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

- Establish Community Priorities
  - Fall 2018
- Technical Analysis
  - Winter 2019
- Draft Plan
  - Spring 2019
- Public Review
  - Spring 2019
- Revisions
  - Summer 2019
- Final Plan
  - September 2019
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.

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.

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.

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

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 could you reach?

This map shows the area of Tucson you could reach in 60 minutes starting between 7am and 7pm. The dark orange area could be reached by trips starting at almost any time during the period. The lighter orange area can be reached less reliably with more detailed trip planning.

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Transit Provides More Value in the Right Conditions

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

- Many people and jobs are within walking distance of transit.
- Fewer people and jobs are within walking distance of transit.

**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.

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

- A direct path between any two destinations makes transit appealing.
- Destinations located off the straight path force transit to deviate, discouraging people who want to ride through, and increasing cost.

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

- Short distances between many destinations are faster and cheaper to serve.
- Long distances between destinations mean a higher cost per passenger.
How Does Transit Match Regional Population & Employment?

The Tucson area is very large, but most places in it are developed at low density. Many residential communities and large employers are located in isolated places that would be very expensive to serve.

The overwhelming majority of public transit service is provided within the built-up area of the City of Tucson. This is mostly because the City contains the highest densities and the largest area of continuous development. But it is also because the largest transit provider (Sun Tran) is managed by the City of Tucson. Sun Shuttle, which is managed by the Regional Transportation Authority, operates in some outer suburban areas.
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 Lake rider takes 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.
How Should the Tucson Region Balance Frequency & Coverage?

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
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.
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?

- **5 Miles of Streetcar**
  - Streetcars have transformational effects on transportation and real estate, but mostly in a small station area.

- **25 Miles of Bus Rapid Transit (BRT)**
  - 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 Throughout the Frequent Transit Network (FTN)**
  - 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.