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: Renovation of 920 Corporate Drive
Address: 920 Corporate Drive, Hillsborough, NC Zip Code 27278
Proposed Use: Offices for School System Administration
Owner/Authorized Agent: Jake Henry Phone: (919) 732-8126 E-Mail: [illegible]
Owned By: ☒ City/County ☐ Private ☐ State
Code Enforcement Jurisdiction: ☐ City ☒ County: Orange ☐ State

LEAD DESIGN PROFESSIONAL: Kenneth E. Redfoot, AIA, CRA Associates, Inc

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	CRA Associates, Inc.	Ken Redfoot, AIA	6565	(919) 401-8586	[illegible]
Civil	CRA Associates, Inc.	Mike Hammersley, PE	13350	(919) 401-8586	[illegible]
Electrical	RNM Consulting Engineers	Jason S. Denton, PE	35223	(828) 492-0677	[illegible]
Fire Alarm	RNM Consulting Engineers	Jason S. Denton, PE	35223	(828) 492-0677	[illegible]
Plumbing	RNM Consulting Engineers	Jeffrey Powell, PE	25989	(828) 492-0677	[illegible]
Mechanical	RNM Consulting Engineers	Mark McDowell, PE	28539	(828) 492-0677	[illegible]
Fire Protection	RNM Consulting Engineers	Jeffrey Powell, PE	25989	(828) 492-0677	[illegible]
Structural					
Retaining Walls >5' High					
Other					

2018 NC BUILDING CODE: Select one
2018 NC EXISTING BUILDING CODE: Alteration Level II N/A N/A
CONSTRUCTED: (date) 2002 CURRENT OCCUPANCY(S) (Ch. 3): Educational
RENOVATED: (date) 2019 PROPOSED OCCUPANCY(S) (Ch. 3): Business
OCCUPANCY CATEGORY (Table 1604.5): Current: III Proposed: II

BASIC BUILDING DATA
Construction Type: V-A
Sprinklers: No N/A
Standpipes: No
Primary Fire District: No **Flood Hazard Area:** No
Special Inspections Required: No

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor			
2nd Floor	6,885	0	6,885
1st Floor	7,011	0	7,011
Basement		n/a	
TOTAL	13,896	0	13,896

ALLOWABLE AREA
Primary Occupancy Classification(s): Business N/A N/A N/A N/A N/A
Accessory Occupancy Classification(s): Assembly A-3
Incidental Uses (Table 509):
Special Uses (Chapter 4 – List Code Sections):

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Special Provisions: (Chapter 5 – List Code Sections):
Mixed Occupancy: No Separation: Select one Exception:
Non-Separated Use (508.3)
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	First Floor	7,011	18,000	13,500	31,500
2	Second Floor	6,885	18,000	13,500	31,500

[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 = 336'-0" (F)
b. Total Building Perimeter = 336'-0" (P)
c. Ratio (F/P) = 1.00 (F/P)
d. W = Minimum width of public way = 30'-0" (W)
e. Percent of frontage increase I_f = 100[F/P – 0.25] x W/30 = 75 (%)
[2] Unlimited area applicable under conditions of Section 507.
[3] Maximum Building Area = total number of stories in the building x D (maximum3 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[1]
Building Height in Feet (Table 504.3)	50	35'-0"	
Building Height in Stories (Table 504.4)	3	2	

[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 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		0					
Bearing Walls							
Exterior							
North		1	Existing exterior bearing walls are 1-hour rated	N/A	U. L. U302	Existing Conditions	
East		1	Existing exterior bearing walls are 1-hour rated	N/A	U. L. U302	Existing Conditions	
West		1	Existing exterior bearing walls are 1-hour rated	N/A	U. L. U302	Existing Conditions	
South		1	Existing exterior bearing walls are 1-hour rated	N/A	U. L. U302	Existing Conditions	
Interior		0					
Nonbearing Walls and Partitions		0					
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		1	Existing floor-ceiling assembly is 1-hour rated	N/A	U. L. L528	Existing Conditions	
Floor Ceiling Assembly		0					
Columns Supporting Floors		1	Existing columns are 1-hour rated	N/A	U. L. X527	Existing Conditions	
Roof Construction, including supporting beams and joists		0					
Roof Ceiling Assembly		1	Existing roof-ceiling assembly is 1-hour rated	N/A	U. L. P522	Existing Conditions	
Columns Supporting Roof		0					
Shaft Enclosures - Exit		1	1-hour	N/A	U. L. U305	Existing Conditions	
Shaft Enclosures - Other		0					
Corridor Separation		0					
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 (%)

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LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: Yes
Exit Signs: Yes
Fire Alarm: Yes
Smoke Detection Systems: Yes, duct detectors only.
Carbon Monoxide Detection: No

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet A0.2

- ☐ 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 (902)
- ☐ 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)

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
(SEE SHEET C2.0 FOR PARKING SUMMARY)

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
TOTAL						

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PLUMBING FIXTURE REQUIREMENTS
(SEE SHEET A0.1 FOR TABLES)

USE		WATERCLOSETS MALE	FEMALE	UNISEX	URINALS	LAVATORIES MALE	FEMALE	UNISEX	SHOWERS /TUBS	DRINKING FOUNTAINS REGULAR	ACCESSIBLE
SPACE	EXIST'G										
	NEW										
	REQ'D										

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, 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 vs annual energy cost for the proposed design.

Existing building envelope complies with code: No

Exempt Building: Yes Provide code or statutory reference: 2018 NC Energy Conservation Code, Section C501.2

Climate Zone: 4A

Method of Compliance: Select one
(If "Other" specify source here)

THERMAL ENVELOPE

Roof/ceiling Assembly (each assembly) Existing Roof/Ceiling Assembly to Remain
Exterior Walls (each assembly) Existing Exterior Wall Assembly to Remain
Walls below grade (each assembly) Existing Walls Below Grade to Remain
Floors slab on grade Existing Floor Slabs on Grade to Remain

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2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN (NO STRUCTURAL WORK IS BEING PERFORMED)

DESIGN LOADS:

Importance Factors: Snow (I_S) Select one
Seismic (I_E) Select one

Live Loads: Roof ______ psf
Mezzanine ______ psf
Floor ______ psf

Ground Snow Load: ______ psf

Wind Load: Basic Wind Speed ______ mph (ASCE-7)
Exposure Category Select one

SEISMIC DESIGN CATEGORY: Select one
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) Select one
Spectral Response Acceleration S_S ______ %g S_1 ______ %g
Site Classification (ASCE 7) Select one
Data Source: Select one
Basic structural system Select one
Analysis Procedure: Select one
Architectural, Mechanical, Components anchored? Select one

LATERAL DESIGN CONTROL: Select one

SOIL BEARING CAPACITIES:
Select one ______
Pile size, type, and capacity ______

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2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone 4A
winter dry bulb: 16F
summer dry bulb: 93F

Interior design conditions
winter dry bulb: 70F
summer dry bulb: 75F
relative humidity: 50%

Building heating load: 384,000 BTUH

Building cooling load: 32 Tons

Mechanical Spacing Conditioning System
Unitary *Refer to Equipment Schedule for Efficiencies*
description of unit: ______
heating efficiency: ______
cooling efficiency: ______
size category of unit: ______
Boiler NA
Size category. If oversized, state reason.: ______
Chiller NA
Size category. If oversized, state reason.: ______

List equipment efficiencies: NA

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2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code - Prescriptive

Lighting schedule (each fixture type)
Existing lighting is to remain.
lamp type required in fixture NA - Existing
number of lamps in fixture NA - Existing
ballast type used in the fixture NA - Existing
number of ballasts in fixture NA - Existing
total wattage per fixture NA - Existing
total interior wattage specified vs. allowed (whole building or space by space) NA - Existing
total exterior wattage specified vs. allowed NA - Existing

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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2018 NC Plumbing Code - Occupancy Calculations

NUMBER OF SPACES/ROOMS	SPACE/ROOM	ROOM AREA (GSF)	ROOM AREA (NSF)	NUMBER OF OCCUPANTS PER CLASSROOM	2006 NCPC TABLE 403.1 CLASSIFICATION AND USE GROUP	NCBC TABLE 1004.1.2 USE CATEGORY	OCCUPANT LOAD FACTOR (SF/PERSON) GROSS	NET	NO. OF FIXED SEATS	NO. OF PEOPLE
	FIRST FLOOR									
1	Office Space	7011			Business	Business	100			70
	SECOND FLOOR									
1	Office Space	6721			Business	Business	100			67
					Business					137
					TOTAL OCCUPANTS					137

2018 NC Plumbing Code - Plumbing Fixture Calculations

NCPC TABLE 403.1 USE GROUP	NO. OF PERSONS	MALE FEMALE RATIO	NO. OF MALES	NO. OF FEMALES	MALE WC	MALE UR NCPC 419.2	MALE LAV	FEMALE WC	FEMALE UR	FEMALE LAV	SHWRS & TUBS	DRINK FOUNT
Business - 1st floor	70	50/50	35	35	1.4		0.875	1.4	NA	0.875	NA	0.7
Business - 2nd floor	67	50/50	34	34	1.36		0.85	1.36	NA	0.85	NA	0.67
REQUIRED FIXTURES FOR MALES ===>					3	0	2					
REQUIRED FIXTURES FOR FEMALES ===>								3	NA	2		
REQUIRED FIXTURES FOR ALL ===>											NA	1

SPACE/ROOM		UNISEX WC		UNISEX LAV	MALE WC	MALE UR NCPC 419.2	MALE LAV	FEMALE WC	FEMALE UR	FEMALE LAV	SHWRS & TUBS	DRINK FOUNT
Toilet 105A		1		1								
Women 193A								3		2		2
Men 193B					1	1	2					
Toilet 290A		1		1								2
Women 291A								3		2		2
Men 291B					1	1	2					
PROVIDED FIXTURES FOR MALES ===>					2	2	4					
PROVIDED FIXTURES FOR FEMALES ===>								6	0	4		
PROVIDED FIXTURES FOR ALL ===>											0	6

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7/22/2019

Renovation of
920 Corporate Drive
Orange County Schools
920 Corporate Drive
Hillsborough, North Carolina

no. revisions

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drawn checked

Code Information Sheet

sheet
A0.1

project no. 1905

date 7/22/19

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