

OFFICE OF THE  
GENERAL MANAGER

June 17, 1975

GM No. 27-75

TO: FINANCE COMMITTEE

FROM: General Manager

SUBJECT: Transit Development Corporation, Inc.

On October 25, 1972, the Board of Directors authorized the General Manager to subscribe AC Transit as an initial member of the Transit Development Corporation, Inc. for a sum of \$15,000 to assist in establishing working capital for the organization.

The Transit Development Corporation, Inc., founded as a non-profit organization, was organized for scientific and educational purposes to pursue and foster research and development projects relative to urban mass transportation systems and to make the findings available to public, governmental bodies and the industry. Transit Development Corporation, Inc., is presently composed of eighteen major rail and bus public transit operating agencies in the United States and Canada, with a full time staff. (Please refer to Exhibit A for a list of member transit operators.)

In developing a proposed group of research projects for the next five fiscal years, as shown in Exhibit B, the Transit Development Corporation has limited selection only to those programs which are of immediate practical value to both the public and the transit industry.

The Transit Development Corporation is actively seeking UMTA financial support for their research projects although current UMTA policy is not directed toward supporting necessary short term practical product improvements. Recently this situation seems to be improving as noted in the testimony of Mr. B. R. Stokes before the House Subcommittee on Transportation. (Please refer to Exhibit C, page 3-6.)

In order to continue the support of the research projects of the Transit Development Corporation, Inc., for fiscal year 1975-76, and to assist in establishing the Transit Development Corporation as a viable research arm of the operating industry, it is recommended that the General Manager be authorized to subscribe AC Transit as a continuing member of the Transit Development Corporation at a sum of \$25,000 for fiscal year 1975-76.

These funds can be drawn from an allocation of the Metropolitan Transportation Commission, specifically earmarked for research and planning.

RECOMMENDATION:

It is recommended that the General Manager be authorized to subscribe AC Transit as a continuing member of Transit Development Corporation, Inc. at a sum of \$25,000 for fiscal year 1975-76.

The matter will be brought to your attention for consideration at the Finance Committee meeting on Wednesday, June 25, 1975.

Alan L. Bingham

attachment

cc: Board of Directors

TRANSIT DEVELOPMENT CORPORATION, INC.

MEMBER TRANSIT OPERATORS

1. AC Transit, Oakland
2. American Transit Corporation, St. Louis
3. ATE Management & Service Company, Inc., Baltimore
4. Chicago Transit Authority, Chicago
5. Cleveland Transit Sytem, Cleveland
6. Mass Transit Administration, Maryland
7. Massachusetts Bay Transportation Authority, Massachusetts
8. Metropolitan Atlanta Rapid Transit Authority, Atlanta
9. Metropolitan Transportation Authority, New York City
10. Montreal Urban Community Transit Commission, Montreal
11. Port Authority Allegheny County, Pennsylvania
12. Port Authority Trans-Hudson Corporation, New York & New Jersey
13. Rapid Transit Lines, Inc., Houston
14. San Francisco Bay Area Rapid Transit District, Oakland
15. Southeastern Pennsylvania Transportation Authority,  
Philadelphia
16. Southern California Rapid Transit District, Los Angeles
17. Toronto Transit Commission, Toronto
18. Washington Metropolitan Area Transit Authority, Washington, D.C.

TRANSIT DEVELOPMENT CORPORATION, INC.  
FIVE YEAR RD&D PLAN

## EXHIBIT B

(A Non-Profit Scientific and Educational Organization  
with Membership Consisting Solely of Transit System Operators)

No.	PROJECT	FY 76	FY 77	FY 78	FY 79	FY 80	TOTAL
1	RMA RAIL VEHICLE SPECIFICATION	\$ 100,000	\$ 500,000	\$1,000,000	\$1,000,000	\$1,000,000	\$ 3,600,000
2	SMOKELESS CABLE	76,000	159,000				235,000
3	SUBWAY VENT FOR SAFETY	52,000	150,000				202,000
4	ACT & ASDP	50,000	210,000				260,000
5	TRANSIT SYSTEM SAFETY	150,000	325,000	275,000	300,000	325,000	1,375,000
6	NSC SAFETY TRAINING FILM	25,000	78,000				103,000
7	TRANSIT MATERIAL FLAMMABILITY-TOXICITY	100,000	150,000	143,500			393,500
8	BUS AIR CONDITIONING	65,000	141,000				206,000
9	BUS DIAGNOSTICS	20,000	26,500				46,500
10	RAIL-WHEEL SQUEAL	100,000	171,000	50,000			321,000
11	FIXED AND MOTOR STAIRS	64,500					64,500
12	CONCRETE TIES	50,000	221,000	194,000			465,000
13	BUS BID EVALUATION	25,000	113,000	69,000			207,000
14	DEVELOP AND MAINTAIN. TRANSIT DATA BANK	50,000	90,000	70,000	70,000	70,000	350,000
15	TRANSIT SPECIFICATION CONSULTATION	25,000	25,000	25,000	25,000	25,000	125,000
16	ASSURED ENERGY RECEPTIVITY	200,000	570,000				770,000
17	RAIL VEHICLE GUIDELINE SPECIFICATIONS (See Project 1)						
18	RAIL VEHICLE CRASH ATTENUATOR		200,000	100,000			300,000
19	TRANSIT STANDARDS COORDINATION		48,300	48,300	48,300	48,300	193,200
20	IMPROVED BUS CLEANING		136,500				136,500
21	BUS TIRE LIMITS		21,000				21,000
22	BUS DESTINATION SIGN RETROFIT		114,000				114,000
23	TRANSPARENCIES STANDARDS AND TESTS		150,000	100,000			250,000
24	TUNNELING TECHNIQUES			1,000,000	1,000,000	181,900	2,181,900
25	DERAILMENTS - PARIMETRIC STUDY			100,000	100,000		200,000
26	TUNNELING DEMAND UPDATE			21,000			21,000
27	TRACK ALIGNMENT STANDARDS			100,000	44,500		144,500
28	RAIL CORRUGATION AND SPALLING			200,000	220,000		420,000
29	RAIL NOISE STND. MEASUREMENT METHODS			100,000	101,300		201,300
30	TUNNEL MAINTENANCE AND CLEANING			131,000	43,900		174,900
31	BUS SELF-CLEANING HVAC FILTER			100,000	82,000		182,000
32	GUIDEWAY INTRUSION DETECTION				230,000	380,000	610,000
33	RELIABILITY IMPROVEMENT TRACTION & POWER				123,000	204,000	327,000
34	VANDALISM/SECURITY STATION DESIGN				586,000	975,200	1,561,200
35	BUS BATTERY IMPROVEMENTS				394,000	131,000	525,000
36	OPTIMUM CAR DESIGN FEATURES FOR FIRE STY.					320,000	320,000
37	RAIL POWER COLLECTION					126,750	126,750
38	FIRE DETECTION AND EXTINGUISHMENT					168,000	168,000
39	SAFETY OF UN-MANNED OPERATION					227,800	227,800
40	NOISE AND VIBRATION EQUIPMENT DESIGN					177,000	177,000
41	BUS MONITORING AND CONTROL					121,000	121,000
42	BUS SCHEDULE ADHERENCE					214,000	214,000
43	VANDAL/SECURITY MANUAL OF PROCEDURES					174,800	174,800
44	STANDARD BOOK OF RULES						
45	FAIL-SAFE DESIGN MANUAL (ATC SYSTEMS)						
46	TRANSIT INFORMATION SYSTEMS						
47	INTERMODAL TRANSFER						
48	ALL-SEASON BUS HVAC CONTROL						
49	BUS HEATING SYSTEM SIMPLIFICATION						
50	DISPOSAL OF LARGE OBJECTS IN SOFT-GRND. TUNNELS						
51	MUCK DISPOSAL						
52	MODULARITY OF MAJOR VEHICLE COMPONENTS						
53	IMPROVED FRICTION BRAKE MATERIALS						
54	HEATING/AIR CONDITIONING STANDARDS						
55	INTERMEDIATE CAPACITY STANDARD VEHICLE						
56	RIDE QUALITY ASSESSMENT CRITERIA						
57	AERIAL STRUCTURE HARMONIC VIBRATION						
58	TRACK FASTENERS						
59	ACOUSTIC MTLs. FOR TUNNELS & STRUCTURE						
	MEDIUM PRIORITY PROGRAMS (44-59 ABOVE)		1,050,700	1,723,200	1,182,000	1,080,250	5,036,150
	GRAND TOTAL	\$1,152,500	\$4,650,000	\$5,550,000	\$5,550,000	\$5,950,000	\$22,852,500

STATEMENT OF B. R. STOKES, EXECUTIVE DIRECTOR OF THE AMERICAN  
PUBLIC TRANSIT ASSOCIATION BEFORE THE SUBCOMMITTEE ON TRANSPORTATION  
OF THE HOUSE APPROPRIATIONS COMMITTEE, MAY 13, 1975

---

Mr. Chairman and Members of the Transportation Subcommittee, I am B. R. Stokes, Executive Director of the American Public Transit Association (APTA). APTA represents urban mass transit systems, both public and private, which carry 90 per cent of the transit passengers throughout the nation. We are dedicated to improving transit. Accordingly, we welcome this opportunity to testify concerning UMTA's budget request.

Mr. Chairman, the National Mass Transportation Assistance Act of 1974 provides the base upon which public transportation can improve and expand. We commend the Congress in passing that legislation, particularly in face of the energy, economic and environmental concerns that so plague the nation.

CAPITAL FUNDS AND FORMULA GRANTS

With respect to the capital funds, we believe that \$1.1 billion represents a fair level for FY76. However, the overall authorization of \$6.6 billion for capital and formula grants over six years may not be sufficient to meet mobility needs over the next several years. This will be true if additional new fixed rail systems are approved for preliminary engineering during 1976. We intend to request the Congress to increase authorizations for Section 3 funds next year in accordance with the scheduled update of the 1970 act.

The level of authorized obligations for the formula grant program needs close watching in its early stages of development. We were pleased to notice that the House Transportation Subcommittee recognizes this fact. Some of the areas of the country have not been able to organize themselves to qualify for obligations under the formula grant program by the end of this fiscal year. In your letter to the Department of

Transportation concerning the reprogramming of \$300 million of Section 3 funds to be used for Section 5 (formula grants), you did indicate that the Subcommittee would expect of the Department that any of the \$300 million not obligated under Section 5 should be obligated during FY75 under Section 3. We commend the committee for its foresight.

We also urge that the committee consider a related problem. The budget request for the formula grant program is \$500 million for FY76. The authority of the apportioned funds under the formula grant program is for two years. During FY76 some urbanized areas of the country may want to exercise the option to obligate their 1975 as well as their 1976 apportionments. Should this occur, the the FY76 budget estimate of \$500 million may be too low.

On April 17 the UMTA Administrator wrote an important letter to the Metropolitan Atlanta Rapid Transit Authority. The Administrator's letter indicated his intent to obligate up to \$600 million out of current authorizations over the next 5 years, if the levels of obligation sufficient to meet this are approved by the Congress. We commend this action. The MARTA action is most reassuring to the nation's transit systems as they can now look forward to long-term commitments and plan accordingly. We hope that this Committee finds it an acceptable way.

It would also be our understanding that since the \$600 million MARTA action is derived from current authorizations, MARTA would not be barred from applying for additional funding when new authorizations become available.

Referring to new rapid transit starts, we are pleased to note the inclusion of \$100 million for the purpose of funding new rapid transit projects. We assume that these funds are to be used for preliminary design and engineering for those areas that have generated the local support for fixed guideway transit. Again, as with the MARTA action,

we are most pleased at the Department of Transportation's recognition of the need for the development of rapid transit.

ADMINISTRATIVE NEEDS

With respect to UMTA's request for additional staffing, and considering the level of grants totaling billions of dollars that impact the entire nation, we recommend and urge the subcommittee to provide for this very vital request for additional personnel.

RESEARCH, DEVELOPMENT AND DEMONSTRATION

APTA would make comments in two areas of the Section 6 program. One is the hardware research program and another is in the demonstration area. We solicit your support for a more responsive approach between the Federal Government and the transit industry regarding research and development. Sensitivity to the priorities and to the short-term requirements of the transit operators and the public they serve is not being addressed sufficiently. There must be a greater participatory role by the transit operators in the determination and implementation of near-term practical needs. Let me assure you that I am not here to request that additional sums be added to the UMTA budget request. We feel industry objectives can be accomplished by either reordering the priorities of Section 6 or by means of a proposal to be made to the Department of Transportation to allow that up to 1 1/2% of an urbanized area's Section 5 funds could be set aside by the designated recipient for R & D.

One can argue that greater emphasis has been placed upon the more innovative types of hardware research with too little emphasis placed on present needs. By and large, the total of \$360 million which has been appropriated for R & D through FY75 has not been productive enough in helping to improve and protect the present \$50 billion investment in our transit systems.

Future R & D expenditures should emphasize near-term improvements in existing technology necessary to bring transit up to date. This type of R & D would apply to product improvement, design innovation, state-of-the-art technology, and systems application engineering using techniques proven in other disciplines. All of this is near-term and of practical application. In short, our necessities rest with such relatively prosaic projects as standardization of concrete ties, energy conservation, bus self-cleaning air filters, improved bus destination signs, bus cleaning devices and the problems of tire wear, to name a few. There are literally hundreds of like items which the transit operators cannot afford to finance.

We recognize that there is the opinion that some of these items are product improvements. As such, this opinion goes, the R & D should be undertaken by the suppliers. This is simply not true. These needs are not new. They have been with us. They have been discussed with suppliers. The facts are that there simply is not the promise of sufficient return on investment to the private sector to offset the risk.

The transit agencies have developed a Five Year R & D Plan to undertake and solve these problems. The cost is modest -- \$1.5 million for FY76 will permit us to start over a dozen projects, some of which can be completed in this period. Total cost for the 5 years, FY76 through FY80, is projected at less than \$23 million. Over 50 projects are identified for completion in this plan, which represents approximately one-third of the over 180 projects identified by the industry as requiring research and development effort. I repeat, these are not high risk ventures with questionable pay-out. These are down-to-earth needs in search of pragmatic solutions.

I ask, Mr. Chairman, that a chart describing this Five-Year Plan be included in the record of these proceedings.

We endorse UMTA's plans to initiate a project to develop a smokeless cable for subways (we have pressed this for years), and its plans for guidelines and standards on transit material flammability and toxicity as well as program effort on noise abatement. However, I submit that without the collective and active participation of the transit operators, the chances for success of these projects is indeed questionable. The operators must have assurance of a participatory role in both the determination and the implementation of transit R & D.

The transit operators are so dedicated to the proposition of finding solutions for today's problems, and the need for a participatory role, that they have sponsored a non-profit organization, the Transit Development Corporation (TDC), to pursue this kind of effort. We are proud of its accomplishments. For example, TDC has recently completed a substantial project on environmental control in subway rapid transit systems -- the end product is an industry first, the Subway Environmental Design Handbook. The success of this project is to a large measure due to both transit operator support and participation. There must be more worthwhile projects such as this one -- with active participation of the operators. They have contributed considerably both financially and in services to TDC's R & D efforts. But, it is painfully self-evident that without a Federal commitment on a regular basis, the job won't get done -- and the public will suffer.

The transit operators have been responsive to their obligation to the public by certifying an organization that will coordinate and focus on its R & D needs.

The transit operators must be permitted to execute the responsibility in cooperation with UMTA to develop, implement, and coordinate the programs detailed in the Five Year R & D Plan and those that will logically follow. We seek your cooperation in this effort.

SERVICE AND METHODS DEMONSTRATION

This successful program has had wide support from State and local governments and the transit industry. We at APTA therefore are curious over the reduction in the 1976 level of \$9.250 million from the 1975 level of \$12.250 million.

The S & M demonstration program, as currently administered, has been an effective tool in making practical use of existing capital funds for transit. Innovative traffic management procedures, pricing and service techniques have had immediate impact and thus have received popular support.

To this point several projects initiated under the S & M demonstration program are now financed by state and local funds or have reached a point where they are self-supporting. The Shirley Highway Project is an excellent example.

ENERGY CONSERVATION

In closing, we feel compelled to briefly mention our deep concern over recent studies that have grossly underestimated the true energy-saving potential of urban mass transit.

The federal studies claim that a doubling of transit ridership would conserve 40,000 barrels of petroleum per day. APTA studies, however, document the fact that the true energy-saving potential of public transit is more than four times the federal figure, or 178,000 barrels per day.

Currently, the Federal Energy Administration's Mass Transit and Energy Conservation, which is based on an earlier DOT report, is being cited as a reliable source of information. Because these studies contain over-simplified calculations of possible energy savings through increased transit use, the results are based on incorrect data, inaccurate assumptions and ignored facts.

Ignored in the studies is one basic and proven fact: The most energy efficient means of moving people is urban public transportation. One bus carries the equivalent of 35 automobiles; one rail transit car is comparable to 70 automobiles. One gallon of fuel used to move people in mass transit vehicles conserves 17 gallons of fuel that would otherwise be used to move automobiles.

With your permission, Mr. Chairman, we ask that the APTA paper - Energy Conservation and Public Transit: An Interim Rebuttal by the American Public Transit Association - be entered into the official record of these proceedings.

Thank you, and I would be pleased to respond to any questions you may have.