Establishing a Transit Capital Replacement Account—The San Diego Experience

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In 1981, coincident with the opening of the light rail transit (LRT) system in San Diego, California, the Metropolitan Transit Development Board (MTDB) established a capital replacement account. This account is for LRT purposes and is governed by a board policy and ordinance that requires an annual payment by the operator, San Diego Trolley, Inc. (SDTI), a subsidiary of MTDB. Maturation of the account has presented a variety of issues: (a) LRT system expansion has caused the financial obligation to grow, (b) state budget cutbacks have forced reduced funding in several years, (c) growth of the capital replacement account presents an attractive financing resource for special and nonreplacement purposes, and (d) determining priorities among competing replacement projects requires evaluation of needs. Despite these issues, the San Diego MTDB and SDTI have maintained the integrity of this capital reserve account. In fact, a separate account has also been established for San Diego Transit Corporation (SDTC), a bus subsidiary of MTDB acquired in 1985. By ordinance, use of account revenues is limited to replacement purposes, but can be overridden by a unanimous vote of the Metropolitan Transit Development (MTD) Board of Directors. Management guidelines were developed to ensure reasonable and prudent use of fund revenues, and yet still provide sufficient capital for major replacement needs.

The San Diego metropolitan area comprises 10 cities of which the largest is the city of San Diego. The current population for the metropolitan area is just over 1.6 million people with nearly two-thirds of these residents living within the city of San Diego. The area has faced considerable growth since World War II and population forecasts show an approximate 30 percent increase over today’s levels by the year 2000, resulting in an expected area population of about 2.1 million residents (7).

The public transportation system for the area includes a variety of services. The basic service is a fixed-route bus network that has local/feeder, urban arterial, and express/commuter runs and is supplemented by light rail transit (LRT) service in two corridors and a number of general and special-purpose demand-responsive services. On a daily basis, approximately 130,000 passengers are carried by this system. Over 350 transit vehicles—buses, taxis, vans, light rail vehicles (LRVs)—are deployed during the peak periods to operate this system.

This public transit network is officially called the Metropolitan Transit System (MTS). MTS represents all of the publicly subsidized transit operators in the San Diego metropolitan area.

BACKGROUND

The San Diego Metropolitan Transit Development Board (MTDB) was created in 1975 by California State legislation (Senate Bill 101) (2). The board is empowered to plan, construct, and operate mass transit guideways and to perform near-term planning and programming in its area of jurisdiction. MTDB is an independent agency governed by a 15-member Board of Directors: four council members from the city of San Diego, one council member from each of nine suburban cities, one supervisor from the county of San Diego, and one representative appointed by the Governor of California who serves as chairperson.

Over MTDB’s first 10 years, the agency was recognized primarily as a guideway development organization. MTDB planned, designed, and constructed the 16-mi LRT line from Centre City San Diego south to the international border (i.e., Tijuana) in San Ysidro, followed by an initial 4.5-mi segment of the eastern line which runs from Centre City to Euclid Avenue in southeast San Diego. This LRT system initiated revenue service on the South Line in 1981 and on the East Line in March 1986.

FIGURE 1 MTDB organization.
In addition to these development functions, MTDB is also responsible for short-range planning and financing for bus and rail transit systems in its area. As depicted in Figure 1, MTDB effectively functions as an "umbrella" agency. MTDB owns the assets of San Diego Transit Corporation (SDTC) and San Diego Trolley, Inc. (SDTI), the area's two largest transit operators. These two transit units were formed under California law as nonprofit public corporations and function as operating subsidiaries to MTDB. In addition, MTDB owns the San Diego and Arizona Eastern Railway Company (SD&AE), a railroad corporation that covers 108 mi of line and over 2,000 a. of property. The operations and maintenance of these two transit services and the freight railroad are all handled under separate operating organizations. Essentially, the day-to-day operating functions, labor matters, and maintenance of facilities are managed by these individual corporations.

The relationship between MTDB and the transit operating subsidiaries, SDTC and SDTI, is formally established through operating agreements with each and MTDB adopted "corporation policies." These agreements specify the roles and responsibilities of each of the organizations. In addition, the operating corporations' policies go a step further and outline procedures in the following functional areas:

- Administrative salaries,
- Affirmative action and disadvantaged business enterprises,
- Auditing and reporting,
- Budget format,
- Charter service provision,
- Fare inspection,
- Fare setting,
- Legal services,
- Marketing and public information,
- Paratransit service provision,
- Planning,
- Procurement,
- Revenue-producing advertising,
- Service adjustments,
- Service contracts, and
- Transportation Development Act and State Transit Assistance (TDA/STA) claim submittals.

The MTD Board of Directors has the policy-setting responsibility for the operation and development of transit service provision and expansion within the San Diego metropolitan area, as well as a significant role on the capital side because of its ownership of transit assets. Thus, it follows that the MTDB also has the responsibility for capital replacement.

DEVELOPMENT OF THE CAPITAL REPLACEMENT ACCOUNT

MTDB's development of a capital replacement account was instigated coincident with the construction and opening of the new LRT system in San Diego. The board recognized when the system opened for service in 1981 that there had been considerable investment in construction and procurement activities and that all the components had a useful life that, once expended, would require replacement at significant cost. The board considered the recent practice of the public transit industry to ignore full capital replacement funding and generally rely upon federal grants.

Many private transit providers also had opted not to provide for the replacement of capital assets, but for different reasons. For many private transit companies, their ability to provide funds for capital replacement was limited by the funds available. Prior to deregulation, most private providers, particularly larger companies such as Greyhound, attempted to set funds aside for capital replacement. However, as deregulation brought on increased competition, replacement funding became a luxury most firms could not afford. As a result, capital replacement was approached on a year-by-year basis depending on available profits or based on acquiring additional contracts.

Similarly, by building the LRT line without federal assistance, the board was under no presumption that grant funds would be available in the future. Therefore, it was the board's conclusion that a capital replacement account should be established for the new LRT system investment and directed that a policy governing its use be prepared. As a result, in 1981, coincident with system opening, the MTD Board of Directors adopted Board Policy No. 16, entitled "Light Rail Transit Capital Depreciation Account" (3).

In establishing the policy, the board used as a model the theoretical approach to replacing capital assets. This approach involves the periodic setting aside of funds, typically in some type of a reserve fund account, in an amount equivalent to the depreciation expense incurred during the period as determined by the type of asset and the method of depreciation. Assets are then replaced based on a long- to mid-range (5 to 10 years) capital plan, which incorporates the replacement policies and priorities.

Although most private companies accept this approach, in practice the degree to which it is followed is determined by a number of factors, primary of which is the bottom-line profits or available funds. Other considerations may be tax advantages, as was the case with accelerated depreciation allowance, and competing capital needs for a company that is in an expansion mode.

In order to protect the integrity of the account, strict limitations on the use of the fund were adopted as part of the policy:

- Disbursement would require two-thirds concurrence and be limited to depreciable light rail transit capital items or facilities, and
- Diversion for other than replacement purposes could only take place following passage of 60 days of formal introduction of the proposal at a board meeting; a unanimous vote would be required to permit diversion.

As to the financial aspects of the policy, the source for the capital replacement funds was set forth to be fare revenues. At the conclusion of the fiscal year, the operator was to transfer a specified amount of fare revenues to MTDB as payment to the account.

Two annual adjustments to the base funding level are required. One is an annual adjustment for inflation based upon Consumer Price Index changes. The second is the increment
due if there is LRT system expansion and a corresponding increase in the total capital investment in built or purchased facilities and equipment.

In 1982, the policy was amended to take into account possible decreases in the farebox recovery rate (4). Since the payment to the account was predicated upon fare revenues, the board felt that decreases in the capital replacement account funding should be considered if the budgeted fare revenue (and thus, recovery) targets were not able to be achieved during the fiscal year. This provision was to provide some financial relief in case of a fare revenue decline, but it has not had to be employed to date. The objective of the amendment was to continue full funding of the account and yet deter its being viewed as an operating budget contingency. The resulting revision was as follows: “For every one percent that the actual farebox recovery ratio dropped below the budgeted ratio, the amount contributed to the LRT capital replacement account would be reduced by 5 percent of the fully funded total.”

In 1985, the policy was converted to an ordinance (5). This action was a result of the board’s decision to use grant anticipation notes to meet cash flow requirements on one of MTDB’s LRT expansion projects. In order to show the need for monies derived from the issuance of capital grant anticipation notes, MTDB had to argue convincingly that the capital replacement account monies were not available for meeting routine financial obligations of the board. As a result, Policy No. 16 was replaced with Ordinance No. 6. The primary difference from the policy is that the ordinance does not allow the diversion of capital replacement account monies to purposes other than those for which the funds were originally intended. However, emergency use of the monies to protect “life, health, or property” was still accommodated.

In July 1985, MTDB acquired the assets and ownership of SDTC from the city of San Diego. As part of an operating agreement, MTDB agreed to establish a bus capital replacement account funded through annual “license payments” by SDTC. Similar to the LRT account, the payment was to be from monies derived from fare revenues and other nonsubsidy sources.

In January 1988, the MTD Board of Directors approved a revised Policy No. 16, “Capital Depreciation Accounts” (6). The revisions incorporated many of the issues that were raised as a result of preparing this paper. Among other things, the revised policy provides for

- Using the account for unique circumstances, such as the early replacement of system components because of obsolescence or for safety reasons,
- Formalizing the application process for use of the account and clarifying the use of the account for subcomponents,
- Allowing for reduced annual contributions if there are reductions in operating subsidies, and
- Clarifying the use of the account as local match to federal and state capital grants.

**BASIS FOR ESTABLISHING ACCOUNT FUND LEVELS**

The basis for calculating the funding level for the two capital replacement accounts was defined to reflect (a) a simple, straight-line method of depreciation of the fixed assets and (b) the cost (adjusted for inflation) for replacement. For each operating entity, the minimum base payment was set at $500,000. As noted above, using the Consumer Price Index (less shelter cost) and accounting for any fixed asset additions and deletions, the payment bases are adjusted annually. Fixed asset valuations are based on the capitalized cost of constructed assets and the original purchase cost for capital equipment.

The annual capital replacement payment due MTDB is, thus, calculated as follows:

\[
AP = (BP \times CPI_1) + [(AV/DP) \times CPI_2]
\]

where

- \(AP\) = annual payment,
- \(BP\) = base payment ($500,000),
- \(AV\) = added annual fixed asset valuation,
- \(DP\) = depreciation period,
- \(CPI_1\) = Consumer Price Index (cumulative change since initial year of account), and
- \(CPI_2\) = Consumer Price Index (annual change, for this year).

**USE OF THE CAPITAL REPLACEMENT ACCOUNT**

Guidelines for the reasonable and prudent use of the LRT capital replacement account were prepared by the MTDB General Manager in 1984 (in a March 23 internal memorandum) and incorporated in the January 1988 updated policy. These guidelines set forth the following:

- A general understanding of major LRT depreciable items and their estimated useful life,
- A process for fairly accounting for early replacement of an item whereby the account would fund a pro rata share based on a straight-line method of depreciation,
- The application process defining requirements such as the net cost (after trade-in or salvage value considerations) along with a justification statement, and
- A definition of eligible capital items and major system components and subcomponents.

Over time, it was found that the annual budget approval process was the best place for evaluating replacement needs, priorities, and funding requirements. Therefore, requests for use of capital replacement account funds are reviewed in the spring of the year (based upon a July–June fiscal year) along with other normal capital funding requests among management of MTDB, SDTC, and SDTI. Priorities are established taking into consideration capital costs, operating cost efficiencies, useful life related to age, and safety impacts. Projects are then divided into sets of high, medium, and low priority. So far, with the LRT capital replacement account, the newness of the LRT system has permitted all eligible requests to be funded. Thus, priority setting has not yet become an issue.
This review process also directly ties into MTDB's annual planning, programming, and budget process as shown in Figure 2. As a result, fund use applications are typically handled as a routine annual budgeting matter. As funding decisions are made, the replacement account is viewed as a separate, but restrictive, capital funding source and is considered with other available funding sources. Use of capital replacement account funds is approved with the adoption of the annual operating budgets of MTDB, SDTC, and SDTI. The estimated amount to be contributed by the subsidiary corporations (San Diego Trolley and San Diego Transit) are budgeted as an expenditure or payment to MTDB. MTDB, as the holder of the account, budgets the payments as a revenue. The licensing agreement with each entity calls for the annual contribution/payment by the subsidiary corporations. Capital expenditures to be funded from the replacement account are budgeted in MTDB's capital budget.

The original LRT capital replacement account was established with the intent to fully fund replacement costs. However, MTDB subsequently was certified as grantee for SDTC and SDTI. Therefore, it is expected that future account revenues will be increasingly used to provide local match to federal grants.

Revenue Summary

Including amounts budgeted and due this fiscal year, the revenues placed into the two reserve accounts are as follows: LRT, $7,350,000; bus, $1,509,000. The LRT account represents 7 years of contributions and the bus, 3 years. For the LRT account, in 1 year (Fiscal Year 1987) a partial contribution was made because of a significant budget cut in state funds that year. Therefore, only $400,000 was placed into the LRT account, when $2,114,000 was due. The board has essentially written off this debt.

Expenditures

There has been relatively little demand on the LRT account because of the newness of the system. Less than $100,000 was spent in each of Fiscal Years 1985, 1986, and 1987. For Fiscal Year 1988, $240,000 is programmed for replacement purposes. Typical projects have included

- Maintenance vans and trucks,
- Gate crossing mechanisms,
- Various maintenance equipment, and
- Various LRV components.

On the bus side, Fiscal Year 1988 represents the second year for which a reserve account exists. A total of $131,000 is budgeted to be used for bus replacement purposes (i.e., a portion of local match for a federal grant) in Fiscal Year 1988.

It is noteworthy to point out that two diversions have occurred from the LRT account. In August 1985, a fund exchange was consummated between the San Diego MTDB and another city in California. This city had some UMTA Section 9 funds that it was unable to use and was in jeopardy of losing. A three-for-two trade was structured in which MTDB received $3,466,724 in UMTA monies in exchange for $2,311,149. The financial wherewithal for MTDB's support came from the LRT capital replacement account and was treated as a loan from that account. The loan (principal and interest) was budgeted to be repaid in equal annual payments over a 10-year period. In accordance with the ordinance, these payments must also restore the lost interest.

The account also has been used to help fund a construction cost overrun reserve which was required by UMTA as part of constructing the El Cajon LRT project, an east extension now being built. Funds are to be repaid with interest as this reserve is reduced.

FIGURE 2 MTDB planning process and schedule.
In these cases, MTDB has found that the capital replacement reserve account served a useful fiscal purpose in being able to generate a net $1,155,575 in additional transit resources without degrading the account.

**ISSUES ASSOCIATED WITH MAINTAINING THE ACCOUNT**

There are a number of issues related to maintaining and effectively using the two MTDB capital replacement accounts.

**Growing Financial Obligation**

A primary issue that has arisen concerns the increasing obligation to fully fund the reserve account on an annual basis. This issue is primarily a problem on the LRT side because of the incremental expansion of the system. By 1989, the investment in LRT facilities and equipment is expected to be three to four times the 1981 level. To date, the annual account contribution has increased correspondingly with the system expansion. As a result, the annual financial obligation has been an increasingly major part of the LRT operator’s operating budget. For a new rail transit property, such as San Diego, reduced funding of the account would quickly place the agency in a similar situation as an established rail property having to play catch up with capital replacement funding. Regardless, it would appear that annual payments to a capital replacement account—even at less than full funding levels—are needed in order to maintain the necessary budget discipline.

**Revenue Shortfalls**

In Fiscal Years 1987 and 1988, MTDB experienced a cutback in state revenues. The loss of this revenue had a direct impact on the ability to fully fund the LRT capital replacement account. In Fiscal Year 1987, only $400,000 of the $2.1 million was contributed by SDTI because of the revenue cuts. In Fiscal Year 1988, the MTD Board decided to use monies saved from earlier aborted projects to fully fund the $2.25 million due. Even so, these shortfalls reflect a substantial reduction in anticipated revenue for the account. Given the realities—and limitations—of available funds in the future, fund restoration is jeopardized, as are future year contributions. Despite the use of fare revenues to support the account, insufficient operating subsidy levels were found to have a detrimental impact on fund maintenance. Options for dealing with revenue shortfalls are limited:

- The payment schedule could be adjusted to account for the outstanding amounts to be paid back over time.
- Eligible replacement items could be limited to “essential” major items. Replacement of some items may have to be delayed.
- The future payment schedule could be reduced to some percentage of the total annual amount due with the assumption that current federal grant programs will continue.

The latter option has been used with the bus account, and the updated policy allows for the annual LRT payment amounts in future years to be reduced to 20 percent of the total due. It appears prudent to assume leverage of account revenues to match federal grants for all but perhaps minor (low-cost) replacement obligations. Given the fact that federal Section 9 grants require a 25 percent local match and that salvage value will contribute to the eventual net cost, a 20 percent figure was considered reasonable.

**Account Diversion**

The growth of reserve levels could lead to the temptation to seek to use funds accumulated in the accounts for purposes other than those intended. This temptation becomes more acute as other funding sources begin to diminish. To help protect the replacement account from being “raided,” the MTDB adopted a policy, later converted to an ordinance, that strictly governs use of the funds. One important feature of the ordinance is the requirement of a two-thirds majority vote to use funds from the replacement account. Consistent with the specific replacement intent of the account, it is recorded as a “restrictive reserve” (i.e., this accounting treatment confirms that the funds are not available for general purposes). Finally, the ordinance requires a unanimous vote of the board for any nonreplacement use of either account. Still, it remains possible for the board to amend its own ordinance and divert funds despite these restrictions.

**Eligible Uses**

Defining what constitutes an eligible “replacement” expenditure is difficult at best. In accepted governmental accounting, depreciation is defined as “expiration in the service life of fixed assets, other than wasting assets attributable to wear and tear, deterioration, action of the physical elements, inadequacy, and obsolescence” (7).

According to the IRS, property is depreciable if it meets these three requirements:

- It must be used in business or held for the production of income.
- It must have a determinable life and that life must be longer than 1 year.
- It must be something that wears out, decays, gets used up, becomes obsolete, or loses value from natural causes (6).

Currently, procedures in San Diego allow early replacement but at a prorated, reduced contribution level from the fund. As noted in UMTA’s Rail Modernization Study, “replacements may involve new equipment, new technology, or they may incorporate required operational improvements” (9). Thus, the legitimacy of a replacement request should not always be based on a predetermined “useful life” estimate. There will be instances where replacement is desired—or even required—to take advantage of significant technological advances that offset obsolescence and improve service, safety, or reliability.

One of the chief problems that must be dealt with concerns components. For example, if a rail vehicle is a “depreciable asset,” does this mean replacement of any of its components is not an eligible expense item? MTDB’s updated policy defines replacement of components to be an eligible capital replacement account expense if two tests are met:

- The component’s unit cost exceeds $1,000 (which is the board’s definition of “capital”)
- The component’s unit cost exceeds $1,000 (which is the board’s definition of “capital”) and
• The component's unit cost represents at least 2 percent of the total item (i.e., of which it is a component) value.

Determining Replacement Priorities

As indicated previously, programming funds for the replacement of fixed assets is part of the annual budgeting process. Using the straight-line method of depreciation, MTDB established a general replacement schedule for each type of major asset (i.e., LRV, track, stations, automobiles, trucks). Items that have fully depreciated would be given first consideration for recommended funding from the replacement account. This is necessary in order to prevent premature depletion of either account. The LRT system has only been in existence for 7 years, so the replacement activities that have taken place so far have been minimal. As time passes, it is anticipated that fund allocation decisions will give additional emphasis to projects or components judged most critical for safety purposes.

CONCLUSIONS

• Establishment and maintenance of a transit capital replacement account should be a basic part of a public transit agency’s long-term financial planning. The advantages of having such an account are

  - The ability to afford capital replacement when required—not after;
  - The separation of resources needed for new investments from those reserved for replacement;
  - The wherewithal to use as leverage for state and federal capital grant programs; and
  - The reduced potential for having to decrease service levels, raise fares, cut back maintenance efforts, or generate new revenue sources when faced with a large capital replacement expense.

• The best opportunities for creating a capital replacement reserve account are when a major new capital project is completed (e.g., a new rail transit line or extension) and when a new local revenue source becomes available (e.g., a local tax).

• The discipline to maintain the account for capital replacement purposes needs some force. In San Diego this "force" is provided in the form of an ordinance which requires a super-majority vote (i.e., two-thirds) to authorize use of reserve fund monies for any replacement purpose and a unanimous vote for a nonreplacement item purpose if an emergency exists.

• The discipline needed to not "raid" the account is aided by considering fund expenditures in the normal course of annual budget preparation and short-range program development. Raids on the account are diminished through routine consideration of short-range needs (as part of Transportation Improvement Program development) and the upcoming year’s priorities, resources, and needs.

• In times of funding shortfalls or cutbacks, a minimum floor for annual reserve account funding should be established in order to keep the decision making bodies aware of the need for the account, as well as place attention on the need for resource replenishment.

• Definitions of eligible capital replacement fund uses need to be set forth by the transit agency in order to maintain the integrity of the account.

REFERENCES


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