# Architect, Engineer, Project Manager, and General Contractor Helpful 61G Information

## General 61G Information and Sprinkler 61G

North Collier Fire and Rescue District

# Bottom Line and Time Line

- Purpose of this discussion:
  - Get it right the first time
  - Minimize issues
  - Keep the project moving

**Feel Free to ask questions at any time**

# Decision Making - Sprinkler

- Determine First if Engineering documents are required

  - Will there be a sprinkler system?
  - New projects –
    - Required by Code (Building, Fire, or other)
    - Required due to/by:
      - Occupancy classification
      - Size, configuration, construction type of the building
      - The Site Development Plan
      - Water supply issues (75% less water demand required), trade-offs - proximity to property lines, or other code or AHJ allowances

# Decision Making - Sprinkler

- Determine First if Engineering documents are required
  - Remodels -
  - Is there an existing sprinkler system?
  - If not, is one now required?
    - Do changes require a building previously not having sprinklers to have sprinklers
      - Occupancy type changes either in whole or in part
      - Changes that increase the occupant load of an assembly occupancy to exceed limits
        - Change a normal assembly occupancy to a dance hall, nightclub other type facility

# Decision Making - Sprinkler

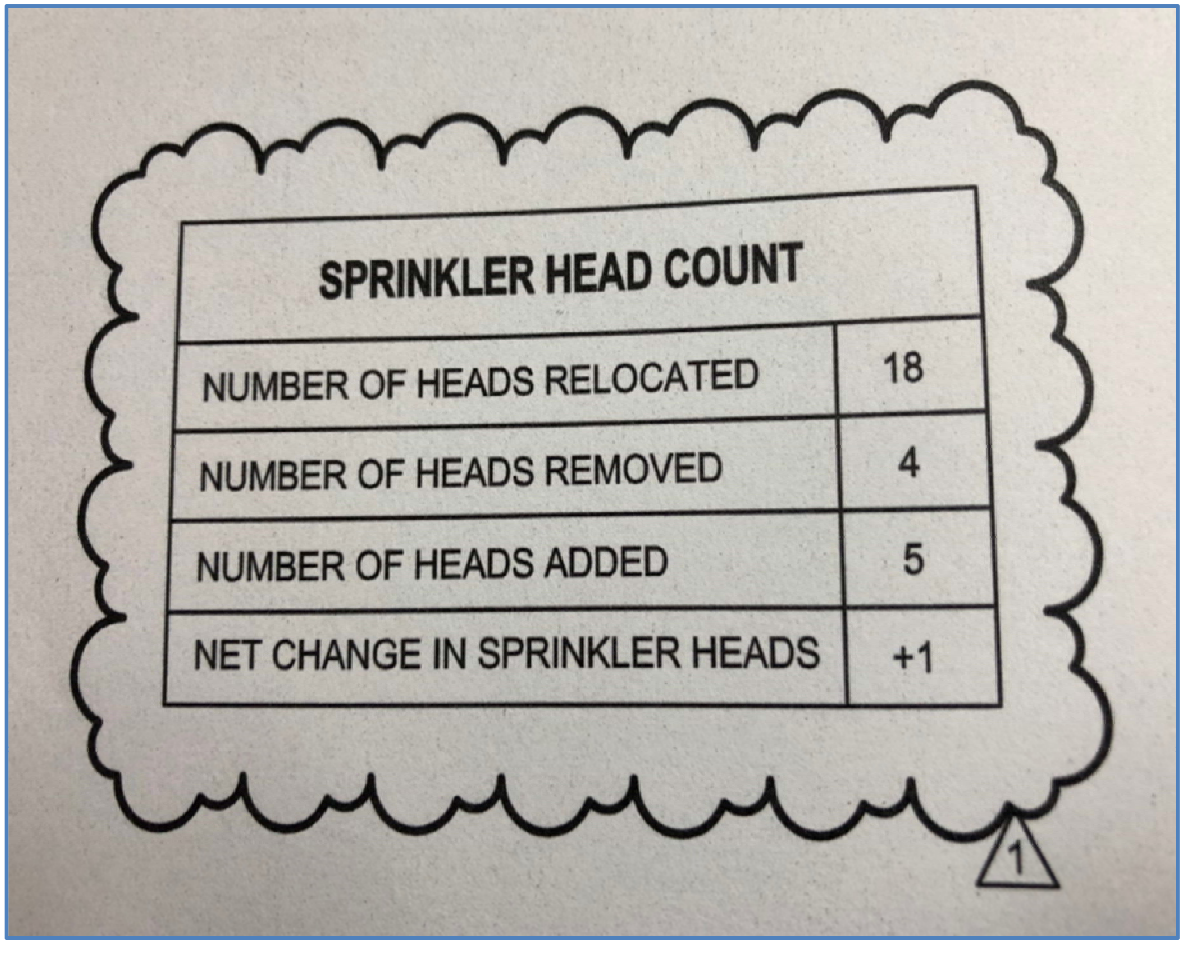
- Determine First if Engineering documents are required
  - Does the owner request a sprinkler system?
    - Insurance benefits
    - Protection of valuables
    - Previous fire experience
    - Taking advantage of Federal Income Tax savings

# Decision Making - Sprinkler

- Determine First if Engineering documents are required
  - Will the construction, addition or changes require **more than 49 heads** to be added, deleted, moved, or plugged?
    - Size of project
    - Extensive changes in wall configurations
    - Shell to an occupancy
    - Changes in ceiling features
    - Ornate ceiling features
    - Changes in the types of heads used
    - Changes in use such as from office to mercantile

# Decision Making - Sprinklers

This is not the way the sprinkler count is achieved when determining the number of heads



| SPRINKLER HEAD COUNT | |
|---|---|
| NUMBER OF HEADS RELOCATED | 18 |
| NUMBER OF HEADS REMOVED | 4 |
| NUMBER OF HEADS ADDED | 5 |
| NET CHANGE IN SPRINKLER HEADS | +1 |

# Decision Making - Sprinklers

# Decision Making - Sprinkler

- If there is no requirement for engineering, consider eliminating it!

BOTTOM LINE ($$$)
TIME LINE!!

# Decision Making - Sprinkler

- If engineering is not required or wanted because it is less than 50 heads, provide a statement on the plans (usually on one of the initial pages) that clearly identifies that the sprinkler system requirements or changes to the system will be less than 50 heads. No engineering required or provided.

# Decision Making - Sprinkler

- If the system or changes to the system will be over 49 heads, engineering is required at the time of the building permit, it cannot be deferred.


Know if engineering is required BEFORE the first submittal. If it is required (or desired) – don't waste a review, get it in the first time.

BOTTOM LINE – TIME LINE

# Decision Making - Sprinkler

- Suggestion:
  - Contact either a licensed fire sprinkler contractor or a trusted engineer who can help make the determination
    - Might save money
    - Able and willing to work with you
    - Designers whose job is to provide proper coverage the best way
    - Early start to either engineering if required, or the permitting process in general

Steering you in the right direction!!

# When engineering is required - Or Desired

- Ask questions of the engineer -
  - Professional Fire Protection Engineer?
  - If not - Experience with Fire Protection Engineering?
  - Experience with Florida 61G15 Requirements
    - How much experience
    - Successful submittals
    - Recent successful submittals in North Collier area

# When engineering is required – Or Desired

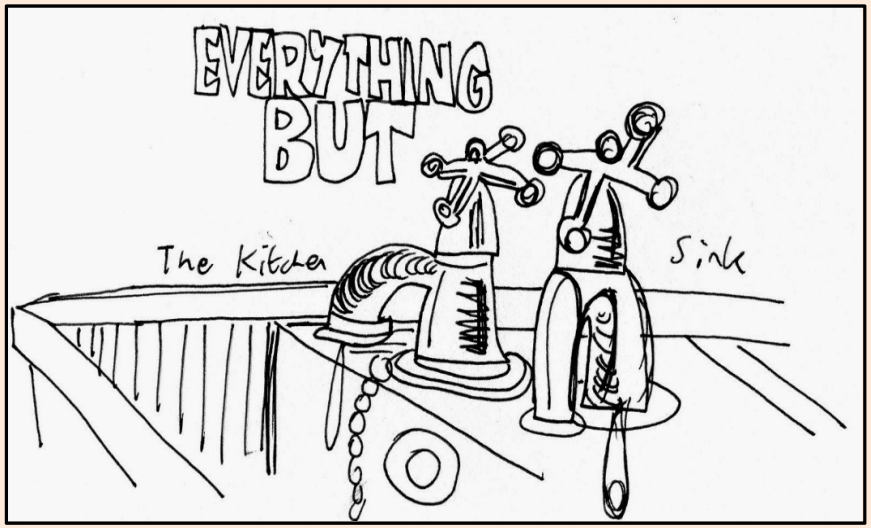
- Ask questions of the engineer
  - What is the difference between Ordinary Hazard I and Ordinary Hazard II? Give examples.
  - If there is storage involved ask what might cause a sprinkler system to be designed to more than OH I or OH II?

# When engineering is required – Or desired

- When an engineer is not sure how to successfully provide 61G engineering documents, too much information can cause more problems

Counterproductive to the Bottom Line – Time Line

The best 61G documents are concise – definitive – Too much information often results in errors



# When engineering is required – Or desired

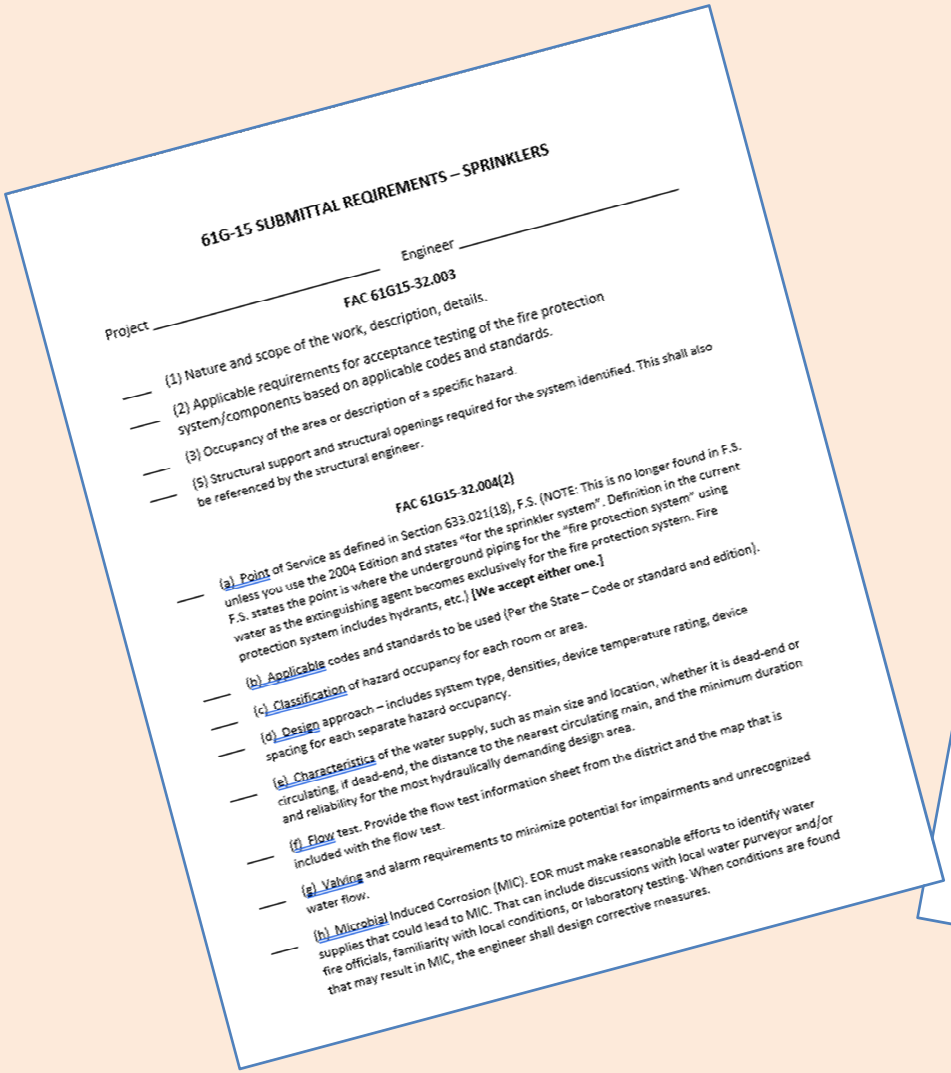
- The engineer should also be asking questions so the design is done properly the first time.

  - Intent
  - Special considerations
  - Future needs
  - Storage

# Things to look for - Sprinklers

- Let's look at each requirement briefly to find things you can look for as the one controlling the project

# 61G Sprinklers Checklist



**61G-15 SUBMITTAL REQIREMENTS – SPRINKLERS**

Project _____ Engineer _____

**FAC 61G15-32.003**

___ (1) Nature and scope of the work, description, details.

___ (2) Applicable requirements for acceptance testing of the fire protection system/components based on applicable codes and standards.

___ (3) Occupancy of the area or description of a specific hazard.

___ (5) Structural support and structural openings required for the system identified. This shall also be referenced by the structural engineer.

**FAC 61G15-32.004(2)**

___ (a) Point of Service as defined in Section 633.021(18), F.S. (NOTE: This is no longer found in F.S. unless you use the 2004 Edition and states "for the sprinkler system" . Definition in the current F.S. states the point is where the underground piping for the "fire protection system" using water as the extinguishing agent becomes exclusively for the fire protection system. Fire protection system includes hydrants, etc.) **[We accept either one.]**

___ (b) Applicable codes and standards to be used (Per the State – Code or standard and edition).

___ (c) Classification of hazard occupancy for each room or area.

___ (d) Design approach – includes system type, densities, device temperature rating, device spacing for each separate hazard occupancy.

___ (e) Characteristics of the water supply, such as main size and location, whether it is dead-end or circulating, if dead-end, the distance to the nearest circulating main, and the minimum duration and reliability for the most hydraulically demanding design area.

___ (f) Flow test. Provide the flow test information sheet from the district and the map that is included with the flow test.

___ (g) Valving and alarm requirements to minimize potential for impairments and unrecognized water flow.

___ (h) Microbial Induced Corrosion (MIC). EOR must make reasonable efforts to identify water supplies that could lead to MIC. That can include discussions with local water purveyor and/or fire officials, familiarity with local conditions, or laboratory testing. When conditions are found that may result in MIC, the engineer shall design corrective measures.

___ (j) Backflow prevention and metering specifications and details to meet local water purveyor requirements. It shall include the maximum allowable pressure drop.

___ (j) Quality and performance specifications of all yard and interior fire protection components.

___ (k) Fire Pump. Required for high hazard occupancy classifications, storage occupancies, factory occupancies and high-rise buildings.

___ (l) Verification of the need for a firewater storage tank. If so, a determination of the size and capacity required.

___ (m) Owner's Certificate. In storage occupancies the certificate is required from the property owner to identify storage configuration of the space for current and future use of the property.

**FAC 61G15-32.003(8)**

Any information deemed appropriate by the EOR to assist the AHJ in understanding the owner's intended use and proposed protection of the building or facility, and to provide sufficient direction to the installation contractor or other interested parties regarding the layout of the system(s), shall be included in the engineering documents.

**FAC 61G15-32.003(6)**

When layout documents contain material deviation from the EOR's Fire Protection System Engineering Document, such layout documents are not compliant unless they are accompanied by revised Engineering Documents made and sealed by the EOR for the fire protection system.

**FAC 61G15-32.004(3)**

Contractor submittals which deviate from the above minimum design parameters shall be considered material deviations and require supplemental engineering approval and documentation.

**FAC 61G15-32.004(4)**

In the event the EOR provides more information and direction than is established above, he or she shall be held responsible for the technical accuracy of the work in accordance with applicable codes, standards, and sound engineering principles.

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Do they follow the format of Florida Administrative Code 61G15-32.003 and .004 items A through M


Engineers are not required to follow the “format” of 61G, but it helps and it is less likely errors will occur or omissions happen. However, as long as all the information is provided, it meets the requirements

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Nature and scope of the work
    - Items to consider:
      - Adequate description – avoid generalizations – be specific
        - Ask yourself – If I didn't know anything about this project, would I understand exactly what the sprinkler intent is
      - Occupancy
      - Construction Type (Can make a difference)
        - Attic spaces
        - Lanai coverage

61G15-32.003(1)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Did the engineer I.D. Acceptance Test Criteria
    - NFPA 13 – Chapter 25 and include Figure 25.1 (Sprinklers)
    - NFPA 13 or NFPA 24 – Chapter 10 and include Figure 10.10.1 (Underground)
    - NFPA 13R – Chapter 10 and include Figure 10.1.2 (Sprinklers)
    - NFPA 14 – Chapter 11 and include Figure 11.1.3(a) for aboveground OR Figure 11.1.3(b) for underground (Standpipes)
    - NFPA 20 – Chapter 14 and include Figure A14.1.3(a) and Figure A14.1.3(b) for the underground (Slight differences from NFPA 24) (Fire Pumps)

Chapters sighted are for current editions used by the State

61G15-32.003(2)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Structural Support
    - Has the sprinkler engineer and the structural engineer addressed the loading and structural openings required for the sprinkler system.
      - The sprinkler engineer identifies the loading and openings signing and sealing his information.

The structural engineer identifies that he has included the sprinklers in his calculations for the loads on the building and acknowledges the use of any structural openings for the system and must sign and seal the information.

61G15-32.003(5)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Did the engineer include the Point of Service

**61G15-32.004 Design of Water Based Fire Protection Systems.**

(1) Water Based Fire Protection Systems include, but are not limited to, automatic sprinkler systems of wet, dry, fine water spray (mist), manual, and deluge valve controlled types, pumping systems, standpipes, fire water mains and dedicated fire protection water sources.

(2) To ensure minimum design quality in Fire Protection System Engineering Documents, said documents shall include as a minimum the following information when applicable:

(a) The Point of Service for the fire protection water supply as defined by Section 633.021(18), F.S.

(18) "Point-of-service" means the point at which the underground piping for a sprinkler system using water as the extinguishing agent becomes used exclusively for the sprinkler system. The point-of-service is designated by the engineer who sealed the plans for a system of 50 or more heads or by the contractor who designed the plans for a system of 49 or fewer heads.

(24) "Point-of-service" means the point at which the underground piping for a fire protection system as defined in this section using water as the extinguishing agent becomes used exclusively for the fire protection system.

We will accept either

61G15-32/004(2)(a)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Have they identified the appropriate codes to be used including the edition (year)
    - NFPA 13, 13R, or 13D – Sprinklers
    - NFPA 24 – Underground
    - NFPA 20 – Fire Pumps
    - NFPA 14 - Standpipes
    - FFPC – 6th Edition


Do not provide codes that are not being used for the project!

61G15-32.004(2)(b)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Occupancy Classification or description of specific hazard for <u>each room or area</u>
    - Business
    - Mercantile
    - Residential
    - High Rack Storage

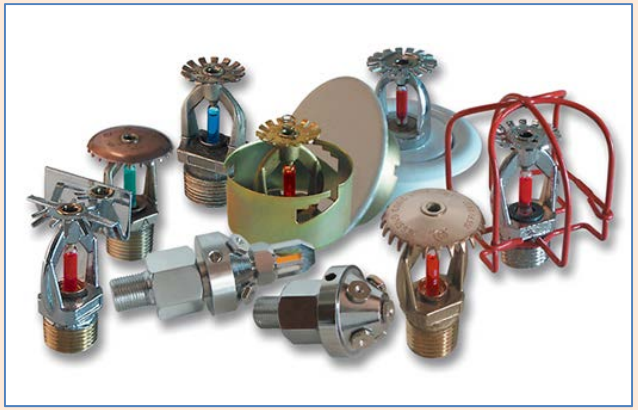
# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Classification of Hazard for EACH room or area
    - Light Hazard
    - Ordinary Hazard Group I
    - Ordinary Hazard Group II
    - Extra Hazard Group I
    - Extra Hazard Group II
    - Storage – Commodity Classification

61G15-32.004(2)(c)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Design approach for each separate hazard
    - System Type (Wet – Dry)
    - Densities
      (.1, .15, .2, common)
    - Temperature Rating
    - Spacing



**<u>All areas or hazards</u>** – NOTE: the attic is often missed and has special requirements different than other light hazard areas and must be addressed separately!

61G15-32.004(2)(d)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Characteristics of the water supply to be used
    - Main size(s)
    - Main location
    - Is it dead-end or circulating
      - If dead-end, the distance to the nearest circulating main
    - Minimum duration and reliability for the most hydraulically demanding area


61G15-32.004(2)(e)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Does the information for the underground fire lines, match the County Approved Site Development Plan

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Do they have a flow test that is less than 6 months old
  - Is it the correct one
  - Does it include the flow test on Fire District letterhead as well as the site map that is included with the flow test

61G15-32.004(2)(f)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted

- Valving and Alarm Requirements
  - To minimize impairment
  - Identify water flow

Common mistake – identifying Central Station rather than Remote Station monitoring when Central Station is not what is intended

61G15-32.004(2)(g)

# Things to look for - Sprinklers

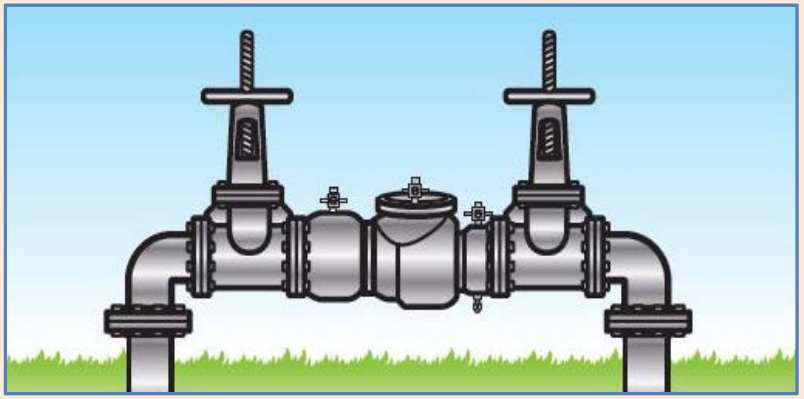
- Check the Engineering before it is submitted
  - Microbial Induced Corrosion (MIC)
    - Engineer must take responsibility for identification of MIC
    - To that end he/she can accept several different ways of receiving the information to make the determination
      - Personal knowledge of the water supply in the area
      - Information received from utilities, property managers, fire department personnel
      - Testing, etc. (Testing BEFORE the engineering report - not by sprinkler contractor before installation)

If MIC is found or suspected – corrective measures must be identified

61G15-32.004(2)(h)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Does the backflow information match the Site Development Plan
  - If already existing, do they indicate something new to be installed or state that it is existing and the size
  - Do they provide the maximum pressure loss through the device



61G15-32.004(2)(i)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Quality and performance specifications of all yard and interior fire protection components
    - Typically “UL Listed and/or FM approved”
    - Are there any special requirements
    - Could be another specific requirement by the engineer


61G15-32.004(2)(j)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted

- Determine the need for a Fire Pump. Required to be addressed for these occupancies:
  - High hazard occupancies
  - Storage occupancies
  - Factories
  - High-Rises

If determined as necessary, the specific volumetric flow and pressure rating of the pump is required.

61G15-32.004(2)(k)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Verification of whether a firewater storage tank is required on site

If so, the engineer must determine the size and capacity required for the system


61G15-32.004(2)(l)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Do they have an Owner's Certificate – if not, why not

Is there storage in the building

Based on the use of the building, do you anticipate any storage of chemicals, plastics, etc.

Does your owner indicate that shelving (racks) will be used.

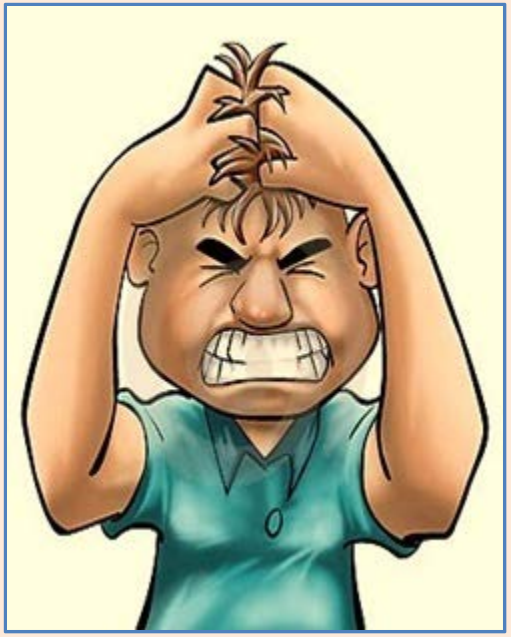
Not a bad thing to have anyway!

61G15-32.004(2)(m)

# Things to look for - Sprinklers

- Check the Engineering before it is submitted
  - Has the EOR provided more than is required?
    - Responsible for the technical accuracy
      - Applicable codes
      - Standards
      - Sound engineering principles

**Whatever is provided, has to be reviewed. This may not be what you want at that time. (Bottom Line – Time Line)**



# Things to look for - Sprinklers

- Has the EOR provided more than is required
  - Whatever is provided, must be reviewed and approved
    - More chances for rejections for items not required at the time of 61G
    - Examples:
      - Sprinkler layout
      - Calculations
      - Cutsheets
      - Spacing
      - Sensitivity

# Things to look for - Sprinklers

- Has the EOR provided more than is required
  - At the time of sprinkler permitting, other issues may need to be addressed
    - EOR requires testing of the water supply for MIC
    - The shop drawings may differ from the EOR's plan
      - The EOR may have pipe sizes larger than is necessary
        - Value design
      - Contractor wants to use a different backflow device
        - Pressure loss issues
      - Contractor wants to use a different brand of sprinkler heads or other appurtenances

# Things to look for - Sprinklers

- Special exception for North Collier Fire submittals
  - Criteria for the special exception to complete engineering:
    - Existing buildings only with no additions
    - No changes in occupancy classification for the building or the portion of the building affected
    - The changes do not involve changes to the original design

# Things to look for - Sprinklers

Realizing that some items related to 61G requirements would be existing and remain unless severe changes to the water supply or building requirements, it was determined that some aspects of 61G15-32 would be waived.

All exceptions to the 61G requirements involve only:

1. Existing buildings only with no additions.
2. There is no change in occupancy classification for the building or portion of the building affected.
3. The changes to the system do not involve changes to the original design (ie. Standard coverage heads to extended coverage heads or the reverse; or changes from standard coverage heads to attic sprinklers or the reverse for example)

We agreed:

**61G15-32.003(5) Structural Support would be waived.**

**61G15-32.004(2)(a) The point of service information would be waived.**

**61G15-32.004(2)(e) The Main size, main location and whether it is dead-end or circulating and if a dead-end the distance to the nearest circulating main would be waived. <u>Minimum duration and reliability for the most hydraulically demanding area will still be required.</u>**

**61G15-32.004(2)(g) Valving and alarm requirements would be waived.**

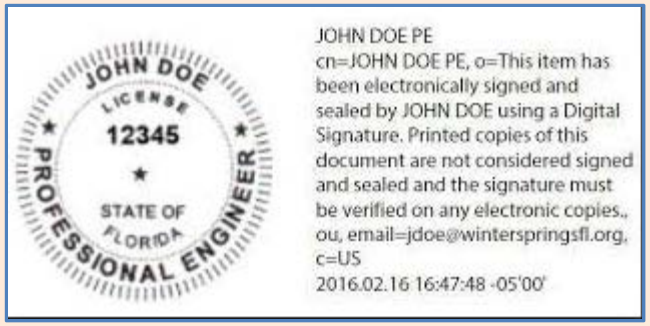
# Avoiding/Solving Problems

- Revisions –
  - If no changes are made to the engineering documents, do not include them in any revisions
  - If engineering has changed with the sprinkler plan, a CO hold is placed on the building permit until the new approved 61G is provided as a revision to the building permit.

Sprinkler Contractors are made aware they have a responsibility to provide the engineering to the GC or Project Manager and advise of the CO hold.

# Avoiding/Solving Problems

- Electronic signatures and seals are only for electronic submittals
- Paper plans are required to have the normal, old fashioned signature and seal
  - Paper plans cannot be submitted with electronic signatures.




# Avoiding/Solving Problems

- Two engineers for the same scope of work
  - On corrections
  - On revisions
  - MEP performs engineering services, but so does another engineer possibly from the sprinkler contractor
  - EOR requires his/her approval of the plans submitted by the sprinkler contractor, but it comes back with a different engineer's approval
    - The EOR, not anyone else at the firm, can perform this work

# Avoiding/Solving Problems

- The EOR states that another engineer, contractor's engineer or "delegated" engineer is to provide these services at time of sprinkler permitting for the sprinkler contractor.
  - Paying twice for the job
  - Requires change in EOR
  - Starting over in review of the 61G requirements

If you see this in the engineering documents you have been provided, make sure that is what you want.

BOTTOM LINE – TIME LINE

# Changing engineers

# Changing engineers

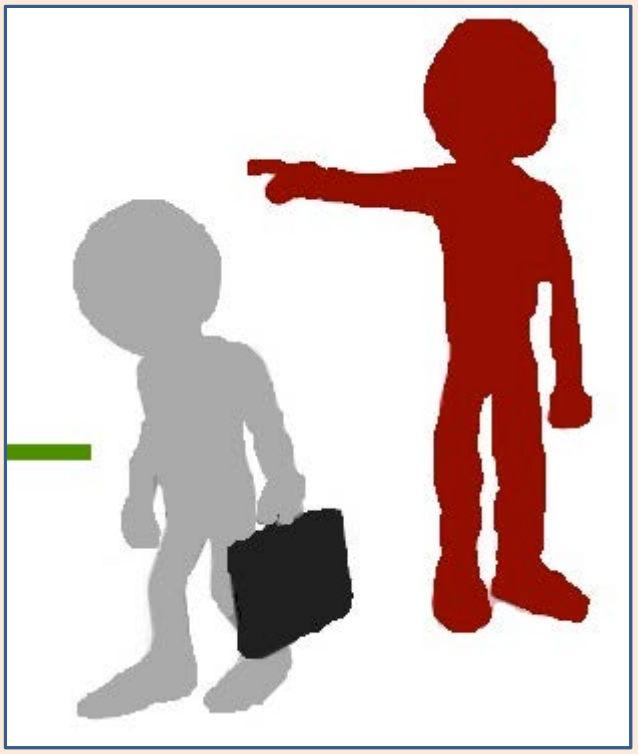
- Changing engineers means we start all over with the review
  - Do you think it is better to stick with the first?
  - Do you think you would be better off with a new engineer?

Are the failures due to providing more information than is required? Consider cutting it back to the minimum requirements!


If you change engineers – follow the right course!

# Changing engineers

- If a new engineer takes over and is NOT using any of the former engineers designs, it is only necessary to advise us
  - Be specific so it is clear there are not two engineers!



# Changing engineers

- If a new engineer takes over and IS using any of the former engineers designs:
  - The new engineer must send a letter to the former engineer advising that he/she is using some or all of his/her design
    - Return receipt letter must be sent to the former engineer

For Review provide:
The letter
Copies of the return receipt (Green Card)
Copies of the payment slip from the Post Office

# So what are we saying or not

- We ARE saying you can use any engineer you want
- We are NOT saying that an engineer cannot provide all the information that would normally be provided by a contractor (shop drawings)

**THE CHOICE IS THEIRS (AND YOURS)!**

# So what are we saying or not

- We ARE saying – be informed, know what to expect and how it affects your

  Bottom Line and Time Line

  - Give us a call or email before you submit if you are unsure – it might save you a lot of grief

jdelaosa@northcollierfire.com
239-252-2312

lsimmons@northcollierfire.com
239-252-2311

# So what are we saying or not

- We definitely are not saying all engineers are bad, there are a number of very good engineers, some are in this room today
- We are saying that having a bit more knowledge of the requirements and things you as a project manager, architect, or general contractor can look for, will help stop repeated rejections that only costs you money and time.

  Bottom Line – Time Line.

# Questions

# NOTES:

- Slide 3: This last one should actually be determined at the time of the Site Plan Development. It is from Chapter 18 of the FFPC 1.
- Slide 4: For example, a group of offices are removed to make room for a larger conference room changing the occupant load. The occupant load was based on 100 sq. ft. per person (or maybe 50), but now the occupant load changes to 15 sq. ft. per person or maybe even 7 net. Or a restaurant (300 limit) that changes to a dance hall (100 limit).

- Slide 5: Much of this is cut and dry. Where it gets tricky is when it is a remodel and now we are taking into account maybe ONLY the number of heads that would trigger engineering. So, lets talk about that.
- Slide 7: The head count is based on the entire count of added, deleted, moved or plugged, not a NET Change.
- Slide 9: For systems less than 50 heads, sprinkler contractors can provide everything that is needed and at the time of the sprinkler permit, not the building permit. (Some areas, such as the City of Naples require all sub permits at the same time as the building permit)

- Slide 10: Putting on one of the first few pages saves us a lot of time, especially with Electronic Plan Reviews. This statement is important but the other documents must agree, because for some reason, we sometimes get this statement only to find out engineering was indeed provided and is part of the submittal package. Make sure your statement matches what plans and/or information is provided to avoid issues.
- Slide 12: Sprinkler contractors typically have either an engineer on staff or work closely with one engineer. So if engineering is required, they can easily accommodate the permitting process. The sprinkler contractor may even be able to prevent going over 49 heads on system changes, but a caution for this is in order. If actual changes in the field then send the count over 49 heads, it very well may delay the project. BOTTOM LINE, TIME LINE. Bidding out the sprinkler work later means you will be working with the engineer. So hopefully the information provided today will assist you in understanding exactly what is required by knowing more of what to look for. I want to stress that I am not taking anything away from engineers. You may feel much more comfortable working with your engineer that you use on projects. That is certainly ok. If the engineer does know how to design systems, he/she will also be able to tell you if engineering is required and assist in possibly limiting the number of heads to avoid official engineering (Signed and Sealed). The choice is yours as to who you use to provide this information.

- Slide 13: It is NOT required to be a fire protection engineer. But when you specialize in an area, the expectation is that you get a better product. However, in Florida, as long as an engineer FEELS he/she is competent to provide the engineering, they can (until proven otherwise). I am a fire inspector specializing in plan review. I know there are building code requirements, but can I do a building plan review? No, I cannot, I have not been fully trained in that capacity, so don't ask me building code questions, I might not get it right! In either case ask how well they do in passing engineering for the systems – especially in North Collier. We are noted for following the state requirements.
- Slide 14: You may not know the answer, but you will see how they react to the question(s). That may be enough to tell you what you should do. If they do answer you, and you are not sure give me a call, I can help to determine if they are close.
- Slide 15: As an example, an engineer provides the same information multiple times. But they do not agree with each other. For instance, identifying the codes required for the project. All to often when the edition of the code changes, they may fix the code references in one place, but not in the others. I have had plans with NFPA 13 2007. 2010 and 2013 ALL in the engineering documents. Once the information is provided once, multiple references only add to chances of errors.

- Slide 16: The engineer really needs to speak with the owner or his/her representative. He or she cannot necessarily just look at a plan and determine how to design it, especially if that building has storage, uses chemicals, has machinery, etc. They also won't know what the owner plans to do in the future if they don't do their part. If the system is designed for today, but the owner intends to make changes that would require an upgrade of their sprinkler system, can you imagine how bad that can be for them. Sometimes overdesigning the system now, can save many issues in the future such as upsizing pipe or backflows, etc. Much more expensive the next time.
- Slide 18: These pages are basically an outline of the requirements so you can see what the intent of the State is vs. what was provided. We don't expect you to be able to do a comprehensive review, but if some of the problems can be eliminated, we will be that much ahead of the game. For instance, where is the flow test?, where is the owner's certificate? Things that can be caught before they are an issue holding up the project. It also may prompt the engineer to ask questions of the reviewer ahead of submittal for better results.
- Slide 20: Occupancy would be in accordance with FFPC (Assembly, apartment, hotel, boarding and lodging, business, mercantile, industrial, storage, etc.) Construction type is based on the building code requirements. Keep in mind that many of the people designing these buildings are calling it Type V construction. So even if it is really Type IIIB construction, the design of the sprinkler system needs to be treated as the building construction type identified for the building.

- Slide 21: If there was a recent code change, or one is coming up, ask the engineer did he verify the numbers in the code that will be in effect at the time of the sprinkler permit.
- Slide 22: So the sprinkler engineer provides the information signed and sealed, and the structural engineer accepts that and identifies that his has made provisions for the system by identifying this specifically on his/her engineering documents. It cannot be included without reference without specifically addressing it. Now, we have recently made a change to this, we were requiring specifically that BOTH sets of information match. But we have asked some questions and conferred with Mr. Jonathan Walsh and felt that as long as it is specifically identified within the list of other loads on the building, we will accept that.
- Slide 23: This always raises questions. Currently 61G15-32.004(2)(a) states the POS is defined in section 633.0212(18) of the Florida Statutes. It isn't there anymore, nor has it been for several years. You can only find it if you go back to the 2004 edition of the Statutes. There is a different definition currently in a different location of the Statutes. We will accept either.
- Slide 28: The identity of the edition approved for use by the State of Florida can be found in FFPC 6$^{th}$ edition in NFPA 1. The editions used would be in effect at the time of the sprinkler/underground permit submittals. So watch for changes in the codes and determine when the permits would be going in for review. Some examples of unnecessary codes: Existing building – no underground, don't provide NFPA 24. No fire pump or standpipe, do not provide NFPA 20 or 14. NFPA 25 is a maintenance standard and is not in effect until the system is launched and in service (typically one year from approval of the testing of the new system. It's just more things that cause confusion or can include wrong information.
- Slide 29: Rarely can you use one classification for an entire building unless, in some cases, you are classifying the whole building as the higher hazard. For example, a mercantile will have office areas, the engineer may call it all out as Mercantile. But be careful, the storage areas may be a different hazard based on the storage arrangement.

- Slide 30: There is a difference between Hazard Classification (FFPC) and Classification of Hazard. Hazard Classification tells you what it is, Classification of that hazard is used to identify how it will be protected using the classification of hazard shown here..
- Slide 31: When we speak of protection, remember, if it is Type III construction but it is built defined as Type V, coverage and design needs to be per the construction type as on the building permit. Attics also have different requirements based on the pitch of the roof. Check to see if the engineer has identified the pitch of the roof and the design in accordance with that pitch. If the engineer is allowing certain “exceptions” from the code, it needs to be specifically noted in the engineering document. Examples are the “Small Room Rule”, “room design method”, or “area density reduction”.
- Slide 32: Minimum duration is determined by Table 11.2.3.1.2. It needs to include two things, gpm and a duration.
- Slide 34: There are seven different things 61G requires for the flow test, but we do not require all seven. What you typically get on a flow test is fine. It should be noted that currently, North Collier requires the static and residual pressures to be reduced 10 percent without changing the flows. This helps cover seasonal adjustments and/or future demands on the water supply system. There may be times that North Collier will require additional reductions based on the water supply for the area and known issues.

- Slide 35: Not saying it cannot be Central Station, but by far the majority are Remote Station. Differences, Central Station is more expensive, has requirements for specific runner service response times, etc. Remote station does not have guaranteed runner service response times and therefore less money. Some insurance companies or policies will require Central station monitoring.
- Slide 36: If the engineer states that testing shall be done by the sprinkler contractor, it is required to be done. So, be sure of what the engineer is asking for and if it is what he really wants and maybe even ask WHY.
- Slide 38: HINT: Some engineers state UL AND FM. This cuts down on the available materials and can sideline a job while efforts are made to find appurtenances that meet UL AND FM. One or the other is usually fine unless insurance requirements address it specifically.
- Slide 39: This requirement has changed to ONLY include these four occupancies. If a fire pump is not necessary in these occupancies, it still needs to be addressed. State no fire pump required. If not one of these specific occupancies, apparently it can be decided by the sprinkler designer. The EOR still can address this if he/she wants, but remember, whatever is provided, must be reviewed at the time of the building permit and followed by the sprinkler contractor.
- Slide 40: Again, it is important to address the item either way.
- Slide 41: Many times, engineers will state, “This is not a Storage Occupancy, therefore the Owner’s Certificate is not required”. Occupancy is not necessarily the whole building. Just as you can have assembly and business “Occupancies” in a building, you can have storage within another dominant occupancy and is required to be addressed.

- Slide 42: This is an important point. First, we are not saying that complete drawings, cutsheets and calculations cannot be provided. That is ENTIRELY up to the engineer and the people who hire the engineer to determine. But, understand, that is not required at this time, only the requirements of the FAC. Whatever is provided, we have to review. Say for instance, the engineer provides complete “shop drawings” and there are problems with the calculations, more than likely the engineering will have to be rejected even though it is not something required at the time of building permit review. Same with cutsheets if they are wrong, or anything else for that matter. AND , it will all have to be reviewed AGAIN, at the time of the underground submittal and the sprinkler submittal. But again, we are just giving you information and not telling you what to do. The decision is yours.
- Slide 44: Everything has to match the engineering, so whatever is provided and/or requested by the engineer needs to be followed by the contractor. Another example is requiring review before submittal for permitting. If this is the case, be sure your sprinkler contractor is following the requirement because not much can be reviewed without the EOR’s approval.
- Slide 46: This is not changes to the requirements found in the FAC, this is only NCFR attempting to work with designers, owners, and contractors because these items are existing, and finding out what size pipe is found underground and it’s path may be very difficult to ascertain. More than likely they are not changing unless the design requirements change, or the water supply changes. So, I spoke with the Fire Marshal at the time, got his approval, and sent this criteria to him to verify and he agreed to these changes. We already discussed the changes we accept for structural support.
- Slide 47: We have allowed changes to be presented with the sprinkler permit. Sometimes things just do not work out as expected and rather than hold up the sprinkler permit, and progression on the building construction itself for such changes, we have allowed changes to be included with the sprinkler permit, however, the engineering still needs to be included with the building permit.
- Slide 50: The engineer is the engineer for the project unless he is officially removed. So now you may have a decision to make, Do I change engineers and hope things go more smoothly, or stick it out with the first one.

- Slide 52: I get these questions often. The project manager or others are frustrated that the 61Gs cannot get approved. They seek advice. We cannot give you this advice. We can meet with you and the engineer to assist (not tell you how) in getting the design or requirements right. Any decision to change engineers is strictly up to the non-governmental people involved. More information than needed – This is an important point.
- Slide 53: Don't just provide new engineering, state that you have removed the first engineer.
- Slide 54: Again, be specific as to your intent.
- Slide 55: The cutsheets, the plans, the calculations, etc.
- Slide 57: If you are having repeated rejections, for the same things, because of incomplete corrections, not answering the rejection comments at all, OR WHATEVER, you may have a decision to make, either on the current project, or your future projects. Hopefully this information has been helpful because our goal at North Collier Fire is to provide exceptional service, help where we can and keep projects moving forward. So again, if you need help, call us, email us, or come in and talk, we can solve this puzzle together.