

Denver Metro RTD Rail at 30:

Will state land use reforms and new funding sources save its low ridership?

October 24, 2025

ACSP Annual Conference, 2025

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UNIVERSITY OF COLORADO **DENVER**

The problem: “Bringing Riders to the Station”



Ridership Progress

Journey to Work by Transit in relation to Population Growth (Census /ACS 1990 to 2023)

	1990	2000	2010	2019-2023 w/o Boulder	2019-2023 w/ Boulder
Population	1,980,140	2,581,506	3,037,053	2,977,085	3,305,402
Commuters by Transit	40,622	58,471	66,336	44,910	50,482
% Commute by Transit	2.1%	2.3%	2.2%	2.8%,	1.5%

RTD Ridership 2022-2024 (RTD)

Ridership	2022	2023	2024	% Change 2022- 2024
Annual boardings	61,602,568	65,175,290	65,230,065	6%
Bus boardings	35,479,174	41,009,241	42,689,708	20%
Access-a-Ride	529,448	543,619	1,215,216	130%
Rail Boardings	21,540,452	21,318,629	19,493,133	-10%
Light rail	13,604,641	12,740,358	11,161,755	-18%
Commuter rail (A-line to DEN)	7,935,811	8,578,271	8,331,378	5%
Denver-Aurora-Greeley CO CSA Pop.	3,663,515	3,691,404	3,750,519	2%



How does the Denver region compare to peer systems?

Means of Transport to Work by Transit in 6 Regions with New Rail Systems

(Census ACS 2019 – 2023)

	Phoenix-Mesa-Chandler, AZ		Los Angeles-Long Beach-Anaheim, CA		Denver-Aurora-Centennial, CO		Minneapolis-St. Paul-Bloomington, MN-WI		Charlotte-Concord-Gastonia, NC-SC		Salt Lake City-Murray, UT	
All Workers	32,057	1.4%	235,424	3.8%	44,910	2.8%	54,223	2.9%	15,321	1.3%	15,670	2.4%
Renters (% of All)	55%		70%		54%		47%		51%		48%	



Research Questions

Why is ridership so low?

What will it take to improve ridership?



Prior Research

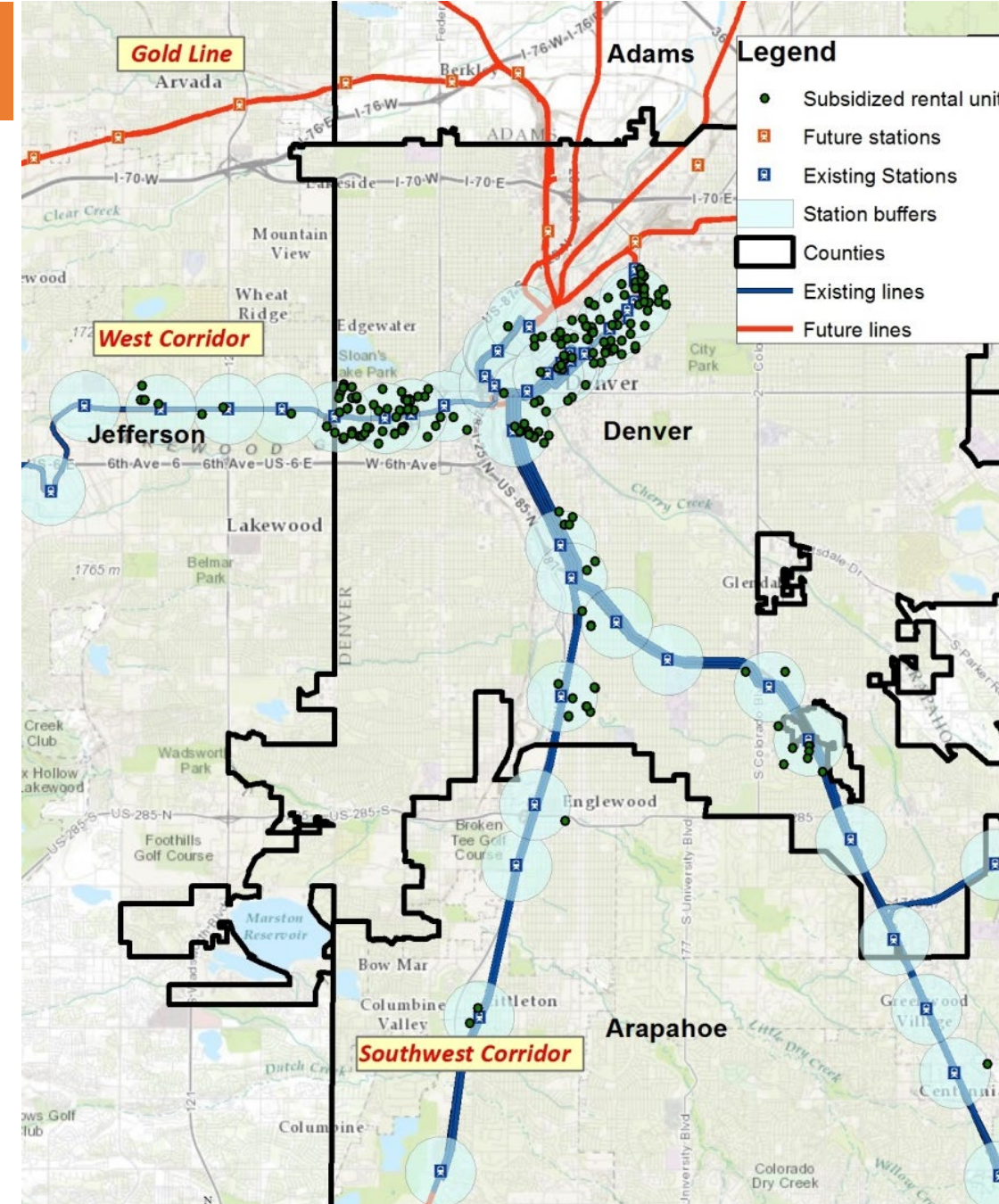
2014 Contract with DRCOG for HUD SCI Grant

Assess current and future stations for:

- Affordable housing
- Accessibility
- Economic Development/Jobs
- Overall development

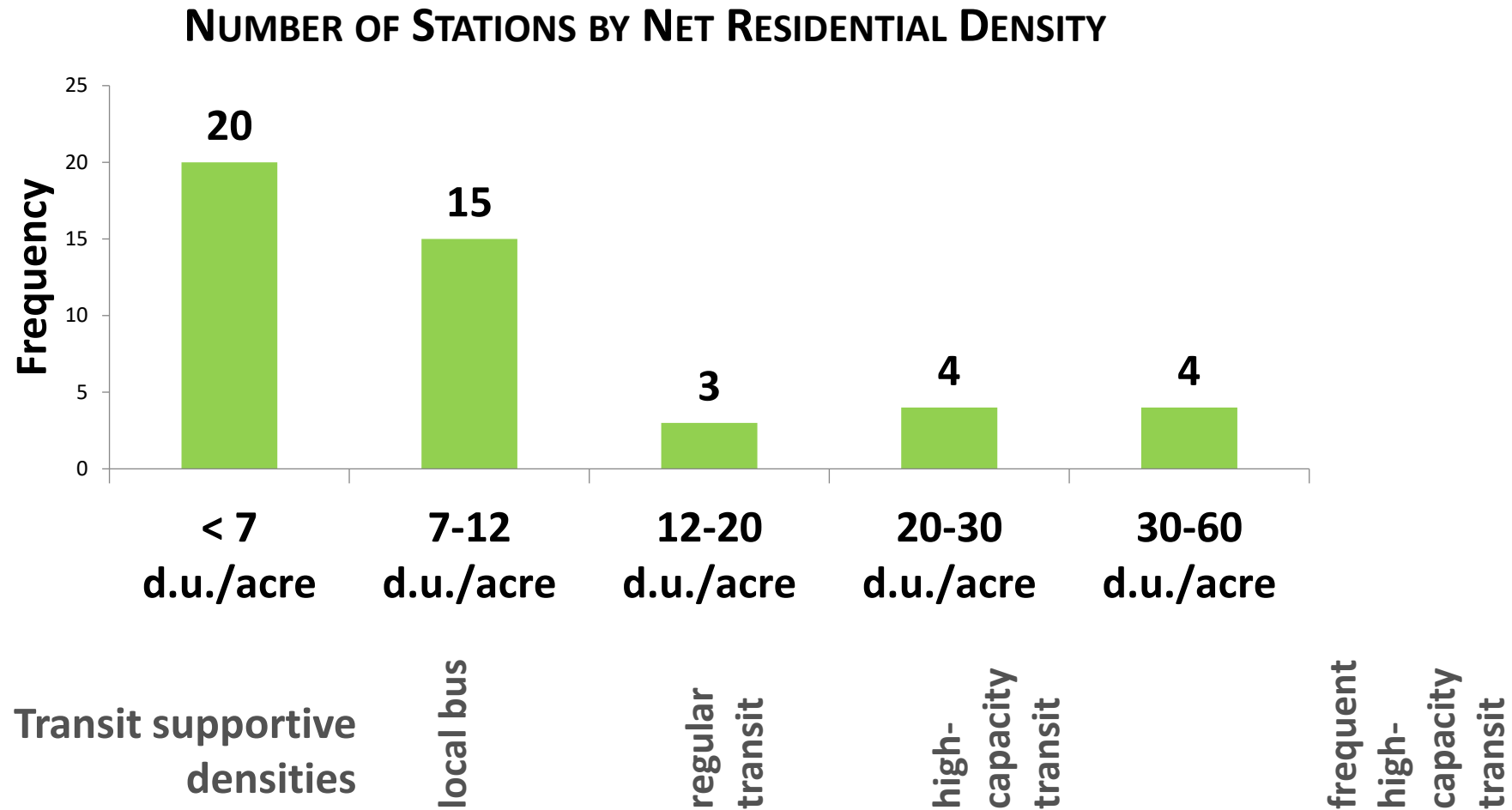
Many of today's problems were predictable

- Most affordable housing was in Denver
- Planners complained RTD engineers moved platform locations post TOD design, harming neighborhood access and TOD potential.
- No money for sidewalks or other accessibility infrastructure- but lots of money for parking.



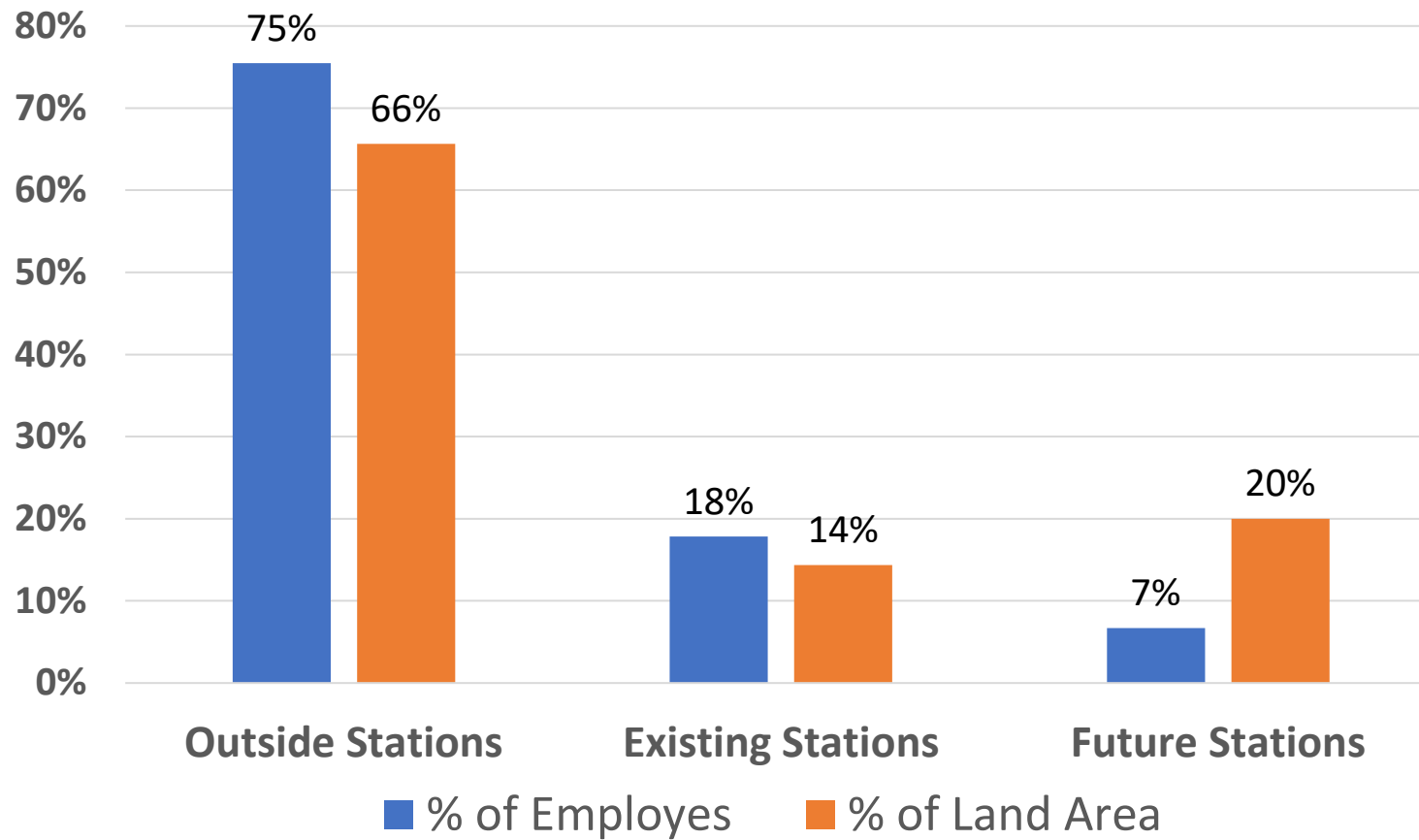
Phase I: HUD SCI Grant 2014

In 2014: Most stations were 7 du/acre or less. Goal for 50% of future housing.

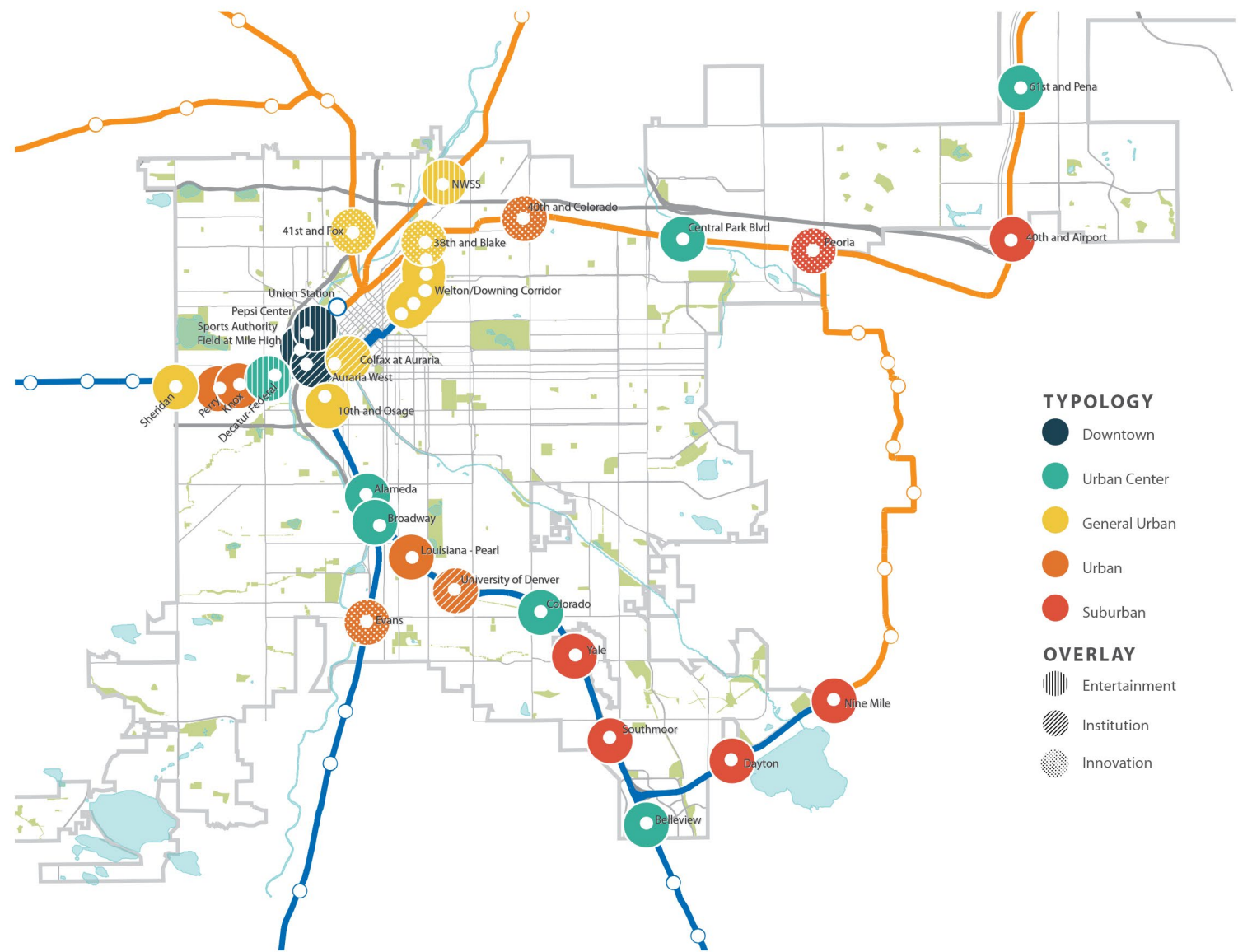


34% of Jobs expected at Existing & Future TOCs by 2022

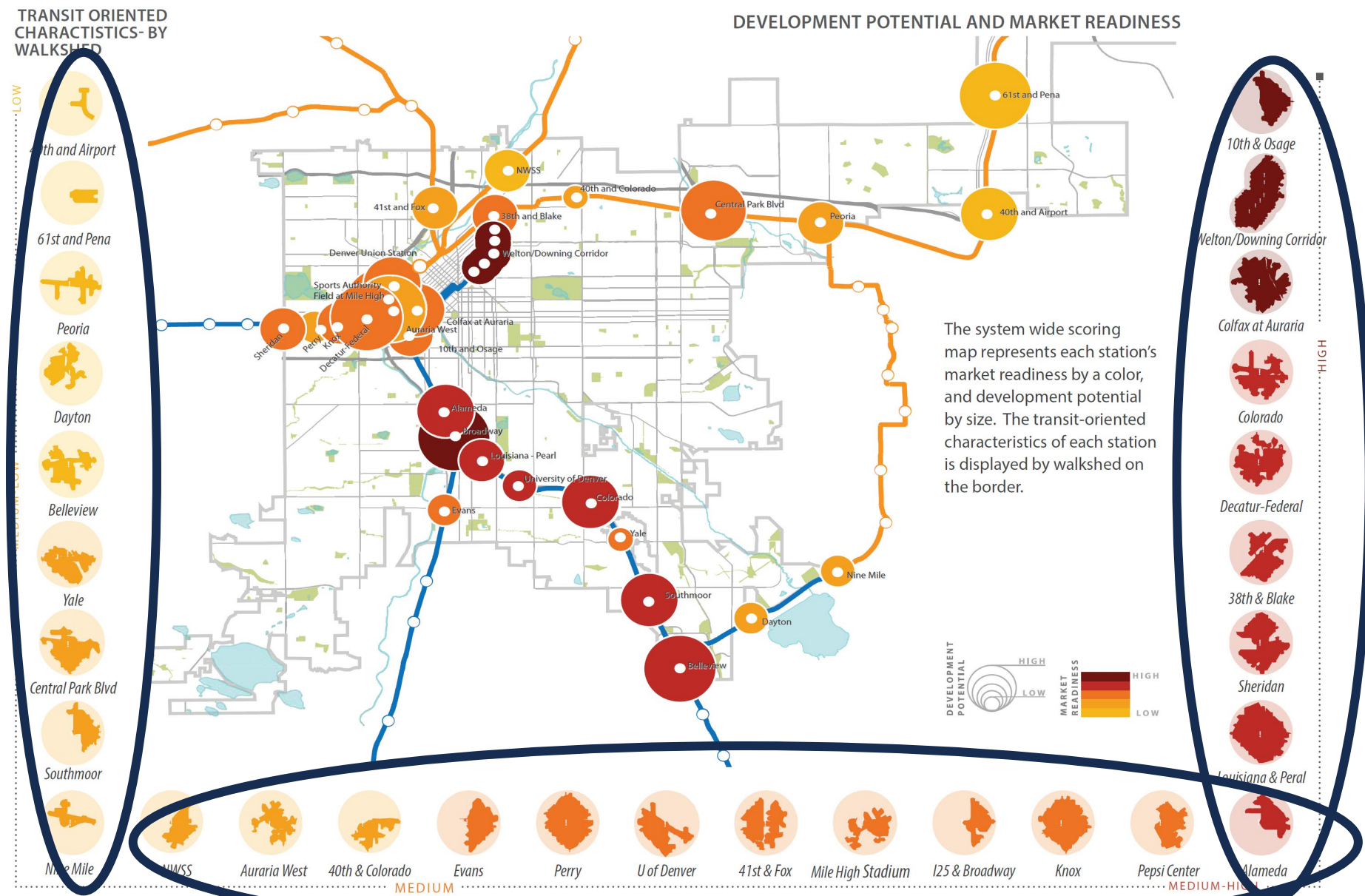
Percentage of the Region's Land & Jobs within and outside current & future station areas (2014)



Denver Created a detailed TOD Strategic Framework



But most walksheds were far less than the ½ mile theorized TOD



Pre and Post Rail Expansion

The good

- TOD plans in place
- Regional HUD-SCI grant showed promise for collaboration around planning growth
- Rail would expand to Adams County and several new jurisdictions.
- Although Boulder wouldn't get rail for decades, a BRT offered a band-aid.

The problematic

- Some communities against HUD "*Sustainable*" Communities Initiative and two planned to vote to downzone from TOD commitments.
- Several lines opened 1 – 2 years late with stops and starts and large cost overruns.
 - **Non-users still question whether rail is reliable based on these rough starts**
- Rush to build new lines created enormous capital debt with little left for operations.
- Expedient alignment reduces TOD potential.



Methods

- Quantitative trend data
- Interviews in 2014 and 2024 (ongoing)
- Land Use Analysis: ongoing
 - zoning
 - year built, building type, affordability, occupants, vacancies
 - TOC commercial uses
- Focus Groups for another sales tax for transit on Fall 2026 ballot
- Station Site Visits: ongoing
 - Sidewalk connectivity
 - Wayfinding
 - Sense of safety
 - Ease of access

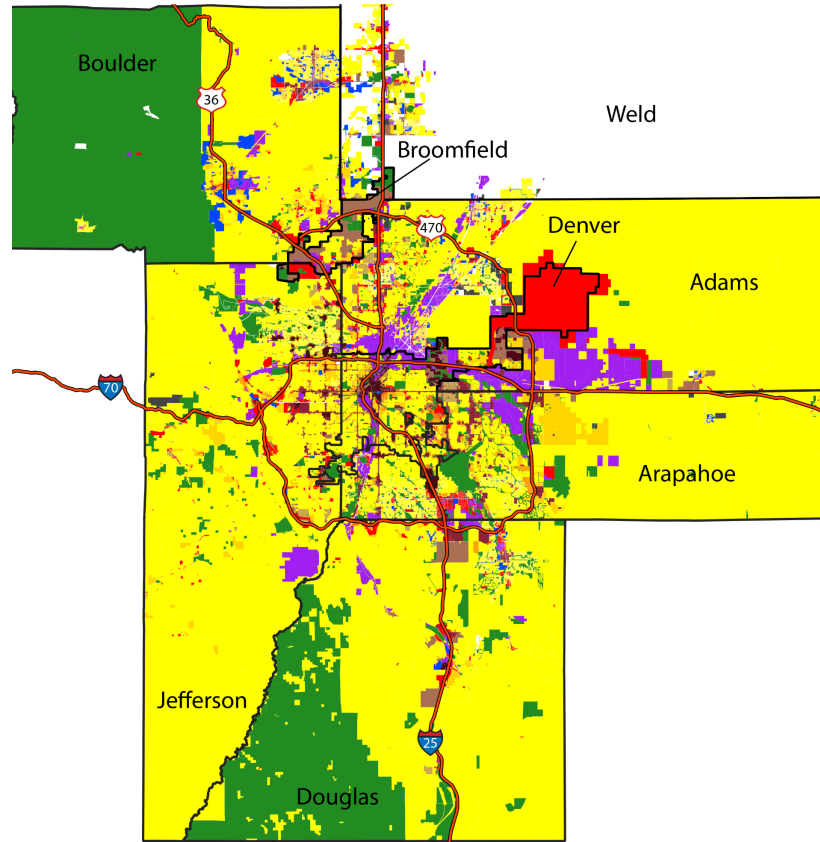


Land Use Analysis



Current Land Use Analysis: Regional View

70% of the region (4,569 sq mi) is zoned SF detached housing



Metro Denver
Generalized Zoning

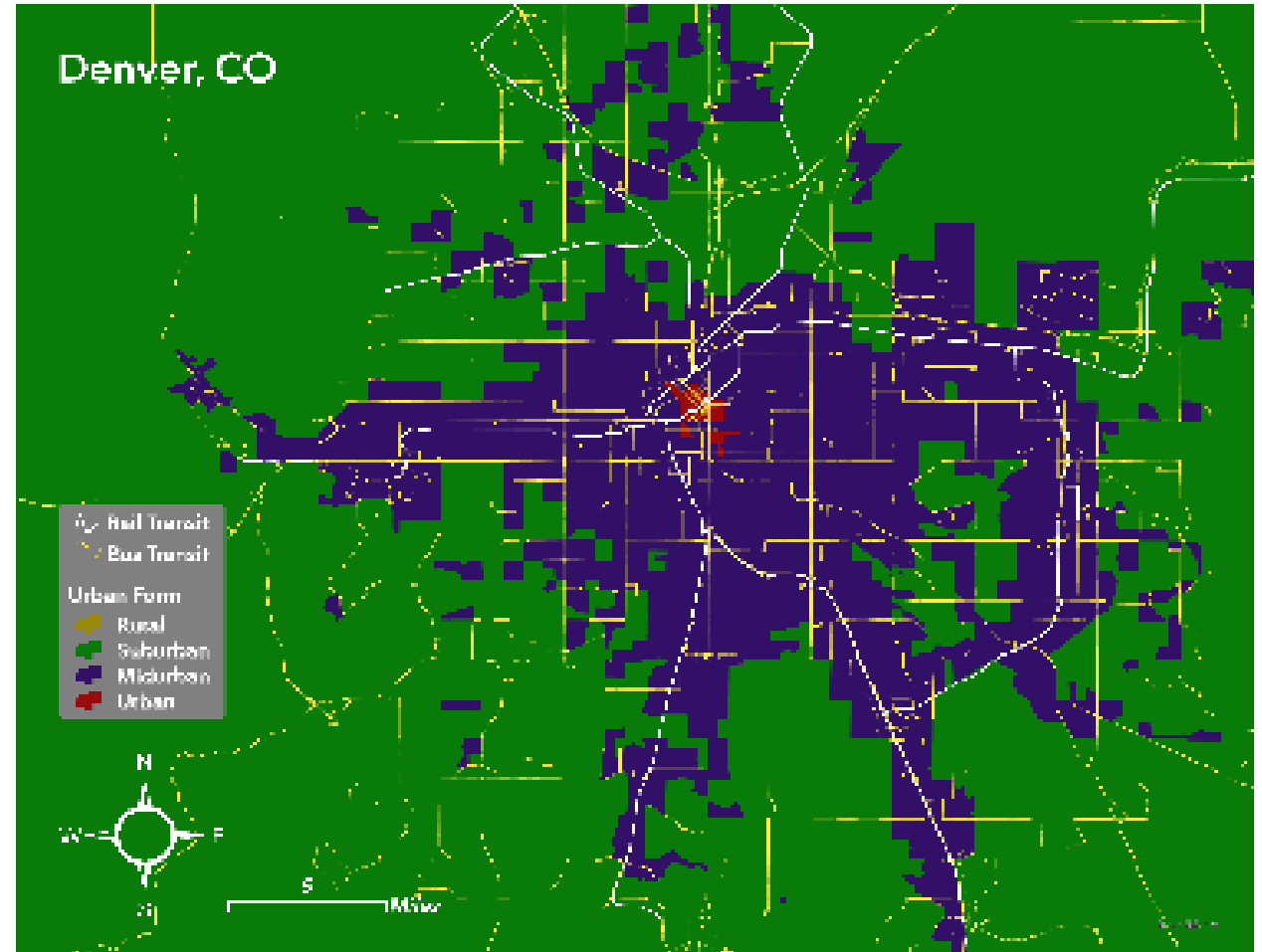


0 7.5 15 22.5 30 mi



Note: does not include unincorporated areas in Weld County.

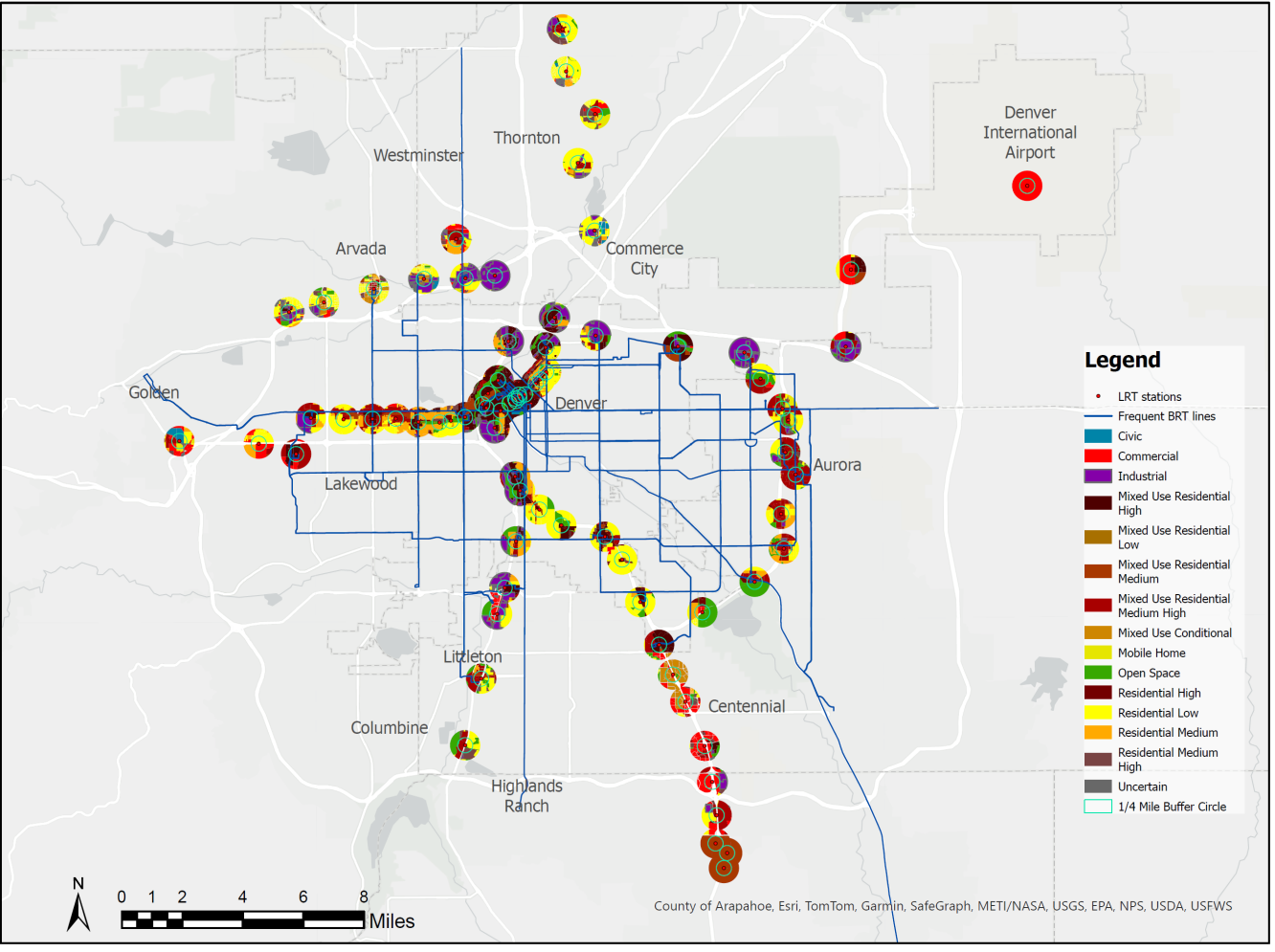
Urban / **Midurban** / **Suburban** Density Pattern: Midurban around most rail lines. Most live/work in suburban areas.



Land Use Analysis: Zoning within TOC areas

- Many stations (mostly in Denver) are zoned for mixed-use residential, but it's not enough.
- More than 50% of land zoned low density res. or industrial

1/2 and 1/4 Mile Buffers of LRT Stations



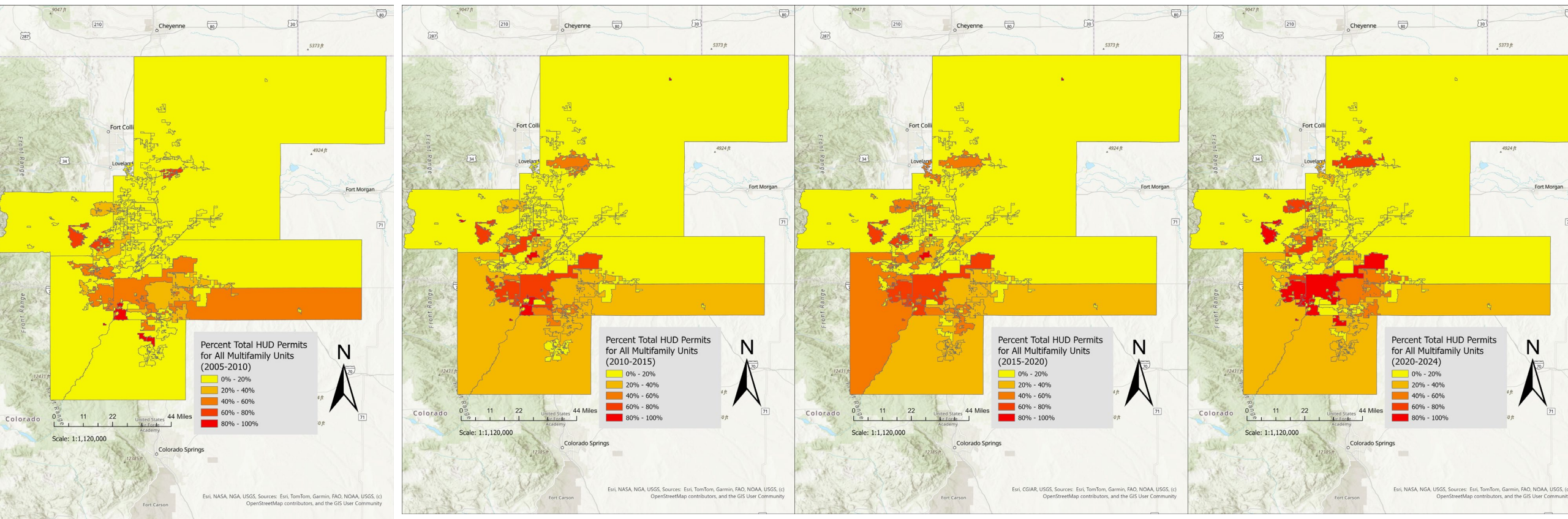
Generalized Zoning	% of 1/2 Mile	Cumulative
Mixed Use Res-High	15.4%	34%
Mixed Use Res-Med	10.7%	
Mixed Use Res-MedHigh	3.8%	
Residential-High	0.3%	
Residential-Med	2.3%	
Residential-MedHigh	1.2%	
Civic	0.3%	
Commercial	8.6%	
Industrial	8.6%	
Mixed Use-Conditional	0.3%	
Mobile Home	0.15%	
Mixed Use Res-Low	0.04%	48%
OpenSpace	18.9%	
Residential-Low	29.4%	
Uncertain	0.03%	
Grand Total	100%	82%



From Zoning to Multi-Family Permits: 2000 - 2024

Housing Unit Permits (HUD, SOCDs):

- Increase in denser multifamily units over time, but the quantity remains below the amount needed.
- MF Units are not going in many of the most job-rich locations with transit stations

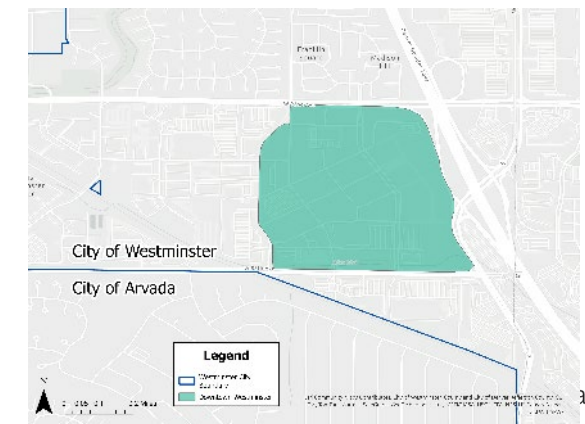


Midurban “Retrofit” Case Study: Westminster’s new Downtown near rail



Former mall “gray-field”

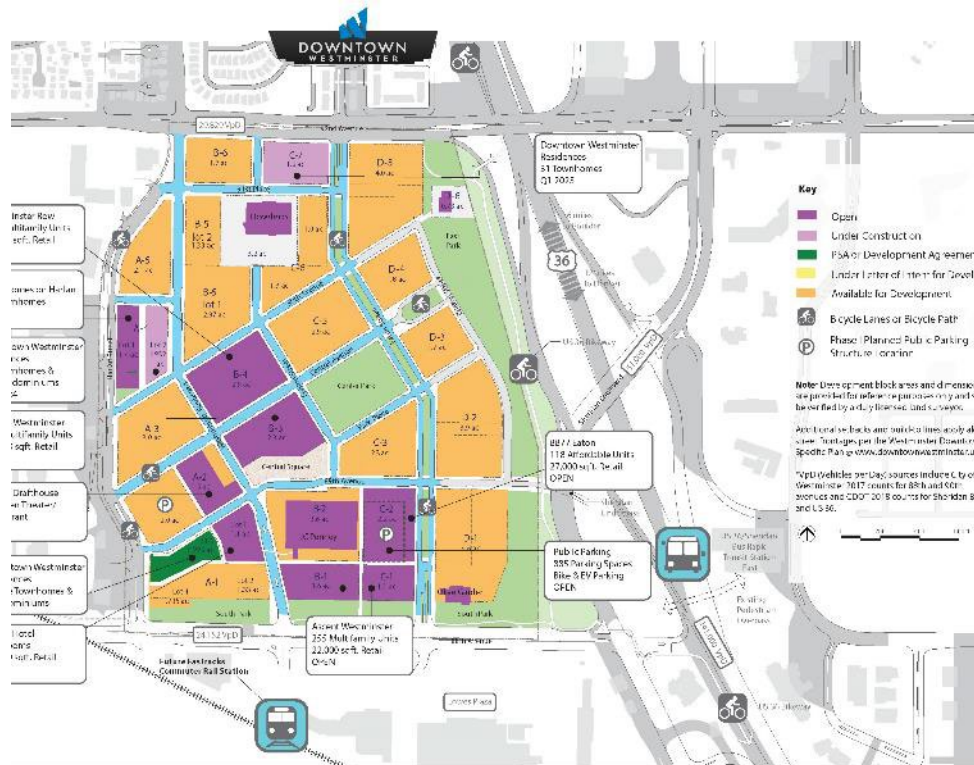
- ▶ Near rail and BRT
- ▶ Post-war suburb
- ▶ City-led redevelopment: \$74M, staff, and land
- ▶ Mixed-use, density, and walkability goals
- ▶ Central Park
- ▶ 20-year timeline



The Vision

Strengths and areas for improvement

- ▶ **Density near transit**, greater densities than elsewhere in Westminster and Denver suburbs, mix of housing types
- ▶ **A central park and parkways** for convening, community building, mental health/nature access, sense of place
- ▶ **Street connectivity**, yet **fairly large blocks may** reduce walkability and small-scale local businesses
- ▶ Other suburban characteristics, e.g., **high parking ratios**, that encourage driving.



Opposition: Orchard Station in Greenwood Village

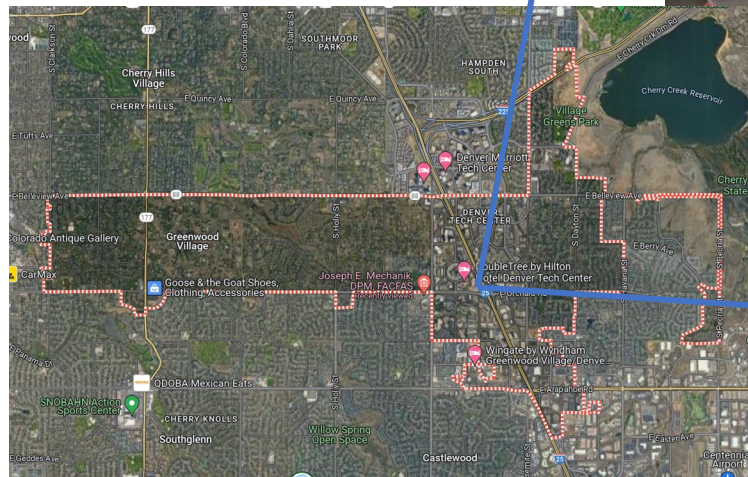
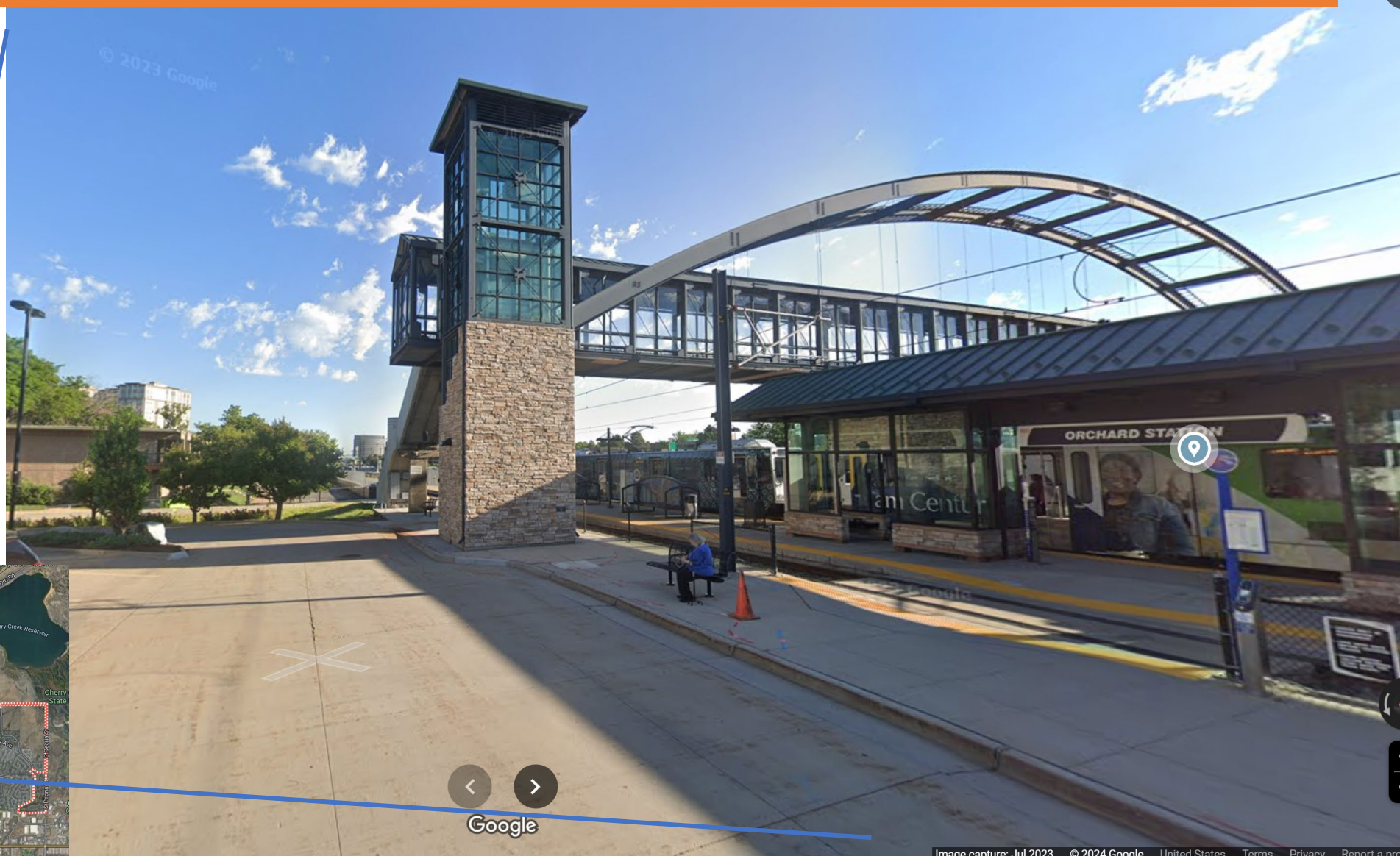
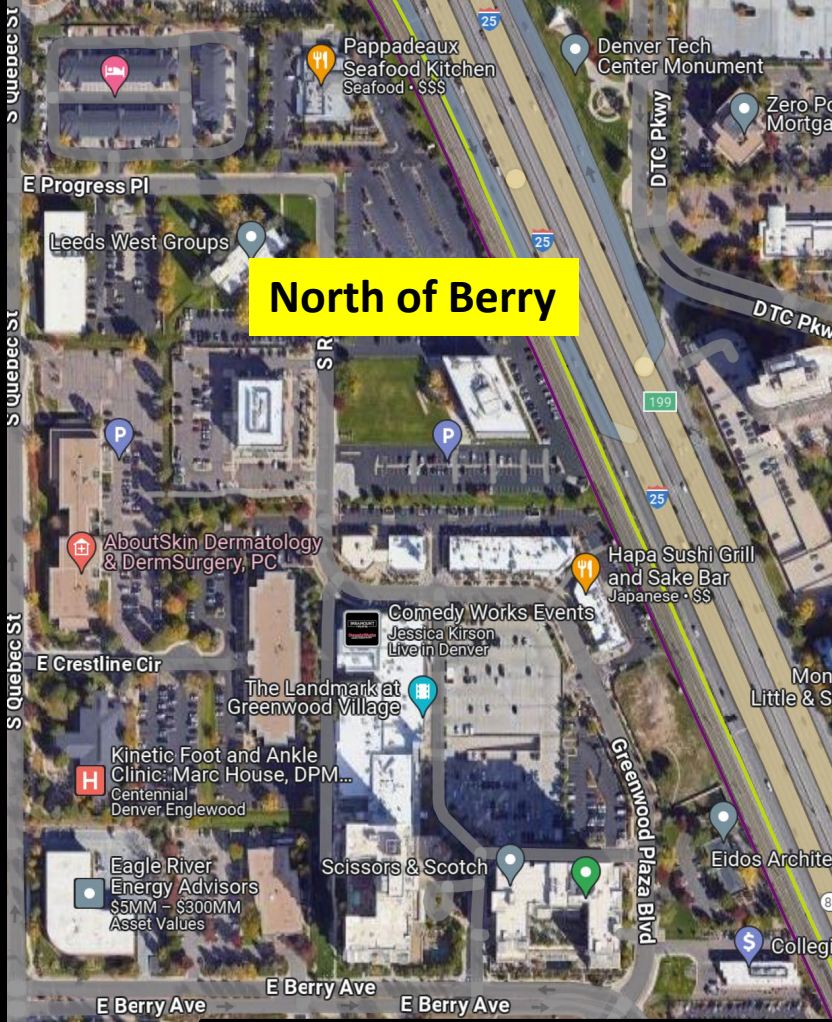


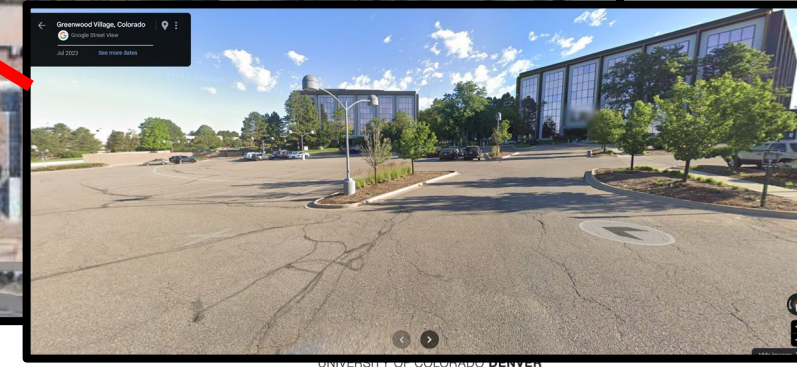
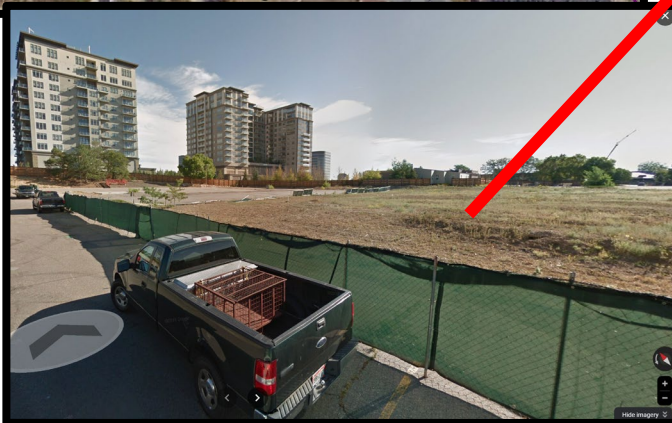
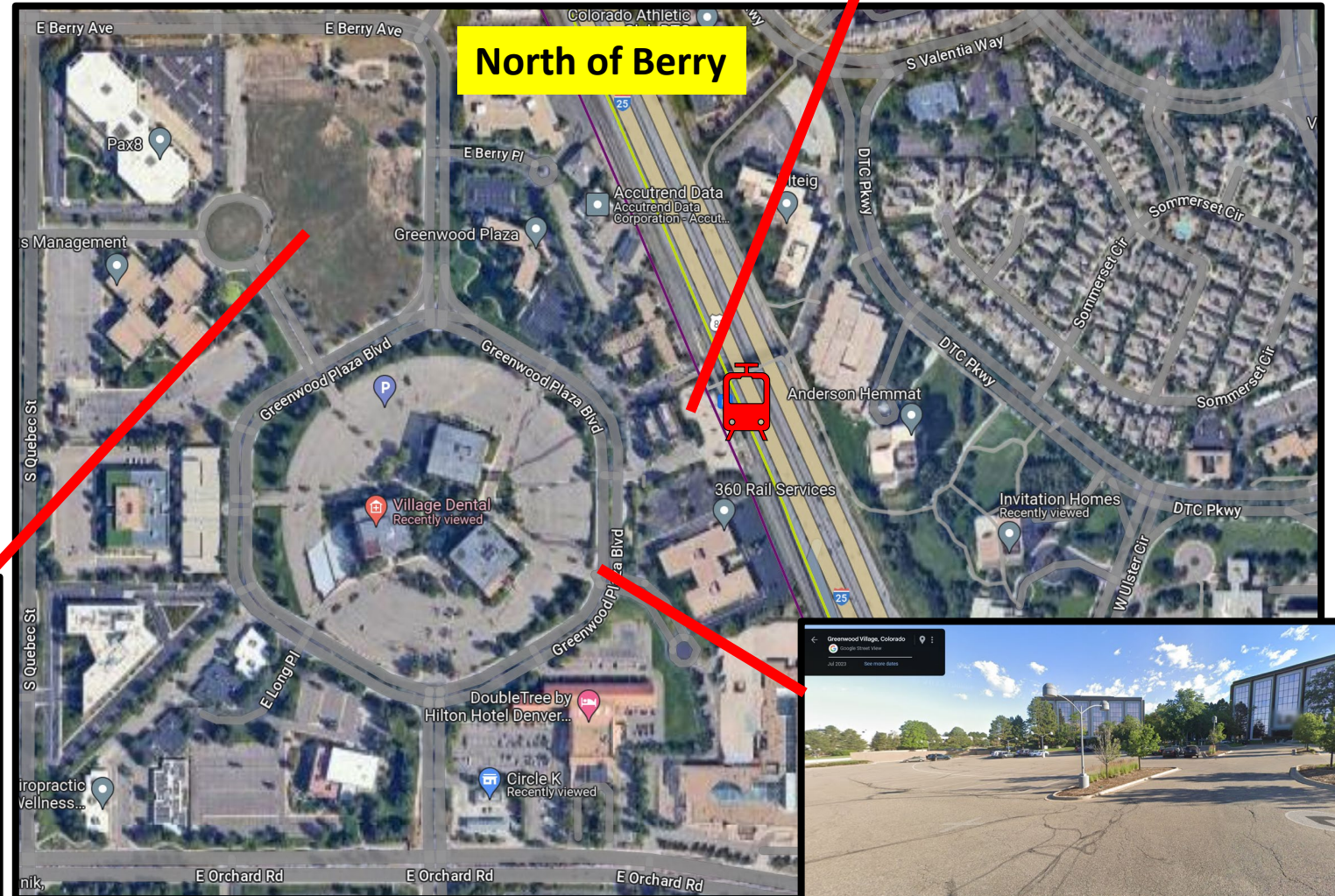
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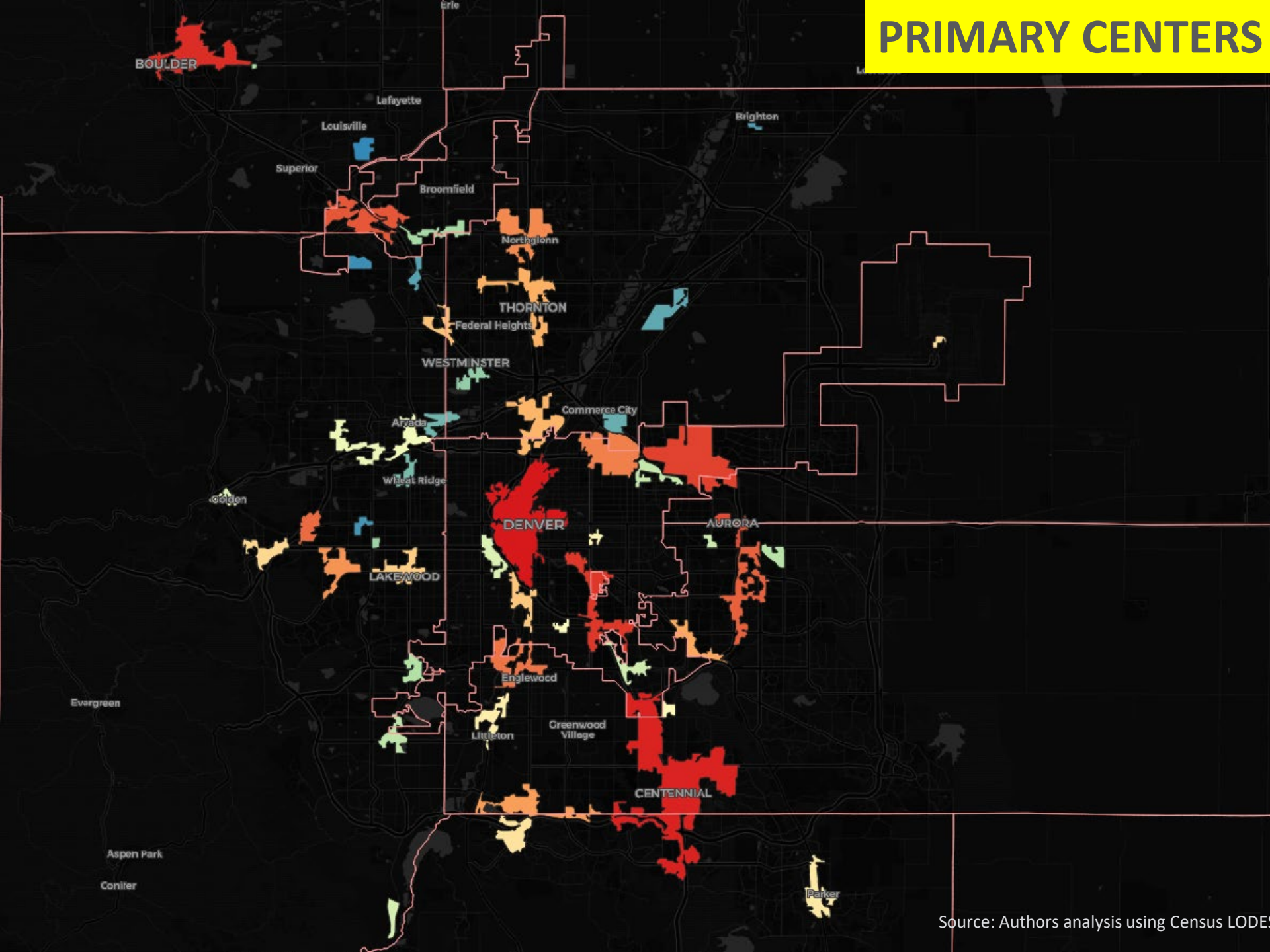
- 320 acres of office buildings, includes 150 acres of parking and grass
- Greenwood Village downzoned near transit and is suing the state for current TOC Bill.



Jobs



PRIMARY CENTERS



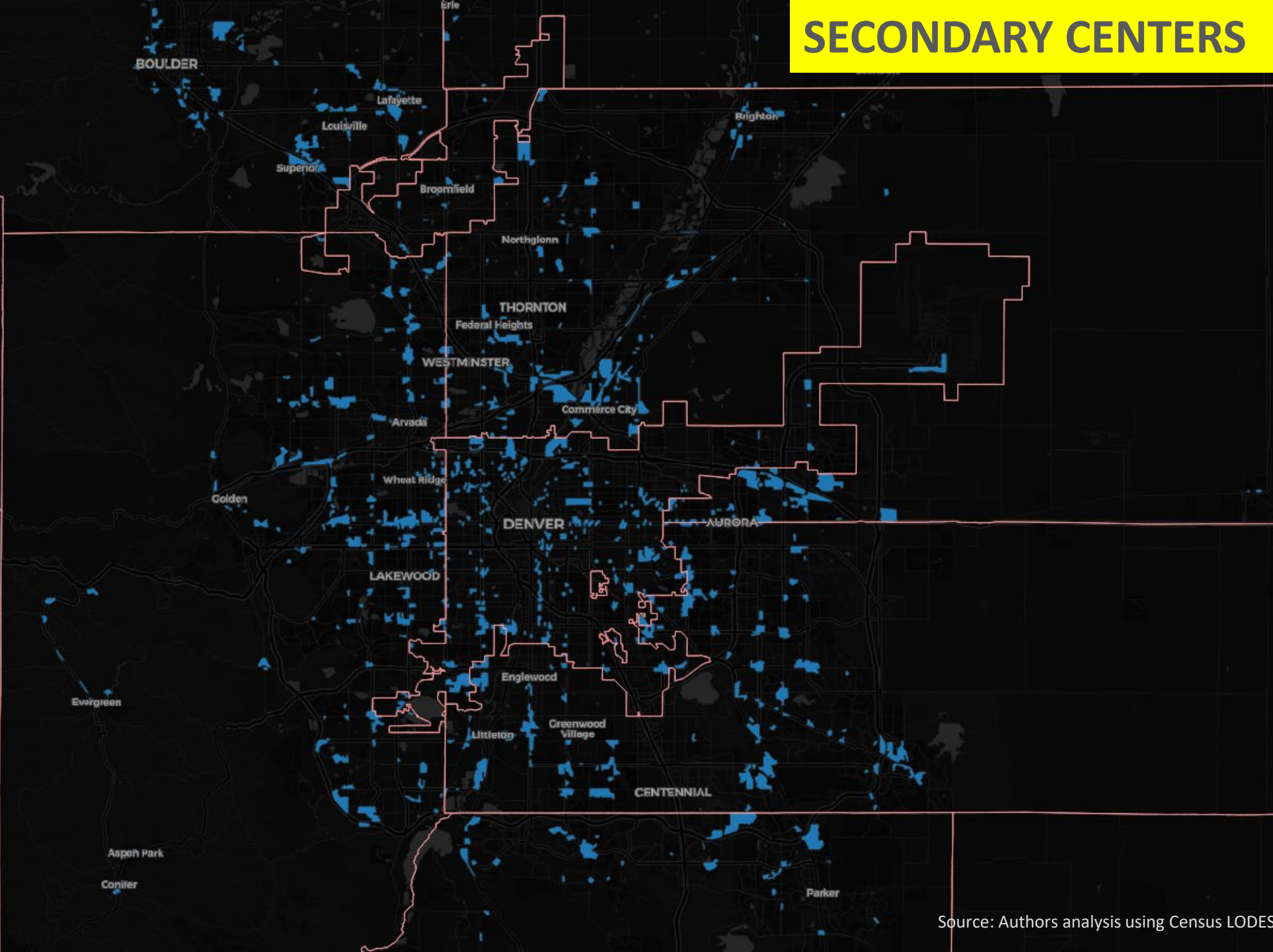
60% of Jobs
in 58
“primary
centers”
Roughly
follow the
train lines

Source: Authors analysis using Census LODS



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SECONDARY CENTERS



20% of Jobs
in “secondary
centers”.

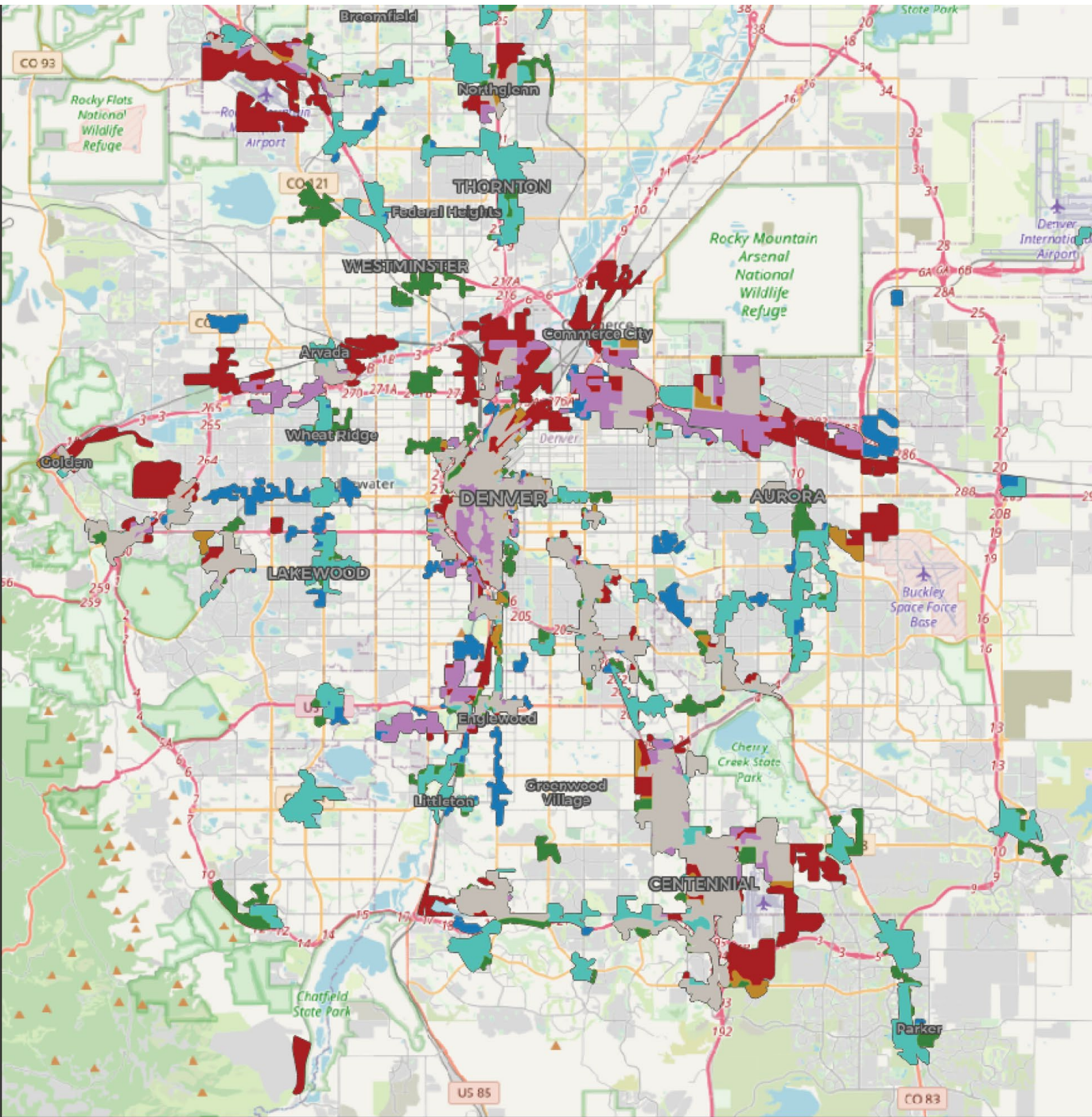
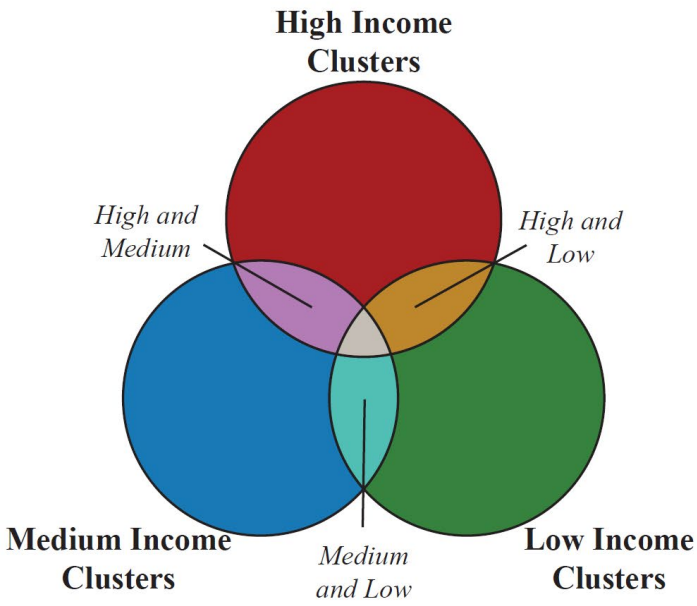
The
remaining
20% are
scattered.

Source: Authors analysis using Census LODS



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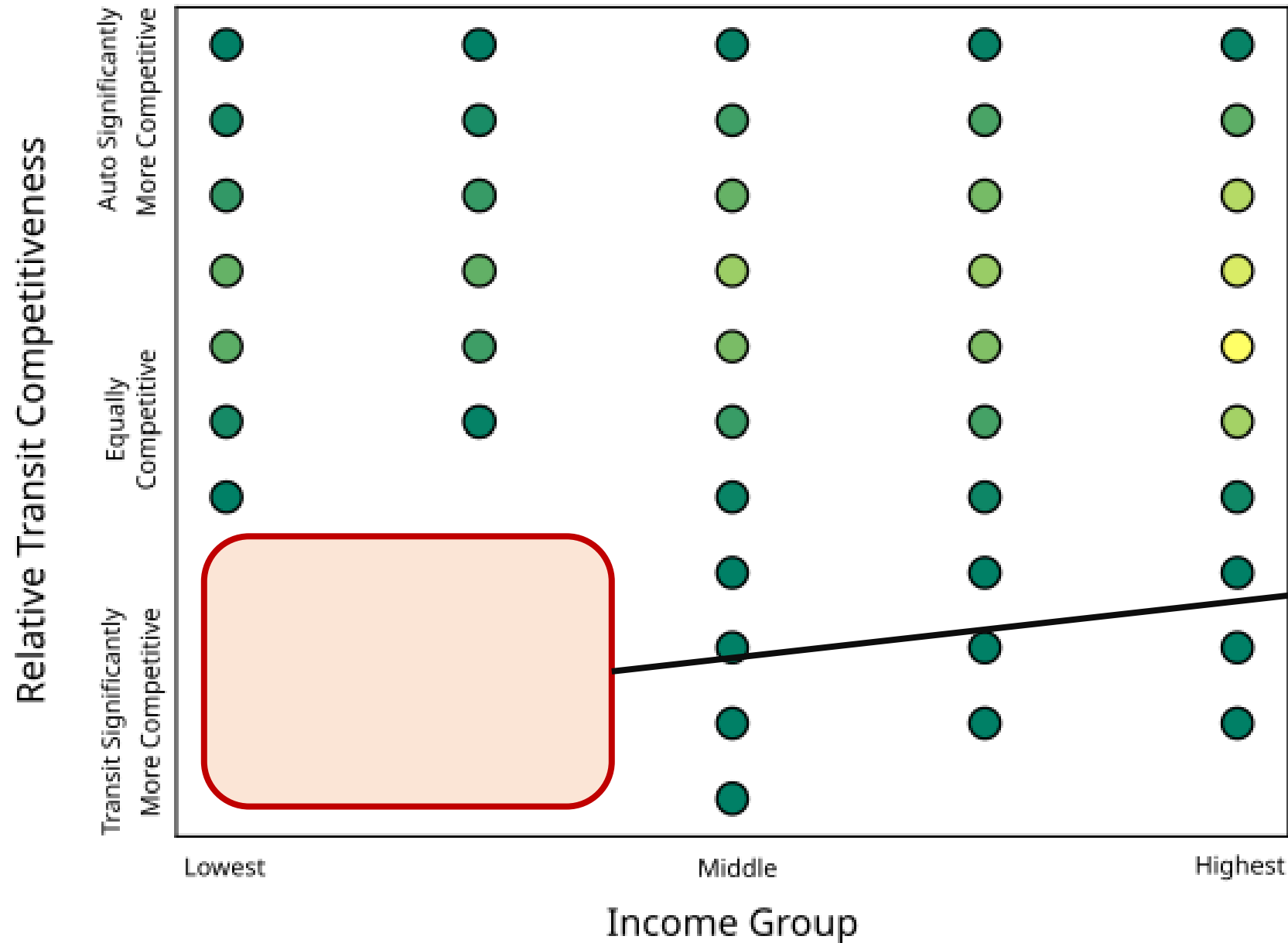
Differential Distributions of Primary Employment Clusters for High, Medium, and Low Income Groups



Lower wage jobs are significantly more prevalent in secondary and uncentered locations with poor transit options.

Source: Authors analysis using Census LODS

Income versus Transit Competitiveness of the Block Group for Workers Commuting to Employment Centers

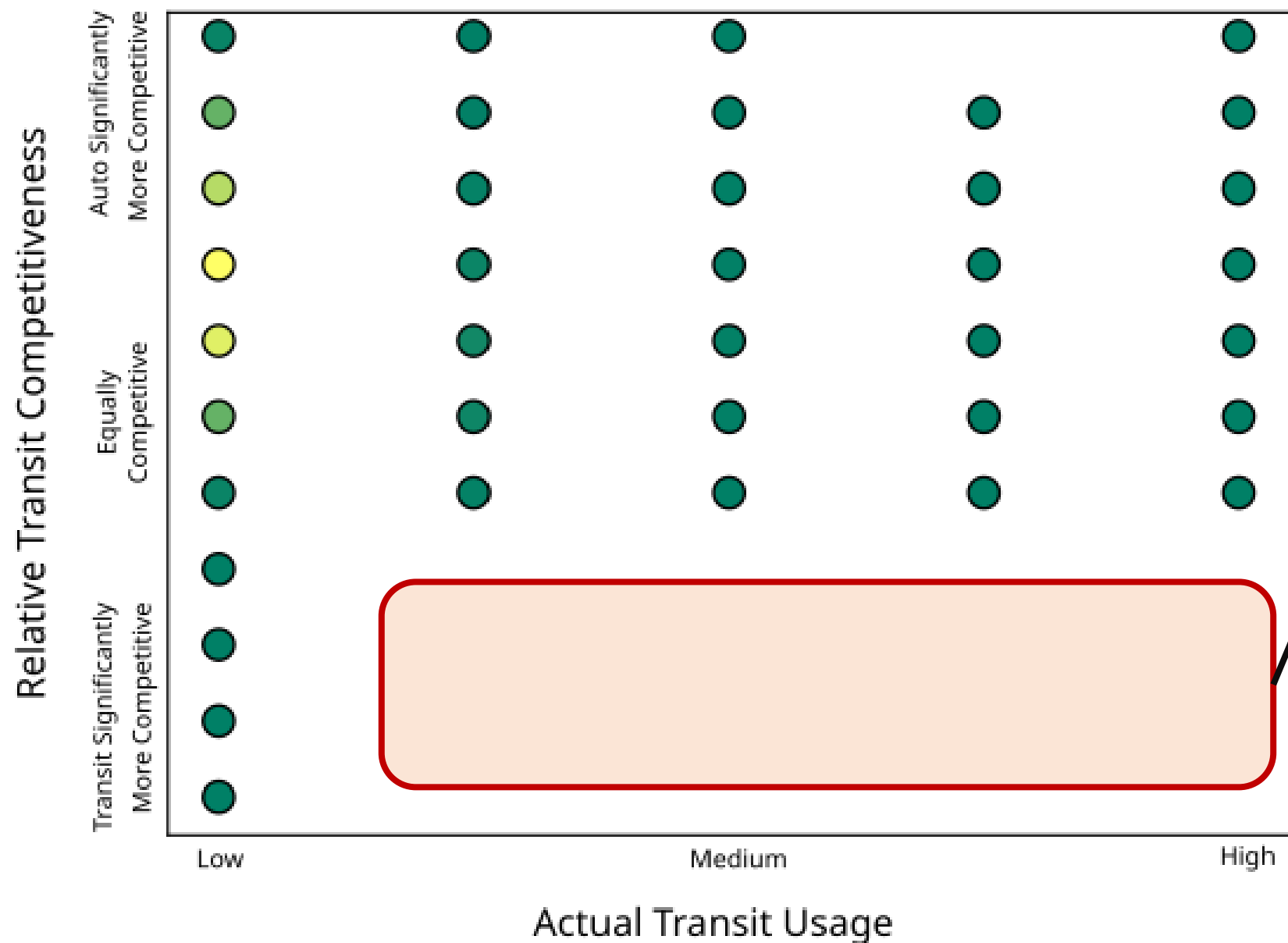


Transit is not
time
competitive for
Lowest
Incomes.

Significant mismatch:
no block groups with
a low-income average,
have transit options
that offer competitive
commute times to
their work
destinations



Actual Transit Usage versus Transit Competitiveness of the Block Group for Workers Commuting to Employment Centers



areas with high transit competitiveness (higher income block groups) lack higher actual transit usage

***note – since the travel times analysis does not consider traffic, this may lose areas where light rail becomes more competitive than driving during rush hour*



Beyond Land Uses



Affirmations from Site Visits

Wayfinding

- Wayfinding is missing or lacking at all stations
- People sitting in a park two blocks from a station didn't know the rail was nearby.

Access

- Stations are lacking connected sidewalks, adequate bike facilities, and bike lanes leading to station.
- Many stations are adjacent to interstates, large arterials, and RR tracks
- Excessive parking, surface and garage, is a barrier to pedestrian access.



Focus Groups for Alliance to Transform Transportation

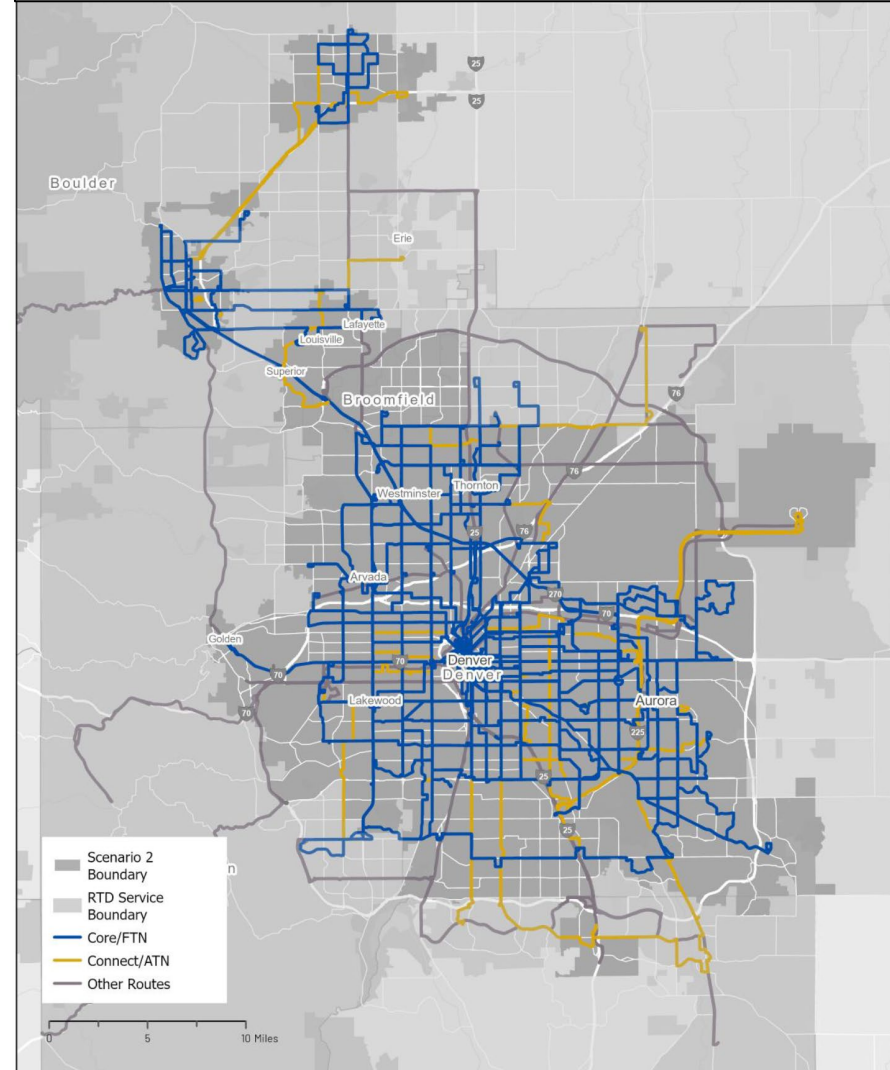
Awareness of & usefulness of transit

- Participants who don't use the transit hear it's unreliable, unsafe, and expensive.
- Most don't know where it goes, or when.
- Others know it doesn't go where they need it to go.
- Distrust RTD; but also distrust local government.

Safety

- One of the biggest concerns for all participants, but it's not part of the Alliance's plan.

Plan to increase \$ for better transit



denver
STREETS
PARTNERSHIP



NRDC
NATURAL RESOURCES
DEFENSE COUNCIL



CONSERVATION
COLORADO



CoPIRG



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So what explains the decline?



T/LU, Urban Design, or Transit Operations?

TOC Principles: Land Use and Design

- Densities are still too low near transit
- Very little walkable commercial
- Almost no wayfinding:
 - *Who should do it? City ROW, RTD's system.*
- Missing sidewalk and bike infrastructure
- Hardened infrastructure eliminates development potential
- Jobs/housing spatial mismatch

Will time and new state TOC mandates help?

Operations: Institutional and financial

- High capital debt left little operations funding: lines are shut down for months at a time
- Poor reliability
- Increasingly low frequencies
- Lack of transit workers
- Safety and comfort are real and perceived issues. RTD needs partners.
- RTD “likes to sit back” and not speak up for itself.

If transit doesn't take people where they need to go, when they need to go, and safely, are TOCs enough?

