State of New York
Office of the State Comptroller
Division of Management Audit

METROPOLITAN TRANSPORTATION AUTHORITY BRIDGES AND TUNNELS

SCHEDULING AND DEPLOYING OF BRIDGE AND TUNNEL OFFICERS

REPORT 95-S-16

H. Carl McCall

Comptroller

State of New York
Office of the State Comptroller

Division of Management Audit

Report 95-S-16

Mr. Michael Ascher
President
MTA Bridges and Tunnels
Robert Moses Building
P.O. Box 35
Randalls Island, NY 10035

Dear Mr. Ascher:

The following is our report on the scheduling and deploying of Bridge and Tunnel Officers at the Metropolitan Transportation Authority's Bridges and Tunnels.

This audit was done according to the State Comptroller's authority as set forth in Article X, Section 5 of the State Constitution. We list major contributors to this report in Appendix A.

Office of the State Comptroller
Division of Management Audit

December 30, 1996

Executive Summary

Metropolitan Transportation Authority Bridges And Tunnels Scheduling And Deploying Of Bridge And Tunnel Officers

Scope of Audit

The Metropolitan Transportation Authority's Bridges and Tunnels (Bridges and Tunnels) was created to acquire, construct, operate, and maintain the toll bridges and tunnels located within New York City. Bridges and Tunnels employs about 1,700 people, including 764 permanent Bridge and Tunnel Officers (Officers) and about 365 temporary Officers, to operate and manage seven bridges and two tunnels. In 1994, about 260 million vehicles used the Bridges and Tunnels. Officers were paid $44 million in salary and fringe benefits, including $8.7 million for overtime. During 1994, Bridges and Tunnels reported toll revenues of $725.6 million and operating expenses of $170.4 million.

Our audit addressed the following questions:

- Does management use a formal plan for scheduling and deploying Officers at the various Bridges and Tunnels?
- Are overtime and pay deduction rates properly computed?
- Was the cost benefit analysis for the Electronic Toll Collection system (ETC) based on reasonable assumptions?

Audit Observations and Conclusions

We found that Bridges and Tunnels management do not use a formal plan when scheduling and deploying Officers. In addition, Bridges and Tunnels management do not ensure that overtime and pay deduction rates are properly calculated. We also found that certain aspects of the cost benefit analysis for the ETC were not based on reasonable assumptions.

A comprehensive plan for scheduling and deploying Officers would help attain proper staffing at toll plazas and maintain a satisfactory level of customer service. It would also provide for adequate coverage to curtail overtime costs and encourage productivity. We found that Bridges and Tunnels management have not developed a formal needs analysis for determining the right number of Officers to staff its facilities. Instead, facility managers determine the number of Officers needed for each shift based on their experience with traffic patterns and their desire to keep delays at toll plazas to a minimum. A more formal approach is needed to ensure optimum staffing levels. (See p. 5)

We performed various analyses to determine whether Bridges and Tunnels management have properly staffed plazas. Our analyses suggest that the facilities are overstaffed. For example, using one particular productivity standard, we determined that Bridges and Tunnels had 42 excess Officer positions at five facilities on five separate days. Bridges and Tunnels management should do its own analyses of traffic volume and Officer staffing

levels at each bridge and tunnel, and develop standards for the optimum staffing of facilities. (See pp. 5-8)

In addition, Bridges and Tunnels management did not ensure that overtime payments as well as pay deduction amounts were properly computed. According to the Officers' collective bargaining agreement, Bridges and Tunnels should pay Officers time and one-half for overtime during weekday shifts. We estimated that from 1991 through 1994, Bridges and Tunnels overpaid about $1.7 million in overtime by incorrectly using a rate greater than time and a half. We also found that for the period March 1, 1993 through April 30, 1994 Bridges and Tunnels should have deducted an additional $152,023 from employees for unauthorized absences. We recommend that Bridges and Tunnels revise and correct payroll procedures for computing overtime and pay deduction rates. (See pp. 9-11)

In 1991, the MTA Board authorized Bridges and Tunnels to participate with six other toll agencies from New York, New Jersey and Pennsylvania to select an ETC. Under this system, each vehicle using ETC would be equipped with a small electronic tag to communicate customer account information. Toll lanes were to be equipped with readers that would collect and transmit information to and from the tags. The data would be processed and the appropriate toll charged to a prepaid customer account. In 1994, Bridge and Tunnel management prepared a cost benefit analysis showing that installing the ETC would cost about $15.3 million. A revised cost benefit analysis prepared in early 1996 indicated capital costs of $53 million. The two primary reasons for the vast cost increase are an increase in the number of tags needed and scope changes that affected the design/build contract let by Bridges and Tunnels. Under the contract, the system was designed while construction was ongoing, and this arrangement led to cost increases as the project progressed. (See p. 13)

We conducted a review of the revised cost benefit analysis of the ETC to determine whether it was reasonable because of the significant increase in the capital costs and late implementation of the system. We assessed the reasonableness of the assumptions, financial benefits, and estimated operating and capital costs. We concluded that certain aspects of the cost benefit analysis were not based on reasonable assumptions. Because of the vast increase in capital construction costs, Bridges and Tunnels' cumulative financial benefits will not exceed ETC operating costs by 1999, as originally anticipated, but could do so in 2001. However, because installation of ETC is not proceeding on schedule, the financial gains will be delayed. Thus, the year when cumulative costs will be recouped will probably be pushed further back, beyond the year 2001. (See pp. 13-15)

Comments of Bridges and Tunnels Officials

Draft copies of the matters presented in this report were provided to Bridges and Tunnels officials for their review and formal comments. Their comments have been considered in preparing this report.

Contents

Introduction

Background

The Metropolitan Transportation Authority's Bridges and Tunnels (Bridges and Tunnels), formerly known as the Triborough Bridge and Tunnel Authority, was created to acquire, construct, operate, and maintain the toll bridges and tunnels located within New York City. Bridges and Tunnels employs about 1,700 people, including 764 permanent Bridges and Tunnels Officers (Officers) and 365 temporary toll collectors, to operate and manage these facilities. The Bridges and Tunnels were built between 1936 and 1964 and are staffed as follows:

Facility	Year Opened	Officers
Triborough Bridge (2 Plazas)	1936	146
Henry Hudson Bridge	1936	36
Marine Parkway (Gil Hodges Memorial) Bridge	1937	21
Cross Bay Veteran's Memorial Bridge	1937	21
Bronx-Whitestone Bridge	1939	85
Queens Midtown Tunnel	1940	126
Brooklyn-Battery Tunnel	1950	132
Throgs Neck Bridge	1961	89
Verrazano-Narrows Bridge	1964	108
Total		764

In 1994, about 260 million vehicles used the Bridges and Tunnels. Officers were paid $44 million in salary and fringe benefits, including $8.7 million for overtime. Bridges and Tunnels reported toll revenues of $725.6 million in 1994 and $725.7 million in 1993. Reported operating expenses totaled $170.4 million in 1994 and $187.3 million 1993.

Audit Scope, Objectives and Methodology

We audited the scheduling and deploying of Officers and the initial planning for the Electronic Toll Collection system (ETC) for the period January 1, 1993 through July 14, 1995. Our objectives were to determine whether Bridges and Tunnels management: used a standard to staff its facilities that is reasonable based on collector proficiency; used a formal plan for deploying and scheduling Officers to maximize staff productivity; properly computed

overtime and pay deduction rates; and had a cost benefit analysis for the ETC that was based on reasonable assumptions. To accomplish our objectives, we analyzed traffic volume data and Officers' sick leave usage at five facilities, and reviewed the cost benefit analysis of the ETC. We also interviewed Bridges and Tunnels officials and employees, reviewed relevant Bridges and Tunnels records, reviewed Bridges and Tunnels staff's method of calculating overtime pay and deductions for absence without pay, and observed toll collection activities.

We conducted our audit according to generally accepted government auditing standards. Such standards require that we plan and perform our audit to adequately assess those operations of the Bridges and Tunnels management included in our audit scope. Further, these standards require that we understand the Bridges and Tunnels internal control structure and its compliance with those laws, rules and regulations that are relevant to the operations included in our audit scope. An audit includes examining, on a test basis, evidence supporting transactions recorded in the accounting and operating records and applying such other auditing procedures as we consider necessary in the circumstances. An audit also includes assessing the estimates, judgments, and decisions made by management. We believe our audit provides a reasonable basis for our findings, conclusions and recommendations.

We use a risk-based approach when selecting activities to be audited. This approach focuses our audit efforts on those operations identified through a preliminary survey as having the greatest probability for needing improvement. Consequently, by design, finite audit resources are used to identify where and how improvements can be made. Thus, we devote little audit effort to reviewing operations that may be relatively efficient or effective. As a result, our audit reports are prepared on an "exception basis." This report, therefore, highlights those areas needing improvement and does not address activities that may be functioning properly.

Response of Bridge and Tunnel Officials

We provided draft copies of the matters contained in this report to Bridges and Tunnels officials for their review and comments. Their comments have been considered in preparing this report and are included as Appendix B.

Within 90 days after final release of this report, as required by Section 170 of the Executive Law, the President of the Metropolitan Transportation Authority's Bridges and Tunnels shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons therefor.

Bridges and Tunnels Officer Staffing

The Officers' primary responsibility is the collection of toll revenues. Other duties of permanent Officers include operating automotive equipment, helping in general maintenance work, and performing law enforcement functions. They work rotating eight-hour tours, including nights, weekends, and holidays.

We found that Bridges and Tunnels management do not use a formal plan when scheduling and deploying Officers. As a result, Officers are not efficiently deployed at the various facilities. We found that Bridges and Tunnels management do not ensure that overtime and pay deduction rates are properly calculated. This has allowed overpayments to occur.

Staffing Standards

A comprehensive plan for scheduling and deploying Officers would help attain proper staffing at toll plazas and maintain a satisfactory level of customer service. It would also provide for adequate coverage to curtail overtime costs, and encourage staff productivity. Among the rudiments of such a plan is an assessment of the number of Officers' positions needed, based on an analysis of traffic data and work restrictions, and toll collector capabilities. Our review found that Bridges and Tunnels management has not developed a formal needs analysis for determining the number of Officers to staff its facilities.

In 1994, the Bridges and Tunnels Scheduling Department reduced the number of Officers' positions to 764. However, neither the Scheduling Department nor the facility managers used any standard formula or criteria to determine the Officers' positions needed at the toll plazas. Without a standard for staff deployment, Bridges and Tunnels management cannot optimize its use of Officers, and could incur unnecessary personal service costs, including overtime.

The Scheduling Department relies on the Bridges and Tunnels site managers' assertions of the number of Officers' positions needed. The managers determine the number of Officers for each shift based on their experience with traffic patterns and their desire to keep delays at toll plazas to a minimum. They have not done any studies of toll plaza activities.

In 1994, while preparing the cost/benefit analysis for the ETC capital project, Bridges and Tunnels Strategic Planning & Budget Division (Division) developed a 450 transactions/hour standard for manned lanes. Manned lanes include full service and exact change lanes. Prior to this, Bridges and Tunnels management did not have transaction processing standards. Division officials selected the highest traffic counts of certain lanes and hours on October 5, 1994 at the Queens Midtown Tunnel from the "Day Total by Hour" report.

These counts were then rounded up to substantiate the 450 transactions/hour standard. However, managers were not instructed to use this standard, and do not use any standard, in making staffing decisions.

To determine whether the Bridges and Tunnels toll management properly staffed plazas, we analyzed Officers' staffing levels and traffic volume in manned lanes for five facilities on five separate days. We divided the hourly transactions by the 450 transactions/hour processing standard to determine the number of Officers necessary to handle the traffic volume. We found 42 of 137 Officers' positions to be excessive, as shown in the following table.

Hours With Excess Officers

Date	Facility	Inbound(I) Outbound(O) Lane	Tours	Hour With Lowest Number of Excess Officers	Vehicle Count	Officers		
						Assigned	Needed	Excess
1/20/95	Queens	I	6am-2pm	9am	1,930	7	5	2
	Midtown		2pm-10pm	5pm	1,124	4	3	1
	Tunnel		10pm-6am	2am	147	1	1	0
		O	6am-2pm	9am	1,027	3	3	0
			2pm-10pm	5pm	1,889	6	5	1
			10pm-6am	6am	136	1	1	0
3/13/95	Triborough	I	6am-2pm	8am	2,027	7	5	2
	Bridge -		2pm-10pm	6pm	1,581	6	4	2
	Manhattan		10pm-6am	5am	98	1	1	0
		O	6am-2pm	10am	1,025	4	3	1
			2pm-10pm	5pm	1,615	6	4	2
			10pm-6am	5am	107	1	1	0
7/15/94	Triborough	I	6am-2pm	8am	1,394	6	4	2
	Bridge -		2pm-10pm	10pm	988	4	3	1
	Bronx		10pm-6am	1am	380	2	1	1
		O	6am-2pm	8am	1,302	6	3	3
			2pm-10pm	10pm	956	4	3	1
			10pm-6am	11pm	792	3	2	1
2/21/95	Bronx-	I	6am-2pm	8am	2,365	8	6	2
	Whitestone		2am-10pm	6pm	2,090	7	5	2
	Bridge		10pm-6am	2am	229	2	1	1
		O	6am-2pm	8am	1,512	6	4	2
			2pm-10pm	5pm	2,039	7	5	2
			10pm-6am	1am	308	2	1	1
3/14/95	Throgs	I	6am-2pm	8am	2,844	9	7	2
	Neck		2pm-10pm	8pm	700	6	2	4
	Bridge		10pm-6am	5am	211	2	1	1
		O	6am-2pm	8am	1,965	7	5	2
			2pm-10pm	6pm	2,144	7	5	2
			10pm-6am	5am	237	2	1	1
Totals						137	95	42

We did a further analysis to determine whether the remaining Officers could handle the increases in per lane traffic volume. We selected the highest-hourly average traffic counts, for both the inbound and outbound lanes, on the five days at each of the five facilities. (We divided each hourly traffic count by the number of manned lanes to determine the highest hourly average.) We then compared those average traffic counts with what the average traffic counts would be if one less Officer worked that hour. We determined that at the new level of reduced Officer staffing, the remaining manned lanes could accommodate the increase in per lane traffic volume and still be below the 450 transactions/hour standard. In most cases, the remaining manned lanes would also be below the 360 transactions/hour standard used by the Port Authority of New York and New Jersey, as shown in the following table.

Average Traffic Counts at Reduced Bridge and Tunnel Officer Staffing Level

Date	Facility	Inbound(I) Outbound (O) Lane	Officers Assigned Hourly	Hourly Average Vehicle Count	Vehicle Count With One Less Officer
1/20/95	Queens	I	6	285	342
	Midtown	O	5	359	449
	Tunnel				
3/13/95	Triborough	I	7	290	338
	Bridge -	O	6	269	328
	Manhattan				
7/15/94	Triborough	I	5	262	328
	Bridge -	O	3	264	396
	Bronx				
2/21/95	Bronx	I	7	299	349
	Whitestone	O	7	291	340
	Bridge				
3/14/95	Throgs	I	9	316	356
	Neck	O	7	306	357

Bridges and Tunnels management agreed with our recommendation that it develop standards for staffing its facilities. However, they disagreed with our use of 450 transactions per hour that was extracted from the ETC cost/benefit analysis on the basis that it was not comparable because it represents the number of transactions that can be processed in an automatic coin machine or exact change lane, and not a full service lane. They did not address our additional analysis using 360 transactions per hour. Instead they mentioned that the Scheduling Division has used 315 transactions per hour for manual lanes during peak periods to determine staffing levels. We disagree with the introduction of this information at this point in the audit. During our field work we were advised that the Scheduling Division relied on the site managers judgment, and did not use a staffing standard. Thus, at this point in time, we do not consider this statement to be sufficient evidence for restating our audit results.

Recommendation

1. Do a detailed analysis of traffic volume and Officer staffing levels at each bridge and tunnel, and develop standards for the optimum staffing of facilities. Assign officers based on the newly developed standards.

Computation of Overtime and Pay Deduction Rates

Bridges and Tunnels incurs a significant amount of overtime ($8.7 million in 1994). According to the Officers' collective bargaining agreement, Bridges and Tunnels should pay Officers time and one-half (1.5) for overtime during weekday shifts. Instead, we found that Bridges and Tunnels pays an overtime rate of 1.71 because staff do not consider the Officers' paid lunch hours when calculating the hourly overtime pay. Staff base the overtime rate on a seven-hour workday instead of an eight-hour day. Consequently, staff used an hourly overtime rate of $29.59 instead of $25.88 for time and one-half, or $3.71 too much. We estimated that during 1991 through 1994, staff overpaid officers about $1.7 million of overtime. The following table shows the actual overtime paid from 1991 through 1994 and our adjustments based on $25.88 an hour for time and a half.

Year	Overtime Paid	Overtime Adjusted	Excess
1991	$7,819,508	$7,400,449	$ 419,059
1992	8,014,407	7,584,903	429,504
1993	7,747,068	7,331,891	415,177
1994	8,140,479	7,704,219	436,260
Total			$1,700,000

Bridges and Tunnels management have agreed to revise the way Officers are compensated for overtime. However, the cost savings resulting from such a revision may be offset by union demands because the overtime payment method is subject to the collective bargaining process. They added that the current method has been in use many years, having been a long-standing practice, and it is not the result of incorrect payroll calculations. We believe Bridges and Tunnels should pay Officers' overtime at the rate of time and one-half (1.5) their base pay, according to the collective bargaining agreement.

We also found that Bridges and Tunnels staff do not properly deduct employees' salaries to recoup prior payments for unauthorized absences. Staff should make salary adjustments based on a workday rate, which is computed by dividing the Officers' biweekly salary of $1,382.66 by ten, equaling $138.27 per day. However, staff calculate deduction amounts using a lower than actual daily rate by incorrectly dividing the Officers' biweekly salary by 14 for a rate of $98.76.

We also sampled 50 Officers with 146 occasions of illness. For 63 occasions, totaling 124 days, the Personnel Department initiated pay deductions because the Officers did not submit the required doctor's notes. Staff used a rate of $98.76 a day, totaling $12,246 for the 124 days. However, they should have used a rate of $138.27 a day, totaling $17,145 for the 124 days. The Officers were overpaid about $4,899.

We expanded our audit test and determined Officers were overpaid $152,023 for the period March 1, 1993 through April 30, 1994.

Management does not think changing the pay deduct method would be cost effective because they have used this lower rate as a basis for calculating shift deferential, and changing the rate would result in increased shift differential payments exceeding our projected cost savings. As in the case with overtime pay calculations, Bridge and Tunnels' stated its method of computing pay deductions has been in use many years, and it not a result of incorrect calculations. We believe, however, that Bridges and Tunnels officials should make salary deductions by dividing the Officers' biweekly rate by ten days and not 14 days. Whether this will result in additional costs in the future is hard to predict because the implementation of E-Z Pass is a new factor that must be considered and its affect on staffing and overtime.

Recommendation

2. Revise and correct payroll procedures for computing overtime and pay deduction rates.

Electronic Toll Collection

Overview

In 1991, the MTA Board authorized Bridges and Tunnels to participate with six other toll agencies from New York, New Jersey, and Pennsylvania (called the E-Z Pass Interagency Group) to select an ETC. Under this system, each vehicle using ETC would be equipped with a small electronic tag to communicate customer account information. Toll lanes were to be equipped with readers that would collect and transmit information to and from the tags. The data would be processed and the appropriate toll charged to a prepaid customer account.

The ETC requires standard tags and readers to enable customers to cross the toll facilities of the seven agencies using the same tag. The objectives of the system are to reduce traffic congestion, enhance customer convenience, reduce air pollution, and reduce the costs of revenue processing and toll collection.

Since the formation of the E-Z Pass Interagency Group, one toll agency, the New York State Thruway Authority, has implemented E-Z Pass. Bridges and Tunnels will be the second agency to implement E-Z Pass. The new system became operational at the Verrazano-Narrows Bridge in October 1995. As of April 1996, E-Z Pass has not been implemented at the other eight Bridge and Tunnel facilities. Originally, the Verrazano-Narrows was to be on-line in August 1995, the Throgs Neck and Whitestone by the end of 1995, and the six other facilities by early 1996. E-Z Pass is expected to be in operation at all nine facilities by the end of 1996.

ETC Cost Benefit Analysis

In 1994, Bridges and Tunnels management prepared a cost benefit analysis showing that installing the ETC would cost about $15.3 million. By the end of 1994, capital costs were expected to be $26.7 million and in October 1995, such costs were expected to be $43.8 million. A revised cost benefit analysis prepared in early 1996 indicated capital costs of $53 million. The two primary reasons for the vast cost increase are an increase in the number of E-Z Pass tags needed and scope changes that affected the design/build contract let by Bridges and Tunnels. Under the contract, the system was designed while construction was ongoing, and this arrangement led to cost increases as the project progressed.

We conducted a review of the revised cost benefit analysis of the ETC to determine whether it was reasonable because of the significant increase in the capital costs and late implementation of the system. We assessed the reasonableness of the assumptions, financial benefits, and estimated operating

and capital costs. We concluded that because of the vast increase in capital construction costs, Bridges and Tunnels' cumulative financial benefits will not exceed ETC operating costs by 1999, as originally anticipated, but could in 2001.

The assumptions on market penetration estimate that 30 percent of the vehicles will use the ETC by 1997 (Phase I) and 60 percent by 2000 (Phase II). Bridges and Tunnels management assumptions were based on three tenets: (1) the marketing report prepared by the Interagency Group, which determined that a realistic market share estimate is 30 percent; (2) their belief that the estimated ETC market share in the cost/benefit analysis is on the conservative side, based on the success of the New York Thruway Authority implementation of the ETC; and (3) their experience in how their customers pay the fares (cash or tokens).

Bridges and Tunnels management based other assumptions used in the cost benefit analysis on changes in toll pricing policies that the MTA Board must approve, such as: eliminating truck tickets (trucks must use the ETC); requiring franchise buses to use ETC to receive reduced rates; offering discounts for residents of Rockaway and Staten Island that would be available only through ETC; eliminating exact change lanes; and eliminating discount tokens, by offering larger discounts from the current discount token rate. The financial benefits and the ETC operating costs are based on market penetration. When the market share increases, the financial benefits and operating costs would also increase.

Reductions in the number of Officers doing toll collections provides the largest financial benefit. An ETC market share penetration of 30 percent would reduce the Officers' staff by 59 (a decrease in personal service costs of $2.8 million) and a market share penetration of 60 percent would reduce the number of Officers by another 177 thereby reducing personal service costs by an additional $8.4 million. In calculating the reduction of 59 Officers, Bridges and Tunnels management first determined the number of manned toll lanes that operate for an eight-hour tour for each toll plaza. The number of manned toll lanes that management should convert to the ETC would be based on the percentage of market penetration, which equates to 42 lanes for 30 percent penetration. Bridges and Tunnels management then determined the number of Officers working in these lanes and applied a relief factor (e.g. to account for vacation days) to the manned lanes for each full shift at each plaza. The same calculations were followed to determine the reduction of Officer positions at 60 percent market share penetration.

The number of Officers' vacancies would achieve the planned reduction of 177 by the end of Phase II, in 2000.

Bridges and Tunnels advised us that the "revised cost benefit analysis included a reduction of 222 BTOs that will be eliminated by attrition, an increase from 177 BTOs planned in the original cost benefit study, yielding an additional $2.8 million in savings. In addition, our greater than anticipated record of sales of tags will permit the BTO reduction to be accelerated thereby permitting us to achieve our goals earlier than originally planned." We disagree that the goals will be achieved earlier than "originally" planned because the cost benefit analysis that was prepared in 1994 by Bridges and Tunnels management indicated that the program would cost about $15.3 million, and now the program has cost about $53 million, more that three times the original estimate.

As a result of the significant cost increases, Bridges and Tunnels' cumulative financial benefits would have outweighed ETC's operating costs and amortized capital costs by 2001, and not by 1999 as planned. However, because installation of ETC is not proceeding on schedule, the financial gains will be delayed. Thus, the year when cumulative costs will be recouped will probably be pushed further back, beyond 2001. Bridges and Tunnels replied "We are pleased to report that as of August 1996, E-ZPass has been implemented at all of our seven bridges, and will be implemented at our two tunnels by the end of this year. More than 263,000 E-ZPass tags have been issued, far exceeding what we had anticipated at this point in time. We fully expect that the cumulative financial benefits of E-ZPass will outweigh its operating costs and amortized capital costs by the year 2001, and not beyond as suggested in the draft audit report." We accept Bridges and Tunnels' statements that the program has exceeded its expectations in sales, however, based on the analysis of costs and financial benefits schedule as of October 29, 1996, the report is correct because the cumulative financial benefits will not exceed the cumulative costs by the year 2001.

Recommendation

3. Timely implement the ETC system.

Major Contributors to This Report

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September 26, 1996

Mr. David R. Hancox
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Re: State Comptroller Audit 95-S-16 (Scheduling and Deploying of Bridge and Tunnel Officers at the MTA's Bridges and Tunnels)

Dear Mr. Hancox:

This is in reply to your letter requesting a response to the above referenced audit report.

I have attached for your information the comments of Mr. Michael C. Ascher, President, MTA Bridges and Tunnels, which address your report in detail.

Sincerely,

E. Virgil Conway

Attachment

Appendix B

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Michael C. Ascher
President

Bridges and Tunnels

September 16, 1996

Hon. E. Virgil Conway
Chairman
Metropolitan Transportation Authority
347 Madison Avenue
New York, NY 10017-3739

Ref: NY State Comptroller Audit of the Scheduling and Deploying of Bridge and Tunnel Officers at the MTA's Bridges and Tunnels No. 95-S-16.

Dear Mr. Conway:

This is in response to the NY State Comptroller Audit of Scheduling and Deploying of Bridge and Tunnel Officers No. 95-S-16. Our specific comments concerning each of the report's recommendations follow.

Electronic Toll Collection

We are pleased to report that as of August 1996, E-ZPass has been implemented at all of our seven bridges, and will be implemented at our two tunnels by the end of this year. More than 263,000 E-ZPass tags have been issued, far exceeding what we had anticipated at this point in time. We fully expect that the cumulative financial benefits of E-ZPass will outweigh its operating costs and amortized capital costs by the year 2001, and not beyond as suggested in the draft audit report.

We have some additional comments regarding the draft audit report. While, the report states that "aspects of the cost benefit analysis are not reasonable," there is no discussion in the report as to what in the cost benefit study is not reasonable. In fact, independent engineering consultants, O'Brien-Kreitzberg, reviewed the revised cost benefit analysis in April 1996 and concluded that it was "well organized, thorough, and reasonably realistic as to the future expectations of this project."

The draft audit report neglected to update an increase in the number of Bridge and Tunnel Officers (BTO's) that will be reduced when the program is fully implemented.
The revised cost benefit analysis included a reduction of 222 BTO's that will be eliminated by attrition, an increase from 177 BTO's planned in the original cost benefit study, yielding an additional $2.8 million in savings. In addition, our greater than anticipated record of sales of tags will permit the BTO reduction to be accelerated thereby permitting us to achieve our goals earlier than originally planned.

The audit report also states that "according to the collective bargaining agreement, Bridges and Tunnels Management cannot lay off Officers." However, as mentioned in B&T's preliminary audit finding response to John Gimberlein, dated May 2, 1995, the language of the contract states that "no Officer will be laid off because of the use of automatic lanes." The contract language speaks to automatic coin machines, not E-ZPass. The formal contract reference is Article XV, Section 10.

Staffing Standards

We, of course, agree with the recommendation to develop and analyze BTO staffing and traffic levels. However, we believe that the major assumption used by the audit team to estimate staffing levels is inappropriate and should be changed. As we have stated to the audit team several times over this multi-year audit, the use of a manual toll lane transaction processing "standard" of 450 vehicles per hour is not a realistically achievable target against which staffing levels should be made. This measure was extracted by the audit team from the E-ZPass cost benefit analysis, and was used out of context. The 450 number was mentioned only to compare the optimal speed of processing E-ZPass versus automatic coin machines and exact change manual toll lanes. During peak periods, a BTO can register approximately 450 transactions per hour in an exact change lane because the transactions are continuous and are processed using the most efficient payment method available (ticket, token, or exact fare). In addition, the exact change lanes exclude commercial vehicles, which have a longer transaction time. The 450 number has no relationship at all to how staffing projections related to electronic toll collection were developed, and was never intended for use by our Scheduling Division as a standard by which staffing decisions are made.

As noted in our preliminary audit response to John Gimberlein, dated October 5, 1995, the Scheduling Division met with the audit team subsequent to the issuance of the preliminary report. In addition to providing information regarding methods to determine appropriate staffing levels, the Scheduling Division reported that it utilizes 315 transactions per hour for full service (i.e. non-exact change) manual lanes during peak periods. Using this figure in the analysis would result in a much higher number of BTO's required. We again urge that the audit team reestimate the number of BTO's utilizing this additional information.

Also previously noted in B&T's preliminary audit response were the strides we have made in reducing BTO staffing since the inception of our Scheduling Division in 1993. This effort continues. In fact, in the months since my earlier response, our staffing requirements have been reduced by an additional 72 positions, the result of a combination of initial E-ZPass headcount reductions (46 positions) and reductions achieved through other efficiency gains (26 positions). All of these planned reductions were accomplished during the current transition to E-ZPass. When the transition is complete, we will resume our efforts to validate the current staffing standard of 315 transactions per hour for manual lanes during peak periods or modify it if appropriate, following a comprehensive review of the actual impacts of the recent toll change and other factors on toll collection transaction times.

Computation of Overtime and Pay Deduction Rates

B&T management has introduced through collective bargaining a demand to implement the audit recommendation to revise the way that Bridge and Tunnel Officers (BTOs) are compensated for overtime. However, as previously raised in B&T's initial comments to the audit report in my letter to John Gimberlein on August 3, 1995, any cost savings derived from implementing the audit recommendations may be offset by countervailing union demands because the methodology currently employed by B&T is protected by the collective bargaining process.

The method of computing overtime payment and charges for absences without pay is part of the long-standing contractual terms and conditions of employment with the BTOBA, the bargaining agent of the BTOs. It is not merely a "payroll procedure" as is stated in the audit report, and because of this, it can only be changed through collective bargaining with the union, not by unilateral management action. While the methodology is different from that used by other New York State Agencies, it is not necessarily incorrect. It is but one facet of the negotiated labor contract that cannot be considered without analyzing all other parts of the compensation package.

Because the overtime methodology is subject to collective bargaining, BTOBA will demand that any cost savings accruing from changing these provisions are required to be credited to the union in the costing of a new contract. Thus, although B&T management is attempting to achieve results in conformance with the audit report in its current round of collective bargaining with the BTOBA, cost savings from altering this provision, if the BTOBA is willing to bargain on it, can only be implemented at the expense of other productivity enhancing contract proposals. In addition, the value that can be attributed to changing these provisions is already substantially lower than contained in the draft audit report because of our successful efforts to reduce BTO overtime expenditures.

Changing the computation of the pay deduction for unauthorized absences was also part of the audit report's second recommendation. While the method can be changed, doing so would increase other compensation costs and would require substantial investments to implement. Changing the computation of the daily compensation rate from the current one-fourteenth of biweekly pay to one-tenth of that amount would indeed save some personnel costs for absences without pay. However, it would increase the cost of other types of compensation, notably night shift differential payments. BTOs are entitled to an additional 10% of their daily compensation for all night shifts. This is currently calculated by taking 10% of one-fourteenth of the biweekly rate. Changing the computation of the workday rate to one-tenth of the biweekly rate would have increased differential payments from July 1, 1993 to June 30, 1994 by $376,689, substantially outweighing the $152,023 in cost savings quantified in the audit report.

Changing the computation of the daily compensation rate has other important ramifications that were not addressed in the audit report. It would require a major specification change in the time and leave and payroll systems that are currently being implemented. It would have to be bargained with all represented groups and would need to be implemented simultaneously throughout the agency. It would require the rewriting of a substantial portion of current work rules. Because of these factors, any change to the computation of the daily compensation rate could not realistically be achieved before the year 2000 and would have substantial implementation costs.

While conformance with other New York State Agencies' time and leave and payroll systems is a laudable goal, changing B&T's current system solely for the sake of conformance is not cost-effective. Therefore, while B&T is currently pursuing the major cost saving element in the audit report recommendation by discussing a change in the overtime calculation with the BTOBA, it has no current plans to negotiate changing the calculation of the payroll deduction for unauthorized absences.

Sincerely,

Michael C. Ascher
President