

Field Observations/Review of The FAX Transit Program Serving Metro Fresno

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MEMO

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To: Mr. John Downs, FAX Planning Manager

From: Jerry Kaplan, JKaplan & Associates ¹

Subject: Field Observations/Review of FAX Transit Program Serving Metro Fresno

INTRODUCTION

The following is a report of the observations made in the field during two clear mild days in mid-February and from a review of the printed information available to the FAX passenger. Discussions with FAX management were also held to obtain a better understanding of the history of the development of FAX routes and schedules and particular issues that were of concern. Input from driver representatives was also sought; modifications to several route alignments were suggested by the representative.

It should be noted that detailed analyses were not undertaken of the many areas reviewed and discussed in this memo because of both time and budget constraints. The intent of this memo is to provide the results and findings of the brief review with appropriate suggestions offered that could increase the attractiveness of the system to both the regular and casual user, as well as result in possible cost savings in several different areas of the operation. Because there was no comprehensive study carried out as part of this review, further evaluation and analyses (for example, a route segment analyses and a study of demand by time of day) is necessary before many of the recommendations for possible changes can be considered for implementation.

The discussion, findings and recommendations that follow are not presented in any order of importance, but represent different areas and facets of the FAX operation that relate to ease of system use by the passenger, routing and scheduling, and a brief section on the Handy Ride program.

A summary of the findings and recommendations is provided on the following two pages, with further discussion in each area following the summary.

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SUMMARY

Passenger Amenities

Observed the following:

- Some destination signs on buses are not working, or barely visible to waiting passengers.
- Lighting at some bus stops/shelters is poor (hard for driver to see waiting passengers).
- Bus stop signs are inconsistent (size, color, lettering); some have incorrect information posted.
- The Downtown transfer center works moderately well, but an off-street facility would provide significant improvements over current situation (get bus completely off roadway, provide much easier and closer transfers between routes, etc.).
- Placement of shelters and benches do not appear to be based on intensity of use at a particular stop.
- Some marketing signs are outdated both at transfer centers and on buses.
- Distance between bus stops vary greatly and in some areas (where stops could be placed), distances ranged up to three quarters of a mile between stops.
- The FAX Schedule Guide is useful and well laid out. It may be possible to reduce the number of pages by simplifying the all inclusive listing of times for each bus run. With printing of the Guide five times a year, any reduction in printing costs would be beneficial.

Area Coverage and Routing

- Many of the FAX routes are exceptionally long and complex and do not operate in a single direction (i.e., primarily east-west or north-south) even though the majority of metro Fresno area is laid out in a grid pattern. On-time performance has fallen from 90.1% (FY 04/05) to 77.1% (FY 07/08).
- It could be beneficial to the overall system effectiveness to shorten some of the longer routes and keep route orientation primarily in a single direction. While this could be expected to increase a passenger's need to transfer, overall customer travel time and on-time performance may benefit.
- In several sub-regions of the metro area there is an overlap of service (both area coverage and schedule frequency). These areas should be analyzed in more detail to develop alternative service scenarios that would allow these freed up service hours to expand service to newly developed areas of the community.
- The more detailed discussion that follows provides several specific examples and suggestions where possible modifications to routing may improve overall system effectiveness and efficiency.

Service Schedules

- The 15 minute frequencies on four of the FAX routes attract many riders and provide excellent service in several important corridors. There may be potential, however, to operate less frequent service (i.e., 30 minutes between buses) during quieter portions of the day to reduce operating costs, and/or allocate the saved service to other corridors.
- Several of the routes begin the morning service at a very early hour at the Downtown Transfer Center. It may be more efficient to start service in the neighborhoods where students and workers would likely be traveling inbound rather than outbound.
- Weekend service, both Saturday and Sunday, begins quite early. Typically, Sunday demand begins later in the day; potential operating cost savings may occur by scheduling a later Sunday morning start.

Fare Structure

- FAX has one of the lowest base fares in the state (\$1.00 for adults) and has not been able to achieve their 28% farebox return (recent data shows a rate at about the 24% level). Systems throughout California are increasing fares to the \$1.50 to \$2.00 range. In light of the economic downturn, there is a need for higher revenues to offset lower monies projected to be available from Measure C and TDA allocations, and the loss of state STA funds. While the free fares for those 65 and over are a boon for those older residents on fixed incomes, it may not be feasible to continue that fare policy in light of the significant decline in revenue sources.
- There may be potential to increase the revenue from fares by considering a pass program for FSU and City College students that allows unlimited rides, paid for by student fees imposed on themselves as part of registration.
- FAX has a fairly complex approach to offering fare payment instruments, including cash, tokens, different value ticket books, full month passes, mid-month passes, etc. The bookkeeping and cash handling involved to maintain all these different payment methods may be consuming a disproportionate amount of time for FAX to administer, track, reconciling, etc.

Handy Ride Program

- System efficiency (productivity) appears to be on the low side for an exclusive ADA paratransit program. If improved slightly through scheduling of more shared rides and meeting, but not exceeding, performance standards, potential annual savings of over \$1 million dollars may be achievable. With the cost per one way trip to the city at about \$30.00 per passenger, even a slight improvement would be beneficial.
- The one way fare for a trip on the service is unduly low at \$0.75. Federal ADA regulations permit charging a paratransit program fare of as much as twice the adult base fare on the fixed-route service, which would allow the Handy Ride fare to be \$2.00 per one way trip. Most transit systems charge a fare that uses this metric; that is, is twice the fixed-route fare. FAX should seriously consider increasing the fares on the ADA service component to a level comparable to other transit systems.
- The current fare structure allows for unlimited rides on the service for a flat monthly pass cost of \$25.00; such a program for ADA paratransit service is rarely seen in transit services. Because of the high cost of each trip provided, this program should be phased out as soon as possible and replaced, if needed, with a ticket booklet or punch pass that would offer rides at a discount to the regular user.
- The cost of the Handy Ride program (at about \$5 million dollars annually), represents over 14% of the total FAX program costs. Anecdotal review of several other comparable systems in the state shows that their ADA paratransit program typically represents between 4% and 8% of their total transit operating budget.
- With improvements to productivity combined with a decrease in demand expected due to a more equitable fare charged for the paratransit service, the Handy Ride program costs could decrease from about \$5 million dollars currently to about \$3 million dollars, which would be equivalent to slightly less than 10% of the total FAX system operating expenses, still a higher percentage than most other systems.

MORE DETAILED DISCUSSION

Passenger Amenities: The issues noted below make it difficult for a casual FAX user as well as others to understand how the system works and determine which bus to use to get to their destination.

1. **Bus destination signs** on some older coaches are not working, and/or are barely readable as the bus is approaching a stop. A sign on one bus observed coming into the Downtown Terminal said it was “out of service,” but it obviously was not.
2. **Lighting at bus stops**, and in particular at some shelters, even along busy routes (i.e., Blackstone, south of Clinton), is poor, making it difficult after dark for drivers to see if passengers are waiting (based on limited observations). FAX uses “i-stops” at some locations where the passenger can signal the driver, but it appears that there are many more locations where this device may be warranted.
3. **Signage at bus stops is inconsistent** (size, lettering, color), and in some instances, is incorrect (signed for the wrong route). Also, several bus stop signs were faded to the point where it was almost impossible to read the information (FAX info #, route designation, etc.).
4. The **downtown transfer center** works fairly well, but an off-street transit center would function much more efficiently by allowing all the buses to enter and exit in one area of the downtown and would greatly improve the passenger transferring situation. The transit center could also house a FAX office where passes and tickets could be sold, lost and found located, etc. While the present arrangements work fairly well, there were occasional instances observed where the buses arriving at their designated shelter had to wait for several minutes for other buses already there to move up and/or go back out onto their route before the waiting bus could move forward. Until that occurred, the rear of the bus was partially blocking a lane of traffic on either Van Ness Avenue or Fresno Street.

Also **crossing between shelters A and B to L**, or the reverse, requires time-consuming circuitous travel, or cutting across muddy, grassy areas. Paving a direct pathway between these areas would help greatly. An overhead real-time information sign at the front of the “L” shelter (street side island) was not working and appears to have been out of service for a while. All others were working and provided excellent route arrival times and time of day to the waiting passengers.

A marketing sign at the shelter advertising the Metro Pass was apparently posted at least three years ago, but notes that the Pass is being offered on a “trial basis.” In order to present an image to the passenger that FAX management is concerned with keeping their customers informed of up to date system changes, it is important to periodically update major information notices such as this one posted at the central transfer center. Several outdated signs were also noted inside some buses.

Additional comments on Amenities:

1. **Benches and/or shelter placement** do not seem to be based on intensity of use at a particular stop. JKaplan suggests updating the existing handwritten inventory of the 2,000+ stops in the system to document the type and consistency of signs, if the bus route(s) serving that stop is correctly identified, the adequacy of benches and shelters, passenger visibility in the evening (lighting availability), and then evaluating the amenities relative to the level of activity at that stop. The current inventory should be computerized on to a database program so that it will

be easier to develop a program for setting priorities for stop improvements to meet the level of demand that may be warranted.

2. FAX has a policy of setting the **distance between bus stops** about every quarter (1/4) mile. However, during the field review of several randomly selected routes, many stops were noted that were at least a half mile or even three-quarters of a mile apart. These were in areas (both residential and commercial) where adequate locations were available for the stops to be placed. Placing bus stops at an uncomfortably long distance from one another discourages ridership because the individual must walk further to board a bus or walk to their destination after the bus portion of their trip. As noted above, an updated computerized inventory of all bus stop locations, as well as amenities at each stop, should prove helpful in identifying distance between stops issues.
3. The **FAX Schedule Guide** is a useful and well laid out reference for the passenger. It includes individual route maps and schedules as well as an overall fold out map of the entire system so one can easily see the areas served by each route. While the Guide includes a tear out Customer Survey page for a passenger to fill out and a Driver Appreciation Nomination form, these forms are not readily obvious and could be referenced as to their location in some highlighted area of the Guide.
4. **To reduce the overall number of pages in the Guide**, it is suggested that the number of full pages that are devoted to printing each and every bus run for every route throughout the day be reduced dramatically. As an example, for Route 38, a total of 58 lines of text on one page provide the schedule for each and every weekday run in the southbound direction. Another 58 lines on another page is included for the weekday northbound direction. A third page is devoted to the weekend schedule with a fourth page displaying a map of the route.

An alternate approach to displaying this information would be as follows: Provide the first two or so hours of the schedule as it is now shown, but then eliminate about 40 lines of text by including a note that says: "service continues every 15 minutes (or 30 minutes) until...." Then begin the line by line time schedule again at a time when the service is entering the peak period time, or when the route shifts from a 15 minute service to a 30 minute frequency. The last two or three runs of the day would then be shown so passengers know when the service stops at time points along the route. Depending on how large the agency wants to display the individual route map (currently, it is at a very legible size), at least one or possibly two pages of the four noted in the example discussed here for Route 38 could be eliminated. If this approach is used on most of the routes in the Guide, perhaps as many as 20 to 25 pages of the 82 page Guide could be eliminated, resulting in reduced printing and binding costs, and even storage space.

Area Coverage/Routing: The FAX system **covers a fairly large geographical area** in the City of Fresno and a portion of the adjacent community of Clovis (about 11 miles by 14 miles). With several busy railroad lines bisecting the city and many major intersections that are controlled by time-consuming eight phase signals, it is **challenging to operate a large city transit program** that is able to keep on schedule, allow for timely transfers, and deliver passengers to their destinations in an effective fashion. While the FAX system appears to be doing a more than adequate job of meeting this goal, there are several areas noted below that likely impact its effectiveness. These are listed below.

1. **Many of the FAX routes are exceptionally long**, with some route running times approaching or exceeding one and one-half hours from start to turnaround. With traffic and

the need to wait to make left turns at many of the multi-phased intersections, it is easy to fall behind schedule, and because of the long route running time, very difficult to make up the time. This creates problems for passengers needing to transfer between routes, if one of the routes is running behind schedule. (*The latest Transit Productivity Evaluation (TPE) for FY 07/08 substantiates the fact that the FAX system is having a more difficult time keeping buses on schedule, with on-time performance falling each year from 90.1% during FY 04/05 to achieving only a 77.1% on-time rate for FY 07/08. **The standard for the FAX system is 92%***²).

2. It also seems like **some of the routing has become quite complex** as new areas of the metro area have developed and bus service expanded to serve those areas. An example of a route that seems to travel in many different directions is Route 45, which begins in the Pinedale area in the NW, then heads due south for several miles, serves City College, turns north to reach the Manchester Transfer center, and then heads east for several miles and then south again to end in the vicinity of the airport. The lengthy route, taking almost one and a half hours to run in one direction, appears to be a candidate for realignment and/or elimination of portions that can be transferred to another route. **Using Route 45 as an example**, portions of that route operating in the far northwest corner, along Herndon Avenue, may be able to be served adequately by extending Route 22, which turns around in the Fig Garden area. This is discussed more in a later section. (Note: No analysis of any ridership data, O-D pairs, or boarding by stops has been undertaken; the comments above are based on a limited review).
3. There are several routes that, from just studying the system map, could fit into the same category of being **excessively long, circuitous, and overly complex**. A more detailed analysis may show that some route segments have very low productivity and may be able to be served adequately by slightly extending another route operating in the general area. In general, while almost every route needs to serve all the areas it now travels through, it would be helpful to break each route into segments for the purposes of analysis, rather than evaluating the route as a whole. That way it would be easier to re-align/create new routes.
4. To summarize, FAX should consider reviewing its route structure in light of the system's deteriorating on-time performance and analyze the potential for shortening routes and keeping most of the routes oriented in a single direction (i.e., east-west or north-south). While this could be expected to increase a passenger's need to transfer, overall customer travel time and on-time performance and system effectiveness may benefit.

Comments on Specific Routes and/or Areas Served:

1. **South of Downtown/West of Highway 99).** The areas of Fresno south and west of Highway 99 appear to have an unwarranted high level of service due to the extension of three of the four FAX routes that operate at 15 minute frequencies. Routes 30, 34, and 38, all important north-south routes - and highly patronized - travel into this area of Fresno across Highway 99, providing a frequency of service that looks to be unjustifiable since most of these three routes travel on streets and into neighborhoods that are quite close to each other. On a portion of Fresno Avenue, for example, west of Highway 99, as many as 28 buses (14 in each direction, equivalent to a bus every 4 or 5 minutes) will be travelling along this corridor each hour during the majority of the day. Since there are a limited number of crossings over the railroad and Highway 99 available to access this area, some service duplication along Fresno Avenue is to be expected, but reducing the overly intense service levels should be explored.

² FAX 2007-2012 Short Range Transit Plan, Goal 2, Service Quality, page 8.

An alternative to the current coverage now operating could be to operate the three routes with 15 minute service only to the Downtown Transit Center and operate one to two buses on a separate route(s), possibly on 30 minute headways, direct from the transfer center to this area. This approach will require additional transferring for passengers travelling to or from the Southeast Fresno area but the cost savings in bus operating hours could be significant and eliminate redundant and costly service. (Note: While no segment analyses of these routes were undertaken as part of this review, it is likely that the analyses would show the sections of these routes south of Downtown achieve a much lower level of productivity because of the high frequency level being offered in such a compact area.

2. **Route 56 in north-central Fresno.** This route has been operating for less than two years, beginning service in August 2007, and while it has experienced increases in ridership since its inception, it falls at the lowest end of all the FAX routes when the performance measures of system productivity and cost per passenger are analyzed. Initiating the route was the first attempt by FAX to provide fixed-route service to the far northern portions of the community, serving higher income residential areas as well as the new State Center Community College District campus. According to the FY 07/08 System Assessment Analysis, the route's productivity (unaudited data) was under three (3.0) passengers per hour and the cost per each passenger boarding was \$57.00. More recent data for the first six months of FY 08/09 show that the ridership has improved to a level of about 5.4 passengers per hour with an estimated operating cost of about \$17.00 per passenger carried. While this is a substantial improvement from the \$57.00 per passenger figure seen in the first 11 months of operation, it is much higher than the fixed-route system wide average of under \$3.50.

With the downturn in the economy resulting in lower than expected revenues available from the sales tax driven Measure C and declines in state transit funding assistance, Route 56 is a prime candidate for elimination. (Route 12, discussed below, also falls into this category).

Because Route 56 travels through a newer and previously unserved area of Fresno, ridership is presently low, and it may be appropriate to re-introduce fixed-route service to this area at a later point in time. A future route in this area most likely would fall into the category of a **"lifeline" service**, representing a minimal level of service that meets the FAX intent of providing fixed-route service throughout the community. A FAX goal in the latest Short Range Transit Plan states *"FAX's fixed-route bus system should be designed so that a minimum of 90% of the service area population resides within one-half mile of a bus route."*³

While FAX has minimum performance parameters for their fixed-route service, the agency may want to consider establishing time sensitive performance measures for start-up service – that is, a target level of ridership that should be reached after a set period of time, such as reaching 50% of the system average within two years of start-up, or within six months of a specific marketing campaign. An alternative target to the 50% of the system average could be to show an annual increase of at least 10%, or some other value, over past year's levels.

FAX management may want to formalize additional standards of performance for this type of service, and/or **adopt a policy for operating lifeline service** as part of the overall transit program serving the growing Metro Fresno area. As the area expands in geographic coverage and population, there will likely be more need to offer basic fixed-route services to the newer areas as they develop. It is generally accepted among transit operators to operate a route that is outside the normal parameters of the system as a whole, by offering a "lifeline" service in a

³ FAX Short Range Transit Plan 2007-2012, Goal 1, Service Levels, page 7

portion of the community where otherwise a scheduled fixed-route may not be warranted by demand alone.

3. **Route 12 in southeast Fresno.** This route, known as the Southeast Circulator, is the shortest route in the FAX system and operates on 30 minute headways between 8:00 AM and 6:00 PM on weekdays only. It is the only service that will deviate to pick up passengers, who call in advance for a scheduled pickup within the specified service area, at a location off route. The bus also will deviate off route to drop a passenger at their destination if a reservation is made. It was not known how many “deviations” are occurring in a typical day; only 10 round trips are made along the route. Observations follow:

- The route travels along many of the same streets as several other routes in the area and **appears to offer duplicative service.** It does serve a large concentration of mobile home communities along Chestnut Street and a senior citizen village where some of these individuals may appreciate the route deviation option offered on Route 12. However, many of these persons may be eligible for the Handy Ride program which will provide curb to curb service.
- There was a **lack of consistent bus stop signage for Route 12** along the route, with some obvious stops for Route 12 only posted for Route 26 and/or Route 41, and in one instance, a bus stop that was signed for Route 12 was off the route (on Chestnut, north of Butler). There were no bus stops signed for the route in the east-west direction (along Kings Canyon Road) for about one and one-half miles, until the stop at Wal-Mart.
- A bus that was apparently operating as Route 12 (a cutaway, bus #4) had **no discernable route sign** identifying it as Route 12.

Because of the substantial amount of bus service operating along most of the same roadways in this area of Fresno as Route 12, and the low productivity seen on the route (less than six (6) passengers per hour, considerably less than the system-wide average of 35 to 40 per hour, and a cost per passenger at an estimated \$25.00 per one way trip), it is likely that eliminating this route would not negatively impact a large number of individuals. These few passengers should instead be able to use one of the other FAX routes (22, 26, 28, or 41) that travel along the same streets. If there are some persons who frequently use the route deviation options available on Route 12 (the number and frequency were unknown at the time of this review), many may be eligible for the Handy Ride program, which should be able to provide a more personalized service.

4. **Service to Clovis via Route 28.** This route travels into the City of Clovis for over two miles and offers opportunities for transfers to and from Clovis Transit service at the Sierra Vista Mall. The City of Clovis service operates a less extensive system that runs only until 6:30 PM and a more limited schedule on the weekend. Clovis buses operate on 30 minute headways on weekdays and 60 minutes on Saturday and Sunday, when the last trip ends at about 3:00 PM.

Route 28 is one of the four FAX routes that offer 15 minute service throughout the majority of the day. The route carries the greatest number of passengers in the FAX system, but data was not available to determine the demand on the portion of the route within Clovis and the level of transferring between the systems. Route 28, while a very productive route overall, is operating about 10 minutes of each run within the City of Clovis, equivalent to over 10% of the total running time of the route, and at 15 minute frequencies. This appears to be an

oversupply of service between the FSU campus area and the Mall in Clovis since the Clovis Stageline also operates a route (Route 10) between several key locations in the community and the University campus on 30 minute headways on weekdays with more limited 60 minute frequencies on Saturdays and Sundays.

It may be more efficient to **extend Route 9, the Shaw Avenue Crosstown route**, past the FSU campus (where it now turns around) as far as the Sierra Vista Mall in Clovis, rather than operate the very complex and circuitous Route 28 to that location. Route 28 could then turnaround on the streets that currently Route 9 is using and provide 15 minute service to that area of the community. This would reduce the running time for Route 28 by a few minutes that could be used to either improve on-time performance - since it is the most heavily boarded route in the system - or possibly extend service further along the southeastern portion of the route (Kings Canyon area). Route 9, operating at 30 minute headways, would then be operating at the same frequency as the Clovis bus system. FAX staff has noted these possible route adjustments and JKaplan agrees that the concept is practical and should not detract from the current FAX service in that area, but in fact would likely improve overall system reliability and attractiveness. A route segment analysis should be undertaken to determine activity along the sections of Routes 9 and 28 that would be modified to evaluate the possible effect.

5. **Route 45.** As discussed briefly earlier under Area Coverage/Routing (page 6), Route 45 is a very long and circuitous route and travels along, in some places, high speed corridors with few available stops (Herndon Avenue). **The route does not meet the FAX evaluation criteria for productivity and cost/passenger standards** relative to the rest of the system. However, because of the important medical facilities on the western end of the route on Herndon Avenue, some basic service level should be maintained in and out of this area. A possibly more efficient way to continue serving this area would be to turn back Route 45 somewhere in the vicinity of Shaw and Fruit, or possibly Barstow and Palm, thus eliminating several miles of travel and as much as 20 to 30 minutes of route running time from the current Route 45 schedule.

To cover the area eliminated on Route 45, extend Route 22 further north on West Street turning left on Herndon Avenue and going to the medical facilities as Route 45 does now. The routing could be extended a little further west past the railroad bridge on Herndon to serve the residential areas where no FAX fixed-route is presently operated. Route 22 currently provides more frequent service than Route 45 (30 minutes versus 60 minutes) and over a longer span of the day (from 6:00 AM to 10:30 PM versus 6:00 AM to about 9:00 PM). Route 22 already has a long route running time (1 hour and 15 minutes) which by extending the route as proposed will add as much as 15 minutes to the route. While this is not desirable (see comments below), the overall benefits to the FAX system integrity should be positive by eliminating: 1) a largely non-productive portion of Route 45, 2) duplicative service on some streets (on Palm, with Route 26), and 3) providing what may be a more attractive service – with 30 minute frequencies rather than 60 minutes – to the far northwestern portions of Fresno. Additional segment analysis of Route 45 along the northwestern portion of the route should be undertaken to determine the appropriateness of these route adjustments.

The above suggested possible revision challenges the earlier discussion where shorter routes and more one-directional routing are being recommended as a possible remedy for declining on-time performance trends and improving overall system efficiency. Route 22 already is quite long and travels in both a north-south and east-west direction (in southeast Fresno, east of the Downtown Transit Center). It may be more effective to reduce the length of Route 22

by eliminating the eastern portion of the route along Tulare Avenue, and replacing that service with another route. This concept, or other possible improvements to address the Route 45 issues, will need to be analyzed in more detail.

Service Schedules: The issues discussed below offer potentially cost saving scheduling changes.

1. **15 minute frequencies** – offered on four routes - are attractive to passengers, since missing a bus by a few minutes will require only a short wait for another. If the demand for the service is such that routes should operate throughout the day at 15 minute frequencies, then FAX is providing an excellent service to the passengers. At the same time, if a lesser frequency can be operated at off-peak periods, a large cost savings could result (see next two comments).
2. The four routes operating on quarter hour frequencies provide this schedule beginning at a very early hour (often 5:45 AM) and **operate throughout the day** until about 6:00 PM, when the service goes to 30 minute headways. It is somewhat unusual to see what often are “peak period” frequencies, offered over a full 12 hour period. More common is shorter frequencies during the peak travel periods, but less frequent service operating during the quieter parts of the day, usually late morning to mid-afternoon (e.g., from 9:30 AM to 3:30 PM). (Note: No analysis of ridership data by time of day has been undertaken to determine if this approach is applicable to any, or all, of the four FAX buses operating with 15 minute frequencies; the comments above are based on a limited review).
3. Three of the four routes with 15 minute headways **operate in a fairly narrow corridor** that may not require that intense level of service. It may be feasible to operate only one or two of the three N-S routes (30, 34, and 38) with 15 minute frequency and 30 minutes on the remaining line(s). Or, as noted above, an alternative could be to operate at least one or two of the routes on 15 minute frequencies throughout the day, but schedule the other one or two routes operating in the north-south corridor on 30 minute frequencies either all day, or as a minimum, during the part of day when there is a lower demand, e.g., for a six hour period between 9:30 AM and 3:30 PM. By operating two, or as many as four, less buses each hour for the six hour off peak period, a substantial reduction of service hours may be achievable, allowing FAX to shift those service hours to other routes and/or areas of the community where additional service is warranted. Again, further analysis of ridership by route segments as well as time of day, would be required before any changes are considered.
4. Several of routes begin their **first revenue service at the Downtown Transfer** center as early as 5:45 AM. It is typically more productive to begin routes in the neighborhoods where the system’s first passengers will be boarding the bus to go downtown to work, or to schools, colleges, or other destinations. There may be a scheduling-related need to start the early morning bus runs downtown and travel outbound, but it is likely that at least some small cost savings would result if many of the routes that begin their first run in revenue service downtown were eliminated. Possible runs to consider include:
 - The 5:40 AM Route 20 NB (instead start with the 6:25 AM bus coming in from the north).
 - The 5:55 AM Route 26 West/North (instead start at Nees and Blackstone at 6:35 AM),
 - possibly the 5:45 AM Route 28 NB (instead start with 6:00 AM run),
 - possibly the 5:45 AM Route 30 NB (instead start with 6:00 AM run), and
 - The 6:08 AM Route 34 SB (instead, start the bus at Cherry/Jensen at 6:25 AM)

Not all of the runs suggested to be eliminated may be appropriate because of early work trips that are being made on these runs, and the number of transit dependent individuals that reside

in the greater downtown area that rely on the early morning service. Further analysis of the demand on these early morning routes by time of day and route segment, as well as some O-D information, would be appropriate before any runs are considered for elimination.

There may be similar situations occurring in the last runs of the evening where some routes are ending their trips late at night at the Downtown Transfer center, although it appears this is minimal.

5. FAX operates a **“weekend” schedule** that is identical on both Saturday and Sunday, with service beginning as early as 6:45 AM in the morning. A more common industry operating practice is for Sunday service to start later in the day, since there is usually very little demand for such early service on Sunday. Beginning service later on Sunday, by even two or three hours, could result in a discernable cost savings. However, a review of recent GFI collected data from the first six months of FY 08/09 show that Sunday ridership is quite high relative to that seen on Saturday, with rates in the 80% range. Typically, Sunday ridership is only about half of Saturday’s. Before any efforts are made to adjust the level of early morning Sunday service as a possible cost savings, further analysis by time of day should be carried out to determine if starting service at 6:30 AM is warranted.

Fare Structure:

1. The current FAX fare structure offers **one of the lowest adult fares in the state of California** for larger operators (\$1.00 for adults). In addition, seniors 65 and over can use the bus system throughout the day for free. The City of Fresno is commended for keeping the base transit fares very reasonable in times of rising operating costs (both labor and fuel). But because of the severe recession that is impacting transit funding sources at both the regional and state levels, systems throughout the state are implementing fare increases to the \$1.50 to \$2.00 range (with some cities, even higher). While FAX has experienced continued increases in ridership in the last several years, the system has not been able to meet their objective of a 28% farebox recovery ratio established as a goal in the latest Short Range Transit Plan (*Goal 3, Provide Efficient and Effective Service*). FAX staff estimates the current level is about 24%. The agency should be evaluating possible fixed-route fare increases to ensure that service levels can be maintained at an appropriate level. JKaplan has no specific recommendations relative to the current fixed-route fare structure since FAX is trying to encourage ridership by keeping the service attractive to the greatest number of area residents. A few observations are provided that are offered for consideration on the fixed-route service. Additional comments on fares are provided in a later section for the Handy Ride operation.
 - **There are no student or youth fares or passes** available. Frequently, fares of one-half to three-quarters of the adult fare are available for youth from five or six years old through the age of 16 or 18. In communities with a large college or university, often an unlimited ride pass for the students is offered and paid for through student fees that are charged at the time of registration. JKaplan is aware of college students voting whether to charge themselves a fee as part of a regularly scheduled school election held by the associated student’s organization. Most often, the fee is approved by the majority of the students since it represents a very small part of the overall registration fees and cost of college.
 - FAX offers to passengers the **convenience of paying fares** by tokens, tickets, and booklets of 5 or 10 tickets, as well as the monthly pass for adult fares, and discounted passes for seniors between 62 and 65. A mid-month discount pass is also available for one half the monthly pass cost. All of these fare instruments provide a small discount

over the base fare for more frequent system users. While the different methods of payment provide a multitude of opportunities for the passenger, the cash handling and bookkeeping required for all the varied fares may be consuming an excessive amount of time for FAX staff to administer, track, reconcile with passenger boarding counts, etc. It may be appropriate to evaluate the administrative costs of the different instruments to determine if some of the payment methods are consuming a disproportional amount of staff time to manage.

Handy Ride Program

The brief review of this program concentrated on looking at available data on system performance over the past several years. Any calculations developed as a result of the review are only approximate and represent the best estimate of performance based on brief discussions with Handy Ride management staff at the city. No observations were made at the Handy Ride dispatch office nor were interviews conducted with the contractor staff due to time and budget constraints.

There appears to be the potential of a significant reduction in net operating costs in the program if the productivity levels can be increased by even a small amount, combined with a more equitable fare structure established for the service. However, additional information about ridership characteristics is needed before any specific recommendations can be developed.

A review of the data for the last several years show that the Handy Ride program has been able to achieve a productivity level in the range of 1.8 to 2.2 passengers boarded for every hour that a van is on the road in revenue service. The latest Productivity Evaluation (dated February 26, 2009) shows that the value achieved during FY 07/08 was 1.8 passengers per vehicle revenue hour. Based on JKaplan's past reviews of scores of ADA only paratransit systems throughout the state, and recent follow-up discussions with several agencies, the **values achieved by the Handy Ride program appear to be on the low side**. Rates of 2.2 to 2.5 and sometimes higher can often be reached and maintained through improved scheduling and encouraging more shared trips, while ensuring that the customer is not subject to unnecessarily long trip times (time boarded a van to drop off at destination). While several of the operators in the state that were contacted were also achieving productivity values in the 2.0 to 2.2 range, there were others whose service ranged higher, with Omnitrans in San Bernardino County operating their exclusive ADA paratransit service at the 2.5 to 2.7 passengers per hour level. It should be noted that many of the agencies who were reporting productivity levels at the 2.0 to 2.2 levels, had a substantially larger geographic area than Fresno in which to provide service (e.g., Contra Costa County Transit Authority, North Coast Transit District, the Metropolitan Transit System in San Diego).

Handy Ride Fare Structure

In most transit operations throughout the state and the country, the typical fare charged for ADA paratransit service ridership is twice that of the fixed-route adult fare (the maximum allowed by ADA regulations.) If the FAX base fare is \$1.00, the Handy Ride fare could be as high as \$2.00. The current fare of \$0.75 for a one way Handy Ride trip **is unreasonably low**. In addition to offering an extremely low cash fare, FAX sells a monthly pass that allows an eligible individual unlimited rides in a month for \$25.00. Because of the high cost to transport each passenger on a specialized paratransit service, offering unlimited rides through the sale of a monthly pass is rarely seen in the industry. Because the ratio of fares to operating cost for the Handy Ride program is so low (about 2.6%), it is strongly recommended that the unlimited monthly pass be phased out and replaced, if needed, with a ticket book or punch pass that would offer rides at a discount from the standard one way fare.

The base fare should be increased over time to a more reasonable fare level of at least 1.5 times the base fixed-route fare. This would bring the Handy Ride cash ride **from \$0.75 to \$1.50 but it could be phased in over several years** to deter the financial hardship that it may cause some passengers. Eventually, after the base fare is raised to the suggested level of \$1.50 per trip or even \$2.00 – to be consistent with other operators, a discounted ticket book of 10 rides for \$11.00, or even a 5 ticket book for \$6.00 could be offered to provide a lower cost alternative to frequent users. As the higher fares are phased in, comparable discounted fare instruments could be developed. In any case, the unlimited ride pass should be eliminated as soon as practical.

One other metric that can be used to evaluate the City of Fresno’s allocation of transit resources between fixed-route and ADA service is to look at the paratransit service program costs as a percentage of the total operating cost. The FAX Handy Ride program costs, at about \$5 million dollars annually, make up about 14% of the total system operating costs of approximately \$35 million. Anecdotal information gathered from several different systems (both larger and smaller operations than FAX) showed that between 4% and 8% is a more normal range. With improvements to productivity combined with a decrease in demand expected due to a more equitable fare charged for the paratransit service, the Handy Ride program costs could decrease from about \$5 million dollars currently to about \$3 million dollars, which would be equivalent to slightly less than 10% of the total FAX system operating expenses.

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