BUILDING CODE SUMMARY

APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

Name of Project: CAMPBELL COLLEGE OF OSTEOPATHIC MEDICINE
Address: 250 LESLIE CAMPBELL AVENUE, BUIES CREEK, NC 27506
Proposed Use: ACADEMIC BUILDING
Owner or Authorized Agent: DAVE MARTIN Phone # 919 893 1610 E-mail
Owned By: ☐ City/County ■ Private ☐ State
Code Enforcement Jurisdiction: ☐ City ■ County HARNETT ☐ State NC

LEAD DESIGN PROFESSIONAL: LITTLE

DESIGNER	FIRM	NAME	LICENSE #	PHONE #	E-MAIL
Architectural	LITTLE	CHARLES TODD	9433	919 474 2500	ctodd@littleonline.com
Civil	STEWART ENG.	ROY LORENZEN	15834	919 866 4813	rlorenzen@stewart-eng.com
Electrical	OPTIMA	BRIAN THOMPSON	023494	704 338 1292	bthompson@optimapa.com
Fire Alarm	OPTIMA	BRIAN THOMPSON	023494	704 338 1292	bthompson@optimapa.com
Plumbing	OPTIMA	GEORGE FOWLER	026023	704 338 1292	gfowler@optimapa.com
Mechanical	OPTIMA	STEVE DALEY	027386	704 927 1781	sdaley@optimapa.com
Fire Protection	OPTIMA	GEORGE FOWLER	026023	704 338 1292	gfowler@optimapa.com
Structural	LITTLE	DALE THOMPSON	9246	704 561 8716	dthompson@littleonline.com

YEAR EDITION OF CODE: 2009 North Carolina State Codes
■ New Construction ☐ Addition ☐ Upfit ☐ Renovation (Existing Bldg.) ☐ Repair ☐ Alteration ☐ Reconstruction

BUILDING DATA

Construction Type: ☐ I-A ☐ I-B ■ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B
Mixed Construction: ☐ No ☐ Yes Types: 'A'/'u'
Sprinklers: ☐ No ☐ Partial ■ Yes ■ NFPA 13 ☐ NFPA 13R-02 ☐ NFPA 13D-02
Standpipes: ☐ No ■ Yes NFPA 14-03 Type: ■ I ☐ II ☐ III ■ Wet ☐ Dry
Fire District: ☐ No ■ Yes Flood Hazard Area: ■ No ☐ Yes
Building Height: 72-0" Number of Stories: 4 ☐ Unlimited per 403.3.1.3
Mezzanine: ■ No ☐ Yes
High Rise: ■ No ☐ Yes Central Reference Sheet # (if provided)
Compliant High Rise: ☐ No ☐ Yes

Gross Building Area (sq. ft.):

FLOOR	NEW	EXISTING
LEVEL ONE	32,747	-
LEVEL TWO	32,542	-
LEVEL THREE	16,742	-
LEVEL FOUR	13,638	-
TOTAL	95,669	

ALLOWABLE AREA

Primary Occupancy: ☐ Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
■ Business ☐ Education ☐ 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 Hospitals ☐ I-3 Jails ☐ I-4 Day Care
I-3 Condition: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ Mercantile ☐ Residential ☐ R-1 Hotels ☐ R-2 Condos ☐ R-3 ☐ R-4
☐ Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Utility and Miscellaneous ☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Secondary Occupancy: A-3, M
Special Uses: ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ .
Special Provisions: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8
Mixed Occupancy: S508.3 ☐ No ■ Yes Separation: 1 Hr. Exception:
☐ Incidental Use Separation (508.2)
This separation is not exempt as a Non-Separated Use (see exceptions).
☐ Non-Separated Mixed Occupancy (508.3.2)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
■ Separated Mixed Occupancy (508.3.3) - 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.

Actual Area of Occupancy A / Allowable Area of Occupancy A + Actual Area of Occupancy B / Allowable Area of Occupancy B = ≤ 1.00

LEVEL 1: (B) 31,647 sf / (B) 112,500 sf + (M) 1,100 sf / (M) 64,500 sf = .30 ≤ 1.00
LEVEL 2: (B) 25,081 sf / (B) 112,500 sf + (A-3) 7,461 sf / (A-3) 46,500 sf = .38 ≤ 1.00
LEVEL 3: (B) 16,742 sf / (B) 112,500 sf + -- / -- = .15
LEVEL 4: (B) 13,638 sf / (B) 112,500 sf + -- / -- = .12

TOTAL (REF. 506.4.1): .95 ≤ 3.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG. AREA PER STORY (ACTUAL)	(B) TABLE 503 AREA	(C) AREA FOR OPEN SPACE INCREASE	(D) AREA FOR SPRINKLER INCREASE	(E) ALLOWABLE AREA OR UNLIMITED	(F) MAXIMUM BUILDING AREA
LEVEL 1	Business	31,647	37,500	NOT TAKEN	75,000	112,500	
LEVEL 1	Merchantile	1,100	21,500	NOT TAKEN	43,000	64,500	
LEVEL 2	Business	25,081	37,500	NOT TAKEN	75,000	112,500	
LEVEL 2	Lecture (A-3)	7,461	15,500	NOT TAKEN	31,000	46,500	
LEVEL 3	Business	16,742	37,500	NOT TAKEN	75,000	112,500	
LEVEL 4	Business	13,638	37,500	NOT TAKEN	75,000	112,500	
TOTAL		**95,669**				(3)112,500 sf =	**337,500**

Open space area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum with = (F)
b. Total Building Perimeter = (P)
c. Ratio (F/P) = (F/P)
d. W = Minimum width of public way = (W)
e. Percent of frontage increase I = 100 [F/P) - 0.25] x W/30 = (%)
The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building I = 200 percent
b. Single story building I = 300 percent
Unlimited area applicable under conditions of Sections Group B, F, M, S, A-3 & 4, (507.1, 507.2, 507.3, 507.5, 507.6); Group A motion picture (507.10); Malls (507.11); and H-2 aircraft paint hangers (507.8).
Maximum Building Area = total number of stories in the building X E but not greater that 3 X E (506.4).
The maximum area of parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type IIA		Type IIA	-
Building Hgt. in Feet	65'	Feet=H+20'= 85'	Feet 72'-6"	504.2
Building Hgt. in Stories	5	Stories+1= 6	Stories 4	504.2

FIRE PROTECTION REQUIREMENTS (Tables 601 & 602)

Life Safety Plan Sheet #, if provided G101-G104

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATED	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		1 hr.	1 hr.	2/A413	Y715 / P739		
Bearing Walls		N/A					
Exterior	> 30'	N/A					
North	> 30'	N/A					
East	> 30'	N/A					
West	> 30'	N/A					
South	> 30'	N/A					
Interior		N/A					
Nonbearing walls and Partitions							
Exterior							
North	> 30'	0/N.C.	0/N.C.	1/A413			
East	> 30'	0/N.C.	0/N.C.	1/A415			
West	> 30'	0/N.C.	0/N.C.	1/A411			
South	> 30'	0/N.C.	0/N.C.	1/A418			
Interior		0/N.C.	0/N.C.	A001			
Floor Construction including supporting beams and joists **		1 hr.	1 hr.	2/A413	D739	SEE PM&E	
Roof Construction including supporting beams and joists		1 hr.	1 hr.	2/A413	D732	SEE PM&E	
Shafts - Exit (S707.4)		2 hr.	2 hr.	5/A602	U905	SEE PM&E	WWS0001
Shafts - Other (S707.4)		N/A	2 hr.	1/A611	U415	SEE PM&E	
Corridor Separation (T1017.1)		N.R.					
Occupancy Separation (T508.3.3)		1 hr.	1 hr.	A001	U465	SEE PM&E	WWS0004
Party/Fire Wall Separation		N/A					
Smoke Barrier Separation		N.R.					
Tenant Separation (S402.7.2)		N.R.					
Incidental Use Separation		N.R.					

* Indicate section number permitting reduction ** Ceiling panels are not a part of floor assembly.
N.C. = Non Combustible N.R. = Not Required N/A = Not Applicable S = Section T = Table

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: S1006 ☐ No ■ Yes
Exit Signs: S1011 ☐ No ■ Yes
Fire Alarm: S907 ☐ No ■ Yes
Smoke Detection Systems: ☐ No ■ Yes
Panic Hardware: S1008.1.9 ☐ No ■ Yes

EXIT REQUIREMENTS
NUMBER AND ARRANGEMENT OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM NUMBER OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS (SECTION 1015.2)	
	REQUIRED Table 1019.1	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1016.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
LEVEL 1, Business	2	5	300'	183'	137'	351'
LEVEL 1, Merchantile	1	2	250'	76'	10'	32'
LEVEL 2, Business	2	3	300'	222'	137'	351'
LEVEL 2, lecture (A-3)	2	2	250'	217'	68'	200'
LEVEL 3, Business	2	2	300'	147'	74'	199'
LEVEL 4, Business	2	2	300'	130'	70'	199'

Corridor Dead Ends (Section 1017.3)
Single Exits for Building (Table 1019.2); Singe Exits for Room or Space (Section 1015.1)
Common Path of Travel (Section 1014.3)

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a) AREA sq. ft.	(b) AREA PER OCCUPANT (N/G) (Table 1004.1.1)	(c) EGRESS WIDTH PER OCCUPANT (Table 1005.1)		EXIT WIDTH (in) REQUIRED WIDTH (Table 1005.1) (a ÷ b) x c		ACTUAL WIDTH SHOWN ON PLANS	
			STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL
LEVEL 1, Business	31,647	100 G	0.2	0.15	X	48"	X	514"
LEVEL 1, Merchantile	1,100	30 G	0.2	0.15	X	5.5"	X	68"
LEVEL 2, Business	25,061	100 G	0.2	0.15	50"	37.6"	96"	72"
LEVEL 2, lecture (A-3)	7,462	Sec. 1004.7	0.2	0.15	76.8"	57.6"	102"	76"
LEVEL 3, Business	16,742	100 G	0.2	0.15	33.5"	25.1"	96"	68"
LEVEL 4, Business	13,638	100 G	0.2	0.15	27.3"	20.5"	96"	68"

See Table 1004.1.1 to determine whether net or gross area is applicable.
See definition "Area, Gross" and "Area, Net" (Section 1002).
Minimum stairway width (Section 1009.1); min. corridor width (Section 1017.2); min. door width (Section 1008.1.1)
Minimum width of exit passageway (Section 1021.2)
See Section 1004.5 for converging exits.
The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required (Section 1005.1)
Assembly Occupancies (Section 1025).

PLUMBING FIXTURE REQUIREMENTS

OCCUPANCY	WATER CLOSETS		URINALS	LAVATORIES		SHOWERS/ TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE		MALE	FEMALE		REGULAR	ACCESSIBLE
LEVEL 1 (B&M)	3	5	2	4	4	-	2	2
LEVEL 2 (B&A)	4	8	2	5	5	-	2	2
LEVEL 3 (B)	1	3	2	2	2	-	1	1
LEVEL 4 (B)	1	3	2	2	2	-	1	1
TOTAL	9	19	8	13	13	-	6	6

ACCESSIBLE PARKING

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL #
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES W/ 8' ACCESS AISLE	ACCESSIBLE PROVIDED
Business	N/A	400	8	2	10
TOTAL	N/A	400	8	2	10

SPECIAL APPROVALS

Special Approval: (Local Jurisdiction, Department of Insurance, ICC, etc., describe below)

STRUCTURAL DESIGN

SEE STRUCTURAL DRAWINGS

DESIGN LOADS:
Classification of Building: Category/Use Group (I,II,III,IV)
Live Load: T1607.1 Roof, Attic, Mezzanine, Floor
Snow Load: S1608.2 Flat-Roof Load, Exposure Factor C_e
Wind Load: S1609 Basic Speed, Exposure Category, Internal Pressure Coefficient, Wind Base Shears
Thermal Factor C_t
Importance Factor I_S
3-second gust
Importance Factor I_w
Components & Cladding .

SEISMIC DESIGN CATEGORY A ☐ Yes ☐ No
SEISMIC DESIGN CATEGORY: ☐B ☐C ☐D ☐E
Provide the following Seismic Design Parameters:
Importance Factor IE
Seismic Use Group
Spectral Response Acceleration Sms %g Sm1
Site Classification ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic Structural System (check one)
☐ Bearing Wall ☐ Dual w/ Special Moment Frame
☐ Building Frame ☐ Dual w/ Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Seismic Base Shear V_s = V_E =
Analysis Procedure ☐ Simplified ☐ Equivalent Lateral Force ☐ Modal ☐ 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

ENERGY SUMMARY

SEE MECH DRAWINGS

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 energy cost budget method, state the annual energy cost budget vs. allowable annual energy cost budget.
THERMAL ENVELOPE Thermal Zone: 7A
METHOD OF COMPLIANCE:
☒ Prescriptive ☐ Performance ☐ Energy Cost Budget
Code Allow. Max. or Min.

Roof/ceiling Assembly (each assembly)
Description of assembly SEE 1/A411
U-Value of total assembly .044
R-Value of insulation R20
Skylights in each assembly N/A
U-Value of skylight N/A
total square footage of skylights in each assembly N/A

Exterior Walls (each assembly)
Description of assembly 1.) SEE 1/A413 ; 2.) SEE 2/A415
U-Value of total assembly 1.) .07 ; 2.) .08
R-Value of insulation 1.) 13 ; 2.) 13
Openings (windows or doors with glazing)
U-Value of assembly .27
solar heat gain coefficient (SHGC) .27
projection factor (PF) N/A
low e required, if applicable LOW E
Door R-Value 1.5

Walls adjacent to unconditioned space (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 (SHGC)
projection factor (PF)
low e required, if applicable
Door R-Value

Walls below grade (each assembly)
Description of assembly N/A
U-Value of total assembly
R-Value of insulation

Floors over unconditioned space (each assembly)
Description of assembly N/A
U-Value of total assembly
R-Value of insulation

Floors slab on grade
Description of assembly SEE 1/A411
U-Value of total assembly .19
R-Value of insulation 5
Horizontal/vertical requirement NONE

ELECTRICAL SYSTEM AND EQUIPMENT

SEE ELECTRICAL DRAWINGS

METHOD OF COMPLIANCE: ■ No Change to Building System
☐ Prescriptive ☐ Performance ☐ Energy Cost Budget

Lighting schedule
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 vs allowed .
exterior source minimum efficancy specified vs allowed.

Equipment schedules with motors (not used for mechanical system)
motor horsepower.
number of phases.
minimum efficiency.
motor type .
# of poles .

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

SEE MECH DRAWINGS

METHOD OF COMPLIANCE: ■ No Change to Building System
☐ Prescriptive ☐ Performance ☐ Energy Cost Budget
Thermal Zone .
Exterior design conditions
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 .
descriction of unit .
heating efficiency .
cooling efficiency .
heat output of unit .
cooling output of unit .
Boiler.
total boiler output, if oversized, state reason.
Chille.
total chiller capacity, if oversized, state reason.
List equipment efficiencies

Equipment schedule with motors (mechanical systems)
motor horsepower.
number of phases.
minimum efficiency.
motor type .
# of poles .

Schedule of Special Inspection Services

SEE STRUCTURAL DRAWINGS

Fire Protection

SEE FIRE PROTECTION DRAWINGS

Control Area (4th floor)

SEE SHEET G104 FOR LOCATION

PERMITTED STORAGE CRITERIA

SCHOOL OF OSTEOPATHIC MEDICINE - CONTROL AREAS LEVEL 4
(MAXIMUM TWO CONTROL AREAS LEVEL 4)

MATERIAL	CLASS	TABLE 307 QUANTITY lbs.	TABLE 307 QUANTITY Gals.	TABLE 307 QUANTITY Cu. Ft.	SPRINKLER INCREASE (x2)	T_412.2.2 REDUCTION (87.5%)	QUANTITY PER CONTROL AREA
COMBUSTIBLE LIQUID	II		120		240	210.00	30.00
	IIIA		320		660	577.50	82.50
CRYOGENICS, FLAMMABLE			45		90	78.75	11.25
CRYOGENICS, OXIDIZING			45		90	78.75	11.25
FLAMMABLE GAS				1,000	2,000	1,750.00	250.00
FLAMMABLE LIQUID	1A		30		60	52.50	7.50
	1B		120		240	210.00	30.00
FLAMMABLE SOLID		125			250	218.75	31.25
ORGANIC PEROXIDES	I	1			2	1.75	0.25
	II	5			10	8.75	1.25
	III	50			100	87.50	12.50
	IV	125			250	218.75	31.25
OXIDIZERS	4	1			2	1.75	0.25
	3	10			20	17.50	2.50
	2	250			500	437.50	62.50
	1	4,000			8,000	7,000.00	1,000.00
UNSTABLE (REACTIVE)	4	1			2	1.75	0.25
	3	5			10	8.75	1.25
	2	50			100	87.50	12.50
CORROSIVES, SOLID		5,000			10,000	8,750.00	1,250.00
CORROSIVES, LIQUID			500		1,000	875.00	125.00
CORROSIVES, GAS				810	1,620	1,417.50	202.50

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
410 Blackwell St., Suite 10 Durham NC 27701
T: 919.474.2500 F: 919.474.2545
www.littleonline.com

CAMPBELL UNIVERSITY

Charles Jesse Todd Registered Architect 9433 North Carolina Durham, NC

ISSUE FOR
CD 100

ISSUE DATE
01.10.12

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
ROBERT BISHOP, AIA
PROJECT MANAGER
CHARLES TODD, AIA
DESIGN TEAM
LITTLE

PROJECT NAME
CAMPBELL UNIVERSITY
SCHOOL OF OSTEOPATHIC MEDICINE
BUIES CREEK, NC
27506

PROJECT NO.
514.6915.00

SHEET TITLE
CODE SUMMARY

SHEET NUMBER
G010