## 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: University Storage
Address: 305 Masonic Road - Erwin, NC    Zip Code 28339
Owner/Authorized Agent: Barefoot    Phone # ( 910 ) 890 . 3256    E-Mail wrbarefoot@yahoo.com
Owned By:    □ City/County    ☒ Private    □ State
Code Enforcement Jurisdiction: □ City    □ County    □ State

**CONTACT:**

| DESIGNER | FIRM | NAME | LICENSE # | TELEPHONE # | E-MAIL |
|---|---|---|---|---|---|
| Architectural | | | | ( ) | |
| Civil | | | | ( ) | |
| Electrical | | | | ( ) | |
| Fire Alarm | | | | ( ) | |
| Plumbing | | | | ( ) | |
| Mechanical | | | | ( ) | |
| Sprinkler-Standpipe | | | | ( ) | |
| Structural | BETCO, Inc. | Gilbert | 026413 | ( 704 ) 872-2999 | chrisg@betcoinc.com |
| Retaining Walls >5' High | | | | ( ) | |
| Other | | | | ( ) | |

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

**2018 NC CODE FOR:** ☒ New Construction □ Addition □ Renovation
    □ 1st Time Interior Completion
    □ Shell/Core
    □ Phased Construction ~ Shell/Core
    □ Renovation

**2018 NC EXISTING BUILDING CODE:** □ Prescriptive □ Repair □ Chapter 14
    **Alteration:** □ Level I □ Level II □ Level III
    □ Historic Property □ Change of Use
    CONSTRUCTED:(date) _____ ORIGINAL OCCUPANCY(S) (Ch. 3): _____
    RENOVATED: (date) _____ CURRENT OCCUPANCY(S) (Ch. 3): _____
**RISK CATEGORY (table 1604.5)** Current: □ I □ II □ III □ IV
    Proposed: □ I ☒ II □ III □ IV

**BASIC BUILDING DATA**
Construction Type: □ I-A □ II-A □ III-A □ IV □ V-A
(check all that apply)    □ I-B ☒ II-B □ III-B □ V-B
Sprinklers: □ No □ Partial □ Yes □ NFPA 13 □ NFPA 13R □ NFPA 13D
Standpipes: □ No □ Class □ 1 □ II □ III □ Wet □ Dry
Fire District: □ No □ Yes (Primary)    Flood Hazard Area: □ No □ Yes
Special Inspections Required: ☒ No □ Yes

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**Gross Building Area:**

| FLOOR | EXISTING (SQ FT) | NEW (SQ FT) | RENOVATED/ALTER (SQ FT) | SUB-TOTAL |
|---|---|---|---|---|
| 6th Floor | | | | |
| 5th Floor | | | | |
| 4th Floor | | | | |
| 3rd Floor | | | | |
| 2nd Floor | | | | |
| Mezzanine | | | | |
| 1st Floor | 19,845 | | | |
| Basement | | | | |
| TOTAL | 19,845 | | | |

**ALLOWABLE AREA**

**Primary Occupancy Classification: SELECT ONE**
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 Condition □ 1 □ 2
    □ I-2 Condition □ 1 □ 2
    □ I-3 Condition □ 1 □ 2 □ 3 □ 4 □ 5
    □ I-4
Mercantile □
Residential □ R-1 □ R-2 □ R-3 □ R-4    *Occupancy Revised to S-1 - CJG - 4-10-23*
Storage ☒ S-1 Moderate □ S-2 Low
    Parking Garage Choose One: □ Open □ Enclosed □ High-piled □ Repair Garage
Utility and Miscellaneous □
**Accessory Occupancy Classification(s):** _____ Not Applicable
**Incidental Uses** (Table 509): _____ Not Applicable
Special Uses (Chapter 4 – List Code Sections): _____ Not Applicable
Special Provisions: (Chapter 5 – List Code Sections) _____ Not Applicable
**Mixed Occupancy:** ☒ No □ Yes Separation: N/A Hr. Exception: _____ Not Applicable
□ 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.

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

_____ + _____ + _____ ≤ 100

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| STORY NO. | DESCRIPTION AND USE | (A) BLDG AREA PER STORY (ACTUAL) | (B) TABLE 506.2* AREA | (C) AREA FOR FRONTAGE INCREASE[1,3] | (D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3] |
|---|---|---|---|---|---|
| 1 | STORAGE | 19,845 | 26,000 | N/A | 26,000 |

[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 (TABLE 504.3) | SHOWN ON PLANS | CODE REFERENCE |
|---|---|---|---|
| Building Height in Feet (Table 504.3) | 55 | 15 | |
| Building Height in Stories (Table 504.4) | 3 | 1 | |

[1] Provide code reference for the "Show 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

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**FIRE PROTECTION REQUIREMENTS**

| BUILDING ELEMENT | FIRE SEPARATION DISTANCE (FEET) | RATING (HOURS) | RATING PROVIDED (W/ REDUCTION)* | DETAIL # AND SHEET # | DESIGN # FOR RATED ASSEMBLY | DESIGN # FOR RATED PENETRATION | DESIGN # FOR RATED JOINTS |
|---|---|---|---|---|---|---|---|
| Structural Frame, including columns, girders, trusses | | | | | | | |
| Bearing Walls Exterior | | | | | | | |
| North | >= 10 ft | 0 hr. | | | | | |
| East | >= 10 ft | 0 hr. | | | | | |
| West | >= 10 ft | 0 hr. | | | | | |
| South | >= 10 ft | 0 hr. | | | | | |
| Interior | | | | | | | |
| Nonbearing Walls and Partitions Exterior walls | | | | | | | |
| North | | | | | | | |
| East | | | | | | | |
| West | | | | | | | |
| South | | | | | | | |
| Interior walls and partitions | | | | | | | |
| Floor Construction, including supporting beams and joists | | | | | | | |
| Floor Ceiling Assembly | | | | | | | |
| Column Supporting Floor | | | | | | | |
| Roof Construction, including supporting beams and joists | | | | | | | |
| Roof Ceiling Assembly | | | | | | | |
| Column Supporting Roof | | | | | | | |
| Shaft Enclosure - Exit | | Ref. Table 1020.1 | Rated Corridor Not Required | | | | |
| Shaft Enclosure - Other | | for Group S-1 | with Occupant Load < 30 | | | | |
| Corridor Separation | | 0 hr. | | CV9 | U419 | N/A | N/A |
| Occupancy/Fire Barrier Separation | | 3 hr. | | | | | |
| Party/Fire Wall Separation | | | | | | | |
| Smoke Barrier Separation | | | | | | | |
| Smoke Partition | | | | | | | |
| Tenant/Dwelling Unit/ Sleeping Unit Separation | | | | | | | |
| Incidental Use Separation | | | | | | | |

* Indicate section number permitting reduction

**PERCENTAGE OF WALL OPENING CALCULATIONS**

| FIRE SEPARATION DISTANCE (FEET FROM PROPERTY LINES) | DEGREES OF OPENINGS PROTECTION (TABLE 705.8) | ALLOWABLE AREA (%) | ACTUAL SHOWN ON PLANS (%) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

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**LIFE SAFETY SYSTEM REQUIREMENTS**

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

**LIFE SAFETY PLAN REQUIREMENTS**

Life Safety Plan Sheet #: _____
□ 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 type 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 (1006.2.1 & 2006.3.2(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 and supporting construction for a fire barrier/fire partition/smoke barrier.
□ 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 floor 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

| Section/Table/Note | Title |
|---|---|
| | |
| | |

**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**

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(SECTION 1106)

| LOT OR PARKING AREA | TOTAL # OF PARKING SPACES | | IF 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 | | | | | | |

**PLUMBING FIXTURE REQUIREMENTS**
(TABLE 2902.1)

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

**SPECIAL APPROVALS**
Special approval: (Local Jurisdiction, Department of Insurance, SCO, DPS, DHHS, ICC, etc., describe below)

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**ENERGY SUMMARY**

**ENERGY REQUIREMENTS:**
The following data shall be considered minimum and any special attribute required to meet the **North Carolina Energy Conservation 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 □ Yes (The remainder of this section is not applicable)
Exempt Building: □ No □ Yes (Provide Code or Statutory reference): _____
    **Climate Zone:** □ 3A □ 4A □ 5A
    **Method of Compliance: Energy Code** □ Performance □ Prescriptive
    ASHRAE 90.1 □ Performance □ Prescriptive
    (If "Other" specify source here)

**THERMAL ENVELOPE** (Prescriptive method only)

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: _____

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

**DESIGN LOADS:**

**Importance Factors:** Snow (Is) 1
    Seismic (Ie) 1

**Live Loads:** Roof 20 psf
    Mezzanine N/A psf
    Floor 125 psf

**Ground Snow Load:** 10 psf

**Wind Load:** Ultimate Wind Speed 119 mph (ASCE-7)
    Exposure Category B

**SEISMIC DESIGN CATEGORY:** □ A □ B ☒ C □ D
Provide the following Seismic Design Parameters:
**Risk Category** (Table 1604.5) □ I ☒ II □ III □ IV
**Spectral Response Acceleration** Ss 18.3 %g S₁ 8.6 %g
**Site Classification** (ASCE 7) □ A □ B □ C ☒ D □ E □ F
    Data Source: □ Field Test ☒ Presumptive □ Historical Data
**Basic structural system** ☒ Bearing Wall □ Dual w/Special Moment Frame
    ☒ Building Frame □ Dual w/Intermediate R/C or Special Steel
    □ Moment Frame □ Inverted Pendulum
**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 3000 psf
    Pile size, type, and capacity _____

*Engineer's Seal on this sheet is limited to the Structural Design information ONLY.*

*(Engineer's seal: NORTH CAROLINA SEAL 026413 ENGINEER CHRISTOPHER J GILBERT — 4/11/23)*

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## 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: _____
    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: _____
    Chiller
        Size category. If oversized, state reason.: _____
        Size category. If oversized, state reason.: _____

**List equipment efficiencies:** _____

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## 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 □ 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 Efficiency Package Options**
(When using the 2018 NCECC; not required for ASHRAE 90.1)
    □ C406.2 More Efficient Mechanical Equipment
    □ 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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**BETCO, Inc.**
228 Commerce Blvd.
Statesville, NC 28625
Limited Engineering License # D-0140

| | DATE: 10/14/2022 |
|---|---|
| | DRAWN BY: DPP |
| | SCALE: AS NOTED |
| | APPROVED BY: |

⚠ GENERAL REVISIONS    04/10/2023    IS
REVISIONS    DATE    BY

**BETCO**
228 COMMERCE BLVD.
STATESVILLE, NC 28625
(800)654-7813

PROJECT NAME: **UNIVERSITY STORAGE**
PROJECT ADDRESS: ERWIN, NC 28339
OWNER: UNIVERSITY STORAGE, LLC
PROJECT NO.: NC22329
SHEET TITLE: APPENDIX B
DRAWING NUMBER: **CV1.1**