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Fact Sheet for the Chairman, Subcommittee on Housing and Urban Affairs, Committee on Banking, Housing, and Urban Affairs, U.S. Senate

July 1991

MASS TRANSIT GRANTS

Development Time Frames for Selected UMTA Projects

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July 11, 1991

The Honorable Alan Cranston
Chairman, Subcommittee on Housing
and Urban Affairs
Committee on Banking, Housing, and
Urban Affairs
United States Senate

Dear Mr. Chairman:

Since 1976 the Urban Mass Transportation Administration (UMTA) has had a structured process that state and local agencies must follow in developing federally funded major capital investment projects (see sec. 2).[1] During August 1990 hearings, Mr. Rod Diridon, Supervisor, Santa Clara County, California, provided a flow chart for UMTA's project development process (hereinafter referred to as flow chart; see sec. 3) and testified that under UMTA's process as much as 12 years may elapse before project construction begins. Because you were concerned about this length of time, you asked us to comment on the time required to complete UMTA's project development process. In subsequent discussions with your office, we agreed to compare the times shown in the "status quo" column of the flow chart with the actual processing times for a number of proposed projects.

UMTA's project development process includes four phases before actual construction--system planning, alternatives analysis, preliminary engineering, and final design. This fact sheet provides information on the time taken to process 10 proposals, about one-fourth of all projects that were in various phases of development as of November 1990 (see sec. 4) and compares these times with those shown in the flow chart (see sec. 5).

In summary, although UMTA's project development process can be lengthy, we found that the time frames for the proposals we reviewed were generally shorter than the times shown in

[1]A major capital investment is the construction of a new fixed guideway system (a facility that uses or occupies a separate right-of-way or rails) estimated to cost more than $100 million or the extension of an existing system.

the flow chart. Specifically, the overall time to complete UMTA's process for the four projects under construction ranged from 3.3 to 5.8 years, with an average of about 4.8 years, excluding the system planning phase. This is about 4 years less than the times shown in the flow chart. In making this comparison, we excluded the system planning phase from both our findings and the flow chart time frames because planning is a continuous regionwide process performed by local agencies without starting and completion dates for specific projects. Therefore, information on the time to complete the entire system planning phase was not available in the UMTA headquarters project files we examined.

As shown in table 1, we found that the average number of months to complete individual process phases for the projects we reviewed was less than the times shown in the flow chart.

Table 1: Comparison of GAO Findings With Flow Chart Time Frames

Process phase	Flow chart range in months	GAO findings: Number of projects	GAO findings: Range in months	GAO findings: Average in months
System planning[a]	6-18	5	1- 7	5
Alternatives analysis	32-40	7	13-38	27
Preliminary engineering	30-42	3	19-34	25
Final design	21-30	4	3-23	13

[a]Includes time only for UMTA's decision making after the transit authority completes planning study.

UMTA's time to review and decide on proposals can be affected by factors that are generally outside of its control. For cases in which proposed alternatives did not meet UMTA's cost-effectiveness criteria or in which UMTA was likely to recommend against proceeding to subsequent phases, local officials requested that UMTA delay its decision until additional information or more cost-effective alternatives could be developed.

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As discussed in greater detail in section 1, we judgmentally selected the project proposals; therefore, the times frames may not be representative of UMTA's project development

process nationwide. We selected 10 proposals from UMTA's list of 41 projects being developed as of November 1990. Two of the proposals we selected were for projects in Santa Clara County, California. We selected the remaining eight proposals, after discussions with UMTA officials, to obtain a mix of those that UMTA considered were being processed either quickly or slowly and that were in different phases of development. We took this approach to ensure that we included some more recent proposals as well as some older projects already under construction. We examined files at UMTA headquarters to determine how long each project took to progress through the development process. According to Mr. Diridon, the flow chart was developed more than 5 years ago and was based on information obtained from discussions with local transportation officials about their experiences in processing proposals.

We discussed the information in this fact sheet with officials responsible for UMTA's project development process and incorporated their comments where appropriate. The UMTA officials stated that the facts were presented fairly and objectively. As agreed with your office, we did not obtain official agency comments on a draft of this fact sheet. Our work was performed in accordance with generally accepted government auditing standards. We are providing copies of this fact sheet to the Secretary of Transportation; the Administrator, UMTA; and other interested parties. If you have any questions, please contact me at (202) 275-1000. Major contributors to this fact sheet are listed in appendix I.

Sincerely yours,

Kenneth M. Mead
Director, Transportation Issues

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ABBREVIATIONS

AA	Alternatives Analysis
EIS	Environmental Impact Statement
FEIS	Final Environmental Impact Statement
GAO	General Accounting Office
PE	Preliminary Engineering
UMTA	Urban Mass Transportation Administration

SECTION 1

OBJECTIVE, SCOPE, AND METHODOLOGY

During August 1990 hearings, Mr. Rod Diridon, Supervisor, Santa Clara County, California, provided a flow chart and testified that under UMTA's project development process as much as 12 years may elapse before project construction begins. The Chairman, Subcommittee on Housing and Urban Affairs, Senate Committee on Banking, Housing, and Urban Affairs, expressed concern about this length of time and asked us to obtain information on the time required to complete UMTA's project development process. In subsequent discussions with the Chairman's office, we agreed to compare the times shown in the flow chart with the time taken to process other project proposals.

We examined pertinent mass transit legislation and UMTA's implementing regulations, policy statements, and directives on mass transportation capital investments to determine the processing requirements for developing project proposals and the procedures and criteria UMTA uses to evaluate and approve proposals. We discussed the project development process with UMTA's Chief Counsel and officials in UMTA's Office of Grants Management. In addition, we reviewed pertinent UMTA manuals and other studies and reports providing guidance to state and local agencies on transit project planning.

We judgmentally selected 10 project proposals and examined project files at UMTA headquarters to determine how long each took to progress through the development process. We compared the time frames from our examination with those shown in the flow chart and documented any differences. We selected the 10 proposals from an UMTA list of 41 projects being developed as of November 1990. We selected the Guadelupe and Tasman proposals because they are projects in Santa Clara County, California. We selected the remaining eight proposals, after discussions with UMTA officials, to obtain a mix of those that UMTA considered were being processed quickly and slowly and that were in different phases of development. We took this approach to ensure that we included some relatively recent proposals as well as some older projects that were under construction. Of the 10 proposals we reviewed, UMTA headquarters files contained information to determine the processing times for 5 of the 10 that had completed system planning, 7 that had completed alternatives analysis, 3 of the 4 that had completed preliminary engineering, and 4 that had completed final design and were under construction.

We also discussed the approach used to develop the flow chart with Mr. Diridon, who told us that the flow chart was put together more than 5 years ago. He said that the chart was developed on the basis of information obtained from discussions with local transportation officials about their experiences in processing

proposals under UMTA's process, including the Guadelupe and Tasman projects.

Finally, the flow chart reflects times for both "Status Quo" and "Fast Track" processes. Our findings are compared to the status quo, or normal, time frames because UMTA did not have a formal fast track process at the time the flow chart was developed. According to Mr. Diridon, the fast track time frames represent the opportunity to reduce processing times by allowing the preliminary engineering phase to begin while the draft environmental impact statement is being developed at the end of the alternatives analysis phase. In March 1989 the Secretary of Transportation announced a new initiative to improve the award of discretionary (section 3) grants. Under this initiative UMTA will expedite its review for projects proposing a federal contribution of 30 percent or less of project costs. Although all of the projects we reviewed began processing before this initiative was announced, UMTA later agreed to expedite the review process for one project that was already in the alternatives analysis phase in recognition of the local funding overmatch.

SECTION 2

UMTA PROJECT DEVELOPMENT PROCESS

The Surface Transportation and Uniform Relocation Assistance Act of 1987 established criteria for funding construction grants for major capital investments. Generally, UMTA can fund a proposed project only if the transit authority completes an alternatives analysis (AA) and preliminary engineering (PE) study and shows that the project is cost effective and supported by an acceptable degree of local financial commitment. UMTA supports preconstruction activities through planning grants; transit authorities can use either planning or formula grant funds for these activities.

The act formalized UMTA's policies and procedures that required a structured project development process to rate projects being considered for discretionary (section 3) grant funding.[1] UMTA's process includes four phases before actual construction--system planning, alternatives analysis, preliminary engineering, and final design. For each phase in the process, transit authorities perform the technical studies to develop the proposals, and UMTA evaluates the proposals to determine their cost effectiveness and degree of local financial commitment. UMTA approval is required before a transit authority can advance a project proposal from one phase to the next. As of November 1990, 41 projects, with total costs of over $17 billion, were either in the development process or under construction.

SYSTEM PLANNING PHASE

System planning, the first phase in the project development process, is a continuous regionwide effort to develop a comprehensive transportation plan for an urban area. Local officials identify where major transit investments will be considered and identify a range of possible alternatives for addressing high-priority transportation problems. Before a transit authority can advance a proposal from system planning to the next phase, UMTA evaluates the proposal to determine if it meets certain ridership and cost-effectiveness criteria.

ALTERNATIVES ANALYSIS PHASE

During this phase local officials analyze the alternatives identified. At least one alternative must consider improving the existing system, including such actions as expanded bus service, ridesharing, and high occupancy vehicle lanes (transportation system management alternative).

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[1]The current urban mass transportation major capital investment policy is set out in the Federal Register, May 18, 1984.

For each alternative the analysis must estimate capital, operating, and maintenance costs; assess impacts on highway and transit service levels and transit ridership; evaluate cost effectiveness; assess funding options; assess state, local, and private sector roles and responsibilities; and assess social, economic, and environmental impacts. Once UMTA accepts the technical results of these analyses, the transit authority prepares a draft environmental impact statement (EIS). Following a required public hearing, local officials select a preferred alternative and adopt a plan for financing its capital and operating costs.

PRELIMINARY ENGINEERING PHASE

During this phase local officials perform a preliminary engineering analysis on the locally preferred and transportation system management alternatives. This analysis includes refining the design of the alternative projects and their estimated costs and impacts and completing the final environmental impact statement (FEIS).

Because federal funds are not sufficient to support all projects, in the first quarter of each fiscal year, UMTA rates all projects that are performing or have completed the preliminary engineering phase and recommends the allocation of grants for the next fiscal year. UMTA's ratings are based on cost-effectiveness criteria, the degree of local financial commitment, and other factors. Before 1985 UMTA issued a letter of intent to obligate discretionary funds for projects selected for potential funding.[2] Since then UMTA has approved funding for the final design phase without a letter of intent.

FINAL DESIGN PHASE

Final design is the last phase of project development before construction and is typically financed with discretionary funds. During this phase, local agencies acquire the right-of-way and prepare final construction plans. UMTA and the transit authority also negotiate a construction grant contract. Once the transit authority receives UMTA's approval, project construction can begin.

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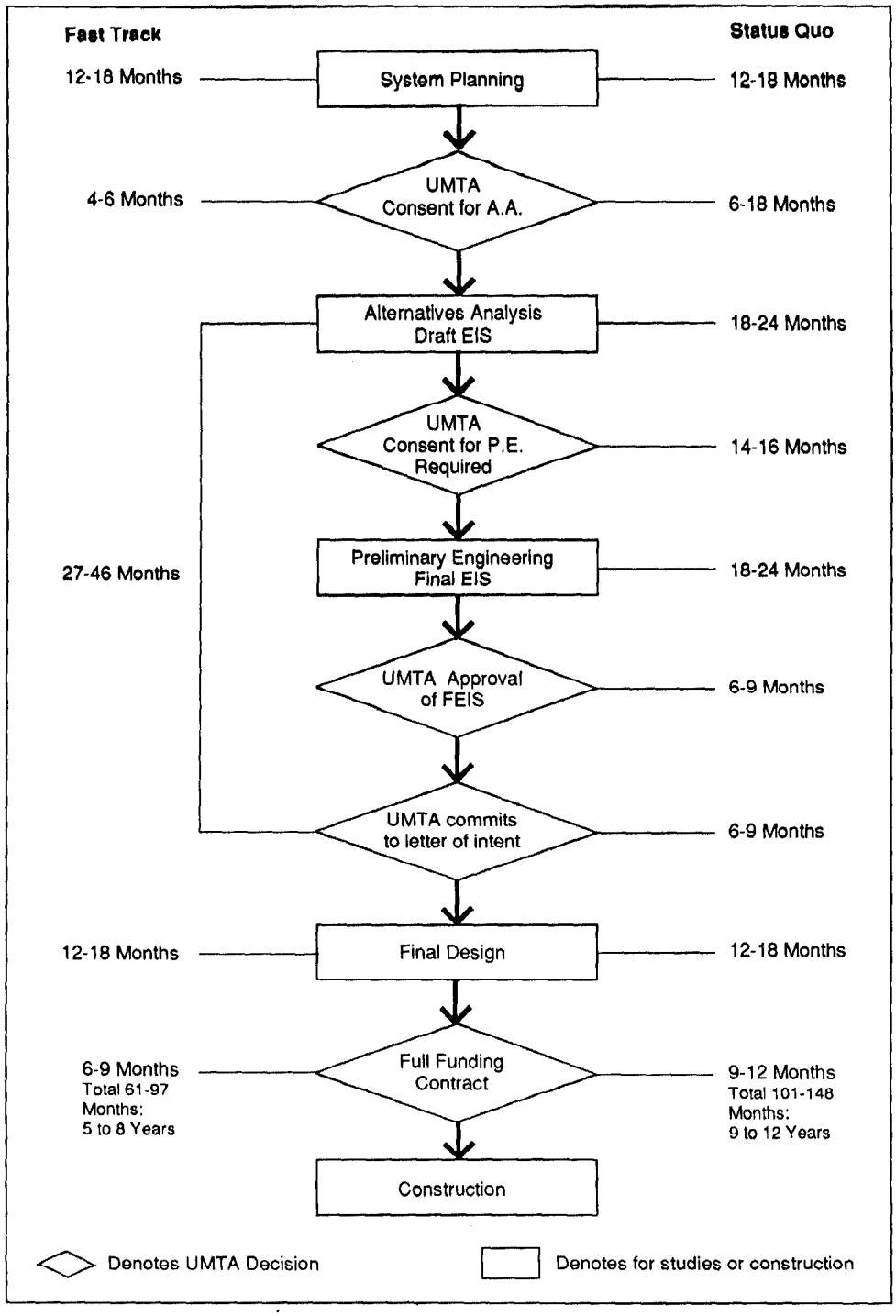
[2]A letter of intent documents UMTA's intention to obligate funds for a particular project but does not commit UMTA to actually funding the project.

SECTION 3

FLOW CHART ON UMTA PROJECT DEVELOPMENT PROCESS AND TIMELINE FOR MAJOR INVESTMENTS



Source: Mr. Rod Diridon, Supervisor, Santa Clara County Board of Supervisors, and Chairman, Metropolitan Transportation Commission.

SECTION 4

GAO FINDINGS ON UMTA PROJECT DEVELOPMENT PROCESS
(as of November 1990)

Project/phase	Date started	Date completed	Number of months
Baltimore-Hopkins			
System planning[a]	07/83	08/83	1
Alternatives analysis	08/83	12/85	28
Preliminary engineering	12/85	10/87	22
Final design	10/87	12/88	14
Total process[b]	08/83	12/88	64
Houston-Southwest			
System planning[a]	c	06/84	c
Alternatives analysis	06/84	07/85	13
Preliminary engineering[d]	07/85	10/85	3
Final design	10/85	09/87	23
Total process[b]	06/84	09/87	39
St. Louis-Airport Metro Link			
System planning[a]	c	01/83[e]	c
Alternatives analysis	01/83[e]	11/84	22
Preliminary engineering	11/84	09/87	34
Final design	09/87	10/88	13
Total process[b]	01/83[e]	10/88	69
Santa Clara-Guadelupe			
System planning[a]	c	06/79	c
Alternatives analysis	06/79	08/82	38
Preliminary engineering	08/82	03/84	19
Final design	03/84	06/84	3
Total process[b]	06/79	06/84	60
Atlanta-North Extension			
System planning[a]	09/87	02/88	5
Alternatives analysis	02/88	09/90	31
Preliminary engineering	09/90	f	f
San Francisco-Colma Station			
System planning[a]	01/86	07/86	6
Alternatives analysis	07/86	04/89	33
Preliminary engineering	04/89	f	f
Dallas-South Oak Cliff			
System planning[a]	06/88	11/88	5
Alternatives analysis	11/88	11/90	24
Preliminary engineering	11/90	f	f

Project/phase	Date started	Date completed	Number of months
Cleveland-Dual Hub			
System planning[a]	[c]/83	[c]/83	[c]
Alternatives analysis	[c]/83	[f]	[f]
Houston-Connector			
System planning[a]	[c]	07/86	[c]
Alternatives analysis	07/86	[f]	[f]
San Jose-Tasman			
System planning[a]	08/85	03/86	7
Alternatives analysis	03/86	[f]	[f]

[a]Includes time only for UMTA's decision making after the transit authority completes the planning study.

[b]Excludes system planning phase because complete information was not available.

[c]Not available from project files at UMTA headquarters.

[d]UMTA consent was not required because preliminary engineering was performed under a Federal Highway Administration program.

[e]Assumes action was taken at the beginning of the year when UMTA project files indicated only the year.

[f]Still in phase as of November 1990.

SECTION 5

COMPARISON OF GAO FINDINGS WITH FLOW CHART TIME FRAMES FOR UMTA'S PROJECT DEVELOPMENT PROCESS

Our comparison of the processing times shown in the flow chart (see sec. 3) to the time taken to process 10 project proposals that were in various phases of development as of November 1990 (see sec. 4) showed that the overall time to complete UMTA's project development process, excluding the system planning phase, ranged from 39 to 69 months, with an average of about 58 months. This is over 40 months less than the times shown in the flow chart.

System Planning Phase

All 10 proposals we reviewed had completed the technical study and UMTA evaluation parts of this phase. However, because system planning is a continuing regionwide process, not a specific project with start and complete dates, information on the time for transit authorities to complete the technical study part of the planning phase was not available in the files we reviewed. The flow chart, however, shows that this part of system planning requires 12 to 18 months to complete.

Of the 10 proposals, only 5 contained information sufficient for us to determine the time frames related to UMTA's decision making for the planning phase. From the transit authorities' requests to initiate alternatives analyses to UMTA's consent to begin this phase, the time ranged from 1 to 7 months, with an average of about 5 months. This is less than the 6 to 18 months shown in the flow chart.

Alternatives Analysis Phase

Of the 10 projects we reviewed, 7 had completed the alternatives analysis phase. Our evaluation of these proposals showed that the time to complete this phase ranged from 13 to 38 months, with an average of about 27 months. We found that the time for (1) transit authorities to perform the technical analyses ranged from 13 to 31 months, with an average of about 24 months, and (2) UMTA to evaluate proposals and approve requests to advance to the preliminary engineering phase ranged from 0 to 9 months, with an average of 3 months. In comparison, the flow chart shows that it takes 18 to 24 months for transit authorities to perform the technical analyses and 14 to 16 months for UMTA's approval. Overall, the chart shows that it takes 32 to 40 months to complete the alternatives analysis phase.

Preliminary Engineering Phase

Our evaluation of three proposals showed that the time for transit agencies to complete the preliminary engineering phase and

for UMTA to approve the final environmental impact statement and/or issue a letter of intent ranged from 19 to 34 months, with an average of 25 months. This is less than the 30 to 42 months shown in the flow chart.

Final Design Phase

The flow chart shows that this phase of the process takes from 21 to 30 months to complete. The time to complete the final design phase for four projects we reviewed ranged from 3 to 23 months, with an average of about 13 months.

FACTORS AFFECTING TIMELINESS

To advance a proposal through the project development process, a transit authority must identify costs; determine transportation, environmental, financial, and other impacts; and assess the cost effectiveness of alternatives. According to UMTA officials the length of time required for the process depends upon such factors as the complexity of project alternatives, magnitude and nature of potential environmental impacts, status of local planning data bases, quality of local analysis tools, competence and motivation of the local staff, and absence or presence of a local consensus on how to proceed.

We noted that three proposals we reviewed had been in the alternatives analysis phase for 4 or more years as of November 1990. One proposal had been rescoped twice since 1985 as local officials developed new alternatives during the analysis phase. However, the new alternatives did not meet UMTA's cost-effectiveness criteria, and the local agency had to refine the proposal and develop additional information. A second proposal has been in the alternatives analysis phase since 1983, in part because the project is a joint effort by three local agencies, one of which has apparently shown little interest in the project because of managerial, safety, and other problems. In addition to the local delay, UMTA questioned the alternatives identified and the ridership forecasts for this project. A third proposal has been in the alternatives analysis phase since 1986. In 1989 the transit agency decided not to proceed with the planned project and to develop other alternatives.

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