STEEL CONDUIT

# The Material of Choice for Presidential Protection

*William J. Clinton Presidential Library and Museum, Arkansas*

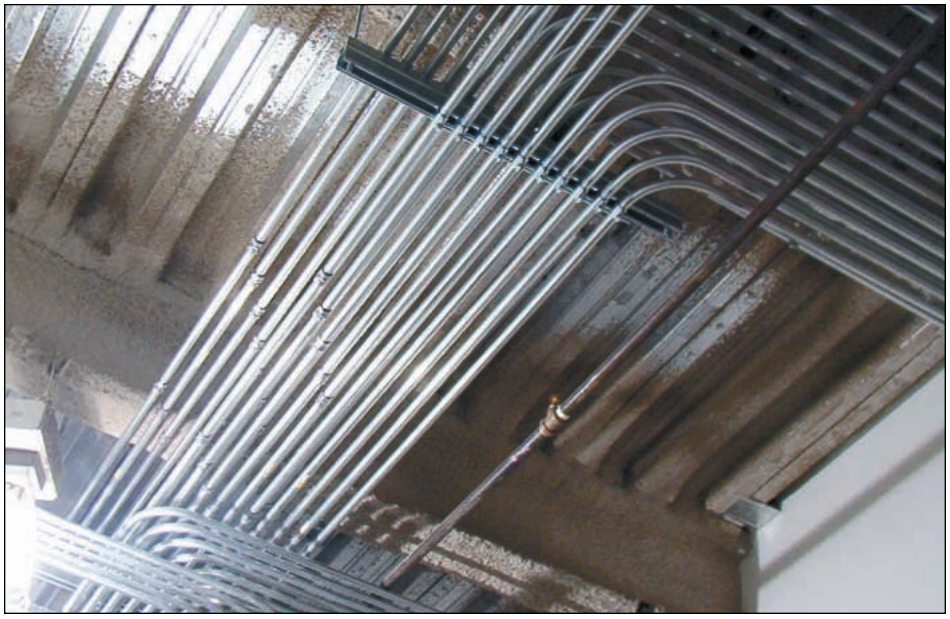
# Steel Conduit Adds Another Layer of Presidential I

The William Jefferson Clinton Presidential Center is modern … visually stunning … and from an architectural and functional viewpoint, hugely complex. The Center is at once a Presidential Library, a museum, a storage facility for artifacts, and an archive for as yet de-classified presidential papers. And last but not least, the top floor also serves as a presidential residence.

The building is nestled along the south bank of the Arkansas River in the middle of a new 27-acre city park, and according to its builders, it was designed and built to last for 125 years. Furthermore, it has to stay secure – really secure – and that's where steel conduit plays a critical role. Project Manager Mike Alberson of IK Electric, the Clinton Center's electrical contractor, put it like this: "We wanted to use a product that we knew would be there for the life of the building. To us, that meant steel conduit. And better still, steel conduit offered all the protection the building's electrical systems required."

## Security Throughout the Building

The building is divided into three separate sections: public museum space, private residence, and storage areas (including a vault) for artifacts and papers … and each has its own security needs: fire protection, EMI/EMF protection, tamper protection, and so forth. In light



**Steel Conduit. Get wired for the future.**

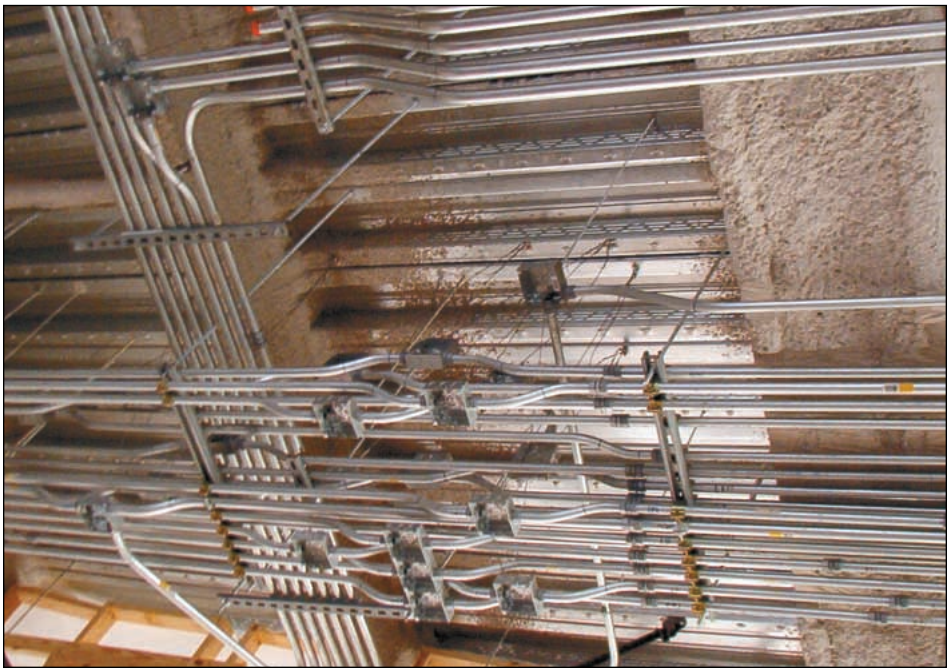
# Protection at the Clinton Library in Little Rock, AK

of these needs for protection, here are some of the key areas where steel conduit plays a significant role:

- The 20,000 square feet of exhibit space uses photographs, video, texts and interactive media to teach and make information accessible. This means it's essential to provide protection against EMI/EMF that could create interference or harm sensitive electronic systems or equipment. Steel conduit does the job better than any other material.

- The building also serves as a repository for Presidential Archives. Because these include sensitive papers and records that haven't yet been declassified, the Secret Service and the Curator of the National Archives required that they be secure, fireproof and tamper-proof; and this, in turn, meant installing a bank vault, complete with double doors and time locks. The wiring and power systems that control access to this storage area run through steel conduit, which provides tamper protection, as well as fire protection.

*(Nobody, including the ex-president, is permitted to enter this vault without a curator and a Secret Service agent accompanying them.)*



- The top floor of the building contains a Presidential Residence used by the Clinton family when they're in Little Rock. So the security systems had to be the highest possible quality. All of the wiring and systems that provide power to this area had to be enclosed in steel conduit for security purposes, and this included the alarm and lighting systems.

- Throughout the building, there are dozens of security cameras, which must operate 24/7/365. The wiring and conductors that control and power these cameras all run through steel conduit.

## Electrical Metallic Tubing (EMT) Protects the Conductors

It took Alberson's crews somewhere between 250,000 and 300,000 man-hours to install the complex and varied electrical systems. In all, they installed nearly five truckloads of EMT steel conduit – more than 100 tons, in diameters from trade sizes 1/2" through 4" – to protect the conductors. During peak construction activity, there were more than 80 electricians working on the job at once.

Fortunately, access to such a huge volume of material wasn't a

problem, because the electrical distributor, Curtis H. Stout, Inc., was only a mile away from the project. This made for timely and inexpensive deliveries. According to Doug Shriver, a representative of the electrical distributor, "We had great access to steel conduit because there's a production facility right here in the state." Thanks to this proximity, and because the steel conduit was both recyclable and American-made, the builders got credit toward the building's LEED Silver Certification.

It takes a lot of thought, planning and effort to provide adequate protection for a Presidential Library and a President. It means protecting against physical damage and fire, protection from EMI/EMF, and protection for lighting, communication and security systems … and steel conduit does it all.

## The Steel Tube Institute

The Steel Tube Institute was founded in 1930 and sponsors cooperative member efforts to improve manufacturing techniques for conduit and other tubular steel products and informs customers and fabricators about these products' utility and versatility. It is headquartered in Coral Gables, Florida.

## Steel Conduit Provides Added Protection

Steel conduit protects electrical conductors against mechanical and electrical damage, and provides excellent grounding for electrical equipment. It also protects against electromagnetic fields (EMF) that could hurt the performance of nearby computers and other electronic equipment. There are three basic types: Rigid Steel Conduit (GRC); Intermediate Metal Conduit (IMC); and Electrical Metallic Tubing (EMT).

## Free GEMI Analysis Software Available


The Georgia Tech study that confirms the EMI shielding advantages of steel conduit is incorporated in the Grounding and ElectroMagnetic Interference (GEMI) analysis software, available free from the Steel Tube Institute. The GEMI CD helps you accurately calculate the electromagnetic field density of a network design for conduit-enclosed circuits. It also helps you confirm that your system design complies with the equipment grounding requirements of the NEC.

For your free GEMI CD, contact the STI. Log onto www.steelconduit.org and download it at no cost.

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