

A Future for Sonoma County Bus Services

Transit will gain public support if the people currently constrained to automobiles can be offered a wider range of acceptable choices. When there have been few travel options, an individual could expand personal opportunities by choosing to acquire an auto, and thereby gaining access to the full gamut of the road network. This proved to be a temporary gain for the individual but a long term loss for society as a whole.

Public transit belongs to everybody, and if well utilized, is a far more efficient means of travel than privately owned automobiles. But when the ability to opt out of transit was enhanced by a wide array of public subsidies for automobiles, transit was largely lost as a reasonable choice.

Although the elimination of the subsidies we give to auto owners would be the single most effective thing we could do to restore a balance between modes, we could enhance the desirability of public transit by giving people more power to influence the nature of the services.

Buses and trains aren't purchased by individuals, but individuals can act as members of a community in the planning of services that bring the greatest mutual benefit. Bus transit is flexible enough to allow frequent opportunities for planning involvement by the community.

SCTLC believes that a much higher percentage of travel could and should be accommodated with the bus system. We should begin planning now, in parallel with the planning for rail service, so that there will be a comprehensive and harmonized system by the time the rail service begins operation.

This white paper outlines a planning process, the ways that bus services might be organized and operated, and how bus services might be financed.

Planning Organization and Process

How could the planning process have full opportunity for public participation, yet be completed within a reasonable cost and with a manageable level of effort from the public agencies involved? One way might be to develop a distributed process, wherein self-selected individuals participate primarily in their own subareas. There also would be roles for a variety of stakeholder entities having a stake in the outcome (e.g. business, education, civic), the service providers and governing bodies.

The central organizing role in Sonoma County might be taken by the SCTA, since that is its function in transportation. It already produces the County's Comprehensive Transportation Plan, staffs the transportation modeling program, and oversees the distribution of funds to the transit agencies serving the County.

Each operating entity would be involved in numerous ways, focusing on its own geographic domain. Cities would all be involved via staff or appointed representatives.

Funding the planning process. In Measure M there is less detail on bus service than in the other categories of expenditure. The local quarter cent sales tax is estimated to produce a total of \$47 million for bus transit over 20 years, and it would be distributed among operators according to the TDA population formula. It would make sense to draw on the bus fraction of Measure M and simply take countywide bus planning expenses off the top. The amount from Measure M would be reduced by any planning funds obtainable at the regional level, and by in-kind contributions that cities could make as part of their participation.

Tentative topics of the plan. Although time in the planning process might be primarily devoted to specifying routes and service levels, a number of other matters would be addressed as well:

- Goals and Objectives of the service
- Transit mode split goals.
- Rules for allocation of service: related to ridership, subsidy funding mechanisms, fare revenue and land use factors.
- Funding of the service
 - Traditional sources such as TDA and Measure M.
 - Additional sources such as employer contributions, city contributions, SMART funds transfer .

Organization of Bus Services

Although many arrangements exist for organizing bus transit, the main objective should be the assurance that the services be provided as if they were a single coherent system from the viewpoint of the traveler. A multi-part organization would be appropriate, as long as there is a good system of accountability.

Recently a bill was introduced in the Assembly by Joe Nation that would confer bus operations on SMART. The proposed new sections are shown below as bold italics:

LEGISLATIVE COUNSEL'S DIGEST

AB 372, as introduced, Nation. Sonoma-Marín Area Rail Transit District.

Existing law creates the Sonoma-Marín Area Rail Transit District within the Counties of Sonoma and Marin, and establishes a board of directors to govern the district. Existing law confers various duties and powers on the board for transit purposes.

This bill would also confer upon the board the duty and power to plan, finance, and operate local and regional bus transit operations within the Counties of Sonoma and Marin.

Vote: majority. Appropriation: no. Fiscal committee: no.
State-mandated local program: no.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 105032 of the Public Utilities Code is amended to read:

105032. It shall be the duty of the board and it shall have the power to:(a) Own, operate, manage, and maintain a passenger rail system within the territory of the district.

(b) Determine the rail transit facilities, including ancillary bicycle and pedestrian pathways, to be acquired and constructed by the district, the manner of operation, and the means to finance them.

(c) Adopt an annual budget for the district that provides for the compensation of its officers and employees.

(d) Fix rates, rentals, charges, and classifications of rail transit service operated by the district.

(e) Adopt an administrative code that prescribes the powers and duties of district officers, the method of appointment of district employees, and the methods, procedures, and systems for the operation and management of the district.

(f) Adopt rules and regulations governing the use of rail transit facilities owned or operated by the district.

(g) Cause a postaudit of the financial transactions and records of the district to be made at least annually by a certified public accountant.

(h) Adopt rules and regulations providing for the administration of employer-employee relations.

(i) Plan, finance, and operate local and regional bus transit operations within the Counties of Sonoma and Marin.

(j) Do any and all things necessary to carry out the purposes of this part.

At this early stage in the legislative process it is a little hard to know what is meant, but that will come out in due course.

Except where a large integrated transit authority already exists, creating one is often seen as a way to get good service. Where service is provided by such an agency, the path to better service is just as often believed to lie in carving it into local entities. Before saddling SMART with the added task of running buses, we should consider some of the likely downsides:

- **Monster.** People don't trust outsized organizations, and each community believes it is getting short shrift.
- **Deep pockets.** People with real or imagined grievances tend to sue large organizations for lots of money.
- **Identification.** People identify with local providers.
- **Cross-subsidy.** Productive services get dragged down by unproductive services, fewer people are served, and overall benefit declines. Poorer people almost always wind up subsidizing richer people.
- **Accountability.** The larger the bus organization, the easier it is to hide problems within it.
- **Labor issues.** The larger the bus organization, the larger the labor-management disputes, the greater the possibility for shutdown disruptions, and the more unhappy the union workers tend to be.

Because of the way the population is strung out along the SMART route, the rail line becomes a great organizing spine for the bus service "ribcage". There may be a few bus lines that cross the Marin-Sonoma border (e.g. running on 101), but the preponderance of bus services will be entirely within one county or the other. Although it is a virtual necessity that the rail be a two-county operation, the bus services don't have to be.

Another argument often advanced in favor of consolidation is economy of scale. That debate takes place in many enterprises, not just the provision of bus transit. If one looks at a bus operation, the most fundamental measures of production economy are operating expense per vehicle revenue hour and per vehicle revenue mile. Here are some comparative numbers:

Cost comparisons for 2001

	cost per bus hr	cost per bus mi	buses in peak
Santa Rosa CitiBus	\$69.23	\$5.58	29
Sonoma County Transit	\$70.73	\$4.43	48
GGBHTD	\$128.88	\$6.85	264
SF MUNI	\$110.65	\$12.49	814
Santa Clara VTA	\$130.93	\$10.22	493
Los Angeles MTA	\$94.83	\$7.72	2147

Notes: "buses in peak" for SF Muni actually includes all vehicles.

While there is quite a variation in these figures, it would be very difficult to conclude from them that there is an economy of scale in bus operations. And the above figures don't include paratransit, which is provided by many bus operators because of ADA regulations. Paratransit has a huge *diseconomy* of scale relative to *area served*.

So unless there are actual economies of scale that can be demonstrated, the safest assumption is that there aren't any, and the organization should be designed for management to function at the lowest levels for the most part, and at higher levels only as necessary. In other words, whatever works at a low level of organization should be left alone.

Matching organizations to function. Both counties already have organizations that would seem to have a logical fit in an integrated transit system. Below is a partial list of functions that might be carried out at each level.

SMART	Top level system integration, including coordination of bus service with rail specification and operation of fare system, operation of public information system
	Rail system construction, including property development Train operation and system maintenance, including stations
SCTA, TAMS	Transit planning within county County level system integration Manage public funding of buses
Cities	Institute and manage funding mechanisms for own service
Bus transit agencies	Plan and manage bus operations
Bus operating firms	Contract services

SMART could be the perfect oversight agency, with the power to mandate that bus services are coordinated with the train, and with a limited power of the purse to provide financial incentives for the coordination. SMART could develop and manage an integrated fare system, and could provide most public information to travelers.

Some Principles for Funding Bus Services

Most travelers don't pay their own way. They pay part of what it costs to provide their transportation services, and the public pays the rest. Car trips generally cost the public a lot more than bus trips. Most people think it would be better if transit were used more, especially by others. If that is the public desire, shouldn't the public be willing to

pay more in support of bus trips than for car trips? That could be done either by having the car drivers reimburse the public for some of the expenses currently incurred by the public, or by spending more public money to get people to use transit, or a combination of the two. The combination seems like the best option, because it could be balanced financially, and thereby minimize overall economic impact.

If we look at transit in terms of the seats that move from one place to another, the transit riders pay close to the full cost of their bus rides out of their own pocket. If we consider the empty seats to be the responsibility of the public, the public pays more than the riders, just to move a lot of empty seats around. In Santa Rosa, there are a lot more empty seats than filled ones, in about the same ratio as for cars. The table below helps to demonstrate that the dismal view of transit economics is largely mistaken.

About the table. Except for *av seats per bus*, the numbers in the upper section are taken directly from the NTDB (National Transit Data Base) for fiscal year 2002, which is posted on the Internet. *Av seats per bus* is an approximation based on detailed vehicle inventories in the NTDB.

With two exceptions, the figures are for “directly operated” transit buses, i.e., buses run by the agency itself, rather than contracted to other operators. Sonoma County Transit (SCT) has a unique arrangement where all of its buses are operated by a private firm. The numbers for BART apply to train cars rather than buses.

Operating Agency TRS_ID (agency ID)	Sonoma County			Santa Clara			
	SR CityBus 9017	Transit 9089	GGBHTD 9016	SF Muni 9015	VTA 9013	LA County MTA 9154	BART 9003
An Psgr Mi	6,974,029	13,617,823	105,768,403	206,199,204	177,882,517	1,422,325,738	1,176,305,514
An Veh Rev Mi	987,540	1,588,278	7,891,256	13,408,351	22,957,885	81,663,272	59,955,363
An Psgr Fares	1,500,422	1,585,110	14,751,220	37,695,816	25,394,071	205,394,110	193,246,555
Tot Oper Exp	5,599,722	7,024,812	57,740,184	171,652,141	216,702,961	693,048,285	330,953,710
Tot Capital Exp	988,735	4,719,563	2,138,405	53,932,210	74,465,808	188,427,212	536,957,525
Av seats per bus	39	30	43	43	43	43	65
Av Psgrs on bus	7.06	8.57	13.4	15.38	7.75	17.42	19.62
Fare rev / service cost	0.23	0.13	0.25	0.17	0.09	0.23	0.22
Seat occupancy	0.18	0.29	0.31	0.36	0.18	0.41	0.3
Fare/cost coverage	1.26	0.47	0.79	0.47	0.48	0.58	0.74

The four lines in the lower section are derived from the variables in the upper section, as follows:

$$\begin{aligned} \text{Av Psgrs on bus} &= \text{An Psgr Mi} / \text{An Veh Rev Mi} \\ \text{Fare rev / service cost} &= \text{An Psgr Fares} / [\text{Tot Oper Exp} + \text{Tot Capital Exp}] \\ \text{Seat occupancy} &= \text{Av Psgrs on bus} / \text{Av seats per bus} \\ \text{Fare/cost coverage} &= [\text{Fare rev / service cost}] / \text{Seat occupancy} \end{aligned}$$

What do these numbers tell us? They say that, at least for Santa Rosa, in spite of having the lowest average number of people on board, the fares they pay more than cover the

seats *they are using*. It is often said that transit is highly subsidized, and it is. But we need to stop blaming the transit rider. The transit rider pays for what she uses, and doesn't cause the subsidy. With enough other people like her getting on the bus and paying a fare, there might be no subsidy required.

A caveat. The usage of seats has been the focus here only to show the nature of the subsidy of buses, in order to encourage a new perspective on the economics of transportation. Beyond that, not too much should be made of it. One may notice that lengthening the bus and adding seats would make the numbers on the last line of the table look more favorable for all agencies, even though it would obviously worsen their balance sheets. The sizes of buses and their seat configurations are properly a function of the service they provide, and the way the agency is organized.

Further, no matter how efficient the operation, and how suitable the environment for transit service, there will always be a fair number of empty seats, on the average.

About Sonoma County Transit

Would it be justified to say that the much lower degree of seat cost coverage by fares for SCT indicates that it is poorly run? Not at all. Its mission is to provide service in the type of environment where bus service would typically have been long abandoned. If the fares were at a level consistent with the much longer trips served, the numbers would of course look better. Filling the empty seats would be better.

Filling the seats

As long as a subsidy is required to move those empty seats, we should look for means of public funding that will encourage filling them. Here are a few places to look.

Empty seat numbers vary from place to place.

If the people that live in the neighborhoods really want all those empty seats going by, then it would be fair to ask that the neighborhoods pay for them, since empty seats don't pay fares.

Parking.

The biggest gift from the public to the car driver is free parking. As a way of bringing the public financial support of car driving into alignment with its support of transit riding, it would be fair to ask car drivers to pay more for their parking. The balance between cars and transit would be achieved more easily if some of that income from parking would fund the operation of more bus service.

A misplaced responsibility

Society is of one mind about the need to subsidize the travel of the disabled, but society has yet to take the responsibility. Ever since national legislation created the legal mandate for providing equal service for the disabled at half the regular fare, the burden of funding has fallen on the able-bodied transit riders, not on society as a whole. Those

other transit riders are generally in the lower income quartile. A more equitable solution would be to have specific funds for transit services for the disabled, that are raised through means that are applicable to all. As long as most people are driving cars, a fee related to automobile use or ownership would be appropriate.

Employers benefit.

The employer benefits along with the worker from good means of travel to work. Being a “joint benefit”, it isn't possible to say exactly how much benefit is on each side. It doesn't really matter. The important thing is that their maximum joint benefit comes from balancing public expenditures on transit and autos (and walking and bike riding). The right balance point is when the employer contributes the same amount for each employee, no matter how the employee gets to work.

Cities can become more efficient

As city land becomes more valuable, providing storage for increasing numbers of autos is wasteful. There are many ways that cities could treat traveler groups more fairly, and if they did, there would be more transit riders, walkers and bicycle riders. Cities could start looking at large parking lots as land banks for productive use. Shopping center owners are beginning to look at all those empty spaces and wonder if there isn't a better way to get people to their stores. Big box stores are little more than a way to extract external transportation subsidies so they can undercut the smaller stores closer to the downtown. By cooperating with these leviathans in an attempt to beggar their neighbors, the cities ultimately make their own citizens worse off. Make sure these corporate stores pay the subsidy costs of the long trips they generate, and use those revenues to support bus services.

Getting more revenue from fares

Are the fares too low or too high? In most transit systems, the answer is *both*. Fares for easy to serve trips are usually too high, and for expensive to serve trips are too low. Tailoring fares more closely to cost of service provided will be fairer, and more fairness leads to higher ridership. Simple and crude fare media were necessary in the past, but technology has advanced, and should be used for more sophisticated pricing.

The minimum fare. Many factors need to be taken into account in structuring a fare system, including some rather arbitrary rules imposed by legislation. But there is a tendency to have fares that are too low, which rob the system and prevent upward adjustments in service levels. There is a simple rule-of-thumb for the lower limit on fares. A bus running full should bring in fare dollars as fast as cost dollars are streaming out. In other words, if it costs \$80 per hour of running in service, then fares should be going into the farebox at \$80 per hour when the bus is full of passengers. If this rule is followed, then service can be expanded indefinitely where it is needed, without requiring additional subsidy.

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