DEPARTMENT OF TRANSPORTATION NEWS

URBAN MASS TRANSPORTATION ADMINISTRATION

WASHINGTON, D.C. 20590

21-S-69

REMARKS BY C. C. VILLARREAL, URBAN MASS TRANSPORTATION ADMINISTRATOR, PREPARED FOR DELIVERY BEFORE THE WESTERN REGIONAL CONFERENCE OF THE AMERICAN TRANSIT ASSOCIATION, SEATTLE, WASHINGTON, ON JUNE 10, 1969.

Ladies and gentlemen -- it is a pleasure to be back on the west coast to participate in your ATA western regional meeting.

I had a smooth and comfortable flight into SEA-TAC, but actually even here on the ground, traffic, has a way of getting to the point that the only way to solve the parking problem is to buy a parked car. However, I still think it's too early to follow the suggestion of a former mayor. His idea was to line the cars up in the streets and pave right over them, then start from scratch... (Notice, I said a former Mayor, not former Mayor Braman).

Incidently, I would like to thank this great City for giving us their outstanding Mayor. From Washington to Washington - coast to coast -- we are indeed fortunate to have Mayor "Dorm" Braman in the Department of Transportation, serving as Assistant Secretary for Urban Systems and Environment.

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I remember the story of an old fellow from out in the sticks who was convinced that the government was going to "you know where." And then he had to go to Washington on business. He was there for a week and on his return the local reporters grabbed him and asked him what he found in the Nation's Capitol. "Well," he drawled, "I'm still convinced the government is going to the devil, but I have got to admit it is going there in very capable hands."

As you know, the Department of Transportation is 2 years old this year. Now, it hasn't exactly "burned rubber" from its tires getting away from the curb. However, I can promise you today that with the new leadership of Secretary Volpe, you will see greater forward movement in the months to come than in previous months.

Secretary Volpe does not want any more detours in the Department's activities. He has ordered us to move ahead with "responsible audacity" to meet and overcome the problems and crises of the American transportation system.

Of course, a detour is something that lengthens your mileage, diminishes your gas and strengthens your vocabulary. We want none of this. We must find short cuts to major problems and we've got to protect our gas supply for the greater tasks that lie ahead. Those of you who fear the strangulation of the urban transportation system don't want words of encouragement. You want help and you want it now.

Few realize the magnitude of our nation's transportation network. As a matter of fact, transportation is the largest service function in our economy today. Approximately one-fifth of America's gross national product represents direct or indirect outlays for transportation. Transportation is a major consumer of industrial products and minerals: 71 percent of the rubber; 52 percent of the petroleum; 53 percent of the lead; 29 percent of the steel; 22 percent of the aluminum; 28 percent of the cement; and 19 percent of the copper.

Transportation generates some 18 percent of all taxes collected by the Federal government. And transportation provides 13 percent of the nation's civilian employment, which amounts to over 9 million jobs.

Transportation's net investment in privately-owned and operated plant equipment and facilities is over 140 billion dollars -- nearly 10 percent of the Nation's wealth in terms of privately-owned tangible assets.

Impressive figures? Well, it's an impressive industry with which we all are associated.

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President Nixon has placed public transit in the cities among his top ten priorities. Secretary Volpe has placed urban mass transportation as his number one priority. The Secretary has already moved forward in many areas to develop a National Transportation Policy -- a Master Plan; something I might add that has been lacking for some time. Time is short, for we have been given only 6 short months in which to accomplish this important task.

In 1907, Theodore Roosevelt, while delivering a message to Congress, said:

> "The object of government is the welfare of the people. The material progress and prosperity of a Nation are desirable chiefly so far as they lead to the moral and material welfare of all good citizens."

His philosophy is applicable today, as it was at the turn of the century. That philosophy basically describes my own. We shall continue with our past programs in the Urban Mass Transportation Administration. The loans and capital grants have brought a significant measure of assistance and support to citizens and to cities across the Nation. Many transit and bus systems are working today because of the support of UMTA -- and the Urban Mass Transportation Act of 1964. Most important, these systems <u>are moving</u> people in urban areas, and they will <u>continue</u> to move them.

For the future, we in UMTA shall go forward with our own program of research and technological development. As many of you know, I have spent a number of years in industry, and I am aware that you cannot satisfy tomorrow's market with today's product.

--- Our long-range plans are committed to move people and goods -- easier, at lower cost, quicker and more safely.

--- We are going to save existing systems by "patching" them up (if you please) until new systems can be planned and built.

--- In our long-range plans, we are dedicated to building an integrated and balanced transportation system utilizing all available technology.

--- We shall explore new and better technology and methods for the sophisticated transportation systems required for the near future.

--- And lastly, our long-range plans are going to attempt to provide the leadership, incentive and policy to permit the most economical use of existing resources.

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As part of the program of development and improvement of urban mass transportation, I contemplate an aggressive and dynamic demonstration program. If we are going to make better, and more effective urban mass transportation a reality, I believe that we should take a long look at the steps which we will be taking in that direction.

We are attempting to work out realistic solutions to the problems of today. At the same time, we cannot overlook the way today's response to transportation crises transforms into the needs of a decade from now, and extending even into the year 2000.

The urban transportation systems of today must be designed and built to last at least 25 years; therefore, they must be planned to integrate into what we think will be the need in 30 years, or at the turn of the century. If we wait, the year 2000 will find us stymied in a multitude of urban and suburban people and traffic causing commerce to grind to a halt. All our efforts, especially at meetings such as this... must be aimed at the development of an integrated transportation system.

Secretary Volpe speaks often of the need for adequate and continuing funds for financing urban mass transportation programs. One possibility which he has mentioned is an urban transportation trust fund, which might do for public transportation service what the highway trust fund has done for highways. Secretary Volpe has mentioned several possible sources of revenue to support such a trust fund. One alternative would be the excise tax on new automobiles, all of which goes to the General Fund. These dollars could be partly diverted to this specific purpose, urban mass transportation. This would in no way affect the Highway Trust Fund. And it would involve the imposition of no new specific taxes.

Another possible source of revenue which has been mentioned would be an additional cigarette tax. In Massachusetts, such a tax helps to support the Massachusetts Bay Transportation Authority, and it has provided a predictable source of revenue to the Authority's planners. Predictability isn't always a virtue, but it is certainly an advantage when trying to find money to plan public programs and facilities.

Another alternative being discussed is to tax alcoholic beverages. Some of us within the Department of Transportation are considering other methods of financing the program, and we are in the process of formulating a legislative program. This package -- Congress willing -- will make it possible to take steps to satisfy the critical need for better urban transportation. Secretary Volpe is deeply concerned about this grave problem and has instructed his staff to find alternative methods of solution.

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Congressional leaders from both the Republican and Democratic sides, feel optimistic in the establishing of a new method of financing to help cities improve or establish public mass transit.

Let me briefly tell you what we are doing today:

TODAY, we in the Department of Transportation are financing experiments and testing prototypes for tracked, air cushion, vehicles that will travel along the ground at speeds up to 300 miles per hour. The research vehicle will first be driven by a turbo-fan, although there are plans to extensively test the unique linear induction motor as a possible future propulsion device. The LIM offers key advantages of low noise and reduced air pollution.

TODAY, we are involved in studying the use of radio controlled mini-buses that would pick up passengers at their front doors and deliver them to a central bus line for delivery to the inner city. We call it "dial-a-bus."

TODAY, we are assiting in research for new types of vehicles that run on streets, as well as tracks, and would be multi-modal in nature.

TODAY, we are working on new programs to use STOL aircraft to carry people between airports, between cities, and from city center to out-lying areas.

AND TODAY, we are investigating a project known as Tubeflight, which is developing the principle of trains floating through tube-like subways between the city center and the suburbs at speeds well in excess of 200 miles per hour, all on a cushion of air and propelled by gas turbine engines with low pollutant emission.

During this conference, I plan to discuss the Airport Access problem with Boeing officials. As we all know, the interrelationship of airport to city center is a major problem today which requires a great deal of study and planning.

I am also looking forward to meeting and talking with Jim Ellis, who shepards "FORWARD THRUST" here in Seattle. I recently read in Harper's Magazine that Ellis has caused some "pretty good miracles" to happen here in Seattle with his "community effort" approach... an example for other communities across the Nation to follow.

In conclusion... I am sure you can see the future is virtually limitless. It is limited only -- I repeat only -- by the breadth of our vision. Project Apollo proves that we can do what we decide to do. We have

the resources in money and brains. We have the experience. We have the management. We have a technology that provides almost instantaneous response to whatever needs we declare... most important.

It is clear, therefore, that working together we can create whole new urban transportation systems. The only question is whether we have the will to do so. I think that will is germinating. It is accelerating. I see a groundswell across the country in favor of a better way than the dis-jointed transportation systems we have today. I predict that we shall achieve a breakthrough in public attitude and political response well within the four years of this Administration. As a matter of fact, I hope it will come this year or next at the very latest.

President Nixon has said, "we must solve our transportation problems in the cities, if the cities are to be saved as fit places for human habitation."

That's our assignment! Not only Secretary Volpe's and mine to carry out but ours -- everyone of us attending this conference!

The choice is yours ... I am sure you will make the right decision and we can count on you for a team effort.

Thank you...

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31-S-69

REMARKS PREPARED FOR DELIVERY BY URBAN MASS TRANSPORTATION ADMINISTRATOR CARLOS C. VILLARREAL BEFORE THE INSTITUTE FOR RAPID TRANSIT ANNUAL CONFERENCE, MARRIOTT MOTOR HOTEL, CHICAGO, ILLINOIS, JUNE 26, 1969.

Gentlemen, it is indeed a pleasure to be here representing the Department of Transportation at your IRT Annual Conference. For the next several minutes, I would like to share some thoughts with you on rapid transit and the new Administration.

Everyone has their life-long ideal and mine happens to be Teddy Roosevelt -- that ole' rough rider. It was 57 years ago this month here in Chicago, that an unknown humorist circulated a poster stating that: "at three o'clock Thursday afternoon, Theodore Roosevelt will walk on the waters of Lake Michigan." Apparently the author's reverence for Theodore Roosevelt equals mine, however, I assure you I don't plan to try and follow in his footsteps.

Secretary Volpe places a great deal of responsibility and interest in his Urban Transportation Advisory Council and today we have three of the council's members attending this conference. I would like to call your attention to those members. They are your President, Bill Ronan; Bill Stokes with "BART" in San Francisco; and Milton Pikarsky, Commissioner of Public Works here in Chicago.

As you all know, the Department of Transportation is still very young. In fact, being just over two years old . . it is still in its infancy. However, in the months to come, you will see accelerated movement, compared to the past.

President Nixon has placed public transit among his top ten priorities. Secretary Volpe has placed public transit as number one on his list of priorities. And, of course, public transit is my job. The Secretary has lived in an urban area for most of his adult life and as the former Governor of Massachusetts he is well acquainted with the transportation problems that face the populous and burgeoning cities along the East Coast, as well as all cities experiencing problems in the heavily populated metropolitan areas.

If you have ever tried to count the ties on a railroad track, then you know how many problems face us today in the field of transportation. Perhaps many of you, like myself, are wondering where it will all end? Which reminds of the prude that asked where the mini-skirt craze would all end: Well, just let me say I think the end is in sight. Gentlemen, if only I could say the same about transportation problems.

These problems are not insurmountable because we have the technology today to solve these problems today . . . and we shall find a way . . . by finding the techniques for using this technology.

Of course, the biggest problem facing us are the means to pay for city transit problems. We are working on this today and hope to have something to present to the President within a short time. We know we must find an answer, and it must be found quickly, because time is running out in our cities across the nation.

The Federal Highway Administration now has a program called "TOPICS" . . . better known as Traffic Operations Program to Increase Capacity and Safety for urban streets through traffic engineering improvements.

The good part about this program is that it is tied in with the mass transit programs of our major cities and would help on fringe area parking for those cities that wanted to become associated with the project.

As you can well imagine, in our nation's largest cities, all our grandiose programs for improving downtown traffic will prove to no avail unless we have a healthy growing mass transit system. The key words being "healthy" and "growing". I assure you the Department continues to emphasize this in all its approaches to the problems that face cities today.

Up until now, rapid mass transit has not grown. In 1945, the total trackage of our rapid rail transit system was 1,222 miles. Today it is 1,255. A net gain of 33 miles in 24 years.

However, our population has zoomed to 210 million with 70% of these people living on only 1% of the land. Our problems are obviously in the cities.

Our present studies indicate there is no substitute for mass transit. But a strange inversion exists in today's mass transit systems, as you know. On the one hand, we need the mass transit systems to pull us out of the maelstrom of millions of autos choking our streets and on the other hand, mass transit in many cities is in difficulty.

As the new Administrator of the Urban Mass Transportation Administration, I assure you we are working rapidly to make something of the jumble we find in nearly every major city of the nation where transportation is involved.

We know we must face this challenge with today's technology, and what exists today, is what we must use to "patch the system" until more sophisticated systems can be built. We neither have the time or money to waste on monumental studies and projects that might develop new technology.

Each mode in the system must be integrated and coordinated to complement, not obstruct or rival . . . the others. The Federal government presently spends as much on highway construction in six weeks as it has put into urban transit in the past six years. Since we don't plan to pave the entire nation . . . then this trend will be stopped. We already have one linear mile of highway for every square mile of land area in the nation.

Americans are demanding and require more mobility than ever before. Our metropolitan areas will have to invest heavily in modern forms of public transportation, and the Federal government is going to have to help.

We have already started to help. As you are no doubt aware... the Department of Transportation will be sending to the White House, for submission to the Congress, a public transportation bill in the every near future. We are hoping to get the bill in the hopper soon... once we have been able to get past the Bureau of the Budget and all the other places required for preliminary clearance.

But we're not sitting around waiting for the bill to pass. For another example of our desire to help is the 25 million dollar grant to Chicago, announced this morning by Secretary Volpe. Yesterday, the largest grant in the history of UMTA was made to Boston in the amount of 50 million dollars and Cleveland received 8 million dollars.

The successful Highway Trust Fund has been used as a mold to cast the public transportation program. However, financing the public transportation program will differ from the highway fund, since it was based on a user tax concept. Everyone knows that additional tax on the present transit user will not solve any problems. As a matter of fact, it would create more problems. So we must find funds from other sources.

One possibility mentioned has been to use a portion of the automobile excise tax. If the motorist wants to drive on uncongested highways, then he can easily justify the tax. Additional revenue possibilities are taxes on cigarettes or alcoholic beverages. Regardless of the method, we are dedicated to "squeezing" all the results possible from each dollar expended.

I might add Secretary Volpe is deeply concerned about this grave problem and has instructed his staff to find alternative methods of solution for financing.

How does it look for the future? Well, we in the Urban Mass Transportation Administration shall go forward with a program of research and technological development. I see this to be an orderly and prudent program. Perhaps I should say, "we have our feet on the ground and our eyes on the stars." Although I came from the aerospace industry this wasn't intended as a pun.

Of course, our long-range plans are committed to move people and goods . . . easier, at lower cost, quicker and more safely.

We are going to save existing systems by "patching them up" until new systems can be planned and built, and at the same time we are going to improve these systems.

We are dedicated to building an inter-modal transportation system utilizing all available technology.

Our plans for the future include an attempt to provide the leadership, incentive and policy to permit the most economical use of existing resources.

To summarize my long-range plans, I say we must do a herculean job of immediate "patchwork" to keep our present rapid-rail system in serviceable condition. Therefore, I have instructed my staff to plan an integrated and coordinated rapid-transit plan, incorporating solid goals for the future. I am pleased to advise you they are making good progress with this task. But we must have your assistance and support, in a team effort concept, to fulfill these goals.

One of my responsiblities as Administrator is to promote research and training at the university level. Another is to support and promote managerial training in the transit industry . . . especially at the middle management level. To be candid . . . it has been a real disappointment there has not been more industry interest in training programs. If today's systems are to serve tomorrow's world, then we are in trouble. We should be training today's young people with an eye on the jobs of tomorrow. This calls for foresight and courage.

The Urban Mass Transportation System has money designed specifically for the purpose of helping in this area. Obviously, we cannot develop this program alone, we need your help. We can only help you, if you help us shape a more aggressive effort to bring young engineers, management trainees and economists into the industry. Each of these professions will constitute a vital ingredient in shaping the future.

As a Federal official I am embarrassed by this situation. We are about to approach Congress with a request for more money . . . in other words, more funds to help you, the cities and other metropolitan areas.

In the area of managerial training, I find we haven't used all the available resources during the current year! We had money left over! There simply has not been enough done to promote these programs and their use as a management tool. Gentlemen, I am afraid you could and should have done more. I feel confident your increased help is forthcoming. Together we can make real strides in attracting and training energetic talent for the future.

In conclusion, Gentlemen, I would like to leave one last thought: there is no richer opportunity to see freedom of choice flourish than in your urban transportation sector. It will require hard work, vision, willingness to compromise and a dedicated application of placing our "shoulders to the wheel."

I can assure you the Department of Transportation is ready and eager to help. But the local communities throughtout our nation must carry the brunt of the burden, deciding on and promoting their rapid-transit needs.

Gentlemen, the choice is yours, I am sure you will make the right decision and you can count on us to help in every way.

Thank you for your attention, and may I wish you success in your Conference.

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Photo by Philip Harrison

NOW FOR TOMORROW

The story of federal research and development in transit

By **CARLOS VILLARREAL**
Administrator
Urban Mass Transportation Administration
U.S. Department of Transportation

Do something.

Move ahead.

The need for transit improvements is obvious.

We hear this from mayors, city councils, riders, commuters, and even motorists. The demands are clear: improve transit and do it now. The Federal responsibility is now clear: provide initiative, direction, and resources. And the assignment is clear: for 18 million daily transit riders, provide better service without adding to the problems of the city.

Our research, development, and demonstration program is intended to provide a major national impetus to spark the development and installation of new and better ways of getting around in the city. A systematic yet inventive, far-sighted effort to do for the straphanger, commuter, and rider what other programs have already done for the carpool, driver, and motorist.

The problem, as we view it in the Department of Transportation's Urban Mass Transportation Administration, is that so little has been done to increase the number of transit riders and almost nothing has been done to make their ride more comfortable, convenient, and safe.

And that is what the Department of Transportation's transit research, development, and demonstration program is all about.

Take fiscal year 1969 (July 1, 1968, to June 30, 1969) as an example. During that year, the Urban Mass Transportation Administration was budgeted $18.5 million for research, development, and demonstration. It appears a piddling amount, and certainly it is small in comparison with space, electronics, or process engineering R&D. That $18.5 million, however, is large in comparison with what has been spent on transit R&D in the past.

It seems to me, having come from the aerospace industry, that management of transit research should be aggressive—and particularly imaginative—because of the small base from which it must work and the outdated technological level of the industry on which it must build.

Prior to 1961 and the small transit demonstration grant program in our predecessor organization, virtually no development had taken place in overall transit systems, save individual supplier product improvement. We intend to change all that. Fifty million dollars has been spent in transit R&D by the Federal Government from 1965 through 1969. At our proposed new program levels, we will spend $30 million in 1970, $50 million in fiscal 1971. Projects will be directed in such a way as to get maximum transit rider improvement, in the shortest period of time, with existing systems and through the development of new systems.

We view the overall R&D needs of the public transportation industry this way: Improve present systems and develop completely new systems.

In other words, cars, train controls, stations, terminals and better buses are not all there is to the problem. The needs extend to management training, maintenance practices, modernized or-

ganization and decision making techniques. Perhaps more important is a better understanding of the legal, institutional, planning and financial hang-ups and constraints that impede the orderly implementation of new transportation technology.

Program direction

Which comes first—immediate improvements to existing systems or longer term, far-out developments? Our R&D program strategy provides the answer. We are doing both. The short-term accomplishments are the basis for other long-term system developments.

It is clear to me that future systems —hardware and software, cars, controls and concepts—can only come from coordinated research and demonstration. We have components and all sorts of bits and pieces, technology not yet successfully applied to transit. Future systems are still ahead of us. In addition, we need a sound understanding of the costs and the many different benefits of these future systems. We must know how new systems will fit with regional development plans and whether future systems will solve problems or only add to them. Hardware alone isn't going to do it. We have significant work yet to do in these other important fields.

The idea is for us to learn, and learn fast, lessons that can be applied to later longer term development of new systems. What we are looking for are short-term results which substantially move us ahead in both the short term and the long term. Controls developed in the short term for San Francisco's Bay Area Rapid Transit (BART), for example, provide the basis in the long term for controls for future personal transit systems.

Our first responsibility in UMTA, however, is to keep existing systems in operation. With capital grants we must make it possible for cities to own, add to, and improve present service. One look at our budget confirms this: Of the $175 million we were budgeted in 1969, $148.5 million went for capital grants and only $18.5 million for R&D and demonstration.

Research program

Our 1969 research funds were allocated as shown in the following table:

BART R&D STUDIES led to evolution of new car type shown here.

GM's RTX BUS reflects findings of UMTA-sponsored bus design project.

"Considerable effort is directed toward better rapid transit car design, improved buses, terminals and stations. Cars which might have taken Horace Greeley West or Grover Cleveland to Wall Street must go."

UMTA R&D PROGRAMS

Central City	$ 2,300,000
Major Activity Centers	710,000
Lower Density Collection and Distribution	2,530,000
Commutation and Linkage	3,500,000
Employment Facilitation	2,500,000
Equipment and Facilities	4,850,000
Management and Operations	610,000
Planning and Program Analysis	1,500,000
TOTAL	$18,500,000

What we call "urban applications" received $11.5 million. The central city, major activity centers (i. e., airports, new towns, universities), collection and distribution systems, and home-to-work commuting received the most attention. Employment facilitation is an important program since it is demonstrations of new kinds of transportation to hard-core unemployed adults. It is included here.

Technological innovations in equipment come next. Cars, terminals, and bus development received $4.85 million in 1969. Not all, but too much, transit equipment is of three types: old, older, and oldest. Considerable effort is directed toward better rapid transit car design, improved buses, terminals and stations. Cars which might have taken Horace Greeley west or Grover Cleveland to Wall Street must go.

Car design and development

Transit car design and development received more than 25% of our research dollars during the past five years. The BART test track and prototype car are the first program since the PCC streetcar developed in the 1930's to make substantial improvements in total transit car design. Developments in automatic train control, power pick-up, suspension systems, and the BART car specifications could easily make Mt. Diablo the Menlo Park of transit cars. We expect to continue this effort.

Secretary Volpe feels as strongly about transit research as I do. Earlier this year he said, "We have to cast our thinking in terms of what is possible with today's technology and the newer

NEW STATIONS in Chicago link Dan Ryan transit line with other modes.

URBAN MASS TRANSPORTATION ADMINISTRATION

Fiscal Year	Research-Development No. of Contracts	Research-Development Amount	Demonstration No. of Contracts	Demonstration Amount	Total No. of Contracts	Total Amount
1965	1	$6,000	11	$9,100,000	12	$9,106,000
1966	2	205,000	7	5,600,000	9	5,800,000
1967	25	3,500,000	14	5,500,000	39	9,000,000
1968	10	1,300,000	18	7,000,000	28	8,300,000
1969	36	6,300,000	32	12,100,000	68	18,400,000
1970	—	12,000,000 (est.)	—	18,000,000 (est.)	—	30,000,000 (est.)
1971	—	20,000,000 (est.)	—	30,000,000 (est.)	—	50,000,000 (est.)

Total contractor employment, all projects, 1969—2,500
Total number of prime contractors, 1965-69—94

concepts that are looming on the horizon. The burgeoning success of our high-speed, inter-city trains in the Northeast Corridor is just the beginning. Any nation that can split the atom, deploy thousands of computer installations, and send three men to the moon and back ought to be able to provide better public transportation than we have now . . . The hurdles we have to leap are not so much technical as conceptual."

Last year these projects got under way: the BART prototype car; identifying possibilities for improved rail wheels, brakes, and suspension components; and tests on the Long Island Rail Road of a new turbo-electric power plant.

Bus developments

For all but the 20 largest American cities, rapid transit means bus transit for the immediate future. Bus transportation of one kind or another which comes closer to the personal service of a private automobile has possibilities as a complement to, or replacements for, conventional bus, rail transit, and freeway systems.

During 1969, development of door-to-door demand-responsive bus service and automatic vehicle monitoring moved ahead. The bus fleet management improvements we are developing also have application to other urban vehicle management problems such as police cars and truck delivery systems.

Large capacity computers and significant UMTA-sponsored developments in their application to bus control, utilization and efficiency offer significant improvements in the level and reliability of service.

We are designing a better suburban bus for local roads and streets, particularly for a demand-responsive bus system—a bus in between the conventional bus and the minibus.

New bus power plants are being tested. Steam and gas turbines, for example, offer considerable promise. The design of improved bus passenger shelters and a bus priority traffic control system are other aspects of efforts to improve existing bus service. Unconventional bus service concepts involving neither fixed routes nor fixed schedules are being demonstrated as the basis for possible implementation.

Personal rapid transit

Personal rapid transit offers the most promise for completely new future systems. Small six or eight-passenger vehicles traveling over a fixed guideway network, either over standard routes or else automatically routed individually from origin to destination at network stations, are planned.

Personal transit research received $1 million in 1969 and will receive about $1.6 in this year. These small vehicle systems show the greatest promise for feeding high-density, long-haul rail systems where they exist, and high capacity on their own in cities without a rail system.

They provide a promising future alternative to medium-capacity systems on the urban fringes and in smaller cities with less area and intensive land development.

We see proposals on supposed new forms of small vehicle personal transit systems almost every week. More than a hundred have already been indexed and catalogued.

Most of these, I regret to say, are not systems at all. Rather, they are the proposed application of a single component from a present use to a future transportation idea. It may be a control element, power unit, or a guideway. Nearly all lack system design; too few have any application to our foreseeable future needs.

Nonetheless, careful consideration, test, and, in some cases, demonstration of personal transit do offer important new opportunities.

We have made detailed technical evaluations of several concepts. Engineering of these systems, their related controls and communications components, and the evaluation of new fast transit line haul systems received more than $1 million in research funds last year.

Tunneling

The Office of High Speed Ground Transportation and UMTA have jointly undertaken problem definition and feasibility work in soft-ground, non-pressurized tunneling, tunnel linings, material handling systems, rock fracturing, and cost estimating.

Advances in tunneling technology and their effect on the cost of new transit systems—witness Montreal—

bear directly on the rate of new system construction—particularly systems that can go underground and avoid the problems of intrusion and land taking.

Tunneling in Europe and Russia and an international exchange of transit systems technology are being considered. An international conference on tunneling technology is being sponsored by DOT for next year.

Other new systems

Performance criteria for several other new systems are under way, and they will become the basis for initiating subsequent prototype development.

We are studying small vehicle rental systems of nonpolluting, publicly owned personal transit vehicles, and this work progressed during the past year. The idea is to supplement long-haul systems with point-to-point transportation at both ends of the trip. These are vehicles one would drive, pay for by the trip, but not own.

The hybrid engine—part electric, part internal combustion—offers the opportunity to meet this small vehicle power requirement and reduce pollution while introducing the technologies necessary for buses and small transit vehicles to operate on both city streets and remotely controlled fixed guideways.

Transit management research

Research means new approaches to people as well as to things. We are taking a fresh look at what can be done to help transit managers run a better operation, but deficits and old facilities are problems not easily overcome.

Transit operators have not been able to attract young graduate engineers and business school talent, so we are developing transit management methods and improved techniques to insure the best utilization of present and future technologies, things developed elsewhere in the program. Aerospace management techniques can and do apply. We hope to use these.

My experience tells me transit needs to relate the decision process more closely to the project and system planning process.

Timely operating information, maintenance, scheduling, cost accounting, personnel management, better equipment selection, and financing methods are all obvious, all necessary, and all are receiving our attention. In 1969, more than $600,000 went into these programs, and we expect to continue at about that level this year.

It has become increasingly clear to me that if our research program is to accomplish its immediate transportation objectives it must be reviewed. It also would be helpful to identify alternatives and measure the costs and benefits of these alternatives. We also need to be able to compare the actual project impact against those anticipated and against the overall objectives of the program.

Center city transportation

Downtown transit improvements are the most pressing. But these improvements are difficult to design, costly to implement, and nearly impossible on which to get agreement. Downtown America has been exhaustively studied, meticulously analyzed, and all manner of recommendations have been made on what to do to improve it. But these improvements are very slow coming; new systems are even slower. We are determined, however, to improve downtown systems and we are doing so in the real-life world of specific cities.

The Center City Transportation Project, which the Secretary announced, is a UMTA contract with a consortium of contractors to identify technological and institutional innovations in downtown transportation—innovations which can be designed and built to serve the five cities selected, Atlanta, Dallas, Denver, Pittsburgh, and Seattle.

It is now crystal clear that significant political, institutional and organizational obstacles, problems and constraints prevent innovative implementation. We have car designs, controls, and stations, but local differences, priorities and political hang-ups intervene. The Center City Project deals with these matters and will develop a set of national guidelines useful to these as well as other cities in overcoming what heretofore have been insurmountable obstacles. Unlike so many other research efforts, ours involves not only the hard sciences but also political and social science as well.

Evaluation

Underlying UMTA research is the belief that in the central city automobiles can't do the job and for more and more people public transportation must become the means of getting around. Certainly with 100 million more people in cities in the coming 30 years, this should be obvious to everyone. We then want to develop rapid transit, rail commutation, buses, cars, personal transit, people movers, pedestrian systems—each combined with all the others.

My standard for the evaluation of each project is this: Will it make a significant impact on getting around in the city? Does it make technical sense and is the project feasible?

Projects are further evaluated as to their relevance to UMTA objectives and the other overall factors we consider, such as its effect on pollution, quality of urban life, safety and service to non-drivers. Where transportation in the city is dominated by the personal car, our research and its subsequent demonstration should evolve systems which offer the potential of a personal public vehicle alternative to the car.

In the future

Looking ahead a few years, we hope to have an advanced model dual-mode bus; a door-to-door rapid-response dial-a-bus tested and ready for demonstration in a number of cities; and a whole family of new buses when our component development and bus design program is completed. A new family of rail rapid transit cars fathered by the BART specifications will be here.

Personal rapid transit should be ready for testing up to the 70-80 mph range, and higher speed systems will be under development.

People movers, moving sidewalks, and horizontal escalators will have been demonstrated in a number of cities. We expect the Center City Project to provide the candidate cities and systems which will set the pace for much of our future R&D effort.

From people movers in the centermost part of the city to linear induction motor-driven air cushioned vehicles for intra-city travel, our program is directed to the full spectrum of new systems we are certain can be developed.

The long-term future of transit R&D, however, rests with President Nixon's Public Transportation Assistance Act of 1969 (S. 2821, H. R. 13463) now pending before Congress. Secretary Volpe has allocated $500 million for research beginning with $50 million in 1971—equal to the total spent from 1964 to 1969.

Who would have thought just four short years ago that transit would have a $10 billion, 12-year program proposed, with a half billion dollars for research?

New legislation is essential if we are to order our national priorities to make the most of progress and give cities the assurance and program continuity needed to use the results of our research. ■

DEPARTMENT OF TRANSPORTATION | NEWS

URBAN MASS TRANSPORTATION ADMINISTRATION

WASHINGTON, D.C. 20590

69-S-69

REMARKS PREPARED FOR DELIVERY BY URBAN MASS TRANSPORTATION ADMINISTRATOR CARLOS C. VILLARREAL BEFORE THE CENTER CITY TRANSPORTATION SEMINAR, ATLANTA, GEORGIA, SEPTEMBER 25, 1969.

I am so happy to be here and participate in your Center City Transportation Seminar.

You know, as the Administrator of the Urban Mass Transportation Administration, I travel a great deal across this vast country. Everywhere I go I sense a mobilization of opinion, a growing determination, a groundswell of action toward doing something about our urban future.

Take transportation as an example: people are realizing the automobile cannot carry the entire burden of commutation. Cars take up too much space. They pollute the air. They intensify noise levels. Their roadways take too much land off the tax rolls. So if we try to rely entirely upon cars in a period of rising demands for personal mobility, the cities surely will become uninhabitable.

Your work at hand here is most important. President Nixon was so right when he said "We must solve our transportation problems in the cities, if the cities are to be saved as fit places for human habitation."

And after all, that is the very reason why we are here. To solve our transportation problems in the cities. It seems almost like yesterday, when

Secretary Volpe announced in March of this year that the Center City Transportation program was going to be launched. During this announcement he pointed out that the program recognizes the lack of attention given by the Federal government to the movement of people and goods within the downtown areas of the Nation's cities.

Other problem areas pointed out included:

1. A lack of overall responsibility for making basic transportation decisions in public and private agencies providing mass transportation.

2. There has never been a nationwide effort to create a desirable "image" for public transportation or to encourage private development of good workable systems.

3. Up til now transportation planning has reacted to satisfying demands for automobile use, rather than creating opportunities for greater use of public transportation.

As you know, the purpose of the Center City Transportation program is to demonstrate the technical and institutional means for improving mobility for people and goods in the downtown city areas. An occasional review of objectives helps keep us on the right track to success, so basically and briefly, I see them to be:

----A closer rapport and working relationship with the cities in finding solutions to common center city transportation problems.

----To encourage the planning and establishment of public transportation systems which the cities agree are needed for economical and desirable urban development.

----To help my administration and American industry select the most promising solutions....technological, financial, and institutional....and to develop criteria and performance specifications for potential new transportation systems.

----And finally to create a flow of information among cities....including business, industry, labor and government interests....having similar problems and solutions.

The contract responsibility for this program has been to inventory present center area transportation plans and problems in the cities of Atlanta, Dallas, Denver, Pittsburgh and Seattle. To develop alternative transportation improvements, and design a series of demonstration projects which the cities can undertake to test possible solutions. However, the big picture means a set of national guidelines will be proposed from these demonstration projects which will come in contact with all Americans, throughout the country.

Fortunately, this project is not just a theoretical study, but is designed as an actual demonstration showing that institutional barriers can be overcome and that a process for planning and implementation of circulation improvements can be established.

With phase one completed in the center city transportation project, we have found the potential market for mass transportation is increasing. However, because of the failure to respond to change, the share of the market carried by public transportation is declining relatively and absolutely. They report that unless short and intermediate range improvements....implementable within three to five years....are provided, presently planned long-term improvements will be jeopardized and the market for other improvements compromised.

We have funds for the completion of this project; all five cities. We even have money for a few additional cities, but our present budget will not finance the needs of our nation.

Which brings me to the one item currently taking almost all my attention: namely, the Public Transportation Act for 1969.

What we need...and what Secretary Volpe and I have proposed in the Act now before the Congress...is a twelve-year, ten-billion dollar program to provide federal funds on an assured basis for the construction, expansion and improvement of public transportation in growing urban America.

It was essential that this legislation contain some provision that would let our State and local partners know that this would not be an "on-again" "off-again" program.

The preamble to President Nixon's legislation calls for the Congress to firmly indicate its intent to fund an on-going program and is further bolstered by a budgetary mechanism known as "contract authority" which will enable cities to undertake long-range projects. For example: Subways in the larger cities, exclusive busways and other facilities in medium-sized cities, and perhaps fleet modernization activities in smaller cities...as well as finance new technology, as it becomes available for all to utilize.

Our legislation seeks the authority to commit funds starting at three hundred million dollars and rising to one billion dollars during the first five years, then holding level with an additional one billion dollars each year for the balance of the program. The continuous availability of funds, as this bill provides, is one of the reasons our interstate highway program has been so successful.

Of tremendous importance is the 500 million dollars we are allocating for research and development. This nation most surely has the technological ability to do practically whatever we want. What we need is the cold hard cash to put our technology into new systems: We need the money to develop ideas into realities.

I believe this legislation deserves the support of all leaders (like yourselves), in all states, rural as well as urban. It is a must. It is good legislation....it is progressive....which reminds me of a great American by the name of Theodore Roosevelt and he once said, "A great democracy has got to be progressive or it will soon cease to be great or a democracy."

There is flexibility built into the Public Transportation Bill of 1969. I believe it will inject a new vitality into urban America. New equipment, new services, a new sophistication could help us reverse the decline of the central city.

Who knows, we might even lure some of the most addicted and hardened motorists out of their cars and onto a convenient, trouble-free, inexpensive transit system. Once mass transportation becomes fashionable, dramatic changes in public taste and attitudes will....in my opinion...take place.

I've said it before and I'll say it again, "We all gotta go to heaven on a bus."

In closing, let me say the urban America project has been designed to demonstrate the benefits of city participation in a research and development effort from the inception of the program. We want to learn from you (the cities), how we can best tailor this program to meet your needs. We don't expect this to be a simple task. Nor do we expect great accomplishments overnight, but we are convinced this sort of dialogue is essential to the achievement of a truly meaningful breakthrough in center city transportation.

I salute each and everyone in this room for your interest and dedication towards making these discussions fruitful, not only for the cities, but your fellow-man throughout the nation.

This is a completely new method developing a national program....a program based on a responsive, rather than controlling federal role. A role I know will lead to a public-private partnership...I am confident it will open new channels for communication between the cities and the federal government.

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URBAN MASS TRANSPORTATION ADMINISTRATION

68-S-69

REMARKS PREPARED FOR DELIVERY BY URBAN MASS TRANSPORTATION ADMINISTRATOR CARLOS C. VILLARREAL BEFORE THE AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS, ORLANDO, FLORIDA, SEPTEMBER 25, 1969.

I want to tell you how pleased I am to be here this evening, and how much I have enjoyed visiting with my many friends and colleagues.

As many of you know, I left the aerospace industry to become the Administrator of the Urban Mass Transportation Administration last April. Since then, I have learned about the hodgepodge, uncoordinated systems of mass transportation facing our cities throughout the Nation.

President Nixon has said, "We must solve our transportation problems in the cities, if the cities are to be saved as fit places for human habitation." These have been the guidelines under which Secretary Volpe and I have been working.

The Secretary is a highly motivated man, and we already have three major pieces of legislation before Congress which are important to transportation. He has been a successful contractor, Governor, and I am sure will make an impressive record as Secretary of Transportation.

The most striking opportunities for improvements in urban transportation are for new technological innovations. Attention fastens easily on a new vehicle or gadget. But such innovation is at the mercy of its institutional setting. Multiple governments, constantly evolving criteria and

goals, other vested interests, as well as financial impediments, often hinder progress unnecessarily. Many of the greatest advances in urban transportation lie in areas such as analysis and planning, operations and management, intergovernmental relations, and financing, and in greater understanding of the whole complex social context of urban travel.

Technology is important, but it isn't the whole picture, for we need to find a method for translating ideas into action, in addition to research and development, such as more effective means for informing communities about feasible transportation alternatives and for helping them overcome the hostility or inertia that so often impede innovation.

Two questions are implicit in any decision that aims at immediate action:

1. How can existing urban transportation systems be improved in the near future by applying present off-the-shelf technology?

2. What kinds of entirely new urban transportation systems might be technologically feasible in the more distant future?

Nearly 300 separate projects or proposals of an immediate, incremental nature have been screened in the process of determining the best of many alternative improvements that can be made in the near future to urban transportation systems.

These possible solutions include right-of-way improvements with exclusive bus lanes. Earlier this week in Washington an experiment was started with the exclusive bus lane concept. I feel confident it will be successful.

Others include:

-- Traffic Flow Control: This involves flow control on freeways by metering vehicles at a rate which will hold traffic concentration below the point of congestion.

-- People-Activated Traffic Control: Because most buses travel over city streets rather than freeways, a related technology, street traffic control could be of great importance. It needs to be applied more directly to the problem of moving people, not just vehicles.

-- Dual Mode Bus: A dual mode bus combines the high-speed, congestion-free characteristics of a rail vehicle operating on its exclusive right-of-way, with the flexibility and adaptability of an ordinary bus.

(more)

-- Improved Steam Propulsion: An especially good candidate for immediate use in urban transportation is steam propulsion. Both closed and open cycle reciprocating steam engines, as well as hybrid engines, are being considered because of their low contamination levels and quiet operation.

-- Gas Turbines: They too exhibit less pollution than internal combustion engines. The gas turbine engine has already been tested on automobiles, trucks, and is running daily between Boston and New York City as the TurboTrain.

As I said, these are possible solutions to many of our immediate technological problems. But now, let's take a look on longer range basis into the future. The technology which underlies the development of the new transportation systems covers a wide range of subsystems and components. These involve:

1. Command and control devices for safe and reliable guidance,

2. Propulsion subsystems to power the vehicles with little or no air pollution or noise,

3. Suspension subsystems to improve comfort and safety: and many other mechanical and electrical components which in combination become the total operating system.

Internal-combustion engines, which carry so much of the nation's transportation, produce a major share of urban air pollution. Preventing environmental contamination and conserving resources are important national goals. Quiet and pollution-free engines are the object of intensified research efforts. In the congestion of the urban environment, even low pollution outputs may add up to unacceptable pollution burdens. Thus, electric motors, which themselves are practically nonpolluting, give more promise as propulsion systems for the future than any type of engine which involves combustion. Unfortunately, self-contained electric propulsion systems are relatively undeveloped for urban transportation.

For the future, air suspension or air cushions offer some of the most promising developments in means for supporting new transportation systems. They will require a great deal of additional test and evaluation before problems of noise, excessive need for power, vehicle switching and steering, and operation on grades are solved. The potential advantages, however, are substantial: wide distribution of weight on guideway and vehicle, reducing structural complexities: negligible roadway wear: elimination of wheel problems such as bearing failure, imbalance, and bounce: as well as simplification or elimination of secondary suspension devices such as springs and shock absorbers.

(more)

Although several vehicles have been designed using air suspension with high clearances, the low clearances would seem better from the standpoint of noise and power consumption.

I have an air cushion vehicle slide with me, which I will show later in my talk. However, let me warn you, this slide is like all artists' concepts of futuristic transportation systems which all too often portray graceful, airy hardware soaring above, below or around the city with the beauty of expensive sculpture.

To continue, tunneling with its underground rights-of-way has obvious advantages, compared to other modes in crowded urban conditions ... especially with increasing costs of urban rights-of-way; the resulting social and economic dislocations; and local tax losses from use of land. Research work to lower tunnel costs and to speed construction times could be very important to the future of urban transportation. Incidently, the Department recently awarded a grant for additional tunneling research.

Still another system under study is the Dial-A-Bus. This is a hybrid between an ordinary bus and a taxi.

I have several slides I would now like to show. The lights can be dimmed, then I will show a slide from the Bay Area Rapid Transit District System, known as BART in San Francisco.

The BART system is essentially a wide-guage commuter rail system, incorporating such advanced subsystems in rail technology as automatic fare collection and automatic controls with a single attendant to handle emergencies. BART trains will have maximum speeds of 80 miles an hour, with capacity designed for 30,000 seated passengers per hour in trains of 10 cars. This system involves both architectural and technological advances in the field of rapid transit.

This next slide shows a high-speed, air cushion vehicle controlled guideway system which is being investigated, as I mentioned, for possible application to commuter service.

The last slide shows an artists' concept of the Gravity Vacuum Train. It illustrates the importance of new and advanced technology in tunneling. Some critics say it is too far out and impractical, however, we are taking a look at it, like many other systems.

That gives you an idea of the direction in which we are moving. As you know, we can't do all these things overnight. Secretary Volpe and I are going to spend the tax payer's money in the most prudent manner possible.

(more)

In the future, there will be considerable growth in transit research and development. For example, this year we jumped from $18.5 million to a total of $30 million for 1970. I estimate a figure of about $50 million for 1971. Our budget will offer favorable opportunities for multi-product manufactures.

I have taken a position of urging all space related and multi-product companies to consider the urban transportation market for research, development and demonstration grants.

Many of you have no doubt read of the four aerospace contracts two years ago in California. It was a good example of transferring space research and technology to urban problems which related to (1) waste management, (2) state-wide information, (3) crime prevention and (4) transportation.

Incidently, I want to plug the one item currently taking almost all my attention: namely, the Public Transportation Bill for 1969.

What we need...and what Secretary Volpe and I have proposed in the Act now before the Congress...is a twelve-year, ten-billion dollar program to provide federal funds on an assured basis for the construction, expansion and improvement of public transportation in growing urban America.

It was essential that this legislation contain some provision that would let our State and local partners know that this would not be an "on-again" "off-again" program.

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(more)

Of tremendous importance is the 500 million dollars we are allocating for research and development. This nation most surely has the technological ability to do practically whatever we want. What we need is the cold hard cash to put our technology into new systems: We need the money to develop ideas into realities.

I believe this legislation deserves the support of all leaders (like yourselves), in all states, rural as well as urban. It is a must. It is good legislation...it is progressive.

I don't have to tell you about the everyday traffic jams from coast to coast, during the rush-hours. You are in them, just as I am, so you can well appreciate the tremendous amount of responsibility I feel in accomplishing the big task that lies ahead. For sustenance, I often recall the words of a great American by the name of Theodore Roosevelt. He said, "Results worth having can be achieved only by men who combine worthy ideals with practical good sense."

In closing, let me just say that I personally invite your questions and inquiries. I have put together what I consider a good team in Washington so feel free to contact my staff or myself if we can be of service.

The hour is getting late and I see I have used by allotted time. Thank you so much for your attention, and thank you for inviting me to your meeting.

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C.1

STATEMENT DELIVERED BY CARLOS C. VILLARREAL, ADMINISTRATOR
URBAN MASS TRANSPORTATION ADMINISTRATION, BEFORE THE
TRANSPORTATION SUBCOMMITTEE OF THE
SENATE APPROPRIATIONS COMMITTEE
ON TUESDAY, SEPTEMBER 30, 1969

113.15

Mr. Chairman and Members of the Committee.

It is a pleasure for me to appear before the Appropriations Subcommittee on Transportation to present our budget request. Only recently did I take up my duties as Urban Mass Transportation Administrator. Ours is a particularly important and challenging program, and I welcome this opportunity to discuss it with you. Since our program is new to the Department of Transportation this is also the first time this Subcommittee has considered urban mass transit in all of its aspects.

This is a request for a $2 million appropriation for Salaries and Expenses of UMTA for Fiscal Year 1970. It is for 151 positions and compares with $853 thousand and 59 positions for Fiscal Year 1969.

Before going into details, I would like to summarize our accomplishments to date under the Urban Mass Transportation Act of 1964.

PROGRAM BACKGROUND

Program Funds

Under the Act and subsequent amendments, authorizations for appropriations totaled $865 million. Congress through Fiscal Year 1970 has appropriated $795 million and there is a balance of $70 million in authorizations through Fiscal Year 1969. Approximately $612.8 million has been committed -- actually obligated or

71-032415

administratively reserved. This, coupled with the program of $175 million in Fiscal Year 1970, will total $787.8 million in Federal assistance to public transit. I might add that of the total, approximately $7 million is being administered by HUD under Reorganization Plan No. 2 of 1968.

Research, Development and Demonstrations

Urban transportation research began in 1961 as a limited pilot program, with $24 million to encourage and assist cities to undertake practical demonstrations of proposed transit improvements.

Under the broader authority of the 1964 Act, $50.9 million in grants has been approved for a variety of projects.

About 30 percent of these funds have been used for bus system studies and demonstrations; about 40 percent for rail rapid transit and rail commuter service; and the balance for studies relating generally to management, operations, and technological innovation.

Our research efforts are making an impact in the transit world. For example, in crime reduction we are working with public and privately owned transit systems to reduce robberies and assaults on bus drivers. From this base, we are exploring technological and operational methods to reduce bus crimes.

We are assisting small cities such as in New Castle, Pa.; Rome and Hempstead, New York; where demonstrations were undertaken to test small transit systems with special problems. The project in Hempstead is a test of bus service in a rapidly growing suburban town. New Castle, Pa. was assisted in demonstrating the use of smaller buses in a small-city transit system. We needed to assess customer attitudes, fare structures, improving suburban services, and improvement of equipment and problems of multijurisdictional cooperation and institutional barriers.

We are working to improve employment opportunities through improved transit. As you may know, the McCone Report, which examined the events which led to the Watts riots, stated that "inadequate public transportation in Los Angeles seriously restricted many of those who lived in and around the Watts area and handicapped them in terms of jobs, schools, shopping and other needs." We need a better understanding of the interrelationship between the problems of poverty and public transportation service. In Boston, for example, we have a project which links Roxbury's model cities area and job opportunities along Boston's beltway. In Baltimore, UMTA and the city contract with the local transit company to operate bus service from the inner city to suburban job sites. In Omaha, UMTA funds a program which

provides peak-hour service from the city's Near North side to its southwest industrial area. And, in Buffalo, we are exploring the question of transportation's potential for increasing employment.

Training Grants and Fellowships

Since 1966 we have financed graduate seminars at six universities, funded 59 fellowships, and assisted in establishing 16 university-centered transportation institutes and programs. A number of the grants have been made jointly with HUD. We want to develop a new, young management team for our country's transit system.

Technical Studies Accomplishments

Since December 1966 we have provided $11.7 million for 66 technical planning studies in 28 States and Puerto Rico.

Grants have ranged from less than $5,000 to Great Falls, Montana, to determine the feasibility of providing transit service, to more than $2.25 million to the Southern California Rapid Transit District for the technical planning of a 65-mile rapid transit system. These grants have been for studies to solve short-range transit problems, generally in smaller cities--33 projects, totaling $1.5 million; transit feasibility studies in larger cities and metropolitan areas--22 projects, totaling $9.4 million; and other studies, relating to

ghetto transit, new towns, suburban centers, etc.--11 projects totaling $822,000.

Capital Grant Accomplishments

Since February 1965, the capital grant program has provided $547.8 million to help finance more than $1 billion in capital improvement projects in 28 States, the District of Columbia, and Puerto Rico.

Cities have been able to purchase 2,900 buses, 1,000 rapid transit cars, and 300 commuter cars. In many cases, these grants have enabled the construction of terminal, maintenance, and storage facilities; the rehabilitation of facilities and equipment; and the general upgrading of transit systems.

Transit systems in twenty-five cities have been saved from abandonment or serious curtailment of service. Three-fourths of these cities have a population of less than 100,000 people. In large metropolitan areas, our program has been critically important in getting improvements under way which benefit millions of daily passengers. Eighteen million people ride transit daily. Our program provides the direction and resources to encourage and assist transit systems and the cities they serve to keep, extend and improve transit service.

COORDINATION WITH THE DEPARTMENT OF HOUSING & URBAN DEVELOPMENT

Additional progress is being made in coordinating the functions shared by DOT and HUD under Sections 6, 9 and 11 of the Urban Mass Transportation Act. As you know, these responsibilities were divided between DOT and HUD by Reorganization Plan No. 2 of 1968. Both agencies are working to advance the President's objective of simplifying State and local agency dealings with the Federal Government.

We are now drafting an agreement by which management responsibility for all of the programs under these three titles will be focused in the Department of Transportation. This will result in more efficient utilization of Federal funds, eliminate duplication and avoid serious gaps in the programs in which both Departments have interests. The Department of Housing and Urban Development will participate in the technical advisory committees that review proposals and maintain surveillance over projects during their execution. HUD will also contribute funds to support such projects.

APPROPRIATIONS FOR URBAN MASS TRANSPORTATION FUND

No program funds are being requested at this time. Our request is limited to appropriations for salaries and expenses. As you know, an advance appropriation of $175 million for Fiscal Year 1970 was provided in the 1969 Department of Transportation Appropriation Act.

The President has proposed new public transportation legislation which provides for a five-year program funding of $3.1 billion, including $300 million for Fiscal Year 1971. As you know, budget authority for the new program is in the form of contract authorization. When the bill passes, we will then include in our fiscal year 1971 estimate a request for liquidating cash. The amount requested will depend in part on when the legislation is enacted and how rapidly projects are approved.

RESEARCH DEVELOPMENT AND DEMONSTRATION

$30 million has been programmed for research in Fiscal Year 1970 compared with the $18.5 million in Fiscal Year 1969. As enacted, the appropriation specifically requires a research program of at least $30 million. The program level has been increased approximately 62 percent if additional salaries and expenses are provided.

During 1970 and 1971 research, development and demonstrations will be directed toward developing new initiatives rather than merely reacting to proposals and projects as in the past. This is our approach to transit problem solving:

In the short term, we are working to identify problems of the city and the transit industry and then demonstrate possible solutions using existing technology.

In the long term, our work is to extend existing technologies and develop new systems.

With our research efforts directed toward these objectives we will develop and demonstrate transit innovations that are socially and economically sound.

One of our objectives is to stimulate development activity in the private sector of the economy.

We hope that our research projects will promote orderly development of new and existing systems and will advance the quality of life in our cities.

UNIVERSITY RESEARCH AND TRAINING

We are authorized to make grants to universities for research and training in urban transportation. The objectives are twofold: (1) to further the development of mass transportation technology through competent research; and (2) to develop a continuing cadre of highly trained manpower to fill responsible positions in transit management, operations and research.

Whereas the managerial training program is designed to update skills of present transit personnel, the university research and training program seeks to attract high-quality students to a career in transit.

Three million in FY 1970 will fund the establishment and continuation of several institutes in urban mass transportation research and training programs. These several institutes will assure a broad regional base of university support so that all sections of the United States can benefit from transit research and training. Ultimately, these regional institutes will become centers of excellence which can provide competent personnel to assist Federal, local and operating agencies in urban mass transportation programs.

TECHNICAL STUDIES

Section 9 provides funds for technical studies in urban transportation systems. They can relate to (a) management, operations, capital requirements and economic feasibility, (b) the preparation of engineering and architectural surveys, plans and specifications, and (c) other activities preliminary and in preparation for construction, acquisition or improved operation of mass transportation systems, facilities and equipment. Grants may not exceed two-thirds of the cost of the studies.

A total of $9 million is programmed for Technical Studies in FY 1970. In addition to the anticipated backlog carried over, new applications are expected to be received during the course of the year which will raise total requests for assistance to approximately $23 million.

MANAGERIAL TRAINING

The 1966 amendments to the Urban Mass Transportation Act of 1964 authorized Federal grants for the personnel training to improve the skills and privide transit managers and others with broader capacilities in all aspects of transportation and its effects on city life.

CAPITAL FACILITIES GRANTS

We administer the capital grant program to complement our research demonstration and technical studies as you might expect. This assures capital funds being used to support publicly approved comprehensive transportation plans and encourages the choice of the most up-to-date equipment and facilities tested and developed under the research program.

The increasing use of the private automobile as the principal means of urban transportation, in part the result of massive public

investments in the modern urban highway network, puts public transit at an increasing competitive disadvantage. The continual decline in patronage and revenues has made most private carriers incapable of financing essential modernization, and financially hard-pressed municipal governments find it more and more difficult to come to their assistance. This situation was the underlying justification for the program of Federal assistance for urban mass transit capital improvements. The program initiated under the Urban Mass Transportation Act of 1964, authorized grants to public agencies for the purpose of providing new transit facilities and improving existing facilities within urban areas.

We had a backlog of seventy-four applications for $276 million as of September 18, 1969. Projections indicate that approximately $320 million in new applications will be received for Fiscal Year 1970. By June 30, 1970, applications requesting $480 million for capital grants are expected to be on hand. We estimate we will need $132.5 million to conduct the capital grant program in Fiscal Year 1970.

CAPITAL FACILITIES LOAN

The mass transportation loan program was initially authorized by the Housing Act of 1961. The original authorization expired on

December 31, 1962 and was subsequently extended to June 30, 1963. The loan program was then reactivated by Congress in the Urban Mass Transportation Act of 1964 without a terminal date.

The loan program is useful in special situations where it may be the only recourse for a local public agency unable to market tax-exempt revenue bonds at reasonable rates. The mere prospect of receiving a government loan has favorably affected the private money market resulting in more favorable terms to the local borrower and making a Federal loan unnecessary. The loan program, although seldom used in the past, is occasionally the best means for financially assisting urban communities to meet their mass transportation demands. It has very limited application and use.

SALARIES AND EXPENSES

The request you are considering is the first full-year appropriation for the mass transit program in the Department of Transportation. Salaries and Expenses for Fiscal Year 1969 were obtained from two sources: (1) a transfer of $703 thousand from HUD pursuant to Reorganization Plan No. 2 of 1968 and (2) transfer of $150 thousand from the Urban Mass Transportation Fund as provided by the Supplemental Appropriations Act of 1969.

Ninety-two additional positions and a $1,147,000 increase are requested for us to effectively administer our program. We are very short of staff. We also need to provide the support services for a growing program. It was clear when the Urban Mass Transportation Administration was established in DOT on July 1, 1968 that the available staff was inadequate to manage the program effectively. Accordingly, $150,000 and 20 positions were provided by the first Supplemental Appropriations Act of 1969. This brought authorized positions to 59 and made $854,000 available for Salaries and Expenses. UMTA was then able to initiate management improvement measures. Even so, the existing UMTA staff can provide only superficial advice and guidance to applicants and can maintain only casual surveillance over approved projects.

Internal audits performed by the Department of Housing and Urban Development on the internal operations of the program when it was part of that department support the need for a substantial increase in staff.

New staff is needed in Washington and in the field to provide applicants with a greater degree of professional assistance. Finally, staff resources to develop direction for the program and to strengthen our research capability are needed. If the grant program is to realize

its full potential, and we are to redirect our work from a passive role of reacting to local initiative, to a more aggressive role of guiding and hastening the development of efficient urban mass transportation systems, we must have staff.

We are requesting staff as follows:

1. Research Administration--$796,000 and 36 positions. Research Development and Demonstration and University Research and Training programs are administered here. New project approvals are expected to increase from 180 in Fiscal Year 1969 to 214 in Fiscal Year 1970. Projects that are ongoing and must be reviewed will increase from 160 in 1969 to 240 in 1970. Final report reviews and close-outs of completed projects will increase from 100 in Fiscal Year 1969 to 134 in 1970.

2. Program Planning--$482,000 and a total of 20 positions are being requested for this activity. Program development is an important facet of the effort to improve the use of Federal money spent in assisting urban mass transportation.

Evaluations of past program efforts and the development of specific targets to be achieved in the process of attaining goals and objectives is the responsibility of this staff.

3. Program Operations--$722,000 and a total of 33 positions. Grants to assist communities in the acquisition and improvement of transit systems is UMTA's principal activity. Review of the proposals and administration of the grants are operations that must be designed to assure that the resource is used in the most efficient manner possible. Applications for capital facilities improvement grants will increase from 50 in Fiscal Year 1969 to 82 in 1970. Projects to be administered will average 88 in Fiscal Year 1969 and 95 in Fiscal Year 1970.

4. Support and Executive Direction--An increase of 38 positions is being requested to provide needed direction, legal, fiscal and administrative services. Included in this total are 12 positions for a field staff.

The creation of a field structure is needed to complement the Administration's effort to regionalize Federal programs affecting urban development, economics, health, etc. We also are requesting 6 positions for a program audit staff. Many projects which were started in earlier years will be completed this year. Audit efforts must be increased. In 1968 there were 12 audits completed. Last year there were 35 and 76 will be required this year. We have no audit capability. Formerly, HUD made our audits but this has not proved to be satisfactory from the standpoint of either Department. It is proposed the 12 positions be utilized to provide budget, personnel, statistical, mail and file services. The expanded workloads in each of these areas have proved to be beyond the existing force. The other 8 new positions would be allocated to perform legal and public affairs functions.

Thank you very much for this opportunity to address you and present this important program. This is a great challenge to all of us. Let me assure you I will manage the resources you make available to the very best of my ability. You will not be disappointed. I shall be happy to answer any questions you may have.

DEPARTMENT OF TRANSPORTATION | NEWS

URBAN MASS TRANSPORTATION ADMINISTRATION
WASHINGTON, D.C. 20590

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REMARKS PREPARED FOR DELIVERY BY URBAN MASS TRANSPORTATION ADMINISTRATOR CARLOS C. VILLARREAL BEFORE THE ADMINISTRATIVE LAW SECTION OF THE AMERICAN BAR ASSOCIATION, AT THE WASHINGTON HILTON HOTEL, WASHINGTON, D. C., ON OCTOBER 3, 1969

I am so happy to be here this afternoon and participate in your ABA National Institute on Federal Urban Grants.

During the past six months serving as Administrator of the Urban Mass Transportation Administration, I have talked to various groups about the Urban Mass Transportation Administration. However, this is my first opportunity to address a group of distinguished lawyers and public officials.

I venture to say most of you are urban dwellers. This is a safe guess, since 80% of us live in cities.

We have all had first hand experience with traffic delays in going to and from work--in shopping and in getting to church. I am sure each of you is interested in what is being done and will be done to improve our mobility.

- more -

Before talking programs, I want to give you some background on the nature of the problem which has lead to what has been called a "crisis in urban transportation," namely, what this country has been confronted with in recent years.

The crux of the problem is increasingly rapid urbanization and the inbalance of our highway and mass transportation facilities.

At the beginning of this decade more than two-thirds of all Americans lived in cities. By the end of this century that proportion will rise to 90 percent. By the year 2000, U. S. population will increase by more than 100 million, almost all of it in cities. This growth will be reflected as much in the expansion of rapidly growing small and medium-sized communities as in the growth of the nation's biggest cities.

There are now more than 80 million cars in use in the United States, double the number registered in 1950. By the year 2000 their number will double again. The car population in our cities is increasing even more rapidly than the urban human population. Urban dwellers depend increasingly on the automobile to meet their transportation needs.

Largely as a result of increasing auto ownership and use, public transportation in cities has declined in quality and availability. Transit patronage today is only about half of what it was 15 years ago. Public transportation is caught in a cycle of increasing costs, rising fares, shrinking profits, decreasing quality, and declining traffic.

Federal programs assisting urban transportation are seriously unbalanced. More than $5 billion will be spent this year for new highway construction, with Federal aid frequently available to defray 90 percent of building costs, but Federal aid for urban public transportation (subways, buses, etc.) is now less than $200 million a year and total expenditures since 1964 are less than current Federal expenditures on urban highways in the course of six months.

Public support of auto-highway oriented transportation in urban areas has greatly disadvantaged the poor. While nearly all families with incomes in excess of $10,000 have a car, less than half those with poverty-level incomes (under $3,000) own an automobile. Most new jobs for unskilled and semi-skilled workers now being created are in the suburbs. The core-city unemployed are, therefore, compelled to use low quality, increasingly costly public transit to seek work and often no transit is available at all. Their economic and social isolation solidifies.

Against that background let me tell you what the Federal Government has done to solve this crucial problem. Federal involvement in the field of urban mass transportation began in 1961 when Congress enacted a modest $25 million pilot demonstration grant program and temporary loan program. After three years of congressional deliberations, the Urban Mass Transportation Act of 1964 was passed. This Act continued the powers granted in the 1961 legislation and established permanent programs of grants for capital improvements and for research and development. The Act was amended in 1966 to authorize grants which added minor refinements to the program. In 1968, the President transferred most of the powers created by the Act from the Department of Housing and Urban Development to the Department of Transportation.

The capital grant program has been the primary focus of activity and interest in the administration of the Act. In fiscal year 1969, UMTA disbursed almost $150 million under the capital grant program, out of a total for all programs of almost $175 million.

Under this program, the Federal Government can contribute to States and local governmental units up to two-thirds of that portion of the total costs of a capital improvement project which cannot reasonably be financed from anticipated fare-box revenues of the transit system being aided. The range of allowable costs is rather broad, but the project funds may only be used for the purchase or improvement of property and may not be used to defray operating costs of local systems. Grants may be made only to public bodies, but grant funds may be and frequently are used for the benefit of private transit companies, as where the local governmental unit which applies for and receives the grant uses the funds to purchase, construct or improve facilities and equipment which are then leased at nominal rental to the private companies. This private use is conditioned upon satisfactory control by a public body over the manner in which the new or improved capital facilities and equipment are to be used.

Capital funds may be granted to localities only after it has been determined that the facilities to be purchased or improved are needed as part of a unified or officially coordinated urban transportation system, which in turn must be part of a locally adopted official comprehensive plan for the development of the whole urban area. Even if this planning requirement has not been fully met, a grant of one-half of net project cost can be made in cases of urgent need for the facilities in the locality which is actively engaged in the planning process, and this can be increased to the two-thirds level if adequate planning is completed within three years. The capital loan program for which the Act provides contains essentially the same provisions as the grant program, except that loans can cover the full amount of the project costs and must be so secured as to be reasonably assured of repayment.

Thus, under the Act, there are provisions which make Federal funds available for the whole range of activities involved in improving urban mass transportation. Manpower can be trained, local systems can be planned, technological and social research can be undertaken, experimental techniques and equipment can be developed and tested in actual operation, and, finally,capital improvements to local systems can be financed.

There are three basic goals which underlie all of the programs. The first, and most important, of these goals is the improvement of the quality of urban life by facilitating the movement of people within our metropolitan centers. This not only involves providing adequate access to jobs and necessary services for people without private transportation, but also requires the improvement of present systems in terms of speed, economy, safety, comfort and convenience, so that individuals will be willing and able to get out of their cars and thus relieve the cities of the air pollution and traffic congestion which presently are strangling them. Both of these aspects are fundamental, and form the basis of many of our decisions in allocating our funds among applicants.

The second goal is the fostering of the rational development of our cities through carefully developed, multi-jurisdictional planning which incorporates all factors relevant to the health of an urban center. If transportation planning is not integrated with and oriented toward implementation of comprehensive planning goals, it is difficult to imagine how our long-range urban transportation needs can be met.

The third goal is the coordination of urban transportation systems with the rest of our national transportation system in order to speed the movement of people and goods between points throughout the nation and the world. We recognize that an intercity journey usually neither begins nor ends at a jet port -- it begins at a residence or an office and ends at another residence or office in another city, and we are fully aware that when we provide facilities to spirit a traveller from Washington to Chicago's O'Hare field in 90 minutes, and then leave him facing a trip to his downtown destination which takes even longer, we really haven't done very much for him.

UMTA has awarded grants to local governmental units and other qualified applicants which have proposed projects which meet the statutory requirements of the Act and give promise of achieving the goals just stated. In many cases, particularly in the capital grant program, we are able to take only remedial action designed to halt the financial foundering and physical decay of existing systems. However, even in these situations, the applicant must demonstrate an adequate planning process, which, when combined with the benefits of research and experimentation flowing from other projects, may provide the basis for the future establishment of a genuinely desirable system. Our grants thus have a dual aspect of, on the one hand, supplying funds in places where they are necessary but otherwise unavailable, and, on the other, inducing local public bodies and private individuals to think constructively about future transportation needs and means of fulfilling them.

In carrying out the programs entrusted to it, UMTA must obviously cooperate closely with other governmental entities operating in the fields of transportation and urban development. UMTA is an operating administration of the Department of Transportation, along with the administrations responsible for railroads, highways, and aviation. All Administrators report directly to the Secretary. This arrangement facilities coordination of governmental activities among the several modes of transportation. We are legally required to seek the views of the Secretary of HUD with regard to the planning findings which UMTA must make before awarding a capital grant, and there has been some additional voluntary cooperation between the two organizations flowing naturally from the intimate relationship of their areas of competence. Also, no capital grant may be made unless the Secretary of Labor determines that the interests of existing transit employees will be adequately protected.

I would like to speak briefly on how our programs have been administered.

First, we have been guided by the broad statement of purposes and policies set forth in Section 2 of the Urban Mass Transportation Act of 1964. For each of our programs we have a pamphlet which provides information on statutory and procedural requirements for applicants who may be interested in applying for financial assistance. We have another informational pamphlet on the planning requirements of the Act and how they may be met. To assist applicants in carrying out approved projects we have a procedural requirements guide and an accounting manual.

The various informational pamphlets and guides have not been put in the form of regulations and published in the Federal Register. Several considerations dictated this decision, among them the availability of such associations as the League of Cities, the Conference of Mayors, the American Transit Association and the Institute of Rapid Transit, who provide wide distribution of our informational pamphlets.

Ours is a growing organization. Although our staff is only 59 now -- it is greatly in need of more manpower as well as increased program funds, if we are to accomplish the mission we have been assigned -- to achieve the best possible public transportation as part of a balanced transportation system for our urban areas.

I want the goals and objectives of our total effort to be carefully and thoroughly reviewed and expressed in a clear and precise statement. Clearly identified goals are necessary to make judgments on program priorities and to determine dollar requirements. I want decisions made and articulated on the criteria, in addition to our statutory criteria, for selecting the order of priority among, and the evaluation of, the capital grant applications which we have been receiving in increasing numbers and gross dollar amounts.

Our work in these areas is about completed. I hope soon to have the end product published in pamphlet form and distributed as are the several program informational pamphlets I mentioned earlier.

Now I would like to talk about our legislative program which has been receiving almost all my attention. What we need .... and what Secretary Volpe and I have proposed in a Public Transportation Act of 1969 now before the Congress .... is a twelve-year, ten billion dollar program to provide Federal funds on an assured basis for the construction, expansion and improvement of public transportation in growing urban America.

It was essential that this legislation contain some provision that would let our State and local partners know that this would not be an "on-again" "off-again" program.

The preamble in the proposed legislation calls for the Congress to indicate firmly its intent to fund an on-going program and is further bolstered by a budgetary mechanism known as "contract authority" which will enable cities to undertake long-range projects. For example: Subways in the larger cities, exclusive busways and other facilities in medium-sized cities, and perhaps fleet modernization activities in smaller cities... as well as finance new technology, as it becomes available for all to utilize.

Our legislation seeks the authority to commit funds starting at three hundred million dollars and rising to one billion dollars during the first five years, then holding level with an additional one billion dollars each year for the balance of the program. The continuous availability of funds, as this bill provides, is one of the reasons our interstate highway program has been so successful.

Of tremendous importance is the 500 million dollars we are allocating for research and development. This nation most surely has the technological ability to do practically whatever we want. What we need is the cold hard cash to put our technology into new systems: we need the money to develop ideas into realities.

I believe this legislation deserves the support of all leaders (like yourselves), in all states, rural as well as urban. It is a must. It is good legislation...it is progressive. Therefore, I am asking for your support in seeing that this legislation is passed.

As President Nixon has said, "we must solve our transportation problems in the cities, if the cities are to be saved as fit places for human habitation."

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REMARKS BY CARLOS C. VILLARREAL
URBAN MASS TRANSPORTATION ADMINISTRATOR
AT THE
ANNUAL MEETING FHWA FIELD STAFF, OCTOBER 24, 1969

Speech

I am pleased to be here and take part in your annual meeting.

I might begin by assuring you that I am neither anti-highway nor anti-automobile. The private automobile and our great network of streets and highways have brought a new degree and new kind of mobility to American life. I like my automobile too.

Thus, we can easily agree that the plans for our urban areas must recognize fully the role of the private vehicle and provide adequately for the highways, streets, and storage facilities needed for its use.

But this does not mean that we can neglect the public transportation facilities which are also needed for an adequate urban transportation system.

The largest urban areas must have public transportation -- in part, at least, using the local streets and highways; perhaps on rail or bus rights-of-way -- to provide a large portion of the daily movements involved in the journey to work and return.

Further, in all cities -- large and small -- many persons are effectively deprived of mobility in the absence of public transportation services. These are the 20 per cent or more of our citizens in urban areas who do not have ready access to an automobile -- the young, the old, the physically-handicapped, and the poor.

So, we must work together, you and my Administration, toward a common goal of providing the fullest degree of personal mobility for all of the people who live and work in our rapidly-growing metropolitan areas.

In fact, Secretary Volpe demands, as part of his overall program to unify the Department and to simplify and expedite its relationships with local communities, that constituent agencies exert maximum effort to coordinate their field activities and to collaborate wherever possible with a view to producing benefits in terms of efficiency and economy. Frank Turner and I have agreed that the activities of the Federal Highway Administration and the Urban Mass Transportation Administration offer an excellent field for collaboration. I believe that UMTA will be a particular beneficiary of this collaboration at least while we are developing a field staff and filling out our Washington organization. As rapidly as possible, UMTA will develop a field staff of its

own which can perform the basic functions of the agency.

Specifically, I have in mind that the Regional Administrators of the FHWA and the Division Engineers of the Bureau of Public Roads can serve immediately as conduits of information between Federal and local public officials and the Washington offices of UMTA. By way of illustration, let me report that Fred Farrell, the Regional FHWA Administrator in Chicago, recently reported that he had been invited to a meeting of the Federal Regional Council on Urban Problems on November 13 to discuss the social and economic problems of Cairo, Illinois. As you may know, Cairo has been living through a time of troubles. Federal agencies have been asked to see what they can contribute individually and in collaboration to help alleviate problems in Cairo.

Mr. Farrell discerned immediately that the Urban Mass Transportation Program might be the principal instrument in the Department of Transportation for this assignment but agreed to go to the meeting in the absence of a UMTA field representative. He has, however, reported the situation to Washington headquarters of FHWA which has been in touch with us about it. We welcome

the opportunity to work through Mr. Farrell and will shortly advise him of a position that he can take for UMTA at the meeting on November 13.

Secondly, I understand that there are many occasions upon which local public officials inquire of FHWA field personnel about the availability of Federal assistance for public transportation improvements. Much information has already been forwarded to FHWA field offices concerning the mass transit program. In the future we will systematize the distribution of information and I hope that FHWA people in the field will make it available in response to local inquiries. At the same time I trust they will notify me of the nature of these inquiries and advise me how I may get in touch with interested people. These arrangements should greatly assist UMTA in reaching its public.

There may be some services that FHWA field personnel can perform on our behalf for the foreseeable future. These services might include, for example, (1) what I may call "preliminary estimates of the situation" in places where an initial trained opinion is required of the possibilities for public transportation improvements, (2) engineering inspections of projects under development, and (3) certain field auditing services. Arrangements for these services will have to be worked out in detail with the Washington office of

FHWA and they will be increments to our collaborative efforts rather than parts of the initial package.

* * *

Let me outline briefly the programs we administer in the Urban Mass Transportation Administration.

In 1961, the Congress first enacted interim legislation looking toward Federal assistance for urban public transportation services. This was followed by a joint study by the Housing and Home Finance Administrator and the Secretary of Commerce, which resulted in the formulation and adoption, in the Urban Mass Transportation Act of 1964, of a long-range program of Federal aid to public transportation.

The 1964 Act has as its purposes:

-- the development of improved mass transportation equipment, techniques, and methods;

-- the encouragement of local planning for areawide mass transportation systems needed for economical and desirable urban development; and

-- the provision of assistance to State and local governments in financing urban transportation systems, to be operated by public or private mass transportation companies as determined by local needs.

To effectuate these purposes, the 1964 Act broadened the 1961 demonstration program to include research in all aspects of mass transportation, and authorized a new program of matching grants to assist State and local governments in providing capital funds for the replacement of obsolete facilities, the extension of existing systems, and the provision of new systems where they are needed.

A statutory requirement under the capital grant program is that we must find that the facilities to be assisted by the Federal Government are needed in carrying out a program for a unified or officially coordinated transportation system as a part of the comprehensively planned development of the whole urban area.

The percentage of the Federal grant varies with the status of this program and the areawide comprehensive plan. Where the plan and program are under active preparation, but are not yet completed, the Federal share is limited to 50 per cent of net project cost. (Net project cost is defined as that part of the cost of a project that cannot reasonably be financed from system revenues). Where the areawide comprehensive plan and transit program have

been completed, the Federal share of net project costs may be 66-2/3 per cent

Under the 1961 and 1964 Acts, Federal funds have been made available for 134 demonstration and research projects, costing about $67 million. Also, capital funds totalling $548 million have been provided to 75 cities and metropolitan areas for the acquisition and improvement of failing private transit systems; for the purchase of buses and other rolling stock; for the construction of more efficient passenger terminals, garages, and maintenance facilities; and for the modernization and extension of rapid transit lines and so forth.

Further Federal assistance to mass transportation was provided by the Congress in 1966. The 1966 amendments extended the provisions of the 1964 Act and authorized four new activities. These are:

First: Matching grants to State and local public agencies for two-thirds of the costs of the technical studies needed in developing the transit program for an urban area, and of planning, engineering, and designing mass transportation projects.

In the three years since the technical study program was activated, 66 grants, totalling $18.1 million, have been made to assist State and local agencies in developing local public transportation programs. In many of these, you, and the Department of Housing and Urban Development, and we in UMTA have joined together in funding projects of mutual and complementary interest.

The second new program enacted in 1966 authorizes grants to public agencies to provide fellowships for up to one year of advanced schooling for persons in the urban mass transportation field employed in managerial, technical, and professional positions.

The third new program provides grants to non-profit educational institutions to assist in establishing or carrying on comprehensive research and training programs for urban transportation. The Act requires that preference be given to institutions of higher learning which bring together knowledge and expertise in the various social science and technical disciplines that relate to urban transportation problems. This program will be closely coordinated with the regular UMTA research program, and with related urban activities in the other parts of the Department of Transportation and in the Department of Housing and Urban Development.

And finally, the 1966 Act directed the development and submission to the Congress of a program of research, development and demonstration of new systems of urban transportation.

During the current fiscal year we will commit some $30 million to research, development, test, and demonstration activities.

You and many others may ask what new modes and concepts are likely to come about in the next four or five years as a result of this effort.

During this period, while the program should produce substantial evolutionary improvements in passenger comfort and convenience, it will be basically a preparatory period, in which will be laid the foundations for the development of new systems of urban transportation. In this program, we have, for the first time, the opportunity of looking in depth at the technological, financial, economic, institutional, and social dimensions of public transportation. And we will be using the kinds of technical and professional skills that since World War II have become available to other parts of the domestic economy and the space and defense programs.

* * *

Now, let me tell you something about the Public Transportation Bill which the President and Secretary Volpe have recommended to the Congress as a part of the Nixon Administration's action program.

The Public Transportation Bill would commit the Federal Government to a $10 billion financial assistance program for public transit over the next 12 years. It would specifically authorize for the next five years a total of $3.1 billion -- $300 million in fiscal year 1971, $400 million in fiscal year 1972, $600 million in fiscal year 1973, $800 million in fiscal year 1974 and $1 billion in fiscal year 1975. This schedule of financing will permit sound and orderly development and implementation of a national program which, in its first five years, will assign to public transportation five times as much Federal assistance as in the past five years.

Under the pending bill, as it is now written, these monies would become available for obligation at the beginning of each fiscal year, in advance of appropriations. Appropriations would be required each year to liquidate the obligations incurred. During the hearings before the Senate Banking and Currency Committee earlier this month, Secretary Volpe agreed on behalf

of the Administration to consider an alternative by which the full amount for the first five years -- $3.1 billion -- would be immediately available for commitment, with actual cash expenditures controlled by fiscal years at levels specified by statute. In any case, the purpose is to give assurance of the availability of Federal funds, upon the basis of which a community can make long-range plans and undertake multi-year projects.

In addition to the very large increase in the level of funding, the bill contains a number of amendments to the 1964 Act which will substantially improve the overall administration of the program.

For example, loans would be authorized for the advance acquisition or rights-of-way. These would be ten-year interest-bearing loans, repayable earlier if a grant is made for construction of facilities on the right-of-way. This provision will permit land acquisition at more reasonable prices and avoid later costs due to speculative activities.

In view of the comments in the press and elsewhere concerning a public transportation trust fund, I might take a moment to answer the question: Why did the Administration decide not to seek such a trust fund?

The establishment of a public transportation trust fund was very thoroughly considered by the President, Secretary Volpe, and others in the Administration. The essence of the trust fund concept, as it exists for highways and as it is proposed for airports and airways, is the contribution of revenues into the fund from those who will use the facilities created by expenditures from the fund. As the term indicates, these are revenues held in "trust" by the Government in behalf of the special taxpayer.

Now, one of the major problems facing public transportation has been the decline in passengers. To impose a special surcharge on the already-high bus and subway fares would simply accelerate the diversion of transit riders to other modes, further decrease transit revenues, and place a levy largely on those who can least afford to pay, and for whom prospects of owning a car are quite dim. Therefore, with respect to the proposed public transportation program, it is simply not feasible to levy a direct tax on the user.

In the face of this reality, consideration was given to funding a public transportation trust fund through taxes on indirect beneficiaries. The auto excise tax was one of those considered. Such a tax would have to rest on the

theory that the users of private autos would benefit by the relief in highway congestion occasioned by improved public transportation. We concluded that this argument was simply too tenuous and would not stand up.

We also considered the possibility of imposing sumptuary taxes. But, like the auto excise tax, we were forced to conclude that there was no sound basis for selecting a special group of taxpayers to bear a burden which was not peculiarly theirs by reason of use or direct benefit.

The Administration's final decision to fund the public transportation program from general revenues flows from the inevitable conclusion that public transportation is a public responsibility. This responsibility should be met by all of the taxpayers, not by a selected group of them.

I am convinced that the Administration's proposal affords local public agencies the assurance of Federal support necessary to plan and carry out long-term, large scale public transportation investment programs.

The bill would also permit for the first time the granting of financial assistance directly to private transit companies.

The bill would require public hearings as a prerequisite to filing an application for a loan or grant for a project which would substantially affect a community or its public transportation service. It would also require that the Governor of the State involved be afforded an opportunity to comment on each project application.

These provisions will lend increased assurance that transportation development proceeds in a manner fully compatible with other local, regional, and State planning objectives.

Finally, the bill would not affect the authority reserved to the Department of Housing and Urban Development by Reorganization Plan No. 2 of 1968 to undertake certain projects which "primarily concern the relationship of urban transportation systems to the comprehensively planned development of urban areas, or the role of transportation planning in overall urban planning."

* * *

Estimates of the capital investment needed over the next 10 years to revitalize public transportation in our urban areas have ranged from $10 billion to $20 billion. The very recent study of public transportation, in the 29

metropolitan areas that are expected to have more than a million people by 1980, concluded that transit investment in those areas alone could be on the order of $30 billion. The study assumed that most of these 29 areas, located in 22 States, would require new public transportation systems with very heavy capital investments.

The hundreds of other cities and urban areas throughout the United States of less than 1 million population will also require substantial amounts of new investment. In these relatively less-dense areas, however, service will probably be provided by bus or bus-guideway systems. Estimates for replacement of buses in these areas over the next ten years are on the order of $1.6 billion.

The program proposed by the Administration will permit us to make a substantial start over the next five years toward meeting these requirements. While, obviously, firm plans have not been developed on a project-by-project basis, we would estimate that of the $3.1 billion authorized, about $1.2 billion would be devoted to the development of new systems in larger cities and about $1.1 billion to the improvement and extension of existing systems. Approximately $400 million would be used to improve and expand bus systems in the smaller and medium size cities. In addition, more than $350 million would be provided for research and demonstrations.

This program, of course, is not an isolated effort but part of the total commitment by the Department, and by Secretary Volpe personally, to solving the urban transportation problem. Improvements in the street and highway systems, together with fringe parking facilities, can substantially effect the efficiency of the chief form of public transportation existing in most cities; namely, bus transportation.

To encourage the use of such programs as the TOPICS program in conjunction with the programs of the Urban Mass Transportation Administration, the Department is planning a special effort to be launched in this fiscal year, known as the Urban Corridor Demonstration Program. It will involve ten or twelve cities to be selected on the basis of the extent to which they utilize these programs imaginatively in a concerted attempt to reduce peak hour congestion in urban corridors.

We are hopeful that this study will dovetail with a study we already have under way in the Urban Mass Transportation Administration known as the Center Cities Project. Phase I of this project has been completed in Atlanta, Dallas, Denver, Pittsburgh, and Seattle, and I am confident that the program, as it proceeds, will lay the basis for improved public transportation in the central

areas of these and other cities.

I believe such activities as these, together with the greatly expanded assistance afforded by the Public Transportation Assistance Act, will permit some early solutions to many of our urban transportation problems.

DEPARTMENT OF TRANSPORTATION | NEWS

URBAN MASS TRANSPORTATION ADMINISTRATION
WASHINGTON, D.C. 20590

REMARKS PREPARED FOR DELIVERY BY ADMINISTRATOR CARLOS C. VILLARREAL OF THE URBAN MASS TRANSPORTATION ADMINISTRATION AT THE OPENING OF THE SECOND DAY OF THE FIVE-MAYORS CONFERENCE OF THE CENTRAL CITIES TRANSPORTATION PROJECT, DEPARTMENT OF TRANSPORTATION, TUESDAY, NOVEMBER 18, 1969, WASHINGTON, D. C.

Good morning.

It is a pleasure to welcome the Mayors of the cities participating in the Urban Mass Transportation Administration's Center City Transportation Project.

Yesterday's meeting with the various staffs gave us several insights:

-- All of us have a better understanding of the transportation problems and the status of planning in each of the five cities.

-- We had an opportunity to review a series of projects that have been proposed for both near-term quick action and longer range solutions to downtown transportation problems.

-- We confirmed that these Center City projects cannot be taken out of the context of good comprehensive planning, and that setting priorities within these plans with enough flexibility to preserve some future options is essential to making balanced public transporta-

more

tion progress.

-- Finally, we realized that the cost of accomplishing all our plans probably exceeds presently available local and Federal funds.

As I mentioned yesterday, the projects which will be refined under Phase II of the Center City Transportation Program will have to compete with finding requests from many other cities. Not only will these projects have to make technical and economic sense, they are expected to make transportation improvements in each city, as well as a significant contribution to the Urban Mass Transportation Administration's research, development and demonstration program.

From yesterday's review, it would appear that the joint efforts of the consultants and city staffs have shown the way for accelerating and strengthening the process for introducing innovative improvements in public transportation. Through this joint effort, there appears to be promise for early action that can lay the foundation for reaching longer-term goals. The final test will occur when we see how well this cooperative effort works in developing these projects during the remainder of Phase II.

I am confident that the professional discussions we had yesterday at our top staff level were most productive in establishing a frame of reference for our continuing action partnership in the Center Cities Project. Our policy discussions today with you, the Chief Executives of the five cities in this project, make me equally confident that we are reaching a mutual commitment to action, with appropriate resources from both the cities and UMTA being pooled for this purpose.

All of us share an overriding common purpose: to act together so as to bring innovative public transportation systems into actual use. This purpose binds us together and our ties will be strengthened even further as visible operational success is achieved.

It is in this spirit of joint action that we welcome you here today. And it is in this spirit that we look towards continuing to work with you in the future.

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DEPARTMENT OF TRANSPORTATION | NEWS

URBAN MASS TRANSPORTATION ADMINISTRATION
WASHINGTON, D.C. 20590

REMARKS PREPARED FOR DELIVERY BY CARLOS C. VILLARREAL, URBAN MASS TRANSPORTATION ADMINISTRATOR, BEFORE THE AMERICAN SOCIETY OF CIVIL ENGINEERS TECHNICAL COUNCIL ON URBAN TRANSPORTATION DEMONSTRATION PROJECTS CONFERENCE, WASHINGTON, D. C., WEDNESDAY, 19 NOVEMBER 1969

If there was ever a word that has its own special contemporary connotation, it's the word "demonstration." Here at this meeting, it is used in the sense of proving out and showing and testing new concepts, ideas and equipment.

In this day and time of crowd politics and mass protest, the very same word--"demonstration"--has come to also mean dissent, dissatisfaction and disagreement.

Demonstration does indeed have more than one meaning. Demonstration as it applies to urban transportation indeed has a very particular meaning to me. Let me share a few thoughts on this with you. This is what demonstration means to me.

Francis Bacon says, "To spend too much time in studies is sloth." Back in the 17th Century he also told us, "It is better to meet some dangers halfway, though they come nothing near, than to keep too long a watch upon their approaches; for if a man watch too long, it's odds he will fall asleep."

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The point is this: We have had enough studies. We need more demonstrations. We need more demonstrations to make an immediate impact on the improved movement of people and goods in the cities, and we need it now.

If there is one particular emphasis in program management at the Urban Mass Transportation Administration while I am Administrator, it is this: more demonstrations sooner. Good, well-thought-out, people-carrying, transportation improving, imaginative transit demonstrations. Say it this way: During my Administration, I intend to see more demonstrations and fewer studies; shorter lead time on projects having long-term results; and the present courage to move out, from observable fact or fairly well-confirmed suspicion, to demonstration projects.

If we are going to be successful in improving transportation for people and goods in the cities, we need to show the Congress, industry, local government, transit operators, motorists, and virtually every other segment of the urban community that we are making visible, tangible improvements in how they can get around day-to-day.

Demonstrations are the way to do it.

Don't misunderstand me. Nothing haphazard, precipitous, half-baked or impuslive. But I am convinced that the time between seeing the need for improvements and demonstrating them can be shortened--can be substantially shortened.

You want me to be candid, I am sure. We don't have anything like the visible, tangible demonstrations we should have to get either the funding from Congress or the attention of industry for our program. My policy is to change that.

It is the policy of my Administration to move to the demonstration, execution and proving out of new transit systems and components as soon as possible, rather than waiting until we are absolutely, positively sure that everything will go right.

Charles Kettering was known for telling young General Motors eingineers that in the pursuit of high grades, accomplishment and status, many forget how to <u>fail</u>. Yes, fail. We have forgotten how to <u>try</u> things new and different and to risk failure, largely because we are so successful in most engineering undertakings. Let's risk more failure while also making more progress.

Not all of our demonstrations are going to be successful, but the more demonstrations we have, the greater the likelihood that significant advancements in systems and components will be made.

Better safe than sorry--true. But better yet, moving, doing, proving than pondering, wondering, and losing.

It is no longer open to argument, as I see it, that demonstrations, whether successful or unsuccessful, are less costly than endless conceptual research. The largest single item of cost in virtually every major new rapid transit system is the cost of escalation and rising prices incurred during planning delays and long construction lead time.

Demonstrations to shorten up the transit time frame. Demonstrations to more quickly prove out your ideas. I want you to know that I have the courage to move ahead where these projects make economic and technical sense--not with hindsight or particularly lucid foresight--just with what good business judgment tells us is the best thing to do at the time.

Let us now proceed to the papers that will be presented at this first session this morning.

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