GROWTH MANAGEMENT DEPARTMENT
201 SE 3rd ST, (Second Floor), Ocala, FL 34471
(352) 629-8421; FAX: (352) 629-8264

BUILDING CODE GUIDELINES FOR ELECTRICAL INSPECTIONS

Building Code compliance is the obligation of design professionals and/or contractors. Plan Review and Inspection Guidelines are intended to be used by design professionals and contractors to ensure that construction plans and construction projects, at a minimum, address the code priorities that the City of Ocala Growth Management will be looking at during plan reviews and inspections. **These Guidelines are not all inclusive**. Additional requirements in the Florida Building Code may also apply to your project. If you need assistance with a code question, please consult the Fifth Edition (2014) Florida Building Code or contact the City of Ocala Growth Management at (352) 629-8421.

Abbreviations for Code Citations Found on Building Division Forms: **Volume**	**Abbreviation**
Fifth Edition (2014) Florida Building Code – Building	FBC- B
Fifth Edition (2014) Florida Building Code – Plumbing	FBC- P
Fifth Edition (2014) Florida Building Code – Mechanical	FBC- M
Fifth Edition (2014) Florida Building Code - Fuel Gas	FBC- G
Fifth Edition (2014) Florida Building Code - Existing Building	FBC- EB
Fifth Edition (2014) Florida Building Code – Residential	FBC- R
2011 National Electrical Code	NEC
Fifth Edition (2014) National Fire Protection Association	NFPA
Mobile Home	FAC-15C, MH04-02

Electrical Inspection Guidelines based on 2011 NEC

General Information for all Permits	
A. Permit Card	FBC 105.7
B. Approved site Plan	FBC 107.3.5
C. Approved Complete set of Plans	FBC 107.3.1
D. Sanitary Facilities on site	FBC 3305.1, FBC P 311.1
Temporary Power Pole:	
A. Support post to be a minimum 4"x4" pressure treated post with two 2" x 4" x 14' long braces or a 6" round pole, all to be of adequate height and buried to the proper depth. Overhead bracing is not required if service is underground.	Utility Requirement
B. Service drop conductors required to have a minimum 10'or 12' vertical clearance.	NEC 230.24B1 or B2 NEC 225.18
C. Proper riser weather-head installed for overhead services.	NEC 230.54, 250.53
D. Conductors to be suitable for the location.	NE 310.8 and Table 310.13
E. Meter-can mounted between 3 ½ ' and 5 ½ ' above grade.	Utility Requirement
F. Service equipment to be suitable for the location.	NEC 230.70(A) and 110.3
G. Grounding electrode installed.	NEC 250.52
H. Proper identification of neutral and grounding conductors.	NEC 200.6, NEC 250.119
I. Service equipment properly bonded with main bonding jumper installed.	NEC 250.24, NEC 250.28, NEC250.102 NEC 250.96
J. Receptacles must be GFCI protected and weatherproofed.	NEC 590.6, NEC 406.8
K. Minimum #8 AWG CU or #6 AWG aluminum conductors.	NEC 230.23(B), NEC 230.31(B)

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Construction Electrical Service:	
A. Support is to be a structurally sound masonry wall.	Bldg. Department Requirement
B. Meter-can mounted between 3 ½ ' and 5 ½ ' above grade.	Utility Requirement
C. Service disconnect equipment to be suitable for the location.	NEC 230.70(A) and 110.3
D. Conductors to be suitable for the location.	NEC 310.8 and Table 310.13
E. Grounding electrode installed.	NEC 250.52, 250.53
F. Proper identification of neutral and grounding conductors	NEC 200.6, NEC 250.119
G. Service equipment properly bonded with main bonding jumper installed	NEC 250.24, NEC 250.28, NEC 250.102 NEC 250.96
H. Receptacles must be GFCI protected and weatherproofed	NEC 590.6, NEC 406.8
I. Main disconnect enclosure must be lockable	Bldg. Department Requirement
Rough Electric Underground:	
A. Direct Burial Conductors and Cables	
1. Ensure burial depths of all direct burial conductors comply with NEC Table 300.5.	NEC Table 300.5
2. All direct burial conductors must be rated for direct burial and suitable for wet locations.	NEC 310.8, NEC 310.13
3. Bushings or terminal fittings with integral bushed opening shall be used at the end of conduit or raceways that terminate underground where conductor or cables transition to a direct burial method.	NEC 300.5(H)
4. Confirm that all direct burial conductors or cables emerging from the ground are protected by enclosures or raceways extending from the minimum cover distance required by Table 300.5 below grade to a point up to 8' above finished grade.	NEC 300.5(D)(1) & (4)
5. Ensure any splices on direct burial cables or conductors are listed for burial application.	NEC 300.5(E)
B. Underground Raceways	
1. Ensure the raceway is listed for underground application.	NEC 110.3
2. Ensure the raceway depth complies with NEC Table 300.5	NEC Table 300.5
3. Ensure raceway fill and conductor ampacity for service conductors, feeder and branch circuits conductors comply with:	NEC 310.15, Chapter 9 and Appendix C
4. Ensure the sizes and types of all other conductors comply with:	NEC Table 310.16
5. All conductors installed in raceways underground, in concrete slabs or masonry in direct contact with the earth must be suitable for wet locations.	NEC 310.8, 310.13
6. Conduits or raceways that are installed underground through which moisture may contact energized parts shall be sealed.	NEC 300.5(G)
7. Floor boxes shall be listed specifically for this application and shall be used for receptacles located in the floor.	NEC 314.27(C)
C. Grounding Electrode System: If a structure is to have electric installed now or at a later date, then a concrete encased electrode is to be installed in the footing or monolithic slab. (This concrete encased electrode is to be inspected at the footing or monolithic slab inspection and a note placed on the "Inspection Information" tab of CD-Plus confirming the location of the electrode)	NEC 250.52(A)(3)

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Rough Electric:	
A. Service: Verify service entry location, size, raceway, conduit-fill, bushings, bonding and grounding.	NEC 230, 250, 310 ,312, 314, Chapter 9 Tables 4 & 5
B. Receptacle Circuits	
1. Two 20 amp circuits for small appliances in the kitchen.	NEC 210.11(C).1
2. One 20 amp circuit for laundry.	NEC 210.11(C).2
3. One 20 amp circuit for bathroom receptacles.	NEC 210.11(C).3
4. One receptacle on exterior front and rear of building	NEC 210.52(E), 400.6
5. Receptacle spacing - 6' rule in habitable rooms, 2' rule on kitchen countertops, any wall space greater than 2', and any counter space greater than 12", Islands	Check all other requirements of NEC 210.52
C. General Lighting Circuits	
1. Verify all required outlets	NEC 210.70, 210.63
2. Maintain proper clearance for clothes closet lighting fixtures.	NEC 410.2
3. Confirm bathroom light fixture type and location.	NEC 410.10(D)
4. Confirm attic, storage or equipment space lighting outlet and receptacle locations.	NEC 210.63, 210.70
5. Verify exterior and dwelling unit personnel entrance / exit door fixture locations.	NEC 210.70
D. General Wiring	
1. All wiring installed and properly supported with no open splices.	NEC 334.30, 322.56, 110.14, 300.15
2. Nail protection plating as required.	NEC 300.4(A)(1), 300.4(B)(2), 300.4(D)
3. Minimum of 6" of free conductor at each outlet, junction or switch box.	NEC 300.14
4. Where NM cable is used with non-metallic boxes, the sheath shall extend not less than 1/4" inside the box/beyond the clamp.	NEC 314.17(C)
5. Verify Proper Box Fill.	NEC 314.16, Table 314.16(A)
6. Proper application of installed wiring system (MC Cable, NM Cable, SE Cable, etc.).	NEC 330, 334, 338 Ampacities 310.16
7. Proper fittings used with raceways and cables.	NEC 300.15
8. Conductors shall be insulated.	NEC 310.2
9. Raceways shall be complete runs.	NEC 300.18
10. Paddle fan outlet boxes must be listed for fan use.	NEC 314.27(D), 422.18
11. Protection of attic wiring shall be within 6' of access opening or storage floor area.	NEC 334.23, 320.23, 330.23
12. Verify bushing on all raceways containing ungrounded conductors, #4 or larger.	NEC 300.4(G)
13. All unused opening in junction boxes and cabinets must be closed.	NEC 110.12(A), 408.7 , 312.5A
14. Verify ceiling insulation type, if structure receives batt insulation, all wiring will be required to be secured above the trusses to allow for installation of insulation.	FBCEnergy 303.2.3
15. Limited energy (security, sound, intercoms, etc) systems must be listed on the approved plans or a separate permit posted on the site. If the limited energy work is performed under a separate permit, then all work must be completed and inspected prior to full approval of the 208 inspection. (compliance with Ch. 7&8)	NEC 720, 725, 760, 770
E. Grounding & Bonding	

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1. All metal boxes and raceways shall be grounded.	NEC 250.80, 250.148, 314.4, 314.40(D)
2. Grounding conductors shall be mechanically connected.	NEC 250.80, 250.148, 110.14
3. Metal piping systems, exposed interior structural steel and all metal framing members shall be bonded.	NEC 250.104 FBC 2704, FBC-R 3402, 250.122
4. Locate the grounding electrode and if it is connected to the services at this time make note under the Final inspection in CD Plus.	Inspector staff only
F. Smoke Detectors	NFPA 72 2007 Edition
1. Inside and outside all sleeping areas.	11.5.1.1
2. On each floor level, including basements.	
3. Must maintain a minimum distance of 36" form supply air grills, bathroom and kitchen doors and ceiling fan blades.	11.8.3.5
4. Must be hard-wired and inner-connected.	11.6, 11.8.5
Semi-Power Release:	
A. This inspection is requested prior to a Final inspection to release power to a structure for various reasons such as finishes, testing, etc. This inspection can only be added by Permitting Staff.	
B. Service must be complete including the grounding electrode conductor.	
C. All open boxes, outlets, switches, etc. are required to be made safe and properly completed or covered up to 8'.	
D. All wiring and boxes above 8' must be capped off and made safe.	
E. All Doors and Windows capable of being locked(includes Garage)	
Final Electrical (With or Without) Power Release	
A. Services: Require proper working clearances.	NEC 110.26, 230.24
1. Overhead Service	
a. Verify proper weather-head height, riser and support.	NEC 230.26-28, 230.54
b. Meter enclosure properly secured.	
c. Grounding electrode conductor properly sized and connected to electrode.	NEC 250.50, 250.52, Table 250.66
2. Underground Service	
a. Service laterals that are not installed by the power utility must comply with the location identification requirements of:	NEC 300.5(D)
b. Conductors must be properly sized and supported in a raceway.	NEC 230.31, 230.42
c. Meter enclosure properly secured.	NEC 312
d. Grounding conductor properly sized and connected to electrode.	NEC 250.50, 250.52, Table 250.66

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3. Service entry conductors must be properly sized and the correct type.	NEC Table 310.15(B)(6), Table 310.16, Table 310.13(A)
4. Main service disconnect properly sized and secured; and all service equipment properly bonded.	NEC 230.70-212, NEC 250
5. All service equipment must meet or exceed the Available Instantaneous Current (A.I.C.) at the point of power delivery.	NEC 110.9, 250.53, Table 250.66
6. Over-Current devices must be properly identified with proper termination of all conductors and proper conduit fill and conductor protection.	NEC 110, 240, 312, 408
7. Panel schedule is complete and accurate.	NEC 408.4
8. Only one neutral conductor per terminal on neutral bar.	NEC 408.41
9. Services containing a steel nipple between the meter can and panel requires a bonding bushing.	NEC 250.94B4
10. Arc Fault Protection installed for all bedrooms.	NEC 210.12
B. Sub Panels and Disconnects:	
1. Proper working clearance per:	NEC 110.26
2. Check that enclosures, feeder conductors, over-current devices and circuit conductors are properly sized, identified, terminated and grounded or bonded.	NEC 110, 312, 314, 408
3. Arc Flash Protection	NEC 110.16
C. Receptacles:	
1. Check condition	
2. Open grounds or reversed polarity.	NEC 200.11
3. Confirm all spacing: 6' spacing in habitable rooms, 2' spacing on countertops, and within 3' of all bathroom sinks.	NEC 210.52
4. GFCI protection installed where required - bathrooms, kitchens, garages, exterior receptacles, hydro tub if installed, within 6' of wet bars, etc.	NEC 210.8
5. Receptacle installed at exterior front and rear of building. If a screen enclosure is installed, then a receptacle must be installed outside the enclosure.	NEC 210.52(E)
6. Receptacle within 25' of all heating and cooling equipment and on the same level.	NEC 210.63
7. Extension rings as required in combustible surfaces.	NEC 314.20
8. Arc Fault Protection installed for all bedrooms.	NEC 210.12
D. Luminaries (lights fixtures)	
1. Condition and support.	NEC 410
2. Installed where required or switchable receptacles as permitted.	NEC 210.70
3. In closets: fixture type, maintain proper spacing from edge of shelf storage area. No incandescent fixtures with open or partially enclosed lamps and no pendant fixtures.	NEC 410.2, 410.16
4. Exterior fixtures at all egress doors and listed for wet or damp location.	NEC 210.70(A)2, 410.10
5. No hanging fixtures or fans are installed inside the tub/shower zone. Bathroom tub/shower zone is 8' up from and 3' out from the tub rim or shower stall threshold.	NEC 410.10(D)
6. Fixture grounding	NEC 410.40-46

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E. Smoke Detectors	NFPA 72
1. Functional test all detectors.	Ch. 10, 11.10
2. Required inside and outside all sleeping rooms.	11.5.1.1, 11.8.3.5
3. On each floor level, including basements	11.8.3.5, 11.5.1.1
4. Must maintain a minimum distance of 36" form supply air grills, bathroom and kitchen doors and ceiling fan blades.	11.8.3.5
5. Detectors must be hardwired with battery back-up and be interconnected.	11.6, 11.8.5
6. Detectors within 20' of cook appliances must have silencing capability or be photoelectric type.	11.8.3.5

F. Paddle Fans	
1. Properly supported. Boxes to be listed per:	NEC 422.18
2. Must be mounted no less than 7'6" above maximum water level of pools, spas, hot tubs; 8' above flood rim of bathtubs; or 7' above the finish floor in any room.	NEC 680, FBC-R 305.1
G. Miscellaneous	
1. If structure contains gas, ensure gas system is bonded to the grounding grid.	NEC 250.104(B)
2. If structure contains copper piping for water, confirm the piping is bonded.	NEC 250.104(A)
Well / Pump Electric: *Inspection code # 202*	
A. Electric disconnect is within sight and within 50'.	NEC Article 100 Definition of "In Sight From" and 430.102(B)
B. Proper size and branch circuit breaker or fuses.	
C. Proper conductors for motor load, voltage drop, type of location and burial depth.	NEC 300.5, 310.16, 430
D. Physical protection of circuit conductors.	NEC 300.5(D)(1)&(4)
E. Re-identify any white conductors used as a "hot" conductor in a cable assembly.	NEC 200.7(C)(1)
F. Well casing bonded.	NEC 250.112(M)

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