



UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

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RESOURCES AND ECONOMIC  
DEVELOPMENT DIVISION

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7/2/75



The Honorable  
The Secretary of Transportation

Dear Mr. Secretary:

We surveyed the Urban Mass Transportation Administration (UMTA) capital grant program and have noted issues warranting your attention.

We made our survey at UMTA headquarters, Washington, D.C., and at 26 grantees in UMTA's region V, which includes Minnesota, Wisconsin, Michigan, Illinois, Indiana, and Ohio. Our survey primarily dealt with the problems grantees are having procuring buses and with the reliability of buses. Many of the transit system grantees were having problems and delays procuring small (30-foot) buses and many small buses purchased with Federal funds were not reliable and have been or will be replaced after a few years' use.

PROBLEMS WITH THE PROCUREMENT  
AND RELIABILITY OF SMALL BUSES

Under the Urban Mass Transportation Act of 1964, as amended (49 U.S.C. 1601), UMTA has provided Federal assistance, through its capital facilities grant program, to transit system grantees for procuring capital equipment. This program's goal is to improve urban life and the urban environment by providing safe, fast, attractive, and convenient service as efficiently and economically as possible. Information gathered during our survey indicated that many small transit systems are not realizing this goal.

Problems and delays in procuring small buses:

Grantees have had delays in obtaining needed buses because of their lack of experience in preparing design and performance specifications during the procurement process. Such delays have caused grantees to continue operating under the conditions they were attempting to correct through UMTA funding.

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UMTA requires each grantee to prepare its own bus specifications. Preparing bus specifications can be a time-consuming process, particularly for small, inexperienced communities. For example, 4 of the 16 grantees we contacted said it took them each about 6 months to prepare bus specifications. In one instance, the grantee wanted to procure only one bus. It sent a copy of one manufacturer's bus specifications to other manufacturers for comment and changes so the other manufacturers could bid. The resulting revised specifications took nearly 6 months to complete. After receiving the revised specifications, the manufacturer whose specifications were originally sent for comment objected to certain revisions; this resulted in additional changes.

Responding to grantee bid solicitations based on grantee-prepared bus specifications, bus manufacturers have on many occasions appealed certain restrictive aspects of the specifications. Such actions occasionally have resulted in delayed bid openings. Five of the grantees we contacted experienced delays in bid openings; one was delayed 6 months.

On other occasions, instead of delayed bid openings, several grantees incorporated requested specification changes into the original specifications shortly before bid openings. In one case, a grantee, after responding to a 50-page and a 5-page appeal from a manufacturer, incorporated five appeal items into the specifications 12 hours before bid opening. UMTA procedures require 7 days between the date final changes are made to bus specifications and the date bid opening takes place.

Specifications resulting in fewer bids can negate the benefits normally derived from competitive contracting. In some instances, bus manufacturers believed they could not compete for a contract because the specifications placed them at a disadvantage. For example, one manufacturer wrote to a grantee that it would like to submit a bid but said the specifications so closely described another manufacturer's vehicle that it believed no other bidder could successfully compete. Another bus manufacturer wrote to a grantee concerning an appeal and said:

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"\* \* \* but you must appreciate that we had to write an 8-page letter and supplement it with an additional 6-page letter on the engine alone in order to handle the many problem areas of your specification. Unfortunately, we are forced to do this repeatedly because specifications which we receive are regularly and almost entirely a copy of a competitive specification which goes beyond the functional and dimensional descriptions of a vehicle and actually describes one specific vehicle."

UMTA procedures provide for its concurrence on specifications before the grantee solicits bids for procuring equipment costing more than \$2,500. At present, two UMTA officials review all equipment specifications to determine that certain procurement elements and standard language are included in the specifications. According to one of the reviewing officials, time does not permit a detailed review. He said that over 50 percent of the staff time is spent responding to manufacturers' appeals on limitations caused by specifications.

Our discussions with grantees in region V indicated their desires for standard bus specifications. Twenty of the grantees we contacted said that developing standard bus specifications was warranted. Also, a recent Michigan Public Transit Operators Association survey report disclosed that a majority of its members preferred standard specifications.

Newly purchased small buses are unreliable

Many small cities have limited maintenance capability and limited financial resources. Yet they are faced with operating transit systems with unreliable buses that were recently purchased with Federal grants.

Ten of the grantee bus operators in region V told us that they were unable to provide the level of transit service desired because of mechanical problems with recently purchased small buses. Many grantees said that their buses, which were

purchased with Federal assistance, were having transmission, engine, brake, and body structure problems. One grantee reported that all nine of its buses--acquired in 1973 with assistance from an UMTA capital grant--were out of service because of mechanical difficulties. Several other grantees have requested or plan to request additional Federal funds to replace buses obtained during the past 5 years. For example, one grantee received an UMTA grant in June 1974 to replace six buses it had purchased in 1971. The reason given for early replacement was excessive breakdowns in the buses and an inability to meet schedules.

Procuring unreliable equipment can result in communities (1) not being able to provide needed service, (2) having to purchase extra buses to insure that a given number of buses are in service at a specific time, or (3) replacing buses before their normal 10- to 12-year life. Such situations diminish the capital grant program's affect on those communities.

Discussions with officials from the American Public Transit Association (APTA)<sup>1/</sup>, UMTA, and several transit systems indicated the need for quality assurance in transit bus manufacturing. One official said that most bus production assemblies do not have quality control inspection and that faulty and damaged equipment gets passed on to the transit operators. Another official pointed out that, if manufacturers reach full production capacity (most major manufacturers are at full capacity) and try to accelerate their production, bus quality can be expected to continue to decline.

An UMTA official said that the current emphasis on mass transit has greatly increased the number of small bus manufacturers. He said that several mobile home manufacturers

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<sup>1/</sup>APTA is an organization of more than 250 rail and motor bus systems in North America with an associate membership comprised of transit manufacturers, suppliers, contractors, publishers, associations, and consultants.

are beginning to build small buses and that several communities may soon be faced with many bidders and not have a method of evaluating the reliability of such vehicles.

Recent actions which could improve the procurement and reliability of small buses

In November 1974, APTA made available to its members a standard bus specification for a heavy-duty small bus. APTA sought a short-term solution to alleviate problems transit operators were having with small buses.

In January 1975, UMTA awarded a contract for developing performance specifications and a conceptual design for an advanced small bus. The specifications to be developed will take "State of the Art" technology and combine it for the first time in one bus. The specifications are expected to be completed in about 16 months and will be available to manufacturers for small bus production. An UMTA official told us that if no manufacturer desires to use the specifications at that time UMTA probably would have to develop the small bus up to production line availability. This would include developing a hardware design for the performance specifications followed by building and testing a prototype bus. He estimated that this additional development would take about 4 to 6 years.

UMTA recently incorporated a statement in the material it sends to grantees to use when preparing specifications for bids. The statement encourages the grantee to obtain from any manufacturer with less than 3 years' experience documented test results of the transit equipment's capability. Also, UMTA is developing language for grantees which would require certain types of performance certifications before new small buses are delivered. Such language could require:

1. Certifying the integrity of the design structure to meet extreme working conditions under full capacity.
2. Certifying actual service in densely populated cities for a minimum of 6 months and for no less than 30,000 miles.

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3. Certifying shaker tests which simulate actual driving conditions over extreme road conditions for a minimum of 15,000 miles. (This may be substituted for 1 and 2.)
4. Loading and testing every bus for a minimum of 50 miles with all equipment operating.

#### CONCLUSIONS

Federal funds should be used to provide well-designed, high quality buses that can reasonably be expected to give, with normal maintenance, service for a predetermined number of years or miles. UMTA's adoption of standard bus specifications for grantees to use should minimize many of the delays and problems we noted by

- eliminating the time-consuming process grantees go through when preparing their own specifications;
- placing manufacturers in a position of knowing what the standards would be, possibly increasing competition;
- reducing UMTA's time to review each grantee's bus specification; and
- reducing the number of appeals from manufacturers.

Requiring performance certifications in the specifications to procure small buses should provide greater assurance of reliable equipment for transit systems and better service to the public. In addition, such certifications should help insure greater reliability of vehicles produced by new manufacturers entering the small bus field.

#### RECOMMENDATIONS

We recommend that the Secretary of Transportation require UMTA to:

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- --Adopt standard specifications for UMTA-funded buses at the earliest practicable time after completing its advanced small bus project.
- Develop interim minimum performance standards to help alleviate the types of problems found in small buses and require grantees to incorporate these standards in future small bus specifications for UMTA-funded buses. In developing these standards, UMTA should evaluate APTA's specifications designed to alleviate problems found in small buses.
- Expedite the development and implementation of its reliability requirements for buses procured with Federal assistance.
- Require, rather than encourage, grantees to obtain test results from bus manufacturers with less than 3 years' experience.

Although our survey focused on the problems with small buses, UMTA should also consider the applicability of our recommendations to the procurement process of all UMTA-funded buses and, where appropriate, implement these recommendations.

As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement of the actions he has taken on our recommendations to the House and Senate Committees on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Director, Office of Management and Budget; the Senate Committees on Appropriations, Government Operations, and Banking, Housing, and Urban Affairs; and the House Committees on Appropriations, Government Operations, and Public Works and Transportation.

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We appreciate the courtesy and cooperation extended to our representatives during the survey. We shall appreciate being informed of the actions you take on our recommendations.

Sincerely yours,

*Henry Eschwege*

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Director