

2012 NORTH CAROLINA BUILDING CODE APPENDIX "B"

FOR ALL COMMERCIAL PROJECTS

Name of Project: HARDEE'S BURGAW
 Address: 500 US 117, BURGAW, NORTH CAROLINA 28425 Zip Code: 27804
 Proposed Use: A2 - RESTAURANT
 Owner or Authorized Agent: NRD Phone # 919-544-0087 E-Mail: rlehmann@LMHT.com

Owned by: City/County Private State
 Code Enforcement Jurisdiction: City: BURGAW County: State:

LEAD DESIGN PROFESSIONAL: GLEN R. LEHMANN

Designer	Firm	Name	License #	Telephone #
Architectural	GLEN LEHMANN		3177	(919) 544-0087
Civil				
Electrical	ROSS STOCKS		39217	(919) 544-0087
Fire Alarm				
Plumbing	SHAWN SLYTER		32078	(919) 544-0087
Mechanical	JOSEPH MORGAN		040760	(919) 544-0087
Sprinkler-Standpipe				
Structural				
Retaining Walls > 5' High				
Other				

2012 EDITION OF NC CODE FOR: New Construction Addition Uplift
 EXISTING: Reconstruction Alteration Repair Renovation
 CONSTRUCTED (Date): ORIGINAL USE(S) (Ch.3): N/A
 RENOVATED (Date): CURRENT USE(S) (Ch.3): N/A
 PROPOSED USE(S) (Ch.3): A2 - RESTAURANT

BUILDING DATA:

Construction Type: I-A II-A III-A IV V-A
 I-B II-B III-B V-B
 Sprinklers: No Partial Yes NFPA 13 NFPA 13R NFPA 13D
 Standpipes: No Yes Class I II III Wet Dry
 Fire District: No Yes (Primary) Flood Hazard Area: No Yes
 Building Height: (Feet) 23'-0"
 Gross Building Area: Per Section 502.1

Floor	Existing (Sq. Ft.)	New (Sq. Ft.)	Sub-Total
1st Floor	0	2932	2932
Total			2932

ALLOWABLE AREA:

Primary Occupancies: 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 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 Occupancies: 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 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 Occupancies: Furnace room where any piece of equipment is over 400,000 Btu per hour input
 Rooms with boilers where largest piece of equipment is over 15 hp and 10 horsepower
 Refrigerant machine room
 Hydrogen cutoff rooms not classified as Group H
 Incinerator rooms
 Paint shops not classified as Group H, located in occupancies other than F
 Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
 Group-3 equipment with padded surfaces
 Group I-2 waste and linen rooms
 Wash and linen closets in rooms over 100 square feet
 Stationary storage battery system having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of more than 100 kWh, used for a facility standby power, emergency power or uninterrupted power supplies
 Rooms containing fire pumps
 Group I-2 storage rooms over 100 square feet
 Group I-2 commercial kitchens
 Group I-2 laundries equal to or less than 100 square feet
 Group I-2 rooms or spaces that contain fuel-fired heating equipment

Special Uses: 402 403 404 405 406 407 408 409 410 411 412
 413 414 415 416 417 418 419 420 421 422 423 424
 425 426 427

Special Provisions: 509.2 509.3 509.4 509.5 509.6 509.7 509.8 509.9
 Mixed Occupancy: No Yes Separation: 2 HR Exception: N/A

- Incidental Use Separation (508.2.5)
 This separation is not exempt as a Nonseparated Use (see exceptions)
- Non-Separated Use (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 Use (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.

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

$$\frac{2088 + 3191}{6000 + 11610} = .623 < 1$$

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
GROUND	(RESTAURANT) ASSEMBLY A-2	2932 SF	6,000 SF	N/A	N/A	6,000 SF	6,000 SF

- Open space area increases from Section 506.2 are computed thus:
 - Perimeter which fronts a public way or open space having 20 feet minimum width = N/A (F)
 - Total Building Perimeter = N/A (P)
 - Ratio (F/P) = N/A (F/P)
 - W = Minimum width of public way = N/A (W)
 - Percent of frontage increase $I = 100 [F/P - 0.25] \times W/30 = N/A$
- The sprinkler increase per Section 506.3 is as follows:
 - Multi-story building $I = 200$ percent
 - Single story building $I = 300$ percent
- Unlimited area applicable under conditions of Sections 507
- Maximum Building Area = total number of stories in the building x E (506.4)
- The maximum area of parking garages must comply with 406.3.5. The maximum area of traffic control towers must comply with Table 412.1.2.

ALLOWABLE HEIGHT:

Type of Construction	ALLOWABLE HEIGHT (TABLE 503)		INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
	Type	V-B			
Building Height in Feet	Feet	40'-0"	Feet = H + 20'	3'	TABLE 503
Building Height in Stories	Stories	1	Stories = N/A	1	TABLE 503

FIRE PROTECTION REQUIREMENTS:

BUILDING ELEMENT	SEPARATION DISTANCE (FEET)	RAISED FLOOR (FEET)	PROVIDED (W) NO REDUCTION	DETAILS AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR PENETRATION	DESIGN # FOR RATED JOINTS
Structural frame, including columns, girders, trusses	> N/A	0	N/A	N/A	N/A	N/A	N/A
Bearing walls Exterior	North	N/A	0	0	N/A	N/A	N/A
East	> N/A	0	0	0	N/A	N/A	N/A
South	> N/A	0	0	0	N/A	N/A	N/A
Interior	N/A	0	0	0	N/A	N/A	N/A
Bearing walls and partitions Exterior	North	N/A	0	0	N/A	N/A	N/A
East	N/A	0	0	0	N/A	N/A	N/A
West	N/A	0	0	0	N/A	N/A	N/A
South	N/A	0	0	0	N/A	N/A	N/A
Interior	N/A	0	0	0	N/A	N/A	N/A
Floor construction including supporting beams and joists	N/A	0	0	0	N/A	N/A	N/A
Roof construction including supporting beams and joists	N/A	0	0	0	N/A	N/A	N/A
Shaft Enclosures - Exit	N/A	0	0	0	N/A	N/A	N/A
Shaft Enclosures - Other	N/A	0	0	0	N/A	N/A	N/A
Corridor Separation	N/A	0	0	0	N/A	N/A	N/A
Party/Fire Wall Separation	N/A	0	0	0	N/A	N/A	N/A
Smoke Barrier Separation	N/A	0	0	0	N/A	N/A	N/A
Tenant Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental Use Separation	N/A	0	0	0	N/A	N/A	N/A

* Indicate section number permitting reduction

LIFE SAFETY REQUIREMENTS:

Emergency Lighting: No Yes
 Exit Signs: No Yes
 Fire Alarm: No Yes
 Smoke Detection Systems: No Yes Partial PART OF HVAC SYSTEM
 Panic Hardware: No Yes

LIFE SAFETY PLAN REQUIREMENTS:

- Life Safety Plan Sheet # 13
- Fire and/or smoke rated wall locations (Chapter 7)
 - Assumed and real property line locations
 - Exterior wall opening area with respect to distance to assumed property line (705.8)
 - Existing structures within 30 feet of proposed building
 - Occupancy types for each area as it relates to occupancy load calculation (Table 1004.1.1)
 - Occupant loads for each area
 - Exit access travel distance (1016)
 - Common path of travel distances (1014.3 & 1028.8)
 - Dead end lengths (1018.4)
 - Clear exit widths at each door
 - Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005)
 - Actual occupant load for each exit door
 - A separate schematic plan indicating where a rated floor/ceiling/door roof structure is provided for purpose of occupancy separation
 - Location of doors with panic hardware (1008.1)
 - Location of doors with delayed egress locks and amount of delay (1008.3.7)
 - Location of doors with electromagnetic egress locks (1008.1.9.8)
 - Location of doors equipped with hold open devices
 - Location of emergency escape windows (1029)
 - The square footage of each area (902)
 - The square footage of each area compartment (907.4)
 - Note any code exceptions or variances that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS: (Section 1107)

ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
		REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	

ACCESSIBILITY PARKING: (Table 2902.1)

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

PLUMBING FIXTURE REQUIREMENTS: (Table 2902.1)

OCCUPANCY - A2 - RESTAURANT 86 PEOPLE : 43 MALE; 43 FEMALE	WATERCLOSETS		URINALS		LAVATOIRES		SHOWERS/TUBS		DRINKING FOUNTAINS	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	REGULAR	ACCESSIBLE	REGULAR	ACCESSIBLE
NEW	1	2	0	1	1	1	0	0	0	0
EXISTING	0	0	0	0	0	0	0	0	0	0
REQUIRED	1	2	0	1	1	1	0	0	0	0

SPECIAL APPROVALS:

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)
 NOT APPLICABLE

DESIGN LOADS:

STRUCTURAL SUMMARY:

ENERGY SUMMARY:

THIS SECTION FOR NEW ADDITIONS CHANGE OF USE, AND REORIENTATION
 ENERGY REQUIREMENTS: EXISTING TO REMAIN UNCHANGED
 The following data shall be considered minimum and any special attention required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information on plan data sheet. If energy cost budget method, state the lowest energy cost budget vs. allowable energy cost budget.

THERMALENVELOPE:

Method of Compliance: Prescriptive Performance Trade Off COM CHECK

Roofing Assembly (each assembly):
 DESCRIPTION OF ASSEMBLY: "FLAT" ROOF
 ROOF MEMBRANE OVER 3/4" WOOD DECK
 WOOD ROOF STRUCTURE AND MIN. RIGID ROOF INSUL.
 AND ACCESSIONAL CEILING TO BE DETERMINED
 R-VALUE OF INSULATION: R-32
 U-VALUE OF ASSEMBLY: 0.031
 SKYLIGHTS (EACH ASSEMBLY): NONE

U-Value of total assembly: 0.031
 R-Value of insulation: 32

Interior Wall Assembly (each assembly):
 DESCRIPTION OF ASSEMBLY: (BRICK VENEER, 1/2" SHEATHING,
 6" BATT INSUL., 2x6 STUD, 1/2" GYP. BD.)
 U-VALUE OF INSULATION: R-19

OPENINGS (WINDOWS OR DOORS WITH GLAZING):
 STOREFRONT WINDOW U-VALUE: 0.30
 STOREFRONT DOOR U-VALUE: 0.30
 PROJECTION FACTOR (PF): 0.33
 SOLAR HEAT GAIN COEFFICIENT (SHGC): 0.31

OPAQUE DOOR U-VALUE: 0.70

Walls adjacent to unconditioned space (each assembly):

Description of assembly: N/A
 U-Value of total assembly: N/A
 R-Value of insulation: N/A

Walls below grade (each assembly):

Description of assembly: N/A
 U-Value of total assembly: N/A
 R-Value of insulation: N/A

Floors over unconditioned space (each assembly):

Description of assembly: N/A
 U-Value of total assembly: N/A
 R-Value of insulation: N/A

Floors slab on grade (each assembly):

DESCRIPTION OF ASSEMBLY: 4" CONCRETE ON 4" CRUSHED STONE
 U-VALUE OF TOTAL ASSEMBLY: 0.09
 R-VALUE OF INSULATION: 0
 HORIZONTAL/VERTICAL REQUIREMENT: NONE
 SLAB HEATED: NO

U-Value of total assembly:

R-Value of insulation: N/A
 Horizontal/Vertical requirement: N/A
 Slab heated: N/A

ELECTRICAL SUMMARY:

ELECTRICAL SYSTEM AND EQUIPMENT

THIS SECTION REQUIRED FOR ALL PROJECTS THAT INCLUDE ELECTRICAL DESIGN

Method of Compliance: Prescriptive Performance Energy Cost Budget

Lighting Schedule

SEE ELEC. (TRAC) DRAWINGS - LIGHTING SCHEDULE
 Lamp type required in fixture: SEE ELECTRICAL SHEET E2
 Number of lamps in fixture: SEE ELECTRICAL SHEET E2
 Ballast type used in the fixture: SEE ELECTRICAL SHEET E2
 Number of ballasts in fixture: SEE ELECTRICAL SHEET E2
 Total wattage per fixture: SEE ELECTRICAL SHEET E2
 Total interior wattage specified: 1542w VS 2444w
 Total exterior wattage specified: allowed: N/A

Equipment schedules with motors (not used for mechanical systems)

Motor horsepower: SEE EQUIPMENT SHEETS
 Number of phases: SEE EQUIPMENT SHEETS
 Minimum efficiency: SEE EQUIPMENT SHEETS
 Motor type: SEE EQUIPMENT SHEETS
 No. of poles: SEE EQUIPMENT SHEETS

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

THIS SECTION REQUIRED FOR ALL PROJECTS THAT INCLUDE MECHANICAL DESIGN

Method of Compliance: Prescriptive Performance Energy Cost Budget Trade Off COM CHECK

Thermal zones: A4

Winter dry bulb: 19.5°F
 Summer dry bulb: 94.8°F

Interior design conditions

Winter dry bulb: 65°F, DIN: 20°F
 Summer dry bulb: 75°F, DIN: 75°F
 Relative humidity: 30% N/A, 50% N/A

Building heating load

Building cooling load

Mechanical Spacing Conditioning System

Utility	R12-1	R12-2	R12-3
Description of unit	1.5 TON HP	2.0 TON HP	2.0 TON HP
WATER PUMP	WATER PUMP	WATER PUMP	WATER PUMP
Heating efficiency	3.5 COP	3.5 COP	3.5 COP
Cooling efficiency	10.5 EER	11.4 EER	11.4 EER
Heat source of unit	24.2 MBH/20.6 KW	24.2 MBH/20.6 KW	24.2 MBH/20.6 KW
Cooling output of unit	13.0 MBH	13.0 MBH	13.0 MBH
Boiler	None	None	None
Total boiler output, if oversized, state reason	N/A	N/A	N/A
Chiller	None	None	None
Total chiller capacity, if oversized, state reason	N/A	N/A	N/A

List equipment efficiencies

Equipment schedules with motors (mechanical systems)
 Motor horsepower: N/A
 Minimum efficiency: N/A
 Motor type: N/A
 # of poles: N/A

SEE MECHANICAL DRAWINGS

NRD Project # 17113

ARCHITECTURAL DESIGNERS
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OWNER:

NO.	DATE	DESCRIPTION

DRAWN BY: CHECKED BY:

APPENDIX "B"

DATE: 6-2