

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to determine whether the temporary measures adopted in Resolution SX-88 or other measures banning personal use of electronic devices by rail transit personnel should be adopted on a permanent basis.

Rulemaking 08-10-007  
(Filed October 16, 2008)

**COMMENTS OF  
LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
ON REPORT OF CONSUMER PROTECTION & SAFETY DIVISION  
AND PROPOSED GENERAL ORDER**

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AND PROPOSED GENERAL ORDER**

In accordance with the Ruling of Administrative Law Judge (“ALJ”) Kimberly Kim, dated December 28, 2009, an extension of time granted by ALJ Kim on December 29, 2009, and the Commission’s Rules of Practice and Procedure, Los Angeles County Metropolitan Transportation Authority ( “Metro”) hereby provides its comments on the report prepared by the Commission’s Consumer Protection & Safety Division entitled “Personal Electronic Device Use on Rail Transit Systems Report for R.08-10-007” and dated December 24, 2009 (the “CPSD Report”) and on the proposed General Order entitled “Rules and Regulations Governing the Use of Personal Electronic Devices by Employees of Rail Transit Agencies and Rail Fixed Guideway Systems” (the “Proposed General Order” or “Proposed GO”).

A. INTRODUCTION

Like the other Rail Transit Agencies (“RTAs”) that have participated actively in this proceeding, Metro strongly supports an absolute prohibition against **use** of cell phones or other personal electronics devices by train operating personnel while operating rail vehicles and by other RTA personnel when working in locations that place them in immediate danger of being struck by a passing train. Metro and the other RTAs have

sought to work closely with the Commission and CPD to develop effective and practical rules to implement and enforce such a prohibition. However, Metro is very disappointed in CPD's continuing refusal to heed the consistent advice of Metro and other RTAs that the overly broad prohibitions and overly complex and bureaucratic surveillance and reporting requirements that would be mandated by CPD's proposed General Order will not effectively serve the Commission's safety goals but will impose unproductive and unaffordable costs on the public agencies that are directly responsible for the operation and safety of California's rail transit systems.

Last November 10, Metro joined with seven other RTAs in filing Joint Comments in response to the prior version of CPD's proposed General Order. In those Joint Comments, the RTAs recognized the need for a strict prohibition against use of personal electronic devices in the transit workplace, but sought to demonstrate that the CPD proposal was overly prescriptive and needed to be revised to partner with the RTAs rather than imposing rigid mandates upon them. Santa Clara Valley Transportation Authority ("SCVTA") has attached those Joint Comments to the further comments SCVTA filed with the Commission earlier this week, and Metro respectfully urges the ALJ Kim, CPD, and the Commission to reconsider those Joint Comments of the RTAs before plowing ahead toward approval of the proposed GO.

Meanwhile, in the present comments, Metro submits its views and criticisms of certain aspects of the CPD Report and of the proposed General Order, presented below.

## B. COMMENTS ON THE CPD REPORT

1. While Confirming the Evidence That Supports Prohibiting Cell Phone Use by Train Operators When Operating Trains, the CPD Report Does Not Justify the Onerous Provisions of the Proposed GO.

The CPD Report includes summaries of serious and catastrophic accidents in which train operator use of cell phones have been implicated and also summarizes scientific research confirming the dangers that arise from distraction of vehicle operators when using

cell phones. From these factual summaries, the CPSD Report concludes that “cell phone or device use by train operating crews poses unacceptable risks to the public” and goes on to conclude that the proposed GO “would prohibit these significant distractions of rail transit train operators” and so “[p]ublic safety requires the proposed General Order.” *Id.* at 17, 28.

There is no disagreement with the CPSD Report’s preliminary conclusions. Even before this rulemaking was instituted and even before the Commission adopted Resolution SX-88, all RTAs in California already had policies in place prohibiting unsafe or inappropriate use of electronic devices by train operators and other personnel. Where there is disagreement is concerning the proper and effective means for preventing such conduct.

The fundamental problem with the CPSD Report is that CPSD makes an unjustified logical leap from the recognized need for effective prohibition of cell phone use by train operators while operating trains to a draconian and impractical set of regulations that will impose unnecessary costs and burdens without enhancing the effectiveness of the prohibition. The alternative approach that the RTAs proposed in their Joint Comments has far better prospects of being both effective and cost-effective in achieving the common goal.

2. A Total Ban on Possession of Personal Electronic Devices Will Not Make Enforcement Easier or Prevent Their Use More Effectively.

Metro respectfully disagrees with CPSD’s position that a “total ban on device possession will make it easier to identify violators . . . .” CPSD Report, at 32. It is no easier to identify violators of a rule against possession than it is to identify violators for using the device. This is because the type of search that would be required to enforce a rule against possession is utterly impractical.

A search procedure sufficient to enforce a ban on possession of personal electronic devices would have to be frequent and highly intrusive. Given the fact that train operators appear for their work shifts at outdoor locations or at train station platforms that are places for public access, it is impractical to install control points at which train operators

would be subject to security surveillance comparable to what is conducted at entry points to airports or public buildings. The only alternative would be to institute regular or random “hands on” personal searches of the bodies and personal belongings of train operators, an embarrassing and even humiliating procedure that would have to be conducted in full view of the passengers on the train.

CPSD’s contention that if a device is seen in an on-duty employee’s possession, a violation of CPSD’s proposed rule would be established, may be valid. That does not, however, ensure effective enforcement of a rule that imposes a severe penalty for conduct (mere possession of a cell phone) that does not directly pose a safety risk. Considering the serious penalties involved (suspension and termination for a second offense), supervisors might be tempted to “look the other way” rather than taking action, particularly if the supervisor were to observe an operator carrying or using a device at a layover or during a break – when it is clear that no immediate hazard is presented.

The fact that train operators necessarily spend their work shifts travelling between distant points, each at a substantial distance from other operators, makes it very difficult for supervisory personnel to oversee their personal conduct. In practical terms, the numerous passengers on transit vehicles provide vastly more “eyes and ears” to monitor the train operator’s behavior through the course of his or her work shift.<sup>1</sup> For this reason, an active public information campaign combined with very serious and certain penalties for confirmed violations of a rule banning improper cell phone use will be much more effective means for preventing such conduct than an unenforceable rule against possession of such devices.

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<sup>1</sup> The CPSD Report confirms these points by relying on “passenger complaints to rail transit agencies” as evidence that operators continue to use cell phones in a manner inconsistent with public safety, and by recognizing that train operators usually work at a distance from their supervisors so that supervisory oversight is often not “present.” *Id.* at 31-32.

3. The Rules Should Be Focused on Prohibiting the Conduct That Presents Danger to the Public.

In asserting the “appropriateness” of its proposal, CPSD claims that the proposed General Order has been “carefully crafted to achieve the necessary safety objective.” However, the CPSD Report fails to identify what the “necessary safety objective” is. If the “safety objective” is to provide the strongest possible assurance that train operators will not use personal electronic devices while on duty, then the focus should be on sure and severe punishment for violations of that rule, rather than on creating broader prohibitions that are no less difficult to enforce.

Accordingly, Metro agrees with CPSD’s position that a “zero-tolerance policy, one with mandatory rather than discretionary penalties, will enhance the perception of the certainty of negative consequences for violation,” and that this will “raise compliance” with the rule. CPSD Report, at 32. Metro also agrees that a “clear policy of significant penalties for violations will further raise compliance with the rule.” *Id.* However, for a strict, severe enforcement policy to be implemented effectively and in a way tolerable to the work force, it must be targeted at substantial violations by conduct that is obviously dangerous to the public. A train operator’s use of a cell phone while operating a train can and should be strictly and severely punished, but trying to impose strict, severe punishment for mere possession of such a device will almost certainly result in lax, inconsistent enforcement and ultimately lead to resentment and non-compliance among employees.

Metro supports the imposition of a severe penalty for violations that present direct risks to public safety – which certainly includes any use of a personal electronic device by a train operator while operating a train. To impose a severe penalty for conduct that does not present a direct risk, however, would diminish the certainty that the penalty will be applied and so would reduce the effectiveness of the overall safety regime.

4. CPSD Vastly Understates the Cost of Compliance With the Proposed GO.

Metro strongly disagrees with CPSD's opinion that the "costs of the proposed General Order are negligible." CPSD Report, at 33. It is clear that CPSD never discussed with any of the RTAs the costs of equipment or the processes necessarily involved in downloading thousands of hours of video data from hundreds of cameras. Had such an inquiry been made, CPSD would have had a better understanding of the costs involved and the labor intensive process required to download the video data that the proposed GO would require the RTAs to retain for CPSD's inspection. Metro has calculated the associated costs that would be incurred to comply with just some of the requirements of CPSD's proposals and has appended them to these comments as Attachment A. By any measure, this cost is very substantial and far from "negligible."

Specifically, Metro operates a fleet of approximately 250 rail vehicles, with cabs at either end of each vehicle. Therefore, a requirement to install in-cab cameras would require Metro to install some 500 digital video recorders ("DVRs") in its vehicles. Metro operates its vehicles in two- or three-car trains and typically has 55 trains in operation on any day. So, on an average day, Metro would have 110 DVRs in use, recording throughout the day and night, in the cabs at either end of each of 55 trains. In a typical week, the number of vehicles in service at one or the other end of an operating train certainly exceeds 110 cars, and could be as high as 150 or 200. This is because the same vehicles are not used in operation each day and are rotated in the operation cycle as maintenance needs dictate use of replacement vehicles. However, to be conservative, Metro has estimated the cost of downloading and storing video data in compliance with the proposed General Order based on the assumption that only 110 DVRs will be in use.

As documented by Attachment A, the amount of video data that Metro will have to download from 110 DVRs and maintain in storage for 60 days pursuant to the Proposed GO will be approximately 27.5 Terabytes, at a total capital cost, just for the storage hardware, in

excess of \$42,000,000. Additional fixed costs for room preparation, installation, machine readers, and software bring the total capital costs to more than \$47,500,000. The first year's costs of compliance with the Proposed GO also include yearly hardware and software costs exceeding \$4,500,000 and yearly staffing costs exceeding \$2,700,000. Thus, as demonstrated by Attachment A, the total first year costs of compliance with the Proposed GO's requirements related to in-cab video surveillance total nearly \$55,000,000.00 This calculation does not even consider the cost of the 500 video camera/recorders, but only the cost of storing the video data that CPSD's Proposed GO would require Metro to retain for inspection.

Obviously, \$55 million is more than "negligible." And, as noted above, Metro's minimal assumption as to the number of DVRs in use in any week makes this estimate clearly understated. Moreover, Metro operates a fleet far smaller than those of several other California RTAs, which would face even greater costs.

5. CPSD's Claim That the Proposed GO is "Fair and Reasonable to Both Management and Labor" Fails in All Respects.

CPSD asserts that, in developing the Proposed GO, they sought to be "fair and reasonable to both labor and management." CPSD Report, at 36 n. 79. This assertion rings false when it is considered that prohibiting train operators and other safety personnel from possession of a personal electronic device during their entire work shifts would deprive them of having any contact with their families for periods of up to 10 hours each day, even such brief contact as employees enjoy today during work breaks and lunch hour. CPSD apparently considers its Proposed GO "fair" to both labor and management because it offers each RTA two alternatives – the first, a prohibition on cell phone possession that would impose a severe hardship on all train operators and safety personnel, and the second, a scheme requiring constant in-cab video recording and massive downloading and storage of

such recordings, at an exorbitant cost to RTA management. This conception of “fairness” will not enhance the regulatory reputation of CPSD or the Commission.

CPSD also fails to recognize the fact that no transit agency will be able to install video cameras by the date the GO becomes effective or even soon thereafter. Therefore, under the Proposed GO, all transit agencies will have no choice but to put into effect the total ban policies immediately, thus cutting off contact for all operators even when they are on their breaks and there is no hazard involved. Nor is the alternative “fair and reasonable” to management, requiring monitoring of each and every operator every 90 days, downloading and storing massive hours of video data, submitting monthly reports and annual justifications – none of which enhance safety the least bit.

6. CPSD’s Proposals to Impose Excessive and Burdensome Requirements Subject to Requests for Variances Are an Unnecessarily Costly Approach.

For the alleged protection of personnel working in the vicinity of the rail line, CPSD tries to deal with the difficult question of “defined distance” of a protected work zone from the track by setting an excessive limit of 15 feet and then requiring every agency for whom such a limit is impractical to file for a variance from the 15-foot requirement. CPSD Report, at 44. This approach would be exceedingly burdensome and highlights the lack of justification for the 15-foot “protected work zone” proposed by CPSD. Rather than requiring a variance to be filed by every agency, Staff should seriously reconsider the proposal submitted by the RTAs in their November comments.

CPSD takes the same variance-based approach for alternative measures to the very costly video monitoring requirement discussed above. CPSD Report, at 46. Rather than incorporating other technological solutions into the General Order and allowing their use as alternatives, the Staff prefers the more bureaucratic approach of requiring RTAs to submit variance requests subject to CPSD review. This is a recipe for waste and abuse.

7. The Proposed GO Does Not Comply With the Mandate of Section 99152 That Existing Industry Standards Shall Be Used Where Applicable.

A primary source of authority on which the CPSD Report relies for its assertion of the Commission's jurisdiction to adopt the proposed General Order is Public Utilities Code Section 99152, which provides that "[a]ny public transit guideway planned, acquired, or constructed, on or after January 1, 1979, is subject to regulations of the Public Utilities Commission relating to safety appliances and procedures. Section 99152 goes on to direct the Commission to "develop an oversight program employing safety planning criteria, guidelines, safety standards, and safety procedures to be met by operators in the design, construction, and operation of those guideways."

Section 99152 also prescribes that "[e]xisting industry standards **shall** be used where applicable" (emphasis added). The proposed GO does not comply with this mandatory requirement. None of the existing industry standards applicable to public transit guideways, such as the rail lines operated by Metro, including standards promulgated by the American Public Transportation Association (APTA), the Federal Railroad Administration (FRA), or the National Transportation Safety Board (NTSB), ban stowing cell phones unless in-cab cameras are installed. None of the existing industry standards require the prescriptive, burdensome, bureaucratic process mandated by the Proposed GO if in-cab cameras are installed.

The CPSD Report does not justify the substantial and burdensome departure from existing industry standards that these provisions of the Proposed GO would entail. Thus, the Proposed GO is not only excessive and wrongly directed from a policy perspective; it also would exceed the Commission's authority pursuant to Public Utilities Code Section 99152.

## C. COMMENTS ON THE PROPOSED GENERAL ORDER

### 1. Rule 2.12

Rule 2.12, the proposed definition of “Rail Transit Vehicle”, vaguely refers to “an RTA’s rolling stock”. This term could include vehicles designed to operate on city streets rather than on rails, which should not be included within the scope of the definition. Rule 2.12 should be limited to vehicles designed to operate on rails. It also should be revised to exclude maintenance vehicles, since such vehicles do not have “cabs” and it would be impractical to install video cameras on such vehicles. Rule 3.1(a) adequately addresses the use of electronic devices by employees who operate such vehicles.

### 2. Rule 2.16

Rule 2.16, defining “Zero Tolerance”, is not consistent with Rule 6.3(c)(ii). The first rule refers to termination for second offenses, but the latter rule would require termination for a first offense “if the violation is a probable contributing cause of an accident”. The latter rule presents very serious issues, which are addressed below.

Another problem with Rule 2.16 is that it needs to specify a definite time period between the first and second offense. If the Commission chooses to stick with a lenient approach to most first offenses, the conclusion of the Zero Tolerance definition should be revised to read “. . . including termination for second offenses that occur within 36 months of the first offense, to be reasonably expected to prevent violations of this General Order”.

### 3. Rule 3.1(c)

Rule 3.1(c) would prohibit RTA employees or contractors from using personal electronic devices while “[w]orking in or on rail transit vehicles, or on train control, train protection or signaling systems”. This provision should exclude maintenance staff who are performing troubleshooting activities or similar duties on board a stopped train. There is no

hazard involved as long as the train is stopped and the employee is on board or in the train and not on the tracks.

4. Rule 3.1(e)

Rule 3.1(e) would prohibit RTA employees or contractors from using personal electronic devices while performing tasks that may result in an employee being “within 15 feet from the field side of the nearest rail.” The 15-foot limit in Rule 3.1(e) should be re-considered, because it is impractical and will impair all the RTAs’ ability to conduct routine tasks in the frequent instances when a cell phone is the only means of communication available. Also, if the proposed 15 foot-rule is instituted, it would prohibit the use of a cell phone by an employee standing in the middle of a station platform (clearly an area where a person cannot be struck by a vehicle) which always will be within 15 feet of the field side of the nearest rail. Also, imposing a 15 foot rule in a new GO, and then immediately having all the RTAs apply for a variance (which is what all RTAs will have to do) is a poor way to establish a new regulatory regime.

A far more workable alternative was proposed in the Joint Comments of the RTAs, filed November 10, 2009. Stripped of the perhaps esoteric reference to “fouling the track”, the Joint RTAs’ recommendation was to prohibit any wayside worker from using a personal electronic device whenever he or she is in such proximity to a track as to be at risk of being struck by a rail transit vehicle and is not in a protected work zone. The applicable distance from the track would be defined in each RTA’s operating rule book. Metro urges the Commission to give serious consideration to this more practical and equally safe alternative.

5. Rule 3.4

Rule 3.4, prohibiting train operators from having any personal electronic device in their possession, is not consistent with Rule 4.1, which allows such possession if the RTA has installed in-cab cameras and other conditions. This inconsistency highlights the

impracticality of CPD's "either/or" approach to enforcement, which should instead be focused on strict, effective enforcement of a ban on the **use** of personal electronic devices by train operators while operating trains.

6. Rule 3.5

Rule 3.5, relating to the stowing of personal electronic devices, is redundant. See Rule 4.1.

7. Rule 3.6

Rule 3.6, requiring that wayside workers have their personal electronic devices turned off while on or near the track, is redundant. See Rule 3.1(e).

8. Rule 4.1

Rule 4.1, which prohibits possession or stowing of electronic devices by [train] operators unless in-cab cameras are installed and related rules implemented, should allow a reasonable time frame for RTAs to install the in-cab cameras. The installation of in-cab cameras can not be done "overnight". RTAs should be given sufficient time to install such devices; this may require a Board decision and is subject to financial constraints and discussions with labor unions. Therefore, the effective date of this rule should take account of this time frame. Otherwise, all RTAs will really have no option, even though it may appear as if they do. Rule 4.1 also should allow the flexibility to employ other technologies (such as signal monitoring or blocking systems) that may be more effective than cameras at enforcing the prohibition of inappropriate use.

9. Rule 5

By Rule 5, which would define requirements for RTA-issued electronic devices, CPD attempts to micro-manage the day-to-day operations of the RTAs. Metro is not aware of any technology that would comply with Rule 5.1(a)(ii) (limiting cell phones issued by agencies to allow only certain numbers to be dialed), but recognizes the possibility of limiting

a cell phone to quick dialing – a maximum of nine numbers – which may be feasible in certain circumstances. Justifications for issuing electronic devices, limiting what numbers may be called, and monitoring phone records are internal administrative functions and should be left as such. The annual assessment and evaluation of the business need for issuing these devices, as Rule 5.1(a)(iv) would require, is another example of bureaucratic intrusion that does nothing to enhance safety. Furthermore, if an employee was approved for issuance of an electronic device last year and his or her job functions have not changed, why should it be necessary to engage in an annual review of the issue? The annual assessment in such cases simply does not make sense.

10. Rule 7.2

The monitoring requirements of Rule 7 are ill-conceived and fraught with problems. Rule 7.1 requires a random monitoring program. Rule 7.2 repeats the “random” requirement to monitor video data, but goes on to require that each train operator be monitored once every 90 days. By definition, “random” means “determined by accident rather than design”. So, a 90-day cycle of “random” monitoring is itself contradictory. If an RTA establishes a truly “random” program, it is inevitable, by definition, that not all operators will be monitored – and certainly not within 90 days. The requirement to monitor each and every operator every 90 days is unduly burdensome and the requirements to track who was monitored and who was not every 90 days poses an administrative challenge. Metro’s resources are already scarce and can be applied far more effectively to other safety-related tasks.

Rule 7.2 also presents the question, how long must an RTA “monitor” the video recording of each randomly selected operator’s behavior? For – 15 seconds, maybe one minute, or should it be five minutes, or five hours, or five days? The more important question is - is this limited duration of monitoring proof that the operator was not using any

device inappropriately at any other time during his or her shift? The 90 days requirement for each operator is too prescriptive and costly.

Just as the Commission today allows RTAs the flexibility to establish a frequency for conducting operational evaluations of compliance with other safety rules, so too should proposed Rule 7.3 would simply require RTAs to periodically conduct operational evaluations and inspections to determine the extent of compliance with these rules and regulations. Together with the random monitoring program mandated by Rule 7.1, Rule 7.3 provides sufficient direction to the RTAs. Proposed Rule 7.2 is an impractical and unnecessary add-on; it should be eliminated.

11. Rule 7.4

Rule 7.4 would require monthly operational evaluations and/or inspections on a form prescribed by Commission Staff. RTAs have been doing operational evaluations in accordance with GO143-B requirements without submitting any forms, and the records of those evaluations are available for CPUC Staff to review. Rule 7.4 should be revised to provide that these evaluations shall be made available for Commission Staff review rather than having to be submitted on a monthly basis. Metro believes that is more effective for CPSD to interact on a frequent basis with RTA staff and not simply review records and reports in their offices. This approach also will afford an opportunity for RTA staff to provide immediate answers and clarifications to any questions that may arise than if CPSD were merely to review the proposed monthly reports.

D. CONCLUSION

For all the reasons discussed above, Metro respectfully urges the Commission to heed the concerns expressed by Metro and other RTAs regarding the poorly designed, probably ineffective, and overly burdensome aspects of the Proposed General Order. The RTAs have long worked closely and productively with CPSD and the Commission in their

common efforts to provide safe and cost-effective public transit services for the people of California. Metro earnestly hopes that the Commission will continue to pursue a cooperative path.

Respectfully submitted,

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# **ATTACHMENT A**

## **ESTIMATE OF COSTS FOR DOWNLOADING AND STORING VIDEO DATA RECORDED PURSUANT TO PROPOSED GENERAL ORDER**

| <b>Fixed Hardware/Software Costs</b>   | <b>Equation</b>                    |                 |
|--|------------------------------------|-----------------|
| 1. Total Number of Trains in operation   |                                    | 55              |
| 2. Number of DVRs /Train   |                                    | 2               |
| 3. Total Number of DVRs  | Line 1 x Line 2                    | 110             |
| 4. Storage per DVR (in Gigabytes)  |                                    | 250             |
| 5. Total Storage of all DVRs (in Gigabytes)  | Line 3 x Line 4                    | 27,500.00       |
| 6. Total Storage of all DVRs (in Terabytes)  | Line 5 divided by 1000             | 27.5            |
| 7. Number of days a DVR can hold images before rewriting (one complete DVR space cycle)    |                                    | 7               |
| 8. Number of days to store per Proposed GO   |                                    | 60              |
| 9. Number of 7 day cycles needed for 60 days   | Line 8 divided by Line 7 (rounded) | 9               |
| 10. Total number of Terabytes needed for 60 days   | Line 6 x Line 9                    | 247.50          |
| 11. Dollars per Gigabyte cost using hardware RAID (for Archive Builders website)           |                                    | \$170.00        |
| 12. Dollars per Terabyte Costs   | Line 11 x 1000                     | \$170,000.00    |
| 13. Total Costs for 60 days of storage.  | Line 10 x Line 12                  | \$42,075,000.00 |
| 14. Installation Costs   |                                    | \$2,000,000.00  |
| 15. Tape Backup System   |                                    | \$550,000.00    |
| 16. Room Preparation (Electrical, HVAC, UPS, etc.)   |                                    | \$2,500,000.00  |
| 17. Machines to read each DVR @\$1500 each for 22 (20 to use and 10% spare ratio) machines |                                    | \$33,000.00     |
| 18. Software to Catalog DVRs   |                                    | \$350,000.00    |
| 19. <b>Total Estimated Fixed Costs</b>   | Lines 13+14+15+16+17+18            | \$47,508,000.00 |

| <b>Yearly Staffing Costs</b>  | <b>Equation</b>      |                      |
|---|----------------------|----------------------|
| 1. Capacity of hard drive (Gigabytes)   |                      | 250                  |
| 2. Transfer Rate (Megabytes/second)   |                      | 100                  |
| 3. Time to download one hard drive info (in seconds)  | Line 1 x Line 2      | 2500                 |
| 4. Time to download one hard drive info (in minutes)  | Line 3 divided by 60 | 41.66666667          |
| 5. Time to download one hard drive info (in decimal hours)  | Line 4 divided by 60 | 0.694444444          |
| 6. Time to retrieve each DVR (in decimal hours)   |                      | 0.25                 |
| 7. Time to Fill out Chain of Custody Form and Catalog DVR into Database (in decimal hours)        |                      | 0.25                 |
| 8. Time to replace each DVR (in decimal hours)  |                      | 0.25                 |
| 9. Total amount of time required to download each DVR (in decimal hours)                          | Line 5 + 6 + 7 + 8   | 1.444444444          |
| 10. Total amount of time required to download each DVR in hours and minutes                       | Line 9               | 1 hour, 27 minutes   |
| 11. Total number of DVRs  |                      | 550                  |
| 12. Total amount of time required to download all DVRs (in decimal hours)                         | Line 9 x 110         | 158.888888           |
| 13. Total amount of time required to download all DVRs in hours and minutes                       | Line 12              | 158 hours, 54minutes |
| 14. Number of man-hours / week  |                      | 40                   |
| 15. Total number of staff to download all DVRs  |                      | 4                    |
| 16. Number of staff to backup existing staff due to sick, vacation, testifying, depositions, etc. |                      | 2                    |
| 17. Number of data room staff   |                      | 4                    |
| 18. Total Number of Subordinate Staff   | Line 15 + 16 + 17    | 10                   |
| 19. Number of Supervisors (assume 2 for every 10)   |                      | 2                    |
| 20. Number of Managers for New Rail DVR Group   |                      | 1                    |
| 21. Total Number of Staff   | Line 18 + 19 + 20    | 13                   |
| 22. Cost per hour   |                      | \$100.00             |
| 23. Cost per hour (all staff)   | Line 21 x Line 22    | \$1300.00            |
| 24. Number of hours per year  |                      | 2,080.00             |
| 25. <b>Total Staffing Cost per year</b>   | Line 23 x Line 24    | \$2,704,000.00       |

**Yearly Hardware/Software Costs**

|    |   |                       |
|----|---|-----------------------|
| 1. | Preventative Maintenance                      | \$100,000.00          |
| 2. | Drive Cost Replacement                        | \$2,103,750.00        |
| 3. | Tape Costs Replacement                        | \$2,103,750.00        |
| 4. | Software Catalog Maintenance                  | \$35,000.00           |
| 5. | Disaster Recovery Testing                     | \$210,300.00          |
| 6. | <b>Total Hardware/Software Costs per year</b> | <b>\$4,552,800.00</b> |

**Total Yearly Costs** \$7,256,800.00  
Page 2, line 25 + Page 3, line 6

\*\*\*\*\*

**Total First Year Costs**

|    |                                  |                 |                 |
|----|----------------------------------|-----------------|-----------------|
| 1. | Fixed Hardware / Software Costs  | Page 1, line 19 | \$47,508,000.00 |
| 2. | Yearly Staffing Costs            | Page 2, line 25 | \$2,704,000.00  |
| 3. | Yearly Hardware / Software Costs | Page 3, line 6  | \$4,552,800.00  |

**Total First Year Costs** **\$54,764,800.00**

## CERTIFICATE OF SERVICE

I, Jeannie Wong, hereby certify that on this date I will serve the foregoing **COMMENTS OF LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY ON REPORT OF CONSUMER PROTECTION & SAFETY DIVISION AND PROPOSED GENERAL ORDER** on the following persons on the service list for R.08-10-007:

### By electronic mail:

jess@alliancegrp.com; mschroeder@apta.com; dispatch@atu.org; mark.rosenker@ntsb.gov; finkelsteind@mta.net; snobler@metro.net; khawaniv@metro.net; puglisid@metro.net; john@welborne.net; karend@portla.org; nlopez@teamsters911.com; bill.woodward@dhs.gov; rpatchett@nctd.org; wpenn@nctd.org; wayne.terry@sdmts.com; nancy.dock@sdmts.com; nathaniel.ford@sfmta.com; tmacbride@goodinmacbride.com; michael.kirchanski@ci.sf.ca.us; ddugger@bart.gov; ggee@bart.gov; lhardy@bart.gov; benjamin.scharf@vta.org; Michael.Burns@vta.org; eksterowicz@vta.org; psc4@ibew1245.com; msakauye@sacrt.com; mwiley@sacrt.com; rfrancis@sacrt.com; utucslb@mindspring.com; josh@shawyoder.org; transitunion256@sbcglobal.net; john.kennedy@sfgov.org; mmattes@nossaman.com; michael.robert@flysfo.com; harry.gordon@seiu1021.org; mr.nelson@sbcglobal.net; mlonergan@sacrt.com; cwp@cpuc.ca.gov; gg1@cpuc.ca.gov; rpg@cpuc.ca.gov; suf@cpuc.ca.gov; am4@cpuc.ca.gov; cl1@cpuc.ca.gov; sul@cpuc.ca.gov; jjz@cpuc.ca.gov; kk2@cpuc.ca.gov; psb@cpuc.ca.gov; pwk@cpuc.ca.gov; rwc@cpuc.ca.gov; ttf@cpuc.ca.gov; vdl@cpuc.ca.gov; jb2@cpuc.ca.gov; sst@cpuc.ca.gov

### By hand delivery:

Hon. Kimberly Kim  
Administrative Law Judge  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

Hon. John Bohn  
Assigned Commissioner  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

### By first-class, U.S. mail:

See Attached List of Service By U.S. Mail.

Executed this 22nd day of January, 2010 in San Francisco, California.

/S/ JEANNIE WONG

Jeannie Wong

# CALIFORNIA PUBLIC UTILITIES COMMISSION

## Service Lists

---

**PROCEEDING: R0810007 - CPUC - OIR TO DETERM  
LAST CHANGED: DECEMBER 28, 2009**

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### Parties

---

JESS DIPASQUALE  
PRESIDENT & CEO  
ALLIANCE GROUP SERVICES INC  
1221 POST ROAD EAST  
WESTPORT, CT 06880  
FOR: ALLIANCE GROUP SERVICES INC

MARTIN SCHROEDER  
STAFF ADVISOR  
APTA  
1666 K STREET, N.W., STE 1100  
WASHINGTON, DC 20006  
FOR: APTA

ATU - INTERNATIONAL HEADQUARTERS  
5025 WISCONSIN AVENUE, NW  
WASHINGTON, DC 20016  
FOR: ATU

MARK ROSENKER  
CHAIRMAN  
NTSB  
429 LENFANT PLAZA  
WASHINGTON, DC 20024  
FOR: NTSB

TCU  
TCU HEADQUARTERS, LOCAL 1315  
3 RESEARCH PLACE  
ROCKVILLE, MD 20850  
FOR: TCU

DANIEL FINKELSTEIN  
CHIEF OF TRANSIT POLICE  
LA COUNTY METROPOLITAN TRANSPORT AGENCY  
ONE GATEWAY PLAZA / MAIL STOP 99-PL-15  
LOS ANGELES, CA 90012  
FOR: LA COUNTY METROPOLITAN TRANSPORT  
AGENCY

ROGER SNOBLE  
CHIEF EXECUTIVE OFFICER  
LOS ANGELES COUNTY METRO TRANS. AUTH  
ONE GATEWAY PLAZA, 25TH FL  
LOS ANGELES, CA 90012  
FOR: LOS ANGELES COUNTY METRO TRANS.  
AUTH

VIJAY KHAWANI  
DIRECTOR OF CORPORATE SAFETY  
LA COUNTY METROPOLITAN TRANS. AUTHORITY  
ONE GATEWAY PLAZA, 18TH FLOOR  
LOS ANGELES, CA 90012-2952  
FOR: LA COUNTY METROPOLITAN TRANS.  
AUTHORITY

DAVIDE F. PUGLISI  
MGR. RAIL DIVISION  
METRO RAIL  
ONE GATEWAY PLAZA (99-11-2)  
LOS ANGELES, CA 90013  
FOR: METRO RAIL

AFSCME LOCAL 3634  
514 SHATTO PLACE  
LOS ANGELES, CA 90020  
FOR: AMERICAN FEDERATION OF STATE,  
COUNTY AND MUNICIPAL EMPLOYEES UNION

THE GROVE TROLLEY  
189 THE GROVE DRIVE  
LOS ANGELES, CA 90036  
FOR: THE GROVE TROLLEY

JOHN H. WELBORNE  
ANGELS FLIGHT  
PO BOX 712345  
LOS ANGELES, CA 90071  
FOR: ANGELS FLIGHT

KURT AREND  
GENERAL MANAGER  
PORT OF LOS ANGELES RED CAR LINE  
425 S. PALOS VERDES STREET  
SAN PEDRO, CA 90731  
FOR: PORT OF LOS ANGELES RED CAR LINE

AMERICANA AT BRAND TROLLEY  
889 AMERICANA WAY, STE 330  
GLENDALE, CA 91210  
FOR: AMERICANA AT BRAND TROLLEY

RAY PATCHETT  
CHIEF EXECUTIVE OFFICER  
NORTH COUNTY TRANSIT DISTRICT  
810 MISSION AVENUE  
OCEANSIDE, CA 92054  
FOR: NORTH COUNTY TRANSIT DISTRICT

E. WAYNE TERRY  
CHIEF OFFICER OF OPERATIONS - RAIL  
SAN DIEGO TROLLEY, INC.  
1255 IMPERIAL AVENUE, STE 900  
SAN DIEGO, CA 92101  
FOR: SAN DIEGO TROLLEY, INC.

JERRY FECHER  
INT'L BROTHERHOOD OF ELECTRICAL WORKERS  
7444 TRADE STREET  
SAN DIEGO, CA 92121  
FOR: INTERNATIONAL BROTHERHOOD OF  
ELECTRICAL WORKERS

NATHANIEL FORD  
EXECUTIVE DIRECTOR / CEO  
SFMTA (MUNI)  
ONE S. VAN NESS, 7TH FL.  
SAN FRANCISCO, CA 94102  
FOR: SFMTA (MUNI)

FACILITY/SUBWAY STATIONARY ENGINEERS  
STATIONARY ENGINEERS, LOCAL 39  
337 VALENCIA STREET  
SAN FRANCISCO, CA 94103  
FOR: STATIONARY ENGINEERS, LOCAL 39

CABLE CAR CARPENTERS  
UNITED BROTHERHOOD OF CARPENTERS L-22  
2085 THIRD STREET  
SAN FRANCISCO, CA 94107  
FOR: UNITED BROTHERHOOD OF CARPENTERS  
AND JOINERS

TEAMSTERS LOCAL 911  
3888 CHERRY AVENUE  
LONG BEACH, CA 90807  
FOR: TEAMSTERS LOCAL 911

BILL WOODWARD  
AREA INSPECTOR SUPERVISOR  
TSA  
2919 W. EMPIRE AVENUE  
BURBANK, CA 91504  
FOR: TSA

WAYNE PENN  
RAIL SAFETY OFFICER  
NORTH COUNTY TRANSIT DISTRICT  
810 MISSION AVENUE  
OCEANSIDE, CA 92054  
FOR: NORTH COUNTY TRANSIT DISTRICT

NANCY DOCK  
SYSTEM SAFETY MANAGER  
SAN DIEGO TROLLEY, INC.  
1255 IMPERIAL AVENUE, STE 900  
SAN DIEGO, CA 92101  
FOR: SAN DIEGO TROLLEY, INC.

OPERATING ENGINEERS - LOCAL 2  
828 MAHLER ROAD, STE B  
BURLINGAME, CA 94010  
FOR: OPERATING ENGINEERS - LOCAL 2

INT'L FED PROF AND TECH ENGINEERS L-21  
1182 MARKET STREET, RM 425  
SAN FRANCISCO, CA 94102  
FOR: INTERNATIONAL FEDERATION OF  
PROFESSIONAL AND TECHNICAL ENGINEERS,  
LOCAL 21

SHEET METAL WORKERS - LOCAL 104  
1939 MARKET STREET  
SAN FRANCISCO, CA 94103  
FOR: SHEET METAL WORKERS - LOCAL 104

THOMAS J. MACBRIDE, JR.  
GOODIN MACBRIDE SQUERI DAY & LAMPREY LLP  
505 SANSOME STREET, SUITE 900  
SAN FRANCISCO, CA 94111  
FOR: GOODIN MACBRIDE SQUERI DAY &  
LAMPREY LLP

IRWIN LUM  
PRESIDENT  
TRANSPORT WORKERS UNION - LOCAL 250 A  
1508 FILLMORE STREET  
SAN FRANCISCO, CA 94115  
FOR: TRANSPORT WORKERS UNION - LOCAL  
250 A

REGINALD MCCRAY  
TRANSIT/SYSTEM SAFETY PERSONNEL  
TRANSPORT WORKERS UNION - LOCAL 200  
1426 FILLMORE STREET  
SAN FRANCISCO, CA 94115  
FOR: TRANSPORT WORKERS UNION - LOCAL 200

TRYG MCCOY  
DEPUTY AIRPORT DIRECTOR  
AIR TRAIN  
PO BOX 8097  
SAN FRANCISCO, CA 94128  
FOR: AIR TRAIN

JESSE HUNT  
AMALGAMATED TRANSPORTATION UNION (ATU)  
132 NINTH STREET, STE 100  
OAKLAND, CA 94607  
FOR: AMALGAMATED TRANSPORTATION (ATU)

GARY GEE  
CHIEF OF BART POLICE  
BAY AREA RAPID TRANSIT DISTRICT  
800 MADISON / PO BOX 12688  
OAKLAND, CA 94607-2688  
FOR: BAY AREA RAPID TRANSIT DISTRICT

AMALGAMATED TRANSIT UNION (ATU)  
1590 LA PRADERA DRIVE  
CAMPBELL, CA 95008  
FOR: AMALGAMATED TRANSIT UNION, LOCAL  
265

MARK MAHAFFEY  
OPERATIONS MGR. FACILITIES MAINT.& SEC.  
SANTA CLARA VALLEY TRANSPORTATION AUTH.  
3331 NORTH FIRST STREET, C-1  
SAN JOSE, CA 95134-1906  
FOR: SANTA CLARA VALLEY TRANSP AUTHTY

NANCI EKSTEROWICZ  
RISK MANAGER  
SANTA CLARA VALLEY TRANSPORT AUTHORITY  
3331 NORTH FIRST STREET, B-1  
SAN JOSE, CA 95134-1906  
FOR: SANTA CLARA VALLEY TRANSPORT AUTHOR

MICHAEL KIRCHANSKI  
MANAGER, HEALTH AND SAFETY  
SAN FRANCISCO MUNICIPAL RAILWAY  
949 PRESIDIO AVE., ROOM 219  
SAN FRANCISCO, CA 94115  
FOR: SAN FRANCISCO MUNICIPAL RAILWAY

INT'L BROTHERHOOD/ELECTRICAL WRKS L-6  
55 FILLMORE STREET  
SAN FRANCISCO, CA 94117  
FOR: INTERNATIONAL BROTHERHOOD OF  
ELECTRICAL WORKERS LOCAL 6

DOROTHY DUGGER  
GENERAL MANAGER  
BAY AREA RAPID TRANSIT DISTRICT  
PO BOX 12688 (LKS-23)  
OAKLAND, CA 94604-2688  
FOR: BAY AREA RAPID TRANSIT DISTRICT

LISA ISLER  
SEIU (SERVICE EMPLOYEE INT'L UNION)  
100 OAK STREET  
OAKLAND, CA 94607  
FOR: SEIU

LEN HARDY  
CHIEF SAFETY OFFICER  
BAY AREA RAPID TRANSIT DISTRICT  
300 LAKESIDE DRIVE, 18TH FL.  
OAKLAND, CA 94612  
FOR: BAY AREA RAPID TRANSIT DISTRICT

BENJAMIN H. SCHARF  
SENIOR ASSISTANT COUNSEL  
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3331 NORTH FIRST STREET - BLDG. C-2  
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FOR: SANTA CLARA VALLEY TRANSP AUTHY

MICHAEL BURNS  
GENERAL MANAGER  
SANTA CLARA VTA  
3331 N. FIRST STREET  
SAN JOSE, CA 95134-1906  
FOR: SANTA CLARA VTA

PHIL CARTER  
BUSINESS REP  
PO BOX 1080  
ROCKLIN, CA 95677  
FOR: SACRAMENTO RTD

LT. MARK SAKAUYE  
HEAD OF POLICE SERVICE UNIT  
SACRAMENTO REGIONAL TRANSIT DISTRICT  
PO BOX 2110  
SACRAMENTO, CA 95812  
FOR: SACRAMENTO REG TRANSIT DISTRICT

MIKE WILEY  
INTERIM CEO  
SRTD  
PO BOX 2110  
SACRAMENTO, CA 95812  
FOR: SACRAMENTO RAIL TRANSIT DISTRICT

RUFUS FRANCIS  
DIRECTOR OF SAFETY  
SACRAMENTO REGIONAL TRANSIT DIST.  
PO BOX 2110  
SACRAMENTO, CA 95812  
FOR: SACRAMENTO REGIONAL TRANSIT DIST.

J. P. JONES  
UTU: CALIFORNIA - LO 005  
1005 12TH STREET  
SACRAMENTO, CA 95814  
FOR: CALIFORNIA - LO 005

JOSHUA SHAW  
EXECUTIVE DIRECTOR  
CALIFORNIA TRANSIT ASSOCIATION  
1414 K STREET, STE 320  
SACRAMENTO, CA 95814  
FOR: CALIFORNIA TRANSIT ASSOCIATION

VIC GUERRA  
ATU  
2776 21ST STREET  
SACRAMENTO, CA 95818  
FOR: ATU

## Information Only

---

JOHN I. KENNEDY  
CITY OF SAN FRANCISCO  
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1390 MARKET STREET, 6TH FLOOR  
SAN FRANCISCO, CA 94102

MARTIN A. MATTES  
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50 CALIFORNIA STREET, 34TH FLOOR  
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SEIU LOCAL 1021 - BART CHAPTER  
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MARK LONERGAN  
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SACRAMENTO REGIONAL TRANSIT DISTRICT  
PO BOX 2110  
SACRAMENTO, CA 95812-2110  
FOR: SACRAMENTO REGIONAL TRANSIT DISTR

TIMOTHY SPANGLER  
SACRAMENTO REGIONAL TRANSIT DISTRICT  
1400 29TH STREET  
SACRAMENTO, CA 95816

## State Service

---

CHRISTOPHER POSCHL  
CALIF PUBLIC UTILITIES COMMISSION  
SAFETY & RELIABILITY BRANCH  
320 WEST 4TH STREET SUITE 500  
LOS ANGELES, CA 90013

GEORGETTA GREGORY  
CALIF PUBLIC UTILITIES COMMISSION  
RAIL TRANSIT AND CROSSINGS BRANCH  
320 WEST 4TH STREET SUITE 500  
LOS ANGELES, CA 90013

RICHARD GALLANT  
CALIF PUBLIC UTILITIES COMMISSION  
RAIL SAFETY & CROSSING BRANCH  
320 WEST 4TH STREET SUITE 500  
LOS ANGELES, CA 90013

SUSAN FEYL  
CALIF PUBLIC UTILITIES COMMISSION  
SAFETY & RELIABILITY BRANCH  
320 WEST 4TH STREET SUITE 500  
LOS ANGELES, CA 90013

APRIL MULQUEEN  
CALIF PUBLIC UTILITIES COMMISSION  
SAFETY & RELIABILITY BRANCH  
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505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

CLAUDIA LAM  
CALIF PUBLIC UTILITIES COMMISSION  
SAFETY & RELIABILITY BRANCH  
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COLLEEN SULLIVAN  
CALIF PUBLIC UTILITIES COMMISSION  
SAFETY & RELIABILITY BRANCH  
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505 VAN NESS AVENUE  
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JASON J. ZELLER  
CALIF PUBLIC UTILITIES COMMISSION  
LEGAL DIVISION  
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SAN FRANCISCO, CA 94102-3214

KIMBERLY KIM  
CALIF PUBLIC UTILITIES COMMISSION  
DIVISION OF ADMINISTRATIVE LAW JUDGES  
ROOM 5003  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

PATRICK S. BERDGE  
CALIF PUBLIC UTILITIES COMMISSION  
LEGAL DIVISION  
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505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

PAUL KING  
CALIF PUBLIC UTILITIES COMMISSION  
CONSUMER PROTECTION AND SAFETY DIVISION  
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505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

RICHARD CLARK  
CALIF PUBLIC UTILITIES COMMISSION  
CONSUMER PROTECTION AND SAFETY DIV  
ROOM 2205  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

TRAVIS FOSS  
CALIF PUBLIC UTILITIES COMMISSION  
LEGAL DIVISION  
ROOM 5028  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

VIRGINIA LAYA  
CALIF PUBLIC UTILITIES COMMISSION  
RAIL SAFETY & CROSSING BRANCH  
AREA 2-B  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

**LIST OF PERSONS SERVED BY  
U.S. MAIL in  
R.08-10-007**

TCU  
TCU Headquarters, Local 1315  
3 Research Place  
Rockville, MD 20850

The Grove Trolley  
189 The Grove Drive  
Los Angeles, CA 90036

AFSCME Local 3634  
514 Shatto Place  
Los Angeles, CA 90020

Teamsters Local 911  
3888 Cherry Avenue  
Long Beach, CA 90807

Americana At Brand Trolley  
889 Americana Way, Suite 330  
Glendale, CA 91210

Jerry Fecher  
Int'l Brotherhood of Electrical  
Workers  
7444 Trade Street  
San Diego, CA 92121

Int'l Fed Prof & Tech  
Engineers  
L-21  
1182 Market Street, Rm 425  
San Francisco, CA 94102

Facility/Subway Stationary Engineers,  
Local 39  
337 Valencia Street  
San Francisco, CA 94103

Sheet Metal Workers, Local 104  
1939 Market Street  
San Francisco, CA 94103

Cable Car Carpenters  
United Brotherh'd of  
Carpenters L-22  
2085 Third Street  
San Francisco, CA 94107

Irwin Lum  
Pres., Transport Workers Union, Local  
250A  
1508 Fillmore Street  
San Francisco, CA 94115

Reginald McCray  
Transit/System Safety Personnel  
Transport Workers Union-Local  
200  
1426 Fillmore Street  
San Francisco, CA 94115

Tryg McCoy  
Depty Airport Dir., Air Train  
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San Francisco, CA 94128

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Mark Mahaffey  
Operations Mgr. Facilities Maint.  
Santa Clara Valley Transport Authy  
3331 North First Street, C-1  
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Kevin D. Allmand  
Legal Counsel  
Santa Clara County Transit  
District  
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Operating Engineers - Local 2  
828 Mahler Road, Suite B  
Burlingame, CA 94010

Int'l Brotherhood Elect Wkrs L6  
55 Fillmore Street  
San Francisco, CA 94117

Timothy Spangler  
Sacramento Regional Transit  
District  
1400 29<sup>th</sup> Street  
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