

Plan Review – Plan Submittal Guidelines

(Commercial Plans excluding One and Two Family Dwellings)

Greenville County

Greenville County Square 301 University Ridge, Suite 4100 Greenville, SC 29601 - 3686 864 - 467 - 7060

1. **Two** complete sets of working drawings including site/plot and one set of specs, if applicable. Drawings shall be to scale and fully dimensioned. Minimum Scale shall be 1/8" = 1' - 0".

A [Commercial Building Application](#), [Commercial Zoning Application](#) and a [Plan Submittal Checklist](#) shall be completely filled out and submitted with plans.

The tax map number is required for all reviews/permits. No plan can be submitted until this number is provided. This number is required for verification of Zoning as well as Building Codes.

All drawings shall have a completed **Code Analysis or Code Footprint**, as part of set. **Drawings required to be Sealed** shall be in compliance with SC Architectural/Engineering Registration Law. Any plan(s) drawn by an Architect/Engineer shall have seals. The SC Architectural Board of Registration (803) 896 – 4408 and SC Engineering Board of Registration (803) 896 – 4422 can be contacted for more detailed information. All projects that are required to be designed by a SC Design Professional according to SC registration law drawings will require Special Inspections. Special Inspection documents and all submittal forms can be found on the web at the following address: http://www.greenvillecounty.org/Codes_Enforcement/applications.asp

Size of buildings shall be shown, including square footage of each floor, as well as total gross square footage and break down of number of occupants, as defined in IBC 1004. In cases where the project is within a multi-tenant building (strip malls) a **Key Plan** showing the total area of the building, all tenant space occupancy classifications and location of fire walls, fire barriers, and tenant walls is required to be included.

Minimum Building Code Analysis is to be included with all plans:

Building Code Analysis:

SCOPE OF WORK:

OCCUPANCY CLASSIFICATION:	
TYPE OF CONSTRUCTION:	
SPRINKLER SYSTEM:	
CONSTRUCTION AREA:	
BUILDING AREA:	
BUILDING HEIGHT:	
BUILDING OCCUPANT LOAD:	

2. **Site Plan** (Architectural or Engineering) shall be dimensioned and to scale. All structures, including existing, new, future additions, etc. shall be shown. All dimensions from property lines, distances between buildings or “assumed property lines”, Zoning property set-backs, right of ways, parking, existing and proposed buildings, utilities, fire hydrants, Fire Department connections, fire sprinkler pits, etc. shall be shown on site plans.

Site Plans are required to be submitted to “Land Development” when a “Grading Permit” is required for details call 864-467-4610.

Zoning Code Analysis to be included on the site plan for new buildings and additions:

Zoning Code Analysis:

SCOPE OF WORK:

ZONING CLASSIFICATION:	
OCCUPANCY USE PER GCZO TABLE 6.1:	
NUMBER OF PARKING SPACES REQUIRED PER GCZO 12:1, 12:2, 12:3:	
NUMBER OF PARKING SPACES PROVIDED:	
PARKING LOT LANDSCAPING PER GCZO 12:4:	
SCREENING PER GCZO 12:9:	

SETBACKS: PER GCZO TABLE 7.3

FRONT:	
REAR:	
RIGHT SIDE:	
LEFT SIDE:	

3. A **Parking Lot Landscape Plan** shall be provided as required by the Greenville County Zoning Ordinance No. 3229 sections 12:4 Parking Lots, 12:9 Screening and Buffers and the Greenville County Tree Ordinance 4173. Trees required in parking lots may be counted towards the required density units in the Tree Ordinance 4173. To access ordinances use the following link. [http://www.amlegal.com/nxt/gateway.dll/South%20Carolina/greenvilleco_sc/greenvillecountysouthcarolinacodeofordin?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:grevillecocode_sc](http://www.amlegal.com/nxt/gateway.dll/South%20Carolina/greenvilleco_sc/greenvillecountysouthcarolinacodeofordin?f=templates$fn=default.htm$3.0$vid=amlegal:grevillecocode_sc)

4. **Tree Ordinance Plan** – A plan in accordance with the Tree Ordinance is required for all projects that disturb 1 acre or more. The Greenville County Tree Ordinance 4173 can be located at: [http://www.amlegal.com/nxt/gateway.dll/South%20Carolina/greenvilleco_sc/greenvillecountysouthcarolinacodeofordin?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:grevillecocode_sc](http://www.amlegal.com/nxt/gateway.dll/South%20Carolina/greenvilleco_sc/greenvillecountysouthcarolinacodeofordin?f=templates$fn=default.htm$3.0$vid=amlegal:grevillecocode_sc) .

_____ acres disturbed
 _____ density units required

Note: 15 density units are required per acre.

5. **Foundation Plans** shall also include footing details. All reinforcing and anchor bolt details including diameter, length, embedment, projection, hook, etc. shall be provided. (Also see # 9 below) Where footings will bear on compacted fill material, the compacted fill shall comply with the provisions as set forth in IBC Section 1803.4. A sealed Engineer's Report Detailing this information will be required prior to a footing inspection.
6. **Floor plans** shall show all rooms, halls, restrooms, stairs, etc. All rated walls shall be clearly marked and labeled. **U.L. numbers** and a copy of the U.L. cut-sheet are required for rated assemblies and shall be incorporated into the set. Plans for building additions shall include existing portions of buildings.
7. **Complete elevations** – All sides shall be provided and fully dimensioned with proper grade elevations. Stairway construction shall be detailed showing tread and riser geometry.
8. **Schedules** for rooms, doors, windows, etc. shall show all fire ratings, dimensions, types of hardware, etc. that are necessary per IBC.
9. All **Storage Occupancies** shall provide a completed Storage Occupancy Submittal Supplement which can be found at: http://www.greenvillecounty.org/Codes_Enforcement/applications.asp Provide **MSDS** (with maximum quantities written on each sheet). A summary sheet that categorizes the materials in accordance with IBC Table 307.1 (1) & (2) shall be required in addition to the MSDS.
10. **Structural plans** showing details of foundation, walls, floors, roof, etc. are required. Provide details of connections for all members. Engineered Metal Building design data sheet and erection drawings shall be provided for pre-engineered metal buildings.

Construction Documents for buildings constructed in accordance with the Conventional Light-Frame Construction Provisions of IBC section 2308 and buildings that do not require a design professional shall indicate the following structural design information:

FLOOR LIVE LOAD:	
ROOF LIVE LOAD:	
GROUND SNOW LOAD, P_g DEFAULT 10 PSF	
WIND: NOTE: REQUIREMENTS WILL VARY DEPENDING ON RISK CATEGORY SEE IBC FIGURES 1609 A, B & C	
ULTIMATE DESIGN WIND SPEED, V_{ult} (3 SECOND GUST) IBC 1609.3.1: 115	
NORMAL DESIGN WIND SPEED, V_{asd} , IBC 1609.3.1 MPH: 89	
WIND EXPOSURE:	
SEISMIC DESIGN CATEGORY:	
SITE CLASS "D" DEFAULT:	
FLOOD DESIGN DATA IBC 1612.3:	
DESIGN LOAD BEARING VALUES OF SOILS:	

All additions and proposed buildings requiring a Design Professional are to include the following structural information per IBC 1603.1.1 through 1601.1.9:

FLOOR LIVE LOAD(S) IBC TABLE 1607.1 AND SECTION 1607.10:	
ROOF LIVE LOAD IBC TABLE 1607.1 AND SECTION 1607.12:	
ROOF SNOW LOAD 10 PSF IBC 1608.10 PSF DEFAULT: 10PSF	
WIND: NOTE: REQUIREMENTS WILL VARY DEPENDING ON RISK CATEGORY SEE IBC FIGURES 1609 A, B & C	
ULTIMATE DESIGN WIND SPEED, V_{ult} (3 SECOND GUST) IBC 1609.3.1 MPH: 115	
NORMAL DESIGN WIND SPEED, V_{asd} , IBC 1609.3.1 MPH: 89	
RISK CATEGORY IBC TABLE 1604.5:	
WIND EXPOSURE:	
INTERNAL PRESSURE COEFFICIENT IBC TABLE 1609.6.2:	
COMPONENTS AND CLADDING IBC TABLE 1609.6.2:	
IMPORTANCE FACTOR ASCE 7 2010 EDITION:	
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS S_s AND S_1 USGS:	
SITE CLASS DEFAULT "D":	
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS S_{ds} AND S_{d1} :	
SEISMIC DESIGN CATEGORY:	
BASIC SEISMIC FORCE RESISTING SYSTEM(S):	
BASIC DESIGN SHEAR:	
SEISMIC RESPONSE COEFFICIENT(S), C_s :	
RESPONSE MODIFICATION COEFFICIENT(S), R:	
ANALYSIS PROCEDURE USED:	
DESIGN LOAD BEARING PRESSURE OF SOILS ASTM D2487:	
FLOOD HAZARD DOCUMENTATION IBC 1612.5:	

11. **Energy Code Analysis** required for new buildings, additions, and change of occupancy classification shall submit a Com-Check-Web demonstrating compliance for the project Based on the 2009 IECC or ASHRAE 90.1 2007 edition. <http://energycode.pnl.gov/COMcheckWeb/>
All applicable portions of the forms shall be completed including Building, Envelope, Interior and Exterior Lighting, and Mechanical. The form shall include contact information and be sealed and signed as required by SC Architectural or Engineering Registration Law.
12. **Mechanical** - Schedule of all equipment shall include cfm, unit sizing (Btu's), and compressor tonnage. Indicate all rated walls and show all required fire dampers. Duct detectors shall be indicated and labeled (if system is 2000 cfm, 5 tons or serves an area used for egress). Provide a Supply and Return duct layout. Provide gas piping sizes, type of pipe, gas pressure, and lengths to the meter. Gas line compliance shall be shown using the "longest run" method (reference IFGC appendix A). Outside Ventilation requirements shall be provided as outlined in IMC Table 403.3. Provide condensate disposal methods, equipment access size, all exhaust sizes, locations etc. Provide drawings, specifications and suppression information on hood systems required for all commercial cooking operations.

Mechanical Code Analysis to be completed on all projects that include mechanical:

Mechanical Code Analysis:

SCOPE OF WORK:

HEAT:

# OF POWER BOILERS AND # OF BTU'S FOR EACH:	
# OF FURNACES AND # OF BTU'S FOR EACH:	
# OF INCINERATORS AND # OF BTU'S FOR EACH:	
# OF HEAT PUMPS OR PACKAGE UNITS AND # OF TONS FOR EACH:	
# OF UNIT HEATERS AND # OF BTU'S FOR EACH:	
# OF DUCTS HEATERS:	
# OF VAV UNITS:	
# OF GAS LOGS:	
# THRU WALL UNITS:	
# OF PRE-FAB FIREPLACES:	

REFRIGERATION:

# OF WALK-IN COOLERS/FREEZERS	
# OF COOLERS/ FREEZERS NOTE: WITH EXTERNAL CONDENSERS	
# OF CHILLERS AND/OR AIR CONDITIONERS AND TONS FOR EACH:	

ADDITIONAL EQUIPMENT:

# OF AIR HANDLERS ONLY OR FRESH	
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AIR UNITS:	
# OF RANGE HOODS: NOTE: ALL DWELING UNITS ARE EXEMPT	
# EXHAUST SYSTEMS/FANS: NOTE: EXHAUST FANS IN DWELLING UNITS ARE EXEMPT	
# DRYERS: NOTE: ALL DWELLING ARE EXEMPT	
REQUIRED OUTDOOR VENTILATION AIR PER IMC TABLE 403.3:	
TOTAL CFM OF OUTDOOR VENTILATION AIR REQUIRED:	
TOTAL CFM OF OUTDOOR VENTILATION AIR PROVIDED:	

Installation of Gas Piping Yes___ No___

Installation or Alteration of Ductwork Only Yes___ No___

13. **Electrical** - Riser diagram (service entry) - Single-line drawings for service, including conduit size, conductor size, type of wire, temperature rating. Provide a panel schedule (include number of **Amps** and **Breakers**). Plans indicating over 400 amps require engineered drawings. All electrical installations shall be in accordance with the National Electric Code (NEC) 2011 edition.

Electrical Code Analysis to be completed on all projects that include electrical:

Electrical Code Analysis:

SCOPE OF WORK:

Permit Data:

New Service:

# OF AMPS (METER BASE):	
# OF BRANCH CIRCUITS (NEW AND REWORKED):	

Service Change or Upgrade:

# OF AMPS (METER BASE):	
# OF BRANCH CIRCUITS (NEW AND REWORKED):	

14. **Plumbing** - Isometric diagrams for plumbing sanitary drains, vents, internal roof drains (include all sizing information). Number of fixtures required shall be in accordance with IPC section 403 and IBC section 2902. Handicap requirements per ANSI ICC A117.1-2009 shall be met.

Plumbing Code Analysis to be completed on all projects that include plumbing:

Plumbing Code Analysis:

SCOPE OF WORK:

Permit Data:

Septic: New _____ Existing _____

Sewer: New _____ Existing _____

LF OF DRAIN/WASTE: (Permitting underground only, or repairs)	
LF DRAIN LINES: (Interwall)	

Plumbing Fixture Data:

# OF WATER CLOSETS:	M:	F:
# OF UNISEX WATER CLOSETS:		
# OF URINALS:	M:	F:
# OF LAVATORIES:	M:	F:
# OF UNISEX LAVATORIES:		
# OF BATHTUB/SHOWERS:		
# OF DRINKING FOUNTAINS:		
# OF SERVICE SINKS:		
# OF KITCHEN SINKS:		
# OF HAND SINKS:		
# OF WATER HEATERS:		
# OF GREASE TRAPS:		
# OF FLOOR DRAINS WITH TRAP PRIMERS:		
# OF MISCELLANEOUS: (Itemize any other)		
TOTAL # OF FIXTURES: (Count all that have a supply, drain or both)		
TOTAL DRAINAGE FIXTURE UNITS IPC TABLE 709.1: (Sum of all fixtures)		

15. A **Sprinkler Specification Sheet** shall be provided for sprinkled buildings, prior to obtaining a permit. A **Fire Sprinkler System Certificate of Compliance** shall be submitted prior to the

installation of the sprinkler system. These two state forms are available for download at: <http://www.llr.state.sc.us/FMARSHAL/index.asp?file=forms.htm>

Sprinkler shop drawings are to be submitted to the SC State Fire Marshal's Office for approval and local Fire Marshal for review.

Fire alarm plans shall include all requirements as outlined in IBC Section 907.1.1 & NFPA 72 and shall be submitted for review.

Due to restructuring of the Inspection/Plan Review Department, Code Analysis Information is required for all trade disciplines on their respective cover sheets. This will afford a more practical turn around time for the plan review.

Application Number (Permit Number) given at time drawings are submitted shall be kept and given to the owner, architect, engineer, contractor, etc. Calls for drawing status, or attempts to obtain permits must have the Application Number. Tracking of drawings can not be done by address or name of project. Plan Status can be checked by calling the **Automated Line 864-467-5660**.

This form and other forms are available on the web at: www.greenvillemountaincounty.org