



Glades County Building Department

250 6th Street SW

Moore Haven, Florida 33471

(863) 946-0533 or (866) 508-9718

NOTE: Building Code compliance is the obligation of design professionals and/or contractors. Plan Review and Inspection Guidelines are intended to be used by designer professionals and contractors to assure that construction plans and construction projects, at a minimum, address the same code priorities that the Glades County Building Department will be looking at during plan review and inspection. The Guidelines are not all inclusive. Additional requirements in the Florida Building Code, not included in the guidelines, may also apply to your project. If you need assistance with a code question please consult the Florida Building Code or contact the Building Department at (863) 946-0533.

MECHANICAL INSPECTIONS GUIDELINE

#264 ROUGH MECHANICAL INSPECTION

- A. Check the following items around the outside of the building.
1. Roof or wall exhaust vent termination caps FBC-M 401.6 & 501.3
 2. Bathroom exhaust vent termination caps FBC 13-606.1ABC.1.3 AND FBC-M 401.5
 3. Dryer exhaust vent termination caps must be dampered with no screen FBC-M 504.4
 4. Range hood exhaust vent termination cap FBC-M 505, 506, 507
 5. A/C refrigerant copper installed at condenser location with suction piping insulated FBC-M 1107
 6. Sealing A/C refrigerant piping chase with moisture resistance material FBC 1205.1.2 AND FBC-M 1107
 7. Ensure that the location of all electrical circuit cable/conductors supplying H.V.A.C. equipment allows for proper working clearances. NEC 110-26
 8. Exterior ducts, exterior type duct material, proper R-value, properly supported at least 6" above grade FBC 13 TABLE 6-10 AND FBC-M 603.5.6.6, 603.12, 603.14
 9. Proper crawl spaces and attic ventilation FBC-M 404
 10. Roof dry-in to protect duct material from weather FBC-M 603.14
- B. Check the following items inside the building.
1. Air-handlers located in accessible spaces. FBC-M 306
 2. Air-handler platform FBC-M 602.3, 603.10
 3. Supply and return-air plenums, at least 4" clearance all around for proper sealing, protect exposed ends from over-spray FBC-M 603.1.3, 603.1.5
 4. A/C refrigerant copper piping installed in concealed chases FBC-M 1107
 5. Insulation required on A/C refrigerant copper suction pipe FBC-M 1107
 6. Insulation required on any concealed portion of the condensate drain piping FBC-M 1107
 7. A/C chase opening must be sealed and can't terminate inside an air plenum FBC 1205.1.2 and FBC-M 603.10
 8. Air-handlers in attics. FBC 13-410.1.ABCD.3.5.2; FBC 13-610.ABC.3.5.2; FBC-M 306.3
 - a. Trusses must be engineered to support the added weight.
 - b. Attic access opening must be large enough to remove the equipment but in no case less than 20" X 36". FBC 2309.6
 - c. Attic access opening can not be more than 6' from the equipment service panel. FBC 13-610
 - d. There must be a 24" wide unobstructed passageway with solid continuous flooring to the equipment. The passageway must be elevated to allow for the correct thickness of insulation between the solid flooring of the passageway and the ceiling below.
 - e. A level 30" long solid platform must extend at least 30" out from the service panel of the equipment. This solid platform must also be elevated to allow for the correct thickness of insulation below. There must be at less 30" of vertical clearance above the solid platform.
 - f. A device must be installed to alert the owner or shut the unit down when the condensation drain is not working properly. FBC 13-610

- g. An auxiliary drain pan with a separate drain line must be installed under the unit. FBC-M 307
 - h. A notice is posted on the electric service panel indicating to the homeowner that the air handler is located in the attic. FBC 13-610
 - i. A lighting outlet must be installed at or near the equipment requiring service with the lighting outlet switch at the attic access opening. FBC-M 306 and NEC 210-70
 - j. A 120 volt receptacle outlet must be installed in the attic and within 25' of the equipment needing service FBC-M 306.3.1 and NEC 210-63
 - k. A minimum 5' vent termination height above a gas fired air handler must be maintained. FBC-M 802.5 and FBC-FG 506.6.2
- C. Air-handlers in crawl spaces. FBC-M 306 and NEC 210-63 & 70
- 1. Access opening must be large enough to remove the equipment but in no case less than 22" X 36".
 - 2. Access opening can not be more than 20' from the equipment.
 - 3. A level grade or solid platform must extend at least 30" out from all sides of the equipment that will require access for servicing.
 - 4. There must be at least 36" of vertical clearance above the level grade or solid platform for service access.
 - 5. A lighting outlet must be installed at or near the equipment requiring service with the lighting outlet switch at the attic access opening
 - 6. A 120 volt receptacle outlet must be installed in the crawl space and within 25' of the equipment needing service.
- D. Roof or exterior wall installation FBC-M 306
- E. Supply and return-air duct system FBC-M 603; FBC 13-610
- 1. Review duct layout plan.
 - 2. Proper size of all supply/return ducts and duct boots
 - 3. Proper assembly of all seams on fiberglass duct board with mechanical fasteners and approved sealing tape
 - 4. Proper mechanical connection and sealing of all ducts with approved materials at plenums, duct joints, distribution boxes and supply/return boots. Spliced joints on flexible duct material require metal splicing collars.
 - 5. Proper R@ value of duct material FBC-13 TABLE 6-10
 - 6. Proper support of all ducts without restricting air flow
 - 7. Proper height of ducts to allow for ceiling insulation
 - 8. Proper sealing around all supply/return boots that penetrate an insulated ceiling or wall. FBC 13-606
 - 9. Cold-air return from all rooms except bathrooms, laundry rooms and small closets. (return-air duct inlets may not be within 10' of a cooking appliance) FBC-M 918.6
 - 10. Proper sized air-transfer opening where necessary. FBC-M 601.4
 - 11. Combustible materials shall not be used in plenums unless properly protected. FBC-M 602
- F. Exhaust system
- 1. Bathroom exhaust fans FBC-M 403
 - 2. Properly vented to exterior of building. FBC-M 501
 - 3. Fan not required in toilet rooms only if window is installed which has a 3 sq. ft. clear open area when opened FBC 1203.4.2
 - 4. Clothes dryer vents FBC-M TABLE 603.3
 - a. Minimum 30 gauge smooth metal pipe (galvanized or corrosion resistant)
 - b. Minimum 4" diameter duct properly vented to outside air with a dampered termination cap with no screen
 - c. Properly supported, no screws or obstruction inside duct
 - d. Joints in direction of flow
 - e. 25' maximum length (minus 5'/90 degree & 2 1/2'/45 degree turns) unless dryer specifications allow greater length.
 - f. Provide nail protection for duct where necessary.

- 5. Range hoods
 - a. Residential FBC-M 505
 - b. Commercial FBC-M 506 & 507
- 6. All exhaust ducts of approved material must be mechanically fastened and sealed where they connect to the appliances, at all joints and outside air termination locations. FBC-M 603
- 7. Exhaust ducts must be properly supported at appropriate distances to prevent duct movement. FBC-M 603
- 8. Exhaust ducts must be sized properly for the appliance they serve.
- 9. Grease hood vents FBC-M 506
- 10. Exhaust must terminate at proper locations. FBC-M 903
- G. Factory-built solid fuel burning appliances
 - 1. Wood and coal burning stoves per manufacturer=s specifications
 - 2. Fireplaces per manufacturer=s specifications
 - 3. Proper-type flue pipe with proper clearances to all combustible material
 - 4. Proper flue termination height above roof or through side walls
 - 5. Proper draft stopping of all flue chases
 - 6. Proper size and material of hearth at fireplaces (check for ash safety strip)
 - 7. Proper ventilation and combustion air for fireplaces
 - 8. Check need for gas permit and inspections.

#263 ROUGH GAS INSPECTION

- A. Check the following items around the outside of the building.
 - 1. Location of gas pipe penetration through exterior wall. FBC-FG 404
 - 2. Locate pressure test gage with at least 10 P.S.I. and test identification label. FBC-FG 406
 - 3. Underground piping must be at least 18" below grade and protected from corrosion. FBC-FG 404.9
 - 4. Flue vent locations through roof or walls, termination caps and heights, weatherproof flashing. FBC-FG 506
- B. Check the following items inside the building.
 - 1. Gas pipe installation.
 - a. Review gas-piping plan. FBC-FG 401
 - b. Proper pipe material and size. FBC-FG 402 & 403
 - c. Proper pipe support, nail protection and termination locations. FBC-FG 407
 - d. Gas piping not allowed in the concrete slab without approval. FBC-FG 404.6
 - e. Electrically bond gas pipe. FBC-FG 309.1
 - f. Pressure test of 10 P.S.I. required on all gas piping. FBC-FG 406.4
 - g. Sufficient combustion air in all rooms containing gas appliances. FBC-FG 304
 - 2. Flue vents.
 - a. Size and type of material. FBC-FG 502
 - b. Properly installed and supported. FBC-FG 503.6 & .7
 - c. Mechanical connection required at all flue vent pipe joints and attachment to appliances.
 - 1) Clearances from combustible materials. FBC-FG 503
 - 2) Single wall flue vent pipe in exposed areas. FBC-FG TABLE 506.7.3
 - 3) Double wall (type B, BW) flue vent in attics and concealed spaces. FBC-FG 506.7.3
 - d. Multiple appliances served by a common vent. FBC-FG TABLE 502(6)
 - 1) Location of vent connector connections.
 - 2) Size and type of vent connector.
 - e. Vertical height of flue vent versus horizontal run. FBC-FG CHPT 5
 - f. Flue damper stops required on gas log fireplaces. PER MANUFACTURER

#262 WALL AND VAULT INSULATION INSPECTION

- A. Check the following items around the outside of the building.
 - 1. Roof covering completed and weather-tight
 - 2. All windows and doors installed, all opening in the exterior walls are sealed FBC 13-606
 - 3. All exterior doors are to be insulated or solid wood. FBC 13-603
 - 4. Type of glass in windows and doors FBC 13-601
 - 5. R-value and support of insulation under raised floors over crawl spaces FBC 13-605
- B. Check the following items inside the building.
 - 1. R-values of batt insulation material in walls and ceiling. FBC 13-602 & 604
 - 2. Insulation must be installed in accordance with energy calculation requirements. FBC 13 600.3.ABC.2
 - 3. All joints, cracks, and holes in exterior walls including along the bottom plates of framed exterior and adjacent walls must be sealed to prevent air infiltration. FBC 13-606
 - 4. All voids are properly insulated (inside wooden window arches and behind tub/shower units).
 - 5. Vapor barrier where required.
 - 6. All pipes, ducts and wires elevated high enough in the attic to allow for proper thickness of insulation.
 - 7. All provisions for blown-in ceiling insulation. FBC 13-604
 - a. Baffles or chutes for insulation over R-19.
 - b. Dams for insulation up to R-19.
 - c. Rulers every 6' to 10' and visible from access openings.
 - d. Batt insulation where vertical clearance does not allow blown-in insulation (corners of hipped roofs).
 - e. Proper-sized attic access openings. FBC 2309.6

#260 FINAL MECHANICAL INSPECTION

- A. Check the following items around the outside of the building.
 - 1. Exterior ducts.
 - a. Exterior type duct material. FBC 13-610
 - b. Proper R-value of insulated jacket. FBC 13-TABLE 6-10 and FBC-M 604
 - c. Properly supported at least 6" above grade. FBC-M 304.7
 - d. Proper mechanical fastening and sealing on all seams, joints and connections. FBC-M 603
 - 2. Proper crawl spaces and attic ventilation. FBC-M 404
 - 3. Roof or wall exhaust vent termination caps. FBC-M 401
 - 4. Bathroom exhaust vent termination caps. FBC-M 401
 - a. Dryer exhaust vent termination caps must have a damper and no screen. FBC-M 504
 - b. Range hood exhaust vent termination cap. FBC-M 505
 - 5. H.V.A.C. equipment
 - a. Supported on solid pad. FBC-M 304
 - b. Equipment bases at least above grade. FBC-M 304
 - c. Condensate drain installed correctly and trapped. FBC-M 307
 - d. Metal thermal collars when connecting ducts within 6" of heat strips. FBC-M 604.8
 - e. Data plate on equipment. FBC-M 301.6
 - 1) Model number of equipment (including B.T.U. size)
 - 2) Minimum circuit ampacity
 - 3) Proper size of over-current protection device
 - f. Proper sizing, installation and protection of electrical circuit conductors. NEC 310-16
 - g. Location and installation of equipment disconnects. NEC 110-26
 - h. Proper size of electrical circuit over-current protection device. PER MANUFACTURER
 - 6. Location of gas pipe penetration through exterior wall and clearances for gas meter. FBC-FG 404
 - 7. Confirm electrical bonding of gas piping. NEC 250-104
 - 8. Underground piping must be at least 18" below grade and protected from corrosion. FBC-FG 404
 - 9. Flue vent locations through roof or walls, termination caps and heights, weatherproof flashing.
- B. Check the following items inside the building.
 - 1. Air-handler located in an accessible space.
 - a. Proper access, working clearances around equipment and ducts/plenums. FBC-M306
 - b. Equipment is adequately supported.

- c. Proper connection and sealing of duct system to equipment. FBC 13-610.1.ABC.3
 - d. Sealing of duct penetration through walls and ceilings if in conditioned space.
 - e. Proper connection and support of all piping to equipment.
 - f. Data plate on equipment.
 - 1) Model number of equipment (including B.T.U. size).
 - 2) Minimum circuit ampacity.
 - 3) Size of over-current protection device.
 - g. Proper sizing, installation and protection of electrical circuit conductors. NEC 310-16
 - h. Location and installation of equipment disconnects. NEC 110-26
 - i. Proper size of electrical circuit over-current protection device. PER MANUFACTURER
 - j. Energy Performance Level display card (EPL card) completely filled out, signed by the licensed builder and posted on the air-handler. FBC 13-104
 - k. Florida H.V.A.C. Efficiency card completely and accurately filled out and signed by H.V.A.C. contractor and posted on the air-handler or a Federal Trade Commission Label on each piece of the H.V.A.C. equipment. FBC 13-104
 - l. Ensure that the B.T.U. size of the air-handler and condenser match on all split unit systems. FBC 13-607
 - m. A/C chase opening must be sealed. FBC 13-306
2. Air-handlers in attics.
- a. Trusses must be engineered to support the added weight.
 - b. Attic access opening must be large enough to remove the equipment but in no case less than 20" X 36".
 - c. Attic access opening cannot be more than 6' from the equipment service panel. FBC 13-610
 - d. There must be a 24" wide unobstructed passageway with solid continuous flooring to the equipment. The passageway must be elevated to allow for the correct thickness of insulation between the solid flooring of the passageway and the ceiling below.
 - e. A level 30" long solid platform must extend at least 30" out from the service panel of the equipment. This solid platform must also be elevated to allow for the correct thickness of insulation below. There must be at less 30" of vertical clearance above the solid platform.
 - f. A device must be installed to alert the owner or shut the unit down when the condensation drain is not working properly. FBC 13-610
 - g. An auxiliary drain pan with a separate drain line must be installed under the unit. FBC-M 307
 - h. A notice is posted on the electric service panel indicating to the homeowner that the air handler is located in the attic. FBC 13-610
 - i. A lighting outlet must be installed at or near the equipment requiring service with the lighting outlet switch at the attic access opening. NEC 210-70 & FBC-M 306
 - j. A 120-volt receptacle outlet must be installed in the attic and within 25' of the equipment needing service. NEC 210-63
 - k. A minimum 5' vent termination height above a gas fired air handler must be maintained. FBC-FG 506.6.2 & FBC-M 802
3. Air-handlers in crawl spaces.
- a. Access opening must be large enough to remove the equipment but in no case less than 30" X 22".
 - b. Access opening cannot be more than 20' from the equipment.
 - c. A level grade or solid platform must extend at least 30" out from all sides of the equipment that will require access for servicing.
 - d. There must be at less 30" of vertical clearance above the level grade or solid platform for service access.
 - e. A lighting outlet must be installed at or near the equipment requiring service with the lighting outlet switch at the access opening.
 - f. A 120-volt receptacle outlet must be installed in the crawl space and within 25' of the equipment needing service.
 - g. Support and clearance from the ground to the equipment. FBC-M 304

4.	Dryer exhaust vent inlet if equipped.	FBC-M 504
5.	Range exhaust hood if equipped.	FBC-M 505
6.	Bathroom ventilation or exhaust fans.	FBC-M 403
7.	Height of ceiling fans.	FBC 1203.2.6
8.	Grills on all supply and return-air openings.	FBC-M 603.15
9.	Cold-air return from all rooms except bathrooms, laundry rooms and small closets.	
10.	Factory-built fireplace.	FBC-M 903
	a. Proper size of hearth and clearance from combustibles.	
	b. Combustion air.	
	c. Chimney termination height.	FBC-FG 506.5
11.	Commercial systems over 65,000 B.T.U. require a Test and Balance Report.	FBC 13-410
12.	Gas appliances and stub-outs located per the approved plan.	
13.	Required clearances for gas appliances from combustible materials.	FBC-M 304
14.	Pilot light on gas-fired appliances in garages must be at least 18" above the floor level.	FBC-M 304
15.	Gas appliances in garages must be provided with reasonable protection from damage from vehicles.	FBC-M 303.4
16.	Sufficient combustion air in all rooms containing gas appliances.	FBC-M 701
17.	Location of gas water heaters.	FBC-FG 303.3
	a. Temperature and pressure relief valve.	FBC-M 1006
	b. Need for drain pan.	FBC-P 504
	c. Discharge location for T/P relief valve and drain pan.	FBC-M 1006
18.	Shut-off valves within 6' of all installed appliances, hard caps on all stub-outs.	FBC-FG 409
19.	Locate regulators on high-pressure systems; (are appliances listed for higher pressure?)	FBC-FG 410
20.	Flue vents	FBC-FG 501
	a. Size and type of material.	FBC-FG 502
	b. Properly installation and supported.	FBC-FG 503
	c. Mechanical connection required at all flue vent pipe joints and attachment to appliances.	
	d. Clearances from combustible materials.	
	1) Single wall flue vent pipe in exposed areas only and needs 6" of clearance to combustibles.	FBC-FG TABLE 506.7.3
	2) Double wall (type B, BW) flue vent pipe in attics and concealed spaces need clearances per the label listing.	
	e. Multiple appliances served by a common vent.	FBC-FG 502.3
	1) Location of vent connector connections.	
	2) Size and type of vent connector.	
	f. Vertical height of flue vent versus horizontal run.	FBC-FG 506.6 TABLE 502
	g. Flue damper stops required on gas log fireplaces.	PER MANUFACTURER
21.	Blown insulation:	
	a. Locate attic access openings and check for gasket seal	FBC 13-006.1.ABC.1.2.3(5)
	b. Blown-in ceiling installed and insulation card posted	FBC 13-606
	c. Areas around all penetrations through walls and ceilings in conditioned spaces must be properly sealed.	FBC 13-606