



**NAPA COUNTY GRAND JURY
2015-2016**

April 29, 2016

FINAL REPORT

**FACILITY MANAGEMENT
WILL THE LIGHTS STAY ON WHEN THE
POWER GOES OUT?**

SUMMARY

The Grand Jury became interested in how well the county's facilities are being managed and whether or not energy efficiencies are being realized through proper maintenance of HVAC equipment and controls. The Grand Jury elected to expand its inquiry into all critical systems in county buildings. The Jury's motivation was to ensure that the county is providing safe, comfortable and healthy facilities for its employees and citizens. The Jury found that the county's buildings are very well maintained. Buildings are attractive and clean and there is little, if any, sign of wear and tear. Temperatures are comfortable and ventilation is adequate.

The Jury further found that the Public Works and Information Technology Services Departments did a commendable job following the August, 2014, earthquake in relocating departments to temporary space in a matter of days. This was an enormously complex task given that 100,000 square feet of county office space had sustained damage, requiring over 400 employees to be relocated, some of them multiple times. By Tuesday morning, August 26th, only two days after the earthquake, virtually all departments were operating and providing services to county residents. The Public Works Department then set about the earthquake repair work, including building system upgrades and maintenance items when appropriate to do so. By October and November 2014, plans and budgets were completed, bids had been solicited, and repair work was underway, except in the Historic Courthouse and the Hall of Justice, where significant structural damage was incurred. Division and department heads informed the Grand Jury that they received excellent communication from the recovery teams and that those teams actively sought input from the operating units when developing plans and schedules for the repair work. These managers credited all county departments for their hard work, long hours, and outstanding teamwork in making the earthquake recovery effort a success, but they universally singled out the Public Works and Information Technology Services Departments for special recognition.

The Jury did find issues, however, with the management of contracts for the maintenance of critical building systems. Service contracts for HVAC equipment, elevators, and emergency power generators were allowed to expire on July 1, 2015, and the inspections and testing regimen by third party specialists was effectively suspended on that date. Elevator inspections did continue on a month-to-month basis until October 31, 2015, but were suspended thereafter. There is no guarantee that such testing would ensure future performance of the equipment, but it is the opinion of the Grand Jury that every reasonable step should be taken to improve the odds that the equipment will work when needed.

The Jury has requested the Board of Supervisors to commend the Public Works and Information Technology Services Departments for outstanding performance in the earthquake recovery effort. The Jury has also requested the Board of Supervisors to direct the County Executive Officer to ensure that maintenance contracts for critical equipment and services are not allowed to lapse in the future.

GLOSSARY

- HVAC –Heating, Ventilation, and Air Conditioning –Mechanical system which circulates air at the desired volume and temperature to work spaces.
- VAV (Variable Air Volume) Box –Device which controls the volume and temperature of air supplied to a zone, or portion of a building controlled by its own thermostat.
- Pneumatic Controls –“Old”technology which adjusts temperature and airflow settings of VAV boxes via a system of compressed air lines.
- Digital Controls –“New”technology which adjusts the temperature and airflow settings of VAV boxes via electronic signals.
- Central Plant –Large piece of HVAC equipment which, along with ancillary air handling units, provides air at the desired volume and temperature to VAV boxes to maintain zones at their desired thermostatic settings. Typically one central plant serves an entire building.
- Package Units –Smaller HVAC units, usually located on rooftops, which provide air at the desired volume and temperature to VAV boxes to maintain zones at their desired thermostatic settings. Usually, several package units are required to serve a single building.
- RFP –Request for Proposals –An invitation for qualified vendors to submit proposals for a defined set of services. Typically RFPs include the scope of work and the term of the agreement.
- Load Testing –Testing of backup generators to make sure they provide the required amount and quality of electrical power to perform in an emergency situation, using a “load bank”to simulate the power demand the generator is expected to deliver in an emergency.
- Switch Gear –Electro-mechanical equipment which switches the supply of electrical power from its normal source to emergency generators, and back.

BACKGROUND

Recognizing the significant investment the county has in its facilities, the Grand Jury wanted to know how well those buildings are being maintained. Of particular interest was energy efficiency. Given the large number of buildings maintained by the county, and the wide range of their size and complexity, the Jury questioned who is maintaining the county’s HVAC equipment and how well they are doing it, starting with how often the HVAC systems were being inspected and by whom. This original area of interest grew to include other facility related issues such as cleanliness, the condition of high wear surfaces, such as carpets and walls, and the maintenance of critical building systems such as elevators, HVAC systems, and emergency power generators. The motivation for the Jury’s investigation in this area was to ensure that the county is providing safe, pleasant, and healthy buildings for its employees and citizens, and to ensure that those facilities will be able to continue to function in the event of a natural or man made disaster.

METHODOLOGY

The Grand Jury began its investigation by interviewing managers at various levels within the Public Works Department to gain an understanding of how the county manages its buildings to make sure that they are clean, safe, and comfortable places to work, especially how it handles the maintenance of critical building systems, such as elevators, HVAC equipment, and emergency power generators. Contracts with four maintenance contractors, Bell Products (HVAC systems and pneumatic controls), Siemens (digital HVAC controls), Kone (elevators), and Peterson Power Systems (emergency power generators), were examined to review such things as scope of work, frequency of inspection, the terms of the agreements, and renewal provisions. Tours were conducted of major county facilities, including the county Administration Building on Third Street, the Hall of Justice, the Carithers Building on Parkway Mall, and all the buildings on the South Campus to check for cleanliness, level of general maintenance, and comfortable and consistent temperatures. The Grand Jury reviewed the earthquake recovery process with the Public Works Department and interviewed senior managers whose departments were displaced to gain their perspectives on how the process was managed.

Documents Reviewed

- Maintenance service contracts for Bell Products, Kone and Peterson for the period July 1, 2012 to June 30, 2015.
- Maintenance Service Contract for Siemens Building Technologies for the period July 1, 2013 to June 30, 2018.
- Purchase orders for work performed by Bell Products, Kone, and Peterson for the period January 1, 2012 to December 1, 2015.
- Property Management Department inspections reports for emergency generators July 1, 2015 to December 1, 2105.
- Property Management work order activity for Bell Products, Kone, and Peterson for the period July 1, 2015 to December 1, 2015.
- Earthquake damage assessment and plans for departmental moves to temporary space and back.

DISCUSSION

Cleanliness and Level of General Maintenance

The Grand Jury found the county facilities it toured to be clean and well maintained. Temperatures in work spaces were comfortable and there appeared to be adequate ventilation. There was no evidence of worn carpets or marred walls. Lighting was adequate and all fixtures were working. Office partitions were in good condition. Restrooms and break areas were spotless.

Post Earthquake Recovery and Repair

At the time of the Grand Jury inspections in September 2015, restoration work to address earthquake damage was just being completed and departments were in the process of moving back into their permanent spaces after being housed in temporary locations. It was evident to jurors during the tours that Public Works had been smart in executing the repair work by seizing the opportunity to perform building system upgrades. HVAC controls were upgraded from

pneumatic to digital, carpet and partition systems were upgraded, and needed maintenance work was completed while the buildings were vacant and opened up for earthquake repairs. County employees and senior managers the Grand Jury interviewed were all complimentary about the condition of their refurbished spaces. They also praised the way in which Public Works and Information Technology Services handled the post earthquake recovery, including the very complex move to temporary facilities, getting them up and operating quickly, and moving them back. After the earthquake damaged about 100,000 square feet of county office space, over 400 people were relocated to conference rooms, training rooms, rented space, the newly acquired South Campus, and even to a folding table outside on the plaza, complete with furniture, phones, and computers. Virtually all county services were available to residents on Tuesday, August 26th, just two days after the earthquake. Repair and renovation work was quickly specified and bid out and construction was underway by November 2014. This earthquake recovery work, except for repairs in the Historic Courthouse and the Hall of Justice, where significant structural damage was incurred, was completed by September 2015. Displaced departments were then moved back into their permanent spaces smoothly and efficiently. Unfortunately, departments that were housed in the Historic Courthouse and the Hall of Justice, the Probation Department for example, will not be moved back to their permanent space until the extensive structural repair work in those facilities is finished, now estimated to be at the end of 2016 in the case of the Hall of Justice and sometime in 2017 for the Historic Courthouse. The Jury acknowledges that this successful result is due to long hours, hard work, and dedication of the entire county workforce, but especially to the people in the Public Works and Information Technology Services Departments.

Maintenance Contracts

The Grand Jury is concerned, however, that contracts with three building system maintenance providers, Bell Products (HVAC equipment and pneumatic controls), Kone (Elevators), and Peterson Power Systems (emergency power generators) were allowed to expire on July 1, 2015. Although county employees did a rudimentary level of testing on generator motors and HVAC equipment, but regular inspection and testing by these third party specialists was suspended on July 1st. These vendors continued to do some work on a purchase order by purchase order basis, but were not directed to continue the inspection and testing regimen they were performing under their contracts. Elevator inspections did continue on a month-to-month basis until October 31, 2015, but were suspended thereafter.

All three vendors had annual contracts starting on July 1, 2012, with one year renewals starting on July 1, 2013 and July 1, 2014. Because these contracts were at their three year limit, the Public Works Department was obliged to send out RFPs to negotiate new contracts to provide these maintenance services beyond July 1, 2015. Allowing time for vendors to respond to the RFPs and time for county personnel to review the proposals, the RFPs should have been sent out no later than May 1, 2015 to avoid a lapse in contracted maintenance services. The RFP for elevator maintenance was issued on January 12, 2016. The new contract is expected to start on either March 22, 2016 or April 5, 2016, following approval by the Board of Supervisors, approximately nine months after the last contract expired and five months after the previous contractor suspended inspections.. The RFP for emergency generator maintenance was issued on January 29, 2016 and the new contract is scheduled to start on April 5, 2016, nine months

after regular inspection and testing was last done. The RFP for HVAC equipment maintenance was issued on February 22, 2016 and the new contract is expected to start on April 19, 2016, nine and a half months after the last contract expired . There is evidence that the Public Works Department was extremely busy with earthquake recovery work and that there was a desire to take the time to make sure the RFPs contained the most up-to-date specifications for scope of work. However, the choice to delay the RFPs placed the reliable performance of critical building systems at risk.

HVAC Equipment

Under its prior contract Bell Products conducted quarterly testing of all HVAC equipment, including central plants and package units all the way down to VAV boxes and thermostats. Not every piece of equipment was tested each quarter, but by the end of a twelve month period every single piece was inspected at least once. After the expiration of the contract, Bell Products continued to do repair work and some inspection, but far short of its prior inspection program, putting the Property Management Department in a position of being reactive in responding to air temperature and ventilation issues instead of addressing problems before they develop.

Elevators

The county has over sixty elevators in service, each requiring annual inspection for preventative maintenance. Kone is doing repair work as requested, but suspended regular inspection activity at the end of October 2015. County maintenance people are not trained, equipped, or authorized to do this work. Without regular inspections by third party specialists, needed adjustments and repairs may go unnoticed, which could in turn compromise the reliability and safety of this equipment.

Emergency Power Generators

County maintenance personnel have been performing basic inspections on generator motors on a monthly basis since July 1, 2015, such as checking battery charge, fuel levels, and lubricant levels, and have been test starting the units. However, county personnel are not trained, equipped, or authorized to load test the generators or test the switch gear. These tests were performed semi-annually by Peterson under its contract, but have not been performed since July 1, 2015. Although there is no assurance that a successful test will ensure that a generator will perform when it is needed, the Jury believes that every opportunity should be taken to increase the odds of proper operation, particularly in facilities like the Hall of Justice, Juvenile Hall, and the communications tower on Mt. St. Helena, by thoroughly and professionally testing these units on schedule.

FINDINGS

- F1:** The Public Works Department is maintaining county facilities in a way that provides county employees and citizens with clean, safe, and pleasant buildings in which to conduct the county's business.
- F2:** The Public Works and Information Technology Services Departments did a masterful job of earthquake recovery. Over 400 people were relocated to temporary spaces and were

back in operation in only two days. Except for the historic courthouse and the Hall of Justice, which both incurred significant structural damage, earthquake repairs were completed in little over a year. The Public Works Department took the opportunity to include building system upgrades and maintenance items while the impacted spaces were vacant. The displaced departments, except the ones housed in the historic courthouse and the Hall of Justice, were smoothly and efficiently moved back to their permanent spaces as the renovations were completed.

F3: RFPs for maintenance contracts for critical building systems were not sent out on time, allowing the existing contracts to expire on July 1, 2015 without renewal or replacement. Although a basic level of inspection and testing was done by county maintenance personnel and some inspection and repair work was done by vendors on a purchase order by purchase order basis, the inspection regimen by third party experts on HVAC equipment, elevators, and emergency power generators was suspended with the expiration of the maintenance contracts on July 1, 2015. Elevator inspections continued on a month-to-month basis until October 31, 2015, but were suspended thereafter. The lack of regular thorough inspection and testing by third party specialists could lead to the increased risk of failure of this critical equipment when it is needed most.

RECOMMENDATIONS

R1: The County Board of Supervisors should commend the Public Works and Information Technology Services Departments for the post earthquake recovery work they performed.

R2: The County Board of Supervisors should direct the County Executive Officer to compile a list of contracts for the maintenance of critical equipment and services and to institute a policy that RFPs for replacement contracts be distributed at least sixty days in advance of the expiration dates of such contracts. This policy should be in place by December 31, 2016. Any deviations from this policy should be approved by the County Executive Officer on a case by case basis.

REQUEST FOR RESPONSES

Pursuant to Penal Code section 933.05, the grand jury requests responses as follows:

From the following governing bodies:

Napa County Board of Supervisors: **F1, F2, F3, R1, R2**

INVITED RESPONSES

County Executive Officer: **F3, R2**

Reports issued by the Grand Jury do not identify individuals interviewed. Penal Code section 929 requires that reports of the Grand Jury not contain the name of any person or facts leading to the identity of any person who provides information to the Grand Jury.