



2006 NORTH CAROLINA  
BUILDING CODE CHECKLIST  
(STATE PROPERTY)

Date: \_\_\_\_\_ Drawing Date: \_\_\_\_\_

Agency, Location, Project Name, Designer, File # [PlanTracker Screen Heading]:

Phase: \_\_\_\_\_

Sub-Phase: \_\_\_\_\_

Comments:


BUILDING DESCRIPTION: \_\_\_\_\_

REVIEWED BY: \_\_\_\_\_

This checklist provides plan reviewers with a consistent structure to follow in verifying code compliance. However, it does not contain reference to all code sections and is not intended to limit review scope if non-compliant items are observed that are not listed in this form. Designers may also benefit from its use, with those caveats in mind.

Instructions: Each item is followed with a code reference that correlates with 2006 NC codes. If the review results in code compliance comments, most will be referenced on this checklist in the appropriate locations, by entering their numbers from the accompanying review letter. The lack of an entry for any item on this form means either the plans were found to be compliant based on just the detail present at this phase of design OR that particular code section was found to be not applicable. That can change as the design progresses, or if previous plan details are altered.

**ADMINISTRATION**

New    Alteration    Addition    System

\_\_\_\_\_ Complete construction documents  
*NC Admin & Enforcement Requirements Code*

\_\_\_\_\_ Plans are sealed (sigs not req'd until bid)  
*NC Admin & Enforcement Requirements Code*

\_\_\_\_\_ Completed Appendix B

# ARCHITECTURAL DRAWINGS

## SINGLE AND MIXED OCCUPANCIES

\_\_\_\_\_ Single Occupancy (302.1)

\_\_\_\_\_ Incidental use areas (302.1.1)

\_\_\_\_\_ Mixed Occupancy (302.3)

\_\_\_\_\_ Accessory use areas (302.2)

### MAXIMUM ALLOWABLE AREA

% of Allowable tabular area,  $A_t$  (Table 503) 100%

% Increase for frontage,  $I_f$  (506.2) + \_\_\_\_\_ %

% Increase for automatic sprinklers,  $I_s$  (506.3)  
+ \_\_\_\_\_ %

Total percentage factor = \_\_\_\_\_ %

Conversion factor: \_\_\_\_\_ (Total percentage factor + 100%)

Additional Notes: \_\_\_\_\_

Frontage  
(506.2)

\_\_\_\_\_ North \_\_\_\_\_ East

\_\_\_\_\_ South \_\_\_\_\_ West

Total

Frontage(F) \_\_\_\_\_ ft. Perimeter (P) \_\_\_\_\_ ft.

Width of open space (W) = \_\_\_\_\_

% Frontage increase ( $I_f$ ) = \_\_\_\_\_ (506.2)

$$I_f = 100[F/P - 0.25] W/30$$

Additional Notes: \_\_\_\_\_

### SINGLE OCCUPANCY OR NONSEPARATED USE (302.3.1)

In a building with a single occupancy, the construction type is based on the maximum allowable area for the single use group. In a nonseparated mixed use, the construction type is based on the most restrictive occupancy height and area identified in Table 503.

#### DETERMINE CONSTRUCTION TYPE

Actual building area \_\_\_\_\_ ft<sup>2</sup>

Adjusted building area \_\_\_\_\_ ft<sup>2</sup>

(actual building area/conversion factor)

Actual building height \_\_\_\_\_ feet \_\_\_\_\_ stories

Allowable building height \_\_\_\_\_ feet

\_\_\_\_\_ stories

Permitted types of construction \_\_\_\_\_

Type of construction assumed for review

(602.1.1) \_\_\_\_\_

Additional Notes: \_\_\_\_\_

#### CHECK ALLOWABLE AREA (506.4)

Allowable area per floor ( $A_a$ )

$$\frac{\text{_____}}{\text{conversion factor}} \times \text{_____} = \text{_____ ft}^2$$

*tabular area (Table 503)*

Allowable floor area (all stories) \_\_\_\_\_ ft<sup>2</sup>

$$\frac{\text{_____}}{\text{Allowable area per floor (A.)}} \times \text{_____} = \text{_____ ft}^2$$

*number of stories (maximum 3)*

Total floor area (all stories) \_\_\_\_\_ ft<sup>2</sup>

Compliance verified (Single Occ. or Nonsep.) \_\_\_\_\_

Additional Notes: \_\_\_\_\_

### SEPARATED MIXED USES (302.3.2)

This section uses the sum of the ratios (actual area/allowed area) to determine allowable height and area. Allowed areas are the tabular value from Table 503 x the conversion factor.

$$\sum \frac{\text{Actual floor area}}{\text{Allowed area}} = \frac{\text{_____}}{\text{(fire area 1)}} + \frac{\text{_____}}{\text{(fire area 2)}} + \frac{\text{_____}}{\text{(fire area 3)}} + \frac{\text{_____}}{\text{(fire area 4)}} = \text{_____} \leq 1.00$$

Additional Notes: \_\_\_\_\_

### CHECK ALLOWABLE AREA (506.4)

Allowable area per floor ( $A_a$ )

$$\text{_____ conversion factor} \times \text{_____ tabular area (Table 503)} = \text{_____ ft}^2$$

Additional Notes: \_\_\_\_\_

Total floor area (all stories) \_\_\_\_\_ ft<sup>2</sup>

Allowable floor area (all stories) \_\_\_\_\_ ft<sup>2</sup>

$$\text{Allowable area per floor (A.)} \times \text{number of stories (maximum 3)} = \text{_____ ft}^2$$

Permitted types of construction \_\_\_\_\_  
Type of construction assumed for review (602. 1. 1)

Compliance verified (Mixed Occ. Separated) \_\_\_\_\_

### \_\_\_\_\_ MEZZANINES (505)

\_\_\_\_\_ Area limitation (505.2)

\_\_\_\_\_ Openness (505.4)

\_\_\_\_\_ Egress (505.3)

\_\_\_\_\_ Equipment platforms (505.5)

### UNLIMITED AREA BUILDINGS (507)

\_\_\_\_\_ Unsprinklered, one story (507. 1)

\_\_\_\_\_ High-hazard use groups (507.6)

\_\_\_\_\_ Sprinklered, one story (507.2)

\_\_\_\_\_ Aircraft paint hangar (507.7)

\_\_\_\_\_ Two story (507.3)

\_\_\_\_\_ Group E buildings (507.8)

\_\_\_\_\_ Reduced open space (507.4)

\_\_\_\_\_ Motion picture theaters (507.9)

\_\_\_\_\_ Group A-3 buildings (507.5)

### SPECIAL PROVISIONS (508)

\_\_\_\_\_ Special condition applicable (508. 1)

\_\_\_\_\_ Compliance verified

<b>SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY (Chapter 4)</b>	
<b>COVERED MALL BUILDINGS (402)</b>	
_____ Egress (402.4, 402.11)	_____ Standpipe system (402.8.1, 905.3.3)
_____ Mall width (402.5)	_____ Smoke control (402.9)
_____ Unlimited area (402.6)	_____ Kiosk requirements (402.10)
_____ Fire separations (402.7)	_____ Emergency voice/alarm (402.12,402.13)
_____ Automatic sprinkler system (402.8)	_____ Plastic signs (402.14)
_____ Fire department access (402.15)	
<b>HIGH-RISE BUILDINGS (403)</b>	
_____ Automatic sprinkler system (403.2, 903.2.10.3)	_____ Elevators (403.9)
_____ Fire-resistance rating reduction (403.3)	_____ Standby power (403.10)
_____ Automatic fire detection (403.5)	_____ Emergency power (403.11)
_____ Emergency voice/alarm systems(403.6)	_____ Stairway doors (403.12)
_____ Fire department communication (403.7)	_____ Smokeproof exit (403.13)
_____ Fire command center (403.8, 911)	_____ Fire Alarm and Detection System (907.2.12)
<b>ATRIUMS (404)</b>	
_____ Atrium use (404.2)	_____ Standby power (404.6)
_____ Automatic sprinkler system (404.3)	_____ Interior finish (404.7)
_____ Smoke control (404.4)	_____ Fire Alarm and Detection System (907.2.13)
_____ Enclosure (404.5)	
<b>OTHER SPECIAL USE AND OCCUPANCY</b>	
_____ Underground structures (405)	_____ Aircraft-related occupancies (412)
_____ Motor vehicle related occupancies (406, 508)	_____ Combustible storage (413)
_____ Group I-2 (407)	_____ Hazardous materials (307.9, 414)
_____ Group I-3 (408)	_____ Control Areas (T414.2.2) _____ Hazmat List
_____ Motion picture projection rooms (409)	_____ Groups H-1, H-2, H-3, H-4, and H-5 (415)
_____ Stages and platforms (410)	_____ Application of flammable finishes (416)
_____ Special amusement buildings (411)	_____ Drying rooms (417)
	_____ Organic coatings manufacturing (418)

# FIRE PROTECTION

## FIRE-RESISTANCE-RATED CONSTRUCTION (Tables 601 & 602 and Chapter 7)

**Note:** A numeric entry indicates required rating in hours. NC indicates noncombustible construction required. \_\_\_\_\_ Construction classification (602)

### COMBUSTIBILITY (602.2, 602.3, 602.4, 602.5, 603)

- \_\_\_\_\_ Exterior walls
- \_\_\_\_\_ Interior elements
- \_\_\_\_\_ Roof

### FIRE-RESISTANCE RATINGS AND FIRE TESTS (703)

\_\_\_\_\_ Ratings / Combustibility (703.2, 703.4)

\_\_\_\_\_ Alternative methods (703.3, 718, 720, 721)

### BUILDING ELEMENTS (Table 601)

- \_\_\_\_\_ Structural frame (714)
- \_\_\_\_\_ Interior bearing walls
- \_\_\_\_\_ Interior nonbearing walls
- \_\_\_\_\_ Floor construction (711)
- \_\_\_\_\_ Roof construction (711)

### EXTERIOR WALLS (507, Table 602, 704, 706.6)

	North	East	South	West
Fire separation distance	_____	_____	_____	_____
Bearing	_____	_____	_____	_____
Nonbearing	_____	_____	_____	_____

\_\_\_\_\_ Opening protection (704.8, 704.12, 704.14)

\_\_\_\_\_ Vertical fire spread protection (704.9, 704.10)

\_\_\_\_\_ Parapets (704. 11)

### FIRE BARRIERS (706)

\_\_\_\_\_ Shaft enclosures (706.3. 1)

\_\_\_\_\_ Exit enclosures (706.3.2, 706.3.3)

\_\_\_\_\_ Horizontal exits (706.3.4)

\_\_\_\_\_ Incidental use areas (706.3.5)

\_\_\_\_\_ Mixed occupancy and fire area separations (706.3.6, 706.3.7)

<b>SHAFTS (707)</b>	
_____ Exceptions (707.2)	_____ Construction (707.3 - 707.14)
<b>Penetrations</b>	
_____ Through penetration	_____ Fire/Smoke Dampers
<b>INTERIOR FINISHES</b>	
_____ Smoke development (803. 1)	_____ Floor finish (804)
_____ Flame spread (803. 1)	_____ Decorations and trim (805)
_____ Non-textile finish (803.2)	
<b>FIRE PROTECTION</b>	
AUTOMATIC SPRINKLER SYSTEMS (903) (Where required)	
_____ Assembly (A-1, A-2, A-3, A-4, A-5) (903.2. 1)	_____ Storage/Repair garage (S-1) (903.2.8)
_____ Educational (E) (903.2.2)	_____ Parking garages(903.2.9)
_____ Factory/Industrial (F-1) (903.2.3)	_____ Windowless story (903.2. 10. 1)
_____ High-hazard (H-1 , H-2, H-3, H-4, H-5) (903.2.4)	_____ Rubbish and linen chutes (903.2.10.2)
_____ Institutional (1-1, 1-2, 1-3, 1-4) (407.5, 903.2.5)	_____ Buildings over 55 ft. high (903.2.10.3)
_____ Mercantile (M) (903.2.6)	_____ Incidental use areas (302. 1. 1)
_____ Residential (R) (903.2.7)	_____ Additional required systems(Table 903.2.13)
<b>AUTOMATIC SPRINKLER SYSTEMS. (903) (Design)</b>	
_____ Shop drawings (106.1.1.1)	_____ Quick-response and residential heads (903.3.2)
_____ NFPA 13 system (903.3. 1. 1)	_____ Actuation (903.3.4)
_____ NFPA 13R system (903.3.1.2)	_____ Water supply (903.3.5)
_____ NFPA 13D system (903.3.1.3)	_____ Hose connections (903.3.6, 903.3.7)

<b>ALTERNATIVE AUTOMATIC FIRE-EXTINGUISHING SYSTEMS (904)</b>	
_____ Installation (904.3)	_____ Carbon dioxide systems (904.8)
_____ Wet- chemical systems (904.5)	_____ Halon systems (904.9)
_____ Dry-chemical systems (904.6)	_____ Clean-agent systems (904.10)
_____ Foam systems (904.7)	_____ Commercial cooking systems (904.2.1, 904. 11)
<b>STANDPIPE SYSTEMS (905)</b>	
_____ Installation standards (905.2)	_____ Helistops/heliports (905.3.6)
_____ Building height (905.3.1)	_____ Hose connections and locations (905.1, 905.4, 905.5, 905.6)
_____ Group A (905.3.2)	_____ Cabinets (905.7)
_____ Stages (905.3.4)	_____ Dry standpipes (905.8)
_____ Underground buildings (905.3.5)	_____ Valve supervision (905.9)
<b>FIRE ALARM AND DETECTION SYSTEMS (907)</b>	
_____ Construction documents (907. 1. 1)	_____ Institutional (I-1, I-2, I-3, I-4) (907.2.6)
_____ Assembly (A-1 , A-2, A-3, A-4, A-5)(907.2. 1)	_____ Mercantile (M) (907.2.7)
_____ Business (B) (907.2.2)	_____ Residential (R-1, R-2) (907.2.8, 907.2.9)
_____ Educational (E) (907.2.3)	_____ Single/multiple station smoke alarms (907.2.10)
_____ Factory (F-1, F-2) (907.2.4)	_____ Other buildings/areas (907.2.11, 907.2.14 - 907.2.23)
_____ High-hazard (H-1, H-2, H-3, H-4, H-5) (907.2.5)	
<b>FIRE ALARM AND DETECTION SYSTEMS (907) (Design)</b>	
_____ Residential smoke alarm power source (907.2.10.2)	_____ Alarm notification appliances (907.9)
_____ Residential smoke alarm interconnection (907.2.10.3)	_____ Detectors (907.10 – 907.12)
_____ Location/Power supply/Wiring (907.3 - 907.5)	_____ Monitoring (907.14)
_____ Activation/Presignal/Zones (907.6 - 907.8)	

<b>EMERGENCY ALARM SYSTEMS (908)</b>	
_____ Detection system applicable (908.1 - 908.6)	
<b>SMOKE CONTROL SYSTEMS (909)</b>	
_____ Where required (402.9, 404.4, 405.5, 408.8, 410.3.7.2, 1019.1.8, 1024.6.2.1)	_____ Exhaust method (909.8)
_____ Design requirements (909.1 - 909.4)	_____ Equipment/Power (909.10, 909.11)
_____ Smoke barriers (909.5)	_____ Detection and control (909.12 - 909.18)
_____ Pressurization method (909.6)	_____ Smokeproof enclosures (909.20)
_____ Airflow method (909.7)	_____ Underground buildings (909.21)
<b>SMOKE AND HEAT VENTS (910)</b>	
_____ Requirements (910.1 - 910.3)	_____ Mechanical alternative (910.4)
<b>MEANS OF EGRESS</b>	
OCCUPANT LOAD (1004.1.2 and Table 1004.1.2)	
Location - _____ ÷ _____ = _____ + Actual Occupant Increase = Total _____ Floor Area   Sq.Ft./Person   (Occ. Load)                   (If applicable)	
_____ Verification of Occupant Loads	
Additional Notes: _____	
CAPACITY OF EGRESS COMPONENTS (1005.1 and Table 1005.1)	
Egress width (inch/occupant)	
Stairways _____	
Other egress components _____	
_____ Verification of Egress Capacity	
NUMBER OF EXITS (1018.1, 1018.2)	
Building Occupant Load _____ Exits Required _____ Exits Shown _____	
_____ Verification of Required Exits	



<b>GENERAL MEANS OF EGRESS</b>	
_____ Design requirements (1003.2 - 1003.7)	_____ Door landings/thresholds/ Arrangement (1008.1.4 -1008. 1.7)
_____ Means of egress illumination (1006)	_____ Door hardware (1008.1.8, 1008.1.9)
_____ Exit signs (1011)	_____ Stairways (1009)
_____ Accessible means of egress (1007)	_____ Handrails (1009. 11)
_____ Means of egress doors (1008.1-1008.1.2)	_____ Roof access (1009.12)
_____ Special doors/Gates/turnstiles (1008.1.3, 1008.2, 1008.3)	_____ Ramps (1010)
_____ Guards (1012)	_____ Exterior Exit Lighting (1003.2.11.3)
<b>EXIT ACCESS</b>	
_____ Door number and arrangement (1013.2, 1014.1, 1014.2)	_____ Egress balconies (1013.5, 1015.3)
_____ Exit access travel distance (1013.3, 1015.1)	_____ Corridors (1016)
_____ Aisles (1013.4)	_____ Air movement in corridors (1016.4)
_____ Common Path of Travel (1013.3)	
<b>EXITS I EXIT DISCHARGE</b>	
_____ Exits/Exit doors (1017, 1018)	_____ Horizontal exits (1021)
_____ Interior exit stairways (1019)	_____ Exterior exit ramps/stairways (1022)
_____ Exit passageways (1020)	_____ Exit discharge (1023)
<b>OTHER MEANS OF EGRESS</b>	
_____ Miscellaneous egress requirements (1014.3 - 1014.6)	_____ Assembly aisles & features (1024.6 - 1024.15)
_____ Bleachers (1024.1.1)	_____ Emergency escape and rescue (1025)
_____ Assembly exits & egress (1024.2 - 1024.5)	

<b>Accessibility</b>	
_____ Scoping requirements	_____ Dwelling units and sleeping units
_____ Accessible route	_____ Special occupancies
_____ Accessible entrances	_____ Features and facilities
_____ Parking and passenger loading	_____ Signage
<b>INTERIOR ENVIRONMENT</b>	
_____ Ventilation openings (1203)	_____ Sound transmission (1207)
_____ Temperature control(1204)	_____ Interior space dimensions (1208)
_____ Lighting (1205)	_____ Access to unoccupied spaces (1209)
_____ Yards or courts (1206)	_____ Surrounding materials (1210, 2509)
<b>EXTERIOR WALLS</b>	
_____ Performance requirements (1403)	_____ Exterior wall coverings/MCM's (1405, 1407)
_____ Materials (1404)	_____ Combustible material restrictions (1406)
<b>ROOF ASSEMBLIES AND ROOFTOP STRUCTURES</b>	
_____ Weather protection (1503)	_____ Materials (1506)
_____ Flashing (1503.2, 1507.2.9, 1507.3.9, 1507.5.6, 1507.7.6, 1507.8.7, 1507.9.8)	_____ Roof coverings (1507) Type of Class <input type="checkbox"/> A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C
_____ Performance requirements (1504)	_____ Roof insulation (1508)
_____ Fire classification (1505)	_____ Rooftop structures (1509)
_____ Reroofing (1510)	
<b>GLASS AND GLAZING</b>	
_____ Sloped glazing and skylights (2405)	_____ Safety glazing (2406, 2407, 2408, 2409)

<b>GYPSUM BOARD AND PLASTER</b>	
_____ Gypsum board materials (2506, Table 2506.2)	_____ Plaster (2507, 2508, 2510 - 2513)
<b>PLASTIC</b>	
FOAM PLASTIC INSULATION (2603)	
_____ Labeling (2603.2, 2603.5.6)	_____ Thermal barrier (2603.4)
_____ Surface-burning characteristics (2603.3, 2603.5.4)	_____ Exterior walls/Roofs (2603.5, 2603.6)
_____ Special approval (2603.8)	
<b>MISCELLANEOUS PLASTICS</b>	
_____ Interior finish and trim(2604)	_____ Plastic veneer (2605)
_____ Light-transmitting plastics (2606 - 2611)	
<b>ELEVATORS AND CONVEYING SYSTEMS</b>	
_____ Construction standard specified (3001.2)	_____ Hoistway venting (3004)
_____ Hoistway enclosures (3002)	_____ Conveying systems (3005)
_____ Opening protectives (3002. 1. 1)	_____ Machine rooms (3006)
_____ Emergency operations (3003)	
<b>SPECIAL CONSTRUCTION</b>	
_____ Membrane structures (3102)	_____ Signs (3107)
_____ Awnings and canopies/Marquees (3105, 3106)	_____ Radio and television towers (3108)
_____ Swimming pool enclosures (3109)	
<b>PEDESTRIAN WALKWAYS AND TUNNELS (3104)</b>	
_____ Construction and use (3104.3, 3104.4)	_____ Public way (3104.6)
_____ Separation (3104.5, 3104.10)	_____ Egress/Ventilation (3104.7 - 3104.9,3104.11)

<b>EXISTING STRUCTURES</b>	
<input type="checkbox"/> Additions, alterations, repairs (3403)	<input type="checkbox"/> Change of occupancy (3406)
<input type="checkbox"/> Fire escapes (3404)	<input type="checkbox"/> Compliance alternatives (3410)
<b>APPENDICES C,D,G-J</b>	
<input type="checkbox"/> Compliance verified	
Additional Notes: _____	

<b>STRUCTURAL DRAWINGS</b>	
STRUCTURAL DESIGN CALCULATIONS	
<input type="checkbox"/> Submitted for all structural members (106.1, 106.1.1)	
DESIGN LOADS ON CONSTRUCTION DOCUMENTS (1603)	
<input type="checkbox"/> Uniformly distributed floor live loads (1603.1.1, 1607)	<input type="checkbox"/> Roof live loads (1603.1.2, 1607.11)
<input type="checkbox"/> Live load reduction (1603.1.1, 1607.9, 1607.10)	
Roof snow loads (1603.1.3, 1608)	
<input type="checkbox"/> Ground snow load, $P_g$ (1608.2)	<input type="checkbox"/> Roof thermal factor, $C_t$ (Table 1608.3.2)
<input type="checkbox"/> Sloped roof snowload, $P_s$ (1608.4)	
<b>Wind loads (1603.1.4, 1609)</b>	
<input type="checkbox"/> Design option utilized (1609.1.1, 1609.6)	<input type="checkbox"/> Wind exposure category (1609.4)
<input type="checkbox"/> Basic wind speed (1609.3)	<input type="checkbox"/> Internal pressure coefficient (ASCE 7)
<input type="checkbox"/> Building category and wind importance factor, $I_w$ (Table 1604.5, 1609.5)	<input type="checkbox"/> Component and cladding pressures (1609. 1. 1, 1609.6.2.2)
<input type="checkbox"/> Main force wind pressures (1609.1.1, 1609.62.1)	

<b>Earthquake design data (1603.1.5, 1614 - 1623)</b>	
_____ Design option utilized (1614.1)	_____ Seismic design category (1616.3)
_____ Seismic use group ("Category") (Table 1604.5, 1616.2)	_____ Basic seismic-force-resisting system (Table 1617.6.2)
_____ Spectral response coefficients, $S_{DS}$ & $S_{D1}$ (1615.1)	_____ Response modification coefficient, R, and deflection amplification factor, $C_d$ (Table 1617.6.2)
_____ Site class (1615.1.5)	_____ Analysis procedure (1616.6, 1617.5)
_____ Design base shear (1617.4, 1617.5.1)	
<b>_____ Flood loads (1603.1.6, 1612)</b>	
_____ Flood hazard area (1612.3)	_____ Elevation of structure
Other loads	
_____ Concentrated loads (1607.4)	_____ Impact loads (1607.8)
_____ Partition loads (1607.5)	_____ Misc. loads (Table 1607.6, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)

<b>Mechanical/Plumbing/Electrical</b>	
Plumbing	
<input type="text"/> Location	<input type="text"/> Fixture Count
<input type="text"/> Penetrations	
Additional Notes: _____	
Mechanical	
<input type="text"/> Duct location	<input type="text"/> Penetrations
Additional Notes: _____	
Electrical	
<input type="text"/> Emergency/Standby Power (Ch 27)	<input type="text"/> Penetrations
Additional Notes: _____	

This checklist is based on the 2003 IBC Plan Review Checklist © produced by the International Code Council ([www.iccsafe.com](http://www.iccsafe.com))