



# 34<sup>th</sup> Annual State Construction Conference

March 26<sup>th</sup>, 2015

## INSPECTION DISCOVERIES

**Victor Stephenson, P.E.**  
Assistant Director  
Construction Administration & FCAP

# SCO Final Inspection Authority:

§ 143-341: To supervise and inspect all work done and materials used in the construction or renovation of all State buildings and all community college buildings whose plans and specifications must be examined and approved; to act as the appropriate official inspector or inspection department for purposes of §143-143.2; and no such work may be accepted by the State or by any State agency until it has been approved by the Department.

# SCO Final Inspections

No construction project can be accepted or occupied by the State or by any State Agency until the work has **been inspected and approved** by the NC Department of Administration – State Construction Office.

SCO Final Inspections are “hallowed ground” .....

..... so please take off your shoes



# SCO Final Inspections

The State Construction Office inspection teams **have never**, and **will never**, treat contractors like this.....



Monday: “Original stamped plans not in inspection box.  
Pay fee and reschedule.”

Other than State of NC jurisdictions

Monday: “Original stamped plans not in inspection box.  
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Tuesday: “Red-ink stamped City Plan Review approved  
documents not in inspection box.  
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Wednesday: "Copy of red-ink stamped City Plan Review  
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Thursday: "Framing supervisor had red-ink stamped City  
Plan Review documents. Copy not  
acceptable. Inspection cancelled.  
Pay fee and reschedule."

Other than State of NC jurisdictions

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Thursday: "Framing supervisor had red-ink stamped City Plan Review  
documents. Copy not acceptable.  
Inspection cancelled. Pay fee and reschedule."

Friday 4:35 PM: "Too many framing deficiencies to  
note. Punch-out framing, pay fee  
and reschedule."

Other than State of NC jurisdictions

What would you do .....  
..... if you were the Contractor?

This is what I would like  
to do:



# SCO Final Inspections

The State Construction Office inspection teams have never, and will never, treat contractors like the previous slides.

So please do not treat SCO inspection teams like this .....









# SCO Final Inspections

So what if the Contractor and/or Designer are not ready?

It is going to cost you time and money!

# SCO Final Inspections

At a MINIMUM, SCO inspection teams consist of:

Licensed design professional:

Mechanical Engineer  
Electrical Engineer

Level III Inspection Certificate AHJ:

Building  
Plumbing  
Mechanical  
Fire Protection (sprinkler)  
Electrical – Power & Fire Alarm

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**Plumbing**

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# SCO Final Inspections

Typical SCO final inspection teams consist of:

A minimum of four (4) professionals

5 or 6 required for large or complex projects

We have to plan out 10 business days ahead to coordinate their schedules and find a date.

It will take 10 business days or more to reschedule if the job is not ready for SCO final Inspection.

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**And that is going to cost everyone time & money.**



# INSPECTION DISCOVERIES

The good, the bad, & the ugly

the good, bad & ugly

Good



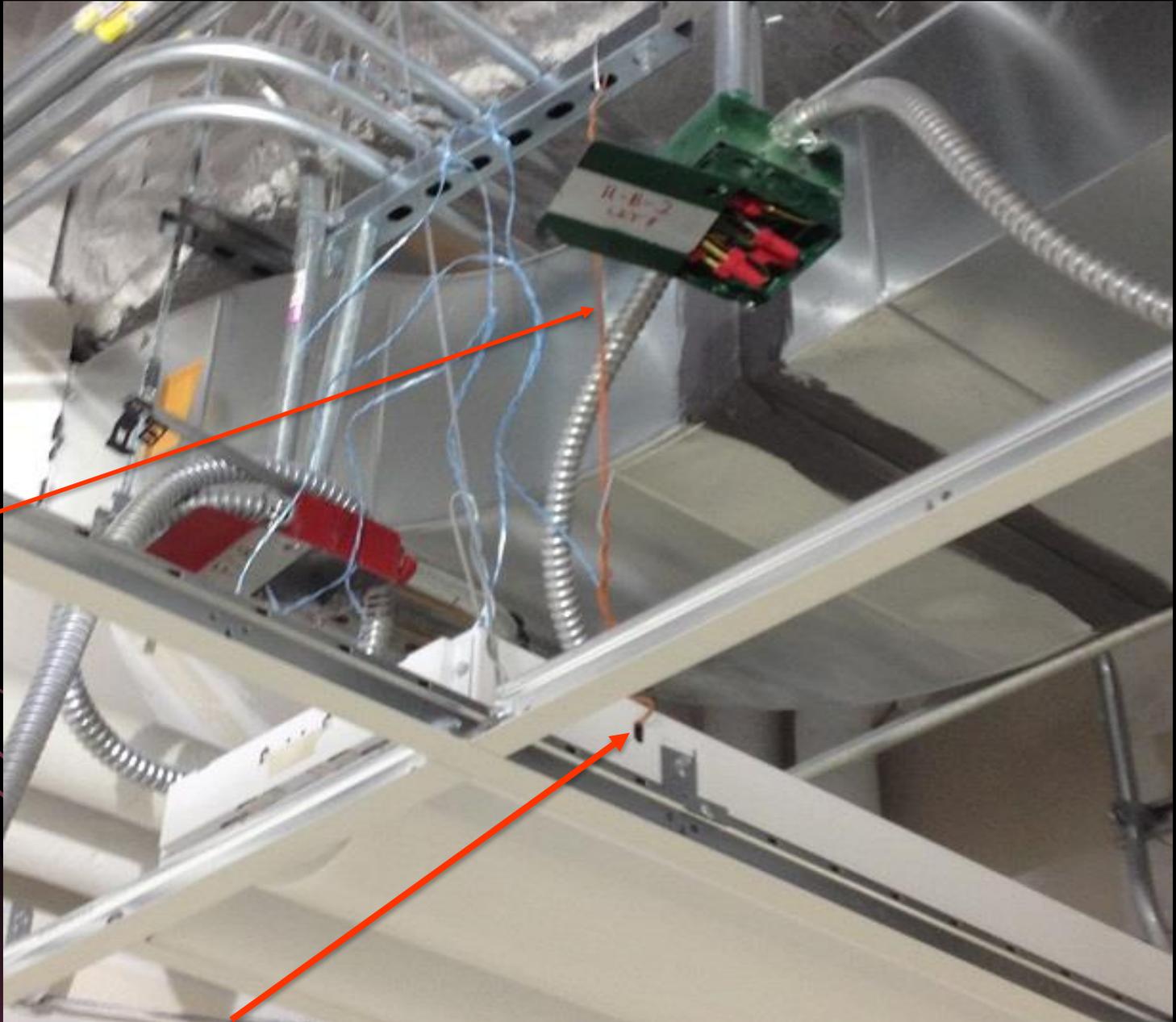
Good



Good



Good



Bad



Bad



Bad



**Notice this coated area**  
**We will re-visit what was found here**

**Where are hatch railings?**

Bad



Bad



Bad



Bad



Bad





75%

Bad



Bad

This is the other 25%

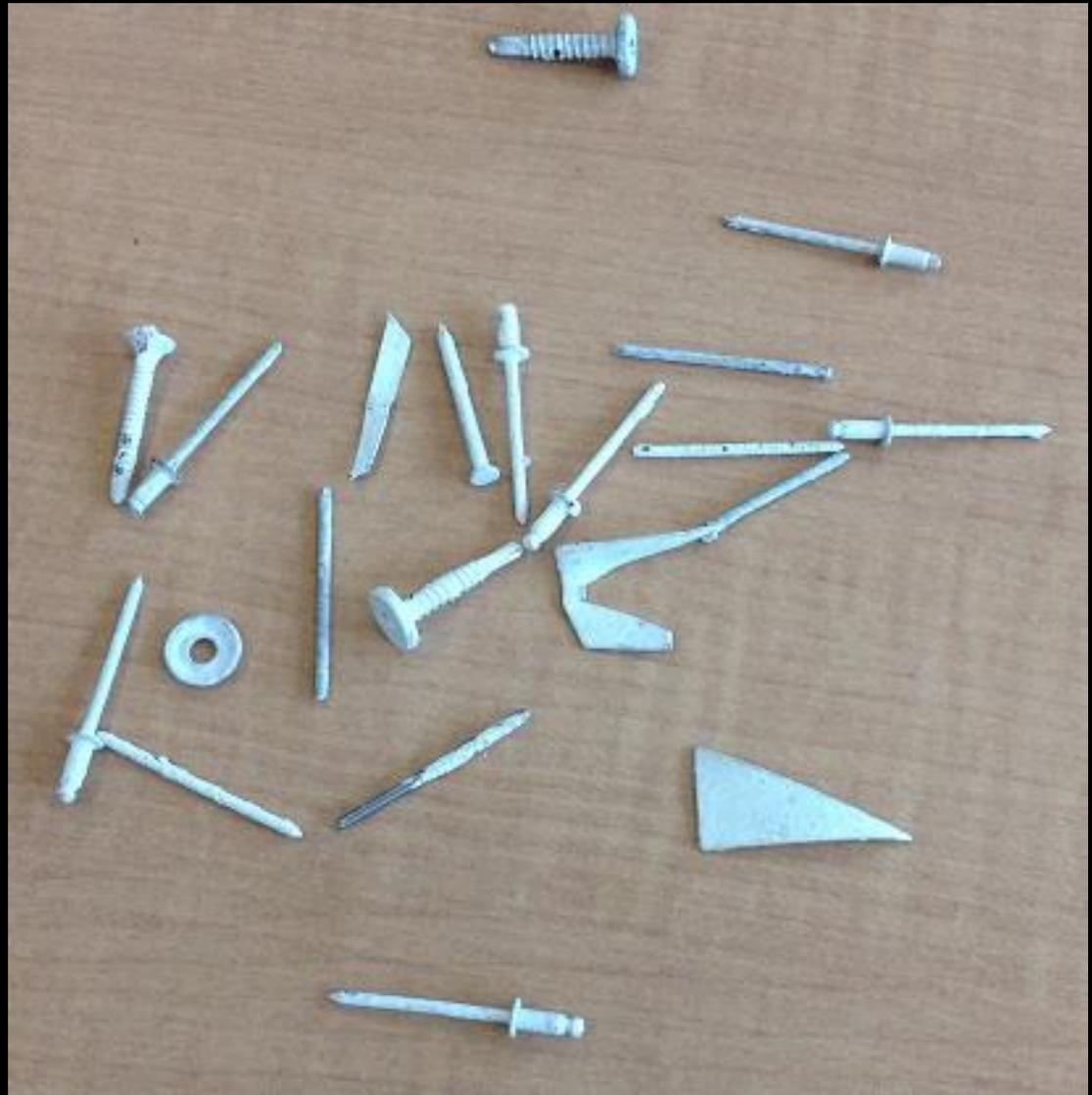
Remember that white coated area of roof near the hatch?



The roofing crew coated-over their own debris !



This is ugly



# RICHARD HARRIS





This is ugly

***This is un-forgivable***



And now, lets look at something beautiful:



And now, lets look at a great roof:



Safety railing



Non-skid surface



No trash

And now, lets look at a great roof:

**This is the largest & nicest roof hatch we have ever seen**





Bad



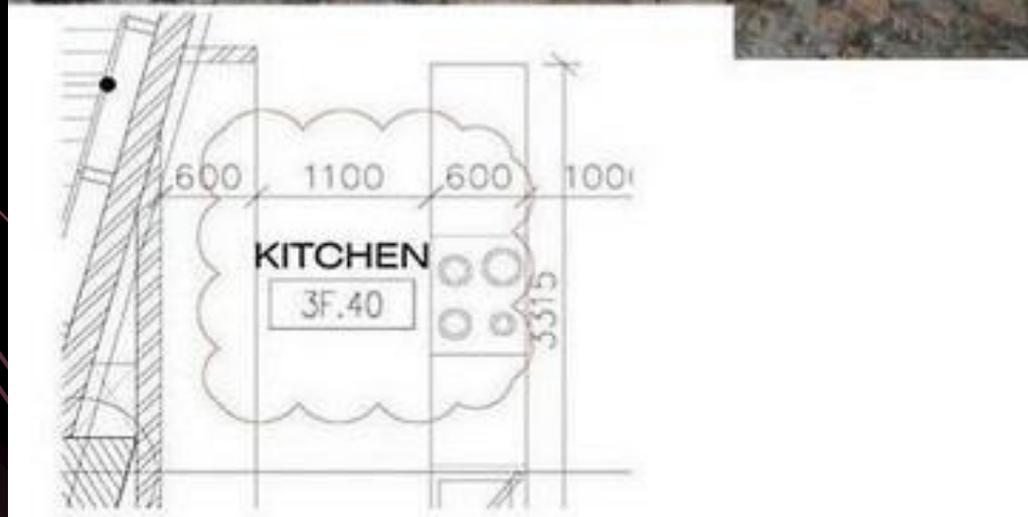
Bad



# Funny



Please be careful putting revision clouds on drawings. Some of the trades take it quite literally.



Bad

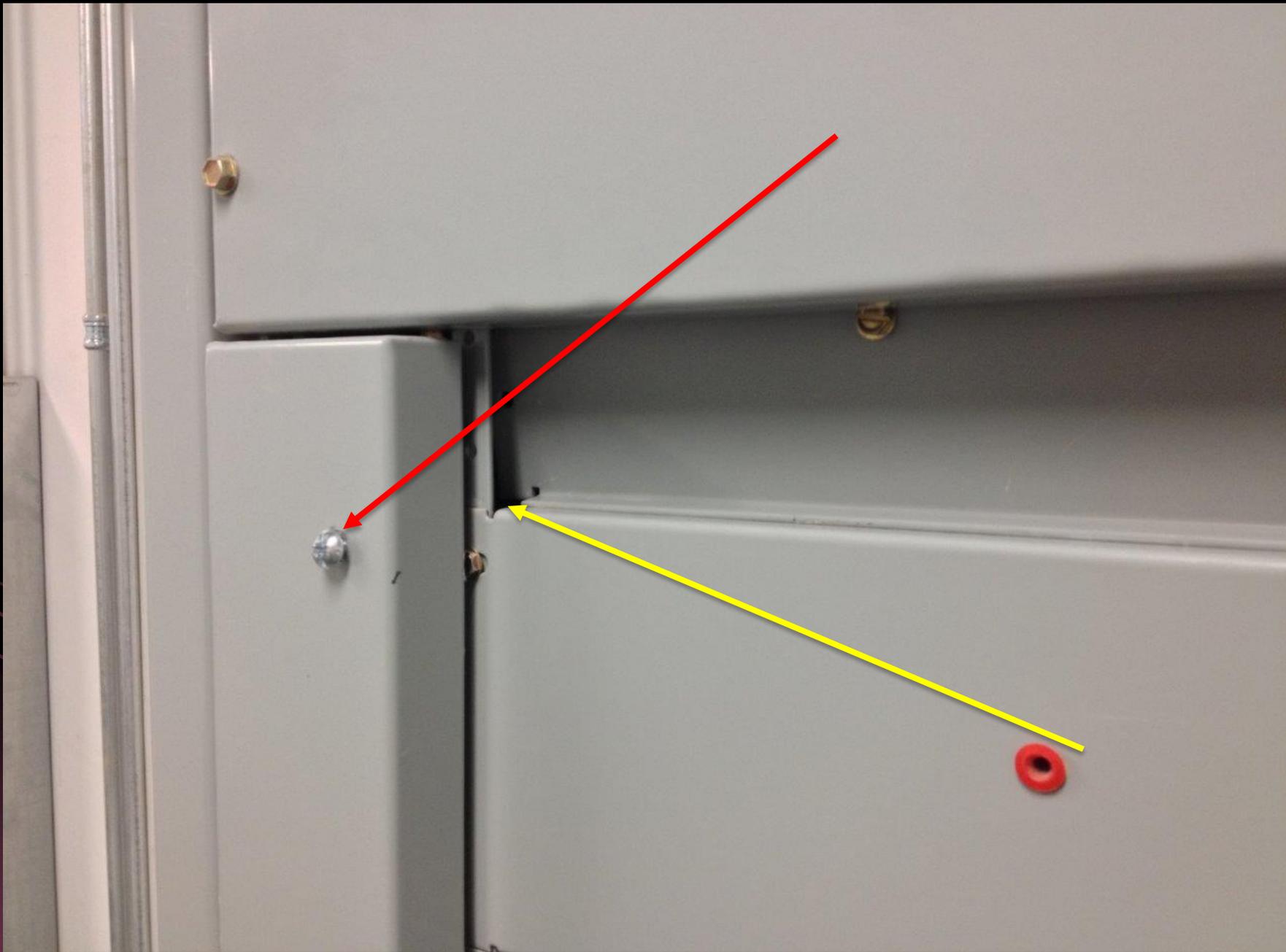
1200 amp, 480 volt, main switchgear



Bad



Bad



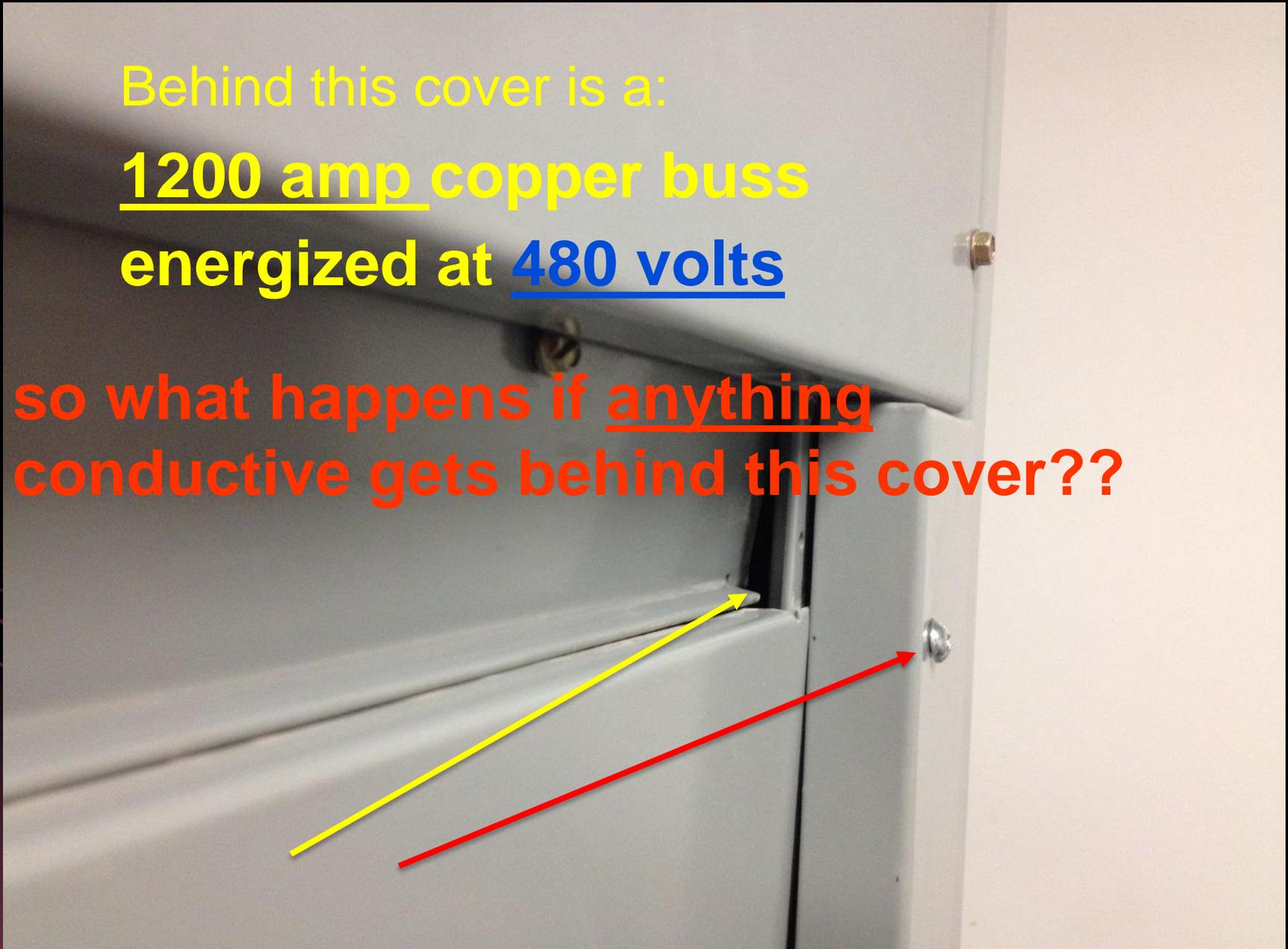
Bad



Bad

Behind this cover is a:  
1200 amp copper buss  
energized at 480 volts

so what happens if anything  
conductive gets behind this cover??



Very bad



Bad



Bad



Bad



Never, ever, seen this before:



Never, ever, seen this before:



Sprinkler riser room  
of a college dormitory

Privately owned

Under  
consideration for  
purchase by the  
State of North  
Carolina



Tamper indicator using a  
“breakable cable type”  
Supervisory Switch.



To eliminate breaking & replacing the electronic cable, the handles were removed at annual testing.

The handles were not replaced at the conclusion of testing.

**The sprinkler valves remained in the closed position for 9 months .....**

Until discovered by SCO during a property transfer inspection.



To eliminate breaking & replacing the electronic cable, the handles were removed at annual testing.

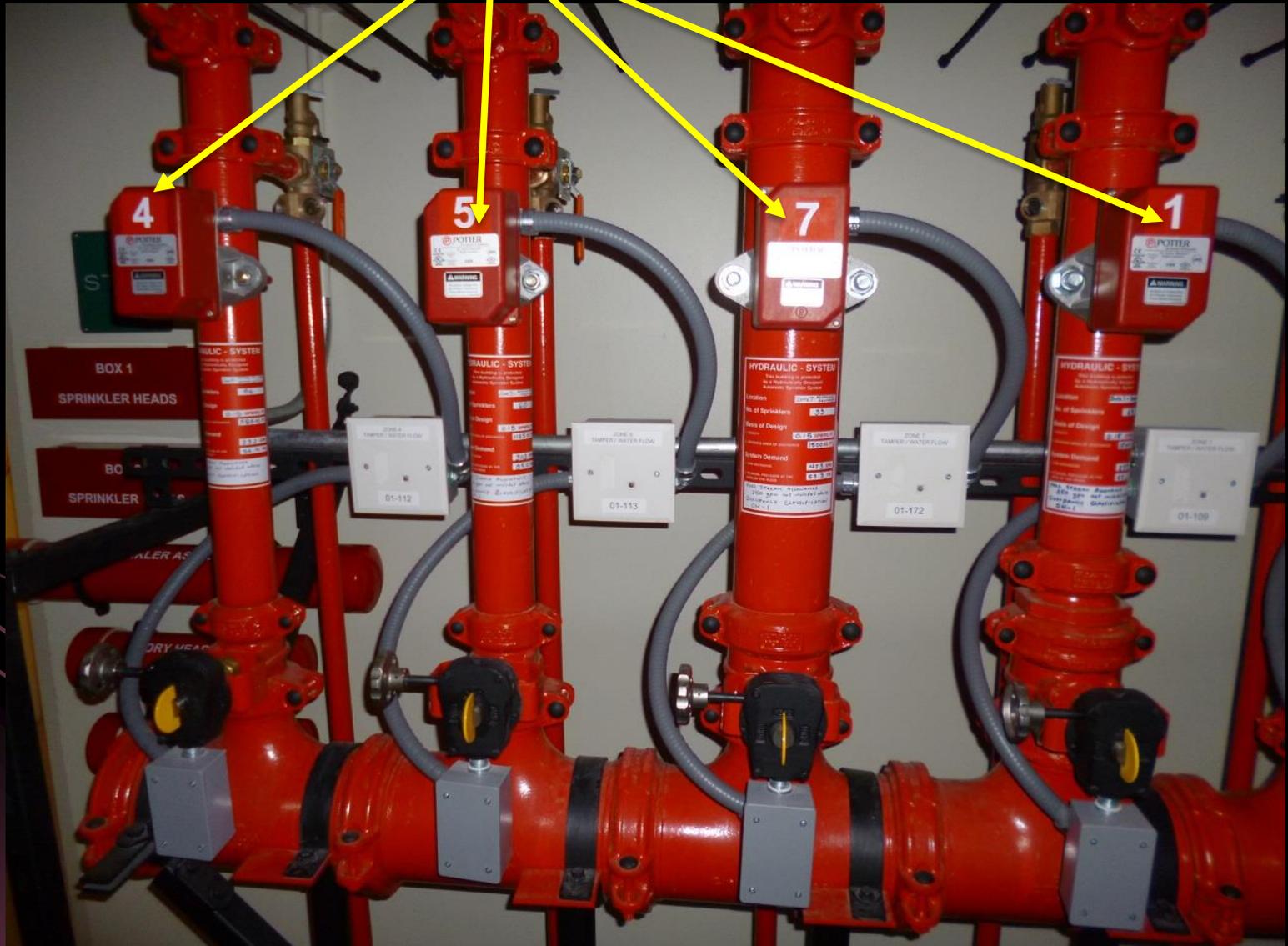
The handles were not replaced at the conclusion of testing.

The sprinkler valves remained in the closed position for 9 months .....

**Oh, did I mention that this building is a college dormitory?**

sprinkler risers  
done right!

proper tamper indicators







# 34th Annual State Construction Conference

March 26<sup>th</sup>, 2015

## Construction Administration 2015 Project Monitor Awards

**Best Managed Projects  
Contractor / Designer/ Owner  
Team-work**

In no particular order



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## Construction Administration 2015 Project Monitor Awards

### Best Managed Projects

***“in no particular order”***

# UNC Charlotte

## Partnership, Outreach & Research for Accelerated Learning Building



# UNC Charlotte PORTAL

Designer: ~~Pabel & Associates, PC~~ Architecture, PC

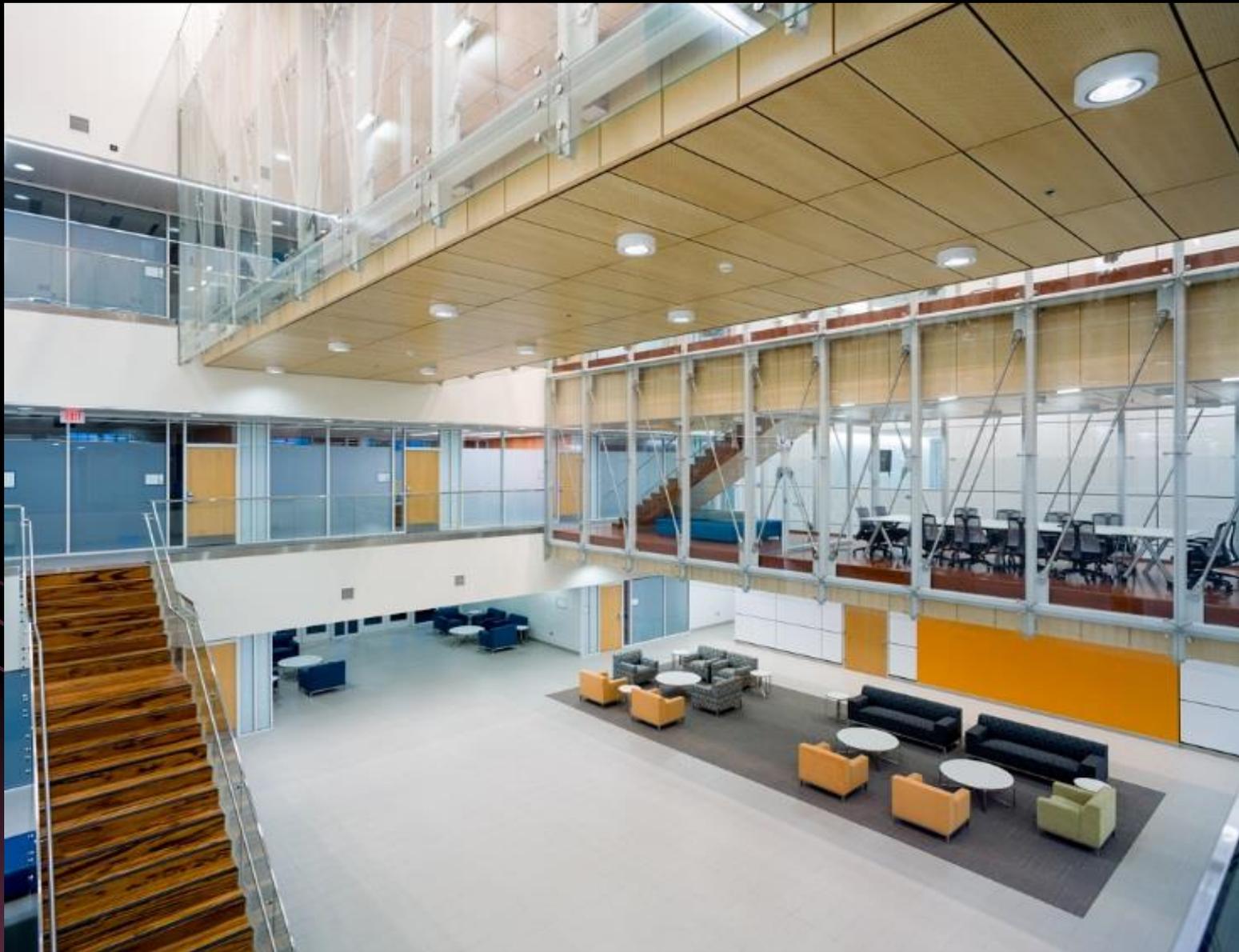
Contractors: EDIFICE, INC



# UNC Charlotte PORTAL



# UNC Charlotte PORTAL



# UNC Charlotte PORTAL



# Asheboro residence



# Asheboro residence



# Asheboro residence



**your mission:**

**Convert this structure from a residence ...**

**....into an NC Highway Patrol Station**

NC Department of Public Safety  
Division of Law Enforcement  
State Highway Patrol

SHP Asheboro Renovations

Architect: JAE Architecture, Inc

**work self-performed by: Department of Public Safety  
Division of Prisons  
Inmate Construction Program**

# Asheboro SHP Renovations

## Inmate Construction Program



before

# Asheboro SHP Renovations

## Inmate Construction Program



# Asheboro SHP Renovations

## Inmate Construction Program



after

# Asheboro SHP Renovations

## Inmate Construction Program



before

# Asheboro SHP Renovations

## Inmate Construction Program

after



# Asheboro SHP Renovations

## Inmate Construction Program



before

# Asheboro SHP Renovations

## Inmate Construction Program



# Asheboro SHP Renovations

## Inmate Construction Program

before



# Asheboro SHP Renovations

## Inmate Construction Program



# Asheboro SHP Renovations

## Inmate Construction Program



# Asheboro SHP Renovations

## Inmate Construction Program



# Asheboro SHP Renovations

## Inmate Construction Program

before



# Asheboro SHP Renovations

## Inmate Construction Program



# Asheboro SHP Renovations

## Inmate Construction Program



# Asheboro SHP Renovations

## Inmate Construction Program



# East Carolina University Todd Dining Hall Exterior Stairs

Project Lead: CLH Design, PA

Architect: Davis Kane

PME: Stanford White, Inc.

Structural: Stroud Pence & Associates

Contractor: Barnhill



# Todd Dining Hall

Before  
After



# Todd Dining Hall

Before  
After



# Cape Fear Community College Union Station Building & Parking Deck



# Cape Fear Community College Union Station Building & Parking Deck

## PROJECT TEAM

Owner	Cape Fear Community College
Architect	LS3P Associates Ltd.
Civil Engineer	McKim & Creed
Landscape Architect	LACC International
Structural Engineer	Andrew Consulting Engineers
Plumbing Engineer	Cheatham & Associates
Mechanical Engineer	Cheatham & Associates
Electrical Engineer	MCBH Engineers
Acoustics & AV	Thorburn & Associates
Commissioning Agent	EMC Engineers
Parking Consultant	Kimley Horn
FoodService Consultant	Foodesign Associates
General Contractors	RogersMonteith (Parking Deck) Shelco Inc. (Building)

Atlantic Coast-line Railroad  
Original Wilmington Union Station  
circa 1913



Did they get it right .....  
or what?



## CFCC Union Station and Parking Deck



## CFCC Union Station and Parking Deck



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## CFCC Union Station and Parking Deck



North Carolina State University  
South-Eastern Plant Environment Laboratories  
also know as: **The Phytotron**



# North Carolina State University Phytotron Building

## Energy Conservation Project (Self-Performance)

Chillers

Pumps

Motors

Air-handlers

Lighting

Designer: RMF Engineering

CMR: DPR Construction

# Phytotron Building

Before



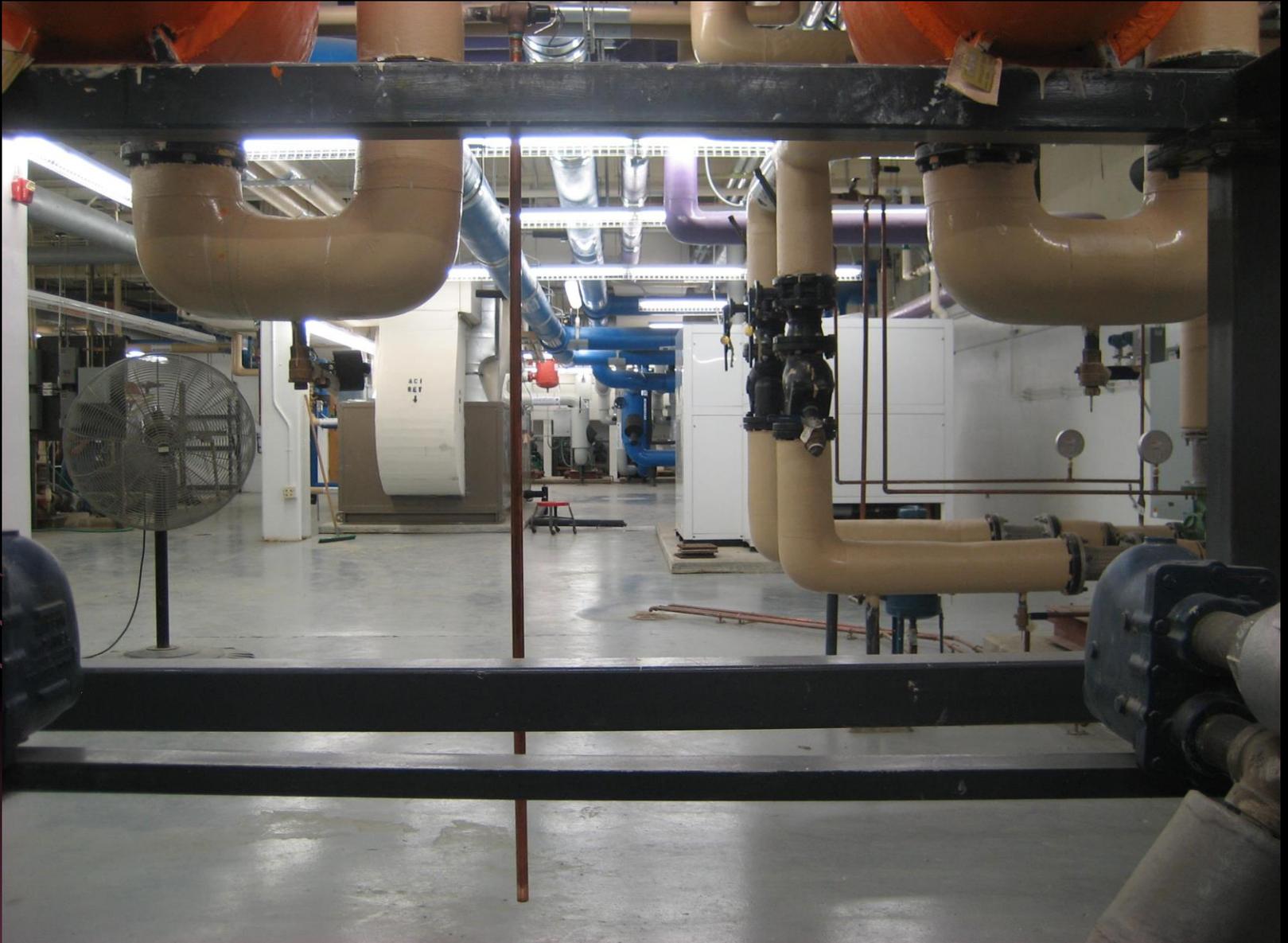
# Phytotron Building

Before



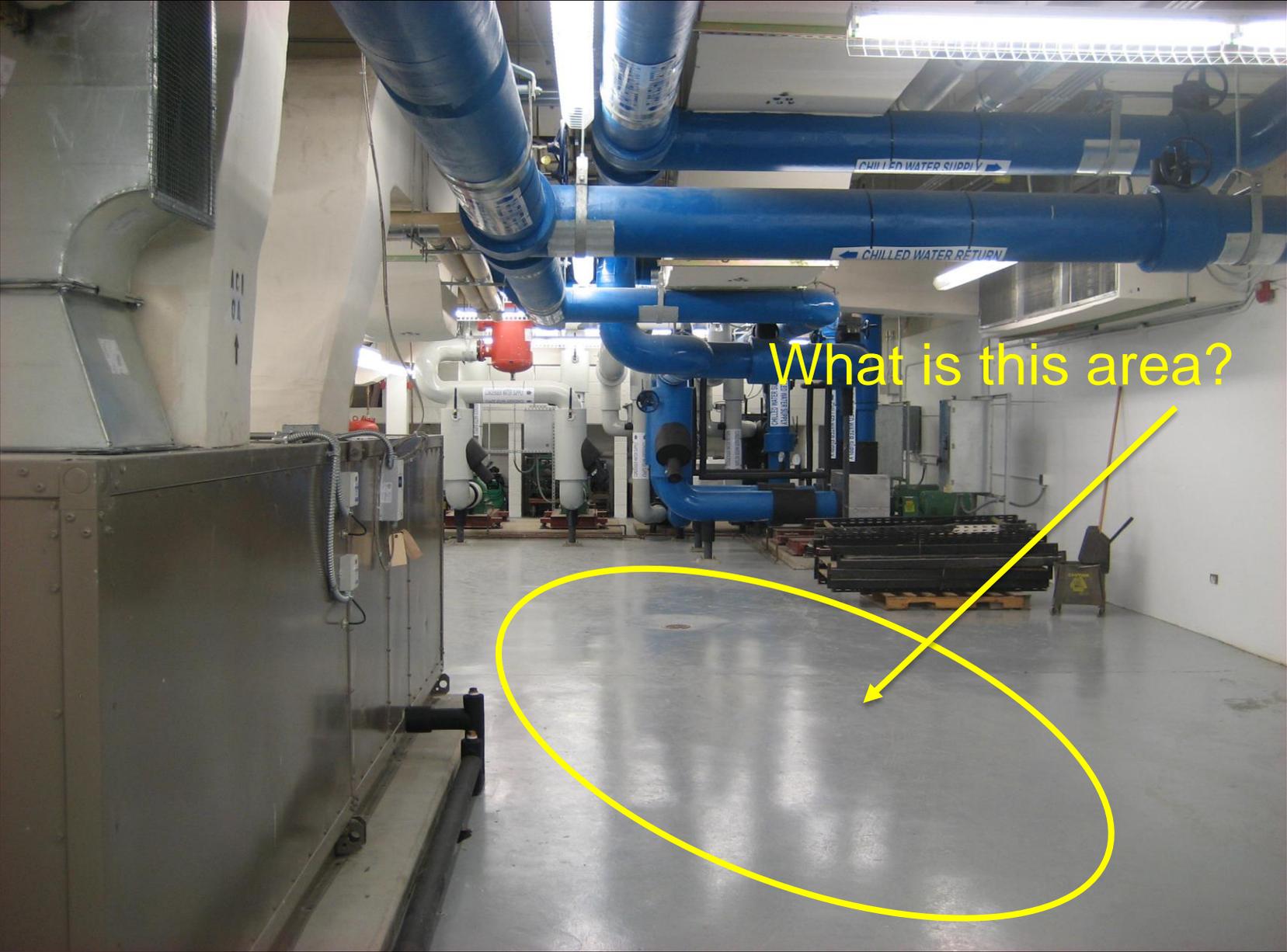
# Phytotron Building

After



# Phytotron Building

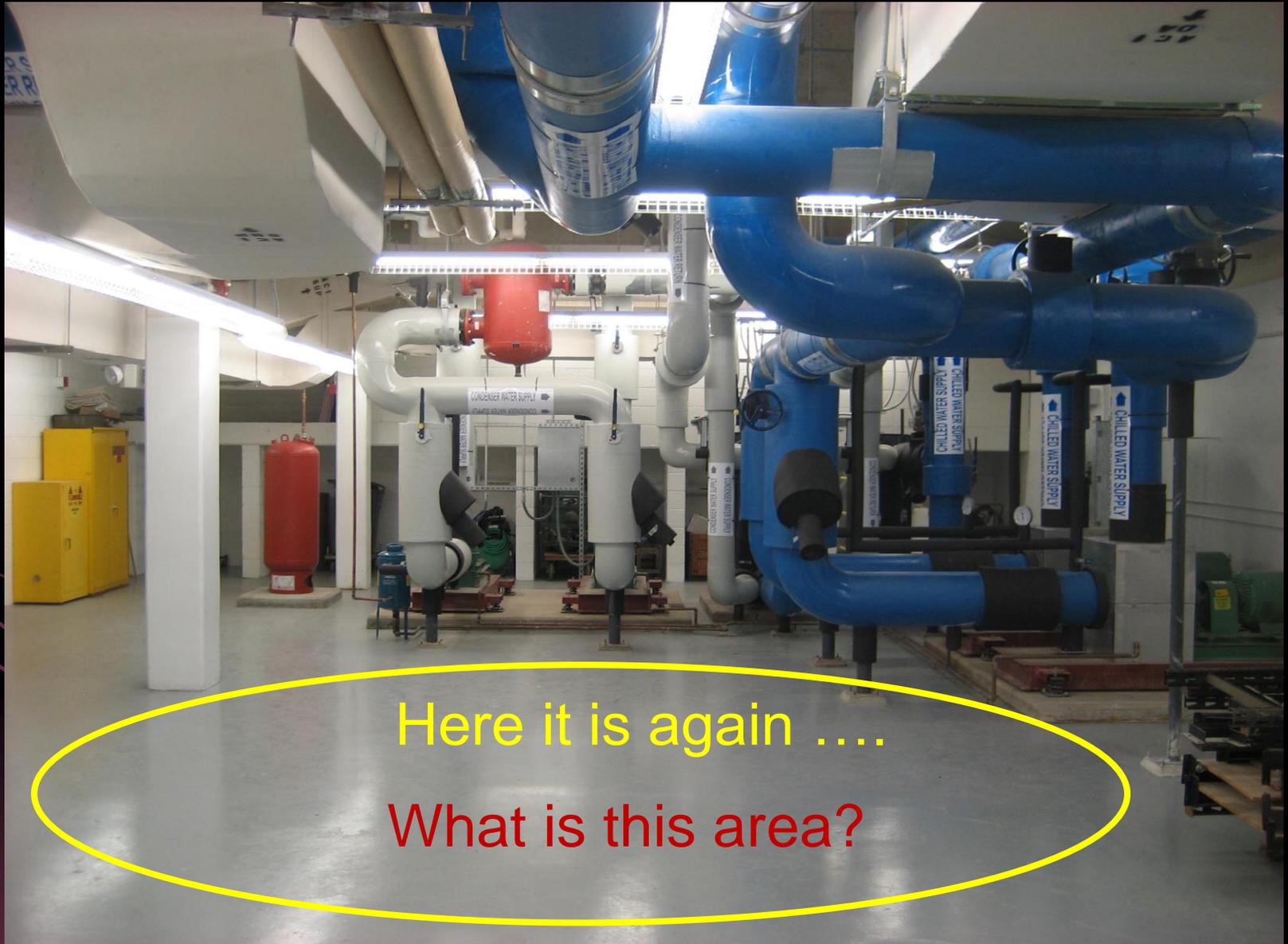
After



What is this area?

# Phytotron Building

After

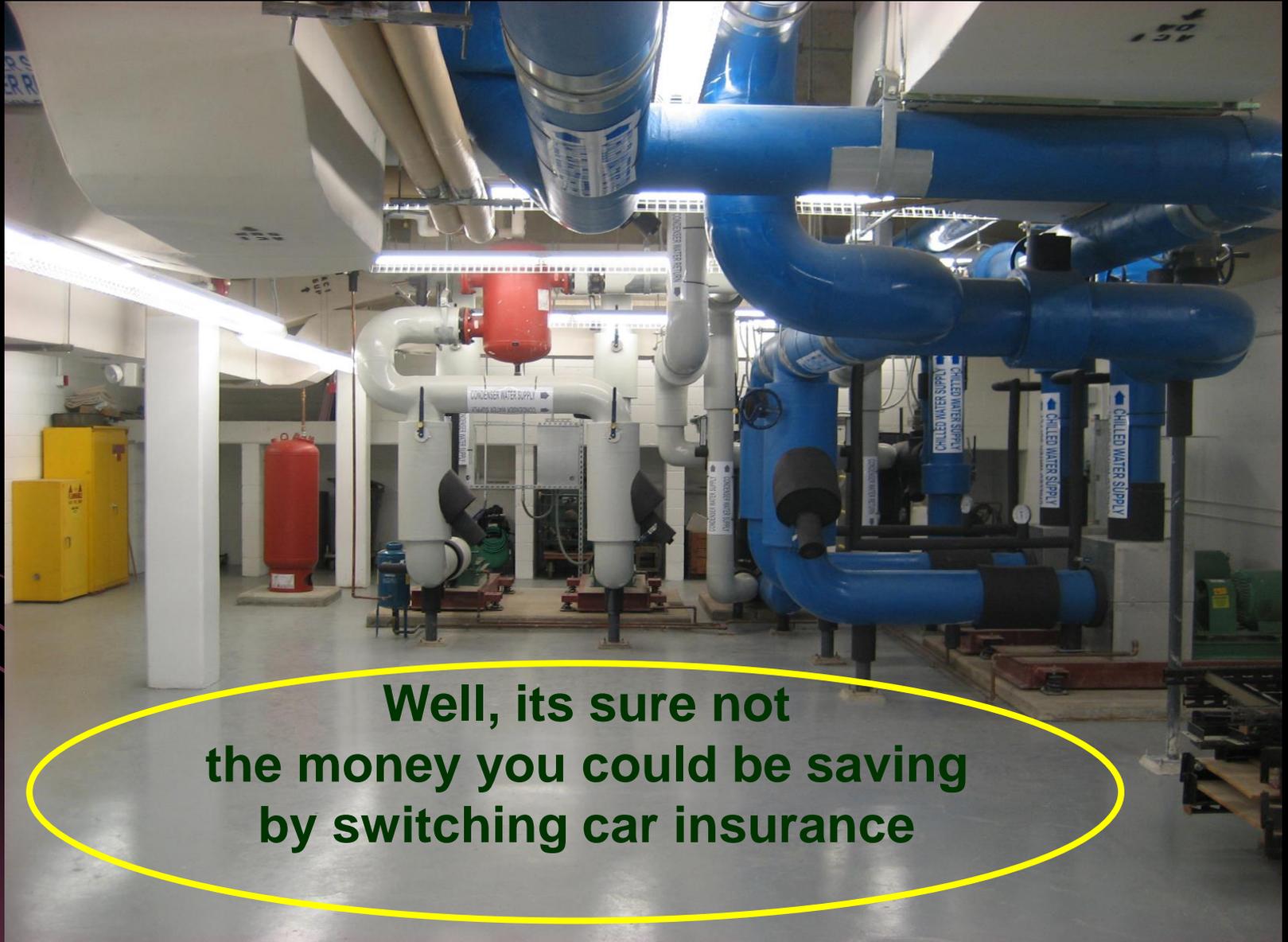


Here it is again ....

What is this area?

# Phytotron Building

After



**Well, its sure not  
the money you could be saving  
by switching car insurance**

# Phytotron Building



**remember  
this?**

# Phytotron Building

After



It is new available space!

# UNC - Charlotte Football Stadium Complex McColl–Richardson Field



# UNC - Charlotte

## Football Stadium Complex

### Designer & Project Lead

MEP Engineer

Civil Engineer/Landscape Architect

Structural Engineer

Jenkins-Peer, Architects, P.A – Charlotte

(United) now McKim & Creed – Charlotte

LandDesign, Inc. – Charlotte

Sutton\_Kennerly & Associates, Inc. – Charlotte

Sports Design Architectural Consultant

Field Design Consultant

Sports Lighting Consultant

Acoustical & Audio-Visual Consultant

Signage & Wayfinding Consultant

Food Service & Merchandising Consultant

DLR Group – Overland Park, KS

Clough Harbour & Associates – Kansas City, MO

FSC – Kansas City, MO

BAI, LLC – Austin, TX

Catt Lyon Design & Wayfinding – Chicago, IL

The Bigelow Companies, Inc. – Kansas City, MO

### CMR Contractor

Rodgers PCL Russell (joint venture)

Rodgers Builders

PCL Construction

H. J. Russell & Company

# UNC - Charlotte

## Football Stadium Complex

### Designer & Project Lead

MEP Engineer

Civil Engineer/Landscape Architect

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Rodgers Builders

PCL Construction

H. J. Russell & Company

# UNC - Charlotte Football Stadium Complex



# UNC - Charlotte Football Stadium Complex



# UNC - Charlotte Football Stadium Complex



# When disaster strikes .....



NC Department of Public Safety  
Division of Emergency Management

# Badin Warehouse Renovation

Architect: Ramsay, Burgin, Smith, Architects, Inc

**work self-performed by: Department of Public Safety**

**Division of Prisons**

**Inmate Construction Program**



# Badin Emergency Warehouse Renovation by ICP



# Badin Emergency Warehouse Renovation by ICP



# Badin Emergency Warehouse Renovation by ICP



What you got in there that's fit to eat?

# Thank you!

Victor Stephenson, P.E.  
Construction Administration & FCAP

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