

Fire Plans Review Checklist and Affidavit

This document contains eleven (11) pages in total. It must be filled out, dated, and signed with every submitted, re-submitted or revised plan by the architect, engineer, or design professional of record.

Permit Number: _____

Applicable Base Codes: (verify using latest State of Florida adopted codes)

- Florida Fire Prevention Code (List year and initial) _____
- NFPA 1, Uniform Fire Code (List year and initial) _____
- NFPA 101, Life Safety Code (List year and initial) _____
- NFPA 13 (List year and initial) _____
- NFPA 72 (List year and initial) _____
- City of Miramar Fire Code, Chapter 9 (initial reviewed) _____
- Broward County Amendments to the Florida Fire Prevention Code (List year and initial)

- Other NFPA Codes not listed above (list code number(s), code years and initial:

Cover Sheet (must include):

- Clearly define the Scope of Work; show key plan of renovation space and entire floor plan.
- List all Codes and Editions used. (Verify latest adopted by State of Florida, Broward County and City of Miramar)
- Identify the Type of Construction per code.
- Identify the Occupancy Class per the Building Code and Fire Code; identify previous occupancy and current occupancy.
- Identify if building will have sprinkler system or not.
- Identify: floor area in sq. ft., number of stories, total height of structure and top floor height. (To determine if high-rise)
- Includes Broward County Property Appraiser's address and legal description.

General Plan (must include):

- aAll sheets must be wet signed and sealed by a design professional.
- All sheets are drawn to scale; scale shown.
- All sheets shall be submitted/stapled/bound in sequential order matching legend/coversheet

- Provide a Key Plan on all sheets.
- Provide a detailed narrative for all phases, when applicable. Show diagrams.
- Clearly label all areas.
- Provide a Title Block along with the project address on all sheets.
- Submit Fire Sprinkler and Fire Alarm SHOP Drawings at this time. (If required). Please remove ENGINEERED Drawings if submitted.
- Add note to plans to state that fire alarm, access control, special suppression, generators, rack systems, and fire sprinklers will be submitted under a separate permit.
- Fire alarm design documents are to be signed & sealed by Florida Engineer for projects \$5,000 or more. (Scale - 1/8 inch = 1 foot)
- Provide Fire Alarm system battery calculations and spec sheets for components.
- Fire Sprinkler design documents are to be signed & sealed by Florida registered Engineer if 49 or greater heads are installed.
- Provide Sprinkler system hydraulic calculations and spec sheets on all components.
- Required NFPA 704 signage shall be installed on the outermost exterior wall facing the access roadway next to all doors.
- Knox Box location (Indicate on plans that a "Knox" (Model 3265 Surface Mount or Model 3274 recess mount key box will be installed near the main entrance at a height of approximately 5 feet above grade.
- Any generator must have an emergency stop installed by the FPL main utility shut off.
- All equivalencies must be approved by the Fire Marshal.

Site Plan (Must be included in plans if applicable): **NOTE: Request Fire Department Access Packet prior to DRC submittal and/or design**

- Show the entire project site including roadways, property lines, exit discharge to public way.
- Provided North directional arrow.
- Show Fire Hydrants, Fire Department Connections, Backflow Preventor, Post Indicator Valves (if applicable to scope).
- Design to City of Miramar Fire Department Access specifications. (Request from Fire Plans Examiner)
- Show any parking related to site along with fire dept access.
- Identify the scale used. Required scale is 1:20

Detail/Schedules: (Must be included in plans if applicable)

- Provide Fire Stopping penetration details (systems sheets) for each penetration type.
- Provide Door Schedule including rating, hardware, width, assembly, etc.
- Provide Stair Detail including all dimensions: width, headroom, rise, run, etc.
- Provide Handrail & Guard detail including: all dimensions-extension, rejections, height, etc.
- Provide Ramp Detail including: all dimensions, show slope in ratio, etc.
- Provide a complete Window Schedule including: all dimensions, identify egress windows, clear widths, sill height above finished floors, etc.
- Provide a complete Interior finish schedule: walls coverings, floors finishes, furnishings and draperies.

- Provide Wall Types (including its joint assemblies) any shafts and chases shown referenced to detailed drawings on plans, UL, or equivalent design details.

Life Safety Plan Review/Sheets: (Must be included in plans if applicable)

- Show existing life safety features that impact means of egress for occupants in the renovation.
- Is the travel distance from most remote area, common path of travel, etc. shown and measured as per code?
- Has the occupant load been correctly calculated and shown?
- Have the required number of Exits with reference to its occupant load been provided?
- Are the Exits remote from one another, with the measurements properly shown on plans? (1/3 of the diagonal if sprinklered or 1/2 of the diagonal if non-sprinklered)
- Are all dead ends within the maximum limits allowed for this occupancy?
- Is the Means of Egress (Exit Access, Exit and Exit Discharge) shown clearly on plans?
- Do all Exit doors swing in the direction of exit travel? Do all doors swing free of obstructions?
- Does the door swing projection within limits in corridor? In stairs?
- Are the floor elevations level on both sides of all Exit doors?
- Has the 1/2 in. maximum threshold been shown across all Exit doors?
- Have Emergency lighting and Exit signs been provided along the entire means of egress?
- Do all Exits lead directly out of the building? (1/2 of the exits can lead back into building if fully sprinklered)
- If provided, do scissor stairs comply with code? Single exit?
- Have all exposures with regard to exiting (less than 10' and/or 90-degree angle) been properly rated / protected?
- Do any/all qualified outside stairs meet the requirements of the code?
- Are the exit stair enclosures free from any openings into storage rooms or other unoccupied rooms?
- Has Emergency lighting been provided to the public way?
- If provided, do the qualified Horizontal Exits comply with code?
- Is there a permanent exit path to the public way?
- Are there two separate ways to get to the public way if the exit discharge has exposures? (Windows, etc.)
- Has panic hardware been provided on all exit doors with an occupant loads of 100 or greater?
- Do the fire doors contain proper hardware (hinges, handles, hardware)?
- Are all exiting access corridors properly rated as required for this occupancy?
- Have all floor level changes in the Means of Egress been properly addressed?
- Does the exit access corridor/pathway have the proper width? (36 inches if less than 50 occupants and 44 inches if more than 50 occupants)
- Does the exit access corridor/pathway have proper rating and fire doors?
- Do all door widths provide the required egress capacity?
- If Special Locking Arrangements are provided on any exit doors, do they comply with code and are they allowed by this occupancy? (Provide all cutsheets for hardware. Product approvals will not be accepted)

- Do the horizontal - sliding doors in a means of egress have a break away feature for exiting emergencies?
- Are there any curved, spiral or winder stairs being used for a designated exit? Do all dimensions comply with the adopted code?
- Have all the Vertical Openings (check all floors) been protected as required for this occupancy?
- Are the Exit Stairs fully enclosed top to bottom?
- Are there any mezzanines, atriums shown on plans, and have they been properly addressed per code?
- Have all the designated exits been checked to ensure they do not pass through a kitchen? Or lockable room?
- Has the building been provided with smoke control, smoke evacuation systems; If so, has the sequence of operation been placed within the plans?
- Have all elevators been provided with either elevator vestibules or the alternative to pressurize the elevator shafts?
- Are rated walls/partitions free of non-rated panels?
- Have rated ceiling light fixtures been provided when installed in rated ceilings?
- Are the stairs for the building being pressurized?
- If the building is provided with a sprinkler system, does the design comply with the applicable code?
- If the building is provided with a fire alarm system, does the design comply with required codes?
- If the building is provided with an emergency generator, does the design / installation comply with code?
- If the building is provided with a fire pump, does the design / installation comply with the code?
- If the building has a common roof top terrace, have the correct number of exits been provided and are they remotely located for proper exiting?
- Is the fire pump located in its own room?
- Are the Emergency Generator and Fire Pump located above the flood line?
- Has a door been provided for exiting within a parking garage when the required vehicle exit is blocked by a security gate?
- Are the exit stairs free of any conduits or piping other than the standpipe and fire alarm system?
- If the property is to be fenced, does the fire department have the required access? (20' wide gate and key box/remote access)
- If the project is mixed occupancy, have the most stringent occupancy requirements been met?
- If there is an area of refuge, does it comply with code?
- Have all Hazardous Areas been identified, and do they comply with the requirements for this occupancy?
- Has a complete fire extinguisher layout, including size, type and mounting details been provided?
- If there are commercial exhaust hoods, have they been tied into the fire alarm system and protected in accordance with code?

Fire Alarm plan review/sheets: (Must be included in plans if applicable)

- Have all sheets been wet signed sealed by Engineer? (Required for projects over \$5,000)
- Are all Floor Plans provided in 1/8 inch = 1 foot scale?

- Is the Fire Alarm System shown on its own designated sheets?
- Have the specification sheets on the type of system being installed and the compatibility sheet been provided?
- Have Smoke detectors been provided by the panels?
- Are the required Elevator Recall devices shown? Shaft? Machine room? Lobby?
- Have the Sequence of operation, fire alarm notes and symbol chart for the system been provided on the plans?
- Have all initiation devices and notification appliances been properly located and shown? Show existing and new components
- Has the candela rating for all appliances shown on the plans and riser and do the plans specify which devices are weatherproof?
- Is the FACP clearly located on plans with a smoke detector above it?
- If this is a High-Rise building, is there a Fire Command Center with 1-hr rating, including the door? (If the Fire Command Center Room is not located in the front of the building, a remote annunciator needs to be placed in the front entrance)
- Does the Fire Command Center Room have the required: generator annunciator panel, fire phone cabinet w/phones, (1) dedicated phone line, smoke detector above panel and strobe appliance?
- Has the survivability of the Fire Alarm system been described and properly shown on the plans?
- If smoke control/smoke evac is provided, are all fans and their disconnects monitored by the alarm system?
- Has the type of system and class been identified on plans?
- If building has kitchen suppression system, has it been tied to the fire alarm?
- Are the strobe appliances 15' from the end of the corridor?
- Have the smoke / heat detectors been shown as required?
- Are all devices shown on plans?
- Have the ceiling heights has been provided in all areas?
- Has a complete riser diagram been provided?
- Has the Parking Garage/Warehouse etc. been provided with full strobe coverage?
- Does the riser provided include the amp draw for each NAC circuit and does it state the max amp draw per circuit?
- Have battery back-up calcs been provided for the FACP and power boosters?
- If there are more than 2 FACPs, are their connections compliant with the code?
- Have the voltage drop calcs been provided on the plans with a starting voltage of 20.4 volts?
- Has a pull station been provided at the building's main entrance and additional pull stations located throughout, with a maximum of 200 feet of travel distance between pull stations, with each pull station no more than five feet from every emergency egress door?
- Are all power boosters shown on plans and riser?
- Has music or white noise shut-off upon activation of Fire Alarm sequence been noted on plans?
- Have the requirements of 75dbA measured at pillow level, within the bedroom been noted on plans?
- Have the requirements of 15dbA measured above Annex reference table been noted on plans for occupancy type?

- Has a bell and a horn/strobe been added to the fire sprinkler riser? If sprinkler riser is not visible from the street, a bell and horn strobe must still be added to any building side visible to incoming fire department vehicles. (Must include waterflow sequence of operation in plans)

Fire Suppression System Review: (Must be included in plans if applicable)

- Has the isometric (3-D) drawing for the complete system been provided?
- Do the plans include details for the hood, showing the ducts and cooking equipment being protected?
- Do the plans clearly state if the hood system is stand alone or if it is tied to the building fire alarm system?
- If the hood system is going to be tied to the alarm system, is the connection shown on the plans?

Fire Mechanical Components Plan Review: (Must be included in plans if applicable)

- Do the floor plans identify all required wall ratings?
- Have all smoke zones been clearly identified?
- Does the stair pressurization comply with code? Are the fans located outside the stair enclosure? Or within the stair it serves only?
- Are all Fire/Smoke dampers shown on plans?
- Required duct detectors shown on fire alarm plan?
- Do the plans include the complete smoke control sequence of operation and its interaction with the fire alarm system?

Fire Electrical Components Plan Review: (Must be included in plans if applicable)

- Has Emergency lighting been provided along the complete means of egress to the public way? (see required photometric note on page nine)
- Do the plans include Photometrics for emergency lighting for all common areas?
- Have Exit signs been provided and shown throughout the space as required?
- Is the location of the emergency generator shown on plans along with its connected loads?
- Have the required single station smoke detectors been provided for residential occupancies? (110 volt with battery back-up and interconnected within the same unit)

Fire Sprinkler Plan Review: (Must be included in plans if applicable)

- Are sprinkler plans wet signed & sealed by a Florida Registered Engineer? (Required if the scope is greater than 49 heads)
- Is the applicable code and edition correct and shown on plans?
- Existing heads at roof deck will be maintained if previously approved/installed (applies to interior buildouts)
- Has the Fire Sprinkler Design Professional coordinated the fire sprinkler system layout with other principals, such as HVAC, Architectural, etc. to confirm no obstructions to coverage?
- Does the Site drawing indicate the point of service from City main, and locations of the Backflow Preventer, Post Indicator Valve and Fire Hydrants?

- Is the backflow shown on the plans the correct type?
- Do the plans show pipe dimensions and diameter?
- Do the plans show riser locations and dimensions and is the riser accessible?
- Is the required outside/riser bell shown on the plans?
- Are the hanger locations, hanger detail (cut sheets can/must be attached to submittal), valves and sprinkler layout clearly shown on the plans?
- Are the water flow devices and tamper switches shown on plans? (Including those required at the Backflow and PIV)
- Are the inspector's tests shown on the plans and is it remote from riser?
- Is the location of the FDC shown on the plans and complies with distance to hydrant?
- Does the FDC have 7.5 ft clearance on each side, clear to the front and 4 ft clearance in the back?
- Is it noted that where a pipe cannot be maintained above 40 F that adequate freeze protection provisions will be included?
- Is the type of system appropriate for the specified application?
- Does the system have an electronically monitored alarm valve or water flow device?
- Is there 100% sprinkler protection? Show existing heads and new heads.
- Does the hazard classification correspond to the potential fuel load?
- Is the design density consistent with code classifications?
- Are the sprinkler zones less than the maximum size permitted?
- Are hydraulic calculations and fire flow test results within 6 months included?
- Is hydraulic nodal information shown on plans?
- Is the calculated zone (design area) the most hydraulically demanding?
- Does the zone contain the correct number of heads?
- Do the calculations use the correct C factor?
- Does the supply curve exceed the system demand?
- Is there a legend identifying type of head, temperature rating, etc.?
- Is temperature rating adequate for the environment?
- Have corrosion resistant heads been specified for all exterior locations?
- Are quick response sprinklers used on light hazard occupancy?
- If applicable, does the dry system have uprights or return bends with pendants?
- Is the distance between sprinklers less than or equal to 15 ft.?
- Is the distance between sprinkler heads called out on the plans?
- Is the area of coverage per sprinkler less than the maximum permitted?
- Are the sprinklers less than 7'-6" from a wall unless by exception small room allowing up to 9'?
- Do obstructions such as columns and beams have additional heads for the required coverage?
- Have additional heads been provided where the soffits obstruct sprinkler discharge?
- Have provisions been made to drain all parts of the system?
- If there are elevator shafts or chutes, are they sprinkler protected?
- Are all concealed spaced sprinkler protected unless excluded by code?
- If there are vaults, are they protected in accordance with code?
- If the building exceeds 2 stories and more than 50' in height, or exceeds 30' to the highest occupiable floor, is a standpipe Class I system installed?
- Does the standpipe have 2-1/2" hose valves with 1-1/2" reducers?

- Does the FDC have a check valve and is it located above finished grade?
- If a standpipe is required, do the fire hose valves provide coverage within 200' of hose?
- Are the fire hose valves located at the intermediate landings of the stairs?
- If a combined system is used in a high-rise, does each floor have a separate control valve and flow switch?
- Is the dedicated standpipe riser at least 4" and combination risers at least 6" in diameter?
- Does the remote riser have two 2-1/2" outlet on the roof?
- Do stairs with access to the roof have an outlet at the highest landing, and stairs without roof access have an outlet on the roof?
- Do the calculations indicate at least 100 psi at the roof manifold of the most remote riser?
- Does the system have a pressure reducing valves for fire hose connections and sprinkler line if the pressure exceeds 175 psi?
- Is there a test riser for PRV's and are the sizes shown?
- Does the supply curve exceed the demand when flowing 1000 gpm?
- Does standpipe show a minimum residual pressure of 100 psi at remote and adequate volume for each standpipe?
- Do the drawings indicate the installation of the fire pump in compliance with the code?
- Does the fire pump room contain adequate drainage?
- Does the fire pump room have adequate emergency lighting?
- If electric driven, does the fire pump have a backup generator?
- If a secondary power supply is required, has it been provided?
- If diesel driven, does the fire pump have sufficient fuel, battery, and exhaust capacity?
- Does the drawing show the required fire pump bypass?
- Is the fire pump room free of exposures and separated by 2-hr rated construction?
- Does the fire pump room have sprinkler protection?
- Does the fire pump suction have an eccentric reducer?
- Are elbows parallel to horizontal fire pumps at least a distance of 10 times the intake diameter from the pump suction?
- Is the Fire Pump Room free from any electrical or plumbing conduits running through it?
- Are the products listed or approved for the application?
- Do the sprinklers cut sheets correspond with the hydraulic calcs and drawings and do they provide the adequate coverage?
- Are the correct temperatures and orientation specified for each sprinkler?
- Are all control valves and flow indicating devices electronically monitored?

Fire Underground Mains Review: (Must be included in plans if applicable)

- Does the site plan show public hydrant location? (If applicable, one hydrant ten to fifteen feet from the FDC of the building, per city of Miramar FP sheet details)
- Is the point of connection clearly marked near the tap to the public main?
- Is the private main designed, installed and tested per code?
- Has the underground piping been routed to avoid running under driveways and/or buildings?
- Does the plan show or note depth of cover to be at least 30"?
- Are hydrants installed on at least a 6" main if looped system; or an 8" main if not looped system?

- Are mains designed to avoid dead-end mains exceeding 600' if it is less than 10' in diameter?
- Does the plan indicate the type of pipe to be used?
- Does the plan show details of joints to be used; restraints, thrust blocks, etc?
- Does the plan show details for hydrant installations?
- Does the plan show sectional valves installed in large system at every 6 hydrants?

All plans must include the following verbiage and details if applicable to the scope of work:

Photometric Note (for any plans altering/installing/modifying emergency lighting)

“The contractor is required to provide a calibrated light meter at time of inspection to verify the emergency lighting photometrics prior to the issuance of the certificate of occupancy. If the contractor cannot secure the structure to prevent natural light from entering during the testing of the emergency lighting, and inspection after normal business hours may be required at the contractor’s expense.”

Fire Alarm Note (for any plans altering/installing/modifying fire alarm notification devices)

“Contractor shall be required to provide at time of inspection- a calibrated dBA meter to verify ambient levels per design documents and adopted codes”

Bi-Directional Amplifier Note (for any new or existing project)

“Two-Way Radio Communication Enhancement Systems. In all new and existing buildings, minimum radio signal strength for fire department communications shall be maintained at a level determined by the AHJ. Where required by the AHJ, two-way radio communication enhancement systems shall comply with NFPA 1221.”

For Warehouse/Storage type occupancies and/or Rack systems:

2 sets of Floor Plans (Interior of Warehouse) to include:

- Warehouse Floor Plans with dimensions and showing existing conditions and the proposed work
- Description of stored product to determine Commodity Classification
- Occupancy Group, S1 (Moderate-hazard) or S2 (Low-hazard storage)
- Location of rack aisles, passageways, exit signs, detailed path of egress to exit(s)
- Locations and distance of sprinkler deflectors to top of storage (if applicable).
- Show fire hose stations, diameter, and length of hose info.
- Location of roof-support columns (Do they need to be protected?)

- Verify that the path of egress follows designed emergency lighting layout.
- Submit photometric information.
- Clearly define whether rack shelving is the open or closed type.

2 sets of cross- section of proposed storage racks to include:

- Rack manufacturer’s brochure showing all rack-to-rack connections.
- Material used for racks.
- Rack Leg floor anchor information (Type, number, embedment depth to concrete, etc.)
- Racking system design weight limit information.
- Engineer Letter Certification (2 sets) indicating that concrete slab will support the imposed loads.
- Locations and height of sprinklers.
- Height and width of racks including the space dimensions
- Material used for racks.
- Design weight limits.
- Rack to rack connections (type & number).
- Rack to floor connections (type & number).

NOTE: ARCHITECTS/DESIGN PROFESSIONALS MUST DESIGN TO THE ADOPTED CODE AND NOT TO THIS CHECK LIST. ADDITIONAL ITEMS CAN BE ADDED TO THE CHECKLIST AS REQUIRED BY THE AHJ ON A CASE-BY-CASE BASIS.

NAME	SIGNATURE	DATE
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You may request a meeting with one of our Fire Plans Examiners by visiting the following link:

<https://outlook.office365.com/owa/calendar/MiramarFireRescueFireLifeSafetyDivision@miramarfl.onmicrosoft.com/bookings/>

***** ALL ITEMS MUST BE CHECKED OR “N/A” MUST BE WRITTEN NEXT TO PROVIDED CHECK BOX*****

*****FAILURE TO SUBMIT COMPLETD FORM WITH PLANS WILL RESULT IN AUTOMATIC FAILURE*****

*****SEE CITY WEBSITE FOR LATEST COMISSION APPROVED FEE SCHEDULE*****

MOST COMMON REASONS FOR DISAPPROVAL

- Incomplete summary of codes, including missing code references and incorrect editions listed.
- Printed digital signature instead of wet sign and seal. (Fire does not currently accept digital plans for review)
- Failure to include detailed response letter with resubmittals or revisions referencing sheet number clearly addressing reviewer's comments.
- Failure to clearly define the Scope of Work; show key plan of renovation space or entire floor plan.
- Missing Life Safety Sheet
- Sprinkler and fire alarm design documents, including hydraulic calculations, missing from submitted building permit plans when required.
- Including engineering details in plans instead of shop drawings.
- Incorrect or incomplete address listed in plans.
- Fire extinguisher locations missing from plans.
- Insufficient remoteness of exits.
- Point of service location on site plan not clearly shown.
- ISO and necessary fire calculations not provided.
- Incorrect spacing of sprinkler heads.
- Incorrect spacing of fire alarm notification devices.
- Incorrect or missing door ratings in fire-rated missing assemblies.
- Incorrect locking devices on doors.
- Lack of necessary egress from elevator lobbies.
- Hold open devices shown without corresponding smoke detectors.
- Incorrect color coding of fire hydrants.