

THESE DIMENSIONS E QUALITY CHECKED BY THE DESIGNER

E

D

C

B

A

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: Project Grace
Address: Grace Street, Wilmington
Owner: Authors of Grace, Mike Hagan

DESIGNER: FIRM NAME LICENSE # TELEPHONE # E-MAIL
Architectural: LSP Charles Honey NC 040181 (910) 791-0287 chahoney@lsp.com

2018 NC BUILDING CODE RISK CATEGORY (Table 1604.5): Current: III Proposed: III

BASIC BUILDING DATA (Existing Garage): Renovation
Construction Type: II-B
Sprinklers: Not
Standpipes: Class I - Dry

BASIC BUILDING DATA (New Building)
Construction Type: I-B
Sprinklers: Yes, NFPA 13
Standpipes: Class I - Wet

Table with 4 columns: FLOOR, EXISTING (SQ FT), NEW (SQ FT), SUB-TOTAL. Rows for 7th, 6th, 5th, 4th, 3rd, 2nd, 1st floors and TOTAL.

Table with 4 columns: FLOOR, EXISTING (SQ FT), NEW (SQ FT), SUB-TOTAL. Rows for 3rd, 2nd, 1st stories and TOTAL.

ALLOWABLE AREA
Primary Occupancy Classification(s): Assembly - A-3 Business - Storage - Parking Garage (Open)

Special Uses (Chapter 4 - List Code Sections): N/A
Mixed Occupancy: Yes Separation: 2 III Exception: See SPECIAL CONDITION #3 on Sheet G-051

Table with 6 columns: STORY NO., DESCRIPTION AND USE, (A) BLDG. AREA PER STORY (ACTUAL), (B) TABLE 506.2* AREA, (C) AREA FOR PENALTY PER STORY OR INCREASE**, (D) ALLOWABLE AREA PER STORY OR INCREASE**.

Table with 6 columns: STORY NO., DESCRIPTION AND USE, (A) BLDG. AREA PER STORY (ACTUAL), (B) TABLE 506.2* AREA, (C) AREA FOR PENALTY PER STORY OR INCREASE**, (D) ALLOWABLE AREA PER STORY OR INCREASE**.

Fromage area increases from Section 506.3 are not applied.
*Unimproved area applicable under conditions of Section 507.
**Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).

Table with 4 columns: ALLOWABLE HEIGHT, EXISTING GARAGE, ALLOWABLE, SHOWN ON PLANS, CODE REFERENCE. Rows for Building Height in Feet and Building Height in Stories.

Table with 4 columns: ALLOWABLE HEIGHT, NEW BUILDING, ALLOWABLE, SHOWN ON PLANS, CODE REFERENCE. Rows for Building Height in Feet and Building Height in Stories.

Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
*The minimum height of an traffic control tower must comply with Table 412.1.1.
**The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS (Existing Precast Garage)

Table with 8 columns: BUILDING ELEMENT, FIRE SEPARATION (FEET), RISK/9, RISK/9, DETAIL # AND SHEET #, RISK/9, SHEET # FOR RATED PENETRATION, SHEET # FOR RATED JOISTS. Rows for Structural Frame, Exterior, Interior, etc.

* Indicate section number permitting reduction.
** Separation between Existing Garage and New Building, see SPECIAL CONDITION #3 on Sheet G-051.
*** Two options per NBC 509.4: (1) 1HR or (2) walls and ceiling capable of resisting passage of smoke.

FIRE PROTECTION REQUIREMENTS (New Building)

Table with 8 columns: BUILDING ELEMENT, FIRE SEPARATION (FEET), RISK/9, RISK/9, DETAIL # AND SHEET #, RISK/9, SHEET # FOR RATED PENETRATION, SHEET # FOR RATED JOISTS. Rows for Structural Frame, Exterior, Interior, etc.

* Indicate section number permitting reduction.
** Separation between Existing Garage and New Building, see SPECIAL CONDITION #3 on Sheet G-051.
*** Two options per NBC 509.4: (1) 1HR or (2) walls and ceiling capable of resisting passage of smoke.

Table with 4 columns: FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES, DEGREE OF OPENING PROTECTION (TABLE 705.4), ALLOWABLE AREA (%), ACTUAL SHOWN ON PLANS (%). Rows for North, East, West, South.

Table with 4 columns: FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES, DEGREE OF OPENING PROTECTION (TABLE 705.4), ALLOWABLE AREA (%), ACTUAL SHOWN ON PLANS (%). Rows for North, East, West, South.

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: Yes
Exit Signs: Yes
Fire Alarm: Yes
Smoke Detection Systems: Partial
Carbon Monoxide Detection: Yes

LIFE SAFETY PLAN REQUIREMENTS

- 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 (705.4)
Occupancy Use for each area as it relates to occupant load calculation (Table 1001.1.2)
Occupant loads for each area
Exit sign locations (1013)
Exit access ways of distance (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
Minimum calculated occupant load capacity each exit door can accommodate based on egress width (1003.3)
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)

Table with 7 columns: UNIT CLASSIFICATION, 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. Row for N/A.

ACCESSIBLE PARKING (SECTION 1108)

Table with 5 columns: LOT OR PARKING AREA, TOTAL LOT OR PARKING AREA (SQUARE FEET), # OF ACCESSIBLE SPACES PROVIDED, # OF ACCESSIBLE SPACES REQUIRED, TOTAL # ACCESSIBLE SPACES PROVIDED. Rows for Parking Deck (exist.) and TOTAL.

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

Table with 10 columns: USE, WASH CLEANS, URINALS, LAVATORIES, SINKS, SHOWERS, DRINKING FOUNTAINS, etc. Rows for NEW and EXISTING.

SPECIAL APPROVALS

Special approvals: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)
See SPECIAL CONDITIONS on Drawing Sheet G-051.

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 date sheet.

Existing building envelope complies with code: N/A
Exempt Building: N/A. Provide code or statutory reference:

Climate Zone: 3A
Method of Compliance: Energy Code - Performance (if "Other" specify source here)

THERMAL ENVELOPE (Prescriptive method only)

Roofing Assembly (each assembly):
Description of assembly: Mechanical Roof Area
U-Value of total assembly: 0.0242
R-Value of insulation: 242
Skylights in each assembly: N/A

Exterior Walls (each assembly):
Description of assembly: Metal Panel Walls & ACM Panel Walls
U-Value of total assembly: 0.0246
R-Value of insulation: 242

Exterior Walls (each assembly):
Description of assembly: Brick Masonry Veneer
U-Value of total assembly: 0.0222
R-Value of insulation: 222

Exterior Walls (each assembly):
Description of assembly: Parking Deck Separation Wall
U-Value of total assembly: 0.0242
R-Value of insulation: 242

Exterior Walls (each assembly):
Description of assembly: Concrete Stem Wall
U-Value of total assembly: 0.0203
R-Value of insulation: 203

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

Floors over unconditioned space (each assembly):
Description of assembly: Post-Tensioned Slab over Chalkham's Terrace and Loading Dock
U-Value of total assembly: 0.0242
R-Value of insulation: 242

Floors slab on grade:
Description of assembly: Slab on Grade
U-Value of total assembly: 1.062
R-Value of insulation: 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 (s): 1.1 Seismic (s): 1.1

Live Loads: Roof: 20 psf
Floor: 100 psf (minimum and 175 psf in museum spaces)
Ground Snow Load: 10 psf

Wind Load: Ultimate Wind Speed 154 mph (ASCE-7) Exposure Category C

SEISMIC DESIGN CATEGORY: II
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5): III
Spectral Response Acceleration Ss: 0.127 g Sa: 0.068 g

SOIL BEARING CAPACITIES:
Field Test (provide scope of test report) Refer to geotechnical report.
Pile size, type, and capacity: 16" diameter Auger Cast with a 30-ton compressive 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: 24.7°F summer dry bulb: 21.3°F

Interior design conditions: winter dry bulb: 20°F summer dry bulb: 22°F relative humidity: 20%/RH

Building heating load: 907 MBH
Building cooling load: 257 MBH

Mechanical Spacing/Conditioning System: Unitary
Description of unit: As Called w/air RTUs w/VAVs (HW reheat), Energy Recovery Unit with wheel providing ventilation air to RTUs.

Method of Compliance: Energy Code - Performance
List equipment efficiencies: ERU (Label summer -68%, ERU (Label winter -72%)

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 - Performance

Lighting schedule (each fixture type): Refer to Electrical Drawings for lighting schedules
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) and exterior wattage specified vs. allowed

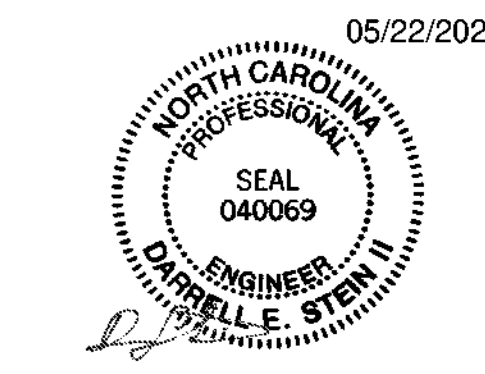
Additional Efficiency Package Options (if being using the 2018 NCCEC, not required for ASHRAE 90.1)
C606.2 More Efficient HVAC Equipment Performance
C606.3 Reduced Fighting Power Density
C606.4 Enhanced Digital Lighting Controls
C606.5 On-Site Renewable Energy
C606.6 Dedicated Outdoor Air System
C606.7 Reduced Energy Use in Service Water Heating

2018 NC Administrative Code and Policies Revised 6/15/2020



101 NORTH THIRD STREET, SUITE 500 WILMINGTON, NORTH CAROLINA 28401 TEL. 910.790.9901 FAX. 910.790.3111 WWW.LSP.COM

INDEPENDENT ENGINEERS 8345 LENOVA DRIVE, SUITE 300 LENOVA, NC 28014 TEL. 913.742.5000 www.iny-engineers.com 2/5/2020 EXP. 6/30/2023



COPYRIGHT 2023 ALL RIGHTS RESERVED. WRITTEN OR ELECTRONIC DRAWINGS AND DOCUMENTATION MAY NOT BE REPRODUCED IN ANY FORM WITHOUT WRITTEN PERMISSION FROM LSP ASSOCIATES LTD.

Project Grace
Grace Street
Wilmington, NC 28401
LSP PROJECT: 7701-177800

Table with 2 columns: DATE, DESCRIPTION. Row: 0 - 2023.05.22 PERMIT SET

SHEET NAME: APPENDIX B

ORIG SUBMISSION: 2023.05.22

SHEET: G-050

PERMIT SET

DARRELLE STEIN

5/22/2023 8:32:02 AM

1

2

3

4

5

6