

By Amanda Parolise

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Building Program Annual Operating Budget For A Multiplex Movie Theater Project

For a building program to be successful and sustainable, it must include an operating budget as well as a construction budget. Fifteen to 20% of the cost of a building is first cost, and that 80% or more of the remaining cost to own a building is in its operation over its lifetime. Quite often, theater owners will choose to outsource the building management and O&M for the day-to-day requirements, as well as subcontract the primary HVAC equipment maintenance to an HVAC service company for the planned maintenance of the seasonal equipment start-up and shutdown.

When designing a new or renovated movie theater facility, the design engineer should refresh his memory relative to this Basis of Design by first going to ASHRAE *Handbook 2015 Applications* and reading chapters 5 (Places of Assembly), chapters 36 through 43 relative to building operation and management, chapter 59 (HVAC security), and chapter 61 (codes and standards). In addition, the design engineer should look at chapter 8 (Sound and Vibration) and chapter 20 (Space Air Diffusion) in the 2013 *Fundamentals ASHRAE Handbook*. Also, a review of the LEED New Construction certifications should be done even if the owner chooses not to apply for the certification but instead be "LEED compliant."

The conceptual design phase annual operating budget for the 65,000-sq-ft, two-story new multiplex theater building will be added into the entire building program's annual operating budget and could look like the following in the conceptual phase of a building program project.

Administrative				
SALARIES, WAGES & BENEFITS (Regional theater operations manager) —10% of salary dedicated to this facility.				
• Employee salaries & wages	(1) Manager	(0) Supervisor	(0) Technician	\$ 10,000
• Taxes, health care, etc.				\$ 2,000
• Retirement & benefits				\$ 1,000
OUTSOURCED OPERATION & MAINTENANCE				
• Project management	(1) Part-time			\$ 5,000
• Vendor salaries & wages	(1) Mechanical & (1) electrical technician			\$ 80,000
• Supplies	filter changes			\$ 5,000
SERVICE CONTRACTS				
• HVAC units and refrigeration	Semi-annual			\$ 16,000
• Heating equipment	Semi-annual			\$ 4,000
• Filters	None			\$ 0
• Emergency Generator	Quarterly			\$ 6,000
CONSULTANTS				
• CAD				\$ 0
• Energy				\$ 0
• Information technology				\$ 0
INFORMATION TECHNOLOGY				
• CMMS				\$ 0
• Handheld devices	In outsource contractor's supplies fee			\$ 0
EXPENSES				
• Education	None			\$ 0
• Conferences	None			\$ 0
• Office supplies	Monthly			\$ 600
UTILITIES				
• Electricity				\$ 130,000
• Gas				\$ 90,000
• Oil				\$ 0
• Propane				\$ 0
• District/campus steam				\$ 0
• District/campus chilled water	Not included in building operating budget			\$ 0
• District/campus hot water	Not included in building operating budget			\$ 0
DOCUMENTATION				
• Printing				\$ 0
PROJECTS				
• Maintenance repair	By outsourced vendor			\$ 0
• In-house HVAC modifications	None			\$ 0
• Capital projects	None			\$ 0
• Energy initiatives	None			\$ 0
TOTAL ANNUAL OPERATING COST				\$ 349,600
TOTAL ANNUAL OPERATING COST/Sq Ft				\$ 5.38