2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: Garner, NC Firestone Complete Auto Care Facility
Address: 5845 NC Hwy 42, Garner, NC Zip Code 27529
Owner/Authorized Agent: Gregg Zuckerman Phone # 407.478.8220 E-Mail: gzuckerman@rockproperties.us
Owned By: Private
Code Enforcement Jurisdiction: County

CONTACT: Olivia Good, SGA Design Group

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	SGA Design Group	Mitchel R. Garrett	12330	(918)587-8600	mitchg@sgadesigngroup.com
Civil	BGE Inc.	Eric C. Hampton	C-4397	(980) 206-4871	EHampton@bgeinc.com
Electrical	Acertus Consulting Group	Randall A. Nelson	032801	(913) 322-5150	randynelson@acertusgorup.com
Fire Alarm	Deferred Submittal By Contractor				
Plumbing	Acertus Consulting Group	Randall A. Nelson	032801	(913) 322-5150	randynelson@acertusgorup.com
Mechanical	Acertus Consulting Group	Randall A. Nelson	032801	(913) 322-5150	randynelson@acertusgorup.com
Sprinkler-Standpipe	Deferred Submittal By Contractor				
Structural	Wallace Engineering	Carrie J. Johnson	033399	(918) 584-5858	cjohnson@wallacesc.com
Retaining Walls >5' High	N/A			( )	
Other				( )	

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

2018 NC BUILDING CODE: New Building

2018 NC EXISTING BUILDING CODE: Select one Select one Select one
CONSTRUCTED: (date) ________ **CURRENT OCCUPANCY(S)** (Ch. 3): ____________
RENOVATED: (date) ________ **PROPOSED OCCUPANCY(S)** (Ch. 3): ____________

RISK CATEGORY (Table 1604.5): **Current:** Select one **Proposed:** II

BASIC BUILDING DATA
Construction Type: V-B
Sprinklers: No N/A
Standpipes: No
Primary Fire District: No **Flood Hazard Area:** No
Special Inspections Required: Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor	N/A	N/A	N/A
2nd Floor	N/A	N/A	N/A
Mezzanine	N/A	N/A	N/A
1st Floor	N/A	6,116 SF	6,116 SF
Basement	N/A	N/A	N/A
TOTAL	N/A	6,116 SF	6,116 SF

ALLOWABLE AREA
Primary Occupancy Classification(s): Mercantile Storage - S-1 Select one Select one Select one Select one
Accessory Occupancy Classification(s): ____________
Incidental Uses (Table 509): ____________
Special Uses (Chapter 4 – List Code Sections): section 406 – motor-vehicle-related occupancies____
Special Provisions: (Chapter 5 – List Code Sections): ____________
Mixed Occupancy: Yes Separation: Select one Exception: non-separated use (508.3)
Select one

Actual Area of Occupancy A / *Allowable Area of Occupancy A* + *Actual Area of Occupancy B* / *Allowable Area of Occupancy B* ≤ 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	Minor auto repair and mercantile	6,116	9,000	N/A	N/A

[1] Frontage area increases from Section 506.3 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)
e. Percent of frontage increase $I_f = 100[F/P - 0.25] \times W/30$ = ______ (%)
[2] Unlimited area applicable under conditions of Section 507.
[3] Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
[4] The maximum area of open parking garages must comply with Table 406.5.4.
[5] Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE[1]
Building Height in Feet (Table 504.3)[2]	40'-6"	22'-10"	
Building Height in Stories (Table 504.4)[3]	1	1	

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
[2] The maximum height of air traffic control towers must comply with Table 412.3.1.
[3] The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS

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

* Indicate section number permitting reduction

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 (%)
Greater than 30' on all sides	UP, S	No limit	Not required

LIFE SAFETY SYSTEM REQUIREMENTS

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

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: LS1

- ☐ 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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ACCESSIBLE PARKING
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED: REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
6,721sf	25	41			2	2
TOTAL		41				2

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATER CLOSETS MALE	WATER CLOSETS FEMALE	WATER CLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SHOWERS /TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXIST'G	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	NEW	N/A	N/A	2	N/A	N/A	N/A	2	N/A	2	1
	REQ'D	N/A	N/A	1	N/A	N/A	N/A	1	N/A	1	1

SPECIAL APPROVALS

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

_______N/A_______________________________

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 vs annual energy cost for the proposed design.

Existing building envelope complies with code: Select one

Exempt Building: Select one Provide code or statutory reference:

Climate Zone: 4A

Method of Compliance: Energy Code - Prescriptive
(If "Other" specify source here)____________

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: Metal building roof____________
U-Value of total assembly: 0.035______
R-Value of insulation: 28.6________
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: Metal building walls ____________
U-Value of total assembly: 0.052________
R-Value of insulation: 19.2__________
Openings (windows or doors with glazing)
U-Value of assembly: 0.5 (HM doors), 0.1 (sectional overhead doors), 0.45 (glazing)
Solar heat gain coefficient: 0.33________
projection factor: 0.2________
Door R-Values: ________

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

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

Floors slab on grade
Description of assembly: concrete slab on grade____________
U-Value of total assembly: N/A ________
R-Value of insulation: 15 per inch
Horizontal/vertical requirement: 2'________
slab heated: N/A________

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS:

Importance Factors: Snow (I_S) 1.0
Seismic (I_E) 1.0

Live Loads: Roof 20______ psf
Mezzanine N/A______ psf
Floor N/A______ psf

Ground Snow Load: 15______ psf

Wind Load: Ultimate Wind Speed 115______ mph (ASCE-7)
Exposure Category C

SEISMIC DESIGN CATEGORY: B
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) II
Spectral Response Acceleration S_S____0.157____%g S_1____0.077____%g
Site Classification (ASCE 7) D
Data Source: Presumptive
Basic structural system Building Frame
Analysis Procedure: Equivalent Lateral Force
Architectural, Mechanical, Components anchored? No

LATERAL DESIGN CONTROL: Wind

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) ____3000______ psf
Pile size, type, and capacity ____________

2018 APPENDIX B
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: 19.6°F________
summer dry bulb: 94.8°F ________

Interior design conditions
winter dry bulb: 70.0°F ________
summer dry bulb: 75.0°F ________
relative humidity: 50%________

Building heating load: 65.9 MBH________

Building cooling load: 55.4 MBH ________

Mechanical Spacing Conditioning System
Unitary
description of unit: refer to sheet M3
heating efficiency: refer to sheet M3
cooling efficiency: refer to sheet M3
size category of unit: refer to sheet M3
Boiler
Size category. If oversized, state reason.: N/A
Chiller
Size category. If oversized, state reason.: N/A

List equipment efficiencies: refer to sheet M3

2018 APPENDIX B
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

Lighting schedule (each fixture type)
lamp type required in fixture **PLEASE SEE LIGHT FIXTURE SCHEDULE ON SHEET E3 FOR ALL**
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 (whole building or space by space) **8,186W**
total exterior wattage specified vs. allowed **4,546W**

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)
- ☐ C406.2 More Efficient HVAC Equipment Performance
- ☒ C406.3 Reduced Lighting Power Density
- ☐ C406.4 Enhanced Digital Lighting Controls
- ☐ C406.5 On-Site Renewable Energy
- ☐ C406.6 Dedicated Outdoor Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating

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2019 - JANUARY -SMALL ER
5845 NC HWY 42
GARNER, NC

SGA DESIGN GROUP, P.C. Registered Architectural Corporation 51720 North Carolina TULSA, OK

MITCHEL R. GARRETT REGISTERED ARCHITECT 12330 NORTH CAROLINA TULSA, OK

Mitchel R Garrett — Digitally signed by Mitchel R Garrett Date: 2019.07.26 15:02:25 -05'00'

07/26/2019

ISSUE BLOCK

PROPERTY NO.:	160017
6 DIGIT NO.:	903065
4 DIGIT NO.:	015P
AOR PROJECT NUMBER:	1955B01
TO PERMIT:	DATE: 07/26/19
TO BID:	DATE: ##-##-##

M3

SHEET TITLE:
APPENDIX B

SHEET NUMBER:
APPB