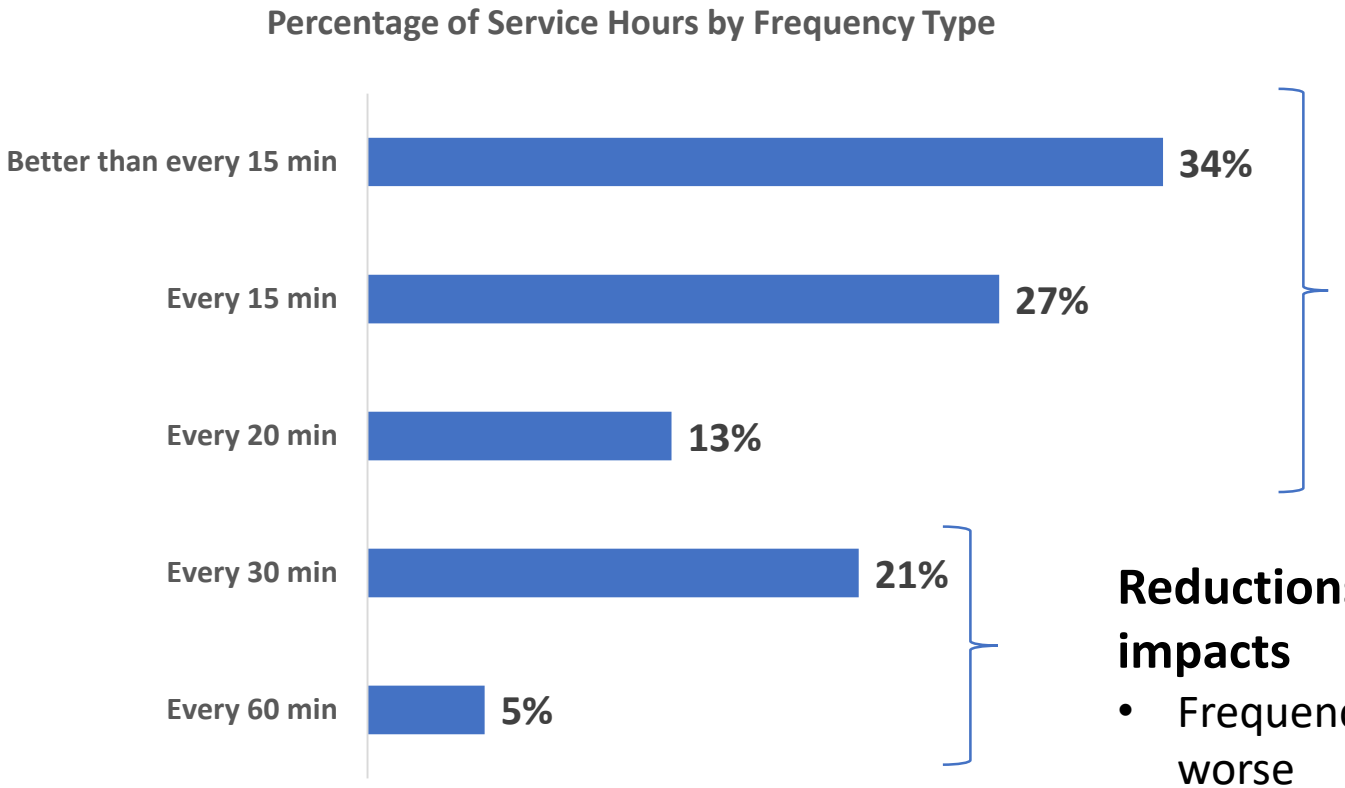
- Service has been removed from frequent routes with excess capacity
- Reallocations have shifted service hours to our southeast sub-region, which includes the fast-growing cities of Surrey and Langley.
- Service has also been reallocated within routes or within sub-regions

4 Strong ridership has resulted in more customers experiencing overcrowding. We responded by continuing to reallocating service.

- Overcrowding on the bus system began approaching pre-pandemic levels in fall 2022.
  - Early fall 2023 data indicates we may be exceeding pre-pandemic levels
- Overcrowding on other modes limited to specific trips/times of day.
- Approximately **13.5% of total bus service hours** were reallocated to respond to changing conditions, including overcrowding.



4 There are increasingly limited opportunities to reallocate service without significantly impacting ridership recovery or usability of the system



Reductions are likely to impact ridership recovery

- Decreases on services better than 15 min will cause more overcrowding
- Decreasing frequencies on 15 – 20 min services cause ridership loss or inhibit ridership increases
- Will remove some routes from the frequent transit network

Reductions will have high customer impacts

- Frequencies would become 60 min or worse

Up Next:

BC Transit

Optimizing Service Design in Urban & Rural Communities

Post-Pandemic Planning and Scheduling

BC Transit

October 5, 2023

Dalbir Sidhu

Brandi Wilson

Carl Purvis

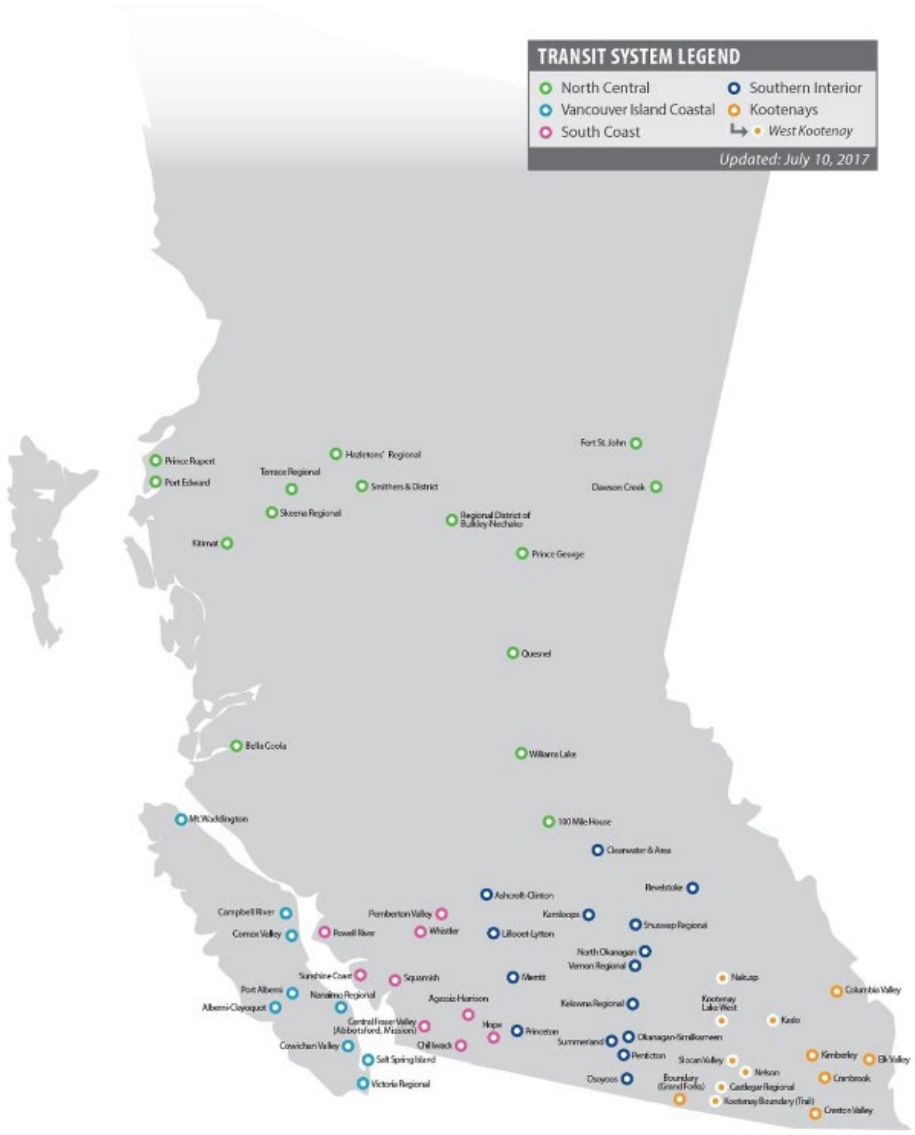
Bronson Bullivant

What We'll Cover Today

1. The Context of BC Transit
2. Pre-Covid Planning Paradigm
3. Covid Recovery Volatilities & Their Influences
4. Analyzing Runtimes
5. Challenges in Post-Covid Scheduling

BC Transit Context

- 57 Million Passengers Annually
- 2.4 Million Service Hours Across the Province
- 57 Transit Systems ranging in scale and complexity
- Fleet of ~1200 Busses
- Annual Expenditures of $350M in Operating and $200M in Capital
- 17 Private Operating Companies, 4 Public Operating Companies, and 14 Non-Profits



OUR VISION

Your best transportation solution

OUR MISSION

Delivering transportation services you can rely on

OUR OBJECTIVES

Always Safe: We will put safety first in everything that we do

Engaged People: We will support our people to achieve success

Satisfied Customers: We will grow ridership by making mobility accessible and enjoyable

Thriving Communities: We will work with Local Government and First Nations partners to improve livability

Responsible Stewardship: We will use our resources wisely and develop the most sustainable solutions

Urban System Examples

Victoria CRD – 383,000

Kelowna CMA – 224,000

Nanaimo – 90,000

Kamloops – 90,000

Prince George – 75,000

Victoria, BC

Regional System Examples

West Kootenay– 123,000

Cowichan Valley – 84,000

Sunshine Coast– 30,000

Fort St. John – 20,000

Kimberley – 7,500

Nelson, BC

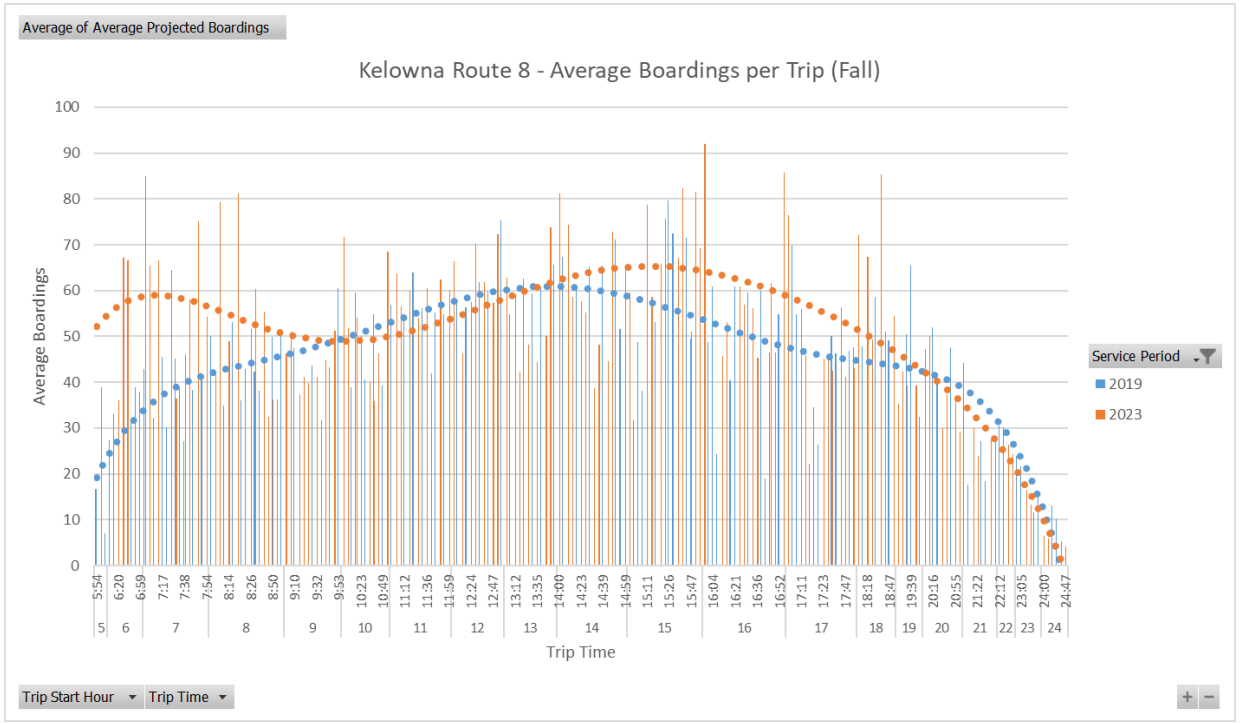
Pre-Covid Ridership

- Enjoyed a period of consistent ridership growth, with ridership increasing 13% from 2015-2019
- Yearly expansion
- Peak ridership times were consistent with historic numbers:
  - Consistent AM and PM Peaks Monday-Friday accounting for seasonal changes in Summer and December
  - Unique Ridership numbers for both Saturday and Sunday with less defined AM and PM Peaks

Post-Covid Ridership

Post-Covid Ridership

- Monday and Friday Peak AM and PM Travel periods are now distinct from Tuesday-Thursday volumes in many urban systems
- Ridership continues to grow, further defining AM and PM peaks



Traffic and Runtime Volatility

- Related to distinct Monday and Friday Peak AM and PM Travel periods, traffic and congestion also differs significantly on weekdays
- Run times now more difficult to predict where time of year, time of day, and day of week must all be considered
- Unavailability of service expansion hours has largely removed option to add service to address run time issues

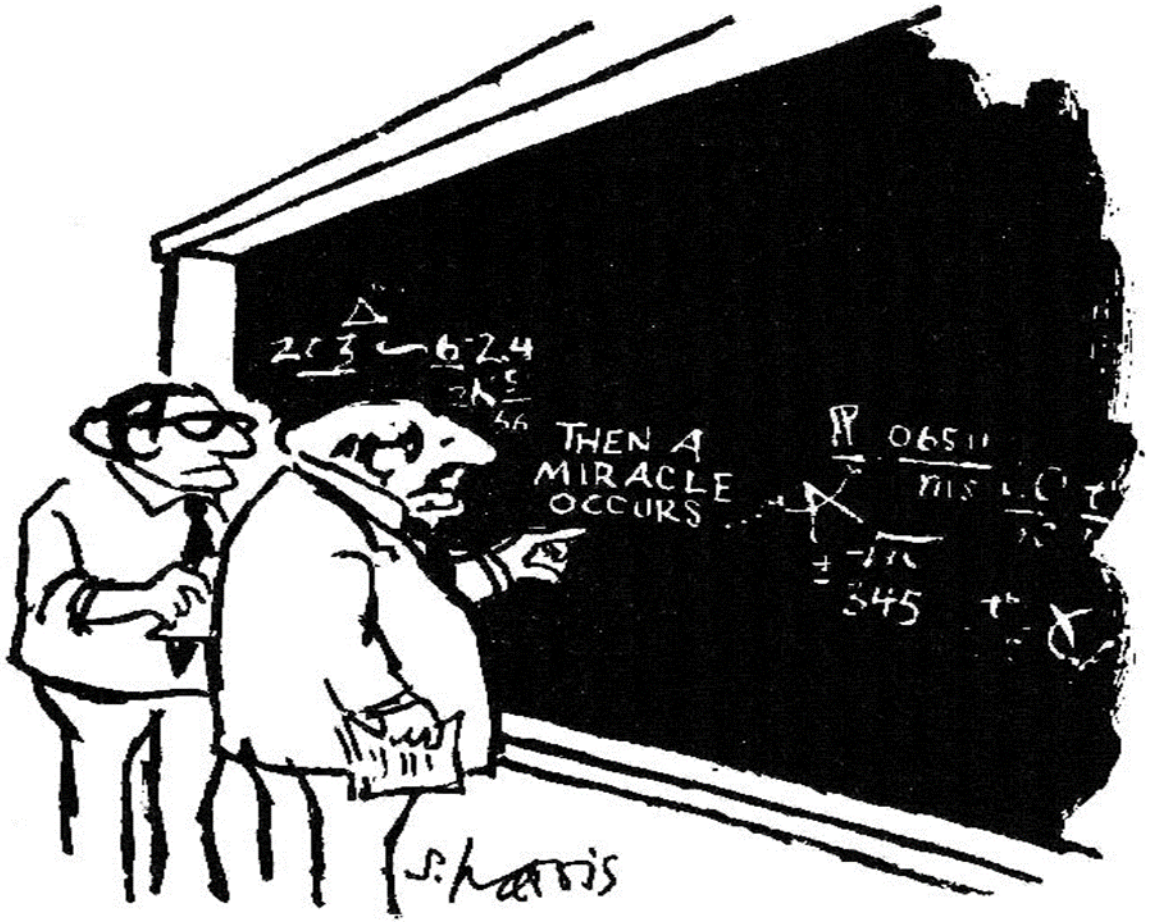
Possible Factors in Travel Time Volatility Urban vs Regional

- Larger transit systems contain more government and multi-national employers who are more likely to have hybrid work policies
- Generational difference in preferences for in-office time continue to contribute toward increased numbers of remote workers
- Prevalence of E-bikes, government rebate programs, and increased investment in active transportation infrastructure in larger systems has had impact on modal split and ridership

Challenges in Post Covid Planning:

- Pressure to expand without service expansion hours
- Acquiring fleet
- Recruiting and retaining operators
- Cost of living and inflation
- Increased Provincial involvement in land use and development decisions

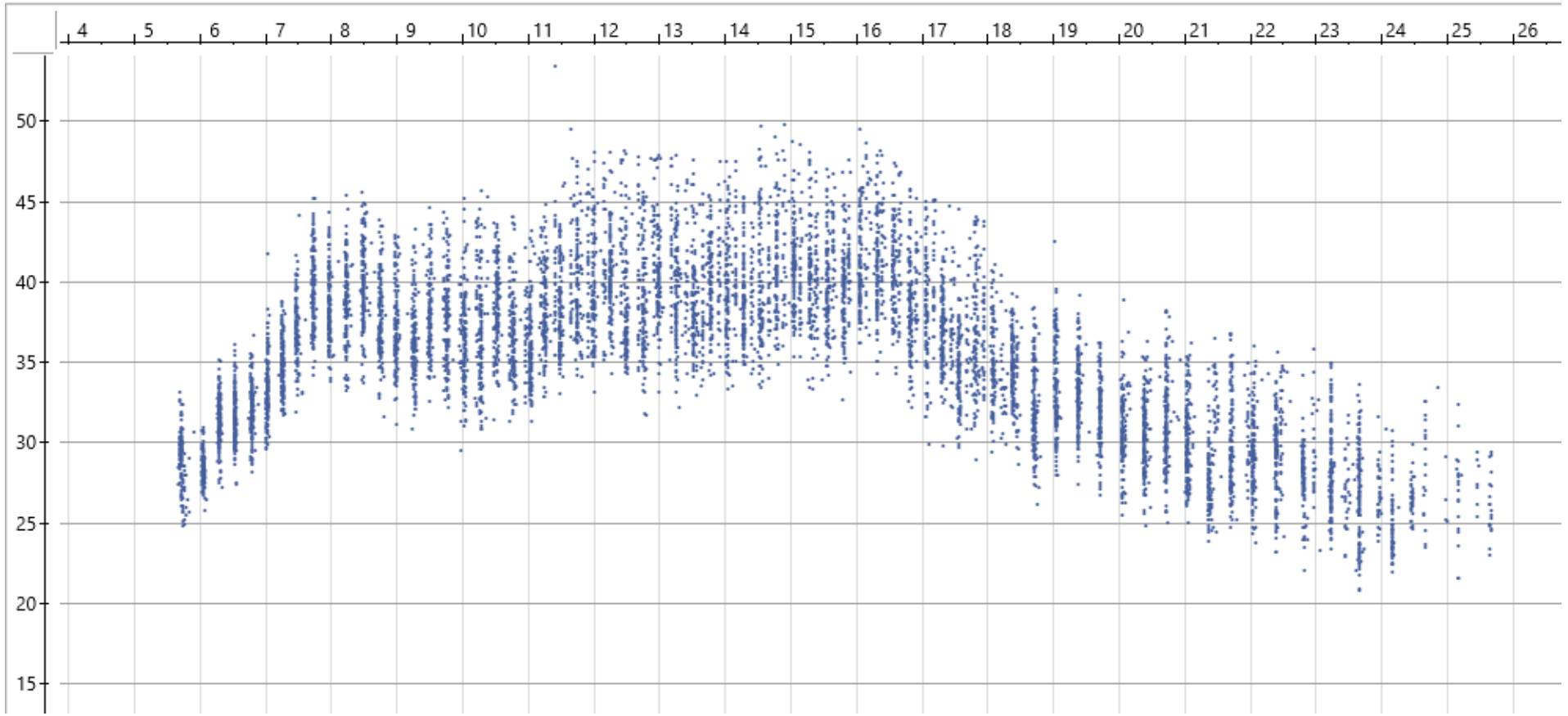
How is a schedule made, the formula?



"I think you should be more explicit here in step two."

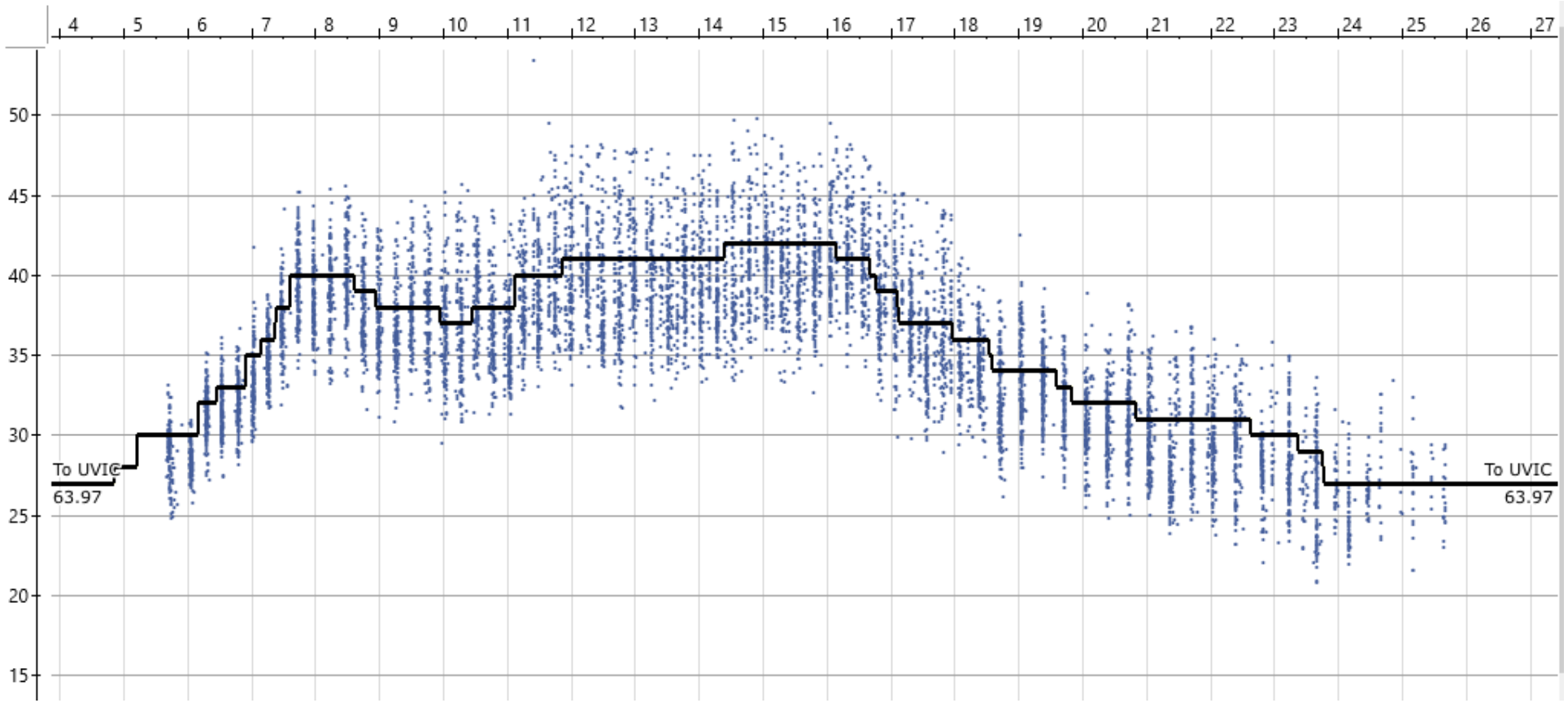
ATP – Analyzing Runtimes

- Example of the analysis for the weekday eastbound route 15
- How much runtime would you allocate?



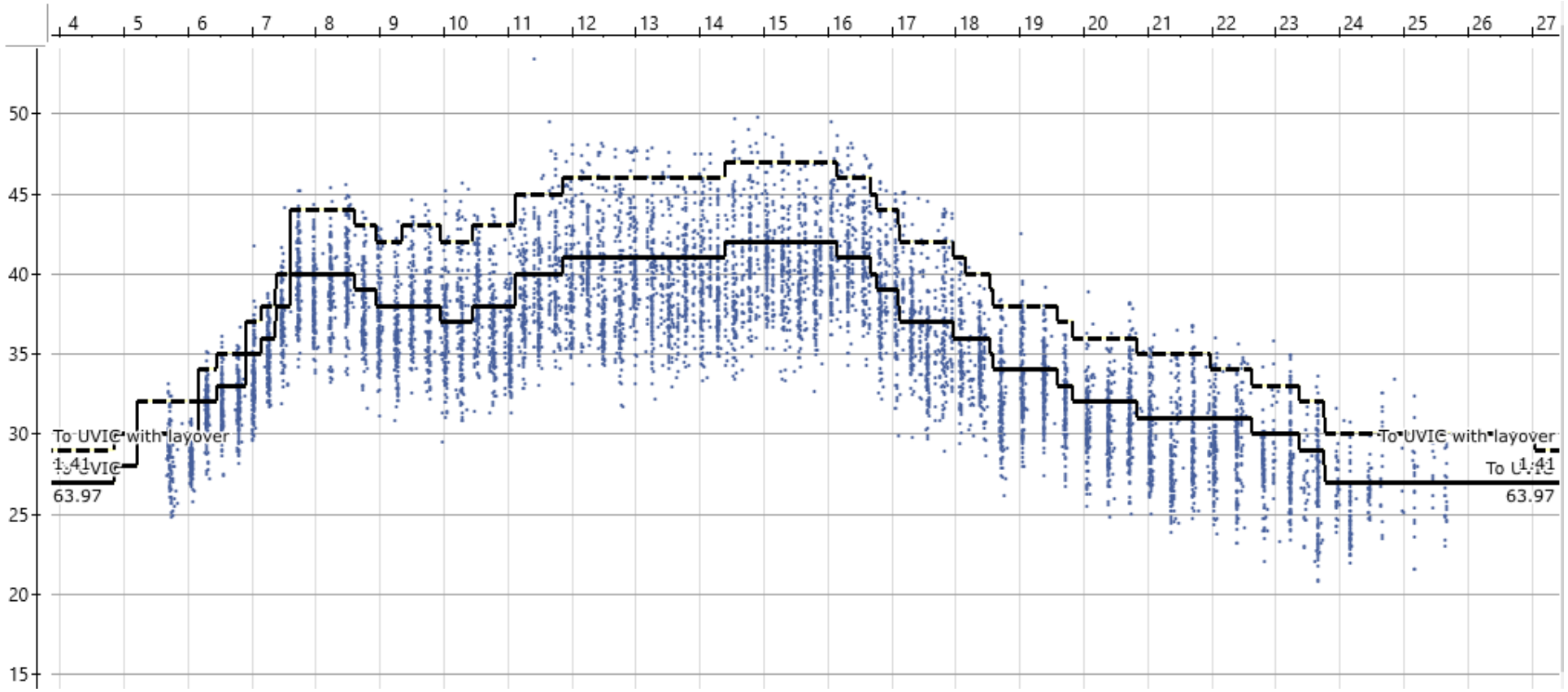
ATP – Analyzing Runtimes

- Example of the analysis for the weekday eastbound route 15
- The solid black line represents scheduled running time



ATP – Analyzing Runtimes

- Example of the analysis for the weekday eastbound route 15
- The dotted line represents minimum “vehicle” layover – 95%

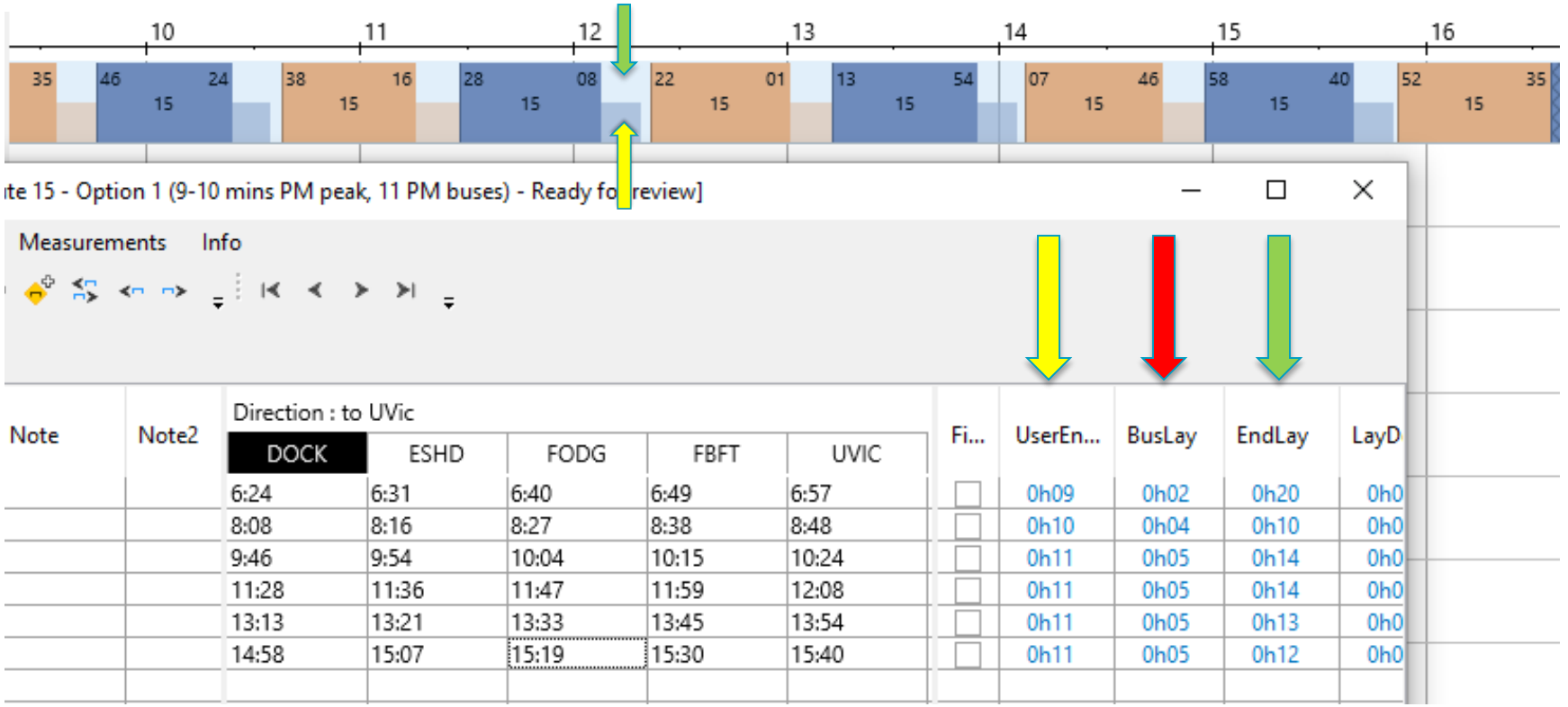


Route 15 timetable and blocking

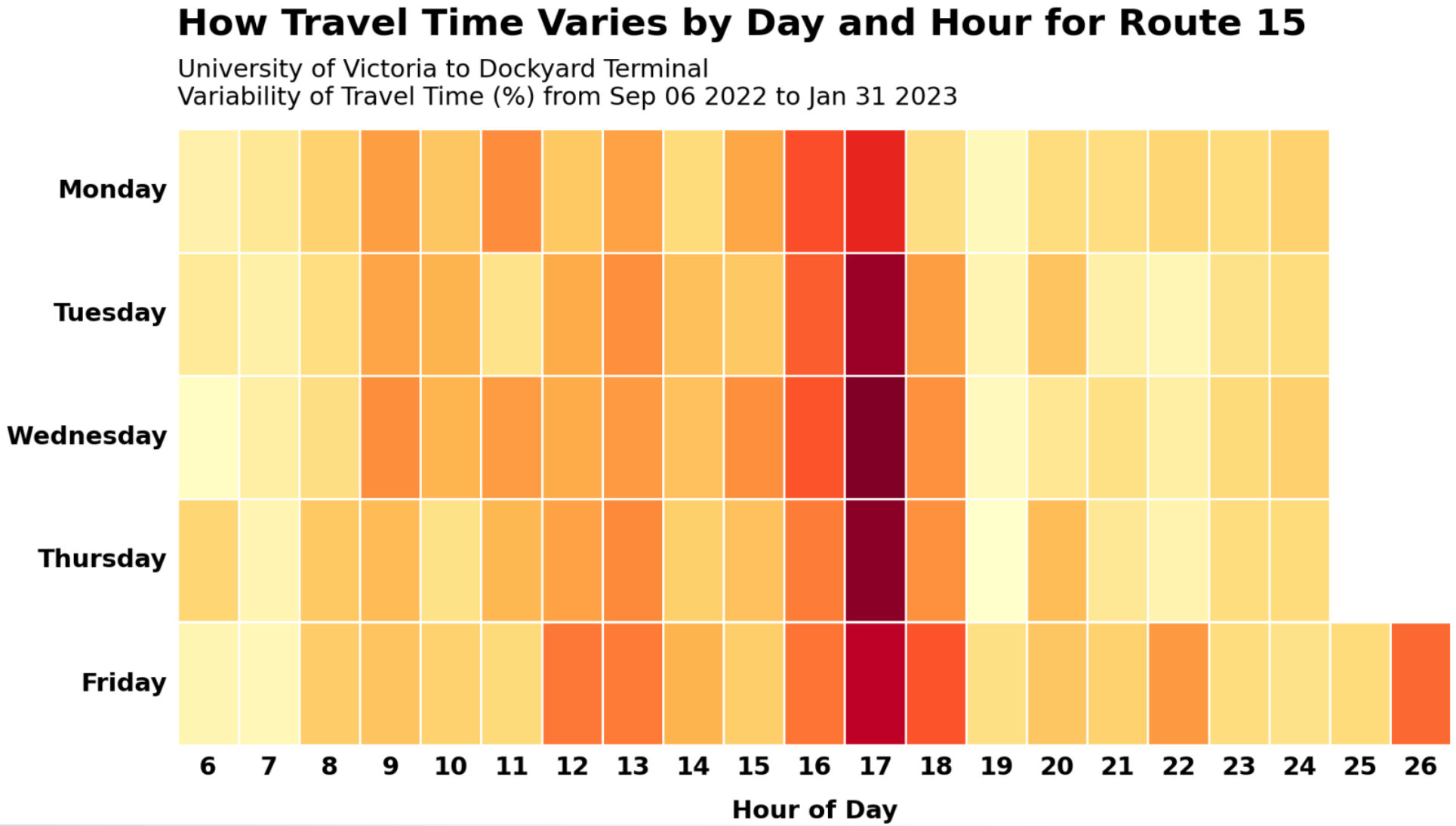
BusLay: Minimum vehicle layover (95%)

UserEndLay: Minimum vehicle layover + “operator-focused recovery”

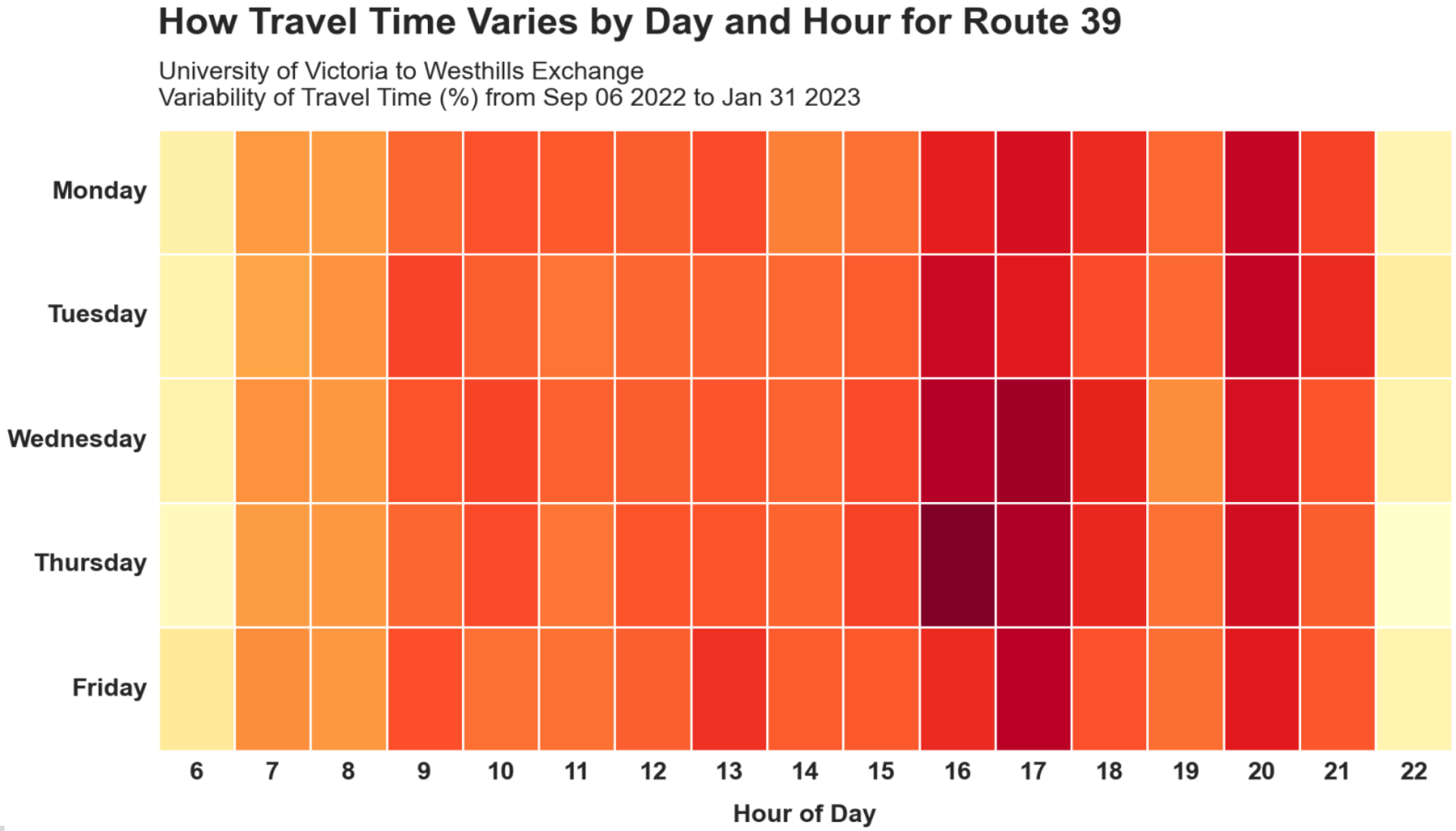
EndLay: Actual layover due to blocking



Variability Heat Graph



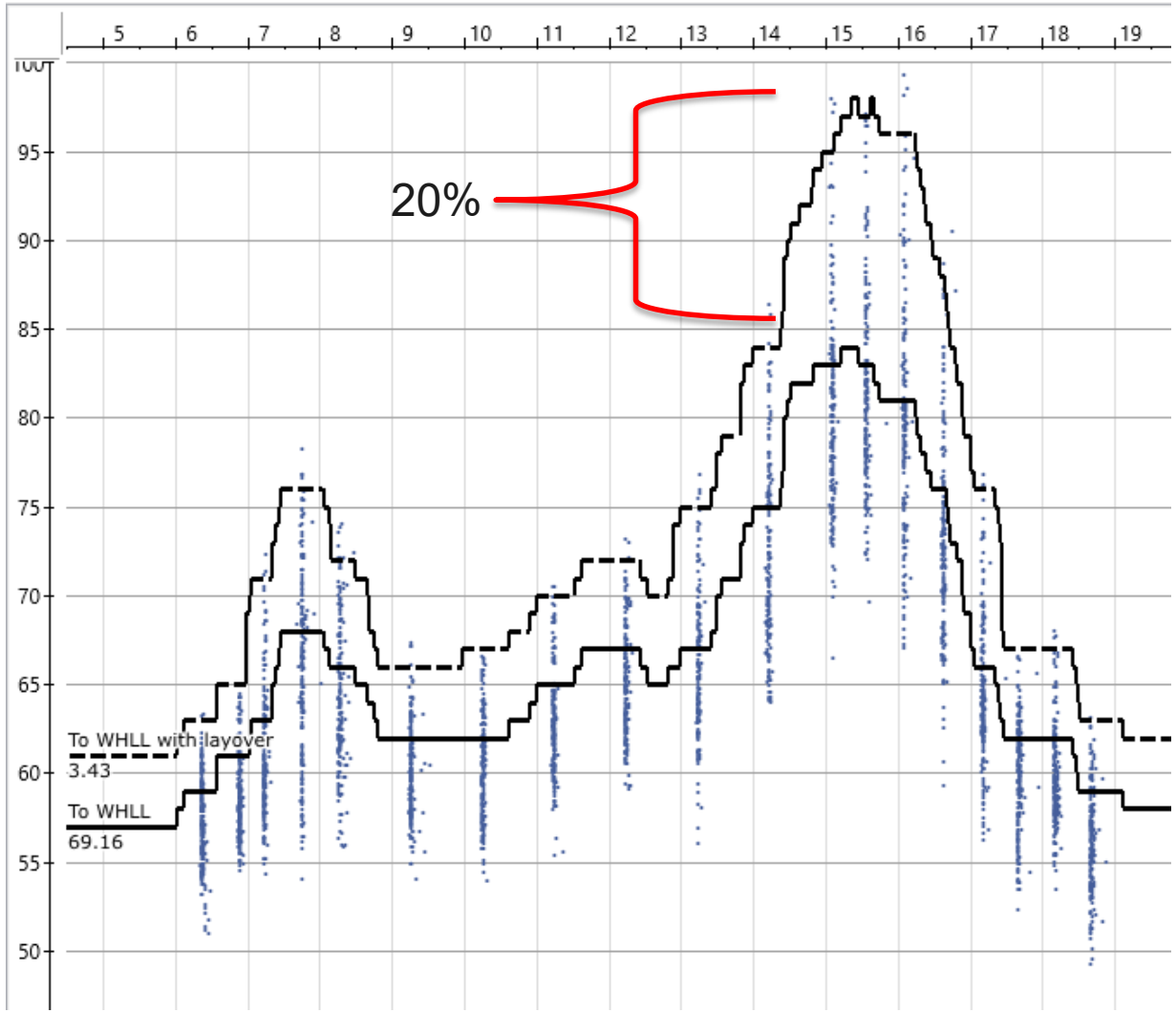
Variability Heat Graph



ATP – Analyzing Runtimes

- It's not always easy!

Route 39
Weekdays
Westbound
Fall 2022 – Spring 2023



Challenges in Post Covid Scheduling:

- Demand based peak period travel patterns have adjusted back to industry standard AM and PM peak times.
- International student enrollment in Canada: **20%** of these students reside in BC
- 2021= 617,000, 2022= 807,000, **2023= 900,000**
- Provincial Government mandated free transit for youth 12 and under
- School boards across BC have cut or cancelled school bus services
- Vehicle expansion limitations (electrification of fleet)
- Transit Infrastructure Investment – Dedicated bus lanes

Dedicated Bus Lanes for All!

Up Next:

LUNCH!!

Session Two Begins Promptly at 1:30