



# 32nd Annual State Construction Conference

March 28<sup>th</sup>, 2013

## SCO NEWS & LATEST REGULATORY DEVELOPMENT

# Office Organization

## 1. Design Review:

Plan Review w/ code compliance + Tent permits

## 2. Construction Management:

FCAP + Construction Administration (monitoring)

## 3. Design & Construction Services:

Consulting Services + Electrical Inspections +  
Contract Administration

# SCO Website Changes

## 1. Revised documents:

- General Conditions, OC-15 (January 2013)
- Sprinkler Guidelines (March 2012)
- Special Inspection (February 2013)
- Roofing Design Criteria (Draft 2013)
- Fire Alarm Checklist (March 2013)

## 2. Added features:

- Tent Permit Application (temporary structures)
- Capital Improvement Project Worksheet, OC-25

# http://www.nc-sco.com

## Recent News

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- Click [here](#) to register
- Click [here](#) to view Agenda

[UPDATED Fire Alarm System Checklist, March 2013](#)

[General Conditions \(OC-15\) 24th Edition, January 2013](#)

[The Division of State Construction: A History by John H. Emerson, P.E.](#)

[SBC Resolution on Design/Build Construction](#)

[Tent or Canopy Permit \(See "Other"\)](#)



**HELP IMPROVE DOA**

Submit ideas to our suggestion box

# INTERSCOPE Changes

1. In process of migrating from Java to a Microsoft platform: more efficient and better suited for quality service.
2. Implemented capability for uploading into INTERSCOPE reports: weekly, monthly reports & inspection certificates.

# INTERSCOPE Changes

3. Need an account to access  
<http://www.nc-sco.com/default.aspx>
4. For contractors register w/ “Vendor Link”  
<https://www.ips.state.nc.us/Vendor/VendorPubMain.aspx>
5. Working on implementing electronic plan submittals and reviews.

# INTERSCOPE



NORTH CAROLINA  
Department of Administration

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- SCO Home
- State Construction Manual**
- Forms and Documents
- Reports**
- Services
- SCO Conference**
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[NCDOA Home](#) : State Construction Office

## Welcome to the State Construction Office



The purpose of the State Construction Office is to provide professional architectural and engineering services and management leadership to state agencies. This office carries out its responsibility by (1) processing cost estimates and contracts relating to construction or renovation of state buildings; (2) review and approval of all plans and specifications for the construction or renovation of state buildings; (3) supervision of the letting of all contracts for the design, construction or renovation of state buildings; (4)

inspection and acceptance of all work done and materials used in the construction or renovation of state buildings; (5) conducting assessments of state facilities to identify deficiencies and (6) providing administrative and technical support to the State Building Commission. These services protect the interest of the state and assure the proper expenditure of public funds for the citizens of North Carolina. This provides for efficiency in the expenditure of state funds in its capital improvement program.

Follow us:



### Quick Links

[InterScope](#) (Agencies, Designers, Contractors)

[Design Review Status](#)

[Construction Status](#)

[VendorLink](#) (Interactive Purchasing System)

[Downtown Raleigh Parking Map](#)

### Recent News

The 33rd Annual State Construction Conference

# Plan Review

## A. When is a plan review required?

- 1) All State funded projects located within State owned or leased land (regardless of project dollar value).
- 2) All privately funded projects located within State owned or leased land (regardless of project dollar value).
- 3) And all privately funded projects not located on State land but with the intent to lease or turn over property to the State. This review consists of a full courtesy review including energy bill compliance. Code compliance will rest with the local AHJ.
- 4) **Exceptions:** Upon written request from owners for “Review Exemption”. See Article 301.2(C) of the construction manual.

## B. What type of reviews are required?

- 1) Standard review:
  - a) Schematic Design, (On request could be combined w/ DD on renovation and smaller projects), 30d
  - b) Design Development, sealed by major disciplines, 30d
  - c) Construction Design, sealed by all disciplines, 60d
- 2) “Code Review only”: one submittal at 100% CD, 15d
  - a) University projects total cost not to exceed \$2M.
  - b) Federally funded projects i.e. Highway Rest Areas, some NC Ports projects.
- 3) Informal projects: one submittal at 100% CD, 30d
- 4) Courtesy Reviews: Private fund, private land to be turned over to the state.
- 5) Emergency Projects: Expedited

c. **Review Exemption, if all the following apply, per Chapter 301.2(C) of SCO manual:**

- 1) No Code issues (NCBC or other codes)
  - 2) No Life Safety changes or concerns
  - 3) Doesn't involve any structural integrity
  - 4) Less than \$300,000
  - 5) No Architect or Engineer is required
  - 6) And Owner to request exemption
- Work will need be inspected by SCO

## D. Examples of Unusual projects requiring reviews:

- 1) Parking lot (no vertical construction): Will require review due to possible floodplain permitting, underground utility work and accessibility issues.
- 2) Storage shed if:
  - a) Used for hazardous storage.
  - b) Any dimension (h,w,d) exceeds 12 ft.
- 3) Replacing a failed boiler during heating season: Can proceed under emergency status but submit plans when available.
- 4) Asbestos abatement.

- 4) Reconfiguring existing space for a change of use.
- 5) Reroofing of flat roofs.
- 6) Stadium scoreboard.
- 7) Retro-commissioning requiring more than programming.
- 8) Walking Bridge over a creek within a NC State Park.
- 9) Energy improvement with new equipment different from existing, other than efficiency.
- 10) Sprinkler modification involving more than 10 heads.

If unsure call our office

# Reviewed: Weir at Dismal Swamp State Park in conjunction w/ US Fish & Wildlife



## E. Examples of projects exempt from review

- 1) Routine maintenance/repair projects.
- 2) Lighting retrofit with like-in-kind fixtures.
- 3) Mechanical/plumbing repairs with like-in-kind equipment replacement.
- 4) Museum displays, w/ no impact to egress or increase to fire load.
- 5) Retro-commissioning w/ programming only.
- 6) Flooring or ceiling replacement (maintain similar fire rating).
- 7) Temporary structures (but will require permit).

There are many other situations, consult w/ our office on similar cases.

# F. What constitute an Emergency Projects?

## 01 NCAC 30D .0302

(e) Special Procedures for Emergency Projects: On occasion, emergency design or consultation services may be required for restoration or correction of a facility condition which by its nature poses a hazard to persons or property, or when an emergency exists. Should this situation occur, in all likelihood there will not be sufficient time to follow the normal procedures described in this Rule. The Capital Projects Coordinator on these occasions may declare an emergency, notify the State Construction Office and then obtain the services of a designer or consultant for consultation or design of the corrective action. In all cases, such uses of these emergency powers shall involve a written description of the condition and rationale for employing this special authority signed by the head of the agency and presented to the SBC at its next normal meeting. Timeliness for obligation of funds or other non-hazardous or non-emergency situations do not constitute sufficient grounds for invoking this special authority.

## F. What constitute an Emergency Projects?

- 1) An emergency declaration letter is required to be submitted to SCO Director from the Division Head or Director to identify such an emergency.
- 2) SBC will review the nature of the emergency request.
- 3) Will require appropriate project documentation when no longer under a time constraint.
- 4) End of fiscal year does not justify the use of emergency expenditure.
- 5) Examples of Emergency projects: Replacement or repairs to boilers, chillers, transformers, etc.

## G. Tent Permits, when are they required?

- 1) Any individual or entity desiring to use a tent with the following conditions:
  - a) Tent size >400 sqft w/ sides or >700 sqft w/o sides
  - b) Event to take place within State owned or leased property.
- 2) Where and how to apply for permit:
  - a) Fill permit application: [http://www.nc-sco.com/documents/forms/Tent\\_Permit.pdf](http://www.nc-sco.com/documents/forms/Tent_Permit.pdf)
  - b) Sketch of tent layout with seating arrangement or occupant load.
  - c) Provide a site plan (sketch) indicating the tent location
  - d) Provide tent's flame resistance certificate
  - e) Email to: [sco.permits@doa.nc.gov](mailto:sco.permits@doa.nc.gov)
- 3) Apply 30 days prior to event. The permit will be issued in a form of signed letter or email.

## H. Energy Performance Projects

- 1) State Energy Office Link:  
<http://www.energync.net/utility-savings-initiative/performance-contracting>
- 2) Compliance with current NCSBC is expected when involved with an energy improvement contract.
- 3) Investment Grade Audit report is a technical document and will need to be sealed and signed by PE licensed in NC.
- 4) Construction phase oversight by SCO is no different from other state projects (monitor, inspections, monthly meetings and the State Final Inspection).

# Customer Service common concerns

- 1) Always use a transmittal letter when submitting plans for review and include a brief narration of the project.
- 2) Always use the assigned SCO State ID number when corresponding with our office.
- 3) If submitting a project for the first time state as such in the transmittal letter and you will be issued an ID number.
- 4) Feel free to call on the reviewer directly for any questions pertaining to the comments.
- 5) Responses to the comments should be issued under your firm letterhead and state the author of these responses.
- 6) SCO still requires hard copies of plans & specs for review including VE's and Addendums.

# Customer Service common concerns

- 7) Only one set of plans is required for review. Submit two sets if expediting the project is desired but w/ prior confirmation.
- 8) Some local municipalities have Jurisdiction over the storm water management as permitted by DENR (ie Durham Co, Cumberland Co...).
- 9) If kitchen installations, audio/visual systems or other special systems are included in the bid set than they need to be sealed by the Designer of Record.
- 10) Ultimately, Designer of Record has full responsibility for own design including delegated designs to contractors or vendors.
- 11) Always include the Building Code Summary with plans.

# References of published material

## A. University download Projects Review requirements (<\$2M):

- 1) <http://www.nc-sco.com/documents/forms/UniversityDownloadProjectReviewRequirements.pdf>

## B. Privately Funded Project Requirements:

- 1) Defined: <http://www.nc-sco.com/documents/guidelines/SCOPlanReviewandInspectionNon-StateFundedProjects11-15-2010.pdf>
- 2) Exemptions: <http://www.nc-sco.com/documents/forms/PrivatelyFundedDesignExemption.pdf>

## C. Floodplain Management Policy <http://www.nc-sco.com/documents/guidelines/floodplainmgmt/FloodplainPermittingInstructions.pdf>

# NC Building Code interpretation

## A. Exit Enclosure penetrations (stair shaft):

- 1) Through penetrations are allowed for stair shaft purposes.
- 2) Building side membrane penetrations of 16 sqin or less per 100 sqft of wall are allowed with a putty pad.



**Stair side  
metal stud**

**4x4 Box w/  
putty pad**

# NC Building Code interpretation

**B.** Horizontal Coiling Fire Shutters can be used in rated floor assembly.

**Horizontal Fire Shutters**



# Area of Refuge

- 1) No longer required on sprinkled buildings (NFPA 13 or 13R).
- 2) Required on all buildings 2 stories & up with no fire protection.\*
- 3) Area of refuge must be 30"x48".
- 4) Area of refuge cannot reduce the required egress path.
- 5) 2-way communication is required to a control center approved by the fire department (on or off-site, 911...)
- 6) Third party listing as a system is required.



\* N/A to duplex or single family dwelling units

# Swimming Pool & ADA

- A. MANDATORY. Existing swimming pools must be modified to comply with the 2010 guidelines no later than January 31st, 2013. chapter 10, section 1009 of the revised ADA guidelines
  
- B. Any swimming pool with less than 300 linear feet of pool wall must provide one means of access either by:
  - 1) Sloped entry
  - 2) The installation of a pool lift



Pool lift



Slopped Entry  
Pool

## Swimming Pool & ADA

- C. Any pool that has over 300 linear feet of pool wall must provide two means of access from the following five designated means of access of which one of the two has to be either a pool lift or a sloped entry:
1. Pool lifts,
  2. Sloped entries,
  3. Transfer walls,
  4. Transfer systems,
  5. or accessible pool stairs.

## Swimming Pool & ADA

- D. Wading pools must have one means of entry and that must be a sloped entry. Spas, both in-ground and portable, also must have one means of entry which can be either a lift, transfer wall or transfer system. The specific can be found in chapter 2, section 242 of the revised ADA guidelines.
- E. SCO and not DOL will conduct Inspections on the pool lifts.

# Automated External Defibrillator (AED)

- A. The American Heart Association notes that at least 20,000 lives could be saved annually by prompt use of AEDs.
- B. In 2009, North Carolina expanded access by allowing any person to use an automated external defibrillators .
- C. House Bill 914, session 2012. A Task Force is to be established to identify and pursue the placement and use of automated external defibrillators (AED) in State-owned and State-leased buildings.



# Will a monitor be assigned to an informal project?

- 1) YES, If it had undergone plan review.
- 2) No, if it's a University download project.
- 3) No, if it has been exempt from plan review (ie. maintenance or limited scope of work).
- 4) But, all require electrical inspections if electrical work is integral of the project.
- 5) The Monitor & Electrical Inspector will be assigned when a construction contract has been established.
- 6) In the absence of a construction contract, owner or designer must contact our office for the monitor contact information.

# Fire Alarm Checklist

<http://www.nc-sco.com/>

NCDOA Home : State Construction Office

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supervision of the letting of all contracts for the design, construction or renovation of state buildings; (4) inspection and acceptance of all work done and materials used in the construction or renovation of state buildings; (5) conducting assessments of state facilities to identify deficiencies and (6) providing administrative and technical support to the State Building Commission. These services protect the interest of the state and assure the proper expenditure of public funds for the citizens of North Carolina. This provides for efficiency in the expenditure of state funds in its capital improvement program.

Our mission is to direct and guide the state's capital facilities development and management process. To effectively and efficiently manage the state's capital improvement process to assure that improvements to the state's physical properties can be reasonably completed with the amount of money appropriated, and that improvements have been designed and constructed giving proper consideration to economy in first cost, maintenance cost, in materials, and type of construction.

### Physical Address:

New Education Building  
201 North Wilmington Street, Suite 450

### Mailing Address:

State Construction Office  
1207 Mail Service Center

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# Fire Alarm Checklist

<http://www.nc-sco.com/documents/forms/FireAlarmCheckList.pdf>

- 1) Checklist arranged in sequential order for checking the design during an inspection.
- 2) Added guide for the installing tech to perform prior to test date.
- 3) Added testing procedure for elevator interface.
- 4) Added specific testing requirement for dormitories, fire pumps and others.
- 5) Provided references to appropriate NC codes.



# 32nd Annual State Construction Conference

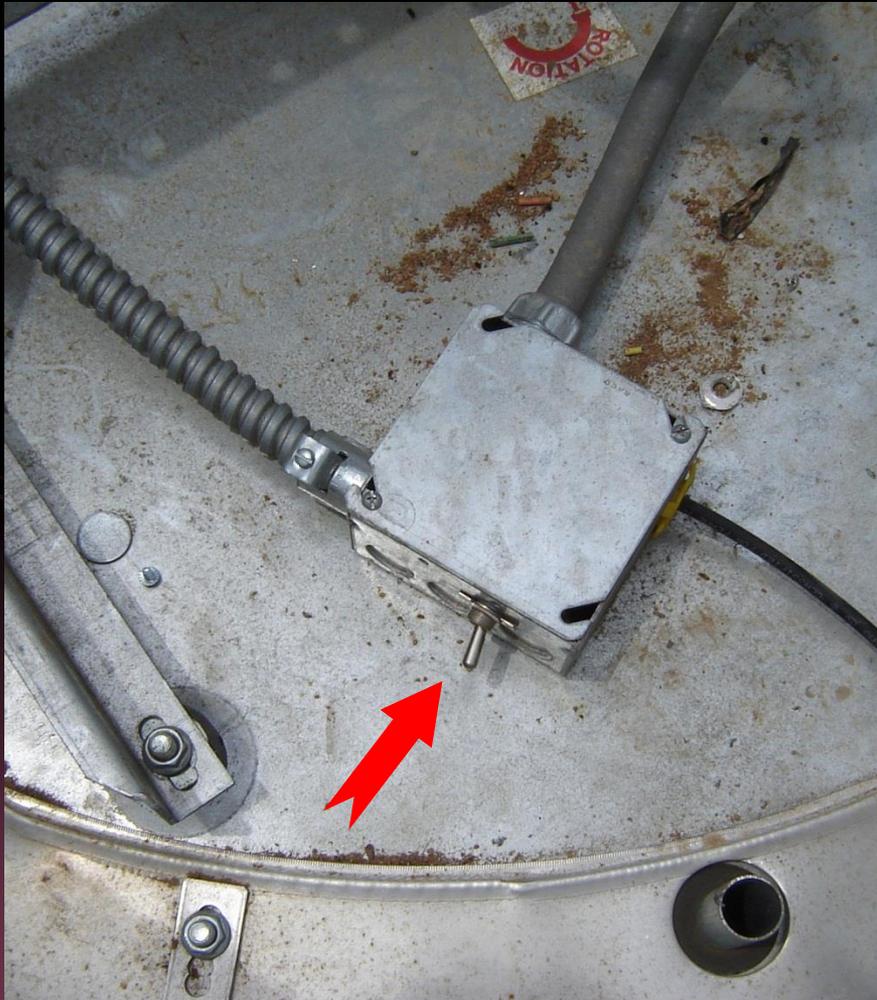
March 28<sup>th</sup>, 2013

## SCO Inspections “Typical Observations”

# Exit that never meant to be!



# UL listed installation?



It's not OK even if no one goes in there



# Even in front of a FACP



The missing link, trap primer or maybe it's an air gap!



# Another missing link, Condensing Furnace!



# Missing splash block



At least there is a splash block



It's only a smoke partition



# Elevator machine rooms are 2hrs fire rated!



Appears to be fire proofing!!!



# Did the contractors abandon the jobsite?



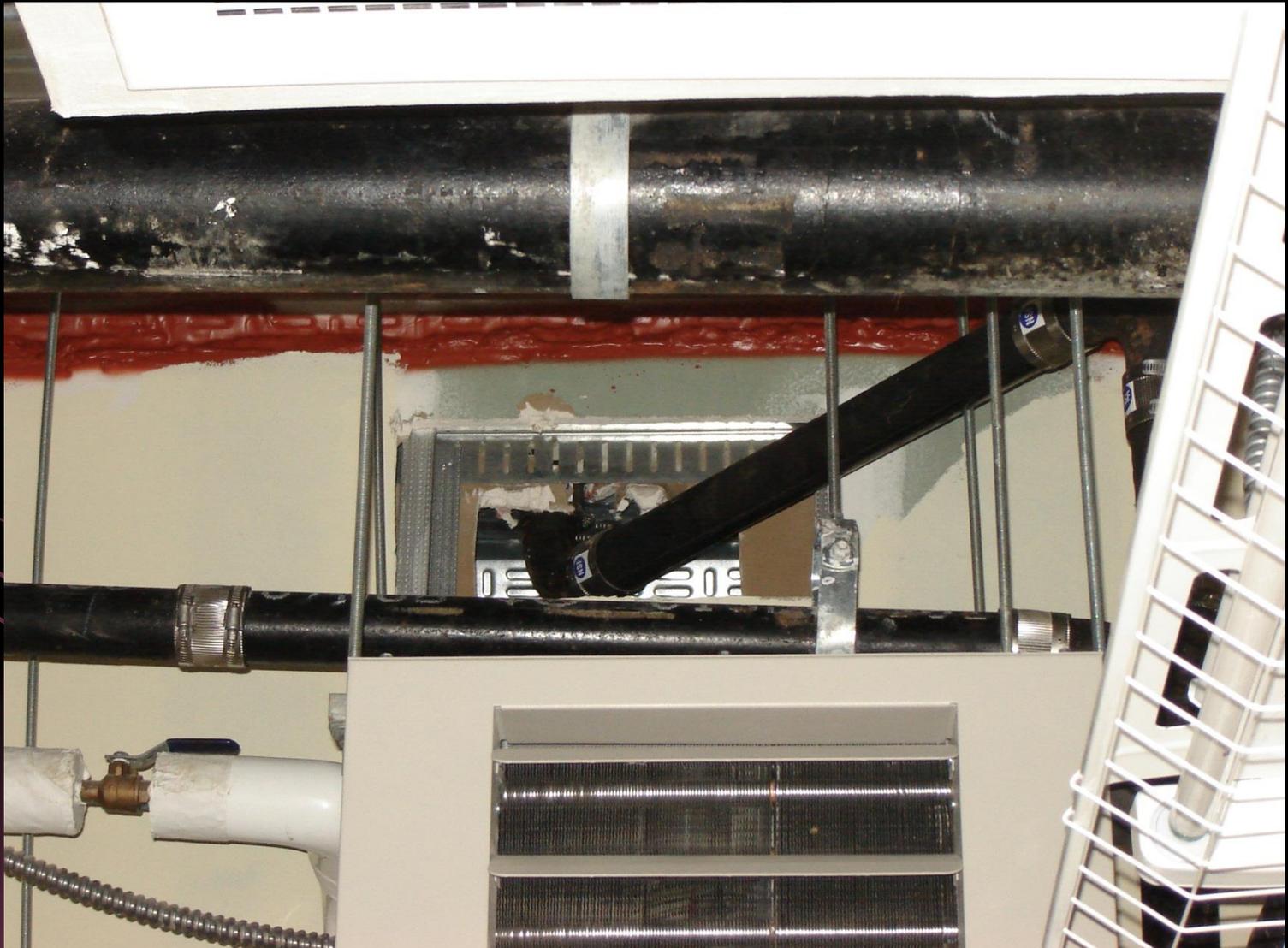
Pipe was there first, working on a UL detail?



# Core drilling, with a chisel



# Last minute installation



Slope floor to drain!



# Controller/actuator optional



# For Your Information



# Electrical-0 Plumbing-1



Plumb is not optional



# Who was first?



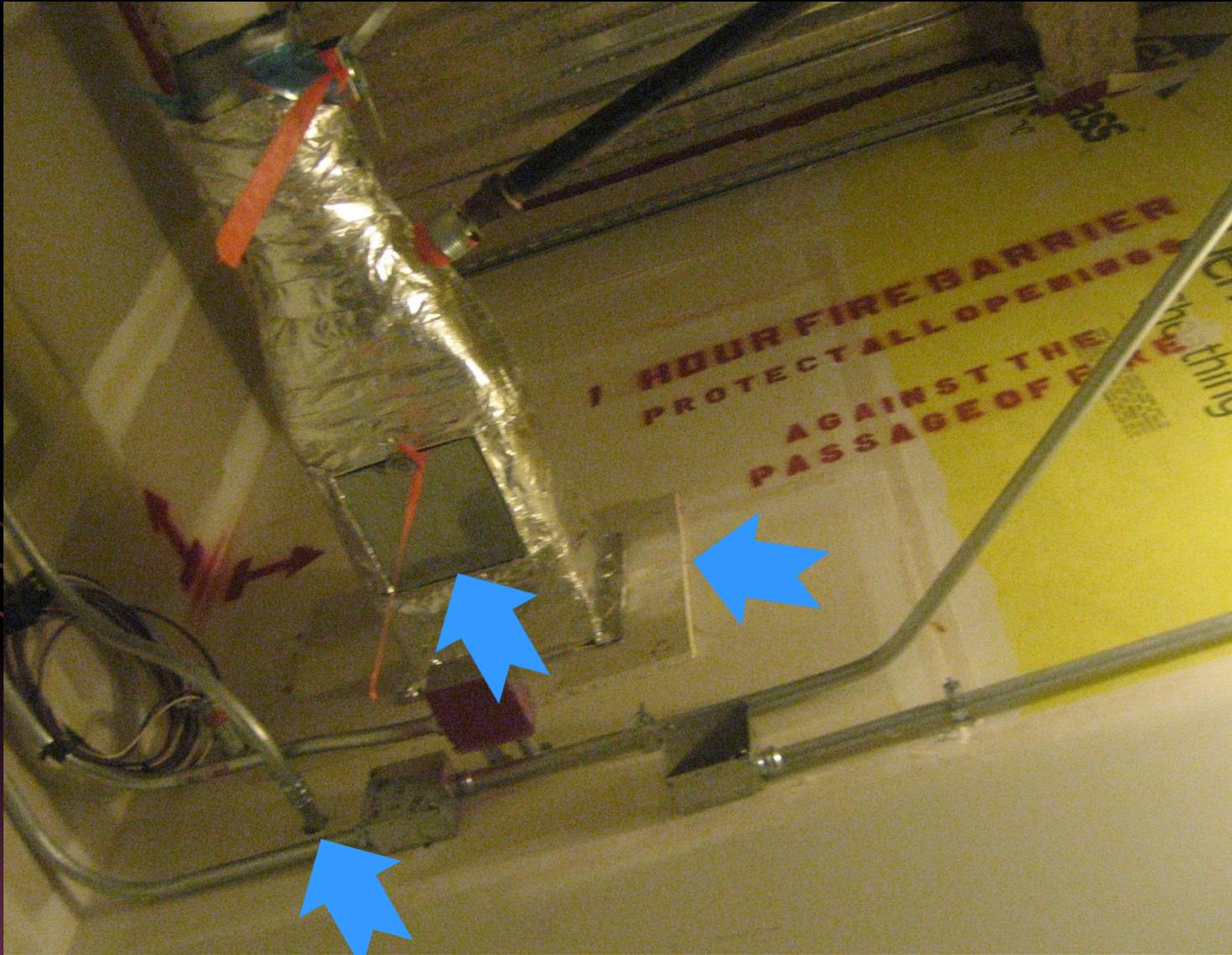
# Some do and some don't



Looks nice, what are these pipes for?



# 3 issues

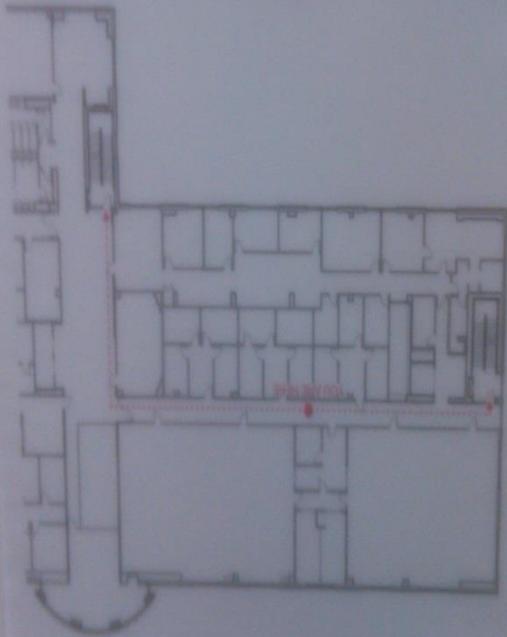


It does the job, but again...



But we all know what it says!

# EVACUATION MAP



YOU ARE HERE



# Is it an emergency or not?



# Electrician's helper first assignment



# Tel Comm room or closet?



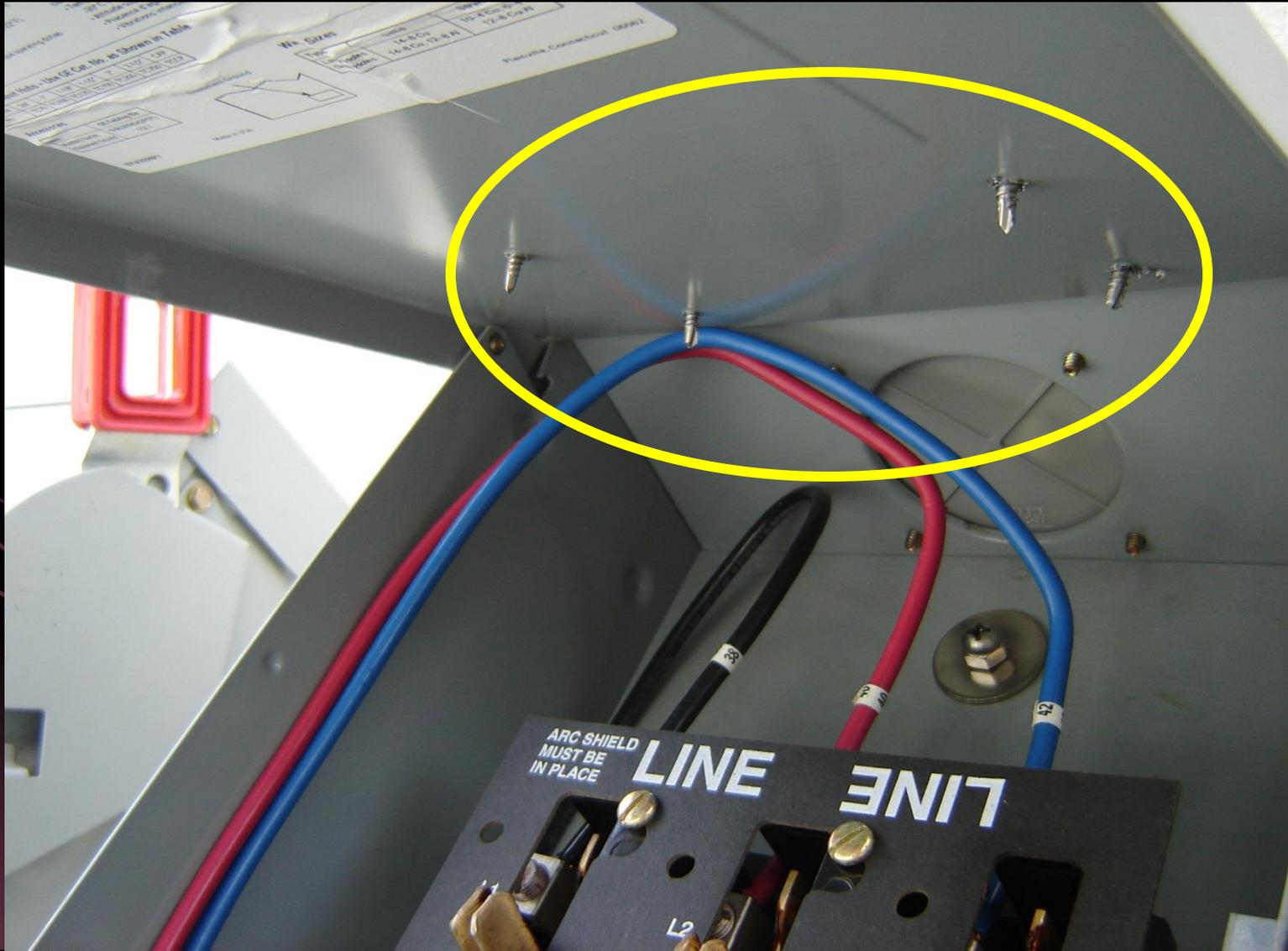
Half of the room is protected



# Suspended ceiling with shop type fixture!!!



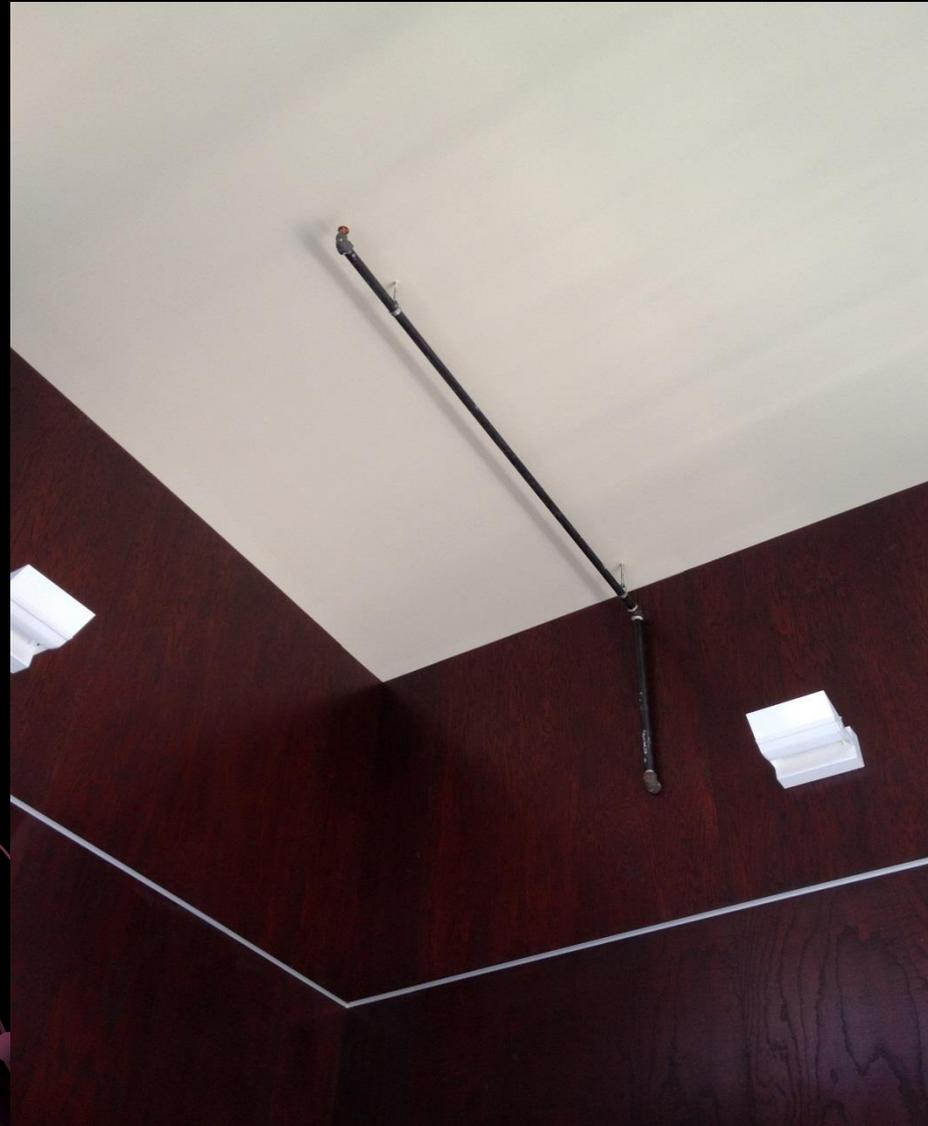
# Self-tapping screws could be hazardous to your health!



Let maintenance worry about it



# An after thought?



Give me one good reason not to use flex duct



# Maintenance gone wild



And for a change!



# And a 5 stars Plumbing chase





# 32nd Annual State Construction Conference

March 28<sup>th</sup>, 2013

**Recognition of Buildings  
“least problematic during  
review and construction”**

**UNC Genome Sciences Building**  
**Designer: Skidmore, Owens & Merrill**  
**Contractors: JV Bovis Lend Lease & Clancy & Theys**





# UNC Charlotte EPIC Building

Designer: Creech & Associates  
Contractor: Turner Construction Co.





Creech & Associates  
ARCHITECTURAL DESIGN

**NCSU Hunt Library**  
**Designer: PBC&L**  
**Contractor: Skanska USA**





# ECU Tyler Dorm

Designer: Davis Kane Architect  
Contractor: Barnhill Contracting Co.



**UNCG The Quad Residence**  
**Designer: Woolpert NC, PLLC**  
**Contractors: JV Balfour Beatty & DH Griffin**





# UNC Charlotte Football Complex

Designer: Jenkins Peer Architects  
Contractors: Rodgers & Russell





Jenkins•Peer Architects

ASU Summit Residence  
Designer: Perkins + Will  
Contractor: Balfour Beatty Construction





**UNC Wilmington Teaching Lab**  
**Designer: Jenkins-Peer Architects**  
**Contractor: John S. Clark Company**





# Wake Tech, North Campus Building E

Designer: Clark Nexsen A&E  
Contractor: Edifice, Inc.





# PITT, New Classroom Building

Designer: JKF Architecture  
Contractor: Centurion





# DPS Min Security Prison Maury CI

Designer: DPS Central Engineering  
Contractor: JV DPS & Inmate Labor





# Thank you!

Questions?

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(919) 807-4100

<http://www.nc-sco.com/>