2012 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: RENOVATIONS TO RUTHERFORD COUNTY COURT HOUSE TAX OFFICES
Address: 229 N MAIN ST RUTHERFORDTON, NC Zip Code: 28139
Proposed Use: TAX OFFICE
Owner/Authorized Agent: RUTHERFORD COUNTY Phone # 828-288-6100 E-Mail _____
Owned By: X City/County ☐ Private ☐ State
Code Enforcement Jurisdiction: ☐ City: _____ X County RUTHERFORD ☐ State

THIS PROJECT IS THE RENOVATION OF APPROXIMATELY 6,242 SQ. FT. OF THE TAX OFFICE PORTION OF THE EXISTING COURTHOUSE. NIETHER THE USE NOR THE OCCUPANCY OF THE EXISTING AREA IS CHANGED BY THIS WORK. THE REHAB CODE WILL BE USED.

LEAD DESIGN PROFESSIONAL: MARK B. PATTERSON

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #
Architectural	PATTERSON DESIGN GROUP	MARK PATTERSON	NC 6062	704-487-1120
Civil				(___)_____
Electrical	MCKNIGH SMITH WARD GRIFFIN	MARK ARRINGTON	NC 12490	704-527-2112
Fire Alarm	MCKNIGH SMITH WARD GRIFFIN	MARK ARRINGTON	NC 12490	704-527-2112
Plumbing	MCKNIGH SMITH WARD GRIFFIN	CRAIG CHAMPION	NC 17250	704-527-2112
Mechanical	MCKNIGH SMITH WARD GRIFFIN	CRAIG CHAMPION	NC 17250	704-527-2112
Sprinkler-Standpipe				(___)_____
Structural				(___)_____
Retaining Walls >5' High				(___)_____

2012 EDITION OF NC CODE FOR: ☐ New Construction ☐ Addition ☐ Upfit X Rehab Code
EXISTING: ☐ Reconstruction ☐ Alteration ☐ Repair X Renovation
CONSTRUCTED: (date) 1925 **ORIGINAL USE(S)** (Ch. 3): COURTHOUSE
RENOVATED: (date) 1994 **CURRENT USE(S)** (Ch. 3): COURTHOUSE AND OFFICES
PROPOSED USE(S) (Ch. 3): COURTHOUSE AND OFFICES

BASIC BUILDING DATA
Construction Type: (check all that apply) ☐ I-A ☐ I-B X II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B
Sprinklers: X No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: X No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ☐ No X Yes (Primary) **Flood Hazard Area:** X No ☐ Yes
Building Height: (feet) 52
Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6th Floor			
5th Floor			
4th Floor			
3rd Floor	6,312		6,312
2nd Floor	12,523		12,523
Mezzanine			
1st Floor	12,442		12,442
Basement	12,442		12,442
TOTAL	43,719		43,719

Seismic (I_E) _____

Live Loads: Roof _____ psf; Mezzanine _____ psf; Floor _____ psf

Ground Snow Load: _____ psf

Wind Load: Basic Wind Speed _____ mph (ASCE-7)
Exposure Category _____
Wind Base Shears (for MWFRS) Vx = _____ Vy = _____

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D
Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV
Spectral Response Acceleration S_S _____ %g S_1 _____ %g
Site Classification (Table 1613.5.2) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ 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_X = _____ V_Y = _____
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) _____ psf
Presumptive Bearing capacity _____ psf
Pile size, type, and capacity _____
SPECIAL INSPECTIONS REQUIRED: ☐ Yes ☐ No

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

THERE IS NO CHANGE IN USE OR OCCUPANCY IN THIS PROJECT. THERE IS NO MODIFICATION OR CHANGE TO TOILET FIXTURES.

USE		WATERCLOSETS		URINALS	LAVATORIES		SHOWERS/ TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE		MALE	FEMALE		REGULAR	ACCESSIBLE
SPACE:	EXISTING								
	NEW								
	REQUIRED								

SPECIAL APPROVALS

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

_____

ALLOWABLE AREA

Occupancy:
Assembly ☐ A-1 ☐ A-2 X A-3 ☐ A-4 ☐ A-5
Business X
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 ☐

Incidental Uses (Table 508.2.5):
☐ Furnace room where any piece of equipment is over 400,000 Btu per hour input
☐ Rooms with boilers where the 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 Group F
☐ Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
☐ Laundry rooms over 100 square feet
☐ Group I-3 cells equipped with padded surfaces
☐ Group I-2 waste and linen collection rooms
☐ Waste and linen collection rooms over 100 square feet
☐ Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for 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 X Yes Separation: ____ Hr. Exception: _____
☐ Incidental Use Separation (508.2.5)

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

X Non-Separated Use (508.3)
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 (508.4) - 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.

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

_____ + _____ + ... = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BUILDING AREA PER STORY ACTUAL)	(B) TABLE 503[1] AREA	(C) AREA FOR FRONT/AGE INCREASE[1]	(D) AREA FOR SPRINKLER INCREASE[2]	(E) ALLOWABLE AREA OR UNLIMITED[3]	(F) MAXIMUM BUILDING AREA[4]
BASEMENT	OFFICES	12,442	15,500	-	-	15,500	46,500
FIRST	OFFICES	12,442	15,500	-	-	15,500	
SECOND	OFFICES	12,523	15,500	-	-	15,500	
THIRD	COURT	6,312	15,500	-	-	15,500	

[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 = _____ (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] x W/30 = _____ (%)

[2] The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building I_s = 200 percent
b. Single story building I_s = 300 percent

[3] Unlimited area applicable under conditions of Section 507.

[4] Maximum Building Area = total number of stories in the building x E (506.4).

[5] The maximum area of open parking garages must comply with Table 406.3.5. The maximum area of air traffic control towers must comply with Table 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type II-A		Type II-A	
Building Height in Feet	65	Feet = H + 20' = _____	53	
Building Height in Stories	3	Stories + 1 = _____	3	

FIRE PROTECTION REQUIREMENTS
DESIGN ASSEMBLIES LISTED ARE FOR THE EXISTING RENOVATION WHERE THIS PROJECT IS.

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/_____* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIG FO RATI JOIN
Structural Frame, including columns, girders, trusses							
Bearing Walls							
Exterior							
North		1	1	U902 SIM			
East		1	1	U902 SIM			
West		1	1	U902 SIM			
South		1	1	U902 SIM			
Interior							
Nonbearing Walls and Partitions							
Exterior walls							
North		NA					
East		NA					
West		NA					
South		NA					
Interior walls and partitions		0	0				
Floor Construction Including supporting beams and joists		1	1	D205 SIM			
Roof Construction Including supporting beams and joists		1	1	F225 SIM OR U906 SIM			
Shaft Enclosures - Exit		1	1	U410 SIM			
Shaft Enclosures - Other		1	1	U410 SIM			
Corridor Separation		1	1	U410 SIM			
Occupancy Separation		NA					
Party/Fire Wall Separation		NA					
Smoke Barrier Separation		NA					
Tenant Separation		NA					
Incidental Use Separation		NA					

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No X Yes
Exit Signs: ☐ No X Yes
Fire Alarm: ☐ No X Yes
Smoke Detection Systems: ☐ No X Yes ☐ Partial _____
Panic Hardware: ☐ No X Yes

LIFE SAFETY PLAN REQUIREMENTS

THIS PROJECT IS THE RENOVATION OF ONLY A SMALL PROTION OF THE ENTIRE BUILDING – APPROXIMATELY 6,242 SQUARE FEET. THE ONLY CHANGES TO THE EGRESS ARE REPLACING TWO DOORS LEADING INTO THE AREA OF THIS WORK.

Life Safety Plan Sheet #: LS1.1

☐ 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 lines (705.8)
☐ Existing structures within 30' of the proposed building
X Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1)
X Occupant loads for each area
X Exit access travel distances (1016)
X Common path of travel distances (1014.3 & 1028.8)
X Dead end lengths (1018.4)
X Clear exit widths for each exit door
X Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
X Actual occupant load for each exit door
X A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
X Location of doors with panic hardware (1008.1.10)
☐ Location of doors with delayed egress locks and the 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)

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

ACCESSIBLE PARKING
(SECTION 1106)

THERE IS NO CHANGE IN USE OR OCCUPANCY IN THIS PROJECT.

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 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
TOTAL						

STRUCTURAL DESIGN

THERE IS NO CHANGE IN USE OR OCCUPANCY IN THIS PROJECT. NO STRUCTURAL ELEMENTS ARE MODIFIRED OR CHANGED.

DESIGN LOADS:

Importance Factors: Wind (I_W) _____ Snow (I_S) _____

ENERGY SUMMARY

THERE IS NO CHANGE IN USE OR OCCUPANCY IN THIS PROJECT. THE ONLY CHANGES TO THE HVAC SYSTEM IS SLIGHT RELOCATION OF GRILLS FOR NEW ACCOUSTICAL CEILING.

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.

Climate Zone: ☐ 3 ☐ 4 ☐ 5

Method of Compliance:
☐ Prescriptive (Energy Code)
☐ Performance (Energy Code)
☐ Prescriptive (ASHRAE 90.1)
☐ Performance (ASHRAE 90.1)

THERMAL ENVELOPE

Roof/ceiling Assembly (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Skylights in each assembly: _____
U-Value of skylight: _____
total square footage of skylights in each assembly: _____

Exterior Walls (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: _____
projection factor: _____
Door R-Values: _____

Walls below grade (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors slab on grade
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement: _____
slab heated: _____

MECHANICAL SUMMARY

THERE IS NO CHANGE IN USE OR OCCUPANCY IN THIS PROJECT. THE ONLY CHANGES TO THE HVAC SYSTEM IS SLIGHT RELOCATION OF GRILLS FOR NEW ACCOUSTICAL CEILING.

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
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
description of unit: _____
heating efficiency: _____
cooling efficiency: _____
size category of unit: _____
Boiler
Size category. If oversized, state reason.: _____
Chiller
Size category. If oversized, state reason.: _____

List equipment efficiencies: _____

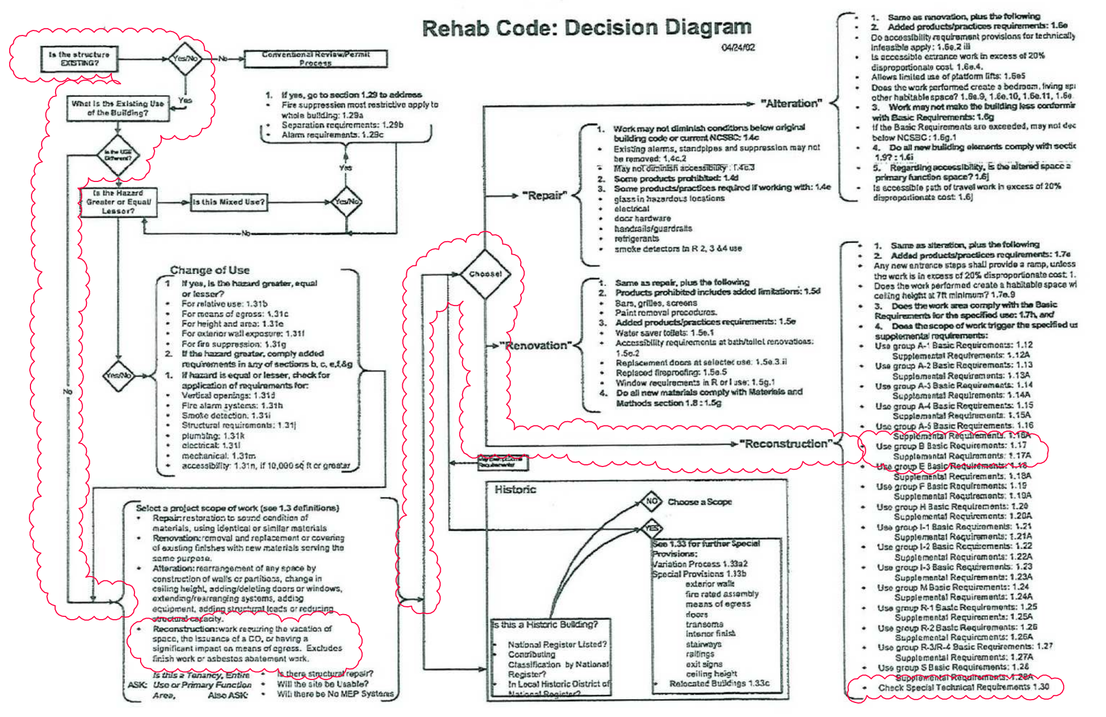
ELECTRICAL SUMMARY

THERE IS NO CHANGE IN USE OR OCCUPANCY IN THIS PROJECT. SEE SHEET E1.0.

ELECTRICAL SYSTEM AND EQUIPMENT
Method of Compliance:
Energy Code: ☐ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting schedule (each fixture type)
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 (whole building or space by space)
total exterior wattage specified vs. allowed

Additional Prescriptive Compliance
☐ 506.2.1 More Efficient Mechanical Equipment
☐ 506.2.2 Reduced Lighting Power Density
☐ 506.2.3 Energy Recovery Ventilation Systems
☐ 506.2.4 Higher Efficiency Service Water Heating
☐ 506.2.5 On-Site Supply of Renewable Energy
☐ 506.2.6 Automatic Daylighting Control Systems



CONSULTANTS

RENOVATIONS TO RUTHERFORD COUNTY COURTHOUSE TAX OFFICES
Rutherfordton, North Carolina

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REVISIONS

MARK	DATE

SHEET TITLE
APPENDIX B

PROJECT NO: 3089
ISSUE DATE: 7-9-13

SHEET CS1.2 OF 11