

# PAG Long-Range Regional Transit Plan

## *Project Goals & Schedule*

PAG and the City of Tucson are working to understand the Tucson region's priorities for transit in the next 10 years.

### Key Questions

- How much transit service is appropriate?
- How should we balance frequency and coverage?
- How should we balance expanding or improving the Frequent Transit Network?
- How should we balance concentrated and diffuse infrastructure investments?

### Project Schedule

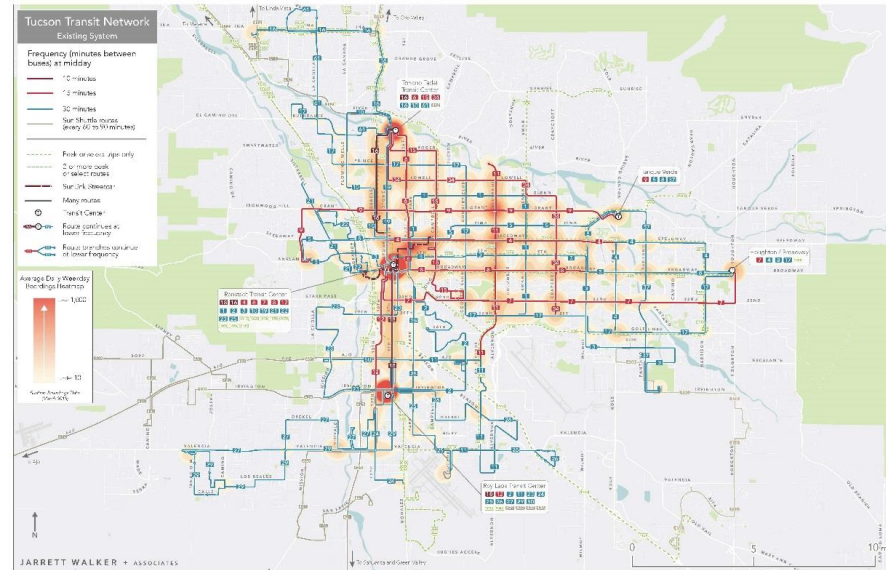


## 2

# Transit Ridership Arises from Useful Service

A. This map shows areas where the most people get on the bus or streetcar.

Tan, orange and red areas generate the most ridership.

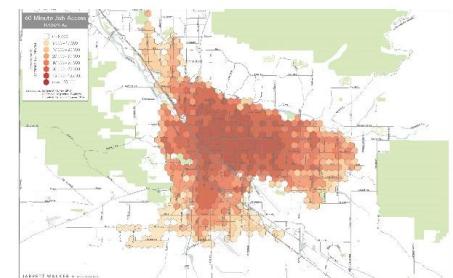
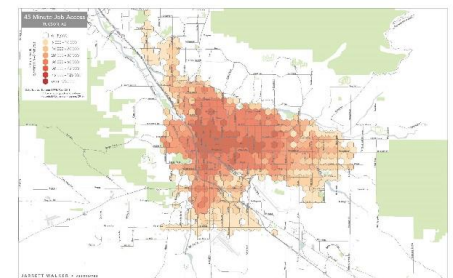
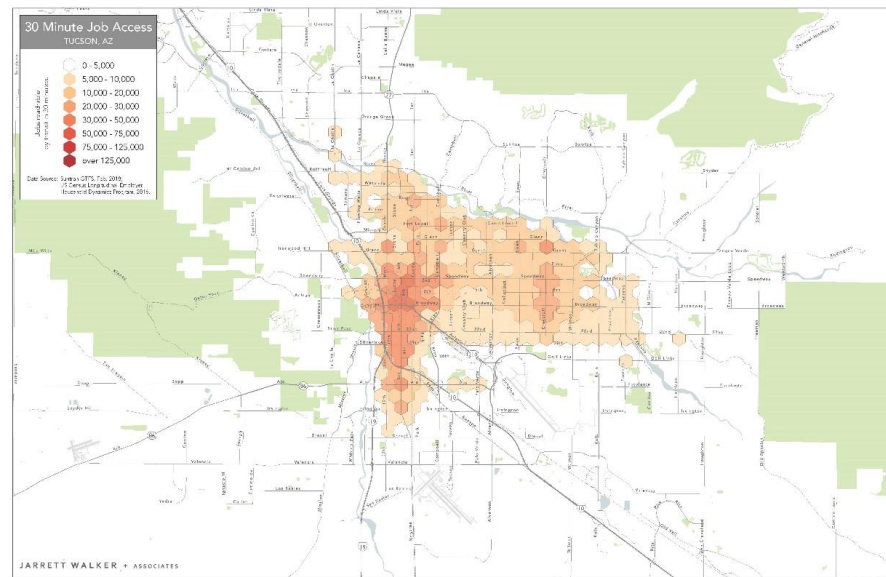


The highest transit ridership occurs:

- Where two or more frequent routes meet. At transit centers and major intersections.
- Where transit provides access to the most jobs within 30 minutes. On the most frequent routes.

B. This map shows how many jobs you can get to in 30 minutes on a weekday using transit, including walking and waiting times.

Tan, orange and red areas provide access to the most jobs.



C. The maps above show how many jobs you can reach in 45 minutes (top) and 60 minutes (bottom) on a weekday using transit.

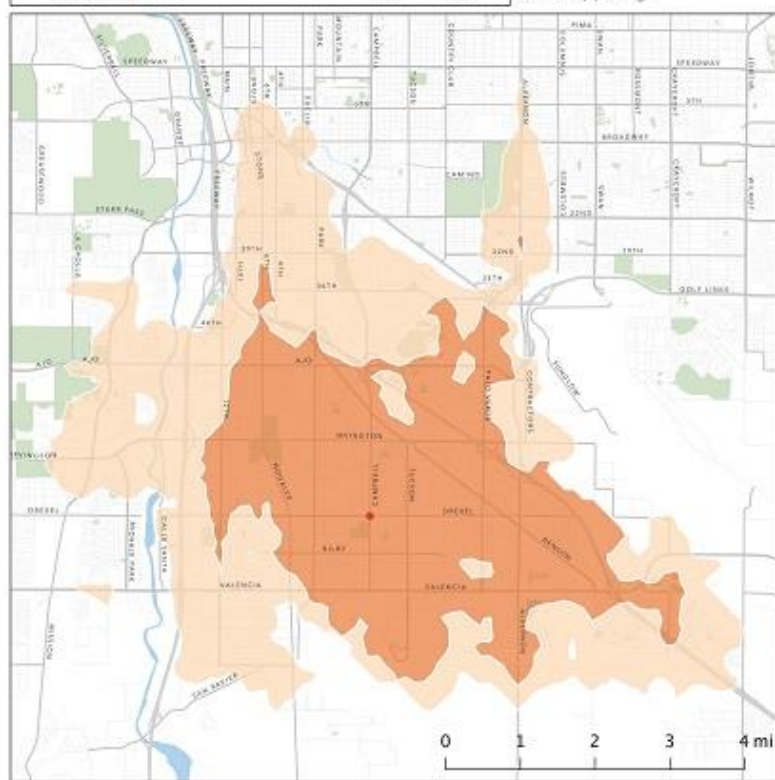
### 3 High Frequency Makes Service More Dependable

The intersection of Drexel & Campbell is served by Route 26, every 30 minutes. Because you might have to wait a long time, there are few places you can reliably reach from here in an hour using public transit.

Where can I travel in 60 minutes from  
Drexel & Campbell?

Where could you reach?		
	Jobs	Population
Area reachable some (25%) of the time	69,000	121,000
Area reachable most (90%) of the time	22,000	58,000
90% - 25% ratio	33%	48%

This map shows the area of Tucson you could reach in 60 minutes starting between 12pm and 1pm. The dark orange area could be reached by trips starting at almost any time during this period. The lighter orange area can be reached less reliably with more detailed trip planning.

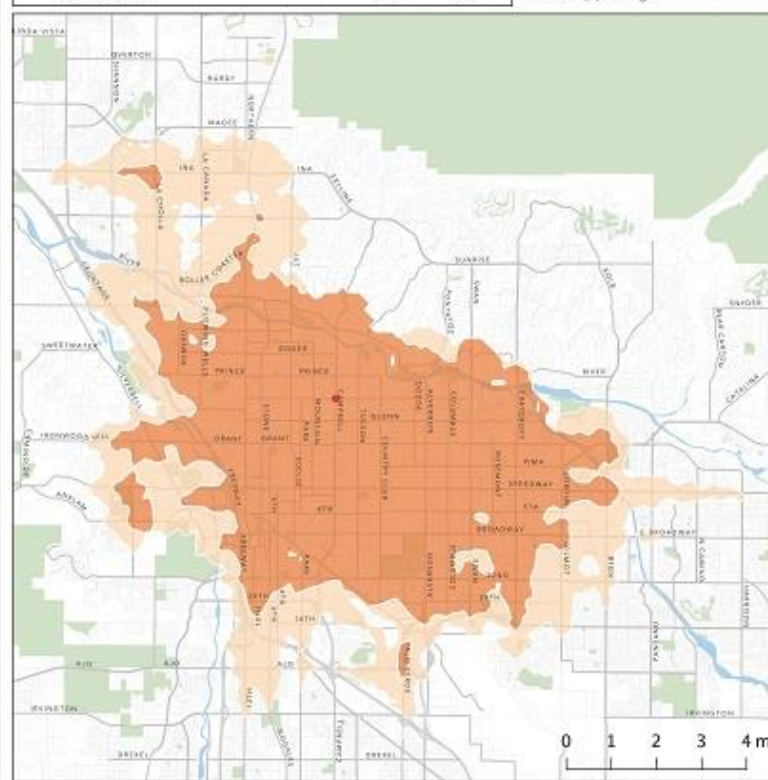


The intersection of Fort Lowell & Campbell is served by Routes 15 and 34, both of which come every 15 minutes. Wait times are shorter, so in an hour you can reliably reach many places using public transit, even if you just missed the bus.

Where can I travel in 60 minutes from  
Fort Lowell & Campbell?

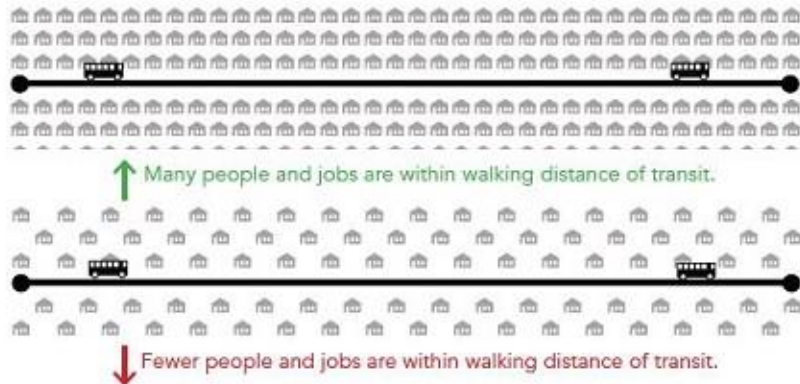
Where could you reach?		
	Jobs	Population
Area reachable some (25%) of the time	199,000	322,000
Area reachable most (90%) of the time	151,000	222,000
90% - 25% ratio	76%	69%

This map shows the area of Tucson you could reach in 60 minutes starting between 12pm and 1pm. The dark orange area could be reached by trips starting at almost any time during this period. The lighter orange area can be reached less reliably with more detailed trip planning.



## 4 Transit Provides More Value in the Right Conditions

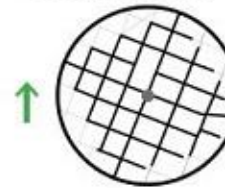
**DENSITY** How many people, jobs, and activities are near each transit stop?



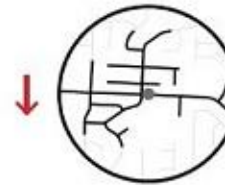
**LINEARITY** Can transit run in reasonably straight lines?



**WALKABILITY** Can people walk to and from the stop?



The dot at the center of these circles is a transit stop, while the circle is a 1/4-mile radius.

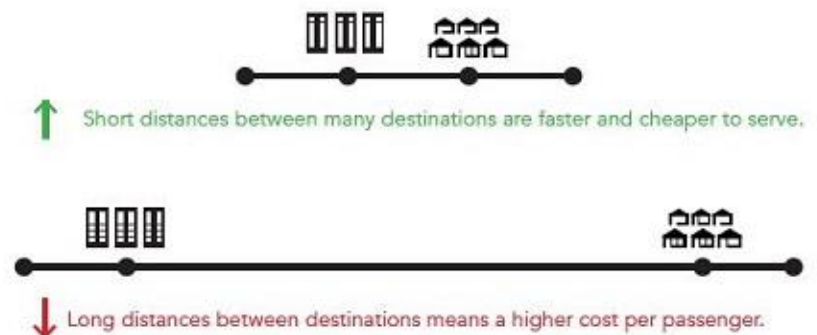


The whole area is within 1/4 mile, but only the black-shaded streets are within a 1/4-mile walk.



↑ It must also be safe to cross the street at a stop. You usually need the stops on both sides for two-way travel!

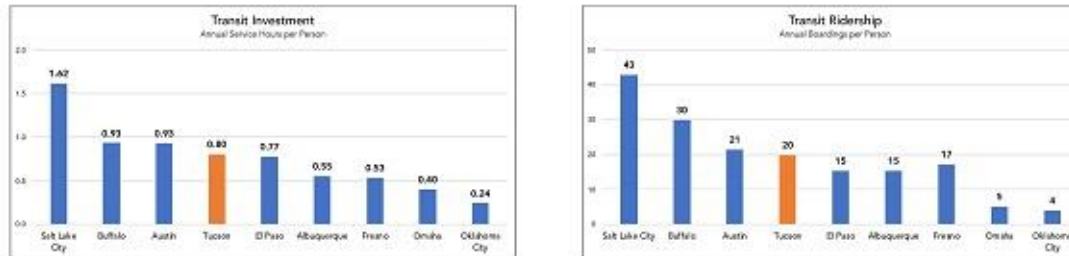
**PROXIMITY** Does transit have to traverse long gaps?



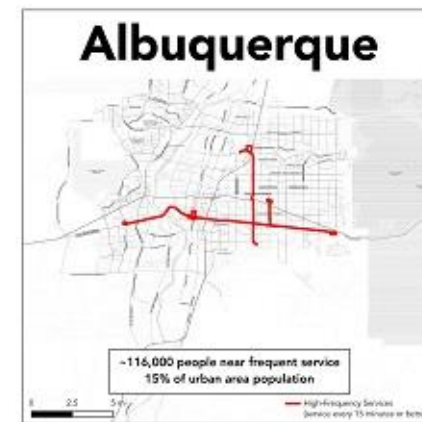
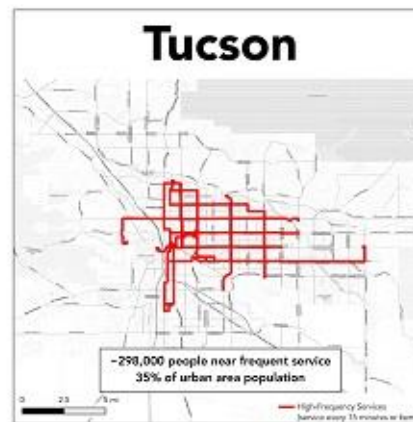


## 6 How Much Should the Tucson Region Invest in Service?

In regions that invest more in transit, people ride more often. For example, Salt Lake City provides twice as much service per person as Tucson; the average Salt Laker rides transit twice as much. Albuquerque invests 30% less in service, and ridership is 25% lower than in Tucson.



Another way to look at this is to compare these three cities' frequent networks. Because Salt Lake City invests so much more in transit service, its frequent network can reach much farther than Tucson's. Similarly, Tucson's frequent network reaches farther than Albuquerque's.



Any increase in funding for transit service in or near Tucson is likely to require a local funding source. So any decision to increase transit service is a decision prioritize transit spending over other local public services, or a decision for a new local tax.

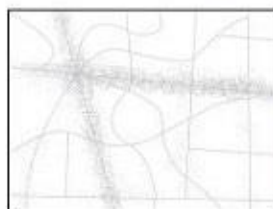
Place a sticker along the spectrum,  
to show what level YOU think the Tucson region should invest in service.

Invest  
Significantly  
More

Invest  
Significantly  
Less

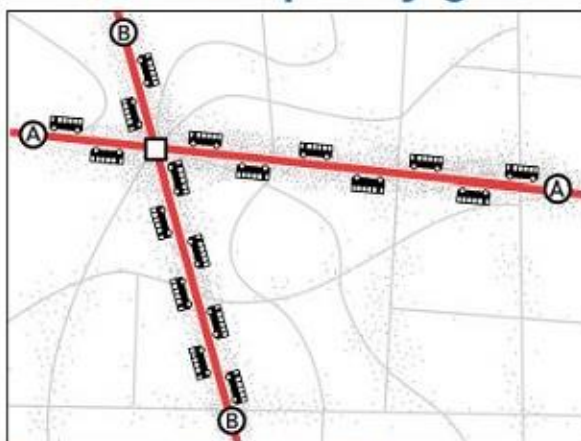
Invest at  
Current Levels

## How Should the Tucson Region Balance *Frequency & Coverage?*



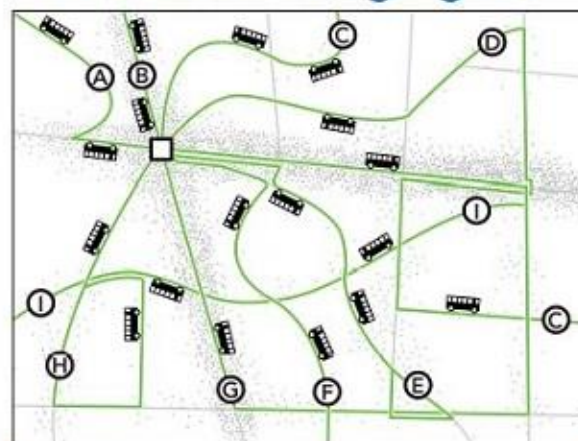
In this imaginary town, you have 18 buses to use to run transit routes. How will you distribute your service?

### 100% Frequency goal



If you concentrate service in the busiest areas, your routes are very frequent, so waits are short. But people in less-populated areas have a much longer walk to service. You are maximizing total ridership, but some places have no service.

### 100% Coverage goal



If you make sure every area is covered, everyone will have a bus stop nearby. But all routes are infrequent, requiring long waits, so very few people find them useful. Everyone has access to minimal service, but total ridership is low.

Place a sticker along the spectrum, to show how YOU think the Tucson region should balance frequency and coverage goals.

Maximum  
Frequency,  
Low Coverage

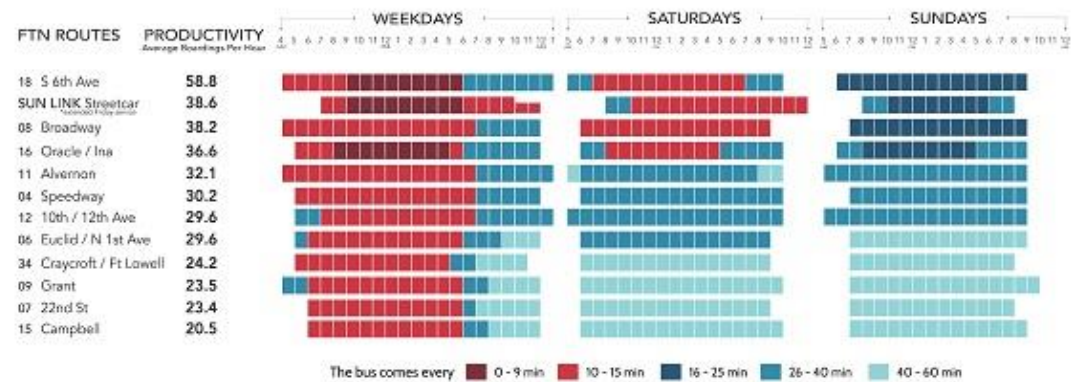
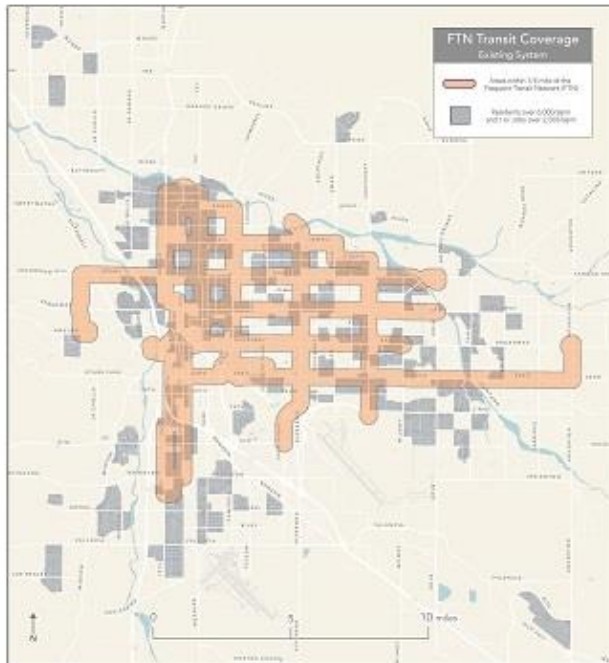
Maximum  
Coverage,  
Low Ridership

Today, Sun Tran spends about 65% of its budget maximizing frequency, and the other 35% providing coverage in low-ridership places.

# 8 How Should the Tucson Region Balance *Expanding or Improving* the Frequent Network?

1. Many areas have densities similar or higher to areas within 1/4-mile of the Frequent Transit Network, but only have infrequent bus service.

2. The highest-performing routes in the Frequent Transit Network are those that provide the best frequencies not just at peak, but also on weekends and evenings.



3. These two facts suggest opposite directions to improve the frequent network. Is it more effective to extend frequent service to new areas, or to new times of day and week?

Place a sticker along the spectrum, to show how YOU think the Tucson region should balance expansion and intensifying of the Frequent Network.

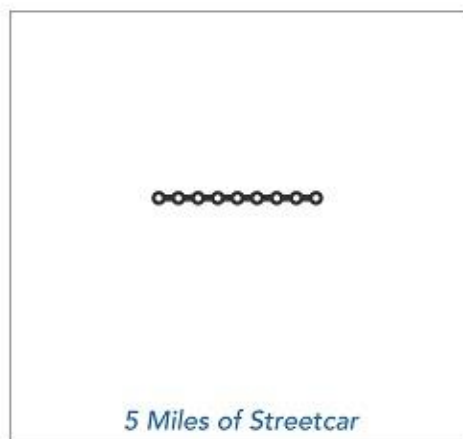
Expand  
the Frequent  
Network  
to New Areas

Improve  
Evening &  
Weekend  
Service

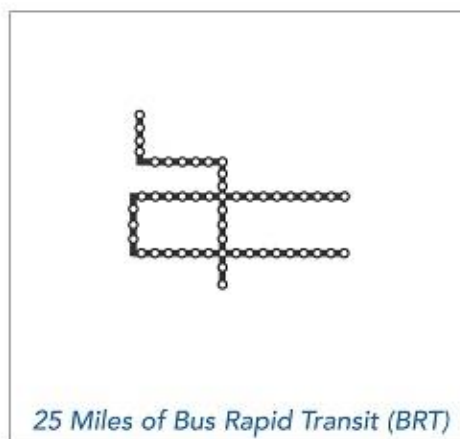
# 9

## How Should the Tucson Region Balance *Concentrated or Diffuse* infrastructure investments?

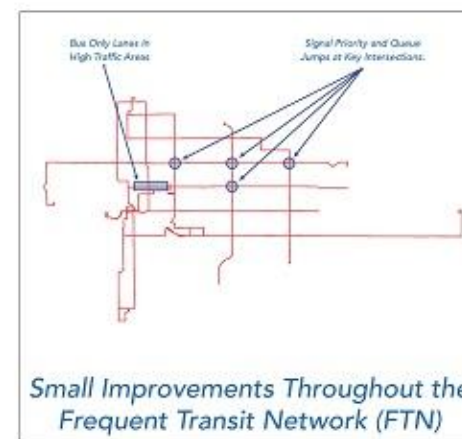
For roughly the same amount of capital investment, Tucson could build a 5-mile streetcar, or 25-miles of Bus Rapid Transit (BRT) corridors, or numerous small improvements at intersections and on congested road segments. What provides the most value?



Streetcars have transformational effects on transportation and real estate, but mostly in a small station area



BRT lines may have the same or more impact as a streetcar in aggregate, but the improvement is spread out over a much wider area.



Small improvements in various locations on the FTN won't change the face of Tucson, but could slightly improve service throughout the region.

Place a sticker along the spectrum,  
to show how YOU think the Tucson region should balance concentrated and diffuse investment in infrastructure.

More  
Concentrated  
Investments

More  
Diffuse  
Investments