Electrical Codes ***by Charles McGarvey***
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How many times have roofing contractors been back-charged for driving a roofing system or insulation attachment fastener through a steel roof deck, which penetrated through and short-circuited electric, telecommunication, computer, or speaker cables and wiring that were installed within the underside of the steel roof deck corrugations?

Well, several months ago, I received a call from a roofing contractor who was being back-charged a substantial amount of money by a national telecommunications company because an insulation attachment screw had penetrated the steel roof deck and their wiring system. This short-circuited the building's entire computer and communication systems.

The roofing contractor felt he was not responsible for the cost because he did not know the wiring was under the roof deck, but the telecommunications company demanded payment for the repairs from his company or his insurance company.

His question to me: "Could I supply him with information on how he could respond to the back-charge claim?" My answer was "maybe," but he needed to send me pictures of the wiring under the roof deck. I reviewed the pictures and then provided him with the information needed to hopefully stop the back charge.

What did I give him? I provided the contractor information within the 2009 Pennsylvania Uniform Construction Code, which adopted the 2008 National Electrical Code (NEC) by reference. NEC Code section 300.4 (E) requires that any wiring installed under a roof deck in Pennsylvania after January 1, 2010 - when the code went into effect - must be located a minimum of 1.5" below the bottom of the roof deck unless the wiring is installed within an intermediate or greater wall-thickness solid metal conduit system.

Because the plastic-coated telecommunications wiring was installed during a building retrofit after 2010, it should not have been placed within the corrugations of the underside of the steel roof deck. Furthermore, it should have been located at least 1.5" below the roof deck unless it was encased within a solid metal conduit system. Thus, the roofing contractor should claim that he was not responsible for any back charges, since the telecommunications company created a code violation by improperly installing the wiring beneath the corrugations of the steel roof deck.

At first, the national telecommunications company responded that they had never heard of this code requirement. They even remarked that roofing contractors are always driving fasteners through their wiring on the underside of roof decks, and they always pay for the damage. The roofing contractor held firm and refused to pay the claim. Shortly thereafter, the roofing contractor received a letter from the company stating that its legal department had reviewed the code section and found it applicable to the installation of the company's communication wiring. Thus, the roofing contractor was not being held responsible for the back-charge costs.

However, this does not always mean a roofing contractor is not responsible for financial damages caused by roofing system screws that penetrate wiring, whether properly or improperly installed, on the underside of a steel roof deck.

Several reasons include:

a) The roofing contractor did not clarify in their proposal that they are not responsible for damage to wiring of any kind that may be located under the roof deck.

b) The roofing contractor did not notify the building owner to hire an electrical contractor to locate wiring under the roof deck and then mark the areas on the roof before the project began. This would allow the contractor to make sure no fasteners were installed in the marked locations.

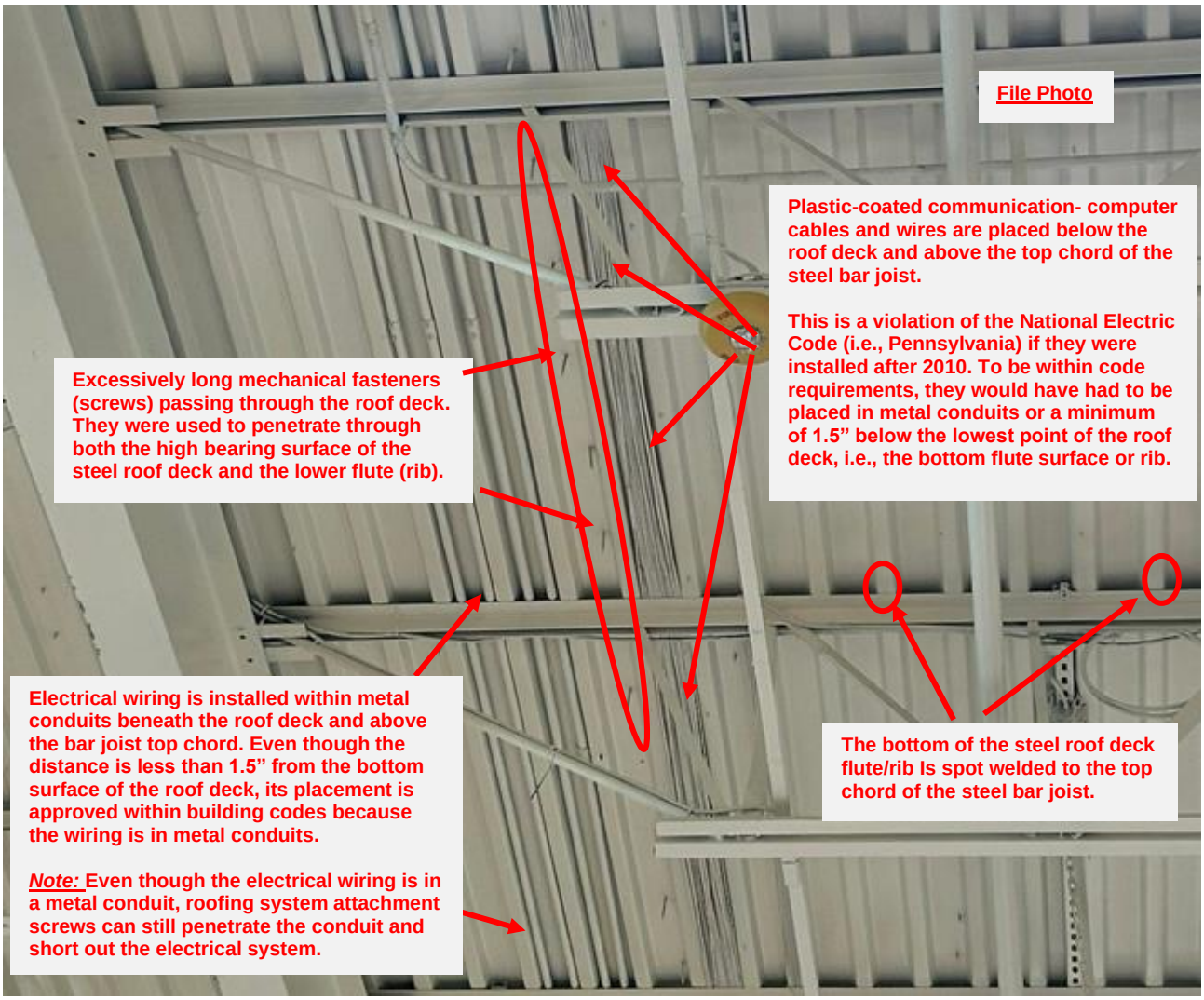
c) The roofing contractor was notified within the reroofing specifications to locate all wiring on the underside of the roof deck and make sure it is not damaged by fastener penetration during a reroofing project.

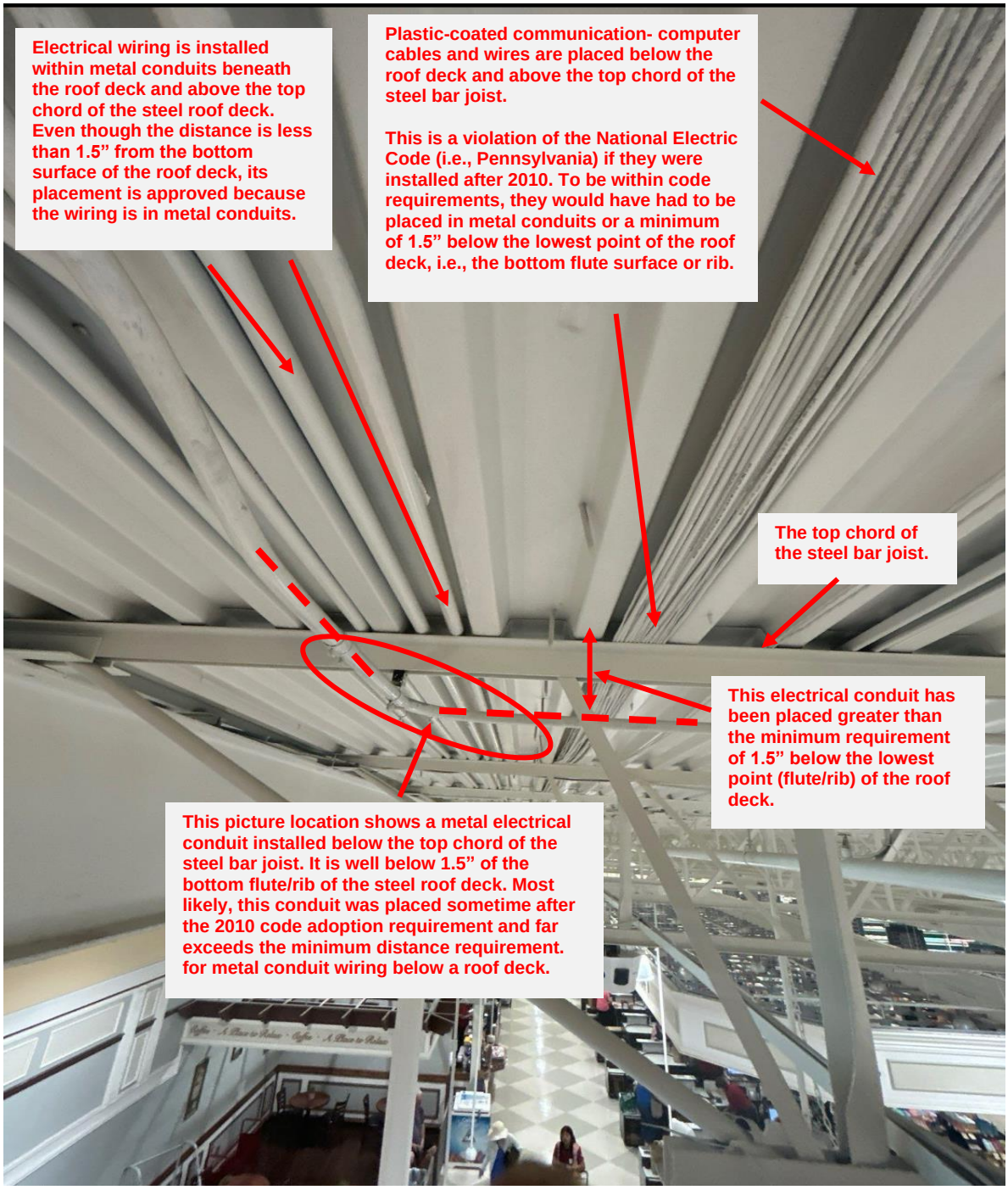
d) The roofing contractor did not do a simple open ceiling pre-job start Due Diligence inspection to investigate whether any wiring is attached to the underside of the roof deck.

e) The roofing contractor installed excessively long screws that penetrated through the underside of a roof deck and damaged hidden or visible wiring.

f) There is no history of when the wiring was installed or who installed it. This could mean the wiring may have been installed before 2010, and thus, there was no installation code violation at the time it was installed.

So, before starting any reroofing project that requires mechanical fasteners to penetrate a steel roof deck, a roofing contractor should clarify their responsibility, or it could become a very expensive problem to repair damaged wiring.





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