



PRINCE WILLIAM COUNTY
Department of Development Services – Building Development Division

NEW STRUCTURES AND ADDITIONS
COMMERCIAL PLANS CHECKLIST

Version 2009-06-27

<i>Staff Use Only</i> BLD _____ - _____
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PROJECT NAME _____

This Checklist is to be completed and signed on Page 4 by the designer who prepared and compiled the plans. Submit the Checklist with the plans. Please address any questions to the Building Plan Review staff at 703-792-6930.

This basic Checklist lists the minimum essential building code information required on plans prior to submitting them as part of the building permit application package. Providing all the information listed will expedite the overall review process and increase the likelihood that plans will be approved on the first submission.

Complete all plans in accordance with the VUSBC, IBC, IMC, IPC, NEC, with current amendments to all codes, and the ICC/ANSI A117.1-2003 edition for accessibility guidelines. On the Coversheet, list the codes used for project design. *Please see the [VUSBC webpage](#) to determine the codes and code year applicable to your project.*

ADDRESSING

- Coordinate the New Structures with GIS (Geographic Information System of mapping) for address prior to submission.

GENERAL REQUIREMENTS

- The full name and complete address of the proposed project.
- Completed [Building Permit Application](#) for each structure, including retaining walls, dumpster enclosures, etc.
- Filing Fee = 35% of Building Permit Fee*. *Building Permit Fee is based on the Gross Floor Area of the approved [Building Development Fee Schedule](#).* (Structures other than Buildings**)
- Two sets of plans.
- Three sets of plans if Health Department review is required; *e.g. food prep area.*

Projects for new construction, remodeling, expansion, or changing of equipment for Public Swimming Pools, Restaurants and any projects with foodservice facilities, require a separate permit application to the Prince William Health District, 8470 Kao Circle, Manassas, VA 20110 Phone (703) 792-6310.

- Written Approval for Shell Building: Plans submitted for Shell Buildings shall require a letter submitted for approval and a pre-submission meeting for the Shell.

* Effective July 1, 2007, the Filing Fee is no longer credited to the Building Permit.

** See www.pwcgov.org/BDDFeeSchedule: item II, C.

Virginia Uniform Statewide Building Code requires that each sheet of A, S, M, E, P drawings is signed and dated by the designer licensed in Virginia responsible for the drawings:

- **Architects and engineers stamp with original professional seal, sign and date within the seal;**
- **Contractors, as permitted by Section 54.1-402 of the Code of VA, list license number, occupation, name, address, telephone number; sign and date.**

- Minimum paper size 24" x 30". Maximum paper size 34" x 42".
- Minimum drawing scale 1/8" = 1'.
- The current civil site plan as submitted to [Land Development Division](#) of the [Department of Development Services](#) showing all utilities; dimensioned distances to public way, property lines and adjacent buildings; building height and area, use group/construction type; fire walls; # stories or mezzanine; finish floor elevation; exits.

ARCHITECTURAL

Code Analysis, Sheet # _____

- Use Group per Chapter 3; Construction Type per Chapter 6
- Building Height; Building Square Foot Area
- Building height and area calculations with all allowable modifications per Chapter 5
- Occupant load including employees calculated on square foot area per Chapter 10
- Number of exits required and provided per Chapter 10
- Compliance with Mixed Occupancy requirements and design method per Chapter 3
- Whether or not the building is fire suppressed and supervised/monitored per Chapter 9
- Incidental Use Area compliance with IBC Table 508.2 (*for 2003 Code year: IBC 2003 Table 302.1.1*)

Architectural Plans, Elevations, Sections, Details:

- Label all rooms with names. Sheet # _____
- Number all doors. Sheet # _____
- Door Schedule including door number, size, type, latching, closers, hardware and fire rating in hours. *Note: Security hardware systems designed to interface with fire alarm systems will be forwarded to the Fire Marshal for additional review.*
Sheet # _____
- Partition Types; key in UL references. Sheet # _____
- Show the locations of partition types with the UL design numbers on plan. Sheet # _____
- Materials used for construction meeting requirements of Construction Type. Sheet # _____
- Roof plan with roof slope, high points, low points, location of drains. Sheet # _____
- Dimensions of corridors and aisle widths. Sheet # _____
- Provide story above grade details. Sheet # _____
- Systems furniture or shelving layout as appropriate to show egress per Chapter 10. Sheet # _____
- Interior finishes; flame spread/smoke developed index per Chapter 8. Sheet # _____
- Details of all ramps and stairs with required handrails, guardrails and landings. Sheet # _____
- Floor elevations with changes in floor level. Sheet # _____
- Coordinate the electrical plan showing exit, exit discharge lighting per Section 1006.3, and egress lighting per Chapter 10.

Fire rated construction:

- Locate fire resistive rated construction including fire walls on architectural plans. Sheet # _____
- Locate fire walls on civil drawings. Sheet # _____
- Reference UL Directory (or other) design numbers; key into Partition Types. Sheet # _____
- Sticky-back Xerox copies or JPEG files of UL Directory (or other) referenced tested fire-rated assemblies directly onto reproducible original drawings. Sheet # _____
- Section details of rated construction showing Chapter 7 compliance including continuity and supporting construction where applicable. Sheet # _____

Accessibility requirements per ANSI A117.1-2003:

- Wheelchair Turning Space, Clear Floor Space, Knee and Toe Clearance per Chapter 3. Sheet # _____
- Base and wall cabinet heights per Section 308 Reach Ranges. Sheet # _____
- Maneuvering clearances at doors per Chapter 4 Accessible Routes. Sheet # _____
- Toilet room clearances and equipment locations per Chapter 6 Plumbing Elements and Facilities. Sheet # _____
- Counter and work surface heights per Chapter 9 Built-in Furnishings and Equipment. Sheet # _____

STRUCTURAL

Note: All plans, technical reports and calculations shall bear the original seal, signature and date of a registered design professional.

General:

- Provide two copies of Geotechnical reports.
- Provide two sets of structural calculations.
- Provide frame reactions for all pre-fabricated structures. The reactions shall be used for footing/foundation design.
- Provide general design requirements including ground snow, wind and seismic design data, soil bearing value, soil lateral pressure value. Sheet # _____
- Provide notes on structural materials used. Sheet # _____

Foundation:

- Provide complete foundation plans with cross sections and details. Sheet # _____
- Provide anchor bolt details, embedment length, size and spacing. Sheet # _____
Include all hairpin details where applicable. Sheet # _____

Floor:

- Provide cross-sections and details. Sheet # _____
- Provide complete floor framing plans for all levels. Include size and spacing of joists and beams. Specify the joist manufacturer where applicable. Sheet # _____

Roof:

- Provide complete roof framing plans. Provide size and spacing of rafters, joists and trusses. Specify the joist manufacturer where applicable. Sheet # _____

- Show design loads for top and bottom chords of roof trusses. Sheet # _____
- Provide location of rooftop mechanical equipment with dimensions and weight. Provide cross sections and details.
Sheet # _____
- Provide the location of all mechanical equipment. Sheet # _____
(Provide dimension and weight for each.)

Shop drawings:

- Provide two copies of approved shop drawings for pre-fabricated structures, tilt-up panels, pre-stressed members, pre-cast members, roof trusses/joists and floor trusses/joists.

Special Inspection Requirements (When applicable per IBC, Chapter 17):

- Provide a [Statement of Special Inspections](#), prepared by the Registered Design Professional in Responsible Charge (RDPRC), per County requirement in accordance with VUSBC.

MECHANICAL

General:

- Provide the type of construction, occupancy and the intended use of each space in accordance with IMC-403.
Sheet # _____
- Provide Mechanical Equipment Schedules, with the efficiency of the equipment (such as COP, EER, IPLV, SEER) total CFM and outside air capacity. Sheet # _____
- Provide heating and cooling (total and sensible), MBH Input/Output, type fuel and weight of equipment.
Sheet # _____
- Provide means for make-up and combustion air for all fuel-fired equipment. Sheet # _____
- Provide details for all boilers (such as low water cut-off, pressure relief, gauges, blow down tank, expansion tanks, and piping).
Sheet # _____

Note: All commercial boilers must be inspected by Virginia Department of Labor & Industry

International Energy Code:

- Provide heat loss / heat gain calculations. Sheet # _____
- Provide exterior envelope worksheet. Sheet # _____
- Provide R-values of all insulation in all construction components (such as walls, floors, roof and perimeter insulation).
Sheet # _____

Duct Systems:

- Show the location of all mechanical systems with supply registers, return grills and include all duct sizes.
Sheet # _____
- Show CFM at each supply outlet & return.
- Provide shop drawings on commercial hoods with dimensions, material, make-up and exhaust air including a detail showing the exhaust duct from the hood to the exterior termination (as per U.L.710). Sheet # _____
- Show all required fire and smoke dampers, fire and smoke detection devices and ceiling radiation dampers.
(As per the listing of the Fire Rated Assemblies). Sheet # _____

Smoke Evacuation Systems:

- Provide plans per IBC 909 and IMC 513. Sheet # _____
Please refer to [Special Inspections Manual](#) -Chapter 23, for more information.

Refrigeration Equipment:

- Provide equipment list and BTUs for each, system classification, refrigerant type, pounds of refrigerant.
Sheet # _____
- Show location and detail of refrigeration equipment and required clearances for equipment located on roof.
Sheet # _____
- Provide piping materials and methods to comply with IMC, Sections 1107 and 1108.
Sheet # _____

Gas:

- Gas piping riser diagram and floor plan with fully developed length, design pressure of gas, total quantity of gas to be provided (CFH or MBH), specific gravity, pressure drop and the type of gas piping with the correct sizing per IFGC, Section 402.
Sheet # _____

ELECTRICAL

Service equipment and panels:

- Provide NEC-compliant load calculations for feeders and service including demands per Art. 220 NEC.
Sheet # _____
- Provide panel schedules with branch circuit numbers, breaker size, load descriptions, poles, loads per pole in KVA, voltage, AIC rating, available short circuit current. Sheet # _____
- Location size and capacity of service, metering equipment, include complete riser with all panels, conductors and conduit sizes with grounding details, include bonding of service per Art. 250.92. Sheet # _____

Lighting and power plans:

- Floor plans showing light fixture layouts, receptacle locations, and branch circuits; include exit/emergency lighting showing compliance with IBC 2003 Section 1006.3 and 700.12(E) & 700.16 NEC. Sheet # _____
- Provide details for site/parking lot lighting on electrical plans and on civil photometric site plans, provide pole base detail for lights over 25' above grade. Sheet # _____
- Light fixture schedule provided. Sheet # _____
- Show that branch circuits are numbered, identified in the panel schedule and on the floor plans; show wiring methods.
Sheet # _____
- Provide listing details showing that electrical equipment penetrating rated assemblies are listed for that specific design number.
Sheet # _____

Mechanical Equipment, Motors, etc:

- Provide details for all equipment wiring, overcurrent protection, disconnection means, and specifications.
Sheet # _____
- Show that branch circuits are numbered, identified in the panel schedule and on the floor plans; show wiring methods.
Sheet # _____

International Energy Conservation Code:

- Construction documents shall be submitted per Section 104. Sheet # _____
- Provide documents with calculations to show compliance with International Energy Conversation Code for lighting per Section 505 & 505.2.2.2 (for 2003 Code year: Section 805.5); or per Section 107 show compliance with ASHRAE 90.1-2004.
Sheet # _____
- Show lighting controls / switching per Section 805. Sheet # _____

Hazardous Locations:

- Provide Documents for all Hazardous/Classified Location per Art. 500.4(A) and 500.5. Sheet # _____

PLUMBING AND ACCESSIBILITY - VUSBC 2006, IPC 2006 & ICC/ANSI A117.1-2003

- Show all plumbing facilities and label with restroom dimensions to scale. Sheet # _____
- Water closets, lavatories, drinking fountain and a service sink are required for all uses.
Sheet # _____
- Plumbing floor plans and riser diagrams for all new plumbing fixtures, including sanitary, water and storm piping with fixture identification and complete pipe sizing. Sheet # _____
- Identify backflow protection and other water control devices required on equipment.
Sheet # _____
- Coordinate points of connection between new plans and site plans. Sheet # _____
- The plumbing floor plan and riser diagram shall indicate the type and quantity of fixtures being installed.
Sheet # _____

Designer: Name/Signature _____

Telephone: _____ Date: _____

To ensure the County has proper contact information to facilitate timely communication, you must also submit the [Contact Information Form](http://www.pwcgov.org/BDDForms) which can be found at www.pwcgov.org/BDDForms