

Can the Postal Bus Play a Role in Providing Rural Transportation?

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In the search for new approaches to solving the rural transportation problem, one approach that has been proposed and investigated in the United States, and has seen widespread application in Europe, is the "postal bus". The postal bus concept basically involves the transporting of passengers in vehicles that are also engaged in the distribution and collection of mail along designated routes. The feasibility of the concept in terms of the nature of operational and institutional requirements and potential barriers is examined. The overall conclusion is that the integration of mail and passenger transportation appears to be a feasible approach to providing passenger service where none currently exists and/or for achieving greater efficiencies in the provision of both types of service.

There currently exists a substantial unmet need for "public" transportation in many rural areas in the United States. Both local and intercity services have been declining in recent years, and this has seriously limited the mobility of those rural residents who do not have access to automobiles. However, the viable options are quite limited; because of the extremely low densities and long travel distances involved, it is difficult to serve these areas efficiently with traditional forms of public transportation. This situation is exacerbated by rapidly escalating operating costs as well as the promise of reduced federal operating assistance over the coming years; rural operators are increasingly facing the realization that they must find new sources of revenue if they are to continue providing existing services, let alone expand their operations.

Both of these situations--unmet needs and worsening fiscal constraints--have spurred a search for new approaches to solving the rural transportation problem. One approach that has been proposed and investigated in the United States, and has seen widespread application in Europe, is known as the "postal bus". The postal bus concept basically involves the transporting of passengers in vehicles that are also engaged in the distribution and collection of mail along designated routes. These rural routes (called "star" routes), on which mail is distributed from regional centers to individual post offices (and then collected later in the day), are generally served by private carriers (called star carriers) under contract to the U.S. Postal Service. Thus, the postal bus would pick up and/or discharge passengers at the regional center or post offices (or along the route).

This integration of mail and passenger service can be carried out through one of three basic arrangements: (a) a star carrier transporting passengers along its mail distribution routes, (b) a passenger service contracting with the U.S. Postal Service to transport the mail (i.e., on star routes), or (c) a combination of the first two--i.e., a passenger service provider or public body contracting with a star carrier to provide passenger service. The first and third frameworks allow for the expansion of service to areas that are currently without it; the second addresses the budgetary problem facing existing operators by providing them with additional revenue while also enabling them to extend their passenger operations (i.e., to the star routes).

There are currently very few postal bus operations in the United States, and those identified to date are fundamentally star carriers. On the other

hand, there are many such services in Europe. The major question that needs to be answered, then, is whether the postal bus can play a role in providing rural transportation in this country. This paper addresses that question, based on examination of existing operations, a review of previous (and current) studies, and an assessment of the key operational and institutional issues related to the feasibility and the potential of the concept.

REVIEW OF EXISTING POSTAL BUS OPERATIONS

The postal bus concept is certainly not a new idea. During the 1800s, stagecoach lines, which had developed to carry the mail, began to transport people and freight as well. Most of these operations flourished into the early part of this century, when they were forced out of business largely by the expansion of the railroads. The joint transportation of mail and passengers was never reintroduced in the United States to any significant extent, but the idea has taken hold once again in Europe. Although institutional and operational conditions in Europe are generally somewhat different from those here, the existing operations abroad do provide some indication of the potential of the concept and thus bear examination.

Europe

Scotland, England, Switzerland, Germany, Austria, and Sweden currently operate various forms of postal buses. In Switzerland, Germany, Austria, and Sweden, passenger service is largely limited to the major bulk-mail collection and distribution routes. Most of these buses have been operating for a few decades and have developed into passenger buses that also carry mail; the buses generally travel on trunk routes at fairly high speeds.

The Swedish Postal Administration, for example, operates the Mail Coach Lines, which deliver mail and freight, plow snow, and carry passengers in rural northern Sweden. The system operates over a route network of 7680 km (4800 miles), delivers approximately 3648 kg (38 tons) of mail and 4500 kg (50 tons) of freight per day, and carries 2.4 million passengers/year. Most routes are served by 3-6 round trips/day, and vehicles range in capacity from 9 to 55 seats.

The Swiss Postal, Telegraph, and Telephone (PTT) Service operates more than 8000 km (5000 miles) of routes and as many as 1300 vehicles. The *Reisepost*, a department of the Postal Service, operates some routes itself (known as the *Regie Lines*) and contracts out some of the lines (known as the *Postautohalter Lines*) to individuals. In 1980, 63 million passengers were carried on the *Reisepost* system.

The majority of the British postal buses, on the other hand, are similar to other European services only in that they provide a basic two-way service to and from a town or village. The British services differ in that almost all involve house-to-house delivery duties and letter-box collections rather than bulk-mail transportation. A typical Scottish postal bus makes two runs a day, one in the morning to deliver mail to towns and wayside mail boxes and

the second to collect mail from the towns. On both runs, the empty backhaul is used to transport people. In certain cases, only one-way service is available for passengers because of the scheduled times of the runs; school buses or private cars serve the other leg of the trip.

The development of Scottish postal buses was expedited by the passage of two pieces of legislation. In 1969, the British Post Office was converted to a public corporation. In recognition of the fact that the postal vehicles in rural areas were underused, the Act of 1969 authorized the British Post Office to do anything "which appears requisite, advantageous or convenient for the purpose of executing its duties." It specifically stated that the Post Office "may carry for hire or reward passengers in vehicles used by it for the purpose of its business." Previously, the 1968 Transport Act had made capital grants available to operators of regularly scheduled bus services for new vehicle purchases and offered refunds on gasoline taxes paid to operate these vehicles. Postal buses were deemed eligible for these subsidies.

Most Scottish postal buses operate at a slight surplus under the grant program. As a result, the program expanded rapidly in Scotland from 1 bus in 1971 to 127 in 1980. In 1980, Scottish postal buses carried a total of 156 000 passengers, or approximately 24 passengers/service/week. The services are offered in locations where users have little real alternative. About half the trips are made by senior citizens, and most trips are made for shopping and personal business purposes. Of necessity, the timing of most trips made on postal buses must be flexible so as to be accommodated by the specific schedule of the vehicle.

Despite the apparent success of the Scottish postal buses, the enthusiasm of the Scottish Post Office has waned somewhat. Apparently, it finds the passenger operations more time-consuming than warranted given the small surplus of the operation. Current sources indicate, however, that service has not been curtailed and that the network is being maintained at the current level.

United States

Very few examples of postal bus service comparable to the European services exist in the United States. Although it is not uncommon for U.S. intercity buses to carry mail, their primary function is passenger transportation; the mail contract, like package delivery, is secondary. There are, however, a few U.S. examples of the postal bus concept; we have examined two of these, both located in California.

The Mount Lassen Motor Transit Company in Tehama County operates a single 176-km (110-mile) route, transporting people, freight, and mail between Red Bluff and Susanville as well as six communities in between. The service runs 6 days/week. The one-way fare for the entire route is \$7.25 and the round-trip fare is \$13.80. Lower fares, prorated according to distance, are charged for shorter distances. The vehicle used is a 1976 Transcoach that has a seating capacity of 8 passengers (there are plans to expand to 14) and a mail capacity of 9 m³ (300 ft³). Ridership, which has been gradually increasing, currently averages approximately 4 one-way trips/day; 886 passengers were carried in 1978, 1005 in 1979, and 1204 in 1980. Passenger revenues account for approximately 12 percent of total revenues. In 1980, passenger receipts totaled \$8384, freight revenues \$19 530, and the mail service \$36 019. Passenger fares are regulated by the California Public Utility Commission (PUC); Mount Lassen has petitioned for a fare increase of 15-30

percent, since fares have not been raised in four years.

Whereas the Mount Lassen manager indicated that the company just breaks even on the passenger service, the numbers cited above suggest that it is making some profit, since marginal costs certainly do not amount to \$8000. Although the vehicle capital cost is higher than it would be for a simple mail van, the primary marginal cost of the passenger service is the insurance premium; the Mount Lassen manager estimates that, without passenger service, the insurance costs would be one-third of the current premium. No federal funding is received, either for capital or operating subsidy, but the state of California would like Mount Lassen to begin operating a new route under its rural assistance program. However, Mount Lassen is reluctant to do so, feeling that the acceptance of the subsidy would subject them to further regulation.

Like Mount Lassen, Kernville Stage and Freight Lines, based in Bakersfield, also carries passengers as a secondary service on its 77-km (48-mile) mail route. The service began as a stagecoach line and has carried both mail and passengers since 1865. Service is currently provided to and from the Bakersfield Greyhound bus terminal. The service is operated 6 days/week; the one-way fare is \$3.10 and the round-trip fare is \$5.00. The vehicle used is a Ford van equipped with four seats and a 42-m³ (1400-ft³) mail compartment.

Ridership on the Kernville service averages 2 one-way trips/day; passenger revenues are approximately \$6.00/day, or \$1800/year. The passenger revenue accounts for roughly 5 percent of total annual revenue. The manager of Kernville Stage and Freight Lines indicated that the number of passengers using the service has remained virtually unchanged for more than 10 years. He attributes this to the slow travel times and the low population density of the service area.

The manager also indicated that, as in the case of Mount Lassen, the company just breaks even on the passenger service. However, since the manager does not perceive insurance costs to be significantly higher due to carrying passengers, it is likely that Kernville is also making some profit, albeit quite small. Nevertheless, the company has petitioned the state PUC to discontinue the passenger component of its operation, regarding it as "a nuisance".

Differences Between European and U.S. Operations

The major difference between European and U.S. postal bus operations can be traced to the institutional and regulatory climates in the various nations. Whereas the concept has not been formally promoted, or even sanctioned, by the U.S. Postal Service, it has been formally endorsed by the postal departments in the aforementioned European countries. These departments have encouraged--in some cases, even required--the integration of mail and passenger service as a means of achieving economies in the delivery of both. As indicated earlier, the Scottish postal buses are subsidized and have come to constitute an important element of the nation's rural transportation program. In contrast, the U.S. Postal Service prohibits the transporting of passengers in its own vehicles and, in at least one instance (in West Virginia, as discussed in the next section of this paper), resisted--and effectively defused--an attempt at implementing a postal bus demonstration.

Although there exist various sociodemographic and geographic differences between the United States in general and specific European countries (e.g., Scotland has a lower rate of automobile ownership

and Switzerland has a generally rougher terrain), variations within the United States are just as great as those between the United States and any of the European countries. Thus, such differences cannot be said to account for the different postal bus situations here and abroad. More significant, perhaps, are attitudinal differences toward public transportation on the two continents: Europeans are generally more inclined to use it than are Americans. Residents of rural Scotland, for instance, have apparently grown accustomed to accommodating their travel needs to the infrequent postal bus schedules, a situation that is less likely to occur in the United States. Of course, as automobile ownership and operating costs grow, the willingness of Americans to adjust their travel schedules to those of available transportation providers may increase as well.

FINDINGS OF PREVIOUS AND CURRENT STUDIES

Although the postal bus concept has yet to see widespread implementation in the United States, there have been several studies and preliminary investigations of its feasibility. Although none of these have either produced conclusive evidence as to the potential of the concept or led to a demonstration, it is useful to review their findings.

Thus far, feasibility studies have been undertaken by the California Department of Transportation, the West Virginia Office of Economic and Community Development, a student at Pennsylvania State University, and Multisystems, Inc. In addition to these studies, the concept is being actively considered by the Pennsylvania Department of Transportation, the Greater Portland (Maine) Council of Governments, and White River Transportation Services of Bethel, Vermont. (It is certainly conceivable that the postal bus concept is being investigated elsewhere as well, but our research has not identified any other examples.) These efforts are described briefly below.

In 1978, the California Department of Transportation (Caltrans) investigated the feasibility of star route passenger service in two communities (1). The study briefly discussed the regulatory environment in California but focused on the operational feasibility of a postal bus demonstration in the two study areas. The study looked at the following issues: route and schedule compatibility of mail and passenger operations, duplication of existing public transit, potential ridership, type and cost of vehicles for joint mail and passenger use, and operating costs.

One study location was quickly discarded, largely because the mail delivery schedules did not meet potential ridership needs with respect to time and direction. The other, however, was judged to be more promising. Revenue projections based on the study ridership estimate and a reasonable fare level were compared with equipment and operating costs. The analysis showed a small profit for star carriers from the passenger service.

Accordingly, the study enthusiastically endorsed a demonstration project. However, a decision was made not to proceed with the demonstration, apparently because of a judgment that demand would be lower than estimated due to the nature of the star routes under consideration. It was projected that lower ridership could result in a deficit instead of a profit, which would make an unsubsidized operation infeasible.

A second feasibility study was conducted by the West Virginia Office of Economic and Community Development (WVOECD). Instead of providing service in unserved areas, WVOECD proposed to replace the

public transit service in rural Pocahontas County with postal buses as a Section 147 demonstration (Rural Highway Public Transportation Demonstration Program of the Federal-Aid Highway Act of 1973): Star carriers would enter into contract agreements with the regional public transportation authority.

The demonstration was not conducted, however, because the feasibility study uncovered a number of potential problems. First of all, the star routes in the area made only one trip per day and would need to be modified to accommodate the needs of passengers. Second, the vehicles would be expensive, because they would have to be accessible to the handicapped (i.e., meet the requirements of Section 504 of the Rehabilitation Act of 1973). Third, the U.S. Postal Service regional Transportation Management Office (TMO) resisted the idea; it would require changes in their operations that would only be in effect for a trial period and would produce no apparent benefit to the Postal Service. Fourth, the cost was deemed to be excessive in that it required a 50 percent subsidy (although the study also indicated that this was probably lower than the projected subsidies for other public transportation services). Apparently, however, the most significant factor that caused the proposal to be dropped was the lack of interest on the part of the U.S. Postal Service. It should be pointed out, though, that this was probably too ambitious a plan for an initial demonstration of the concept. A more modest effort would seem to have been more appropriate and might have been better received.

A more recent study was conducted by Adams (2), a student at Pennsylvania State University, to determine whether a viable postal bus demonstration could be conducted in the State College, Pennsylvania, area. The Adams paper contends that the routes selected in both the California and West Virginia studies were atypical of most star routes and that they were generally incompatible with the requirements of passenger transportation. Adams proposed a postal bus demonstration that would use routes he considered more appropriate. Although a long lay-over would be required on the selected routes, he pointed out that the postal bus would provide a means for residents in rural towns to make use of stores, medical services, and a senior citizen center and return home the same day. No demand or cost estimates were included in the paper.

In addition to these studies, offices in at least three states are currently interested in the postal bus concept. The Pennsylvania Department of Transportation (PennDOT) has become interested largely in response to the efforts of Adams and the enthusiasm of the manager of the local postal facility in State College. PennDOT wants to undertake a study, through its Section 18 program (Urban Mass Transportation Act of 1964, as amended), that would look at the institutional and administrative feasibility of postal buses in Pennsylvania. If a favorable recommendation ensues, a demonstration project will be conducted.

The Vermont Agency of Transportation (Division of Public Transit Operations) is also quite interested in the postal bus concept and encouraged White River Transportation Services (WRTS) of central Vermont to submit a transportation system management (TSM) proposal to the U.S. Department of Transportation (DOT), that would include funds to assess and implement postal bus service. WRTS proposed to conduct a needs survey and analysis that would lead to a demonstration. WRTS envisioned contracting with a star carrier to provide service in the most rural sections of its service area. The TSM study was not funded, but WRTS and the state are still interested in testing out the concept.

In Maine, the Greater Portland Council of Government (GPCOG) has expressed interest in integrating mail delivery and passenger service in Cumberland County. GPCOG has identified seven potential star routes on which passenger service might be provided. It has assumed that regular buses could be adapted to meet the U.S. Postal Service specifications; however, no cost analysis has been conducted.

Thus, there has been a fair amount of interest in the potential of integrating mail and passenger transportation in the United States, as a means of extending transportation service to people without other options by making more efficient use of existing resources (i.e., star carriers) and as a means of enhancing the operating base and revenues of passenger carriers. None of these studies or analyses have led to demonstrations (although there may yet be one in Pennsylvania), but current trends in transportation economics suggest that this may prove to be a valuable approach to serving low-density areas that do not have any public transportation. As costs for all types of transportation operations rise and as the level of federal operating assistance dwindles (the level of Section 18 funding is not expected to be increased over the next several years and may yet be eliminated), interest is likely to increase over the coming years.

Each of the studies discussed above looked at a particular area (in fact, particular routes) in assessing the feasibility of postal buses. Each study encountered specific barriers associated with its particular routes and/or institutional setting. However, the nature of the barriers is such that they may well be peculiar to the individual situation and would not constitute problems in other areas. The next sections of this paper examine the operational and institutional feasibility of the postal bus concept within the full range of potential barriers and benefits.

OPERATIONAL FEASIBILITY OF POSTAL BUS CONCEPT

The studies described above raised a number of key issues that affect the operational feasibility of postal buses. The following discussion reviews these issues, which include route and schedule compatibility, demand, costs, and the interest of the U.S. Postal Service and star carriers in the idea.

Routes and Schedules

As discussed above, postal bus routes and schedules must be compatible with both mail and passenger transportation needs. Many star carrier routes and schedules operate outward from regional centers in the mornings and inbound in the afternoons, against the normal pattern of demand for passenger transportation service. Many star carriers also travel during unacceptably early or late hours, and delivery schedules are tightly drawn.

Some star routes, however, do appear to better meet the travel needs of rural residents and would be good candidates for postal bus service. Where the (local) postal facility is interested, some routes and schedules could also be adjusted somewhat to better facilitate a postal bus operation. The manager of the State College, Pennsylvania, sectional facility, for example, has expressed a willingness to adjust routes to try to accommodate postal bus service if an interested star carrier can be found. He said that, although the star carrier contracts are put out for bid and processed at the regional TMO (in Pittsburgh), the local sectional facility has some latitude in defining the actual delivery routes and schedules. Thus, if the proper

routes are selected and local postal managers are willing to make slight adjustments, routes and schedules should not constitute a barrier to the concept.

Demand

Data on rural ridership are seldom disaggregated so as to be useful in gauging potential demand for postal bus services (i.e., covering individual routes in very low-density service areas). The postal bus systems discussed earlier, Mount Lassen Motor Transit Company and Kernville Stage and Freight Lines, carry approximately 4 and 2 riders/day, respectively. Mount Lassen has experienced an annual ridership growth of approximately 13 percent for the past 3 years; Kernville ridership has remained stable for 10 years. Whether Mount Lassen advertises its service to the public was not indicated; Kernville does not.

To further complicate the problem of determining potential patronage, traditional methods of projecting demand are generally inappropriate for rural areas because the necessary background data are often not routinely collected (a major reason being that these operations often have very small staffs and cannot afford the time required to collect and tabulate such data). In any event, although the demand for postal bus service is likely to be quite low, considering the low level of service offered, it may be high enough to make the service feasible, at least as a secondary source of revenue. (A postal bus operator does not have to be especially concerned with the level of passenger demand on the star route, since he or she would be carrying the mail primarily for the purpose of generating additional revenue.)

Costs

The principal marginal costs associated with a postal bus service include (a) vehicle conversion or procurement, insurance, and licensing and (b) labor and fuel. As regards the vehicle used, the postal service specifies the size of the mail compartment based on the maximum anticipated daily mail volume over the four-year contract period. Most of the vehicles currently operated by star carriers are station wagons or vans that have a mail capacity of 6-30 m³ (200-1000 ft³). In terms of applicability to postal bus operation, station wagons generally do not provide the required locked compartment for mail separate from the passenger area, and vans typically do not have seating capacity for more than one or two passengers.

As mentioned earlier, the Caltrans study proposed use of a six-passenger crew-cab (four-door) pickup truck with a lockable camper shell and additional steps into the cab. Both 0.68- and 0.9-Mg (0.75- and 1-ton) models were considered, depending on mail volume requirements. (The 1981 cost of these vehicles was around \$10 000/truck.)

In the case of a passenger transportation operator seeking to carry the mail, the only vehicle-related cost involves adapting the interior so as to create a separate mail compartment. The cost of this will depend on the size of the compartment required under the terms of the contract and the nature of the vehicle (e.g., how many seats and wheelchair stations).

For star carriers, insurance and licensing fees increase substantially when passenger service is added. For instance, the California PUC requires passenger insurance coverage as much as 15 times higher than that required by the U.S. Postal Service for the transportation of mail. Mount Lassen indi-

cated that, without passengers, its insurance costs would be only one-third of current payments; PennDOT expects that insurance costs might account for 80 percent of the cost of a postal bus demonstration. The cost tends to be especially high for new operators that have no history of providing passenger service. One rural transportation system contacted reported annual insurance costs of between \$14 000 and \$17 000 for 12 vehicles carrying 25 passengers/vehicle/day. Although postal buses would usually fall into lower coverage categories due to lower passenger volumes, premiums can still be expected to be fairly high.

Licensing fees would include the necessary driver's licenses and the cost of any required certification. The fees for certificates of public convenience and necessity (CPCNs) for transporting passengers are generally between \$10 and \$75, and renewals are between \$5 and \$35.

Labor and fuel costs for star carriers should not be substantially higher with passenger service. First of all, many star carrier drivers are self-employed. For other cases, the U.S. Department of Labor publishes the Register of Wage Determinations Under the Service Contract Act, which specifies the minimum hourly wage for drivers employed on contracts for mail hauling, based on region and type of vehicle. The March 1981 Register specifies an hourly minimum between \$7.50 and \$9.00.

Of course, integrally related to the cost of implementing and operating the postal bus is the level of additional revenue that the service will generate. For the star carrier transporting passengers, the amount of revenue will obviously depend on the fare level and the level of ridership. As explained earlier, the two postal bus operators contacted claim that they collect sufficient revenue to cover the additional cost of the passenger service, and it seems likely, in fact, that they make at least some profit. Nevertheless, several other star carriers contacted did not feel that they would be able to cover their additional costs through the farebox. That seems unlikely, given the nature of additional costs. However, such a concern is likely to discourage many star carriers from adding passenger transportation unless they are subsidized by a public body.

On the other hand, a public transportation operator stands to gain considerable revenue from taking over a star route. These routes carry contract reimbursement rates that average nearly \$0.56/km (\$0.90/mile), and total annual revenue from star route contracts has been as high as \$85 000 for star carriers in Vermont and New Hampshire (most of these carriers are in the \$15 000 to \$30 000 range). Such guaranteed revenue is much needed by many rural transportation providers (i.e., in light of federal cuts in such areas as social service programs, the Comprehensive Employment and Training Act, and community action programs), and thus makes such an arrangement rather attractive, at least where operators can cover the star routes with minimal additional expenditure (i.e., without having to purchase additional vehicles).

Other Issues

Other considerations include the interest of star carriers in operating postal buses and the timing of the initiation of service. Star carriers interviewed were not interested in carrying passengers because they did not want to increase their administrative burdens and because they currently use their vans for other, more lucrative activities (e.g., freight delivery) in between mail deliveries. One carrier, for instance, delivers newspapers through-

out the region, whereas another transports local produce.

If this lack of interest is indicative of star carriers in general (and it might well be, in light of the low potential payoff from carrying passengers), then the greatest potential for the postal bus concept probably lies in the passenger carrier option--either bidding on star routes themselves or contracting with star carriers. Several passenger service operators contacted (both public and private) were generally interested in one of these options, either adding mail service as a means of increasing revenues or contracting with star carriers to transport passengers in areas too difficult for them to serve.

Of course, the timing of the initiation of service is also a factor in terms of the organizational arrangement because of the four-year contract schedule of the Postal Service. A new four-year contract period began July 1, 1981, in Pennsylvania, Vermont, and New Hampshire and will start July 1, 1984, in Maine. Since the Postal Service must pay an indemnity for breaking a signed contract, any postal bus implemented on an existing star route would require the participation of the existing star carrier. It is essentially for this reason that PennDOT proposes to find an interested star carrier within the boundaries of a transit authority. The authority would then sign a purchase-of-service agreement with the star carrier to provide passenger transportation along its mail route.

The alternative option (i.e., if a passenger carrier wishes to directly operate the postal bus service) would require that the interested operator follow the standard star route contract process and bid on the star route in question at the appropriate time.

To summarize, the issues discussed here will have rather different impacts, depending on the nature of the particular location and situation. For instance, some routes and schedules do not lend themselves to passenger service, whereas others are more conducive to the integration of mail and passenger service. The nature of marginal costs probably constitutes the most significant operational constraint to implementing a postal bus arrangement, although this will obviously be affected by the level of demand and the fare and, thus, the revenue generated. Other issues (e.g., nature of interest and timing) will certainly affect who operates the service but would not seem to represent barriers to implementation in general.

REGULATORY AND INSTITUTIONAL ISSUES

The regulatory requirements and administrative procedures that can have a bearing on the feasibility of a postal bus operation in the United States are reviewed below.

U.S. Postal Service

As previously mentioned, although the U.S. Postal Service owns and operates a large fleet of mail vehicles, private contractors, known as star carriers, perform much of the mail distribution among rural post offices. Star carrier contracts are awarded by the U.S. Postal Service TMOs located in each of approximately 20 subregions. Generally, the contracts are renewed or advertised for bid on a state-by-state basis. In mid-1981, for example, the New England region TMO (located in Boston) renegotiated contracts for New Hampshire and Vermont. Most contracts are set for a four-year period, the maximum period allowed by U.S. Postal Service regulations. However, if the TMO anticipates a change in

mail volumes, it can set the contract period for a shorter period of time.

When the contracts are awarded, current contracts are renewed whenever possible. The contract is advertised for bids if the service provided by the contractor has been unacceptable, if an unreasonable rate increase is requested, or if the contractor does not wish to renew the contract. Sealed bids are requested; the bid price must include operational, fuel, and payroll costs and the contractor's profit. The contract is then awarded to the lowest reasonable bidder or to the bidder deemed "most advantageous".

Although federal rules and regulations prohibit the use of U.S. Postal Service vehicles for carrying anything other than mail, there is nothing in the rules and regulations for contract carriers that prohibits the use of these vehicles for carrying passengers; the Postal Service General Provisions (3) require only that the mail be carried in a locked compartment separate from the passengers. In fact, in contracting out a route, the Postal Contracting Manual (4) stresses that "it should be determined that no other form of transportation exists that would be less expensive to handle the mail involved at the desired service standards."

On the other hand, in the case of using star carriers to transport passengers, the prevailing attitude of the Postal Service is that passengers may be carried only if they in no way inconvenience or inhibit the timely delivery of the mail. The General Provisions (3) specifically state that "the mail shall not be delayed to accommodate passengers, freight, or other traffic."

Each regional TMO, however, has considerable latitude in the interpretation of these provisions. The reactions of the regional TMOs that were contacted ranged from some willingness to experiment with the postal bus concept as a possible way to hold down the rapid growth in the per mile rate, to general skepticism, to a feeling that, although there are no insurmountable legal hurdles, the administrative problems would be monumental.

Thus, although the U.S. Postal Service does not prohibit the carrying of passengers on its contract routes, it does have certain specific requirements (i.e., concerning the timing of delivery and collection and the nature of the separate mail compartment) and contracting procedures that affect potential postal bus operations. Although these do not constitute real barriers to the concept, a reluctant regional contracting office can create administrative roadblocks to its effective implementation and operation. Where the regional facility is amenable, it should be possible for the administrative and regulatory requirements to be worked out fairly easily (and modified if necessary).

State Regulations Pertaining to Passenger Transportation

Unless specifically given exempt status, as in the case of motor vehicles engaged exclusively in the delivery of the U.S. mail, most motor carrier and passenger transportation services that operate entirely within the boundaries of a state are regulated by the state PUC. These regulations cover safety (e.g., licensing of drivers) and insurance and, to varying degrees, rates, routes, and schedules for passenger transportation. The regulations that pertain to postal bus operations in selected states are discussed below.

As previously discussed, California has a history of combined mail-passenger operations. As a result, the California PUC has a set of regulations specifically for such operations. These regulations re-

quire a CPCN for all carriers that propose to transport passengers over a regularly scheduled route. Once a certificate has been awarded, a carrier must petition the PUC to transfer the certificate to another operator or to discontinue service.

Other states (e.g., Maine, New Hampshire, Vermont, and West Virginia) also require such certificates for passenger transportation operations and have similar requirements regarding license transfers or discontinuance of service. Maine and Vermont require a public hearing on each application to help ensure that the application or proposed discontinuance is in the public interest.

Some states exempt certain government activities from public utility regulation. Chapter 376 of the New Hampshire Property Transportation Law specifically exempts "motor vehicles engaged exclusively in work for any branch of the Government of the United States or for any department of this state, or for any county, city, town or village...." Pennsylvania law has a similar clause that exempts routes operated by public transportation authorities from specific regulation by the Pennsylvania PUC. As stated earlier, the postal bus study proposed in Pennsylvania plans to look into the feasibility of working through a regional transportation authority to avoid the requirement of obtaining a separate CPCN. By signing a purchase-of-service agreement with a star carrier, the authority could issue temporary operating rights that could be easily transferred from carrier to carrier by simply transferring the purchase-of-service agreement.

As suggested earlier, most states also specify the minimum insurance requirements for motor vehicles engaged in the transportation of passengers. These requirements are considerably higher than those set by the U.S. Postal Service for mail delivery alone.

The CPCN is not difficult to obtain in most states, on payment of the appropriate fee (ranging from \$10 to \$75 in the states surveyed), as long as the operation is "sound" and there is no competing service in the area. The major drawback of this requirement for star carriers willing to transport passengers is that, once a certificate is awarded, the requirement to provide service remains until such time as the issuing agency gives permission either to transfer authority or to discontinue service. Thus, if a star carrier chose to discontinue carrying mail or the postal service chose not to renew a star carrier's contract at the end of the four-year period, the requirement to carry passengers would not automatically be terminated as well. If the new star carrier wished to carry passengers, he or she would have to petition to transfer the certificate. If he or she did not wish to carry passengers, the holder of the certificate would have to provide service until authorized to discontinue service. Such a requirement may make many star carriers reluctant to enter into such an agreement; the proposed PennDOT arrangement may therefore make the postal bus concept considerably more appealing to star carriers.

Federal Transportation Regulations

If postal bus operators sought to use federal transportation funds--e.g., Section 18 (rural) or Section 6 (demonstration)--they would be subject to certain regulations affecting public transportation operations. These regulations include Sections 13c and 3e of the Urban Mass Transportation Act of 1964 and DOT rules pertaining to Section 504 of the Rehabilitation Act of 1973. The first, Section 13c, deals with protection of labor in existing public transportation operations; it requires that a new opera-

tor receive a "sign-off" by the U.S. Department of Labor. Section 3e pertains to the protection of the rights of private operators. The DOT Section 504 regulations relate to accessibility requirements (for the handicapped) on public transportation services; as currently stated, all transit fleets in areas of 50 000 or more people must be made accessible to the handicapped (i.e., a certain percentage of vehicles must be equipped with wheelchair lifts).

Although Sections 13c and 3e might present certain administrative hassles to potential postal bus operators, they are not likely to constitute serious impediments to implementation of the concept. Section 18 applicants have generally been granted a one-time waiver of the Section 13c provision if absolutely no service exists at the time of project implementation. Since there typically would be no existing transit service in areas that initiate postal bus service, Section 13c should not be a problem. Similarly, Section 3e is not likely to be a problem in the implementation of a postal bus service, since such a service would generally be introduced only in areas not currently served by other private operators (e.g., taxis).

The Section 504 rules, as they are now stated, could prove troublesome in that postal bus operators might be required to provide lift-equipped vehicles (at least 50 percent of the fleet would have to be accessible). However, these rules have not been finalized. At this time, it is unclear how the final rules will affect rural operations in general and the postal bus in particular.

CONCLUSIONS

Based on the research conducted thus far, it would seem that the postal bus is certainly a feasible concept for providing passenger transportation service where none currently exists and/or for achieving greater efficiencies in the provision of both passenger and mail distribution and collection services. The integration of these two functions can potentially be accomplished through three different arrangements: (a) a star carrier transporting passengers, in addition to its normal mail distribution functions, on its own initiative; (b) a star carrier providing passenger service under contract to a public body (i.e., a regional transportation operator or authority or a county government); or (c) a passenger transportation service operating a star route in addition to its normal functions.

Of these alternatives, the first would seem to offer the least potential for developing a postal bus operation. As Table 1 indicates, there are considerably more potential barriers to a star carrier adding passenger service than to a passenger carrier adding mail service. Whereas none of these barriers is insurmountable (actually, most will not be factors in the majority of situations), the combination of several can make the endeavor more

trouble than it is worth. Moreover, the cost issues alone may be serious enough to dissuade most star carriers from initiating such an effort. There is certainly the potential for making a profit. However, in a market in which demand is highly unpredictable and uncertain, it would seem that many star carriers would be unwilling to put up with the administrative problems associated with procuring a CPCN, and the operating requirements of marketing the service, collecting fares, and attempting to meet passengers' travel needs, for a limited potential benefit. Furthermore, the requirements associated with common carrier regulations discourage experimentation with the postal bus concept in that those star carriers that receive a CPCN cannot readily discontinue passenger service if it does not prove financially viable.

The second alternative, which involves subsidization of a star carrier, appears to have some promise. Although the star carrier might still be faced with the regulatory requirements mentioned above, he or she is guaranteed a profit (or at least a break-even situation) and thus has an incentive for carrying passengers. This arrangement will benefit the contracting body in that it is likely to be less costly to subsidize a mail carrier to transport passengers along its existing route than to provide a separate passenger service in that area.

Finally, the third option--the passenger carrier taking over a star route--would seem to have considerable potential, providing an operator can successfully bid on a star route. Since star contracts are generally renewed as long as the existing carrier wishes to continue (and if the carrier provides adequate service), this alternative can only be implemented in a location where an existing star carrier does not wish to renew the contract at the end of a four-year cycle and where the public transportation operator is able to submit a low enough bid. Since star carriers do on occasion retire, die, or simply decide to get out of the business, renewal is not a major barrier in all locations; however, the ability of the prospective postal bus operator to come up with a low enough bid may constitute a serious barrier in most places. The cooperation of the Postal Service in a particular location can therefore be quite important.

The third arrangement offers several advantages (over the other two) for the prospective postal bus operator: (a) no need for a new CPCN, (b) little or no increase in insurance payments, (c) no need for major vehicle modifications, and (d) less uncertainty about the ability of revenues to cover costs, since a certain demand may already exist and, more important, since the primary reason for carrying the mail would be to increase revenue by way of the Postal Service contract (generally considerably more remunerative than carrying passengers in low-demand areas). In light of proposed federal transportation cutbacks, as well as rapidly escalating operating costs, the prospect of a guaranteed revenue source

Table 1. Potential barriers to postal bus implementation and operation.

Type of Issue	Barrier	
	Star Carrier Providing Passenger Service	Passenger Transportation Operator Providing Mail Service
Regulatory and/or institutional Operational	Must get CPCN and must continue to carry passengers, even if no longer carrying mail; Section 13c; Section 504 Strict mail distribution schedules (i.e., without tolerance for passenger pickup and drop-off); probability of very low level of service and potential difficulties of passengers getting to and from postal bus stop; incompatibility of some star routes with passenger needs	Proper mail compartment; timing of star contract cycle (every 4 years) and nature of bidding procedure Strict mail distribution schedules
Cost	New vehicle; additional insurance	Adaptation of vehicle (for mail compartment)

is likely to appeal to many rural operators.

Thus, it is not surprising that interest in the postal bus concept is growing, as demonstrated by the number of recent studies and planning efforts as well as increasing concern on the part of rural operators over future funding sources. Although it is difficult to predict demand for such service, the results of current systems suggest that there is certainly some demand, however modest, for even a very low level of service in low-density areas. Permutations of the various institutional and operational issues may impede efforts to implement a postal bus operation, but none of these issues should constitute major barriers, at least in a cooperative institutional setting (i.e., referring to the state PUC and the regional postal facility). Plans for implementing postal bus service to date (except for the existing operations, of course) have been thwarted by uncooperative Postal Service officials and/or inappropriate scope of service. In the proper setting, a modest effort (i.e., covering only one or two routes to start with) would seem to have a good chance at successful implementation and operation.

In summary, this paper has examined the feasibility of the postal bus concept as a means of improving the rural transportation situation. Based on the evidence to date, it would seem that the integration of mail and passenger transportation functions can potentially play a role in providing rural transportation, at least in certain areas and institutional settings. This last point is the

key: The regulatory requirements and restrictions, operational environment, and nature of demand vary considerably from one area to the next, and the feasibility of the postal bus varies accordingly. Therefore, demonstrations and attempts in several diverse settings are necessary to enable a true assessment of the applicability and potential of the concept.

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Abridgment

Section 13c Labor Protection: A Review of Its Effectiveness and Impacts

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The impacts of the Section 13c special warranty and waiver procedures on the nonurbanized transportation program, which were authorized by Section 18 of the Urban Mass Transportation Act of 1964, as amended, are assessed. The study found that warranty procedures at the state level caused significant initial program delays. Once the warranty was accepted by the state department of transportation, however, little delay was observed. Conversely, rural transit operators and government officials expressed their concern over the unknown liabilities implied in the warranty. Most operators signed the warranty to fulfill grant requirements only, not understanding fully their obligations under the warranty. Generally, transit employees as a group were not aware of the protections offered them. The study uncovered no evidence indicating that labor rights would have been violated in the absence of the warranty. Furthermore, the lack of understanding by transit managers and employees of the warranty provisions seriously constrains the effectiveness of the Section 13c labor protections in the Section 18 program even if labor rights were violated.

The Surface Transportation Assistance Act of 1978 added a new Section 18, Formula Grant Program for Areas Other Than Urbanized Areas, to the Urban Mass Transportation Act of 1964. Section 18 authorized funds for capital improvement and operating subsidy for public transportation projects in small urban and rural areas. As with urban transportation projects, the labor protection provisions under Section 13c have been extended by the Urban Mass Transporta-

tion Administration (UMTA) to all grants under Section 18 programs.

Section 13c requires that fair and equitable arrangements be made to protect the interests of existing transportation employees who may be affected by such assistance. Such arrangements shall include provisions as necessary for (a) preservation of rights, privileges, and benefits under existing collective bargaining agreements or otherwise; (b) continuation of collective bargaining rights; (c) protection of employees against a worsening of their positions with respect to their employment; (d) assurances to employees of acquired mass transportation systems and priority of reemployment for employees terminated or laid off; and (e) paid training or retraining programs. Anticipating cases in which Section 13c requirements may not be necessary, the law provides that the Secretary of Labor may waive the Section 13c provisions.

Initial efforts by the U.S. Department of Transportation (DOT) to press for a liberal waiver of the Section 13c requirements proved unsuccessful. Months of negotiation between DOT and the U.S. Department of Labor (DOL) followed. In June 1979, DOL finalized the special warranty and waiver procedure