

Project Success – *Plan Review and Inspection of Fire Alarm and Sprinkler Systems*

1. Why your drawing quality matters

- A. Your drawings are telling a story in pictures. Know who your audience is, and remember they don't know the job as well as you do, and they can't read your mind, only your drawings.
- B. Remember that inspectors are often looking at drawings under poorer lighting and environmental conditions.
- C. We microfiche submittals for permanent public record, a b&w photographic process.

2. Plan Review Success

A. All Work

- 1. All plans must be of architectural quality
 - a. Draw to recognized architects or engineers scale.
 - b. Show doors, windows, fixed equipment/obstructions.
 - c. Label drawings – room names, drawing name, scale, north arrow.
 - d. Provide an accurate, complete legend for all symbols used.
 - e. Only use symbols on plans that match those in legend.
 - f. The name and contact information for the design professional responsible for the system design must be on the drawings and application.
- 2. Drawings must be complete, accurate, and legible
 - a. Make sure final prints do not contain microscopic lettering for names, notes, dimensions, symbols, etc.
 - b. Control auto-dimensioning so numbers and letters don't overlap.
 - c. Printed output must be readable in black & white/gray-scale.
 - d. If color used, make sure it is of strongly contrasting hues – thin red lines are hard to tell apart from thin green lines.
 - e. Check line weights and layers printed to make sure the proposed work is the most prominent information on the drawing, not ceiling grids, light fixtures, ductwork, etc.
 - f. Conversely, make sure line weights of important elements such as walls are not so light as to be barely readable or reproducible.
 - g. Revisions must be ballooned and dated.
 - h. If the system you are submitting is an optional one, tell us so.
- 3. Equipment model numbers must be clearly identified – putting the complete model number on the equipment legend is a good way to accomplish that.
- 4. Coordinate cut sheets with drawings, and highlight specific models/options.
- 5. Battery calcs must be submitted under the signature of the design professional, and must be understandable. Computer generated summaries often aren't.

6. Model numbers and quantities on calcs must match information on drawings.
7. Ceiling mount strobes are only approvable via requested and approved exception to ADAAG standards until Feds update the ADAAG.
8. New suppression system drawings need to include a site plan showing the fire suppression system all the way back to the tested fire hydrants, and with size, materials, and calculation nodes identified. Also show fire hydrant within 75 feet of fire department connection.
9. Type and location of fire department connections for sprinkler systems must be in accordance with local fire department requirements. Check before submitting drawings.
10. Sprinkler systems for high piled storage require significantly more information about the type and configuration of product being protected. Either the architect or the sprinkler system designer must tell us things, such as the commodity type, storage height, rack layout, etc.

B. Existing Buildings

1. Visit the job, and make sure your plans are accurate to what's out there, both in terms of walls and in terms of obstructions such as casework or ductwork. Don't rely solely on drawings someone gives you and says are the existing plans.
2. Clearly distinguish between what is proposed and what is existing work.
3. Show that which is being removed as well.
4. If entire system is being replaced, new work must comply with current code in all respects, including location.
5. If minor repairs are made, such as one-for-one replacement of smoke detectors, with existing wiring to remain, then existing locations are probably okay as long as the device provides acceptable coverage for the location proposed.

3. Inspection Success

- A. Read plan review comments on permit drawings before you start you job. If you have questions about anything, ask early. Don't wait until the inspector is on the jobsite for an inspection.
- B. Approved drawings have to be on the jobsite for inspection.
- C. Any significant changes from the approved plans must be re-submitted for plans approval before the inspection can be approved.
- D. Work must be inspected before being covered up. That includes not installing ceiling tiles until above ceiling work is approved. Remove ceiling tiles in areas of work before the inspector gets there. Don't expect him to tell you which tiles need to be removed.
- E. If work is an alteration to an existing system, have a knowledgeable installer on site that knows the system. He may be able to answer important questions, and be able to fix issues on the spot.
- F. We welcome coordination calls from inspectors between 7:30 – 8:00 a.m. You can get a 2 hr max. time frame of when we'll be there, and can share with us where to meet you on the job site, and what part of the work you are trying to get inspected.
- G. If you have special inspection needs, contact our supervisor, Robert Martin, at 937-225-4650.
- H. We have an expedited plan review process for small projects. It helps you get started early, but does not waive standard plan review or inspection requirements.

4. Our Website - www.mcoho.org/build

- A. Includes application forms, fee schedules.
- B. We have an up-to-date list of Who to Contact in all jurisdictions in Montgomery County.