

COMPETITIVE CONTRACTING OF TRANSIT SERVICES: DENVER EXPERIENCE

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ABSTRACT

The Regional Transportation District (RTD) in Denver, Colorado has contracted a substantial portion of its fixed-route bus service in response to state legislation enacted in May 1988. By 1994, RTD was operating 24.6 percent of its bus service through competitive contracts. The first contracts took effect in 1989. Services bid in 1992 and 1994 included a provision that the contractors provide buses that RTD could purchase at the end of the contract period.

A review of this program was conducted in 1995, approximately five years after the start of the program. This paper presents the results of this review, with primary emphasis on the financial impacts of competitive contracting on the transit system. Based on this analysis, it has been estimated that RTD will have saved \$88.0 million dollars between 1989 and 1999 as a result of competitive contracting. Similarly, RTD's cost efficiency, measured as the operating cost per hour, has improved significantly during the six-year period from 1988 to 1994. At the same time, RTD increased service levels by more than 15 percent, essentially using the savings from competitive contracting. However, RTD's decision to have the contractors provide the buses, at its option, has cost RTD \$15.8 million more than if it had purchased the buses directly. This is attributable to pre-paid capital charges from the post-contract period, financing charges, profit margin, and fees and taxes from which RTD is exempt.

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INTRODUCTION

Senate Bill 164, enacted in May 1988, required the Regional Transportation District (RTD) in Denver, Colorado to competitively contract at least 20 percent of its bus service. The purpose of SB 164 was to produce public transit service *at the lowest possible cost* consistent with service and safety standards. SB 164 authorized RTD to use a mix of public and private resources to achieve its purpose. In response to this legislative request, RTD began to contract for transit services in June 1989.

RTD has exceeded the 20 percent legislative requirement. By 1994, RTD was operating 24.6 percent of its bus service through competitive contracts. RTD implemented its competitive contracting for services over time, in groups and packages. The contract packages are listed in Table 1. In the earlier years of the program, RTD used two approaches regarding the vehicles needed for the service: either the contractor used vehicles provided by RTD or the contractor provided its own vehicles. In all but one of the later groups, RTD decided to have the contractors provide the buses with RTD retaining an option to purchase the buses. Contractors were required to provide new buses for the service. RTD-provided vehicles were used buses.

A review of RTD's competitive contracting program was conducted in 1995, approximately five years after the start of the program. This paper presents the results of this review, with primary emphasis on the financial impacts of competitive contracting on the transit system. It discusses both operating cost impacts and the consequences of RTD's decision to purchase buses through contractors.

PROGRAM ADMINISTRATION

RTD has implemented the requirements of SB 164 successfully. RTD maintains a number of quality of service and safety-related performance indicators for its competitively contracted and directly-operated services. As shown in Table 2, the services it has obtained from the competitive market achieved better performance levels in some categories and worse performance levels in other categories compared to RTD's directly-operated services. The indicators presented in Table 2 were developed from a database maintained by the RTD for directly-operated and competitively-contracted services. Therefore, the definitions of the indicators and the data collection methods were identical. For the year ending September 30, 1995, for example, the performance of the competitively-contracted service has been better than the directly-operated services in the areas of vehicle accidents, passenger accidents, and on-time performance. The competitively-contracted service has been worse than RTD's directly-operated services during this time period in the areas of complaints, commendations, and miles between road calls.

RTD has maintained full policy control over the contracted services. It defines the services to be operated and monitors contractor performance. RTD's contract management practices have produced a satisfactory performance level from the contractors. All contracts have remained in effect for the full period of performance. No contracts have been terminated. Nor has there been a need to consider termination action in response to inadequate performance by a contractor.

Table 1: Summary of Contract Packages

Group Number	Service Start	Total Buses	Peak Bus Reqmnt.	Contractor	Bus Ownership	Bus Purchase Option	Reason for Contracting
I	6/89	55	46	Mayflower	Contractor	No	SB 164
II-A,B,D	9/89	56	47	Laidlaw	RTD	na	SB 164
II-E	9/89	na	15	Mayflower	Contractor	No	SB 164
III	12/89	25	20	ATC-Vancom	RTD & Contractor	No	SB 164
IV	9/90	9	7	Mayflower	RTD	na	SB 164
VI	9/92	20	16	Laidlaw	Contractor	Yes	Capacity
VII-A	8/94	50	41	ATC-Vancom	Contractor	Yes	SB 164
VII-B	8/94	44	36	Mayflower	Contractor	Yes	SB 164
VII-C	8/94	56	46	Laidlaw	Contractor	Yes	SB 164
VIII	9/94	20	17	Mayflower	RTD	na	Capacity & Savings Opportunity

na= not applicable

Table 2: Comparison of Directly-Operated and Competitively-Contracted Service Performance for the Year Ended September 30, 1995

Performance Indicator	Directly Operated Service	Competitively Contracted Service	RTD Total	Contracted Compared to Directly Operated
Complaints/100,000 Boardings	16.78	22.13	17.52	-32%
Commendations/100,000 Boardings	2.55	1.84	2.45	-28%
Vehicle Accidents/100,000 Hub Miles	0.402	0.309	0.378	23%
Passenger Accidents/100,000 Boardings	0.098	0.095	0.097	3%
Miles Between Road Calls	17,814	14,786	16,911	-17%
On-Time Performance	85.5%	87.8%	86.1%	3%

COST IMPACTS

RTD's competitive contracting program includes two cost components: operating costs, which are incurred in lieu of RTD's costs for directly operating the service, and capital-related costs, which include the costs incurred by the contractors in acquiring buses to provide the service (i.e., the purchase price for the buses, purchase taxes, license fees, financing charges, and attributable profit margins). When RTD supplies the vehicles, there are no bus acquisition costs associated with the contract.

Initially, RTD's competitive contracts required either RTD-supplied buses or private operator-supplied vehicles. Later contracts (Groups VI and VII) required contractors to supply the vehicles. Further, contractors were required to supply new buses, which RTD would have an option to buy at a later date.

For this analysis, in order to "level the playing field" to compare contractor costs with RTD directly-operated services, the operating and capital-related cost components were separated. This break-out was done based on information presented by the contractors in their bid packages, supplemented by discussions with RTD and contractor personnel. In-house operating costs were developed through the application of a cost allocation model developed for RTD by KPMG Peat Marwick(1,2,3). This fully-allocated cost model addressed the specific unit costs of different types of RTD services. This was accomplished by distinguishing labor productivity and other unit cost factors for peak and off-peak services. Maintenance costs were distinguished by a differential for the types of buses operated from RTD's various garages. The model also separated costs for "retained functions", which included the functions that RTD continued to provide regardless of who operated the route. Examples of retained functions include: governance board, legal counsel, mall security, marketing, scheduling, planning, street supervision, and grants management.

Operating Cost Impacts

RTD has benefited from two types of operating cost impacts from its competitive contracting program in response to SB 164:

- the direct operating cost savings it has realized so far and will continue to realize through the duration of the contract periods, and
- the indirect influence on its operating costs and service levels due to the existence of a competitive environment.

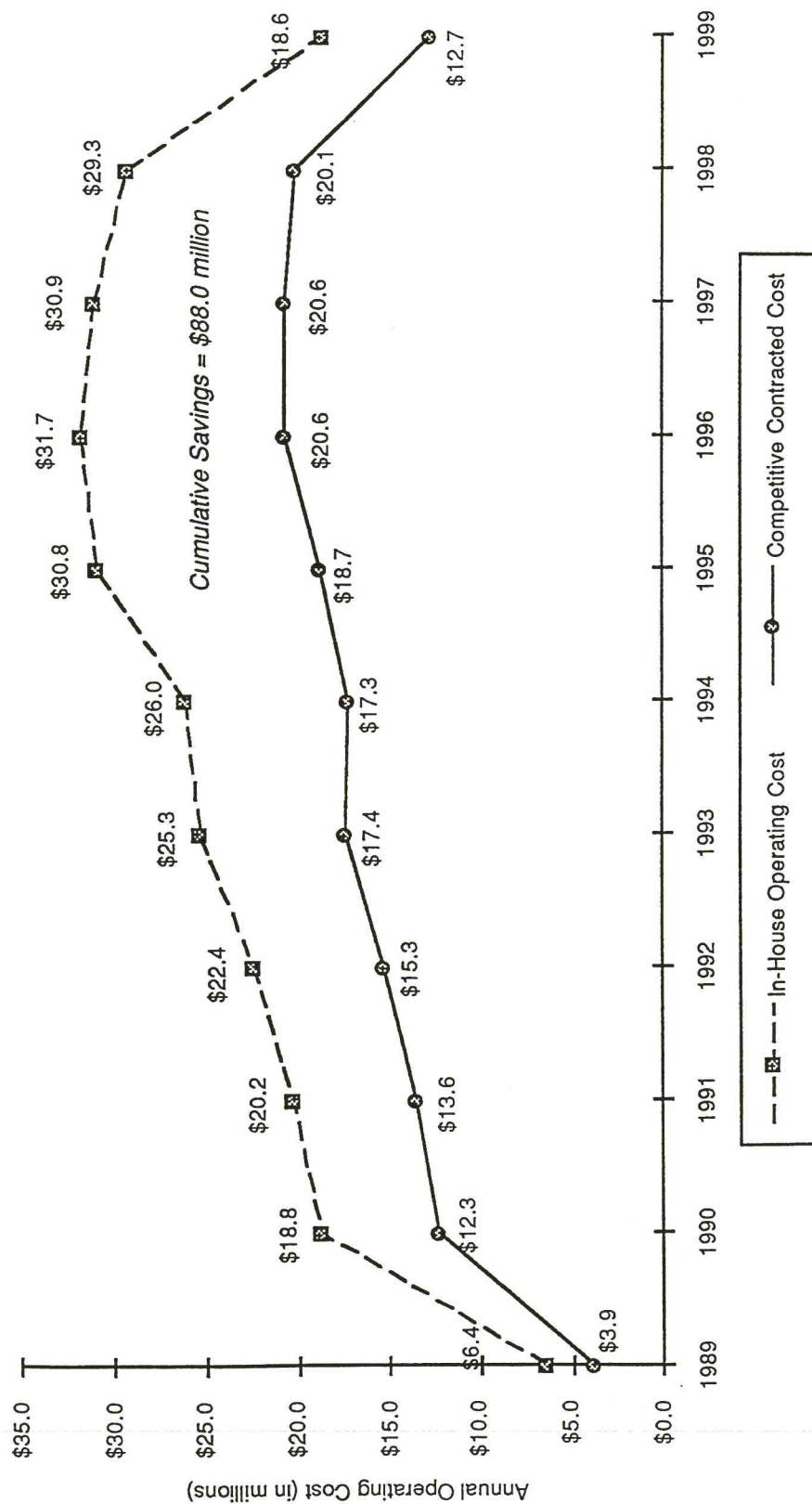
The following two sections discuss these direct and indirect impacts on operating costs.

Direct Impact of Competitively Contracted Service

To determine the direct costs impacts, a comparison was made of the annual operating costs for contractor-provided services and the operating costs that would have been incurred had RTD provided the same services in-house. The contractors' operating costs are based on their bid costs less capital-related costs. RTD's operating costs include only incremental costs and are based on the KPMG cost allocation model.

The results of this comparison are presented in Figure 1. In 1994, for example, the operating cost for contractor-provided service was \$17.3 million. Had RTD operated that service in-house, the cost for the same level of service is estimated to be \$26.0 million. Over the eleven-year period from 1989 to 1999, the cumulative operating costs for competitively contracted service is estimated to be \$172.4 million. RTD's incremental in-house operating costs for the

Figure 1: Comparison of Operating Costs
Competitively Contracted Cost vs. RTD In-House Operating Cost for the Same Service



same service over the same time period is estimated to be \$260.4 million. Thus, competitive contracting is estimated to reduce RTD's operating expenses over this time period by \$88.0 million. RTD already has benefited from these savings. It saved \$51.5 million from the contracted services operated from 1989 to 1995. The balance of the savings (\$36.5 million) will be achieved from existing contracts from 1996 to 1999. This assumes that all currently contracted packages will be operated through 1999.

Indirect Impacts on Cost Efficiency and Service Levels

The indirect impacts of competitive contracting on RTD's cost efficiency were assessed by reviewing RTD's operating cost per hour before and during the period of competitive contracting. The last year before competitive contracting was 1988. Therefore, the trends in costs were reviewed for the six years before and after this year (from 1982 through 1988 and from 1989 through 1994). The operating cost per hour has been adjusted based on the inflation rate, using the CPI for the Denver-Boulder area.

As shown in Figure 2, RTD's inflation-adjusted operating cost per service hour went from \$89.64 in 1982 to \$90.69 in 1988, an increase of 1.2 percent. During the next six years, following the introduction of competitive contracting, RTD's inflation-adjusted cost per service hour declined from \$90.69 in 1988 to \$77.46 in 1994. This was a reduction of 14.6 percent. Performance in the intermediate years also is illustrated in Figure 2.

The annual changes in inflation-adjusted operating costs and service levels over both periods (from 1982 through 1994) are presented in Figure 3. In the six years prior to competitive contracting, RTD's level of service was increasing at a similar rate as its operating costs: annual service hours increased by 17.5 percent, while inflation-adjusted operating expenses rose by 18.8 percent. In the six years following the introduction of competitive contracting, RTD continued to expand its services. There was an overall increase of 18.9 percent in bus service hours operated between 1988 and 1994. However, its inflation-adjusted operating expenses during this same time period increased by only 1.5 percent. Essentially, the savings from competitive contracting were sufficient to finance the continued expansion of RTD services.

Bus Acquisition or Capital Cost Impacts

Contracts for Groups VI and VII were structured to require private operators to supply a total of 170 new buses for the service in their packages. The approach of obtaining buses through the contractors was developed because capital funds for routine bus replacement were not readily available. RTD has an option to purchase these buses from the contractors. Should that option be exercised, RTD will be purchasing used buses that are between three and five years old.

A review of this approach also was conducted. The analysis indicated that this approach is significantly more costly than if RTD had purchased the buses and provided them to the contractors. The details of this analysis are summarized in Table 3 and discussed below.

The cost to purchase the buses through the contractors is comprised of two elements: the option price and the portion of the operating cost per hour paid throughout the contract period that can be attributable to bus payments. This analysis has determined that RTD's average cost per bus will be \$301,800 (\$51.3 m for 170 buses) if purchased through the contractors. This is \$15.8 million more (44.5 percent) than if RTD had purchased the same buses itself. It represents a unit cost of \$93,000 more for each bus.

Figure 2: Trends in RTD Operating Cost per Hour
1982 through 1988 vs. 1988 through 1994

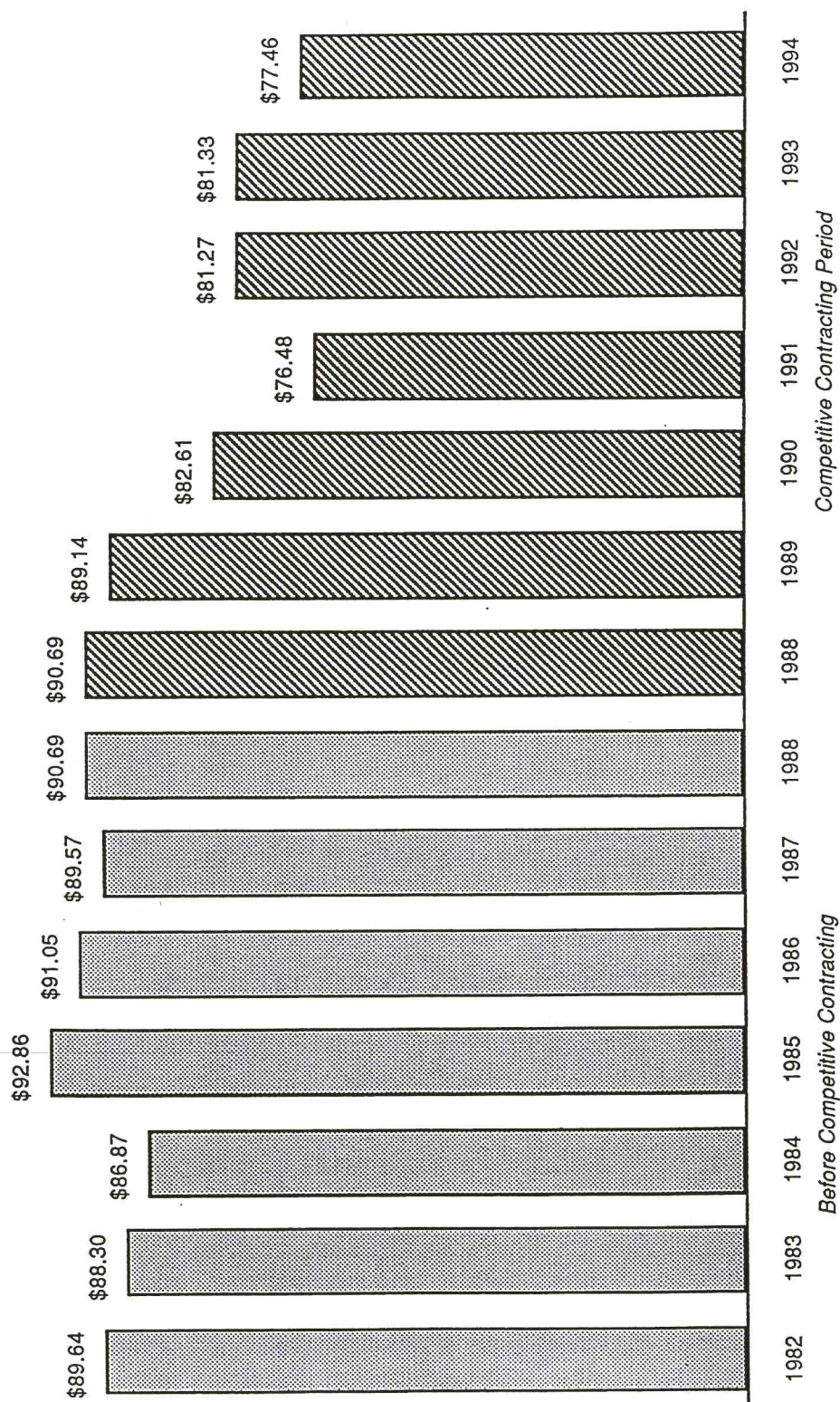
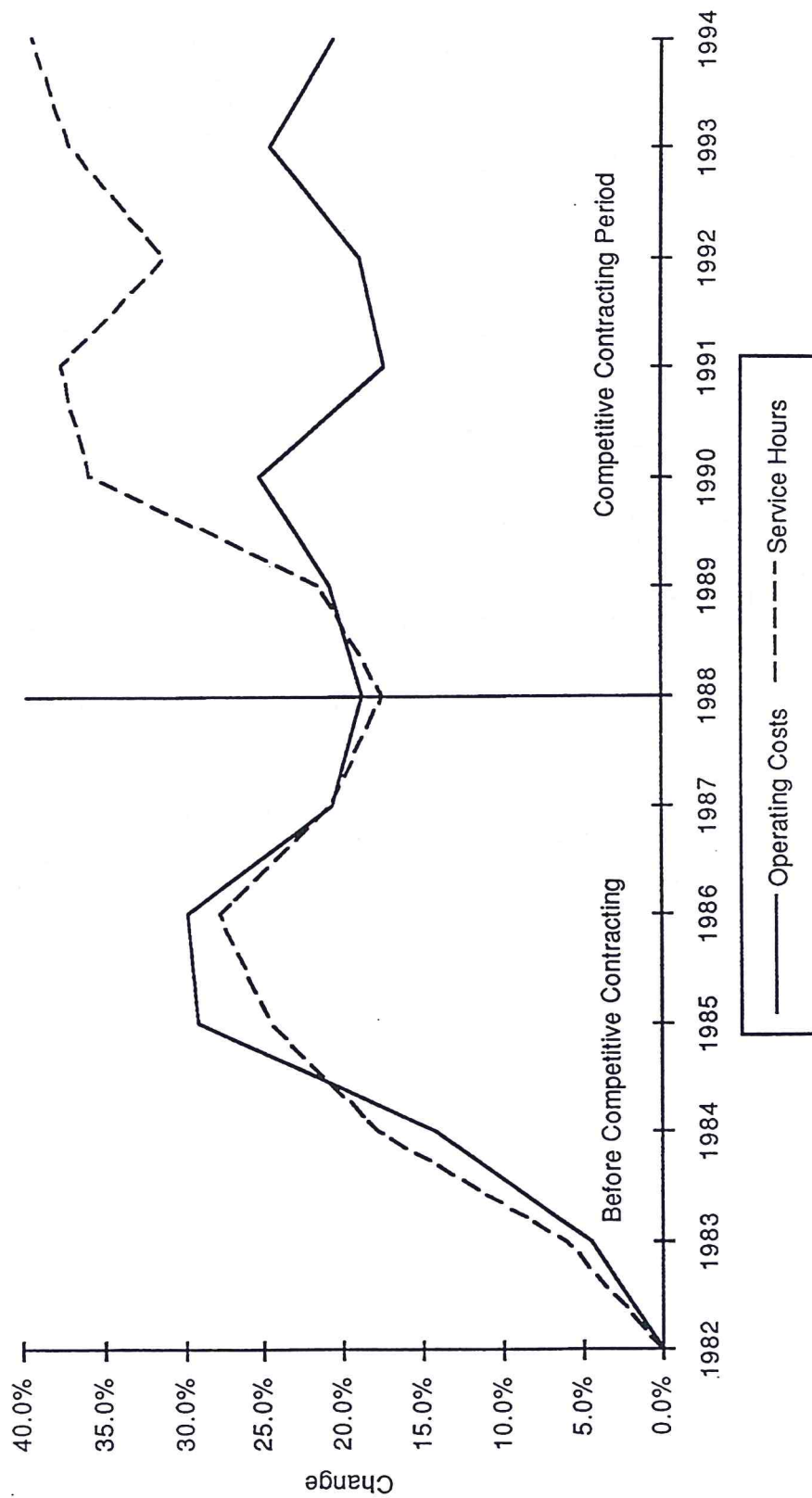


Figure 3: Changes in Operating Costs and Service Hours



Purchasing buses through private contractors is more expensive for several reasons. First, RTD is paying for bus depreciation at a highly accelerated rate. Nearly \$15 million in the costs paid to the contractors is attributable to the post contract period for pre-paid capital, which is billed at an accelerated rate by the contractors. Second, RTD is paying the contractor's financing charges and profit margins. Profit margins are considerably higher on capital purchases than on operating costs (usually at least six percentage points). And third, the contractors' rates include reimbursement for costs that they incur but from which RTD is exempt, including vehicle license fees and state purchase taxes.

CONCLUSIONS

RTD has implemented the requirements of SB 164 successfully and achieved the desired results of the legislation. RTD already has recognized savings estimated at \$51.5 million between the start of its competitive contracting program in 1989 and 1995. It is projected to save another \$36.5 million between 1996 and 1999, assuming the current contracts remain in effect. Thus, RTD's total operating cost savings from competitive contracting are estimated to be \$88.0 million from 1989 to 1999.

The services provided by the private contractors have performed well in the quality of service and safety-related performance indicators monitored by RTD. These services compare well against RTD's directly-operated services. RTD's overall cost efficiency also has improved since the introduction of competitive contracting. Prior to the competitive contracting period, RTD service levels increased in a similar pattern as its operating costs with annual cost increases being at a slightly higher rate. During the competitive contracting period, however, service levels expanded at a rate 12.6 times the increase in operating costs. Essentially, the savings from competitive contracting were sufficient to finance the continued expansion of RTD services.

One concern with the current contracts, however, has been the reliance on contractors to supply new buses for RTD. These buses are used in the contracted services and can be purchased to become part of the RTD fleet. This analysis has shown that this provision, if exercised, will cost RTD \$15.8 million more to purchase used buses from the contractors than if it had purchased the buses directly at the outset.

Table 3: Summary of Bus Acquisition Costs
Contractor vs. Direct Purchase

	Through Contractor	Direct Cash Purchase	Difference (Contractor Payments vs. Cash Price)
Number of Buses	170	170	--
Bus Payments	\$26.4 m	\$35.5 m	(\$9.1 m)
Financing, License, Profit	\$14.5 m	--	\$14.5 m
Subtotal, Payments	\$ 40.9 m	\$35.5 m	\$5.4 m
Option Price	\$10.4 m	--	\$10.4 m
Total RTD Payments	\$51.3 m	\$35.5 m	\$15.8 m

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