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November 14, 2005

Honorable Fredrick P. Horn Presiding Judge of the Superior Court 700 Civic Center Drive Santa Ana. CA 92701

SUBJECT: Orange County Grand Jury Report: OCTA Bus Communications System

Dear Judge Horn,

On behalf of the Orange County Transportation Authority (OCTA) Board of Directors, this is the response to the Orange County Grand Jury's May 31, 2005, report reviewing the OCTA bus communications system known as the Integrated Transportation Communication System (ITCS). We appreciate the observations and suggestions offered. The information provided will assist us in ensuring that OCTA continues to offer outstanding bus service for Orange County.

Since the Grand Jury's initial communications to OCTA on this matter in fall 2004, we have been listening. In December 2004, members of the Environmental and Transportation Subcommittee of the Grand Jury suggested OCTA hire an independent evaluator of the system. OCTA did this. The result was a June 2005 report by a nationally recognized communications firm headed by Dr. Henry L. Richter, Ph.D. / Professional Engineer (PE). The attached Richter Group report concludes that OCTA's current system is reliable and meets industry and federal guidelines. The report documents numerous improvements made to the system and OCTA's management processes and serves as the basis for many of our responses.

### **FINDINGS**

#### 5.1 Inadequate project management

OCTA agrees in part with this finding. It is noted that beginning in 2001, OCTA management acknowledged that project management was inadequate. Over the past four years, management has taken a number of corrective actions to ensure successful implementation of the project. Project management challenges existed on several fronts. For example, the

original project manager lacked the technical expertise to understand the underlying technology of this complicated system. In addition, as well as serving as ITCS project manager, this individual had other full time responsibilities.

Following OCTA's change in executive management in 2001, a project review was undertaken and an audit of the project conducted. This resulted in a change in the overall approach to project management. The new method was to establish a team approach to project management (versus a single project manager) that included Executive, Maintenance, User Group and Information Systems (IS) teams. A contract compliance officer and legal counsel augmented the team. The Richter Group report validates the team approach to project management.

 Automatic passenger counter was added and deleted in a matter of months

**OCTA disagrees with this finding.** As discussed in the exit interview with members of the Grand Jury, the ITCS contract was amended on November 13, 2000, to add the installation of automatic passenger counting systems on 75 buses in the OCTA's fleet. This requirement was never removed from the contract requirements. OCTA currently has 75 buses that are equipped with the automatic passenger counting system. This system is fully functional and utilized by OCTA on a regular basis.

 Original project manager was required to oversee this project in addition to his other duties.

**OCTA** agrees with this finding. OCTA management has acknowledged that the original project manager may have been overburdened by his other duties to the detriment of the ITCS project. Management has taken steps to ensure that this situation does not occur in the future by dedicating a full time project manager to all large-scale technical projects.

• It took five years of problems with the contract before an audit was performed.

**OCTA** agrees in part with this finding. Immediately following the execution of the contract in September 1997 and the notice to proceed, the contractor began to design the system. The actual system hardware was not installed

and operational until early 2000. This was approximately two years prior to the audit. It is correct that a significant amount of time went by before an audit was conducted. We believe this was due to reluctance on the part of the project manager to communicate deficiencies with management in a timely manner. The audit report ordered by OCTA's Chief Executive Officer flagged communication issues and brought about a change in the approach to project management.

#### 5.2 <u>Unreliable system</u>

**OCTA** disagrees with this finding. OCTA management made a decision to investigate thoroughly the allegations of a non-reliable system. To that end, in early 2005, OCTA retained an independent expert – the Richter Group — to review the overall communications system and assess whether or not it performed within federal guidelines and to industry standards. The review also analyzed the system's capacity to grow as the bus fleet grows and provided an assessment and recommendations for ongoing maintenance and training.

The Richter Group spent three months reviewing the technical specifications of the system, testing and assessing performance. It included interviewing coach operators, radio communications personnel, maintenance staff, project team members and management.

On June 20, 2005, the Richter Group issued its final report detailing the findings of its exhaustive review of the system. The report states that the "system meets specifications, and is at the forefront of a combined voice-and-data technology. This system meets recently established Federal Guidelines for Transit Systems, and compares favorably with other new transit systems, such as RTD Denver." Further, the system is "adequate, is reliable, meets specifications, and has growth potential." It concluded, "At this time, there are no major technical deficiencies that would indicate a degraded or partially functioning system."

The Richter Group report also cited the fact that the ITCS project was, in the beginning, troubled. It initially lacked proper project management and did not address ongoing maintenance. However, the report noted that the replacement project team <u>corrected</u> the deficiencies of the past and the system has been tested and deemed reliable.

For example, in Spring 2005, the Richter Group conducted specific testing where a text message was sent to 195 buses at the same time. The results of the test indicated that at no time did system congestion occur. During the data test, normal voice traffic, data messaging, and Automatic Vehicle Locator were operational across all vehicles in service at that time.

### 5.3 System maintenance is inadequate

**OCTA** agrees in part with this finding. OCTA agrees with the Grand Jury's finding that during the implementation of the ITCS, project preventative maintenance was inadequate and gave rise to several failures prior to acceptance of the system.

In late August 2004, when the project was nearing final testing, it was determined by the project team that preventative maintenance was lacking and was a cause of several major deficiencies with the system. At that time, management decided that it was in OCTA's best interest to strengthen these functions and retained the services of former County of Orange's chief communications engineer to assist in the maintenance of the system. In addition, to provide further technical depth, OCTA's internal IS group was trained to support the system. Finally, OCTA has undertaken a training program with the support of Orbital Sciences to address system maintenance and support.

The Richter Group report emphasized the need for an established, regular maintenance program for the system. Working in conjunction with Orbital Sciences, OCTA staff has recommended a regular, scheduled communications system maintenance program be incorporated into OCTA's regular bus maintenance programs. A recommendation to procure needed maintenance training was approved by the OCTA Board of Directors on July 25, 2005.

#### 5.4 System users excluded from problem resolution

**OCTA disagrees with this finding.** OCTA's communications system team made it a priority that not only central communications personnel, but also coach operators, line captains and field supervisors were included in problem resolution and system compliance testing.

#### **RECOMMENDATIONS**

### 6.1 <u>Project managers should be dedicated solely to the project and</u> have system expertise.

**OCTA agrees with the recommended action.** OCTA has determined that on future complex technical procurements, a technically competent, dedicated project manager will be assigned. Further, based on recommendations in the Richter Group report, OCTA will create project management teams to plan and implement such projects.

## 6.2 <u>Internal audit should monitor contract implementation to ensure</u> payment follows performance.

The recommended action has been implemented. Following the issuance of the internal audit report on this project in 2002, guidelines were established to review significant contracts within the first year of the contract with additional reviews conducted, as considered necessary, throughout the term of the contract.

## 6.3 <u>Hire an independent consultant to analyze the system and make</u> recommendations for improvement.

The recommended action has been implemented. In March 2005, OCTA retained the services of Dr. Henry L. Richter, Ph.D. / PE and his consulting group to investigate and evaluate OCTA's ITCS system. One outcome of this study is a plan to conduct a system-wide analysis of all vehicle communications systems in FY 2005/2006.

# 6.4 <u>Implement the recommendations of the independent consultant to improve the system.</u>

The recommended action has been implemented. OCTA received the final Richter Group report on June 20, 2005, and numerous recommendations have already been implemented. In addition, other recommendations will be implemented on an ongoing basis.

6.5 Continue training of technicians as planned, and consider hiring an independent firm with knowledge of the system to perform maintenance.

The recommended action will be implemented. The system provider Orbital Sciences and M/A-COM, will provide system and maintenance training. A recommendation to expend approximately \$80,000 on this training was approved by the OCTA Board of Directors on July 25, 2005.

Due to the proprietary nature of the technology, hiring an independent firm to perform system maintenance is not feasible or cost effective and OCTA is training its own personnel in operations and maintenance of the system.

## 6.6 <u>Include system users in meetings where the system is being</u> analyzed and recommendations are being made.

The recommended action has been implemented. From the outset of the procurement of this project, system users have been involved in the analysis, implementation and testing of the system. OCTA will expand this practice to utilize system users as a resource of information and ideas for the maintenance and any potential upgrade of the system.

# 6.7 <u>Take steps to correct the perception by some users that reporting system problems could hurt their OCTA careers.</u>

The recommended action has been implemented. OCTA is committed to open communication and recognizes the need for continual improvement. OCTA's Chief Executive Officer has communicated to executive and management staff his desire for creating an environment where all employees feel free to bring issues and problems to the attention of management. In the future, this perspective will be underscored through additional internal communications such as articles in the employee newsletter and communications via e-mail. The message will be to encourage employees to surface issues and provide suggestions to improve delivery of OCTA projects and services.

### Conclusion

On behalf of the OCTA Board of Directors, I want to thank the Orange County Grand Jury for its report on the OCTA bus communication system. OCTA continually strives to provide outstanding bus service for Orange County and wants to be a national model for the industry. Constructive feedback can only help in this endeavor.

Should you have any questions, or require additional follow up on this matter, please do not hesitate to contact me directly at (714) 560-5584.

Sincerely,

Arthur T. Leahy
Chief Executive Officer

ATL:dgs

c: Orange County Grand Jury,

Phillip Russell