DEPARTMENT OF TRANSPORTATION | NEWS

FEDERAL RAILROAD ADMINISTRATION

WASHINGTON, D. C. 20591

REMARKS PREPARED FOR DELIVERY BY FEDERAL RAILROAD ADMINISTRATOR, REGINALD N. WHITMAN, BEFORE THE RAILROAD MANAGEMENT INSTITUTE, WINDSOR PARK HOTEL, WASHINGTON, D. C., JANUARY 13, 1970

I feel privileged to have been asked to this meeting. I can think of no better forum for railroad people and those interested in the railroads to air their gripes, discuss the problems and perhaps come up with some solutions. The academic environment seems to stimulate the brain.

As you know, my topic for discussion today is the "Role of the Federal Railroad Administration in the Department of Transportation." The subject isn't really as formidable as it sounds because the FRA is still a youngster less than 3 years old. In spite of our youth we've had the good fortune to be where a lot of the transportation action is these days, so I hope what I have to say will generate dialogue beneficial to all of us.

Most of you are probably aware that up until the establishment of the new Department in April 1967, there was no agency within the Executive Branch of Government whose focus was specifically on the problems of railroad transportation and its future role in the social and economic life of the country.

In fact, the Federal Government has paid little attention to the railroads over the past decade. There are various

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reasons for this -- one, railroads have been cast in the role of being the last bastion of free enterprise in the transportation industry and do not need or want help. Another, the general public has regarded railroads as something from a bygone year and relatively unimportant to their daily lives. As a result, lack of public interest and support has produced a wide chasm between railroad problems, their effects on the economy and what should be done in the way of solutions. The Congress, for instance, has been forced into solving railroad problems only in a case-by-case crisis atmosphere. The Work Rules' case in the early sixties is an example of this. The attention this past session to rail safety, passenger service and rail equipment tax problems are others.

One only has to look at the headlines appearing almost daily to know there are problems -- "Rails Feel Pinch in Money Belt;" "New Penalty Fees Proposed on Boxcar Delays;" "Rail Freight Rate Increase Rapped;" "Rail Passengers Battle to Restore Train Service;" "Town Evacuated After Train Wreck;" and so on.

What about solutions to these apparent problems? Federal subsidies for passenger service is one that is voiced; tax relief in various forms is another; common ownership is one more. And, perhaps the most heard and least understood proposed solution for most rail problems is deregulation. (Just for the record, my idea of deregulation covers a lot more than rates. It encompasses at the least car service, mergers, safety and common ownership.)

Just because there is a Federal Railroad Administration, it doesn't mean railroad problems are going to be solved overnight -- they aren't. But, as we think the formulation of the Department of Transportation was the starting point to bring on general transportation progress, so we think FRA is the focal point for getting something going again for a key part of the Nation's vast transportation complex. And the railroads are a key mode by any measure.

For the record, let's review what the rail industry is all about.

American railroads operate 210,000 miles of line serving more than 50,000 communities. During 1968, the rail system moved over 755 billion ton-miles of freight -- approximately 41 percent of the total intercity freight movement. Over 13 billion passenger miles were provided in 1968 -- about 9 percent of the total passenger movement by common carriers. Rail commuter lines, concentrated in New York, Philadelphia, Boston, Chicago and San Francisco serve some 600,000 commuters daily.

The economics of transportation make railroads the most important mode in the movement of high density, bulk commodities such as coal, grain, ore and lumber. Most agricultural products heavily depend on rail transportation. In areas without access to water transportation, rail is the only economically feasible alternative for the movement of bulk traffic.

Let's take this a little farther and look briefly at what would happen if railroads stopped running tomorrow. Instantly pressure would be felt by coal mining, major chemical industries, perishables and food-stuffs, mail and passenger service. Within a week water purification would be hampered, automotive production cut back and the construction industry seriously curtailed. As lack of railroad service continued, the impact would spread to the publication industry, boiler products, motors, generators, grain elevators and defense-oriented industries. The Nation's international freight traffic would also be seriously endangered, with many commodities unable to reach ports in sufficient quantity. Our balance of payments' problem would certainly be aggravated. It is also estimated that lack of railroad service for just 30 days would idle six to seven million people. One more fact of our transportation life: if railroads stopped running, other modes could absorb only 10 percent of normal rail volume. And this doesn't account for the specialized handling requirements of much of the traffic normally carried by rail.

So to say the railroads are critically needed to keep this Nation moving is not just a straw thrown casually to the wind. And this is why we at the FRA think we have an important job in helping the rail alternative serve its key role to the best of its ability. Now, how are we going about this? When FRA was formed as a part of the Department in 1967, it was given responsibility for three basic programs -- operation of the Federally-owned Alaska Railroad (more about this later,) railroad and liquid pipeline safety and the Office of High Speed Ground Transportation.

However, under the Department of Transportation Act, we have responsibility for implicit activities such as: (1) development of national policies and programs conducive to fast, safe, efficient and service-oriented railroad transportation consistent with other national objectives; (2) coordination of effective administration programs; (3) encouragement of cooperation between State and local governments, rail labor and other interested parties toward achievement of national rail transportation policies; (4) stimulation of technological advances in rail transportation; and (5) to serve as the

principal organization for assistance to the Secretary on all matters relating to railroad transportation.

During its first year of existence, FRA was engaged in identifying major goals and in establishing an appropriate organizational structure. And there was also the problem of staffing. While extremely capable personnel had been inherited with the three on-going programs there was no staff to work on the basic problems of the railroads -- no reservoir of professional talent from which to draw. Therefore much of our time was spent trying to bring a capable planning and action team into government service. It hasn't been easy. But at last I think we have that team on board. Let me give a few examples: our Deputy Administrator is the former General Attorney for the Association of American Railroads. The Special Assistant to the Administrator is former General Counsel of the Brotherhood of Locomotive Firemen and Enginemen. FRA's Director of the Bureau of Railroad Safety is also from rail labor and worked in employee relations and legislative activities. The Director of the Office of Policy and Program Analysis was formerly manager of transportation for the Central Railroad of New Jersey. And last week our new Chief Counsel came on board to round out our first team. He formerly was Assistant Attorney General for the State of Colorado assigned to the Colorado Public Utilities Commission.

I could name many other equally talented, dedicated and knowledgeable members of the FRA staff but I think this short list gives you a good idea of the type of people we have -- a well balanced staff with appropriate backgrounds representing all facets of the industry as well as government.

In our day-to-day activities, we hope to achieve our objectives by exercising four roles: first, to serve as the main communicator between the railroad industry and the government; second, to exert leadership by coordinating and stimulating the industry's many talents and drives; third, to act as the industry's advocate within the Department of Transportation in balance with the public interest; and finally, through research -- both economic and technological -- to serve the national interest by encouraging, sponsoring, stimulating and, where necessary, funding activities essential to a better service and a more progressive industry.

As I mentioned earlier, our first months were spent in organizing the agency. At the same time it moved ahead very creditably on a number of fronts: the high speed ground

transportation program; use of the Department's four highly instrumented rail research cars; railroad safety; and grade crossing problems.

In the grade crossing area, an investigation was begun looking into such things as guidelines for diagnosing hazards, enforcement of traffic regulations at grade crossings, improving accident data, identification of crossings most used by school buses and commercial vehicles carrying hazardous cargo, and closing or limiting the use of existing crossings.

This year we completed an extensive study into the safety problems connected with grade crossings. I am sure you are aware that this is one of the most complex problems we face because of the high fatality rate in grade crossing accidents, and in the enormous costs involved in protecting or separating them.

Safety and another public issue -- passenger railroad service -- are two major problems which have been with us since the day the Department came into being. The only changes seem to have been for the worse but I believe we have begun to make progress. One major achievement has been in proposing safety legislation which I feel certain Congress will approve early next session.

As you know, we presently have only limited responsibility for railroad safety. Our authority covers signals, brakes, locomotives and such safety appliances as handholds and ladders. Most of the laws providing for these regulations were passed in the early 1900's. Needless to say, they are outmoded, limited to particular hazards and contain broad gaps.

Over the past several years there has been a steady increase in train accidents, with derailments the most significant factor. In fact, the increase in accidents between 1963 and 1968 amounts to 66 percent -- an average monthly increase from 400 in 1963 to 669 in 1968.

Thus the basic philosophy behind the railroad safety bill submitted to the Congress last October was that broader authority will permit us to get at the hard core of the railroad accident experience. This same view was expressed by the Task Force on Railroad Safety which, as you probably know, was made up of representatives of the railroads, rail labor and the States which studied the problem for months.

The Senate approved a rail safety bill (S. 1933) just before it adjourned December 23. The key elements are: (1) the Secretary be given broad authority over rail safety and have the power to issue rules, regulations and standards; (2) regulation of rail safety be nationally uniform to the extent practicable;

(3) States be permitted to regulate in areas where a local hazard is not being adequately treated by the national standard prescribed by the Secretary; and (4) enable States that so desire to be certified to adopt Federal standards and take over enforcement responsibility.

Basic research is another area of vital importance if safety is to keep pace with technological innovation. This legislation would authorize the Department to begin an immediate research program into the many unexplored problem areas of rail safety. For the first time, the Federal Government would be able to couple rail safety research with regulation. Of course, there are other important sections of the bill, particularly those sections covering hazardous materials and grade crossings.

But I think the bill is relatively good and I am hopeful the House Interstate and Foreign Commerce Committee schedules early hearings this session. With some minor language adjustments, it will enable the Department to begin the tough job of structuring meaningful solutions.

In the second major area of concern -- that of rail passenger service -- we have been hard at work on recommendations we hope to present to the Congress early in the next session. This is a tough problem. And it goes deeper than just the often heard arguments of "the railroads don't want passengers." While I think its true a few railroads downgraded service, the rail passenger dilemma is the result of a combination of factors: namely, public preference for other means of travel, inability of the railroads to compete effectively with subsidized modes, and lastly, lack of private capital to pour into an uneconomical service.

So what do we do about solving this problem? Many legislative proposals have been introduced on both sides of Congress. Most, however, would treat the effect of the problem -- not the cause. I should say problems, as what we are faced with is the "today" problem, avoidance of losing passenger trains other than in a national transportation policy framework; and the "tomorrow" problem, deciding on the future need for passenger trains.

The "today" problem is evidenced largely by the excessive losses in railroad passenger service which in 1968 approximated $200 billion. This is related cost but in actuality they are real dollars. Coupled with this loss is the ability or inability of the railroads to absorb these losses and the feeling of railroad management that if they are required by Interstate Commerce Commission regulations to continue uneconomical

passenger service they should be reimbursed by the Federal Government. Statistics are available showing the poor net position of the railroads cash position, high bonded indebtedness due within one year and inability to refinance for needs in critical areas.

It is my opinion that, all things considered, the railroad industry, per se, is not in a position to continue large passenger losses without serious implications. At the best, money lost in passenger service should be spent where there is as much of a public need. This applies also to providing uneconomical passenger trains. For instance, a great deal of money must be spent by the industry in upgrading their track and structures in the interest of safety. The continuous shortage of cars indicates an extreme need for the industry to supplement their level of ownership.

Considering railroad rights-of-way, intercity and into the city, constitute a major asset in the transportation needs of this country, present and future. Steps should be taken to keep these transportation corridors available and retain some passenger capability for the future even though present needs are judged only on an economic basis.

Therefore, I suggest that consideration be given for Federal support to maintain a skeleton network of passenger trains to retain this capability. This would be done with the understanding that the basic network be related to present day needs and patronage. The basic system would periodically be reviewed to further reduce amounts of public assistance, by gradual elimination of runs not considered essential to the network, and to reduce those that are essential to lowest possible cost.

To attack the second problem, which should address itself to future passenger needs, a two phase program is necessary. The Federal Government must plant "seed money" in a number of areas for the establishment of demonstration projects. The industry has some obligation to support a portion of this program. These demonstrations, if successful, would provide the impetus for the longer term solution -- an on-going Federal/State/local cooperative program by which public grants should be available to public bodies. These would allow the Federal Government to furnish equipment and one-time assistance in upgrading track and stations where studies show passenger service is needed and has a chance of success. Public bodies should be required to stand behind their requests to the extent that they will take care of any operating deficit if one occurs as a result of inauguration of requested service in the future.

This built-in discipline should limit the requests to only those communities where real need exists and will avoid the political implications for those required to make the decisions of where these grants should be available. Such grants should be used not only for rail transportation but also available to finance new technology that may be forthcoming whether this be TACV, tube or bus transportation.

In fact, one of the "today" solutions might be Federal assistance to bus lines to handle the intercity traffic in the less densely populated areas until mass ground transportation is necessary.

Now a word about our Northeast Corridor demonstrations. Our experimental high-speed rail passenger service in the Northeast Corridor shows every sign of proving not only the need for a rail alternative in congested areas, but a definite preference by many people for train travel over other modes. A recent survey indicated that in its first 6 months of existence the Metroliner, which runs between New York and Washington, gained half of its 228,000 passengers from other modes. And a study of the July through September volume shows that overall traffic between the two cities was up 30 percent over the same period in 1968.

On the Turbotrain, which operates between Boston and New York, there were almost 57,000 people who used the service between April when it was started and November 1969. The average load factor for the one daily round trip has increased to around 66 percent since last July. While we have some maintenance problems, we are very pleased with passenger response to these trains.

The Congress did not leave us with a mandate to "make do" with the present state-of-the-art in ground transportation. In addition to the conduct of rail passenger demonstrations, we were assigned to develop the technology of ground transportation by both rail and advanced system, and we were not limited to any one mode. The objective of our current research and development is to make possible the design and demonstration of advanced equipment, systems and service and to develop performance data on such advancements.

Research in high-speed rail and other advanced systems is directed toward attaining shorter trip times and exploring the practical speed limits of ground systems. Travel time, convenience and cost are the three major factors determining choice of mode by travelers; hence high speeds are an essential characteristic of future alternatives to the increasing congestion of railways and highways. High-speed trains will be able to travel at 150 miles per hour or more while tracked air cushion vehicles are expected to achieve nearly 300 m.p.h. Tube vehicles may attain even higher speeds.

Another objective in the development of new transportation technologies is the reduction of noise and air pollution. Toward this end, attention has been focused on electrical propulsion systems. This country's first full size linear induction motor has been built and will be tested this year in a wheeled vehicle at speeds up to 180 m.p.h. These tests will provide information on the efficiency of linear motors for propulsion and for designing an improved motor to propel the tracked air cushion research vehicle. Because it requires no wheel-rail traction and is economical at high speeds, the linear motor would be ideal for the tracked air cushion research vehicle which will be designed in fiscal year 1970.

As we move into the new year, our major concern will continue to be the areas I have already discussed. We also hope to scratch more than just the surface of solid rail research. For example, identifying what the needs are for improvements in rail safety presented us with a problem of major proportions. But our people now feel they have defined a first approach and have pinpointed 29 problem areas. These include human factor studies, braking systems, automatic train control, hazardous materials, derailment-causal/economic analysis, a central information system, automatic train couplers and equipment problems such as wheel failures. A comprehensive research plan has been developed for each of these areas and we hope to begin work on them in the next fiscal year.

A second program area, that of grade crossings, is perhaps farther advanced. I mentioned that we have completed a 5-year research plan which has identified the problem areas and where we can best invest our money to help correct the situation.

Our objectives in this 5-year program will be: (1) to reduce grade crossing accidents by 25 percent; (2) to develop special devices which will help reduce accidents at grade crossings with low vehicle and train volumes; (3) complete accurate inventories and records of all grade crossings, accidents at these crossings and costs so that we may better formulate future policies; (4) improve cost and benefit information as a basis for selecting improvement projects of merit; and (5) to carry out demonstration projects in several communities with the objective of eliminating unnecessary crossings and providing protection for all crossings which are allowed to remain.

The third area in our overall research plan is, I am sure, of special interest to my audience today. We have done very little to date on planning and policy research because of the low budget within which we have had to work. But we hope this situation will be corrected.

Major research areas in which we plan to delve include: passenger service, commuter transportation, freight car supply and service problems and their economic impact, functional boxcar development, intermodal systems, freight service quality control and terminal systems, to mention a few. Moreover, the Office of High Speed Ground Transportation is planning to build a wheel/rail dynamics laboratory which will be of tremendous importance in providing an actual environment for the testing of new equipment. It will contain a track on which passenger and freight cars can be tested as well as new high speed systems -- in fact, anything from 50 miles per hour to 300 m.p.h.

I mentioned earlier that I would come back to the Alaska Railroad. But rather than talk about what we're doing up in our 49th State, I brought a film which I think will point up the importance of the railroad mode there.

Before we view it though, I would like to close by putting on the hat you will be wearing later on this morning and leave you with a few questions for your group discussion period.

First, I've talked a lot about rail safety; where do you think the safety problem lies?

Second, what is at the bottom of the freight service problem?

Third, what directions for research and development should the railroads be taking themselves?

Fourth, to what extent should regulation be lessened?

And finally in what direction do you think the Department of Transportation should be moving toward assisting the railroads?

These are not easy questions. But I hope you will think about all or one of them during your discussion period. I would be very interested in obtaining your views.

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REMARKS PREPARED FOR DELIVERY BY FEDERAL RAILROAD ADMINISTRATOR, REGINALD N. WHITMAN, AT THE RAILWAY PROGRESS INSTITUTE'S 1970 RAILROAD SALES DEVELOPMENT SEMINAR, SEAVIEW COUNTRY CLUB, ABSECON, NEW JERSEY, MARCH 9, 1970, 7:00 P.M.

I am delighted to be here today, and I would like to thank Nils for the invitation which gives me an opportunity to get better acquainted with you of the railroad supply industry. I think it most important that we widen the dialogue between Government and your industry because I feel that between us we can do a great deal to help the railroad mode fulfill its role in meeting the transportation needs of our country.

We are all aware of the great history of our railroads and their role in opening up our country. I think you also know that they cannot simply rest on their laurels.

Railroads have been the largest carriers of merchandise in the American economy since the mid-1800's. They continue today to be the "backbone" of the transportation system, with the largest ton-mile share of any mode and a significant revenue share of the market.

The 210,000 miles of line form one of the most comprehensive networks in the world and reach into 50,000 communities all over our Nation. Transportation services performed by the railroads in 1969 produced $11.2 billion in gross revenues, moved 28.2 million freight car loads and transported 296 million passengers. Employees number over 578,000. The average haul on the Class I railroads is a boxcar carrying 50 tons and moves 485 miles. Truly, the railroads are "big business."

Yet, in recent years, a day doesn't pass without someone bemoaning the sad situation of the railroads. Much of this has been misleading. It is true, however, that the railroads are our oldest mechanized industry; that many of their managerial practices were crystallized before the newer machine-oriented industries were even dreamed of; and it may be true that the railroads have had difficulty in adjusting to technological change, (albeit the total amount of goods which they carry has never been greater).

This area -- that of technological change -- is, I believe, the key to solving many of the industry's problems. And I would hope this is an area where the railroad supply industry will play a much larger role. And that role obviously begins with the group here tonight.

I say this with full knowledge of your industry's many, many contributions to producing a better railroad product. Since my appointment as FRA Administrator last year, it has become increasingly evident that there is now and in the forseeable future a tremendous need for more basic research and more importantly, more innovation. One has only to look down the road a short distance to see why this is so.

We are adding 10,000 additional vehicles to our highways every day. Domestic airlines will triple passenger miles in 10 years. Truck tonnage will rise 50 percent by 1980. Railroads are adding 15 million ton-miles every day. Also, our projections show that by 1980 railroad ton-miles will increase by 50 percent although they also show railroad share of the inter-city market will decrease to 35 percent.

In fact, the demand for transportation services of all kinds is far outstripping population growth (which by the way is increasing by 7,000 persons a day) and also outstripping most other forms of economic activity in this country. The result is obvious when you project the figures on the charts -- we have to double our transport capacity within 20 years. Put this another way: we must double what has been put in place since the founding of this Republic!

We at the Federal Railroad Administration are getting to work towards helping the rail mode be ready to meet the challenge. But I see no reason why you should wait for us. We are limited as far as funds are concerned and it is risky business depending too heavily on the Congress for massive financial support.

I would say it is much less risky depending on the future health of the railroad industry, if they receive the visionary assistance they need -- assistance that can only be effective if everybody concerned with transportation throw themselves wholeheartedly into the technological revolution which is currently producing so many awe-inspiring products.

The railroads have many basic assets which have yet to be exploited to their full worth. For example, it takes 360 truck drivers and 360 trucks to handle the 4,300-ton load of one 100-car freight train, which has a crew of five. Plowing through mountainous snow drifts or heavy fog -- when other forms of transport have been stalled -- is how U. S. railroads have earned their performance record. The transportation "space race" everyone talks about these days has been potentially won when you look at it in the sense that railroads obtain about fourteen times as much practical capacity per acre of right-of-way as do trucks. Railroads are the only mass producers of transportation that are nationwide in extent and which can economically, dependable, and continuously haul all types and quantities of traffic between any combination of points. And, most importantly in these days of ecological awareness, a railroad train produces much less pollution -- both noise and air types -- than either highway or air transport per ton.

I could go on but I think what I am trying to say is obvious. In spite of what you may have heard, don't sell the railroads short. They have long and fruitful lives ahead of them. What is currently lacking is a lack of balance and a lack of integration between modes which has generated the transportation gap with which we are now faced. And I firmly believe that this is of our own doing. We all have been too inward looking. We haven't kept a fast enough pace with the times.

I admit that part of the need lies in lack of funds and, hopefully, this situation will be corrected before too much longer. But there are also ways of

pulling oneself up by the proverbial bootstraps. I saw some recent projections for the intercity freight market which showed a very real possibility that the railroads could divert 50 percent of the truck ton miles over 500 miles by 1980, given an improved rail system. This would mean a shift of 136 billion ton miles at a cost savings of about 1.8 cents per ton-mile.

These figures certainly open up new vistas. So do some of the activities now going on in Washington. For one, we are optimistic there will be a broad Federal rail safety bill and some type of passenger legislation passed before the year is out. What a golden opportunity for anyone interested in concentrating on R&D!

Before I talk a little about what directions FRA is moving, I would like to pass on some of my observations about the railroad situation generally.

On an encouraging note, let me report to you that American public interest in the need to make better use of our railroads seems to be increasing at a tremendous rate.

There are many indications that our leaders are now realizing that our railroads have been overlooked, in fact neglected, in our overall transportation planning and in our programs of public support.

If you could read the letters from Congress that come to the Department of Transportation, many of them enclosing correspondence from American citizens from coast to coast, you would sense as I do the intensifying public and political interest in railroads.

Last month as an example, I participated in a variety of meetings, large and small, at the Department and on Capitol Hill. All of these meetings focused on the need for better rail service, both freight and passenger, and on the importance of Federal action to stimulate such an improvement.

One such meeting was a large gathering on Capitol Hill organized by New England Members of Congress. These Senators and Congressmen had organized a committee called CIPS -- Committee to Improve Passenger Service. All of the statements and discussions centered on one mode of transportation -- railroad -- and, on the need for the Federal Government to join with local and state efforts to revitalize railroad passenger service.

That very day, I held some private conversations with Members of Congress. We discussed the historical reasons for our current railroad problems. Also, we talked about some of the special railroad problems in the cities.

Let me underscore this fact. More and more, America is becoming a nation of city dwellers. Now about 80 percent of our population live in urban areas, but in the year 2000 we expect that 90 percent of our citizens will be living in cities.

What this means is that public interest in transportation problems faced in the cities will not disappear, but will grow. As a compelling example, the United States Senate passed the Nixon Administration's Urban Mass Transportation Assistance Act just last month, on February 4, 1970. This measure launches a new, long-range, large-scale program to rejuvenate public transportation by all modes -- including rail -- in our cities. The proposal calls for $10 billion to be invested by the Federal government over the next 12 years. The vote in the Senate was 83 to 4. We are confident that the House will also approve this vital measure soon, and that the President will sign it into law by late spring.

On the subject of transportation in the cities, Members of Congress and I have discussed the dilemma of Greenwood, South Carolina, and countless other communities with a similar problem. I think that most of you know that many American towns have a wheel-like web of railroad tracks leading into the downtown area. We often refer to the folks who live "on the other side of the tracks." Railroad tracks do cut up our communities into sections and pose a problem of growing severity.

With our rapidly increasing automobile ownership and the development of an expanded highway system, more and more cars crowd downtown areas. Cities are being strangled and immobilized by the traffic jams. Parking, pollution and bumper-to-bumper vehicular tie-ups are the well-known resulting problems. Railroad tracks running through the center of town combine with the other factors to aggravate the situation. Crossings are heavily traveled and much more dangerous. Emergency vehicles such as fire-engines, ambulances, school buses, and the pedestrian find the railroad tracks to be a serious obstacle.

Many cities are hoping to find ways and means of relocating railroad tracks as part of their general plans for revitalization and improvement. Unfortunately, there is no Federal program to assist in bearing the heavy costs of such action. If an airport of highway were involved, the great resources available under the Federal Aid Airport and Federal Aid Highway programs could be implemented. But, a comparable Federal Aid Railroad program is yet to be born.

As a result, local planners who must make the most prudent use of local and state resources do not have a balanced and broad range of options. Because of the availability of Federal assistance on a 90-10 ratio in highways or a 50-50 ratio in airport programs as contrasted with no money for railroad related programs, there is a natural temptation to go where the money is. I am told that local decision-making and local judgments are seriously affected. The imbalance in national support programs causes distortion and misdirection in local planning, and it seems to me that we must correct this situation.

There is a growing feeling in this country that greater flexibility and freedom is needed in our Federal assistance programs. Municipal, county, state and regional leaders must be able to make their transportation decisions not on the basis of what money is available in Washington, but rather on the basis of what is right, rational and economic in their locality. President Nixon has recognized this problem. An effort is being made in all domestic Administration programs to develop what is called the New Federalism so that local decisions will not be distorted, but rather will be supported by our Federal activities. Indeed, Secretary John A. Volpe of the Department of Transportation is leading our Department in the quest for a national transportation policy which is balanced. I am confident that the balanced policies which we are seeking will give due regard to the great role that railroads must play in our total transportation system.

Now, a little about FRA's direction in R&D:

In the area of safety, we recently contracted for a study to be conducted on what type of R&D might be necessary to reverse the present safety picture

on the railroads. I would like here to share with you some of the suggestions we received for a comprehensive 5-year rail safety research plan:

First, it was their opinion that little had been done to improve railroad safety over the past century where R&D is concerned. The report recommended expenditure of some $63 million on research over a five-year period to develop solutions to the problem.

The study found that there "exist wide gaps in the Federal Government's involvement in and responsibility for railroad safety." From 1961 through 1967, the report noted, direct costs of train accidents amounted to approximately $530 million for Class I railroads. If other related costs are included, the figure grows to something like $1.6 billion.

The study group decided that safety research was needed in eight basic categories: (1) track and roadbed, (2) equipment, (3) people, (4) development of a comprehensive, modern Safety Information System, (5) train/track system, (6) hazardous commodities, (7) communications, and (8) policy.

A comprehensive research plan has been developed for each of these areas and we hope to begin work on them in the next fiscal year.

A second program, that of grade crossing safety, is perhaps further advanced. I mentioned that we have completed a 5-year research plan which has identified the problem areas and where we can best invest our money to hlep correct the situation.

A third area in our overall research plan is, I am sure, of special interest to my audience here today. We have done very little to date on planning and policy research because of the very low budget within which we have had to work. But we hope this situation will be corrected.

Major research areas in which we plan to delve include: passenger service, commuter transportation, freight car service, functional box car development, intermodal systems, freight service quality control, and terminal systems, to mention a few.

I would like to repeat here that our hopes lie with you, the railway suppliers, and with the industry itself in furthering the cause of greater operating efficiency and safety. We don't intend to do all the work, nor do we want to take over. What we do want to do is stimulate your industry to expand research efforts, to develop prototypes, and to help move the railroads into the 21st century in a manner which will allow them to compete more effectively with other modes.

One final point I would like to make is that I don't think the picture is as one-sided as perhaps I have made it look. I am merely attempting to stress where I think the priorities lie. I don't at all mean to imply that the railroads or the railroad supply industry have just been sitting back doing nothing. Many remarkable improvements have been made in freight service. And recent advances in containerization, piggybacking, and jumbo rolling stock have enabled the railroads to deliver the goods with a great deal more precision.

But no one person or no one group holds the key to the future of the railroad industry. Certainly there are problems, but there are problems everywhere. I am satisfied that the future of the industry can be a bright one. But I am convinced that the extent to which such a bright future is realized depends upon the contribution made by each of us in our own particular way.

As this three-day Railroad Sales Development Seminar opens, I would like to say a few words about its sponsor -- and our host -- the Railway Progress Institute. Perhaps the best opportunity for development of new railroad equipment has been helped by the achievements of RPI itself, working with its colleague, the Association of American Railroads.

I refer to the tax incentives in the form of five-year amortization and other relief provisions which were included in the important tax reform bill passed by Congress and signed by President Nixon last December 30. This railroad tax incentive package was the culmination of a series of meetings and briefings on railroad financial problems to key Washington officials arranged for and participated in by RPI, the AAR and officials of individual railroads.

Due to the provisions of the new law, the railroads will have a total tax saving estimated at $85 million in 1970 alone. That means an additional $85 million should be available for purchase of necessary new supplies and equipment. I am sure the participants in this Sales Seminar appreciate this opportunity as a springboard to further sales.

So, I congratulate this national association of the railway supply industry on the success of its efforts in assisting the railroads of the Nation. I know these efforts will continue in the future. I am sure your Seminar sessions here at Absecon will help in enabling you to take even better advantage of the sales opportunities that confront you.

Thank you.

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U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

TESTIMONY OF REGINALD N. WHITMAN
FEDERAL RAILROAD ADMINISTRATOR
ON S. 3223 AND S. 3334
BEFORE THE SPECIAL SUBCOMMITTEE OF
THE SENATE COMMITTEE ON COMMERCE
MARCH 25, 1970

Mr Chairman, I appreciate the opportunity of appearing before you today to present the Department's views on two bills, S. 3223 and S. 3334, which deal with the problems of freight car per diem charges and penalty per diem charges on cars used for agricultural commodities.

I know it is an understatement to label the issues of freight car shortages and per diem disputes old problems. However, the history of these issues indicates that the industry itself dealt with them with some success from 1902 to 1953, when the present dispute was submitted to the Interstate Commerce Commission for adjudication. I am impressed that the real answer to the longstanding and complex dispute lies within the willingness and ability of the railroad industry to settle its own problem without regulatory or legislative action.

A complete analysis of S. 3223 and S. 3334 is already a part of the record. Therefore my statement will not repeat a similar analysis. Instead I would like to present my views on three basic principles which must be considered, if indeed, the per diem issue is to be effectively resolved.

These three principles are:

1. Compensation: Per diem rates should be at a high enough level to provide an incentive for railroads to build freight cars. This incentive is necessary if we are to expect continuous commitment of railroad capital will be made to replenish and expand the freight car fleet. This is particularly true today when non-railroad, high yield investments are attracting more attention from railroad companies.

2. Stability: It is important that a stable policy regarding tax credits, depreciation and per diem charges be maintained if we are to avoid and hopefully eliminate the peak and valley production of freight cars. A stable investment environment will support car building programs by making capital for equipment acquisition more available from the financial community.

3. Utilization: Per diem rates which provide adequate compensation will also persuade the cost-conscious railroad industry to move empty cars more expeditiously back into the pipeline for revenue service. An unreasonably low per diem rate will retard utilization of the present fleet. An unreasonably high rate, such as provided for in S. 3334, would be destructive to traditional and necessary interchange practices.

Admittedly, these principles are stated in their broadest terms. There are many variables in each of the three areas that form the basis of the controversy which led to the introduction of the two bills. Critical factors involved include car reproduction costs, interest rate or return on investment and whether per diem charges are to be assessed on a time or time-mileage basis. These factors are also the reason we are here today to discuss S. 3223. The bill would provide a settlement, through legislation, of the long term differences that have divided the railroad industry.

I believe it is clear from the record in these hearings and Senator Magnuson's views as expressed when he introduced S. 3223, that the ICC's decision on these disputed factors has not won wide acceptance within the industry. If I can relate back to my view on the need for a stable investment environment, it would appear that any policy, must have a broad base of industry support. Without it, we can logically expect continual controversy and pressure for change either through regulation or legislation.

Frankly, neither I nor my staff in the Federal Railroad Administration can provide the Committee with the type of solution that will settle the 19-year-old per diem issue. I have my personal views, but these may be as controversial as those now before you and perhaps equally unacceptable to one or more segments of the industry.

If change is deemed to be necessary I strongly suggest that the change be developed and accepted within the railroad industry itself. I believe the industry must come to grips with the issues and create the procedures to reach a final and binding settlement. While I am sure the Congress is anxious to do all that it can to promote an adequate and efficiently used freight car fleet, a legislated solution would set in concrete the varying cost factors involved. Any subsequent change would normally come through legislative amendments and Congress would find itself the final arbitrator whenever new or reargued factors caused the introduction of legislation.

The Secretary of Transportation has proposed to the railroad industry, that binding arbitration, within the railroad industry, be adopted for settling the per diem rate issue. This would include the computation, establishment, and application of per diem rates as well as other related items. We have proposed that the per diem controversy be settled within the railroad industry by the carriers themselves.

I have for the record, the Secretary's letter to Mr. Thomas M. Goodfellow, President of the Association of American Railroads. We are hopeful that the industry will give careful and favorable consideration to the Secretary's arbitration proposal.

Before concluding, Mr. Chairman, I would like to discuss the impact which we believe S. 3334 would have on the present system. As I stated earlier I believe S. 3334 would have a destructive effect.

In 1968 average revenue generated per carload was about $350. Using standard demurrage agreements, shippers and consignees would control a car four free days per load, while the serving railroad paid out $400 in per diem. The effect of these economics on cars used for agricultural commodities would mean:

1. No foreign cars would be accepted by home roads;

2. Originating carriers would not have access to foreign cars;

3. Foreign carloads would be unloaded at interchange points.

We therefore, do not believe S. 3334 would have its intended effect of improving the supply of cars used for agricultural commodities.

Mr. Chairman, in summary, freight car shortages and per diem are old problems in the railroad industry. Because this is so, a legislative solution may be appealing in that it resolves the issues with some finality. In my opinion, however, the solution would be short term. In decisions involving both parts of this regulated industry, an effective solution must have a high degree of acceptance within the industry. Thus, to gain industry acceptance, I propose the railroad industry take back the per diem

problem and resolve it internally. While I believe Congressional interest in finding a solution is commendable and that the thrust of S. 3223 is consistent with Congress' concern, the Department of Transportation would favor voluntary arbitration by the industry rather than legislation.

In conclusion, Mr. Chairman, I would like to assure the Special Subcommittee that the Department of Transportation is vitally concerned about the problem of freight car shortages. We believe per diem is only one element. I have attached to my statement a list of DOT program activities in the car service area.

This concludes my prepared statement and I shall be happy to answer any questions you may have.

DOT's RAIL SERVICE AND CAR SERVICE ACTIVITIES

This outlines the Department's past, present, and planned activities in rail service and car service activities.

DOT's Past Activities:

Past activities have included:

(1) Worked with the Treasury to obtain the five-year fast amortization provision, in the 1969 Tax Reform Act, which applies to railroad rolling stock. After 1972, this Act provides that the Secretaries of Treasury and Transportation shall determine which types of rolling stock are not in short supply, to which the fast amortization provision will no longer apply. We believe this tax incentive will stimulate continued investment in rolling stock despite loss of the seven percent investment credit.

(2) Supported Illinois Central's "Rent-A-Train" proposal before the Commission. Not only does this pricing proposal give tremendous incentive for better car utilization to both shipper and carrier, it also levels out one peak demand for freight cars, thereby reducing car shortages. As we see it, these peak demands must be levelled if car shortages are to be avoided. IC's "Rent-A-Train" proposal contributes toward accomplishment of this goal.

(3) Proposed a joint DOT-AAR demonstration of a railroad service quality control system in September, 1969. The proposed system, to operate over three demonstration roads, was to schedule each car from origin-dock to destination-dock, monitor each car movement to insure it was on schedule, and provide data to evaluate service performance by railroad, route and facility. In its eight point program to improve service as announced in October, the AAR included its own pilot demonstration project to measure service for traffic moving on more than one railroad. While our proposal was not accepted it may have had some effect in promoting the AAR demonstration.

DOT's Present Activities:

Present projects include:

(1) A research study which will obtain an estimate of the economic effects of freight car shortages in 1968 for the grain, lumber, and plywood industries. This $157,000 contract, now being performed by Arthur D. Little, Inc., has a scheduled completion date of late September, 1970. As we see it, this effort complements the Commission's Ex Parte 252 work. If a rational economic decision to eliminate car shortages in these industries is to be made, estimated savings must be compared with the associated costs.

Of greatest interest to the Commission, we are also attempting from this contract to derive a method of forecasting weekly freight car demand in important regions for these three industries. If we are successful, this should prove a valuable tool to better plan car allocation between regions. We are also determining the feasibility of expanding this study to see if other information of value can be obtained at the same time.

To date, persons from both the Commission's Bureaus of Operations and Economics have advised us on this contract. Their continued help is needed.

(2) A Secretarial Conference is being proposed for early summer, which we hope will lead to some agreement on ways to improve car service. Such a three-day conference with shipper, carrier, academic, and Commission participation will also focus on our emphasis that improved freight car utilization is the key to improved car supply.

(3) We are considering proposing to the railroads that binding arbitration within the railroad industry be adopted for settling per diem rate issues. The time and money spent on these issues is far out of proportion to any results which have been achieved. Had the same effort been made to improve car service, substantial benefits could have accrued to all, including the public.

DOT's Planned Activities:

Planned activities include:

(1) Put railroad per diem charges on an hourly rate basis. As AAR's Per Diem Task Force Report showed, an uneconomic operational peak near midnight now results because per diem charges are settled on a daily basis. Not only will reduced car delays result from using an hourly charge, but also reduced operational expenses.

(2) Encourage increased implementation of railroad operations accounting systems which consider car costs in addition to labor, power, and fuel costs. Too few railroad operational decisions are now made which include the costs of leaving cars idle. Implementation of new cost accounting systems will, we believe, substantially improve freight car utilization while minimizing total railroad costs.

(3) Encourage implementation of computerized car control systems, (such as Southern Pacific's "TOPS" system) which will, when coupled with good forecasts of loading demand, permit empties to be dispatched across entire railroad systems at a minimum total operational cost.

(4) Support and promote implementation of a uniform, industry-wide system for grading the condition of empty freight cars. One movement across a cleaning track on any railroad should provide a grade for any car. Repetitive trips across cleaning tracks on different railroads should thus be eliminated to improve car utilization.

(5) Reduce the number of railroad interchange points. Many low traffic interchanges have infrequent train service. Significant car delays result from their use. Thus, many such points are uneconomical to operate if car costs are considered. Eliminating these interchanges will improve car utilization and car supply.

(6) Evaluate higher demurrage charges and/or reduced free time as methods of improving car utilization. Use of actual spot time instead of 7:00 a.m. as the starting time for demurrage charges will be explored. Other penalty measures against shippers causing damage, dirty, or unnecessary delay to cars in short supply will also be considered.

(7) Consider the feasibility of assessing penalties (by some automatic system rather than through litigation) against railroads when cars are not moved according to schedule. This requires origin-to-destination (dock-to-dock) schedules and some method of measuring actual car movement against these schedules for each railroad.

(8) Support and encourage pricing proposals (such as "Rent-A-Train") which level peak demand for cars and/or improve car utilization.

(9) Evaluate the feasibility of a Government owned auxiliary car fleet as an alternative means of handling peak car demand. We anticipate car costs would be covered by user charges. Distribution of the fleet would be under governmental control.

(10) Investigate the economics of levelling car purchases. Current and past cyclical ordering of new cars is reported as much more costly than level purchases would be. If true, incentives to level car purchases might be instituted.

(11) Establish car service goals to be attained by both shippers and railroads. Goals should be set for such items as bad order ratios, order lead times, car miles per car day, load per car, and time loading and unloading.

DEPARTMENT OF TRANSPORTATION | NEWS

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FEDERAL RAILROAD ADMINISTRATION

WASHINGTON, D. C. 20591

REMARKS PREPARED FOR DELIVERY BY
FEDERAL RAILROAD ADMINISTRATOR, REGINALD N. WHITMAN
BEFORE MEETING OF WESTERN SECTION OF THE
ASSOCIATION OF AMERICAN RAILROADS, HILTON HOTEL,
ST. PAUL, MINNESOTA, APRIL 15, 1970, 9:30 A.M.

It has been called the age of aquarius, the age of ecology, even by some the age of dissent and confrontation. Whatever we call it, there has been a general consensus among psychologists, sociologists and counselors that, at the root of many of our society's ills, lies a fundamental lack of communication between various groups. This is true on the international, national and personal level. Refusing or unable to communicate, the rift between groups is widening at an alarming rate - between nations, races, even in the supposedly intimate sphere of one's own family.

I don't think it is too artificial to draw an analogy between the larger meaning of communication and the more precise, technical sense as you gentlemen deal with every day. You - more than anyone, perhaps - realize the dangers of a breakdown in communications. We at FRA are aware of this, too, and I am delighted to have the opportunity to appear before you and let you know what we're doing in this regard and in the area of safety in general. I assure you, there is no pun intended when I say that I hope my remarks here today will bring about better communication between the Department and the industry so that we can work together and make a contribution in this vitally important area. I might also add that it is always a pleasure to come back to St. Paul where I spent several years with the Great Northern.

As you well know, public concern for man's environment and safety has heightened during the last several years. Campaigns "to save man from himself" have ranged from warnings on cigarette packages to anxiety over the types of toys we let our children play with. No longer are we content to render lip service to safety considerations. The public demands a realignment of priorities with safety at the very top.

So, shortly after taking office in 1969, Secretary Volpe took steps to attack the railroad safety problem in a broad, sweeping manner. He invited representatives from railroad management and labor and state regulatory commissions to participate in a Task Force to identify problems of rail safety and to recommend appropriate courses of action. I had the privilege of acting as chairman of that group. The recommendations of the Task Force, which we submitted on June 30, 1969, served as the basis for a legislative proposal that the Department sent to the Hill last October. The general feeling was that, despite the odious aspects of more regulations, any solution short of broad Federal regulation would probably not adequately address itself to the situation. It was a very serious group, aware of the problems and bent on action rather than mere talk. I think the fact that we got together, had an honest exchange of ideas and arrived at a general agreement was in itself a genuine coup for "communications." We came up with the following recommendations:

--that the Secretary of Transportation have authority to promulgate regulations in all areas of railroad safety,

--that a National Advisory Safety Committee be established to advise the Secretary,

--that present State and local rail safety laws and regulations remain in force until and unless preempted by Federal action,

--that a research program into railroad safety technology be initiated by Government and industry,

--that an expanded and concerted program on grade crossing safety be undertaken.

All of these recommendations derived from a close look at the fundamental causes of most railroad accidents. We feel that the legislative proposal we sent to the Hill based on these suggestions strikes at the very heart of the matter.

On March 17, Secretary Volpe went up again to the Hill to testify before the Senate Commerce Committee in support of this bill. There is another proposal already passed by the Senate and sent to the House. We, of course, think ours has a better idea. In any case, whatever happens, we'll end up with a strong rail safety bill. It is simply a matter of time. The public and the Congress demand it. The Department is committed to it.

Grade crossing safety -- or lack of it -- is of particular concern to all of us. Accidents at grade crossings according to preliminary figures for 1969 -- while not as high as the previous year -- continued to exact more than 1,500 lives for the sixth straight year and injuries from such accidents were again around 3,700. Even where there are no deaths or injuries involved, losses to the public, railroads and shippers through property damage were staggering. It is "cold comfort" indeed to hear that such figures are small compared to the number of people killed on our Nation's highways every year. We feel that every accident rate which is on the increase calls for remedial action. But, concerned as we are, it is not easy to stem the tide. Grade crossing separation, in view of the tremendous costs involved, is clearly not a feasible, general solution. Nor, despite being less expensive, is fully automatic protection -- again as a general solution. The costs involved are still prohibitive, especially when we are talking in terms of 180,000 public crossings. And of these only 20% are eligible for Federal-aid highway funds under existing law. Yet clearly something must be done. Changing the law will not in itself be sufficient. Nor is the problem exclusively one for the railroads. Public programs must be initiated and properly funded to provide the motorist with positive, uniform and adequate information about the hazard at the crossing. Low-cost protective devices must be developed. Better use of existing funds and making additional public funds available must be explored.

But these are only partial solutions. The real answer, I think, lies in more effective research by Government and industry and interested parties into "different" approaches to the problem -- and ones that are economically acceptable. Perhaps we have gotten "locked into" categories, thinking that separation and fully automatic protection -- as we now conceive of them -- are the only avenues of approach. There might well be others, and I think we ought to look for them.

In the Task Force's examination of the root causes of railroad accidents, we discovered that general causes of train accidents are almost evenly divided among human error, defects in or failure of equipment and defects in or improper maintenance of track and roadbed. So, despite diligent efforts to keep railroad equipment abreast of the latest technological developments, the human factor we will always have with us. Very often, as you well know, these are the most difficult problems to contend with.

Our Bureau of Railroad Safety tells me, for example, that there have been a considerable number of accidents due to engineers failing to comply with aspects displayed at wayside signals. In fact, some recent accidents involving signals that we looked into showed that 85-90% were due to human factors and only 10-15% attributable to defective signals. There is an average of one major accident a month due to employees failing to heed visual aspects.

In the grade crossing situation we have the problem of motorists being misled by malfunctioning or excessive operation of the signal. Often these incidents are due to improper maintenance or to cases where the circuitry is not sufficiently sophisticated for a particular crossing.

Recently there have also been a number of serious accidents at interlocking systems on a "dead section" of track due to solid steel frogs. We are working with a manufacturer of electronic devices to come up with something that would prevent such occurrences.

Besides safety, which has our highest priority, economic considerations are also very much the object of our research; because we know that saving money will enable the railroads to provide the kind of safe, efficient service to which they all aspire.

Along these lines we are working closely with a consulting firm and the rail carriers involved in the Los Angeles area in conducting tests on a high voltage DC transmission line to determine what effect stray ground currents will have on our present signaling and communications systems.

These are only a few projects. There are many others which will require imagination, innovation, courage -- and, obviously, funding. Perhaps we could get moving on the development of a new signaling system which would indicate other than trains in the block, e.g. curvature, tangent of track and such things as vehicles blocking crossings. This raises the ugly specter in all of your minds, I'm sure, of the engineer constantly applying the emergency brakes. This, of course, would be unacceptable. At any rate, I throw this out not as a plan we've seriously considered nor a project we're engaged in. It is merely an example of the direction in which we should be heading in our search for solutions -- untapped areas that need exploring.

Permit me to turn around the famous phrase which goes something like: "those who do not study history are destined to repeat its mistakes." I say if we get locked in on history and lack insight into the future, we will inevitably repeat the mistakes of the past. Transportation planning is no exception.

As part of our R&D efforts in the Office of High Speed Ground Transportation, an in-house effort has begun to develop a vehicle surveillance system to guarantee the safety and improve the operating efficiency of high speed ground vehicles.

In the very important area of obstacle detection, last year a feasibility model of a scanning device was developed for the Department. Obviously, any future vehicle traveling from 200-300 mph will need positive indications that its track or guideway is free of obstructions two or three miles ahead, far beyond human sight limits.

The scanner works in the following manner. Positioned alongside the track, it sends a very narrow, invisible infrared beam just above both tracks to a retroreflective strip fastened on the opposite side of the track. If no object blocks it, the beam is reflected back to a receiver in the scanner indicating that the way is clear. Should the light beam detect an object one inch or more in width, however, there is either a very faint signal or none at all. Present estimates are that ten to twenty scanners will be required for each mile of track.

We are looking further into the possibility of developing and demonstrating an automatic train control system. I assure you, we are appraising the value of such a system for future use in the light of past train control policies. This, of course, is an enormous project of many dimensions. It will take much time, money and cooperative efforts. It involves development, testing and demonstration of a technologically advanced system which will contribute to the railroads' economic efficiency -- and I can't stress that enough -- as well as its safety.

These are but a few of the areas in which we at FRA are involved. There are others I would like to tell you about but time does not permit. Besides my purpose in coming here was certainly larger than enumerating all the "wonderful things that FRA has wrought." As a matter of fact, our contributions have been paltry compared to what needs to be done. And before I finish, I also want to

dispel the notion that I came here to St. Paul today to catalog all the ills of the railroad industry. Nor did I come here as the head of an agency whose prime function might be wrongfully construed as investigative in nature. Our job, as we see it, is to try and help in a positive way. That's our only reason for existing. Nor are we bent on adding a passel of Federal regulations, for we know too well that such eventually would only impede the industry rather than help it. My purpose this morning was none other than to pinpoint areas of common concern which need improvement.

I do hope that my remarks have assured you that we look forward to working together with you to help the railroad industry do its job: move people and goods as efficiently, economically and safely as possible. An essential element of communications is "listening" and we intend to do just that, listen to your ideas as well as tell you some of our own.

If we can do this together, no matter what they call this age, we will be satisfied in the knowledge that we will have made a major contribution to this country's well-being.

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STATEMENT OF REGINALD N. WHITMAN,
ADMINISTRATOR, FEDERAL RAILROAD ADMINISTRATION,
DEPARTMENT OF TRANSPORTATION, BEFORE THE
SUBCOMMITTEE ON SURFACE TRANSPORTATION
OF THE SENATE COMMERCE COMMITTEE
ON S. 3730, JUNE 4, 1970

Mr. Chairman and members of the Committee:

I appreciate this opportunity to appear before you today in support of S. 3730, the Department's bill extending for an additional year the statute establishing the High-Speed Ground Transportation Program.

S. 3730 contains two amendments to the existing law. One changes the expiration date of the statute to June 30, 1972. The other authorizes appropriations in the amount of $21.7 million for fiscal year 1971. We have prepared a breakdown of how we propose to utilize these funds which we would like to submit for the record at this time. No other amendments, of substance or procedure, are proposed.

If funds are appropriated to the full extent of this additional spending request for the fiscal 1971 budget, we shall have had a total appropriation of $98.7 million for the six years of the program compared to the $90 million initially authorized in 1965 for just the first three years.

I am sure you are very interested in why we are asking for only a one year extension of the Act instead of one for a longer period. We are in the process of relating

all Department R&D into a well coordinated effort that will be responsive to the demands for technical revolution in our transportation systems. Many of the research projects initiated early in the OHSGT R&D Program are reaching the advanced stages of development and can have great impact on the planning of similar advanced projects in other modes of transportation. Also, new research projects which we are about to initiate in High Speed Ground, must be coordinated with other programs affecting urban mass transportation, highways, and such aviation programs as the implementation of VTOL and STOL service. It is necessary, therefore, to have all of these programs in the proper sequence of planning and this one-year extension request for High Speed Ground R&D will give us the opportunity to fully integrate the next year's planning into the total Departmental picture.

Proper integration and utilization of the total Departmental R&D facilities is also another consideration in our extension request. The Department will acquire on July 1, NASA's Electronic Research Center at Cambridge, Massachusetts. We will use this new capability for R&D on advanced systems and technological development. Also, the development of the high speed ground test site in

Colorado will give us new testing and development capabilities. The research and testing programs of these two facilities must be closely coordinated and this one-year extension will enable us to accomplish this. Another factor not clearly definable at this time is the final Congressional action on the proposal to establish a public-private corporation to run intercity rail passenger service. If the plan wins Congressional approval, we will want to relate the demonstration projects of the High Speed Ground Program to the role of the newly established passenger train corporation.

Support for the High Speed Ground Transportation Act of 1965, both within the Congress and elsewhere, reflected a concern about the future of transportation in developing urbanized regions in the United States, particularly the densely populated Northeast Corridor between Washington, D. C., and Boston, Massachusetts. Sharply increasing demands for transportation in the Northeast Corridor and the decreasing capability of existing transportation facilities to meet these demands was the major theme of two key reports - one in 1962 and one in 1964 - which led to the High Speed Ground Transportation Act.

Both reports suggested that improved rail service might offer a short-term solution to the problem of increasing demand for transportation in the region. But they also recognized the clear needs for longer-range analysis to

ascertain future growth, exploration of possible new technologies and identification of the transportation systems which would be the most effective in serving this growth. On the latter point, the Department has submitted the "Northeast Corridor Transportation Project Report of April 1970." This report provides a substantial amount of information about the prospects of intercity passenger service in the Northeast Corridor.

The report indicates that the auto will continue to serve the vast majority of travelers, regardless of technological or service improvements in other modes. The report however suggests that in considering future transportation investment policies, attention should be given to various alternatives including more effective use of the existing rail capability, short-haul air technology, and more adequate supporting urban transit. High speed ground systems were found to have the potential of attracting a significant number of passengers, but the investment costs are high. If the advantages of ground systems, such as relief of highway and airport congestion and greater safety are to be realized, then more R&D to lower the cost is a solid investment for the future.

The improvement in predictive and analytical capabilities achieved by the Northeast Corridor Transportation Project methods may, with additional refinement, improve

our decisions with respect to large magnitude investments which in some cases could be as high as $1 to $2 billion over the next 10 to 20 years. In addition, those expenditures that are made might thus be more efficiently planned and managed. I suggest that the "Executive Summary" contained in the Northeast Corridor Report be included in the record of this hearing.

In 1968, at the time of the first request for an extension of the high speed program, the Administration introduced to this Committee an explanatory statement which helped to bring the program into focus, reviewed background development, summarized accomplishments, discussed current status of work in progress, and outlined proposed continuing activity. In effect, this statement served also as a report on the third year of activity under the program in accordance with the statute. Subsequently a "Third Report" in July of 1969 carried the story through the fourth fiscal year of the high speed program. The Fourth Report is now in preparation.

Let me briefly provide a current status report on some aspects of both the R&D and demonstration programs.

The High Speed Ground Transportation Act authorized the Secretary of Transportation to "undertake research and development in high-speed ground transportation." Major objectives of the program are:

1. To advance the technology of ground transportation including railroads as well as more advanced systems;
2. To conduct research and development to make possible the design and demonstration of advanced ground transportation equipment, systems, and services; and
3. To develop cost and performance data on potential systems for intercity transportation.

The HSGT R&D program is structured to explore technology in several speed ranges. The higher the speed the longer the technology will require for development.

High speed rail is considered satisfactory for speeds of at least 150 mph; tracked air cushion vehicles (TACV's) for speeds up to 300 mph; and tube vehicles are looked to for speeds up to 500 mph.

High speeds are desired to lower travel time, but as the Corridor report points out, door to door average speed is far below terminal to terminal average speed due to difficulty in traveling to and from terminals and delays in terminals. Therefore, the HSGT R&D program includes an alternate approach to achieving lower door to door time - systems which combine the flexibility of the private automobile with a high speed mode.

In the high speed rail R&D program the four DOT rail research cars will continue to gather information on track,

suspension and ride quality and improvement of components; the program to develop lower maintenance track will reach field test; and under a joint program with UMTA construction of a wheel rail laboratory will start for the testing of rail vehicle suspensions and running gear to assure safer and better riding equipment and realization of the full potential of steel wheel on steel rail technology.

With respect to TACV's an experimental vehicle is being designed now and construction will start early in 1971. Information gained from tests of this vehicle will advance technology from the present prototypes 150-180 mph to 300 mph. Data are needed on air cushions, secondary suspensions, aerodynamics and propulsion.

Propulsion of the experimental vehicle will be through a linear electric motor. Electric propulsion has been chosen because of low noise and pollution; a linear motor is necessary for a vehicle without wheels. Meanwhile, we already have a 2,500 horsepower linear motor in a wheeled vehicle undergoing low speed tests and design of an 8,000 horsepower motor for the TACRV has been started. Fabrication of this motor and the associated power conditioning equipment is expected to start in nine months.

During the coming year, work will begin on systems where the vehicle is suspended below the guideway. The vehicles may be wheeled or air cushion and the required

elevated guideway may be cable supported or of more conventional rigid construction. Cable supported guideways hold promise of low cost. These systems are interesting because of an ability to take sharp curves at higher speeds combining with the prospect of improved aesthetics over elevated systems with overriding vehicles.

In January 1970, Secretary Volpe announced selection of a site near Pueblo, Colorado for construction of HSGT testing facilities. The wheel rail laboratory is to be constructed there in 1972. The linear motor vehicle will be moved to Pueblo as soon as a test track for high speed testing can be constructed and will be the first test program to be conducted at the site, starting in early 1971. The TACV experimental vehicle is expected to follow in 1972, and automobile related systems, suspended vehicle systems and tube vehicle systems in subsequent years.

While it may be that the ideal ground transportation system for the future will be under the surface, we fully realize that both the technology for a tube system and a major reduction in tunneling costs are still a long way off. At this time tube vehicle systems appear to be feasible; however, final conclusions cannot be drawn until further studies and research are completed in the fields of gas dynamics, high-speed wheel-rail interaction

and tunneling. We intend, therefore, to continue research in the tube vehicle program, which potentially could offer speeds up to 500 mph with the use of evacuated tubes and a magnetic suspension system. The magnetic suspension research is one of the projects to be undertaken at the DOT transportation system center (the NASA Electronics Research Center to be transferred July 1, 1970).

Our tunneling research, which leads the field in this country, offers continuing encouragement that the cost barrier will eventually be broken. Studies to date indicate that, if the cost of tunneling can be reduced, tube vehicle systems will be cost competitive with other modal forms, and at the same time, will offer the advantage of increased safety, high speed, and all weather operation.

The automobile-related systems program is to be conducted in cooperation with the Federal Highway Administration and is geared toward the development of control systems and other hardware that can incorporate the privacy and flexibility of an automobile with the comparable safety, high-speed and pollution levels of rail systems. The control concepts for reservations, merging and headway are to be tested with small electrically powered vehicles as a first step towards prototype demonstrations.

With additional research, prospects appear excellent for development of the obstacle detection and communications

systems that are essential to the safety of high speed ground operations, whatever the mode.

As an example of the wide range of technical effort in the High Speed Ground Program and the Northeast Corridor Transportation Project, 120 technical reports have been sent to the Clearinghouse for Federal Scientific and Technical Information during the last two years. Many of these reports serve as the basis of designs of experimental and prototype equipment.

As you know, two rail demonstration programs have been funded, a rail airport access demonstration is in planning and the possibility of a TACV airport access demonstration as a joint program with UMTA is being explored for early implementation.

Despite the fact that the formal Metroliner demonstration has not begun, the level of operation conducted by the carrier itself has exposed significant service features to public reaction. These include the country's first two-way, continuous-route, commercial, on-train telephones; experimental passenger-and-luggage speedramp at Baltimore; Metroclub meals served at seat; and the first computerized reservations-and-ticketing system for rail passenger transportation service. Telephone inquiry and ticket-selling procedures are not yet completely satisfactory, but have been progressively improved since Metroliner service started.

In April, the latest month for which figures are available, the load factor on Metroliners average more than 70 percent. On time performance is 86 percent.

A word about passenger response to Metroliner service:

1. About half of Metroliner passengers switched from private auto, plane or bus used on their latest prior trip.

2. More than 85 percent of Metroliner passengers said they expect to use train service again the next time they make a trip on the route.

3. Despite a long-term decline in train travel, there was an increase in non-commuter patronage on the Washington-New York route (including trips between intermediate cities) in 1969, of 7 percent over 1968 for a total of 7,483,000 -- 605,000 on Metroliners. On April 20, 1970, the Metroliners carried their one-millionth passenger.

4. Metroliners have been especially effective in recapturing longer haul patronage as evidenced by an increase in 44 percent in the through Washington-New York traffic. Approximately a third of these passengers went by Metroliner.

At this point, I do not know when actual contract demonstration service with the Penn Central will begin, but hopefully it will be soon. We have been in continued contact with the railroad and are considering contract modifications as to frequency of service and ride quality.

In the last extension legislation, you authorized the building of suburban intermodal stations at Lanham, Maryland, and Woodbridge, New Jersey. The Lanham Capital Beltway Station has been operating now for more than two months and appears already to have justified the public investment, both as a contribution to the relief of highway and air congestion and as an example of bi-modal cooperation where buses and trains operate intercity service out of the same facility. It represents the combined efforts of Federal, state, and county governments. Approximately 80 rail passengers a day board at this new station, which is more than we estimated for the early stage of the project based on seven trains which stopped only on weekdays. Recently, the number of trains stopping was increased to 13, with weekend service as well.

To maximize utilization of the station, we are conducting demonstration feeder bus service to Rockville, Maryland via D. C. Transit and to Annapolis via Greyhound. The Greyhound Bus Company is doing equally as well in providing express bus service from Lanham to New York in less than 4 hours and serving other North-South traffic.

Ground has been broken for the Woodbridge station in New Jersey and it will be in operation before the end of the next fiscal year. It is located off the Garden State Parkway and will serve as a "Beltway" type station for the New York-Newark Metropolitan area.

The prototype TurboTrain has been in demonstration service for more than a year now between Boston and New York. The service is operated by Penn Central, utilizing two three-car trainsets built and maintained by the United Aircraft Corporation, and leased for a two-year period by DOT. With only one round-trip daily, the demonstration has not been so much a test of public response to service but a test of experimental equipment incorporating significant new design features. The train is providing important economic and technical data and operating cost information which reflect use and replacement of aircraft-type components and preventive maintenance techniques.

From April 8, 1969, through April 30, 1970, Turbos, operating one round-trip daily, with "Weekend Specials" added in August and September, carried 90,000 passengers. The average load factor is 65.1 percent, which is high for a run involving four or five intermediate stops. The average number of passengers per train is 121 (seating capacity, 144). On-time performance rate is 88 percent.

We have been unable to utilize the full high-speed capacity of the train to achieve the planned reduction in running time to three hours and fifteen minutes because of the condition of the roadbed and the existence of many highway crossings at grade.

In summary, Mr. Chairman, I can assure you that the Department's interest in high speed ground research,

development and demonstrations ranges far beyond the one-year extension in authority and appropriations now before you. Once we have answered some of the questions we have asked ourselves about the future, we will be better able to advise you on what we believe to be the appropriate role for the High Speed Ground Program in the full scope of transportation systems research.

I strongly urge your continuing support of the High Speed Ground Transportation Program which has had and will continue to have a significant role in solving the crises of urban and inter-urban transportation. Mr. Chairman, that concludes my prepared remarks. Now we will be pleased to answer any questions the Committee may have.

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