

# abaa 2026 building enclosure conference

## Air Barrier Installation Requirements

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AIA  
Continuing  
Education  
Provider



# Air Barrier Installation Requirements

This presentation covers key air barrier requirements for inspecting and installing building envelope materials. Attendees will learn what to look for before, during, and after installation, with a focus on practical, field-applied guidance.

The session will also address quality assurance and quality control of installed materials, ensuring compliance with specifications and manufacturer requirements, and conclude with tips and tricks for installers and inspectors to improve efficiency and avoid common issues.



## Matthew Giambrone

- Level 3 Certified ABAA installer
  - Self Adhered
  - Fluid Applied
  - Spray Polyurethane Foam
- Certified Air Barrier Specialist (CABS)
- Chairman of the Contractors Committee
- QAP Committee Member
- Executive Committee Member
- Board of Director
- Second Vice Chair
- 4<sup>th</sup> Generation Bricklayer
- Treasurer JAWS Board of Directors



## Learning Objectives

1. Preinstallation AVB substrate inspections
2. Mock Up Suggestions and Preinstallation Meeting Actions
3. Quality Assurance and Quality Control of Installed materials
4. Tips and Tricks for Installers and inspections

# Many types of Air Barriers

- Fluid Applied
- Self-Adhering Membranes
- Spray Polyurethane Foam
- Boardstock
- CI Systems
- Wraps/Mechanically attached Systems

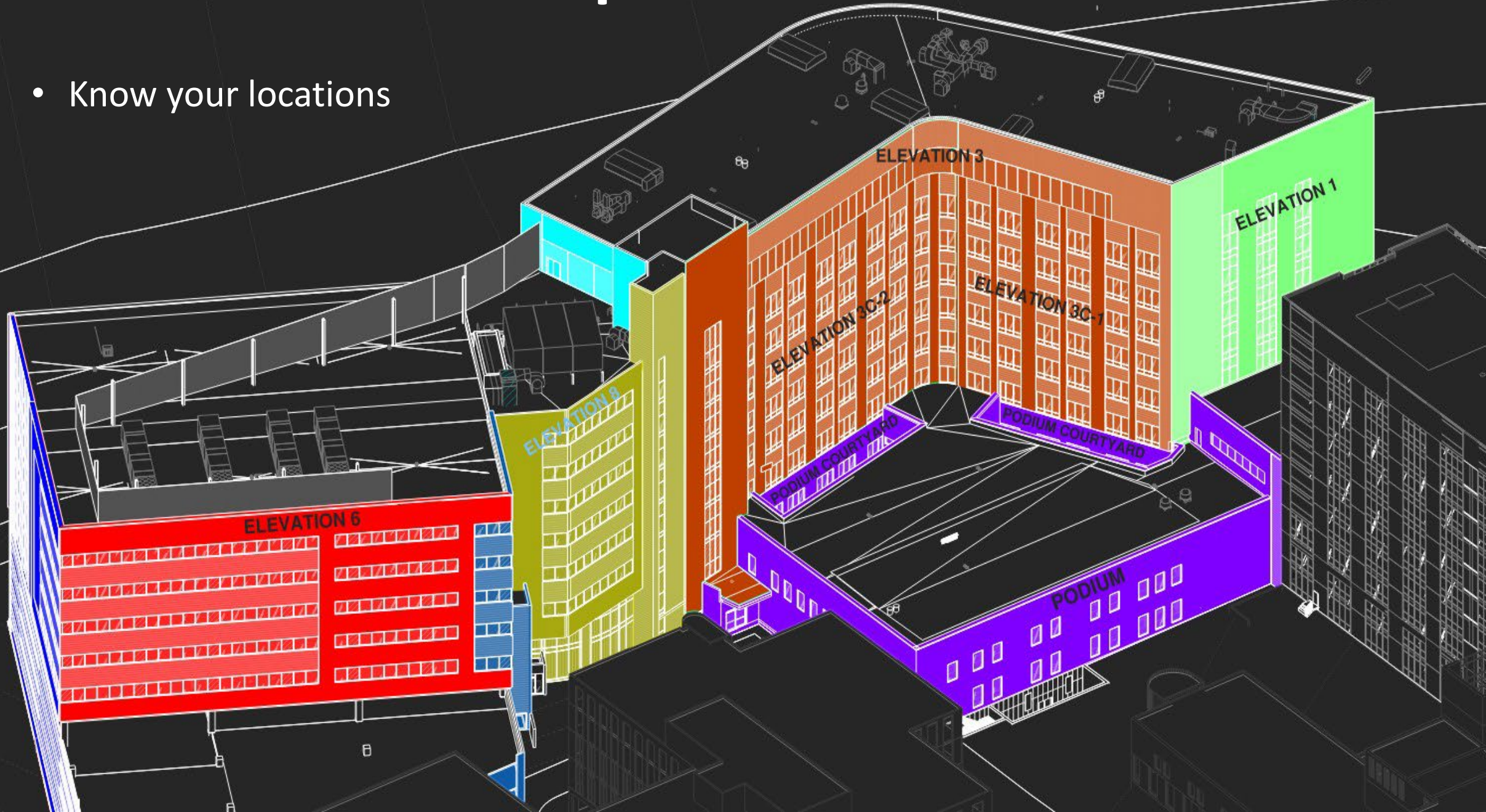
# Installation Process

- Each material has its own unique installation requirements
- All installations should have the same train of thought:
  - Needs Continuity – unbroken state
  - Continuous – No gaps, holes, or jumps
  - Compatible – all items that touch
  - Complete – From Footer to Roof



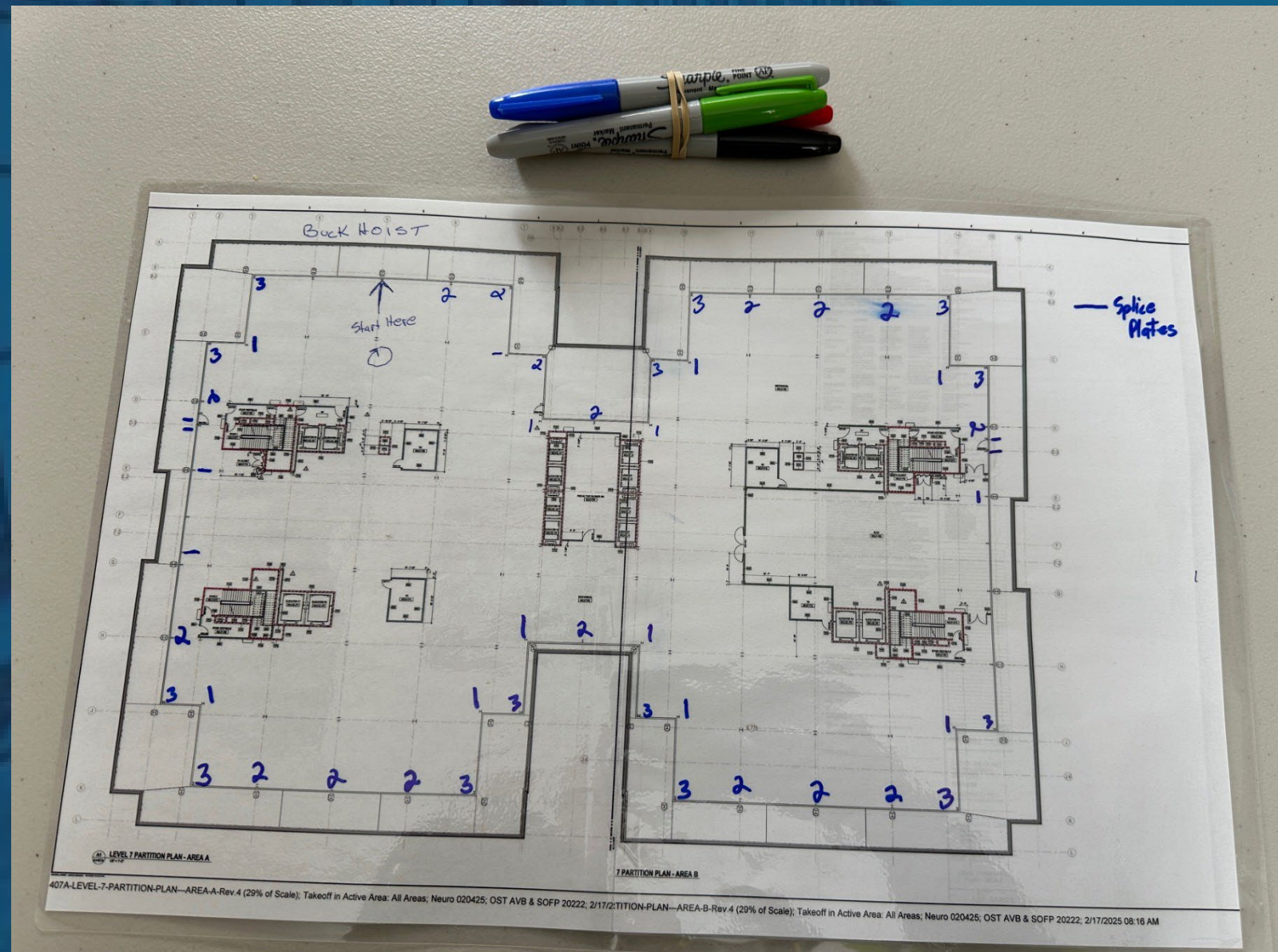
# Get set up for Success

- Know your locations



# Get set up for Success

- Help guide your installers





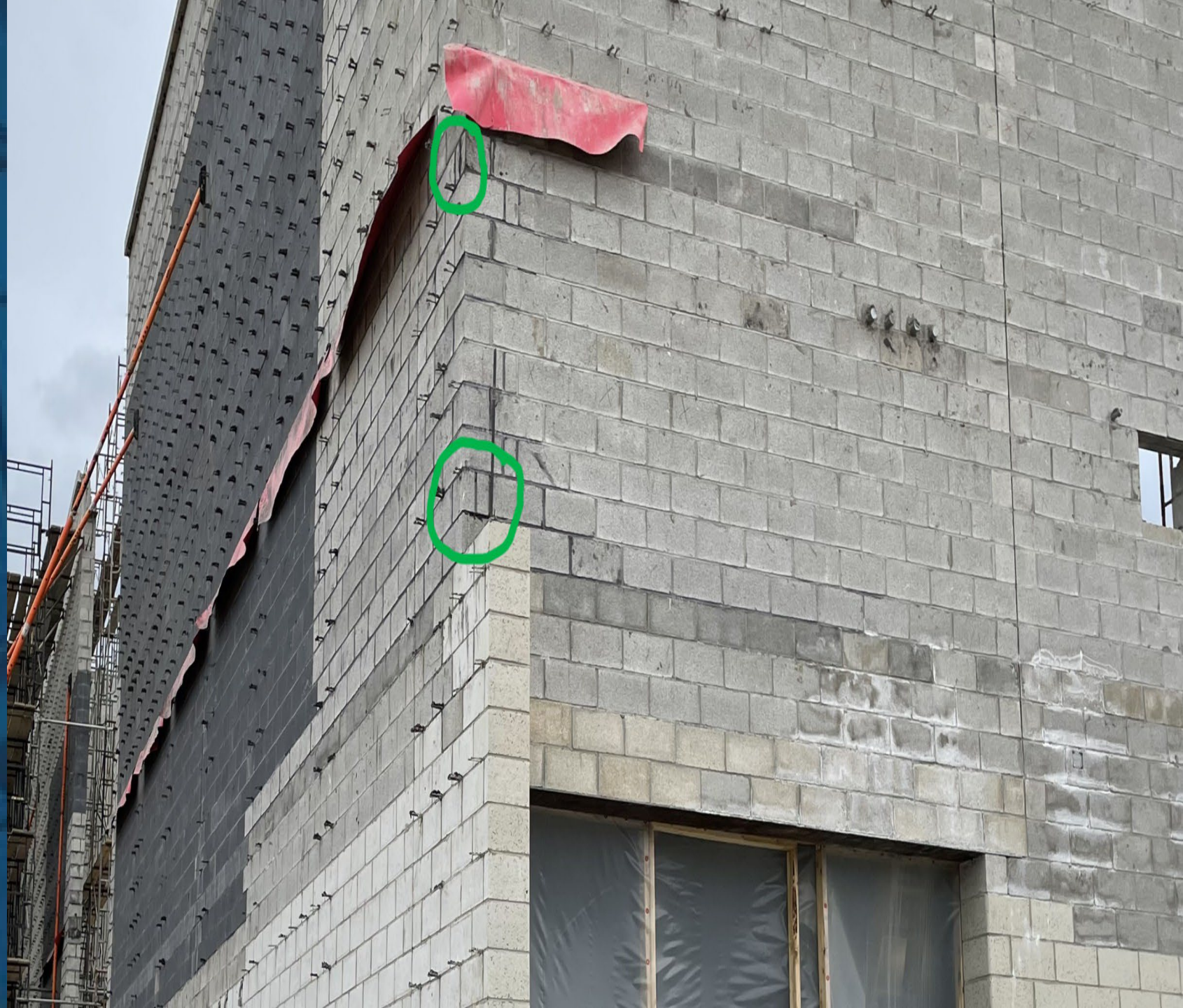
# Pre-Installation Check

- Moisture Content: Each substrate can hold a different percentage of moisture.
- Completeness of area: is it ready?



# Pre-Installation Check

- CMU: block is very porous. Ensure solid ends at jambs and corners (ears or CJ block).
- Check for full head and bed joints; struck flush or not.



# Pre-Installation Check

- Raw Edges of Sheathing: Some AVB installations require primer over cut edges.
- Board joints need to be tight.



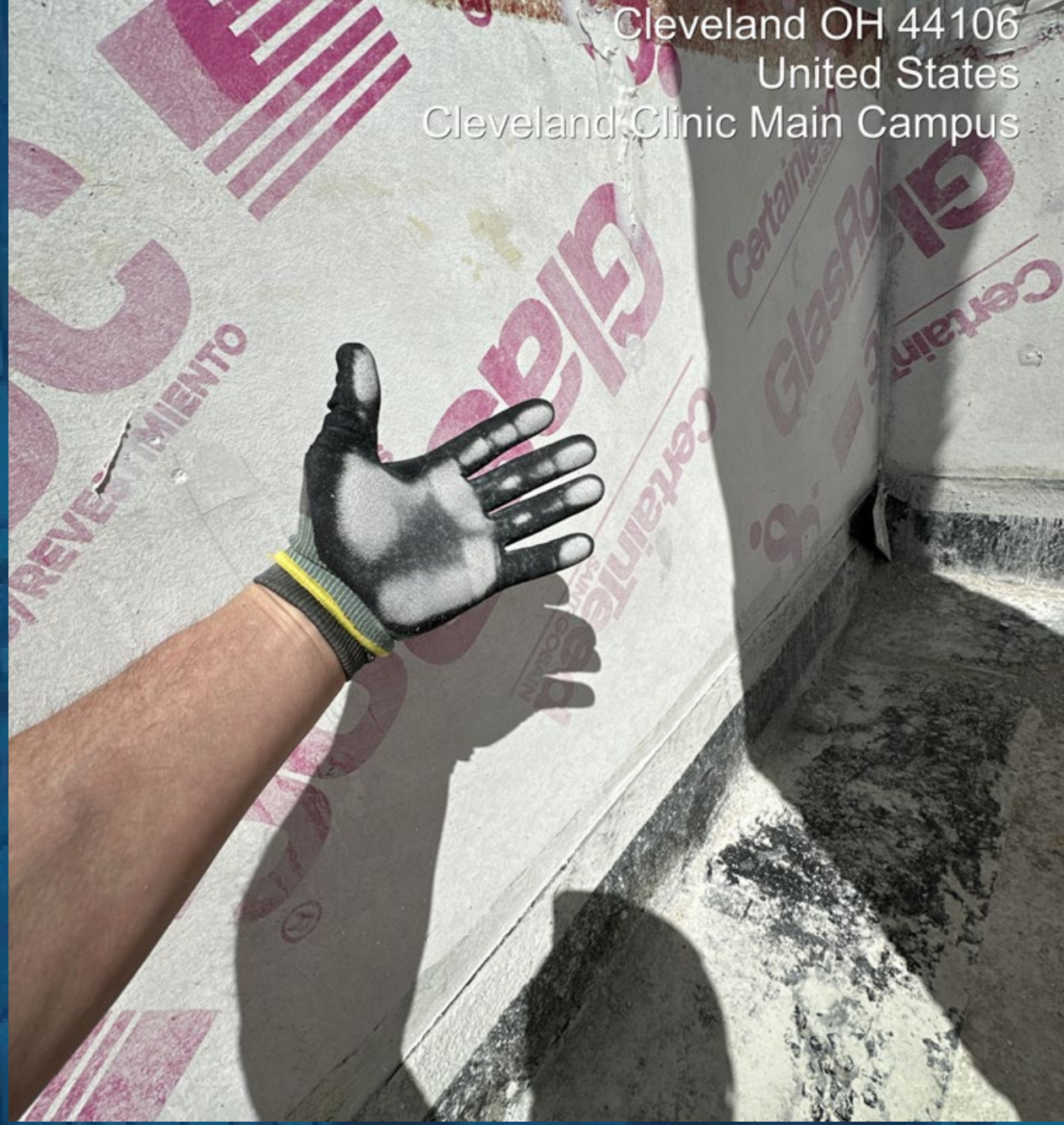
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# Pre-Installation Check

Plywood: Fill the knots with sealant.

# Pre-Installation Check

- Substrate Clean: Dirt, dust, debris, slurry, all need to be removed.



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Trust but verify substrate has been cleaned

# Pre-Installation Check

CMU Bee hole or unfilled head or bed joint



# Pre-Installation Check

- SOFP  
overspray on  
Sill prior to  
AVB  
Installation



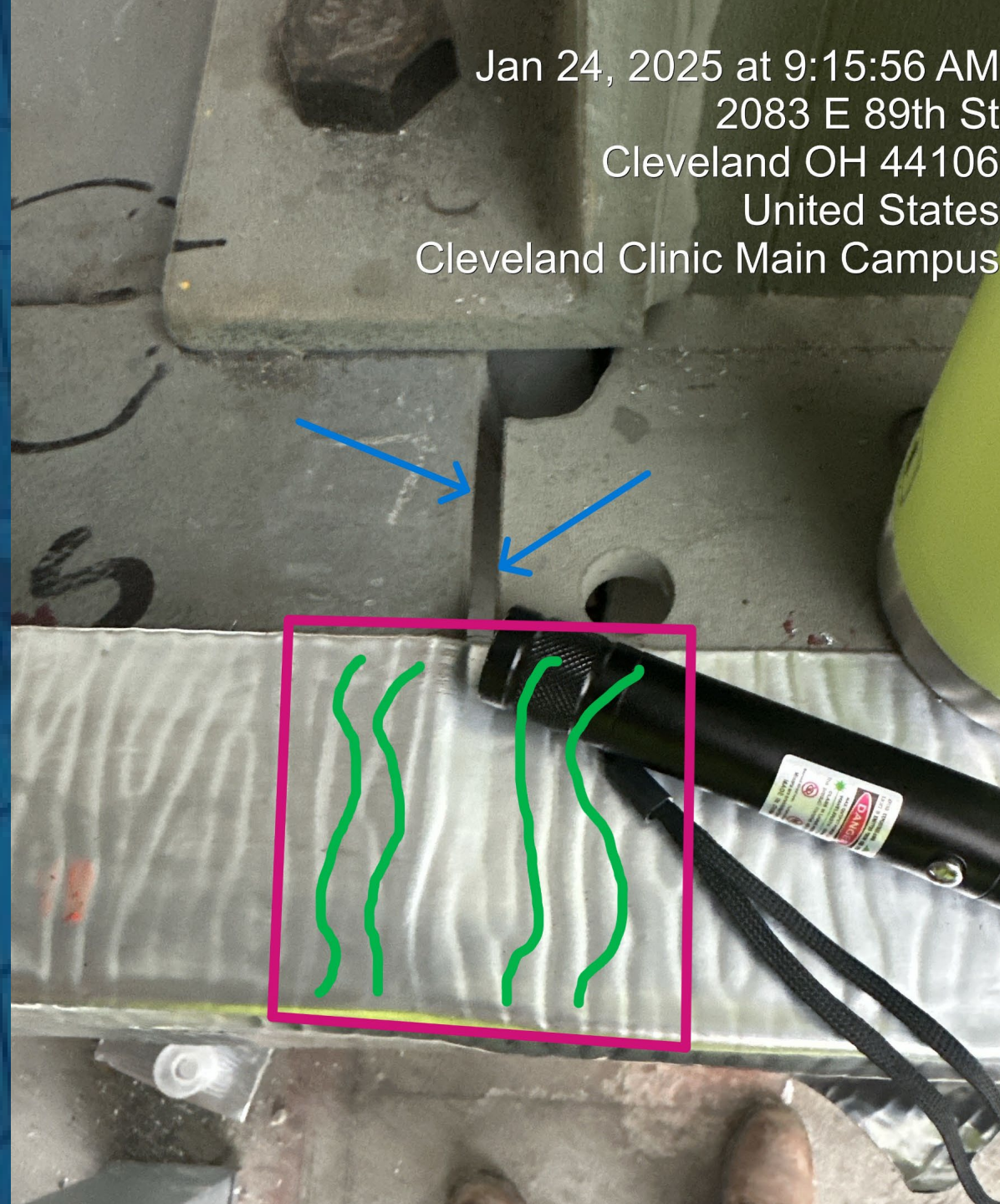
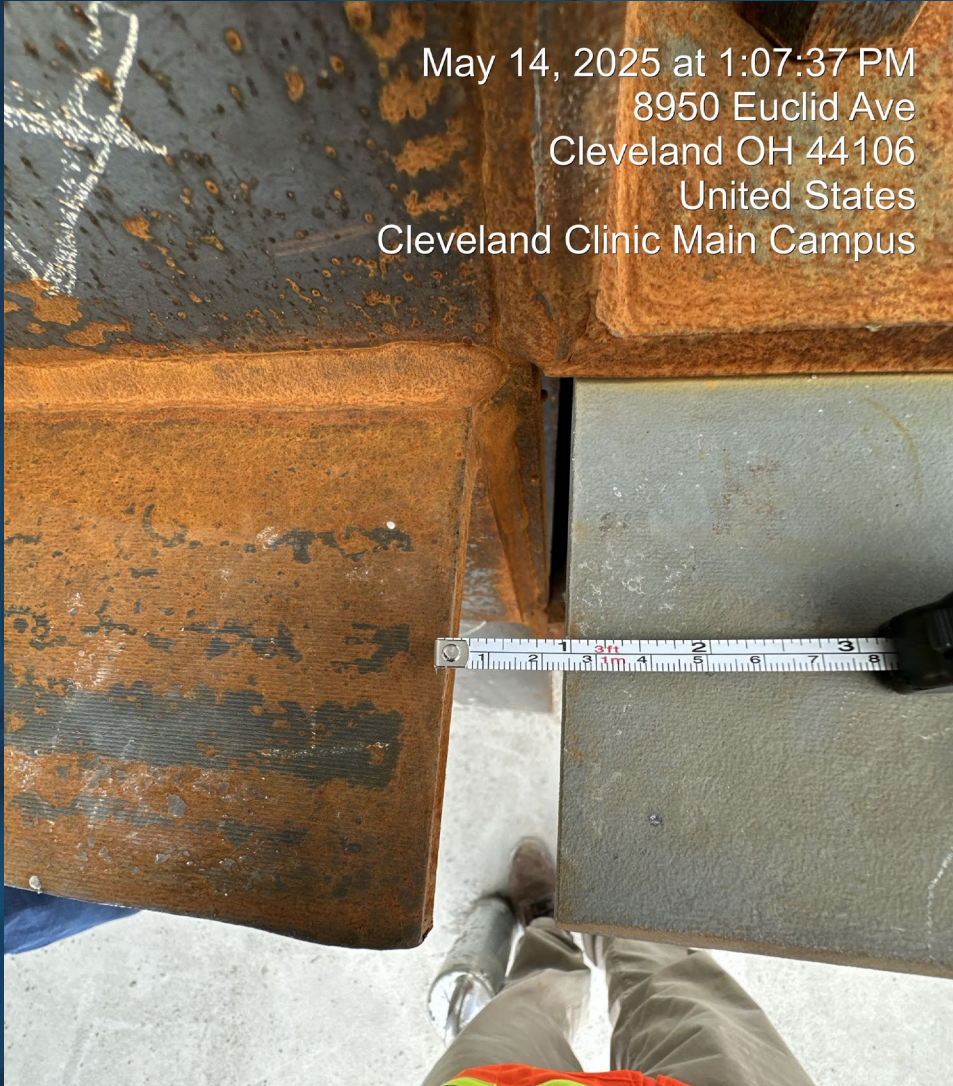
# Pre-Installation Check

- You touch it, you own it!



# Pre-Installation Check

- Steel Lintels for CW's



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That should hold it!

Rolled/Struck joint on CMU



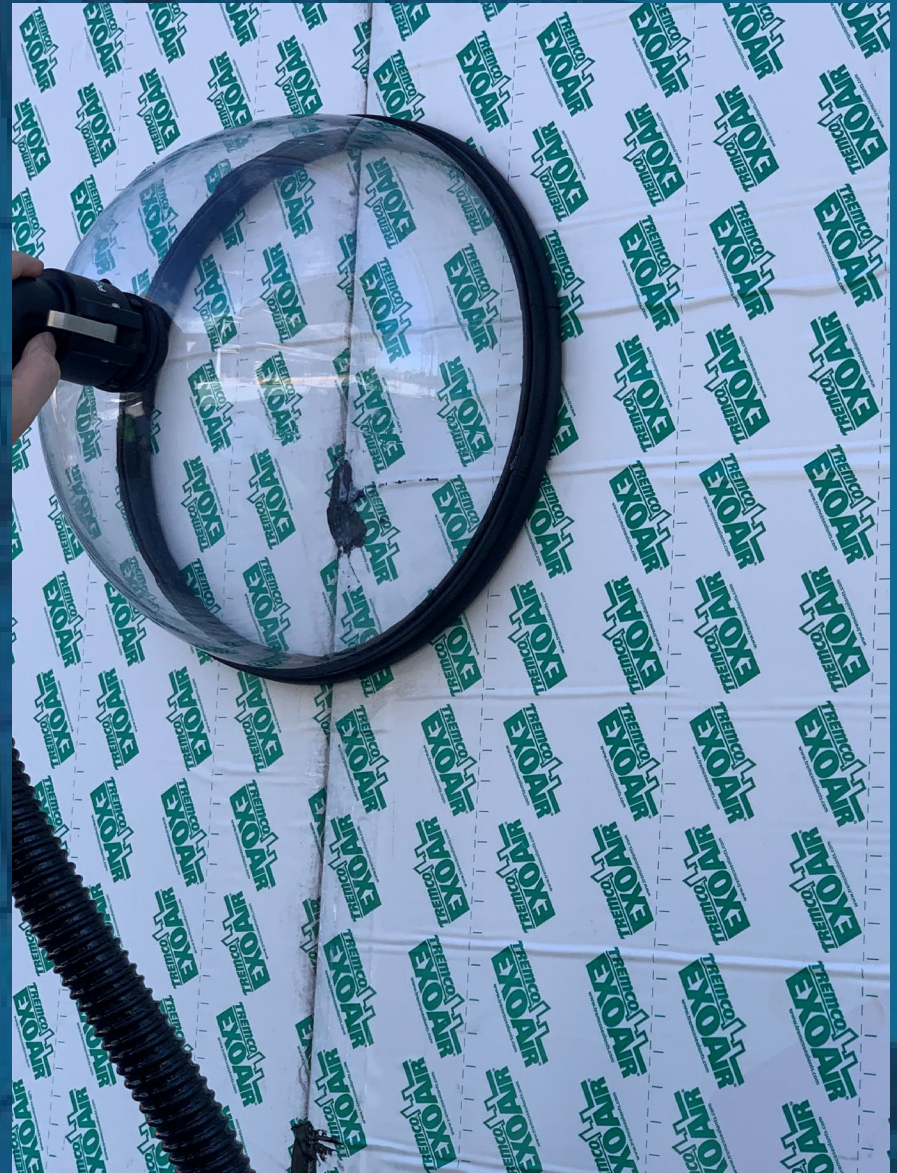
CMU Head/Bed Joint



Sealed

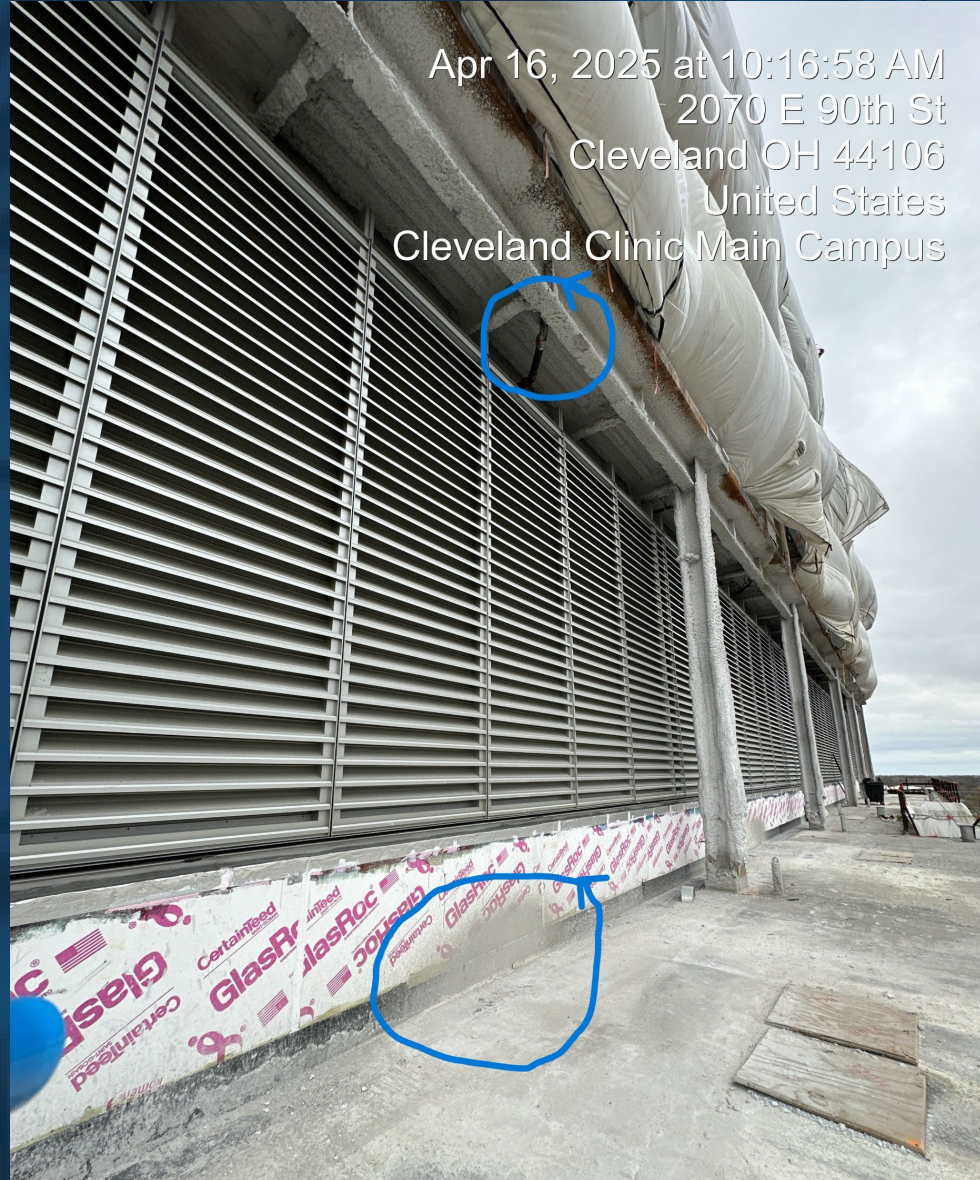


Inspect



# Damaged Substrates

Concrete slurry from overhead core



Damaged corner too large  
for AVB repairs.





Moments  
earlier...

Hulk Smash!!



Just kidding!

It was the  
plumber.



Its Ready, and you're late!



Why can't you complete your work?

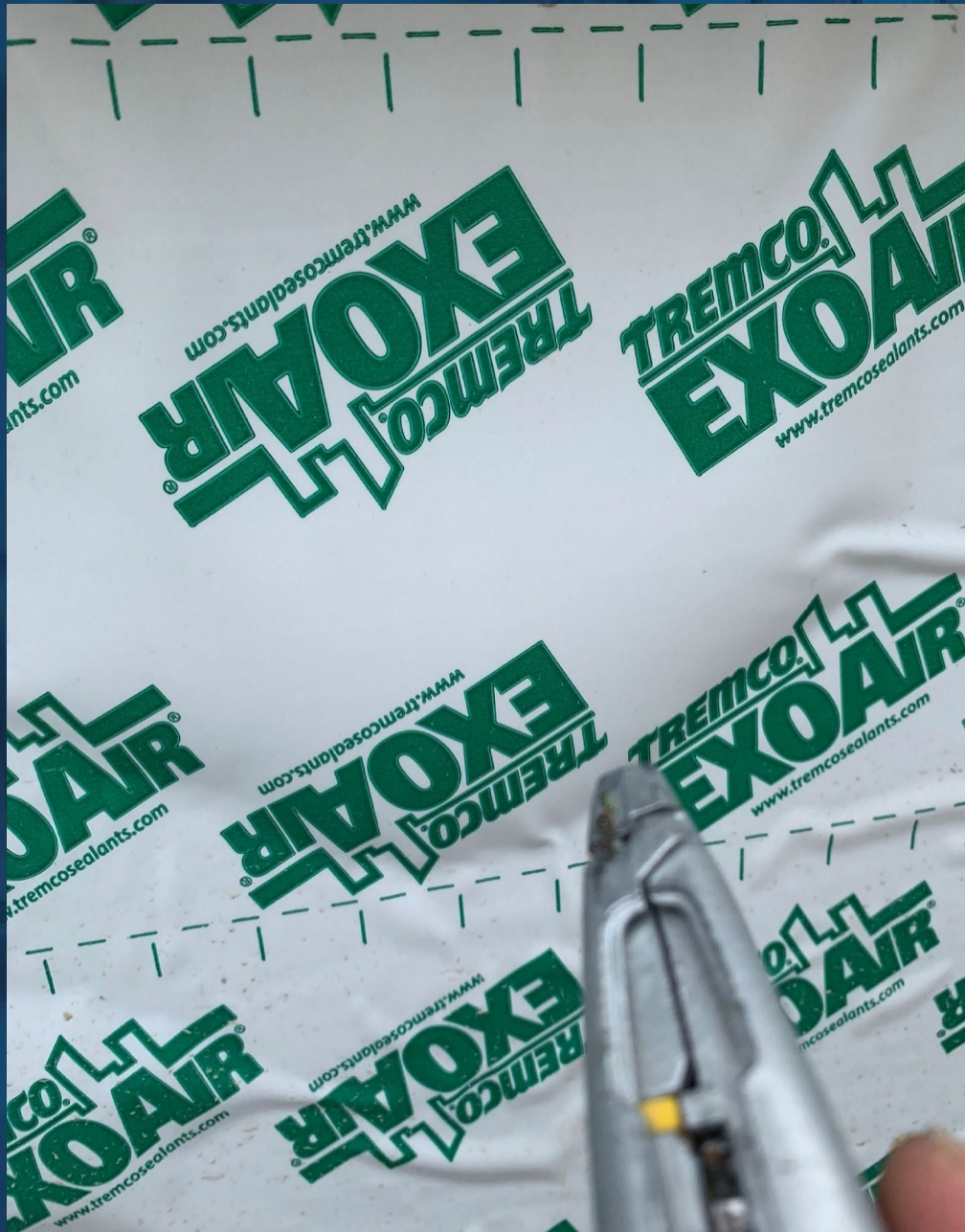


# Temps and Weather Limitations

- Ensure the substate meets the manufacturer's requirements.
- Frost Free
- Free of ponding water
- No Spraying 24 hours before the possibility of rain! More or less.
- Takes days to dry out!
- Ambient/Substrate temp limitations
- Don't install in fog
- Time of year installing, rain days/weather delays in the schedule?



I spy...



Water infiltration behind SA Membrane



# Equipment and Tools

- Know what type of material is being installed.
- What is the proper tip size, hose sizes, and hose lengths?
- Any required pump sizes, electric or gas powered.
- Hard hand rollers, wet mill gauges, rollers, bushes, razor knives.
- Cleaning solutions/solvents



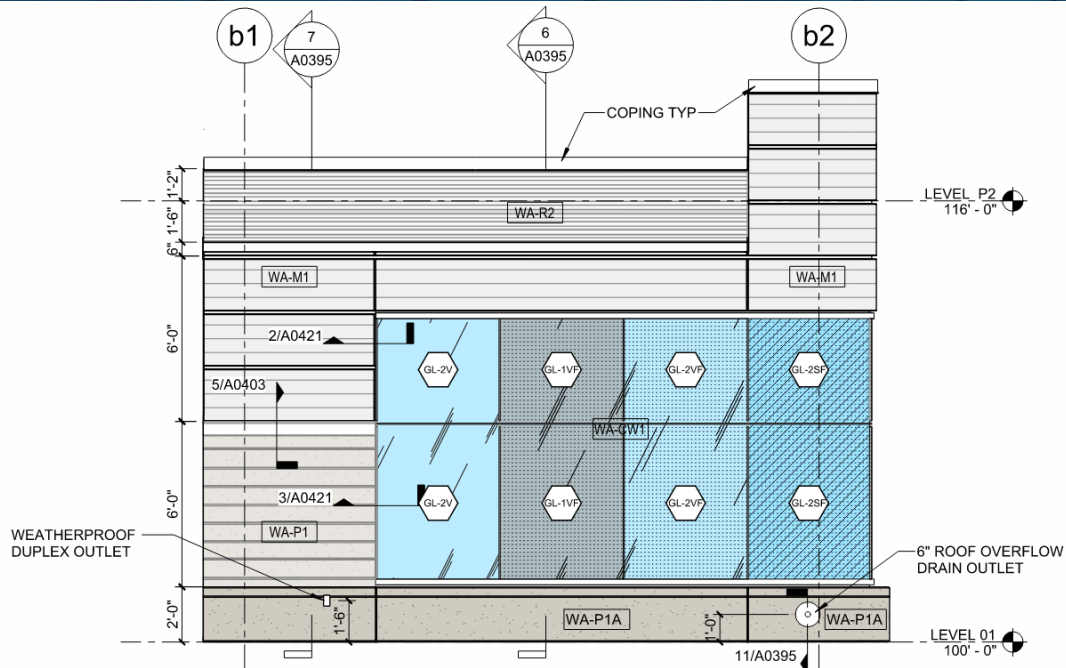
# Mockups

- Details parts of the building that could prove to be difficult.
- Shows a repetitious detail
- Shows transitions to all substrates and other systems.
- Use to set the tone on the job
- Hold others accountable



# Mockups continued...

- Helps to get in early with the design team to understand what is needed.
- Penetrations, change in back up walls, change in claddings, connections to CW's and storefronts, footer to wall, roof to wall connections.



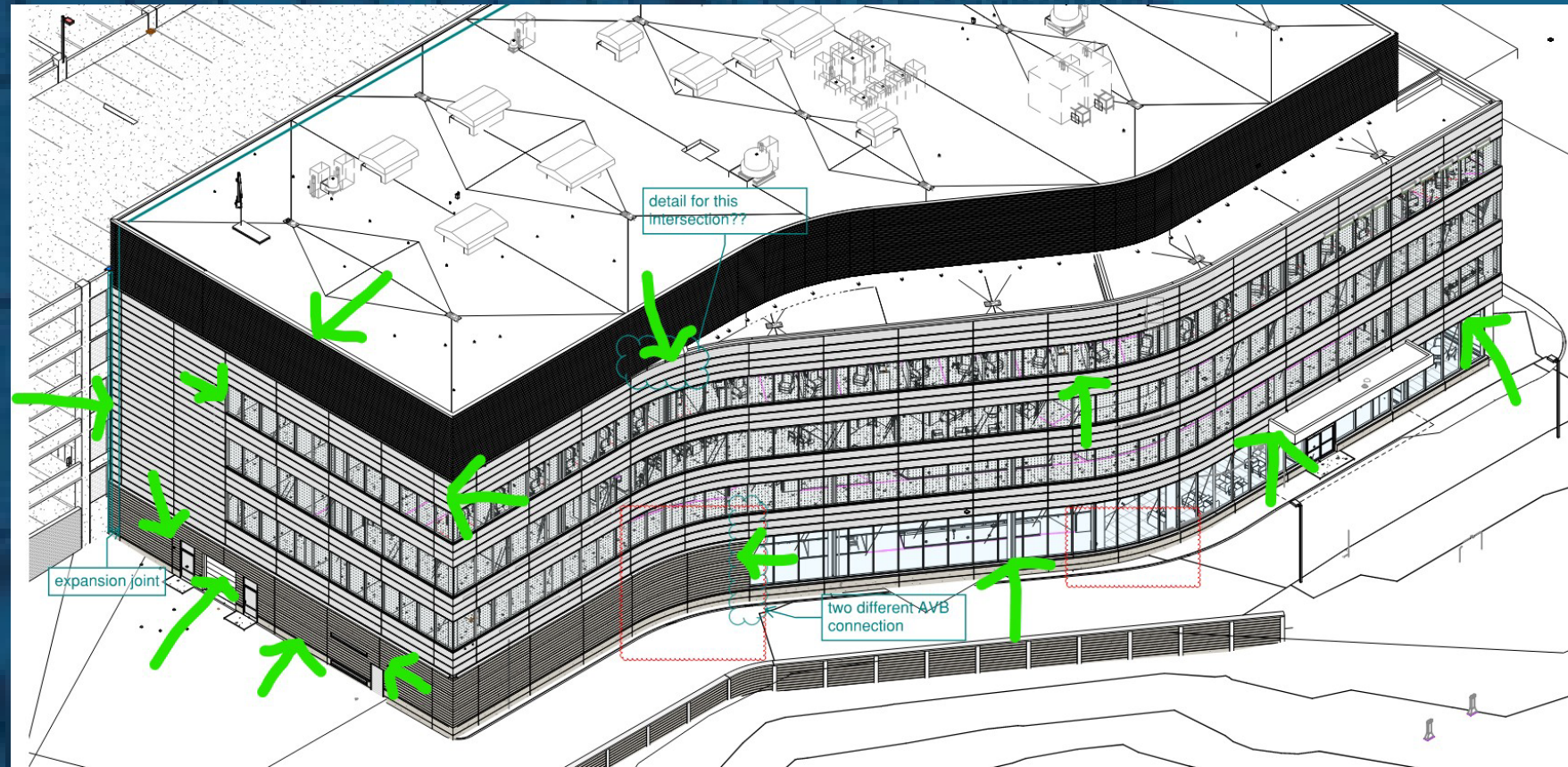
2 MOCK-UP ELEVATION A  
1/4" = 1'-0"



9 3D MOCK UP - 01

# Who should be at the Mockup Meeting?

- Roofer
- Electrician
- Plumber
- Cladding Contractor
- Glazier
- Concrete Contractor
- Waterproofer
- Fireproofing contractor
- Owners Representative
- Consultant
- Envelope Team members
- General Contractor PM and Superintendent



# Order of Operation

- -Discuss who goes first and then who follows.
- -Will go-backs be required?
- -Discuss compatibility and get letters from the manufacturers confirming.
- -Helps to discuss durations of work for expectations of manpower



# It pays to help!



Water kept flowing off the roof onto the work below that was a predecessor to any work above.

Stopped water so work below could continue after rainfall

Roofer went out of order

# Who owns what?

- Discuss any possible scope gaps. Ensure all clarifications have been confirmed during the meeting:
- Stud wall with AVB
- Concrete wall with AVB
- Below grade with Waterproofing
- Edge of precast
- Expansion Joint



# Sequencing and Timing

- Discuss cure times for all materials that will overlap and meet or touch each other.
- Ensure chemical compatibility, not just adhesion.

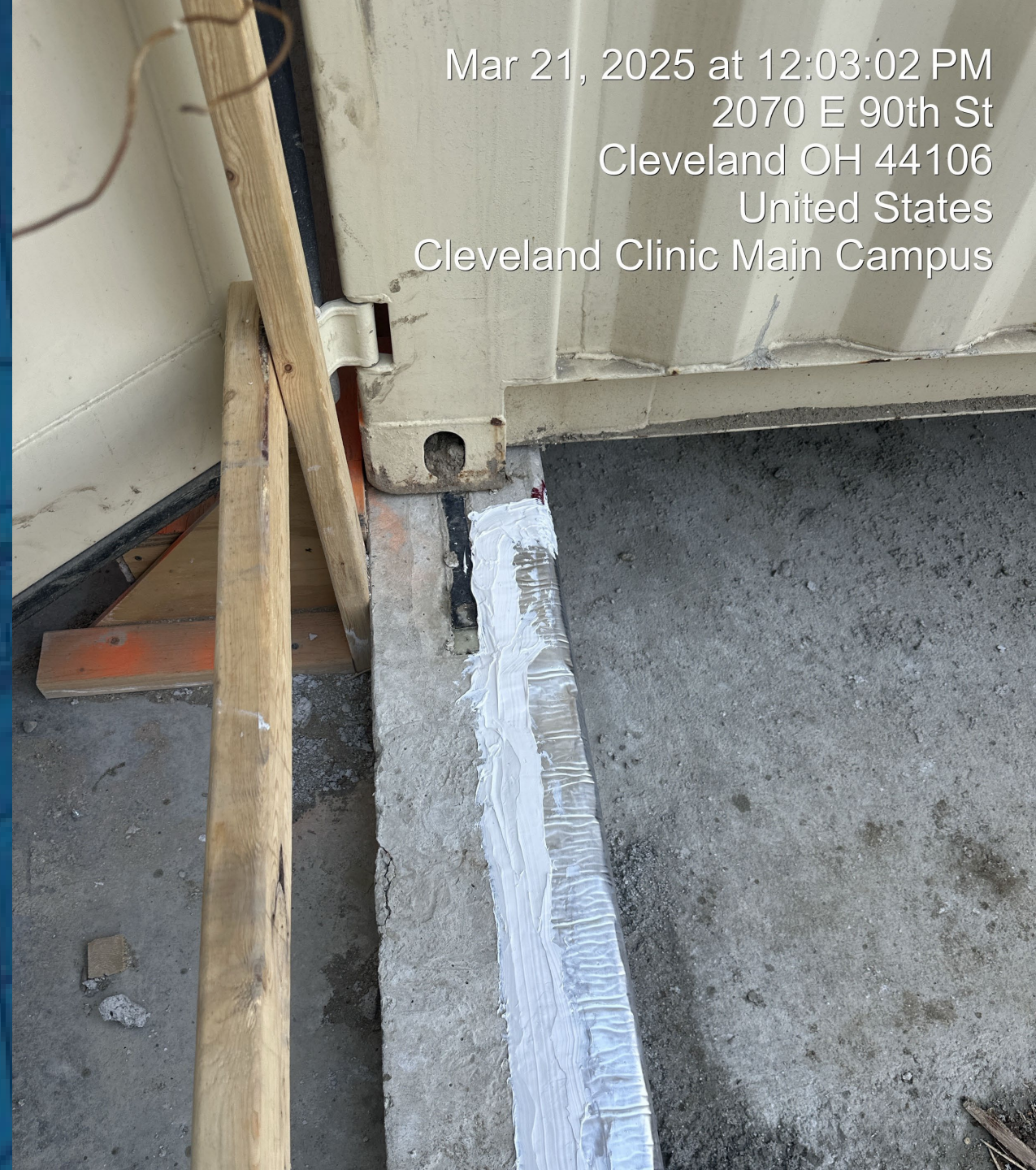




# Where do I Stop?

- Have a clear and concise path of where you are starting and where you are stopping!
- Document where predecessor work is incomplete or reason for not being able to finish.

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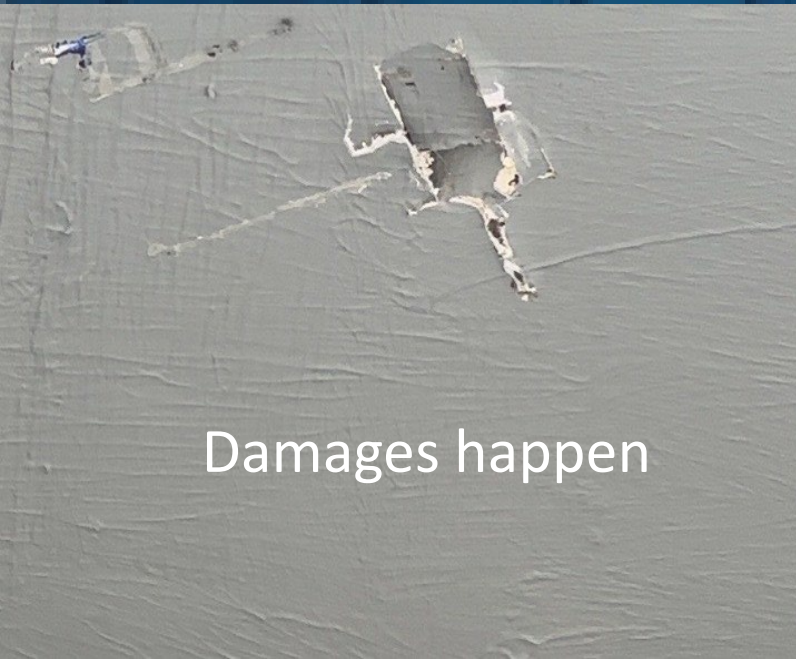


# Expectations

- Others Work
- Your work
- Pre-Installed
- Post-Installed
- Repairs

Wrinkles happen

What size hole do I need again?



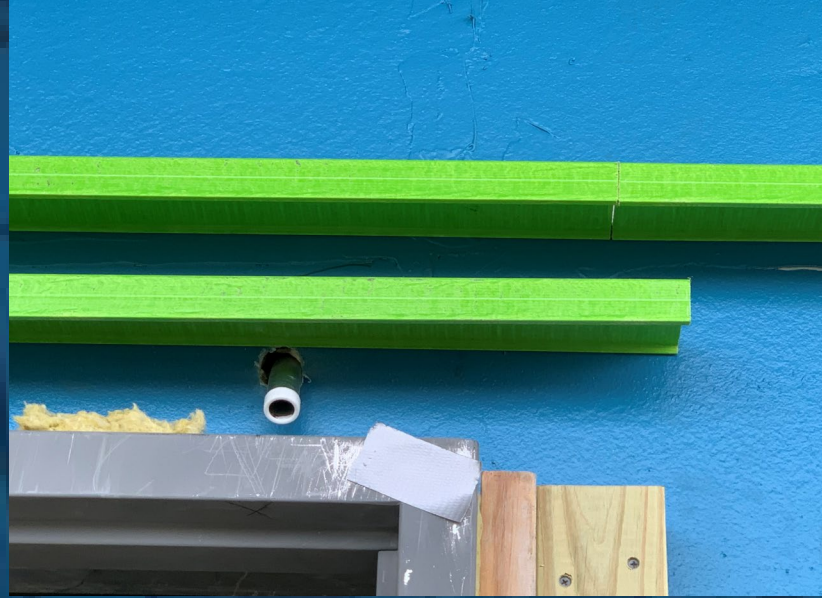
Damages happen



# Conduit penetration requirements



Multiple flex conduit in one hole

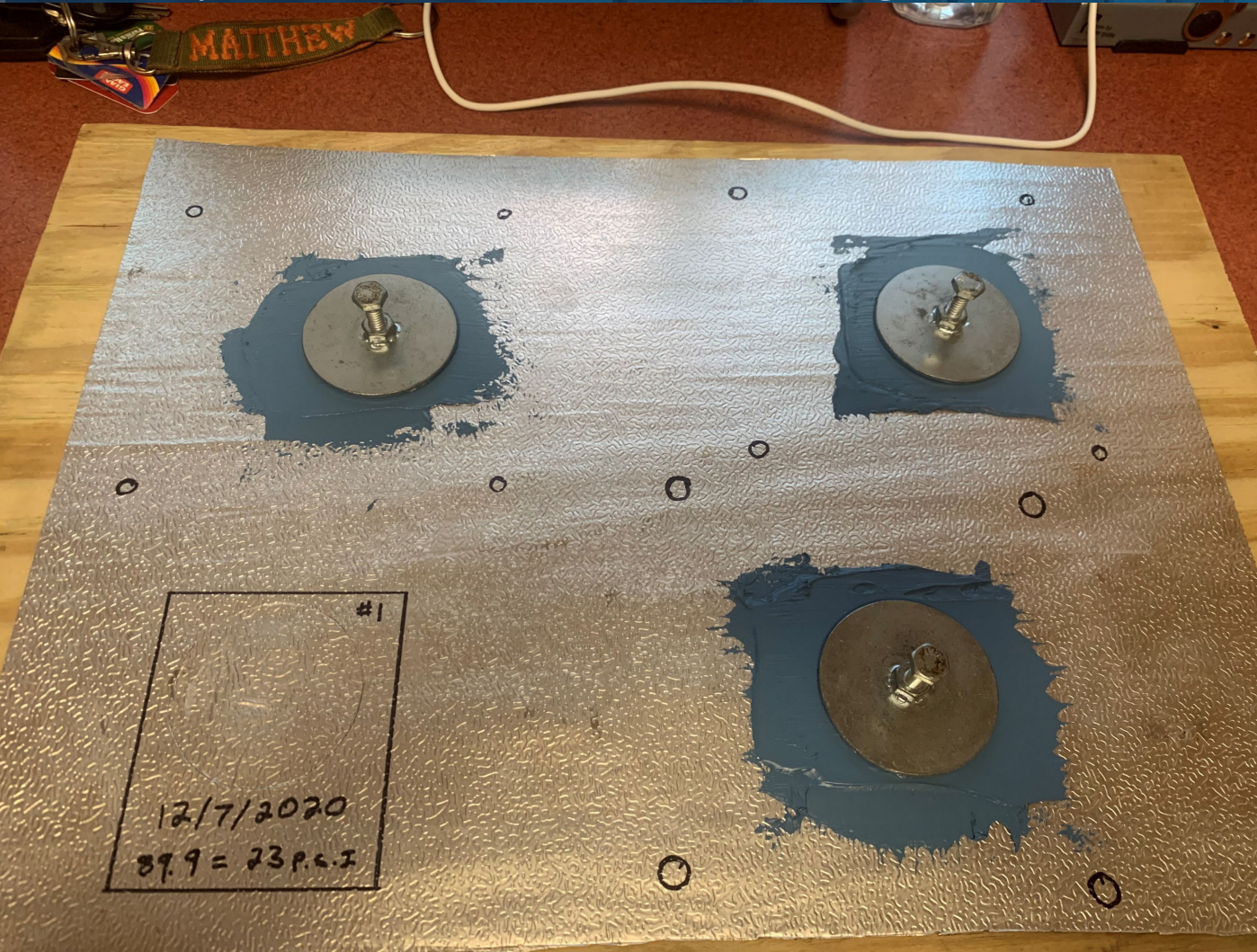


Seal onto the pipe, not just around it

Pipe needs to be secured and accessible to detail

# Testing

Confirmed adhesion of materials with  
no past documentation or testing

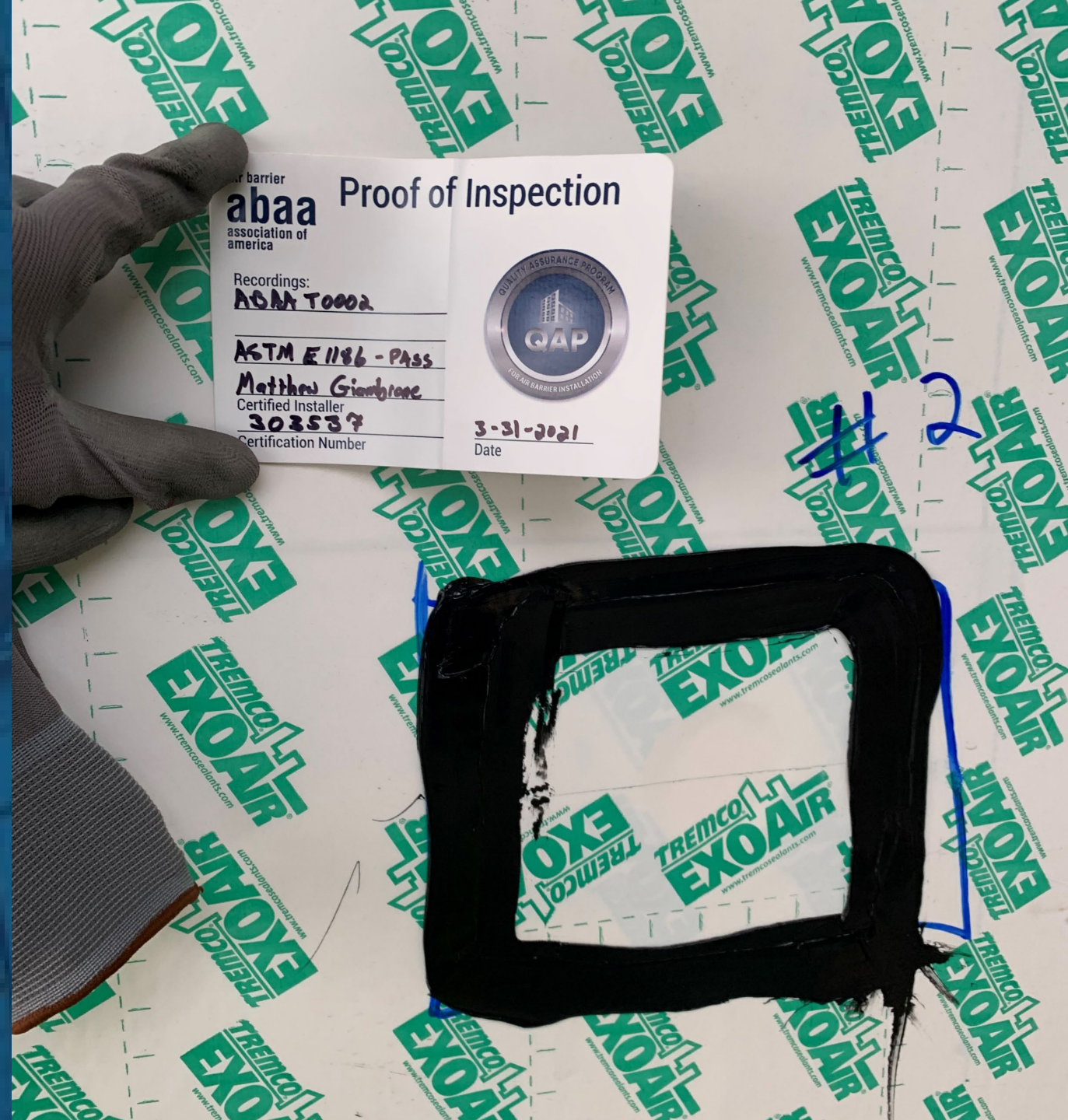


Sealing brick ties extremely  
difficult with SA membranes

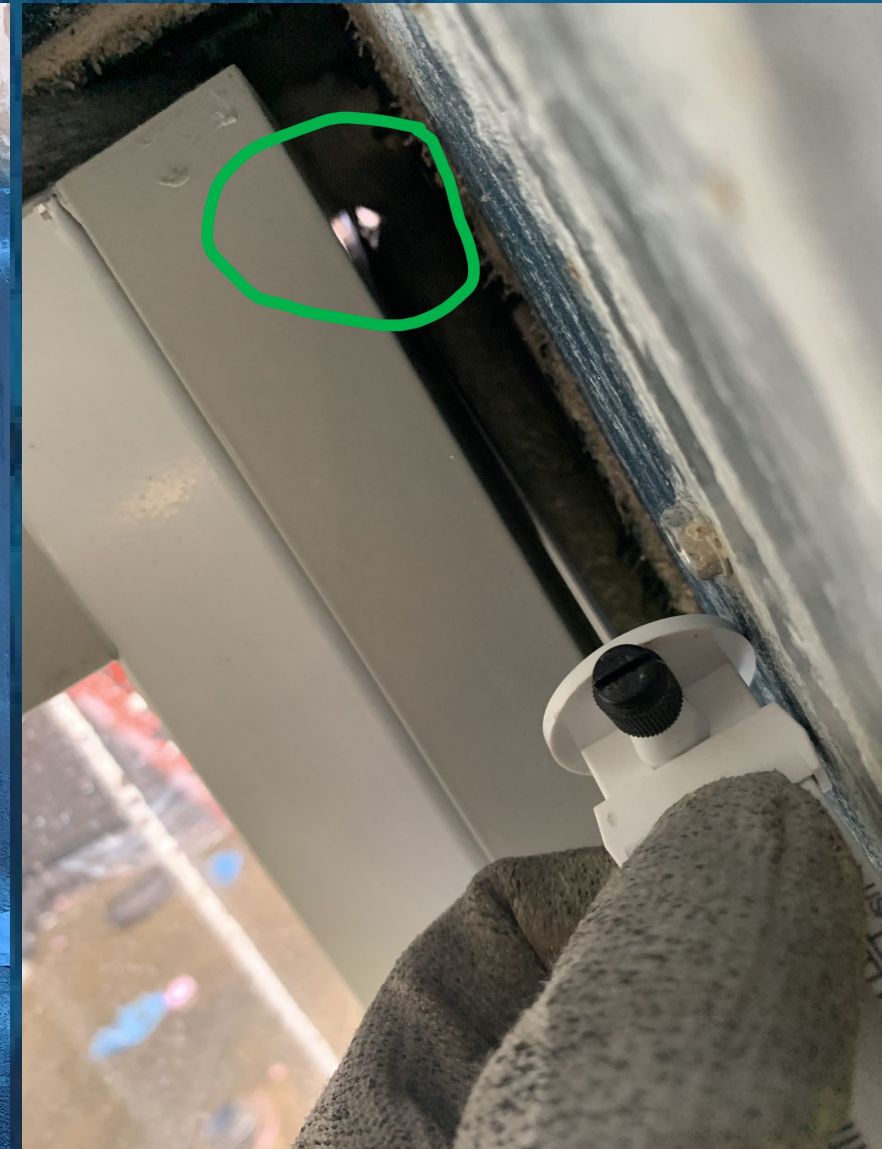


# Testing

- What type of testing will be required?
- What will be tested?
- Check the specification to confirm if testing will be required at all.
- Correct test?
- As a Level 3 ABAA Certified installer, I have been trained to properly perform pull tests to confirm adhesion of the materials installed.



# Quality Assurance/ Quality Control

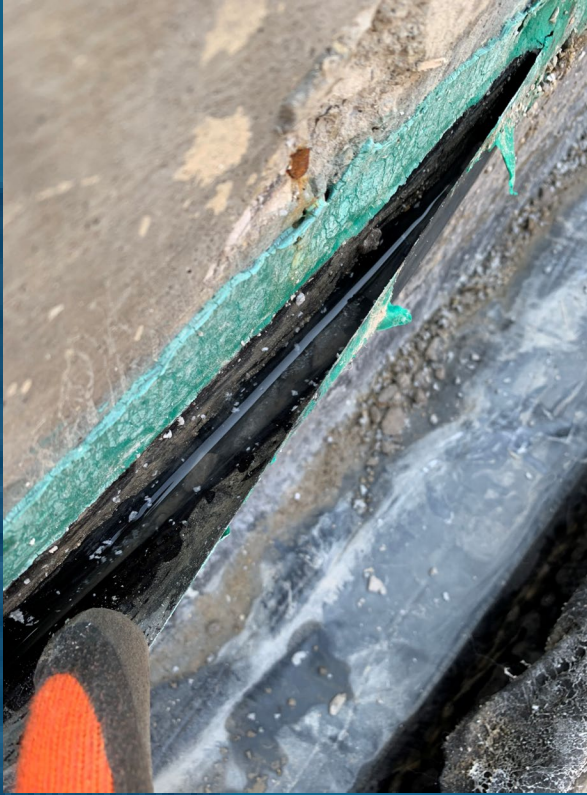


# Below Grade Connections

- Where is grade at?
- Connection point?
- Compatible?
- Accessible?
- Is it acceptable to install?
- Predecessor work required?
- Previously installed work still good?



# Before Install



# Poured Concrete

Expect multiple passes and go-backs to repair bubbles and holes after inclement weather

Divots can require multiple passes...

...or additional sealant.



# SOFP and AVB interface

Currently No approved UL's

AHJ needs to provide a letter!



OOPS!



# Equipment & Access

- Job sites are known to be cramped, sometimes with little to no lay-down areas or stations.
- Discuss with the General Superintendent your needs and requirements to access hard-to-reach spots.
- Consider the schedule and the timeline of work activities that could interfere with your installation.
- Discuss overspray protection and any other relevant information.



# Detailing Openings

Check 90-degree turns and corners

Possible point of infiltration

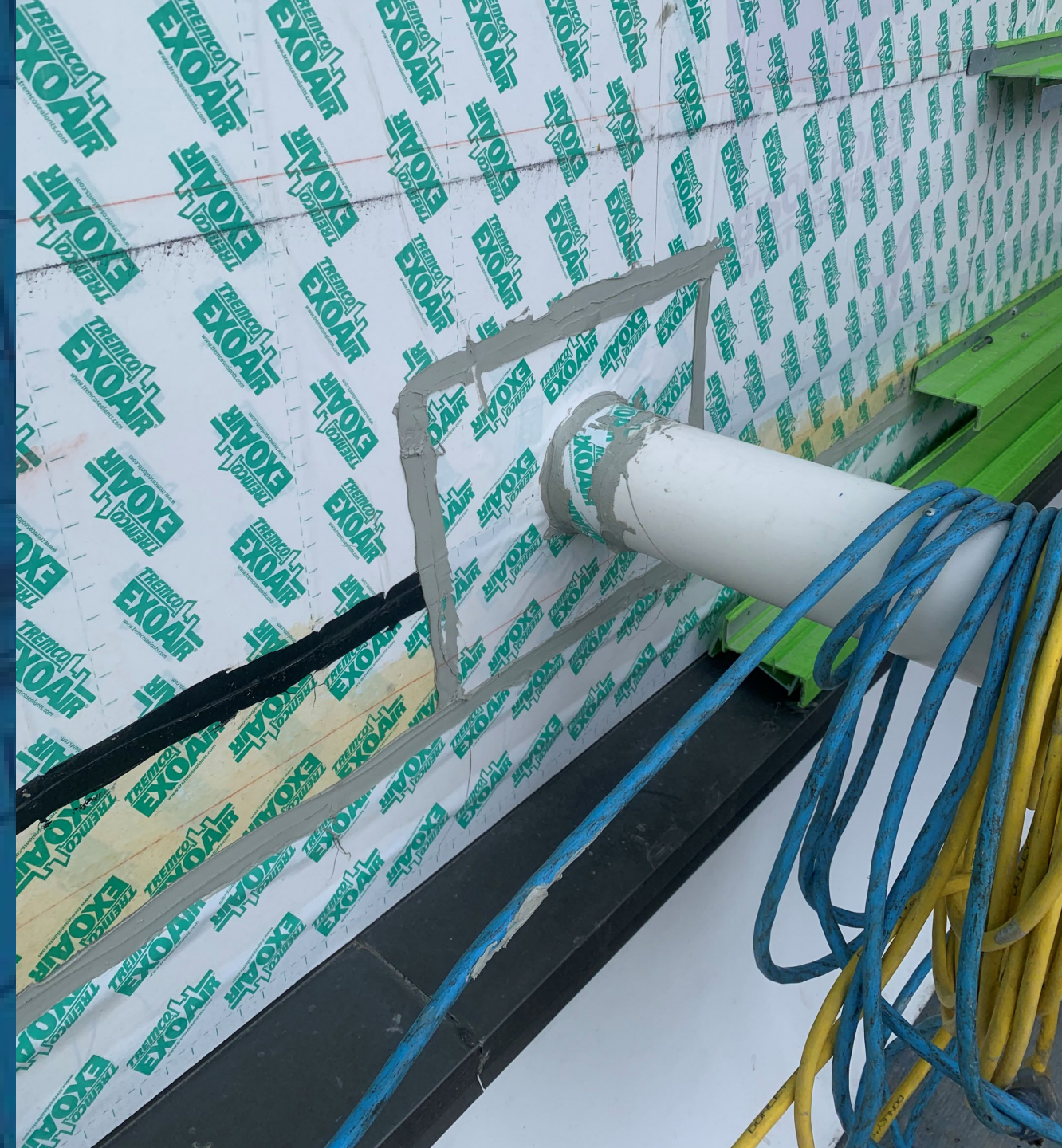
Incorrect window membrane flashing installation



# Pipe Penetrations

## Roof Overflows

- Secured tight
- Hole cut properly
- Placed at correct height



# Pipe Penetrations

## Sleeves

- Secured tight
- Hole cut properly
- Placed at the correct height
- Detail to sleeve not the pipe
- Insulate/non-insulated pipe
- Needs to be sealed



# Liquid Flashings

Taper board joint treatments

Look closely!



# Liquid Flashings

Liquid flashings can be just as difficult as self-adhered membranes to install at the inside of corners and openings.





Detail T-Joints and intersections with sealant



Detail Repairs

16-2 1/2



16 3/8



Check installed fasteners and pattern

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Air & Water Barrier

SECUROCK® EXOAIR® 430  
Air & Water Barrier

17-54

12 1/2 8E

11 3/4

65

11 3/4

5

12 1/2

2



# We are human, we make mistakes



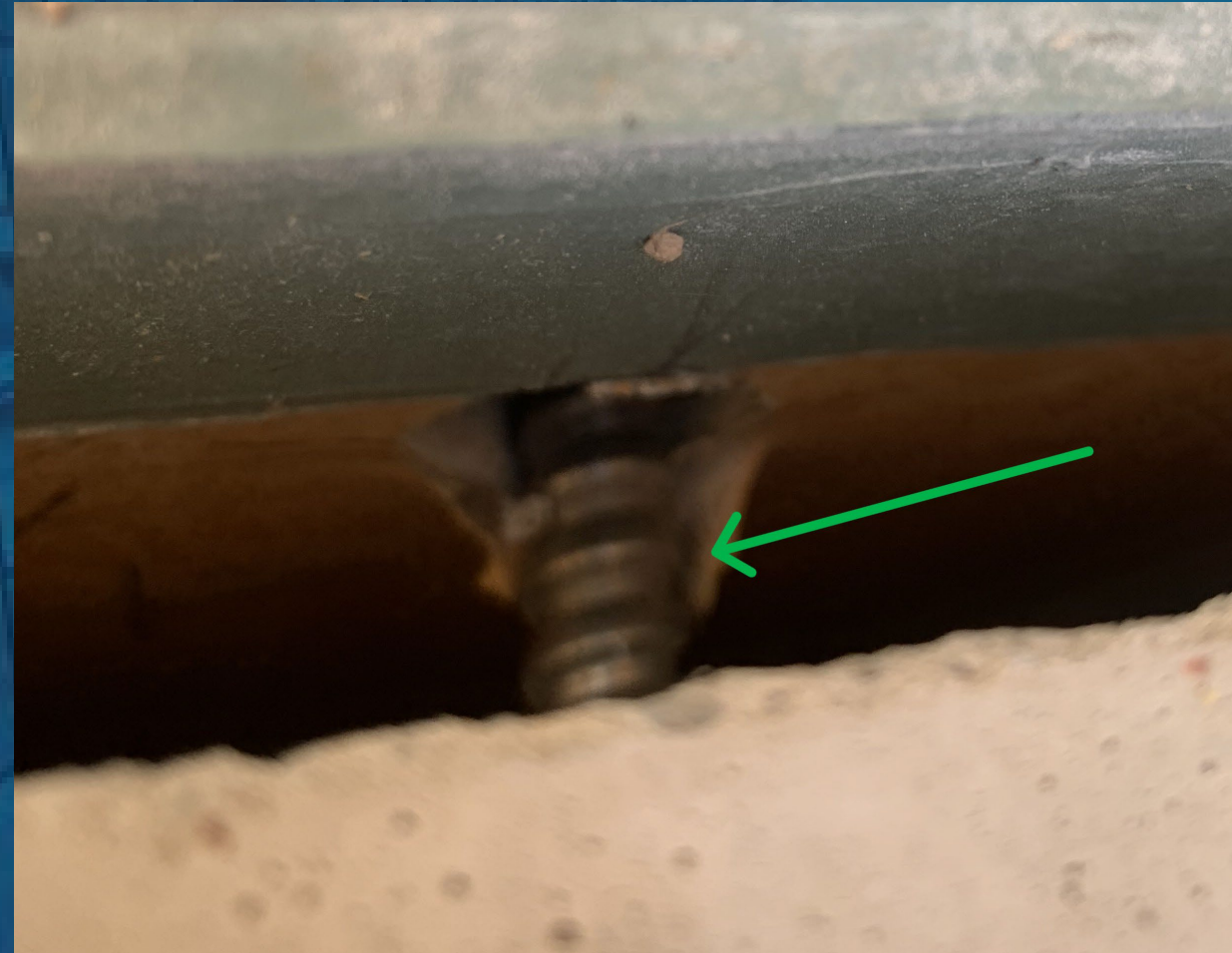
Check the underside of installed materials



Sealant is required to be tooled at the edges of membranes

# We are human, we make mistakes

Others can make bigger mistakes...



# Support Blocking and the Unknown

Before completing your work, double-check that all wood blocking has been installed around openings to ensure connection points are created.





- Steel protrusion through the framing and the sheathing
- Tolerances are different for each trade
- Sometimes it can create additional work if the detail is not included in the contract drawings.
- Inform the General Contractor of discrepancies through an RFI on how to detail properly and have them provide direction through a CO or an ASI.

# Kickers and Support Framing

- Some exterior soffits may require additional framing support for the CW below.
- These are not always identified on the architectural drawings, check the structural drawings to see how the connections are made.
- A lot of times these will only be identified on the Engineered Cold Form Framing Submittal Shop Drawings.
- Get compensated for additional work



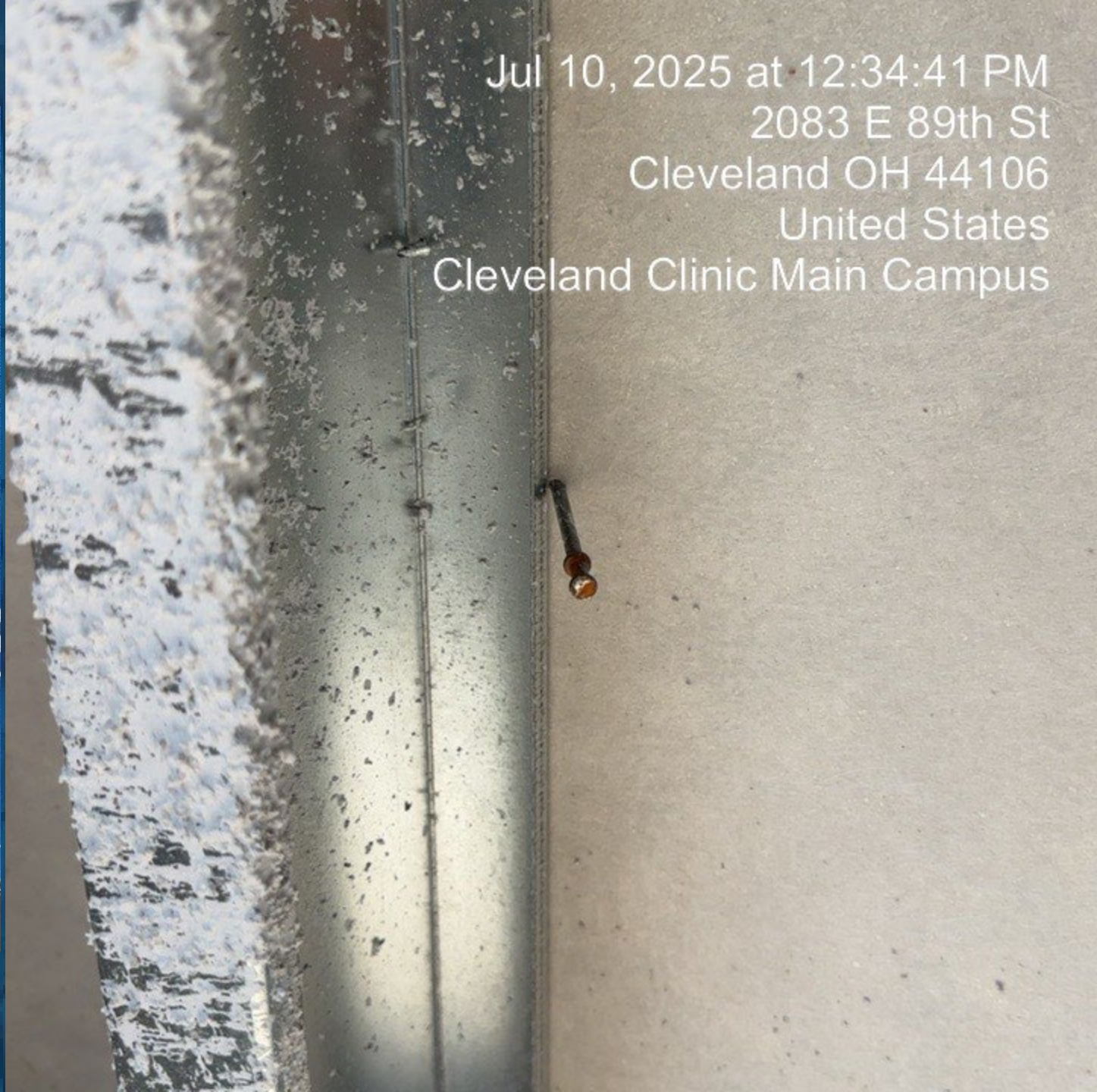
# Check inside too...

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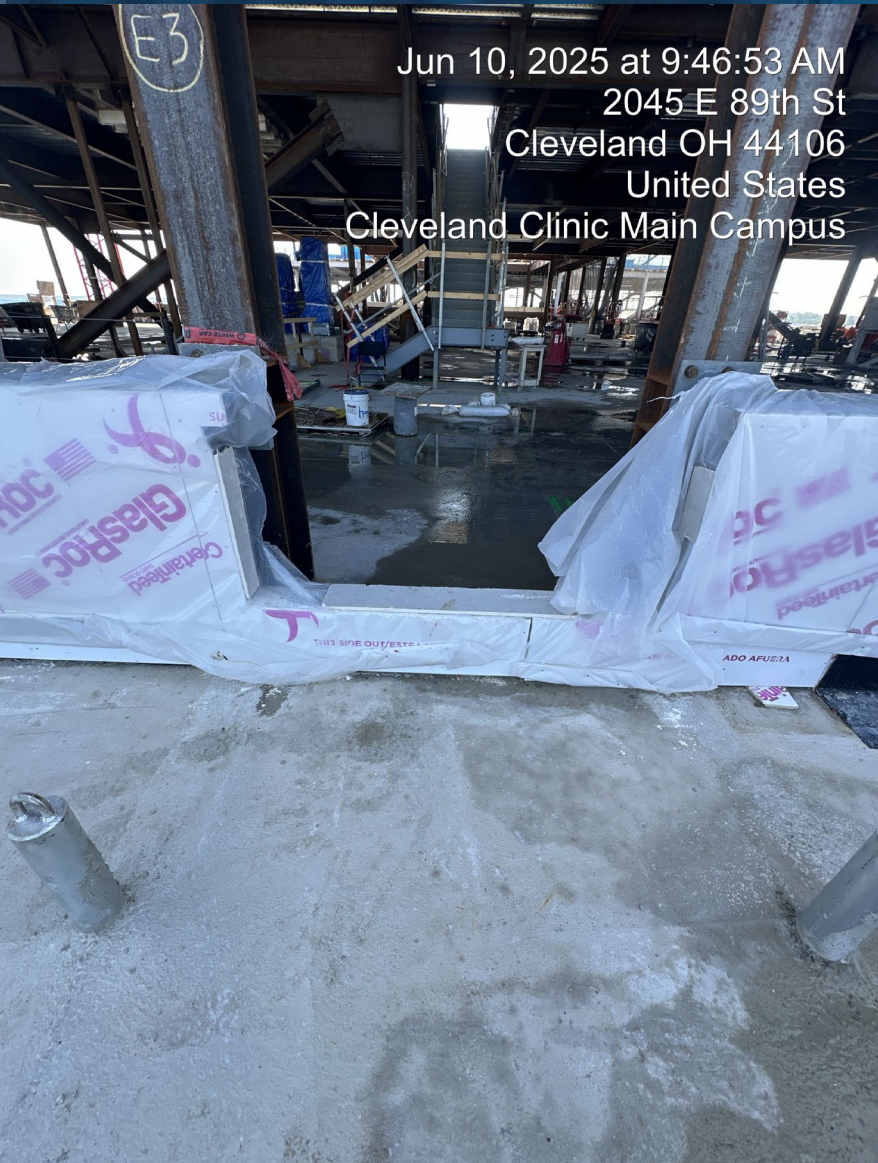
Henry®  
**Blueskin**  
Air Tight Water Tight

-Other workers could not locate  
the studs from the exterior...

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# Protect Your Work



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- Protect work before installation to ensure a proper substrate.
- Saddles over-installed membrane at door openings. Simple, quick, cost-effective.
- ABAA has a position paper available online in the members' area.
  - Top of Walls
  - Backside of Parapets



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# Continuous Inspections!

Mar 12, 2025 at 8:51:50 AM  
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A blue-tinted photograph of a tennis court net. The net is the central focus, stretching across the frame. The background shows the court's structure and some foliage, all rendered in shades of blue. Overlaid on the net is the text "THANK YOU!" in a clean, white, sans-serif font.

THANK YOU!