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P U B L I C H E A R I N G

before

ASSEMBLY TRANSPORTATION AND COMMUNICATIONS COMMITTEE

To consider the effect of the proposed Garden State Parkway toll increase on traffic, highway safety, and the environment in New Jersey

April 13, 1989
Room 403
State House Annex
Trenton, New Jersey

MEMBERS OF COMMITTEE PRESENT:

Assemblyman Newton E. Miller, Chairman
Assemblyman John S. Penn, Vice Chairman
Assemblyman D. Bennett Mazur

ALSO PRESENT:

Laurence A. Gurman
Office of Legislative Services
Aide, Assembly Transportation
and Communications Committee

New Jersey State Library

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Hearing Recorded and Transcribed by
Office of Legislative Services
Public Information Office
Hearing Unit
State House Annex
CN 068
Trenton, New Jersey 08625

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JOHN S. PENN
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April 3, 1989

NOTICE OF PUBLIC HEARING

The Assembly Transportation and Communications Committee will hold a public hearing on Thursday, April 13, 1989, beginning at 1:00 P.M. in Room 403 of the State House Annex, Trenton, New Jersey.

The purpose of the hearing is to consider the effect of the proposed Garden State Parkway toll increase on traffic, highway safety and the environment in New Jersey. In addition, the Committee will study alternate methods for the possible restructuring of the current toll collection system as well as receive testimony as to what measures could be undertaken to facilitate the movement of traffic along the Garden State Parkway. Particular attention will be focused upon gathering information regarding the technology currently available to improve traffic flow at toll barriers and to investigate how this technology functions.

Anyone wishing to testify should contact Laurence Gurman, Committee Aide, at (609) 984-7381.

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ASSEMBLYMAN NEWTON E. MILLER (Chairman): Good afternoon, everyone. My apologies for starting some 20 minutes late, but I had to sign some autographs outside. You know, this routine. No, I had a meeting with the press to square away a few of the points that we are here for today.

I call this hearing to order. Our purpose is to discuss the effect of the proposed State Parkway toll increase on traffic, highway safety, and the environment in this State. We will also examine the feasibility of alternate methods for structuring the current toll collection system, as well as what measures can be undertaken to facilitate the movement of traffic along the Parkway.

It is well-known that the Highway Authority will implement this 10-cent increase Sunday, at one o'clock. The Authority states, and has attempted to document, that the increase in tolls is needed to cover roadway improvements. It also states that without the increase, the Authority will be in the red by 1990.

The scheduling of today's hearing is timely not only because of the proximity to the date of the toll increase, but also in light of the article which appeared in today's Star-Ledger, which provided evidence that the Parkway's toll machines may not be able to handle this change in tolls, which could certainly create chaos. On February 20, 1989, the Transportation Committee held an initial hearing on the then proposed toll hike. At that time, evidence was presented to show that tolls, in general, have a negative effect on traffic safety and the environment.

Today, the Committee is pleased to hear from Mr. Trefor Williams, of the Department of Civil and Environmental Engineering of Rutgers University. Mr. Williams has conducted a traffic analysis of the Garden State Parkway toll barriers on behalf of the General Assembly. In summary, the study indicated that the use of toll barriers as a method of revenue

raising results in increased incidents of accidents, greater discharges of automobile emissions, and increased traffic congestion.

Now, one of the main goals of this hearing is to tap into the knowledge of the private sector concerning the types of new technology which may be used to ease some of the problems associated with toll collection. As Assemblyman Speaker Chuck Hardwick stated at our February 20 Committee meeting, we are entering the twenty-first century, but we are still collecting tolls by eighteenth century methods. There is a definite need for modernization of the toll system. In developing the witness list of today's hearings, I was amazed at the level of available technology in this area. Automatic vehicle identification -- AVI -- is the new term most commonly used to refer to a system which uses a fixed receiver and a tag attached to each vehicle for which identification is sought. Several of our witnesses will explain AVI and the successes that are already taking place on various highways throughout the United States and the world.

Before we begin, I have a bit of housekeeping. First, I would like to submit written statements from Assembly Speaker Chuck Hardwick and Assemblyman Frank LoBiondo. Speaker Hardwick had planned to be here today but, unfortunately, we scheduled our hearing on the same day that President Bush is visiting Union County. I guess Bush is more important than Assemblyman Miller.

In addition, the 3M Company is unable to send a representative, but would like to submit written testimony. Each Committee member has been given a copy.

Does any other member wish to say a few words before we begin? Ben, would you care to say a few words?

ASSEMBLYMAN MAZUR: Yes. I suggested this particular modality of collecting tolls at our last meeting in Atlantic City -- the electronic automatic vehicle identification --

which is used by the railroads of this country to identify passing freight cars and brake classification yards. Although they are all of uniform construction and uniform height, there must be some application of this method to automobiles passing through toll booths, or some sort of a counter. It would seem to me to be quite feasible simply to have set aside one or two barrier slots for the electronic recording of regular commuters. That would rapidly facilitate the flow of traffic, and should also cut down a little bit on labor costs at those particular authorities. It would prevent the long lines of delay, etc., etc.

This is certainly something that should be explored, in my opinion. It would bring us very much -- as Mr. Miller said -- into the twenty-first century; really into the twentieth century, we are now in the nineteenth. It seems like our pikes still fit the old category of turnpike, when it was a barrier across the road and you gave the man a nickel or a dime, or whatever it was, and he came out and opened the barrier and let you go through. That is where the word "turnpike" came from. And here we are, still in the same modality of actually the eighteenth century -- slightly sophisticated.

I think we have to go forward. It certainly deserves more study by the authorities, and some experimentation.

ASSEMBLYMAN MILLER: Very good, Assemblyman Mazur. Assemblyman Penn -- Jack?

ASSEMBLYMAN PENN: Thank you, Mr. Chairman. Actually, I would like to-- I came here as a learning experience today, so I will reserve any remarks or questions I have until after we get into the testimony. But, thank you.

ASSEMBLYMAN MILLER: I think we are all here for a learning experience. We have been getting all of our education out of the newspapers, so let's see what it is all about on a firsthand basis.

Suppose we start out with the Chairman of the New Jersey Highway Authority, Mr. William Tremayne. Bill, would you mind just giving us an overview of exactly what is going on? I have to apologize to people such as yourself for having to come before an Assembly Committee, and I know you have been before the Senate Committee. I tried for a long time to get the Senate Chairman to try to run combination meetings, so we could expedite the situation and not impose upon people to come out the second time. But it just doesn't seem to be working out too well. That is why we are here today.

WILLIAM H. TREMAYNE: I appreciate that very much. It is actually a pleasure for me to be here. I am still on the learning curve myself. It was exactly six months ago today that I spent my first day as Chairman of the New Jersey Highway Authority. That opportunity was a hearing, and I am delighted now to start my second six months as Chairman before another Committee. I would be pleased to address any questions you have.

I will say that I have learned a lot in those six months. I didn't have a great deal of experience; in fact, I had no experience in terms of highway administration. Before, my background was probably better suited for the Arts Center, than it was for the highway aspects.

But, one thing I have learned since then, is that some of the dire stories I had read, and some of the problems that I had heard about, were not at all as severe. I have been very pleased by the quality of the staff of the Highway Authority; the work they have done, the gentler, kinder toll collectors we have on the system. I think it is a well-functioning organization. It is one now that is facing up to the consequences of a toll rate that was set back in 1954. It has not been raised in 35 years, even though the costs, both of operation and construction, have skyrocketed.

At first, increased traffic was able to cover those costs for a period of time, but now the ravages of inflation and interest rates have caught up with us, and an increase has proven necessary.

With that as background, I will be happy to address any of your questions.

ASSEMBLYMAN MILLER: Are you saying, by what I read right here, that by 1990 you will be in the red?

MR. TREMAYNE: By 1990 -- this year, 1988 (sic), there would have been sufficient funds to render operation if we had done no construction work, had done no major repairs. By 1990, we would not have even been able to operate the toll road.

ASSEMBLYMAN MILLER: And the other point I read in the papers, is that it is the Parkway's intention to put extra toll booths in, in the southern part of the Parkway. Is that still part of the plan?

MR. TREMAYNE: There will be one new barrier toll erected. It will be in Atlantic County. In an earlier study, there was an indication of need for one in Atlantic County and one in Cape May. There will not be one in Cape May, at least for the next 10 years. We will be proceeding to put a new one in, in Atlantic County.

ASSEMBLYMAN MILLER: Do you have any idea at all as to how many toll booths you have just on the main line of the Parkway; not the exits, but just the main run from north to south? Do you have any idea what that is?

MR. TREMAYNE: I think it is roughly 100. Well, there are 11 toll plazas. I assume your question was, how many toll booths?

ASSEMBLYMAN MILLER: Yes, how many individual booths do you have?

MR. TREMAYNE: A hundred? (witness consults with associate in the audience)

UNIDENTIFIED SPEAKER FROM AUDIENCE: Three hundred.

ASSEMBLYMAN MILLER: Three hundred?

MR. TREMAYNE: That sounds high. I will get you that number.

ASSEMBLYMAN MILLER: Well, the reason I ask is, I had an idea. I don't know how practical it is. But part of the problem seems to be air pollution, rear-end accidents, and delays. If we were to eliminate every other toll booth going down, and the opposite toll booth coming up, and instead of charging the present 25 cents per toll booth, we charged 50 cents, and then adjusted your exit tolls to compensate for the fact that you pay 50 cents at this exit and so many miles down the road exits are all for free, further on down it is 15 or 20 cents, and 25, until you work up to the 50-cent mark again--

The reason I asked you the number of toll booths is because, if it is 200, you save on 100 toll booths if you do that, and you save on that number of employees -- salaries, benefits, and whatever goes with it -- and maintenance of machines. It would seem to me that that might be one way of cutting back on the expenses of the Parkway and, after all, we recognize that salaries are one of the biggest expenses. I don't care if it is a board of education, a local town, or whatever, salaries take a big chunk out of the budget. If something like that could be done -- and I think it would have to be studied out -- undoubtedly it would be a saving. I see no shortcoming. You would have the same number of cars going through the toll booths. It would just be that they would be throwing 50 cents, instead of 25.

Have you given any thought to that at all?

MR. TREMAYNE: Yes, that matter has been studied a number of times in the past. That procedure lends itself very well to a system such as you have between New Jersey and New York, where there are a limited number of crossings, and you can reliably figure that those who go over in one direction, will come back.

The problem on the Parkway is that it is not a closed system. Unlike the Turnpike, where you have to get on or get off at a designated exit, and there are no ways on or off in-between, the Parkway was built to be a local feeder road, as well as a toll road. The locations of the tolls were designed to capture tolls from people who would be riding any distance on the road, and in contemplation of where they would be relative to exits. The problem we would have with an every-other would be twofold: One, if in theory you eliminated half of the toll booths, as you describe, you would have to charge more than 50 cents, because we would still have the problem of the maintenance. The toll collection would be a savings, but it would not be that significant. So you would still need an increase, if you could capture all of the traffic.

The problem we have is that there are so many local roads feeding on and off, that it would make it a lot easier for drivers to avoid paying the toll in either direction. There may be a better possibility in one or two selected locations -- Raritan would be an example -- where it is rather difficult to avoid that toll plaza. To get off it, the only real alternative is Route 9, which probably would not be viable during the rush hour. It would be conceivable to think of it there, and we are going to be looking into that down the road.

But in general, I don't believe it would be possible, simply because there are so many free entrances and exits onto the Parkway -- and maintain the revenue structure.

ASSEMBLYMAN MILLER: I recognize the free entrances and exits, but I also recognize that maybe at some of those so-called free entrances and exits now, that that will have to be considered. As far as putting two toll booths in those particular spots, maybe purchasing the property to make that possible-- See, I haven't done a study of this. This is only an idea to offset what you are talking about. I understand what you're saying, that right now between toll booths, you can

get on and off and just use the road as a means of getting from one point to the other, without paying a penny.

MR. TREMAYNE: It might also require more entrances and exit ramps, with tolls. Those normally require a higher ratio of toll booths that require a person, than they do on the main line, where a lot of them can be automatic toll booths.

ASSEMBLYMAN MILLER: But no study has really been made of this, as far as to prove in the fact that it is not practical; that the savings are not there. No study--

MR. TREMAYNE: Studies have been made in years past. There has not been a study in the six months that I have been on the Authority.

ASSEMBLYMAN MILLER: All right. Ben, or Jack, do you have any--

ASSEMBLYMAN MAZUR: Yes.

ASSEMBLYMAN PENN: Go ahead, Ben.

ASSEMBLYMAN MAZUR: Have any studies at all been made of any alternative methods? I mean, have consultants been hired to try to find better ways of taking tolls? Or, have in-house studies been made of better ways to do all of this, to try to bring down the costs of maintaining all those booths and expediting the flow of traffic?

MR. TREMAYNE: There have been a number of studies, or at least analyses. Some of them may not be studies. For example, one could talk about converting it to a closed system. However, that would require closing so many present entrances and exits, that I don't think any of us would want to contemplate the results. There would be another, which is on your agenda for later discussion -- that is the AVI system -- which would be a way to maintain the tolling system, but be able to speed traffic through. That is an evolving technology. It is one where we expect to be in the forefront of its development and participating actively, both nationally and in the New York area -- in developing it. We have in our

construction plans-- Part of the \$256 million construction plan will be to put an AVI system partially into the Raritan Plaza, and also a new bus ramp that will be built at Exit 123. We feel this does have great promise for the future. It is still a few years off in widespread application.

Another alternative, of course, is to do away with tolls altogether. That is a financial decision, rather than a traffic decision. It is also a legislative decision, not one that we on the Highway Authority can make.

ASSEMBLYMAN MILLER: Jack?

ASSEMBLYMAN PENN: No.

ASSEMBLYMAN MILLER: Some time back, when the Authority first became -- was founded, I'll put it that way -- it was said that we would charge 25 cents until it was all paid off, and then we would ride for free. But in setting up the toll booths, we set them pretty close together in the northern part of the State. As I understand it, the reason for that was that the purchasing of the property was more expensive in that part of the State than it was in the southern part, and this was a way of offsetting that -- putting more toll booths up at the upper end than at the lower end.

Well, now all of the work is being done down at the lower end, and very little being done up above, because we have, I guess, sort of reached our maximum of expansion capability, but there are still capabilities down below.

Is there any thought on the part of the Authority, if they maintain tolls, to change the toll fee, if you will -- 25 cents up north, 35 cents down south? Is there anything to try to balance out the north with the south, as far as the contributions going into these toll booths to maintain the--

MR. TREMAYNE: There is no current plan to make a differentiation in the tolls. When we had our public hearing, we had both citizens and legislators and other government officials testifying quite vigorously on this question. When

we were down south, they told us they were paying too much relative to the north, because it cost less to build their section of the Parkway. When we went to the north, they told us they were paying too much because it cost more per mile up there. When we went to the central part of the State, they said, "They're both right."

It's a lot like landing fees. You may remember the discussion over the Port Authority, which had different landing fees for Newark and for LaGuardia and for Kennedy. You are really in matters of cost accounting. What is the appropriate charge? Fairness is in the eye of the beholder. It depends on what part of the Parkway you're on.

ASSEMBLYMAN MILLER: Has the Authority made any study in this particular field? Have you come up with any definite conclusions that it should remain the same, equal throughout the State, for whatever reason, or that there should be change, for whatever reason?

MR. TREMAYNE: I have looked at the data available, Chairman, and I believe that reasonably fair justice is being provided. We will never get an exact system, because you won't be able to agree on a definition of what is exactly fair.

ASSEMBLYMAN MILLER: As far as these studies are concerned, are they made within the structure of the organization? Or, who made the studies?

MR. TREMAYNE: They have been made both internally and through the use of consultants. I am not personally aware of any outside studies, other than inquiries from previous legislative panels.

ASSEMBLYMAN MILLER: Has the Authority ever had an outside group come in as management consultants to review the overall operation of the Authority?

MR. TREMAYNE: Yes. As a matter of fact, Booz, Allen was brought in last year, I think somewhat at the suggestion both of legislators and the Governor's Office, to make an

overall study of the Highway Authority. Their findings were that the New Jersey Parkway carries more traffic than any other toll road in the country. It carries it at lower cost -- six cents per mile -- than any other toll road in the country. And even after the increase which will take effect on Sunday, we will still be one of the lowest cost toll roads in the country.

ASSEMBLYMAN MILLER: Now, is this an accounting concern -- company?

MR. TREMAYNE: Booz, Allen is a noted national management consulting firm.

ASSEMBLYMAN MILLER: A management consulting firm?

MR. TREMAYNE: Yes.

ASSEMBLYMAN MILLER: And they also went into the accounting--

MR. TREMAYNE: And they were reviewing the data that was prepared by Touche Ross, which is our accounting firm. It was data that had been audited that they were reviewing as part of their study.

ASSEMBLYMAN MILLER: I see. All right.

MR. TREMAYNE: In fact, one of the good aspects of coming on when I did, was that so many studies had been done, and so much data had been provided, I don't think a neophyte Chairman has ever had more help than I have had in data available at the time of starting the job.

ASSEMBLYMAN MILLER: Jack?

ASSEMBLYMAN PENN: Yes, Mr. Chairman. I think you testified before that there are approximately 100 toll booths. Is that correct?

MR. TREMAYNE: I have the correct figure: Including the ramps, as well as the main line plazas, there are 294 toll booths.

ASSEMBLYMAN PENN: Okay, 294. Now, I believe earlier it was said that there had been no toll increase in the last 35 years.

MR. TREMAYNE: On the main line, barrier tolls, it has always been 25 cents. In 1988 -- May, I believe it was -- some of the ramp tolls that had been less than 25 cents, were increased to 25 cents. Those that were increased last year will not be further increased as of Sunday. They will remain at 25 cents.

ASSEMBLYMAN PENN: Another question: In this past 35 years -- and this is probably an unfair question, Mr. Chairman -- can you tell me how many toll booths have been added? What was our original number of toll booths, and how many have been added?

MR. TREMAYNE: I am relatively confident saying there are probably at least twice as many as there were then. One of the reasons being -- and this addresses one of the questions the Chairman raised -- the assumption that the bonds would be paid off. That was on the assumption that the highway would remain 173 miles long, and revenues predicated on that.

What we have is a highway which is now 60% more than it was when it was built. As it has gone to middle age -- just like the rest of us -- it hasn't gotten any taller; it has gotten wider. A lot of lane miles have been added, and the cost of construction was not contemplated in those early statements that it could be paid off. That was on an assumption that you would be dealing with the same highway over a long period of time. Since then, we have had very high inflation rates, very high interest rates, and escalating construction costs.

ASSEMBLYMAN PENN: So, actually, every time you add a toll booth, you actually increase revenues. So, if we have doubled the number of toll booths, we ~~actually~~ have doubled the tolls in that same period of time.

MR. TREMAYNE: We have certainly raised the revenues multifold, and I have the data, if you are interested, on what we collected the first year or two.

ASSEMBLYMAN PENN: I'm just saying that is actually the way we raise the tolls, by adding more toll booths, and not by increasing the 25 cents. Actually, what we have done is, we have increased tolls.

MR. TREMAYNE: Well, we certainly have increased the revenues, and traffic has done that, and I think I stated that. But if you went from the New York border to Cape May, you would still pay at the same 11 booths that were originally erected, at 25 cents per booth.

ASSEMBLYMAN PENN: Okay, fine. Thank you.

ASSEMBLYMAN MILLER: Ben?

ASSEMBLYMAN MAZUR: Yes. I understand that the State Treasurer made specific recommendations to the Highway Authority which would save \$20 million annually. What were these recommendations? Were they implemented by you? If they have been, what have been the results? Can you fill us in on that?

MR. TREMAYNE: I am not precisely sure what the \$20 million figure is, but I have met with the Treasurer on several occasions, and I believe we have satisfactorily addressed all of the questions that she and her staff had raised with respect to the operations. It was predicated on that, because the Treasurer, along with the Governor, authorized us to go ahead with the adoption of the toll increase.

ASSEMBLYMAN MAZUR: Well, did the Treasurer make recommendations that you change your operations in some way, or make alterations?

MR. TREMAYNE: With respect to the method of collection, no.

ASSEMBLYMAN MAZUR: Or, in the financing?

MR. TREMAYNE: No, no, there was no such recommendation.

ASSEMBLYMAN MAZUR: Internal changes, administrative changes?

MR. TREMAYNE: The recommendations were with respect to internal handling of funds and management, forecasting -- budget forecasting, and such -- but they did not address, nor did the study that was also done by the Department of Transportation address, any recommended changes for the method of toll collection.

ASSEMBLYMAN MAZUR: Those recommended changes have all been made?

MR. TREMAYNE: The major ones have been made, and there is agreement. I can't say precisely as to whether every single one has been adopted.

ASSEMBLYMAN MAZUR: Well, were there savings involved with these changes?

MR. TREMAYNE: There were some operational changes, but they were not massive in amount -- savings, I mean. They were not huge amounts.

ASSEMBLYMAN MILLER: Any more, Ben? (no response) All right?

ASSEMBLYMAN MAZUR: Yes.

ASSEMBLYMAN MILLER: Jack?

ASSEMBLYMAN PENN: Just one question: There has been quite a push on now to buy the tokens, which would save you a little bit of money. Can you tell me how many dollars will be generated by the advance sales?

MR. TREMAYNE: Well, we have sold about 22 million tokens, so that's about \$5.4 million in revenues. Now, probably about 20% to 25% have been redeemed by people putting the tokens back.

ASSEMBLYMAN PENN: And they continue to buy them?

MR. TREMAYNE: They continue to buy them. We were selling them at less than a half a million a week in the first 11 months of last year, before we took our first action to effectively increase the tolls. They were running about a million a week in January and February, and two weeks ago, they were up to four million. Last week they were six million, and

this week, they were going out at the rate of nine million. We were actually selling more tokens per day than we had tolls paid coming back in, which is a great tribute to people's willingness to respond. They were maybe two or three days ahead of us, and we did have to limit the number of tokens to one roll per car, as of this morning. This is to assure that tokens will be available for purchase by our commuters on Monday morning and through next week.

ASSEMBLYMAN PENN: Prior to that, you were selling whatever amount anybody wanted?

MR. TREMAYNE: In whatever quantity they wished. We also have 10 million newly minted tokens, which are arriving between yesterday and next Friday. We have another 10 million which will be coming in within the following two weeks. So, we have an ample supply coming in. We just slightly got out of kilter on the schedule.

ASSEMBLYMAN PENN: Do these work in all of the toll booths, or only in the token lanes?

MR. TREMAYNE: They will work in the token-only lanes and the exact change lanes.

ASSEMBLYMAN PENN: Okay, fine. Thank you.

MR. TREMAYNE: Incidentally, I do have the figure. The first year -- in 1954 -- the revenues were \$1.8 million, and in 1987, they were \$125 million. So, the growth has been many-fold.

ASSEMBLYMAN PENN: Good business.

ASSEMBLYMAN MILLER: I assume that the advance sale of the tokens gives you a lot of money to invest while you are waiting for the tokens to be used up, also.

MR. TREMAYNE: There will be an influence. We are investing it on a daily basis as it comes in. Now, starting on Monday, the system should reverse. No matter how many we sell on Monday, I would anticipate, at least for a period, for all those people who bought them, they are going to start using them.

ASSEMBLYMAN MILLER: But it is somewhat of a windfall, as far as your temporary investments are concerned, on these tokens.

MR. TREMAYNE: Sure, sure. If we have a net of \$4 million invested for an average of two months or so, that will be very helpful.

ASSEMBLYMAN MILLER: Yes. Not enough though to--

MR. TREMAYNE: No. (laughter)

ASSEMBLYMAN MILLER: Okay. There is some talk about doing away with the Authority completely, and allowing the State to take it over. What would it cost the State of New Jersey to run the Garden State Parkway out of general revenues or taxes or whatever? What would the bottom line be?

MR. TREMAYNE: Well, it would cost less -- probably half, more or less -- than it does for us to maintain the highway, because I think it is fair to say that the Parkway is maintained at better quality than is the average highway in the State. That is not a criticism; it is simply that because we charge a toll, we believe the customers are entitled to the best reasonable quality highway they can get to keep them speedily on their way. We are concerned about--

ASSEMBLYMAN MILLER: It cost you "X" amount today -- each year.

MR. TREMAYNE: We would also save the cost of the toll -- the collection operation.

ASSEMBLYMAN MILLER: And the maintenance of the machines, the benefits that go with--

MR. TREMAYNE: Certainly.

ASSEMBLYMAN MILLER: I am just wondering what--

MR. TREMAYNE: I should say, however, Chairman, that we would also lose the revenues we get from out-of-state customers, which are--

ASSEMBLYMAN MILLER: Oh, I know all the arguments, and I can't say I disagree with you on some of these arguments.

But what I am trying to get at is, what would it cost the State of New Jersey to run your operation, considering your total cost of operation a day, minus the employees that we wouldn't have on if it were toll free, minus the fringe benefits that we wouldn't have to pay because the employees were not there -- I'm talking about the collectors now -- minus the maintenance of the toll booths, and keeping the same other personnel, that is the people keeping it cleaned up? Not that it would happen that way, but just with those big items out, what would it cost the State of New Jersey?

MR. TREMAYNE: I don't have that figure readily at hand, but I would be happy to submit to the Committee an estimate of what that figure might be.

ASSEMBLYMAN MILLER: See, my reason for asking is basically that, if you people don't do it on a user-fee basis, and the State has to do it on a non-user-fee type basis, the money has to come from someplace.

MR. TREMAYNE: Well, not only that, Chairman, but you also would have the payoff of the \$400 million that is owed to bondholders, and even by the time that would be accomplished, there would probably be another \$200 million or so for the construction that has to be done over the next five-year period. So, we would be talking about \$600 million or so in bond debt service, plus the impact it might have on the credit rating of the State.

ASSEMBLYMAN MILLER: The bond rating of the State, that's right.

MR. TREMAYNE: The Parkway has the best credit rating of any toll road in the country, which I think is a tribute to the management of it in the past.

ASSEMBLYMAN MILLER: I might say at this point that with the Parkway, I think it is emblematic of what we say, that this is the Garden State. I think on the Parkway, people coming from Delaware up to New York get a pretty good picture

of the State as far as parks are concerned and the State is concerned.

The Turnpike, of necessity, is more in the commercial/industrial end of the world, if you will. I dread -- honestly dread -- to see the State of New Jersey, Department of Transportation, take over the Garden State Parkway. We will have mufflers and hubcabs and sand on the road that was there from five snowstorms five years back, and we are going to have the same image, or picture, that we have of other highways in the State.

I also know that we passed a two-and-a-half-cent gasoline tax just recently -- the Assembly did. We had the constitutional dedication bill passed. It got to the Senate side; it never moved; and that two-and-a-half cents is in general revenue. That can be diverted and put anywhere they want. Now we have a budget crunch. Anything is apt to happen to it. I just kind of feel, personally, looking at this thing, that-- I think the Parkway, as it stands today-- I think they are doing a good job, but my hang-up is, is it being done efficiently enough? Is there some way of doing this from a management point of view, or from an operational point of view, in a more economical fashion?

For instance, we have the Garden State Arts Center. Now, I have often wondered why, if we are involved in highways, do we get involved in the theatrical part of the world? That, to me-- Personally, I think that belongs in somebody else's hands, whether it be somebody in the State -- a State agency of some kind -- rather than the Parkway. I have the same problem with the Port Authority. Why are they putting office buildings up, when they should be doing-- As far as I am concerned, they should be trying to keep the tolls down on the bridges, and what have you, rather than going into the real estate business. They are in the wrong world, as far as I am concerned. I recognize what their charter calls for, but I think they have extended it too far.

What about the Arts Center? Is that a losing proposition, as I read in the paper? Are we losing money on it? What is the story on that?

MR. TREMAYNE: In the last five years since George Zilocchi, our Executive Director, has been in charge of the operation, the profit has been \$6.5 million. It has been quite successful, far more so than it had been in any period prior to that. There are, however, I should point out, some accounting items that did not fully bill the Arts Center for costs that were incurred by the Highway Authority. I have instituted changes to reflect all of those charges. Had that been done, the figure, rather than being \$6.5 million, would have been \$4 million to \$4.5 million over that period.

So, from a cash flow basis, it has been operationally successful, profitable, and not been a drain on the Highway. The Reception Center that was built, however, was not funded, and that remains to be seen. We have entered into, I think, a very desirable contract with a management firm, and I think there are good prospects that that will be paid off. As I indicated earlier, I am not sure that all of the marketing studies that I would have liked to have seen, had been done prior to erecting that Center.

ASSEMBLYMAN MILLER: The \$6.5 million you are talking about-- Did that include the capital costs, the bonding, and that sort--

MR. TREMAYNE: It does not. Like any governmental entity, it is on a cash flow basis, just as the State budget is. There is no debt service reflection in operations.

ASSEMBLYMAN MILLER: Oh, I see. In other words, the original construction came out of the so-called profits -- operating profits -- from the tolls?

MR. TREMAYNE: That is correct, yes. I am not addressing whether or not that decision should have been made, or was made. What I can assure you is that it is currently a

profit-making operation with a favorable cash flow, bringing, I think, outstanding talent to the State, and in a lot better way than maybe a commercial operation would, because we do have symphony programs. We have free programing for senior citizens, for children, for the disabled, for the ethnic festivals. I think a great job is done -- a service -- which might not be done if it were being managed externally.

ASSEMBLYMAN MILLER: I know Senator Ambrosio is running quite a review of that--

MR. TREMAYNE: We don't agree on that question.

ASSEMBLYMAN MILLER: --particular situation, so I don't want to go too deeply into it because we will undoubtedly get his report. So, rather than repeating ourselves--

Does anyone else have any questions?

ASSEMBLYMAN MAZUR: Yes.

ASSEMBLYMAN MILLER: Yes, Ben?

ASSEMBLYMAN MAZUR: I have the report to the Governor -- Budget and Financial Review of the New Jersey Highway Authority -- prepared by the New Jersey Department of the Treasury, February 5, 1988. First of all, the Arts Center. It says, for example: "While the Authority has represented that the Arts Center is self-sustaining, it is not clear that all indirect costs are charged against the Arts Center budget. Also, no capital improvement costs or insurance are included in the Arts Center's Profit and Loss Statement." In other words, those costs have been picked up by the Highway Authority.

MR. TREMAYNE: Those direct out-of-pocket costs are the ones that I mentioned -- the change that I had instituted. Those were--

ASSEMBLYMAN MAZUR: All right. So you have changed that now?

MR. TREMAYNE: Excuse me?

ASSEMBLYMAN MAZUR: You have changed that now?

MR. TREMAYNE: Yes, I have, particularly with respect to the maintenance of the area outside of the theater, and with respect to printing costs. Insurance is not, because we do not pay an incremental insurance premium relative to the Center. It is an overall umbrella policy, and we do not incur higher out-of-pocket costs that are identifiable to the Arts Center.

ASSEMBLYMAN MAZUR: What are your insurance costs, overall?

MR. TREMAYNE: I may have the statement. (pause here while witness looks for statement) It is not an unidentifiable charge on the financial statement, but I will get you that figure.

ASSEMBLYMAN MAZUR: All right. Well, the assertion-- At least by reading this statement, the assertion I get is that the Profit and Loss Statement of the Arts Center is made to look better by the assumption of some of these costs, or has been in the past -- the assumption of those costs by the Highway.

MR. TREMAYNE: I agree with that. That is why I reduced the reported figure of \$6.5 million to \$4 million to \$4.5 million, to reflect those major costs to which the Treasury report was referring.

ASSEMBLYMAN MAZUR: It also says in the summary: "Total budget reductions for 1988 are recommended to be \$19.7 million, or about 20% of the Authority's original proposal. The Authority can generate recurring savings of about \$8.4 million per year over the next several years by cuts in its salary account, employer's payroll expense, maintenance reserve budget, health insurance expenses, and payments to the State Police." Also: "The 1988 operating budget can be cut by an additional \$1.5 million, through deferring expenses for new automatic toll machines, additional toll collectors, and other items into 1989. Additional savings of about \$9.8 million are available in 1988, plus \$2.4 million per year from 1989 through

1982, because some reserve balances exceed levels necessary to ensure liquidity and equipment replacement. These spending reductions could eliminate the need for a barrier increase to fund operations for at least five years." This was the Treasury Department's analysis.

MR. TREMAYNE: Yes, and meetings were held -- it was prior to my joining the Authority -- to effect many of those savings. Not all of those savings could be effected, but many of them -- chances in the reserves, an austerity program on hiring-- A significant reduction-- Let me see if I can find that.

Do you remember what the budget was reduced-- (witness turns away from microphone and consults with associate sitting in the audience)

UNIDENTIFIED SPEAKER FROM AUDIENCE: No.

MR. TREMAYNE: I'll get you that figure. The budget that had been introduced for 1988, and adopted, was readopted after reflection of the report both from the Department of Transportation and the Treasury. As I say, it was before I got there. I don't remember the amount of the reduction, but it was reduced significantly, and I will get you that figure.

ASSEMBLYMAN MILLER: Can't we, when you do that-- The comments made in this report-- Can we have that item by item to show us, after reading it, did we comply with it, and if we did, by how much?

MR. TREMAYNE: Fine.

ASSEMBLYMAN MILLER: Just to break it down on the bottom line, all right?

MR. TREMAYNE: Sure.

ASSEMBLYMAN MILLER: We can make that a part of this particular report here, too. I appreciate it.

ASSEMBLYMAN MAZUR: Mr. Chairman?

ASSEMBLYMAN MILLER: Yes, Ben?

ASSEMBLYMAN MAZUR: The summaries from the-- The budget was reduced by 7%, but the new budget for '89 has a 6% increase.

ASSEMBLYMAN MILLER: I think, at the same time, the '89 budget-- The recommendations made here-- Were they carried through to the '89 budget also?

MR. TREMAYNE: The '89 budget obviously took place after the '88 revised budget. The increase in the '89 budget was the lowest rate of increase in the '80s.

ASSEMBLYMAN MILLER: Considering the inflation and whatnot, that was quite an accomplishment, too.

ASSEMBLYMAN MAZUR: Yeah, I understand that.

ASSEMBLYMAN MILLER: Anything else, Ben?

ASSEMBLYMAN MAZUR: No, just that it washed out the savings from the year before.

ASSEMBLYMAN MILLER: Okay. Jack, do you have any questions?

ASSEMBLYMAN PENN: No.

ASSEMBLYMAN MILLER: Let me get into the area, if I may, on these new machines.

MR. TREMAYNE: By the way, in response to both the Treasury report and the DOT, we put together 10 reports which address many of those concerns. I will give you a copy of those reports. Many of the answers are contained in this report.

ASSEMBLYMAN MILLER: Those reports?

MR. TREMAYNE: Yes.

ASSEMBLYMAN MILLER: Okay.

MR. TREMAYNE: They were prepared in response to the questions raised both by the Treasurer and the Commissioner of Transportation.

ASSEMBLYMAN MILLER: I think there is a series of five pamphlets -- five or six pamphlets in this report, as I--

MR. TREMAYNE: There were five released in October, and five in November.

ASSEMBLYMAN MILLER: I didn't see the second five, I guess.

MR. TREMAYNE: Well, I have them here, and I will be happy to provide them to you.

ASSEMBLYMAN MILLER: Okay. This is October 14 of '88. This is one of the five that I have.

MR. TREMAYNE: That is correct.

ASSEMBLYMAN MILLER: Okay, fine.

MR. TREMAYNE: These were prepared by the Commissioners who were there prior to my joining it.

ASSEMBLYMAN MILLER: Okay. The Newark Star-Ledger had quite an article today on the toll machines, and that Garden State is experiencing, during the testing, a significant failure on this. Do you anticipate any big problems with these machines, and if you do, what is the game plan as far as circumventing the problem when this new toll goes in?

MR. TREMAYNE: Some of those figures, as I believe the article itself notes, took place before adjustments had been made over the last few weeks. The manufacturer of the machine has had service people on each of the plazas. We have visited them all more than once, and have gone over each machine. They have been recalibrated. They will be recalibrated again on Saturday when the new fares are set. There will be technicians from the manufacturer at each barrier toll location on Monday. There will be both other Parkway staff and temporary collectors there to ease the traffic through.

We have taken many steps, and have had many meetings on the implementation of this program, to be sure that when the increase takes place on Sunday, and then for the commuters on Monday, we will have operations in place to make it work right. Part of that process was selling tokens and, as I have indicated, we have sold a lot of them.

ASSEMBLYMAN MILLER: Well, just a comment on that: I find myself approaching a toll booth and that white sign up above-- I haven't quite recognized it as being the toll-free lane. I see nobody in that lane, I head for it, and the next thing I know I am pulling over to get into some other lane. I am almost tempted to throw a quarter in and run, rather than the token part.

I think something should be done to-- I don't know, maybe the signs have to be someplace before the toll plaza, to indicate that toll-free are the white overhead, or some such thing, because I find that strangers especially coming in, don't have these tokens, and don't realize what is going on.

MR. TREMAYNE: I appreciate the difficulty. We have, both in our news releases, and in our advertising-- We do have some signs before the booths that talk about-- Not only do we have them painted white, to be a target for them, we have double flashing green lights over them.

ASSEMBLYMAN MILLER: I see that.

MR. TREMAYNE: Some of that is going to be a matter of us getting acquainted with the new system. But I think that with the advertising, with the white tunnel approach we have used-- When people start to realize that is where the token-only lanes are, they can start aiming for them.

ASSEMBLYMAN MILLER: It is a case of education, of course.

MR. TREMAYNE: It is.

ASSEMBLYMAN MILLER: I think the double green light is perhaps--

MR. TREMAYNE: A double flashing green light, plus the white tunnel.

ASSEMBLYMAN MILLER: Yes, I think that's--

MR. TREMAYNE: That's the token-only lane.

ASSEMBLYMAN MILLER: Is there anything-- Well, I don't know. Part of the problem, as you know, is the backup at

the toll booths. This is going to get worse with the token situation, people trying to move in or out. It is going to get worse with the conversion of the booths to the toll machines -- the conversion of the machines to 35 cents. We are going to have booths shut down. We are going to have traffic backing up further. I am just thinking of the traffic between northern Jersey and the Newark exits for one thing, and from southern Jersey to the Newark exits.

Is there any plan afoot, if this traffic backs up for a couple of miles because of this, to allow the traffic to flow, just to get rid of it, move it, and take your losses?

MR. TREMAYNE: We have plans to expedite the traffic through. As I say, we will have people not just at each barrier area, but for each of the toll booths. We will be able to keep them open, even in the event of a breakdown, and I don't believe there are going to be very many of those. But we have plans to keep the traffic moving.

ASSEMBLYMAN MILLER: What is your thinking on combining all three of the authorities under one jurisdiction, without worrying about protecting your turf? I mean, just as far as the overall operation.

MR. TREMAYNE: The consequences to me would be that I would get more time to spend with my family. That part doesn't bother me.

I think there would be some economies available. I believe the extent of those economies is generally exaggerated, because the ultimate savings would be in a few administrative positions. You might need only one executive director, but you would need more assistants to do it. I think a greater problem would be the separate interests of the bondholders, of those who think they might be better protected. I am not sure it is worth doing, but it is not something in which I have a visceral reaction that it is a horrible suggestion. I just think when you got to analyze it, it wouldn't be all that workable.

ASSEMBLYMAN MILLER: What about your-- Are there any -- let's just take trucks -- vehicles you have in the Authority-- Are they purchased through a State purchasing plan?

MR. TREMAYNE: Yes, they are.

ASSEMBLYMAN MILLER: They are. What about the purchase of salt, macadam, sand, stone?

MR. TREMAYNE: All of the State purchasing programs, when they are available at best negotiated price, are availed of. In those areas where there aren't any, there are multiple bids obtained to see that we get the lowest price we can for our supplies.

ASSEMBLYMAN MILLER: I don't know just which items I would be talking about, or you are referring to, but are there any of those items that we put out on bid that we could get a better price on if all three authorities were to bid this under one bid, and then from there?

MR. TREMAYNE: My understanding is that all of those items are already available through the contracts the State has negotiated for the Department of Transportation, and we are already availing ourselves of those efficiencies. So I don't believe there are any further ones available.

ASSEMBLYMAN MILLER: So the bidding, undoubtedly, is handled by way of the State?

MR. TREMAYNE: Yes.

ASSEMBLYMAN MILLER: And then from that-- You pick off that for your needs?

MR. TREMAYNE: That is correct.

ASSEMBLYMAN MILLER: I see. Jack, do you have any--

ASSEMBLYMAN PENN: No, I don't.

ASSEMBLYMAN MILLER: Ben?

ASSEMBLYMAN MAZUR: No.

ASSEMBLYMAN MILLER: I want to thank you for your time. I really appreciate it. I think, on an overall basis, the Authority is running a-- I don't know how efficient, but

they are running a good program as far as that highway is concerned. You say that there has been a management study made and auditing done of the books, as far as the accounting is concerned. They are good outfits; they are reputable companies. I would, as a layman, have to accept that. I question in my mind, if we do away with any of the authorities, and we turn them over to the State to run, exactly how well would they be run, number one? And secondly, once you make a freeway, everybody is going to use it. Today they might not use it because they have to pay the 25 or 35 cents. We will increase the traffic on the roads, creating more demands for more expansion, more whatever. I just kind of feel personally that I don't think the way to go -- my own viewpoint here -- the way to go is to wipe it out and turn it over to the State, because the money has to come from someplace. You pointed out \$400 million just in bonded indebtedness that has to be paid yet. That will reflect again into the State's rating -- bond rating.

I just see so many things that must be considered for the general welfare of the State -- the overall welfare of the State. Well, sure, we can cut back on employees. If you don't want to give service, you just cut back on it. You cut back on your payroll, and this sort of thing.

MR. TREMAYNE: Right.

ASSEMBLYMAN MILLER: I just have some hesitancy on my part to just plunge headlong-- I know the local newspapers are all for wiping out tolls. But I don't think they have considered the other side of the problem that is involved here.

Further, to do that, you need taxes. That money has to come from someplace. If you are going to put a tax on gasoline, it should be the user type approach. That means that people who never use the Parkway are paying a gasoline tax for somebody else's use. It means that people who use it for a thruway, gas up in Delaware and go through to New York, are not paying for the use of that particular road.

I see many things that should be considered before that decision is made. That is as I see it right now. Having said that, I still don't like to see the price going up. And having said that, I would like to find some way of keeping the price down. As mentioned before, you say you studied this elimination of toll booths. I think it has merit. I think if you eliminate 50% of the toll booths on the main line -- and you have 200 there now in round numbers-- If you eliminate 100 of them, you eliminate 100 booths with people in them, to whom you are paying benefits and all that goes with that, the backup, the traffic, and that-- I think that area really needs study. You know, it may cost you a few dollars to put a couple of toll booths on the entrance in place; it may cost you a few dollars for property to do that. There are some places where you can't put toll booths. The exits down around -- in the Newark area -- where you come right out on the street. It would be very difficult to do that.

MR. TREMAYNE: That's right.

ASSEMBLYMAN MILLER: But there are other spots where I think the get on and get off are free. Maybe that is where you need a 10-cent booth or a 15-cent booth to help to offset some of this loss we are talking about between these long distances between the booths. But I think it has merit. You would cut down on accidents; you would cut down on the waiting time; you would cut down on the fuel -- the exhaust fumes. I think it should be, perhaps, looked into a little bit closer.

MR. TREMAYNE: I will review that once again with our consultants.

ASSEMBLYMAN MILLER: I think you should. I think if you can do that, and you can show where you are cutting out one-third of your payroll, and one-third of your benefits, and one-third of your maintenance-- Maybe you could find enough here to keep these tolls in line at 25 cents. Nobody would say a word if you kept it at 25 cents, but you want to raise it to

35, and everybody is mad now.

You know, it is human nature to say, "Well, if I can save 25 cents or 50 cents a day going back and forth to work, why shouldn't I?" but at the same time they will throw 50 cents away like it is a penny, in many other instances. For everybody in general, there are those who really can't afford that 50 cents. But I mean, just by and large, in today's society, you pay a dollar for an ice cream cone, and think nothing about it. I think this is a definite use; it is a definite advantage to the people of the State to have this particular Authority -- or Parkway going. Now, whether or not there are economies that can be evoked to bring this back down to a quarter remains to be seen.

I would hope also that if this thing doesn't work with the 35 cents, if you are having trouble with your toll booths and you can't get the traffic through, you will do something. Put a big sign up, and say, "This one's a free one," and get them through there, because you are going to have problems, and you are going to have them on your back again, because it is a change, it's something different, and people are going to object to it. It is just going to be that much more--

MR. TREMAYNE: That is our extreme solution; it is not our plan.

ASSEMBLYMAN MAZUR: I would say that you would probably have a revolution at the toll booths, and gunshots, if some people, after waiting in line, had to pay a toll, while others went through free.

ASSEMBLYMAN MILLER: I'm saying the whole thing should be--

MR. TREMAYNE: In doing our broad range of contingency planning, that is not one we are planning for. (laughter)

ASSEMBLYMAN MILLER: Anybody else have any questions? Ben?

ASSEMBLYMAN MAZUR: Yes, Mr. Miller. We have made some references to -- have discussed to some extent State takeover of the authorities. I am sponsor of legislation that would do that to all three, but maintain the tolls. Each would be under a Deputy Commissioner of the Department of Transportation. Those tolls would be used for the maintenance of the roads and paying off the bonds, to that point when the bonds were retired, then the roads would be toll free.

I point out that there are State highways of a similar kind of carrying capacity and design in this State which are maintained by the Department of Transportation, which are not littered with beer cans, spare tires, or used tires, whatever -- Route 80, Route 78, Route 280, Route 95 -- 295, rather, and a stretch of 95. Particular attention is paid to those roads, I'm sure, and that is the reason they are maintained properly.

I think our Department of Transportation certainly could do that. I just tell you this as my opinion, just as we have heard our good Chairman Miller's opinions. So, there is a divergence of viewpoint on this.

ASSEMBLYMAN MILLER: I might point out to you, I don't know what part of Route 80 Ben is looking at, but I know the part of Route 80 I am looking at. If you want to see a pigpen and garbage sties, just take a look at some of the exits and entrances and see the paper. You know, when they cut the grass, they cut the paper with it, and there is just no concern whatsoever. It's "get in and get out and get it over with." I see these yellow barrels that are supposed to be there to protect you if you are going to hit the barrier. I see these barrels are broken; I see them where they are not fixed for months to come. I see the guardrails that trucks knock down. They lie there forever.

These things you do not see on the Parkway. This is what we pay for in that toll. I just hesitate to see the Parkway look like other highways in the State. As I said, I

don't know where Ben is coming from on Route 80, but come over to my neighborhood, Ben, and I'll show you--

ASSEMBLYMAN MAZUR: I travel it frequently. The question is whether the people are willing to pay for somebody to stand by the side of the highway and catch the garbage -- whatever incidentals do come out of the cars -- or whether it is going to be cut up into little bits of compost.

MR. TREMAYNE: Well, I don't want to come between the argument of how the other highways are maintained, but I will state that in our public hearings we got a great response from the public. They didn't want to pay the higher tolls, but they did want us to continue to maintain the highways, to keep them clean. They agreed with all of the improvements that were designed. They just wanted the toll to stay the way it had been.

ASSEMBLYMAN MAZUR: Your highway is beautifully maintained. I am not making any--

ASSEMBLYMAN MILLER: There is no such thing as a free lunch, as the saying goes.

MR. TREMAYNE: I might point out -- reiterate, if I may -- that the finding was that the Garden State Parkway is the most cost-efficient toll road in the country, in terms of its class, in relation to miles traveled. I might also say that if we applied the CPI -- the Consumer Price Index -- that quarter we charged in 1954, and will still charge for at least two more days, would be \$1.06 today.

ASSEMBLYMAN MILLER: Do you have any thoughts in mind as far as the summer crowd is concerned going down to the shore? You know, if you don't get up at five in the morning to go to the shore on the weekend, you might as well stay home, because you spend half of your day traveling down. Is there any thought-- Do you have any thoughts about how to expedite that traffic on the weekend? If you go with my thought of every other toll booth, I can tell you how you can expedite it a little bit. Do you have any plans at all on that?

MR. TREMAYNE: Of course, a lot of improvement took place in the expansion between the Raritan Bridge and the Asbury Park area. That has freed up a lot of the traffic. To the extent that we can get people to use tokens, that will speed up the flow considerably. But one of our considerations was to get this increase in early enough that people would adapt to it before the heart of the summer season. That is one of the reasons why we felt that a spring start would be better than waiting until mid-summer.

ASSEMBLYMAN MILLER: Well, as I see the tokens, it would be the same as the quarters. You still have backups with people wanting to put the quarter in. It would be the same backup. The only thing you're saying here really is that if you have a token, you would use the token rather than going to-- As of today, if I see a solid green light and there is no one there, I will go up and give the man my quarter. But I can't give him my token very well, I have to give him 35 cents, or whatever it is. With a token, on the other hand--

MR. TREMAYNE: You will be able to use the token in the exact change lane as well. Part of the expectation is, people who will buy a roll -- which is now 40, and will become 30 in July -- will have--

ASSEMBLYMAN MILLER: The dollar's savings.

MR. TREMAYNE: They will have the saving -- 50 cents actually -- on the roll, but they will have obtained a 30-toll supply, so it will be that much longer before they have to go back to the manual lane, which operates at about half the speed of the faster one. To the extent that people will use tokens, we have put in a faster, more efficient system.

ASSEMBLYMAN MILLER: I wish you well.

MR. TREMAYNE: The question is, will people buy the tokens?

ASSEMBLYMAN MILLER: And the AVI-- You are looking into that?

MR. TREMAYNE: Oh, yes. We see AVI as having great prospect for the future, and look forward to a time when we can put that into play.

ASSEMBLYMAN MILLER: Okay. We appreciate your participation.

MR. TREMAYNE: I was delighted to be here.

ASSEMBLYMAN MILLER: I'm sorry we had to bring you out on a nice day. You should be on a golf course today, but you are down here instead. And I should be out there with you.

MR. TREMAYNE: I appreciate that. I will be around for the rest of the afternoon. If you have any follow-up questions, I will be available.

ASSEMBLYMAN MILLER: Thank you. Can we, at this time-- How about-- Trefor Williams is from the Department of Civil and Environmental Engineering, Rutgers University. Is the Professor here? (affirmative response from audience) The Professor did a study for us at the State's request. He made a report before, but just to bring everybody up to date, if you will, Professor, please give us your input to this problem.

PROFESSOR TREFOR P. WILLIAMS: Okay. Well, I did a study that looks at the traffic and accident situation on the Parkway right now. The first thing I did was to calculate accident rates for non-toll, limited-access segments of the Parkway, and then segments of the Parkway that are adjacent to toll booths. I found that accidents do occur at a higher rate in the vicinity of the toll booths. I think it is 103 accidents per one-hundred-million vehicle miles at the toll booths, versus 79 on just the regular main line. This is mainly higher property damage accidents and injury accidents. I didn't find that fatal accidents occur at any higher rate at the toll booths.

It is also possible-- I looked at a five-year period -- 1982 to 1987 -- and it was also possible from this difference in rates to estimate that there would have been,

without the toll booths, 171 fewer injury accidents, and 468 fewer property damage accidents over this period.

ASSEMBLYMAN MILLER: So, if we go with my suggestion, then, we cut that in half, right? With half of the toll booths going down, we can cut the accidents down, and we can cut the--

PROFESSOR WILLIAMS: That's right, yes.

ASSEMBLYMAN MILLER: I see a savings already. Thank you.

PROFESSOR WILLIAMS: The second thing I looked at was the traffic flow facts, or the, sort of what's the situation with traffic flow on the Parkway right now. Of course, there are really three reasons why people are delayed on the Parkway right now: You have a delay when you stop to pay a toll; you have a delay during the rush hour, when the capacity of the road is exceeded, you know, not enough lanes; and then there is another delay, hard to quantify, the capacity of the toll booths themselves to process vehicles. So, there are really three sources of delay.

Now, eliminating the toll booths wouldn't get rid of the first problems with delays -- the delay where the capacity of the road is exceeded. If you were to eliminate all the toll booths right now, there would still be traffic jams in the peak periods, just because there are just more cars than the lanes can handle. The primary delay of eliminating the toll booths would be during the off-peak periods, when you are driving, you know, free flow, and you're going 55 miles an hour, and you have to stop and pay the toll. So, if you didn't have to do that, that would be where the benefit is.

I also did some simulation on the computer, trying to look at -- get an idea of what sort of worst case scenarios would be for people. It is possible, if you simulate peak summer traffic, say, for the area along the shore, that in a worst case, people could have very significant delays -- 30- or 40-minute delays caused by the toll booths. At least the computer simulation gave numbers like that.

Another effect I was able to quantify of removing -- or, of the toll booths right now, is increased operating costs. There is a cost to motorists every time they slow down and stop; you know, wear and tear on the car and on the brakes. You can quantify that. I calculated a cost for that in the report. Also, reduced vehicle emissions -- pollutants. The more you have people stop and start, the more vehicle emissions there are of pollutants.

I guess that kind of summarizes what I-- Oh, and I would also say that I did get some numbers from the Connecticut Turnpike, when they removed the toll booths there. There is one problem that does have to be considered in that. In Connecticut what they found when they removed the tolls, was that the traffic volumes did jump significantly -- when they did that.

I guess that summarizes my study.

ASSEMBLYMAN MILLER: The volume of the traffic did increase when they removed the tolls?

PROFESSOR WILLIAMS: Yes. It was on the order, I think, of 20%.

ASSEMBLYMAN MILLER: Twenty percent?

PROFESSOR WILLIAMS: Yeah.

ASSEMBLYMAN MILLER: Okay.

ASSEMBLYMAN MAZUR: But, the flow of traffic was unimpeded?

PROFESSOR WILLIAMS: That's correct.

ASSEMBLYMAN MAZUR: I mean, there have been some very long delays on the Connecticut Turnpike in the summer months at those toll booths. I have stood-- Coming down from Rhode Island, I remember spending an average of half an hour in front of some of the toll booths in the Connecticut section, you know, of the New England Thruway.

PROFESSOR WILLIAMS: Right. Well, I guess I say that just to point out that there is the danger that you could, at

some point in the future, by taking the tolls off, make it so that you have to add more lanes. That's the-- But over the short term, they had improvement.

ASSEMBLYMAN MAZUR: I understand.

ASSEMBLYMAN MILLER: Jack?

ASSEMBLYMAN PENN: Yes. Professor, I appreciate you taking the time to be with us today. I would like to ask you a question, as we go back to the safety aspect of it. You had said something about the number of accidents, particularly at toll booths, and so forth. I think it has been said in the past that the Parkway is significantly a safer road than the Turnpike. And one of the reasons for that was the toll booths and the fact that people were aware they were going to have to stop and be alert before they got back to just driving along.

Have you any comparison of the safety factor between the two highways, or have you thought about it at all?

PROFESSOR WILLIAMS: Yes, I have. I think I have one table. For 1984, I compared the Parkway main line and the Parkway around the tolls, with the whole urban interstate and the whole rural interstate, you know, the aggregate. The Parkway does compare very favorably. I think a reason the Parkway does, is because there are no trucks on most of it, and places where they have a lot of trouble with accidents on roads like this-- Trucks are usually a big factor.

So, the Parkway does, even in the areas adjacent to tolls, does I think-- Well, for example, the injury accident rate adjacent to tolls in 1984-- I calculated it was 40 accidents per one hundred million vehicle miles, where on the urban interstate, just the aggregate was 47 accidents. So, it does compare.

ASSEMBLYMAN PENN: So, you would feel-- You would characterize the Garden State Parkway as one of our safer roads then? Is that--

PROFESSOR WILLIAMS: I guess I would. I wouldn't characterize it as an unsafe road, I guess.

ASSEMBLYMAN PENN: It's either half full or half empty, right?

PROFESSOR WILLIAMS: Yes. (laughter)

ASSEMBLYMAN PENN: Okay. Thank you.

ASSEMBLYMAN MILLER: Anything else? Ben, any more questions?

ASSEMBLYMAN MAZUR: No, no.

ASSEMBLYMAN MILLER: I want to thank you for your participation. We appreciate your time.

PROFESSOR WILLIAMS: Thanks.

ASSEMBLYMAN MILLER: Thank you. Mr. Craig Schaffer, from Amtech Corporation. Mr. Schaffer?

C R A I G S C H A F F E R: Do you want a recitation?

ASSEMBLYMAN MILLER: Yes, go right ahead.

MR. SCHAFFER: As you stated earlier, it is an educational process.

ASSEMBLYMAN MILLER: May I first ask you, Mr. Schaffer -- Amtech Corporation-- What is the business you're in, just for the record?

MR. SCHAFFER: We are in electronic identification.

ASSEMBLYMAN MILLER: Electronic identification, all right. (witness sets up overhead projector at this point)

Very good. Can the people out there see it? Can you see it? (affirmative response)

ASSEMBLYMAN MAZUR: It's to the right so we can see it. Oh, I see, okay.

ASSEMBLYMAN MILLER: Now, can the people out there see? Can you see it, because we can move over if need be. All right? (affirmative response)

ASSEMBLYMAN PENN: Did you bring the family slides with you today?

MR. SCHAFFER: (witness moves to projector, and away from microphone) As you stated earlier, it is an educational process, a brand-new technology. Maybe if I take you a little bit through what the technology is all about, it would be a better forum for understanding than a question and answer period.

ASSEMBLYMAN MILLER: Very good.

MR. SCHAFFER: As you noticed, we call them electronic toll collection, as opposed to simply AVI, because AVI insinuates that you can identify something at a distance using electronic means. And we look at it as a total systems approach, or a toll accounting reconciliation behind that information that brings that data into play.

Basically -- it's not very good here, but-- It's a small identification tag that is attached to a certain object. The object passes a reader, and then a unique identification code is then reflected. So, if you look at tags going through a reading range, an energy path, a reader interprets that, and you can go to a computerized manual system.

Now, this is a radio wave, as opposed to any sort of optic system, so it is similar to a cellular phone. It operates at a frequency of about 815 megahertz. This operates just above that at 915 megahertz. So, it will penetrate ice or glass or anything that can be defined. It's not a line sight type of thing.

ASSEMBLYMAN MILLER: Maybe this isn't the place for a question. If it isn't--

MR. SCHAFFER: No, please go right ahead.

ASSEMBLYMAN MILLER: These would be installed, let's say, on the fender of a car someplace, going through a toll booth? That is the application we are talking about here? Is there any speed limit-- I mean, can I go through at 50 miles an hour and be missed, or do I have to get down to 20 miles an hour to do this?

MR. SCHAFFER: Well, the technology itself has a speed limit of about 200 miles per hour.

ASSEMBLYMAN MILLER: Okay.

MR. SCHAFFER: We are currently installed on a French bullet train, and traveling at 300 kilometers an hour.

ASSEMBLYMAN MILLER: Okay.

MR. SCHAFFER: Of course, in the toll environment, that is not the kind of situation you want. The toll barriers today are not even designed for those types of speeds, you know. To exceed anywhere, you know, above 12 miles an hour is probably the maximum limit, and we wouldn't recommend that fast a speed.

ASSEMBLYMAN MILLER: And I, as an individual, if we had that system in this State-- I, as an individual, would have to buy that myself. What would that cost me?

MR. SCHAFFER: There are a lot of different ways to approach it. The tag itself, which is-- That tag that we're talking about is a credit card size tag, that basically adheres to your windshield, and that's all it would take.

ASSEMBLYMAN MILLER: I see.

MR. SCHAFFER: The price of that is-- The retail price of the tag is about \$31, \$32.

ASSEMBLYMAN MILLER: Okay.

ASSEMBLYMAN PENN: If you can buy them in quantity, I guess you could get them for maybe \$29.9.

ASSEMBLYMAN MAZUR: I have a question on that.

MR. SCHAFFER: Pardon me?

ASSEMBLYMAN MAZUR: The tag has to be lined up directly with the reader?

MR. SCHAFFER: Right. The read range on these is about 30 feet.

ASSEMBLYMAN MILLER: So it could be anyplace in the car?

MR. SCHAFFER: However, in a toll environment, it will only read in one lane, not the other lane.

ASSEMBLYMAN MAZUR: It has to be within 30 feet of the reader?

MR. SCHAFFER: That is correct.

ASSEMBLYMAN MAZUR: But, what about alignment? Does it have to be in exact alignment?

MR. SCHAFFER: It is a polarized signal, so you have to have it aligned this way, with the reader, not this way. (demonstrates)

ASSEMBLYMAN MAZUR: Right. But, up or down, I mean--

MR. SCHAFFER: Are you talking about, like, tractor-trailers and Maseratis?

ASSEMBLYMAN MAZUR: Yeah.

MR. SCHAFFER: Okay. It will read both. The antenna design is such that it will encompass all types of vehicles.

ASSEMBLYMAN MILLER: If you put that in the right-hand window, instead of the left-hand window, would that still read?

MR. SCHAFFER: Yeah. We recommend putting it on the left-hand side, on the corner. In New Jersey, I believe there is a safety sticker?

ASSEMBLYMAN MILLER: Yep.

MR. SCHAFFER: It is above that safety sticker. That is where we recommend the placement.

ASSEMBLYMAN MILLER: Okay.

MR. SCHAFFER: A little bit of history on the technology: It was developed by the government at Los Alamos National Labs back in the '72-'75 time frame, and the government invested a lot of money in it -- the Department of Energy and the U.S. Department of Agriculture. It was a joint project -- the original technology -- and it was actually embedded under the skin of an animal, and identified the temperature range of that animal for disease control within a herd. So, that is where it started. When Reagan took over, there was a big privatization program, and the technology patents were turned over to the original scientists, who formed

the core group for our corporation today, and had the funding put in from Dallas. We have had some major investors -- Mitsubishi Corporation, and also American President Lines out of Oakland, California.

In the major markets-- I believe Assemblyman Mazur said earlier about the rail industry and putting these tags on rail cars. That is one of our major industries -- fleet management for access control. Rental car agencies to keep track of their cars is another industry, and the big intermodal containers that go from a ship to a rail car to a truck. All those are major industries, along with electronic toll collection.

Now, if we look at the application in specifics to electronic toll collection-- I have a video that we could show, and I will leave that with this group to view at their leisure. It shows one of our current installations down in Louisiana. It goes through exactly how this works, with live shots of the operation.

If you look at the conventional toll collection, the problems that occur today-- These are not unusual problems to anyone here, I'm sure -- the traffic congestion, the fact that the patrons can run the lanes, and not pay at all. You have certain theft that occurs inside a lane. You have overhead costs, coin and token handling costs, and, of course, air pollution, which was pointed out a little bit earlier. Another issue is the fact that a lot of the times, the toll roads today cannot be expanded in any great means because of the limitations of land or funding for that. Also, the ability to audit gets kind of sketchy out there in the toll booth lanes. Statistical reporting is something that a lot of authorities today do not even have.

With a system such as ours, if you look at it, it is sort of three different areas. You've got a store concept, which is what we call a "toll tag" store, where people can come

in and actually rent these tags, purchase them, put prepaid deposits down, so that that would be in your account balance, and every time you pass through the lane with your tag on your car, it would just simply adjust that balance per your usage. So, as you use the lane, your account balance would then be lowered.

There is a central computer function which handles all of your statistical reporting and then, of course, there is the operations that are out in the toll plaza. So, there are sort of three segments to this system.

You mentioned a little bit earlier-- The actual tagging placement of the tag on the car is the top one here (demonstrates), just above your safety sticker. So, it is on the driver's side, on the lower left-hand side, the inched side of the windshield.

ASSEMBLYMAN MAZUR: So, it can be at right angles to the receiver -- to the reader?

MR. SCHAFFER: Yes. It is a polarized signal, so as long as you keep it this way--

ASSEMBLYMAN MAZUR: Oh, it's on four sides?

MR. SCHAFFER: That's right. You can keep it like this, and it will read. If you put it this way, that is when you have problems. So, it has to be installed correctly.

Do you look to know what the patron's perspective is, that instrument right there is the antenna that is in the lane. That is about the only physical portion that the patron would see as he presses through the lane. That is the antenna that sends the signal out, and the tag actually reflects it. So you need that decode. It goes back into the data base and looks to make sure that the tag is valid, if somebody has signed up for it, there is an account balance, it hasn't been lost or stolen. All of that validation occurs each time that tag is read.

ASSEMBLYMAN MAZUR: It would take about -- less than a second?

MR. SCHAFFER: It takes 12 milliseconds to read one of these.

ASSEMBLYMAN MAZUR: Milliseconds. But to go to the data base and back to that light--

MR. SCHAFFER: We are getting about a tenth to a quarter of a second to process a tag through a lane, from the time it is read to the time that the lights are actually red, green, or the patron gets some sort of positive response -- about a tenth to a quarter of a second.

Again, out here are your normal lights you see at the end, which are the red and green that you had out there today. There are a lot of different ways of doing it. At our installation in Louisiana, they are just adding one light to that unit, which is a yellow light. It tells you that your account balance is low, or gives you some sort of other indication. In the Dallas North Tollway, we are using a separate pod of lights, which say: "Valid tag, go," or "Call the tag store for further information, because there is something wrong with your account." So, you get a positive response each time you go through the lane.

ASSEMBLYMAN MILLER: What happens when you attempt to go through and you get a light that indicates that you can't get through because your balance isn't there any more?

MR. SCHAFFER: Then you've got to use the traditional method of paying in the toll lane, which is tokens, coins, or manual.

ASSEMBLYMAN PENN: How would you do that, if you are already through the--

MR. SCHAFFER: Pardon me?

ASSEMBLYMAN PENN: How would you do that, if you are going to go through the lane, and then you get up there-- Is this before you get to the lane, this is what you've got to do?

MR. SCHAFFER: Right. Where the tag is read and where you get the response back, we-- It is a design issue.

Wherever you want to read the tag, we can read it, of course. What we try to do is, where they are normally used to paying tolls, whether it be a coin machine with a basket, at that point is where we would actually read the tag. So, the people get the response at that point.

ASSEMBLYMAN PENN: Yeah, but at that point, there is no way they are going to be able to put any money in the toll. They already passed the thing at that point.

MR. SCHAFFER: Right. What I am saying is, there are different design criteria. If you want it read prior to that, that is just how you design the system. The technology works any way you want to design the system. So, that in-lane design that you pointed out is a critical issue. The different authorities where we have our equipment installed want to operate it differently. That is their choice.

ASSEMBLYMAN PENN: Unless you run an overdraft account for them.

MR. SCHAFFER: Pardon me?

ASSEMBLYMAN PENN: Unless you run an overdraft account for them.

MR. SCHAFFER: Right. Now, if you look at traffic comparisons -- and we're not saying these are accurate-- What I am saying is, this will give you an idea of the flavor of the differences in the manual collection, exact change collection, and also the toll tag lane. And if you don't believe the 12 seconds-- It might be eight seconds, but the differences are about the same, as far as percentages go. So you can see where the toll tag lane, at three seconds per car, can process 1200 cars per hour. If you look at what a change made lane is -- and that is where you go up, and you have a dollar bill, and you get 75 cents back on this Parkway -- 290 is what our estimate is. These are some figures that we came up with. You can see the net gain on cars per hour just by using electronic identification means.

If you look at what the benefits are for this system for a toll authority, they are, of course: improved traffic flow; reduced theft, both from the patron and also from employee theft within the lane; lower operating costs due to overhead, because now you may not have to man as many lanes, for one. Secondly, coin or token handling becomes less, because people will be using this system versus other alternate means of collection. You have increased automobility, and you have flexibility in pricing. By flexibility in pricing, since it is a computerized system, if you wish to charge tolls 25 cents from six in the morning to ten o'clock in the morning, and you want to charge 10 cents during the day, and at three o'clock you want to start charging a higher price again, you can do that with this system, since it is an electronic means, and it will have no impact on how you run your operations.

ASSEMBLYMAN MILLER: Do you have a system whereby if I get the old light indicating my account is down--

MR. SCHAFFER: Right?

ASSEMBLYMAN MILLER: --I can throw five dollars in quarters in the machine, or something, to bring my account back up? Is that--

MR. SCHAFFER: No, you would have to-- The way we are handling it today is, when people come in, most of the people choose to use a credit card to prepay their tolls.

ASSEMBLYMAN MILLER: Yes?

MR. SCHAFFER: And with a credit card, we also have them sign a pre-authorization for the tag store to rebuild their account. So, if they put \$50 in tolls in, if it goes down to \$10 and they have used \$40 worth of the tolls, at that point, they have pre-authorized us already to refill their account for \$40, so it goes back up to that \$50. The reason we do it at \$10, or whatever makes sense here, is because most of the agencies where we are, are about a dollar a toll, so we give them 10 trips to notify them that at that point they need

to come back in and do something with their accounts, if they are cash-paying customers.

If you pre-authorize us to use the credit card, what you can do then is, as it goes down to \$10, we automatically rebill it, and you never even see the yellow light in the lane. It happens automatically, unless there is some problem with the credit card, expiration date, ended, or you have exceeded your credit limit.

ASSEMBLYMAN MILLER: Do you send the person who has that card in his name-- Do you send him a statement at the end of the month as to what his balance is?

MR. SCHAFFER: We can, that is available, yes. All that information on the history is available.

ASSEMBLYMAN MILLER: Okay.

MR. SCHAFFER: Again, different authorities choose to do things different ways. That is why I am saying the capabilities are there to do that. Most of the authorities, the way they are handling it is, they are not sending out a bill, because that is, again-- We are trying to eliminate overhead. If you send out a bill, there are all sorts of overhead associated with that. What the authorities choose to do is, if somebody does want the account history, they can call up their store, and say, "I would like to see my history." You can have him come in and pick it up, and give it to him for free.

ASSEMBLYMAN MILLER: Okay.

MR. SCHAFFER: Now, of course, there are benefits to the patron: faster commuting time; enhanced convenience. For instance, when it rains, people choose to go underneath the canopy, roll down their window, and throw the change in; roll their window up, and then take off. With the electronic device, you just go through at the same speed, whether sunshine, darkness, rain, snow, whatever. So there is enhanced convenience there.

Secondly, you can also get these print transaction reports you are talking about. And also, when you are going through the lane, a lot of people are searching for coins or tokens, and as they are doing that, they are taking their eyes off what they are really there doing, keeping both hands on the wheel and trying to go through the toll booth safely. While they are looking around and fumbling for coins, things could happen. But with your electronic means, a person has his eye on the road and is in control of the car all the way through the booth.

ASSEMBLYMAN MAZUR: What about accidents, you know, where somebody is going through and the light shows red, rather than the green that they expected? They are traveling at some speed, and have to jam on their brakes.

MR. SCHAFFER: Right. That's why I am recommending that you don't use the full 200-miles-per-hour capability. You keep it to-- You know, five to eight miles per hour is usually what the toll authorities recommend. But it sure beats stopping. In that case, most of the time, you are going to have mixed lanes -- people with the tags in their windshields, and also people with manual collection. So, if you mix the traffic up, people are already expecting, you know, certain things to happen -- to occur in front of them.

Also, as pointed out a little bit earlier by Trefor Williams, as you are speeding up and stopping and speeding up to get to your toll booth, there are a lot of pollutants entering the atmosphere at that time. With a steady stream of cars, you will lower that pollution impact also.

Now, one of the things we are working with-- There is a five-agency committee of which the Garden State Parkway is a member that we are working with up in the New York area. Their situation there is, what if you have a single tag to be used on the New Jersey Turnpike, the Garden State Parkway, the Port Authority, the Triborough Bridges, and also the New York State

Thruway? What the proposal is there, or what the opportunity is there, is to have sort of a clearing house effect, which is a unit that is where -- a central unit where people go to get their tags issued, and also prepay their accounts, and there would be one consolidated billing from that central site, as opposed to having one tag for the Garden State Parkway, one tag for the New Jersey Turnpike, one tag for the Port Authority. So, you would go to a central location, similar to how you write checks today. You write one check, and it goes through the bank system, through a clearing house type of--

ASSEMBLYMAN MAZUR: But it does this all in milliseconds? It would do it all in milliseconds?

MR. SCHAFFER: Yes. The in-lane computers validate the identification, the code in here, to make sure that you get a correct account balance. As it is a tag that has been issued on the Garden State Parkway -- if you are just trying to use it on that -- or it is issued for the Port Authority-- Make sure that it has been issued for the authority that you are trying to use it on.

ASSEMBLYMAN MAZUR: In other words, the same card could be set up to bill five different accounts, if you are just running--

MR. SCHAFFER: Exactly. Well, it would be one account, but you could use it at multiple agencies.

ASSEMBLYMAN MILLER: Do you have an automatic by-pass in the event the computer goes down as a person is trying to use their--

MR. SCHAFFER: Well, there are a lot of redundancies. The reader unit itself, which is an Amtech reader, is a computerized device. That has storage capabilities on it, and that is where the lane control, as far as lights go-- That is where that is initiated from. That reads the system. So, if the computer is down in the lane, fatal, you still have that as

backup, and you would still be collecting tolls as they go through there, but a limited memory. If the computers in the lane go out, we work them with a special network, and if one of the computers goes out, it automatically reroutes the processing through another computer. So you have a redundancy there.

Thirdly, the plaza computer is another computer that-- If that goes out, you can still operate the lot with your in-lane computer.

If you will look at where we are currently operational today with our electronic toll collection system-- Now this is not on a test basis. What I am talking about is actually people are operating the system today and collecting tolls with that. There is a Greater New Orleans Bridge, number two, down in Louisiana -- New Orleans. It has been operational since January; a 12-lane bridge plaza, with 60,000 commuters crossing over that today. They are collecting tolls using our system today.

The Texas Turnpike Authority, the Dallas North Tollway, which is a 23-mile toll system that has 60 different lanes, is due to be implemented in May of 1989. They went through a very exhaustive test of our equipment -- it was a six-month test -- where they audited every single transaction where we collected information using the AVI. By that I mean, people actually stopped and signed the log. That log was compared to the reads that we got off of our system, to validate that the system does, indeed, collect -- is audit able and reliable. They went through the six-month test. After four months, they were convinced that it was the right system for them, and we are going ahead now to install all 60 lanes at the Dallas North Tollway.

The Port Authority of New York/New Jersey, the Lincoln Tunnel, has had an AVI system since last April. They are using it for buses. They have some of the New Jersey Transit buses

tagged today. And they are going through the Lincoln Tunnel on the express bus lane. And they are counting the buses going through there, to bill the New Jersey Transit Authority. So, that is another live installation.

We also have an installation in the Torino/Milano Toll Road in Italy. They are in phase one, and I think they have about 12 lanes installed today. That is going to be up to about 48 lanes, in phase two, which they expect to have totally installed by the end of this year.

There have been some tests in the New York/New Jersey area other than the Port Authority Lincoln Tunnel demonstration. The Garden State Parkway tested equipment in July of '87, and Triborough also in December of '86 and March of '87. There are two proposals outstanding today with the Port Authority and the Triborough Bridge Authority.

I will entertain any questions you may have at this point.

ASSEMBLYMAN MAZUR: Do you have a copy of all that information you showed us?

MR. SCHAFFER: I can give you a copy.

ASSEMBLYMAN MILLER: Jack?

ASSEMBLYMAN MAZUR: Jack's gone.

ASSEMBLYMAN MILLER: Okay. I don't have any questions. I think we have asked the questions as you were proceeding.

MR. SCHAFFER: Okay.

ASSEMBLYMAN MILLER: But I do appreciate the information. I think it is certainly something we should be looking into. I think it has a lot of merit -- whether it be your system or somebody else's system -- toward expediting traffic, and would take some of the people off the payroll.

MR. SCHAFFER: I do wish to say that the five-agency committee in the New York/New Jersey area has been investigating this for a number of months, and is looking seriously at it.

ASSEMBLYMAN MILLER: They can't get that in there in time to eliminate the 35-cent toll, though.

MR. SCHAFFER: Probably not by Monday.

ASSEMBLYMAN MILLER: Not by Monday. Well, okay, we tried. Thank you ever so much. We appreciate your time.

MR. SCHAFFER: Thank you.

ASSEMBLYMAN MILLER: We have Thomas Quinlan, President, Automatic Toll Systems. I think this is about the right time for Mr. Quinlan to be presented also.

T H O M A S Q U I N L A N: Thank you, Mr. Chairman. I received word at a late date, asking me if I would come. I certainly am glad to appear, and I kind of think I am in a unique position, in that I am President of Automatic Toll Systems, which has its world headquarters in Teterboro, New Jersey. We employ 300 New Jersey residents. I also have the unique situation of having two family businesses, one located near my home on Long Beach Island, and another business in Tuckerton. So, we are very conscious of the Garden State Parkway and its impact on our family living. We are very proud of the Parkway, both from a business point of view and from a personal point of view.

So, I think I can sit here and assist you fellows, and ladies, in drawing conclusions on AVI, as well as other areas of the toll market. With ATS, I have been employed for 26 years. I installed the first toll AVI system, in cooperation with the Delaware River Port Authority, back in, I think, around 1965. I won't speak too much about that system now, because there is a gentleman here who knows much more about it than I, and has been much closer to it. However, I am proud that I leased the system to the Delaware River Port Authority, as well as the toll equipment -- automatic toll equipment, 163 lanes of it -- to the Garden State Parkway, and automatic lanes to New Jersey Turnpike and the Atlantic City Expressway.

I think I can come without prejudice, and I can advise, counsel, whatever would be necessary in the future, or now, based not on selfish or personal motives, because I already supplied the equipment, and on the Garden State Parkway I am under a lease contract for eight more years. I won't be working for ATS eight years from now; that's for sure.

As a homeowner and businessman in Long Beach Island and Tuckerton, I had no problem personally with paying the toll, because of what that Parkway does for our family income. I do, however, have some reservations when I hear criticism of the Parkway operations, because over those 26 years, I have been very, very intimately involved with various members of the Authority -- over that full span of years. And during that time, the Parkway has been a friend, an ally, but has also held me to task. I have paid liquidated damages severely for being late on contracts. I had to sharpen my pencil just recently and lower my price \$2 million, to get my latest contract.

So the Parkway, as far as I am concerned, is a very well-run, very honest operation. My personal self gets involved when I talk about it, or when I hear some of the things that are happening with the toll increases. I also worry when I hear various vendors trying to market their wares. And though I have been a vendor all my life, and somewhat of a street huckster -- I know how to do that as well as anybody -- I will tell you that there is no gain for me, except to tell you what I know about AVI, since that is what I assume I am here to talk about.

Back in 1965, I installed the first bar code system, which was a spin-off of an early Sylvania railroad car system. I installed four lanes of that system on your Walt Whitman Bridge; from that bar code system, over 20 various AVI systems of various technologies involved. Out of those, there stands, probably, two systems today that look like they are on the edge of the new technology necessary in tolling. And I will be glad

to admit that those technologies are the RF transmission type, which was just talked about previously, and still the bar code. I presently have a bar code system in Sanibel Bridge in Florida, Treasure Island, Florida, the Susquehanna River Bridge in Maryland, and of course, I think it is 56 lanes of bar code at the Delaware River Port Authority. That system is a very cost-effective system.

And this is what I put my hat on as a businessman on Long Beach Island. I have to say, what is best for me, the commuter? Do I want to pay \$30 for a tag -- an RF tag -- or do I want to pay something less than that for something that maybe doesn't give me all the exotics of an RF system? I don't know the answer to that. That would be an operations question for the-- But I do know, as a resident of New Jersey, I have no intention of paying \$30, or anything near that, for the privilege of using a tag, and then paying a full toll. I wouldn't be happy about that. I would be much happier if such an AVI system was adapted where the cost of the tag or the label was in the dollar or two-dollar range, which the average person could afford for whatever convenience they may get.

Setting that aside, I would like to real quickly move to how I see these technologies evolving and what I think will happen in the future. They are my own opinions. They may not necessarily be fact, but I believe them to be such. I have experimented recently with two RF type systems, and I am aware of others. One of the systems I experimented with was on the Garden State Parkway, in a limited test, and it was a disaster. The system was made in England, and what they forgot was that in America we have ignition systems somewhat different than theirs, and we have air conditioning systems, and they created noise and generated false reads. That gave me grave concern, and we took the system out in some embarrassment.

I pursued further what I thought of the other technologies, and quite frankly, the gentleman who spoke before

me has spent probably more money than anyone in the industry, and has come further than anyone I have seen in the industry, to date. I have had the occasion to work with them in the past, and I had a nice relationship. But you, as a customer, if you were asking me today for the Garden State Parkway do I want to go with AVI, I would have to suggest that you don't. I don't think we are there yet with the technology. There are grave questions to be answered.

The two systems that are emerging are the low frequency RF system and a high frequency system. With the high frequency, or near microwave system, there are some concerns; some that have been answered, and some that have not been answered, as far as a health hazard. As we all know, microwaves do present serious health hazards. Whether they do or not in this application-- I have not gotten a straight answer. I do know, and have been assured by people like Amtech that we will get those answers, and I know that with their expertise they will honestly try to find them and produce them. But for you, as the patron or the customer, I have to say, there are concerns. There are standards in the U.S. that determine-- However you read the numbers, you may find that you are within limits. But then you look at standards in the Soviet Union or Australia, and you may find that they are way out on the limits, by 30 to 300 times.

All this is meaningless to me, a non-technical person in microwave communications, but it certainly isn't meaningless if I have toll collectors in the toll lanes, and there can possibly be the pregnancy problems, or other problems associated with radiation.

So I think that these areas, although they have been expressed recently, have been a concern, and people are looking at them. I am not sure, as a supplier of toll equipment, that I could recommend that you go in that direction. I would like to see a lot further tests.

The other problem is the environmental problems of reading properly. I am very familiar with reading labels, and I know what sunlight does when it reflects back off of a car when you are trying to read a label. I know what happens when you go through too many car washes and the wax build-up on the label no longer makes it passable. I know what happens with dust on a label. And I know that when you take a high frequency tag and place it in a bowl of snow, or behind a windshield full of snow, or water, there is a possibility of a misread. That misread represents revenue. In the toll business, revenue has to be protected.

So, I don't know that the technology can clearly, definitively say they are at the door of putting it in full-scale use. The other system that is in use today, in limited applications, is the low frequency system, and there are pros and cons on either side. The low frequency system today, that I have been looking at very hard in the last several months, doesn't have the health hazard risk, and up until recently it had a problem with reading distances far enough into the lane to properly record. I am of the opinion that that has been overcome, but again, it is at a testing stage. It hasn't been tested adequately enough.

The most major test so far that I know of has been the test in Dallas. However, the test in Dallas, to date, I believe has used somewhere in the vicinity of 250 tags on vehicles. We only have to look at Raritan Toll Plaza on a weekday morning, and we recognize that there are a lot more than 250 vehicles. What happens with the radio frequency from each of those lanes. Does the reading of this lane interfere with the reading of that lane? We know in some cases it does. We know that we can take a tag over two lanes away, or a lane away, and we know we can read over in this lane.

These questions make me say: Let's continue what we are doing now -- experimenting. Let's not spend a lot of money

in something, particularly on the Garden State Parkway, where-- Why spend money for better toll collection equipment? Let's use that money to widen the route. Or, if we have a toll increase, let's not use the toll increase to finance toll collection equipment -- which I make. Let's use that additional money to finance building a wider road, so that the patrons can get to my gift shop on Long Beach Island.

I will be glad to answer any questions regarding bar code or automatic toll collection equipment, because I like to think that I am not quite old enough to say I am the father of it, but I certainly am the grandson of it.

ASSEMBLYMAN MILLER: How does a bar code system work? Where do you place the bar code, on the windshield also?

MR. QUINLAN: The bar code is on the left side rear window generally.

ASSEMBLYMAN MILLER: Left side rear window?

MR. QUINLAN: Yes.

ASSEMBLYMAN MILLER: Now, what about the snow and whatnot on that, and the ice?

MR. QUINLAN: Snow will-- It absolutely won't work in snow. And again, there is a gentleman here who can speak far better on the operations of his facility than I. But, from what I know of his facility, the people have used the system long enough, and well enough, and like it enough, and the convenience of it, that if there is snow on it when you get in the car, you wipe it off.

ASSEMBLYMAN MILLER: What about the snow on the equipment that receives it, not the car, but the other end of it, the receiver?

MR. QUINLAN: On the equipment that is on the lane stationary?

ASSEMBLYMAN MILLER: Yes.

MR. QUINLAN: The transmitting device is generally hooded and heated, so it doesn't build up in that area.

ASSEMBLYMAN MILLER: I see.

MR. QUINLAN: There is no question that the RF systems, working properly, and under control tests that I have seen, are far superior to the bar code system. They have many advantages to them. But in practicality, none of them have been tested to date like the bar code system has, and I am not here trying to sell the bar code system. I don't necessarily think it is a practical system for the Parkway, any more than I think the AVI system is a practical one for the Parkway. If you come up to the Raritan Plaza, or any of the other northern plazas on a workday morning, whether you pay the toll by token or AVI or bar code, you are not going to move very fast across Raritan Bridge in either case. So, you are not going to speed traffic up.

The inherent danger in an AVI system, if it has to be used in a mixed society, meaning if you have to use a bar code system with manual toll collection equipment, and with automatic equipment -- and you most likely would; you wouldn't be ready to disband everything and just go AVI-- So, if you have to intermingle it with your present equipment, there is another problem, which is the serious danger of fatalities.

To give you an example, around 10 years ago, I sold automatic gates to the Atlantic City Expressway at the Pleasantville Toll Plaza, not because they were faster, not because they were efficient, and not because they cut down on violators, but because the Atlantic City Expressway had had toll collectors killed on that plaza, trying to cross between lanes, since there is no access tunnel below the roadway. All service maintenance personnel and toll collectors must cross the roadway. If you invite traffic through your toll lanes, without coming to a stop, you are inviting the opportunity to kill the toll collector. And knowing the Parkway people, I think that would be a serious consideration.

ASSEMBLYMAN MILLER: Ben, do you have any questions?

ASSEMBLYMAN MAZUR: No.

ASSEMBLYMAN MILLER: You are in the business of selling toll collection equipment?

MR. QUINLAN: We have 98% of the toll equipment market throughout the world, whether it is automatic or manual.

ASSEMBLYMAN MILLER: You are talking about the machines we throw our quarters in.

MR. QUINLAN: We invented the first machines.

ASSEMBLYMAN MILLER: All right. Let me ask you a question then: How much of a problem are you going to run into on the Garden State Monday -- or 12:01 Sunday, is it? -- when they have to put 35 cents, instead of a quarter, in your machines?

MR. QUINLAN: Let me answer that with more than just a yes or a no -- a very quick answer. The Garden State Parkway machines have been upgraded to accept the new toll. There is no anticipation of a problem with the acceptance of that toll, and the most recent test, in the last 24 hours, indicates that that's the case. However, vandalism and acts of mischief can't be controlled by the vendor of the equipment. And, you know, I can't predict. The equipment will do the job. The Parkway had the foresight to recognize that for the future they needed a more modern piece of equipment, and they went out to bid. We were the low bidder, and we are providing them with 163 automatic lanes of a new technology, which are much faster and will handle coins -- process coins much quicker -- and will identify counterfeits from real coins. But these machines won't be in for some time yet.

ASSEMBLYMAN MILLER: What is the additional delay -- time delay -- for the two coins versus the 25-cent piece?

MR. QUINLAN: Well, again, you can play with numbers. Another vendor could be sitting here, saying his machine will do it in one second, or a second and a half, and I'll say a second. Where do you want the time from -- from the time you

roll your window down and throw your arm out the window, or from the time you put--

ASSEMBLYMAN MILLER: From the time the coins get into the pot.

MR. QUINLAN: Again, the Parkway has done numerous studies on times. Obviously, my time is going to be very quick, and I am going to say it is in the area of a little over a second. But again, if they measure the time from when he starts to roll his window down, it could be two-and-a-half seconds. You know, I can't tell you that.

ASSEMBLYMAN MILLER: Your machine will take, at 35 cents -- will take seven nickels, instead of--

MR. QUINLAN: It will take any combination of the coins, or overage. If they throw in two quarters, it will work.

ASSEMBLYMAN MILLER: It will take the overcharge also?

MR. QUINLAN: Yes.

ASSEMBLYMAN MILLER: It doesn't give change, though?

MR. QUINLAN: No.

ASSEMBLYMAN MILLER: You're working on it, right?

ASSEMBLYMAN MAZUR: Put a dollar bill in, you know, and get all the quarters out of the bottom.

ASSEMBLYMAN MILLER: And it does not take pennies. Or, it will take them, but please don't put them in.

MR. QUINLAN: Please don't put them in, right.

ASSEMBLYMAN MILLER: I understand. Very good. Ben, nothing else, right?

ASSEMBLYMAN MAZUR: No.

ASSEMBLYMAN MILLER: We appreciate your time. Thank you.

MR. QUINLAN: If I can be of any further help, my office is in Teterboro.

ASSEMBLYMAN MAZUR: Oh, I do have one question. The bar code--

MR. QUINLAN: Yes, sir?

ASSEMBLYMAN MAZUR: Does that have to be a prescribed height from the roadway--

MR. QUINLAN: The bar code--

ASSEMBLYMAN MAZUR: --to line up with the reader?

MR. QUINLAN: --window -- and my figures may not be correct; it has been a long time since I personally worked on it-- But, the bar code would read, like, halfway down the door to up above the roof of the average vehicle. So, the window is quite large for the bar code.

ASSEMBLYMAN MAZUR: So, on a bus, or something else, it would have to be on the side of the vehicle itself, rather than the window, because of the--

MR. QUINLAN: That is correct. Generally, in that type environment, when we have done it on buses, it has been mounted to a plate which is affixed to the vehicle at a prescribed height, yes.

ASSEMBLYMAN MILLER: And you're saying this bar code would be, what, like in the rear left window of the car, or the--

MR. QUINLAN: It is generally on the rear left window.

ASSEMBLYMAN MILLER: Okay.

MR. QUINLAN: And the transmitter is on the island as you enter the lane.

ASSEMBLYMAN MILLER: Okay.

MR. QUINLAN: Now, in a couple of the systems-- In one system, what they do is, when you come into the lane and it reads the bar code, which is good for a period of days, and then it expires-- But when it reads that bar code, it then programs the automatic machine to take a reduced toll. Now, that is an operational-- There is a reason operationally for that, and that, of course, isn't my business. My business was to provide the equipment to do that.

ASSEMBLYMAN MILLER: Okay. Does your bar code do the same as the AVI, as far as billing?

MR. QUINLAN: No. You see, you are getting into two areas here. One is a charge system, and one is a prepaid system. In the discussion on the RF system, that was where the car transmits back an account number.

ASSEMBLYMAN MILLER: Right.

MR. QUINLAN: Which is then automatically billed to the customer, you know, at some predetermined date, or put to a Master Card, or whatever. In the toll industry in general, most state legislatures try to stay away from charge systems because they are tying their money up for some period of time. And they prefer, if anything, to go to a token system, which is a prepaid system.

ASSEMBLYMAN MILLER: Yeah.

MR. QUINLAN: The Parkway's got their money for those 30 tokens whether you ever use them or not.

ASSEMBLYMAN MILLER: Okay, but with this bar code on the side of that window, the receiver accepts it, how do I know, as the person driving that car, that-- I assume the same system. I would have to put so much money into my account. How do I know, if I go through this, that my account is down? Mr. Schaffer said the yellow light comes on. Do you have the same thing?

MR. QUINLAN: On that particular system, they are printed on the label. I may be corrected, but the old way was, printed on the label was the expiration date.

ASSEMBLYMAN MILLER: Of that bar code?

MR. QUINLAN: Of that bar code, yes.

ASSEMBLYMAN MILLER: Well, this doesn't add up.

MR. QUINLAN: If it didn't work--

ASSEMBLYMAN MILLER: Yes?

MR. QUINLAN: --you then proceed to throw the remainder amount of money into the basket, or pay a toll collector, or whatever.

ASSEMBLYMAN MILLER: I see.

MR. QUINLAN: But, you can have all the bells and whistles that you want to pay for. You can have a major sign, that says, "Two more trips left," "One more trip left."

ASSEMBLYMAN MILLER: I see. The technology is there. It depends on how far you wish to go.

MR. QUINLAN: For either the RF or the bar code. The RF technology certainly can go much further in total control than the bar code can. It really depends on what your particular application is.

ASSEMBLYMAN MILLER: Whether you want a Cadillac or a Ford?

MR. QUINLAN: Yeah. In the Parkway tag system versus a token system, I don't know if speed is an argument, because, yes, the bar code, obviously, is going to be faster-- I mean, the tag is going to be faster, because you don't have to roll your window down. You can keep on moving. You just create a safety problem. You are going through a 10-foot lane with two steel booths on each side of you. Most women, or men, nowadays, can't get their car in the average garage without taking their rear view mirror off. So, try going through a lane at 10 miles an hour, which doesn't seem fast, but put your car at 10 miles an hour and go through two toll booths -- steel toll booths -- 10 feet apart. It becomes very dangerous.

So, the argument, or the selling point to sell AVI for speed on the Garden State Parkway, outside of rush hour maybe, but during commuter traffic, which is, I think, what we are talking about-- I don't know that the speed consideration is a factor. You need more roadway to handle the vehicles.

ASSEMBLYMAN MILLER: I am inclined to agree with you. When you go through the Essex toll-- When you go through, you are right in a traffic jam as soon as you go through the booth, during the rush hour in the morning. So, I am inclined to agree with you.

No further questions? (no response) Thank you for your time. We appreciate your participation.

MR. QUINLAN: Thank you. Any information you need, please feel free to call me.

ASSEMBLYMAN MILLER: Thank you. We'll do that.

Harry Kennedy is here, and Al Griebing. Do both of you gentlemen want to come up? Harry Kennedy is the Manager of Governmental Affairs, Delaware River Port Authority, and Al Griebing is the Acting Director for Bridges, Delaware River Port Authority. You two have undoubtedly met before?

HARRY KENNEDY: We have.

ASSEMBLYMAN MILLER: Okay, fine.

MR. KENNEDY: Thank you very much, Mr. Chairman, Assemblyman Mazur, ladies and gentlemen. When Larry called and asked for an expert witness to come and testify before you, I got his list of people who would be testifying, and I went through the Port Authority for the person who would be most appropriate to speak to the Committee. I heard you were going to have a college professor, and Mr. Griebing used to teach at West Point, so I thought he would fit the bill there. He used to be in charge of the Army Corps of Engineers, so he has some background there. He was the Executive Vice President of the Port Authority. He oversaw all the automatic toll equipment being installed. Unlike the Parkway, he has been involved in many toll increases, and has had to help the motorists across the bridge and expedite the crossings. So, he was truly the Renaissance man to finish the testimony today.

ASSEMBLYMAN MILLER: Very good.

MR. KENNEDY: Many years ago being a Freeholder Director, I knew it was always a good policy to save that sort of person until last, to be your cleanup witness, and appropriately you did so today, Mr. Chairman. I think Mr. Griebing will be able to delve into all of those areas, and has done so for many years at the Port Authority very successfully.

Al Griebing, our Executive Vice President.

ASSEMBLYMAN MILLER: Thank you.

A L G R I E B L I N G: Mr. Chairman, gentlemen: I have never been so over-introduced in my life. (laughter) Believe it or not, I didn't write that speech.

ASSEMBLYMAN MILLER: You aren't running for Governor, are you?

MR. GRIEBLING: No, sir.

ASSEMBLYMAN MILLER: Okay.

MR. GRIEBLING: Tom Quinlan mentioned the guy who had the system for a long time. That's me, too, so he did part of the introduction.

I did have a short prepared thing to read into the record, but I don't think that is necessary. I am willing to answer any questions you want to ask me, with the understanding that my experience has been limited to toll bridges, and in my opinion, there is some difference between a long toll road and the four toll bridges in the Philadelphia area that I am very familiar with. But, I will tell you what I know about AVI, toll collection, anything you care to ask about.

ASSEMBLYMAN MILLER: How about just an overall view, then? Your background in the business-- How has it worked? How is it working? That are the pitfalls?

MR. GRIEBLING: The AVI system that Mr. Quinlan mentioned being at the Delaware River Port Authority was there 15 years ago when I came. It was pretty well tested. All the bugs were shaken out then, and it performed extremely well for the past 15 years. In fact, we are in the process of negotiating another agreement with ATS to update, computerize, modernize this system for the future, and that is under way at the present time.

ASSEMBLYMAN MILLER: So, you really haven't had any problems with your present system?

MR. GRIEBLING: No serious problems. Now, I want to clear up a few things. A comment was made about snow, and he quickly answered, "It doesn't operate at all in snow." Well, he means with the snow on top of it. But if a guy takes enough time when he gets in his car in the morning to brush it off, and he comes to our booth, it usually reads. Now, if he runs his scraper across it, it is going to goof up the bar code, and when he gets to our booth, it will not read, and somebody will pull him over to the side and give him a new sticker, when we have determined that it has been defaced.

But, no system is perfect. This one has operated very satisfactorily through the years, to the point that we are ready to keep it, with some improvements. They have come across a much better scanner that scans these stickers. The other one was reliable, but it is getting to the point where the parts are obsolete, and this one is as reliable, or more reliable in the tests we have made of it.

ASSEMBLYMAN MILLER: Do you have passenger cars, as well as buses and trucks using this?

MR. GRIEBLING: We only use this on passenger cars.

ASSEMBLYMAN MILLER: Okay. What is the participation? Of your total usage on the bridges, what is the participation? How many people are really using it?

MR. GRIEBLING: On our four bridges, we crossed 87-plus million vehicles last year, and 28.81% of those vehicles use this system. So, let's just say 30% of 90. Twenty-seven million crossing were handled through this system.

ASSEMBLYMAN MILLER: Have you doped that out as to what that means in dollars and cents, as far as the number of employees that you have replaced, or haven't used?

MR. GRIEBLING: It is a very cost-effective thing. I haven't-- I can't put my finger right on the answer to the question you asked, but-- For example, where we have automatic lanes, we have one monitor looking at four lanes, rather than

one toll collector in each booth. That man can handle that operation, some guy arriving with the wrong change, or dropping the money on the road -- anything that ties it up. With that kind of traffic going across our bridges, you want to keep the traffic moving. So we have that man expediting that traffic for four lanes. It's very cost-effective.

ASSEMBLYMAN MILLER: Was there any noticeable reduction in the traffic tie-ups -- the backups in the lanes of the people using this system, versus those not using this system?

MR. GRIEBLING: That is really a function--

ASSEMBLYMAN MILLER: First of all, let me ask you this: There are certain lanes, are there not, that you have this system in?

MR. GRIEBLING: Where you must use this system.

ASSEMBLYMAN MILLER: So, on that basis, what is the traffic backup, or the delays?

MR. GRIEBLING: It varies through the day, and it is a function of your toll system. Right now, we probably have the worst casual toll rate that we could pick, but we didn't want to be greedy and ask for a dollar, so we settled for 90 cents. Therefore, the number of people who arrive with 90 cents to throw into the exact change lane, which is the same lane that accommodates the commuters with the decal on the side-- That has dropped off.

Now, if we were to change our toll sometime in the future to a dollar, the use of these lanes would pick up. It is not a cut and dried thing, but it is a function of the toll you are charging at a given time. And it varies through the day. The commuters use this very heavily to and from work -- the automatic lanes. The rest of the day, the casual user shows up and hands the guy a dollar bill and isn't in any particular hurry. So, the use of the lanes varies over the course of a day.

ASSEMBLYMAN MILLER: Well I, as an individual, want to participate in your program. I live in the area. How would I go about doing this?

MR. GRIEBLING: You drive up to designated toll booths that say, "Sticker sales." There is a big yellow sign over the top. One of our toll collectors installs the decal on your window after you pay him \$14 up-front. He takes your license plate and gives you a receipt that you purchased this on a given date, so that if you have trouble with it in the future, we can accommodate you with a new sticker.

Now, this sticker we use has the Julian date on it. That corresponds to a certain number of days since the first of the year. That is the date it expires. When you come through our lane, a visual scanner reads that sticker, and if that date is any number less than the Julian date that it expires, it says your sticker is valid. Now, our system requires you to throw a quarter in, so we get you for \$14 up-front, and a quarter a trip. That is an important consideration that I will mention a little later on. If I forget it, jog my memory.

But, you come through the lane. It says your sticker is either valid or invalid. If it's valid, you put the quarter in, a gate goes up, and you go through. If any of that is not so, the gate stays down, and this man who is looking at four lanes comes over and determines what the trouble is. So in essence, we don't have any people skipping out on the toll in that part of the system.

ASSEMBLYMAN MILLER: So, besides paying the \$14, you still have to pay a quarter to go through the--

MR. GRIEBLING: Yes, sir. I said I would elaborate a little bit on that. That is an important consideration for the general public, let's say. I think there are a lot of people who might have trouble spending more than \$14 up-front. Now that is not to say that we won't ever want \$15, but let's compare \$14 to 30 or some large number. The number you might

have to charge if you are going to have a system that decrements dollars as you go through and use the system. The guy who is having a hard time getting through until Saturday, might have trouble putting that amount of money up-front at the beginning of the month, to use this thing for the full month.

But, \$14 may be within his capacity. Maybe it exceeds it. But the quarter a day makes the total cost-- The way we figure it is, the guy who uses this, probably crosses 40 times in a month -- 20 days to and from work. So, if he goes 40 times for \$14 up-front and a quarter a trip, that's 60 cents a trip instead of 90 that he would have to pay if he went through the manual lane or came through the same lane and put the exact change in.

ASSEMBLYMAN MILLER: So, it's merely-- Your system then is one to reduce the cost of the fare for the person using the toll.

MR. GRIEBLING: It is designed for commuters.

ASSEMBLYMAN MILLER: It isn't designed so much as a system for speeding up the movement of traffic through the tolls. It is designed more to save the commuter money.

MR. GRIEBLING: Well, it really does both, because we can process about 600 vehicles an hour through an automatic lane. Now, it is almost like ballet watching the commuters line up for this thing, because, boy, as soon as that window goes down and the quarter goes in and the foot hits the accelerator and the gate goes up, another guy is right behind him. It looks like you rehearsed it on a busy morning. It is sort of poetry in motion to watch that.

I would say that a manual lane -- a good manual collector -- maybe could handle 400 vehicles an hour. Some of my old-timers would say that they could get closer to that 600, but they lie a lot. (laughter)

ASSEMBLYMAN MILLER: How about it, Ben? Do you have any questions on this?

ASSEMBLYMAN MAZUR: No. I am just amazed that they have had this for 15 years, and we haven't even gotten it yet.

MR. KENNEDY: Mr. Chairman, if I may--

ASSEMBLYMAN MILLER: Yes?

MR. KENNEDY: --before the end of the testimony-- I did want to say that, as you are probably aware, the Governor has designated the Delaware River Port Authority as the agency that he is interested in pursuing in his goal of port unification between Philadelphia and southern New Jersey. At some point in the very near future, I will be in touch with Larry to invite the Committee to come to Philadelphia and Camden, not only to view the automatic toll equipment, but also to view the port, and possibly take a port tour. Hopefully, the entire Committee will be able to avail themselves of that. We will make sure that it is a very, very educational day. I will make sure that I have Mr. Griebing on a day that he hasn't scheduled any important business, so that he will be available. Hopefully, we will be able to work that out together.

ASSEMBLYMAN MILLER: Make sure it is sometime after the June primary.

MR. KENNEDY: Yes. Yes, sir.

MR. GRIEBLING: If you can spare the time, I think you might want to look at this new system I mentioned, that we are negotiating on now, because it incorporates closed circuit TV as a security system. Every vehicle that goes through the lane is recorded on closed circuit TV. You can then later compare the button the toll collector pushed with what he should have pushed for that vehicle in his lane, and you can determine-- It greatly facilitates your ability to audit.

ASSEMBLYMAN MILLER: Well now, does this take a picture of the car going through?

MR. GRIEBLING: It's a closed circuit TV camera that records every vehicle going through the lane.

ASSEMBLYMAN MILLER: Well, you have to watch this a little bit, I'm sure. As a mayor of a town back in the '70s, we had people come in to catch speeders, on the odd hours especially. We were going to install these cameras on the island between the highways. It sounded like a good idea because you would get the picture, and you would get a picture of the person in the car. The only trouble we were concerned about was that the woman alongside, might not have been his wife. (laughter) So it got knocked down, really for that reason. They didn't want to get involved.

MR. GRIEBLING: That is where we are discerning. They are mounted at great distances, and all they can tell is that it is either a truck or a car, or how many accidents.

ASSEMBLYMAN MILLER: Well, that was the reason it got knocked down.

MR. GRIEBLING: Not blondes or brunettes.

ASSEMBLYMAN MILLER: It wasn't me. My council went against it.

MR. GRIEBLING: Very interesting.

ASSEMBLYMAN MILLER: That is one of the technological things you are putting into our thinking about doing with this.

MR. GRIEBLING: Yes.

ASSEMBLYMAN MILLER: All right. It sounds very good. It sounds like a successful venture. I guess the only difference is, in your case, you are cutting down the amount of toll the person is paying, where in the other case, it is a case of paying the same toll, but getting them through without having to stop.

MR. GRIEBLING: Well again, sir, remember that ours is a toll bridge that has a bedroom community going to a place of business, and home at night. I don't know enough about Garden State traffic to know what their percentage of commuters is, but it works for us. That is about all I can say.

ASSEMBLYMAN MILLER: We appreciate your time. Thank you.

MR. KENNEDY: Thank you, sir.

MR. GRIEBLING: Thank you, Mr. Chairman.

ASSEMBLYMAN MILLER: Is there anyone else who would care to talk about this subject? How about DOT? Carolyn, would you care to become involved?

C A R O L Y N S. M C C A L L U M: (speaking from audience) I'm saving mine for the next hearing.

ASSEMBLYMAN MILLER: The next one, all right. Anyone else? (no response)

Well, I want to thank all of you for having the patience and sticking around -- hanging around as long as you have this afternoon. It has been very interesting to me. I'm sure we have all learned something by it. What we will do with it from here-- We will wait until this report comes out, and maybe sit down and come to some sort of a conclusion as to -- a conclusion in suggestion form, I might add, because we can come up with a conclusion and try to put some laws through, but I don't know how far it would go, because honestly the Governor is about the only one who has the power of veto, or authority, to do something of this nature.

We, as legislators, would have a tough job, I think, trying to pass legislation that would force the Governor to do something, because he has the power of veto yet. So I think it has to be on a suggestion basis. I'm sure we will come out with something, not only from this Committee, but from the Senate Committee, and other committees that are working in this particular area right now.

I do appreciate your time. It was nice of you to come out. Thank you.

(HEARING CONCLUDED)

APPENDIX



THE ASSEMBLY
STATE OF NEW JERSEY
TRENTON

SPEAKER
CHUCK HARDWICK

SPEAKER'S OFFICE
STATE HOUSE ANNEX, CNOPB
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609-984-8290

Testimony Before the Assembly Transportation Committee
Re: Rescinding the Toll Increase and Eliminating Toll Booths
on the Garden State Parkway

by Chuck Hardwick
Speaker, New Jersey General Assembly
April 13, 1989

The Garden State Parkway's toll collection system, which has always been frustrating for our state's drivers, is just getting worse.

Traffic keeps getting more congested and now, starting Sunday, drivers on the Parkway will have to contend with a 10-cent increase at every toll booth. This toll hike makes no sense in the face of the study by Rutgers University Professor Trefor Williams that indicates to me that we should be looking for ways to abolish the tolls, not increase them.

I sponsored a resolution opposing the increase, and now I am asking New Jersey Highway Authority Chairman William Tremayne to take action to rectify the authority's error and cancel the toll hike.

New Jersey's commuters deserve our best efforts to ensure the most efficient and cost-effective Parkway we can provide. They certainly deserve better than the extra expense of the increased tolls and the traffic nightmares that will occur as the Parkway's toll machines attempt to process twice the amount of coins.

Our greatest fears have been confirmed in the Parkway's own test. One-fifth of the machines failed to correctly process the 35-cent fare.

In addition to delays caused by the machines, the traffic problems will be compounded as motorists hunt for two or more coins as they approach the toll plazas.

My concern is that parts of this roadway could soon be known as the Garden State Parking Lot.

Not only will the toll increase add to the cost and aggravation suffered by drivers, but it will also hurt people who depend on customers delivered by the Parkway.

The increase will throw sand in the face of our efforts to revive tourism at the shore after two straight bad summers.

The Legislature and the Governor have taken positive steps to deal with ocean pollution and to restore the public's confidence in the Jersey shore. We are doing all we can to restore the reputation of our shore as a premiere spot for vacations and day trips. We don't need the traffic jams and other problems that would result from a toll hike. The prospect of sitting in longer traffic jams on the Parkway is not going to make a trip to the shore any more attractive.

Not only is the increase ill-advised, but the highway authority is ill-prepared to implement it. They are already realizing that they may have a shortage of tokens, which are the only time-saving devices that can begin to alleviate the expected traffic jams.

It's not too late to give this toll increase a red light.

We should also continue to study the possibility of eliminating the toll booths altogether.

The Williams study demonstrates that the antiquated toll collection system is an idea whose time is long since past. The toll barriers lead to increased congestion as cars decelerate, pay the toll and accelerate again.

The current system also leads to a higher accident rate near the toll plazas. The Williams study finds that, over the last six years, the jockeying that takes place upon entering and leaving the toll booths has lead to 171 injuries and 468 property damage accidents that could have been avoided.

Additionally, the toll booth system leads to increased pollution as cars accelerate and decelerate and increased vehicle costs for drivers. The wear and tear on tires and brakes and increased fuel costs could be avoided if the toll booths are replaced by an alternate system, perhaps one of the automatic identification and billing systems that are being proposed.

The ability to bill drivers for the toll without requiring them to stop, or even slow down significantly, could provide the Parkway with the funds it needs to operate without clogging up the roadway artificially created traffic jams and without the threats to the environment and driver safety caused by the toll booths.



THE ASSEMBLY
STATE OF NEW JERSEY
TRENTON

FRANK A. LOBIONDO
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OCEAN & BEACH
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NATURAL RESOURCES & ENERGY

TESTIMONY BEFORE THE ASSEMBLY TRANSPORTATION COMMITTEE

APRIL 13, 1989

FRANK A. LOBIONDO
ASSEMBLYMAN, CAPE MAY-CUMBERLAND

CHAIRMAN MILL, MEMBERS OF THE COMMITTEE, I WANT TO THANK FOR GIVING
ME THIS OPPORTUNITY TO SPEAK.

I DO NOT HAVE TO TELL YOU, MR. CHAIRMAN, THAT THE PEOPLE IN THE
FIRST DISTRICT ARE FED UP WITH THE PARKWAY AND THE NEW JERSEY
HIGHWAY AUTHORITY. IN MY FIRST TERM AS A LEGISLATOR, WE HAVE HAD
TWO PROPOSALS FOR TOLL INCREASES, ONE OF WHICH APPEARS TO BE HEADED
FOR APPROVAL; A PROPOSED NEW TOLL BARRIER FOR CAPE MAY COUNTY; AND
ABSOLUTELY NO INDICATION WHEN SOME VITAL IMPROVEMENTS WILL BE MADE
TO OUR END OF THE HIGHWAY AND AS YOU MAY RECALL WE ARE THE ONLY
SECTION OF THE PARKWAY WITH TRAFFIC LIGHTS.

ALL THIS HAS OCCURRED AT THE SAME TIME WE WERE LEARNING THAT THE PARKWAY HAS BEEN MISMANAGED, THAT THE TOLL BARRIERS CAUSE ACCIDENTS, AND THAT WITHOUT THE TOLL INCREASE, SUPPOSEDLY THERE CANNOT BE ANY IMPROVEMENTS TO THE PARKWAY.

ALSO, MR. CHAIRMAN, THAT OUR RESTROOM FACILITIES ARE CLOSED AT NIGHT AND ON WEEKENDS AND THAT OUR LOCAL POLICE ARE FORCED TO PAY TOLLS WHEN RESPONDING TO BACK-UP FOR THE STATE POLICE.

ALL OF THIS WITHOUT GIVING CAPE MAY COUNTY A SINGLE VOICE IN ANY OF THE DECISIONS MADE BY THE NEW JERSEY HIGHWAY AUTHORITY.

I REALIZE THAT WE ARE NOT THE ONLY COUNTY FACING THIS SITUATION. BUT IN CAPE MAY COUNTY, THE PARKWAY REPRESENTS THE ONLY FOUR LANE HIGHWAY IMMEDIATELY AVAILABLE TO OUR RESIDENTS AND A VITAL LINK TO ATLANTIC CITY (WHERE MANY OF OUR RESIDENTS WORK), AND TO PHILADELPHIA VIA THE EXPRESSWAY, WHERE MANY OF OUR SUMMER VISITORS LIVE (TOURISM IS CAPE MAY COUNTY'S NUMBER ONE INDUSTRY).

IN NOVEMBER AND AGAIN IN JANUARY, I TESTIFIED BEFORE THE HIGHWAY AUTHORITY ASKING THEM FOR THEIR PLAN FOR CUTTING COSTS. I HAVE YET TO HEAR THAT ONE EVEN EXISTS, LET ALONE WHAT SUCH A PLAN MAY BE.

PARKWAY TESTIMONY

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FOR AN AUTHORITY THIS SIZE TO RUN INTO FUNDING PROBLEMS IS FORGIVABLE. BUT TO SOLVE THOSE PROBLEMS BY ASKING TWO SOUTH JERSEY COUNTIES, NEITHER OF WHICH HAS REPRESENTATION ON THE AUTHORITY, TO BITE THE BULLET WITHOUT GETTING OUR FAIR SHARE, IS NOT.

FROM WHAT I HAVE SEEN, THE AUTHORITY SHOULD LOOK AT ITSELF FIRST -- FIND OUT WHAT MISTAKES IT HAS MADE, AND WHAT CAN BE DONE TO SAVE MONEY BEFORE ASKING THE WORKING PEOPLE OF THIS STATE TO PICK UP ITS TAB.

THAT LOOKS GOOD ON PAPER -- BUT THE AUTHORITY DOES NOT APPEAR TO BE WILLING TO DO SO. THE AUTHORITY CONTINUES TO SPEND WHATEVER AMOUNT OF MONEY IT RECEIVES THROUGH TOLLS AND, WHEN THAT MONEY IS USED UP, IT MOVES TO INCREASE THE TOLLS.

I THINK IT MAY BE TIME TO ABOLISH THE TOLL SYSTEM ON THE PARKWAY -- AT LEAST THOSE THAT ARE ON THE HIGHWAY ITSELF AND LEAVE THE TOLL BOOTHS ON THE ENTRANCE AND EXIT RAMPS. NOT ONLY WOULD THIS FACILITATE THE TRAFFIC FLOW, BUT IT WOULD MAKE THE AUTHORITY OPERATE ON A TIGHTER BUDGET AND BEGIN TO MAKE THE AUTHORITY MORE FINANCIALLY SOUND.

THANK YOU AGAIN, MR. CHAIRMAN, FOR THIS OPPORTUNITY TO SPEAK.

3M Traffic Control Materials Division

3M Center
St. Paul, Minnesota 55144-1000
612/736-1110



April 11, 1989

The Honorable Newton Miller
Chairman of The Assembly Transportation Committee
General Assembly
Majority Office
Second Floor
State House Annex
Trenton, NJ 08625

Dear Chairman Miller:

We have been notified through our company representative in your state that the New Jersey Legislature is looking for information on an Automatic Vehicle Identification system to address traffic management at toll booth collection stations on the Garden State Parkway.

The 3M Automatic Vehicle Identification systems are designed to:

- . increase the volume of vehicles going through existing toll collection booths;
- . minimize the task of revenue collection, while increasing the efficiency of toll collection;
- . have tag and collection security built into the total system;
- . create a safe environment for the toll collection employee and the driving public;
- . have a built-in enforcement system for collection violators; and,
- . be cost effective.

The systems we offer to meet these demands utilize radio wave and optical retroreflective image analysis. The Automatic Vehicle Identification (AVI) technology is based on tags which are remotely read by low radio frequency (RF) "readers". Each tag is assigned its unique security number. Vehicles are identified by readers as they pass through the toll collection booth, and their pass is accounted for electronically. Some states are testing an enforcement system by optically reading their reflective license plates.

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The Honorable Newton Miller
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With the utilization of these two systems, vehicle drivers pay tolls without having to have cash on hand, the toll authorities simplify their collection process, and the transit time for vehicles moving through toll plazas is greatly reduced.

I hope that I have given you enough of a description of the 3M systems so that we can have the opportunity to provide further details to you and other New Jersey officials.

Respectfully yours,



Robert L. Olson
Sales & Marketing Manager
Special Enterprises Program

RLO:rjh

