



## Public Safety Operations Center Lexington-Fayette Urban County Government Lexington, Kentucky

### **Owner**

Lexington/Fayette Urban County Government  
Lexington, Kentucky

### **Contact**

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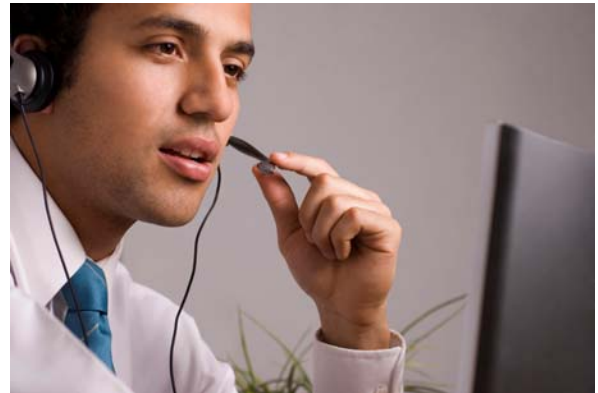
### **Cost**

\$35,000,000

The Lexington Public Safety Operations Center is a new freestanding building that contains several divisions of the Lexington-Fayette Urban County Government (LFUCG) in one building. The building houses the LFUCG 911 Call Center, the Emergency Operations Center, 311 Lexcall, the Traffic Management Center, and all IT operations for the city. The primary focus of the building is to remain on-line and functioning at all times. As part of the design process, a Threat and Vulnerability Risk Analysis was conducted to identify all possible scenarios for the building and how the building's systems would respond. The Threat and Risk Analysis included weather events (ice storms, floods, etc.), seismic/geological events, acts of God, terrorism, vandalism, electronic security, internal threats, etc. to understand the possible implications for the building systems. The project is also pursuing LEED Certified status.

This facility is served by two utility feeds from separate substations to provide redundant utility power sources. Two remote electrical services provide 100 percent power redundancy and are capable of operating independently or interconnected. All utility feeders within the development are installed underground to give greater protection from natural disasters and tampering.

Emergency power is provided by two 1.5MW diesel generators located in the facility. Generator capacity is provided to run the entire facility with one unit offline. Redundant 400KVA central UPS systems are provided for all operations and communications systems. The units support independent 'A' and 'B' power paths to all ITS and operations equipment. The center is connected to the outside world with diverse-route fiber optic and copper cabling, radio



communications, and satellite links. An on-site 100 foot antenna tower provides radio and microwave communications capabilities. The building is also equipped with a state-of-the art audio/video and program distribution system to enable fast response and information exchange among the various emergency response agencies.

Proper grounding for the facility is given very high priority. Soil resistivity testing will guide the best grounding solution for the communications center and tower. Motorola R56 and EIA/TIA grounding standards will be followed for all sensitive equipment.

The building mechanical systems were designed to provide maximum occupant comfort, reliability, and energy efficiency. For these reasons, a geothermal-based underfloor air distribution system was designed. The geothermal "plant" for the system provides inherent earthquake resistance (underground polyethylene pipe outperforms ground-mounted exterior equipment), energy efficiency, and vandalism / terrorism resistance. The underfloor air distribution system takes advantage of the large underfloor spaces used for data cabling, and also provides the ability for individual users to control their comfort in the large open call center spaces. Both the geothermal plant and the large air handling units have redundancy built into the system components. The large Computer Equipment Room is served by computer room HVAC units with underfloor air distribution. The computer room HVAC units are sized to have 100% spare capacity for the current cooling needs. Infrastructure has been provided to accommodate a future additional 100 percent increase in cooling capacity.