

From: ttrewyn@comcast.net [mailto:ttrewyn@comcast.net]
Sent: Wednesday, September 15, 2021 3:32 PM
To: Madani, Mo
Subject: Draft Electrical/Fire Alarm Systems Evaluation

[NOTICE] This message comes from a system outside of DBPR. Please exercise caution when clicking on links and/or providing sensitive information. If you have concerns, please contact your Knowledge Champion or the DBPR Helpdesk.

Sir:

I have done an initial review of the Safety Inspection Draft 2.1.

I propose the establishment of a position of State Building Electrical Incident Historian, for the purpose of collecting inspection and incident reports and failure studies, for conducting occasional inspections and documentation of incidents, for accompanying inspections, and for disseminating discoveries and lessons learned from electrical failure incidents and inspections to inspecting PE's, electrical contractors, continuing education providers, insurance carriers, and building officials. I believe this would provide ongoing improvement to the electrical inspection checklist and inspection methods and tools. This would also create an archive of "institutional memory" that could be conveyed to successors to the position and engineers starting inspections. Ideally, a new PE conducting their first inspection should be doing that in the company of a PE experienced in inspections, and have their report peer-reviewed. Once would be better than never. The historian in time and with their collected data could perhaps recommend a standard for a PE to be considered experienced in inspections. Florida Statutes and the FAC may need adjustment to allow the public reporting of incidents on private property. I am not sure about that, but the FAC does include discipline for engineers that breach client confidentiality. A safety incident should not qualify as confidential in my view. Perhaps the NFPA can be very helpful in this regard.

A few examples:

I have found that service grounding electrode conductors have been vandalized, rendering a building ungrounded.

I have found service ground resistances above 25 ohms. (The checklist makes no mention of testing ground resistance at the service. An \$800 device is required to do this. How do we otherwise rightfully certify the ground is "GOOD".)

I have found circuit breakers wired with undersized conductors. I have found signs of arcing inside panels. I have found knockouts without bushings. I have found non-standard cover screws chafing wires. All these things required removing branch circuit panel covers. I usually have an EC with me for this, but sometimes not.

Miami-Dade also wants light meter readings of parking areas by a PE, and requires a signed and sealed statement of compliance with local code. That's not on this list.

Timothy C. Trewyn, PE FL 61580
Electrical Engineer
Fort Pierce Engineering, Inc.
315 S 7th Street
Fort Pierce, FL 34950-4228
Work (772) 672-4636