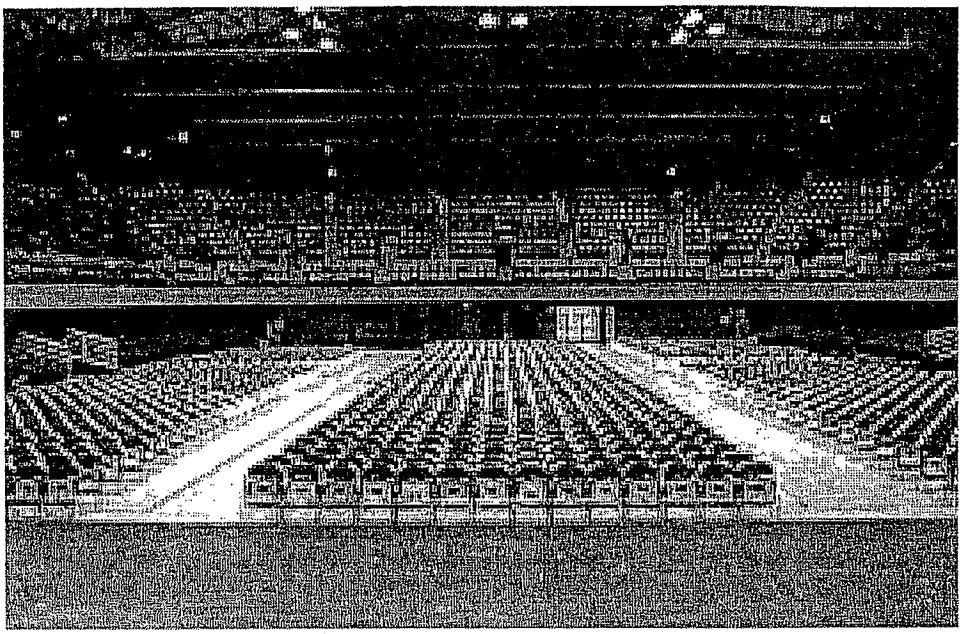
CEG

Critical Engineering Group, Inc.

Henry J. Kaiser Center
10 Tenth Street, Oakland CA



Client:
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Date of Report: 010/27/2008

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Introduction

The intent of this summary is to identify the current status of the HVAC and electrical systems at the unoccupied Henry J. Kaiser Convention Center located on 10 Tenth Street, Oakland, CA. Rehabilitation costs have be quantified to retrofit the system/s to meet the original design and current mechanical and electrical code requirements. Information has been obtained with conversation's with the Building's Engineer, record drawings dated July 23, 1982, and site inspections by the respective engineers.

The building was constructed in 1914, and has basement level mechanical and electrical rooms. The three above ground floors have been used as an entertainment and arts venues. The first floor consists of a North Gallery, West Entry, West Lobby, East Entry, East Lobby, Calvin Simmons Theater, and The Arena. The second floor has the Olympic Room, Balcony, second level Arena seating and several dressing rooms. The third floor consists of a Ballroom, Balcony, The Gold Room, and highest level arena seating.

This study will primarily focus on electrical, heating, ventilation and air conditioning equipment capital costs and the re-use of the existing equipment, if possible. Recommendations will be made on building controls and higher efficiency equipment available on the market today. Electrically, the current building load will be estimated and revised existing and future loads will be allocated to applicable equipment or processes.

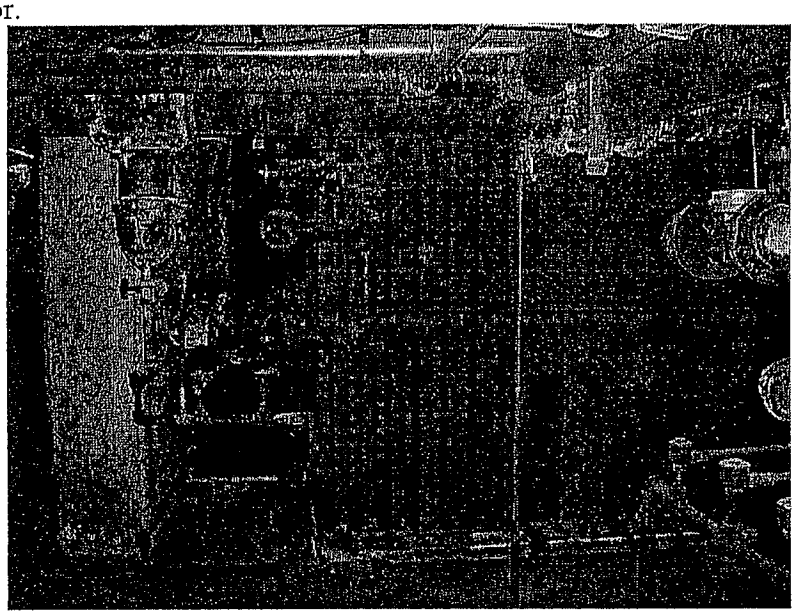
The intent of the study will be to make recommendations for changes and upgrades which will allow operation per current codes and to satisfy peak operating conditions that will be seen during performances. It is expected that the desire of Live Nation and the City of Oakland is to allow the facility to be used for full operation, including hosting full live performances, for an extended future (20 years and beyond). The study also assumes that all equipment and installations will be of high quality and operate in an efficient and up-to-date fashion.

Mechanical System

BASEMENT

Boiler System

The lower basement level has an estimated 6,000,000 Btuh gas fired boiler made up of two separate chambers encased in a CMU housing. The boiler feeds low pressure steam at roughly 12 psi to steam coils located in three adjacent fan rooms and several steam wall furnaces on the first and second floor.



Fan Room Coils

According to the building's engineer, one of the two tank chambers is not operable, while the other chamber has been utilized in the past year for events at the center. Auxiliary equipment for the boiler includes expansion tanks, relief valves, condensate pumps, traps, along with piping and valves. Although most of the equipment appears to be in some form of working condition they all lack adequate seismic bracing and supports and require continued maintenance. The boiler is many decades old and does not operate efficiently. Also, asbestos is assumed to be present with-in the boiler housing.

Existing boiler and gauges

Recommended new scope of work as part of this section –

Boiler Replacement

Option One - A second, possibly more economical, option to the existing steam heating system is to replace the steam system with a heating hot water system. Individual hot water boilers can be very cost effective units to install and operate. This approach will require new piping, valves, and heating coils. ***It is recommended*** this approach be followed for ease and cost of installation.

Option Two is to retrofit the building steam system to some level approaching current standards by demolishing the CMU boiler assembly and replacing it with an engineered packaged boiler system. It is recommended that all, or nearly all, the piping and fittings also be changed out. If the piping is not changed out in its entirety, then its supports shall be retrofitted to current seismic codes, as allowable by the current site conditions. All steam traps should be replaced at this time also.

Each option above would include demolition and abatement of the existing boiler and associated equipment and piping within the boiler room. Costs are shown as a separate line item for this demolition work.

Air Handling Rooms

The forced heating air system appears to be in working condition; however its operation will require verification prior to occupancy of the building. At minimum, the existing fans will likely need replacement (see below) due to age. Also, it would be beneficial to replace the fans and their motors with those suitable for variable speed. This would allow more efficiency and control of the heating system.

Without an air balance report, the airflow of the fans cannot be determined for this report, however we have estimated their capacity (see below).

As described above, it is recommended these AHU rooms have their heating coils replaced and fed by a new boiler system.

Domestic Water Heating

There is a new domestic water heater also located in the basement. The water heater appears to be a recent addition and is assumed to be in good working condition. Also the sewage/waste lift station is located in the basement.

South of the boiler room in the basement, there is a separate generator room. The generator and its fuel storage tank are located with-in the room. The tank appears to have been recently installed, and the transformer has recently been re-built according to the building's engineer. The generator likely does not meet current Air Quality Management standards. Retro –fitting the

generator to current standards will not be cost efficient. Furthermore, from the cursory review of the building emergency electrical demands the generator will likely need to be upsized, the tank and transformer may be reused.

Ventilation

The outside air requirement for the arena is 135,000-cfm considering a capacity of 9,000 persons. There is currently a maximum potential of 41,170-cfms of outside air provided in to the arena area from the two mechanical room fans on the Northeast and Southeast corners of the arena. The air from the basement fan rooms compensates for the remainder of the outside air into the building. It is unclear without a balance report to quantify the total amount of outside air brought in by the basement fans, however it appears from the four fans are capable of providing 92,535-cfm. These totals will satisfy the requirement as described above.

The Calvin Simmons Theater is supplied outside air solely by the fan rooms, as are the auxiliary areas throughout the building. The ball room and the gold room have a combination of designated supply fans and the basement fan room outside air supply. Most outside sources are matched by an exhaust system.

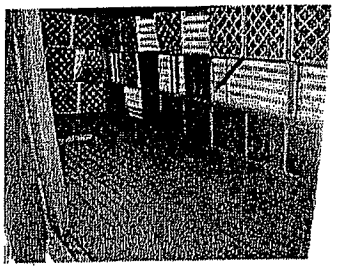
Recommended new scope of work as part of this section –

- The recommended scope of work is to replace the existing fans in the basement AHU rooms. These fans are very old and no indication of type and manufacture is available. The fan motors should include VFDs for better control and energy efficiency.

ROOFTOP

There are six exhaust fans located on the arena roof, along with several other exhaust fans serving various rooms. Outside air intakes are also located on the roof as well as 3 to 4 filter bank housings. The exhaust fans physically seem to be in good operational condition. The OA filter banks look to be structurally sufficient, however the interior filter bank needs rework and the filters themselves would all need replacement. Furthermore, the roof drains have debris restricting drainage; the debris should be immediately re-moved to prevent any further damage to the roof and structure in case of rain.

The "Feasibility Study of the Adaptive Reuse of the Kaiser Arena as New Main Library" by Group 4 Architecture Research + Planning, stated that the building has not been retro-fitted to standards at least as of 1982. Caution should be taken when adding or replacing any roof top equipment, specifically on the East end of the building where the structure has settled more than 15-inches, damaging the area walls. As the roof stability is dependent on the resistance to the outward forces of the building walls, the wall framing shall also be closely be looked at when placing additional weights on the roof (Rutherford & Chekene Consulting Engineers, June 2006). Without proper structural engineering, it would be unsafe to assume the roof can accommodate additional loads without some modifications.



Rooftop Filter Bank Housing.

Recommended new scope of work as part of this section –

- Replace all filters and shore the filter bank housings

Mechanical Cooling

No mechanical cooling is currently installed in the building. There should be some consideration for providing cooling in various areas throughout the building.

Arena – The arena area is currently being cooled by using outside air only. Peak loads as for this area would occur during full occupancy (during performance) and at high ambient outside air temperatures (assume 90 deg F peak). At these conditions, additional cooling capacity beyond just use of outside air for cooling can be substantial to maintain comfortable conditions within the arena. It is estimated the arena will require approximately 200 tons of cooling to maintain such comfortable conditions. There are different possibilities for providing this cooling, but all will require a location for heat rejection equipment outside in ambient conditions. The only foreseeable locations for these are on the roof and possibly the current parking lot. Their placement on the roof will require some structural engineering review and approval from city planners, who may require mechanical screen shielding the equipment. Placement in the parking lot would require the permanent use of 6 to 8 parking areas, and approval from the Cities planning department.

Recommended new scope of work as part of this section –

Option 1:

- Install 200 tons of cooling/heat rejection equipment somewhere on the roof area, if possible. There are a few different possibilities for this to be accomplished including:
  - Install 5 x 40 ton rooftop package units
  - Install 200 tons of chiller capacity and feed chilled water coils in either the AHU rooms or at the ceiling of the arena
  - Structural and screening work to support the above

Option 2:

- Install 250 tons of air cooled chillers and pumps somewhere in the parking/surrounding area, if possible. This system would supply all the cooling needs to the building. This would then require installation of cooling coils in the AHU rooms and providing cooling coils in the roof area of the arena and individual fan coil units in the administrative areas.

Office Spaces - The remaining spaces including the theater and other venues require approximately 40 tons of cooling during the peak conditions.

Recommended new scope of work as part of this section –

- Install individual 3-5 ton DX (refrigerant) units in selected areas, as desired. Alternatively, if a source of chilled water is created (above), fan coil units in these areas could be used.

Ductwork

The heating duct work in the facility appears to be in good working condition. The ducts however may require seismic upgrades. The zone dampers are currently pneumatically operated; these should be converted to electronic operation by changing the motors on the actuators. The ducts are equipped with fire dampers, their operation with the fire protection system shall be verified and it is likely the Fire Marshal may need to confirm this for occupancy permitting. Furthermore, the supply duct will require insulation to comply for California Tiltle-24 energy efficiency requirements. Note that external insulation was not verified, but the duct may have interior lining. It would also be desirable to air balance the entire ducted system.

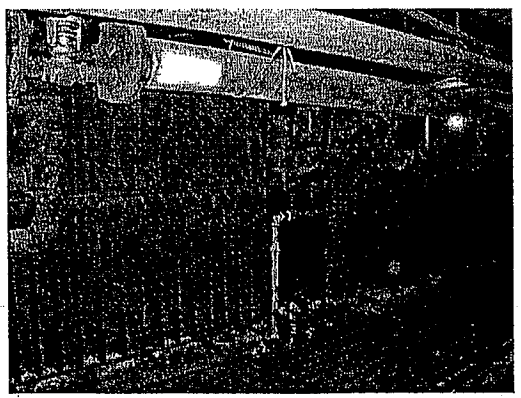
Exhaust duct as seen from the site walks appear to be in good working condition.

Recommended new scope of work as part of this section –

- Brace duct, as necessary, to comply with current seismic standards
- Insulate duct, as necessary, to comply with current T-24 requirements
- Clean ducts, as necessary.

Utility Piping

During the site walks only the exposed utility piping was verified, majority of which was located in the basement mechanical areas. All of the piping requires seismic analysis and may require additional bracing and supports. The steam piping presently is not insulated. Adding insulation may increase the efficiency of the heating system substantially, and is mandatory for Title-24 compliance. Whether the existing steam system is retro fitted or replaced with a hot water system, insulation is mandatory for distribution piping.



Existing piping and coils in the AHU rooms

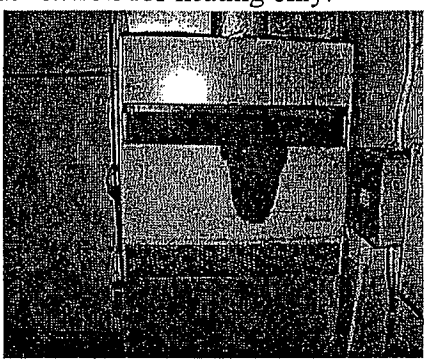
All new piping will be required for cooling systems.

Recommended new scope of work as part of this section –

- Install seismic restraints on piping, as necessary.
- Reinsulate piping, as necessary.

Misc. Mechanical Equipment

According to the 1982 retrofit project's mechanical schedule there are four forced air wall heaters throughout the building with individual temperature-stat controls for heating only. During the site survey one of the four was verified on-site, and appeared in good working conditions. The others may have been demolished.



Electric Heater in the Ball Room

Recommended new scope of work as part of this section –

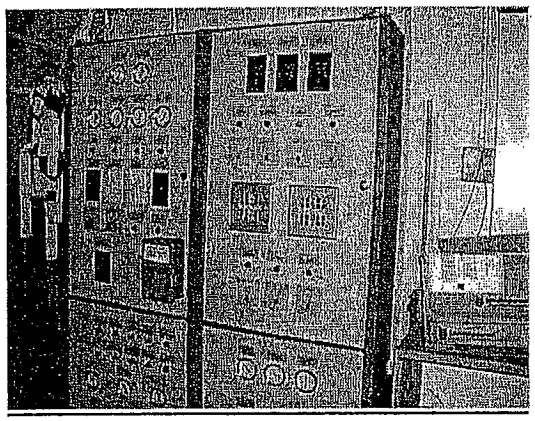
- Replace 3 forced air wall heaters in existing locations.

Controls

All the valves and the duct dampers are pneumatically operated. It is recommended that the pneumatic system be demolished and an electrical system be installed. This would require all actuator motors to be replaced with electronic units and rewired or control wirelessly. With electronic controls the building utility's can be integrated into a DDC system. This will allow more efficient and accurate monitoring and controls of the HVAC system. The facility currently does not have a DDC system; one can be chosen and coordinated with the operational engineers to allow remote monitoring of the facility's systems. All existing temperature controls panel are located in the basement.

Recommended new scope of work as part of this section –

- Replace pneumatic operators with electric operators
- Install new DDC controls system throughout the building – this would include front end computer and approximately 150 points of control throughout the building



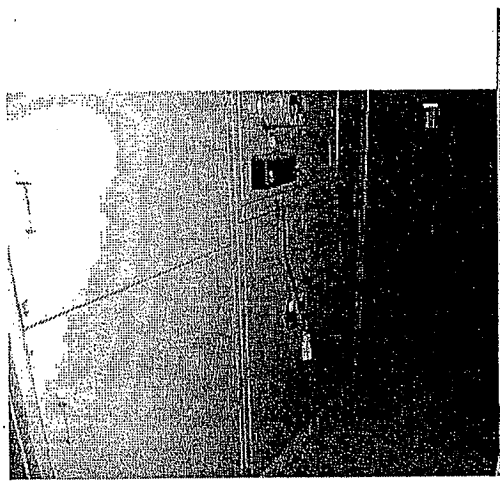
Existing control panel to be replaced

ELECTRICAL SYSTEMS

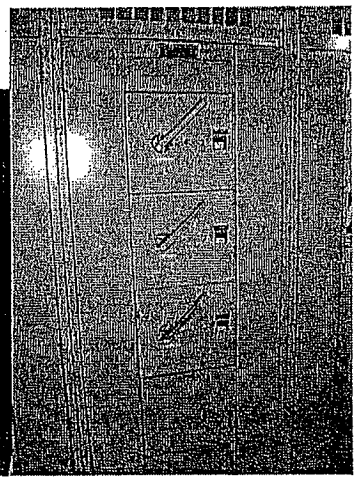
Main Electrical Service and Distribution Systems

Utility power is provided to the site via a Pacific Gas and Electric (PG&E) transformer network and a 4000 amp utility bus duct that enters the building in the southwest corner of the basement level.

The facility main electrical service is located in the basement main electrical room and consists of a 4000 amp, 208/120V main switchboard and multiple distribution switchboard sections. Protective devices are fused switch disconnects that feed distribution power panels, motor control centers and branch circuit panelboards throughout the facility.

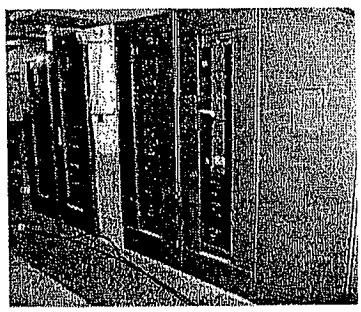


Main Switchboard in Basement



Main Distribution Switchboard

Major distribution loads include three (3) lighting power panels, two (2) motor control centers, one (1) building power panel, along with separate panels for the stage loads and arena loads. The existing stage and arena panels are rated at 600 amps each.



Distribution panelboards

Anticipated new loads for the site are as follows:

- Based on information from similar sized venues, Live Nation has requested a dedicated 2000 amp, 208/120V service for the anticipated stage and arena loads.
- New HVAC equipment
- Additional/upgraded facility lighting will be needed to comply with current building codes

The general electrical distribution system project's approach will be to provide new equipment where practical for new building loads and utilize existing equipment for remodeled or renovated loads.

Preliminary Work Scope:

1. Major electrical equipment was installed at least 25 years ago and has been inactive for several years. It is not possible to determine equipment condition from visual inspection only. It is recommended that the main switchboard, main distribution equipment, and power panelboards be completely cleaned and inspected by a certified electrical testing agency. All equipment should be serviced and tested for proper operation. Depending on the results of the surveys, a decision regarding the suitability of the equipment for continued operation can be made.

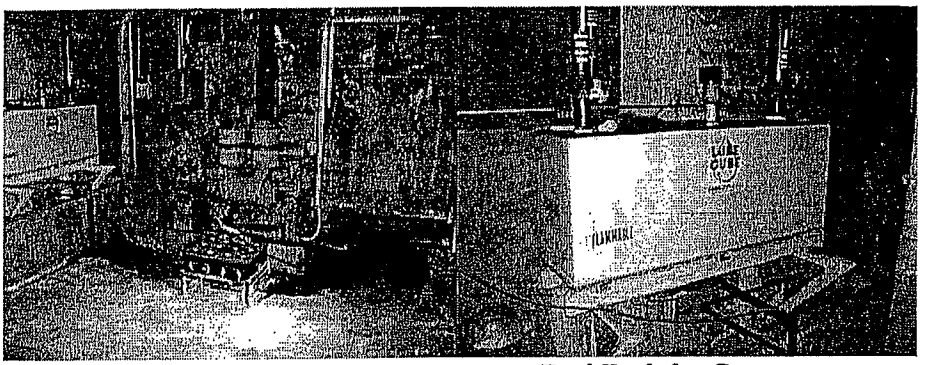
2. A new 2000 amp, 208/120V electrical service will be installed to power stage and arena loads. At this preliminary stage, it is anticipated that this switchboard will powered from a separate Pacific Gas and Electric service. Feeder circuit breakers from this service will provide power to new panels installed at the stage and arena locations for new equipment.

3. A new motor control center (MCC) will be installed to power new mechanical system equipment. It is anticipated that this MCC will be connected to the existing main switchboard.

4. Due to age, a contingency for replacement of existing feeders and branch circuit wiring is recommended. All wiring should be inspected and tested to assure it has not deteriorated. Circuits that fail testing or are deemed suspect should be replaced.

Standby Systems

The existing building standby plant consists of a small 100kW generator, external fuel tank and automatic transfer switch. All equipment is located in the basement main electrical room. The standby system provides power to one distribution panel that primarily feeds emergency and egress lighting for the building.



Existing Standby Generator *Fuel Tank for Generator*

Due to age and condition, the standby plant will need to be replaced for this project. It is recommended that the new plant be sized to provide standby power to the following equipment:

- Emergency and egress lighting – both interior and exterior
- Building security systems
- Building management/control systems
- Life safety equipment (fire alarm systems, etc)
- Task lighting for critical infrastructure areas (main mechanical and electrical rooms)

Preliminary Work Scope:

1. A new 100kW, 208/120V diesel generator will be installed, preferably in a separate generator room to provide physical separation from the utility power systems. To simplify fuel piping and delivery, it is recommended that an integral fuel tank be included with the generator set. The generator will be equipped with a local, "on board" control panel and both generator and fuel system will be equipped with Code required alarms and emergency shutdown devices. A separate, continuous fuel monitoring system will be installed to monitor fuel levels and provide fuel leak detection.

2. A new automatic transfer switch (ATS) will be installed in the electrical room. The ATS will be equipped with a solid state control panel that includes all required voltage/frequency sensing for both commercial and standby power. All necessary generator and system transfer controls will be integral to the new ATS. The system will be programmable to provide the ability to functionally test the system.

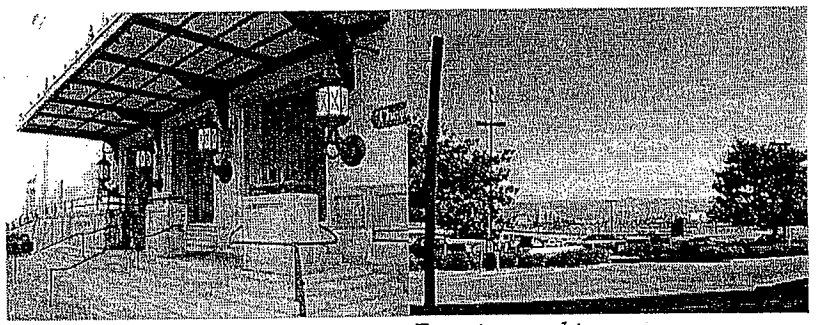
3. A new emergency system panelboard will be installed adjacent to the new ATS. The new panelboard will be equipped with branch circuit breakers to power new and existing building loads.

Lighting Systems

The primary lighting systems installed at the facility have been grouped into the following categories:

A. Decorative lighting:
The main entrances, lobbies and general areas are equipped with substantial decorative light fixtures and chandeliers that are integral to appearance of the facility. Other than confirmation that devices are operating, no major work is anticipated for the decorative lighting.

B. Exterior lighting:
Existing exterior fixtures are located on the building and around the building perimeter. Although the site visits were made during daylight hours, several areas appeared to have "dark spots" or low light locations. It is recommended that additional fixtures/light poles be added to increase area illumination, particularly in the parking areas.

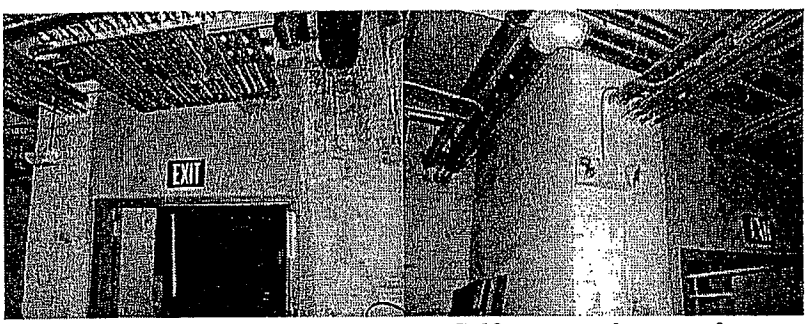


Lighting on building exterior *Exterior parking areas*

C. General illumination:
   a. The arena spaces are equipped with both high level lighting and perimeter lighting. The number of fixtures and general illumination level appeared to be sufficient; however it was not confirmed if all fixtures were operating.
   b. The non-arena areas are equipped with mainly fluorescent light fixtures. The number of fixtures and general placement in most areas appeared to be sufficient for required light levels.
   c. Infrastructure areas are equipped with mainly fluorescent light fixtures. Several areas will require additional fixtures and light switches.

D. Egress lighting:
Record drawings indicate locations of egress light fixtures for some areas; however fixture numbers and types do not appear to be consistent with the latest requirements. A detailed lighting survey will be required prior to final design, but initial items noted include:

a. Illumination will be required on arena stairways, either on the stairs or integrated into the adjunct seats
b. Additional high level lights will need to be connected to the egress lighting system, particularly for events that utilize "general seating" on the floor level of the arenas.
c. Selected exterior fixtures should be connected to the egress lighting system to allow safe passage out of the building.
d. Lighting for infrastructure areas, basement electrical/mechanical rooms will need to be upgraded to allow maintenance staff to perform restoration activities in the event of equipment failure.



Self illuminated exit sign *Self contained egress fixture*

E. Exit lighting:
Exit signage is installed at various locations around the building; however additional signage will be required to comply with local codes. The design will need to establish actual egress pathways and exit signage can then be installed at those locations.

Preliminary Work Scope:

1. Many of the light fixtures installed at the site do not meet current energy compliance codes. It is recommended that Live Nation confirm with the City that existing fixtures will not need to be replaced due to energy efficiency requirements.
2. Install new exterior light fixtures and exterior light poles to provide even illumination around the building. The final light locations will be coordinated with the building security vendor to assure proper coverage.
3. Install additional general illumination light fixtures and switches, particularly in the infrastructure areas.
4. Install additional egress lighting fixtures, both interior and exterior, and connect to new standby power system.
5. Install additional exit signage, consistent with egress pathways, and connect to new standby power system.

Security Systems

During site walkthrough(s) there were several items discussed concerning security additions to the building. A security vendor working with the City visited the site and is currently reviewing the possible scope of work and costs. The scope of work discussed at the site included the following:

Cameras – It was proposed that cameras be installed in at least the following areas:

- Main Corridors
- Arena
- Auditorium
- Exterior doors

We would anticipate this would require approximately 15 cameras throughout.

Secure Doors/Card Key Access – The following areas were proposed for secure doors at the building:

- All exterior doors
- Various office doors
- Main secure office

We would anticipate approximately 20 doors would require upgrade to card key access.

Main Controller and DVD Recorder – The new systems would require a new main controller, main computer and DVD system for the overall security system.

We expect to receive more detailed scope of work and estimated costs shortly from the security vendor.

Tag	Type	Function/Location	Capacity	Status	Recommendation	$ ROM
MECHANICAL SYSTEMS						
SF-1N	Fan	Basement	3060-cfm	Inoperable	1)Replace with fans meeting current ventalation requirements along with	$ 10,000
SF-2N	Fan	Basement	3060-cfm	Inoperable	1)Replace with fans meeting current ventalation requirements along with	$ 10,000
SF-3N	Fan	Theater Dressing RM	1420-cfm	Not Verified		
SF-4N	Fan	SS Arena	20585-cfm	Operable	1)Verify Flow and Re-sheave as required to bring OA req into Arena. 2) Change controls to electronic, DDC controled. 3)Change Motor and add VFD.	$ 20,000
SF-5N	Fan	NS Arena	20585-cfm	Operable	1)Verify Flow and Re-sheave as required to bring OA req into Arena. 2) Change controls to electronic, DDC controled. 3)Change Motor and add VFD.	$ 20,000
SF-6N	Fan	Olympic Rm	4500-cfm	Not Verified	Don't anticipate work at this time	
SF-7N	Fan	Ballroom	9,000-cfm	Not Verified	Don't anticipate work at this time	
SF-8N	Fan	Gold Room	9,000-cfm	Not Verified	Don't anticipate work at this time	
RF-1	Fan	Olympic Rm	3250-cfm	Not Verified	Don't anticipate work at this time	
RF-2	Fan	Ball RM	9,000-cfm	Not Verified	Don't anticipate work at this time	
RF-3	Fan	Gold	9,000-cfm	Not Verified	Don't anticipate work at this time	
EF_1N	Fan	Recharging RM	500-cfm	Not Verified	Don't anticipate work at this time	
EF-1NA	Fan	Recharging . Trash RM	3500-cfm	Not Verified	Don't anticipate work at this time	
EF-2N	Fan	Arena R/R-SS 1st FLR	2115-cfm	Not Verified	Don't anticipate work at this time	
EF-3N	Fan	Olympic Kitchen	750-cfm	Not Verified	Don't anticipate work at this time	
EF-4N	Fan	Area 1st/WMNs NS	1650-cfm	Not Verified	Don't anticipate work at this time	
EF-5N	Fan	Area 1st/Men's NS	1650-cfm	Not Verified	Don't anticipate work at this time	
EF-6N	Fan	Gold RM R/R	700-cfm	Not Verified	Don't anticipate work at this time	
EF-7N	Fan	Ball RM R/R	700-cfm	Not Verified	Don't anticipate work at this time	
EF-8NA	Fan	Arena 2nd/ R/R	1180-cfm	Not Verified	Don't anticipate work at this time	
EF-9N	Fan	Arena Roof	13015-cfm	Operable	1)Verify flow and Balance. 2)Integrate into DDC controls system	$ 2,000
EF-10N	Fan	Arena Roof	13015-cfm	Operable	1)Verify flow and Balance. 2)Integrate into DDC controls system	$ 2,000
EF-11N	Fan	Arena Roof	13015-cfm	Operable	1)Verify flow and Balance. 3)Integrate into DDC controls system	$ 2,000
EF-12N	Fan	Arena Roof	13015-cfm	Operable	1)Verify flow and Balance. 3)Integrate into DDC controls system	$ 2,000
EF-13N	Fan	Arena Roof	13015-cfm	Operable	1)Verify flow and Balance. 2)Integrate into DDC controls system	$ 2,000
EF-14N	Fan	Arena Roof	13015-cfm	Operable	1)Verify flow and Balance.3)Integrate into DDC controls system	$ 2,000
EF-1	El. Heater	Ball RM	1000kW	Operable	1)Verify flow and Balance. 3)Integrate	$ 5,000
EF-2	El. Heater	Unknown	1000kW	Not Verified	1)Verify flow and Balance. 3)Integrate	
EF-3	El. Heater	Unknown	1000kW	Not Verified	1)Verify flow and Balance. 3)Integrate	
EF-4	El. Heater	Unknown	1000kW	Not Verified	1)Verify flow and Balance. 3)Integrate	
GF-1	Gas Furnace	Ballroom	120,000-btuh	Not Verified		
GF-2	Gas Furnace	Theater Dressing RM	20,000-btuh	Not Verified		
GB	Boiler	Hot Water Boilers	6,000,000 btuh* - (3 x 2,000,000 btuh units)	New for replacement of existing steam boiler	1) Demolish existing boiler and CMU hosing and install new steam boiler and pad. Reconnect exisitng piping with replaced steam traps. Alternate, replace with steam boiler.	$ 650,000
GB	Boiler - Demolition	Remove existing Boiler and piping				$ 200,000
SF-1	Fan	Basement/CS Theater	Appx 30,000 cfm	Operable	Includes UPS	$ 25,000

Tag	Type	Function/Location	Capacity	Status	Recommendation	$ROM
SF-2	Fan	Arena	Appx 30,000 cfm	Operable	Includes UPS	$ 25,000
SF-3	Fan	Arena	Appx 30,000 cfm	Operable	Includes UPS	$ 25,000
SF-4	Fan	CS Theater Lobby/ Ball RM	Appx 30,000 cfm	Operable	Includes UPS	$ 25,000
FB-1	Rooftop Housing	Basement Fan Room	92,535-cfm	Needs Filters	1) Replace Filters	$ 15,000
FB-2	Rooftop Housing	Arena South Side	20,685-cfm	Needs Filters	1) Replace Filters	$ 1,500
FB-3	Rooftop Housing	Arena North Side	20,685-cfm	Needs Filters	1) Replace Filters	$ 1,500
FB-4	Indoor	Olympic Room	4,500-cfm	Not Verified	1) Replace Filters	$ 2,000
FB-5	Indoor	Ballroom	9,000-cfm	Not Verified	1) Replace Filters	$ 8,000
FB-6	Indoor	Gold room	10,200-cfm	Not Verified	1) Replace Filters	$ 10,000
FB-7	Indoor	Theater Dressing Room	1,420-cfm	Not Verified	1) Replace Filters	$ 4,000
Duct	Hot Air Supply	Supply Air Distribution		Operational	3)Change over pnuematic controls to electronic 3)Air Balance	$ 40,000
Pipe	Steam	Heating coils		Operational	1)Insulate 1) Slesmic Bracing 1)Change out Steam Traps 2)Test and Balance 3) Change over to DDC electronic from pnuematic Alternate Change to hotwater system	$ 80,000
AC	Cooling	Air Condtioning System		None	1) Install in Theather and Auxillary Venues. 2) Install for Arena	$ 450,000
DDC Sys	DDC Controls	Control for all HVAC equipment		None		$ 150,000
Total Mechanical Upgrades						$ 1,789,000
GB - Alternate	Boiler - *Alternate* (Remain as Steam)	Badenhausen-LP Steam	6,000,000 btuh* - (3 x 2,000,000 btuh units)	Replace	1) Demolish existing boiler and CMU hosing and install new steam boiler and pad. Reconnect exisitng piping with replaced steam traps.	$ 800,000
ELECTRICAL SYSTEMS						
AC Service	Main Service	Basement serves Live Nation loads	2000A, 208VAC	New	PG&E dedicated service for Live Nation Loads. Cost includes: 1) PG&E Design 2)Network Transformer 3)Bus duct secondary 4)2000 amp, 208V, 3ph, 4wire Main Switchboard	$ 850,000
AC Dist. Swbd	Main Distribution	Basement serves Live Nation loads	2000A, 208VAC	New	New distribution equipment includes: 1) Distribution Swbd 2)Raceways/feeders	$ 420,000
Standby System	Generator	Standby power system serves life safety loads	100kW	New	System includes: 1) 100kW generator 2) Integral fuel system 3) 600amp ATS 4) Emergency switchboard	$ 325,000
Lighting	Egress/Upgrades	Specific area lighting	N/A	New	Lighting upgrades to comply with City requirements and for more operational efficiencies	$ 175,000
Contin gency	Wiring	Replace wiring found to be damaged due to age/heating	N/A	Replacement	Recommend a contingency for replacement of wiring found to be damaged	$ 150,000
Total Electrical Upgrades						$ 1,920,000
Total Mechanical and Electrical Upgrades						$ 3,709,000