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1 INTRODUCTION

1.1 Background

In 2020, the City of Benson’s Benson Area Transit Program was awarded 5305 funds (GRT-20-0007903T) from Arizona Department of Transportation’s Multimodal Planning Division (ADOT) to conduct a Route Efficiency Study (Study). This Study was to review existing routes and conditions to determine if there were opportunities to increase efficiency while also maintaining overall rider satisfaction. The Study was to be completed by September 30, 2022 and include recommendations for improving efficiency.

In March of 2022, Benson Area Transit requested assistance from SouthEastern Arizona Governments Organization (SEAGO) in developing the Study. An Intergovernmental Agreement was signed allowing six months for SEAGO to complete the study and described a scope of work that required review of existing systems, public input, and a final report.

Using staff resources, SEAGO assigned the task to Melanie Greene, its in-house transit planner. Ms. Greene conducted the scope of work over the six-month period. Following are the major elements of her activities with Benson Area Transit, its staff, and riders.

- Met with BAT Manager to review the scope of work and collect ridership data for the previous 12-18 months.
- Held public meeting to discuss the purpose of the study and to garner input from the public regarding the current routes and schedules.
- Held an initial meeting with drivers and Transit Specialist to determine what areas of the transit program’s routes and schedules, service provision, and dispatching systems were working well and those that were not working well – along with suggestions for improvements.
- Rode the Fixed, Flex, and Dial-a-ride systems/services to better understand route conditions, scheduling challenges, and rider satisfaction.
- Interviewed riders while in transit on all three systems.
- Conducted a written survey of riders for information on ways to improve the service.
- Reviewed internal transit policies, driver training schedules and content, route schedules and maps, rider guides, and dispatching protocols and policies as they relate to route efficiency.
- Met with drivers and Transit Specialist to discuss possible deviated fixed routes and schedule changes based on collected data and ride-along insights.
- Met with drivers and Transit Specialist to discuss possible para-transit changes and service areas toward a public dial-a-ride system.
- Met with drivers and Transit Specialist to review the draft study and obtain input prior to release of draft Study to the public.
- Held a public meeting to share preliminary recommendations and obtain input for further consideration.
- Prepared a final draft study for review by SEAGO and Benson Area Transit leadership staff for the purposes of garnering input for further changes/additions to the Study.
- Prepared and submitted final Study to City of Benson and ADOT

1.2 History of Benson Area Transit

In early 2009, Catholic Community Services (CCS) notified the City of Benson that it would no longer be able to provide transit services to the area. Operating only a dial-a-ride system for the elderly/disabled using Area Agency on Aging (AAA) funding and FTA Section 5310 funds, CCS found that funding cutbacks
made continuation of the service no longer feasible and sought alternative organizations to provide the service.

In the fall of 2009, an ADOT funded Transit Feasibility Review and Implementation Plan was completed and the City of Benson Council approved the City’s assumption of operations for a local transit service that included general public use utilizing FTA 5311 funding. In 2010 the City took over operations and provided local match funding for the purchase of the vehicle from CCS.

A deviated fixed route service and a dial-a-ride program were operated with service using a town loop and service to Mescal and Pomerene along with a dial-a-ride service area that continued service in the City of Benson and the outlying areas of Mescal, and Pomerene.

In 2013, The Transit System modified its service to include Paratransit services even though the deviated fixed route allowed for public dial-a-ride services that would not limit the eligibility of riders. In doing so, Paratransit services were made available only to riders aged 60 and older or for those with disabilities.

The current Fixed/Flex Routes and Paratransit services have been in effect since 2017. The fixed route serves as a connection between primarily mid and lower income residential areas and destinations for medical care, shopping, and services. With the change to paratransit, the fixed route no longer deviates. The Flex route serves St. David on Mondays and Thursdays; Mescal on Tuesdays and Fridays; Pomerene and Willow Lake on Wednesdays; and Food Pantry runs on Wednesdays before noon.

This schedule requires two active drivers throughout the schedule of service; one to operate the fixed route and the other to operate paratransit services. A total of five drivers are employed, some working steady shifts while others serve as back-up or substitute drivers for both the fixed and dial-a-ride services.

1.3 Summary of recommendations

- Return the fixed route system to a deviated fixed route.
- Reroute fixed route to reduce backtracking and reduce headway.
- Return the Paratransit system to a general public dial-a-ride program using 20-minute scheduling increments.
- Include St. David, Pomerene, and Mescal in dial-a-ride service.
- Add second dial-a-ride bus, one for the west locations of Mescal & J6 and one for the east locations of Pomerene, south Benson, and St. David.
- Discontinue Flex route schedule.
- Hire a full-time dispatcher that can serve as a backup driver.
- Create rider policies and a rider guide that includes policies, a schedule, and map.
- Train drivers to adhere to schedule and ridership policies.

2 ROUTE ANALYSIS

2.1 Current Conditions

The Benson Area Transit (BAT) system provides three levels of service to riders in the region.

The first is a fixed route system limited to the City of Benson. Benson is divided along the east/west railway line into south and north sections. The south section reaches from the Walmart to the west to
the Highway 80 intersection to the east and the Community Center to the south. The northern section of the route reaches the Circle K to the east, Lions Park to the west, and Walker Street to the north. The fixed route system no longer services Cochise College (lack of ridership) nor the outlying RV Parks along Highway 80. The fixed route does, however, serve the Food Pantry on Wednesdays which is located on Highway 90, 3 miles west of the City and is accessed along Interstate 10.

The second service is a paratransit service that serves a wide-reaching area including rides that originate 5 and 8 miles north of Benson, rides that originate outside Benson in Mescal/J6 (10 miles west), St. David (8 miles southeast), Pomerene (4 miles northeast) and RV Parks south of Benson (2 miles) on Highway 80.

The third service is a flex-route system that is scheduled to serve Mescal/J6 (Tuesday and Friday), St. David (Monday and Thursday), and Pomerene/Willow Lake (Wednesday). This system picks up riders at their door and delivers them to the Walmart where they can access the Fixed Route, returning riders from Walmart to their individual homes. These trips are provided between fixed route scheduled loops with the driver deviating to the locations depending on the day.

2.1.1 General Conditions
Because busses travel on rough road surfaces (throughout service area), including dirt roads (paratransit), and frequently cross rough railroad tracks, vehicles are subject to rough and sometimes uncomfortable rides (suspensions are prematurely degraded) with loud ambient noise caused by extreme bus rattling and Interstate traffic.

Railroad, bridge, and interstate maintenance and construction make it exceedingly difficult to maintain fixed route schedules and require additional time for paratransit rides. Long workarounds for trains blocking track crossings, and occasional (and recently prolonged) bridge closures create longer dead-head trips for paratransit rides.

Currently there are no cash boxes to receive fares or donations on one vehicle used for paratransit. A convenience store cup is left in the cup holder near the bus door and those who wish to pay are expected to leave cash in this open container. At the drivers’ discretion, cash is removed from cup and locked in glove box. This system for donation collection provides no checks and balances between the driver and Transit Specialist. The containers are not always monitored when the driver leaves the bus (bathroom break or assisting other passengers), creating additional potential for loss.

While drivers recognize many of the riders on the fixed, flex, and paratransit systems, no rider, while the author was riding, was asked to present a bus pass or pay a fare when entering the bus. When the author of this Study asked riders if they were AAA bus pass riders, only 65% knew that they were but no one was aware of when their pass expired. No rider voluntarily offered to present their pass either to the driver or to the author.

Drivers are not always equipped with rider guides, maps, or schedules to provide to riders seeking additional information. While most all of the riders are known to the drivers, on one occasion, a Spanish speaking elderly man was attempting to board the paratransit bus and asked if this were a bus he could ride. He was told no, but not offered information on alternatives. Presently, BAT has only a ride schedule for fixed and flex transit with no map, no information on rider regulations or Title VI are included. There is a paratransit card titled Dial-a-Ride, which outlines services, eligibility, fares, and pass options but does not include information on Title VI, AAA bus passes (free) or connections to fixed or flex routes. There are no rider responsibility policies or written protocols that are shared with riders.
The Transit Specialist provides information on request either in person or by phone at her City Hall office.

Dispatching for paratransit and flex route pick-ups was seen to be difficult and inefficient with no scheduling software available. While the Flex routes have specific days and times, paratransit rides to these areas were scheduled outside of the scheduled days. Additionally, dispatchers, when asking for destinations, would schedule for one requested destination but drivers would be told by the rider that they had several destinations. Drivers would try work them into the schedule, often creating a delay for other riders. There are no written policies for the number of stops a single scheduled ride can make.

Riders with scheduled appointments (doctors, etc.) are allowed to call the dispatcher when they are ready to be picked up using an informal “will-call” process that makes it difficult to keep paratransit drivers on schedule with other riders. On some occasions, riders have been left to their own devices when their will-call request could not be met or could not be met in a timely fashion that suited the rider. According to one driver, some wait times approached 2-3 hours when the paratransit schedule was fully booked.

Because there is not a full-time dispatcher, phone calls are not always answered at the Transit Office. Riders have learned to call drivers directly to schedule rides or will-call pick up requests. This practice complicates scheduling and distracts drivers who must pull over to take the call, record the request, and change the schedule.

Dispatch schedules in 15-minute increments (typically 15 minutes to pick up passengers and 15 minutes to deliver to destinations) which is often not enough time to pick up multiple riders in a neighborhood and return to destinations. Drivers frequently mentioned that their lunch and break times are used to catch up with scheduled pick-ups and returns where there was not enough time to reach multiple riders, load disabled passengers, and/or make additional stops for unscheduled destinations.

Current dispatch/driver personnel are not bi-lingual and there is no translation software available. While the system rarely receives a call from mono-lingual Spanish speakers, it may be that this population would become regular riders if there were easily accessible Spanish speakers among drivers and dispatchers or if translation devices were more readily available and used. Ridership among mono-lingual Spanish speakers increases with word-of-mouth encouragement from others who use the system and feel welcomed through removal of language barriers.

There are no policies regarding the number of bags that can be brought on board. Trips to the Food Pantry often result in people bringing foldable (though many come on board expanded using the wheelchair lift to board them), large shopping carts, and other equipment on board, blocking aisles and limiting the number of passengers that can be on the bus. Passengers often leave their food-bank boxes on-board when getting off for other destinations knowing they will be reboarding when the bus returns to that place on the route or for their return paratransit ride.

There are no policies for tracking no-shows or late arrivals for paratransit. There also are no policies for rider responsibilities including policies for addressing disruptive riders, suspension of riding privileges, or notifying passengers of their Title VI protections.

Signage and bus shelters are limited throughout the fixed route system. At one point, the signage is on the opposite side of the road where the bus actually stops (7th and Dragoon). At another, signage exists where there is no stop.
All vehicles are equipped with fire extinguishers and first-aid kits. All vehicles are accessible via lift or ramp.

The scheduled headway for a fixed route loop is two hours (flex routes are scheduled between). Riders commented on board that they found this most frustrating and created delays when flex route schedules took longer than anticipated.

Greyhound and Amtrak make stops in Benson. Greyhound daily and Amtrak three days a week. BAT reports that only 3-4 rides per year are related to these inter-city services. There are currently no agreements with either to utilize BAT rides as intercity matching funds.

2.1.2 Food Pantry Destination
The Food Pantry is open on Wednesdays between 9 a.m. and 11 a.m. It is located 3 miles west of Benson on Highway 90 near where it intersects with Interstate 10. This requires the system to utilize its fixed route and paratransit vehicles and drivers to collect riders from Mescal/J6, St. David, Pomerene, south Hwy 80 and the City of Benson to arrive between 9:40 a.m. and 10:20 a.m. so that passengers can obtain food boxes. The fixed route must resume its schedule by 10:25 a.m. and for those using the fixed route rather than the paratransit, food boxes generally stay on board when passengers exit to shop at Walmart or other destinations and remain there until the bus returns on its route. Food Pantry boxes are generally large, sometimes heavy, and always unwieldy. People bring carts and wagons to help manage their goods and these often create hazards blocking aisles and preventing easy access to seats. There are no policies with regard to management of food boxes. There are typically 6 to 8 riders from Mescal and Pomerene on Food Pantry days, 6 to 8 from St. David, and full capacity on the fixed route bus.

2.1.3 Winter/Seasonal population changes
Benson is a destination for many winter travelers and “snowbirds” who will spend the winter and early spring in the area. Population numbers begin to rise in October, peak in January, and begin to return to normal by the end of April. There are numerous RV parks in Benson, most located along Highway 80 headed south toward St. David. Mescal and St. David also experience upticks in population during the late fall, winter, and early spring months. There are 17 RV Parks in the Benson area housing anywhere from 5,000 to 10,000 temporary residents during the season. Presently, the fixed route does not expand its service to these areas but will respond to paratransit ride requests.

2.1.4 Social Security checks – high ridership
The first week of each month is one of significantly higher ridership for BAT as most of the Social Security recipients receive their check during this week and are more apt to do their shopping and schedule appointments during this time. Paratransit schedules are fully booked, and fixed route and flex route busses run at or near capacity. Without careful dispatch and scheduling of rides, delays can be long with rider and driver frustrations at their peak. This week also means that riders with packages, shopping bags, carts, and wagons also increases along with trips to utility offices, banks, and other payment centers.

2.1.5 Summary of Conditions
While BAT operates somewhat smoothly, efforts to increase efficiency are predicated on improved conditions that are administrative and policy driven. These include staff training, policies and procedures, printed rider guides, dispatcher training, scheduling software, training drivers in rider relations (enforcing policies), streamlined routes, and clear dial-a-ride service area limits.
Inefficiencies identified are less about the actual routes and more about lack of clear policies that are documented in rider guides, and a desire among transit staff and drivers to meet every request of riders regardless of its impact on efficiency, cost, and schedule adherence.

The existing fixed route is generally efficient with some changes needed to create shorter headways, more flag-stop locations instead of fixed stops in areas where ridership is extremely limited, and the elimination of the flex-routes to distant locations between the fixed route loops as these create significant difficulties in maintaining the fixed route schedule. Because the fixed route is compact and serves areas throughout the city, utilizing a deviated fixed route at ¾ mile will not significantly impact adherence to the schedule.

Using a deviated fixed route system will allow BAT to utilize a public dial-a-ride service rather than paratransit which is limited to the elderly and disabled rider. The public dial-a-ride system, with two distinct east/west service areas will allow for more passengers and greater connections to the deviated fixed route service.

2.2 Fixed Route Analysis

2.2.1 Route

The current fixed route system has 19 unique stops with Walmart, the Food Pantry (Wednesdays only), and Safeway being the primary destinations for most riders using the system. A full route is scheduled every two hours (flex-routes run in between each of the scheduled loops) with four complete routes scheduled between 8:25 a.m. and 4:33 p.m., Monday through Friday. This results in a two-hour headway for people wishing to use the fixed route who have origins within the fixed route service area.

While there is no current rider guide that includes a map, the route has been designed around regular riders (at the time of development) and covers most of the low-income neighborhoods and subsidized housing for origins. The major shopping destinations, along with pharmacy, utility, and health care facilities are included for destinations. The City Hall destination in the middle of the route allows access to restrooms, water, and the transit office with a 15-minute layover. Drivers often use this to make up for schedule delays in the flex route deviations.

Route stops have signage with some sheltered stops limited to the Safeway, City Hall, and Library (due to be constructed in fall of 2022). An additional shelter will be erected at the Chiricahua Clinic, not currently on the schedule. Signage does not include the schedule and in one case is on the opposite side of the street from the stop.

The only existing route map (2014, no longer in circulation) allows one to view the general service area. See Figure 2 2014 Route map.

Presently, there are not three distinct routes as indicated in the map. Instead, there is one fixed route that remains which is the red route (and the portion of the green route along 4th St.) utilizing the schedule in Figure 1, Route Schedule.
Fixed route service to the College (blue route) and to south highway 80 and Pomerene (green routes) have been discontinued. St. David and Pomerene are now served on the Flex Route and/or paratransit system.

The stop for the Safeway (News Sun 5th St & Ocotillo) is across a busy street from the Safeway and often results in store carts being left off the property as shoppers must move groceries across Ocotillo to get the first bus on the route. On the way back through the route an hour later, the bus stops at a sheltered stop alongside the Safeway building on Ocotillo. This is better access but does not provide ADA accessibility from the sidewalk alongside the store to the bus stop which is on an upward and graveled grade to the street.

The Visitor Center stop is a hazard for the driver as it must turn left across Benson’s busiest street (Hwy 80 also known as 4th Street) and then a right turn across the same traffic to resume the route.

Drivers report that ridership beyond the San Pedro Apartments is non-existent (route was created here for one regular passenger who has since moved) as it travels from Mark Street to Lions Park and onto Patagonia with the schedule pausing at City Hall for breaks. Drivers will also stop, when the bus is ahead of schedule, at Lion’s Park where restrooms also are available.

The stop at 7th and Dragoon has the sign posted on the opposite side of the street; whereas the Silverwood at Valley View stop has no sign.

The bus will only stop at the hospital on a “call for pickup” basis. This has been problematic for drivers as hospital personnel do not always make sure the patient is ambulatory. In one instance while riding, the author observed that a patient who was assisted to the bus by hospital personnel was still in a hospital gown with bare feet and was unable to board the bus without the driver’s assistance as he had no mobility device (walker, wheelchair, etc.). The patient, as it was learned by the driver, was expecting to go to St. David. The driver deviated to the Flex Route, and when the bus arrived there was no one to assist the patient into his home. The driver disembarked, attempted to reach the door of the home, and was stopped by a gate that was guarded by a large and threatening dog. The driver called the hospital who called a relative of the patient to come out and assist the rider off the bus. Upon returning to the route, the driver was now well behind schedule. While dispatch works with hospital personnel in arranging rides for discharged patients and ask detailed questions about mobility and readiness, the information is not always accurate and the driver, in his/her attempt to satisfy the rider’s need, accepts the rider. Dispatch continues to query the rider and/or hospital staff to assure the proper route (fixed flex, or paratransit) system is utilized and the ride can be successfully completed without further inconvenience to the rider, however, these types of scenarios built on miscommunication or lack of information continue, though infrequently.

2.2.2 Conditions
The route, as currently driven, has a two-hour headway as flex-routes are scheduled between the fixed route loops. Because the flex routes often take longer than anticipated, returning to the fixed route on
schedule is challenging; leaving riders who are expecting the bus to be left at stops, many without shelters, for extended periods of time.

Interviews with riders while on the fixed route were conducted and the most often repeated concern was the headway time and uncertainty of the schedule.

The fixed route fleet is adequately sized will all busses having lift or ramp capability. Capacity on heavy ridership days (Food Pantry and first-of-the-month shoppers) is maximized and sometimes difficult with Food Pantry boxes, wagons, and carts creating access and safety hazards for passengers.

59% of survey respondents were riding the fixed route system. 87% were female and 20% stated they paid a fare each time they rode. Nearly 85% indicated shopping (Walmart and Safeway) or returning to their home from shopping as their ride purpose.

2.3 Flex Route Analysis

2.3.1 Mescal

The Mescal/J6 route is scheduled for Tuesdays and Fridays between each of the four fixed route loops. Mescal is nearly 10 miles from Benson’s City Hall stop. J6, across the interstate from Mescal, is also served by the current Flex Route. Riders are picked up from or delivered to Mescal/J6 at four scheduled times per day at their door. The vehicle takes all passengers to Walmart and resumes its fixed route schedule. Mescal riders identified through the survey are generally within a half-mile of one another. Most are elderly or disabled. The riders from J6 live just over the Pima County line nearly two miles from the interstate exit. The Mescal route is the only transportation available to most riders with no grocery, medical, or services available outside of Benson.

2.3.2 St. David

St. David is located 8 miles to the south of Benson on highway 80. Flex routes are scheduled on Monday and Thursday, and like Mescal, they operate four times a day between the scheduled fixed route and deliver passengers to the Walmart where the fixed route resumes. Riders are picked up from their door with most riders living a mile or more from one another. One regular rider resides three miles further south on highway 80. BAT receives daily requests for rides, from the St. David area, and when the Flex route is not scheduled, riders will ask for paratransit services. This creates scheduling difficulties as dispatchers and drivers (who are often called directly) hesitate to enforce the schedule for this Flex Route.

2.3.3 Pomerene

The community of Pomerene lies 4.3 miles north and east of Benson, across Interstate 10. The Flex route is scheduled on Wednesdays; once before the Food Pantry run and twice after. This Flex route also includes Willow Lake, 9 miles north of Benson for one rider and further north for an occasional second rider. These two riders also make use of the paratransit system on days when the Flex route does not serve this area. These far reaching north-bound rides are the most inefficient in the system as they can create delays for the fixed route.
2.4 Paratransit Analysis

2.4.1 Schedule and Service

Paratransit services are offered Monday through Friday from 8:00 a.m. to 4:00 p.m. The service reaches Benson, Pomerene, St. David, and Mescal/J6, the same locations for the Fixed and Flex routes. However, the paratransit services to Mescal, Pomerene, and St. David are scheduled even on days when the Flex routes are not running in those areas. This creates an inefficient service whereby riders call for and receive paratransit rides for days in which the Flex route does not operate in their area. This has led to fewer Flex route rides as eligible riders can use the paratransit service on any day.

The paratransit service areas are outlined in yellow in Figure 3. These include Mescal/J6 to the West; Whetstone at the intersection of Hwy 90 and I-10; the City of Benson (outlined in green); Pomerene to the North; and St. David to the South.

Eligibility for paratransit is limited to elderly and/or disabled riders 60 years of age or older. Riders must document their age and/or disability. Riders must make reservations one day in advance. Drivers report that they are often asked to allow non-eligible, non-attendant riders to board along with the rider who has scheduled the ride and no driver reported denying those requests.

There is a rack-card titled Dial-a-ride that is made available to the public that describes the above information along with fares and pass information but no information on rider responsibilities, the number of stops that can be requested with each reservation, Title VI protections, or use of the current “will-call” pick up service.

Paratransit drivers have regular daily riders, some who must be accessed on unmaintained dirt roads.

During the first week of each month and on each Wednesday when the Food Pantry is operational, the paratransit system requests exceed the capacity of the single driver/bus that must make rounds to each of the Flex Route and Fixed Route service areas. The Fixed/Flex Route driver also serves these areas at capacity on these days. Because the Food Pantry is open for limited hours in the morning, these rides are made a priority.

Paratransit drivers often receive calls from riders directly, asking for same-day pick up or changes to their scheduled rides including requests to increase the number of stops they make, will-call pick up requests, or changes in pick up locations if they have used the fixed route to move to a different location. The drivers’ willingness to accommodate these requests can create significant delays in the schedule.

The vehicle most often used for paratransit has a lift and two wheelchair accommodations with tie-downs and belts. The older, back-up vehicle also used for paratransit, has a ramp.

At no time did the author see a driver ask for a pass or fare. Nor did the author see any rider offer a pass. One rider voluntarily paid a fare though this person looked to be old enough to be a pass rider.
When asked, the rider was unaware of the availability of passes for persons 60 and over. One paratransit bus has no fare box, rather a Styrofoam cup in a cupholder into which riders can leave a fare or donation.

2.4.2 AAA Pass

Benson Area Transit is a funded entity of the Area Agency on Aging (AAA) program, a division of SEAGO. As such AAA provides a multi-year contract to BAT and reimburses the City for each ride it provides to AAA approved bus-pass holders. BAT has issued passes as requests are made, however; these passes do not have an expiration date and subsequent requalification of riders is not made. Riders are not asked to present their pass when boarding. The Daily Ticket (a form used to schedule paratransit rides), does not record whether a rider is a pass holder or will be paying a fare.

2.4.3 Limitations

The paratransit service area, as is required, covers each of the service areas for the Fixed and Flex routes and in some cases goes well beyond. However, paratransit operates in these areas Monday through Friday when Flex routes are schedule limited days per week.

Road conditions for some paratransit riders are unmaintained dirt roads and extremely rough. Many City streets within Benson also are difficult and rough leaving vehicles with prematurely degraded suspensions making travel for both the drivers and passengers rough, loud, and uncomfortable.

The service area for paratransit is extremely large. The distance between Mescal and St. David is 16.5 miles. With one paratransit vehicle on the road at a time, this makes scheduling difficult when not adhering to the Flex Route schedule for paratransit services.

Rider Guides, with policies, pass, fare, and schedule information, are not available.

3 RIDER ANALYSIS

3.1 Ridership

Benson Area Transit presently reports a negative trend in ridership. This trend may be related to COVID concerns. The annual ridership decline from 2018-19 to 2020-21 was 11%. With one month of reporting left in the federal funding fiscal year, BAT reports 10,061 annual riders, a 4% increase over the same period the previous year and an 8% decrease from pre-COVID ridership in 2018-19. This may indicate a trend toward returning to pre-COVID ridership numbers as FTA restrictions for transit are lifted and vaccines are readily available. On average, Fixed route riders represent 66% of all ridership.

3.2 Paratransit riders

Benson Area Transit presently has 124 riders registered for AAA bus passes. These pass holders must be 60 years of age or older and/or disabled. Of 198 survey respondents across services (fixed, flex, paratransit) 71% indicated they were AAA pass holders. Paratransit riders constitute the largest population of riders when counted as individuals. Destinations vary but are typical when defined broadly: shopping and medical appointments are the two most often described destinations for AAA pass holders.

Benson Area Transportation provides an online form to determine eligibility for a AAA pass. The same form can be obtained at the transit offices in City Hall. Applications are reviewed by the Transit Specialist and potential riders are informed of their eligibility. While most of the AAA pass holders are
ambulatory, a number of them do not live near or can access the fixed route system. These include riders in Pomerene, Mescal/J6, Whetstone, and St. David.

3.3 Food Pantry Deviation

The Food Pantry is open on Wednesdays from 9 a.m. until 11 a.m. The second Pomerene Flex Route is supplanted with the Food Pantry Route. Both the Fixed Route and the Flex Routes deviate on Wednesday mornings to take riders to the Food Pantry. Additionally, paratransit rides with destinations to the Food Pantry are scheduled for the morning portion of each Wednesday. The Food Pantry route generally runs at capacity.

The Food Pantry does not allow riders to disembark but rather polls the riders for family size and delivers, on board, the requisite number of boxes containing food. Deliveries can vary between 1 and 4 boxes per person. These boxes do not fit under the seats of the vehicles and some riders bring wagons and carts to manage their individual boxes. As the Food Pantry route returns to the Fixed Route (Walmart), passengers are allowed to leave food boxes on-board when they disembark to do other shopping and the bus returns to its route along with the boxes until the passengers re-embark and are taken home. This practice is convenient for the Food Pantry passengers but creates a safety hazard for those riders remaining on the bus or boarding at stops along the way.

3.4 Originations and Destinations

Persons completing the surveys provided information on the origin of their current trip. These surveys were from Fixed, Flex, and Paratransit services. Nearly 50% of survey respondents list their home as their point of origin. 63% listed Walmart, and 17% listed Safeway. These two shopping designations are the most frequented among each of the transit service types.

Destinations were similarly logged with shopping, medical appointments, and home most frequently chosen in surveys. Among destinations in the “other” category, the Food Pantry was by far the destination with the highest count.

3.5 Rider Gender, Language, Frequency

87% of survey respondents reported being female. 8% reported speaking another language at home – Spanish being the only language identified in a follow-up question.
The survey asked about the frequency in which respondents used the three systems; Fixed, Flex, and Paratransit (described as dial-a-ride on the survey).

Again, the surveys were issued on all three systems over the course of one month with some riders completing multiple surveys over the survey period. See Figures 6, 7 & 8 Frequencies.

4 OPERATIONS ANALYSIS as it relates to route efficiency

4.1 Routes

In reviewing the route systems and riding with drivers during their routes, the author found that the fixed route is largely efficient in its design, notwithstanding some stops that are no longer relevant and some minor retracing of the route to reach the next destination. These are easily addressed without substantial changes to the system.

The Flex routes were an attempt to include service areas outside of Benson for persons who had no transportation options for essential services. The inefficiency is in the inclusion of flex-routes in between fixed route runs. Because these flex route communities are anywhere from five to ten miles outside of Benson, they can create disruptions in the fixed route system and create two-hour headways for fixed route riders.

The paratransit system was designed to be comparable to both the fixed and flex route systems, however, the desire of riders in the flex route communities is to have daily access; creating inefficiencies that disrupt schedules and increase the cost of paratransit significantly.

4.2 Policies

Throughout the study, the author found that a lack of written policies available to drivers, riders, and dispatchers was the genesis for most operational inefficiencies. While the printed schedule clearly points out the Fixed and Flex schedules, there was no information on rider policies and responsibilities. The Transit Specialist explained that there were informal policies, but adherence was limited. Drivers often received calls directly from riders to add or change scheduled pick-ups and drop-offs for the paratransit program. Dispatchers and drivers for paratransit were not enforcing destination limitations.
Fixed route drivers were often delayed while conducting Flex Route circuits as door-to-door pickups and drop offs. Because Flex route drivers must return to a fixed route schedule, these delays also impact on-time arrivals and departures for the fixed route. Paratransit drivers would often go to outlying areas even on days when that area was not being served by the flex route. Riders would board with packages, bags, and large carts that could not be safely stowed. And, fare and pass policies were seldom acknowledged or enforced by drivers.

The lack of written policies made available to dispatchers, drivers, and riders in both English and Spanish allowed an environment of inefficient use of the systems’ resources that also negatively affected the safety of drivers and riders, as well as the general reputation of the system among the public. Dispatchers and Drivers were more apt to allow disruptions in schedules or departures from safety measures because they would not or could not point to policies that prohibited these deviations. Transit Management was not always aware of these practices and cited that policies had not been updated and were, therefore; not enforced.

There is no printed rider guide (only a fixed – flex route schedule) to share system policies including rider behavior, responsibilities, obligations for fares, passes, safety, or limitations (number of bags, number of destinations for paratransit, will-call service for paratransit, animals on board, number of no-shows, cancellations). This lack of written policies makes it difficult to enforce measures as drivers (who may be unaware of the policy themselves) cannot consistently educate riders and point to policies as a means to stop or prevent behaviors and conditions that impact efficiency and the safety and wellbeing of all on board.

ADOT and most 5311 programs in Arizona have collected and implemented well-written policies that are easily accessible and readily adaptable to BAT.

4.3 Dispatch

With no full-time dispatcher, most dispatching for paratransit is done by the Transit Specialist. There are no transit staff who are bilingual. At the time of this study, a driver with a shoulder injury was also dispatching. Dispatchers schedule rides in 15-minute increments and were often unaware of the real drive-time required to pick up multiple paratransit passengers and also would schedule rides in areas not being served by the comparable Flex Route systems. These included rides well outside (five to eight miles) the fixed or flex route service areas.

The dispatch phone line is not always staffed during operations hours leaving riders who are expecting to use will-call services without access to someone who can tell the driver they are ready to be picked up. Will-call rides can lead to schedule delays, and in one case the author understood that a rider had been forgotten and left to their own devices as the driver had been heavily scheduled the rest of the day.

BAT does not own scheduling software.

4.4 Rider Guide

Benson Area Transit has a printed Fixed/Flex route schedule but no route maps or rider guide publications either in print or online. Information on paratransit is provided on a rack-card with information on scheduling a ride, eligibility, fares, and locations where paratransit is available. Neither document addresses topics typically found in rider guides including rider conduct, dress code and hygiene, sitting/standing, aisle safety, shopping carts and bags, large and prohibited items, food and drinks, solicitation, tobacco/vaping use, bicycles, lost and found, trip cancellations, pick-up time
allowances (early and late), will call, subscription services, no shows, wheelchair/mobility device accessibility and limits, care attendants, service animals, or Title VI and ADA protections.

Rider guides are typically documents that outline policies and are meant to be tools for riders to understand their responsibilities and for drivers to point to when enforcing those policies.

4.5 Schedule and Map
The current fixed/flex route schedules are printed on one side of a half sheet of paper and made available to riders through the transit office, online, and from drivers. There is presently no map of the fixed route available to riders.

There is no schedule or map of paratransit service areas available to riders, only a rack card that describes the service and provides a phone number to schedule a ride.

4.6 Paratransit vs. General Public Dial-a-ride
When the BAT system changed to include Flex-Routes into outlying areas and changed from a deviated fixed route to a Fixed/Flex route system, the system included comparable paratransit for both the fixed and flex routes. BAT describes their paratransit system as a dial-a-ride system on their brochure, but it is limited to riders who qualify for paratransit services. In conducting the study, this author was informed of numerous instances when paratransit riders would have one or more attendants but had not let the dispatcher know that others would be riding as well. Drivers did not collect fares from additional attendants and in one reported case, the additional riders were not included in the ride count. The driver reported that the paratransit system was the only way the rider knew to get her family into Benson as she wanted to travel on days the Flex Route did not operate in her area.

While the current paratransit system operates in Flex Route areas outside of the Flex Route schedule, it is a more convenient source of travel for eligible but ambulatory riders. Instances where eligible riders bring along in-eligible riders (not including attendants), is an indication that general-public access to transportation outside of the limited flex-routes was desirable. Drivers, when questioned, agreed that the Flex Route – Paratransit for Flex Routes, was inefficient as they were not tied together in terms of schedules and that riders would take advantage of the paratransit availability when the Flex Route was not scheduled.

4.7 Fleet
The Benson Area Transit fleet includes five vehicles, two of which operate as spares. See Figure 9. All are ADA accessible with each having 2 wheelchair positions. Vehicle ages range from 2 years to 13 years. Two of the ramp vehicles are kneeling buses making it hard for them to navigate high curb cuts or rough terrain. The paratransit van, which is on a dirt road daily, has four ambulatory seats and 2 wheelchair positions.

For the purposes of the current systems, the fleet is adequately sized and in good condition.

Figure 9 Vehicle Fleet
4.8 Fares and Passes
The fares charged for passenger rides in Benson is typical for 5311 programs across southern Arizona. Adults on the fixed route schedule pay $1.00 per ride while students and seniors pay 50 cents. Paratransit and Flex route riders pay $2.00 per ride. Passes are available to all riders at various prices. AAA Passes are free to passengers.

5 STAKEHOLDER OUTREACH
5.1 Staff, driver interviews
This study included extensive interviews with staff and drivers. The author met with drivers on both their routes and in scheduled meetings at the transit office which also included the Transit Specialist.

During the riding portion of the interviews, drivers pointed out areas where their routes were inefficient, how stops and signage were not always aligned, and how regular riders utilized the system. For fixed routes, the interruption of a flex route was often a source of concern for the driver as were the delays in returning to the fixed route when the flex route offered door-to-door service to multiple riders.

Paratransit drivers also shared information in route and in meetings. Paratransit drivers know their passengers well and do their best to accommodate their needs, often at the risk of creating delays. Paratransit drivers were most concerned about 15-minute schedule increments that did not consider their need to pick-up or drop-off several riders who did not have origins or destinations that could be reasonably reached in that time frame. Back ups and delays were often met at the expense of their lunch breaks.

Interviews with the Transit Specialist occurred throughout the study period. The Transit Specialist was forthcoming with data, schedules, rider information and all other requests, in a timely manner. The Transit Specialist has been in her position for 5 years and is knowledgeable about the current systems in place.

All driver and Transit Specialist comments were considered in describing the systems (previous sections) and in determining how the systems could be improved.

5.2 Rider surveys
BAT personnel implemented a survey among riders for the purposes of the study. Over 180 survey responses were received with some riders completing several surveys. Multiple survey responses were encouraged to determine origination and destination locations along with use of fixed, flex, and paratransit systems. Survey data was input into a spreadsheet with charts and graphs that helped determine trends. Because some riders filled out multiple surveys, demographic data for these individuals skewed toward their answers. Because the survey was for efficiency purposes, these skewed data were not deemed relevant to the survey outcomes. The survey form is found in Appendix A along with a tabulation of survey results.

5.3 Public meetings
Two public meetings were held with regard to this Study. The first introduced the study, its purpose, and how public input would shape the study. The Transit Specialist included this meeting as part of the BAT TAC meeting. Eight participants were in attendance. The second meeting was to review suggested changes to the routes and service. At each meeting, attendees were encouraged to provide feedback or present ideas for achieving greater efficiencies.
6 RECOMMENDATIONS

The following recommendations address efficiencies for the route but also for the system in general. These recommendations are made for the consideration of the Benson Area Transit staff and may be implemented or dismissed as staff and resources allow. It is expected that any recommendations considered favorably would be scheduled for implementation upon assurances that financial and staff resources are available and that ADOT approves an implementation plan.

6.1 Fixed Route to Deviated Fixed Route

For the purposes of reducing the two-hour headway to one hour and to provide paratransit equivalent through deviations, it is recommended that the fixed route be changed to a deviated fixed route that runs a full loop once every hour and fifteen minutes. Deviations would be scheduled within ¾ mile of the fixed route. This proposed route streamlines the current route and identifies flag stops drivers identified as areas with rare ridership. The route also includes La Habra Apartments and Pato Blanco, both new to the route and with current ridership. The south loop (south of 4th/Hwy80) is completed first with the north loop completed with a return to Walmart and Safeway as these are the two destinations that north loop riders want. In this way, they will not have to ride the entire south loop to reach their destination and south loop riders who wish to return home can board at either scheduled stop K or Q. Added to the north loop is a turn off of 4th to enter the Horseshoe Restaurant Parking lot as drivers indicated that destinations along 4th are popular but inaccessible from the busy highway. Additional flag stops can be added prior to implementation. The south loop stop at Safeway will be at the bus stop located on Ocotillo. This stop will need to be upgraded for ADA accessibility. The north loop stop at Safeway will be at the picnic tables in front of the building nearest Ocotillo and proceed to the store fronts to the east of the main building where the laundry is located. This route can operate five to six times a day as headway is one hour and 15 minutes in slow traffic with frequent stops.

*Figure 10 Recommended Fixed Route*
6.2 Flex Routes to General Public Dial-a-Ride
It is recommended that the current flex routes be discontinued, allowing for a more streamlined fixed route, and promoting a public dial-a-ride system for outlying areas including south Benson, Mescal/J6, Pomerene, St. David, and Whetstone. This recommendation is based on the inefficiency of operating flex routes only on certain days while running paratransit throughout the week to all outlying areas. A public dial-a-ride system can accommodate any rider regardless of eligibility and will allow better scheduling of rides. This will increase ridership and needed connections to the fixed route.

6.3 Paratransit to General Public Dial-a-Ride
Because the current fixed route is recommended to become a deviated fixed route, paratransit services comparable to the fixed route can be accommodated with deviations. This allows the current outlying paratransit services to become a general public dial-a-ride service. It is recommended that two DAR vehicles operate at any given time (when scheduling requires) with one going to Mescal/J6 and Whetstone while the other goes to St. David and south Benson. The dispatcher can determine which driver will take Pomerene rides based on the level of requests and capacity of vehicles.

Dispatchers can determine eligibility for door-to-door service for destinations, or if the rider/system is best served by linking a rider to the fixed route service. Revised dispatch tickets (driver’s list of origins and destinations for the day) should indicated if the rider is a AAA pass holder or will be paying a fare. Drivers may only provide door service to AAA pass holders whose destinations are outside the deviated fixed route system while others will be connected to the deviated fixed route system. Since all vehicles are mobility device capable with wheelchair lifts or ramps, this use of DAR for the general public as well as eligible paratransit riders will allow for more rides to be completed. DAR service areas are marked in pink and represent areas already served by the system. It is recommended that BAT no longer serve requests beyond these areas as they generate the most inefficient rides. The DAR area known in this study as south Benson includes a number of large-scale RV parks where winter residents live. Rather than make this part of the year-round fixed route schedule, it will be more efficient to address rider needs through the DAR service on a seasonal basis connecting ambulatory riders to the fixed route system.

Figure 11 Recommended Dial-a-ride zones (pink) and Food Pantry run (blue)
6.4 Food Pantry
The Food Pantry deviation route will remain on the Wednesday schedule when both the fixed route and
the DAR will include it as a destination. The Food Pantry route is indicated in blue on the map in Figure
11.

6.5 Dial-a-ride and Fixed Route Fare Structure
It is recommended that fares remain the same for both dial-a-ride and the fixed route system as these
rides serve mostly low-income riders. BAT may wish to consider fare increases for 2024, raising each by
a dollar. At that point, most social security recipients will have received the cost-of-living increase and
with gas prices remaining high, increased fares will be justified.

6.6 Scheduling & Dispatching
As BAT refines the new recommended fixed route, schedules will be finalized and evaluated for accuracy
in timing that allows for driver breaks and appropriate driver changes. Operating hours will be
determined that allows for driver pre and post checks and reporting.

Dial-a-ride services should be scheduled for two simultaneous drivers when rider trip schedules require
it. This will be especially important during the first week of the month and on Wednesday’s Food Pantry
run. It is recommended that dial-a-ride schedules be divided between two zones; the west zone which
includes Mescal/J6 and Whetstone, and the east zone which includes south Benson and St. David. The
dispatcher can determine which zone will pick up Pomerene riders based on scheduled rides and driver
availability. Keeping schedules limited to zones will increase efficiency, allow additional rides to be
scheduled, and remove rides currently made to points well beyond a reasonable service area. This may
include the need to forgo rides offered to Pima County residents near the J6 community.

It is strongly recommended that a full-time dispatcher be hired to manage the five dial-a-ride locations.
Training the dispatcher to properly schedule rides so that vehicles are running at capacity is paramount
to greater efficiency. It is also recommended that BAT consider scheduling software in its next capital
request to ADOT.

6.7 Driver Training
Assuring that drivers are properly trained to adhere to the transit program operating and safety policies
is essential to its success. In addition to standard ADOT approved training including safety, defensive
driving, PASS, pre-post check inspections, and drug and alcohol policies, drivers should receive annual
training and competency evaluation on the following:

- Driver schedules
- Route schedules
- On-board route training
- Deviations
- Fare policies
- Communications policies (dispatch, media, technology, etc.)
- Customer service
- Conflict resolution
- Rider Guide policies including those listed in Rider Guide
- Rider behavior (acceptable and un-acceptable)
- Foreign language translation tools (i.e., google translate)
• Emergency readiness and response (vehicle evacuation, fires, mechanical emergencies, medical emergencies, incident emergencies, security emergencies
• Dealing with rider incidents (when can drivers refuse rides)
• Wheelchair lift operations and securement
• Seatbelt policies for both wheelchair and non-wheelchair riders
• Embarking and debarking safety policies
• Customer safety
• ADA policies
• Title VI policies
• Dispatch requirements
• Driver logs and reporting – data collection
• Policies related to children
• Vehicle familiarization
• Vehicle inspections
• Destination information
• Flag Stops
• Driving Conditions – safety
• Training and testing requirements

6.8 Rider Guide and Rider Policies

It is strongly recommended that a rider guide in both English and Spanish (preferably in a single document) be developed that fully outlines the following:

• Rider conduct responsibilities
• Dress code and hygiene requirements
• On-board requirements (sitting, standing, aisles clear of obstructions)
• Title VI information
• Mobility devices
• Wheelchairs
• Personal care attendants
• Shopping cars and shopping bags
• Baby strollers
• Large and prohibited items
• Food and drinks
• Diaper changing
• Solicitation
• Tabaco/Vaping
• Bicycles
• Lost and found
• Service animals
• Dial-a-ride information
• Schedules
• Maps
• AAA Bus Pass information and eligibility
• Fare and Pass information
• Transit Office contacts
• Dispatch number

Additionally, all AAA pass holders should receive new passes that identify them by name and include an expiration date. This pass can be designed with a QR code that provides additional information such as rider emergency contact information, special needs, or other identifying information needed for eligibility and/or safety purposes.

6.9 Marketing

Once BAT determines that it has finalized schedules and routes, a marketing campaign should be implemented to provide adequate notice and training to drivers and riders. All policies and a rider guide should be fully developed prior to any marketing efforts. FTA requires riders receive a full 30-day notice of any changes to the route and schedule. In choosing a launch date, BAT staff should work backward on the calendar to determine the length of time necessary to complete these tasks and receive City Council and ADOT approval as well as the funding necessary to implement changes.

It is recommended that BAT begin with rider education as to expected changes and the schedule for when new system schedules, policies, and routes will take effect. Public meetings to provide rider education can be scheduled using the new rider guide that has an effective date boldly indicated on the front cover. Having staff review the new rider guide, schedule, and maps through rider education opportunities will greatly improve the riders’ confidence and loyalty to the program.

Other marketing endeavors recommended include:

• Frequent press releases and print ads leading up to the effective date
• Radio PSAs
• Frequent social media content leading up to the effective date
• Announcements at City Council meetings
• Bi-Lingual Posters on board buses and in public settings that are destinations for most riders (Walmart, Safeway, medical offices, laundry mats, library, clinics, hospital, banks, utility offices, bus stops, etc.)
• Announcements in utility bills
• Announcements in local newsletters and church bulletins
• Announcements and publications through schools including public, charter, private, and higher education institutions
• Bi-Lingual announcements and posters to major employers
• Bi-Lingual flyers for all riders
• Bag inserts for Safeway and Walmart shoppers

As the effective date nears, new rider guides and route schedule/maps should be made available online, onboard, and in destination locations frequented by riders.

6.10 Infrastructure

It is recommended that prior to the effective date all fixed route bus stop signage should be replaced with weatherproof signage that includes the revised schedule and route map along with phone, email, and website information. Old, obsolete signage should be removed, all established bus shelters made ADA accessible, and all flag stops identified with signage.
6.11 Budget Considerations

The largest budget considerations with regard to these recommendations are labor (full-time dispatcher, two dial-a-ride drivers), fuel, and bus maintenance. BAT staff will review their current budget and determine the level of funding required to accommodate changes so they may be included in applications for funding from ADOT and AAA.

Additional capital costs for consideration are scheduling software, bus replacement, additional bus shelters (or improved ADA access to existing shelters) and new bus stop signage. Administrative costs for policy development, rider guide, and schedule/map printing will also need to be considered.

Sources of funding not currently utilized by BAT may include Cochise County, Chiricahua Clinic, Benson Hospital, Walmart Foundation, and Safeway Foundation.

Cochise County’s elected supervisors have access to discretionary funds that may be used in support of transportation for county residents that live outside the City of Benson service area. BAT can identify past Flex and Paratransit rides for these county residents and can assure that ridership is tracked under a revised system, allowing BAT to accurately report ridership in support of County funds claims.

Both the Chiricahua Clinic and the Benson Hospital rely on BAT to bring patients to appointments and to return them home. BAT can identify the number of these rides provided in the past when reviewing driver logs and destinations. Utilizing a ridership software tool (Douglas Rides has created one and can make it available for purchase) can track origins and destinations that would allow BAT to bill health organizations for rides in an agreed upon contractual relationship.

Walmart and Safeway are the two destinations most often used by riders. BAT can identify past ridership for these destinations to negotiate annual gifts from each company’s foundation.

7 APPENDIX

A- Survey results

B- Public meeting sign-in sheets