

# EXPANDING COMMUTING OPTIONS TO DENVER INTERNATIONAL AIRPORT (DEN)



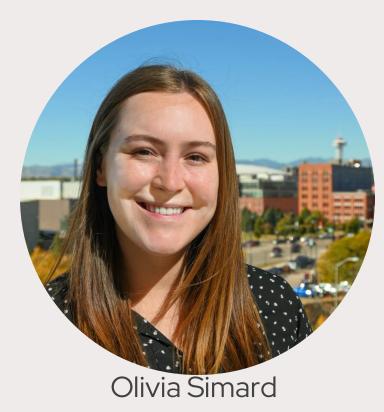
Client Project with Denver International Airport (DEN) in URPL 6560 | Transit, Bike, and Ped Planning

Image Source: <u>Fly</u> <u>Denver</u>

# THE PROJECT TEAM









## Mykayla Marek

# THE PROJECT TEAM







Halden Schnal



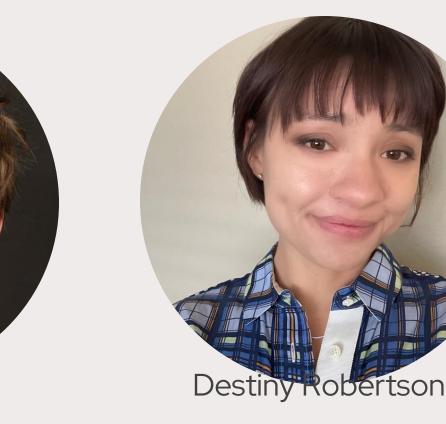


Allie McGahee





#### Aislinn Droski



# TODAY'S TRIP

Introduction: The Current Commute

#### Intervention Buckets

#### Short-Term Interventions

#### Long-Term Interventions

The New Commute

# **IP** ommute



# INTRODUCTION TO THE CURRENT COMMUTE

# WHAT IS THE CURRENT COMMUTE?

To understand the current commute of DEN employees, the Market Identification studied the **2022 Annual Peña Utilization Report,** to determine what times of days are the busiest (peak), a **Staff Survey,** to determine when different cohorts of employees are commuting, and **Census Data,** to understand where there are critical transportation/commute corridors.

## **Peña Utilization Report Peak Travel Times**

#### **Overall peak travel times:**

- **Eastbound** peak travel time from 7AM - 3PM (Arriving at DEN)
- **Westbound** peak travel time from 4AM – 12PM (Departing from DEN)





Image Source: The Denver Post

## COMMUTING COHORTS

## **Staff Survey Commuting Cohorts**

**Peak Eastbound Commuter**: Arriving at DEN between 7am-3pm

Peak Westbound Commuter: Departing DEN between 4am-12pm

**Non-Peak Commuters**: All other survey respondents

Introduction

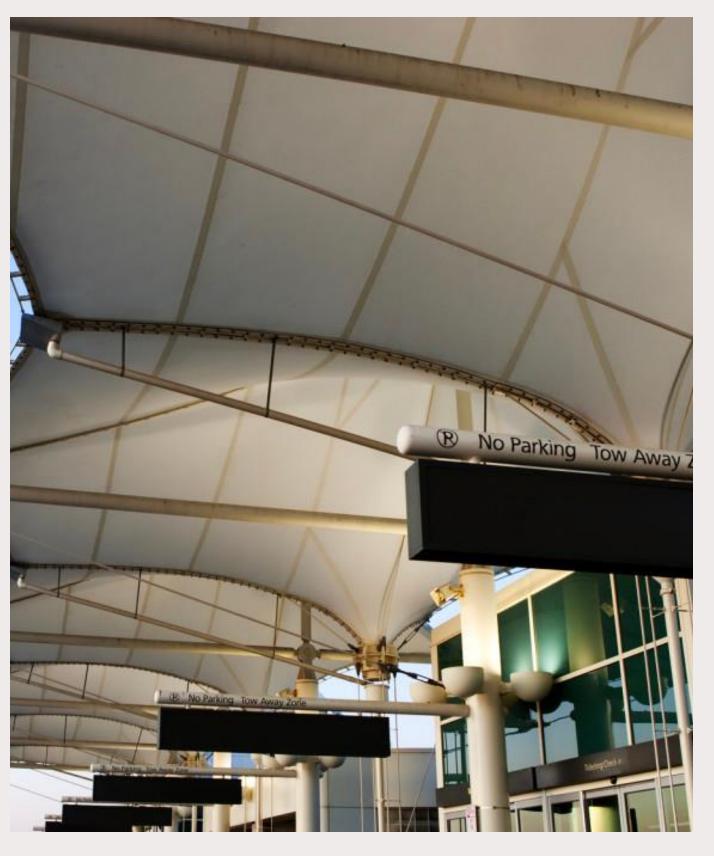
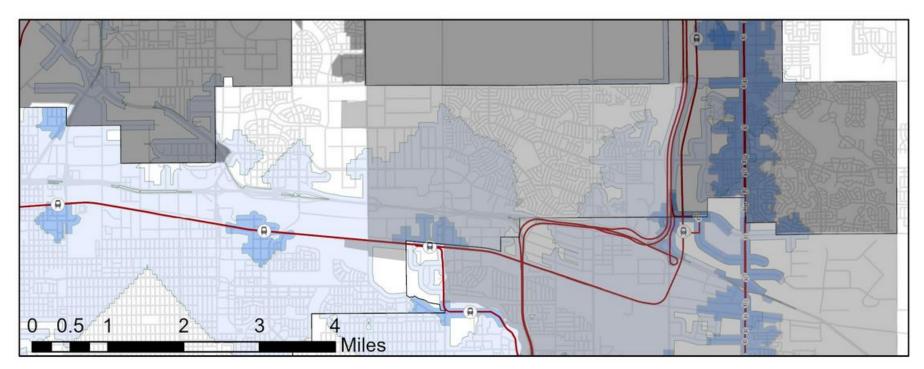


Image Source: Park DIA

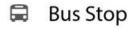
# COMMUTING COHORTS

Cohort	Peak Eastbound Commuter	Peak Westbound Commuter	Non-Peak Commuters
Primarily Drive Alone	76%	74%	76%
Employers	CCD	United/Frontier	United/Frontier
SOV Next-Most Common Mode	Other, Train, Carpool	Other, Dropped Off, Train	Other, Carpool, Train
Parking	Employer-Provided Parking	Pay for Parking/Free Lot	Free Parking Lot
Wage	Salary	Hourly	Hourly
Income	>= \$75,000	<=\$35,000	\$50,000-\$75,000
Overtime	Less Likely	Less Likely	More likely
Eco-Pass Possession	More Likely	Less Likely	Less Likely
Likelihood to Use Transit If Cheaper	More likely	More likely	Less Likely
Reason for Commute Mode	Fastest option, most reliable option, can run errands	Less stressful option, safer option	Only option available, easier to work overtime

All values are relative to the survey respondents as a whole



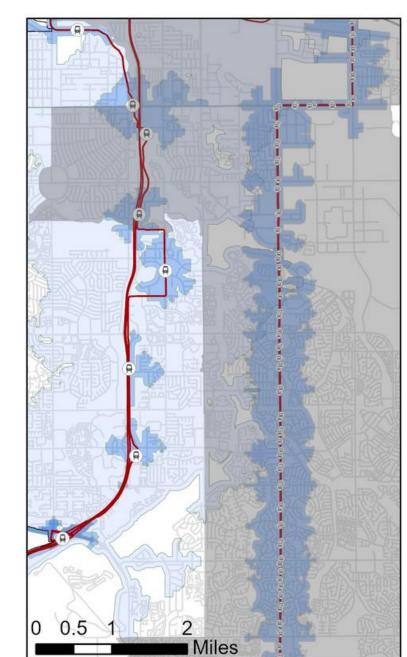
Top Origin Zip Codes (more than 50 Survey Respondents) For DEN Employees

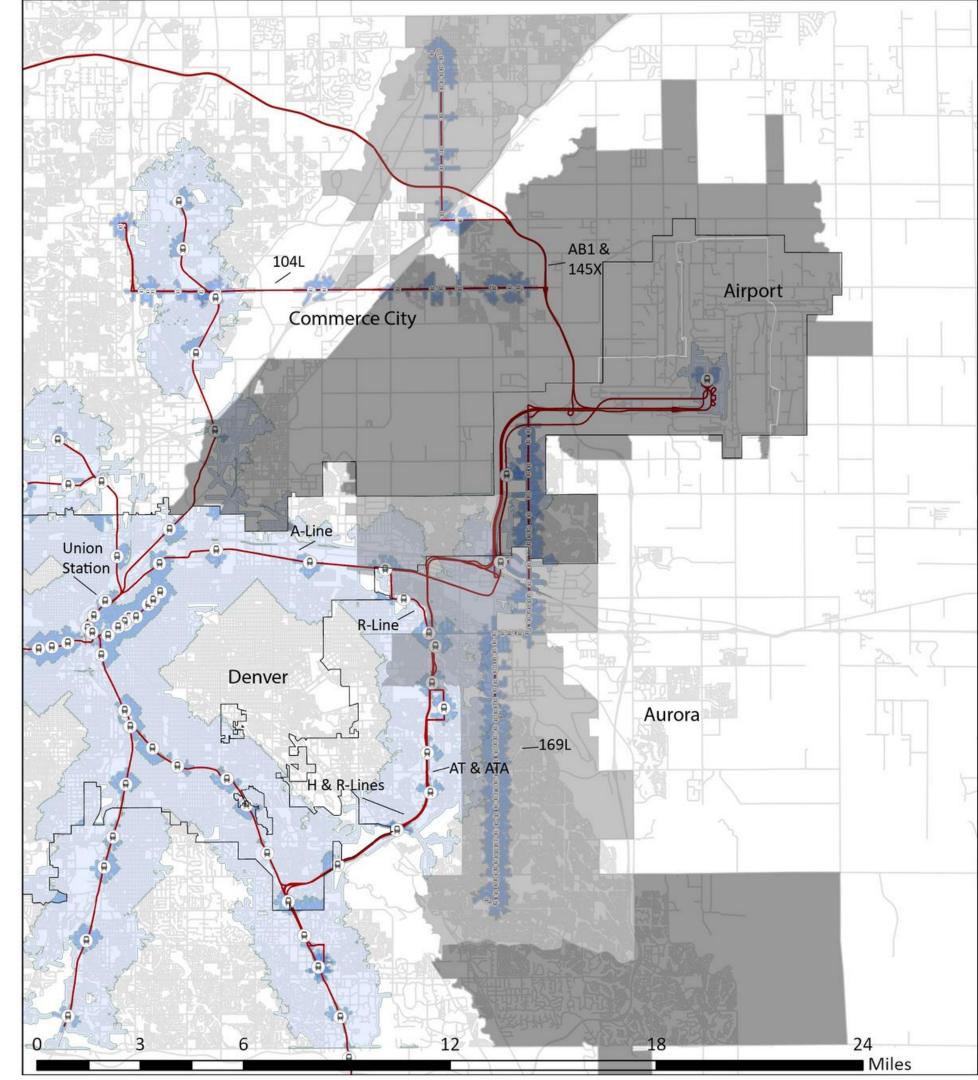


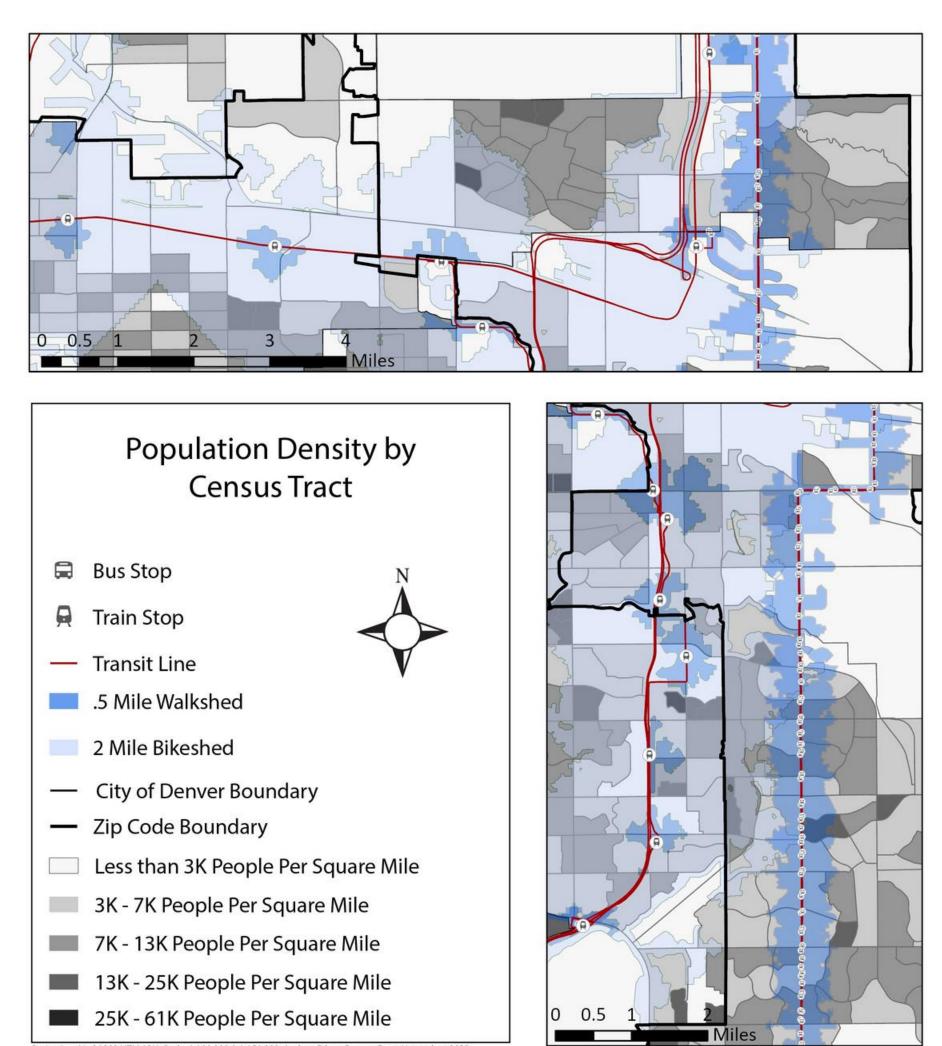
📮 Train Stop

- Transit Line
- Street Network
- .5 Mile Walkshed
- 2 Mile Bikeshed
- City of Denver Boundary
- Zip Codes 50 69 Respondents
- Zip Codes 70 140 Respondents

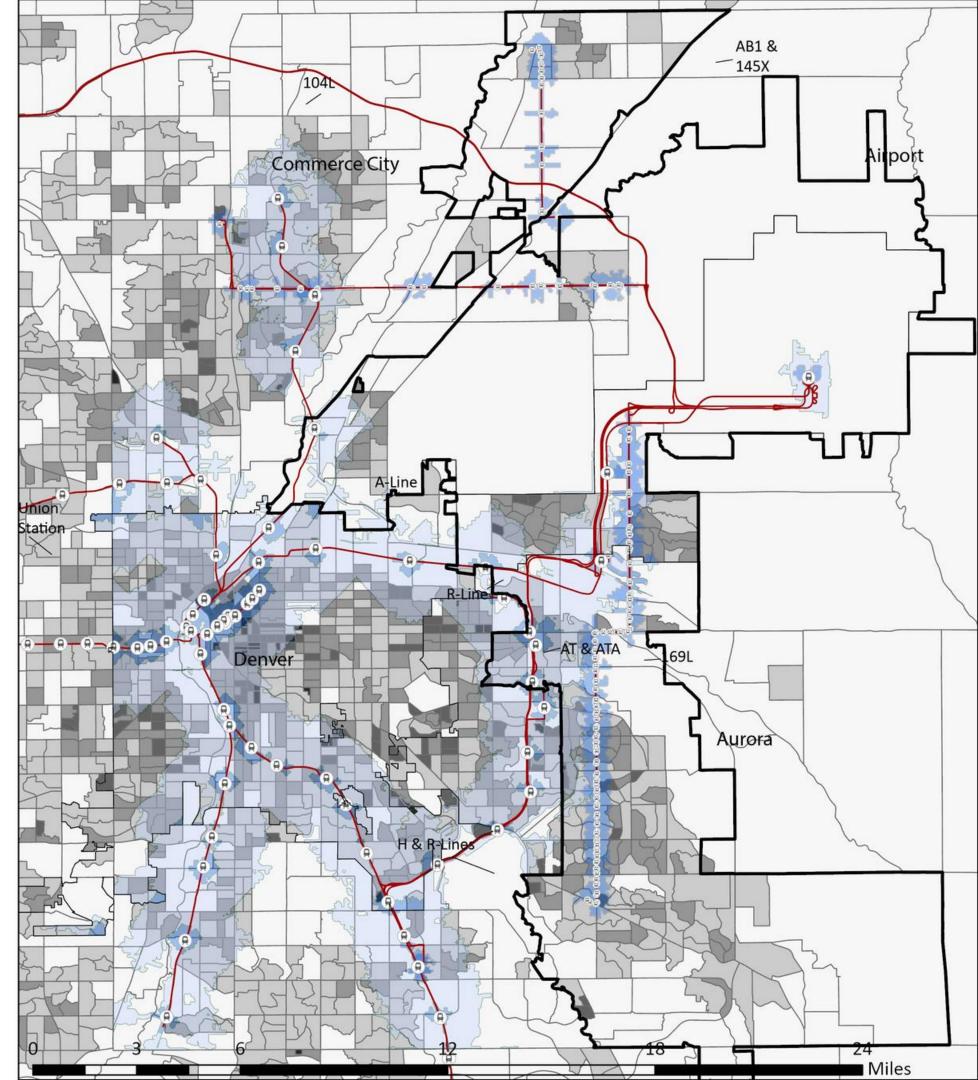
Projection: Nad 1983 UTM 13N; Scale: 1:100,000 & 1:220,000; Author: Ethan Greene; Date: November, 2023 Data from: DRCGO, City and County of Denver, Arapahoe County, Adams County, RTD, Boulder County, City of Aurora, US Census, City and County of Broomfiled

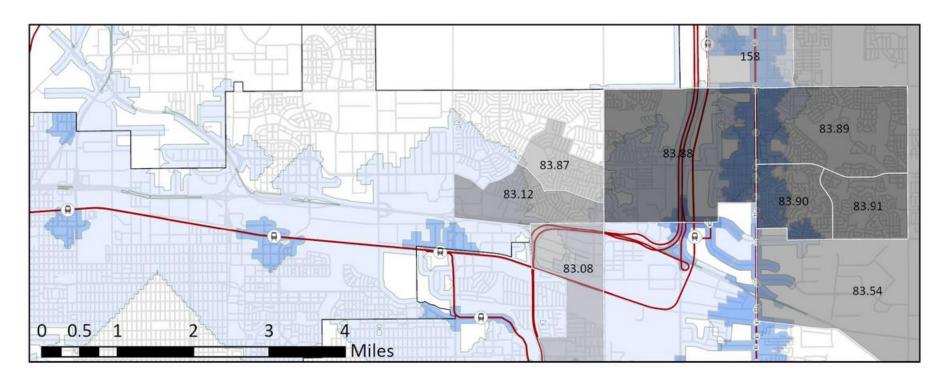






Projection: Nad 1983 UTM 13N; Scale: 1:100,000 & 1:150,000; Author: Ethan Greene; Date: November, 2023 Data from: DRCGO, City and County of Denver, Arapahoe County, Adams County, RTD, Boulder County, City of Aurora, US Census, City and County of Broomfiled

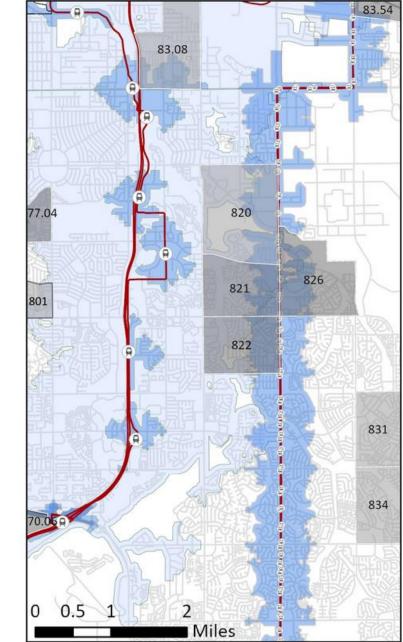


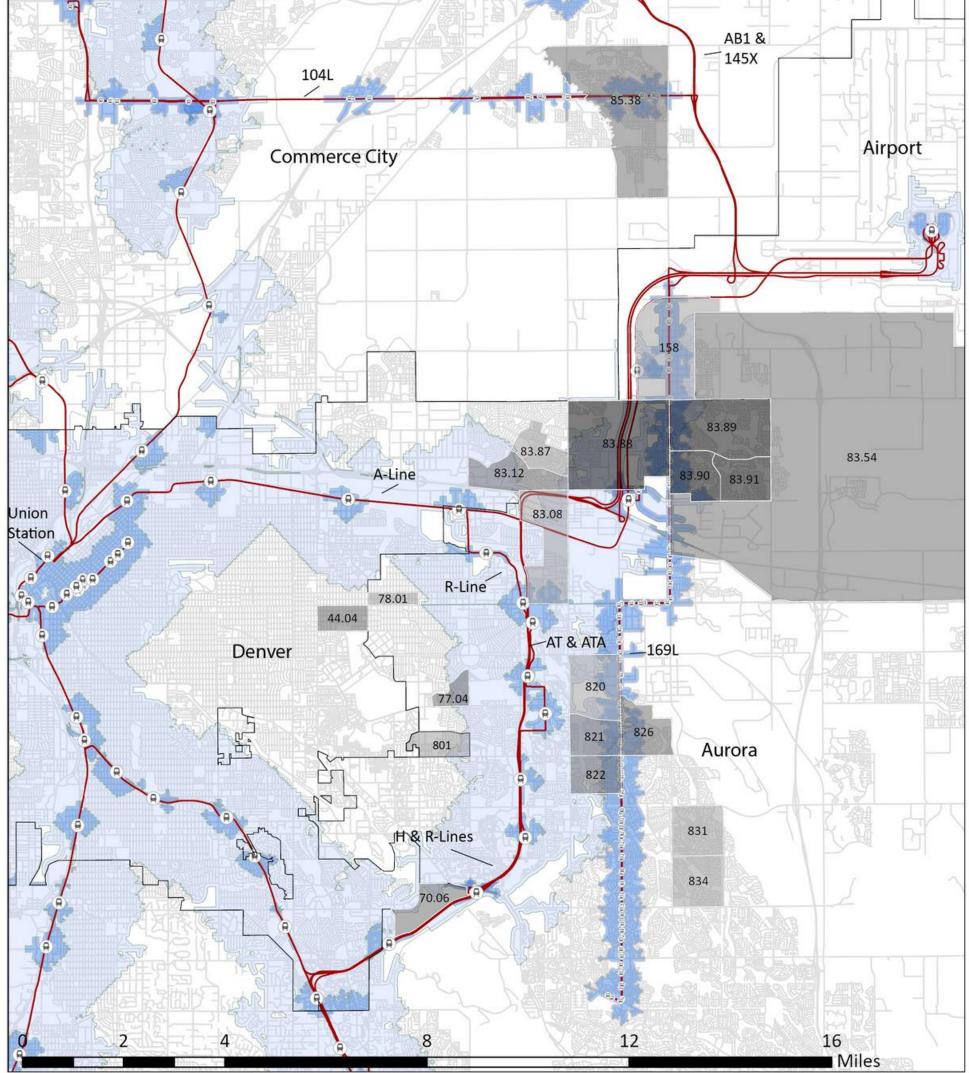


#### Origin Census Tracts With 70 or More DEN Employees

- 🛱 🛛 Bus Stop
- 📮 Train Stop
- Transit Line
- Street Network
- .5 Mile Walkshed
- 2 Mile Bikeshed
- City of Denver Boundary
- Census Tracts 70 89 Employees
- Census Tracts 90 199 Employees
- Census Tracts 200 315 Employees

Projection: Nad 1983 UTM 13N; Scale: 1:100,000 & 1:150,000; Author: Ethan Greene; Date: November, 2023 Data from: DRCGO, City and County of Denver, Arapahoe County, Adams County, RTD, Boulder County, City of Aurora, US Census, City and County of Broomfiled



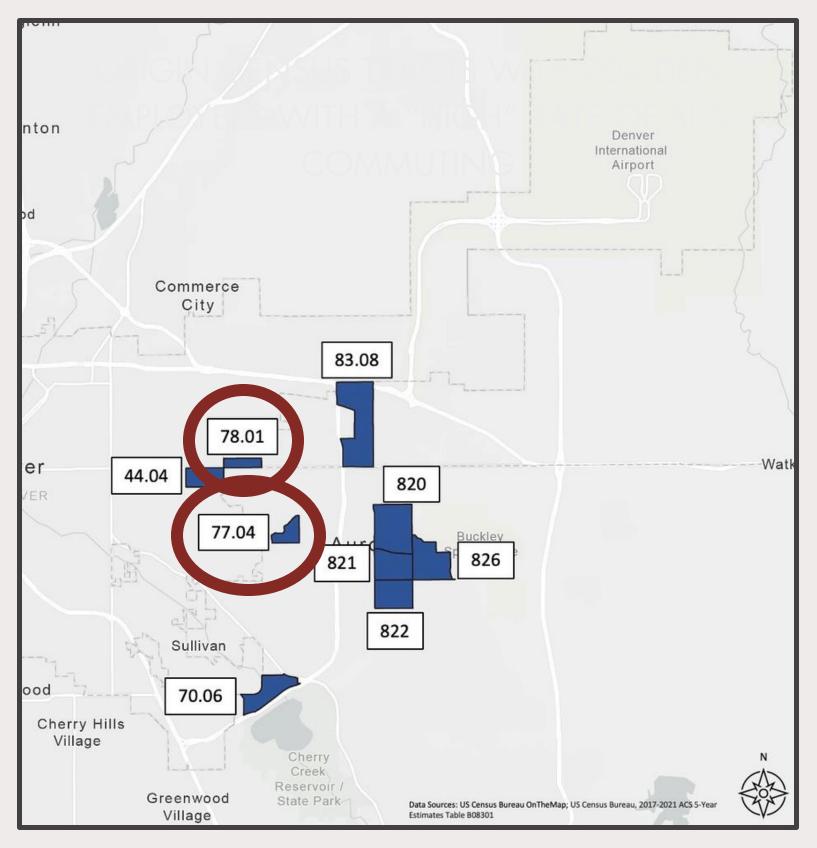


## CENSUS DATA MEANS OF TRANSPORTATION TO WORK

2%, 2%, and 4% of residents who commute to work in Adams, Arapahoe, and Denver counties respectively, stated they took the bus to work.

In Census Tract 78.01 in Adams County, 14% of their workers reported taking the bus to work, which is seven times the county's rate.

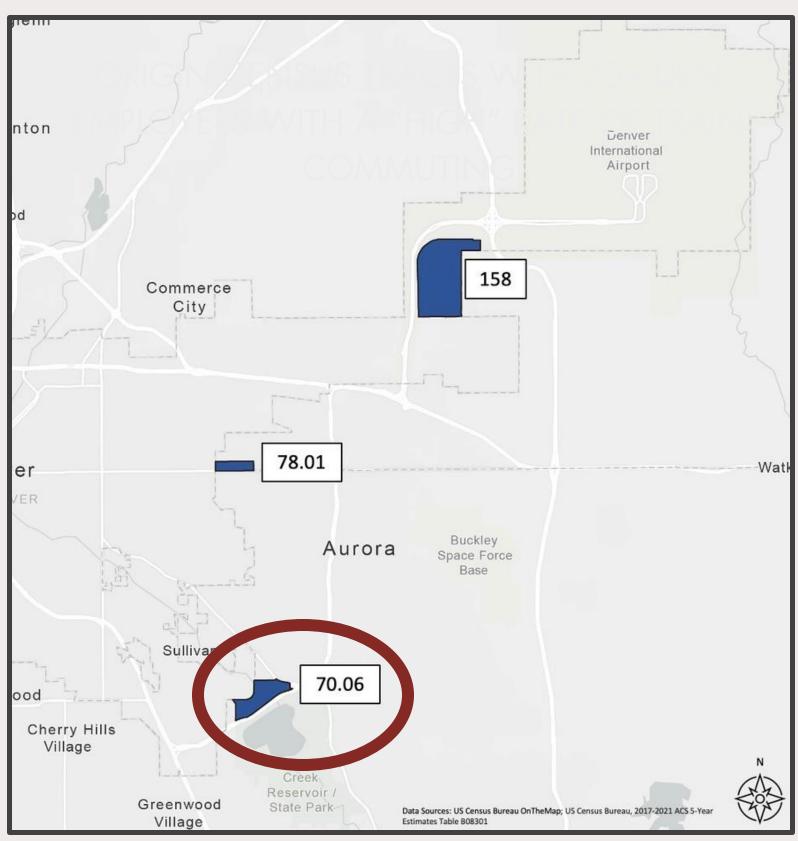
In Arapahoe County, **10% of the workers in Census Tract 77.04 take the bus to work**, eight percentage points higher than Arapahoe County as a whole.



## CENSUS DATA MEANS OF TRANSPORTATION TO WORK

1%, 1%, and 2% of commuting workers in Adams, Arapahoe, and Denver counties respectively, stated they took a train to work.

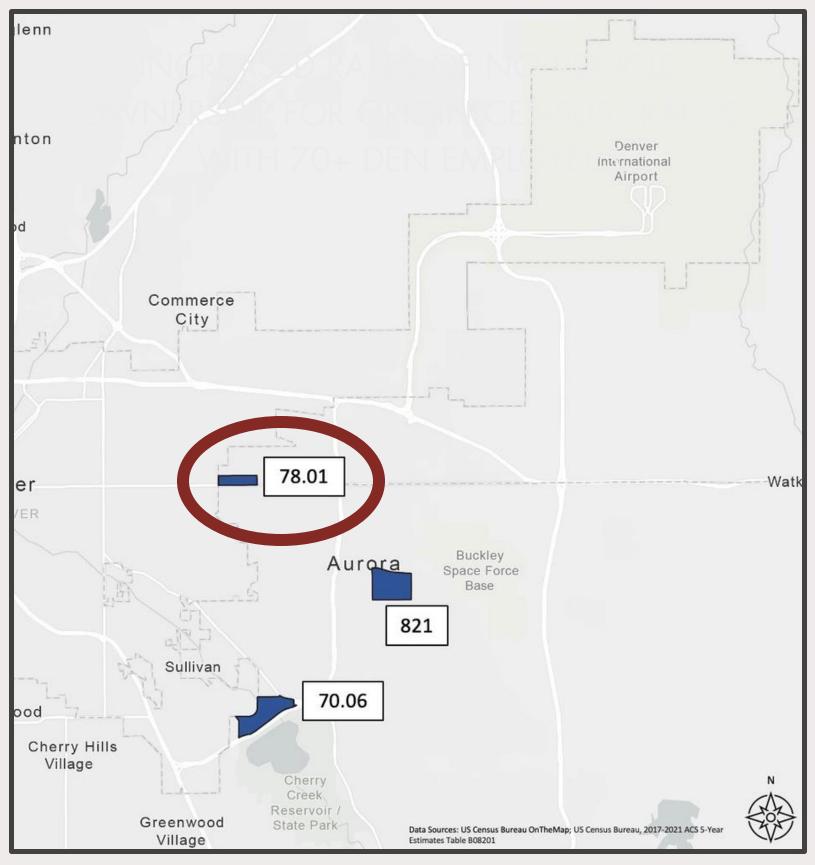
One standout was **Census Tract 70.06 in Denver with a reported 14%** of workers taking the train to work, twelve percentage points higher than all of Denver.



#### CENSUS DATA NUMBER OF VEHICLES AVAILABLE IN HOUSEHOLDS

In Adams, Arapahoe, and Denver counties, 4%, 5%, and 10% of households respectively, do not have access to a vehicle.

Census Tract 78.01 in Adams County was the biggest outlier with **39% of households reporting they did not have a vehicle** available to them.

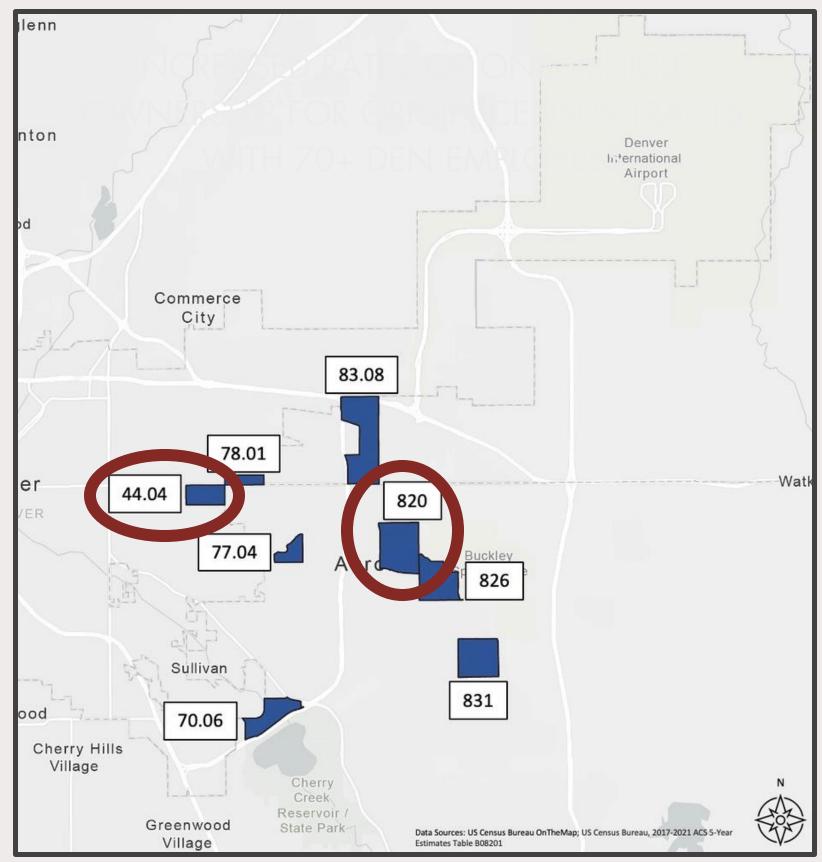


#### CENSUS DATA NUMBER OF VEHICLES AVAILABLE IN HOUSEHOLDS

In Adams, Arapahoe, and Denver counties, 26%, 31%, and 41% of households respectively, have access to one vehicle. Households with only one vehicle available can represent the group that needs alternative transportation options, especially if the household has two workers who must commute to work.

Census Tract **820 in Arapahoe County had 58% of households with access to one vehicle**, twenty-seven percentage points higher than the county overall.

Denver's Census Tract **44.04 reported 56% of households with one vehicle available**, fifteen percentage points higher than the county.

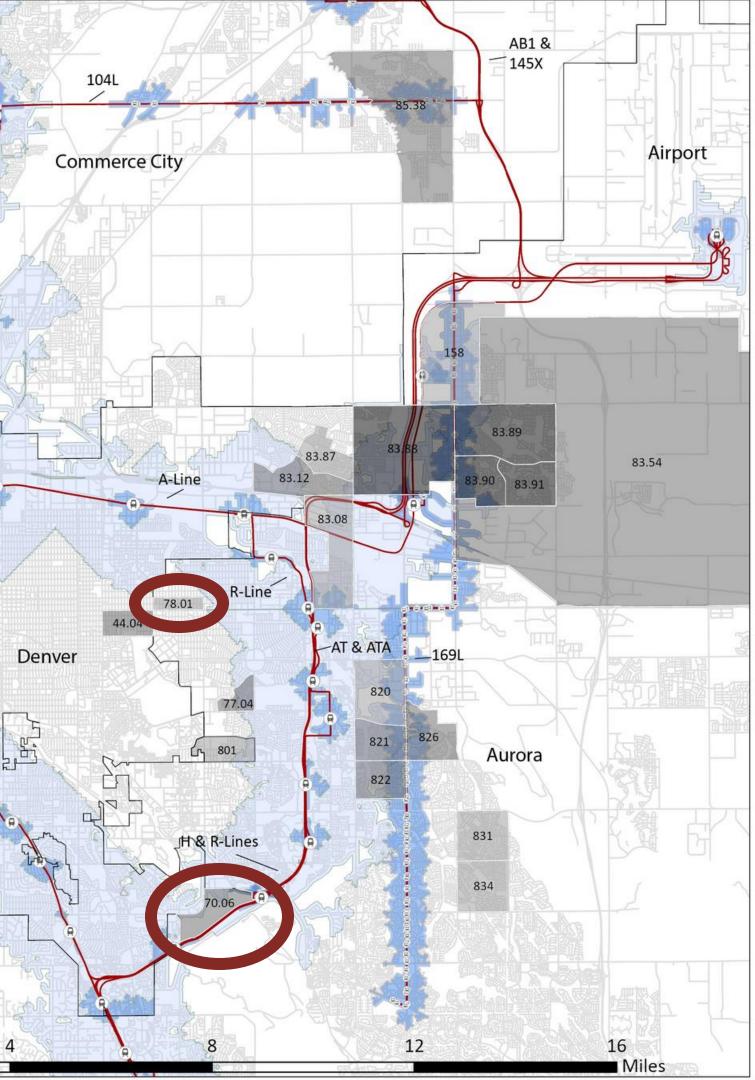


# LIKELINESS TO MODAL SHIFT

Two census tracts met the criteria for all four groups we evaluated. Census Tract 70.06 (Denver County) and Census Tract 78.01 (Adams County) have higher percent totals of:

- workers that took the bus or the train to work
- households with access to one or no vehicles than their respective counties.

These two census tracts present the ripest **opportunity for modes beyond vehicles for DEN employees.** 



# THE CURRENT COMMUTE ACCORDING TO...

# The Current Commute According To... Belinda Rob

Introduction

#### Theo



## The Current Commute According To...

Belinda



#### PEAK EASTBOUND COMMUTER

## PEAK WESTBOUND COMMUTER

Introduction

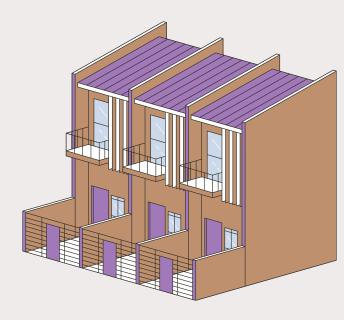
#### Theo

## **NON-PEAK** COMMUTER



# Belinda's Current Commute as a Flight Attendant

Shift Start: 7AM, for a 9AM flight | Shift End: A few days later, at 4PM





Belinda lives in a townhouse in the Lowry neighborhood

Belinda drives alone 35 -50 min, depending on traffic

Introduction



PEAK EASTBOUND **COMMUTER** 

# DEN

#### Belinda arrives at DIA after parking in the airside employee lot



# Belinda's Current Commute as a Flight Attendant

Shift Start: 7AM, for a 9AM flight | Shift End: A week later, at 4PM

Because of her work schedule, it can be difficult for Belinda to take transit. She does love the idea of carpooling, but doesn't currently know how to make that happen and there aren't any extra benefits for her commute to try & coordinate it.

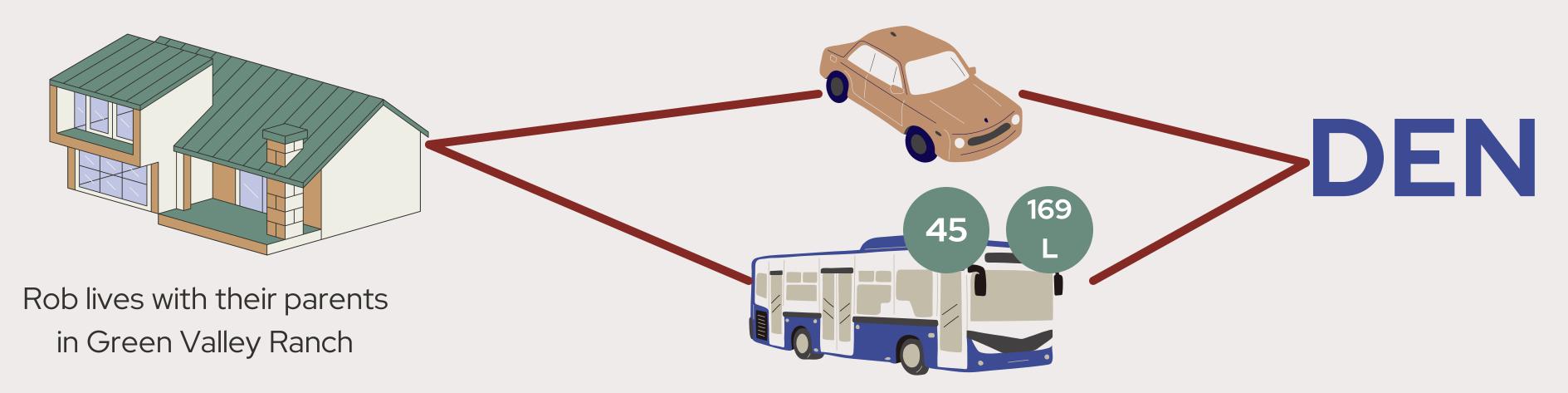


PFAK FASTBOUND COMMUTER



# Rob's Current Commute as a Part-Time Barista

Shift Start: 4AM | Shift End: Noon



Rob's parents drop them off at work if they're awake, which takes 15 minutes, or... they take two buses, which takes about 30-40 minutes.





## Rob's Current Commute as a Part-Time Barista Shift Start: 5AM | Shift End: 11AM

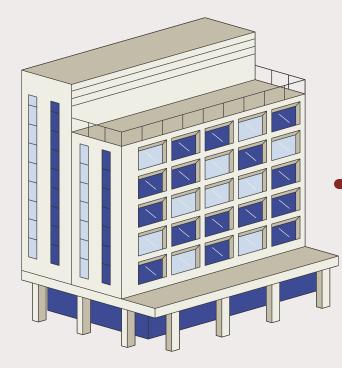
Rob loves the idea of biking on their own to the nearest A-Line or bus stop so that they can have more freedom of where to go after work. However, Rob's bike is new and they're not comfortable locking it up at the stations or airport with the current facilities.

PFAK WFST-BOUND COMMUTER



# Theo's Current Commute as a Marshaller

#### Shift Start: 6PM | Shift End: 2AM





Theo lives in an apartment complex along E. Colfax in Aurora

Theo drives alone to work, about 25 min

Introduction

NON-PEAK COMMUTER

# DEN

Theo arrives at the employee parking lot and shuttles to work.



## Theo's Current Commute as a Marshaller

Shift Start: 6PM | Shift End: 2AM

Theo's car is really old and he would prefer to take transit to work so he can save his mileage for taking road trips. While he could get to work on the train for the start of his shift, he has no way to get home when he gets off at 2AM.

NON-PEAK COMMUTER

# Let's Pause... Any questions so far?

Image Source: <u>Fly</u> <u>Denver</u>

## THE INTERVENTION BUCKETS



# Long-Term

Intervention Buckets

#### **Programmatic & Infrastructure**

#### **Programmatic & Infrastructure**

## THE GOAL: MODAL SHIFTS

I.e. the change from one form of transportation to another -> how do we encourage folks to use modes other than Single Occupancy Vehicles to arrive to work at DEN?

Previous research suggests that there are groups that could be considered amenable for shifting modes, and there are likely more cohorts that haven't yet been identified. The varied types of interventions and support recommended here are aimed at making it easier for DEN employees to consider the decision to incorporate new modes of commuting into their daily routines.









# SHORT-TERM RECOMMENDATIONS

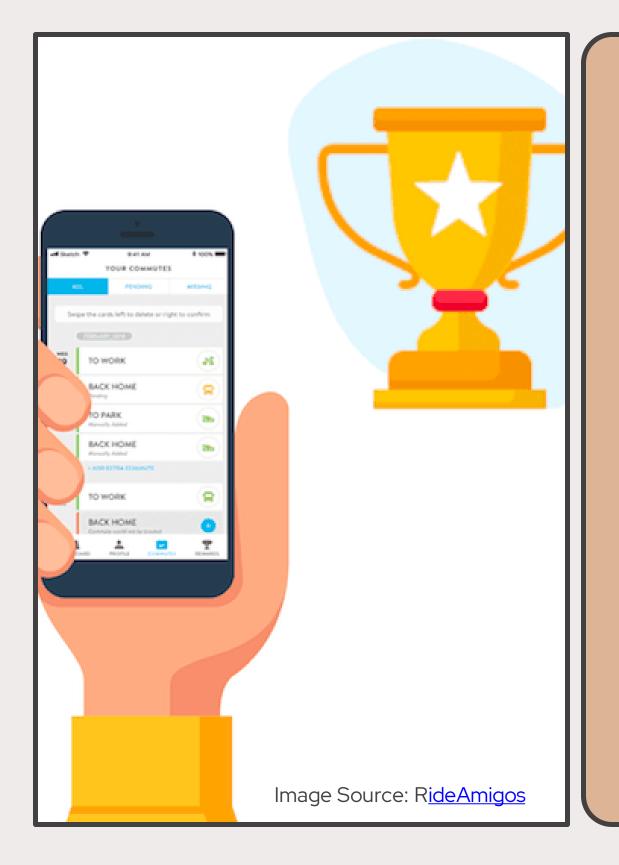
Short-Term

# SHORT-TERM PROGRAMMATIC INTERVENTIONS

Short-Term



## NON-CASH INCENTIVES



#### What It Is

- Offering incentives to users of alternate transit methods other than cars
- This includes rewarding carpooling, cyclists, trains, buses, etc.
- Use of apps and tracking systems to log hours and days
- Rewards include PTO, Extended or extra break times, "seniority" during shift bidding times
- Related: Reward system or platforms that offer incentives like gift cards

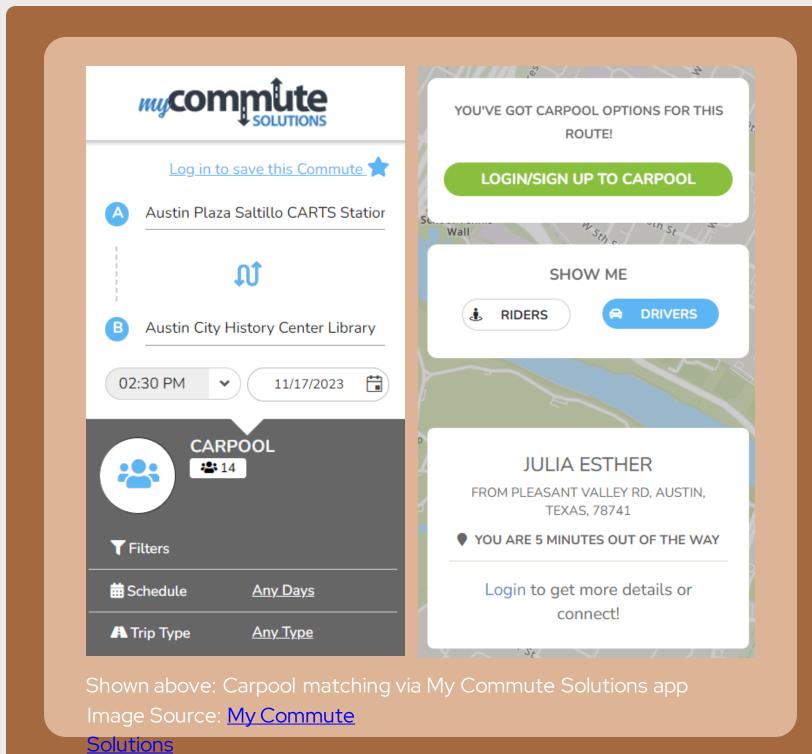
#### **Recommendations for DEN**

Create a platform that allows for tracking of hours in conjunction with other recomendations

#### Application:

- Create an app
- Tracking and verify at entry and exit spaces such as security.

# Non-Cash Incentives Case Study

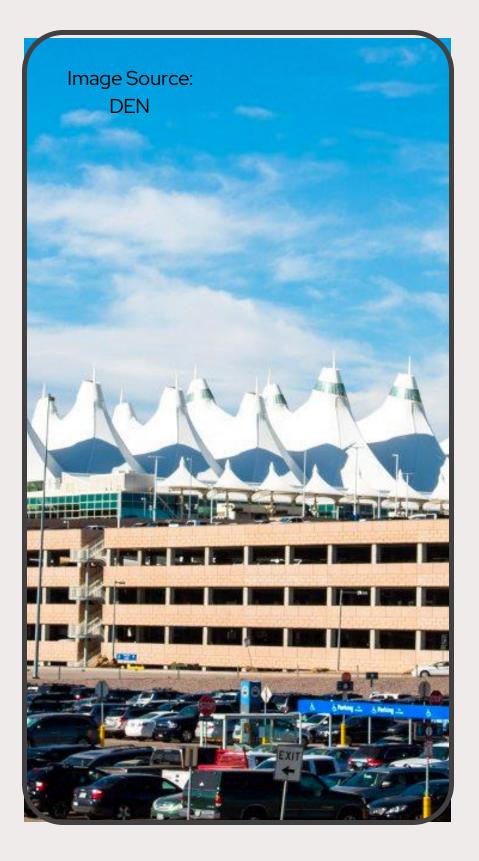


#### City of Austin's PTO Travel Incentive

- City of Austin introduced a Smart Commute Rewards program for 13,000 employees in 2017
- Employees could accrue additional PTO hours by taking alternative transportation modes
- Employees logg app
- 50 trips earned 4 extra PTO hours
  - 50 trips = roughly one month of commuting
- Drive-alone trips fell by 12 percentage points within 6 months (from 53% to 41% of all trips)

• Employees logged non-car trips in the RideAmigos

## FLEXIBLE PARKING PASSES



#### What It Is

- Gives employees & employers more flexibility, to park less or only as needed. Allows employers to save money, which could be rolled into benefits for workers who chose to enroll in a flexible program.
- Could be paired with existing toll sticker parking: i.e. a car cannot exceed a certain number of exits.

Source: PreciseParkLink

#### **Recommendations for DEN**

Implement a flexible parking pass, which allows employers to save money on employees that want to enroll in the flexible program.

Advertise flexible parking passes in tandem with the EcoPass available to each employee, as well as any incentive programs to encourage mode shifts.

# Flex Parking Passes Case Study



#### University of Wisconsin-Madison

- Implemented a Flex Parking Program that allows for pay-per-use parking
- Designed to complement alternative commute modes
- Provides an incentive for faculty to drive less and only pay when they need to drive to campus
- "The less you park, the less you pay!"
- Uses Park Mobile app to make payments easy and convenient



## ONBOARDING PROCESSES



#### What It Is

- Educational programs and materials to inform employees of transit, carpool, and bike transportation options
- May include information about bus passes, routes, carpool programs, and incentive programs
- Can be done at time of employee hire or during windows of opportunity (i.e. construction, New Years)

#### **Recommendations for DEN**

Create a new employee educational program for transportation options and incentives, and partner with other agencies to supplement and provide resources

Leverage DEN Insider app to provide information and updates Take advantage of onboarding process to provide information, option to link ID badge with EcoPass Partner with DRCOG Way to Go team to provide resources

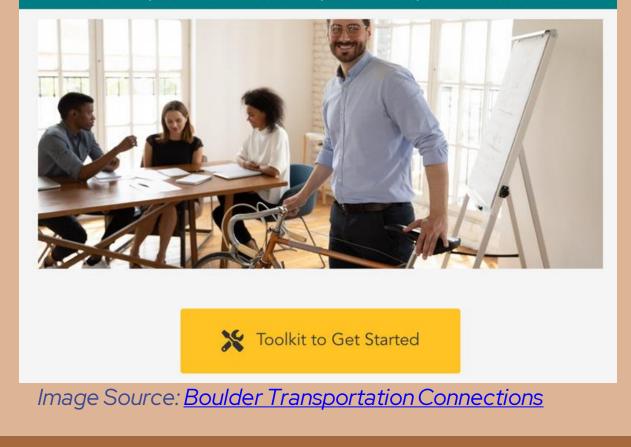
# A Onboarding Process Case Studies

≡



#### Employee Transportation Coordinator

Home » Employer Resources » Employee Transportation Coordinator



#### New Employee Welcome Packets (Dane County, WI)

- Provide educational materials on commute options during onboarding or on the first day of employment
- Include commute option information in new employee emails
- Materials may include flyers for bus pass & route information, bicycle maps, personalized transit and/or bike routes
- These materials could also be redistributed to employees during other "fresh start" periods such as the New Year or New Fiscal Year

#### Hiring Employee Transportation Coordinators (**BTC**)

- An employee who is informed on the commute programs, transit routes, and incentives available to employees
- Collects as much information from each new hire relating to their commute patterns and if they are interested in learning about the transportation options available to them
- Available to provide service to all employees during onboarding and throughout employment

# SHORT-TERM **INFRASTRUCTURE** INTERVENTIONS

Short-Term



## SECURE BICYCLE PARKING



### What It Is

- Secure bicycle parking at transit locations
- Can supplement ridership by expanding transit sheds
- Modular locker banks or bike racks enclosed by secure shelters
- Accessible by RFID, key, or combination
- Transparent options for DEN security concerns
- Can be paired with simple bike repair stations
- Bike parking fees can be subsidized through employers
- Fees can be pay-per-use for flexibility

#### **Recommendations for DEN**

Install secure bicycle parking for employees at identified RTD transit locations.

#### Locations:

Union Station, 38th and Blake Station, 40th and Airport Station, 61st and Pena Station, Colfax Station (R-Line), Aurora Metro Center Station, Buckley Road and Mississippi Avenue, 9 Mile Station, Denver Airport Station

## Secure Bicycle Parking Case Study



Image Source: bouldercounty.gov

#### **US 36 Flatiron Flyer Bike Lockers**

- Secure key-card access
- Reduce amount of bikes on A-Line
- including adapted and special bicycles
- Visible does not pose a security risk
- Affordable

#### **Could Have:**

- Badge and/or app access
- Pay-per use

Source: https://bouldercounty.gov/transportation/multimodal/bike-n-ride/

• Close to entrance of transit station or on platform • Accessible - accommodate different types of bicycles

• Modular - could provide different types of bike parking and could be designed to be expanded as demand increases

### WAYFINDING



#### What It Is

A means for people to identify where to go when using public transportation and cycling as their commute option. There are opportunities for private-public partnerships through art as a way to improve user sense experiences.

#### **Recommendations for DEN**

Provide wayfinding signs and lighting at and around transit centers

#### Locations:

Union Station, 38th and Blake Station, 40th and Airport Station, 61st and Pena Station, Colfax Station (R-Line), Aurora Metro Center Station, Buckley Road and Mississippi Avenue, 9 Mile Station, **Denver Airport Station (shown here)** 

## Wayfinding Case Study



#### Fort Collins Bicycle Wayfinding Master Plan

- Consistent signing across network
- Common sign style and color
- Predictable sign placement
- Prominent and easy to read signs, with Spanish translation
- Decision signs at junctions of routes with 1+ destinations • Confirmation signs placed after a turning movement or
- intersection
- Turn signs to let travelers know they must turn

#### Could have - unique branding for airport access

## Let's Pause... Questions?

Image Source: <u>Fly</u> <u>Denver</u>

# LONG-TERM RECOMMENDATIONS

Long-Term

# LONG-TERM PROGRAMMATIC INTERVENTIONS

Long-Term



## CONRAC PILOT & BEHAVIOR CHANGE



Source: Denver International Airport



Source: Denver International Airport

### What It Is

A consolidated rental car facility (ConRAC) for DEN's rental car businesses.

Location selected for ConRAC is current airside employee parking lot.

Employee travel habits will be disrupted by construction and implementation of the ConRAC.

Long-Term

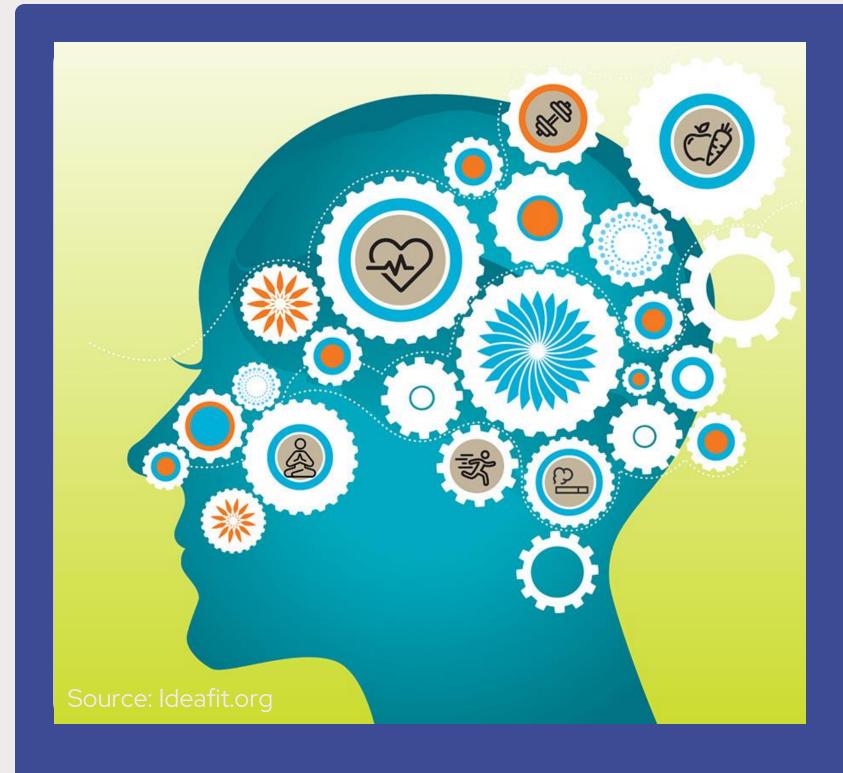
#### **Recommendations for DEN**

Investigate the logistics of how the ConRAC will disrupt employee travel patterns/options.

Provide education about alternative transit options for affected employees.

Identify the programs or alternatives that can be taken advantage of while travel and behavioral patters are affected.

## Windows of Opportunity Case Study



- Windows of opportunity are when habits are vulnerable, such as a change in jobs, when a shift in habit may occur given adequate information about options
- Demand for transport options depends on range of factors: perception of risk, cost, confidence, and availability of alternative transport modes. timing, level of trust in government, and how they are combined with other measures.
- Public awareness campaigns are dependent on • User centered design and who delivers the message is crucial.
- For instance: COVID-19 changed the way that people use transportation.

Source: lea ord

### CASUAL CARPOOLING

### WHAT IT IS

Ridesharing without any prearrangement between the driver and riders – during commute hours, riders and drivers line up at designated meeting places and create spontaneous carpools

- No ongoing commitment
- No special technology; relies on word-of-mouth, employee orientation
- Primarily motivated by convenience, time savings, and monetary savings; environmental implications merely a positive byproduct
- Etiquette/rules for safety and comfort (e.g. no talking, no eating/drinking, seat belt use, right of refusal)

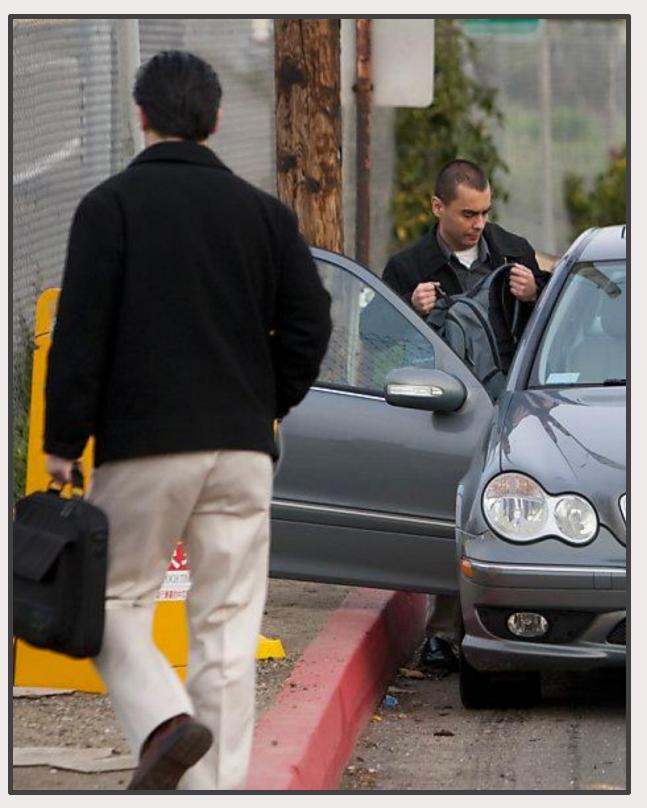


Image Source: <u>SF Gate</u>

### CASUAL CARPOOLING

#### **RECOMMENDATIONS FOR DEN**

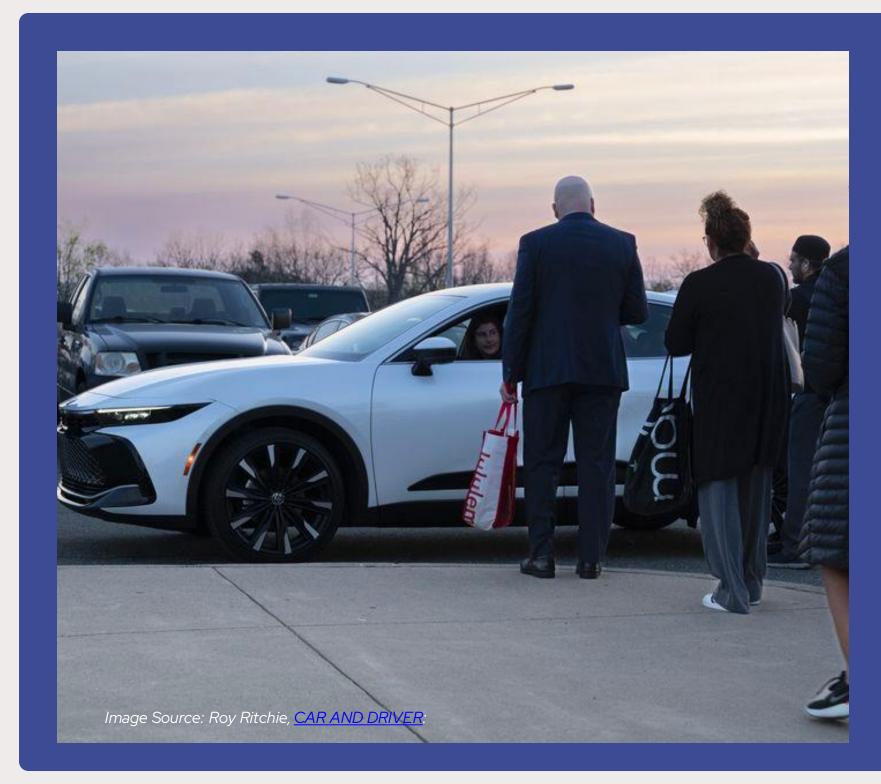
Work with DRCOG's 'Way To Go' app to promote casual carpooling, publicize existing & new incentives (i.e. HOV lanes, closer parking spaces), and compete to become one of the top 10 companies carpool commuting on the app.

Locations to Consider: Transit park and ride lots, bus stops, church parking lots, parks

**Where to Start:** Green Valley Ranch, Reunion, Brighton - These are important locations to highlight due to their location at the entrance of Pena Boulevard.

**Important Aspects of a Casual Carpool Approach:** Incentives are necessary (e.g. HOV lanes) for success of this program, and the place where DEN can intervene most. Additionally, identifying locations & creating signage for these casual carpool meet-up locations can help guide people on where to gather.

## Casual Carpooling/Slugging Case Study



- People are more likely to "slug" if they:
  - Are 25-34 years old

  - Have a household income above \$35,000/year
- <u>20% of all Washington DC carpools were</u> <u>"slugs" pre-pandemic</u>
- Casual carpool passengers can comprise a significant portion of HOV lane person movements
  - Slugging should be considered when investigating HOV lane implementation

Long-Term

- Have a professional/managerial or
  - administrative/clerical occupation

## CIRCULATORS & MICRO TRANSIT



Source: City and County of Denver



Source: DC Circulator

### What It Is

**Circulators:** short-distance, circular, fixed-route transit mode that takes riders around a specific area with major destinations. It may include streetcars, rubber-tire trolleys, electric buses - TTI

Neighborhood circulators typically provides service to low-density suburban communities.

**Microtransit**: IT-enabled private multi-passenger transportation services (e.g. Via) that serve passengers using dynamically generated routes, and may expect passengers to make their way to and from common pick-up or drop-off points. Vehicles can range from large SUVs to vans to shuttle buses.

#### Subsidy:

circulators: \$30-40 per rider per trip microtransit: \$15-43 per rider per trip

Long-Term

#### **Recommendations for DEN**

- Consider a circulator serving serving area southeast of the airport, Aurora, and E-470
  - Aim for 15-min headways
- Continue exploring partnerships to provide more microtransit service to airport and to train stations serving the airport
- Build on existing microtransit efforts
  - Montbello-Gateway Connector
  - The Aero: New microtransit service connecting Aurora Highlands with 40th & Airport Blvd station
- Establish thorough data agreements when contracting with third party providers

## Circulators and Micro-Transit Case Study



**Denver's Connector microtransit** began as a pilot program in 2021 Montbello and then extended to Gateway, Globeville and Elyria-Swansea for an additional two years. Residents can use an app or call to request rides in English and Spanish. The service currently runs weekdays from 6 a.m. to 8 p.m. with a 30-min response time. The Connector has wheelchair accessible vans, along with vans with bike racks, and operates hybrid and electric vehicles. The Department of Transportation and Infrastructure (DOTI) said top destinations include grocery stores, regional transit stations and community centers. The Montbello Connector has seen ridership grow from 1,672 passengers in November 2021 to 4,037 passengers in July 2023.

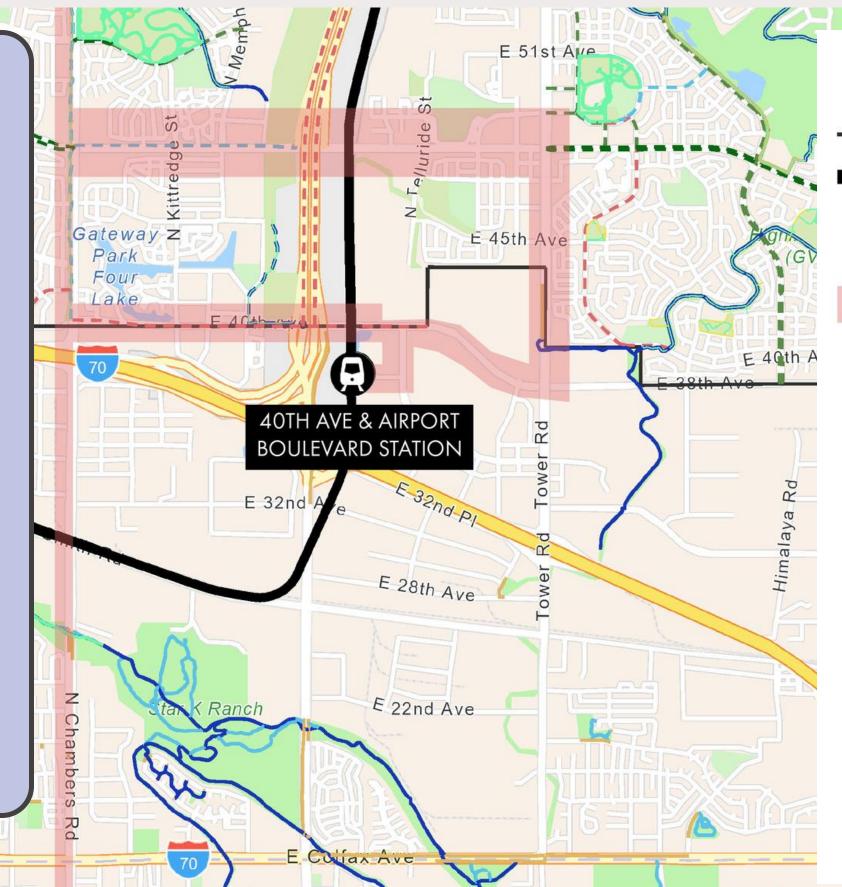
# LONG-TERM **INFRASTRUCTURE** INTERVENTIONS

Long-Term

## FIRST MILE/LAST MILE GAPS ANALYSIS

#### What It Is

An employee's "first mile/last mile", or, how they get to the nearest transit station is critical to a healthy transit network. **Conducting a gaps analysis** shows where folks may encounter missing or uncomfortable pathways that would keep them from accessing transit by walking, rolling, or biking.



#### LEGEND

Denver County Boundary

RTD Light or Commuter Rail Lines



RTD Light or Commuter Rail Station

Missing or Uncomfortable Bike/Ped Facilities

#### **Denver Bike Facilities**

- ■■■■ Protected or Buffered Bike Lane
- Bike Lane
- Shared Roadway
- Shared Use Path

#### Aurora Bike & Trail Facilities

- Trail
- Path
- Sidewalk

#### Denver Sidewalk Widths

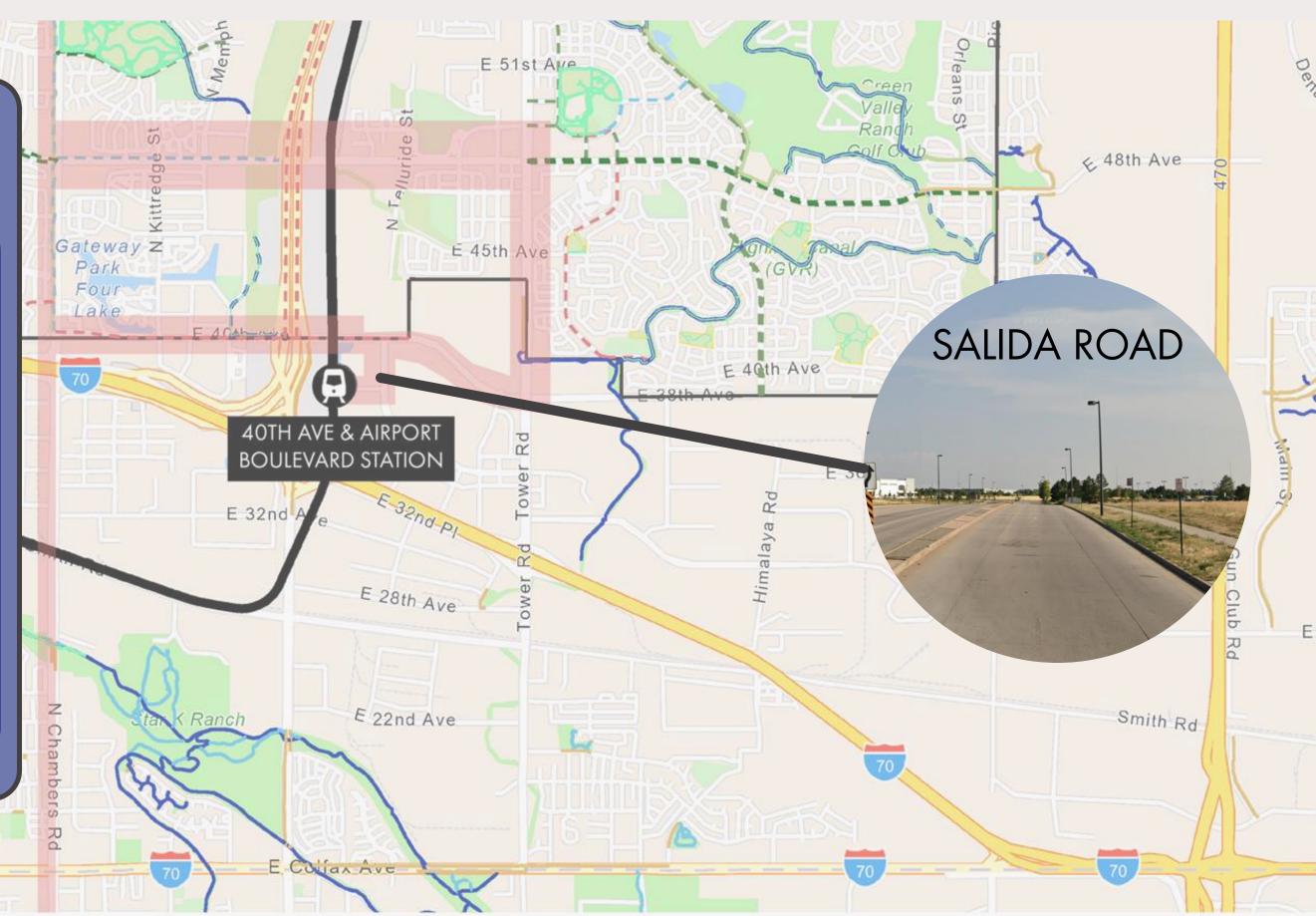
- 8 feet wide or over
- Under 8 feet wide

## FIRST MILE/LAST MILE GAPS ANALYSIS

#### **Recommendations for DEN**

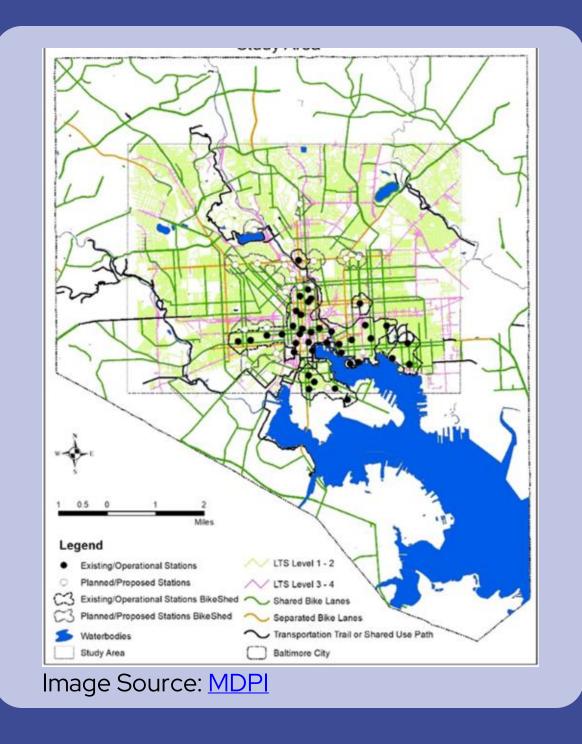
Conduct a FMLM gaps analysis of major airport commuter stations. **Investigate how FAA** funds could be utilized or partnerships built to provide safe and beautiful pathways to transit stops.

Campus





## Gap Analysis Case Study



#### GIS Based Equity Gap Analysis - Baltimore, MD

- Method applied to gap analysis of bike share stations – can be applied to transit stops people use to access the airport
- Bikeshed analysis using land use, density, etc.
- Including elevation and slope to assess the comfort of bike routes
- Weighing different characteristics to identify priority for investments in sidewalks, bicycle facilities, etc. to increase bike/ped connectivity to transit.

Source: MDPI

## HOV/CARPOOL LANES



Source: Tacoma News Tribune

### What It Is

HOV lanes are a widespread nonmonetary congestion mitigation intervention, which allows 2-3+ vehicles and buses to ride in an express lane. They:

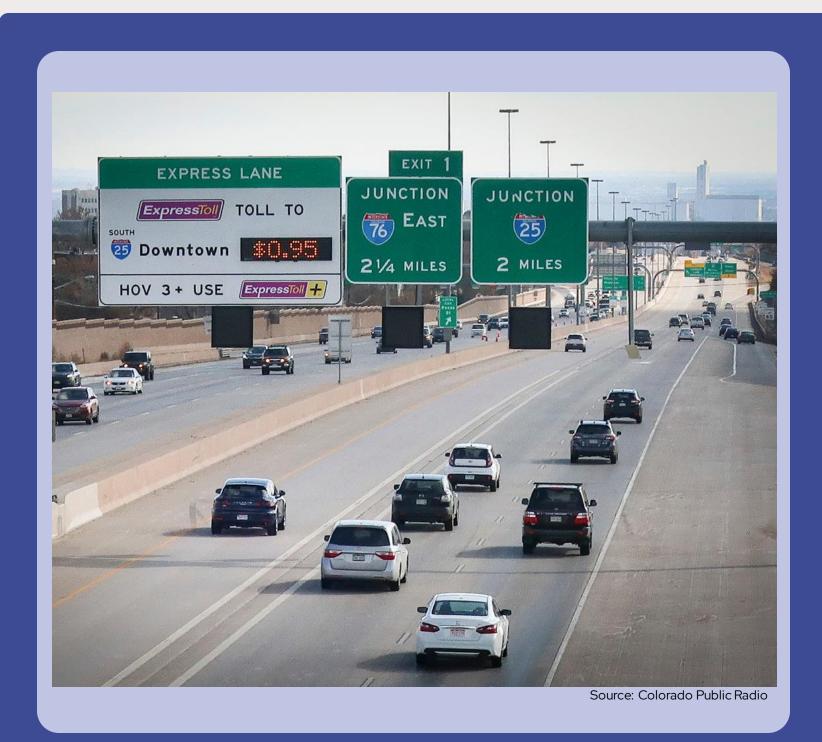
- Provide an incentive to use ride sharing and public transportation.
- Have a positive impact on carpooling: HOV lanes can help carpooling marketplaces scale both on the demand side and the supply side
- Incentivize casual carpooling

Long-Term

#### **Recommendations for DEN**

Consider a 3+ carpool, bus, and shuttle HOV lane as part of the Peña Boulevard Expansion project.

## HOV Lanes Case Study



- HOV lanes attract new users to carpooling and positively influence carpooling intent on and off HOV lane routes
- <u>Two-thirds of HOV lanes showed substantial</u> increases in carpooling

#### CDOT's HOV/Express Lanes

- Transponder device and at least three individuals in the car to travel in the lanes
- HOV/express lanes on highways across the state • Drivers must have a Switchable HOV

#### The Impact of High-Occupancy Vehicle Lanes

#### on Carpooling (Cohen et al., 2022)

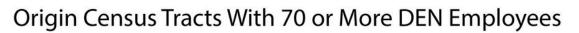
## ADDITIONAL & EXPANDED TRANSIT SERVICE

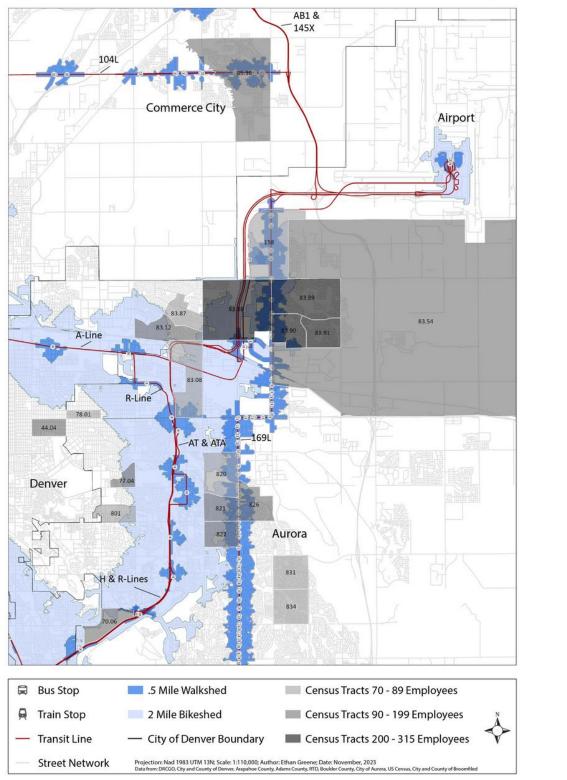
#### WHAT IT IS

Transit is the most efficient, safe, and equitable way to move a large number of people to a single location, making it critical to meeting Denver Airport's projected demand growth.

Currently, only 12% of surveyed DEN employees ride the train, while 5% commute by bus.

- A-Line provides frequent service (15min peak, 30min off-peak) from DEN to DUS. Service gap: 1:28 AM - 4:51 AM
- R-Line train and numerous buses feed into A-line
- RTD buses providing direct service to Airport (AB1, AT/ATA, 104L, 169L, 145X)
- Only one transit option provides frequent service (A-line)
- R-Line and Buses operate at low frequencies (30-60 min)
- Operator shortage is an ongoing challenge for RTD





## ADDITIONAL & EXPANDED TRANSIT SERVICE

#### **RECOMMENDATIONS FOR DEN**

- Increase frequency and span of bus service to airport (work with RTD/stakeholders)
- Increase frequency and span of A and R Line trains (work with RTD/stakeholders)
- Add new service to SE Aurora / E-470 express (work with RTD/stakeholders)
- Explore using FAA funds for A-line improvements and other transit investments
- Pursue better connections from bus to rail (esp routes 169 and 45)
- Continue efforts to expand access to EcoPass subsidies
- Add an AT/ATA stop at Colfax & 225 to capture 15/15L and future Colfax BRT riders
- Adopt formal transit mode share goals informed by GHG targets

ork with RTD/stakeholders) with RTD/stakeholders) NRTD/stakeholders) Her transit investments 9 and 45)

nd future Colfax BRT riders targets

## Transit Service Expansion Case Studies



• Competitive travel times can attract a significant share of employees to use transit rather than SOVs

#### CapMetro – Austin, TX

- in 2015
  - 15-minute headways
- Ridership increased up to 37% in first year

odeling Airport Employees Commuting ode Choice (Tsamboulas et al., 2012)

• Implemented high-frequency route network

# THE NEW COMMUTE

Conclusion





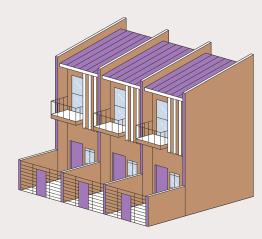
Conclusion





### Belinda's New Commute





Conclusion

With a new HOV lane and non-SOV incentive program in place, Belinda decided it was time to try carpooling. She used Way To Go to find people who were working similar flights as her, as well as sending out texts to friends. Finding her carpool group, they were able to use the faster HOV lane and earn a little extra PTO from their companies.

#### PEAK **EASTBOUND COMMUTER**

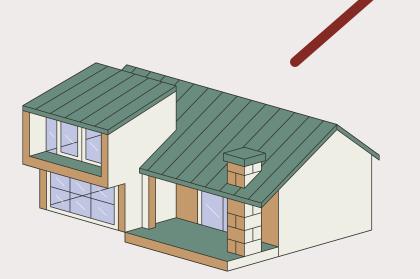
Interventions that Help Belinda & **Friends** 

- Carpooling in the HOV lane
- Non-Cash Incentives
- Windows of Opportunity
- Flex parking passes for those in Belinda's carpool



### Rob's New Commute





The installation of new & secure bike locks, as well as a safe bike path to the A-line station near their house makes Rob more confident to bike to the train station to take it to work and back. Now, Rob can easily ride the A-line downtown to go to the museum with friends after work if they'd like!

Conclusion

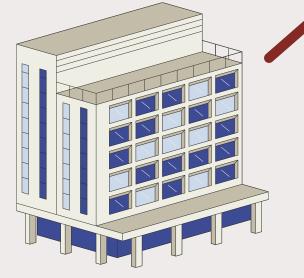
PEAK WEST-BOUND COMMUTER

### Interventions that Help Rob

- Secure Bicycle Parking
- First Mile Last Mile Gaps Analysis
- Wayfinding
- Non-Cash Incentives



### Theo's New Commute



Theo received a notification from DEN that the AT/ATA line is adding a stop near his house, and extending their service hours. Theo is excited to finally be able to take transit, and save his car for road trips with his partner! Before and after his shift, Theo changes between taking the A-line or taking BRT to the AT/ATA line, where he sits and researches trips to go on with the extra PTO he earns by taking transit instead of driving a car.

Conclusion

#### NON-PEAK COMMUTER



- Transit Service Expansion
- Flex Parking Passes
- Non-Cash Incentives
- Onboarding/ Communication
  Processes



Image Source: <u>Fly</u> <u>Denver</u>