

APPENDIX B

**2018 BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS**

(EXCEPT ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES)

(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: _____

Address: _____ Zip Code _____

Owner/Authorized Agent: _____ Phone # (____) ____ - _____ E-Mail _____

Owned By: City/County Private State

Code Enforcement Jurisdiction: City _____ County _____ State

CONTACT: _____

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	_____	_____	_____	(____) _____	_____
Civil	_____	_____	_____	(____) _____	_____
Electrical	_____	_____	_____	(____) _____	_____
Fire Alarm	_____	_____	_____	(____) _____	_____
Plumbing	_____	_____	_____	(____) _____	_____
Mechanical	_____	_____	_____	(____) _____	_____
Sprinkler-Standpipe	_____	_____	_____	(____) _____	_____
Structural	_____	_____	_____	(____) _____	_____
Retaining Walls > 5 feet High	_____	_____	_____	(____) _____	_____
Other	_____	_____	_____	(____) _____	_____

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: New Building Shell/Core 1st Time Interior Completions

Addition Phased Construction—Shell Core

2018 NC EXISTING BUILDING CODE: Prescriptive Alteration Level I Historic Property

(check all that apply) Repair Alteration Level II Change of Use

Chapter 14 Alteration Level III

CONSTRUCTED: (date) _____ **CURRENT USE(S)** (Ch. 3): _____

RENOVATED: (date) _____ **PROPOSED USE(S)** (Ch. 3): _____

OCCUPANCY CATEGORY (Table 1604.5): Current: _____ Proposed: _____

BASIC BUILDING DATA

Construction Type: I-A II-A III-A IV V-A

(check all that apply) I-B II-B III-B V-B

Sprinklers: No Partial NFPA 13 NFPA 13R NFPA 13D

Standpipes: No Class I II III Wet Dry

Primary Fire District: No Yes **Flood Hazard Area:** No Yes

Special Inspections Required: No Yes

GROSS BUILDING AREA TABLE

Floor	Existing (sq ft)	New (sq ft)	Subtotal
3rd Floor	_____	_____	_____
2nd Floor	_____	_____	_____
Mezzanine	_____	_____	_____
1st Floor	_____	_____	_____
Basement	_____	_____	_____
TOTAL	_____	_____	_____

ALLOWABLE AREA

Primary Occupancy Classification(s):

- Assembly A-1 A-2 A-3 A-4 A-5
- Business
- Educational
- Factory F-1 Moderate F-2 Low
- Hazardous H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM
- Institutional I-1 I-2 I-3 I-4
- I-3 Condition 1 2
- I-2 Condition 1 2
- I-3 Condition 1 2 3 4 5
- Mercantile
- Residential R-1 R-2 R-3 R-4
- Storage S-1 Moderate S-2 Low High-piled
- Parking Garage Open Enclosed Repair Garage
- Utility and Miscellaneous

Accessory Occupancy Classification(s): _____

Incidental Uses (Table 509): _____

This separation is not exempt as a Nonseparated Use (see exceptions).

Special Uses (Chapter 4 – List Code Sections): _____

Special Provisions: (Chapter 5 – List Code Sections): _____

Mixed Occupancy: No Yes Separation: _____ Hr. Exception: _____

Non-separated Use (508.3)

Separated Use (508.4)—See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

Select one

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

_____ + _____ + = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 ⁴ AREA	(C) AREA FOR FRONTAGE INCREASE ^{1, 5}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{2, 3}

1. Frontage area increases from Section 506.2 are computed thus:
 - a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
 - b. Total Building Perimeter = _____ (P)
 - c. Ratio (F/P) = _____ (F/P)
 - d. W = Minimum width of public way = _____ (W)
2. Unlimited area applicable under conditions of Section 507.
3. Maximum Building Area = total number of stories in the building × D (maximum 3 stories) (506.2).
4. The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
5. Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)			
Building Height in Stories (Table 504.4)			

1. Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (feet)	RATING		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
		REQ'D	PROVIDED (W/ REDUCTION) *				
Structural Frame Including columns, girders, trusses							
Bearing Walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing walls and partitions							
Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction Including supporting beams and joists							
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof Construction, including supporting beams and joists							
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures—Exit							
Shaft Enclosures—Other							
Corridor Separation							
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

APPENDIX B

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (feet) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)

LIFE SAFETY SYSTEM REQUIREMENTS

- Emergency Lighting: Yes No
 Exit Signs: Yes No
 Fire Alarm: Yes No
 Smoke Detection Systems: Yes No
 Carbon Monoxide Detection: Yes No

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: _____

- Fire and/or smoke rated wall locations (Chapter 7)
- Assumed and real property line locations (if not on the site plan)
- Exterior wall opening area with respect to distance to assumed property lines (705.8)
- Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
- Occupant loads for each area
- Exit access travel distances (1017)
- Common path of travel distances [Tables 1006.2.1 & 1006.3.2(1)]
- Dead end lengths (1020.4)
- Clear exit widths for each exit door
- Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- Actual occupant load for each exit door
- A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- Location of doors with panic hardware (1010.1.10)
- Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- Location of doors with electromagnetic egress locks (1010.1.9.9)
- Location of doors equipped with hold-open devices
- Location of emergency escape windows (1030)
- The square footage of each fire area (202)
- The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- Note any code exceptions or table notes that may have been utilized regarding the items above

**ACCESSIBLE DWELLING UNITS
(SECTION 1107)**

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

**ACCESSIBLE PARKING
(SECTION 1106)**

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE UNITS PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH		
				132" ACCESS AISLE	8' ACCESS AISLE	
TOTAL						

**PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)**

USE	WATERCLOSETS			URINALS	LAVATORIES			SHOWERS/TUBS	DRINKING FOUNTAINS	
	Male	Female	Unisex		Male	Female	Unisex		Regular	Accessible
SPACE	EXIST'G									
	NEW									
	REQ'D									

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)

ENERGY SUMMARY

ENERGY REQUIREMENTS:

The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design versus the annual energy cost for the proposed design.

Existing building envelope complies with code: (If checked, the remainder of this section is not applicable.)

Exempt Building: Provide code or statutory reference: _____

Climate Zone: 3A 4A 5A

Method of Compliance:

Energy Code: Performance Prescriptive

ASHSAE 90.1: Performance Prescriptive

Other: Performance (specify source) _____

THERMAL ENVELOPE: (Prescriptive method only)

Roof/ceiling Assembly (each assembly)

Description of assembly: _____

U-Value of total assembly: _____

R-Value of insulation: _____

Skylights in each assembly: _____

U-Value of skylight: _____

total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)

Description of assembly _____

U-Value of total assembly: _____

R-Value of insulation: _____

Openings (windows or doors with glazing)

U-Value of assembly: _____

Solar heat gain coefficient: _____

projection factor: _____

Door *R*-Values: _____

Walls below grade (each assembly)

Description of assembly: _____

U-Value of total assembly: _____

R-Value of insulation: _____

Floors over unconditioned space (each assembly)

Description of assembly: _____

U-Value of total assembly: _____

R-Value of insulation: _____

Floors slab on grade

Description of assembly: _____

U-Value of total assembly: _____

R-Value of insulation: _____

Horizontal/vertical requirement: _____

slab heated: _____

APPENDIX B

2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

STRUCTURAL DESIGN

(PROVIDE ON SHEET 1 OR 2 OF THE STRUCTURAL SHEETS)

DESIGN LOADS:

Importance Factors: Wind (I_W) _____
 Snow (I_S) _____
 Seismic (I_E) _____

Live Loads: Roof _____ psf
 Mezzanine _____ psf
 Floor _____ psf

Ground Snow Load: _____ psf

Wind Load: Basic Wind Speed _____ mph (ASCE-7)
 Exposure Category _____

SEISMIC DESIGN CATEGORY: A B C D

Provide the following Seismic Design Parameters:

Occupancy Category (Table 1604.5) I II III IV

Spectral Response Acceleration S_S _____ %g S_1 _____ %g

Site Classification (ASCE 7) A B C D E F

Data Source: Field Test Presumptive Historical Data

Basic structural system (check one)

- | | |
|---|---|
| <input type="checkbox"/> Bearing Wall | <input type="checkbox"/> Dual w/Special Moment Frame |
| <input type="checkbox"/> Building Frame | <input type="checkbox"/> Dual w/Intermediate R/C or Special Steel |
| <input type="checkbox"/> Moment Frame | <input type="checkbox"/> Inverted Pendulum |

Analysis Procedure: Simplified Equivalent Lateral Force Dynamic

Architectural, Mechanical, Components anchored? Yes No

LATERAL DESIGN CONTROL: Earthquake Wind

SOIL BEARING CAPACITIES:

Field Test (provide copy of test report) _____ psf

Presumptive Bearing capacity _____ psf

Pile size, type, and capacity _____

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2018 BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS

MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)
MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone

winter dry bulb: _____
summer dry bulb: _____

Interior design conditions

winter dry bulb: _____
summer dry bulb: _____
relative humidity: _____

Building heating load: _____

Building cooling load: _____

Mechanical Spacing Conditioning System

Unitary

description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____

Boiler

Size category. If oversized, state reason.: _____

Chiller

Size category. If oversized, state reason.: _____

List equipment efficiencies: _____

APPENDIX B
**2018 BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS**

ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY
ELECTRICAL SYSTEM AND EQUIPMENT
Method of Compliance:

Energy Code: Prescriptive Performance

ASHRAE 90.1: Prescriptive Performance

Lighting schedule (each fixture type)

lamp type required in fixture

number of lamps in fixture

ballast type used in the fixture

number of ballasts in fixture

total wattage per fixture

total interior wattage specified versus allowed (whole building or space by space)

total exterior wattage specified versus allowed

Additional Prescriptive Compliance

- 506.2.1 More Efficient Mechanical Equipment
 - 506.2.2 Reduced Lighting Power Density
 - 506.2.3 Energy Recovery Ventilation Systems
 - 506.2.4 Higher Efficiency Service Water Heating
 - 506.2.5 On-Site Supply of Renewable Energy
 - 506.2.6 Automatic Daylighting Control Systems
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