

# Memo

**To:** Mendocino Coast Recreation and Park District (MCRPD) Board of Directors and City Council of Fort Bragg

**Cc:** Linda Ruffing, City Manager of Fort Bragg

**From:** Ethan Newton, District Administrator of MCRPD

**Date:** 08/13/2015

**Re:** Proposed Budgeted Amendments to Support C. V. Starr Community Center (CVSCC) HVAC System, CVSCC Personnel Changes and Change to Towel Service

---

## **CVSCC HVAC SYSTEM**

The C. V. Starr Community Center (CVSCC) has a total of 15 air handler units and two heater units that provide ventilation and heating for the facility. These units provide individualized air supply for 14 different zones and are controlled via Johnson Controls software. The control software is sophisticated; capable of being programmed for many variables, such as temperature, humidity, air pressure, occupied status, and provide feedback for when the system is not operating as expected. Through the use of the control system energy efficiencies may be maximized. The proper and effective operation of the entire HVAC system relies on both the mechanical components operating properly and the controls system being programmed properly.

To address ongoing issues with the HVAC system, Johnson Controls, Inc (JCI) was contact to provide an assessment of the system as well as provide advisement on whether the two largest HVAC units that service the natatorium could benefit from installing VFD units. The assessment identified several items that JCI recommended addressing, including the following:

### **Resolved**

- AHU2 controller malfunctioning (repaired)
- HRU3 HWV malfunctioning (repaired)
- HRU4 offline and malfunctioning (repaired)
- HRU11 HWV malfunctioning (repaired)
- Site controls required upgrade (upgraded)
- AHU1 and AHU2 serve same area but utilizing different set points and operating out of sequence (corrected)
- Obsolete FEC controller (upgraded to latest version)

### **Unresolved**

- Building static pressure control malfunctioning; damper actuators installed in reverse and non-operational (repair scheduled)
- HW system not interlocked to FRU's
- Boiler set point control needs to be evaluated
- AHU's not scheduled to balance runtime on equipment
- AHU's do not have a high static safety of SF or RF
- Damper operation needs to be evaluated
- Metasys (control software) trends not being utilized
- SF VFD retrofit for AHU1 and AHU2

- AHU1 and AHU2 air intake not isolated from exhaust and cycling air

To resolve the outstanding issues and provide needed support to maintain the system it is recommended to complete the following:

1. Enter into a Planned Service Agreement (PSA) with JCI
2. Install and integrate SF VFD's on AHU1 and AHU2
3. Ducting improvements to isolate AHU1 and AHU2 air intake and exhaust

#### 1. Planned Service Agreement

A PSA with JCI provides a customized service strategy designed specific to the CVSCC. JCI's approach features a combination of scheduled, predictive and preventative maintenance services, much of which are not able to be completed by current staff due to the specialized skillset required to perform these services.

The PSA aims to help the CVSCC achieve the following five objectives:

- Identify energy saving opportunities
- Reduce future repair costs
- Ensure occupant comfort
- Health and safety
- Protect the environment

Inclusions in the PSA are as follows:

- Quarterly inspection and service visits: 3 onsite and 1 performed remotely with web access
- Enhanced engineering: JCI monitors the overall performance of equipment, taking into consideration current manufacturer's recommendations, reliability, productivity, operating cost, and changes in use. When JCI identifies alterations, upgrades, retrofits, etc., which will benefit the C. V. Starr Community Center, JCI will suggest appropriate action.
- Metasys (control software) support:
  - Backup and archive database
  - Assess communication performance
  - Monitor NAE load and available memory
  - Periodically back up security database
  - Review operating sequences
  - Check Event and Audit log for abnormalities
  - Clear alarm summaries
  - Setup/monitor trends as necessary
  - Single level software upgrades
  - Evaluate opportunities for additional automation and energy savings.
- Review any outstanding hardware issues
- Check any problematic sensors for calibration
- Priority dispatch for service calls
- 10% discount off street labor rate and parts
- Service reports after each preventative maintenance visit
- Quarterly progress meetings or conference calls for quality assurance

The agreement is for an initial 3-year term with the following cost:

Year 1: \$10,542

Year 2: \$10,542

Year 3: \$10,868

Cost savings in utilities and equipment resulting from the PSA are projected to offset the annual costs of the PSA and prevent future escalations of utility and equipment costs due to ineffective maintenance of the HVAC system.

## 2. Supply Fan VFD's on AHU1 and AHU2

JCI has identified that installation and integration of variable frequency drives (VFD's) on both supply motors for AHU1 and AHU2 would produce significant energy and cost savings for the C. V. Starr Community Center. These two new VFD's would be integrated with the already installed VFD's on both exhaust motors for AHU1 and AHU2. The project costs are as follows:

<b>Description</b>	<b>Cost</b>
2 VFD units	\$ 10,261
Installation of VFD units	6,000
Programming	7,645
Rebate	(3,200)
Net Cost	\$ 20,706

The estimated electrical cost savings is between \$12,000 and \$24,000 annually. The return on investment (ROI) is calculated to be between 11 and 21 months. Savings in heating (propane) is also anticipated, but has not been calculated as of the time of this memo.

## 3. Ducting Improvements for AHU1 and AHU2

AHU1 and AHU2 both together provide air and exhaust air for the CVSCC natatorium. Aquatic facilities require 100% outside air (no recycled air) to maintain quality air free of chloramine accumulation. Chloramines (a byproduct of chlorine disinfection that occurs in swimming pools that off-gas from the pool water into the air) can accumulate without regular exchange of 100% outside air for inside air. The accumulation of chloramines increases the difficulty of managing pool water chemistry, increases the discomfort level for patrons (the "pool smell" is an indication of a buildup of chloramines), and increases the corrosion of equipment and damage to the building.

AHU1 and AHU2 were originally installed in such a manner that the air intakes for these units pull air that has recently been exhausted from the same units. While not engineered to recycle air, these units are doing just that. As described above, this may lead to a chloramine accumulation. Additionally, recycling of the air may lead to increased humidity levels in the natatorium, which may increase the discomfort level for patrons and accelerate the corrosion of equipment and the damage to the building.

To fix this issue requires the air intakes for both AHU1 and AHU2 to be isolated from the exhausted air. The solution recommended by JCI and staff is to provide framing, duct work and louver panels to pull air from the east side of the building.

The estimated cost is \$10,000.

## **CVSCC PERSONNEL CHANGES**

A review of current personnel needs of the CVSCC has identified 4 areas of concern.

1. Administrative personnel
2. Aquatics personnel
3. Custodial/maintenance personnel
4. Workers' Compensation Insurance

### **1. Administrative Personnel**

With the recent transition to a staff allocation model between the CVSCC and Mendocino Coast Recreation and Park District (MCRPD), there was a reduction of administrative staff levels from a combined total 3.75 FTE's to 3.50 FTE's. This reduction of administrative staff was supported by the strategy of streamlining activities that had previously been completed separately by both operations and reducing inefficient redundancies.

Since this reduction, a full-time Accountant and Administrative Services Coordinator position has been vacated and purposefully not refilled. The duties of this position have been assumed by the Business Manager and supported with an increase of the Administrative Assistant position from 0.50 FTE level to 0.75 FTE level and an increase of Guest Services Representative position from 1.75 FTE to 2.20 FTE's.

It is recommended to make permanent the elimination of the Administrative Services Coordinator position, but given workload levels it is recommended to increase the Administrative Assistant position to a fulltime (1.00 FTE) position and make permanent the 2.20 FTE's for Guest Service Representative.

The cost savings to the CVSCC operating budget would be \$5,458.

### **2. Aquatics Personnel**

The Lifeguard position is budgeted for 8.35 FTE's and supports programs 7-days a week, as early as 4:30am and as late as 8:00pm. Aquatics programs are required to have a lifeguard (or more) for safety reasons.

For over 2 years (and perhaps longer) the Lifeguard position has never been adequately staffed. Many aquatics programs are only running because supervisors are lifeguarding (more than planned) and in some instances overtime has been approved to maintain the continuity of programs. Even with these measures, there have been instances in which programs have been cancelled due to the low lifeguard staff levels.

The following have been identified as contributing to this issue:

- Lack of available certified lifeguards
- Lack of available lifeguard candidates that are able to meet the minimal lifeguard certification requirements (candidates have poor swimming skills, are unable to pass lifeguard knowledge test, are unable to pass skill tests, etc.).
- Despite continued recruitment efforts above and beyond the normal recruitment practices, the interest in the job is minimal. This is likely due to the aforementioned items, as well as the compensation level (\$10-\$12/hour), only part-time (non-benefitted, limited hours), and unattractive schedules (early mornings, evenings, weekends, holidays, etc.).
- Retaining lifeguards is also a challenge. Many lifeguards are young (high school age) and job is often secondary to their family, schooling, sports, social lives, etc.

Complicating this issue is that the pool and aquatics program schedule has been established or grown independent of the budget. To appropriately staff the current level of swims and aquatics programs would require an additional 2,229 hours of a Lifeguard position beyond what is budgeted.

To resolve the staffing shortage issue and re-align the pool and aquatics program schedule with the budget, it is recommended to do the following:

- Increase the Senior Lifeguard position from 0.75 FTE's to a full-time position (1.00 FTE) and increase the amount of time the position provides direct program support (lifeguards, teaches classes, etc.) from 50% to 75% of the position's time.
- Create a full-time (1.00 FTE) Aquatics Leader position with a pay rate of \$11-\$13/hour). With a slight increase in the pay rate, benefits, and 40hours/week it is anticipated that the position would be more easily filled than the Lifeguard positions and help address the persistent lifeguard shortage issue.
- Reduce the Lifeguard position from 8.35 FTE's to 6.73 FTE's.
- Increase the amount of time the Assistant Coordinator – Aquatics position provides direct program support (lifeguards, teaches classes, etc.) from 25% to 50% of the position's time.
- Change the Open Fitness swims to be adults only (allows for a reduction of lifeguard hours)
- Eliminate the Tuesday and Thursday 5:15pm River Walk program (average attendance of 2; allows for a reduction of lifeguard hours)
- Change the pool schedule to close 30 minutes earlier each day so the pools would close at 6:30pm on weekdays and at 4:00pm on the weekend (allows for a reduction of lifeguard hours)

Due to pool schedules already been published and in circulation, changes to the pool schedule would not be effective until January 2016. However proposed staff reorganization would implemented as soon as possible.

There is no estimated cost nor savings to implement aquatics personnel and pool schedule changes, as the package of proposed changes offset costs with savings.

### 3. Custodial/Maintenance Personnel

Since March of 2015 there has been an unfilled Custodial/Maintenance Worker position (29hrs/week). The vacancy of this position is negatively impacting the cleaning and care of the CVSCC.

The following has been identified as contributing to this issue:

- Competition with other like jobs in the area.
- Despite continued recruitment efforts above and beyond the normal recruitment practices, the interest for this job is minimal. This is likely due to the compensation level (\$10-\$12/hour), only part-time (non-benefitted, limited hours), and unattractive schedule (may require early mornings, evenings, weekends, holidays, etc.).

It is recommended to create a full-time Custodial/Maintenance Worker 2 position. The pay range would be \$11-\$13/hour and this position would receive benefits provided to full-time employees. With a slight increase in the pay rate above the current Custodial/Maintenance Worker position, benefits, and 40hours/week it is anticipated that the position would be filled and a higher level of cleaning and care of the CVSCC could resume.

The cost would be partly offset by replacing the vacant 29hr/week part-time Custodial/Maintenance Worker position. The additional cost to the CVSCC operating budget would be \$10,181.

### 4. Workers' Compensation Insurance

As part of the evaluation process for producing these recommended personnel changes it has been identified that there is a projected expenditure increase for workers' compensation

insurance. This is in part due to updated estimates not available at the time of budget production and in part due to a formula error.

The estimated cost increase for workers' compensation insurance is \$12,296.

### **TOWEL SERVICE**

To offset the increase in wages and benefits costs for the Custodial/Maintenance Worker 2 position and the increase in workers' compensation cost, and more generally control quickly escalating costs, it is proposed to discontinue towel service at the CVSCC. Currently towel service is budgeted at \$22,800, but the current cost of service has escalated and projections show that the cost for towel service for the year could reach \$30,000. It is understood that at the time that towel service was implemented, it was anticipated to recover its own costs. However, after two-years it has proven to be an expensive endeavor and one that if continued would prevent spending in higher priority areas, such as staffing appropriately to maintain and clean the facility.

Staff have explored the option of alternative laundry services, but are contractually obligated to continue service with the current provider if CVSCC is to continue to provide towel service. In addition to sharp increases in the cost, the laundry service provider has provided inconsistent service and fails to successfully communicate important changes in service (costs, changes to deliveries, etc.) to CVSCC management.

To terminate laundry service and towel service would provide an estimated cost savings of \$16,800 (approximately \$6,000 will have been spent on laundry service during the first 12 weeks of the current fiscal year)

To continue with the laundry service and towel service would require a budget adjustment increase of \$7,200 to the operating budget.

## **SUMMARY**

To address current HVAC issues and provide responsible ongoing management of the C. V. Starr Community Center HVAC system, the following recommendations are proposed:

1. Enter into a planned service agreement with Johnson Controls, Inc. and amend the Operating Budget – Operating Expense Section to include an increase of \$10,542 to the Maintenance line item. While a reduction in utility costs is anticipated as an outcome of the planned service agreement, it is not recommended to amend the budget with a reduction to utility expenses until there is evidence supporting this projected savings.
2. Proceed with the AHU1 and AHU2 VFD project, amend the Operating Budget - Capital Improvements Section to include the cost of \$23,906, amend the Operating Budget – Operating Expenses Section to include a decrease of \$12,000 to the Utilities line item (anticipated utility savings) and amend the operating budget – Operating Revenues Section to include an increase \$3,200 to the Miscellaneous line item (estimated utility rebate).
3. Proceed with ducting improvements for AHU1 and AHU2 to isolate the air intake from the exhaust and amend the Operating Budget - Capital Improvements Section to include the cost of \$10,000.
4. Amend the Operating Budget – Operating Expense Section to include an increase \$17,019 to the Wages and Benefits line item supporting the following personnel items:
  - a. Eliminate the full time (1.00 FTE) Accountant and Administrative Services Coordinator position.
  - b. Increase the part-time Administrative Assistant position from 0.50 FTE's to a full time (1.00 FTE) position.
  - c. Increase the Guest Service Representative position from 1.75 FTE's to 2.20 FTE's.
  - d. Reduce the Lifeguard position from 8.35 FTE's to 7.63 FTE's.
  - e. Increase the part-time (with limited benefits) Senior Lifeguard position from 0.75 FTE's to a full time (1.00 FTE with full benefits) position.
  - f. Add a full time (1.00 FTE) Aquatics Leader position.
  - g. Reduce the Custodial/Maintenance Worker position from 2.00 FTE's to 1.25 FTE's.
  - h. Add a full time (1.00 FTE) Custodial/Maintenance Worker 2 position.
  - i. Increase in workers' compensation insurance costs of \$12,296.
5. Proceed with discontinuing towel service, discontinue using a laundry service and amend the Operating Budget – Expense Section to include a decrease of \$16,800 to the Maintenance line item.



Description	Variance = C - B	FY 15/16 Adopted	FY 15/16 w Proposed Amendments	Variance = E - B
Operating Revenue	favorable (unfavorable)			favorable (unfavorable)
General Admission	\$ 41,882	\$ 541,000	\$ 541,000	\$ -
Discounts	6,290	(26,600)	(26,600)	-
Rentals	11,529	42,100	42,100	-
Registration	7,019	57,700	57,700	-
Merchandise	176	5,700	5,700	-
Miscellaneous	31,404	1,900	5,100	3,200
Total Revenue	98,300	621,800	625,000	3,200
Operating Expense	(favorable) unfavorable			
Wages and Benefits	7,576	944,730	961,749	(17,019)
Utilities	(13,007)	280,850	268,850	12,000
Outreach	(110)	31,310	31,310	-
Maintenance	6,718	90,040	83,782	6,258
Operations	3,412	190,753	190,753	-
Other Expenses	(401)	28,876	28,876	-
Total Operating Expense	4,188	1,566,559	1,565,320	1,239
Other Income/Expenses				
Classification/Comp. Plan		10,000	10,000	-
Exercise Equip. Repl.		22,250	22,250	-
Total Other Income/Expense		32,250	32,250	-
COFB Loan Principle Payment	-	61,369	61,369	-
COFB Energy Loan Princ. Pmt.		4,570	4,570	-
Total Expenses	4,188	1,664,748	1,663,509	1,239
Net Revenue (Expense)	94,112	(1,042,948)	(1,038,509)	4,439
Enterprise Fund Allocation for Operations	(94,112)	1,042,948	1,038,509	
Net Operating Income	\$ -	\$ -		\$ -

Description	FY 15/16	
	Adopted	w Proposed Amendments
Capital Improvements		
AHU VFD Project	\$ -	\$ 23,906
AHU Duct Improvements		10,000
Total Facility Improvements	0	33,906
Enterprise Fund Allocation for Facility Improvements	-	(33,906)
Net Capital Improvements	\$ -	\$ -
Enterprise Fund		
Beginning Avail. Net Assets	316,292	316,292
Sales Tax Revenue	810,000	810,000
Property Tax Revenue	230,000	230,000
Total Allocation	(1,042,948)	(1,072,415)
Net Assets	\$ 313,344	\$ 283,877
Operating Reserve	141,672	126,939
Capital Repair & Equip Reserve	141,672	126,939
Facility Improvement Reserve	30,000	30,000
Net Assets	\$ 313,344	\$ 283,877