

2012 NORTH CAROLINA BUILDING CODE APPENDIX "B"

FOR ALL COMMERCIAL PROJECTS

Name of Project: BISCUITVILLE NEW BUILDING
Address: 1608 NC 24-87 CAMERON, NC Zip Code: 28326
Proposed Use: RESTAURANT
Owner or Authorized Agent: NRD Phone # (919)-544-0087 E-Mail: rlehmann@nrdmt.com
Owned by: City/County Private State
Code Enforcement Jurisdiction: City: County: HARNETT COUNTY State

LEAD DESIGN PROFESSIONAL: GLEN R. LEHMANN

Designer	Firm	Name	License #	Telephone #
Architectural	LMHT ASSOCIATES	GLEN LEHMANN	3177	(919) 544-0087
Civil				
Electrical	LMHT ASSOCIATES	DOUGLAS R. STOCKS	039217	(919) 544-0087
Fire Alarm	LMHT ASSOCIATES	SHAWN SLYTER	032078	(919) 544-0087
Plumbing	LMHT ASSOCIATES	M. JOSEPH MORGAN	40760	(919) 544-0087
Mechanical				
Sprinkler-Standpipe				
Structural				(757) 965-5710
Retaining Walls > 5' High				
Other				

2012 EDITION OF NC CODE FOR: New Construction Addition Upfit
EXISTING: Reconstruction Alteration Repair Renovation
CONSTRUCTED (Date): ORIGINAL USE(S) (Ch.3):
RENOVATED (Date): CURRENT USE(S) (Ch.3):
PROPOSED USE(S) (Ch.3):

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): 19'-10" (24'-7 1/2 AT PEAK POINT)

Gross Building Area: Per Section 502.1

Floor	Existing (Sq. Ft.)	New (Sq. Ft.)	Sub-Total
1st Floor	0	2,745 SF	2,745 SF
Exterior F/C	0	182	182
Total	0	2,927 SF	2,927 SF

ALLOWABLE AREA:

Primary Occupancy: 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
 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 psi 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 I-3 cells equipment with padded surfaces
 Group I-2 waste and linen collection rooms
 Waste and linen collection 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 1000 pounds 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: N/A 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.

Actual Area of Occupancy A + Actual Area of Occupancy B < 1
Allowable Area of Occupancy B

Story No.	Description and Use	(A) Bldg Area Per Story (Actual)	(B) Table 503 Area	(C) Area For Open Spce Increase ¹	(D) Area For Sprinkler Increase ²	(E) Allowable Area Or Unlimited ³	(F) Maximum Building Area ⁴
GROUND	RESTAURANT A-2	2927 SF	6,000 SF	----	----	6,000 SF	6,000 SF

- 1: Open space area increases from Section 508.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = X (F)
b. Total Building Perimeter = P
c. Ratio (F/P) = X/P
d. W = Minimum width of public way = W
e. Percent of frontage increase I = 100 [F/P - 0.25] x W/30 = X%
2: The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building I = 200 percent
b. Single story building I = 300 percent
3: Unlimited area applicable under conditions of Sections 507
4: Maximum Building Area = total number of stories in the building x E (506.4)
5: 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	Type	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet	Feet 40	Feet = H + 20' = N/A	19'-10" (24'-7" FT. @ PEAK)		SEC. 504.2
Building Height in Stories	Stories 1 STORY	Stories + 1 = N/A	Stories 1 STORY		TABLE 503

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	PROVIDED (W) no REDUCTION	DETAILS AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural frame, including columns, girders, trusses	> 30 FT.	0	N/A	N/A	N/A	N/A	N/A
Bearing walls Exterior							N/A
North	> 30 FT.	0	0	N/A	N/A	N/A	N/A
East	> 30 FT.	0	0	N/A	N/A	N/A	N/A
West	> 30 FT.	0	0	N/A	N/A	N/A	N/A
South	> 30 FT.	0	0	N/A	N/A	N/A	N/A
Interior	N/A						
Nonbearing walls and partitions Exterior							
North	N/A	0	0				
East	N/A	0	0				
West	N/A	0	0				
South	N/A	0	0				
Interior		0	0	N/A	N/A	N/A	N/A
Floor construction including supporting beams and joists	N/A						
Roof construction including supporting beams and joists		0	0	N/A	N/A	N/A	N/A
Shaft Enclosures - Exit	N/A						
Shaft Enclosures - Other	N/A						
Corridor Separation	N/A						
Occupancy Separation	N/A						
Party/Fire Wall Separation	N/A						
Smoke Barrier Separation	N/A						
Tenant Separation	N/A						
Incidental Use Separation	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 HVAC
Panic Hardware: No Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet # T400

- 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 (1005.1)
- Actual occupant load for each exit door
- A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purpose of occupancy separation
- Location of doors with panic hardware (1008.1.10)
- Location of doors with delayed egress locks and amount of delay (1008.1.9.7)
- 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 fire area (902)
- The square footage of each smoke compartment (407.4)
- Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (Section 1107)

NOT APPLICABLE

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

ACCESSIBILITY PARKING (Table 2902.1) SEE CIVIL DRAWINGS

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	WATER CLOSETS		URINALS		LAVATOIRES		SHOWERS/TUBS	DRINKING FOUNTAINS
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	REGULAR/TOTAL ACCESSIBLE	
REQUIRED RESTAURANT = 101 OCCUPANTS	1	1			1	1	0	0
PROVIDED RESTAURANT	1	1			1	1	0	0

BUILDING DRAIN SIZE	NUMBER OF BLDG DRAINS	TOTAL FIXTURE UNIT LOAD COUNT	WATER SERVICE SIZE	NUMBER OF WATER SERVICES	TOTAL FIXTURE UNIT LOAD	NOTES
4"	18	102	1-1/4"	1	65	

SPECIAL APPROVALS

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

DESIGN LOADS: SEE STRUCTURAL DWGS.

Importance Factors: Wind (W) 1.0
Snow (S) 1.0
Seismic (E) 1.0

Live Loads: Roof 20 psf
Mezzanine 100 psf
Floor 100 psf

Ground Snow Load: 10 psf

Wind Load: Basic Wind Speed 120 mph (ASCE 7-10)
Exposure Category B
Wind Base Shears (for MWFRS): Vx = 19.5 KIPS, Vy = 47.5 KIPS

SEISMIC DESIGN CATEGORY: D
Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) II
Spectral Response Acceleration SS 20.5 %
Site Classification (Table 1613.5.2) E
Data Source: Field Test
Basic structural system (check one)
Bearing Wall
Seismic base shear: Vx = 9.6 KIP, Vy = 8.6 KIP
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) 2,000 psf
Presumptive Bearing capacity
Pile size, type, and capacity

SPECIAL INSPECTIONS REQUIRED: No

ENERGY SUMMARY

METHOD OF COMPLIANCE: PRESCRIPTIVE PERFORMANCE (COM CHECK) ✓
ROOF/CEILING ASSEMBLY (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY: 3/4" PLYWOOD, R-25 RIGID BOARD INSULATION, WOOD TRUSSES, ACoustICAL CEILING TILE
U-VALUE OF TOTAL ASSEMBLY: 0.039 (BTU/HR-Ft²-F)
R-VALUE OF INSULATION: R-25
SKYLIGHTS IN EACH ASSEMBLY: NONE
U-VALUE OF SKYLIGHT
TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY: NONE

EXTERIOR WALLS (EACH ASSEMBLY)
DESCRIPTION OF ASSEMBLY: SIDING, 1/2" PLYWOOD, 2"x6" WOOD STUDS, R-19 BATT., 5/8" GYP. BOARD
U-VALUE OF TOTAL ASSEMBLY: 0.067 (BTU/HR-Ft²-F)
R-VALUE OF INSULATION: R-19

OPENINGS (WINDOWS OR DOORS WITH GLAZING)
DESCRIPTION OF ASSEMBLY: ALUM. FRAME W/ 1/4" SAFETY GLASS
U-VALUE OF ASSEMBLY: 0.28 (BTU/HR-Ft²-F)
SHADING COEFFICIENT: 0.28
PROJECTION FACTOR: 0.39
LOW E REQUIRED: APPLICABLE: NO
DOOR R-VALUES: 0.28

WALLS ADJACENT TO UNCONDITIONED SPACE (EACH ASSEMBLY): NONE
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
OPENINGS (WINDOWS OR DOORS WITH GLAZING):
U-VALUE OF TOTAL ASSEMBLY:
LOW E REQUIRED, IF APPLICABLE:
DOOR R-VALUES:

FLOORS OVER UNCONDITIONED SPACE (EACH ASSEMBLY): NONE
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:

FLOORS SLAB ON GRADE
DESCRIPTION OF ASSEMBLY: 4" CONCRETE
U-VALUE OF TOTAL ASSEMBLY: 0.13 (BTU/HR-Ft²-F)
R-VALUE OF INSULATION: NONE
HORIZONTAL/VERTICAL REQUIREMENT:
SLAB HEATED: NO

WALLS BELOW GRADE (EACH ASSEMBLY): NONE
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:

MECHANICAL SUMMARY

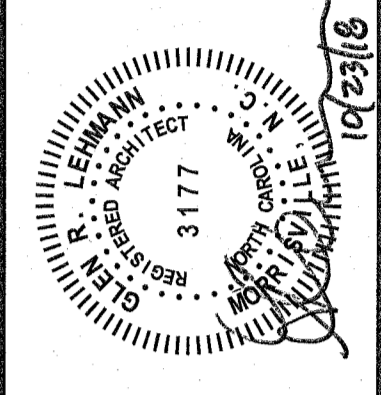
(ALL MECHANICAL EQUIPMENT IS EXISTING TO REMAIN)
METHOD OF COMPLIANCE: PRESCRIPTIVE ENERGY COST BUDGET ✓
MECHANICAL SPACING CONDITIONING SYSTEM

UNITARY DESCRIPTION OF UNIT:	RTU #1 9.0 TON COOLING WITH GAS HEAT	RTU #2 7.5 TON COOLING WITH GAS HEAT	MUA #1 7.5 TON COOLING WITH GAS HEAT
HEATING EFFICIENCY:	80%	80%	80%
COOLING EFFICIENCY:	11.2 EER	12.1 EER	12.1 EER
HEAT OUTPUT OF UNIT:	156.0 MBH	156.0 MBH	156.0 MBH
COOLING OUTPUT OF UNIT:	104.5 MBH	90.4 MBH	90.4 MBH
BOILER: NONE			
CHILLER: NONE			
THERMAL ZONE: 3a			
EXTERIOR DESIGN CONDITIONS WINTER DRY BULB: 22.9°F SUMMER DRY BULB: 96.3°F	EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEMS): BY OTHERS		
INTERIOR DESIGN CONDITIONS: WINTER DRY BULB: 70°F SUMMER DRY BULB: 75°F RELATIVE HUMIDITY: 55%	MOTOR HORSEPOWER: NUMBER OF PHASES: MINIMUM EFFICIENCY: MOTOR TYPE: # OF POLES:		
BUILDING HEATING LOAD: 46.6 MBH			
BUILDING COOLING LOAD: 165.5 MBH			
LIST EQUIPMENT EFFICIENCIES:			

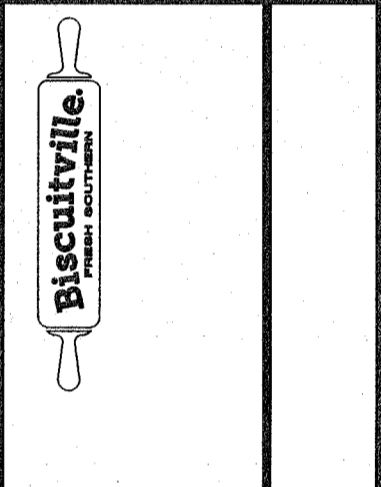
ELECTRICAL SYSTEM AND EQUIPMENT:

METHOD OF COMPLIANCE: PRESCRIPTIVE PERFORMANCE ENERGY COST BUDGET ✓
LAMP TYPE REQUIRED IN FIXTURE: SEE "E" DRAWINGS LIGHTING SCHEDULE
NUMBER OF LAMPS IN FIXTURE: SEE "E" DRAWINGS BALLAST TYPE USED IN THE FIXTURE: SEE "E" DRAWINGS NUMBER OF BALLASTS IN FIXTURE: SEE "E" DRAWINGS TOTAL WATTAGE PER FIXTURE: SEE "E" DRAWINGS TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED: 1975W VS. 2322W
TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED: N/A
EQUIPMENT SCHEDULES WITH MOTORS (NOT USED FOR MECHANICAL SYSTEMS): NONE
MOTOR HORSEPOWER:
NUMBER OF PHASES:
MINIMUM EFFICIENCY:
MOTOR TYPE:
OF POLES:

LMHT Project No. 18144
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PROJECT: BISCUITVILLE
76 SEAT PROTOTYPE
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DRAWING: NC APPENDIX 'B'



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Revisions

REVISION DATE	COMMENTS
	2 COMMENTS 10.23.18

PROJECT DATE: 9.4.18
Drawn By: MTA
Checked By: GRL
Sheet No.: T600