Fw: MX South Canopy Electric - conduit gaps

From: M Bret Blackford (bret_blackford@yahoo.com)

To: thunsaker@mcknightcrossings.org; bret_blackford@yahoo.com

Date: Monday, May 11, 2026 at 02:52 PM CDT

Tom,
We can talk about this sometime over the next few weeks. Not a front-burner issue at the moment.
--- Bret

----- Forwarded Message -----
From: M Bret Blackford <bret_blackford@yahoo.com>
To: Steve Walker <swalker@mcknightcrossings.org>; Tom Hunsaker <thunsaker@mcknightcrossings.org>
Cc: Bret Blackford <bret_blackford@yahoo.com>
Sent: Tuesday, September 23, 2025 at 02:33:15 PM CDT
Subject: MX South Canopy Electric - conduit gaps

Tom and Steve W.,
While running some computer networking cables (Cat6 ethernet) I noticed some electrical issues on the exterior conduit running along the top of the south canopy. See more details in the attached.
No rush but keep this on radar for a future fix.
--- Bret

MX-electrical v3.pdf
509.5 KB

McKnight Crossings Church
South Canopy Exterior Electric

On September 19, 2025, two 200' Cat6 ethernet lines were installed along the south canopy to the cross area in the circle:

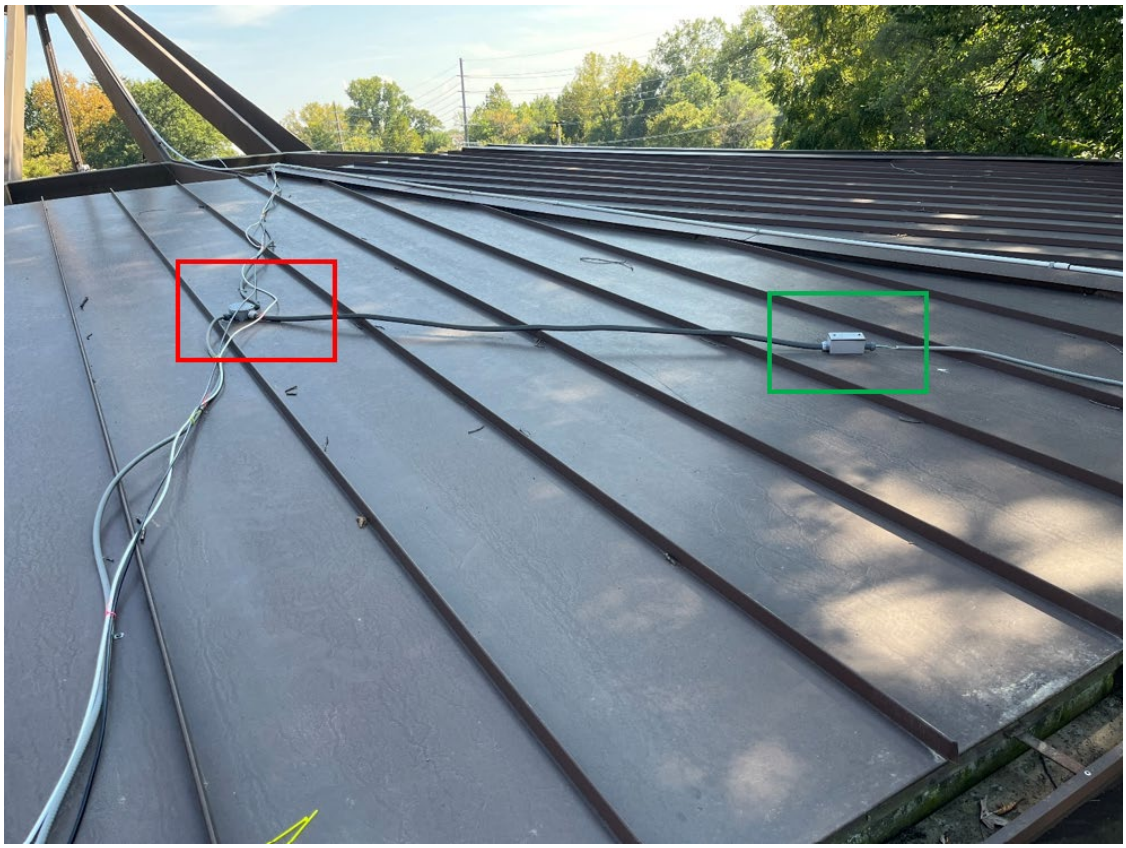
- White Ethernet Cable → Terminates at the new Ubiquity Unifi G6 PTZ camera.
- Black Ethernet Cable → Terminates at the Ubiquity AC Mesh external Wi-Fi access point.

Both ethernet lines were zip-tied to the existing 110AC electrical conduit running along the same path.

During installation, the following issues were observed with the existing electrical conduit:

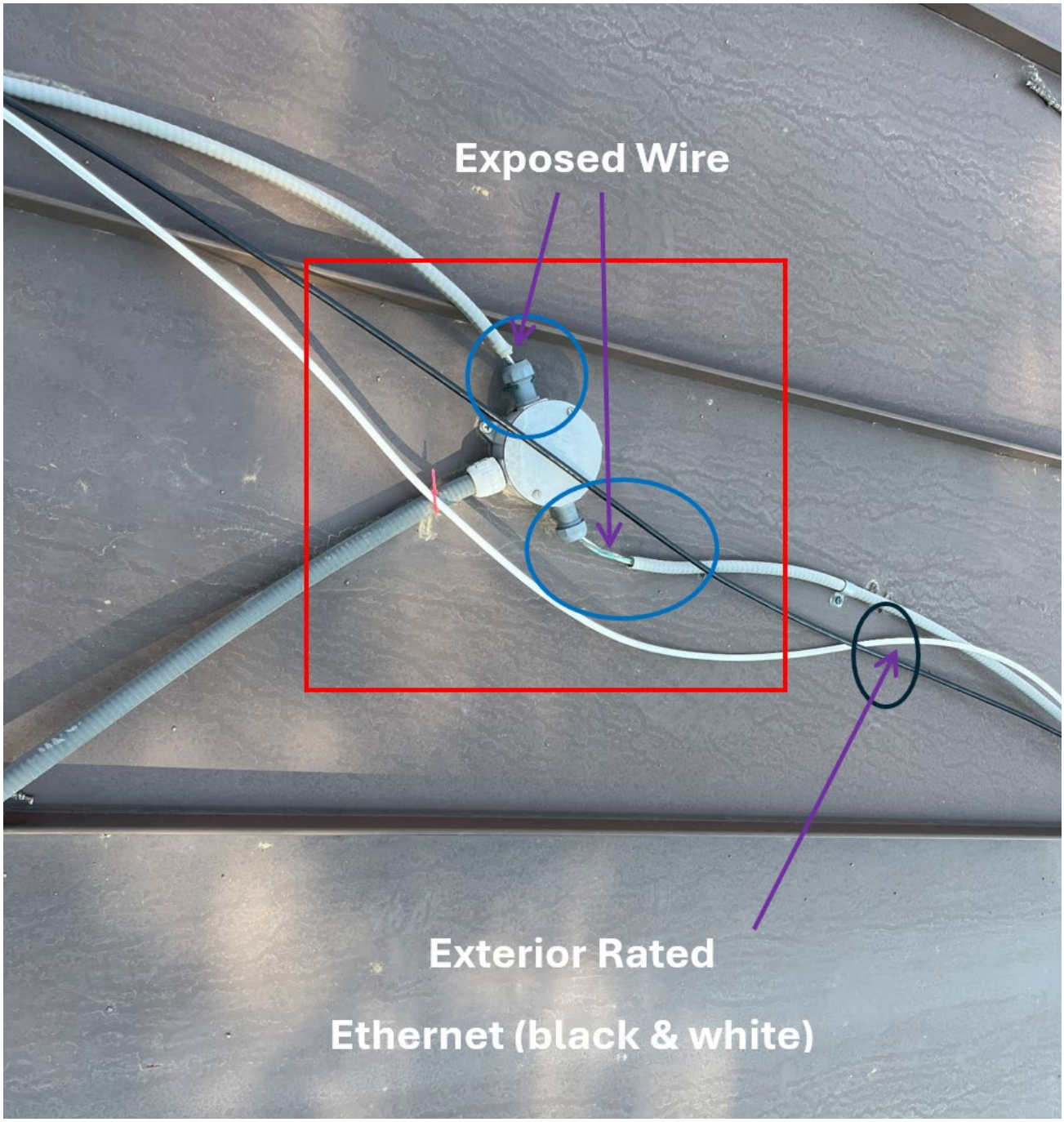
1. Conduit Separation: The conduit has pulled free from the junction box connectors, leaving gaps where it should be sealed.
2. Wire Exposure Risk: Only the outer sheathing of the three internal electrical wires is exposed, not the copper conductor. However, UV damage and weather could deteriorate this sheathing over time, exposing the copper to the elements.
3. Water Intrusion Risk: Gaps in the junction boxes could allow rain or snow to enter, potentially causing short circuits inside the boxes.

Below shows the two junction boxes that have the electrical conduit pulling free from the junction box connectors, exposing the 3 internal electric wires and opening the junction boxes to the elements – rain and snow – which could cause shorts in the boxes where the wires are joined. These exposed wires are noted in better detail in close-up photos later in this document.

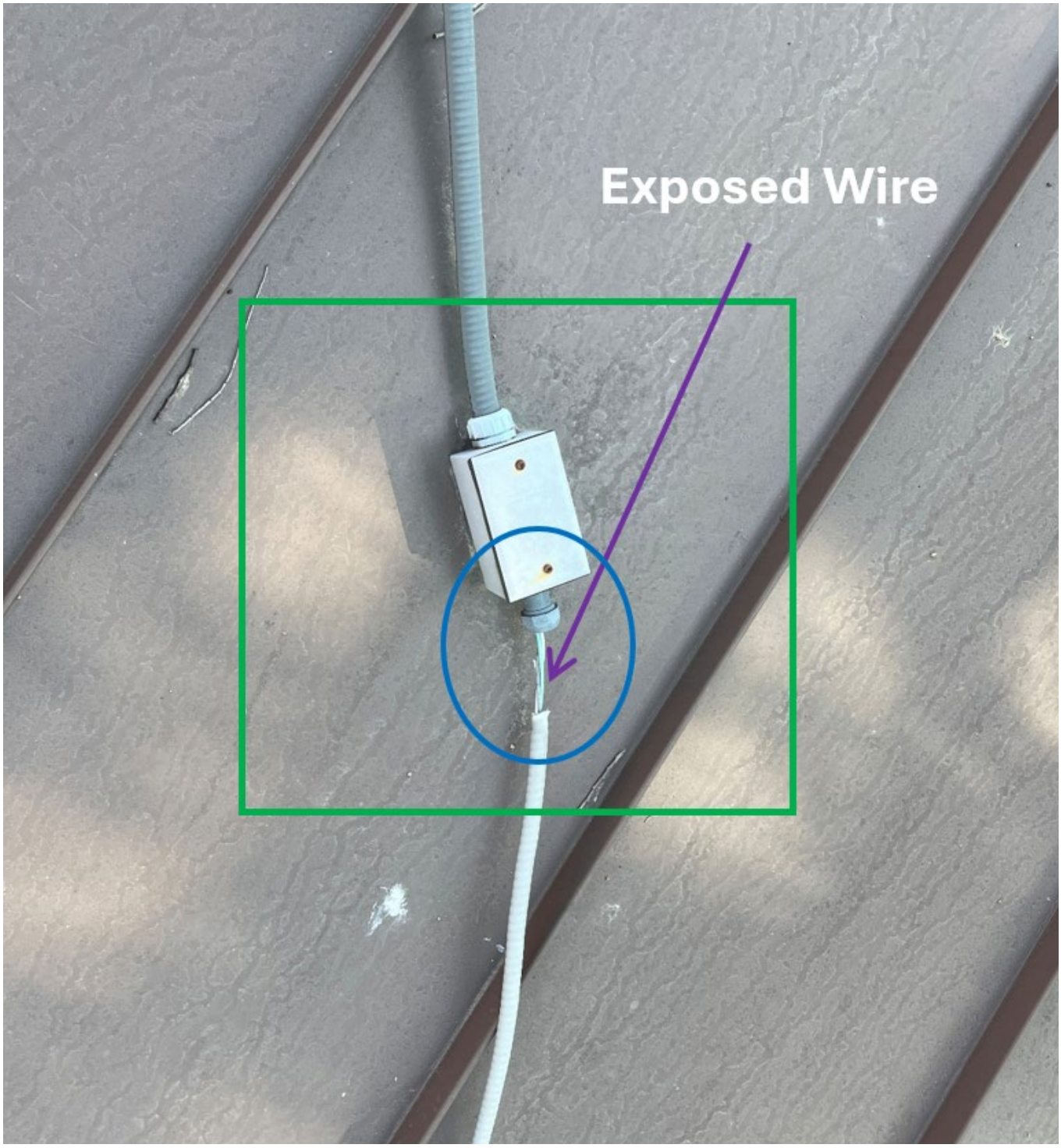


Below is a close up of the two electrical junction boxes noting how the conduit has pulled free from the box exposing the 3 internal wires (which are still individually sheathed).

The opening in the junction box can allow water from rain and snow to enter and possibly short on the internal wire connections.



Close up of the other junction box where conduit is pulling away from the box.



Recommendation
The conduit should be terminated to the junction boxes with no visible wire showing and eliminating any possible water penetration into the junction boxes. There does not appear to be enough slack in the existing conduit to reach and reconnect fully to the junction boxes and it may be necessary to cut the conduit short, add another junction box to the existing conduit and add new conduit from the new junction box to the existing junction box.

Covering the exposed inner wire with electrical tape is discouraged.

This issue has probably been in existence for months if not years so no immediate rush to correct. However, this should be put on the **ToDo list** and prioritized.