



# MOBILITY ON DEMAND (MOD) SANDBOX

## Regional Transportation Authority of Pima County

Adaptive Mobility with Reliability and Efficiency (AMORE) – Rita Ranch Area Pilot in Tucson, Arizona

---

### TEAM, BUDGET, AND WAIVERS

**Key Partners:** Regional Transportation Authority of Pima County, Metropia, RubyRide

**Budget Summary:** The budget from the applicant is summarized below:

MOD Sandbox Demonstration Federal Amount (\$)	MOD Sandbox Cost Share (\$)	Total Cost
\$669,158	\$175,986	<b>\$845,144</b>

---

### INNOVATION: PROJECT APPROACH

The Adaptive Mobility with Reliability and Efficiency (AMORE) project’s vision is to enhance mobility access to work and various needs of life for citizens needing or wishing to reduce car dependency, by integrating the best attributes of multiple emerging mobility services and technologies. The project goals are to transform the existing fixed-route transit system, improve overall system reliability and efficiency, and increase ridership while delivering a seamless user experience. The pathway for project success requires strong partnerships, integrated systems, and an innovative business and operation model that operate in concert to bring affordable services to a wide range of demographics.

The AMORE project proposes to pilot and evaluate augmenting Rita Ranch’s current transit service with an integrated multimodal, city circulation-based mobility service that can be accessed, paid for and managed through a single platform. The key strategies are:

1. Establish a financially sustainable mobility ecosystem that is comprised of a credits/points system in which credits can be subscribed, purchased, earned, and transferred among families and friends via a range of activities to meet an individual’s mobility needs. This model allows local partners (like employers, local businesses and other stakeholders) to participate and contribute in providing access to an enhanced mobility options pool.
2. Introduce a subscription-based ridesharing service (RubyRide) as a viable and affordable option for commuting or first-/last-mile service for transit operations (achieve a higher utilization and occupancy e.g. reduced VMT at a lower cost than other TNC services).
3. Seamlessly integrate community-based social-carpooling (via the mobile technology, Metropia DUO) with the above subscription-based Ruby Ride and existing transit services in order to make the total system capacity dynamic, adaptive and capable of meeting the peak-hour demand surge.

---

### CHALLENGES PROJECT IS DESIGNED TO ADDRESS

The rising cost of public transportation coupled with broadened demands on local tax revenues presents an increasing challenge for the sustainability of traditional transit systems. In the Tucson region, voters chose to make multimodal transportation infrastructure and services a priority by electing to support the Regional Transportation

Authority (RTA) plan. RTA's expansion of the local transit network has provided coverage to outlying communities in the region where no transit service previously existed.

Since their introduction, ridership on both route 110X and 450 has steadily grown. The ridership growth, coupled with requests from the Rita Ranch Community for expanded operating hours, demonstrates both latent demand and a shifting preference for transit. Unfortunately, due to slow economic recovery rates in the Tucson region, RTA's tax revenues share has fallen below projected levels. While the Rita Ranch Community would appear to be a good candidate for expansion of transit services, RTA is unable to respond to the demand with current resources.

RTA recognizes the imperative to meet this challenge with an innovative solution, and views the AMORE project as an excellent opportunity to test and experiment with creative public-private partnerships to expand multimodal transportation in Rita Ranch to meet the growing demand for alternatives to auto travel.

---

## ANTICIPATED OUTCOMES, BENEFITS, IMPACTS

Based on the results from the survey and interviews with neighborhood associations in the study area, there is significant support and potential demand for affordable ridesharing/carpooling options to help residents move around town for important life functions, to and from workplaces, and nearby transit routes and terminals. The anticipated outcomes and benefits can be realized on both personal and system levels.

**Personal:** One of the major outcomes anticipated for the new AMORE project service will be residents shifting their travel to more diversified mobility options, freeing themselves from car dependency, and gradually integrating multimodal travel into their daily life.

Residents who have no access to vehicles – should they be senior citizens or minors or anyone by choice – will have affordable mobility options for work or social activities that they would otherwise forgo or defer. Improved and more equitable access to employment and quality of life will be one of the major benefits to residents. An additional added benefit to individuals and the community will be an expected reduction in alcohol related traffic stops and accidents as impaired drivers will easily be able to summon a ride home.

**System:** Once the study area residents discover and consider the variety of mobility options, the system-level benefits should start to be realized. First, it is expected that the AMORE service will be more cost-effective and higher quality than the existing service; as such, public-private partnerships can be further explored and extended in future years in order to allow RTA to provide the Rita Ranch area residents better service with the same or lower resource requirements. The AMORE service can be easily transferred to other neighborhood areas throughout the Tucson metropolitan area, the State of Arizona, and nationwide, to provide region-wide, statewide and national benefits.

The RTA believes that the core value of the MOD services is to make the overall system both more efficient in terms of travel time and energy expenditure. Metropia DUO trips, passengers sharing rides through RubyRide, plus potentially more transit trips due to better first-/last-mile accessibility, will directly reduce vehicle miles traveled while not impacting the number of personal trips. The extended environmental benefits could be substantial. Finally, a reduction in alcohol related incidents will also significantly improve public safety and the societal costs associated with crashes.

Overall, the AMORE project will shed light on how combining social carpooling with subscription-based and on-demand ridesharing services could successfully complement transit services. It will also demonstrate how doing so can make a multimodal transportation system more robust, cost-effective and efficient.