

2018 APPENDIX B

BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

(EXCEPT ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES)

(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: Sheetz - Boone

Address: East King Street & New Market Blvd., NC

Owner/Authorized Agent: Sheetz, Inc.

Owned By: ☐ City/County ☒ Private ☐ State

Code Enforcement Jurisdiction: ☒ City ☐ County ☐ State

Phone #

E-Mail

Zip Code

28607

boone@sheetz.com

28607

CONTACT:

DESIGNER

Architectural

Civil

Electrical

Fire Alarm

Plumbing

Mechanical

Sprinkler-Standpipe

Structural

Retaining Walls >5' High

UST's

Gas Canopy

FIRM

NAME

LICENSE #

TELEPHONE #

E-MAIL

CEISO Architects, Inc.

Brady Harding

10089

(977) 433-8584

adam.weller@cesoinc.com

LEAD Professionals, P.C.

Ryan Gatewood

045527

(434) 792-5680

rgatewood@lflm.com

H.F. Lenz

David Busci, PE

37594 (F-1080)

(814) 269-9300

dbusci@lflm.com

N/A

N/A

N/A

N/A

N/A

H.F. Lenz

David Busci, PE

37594 (F-1080)

(814) 269-9300

dbusci@lflm.com

H.F. Lenz

David Busci, PE

37594 (F-1080)

(814) 269-9300

dbusci@lflm.com

DASE

Randi Dineen, PE

036522

(814) 317-5037

rdineen@Ddstructures.com

LEAD Professionals, P.C.

Ryan Gatewood

C-2577

(434) 792-5680

rgatewood@lflm.com

Weller Corp.

Robert W. Weller, PE

051765

(330) 239-2699

rob@weller.com

McGee Corp.

Lance R. Pilon

021186

(315) 668-0039

larrypilon@gmail.com

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

2018 NC BUILDING CODE: ☒ New Construction ☐ Addition ☐ Renovation ☐ 1st Time Interior Completion

☐ Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements

☐ Phased Construction-Shell/Core-Contact the local inspection jurisdiction for possible additional procedures and requirements

2018 NC EXISTING BUILDING CODE: EXISTING: ☐ Prescriptive ☐ Repair ☐ Chapter 14

Alteration: ☐ Level I ☐ Level II ☐ Level III

☐ Historic Property ☐ Change of Use

CONSTRUCTED: (date) \_\_\_\_\_ CURRENT OCCUPANCY(S) (Ch. 3): \_\_\_\_\_

RENOVATED: (date) \_\_\_\_\_ PROPOSED OCCUPANCY(S) (Ch. 3): \_\_\_\_\_

RISK CATEGORY (Table 1604.5): Current: ☐ I ☐ II ☐ III ☐ IV

Proposed: ☐ I ☒ II ☐ III ☐ IV

BASIC BUILDING DATA

Construction Type: (check all that apply)

Sprinklers: ☒ No ☐ Yes ☐ Partial ☐ Yes ☐ Class I ☐ II ☐ III ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

Standpipes: ☒ No ☐ Yes ☐ Flood Hazard Area: ☒ No ☐ Yes

Fire District: ☐ No ☐ Yes

Special Inspections Required: ☐ No ☒ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table

Floor	Existing (sq ft)	New (sq ft)	Subtotal
3rd Floor	N/A		
2nd Floor	N/A		
Mezzanine	N/A		
1st Floor	N/A	6,132 SQ. FT.	
Basement	N/A		
TOTAL		6,132 SQ. FT.	

Primary Occupancy Classification (s):

ALLOWABLE AREA

Assembly

Business

Educational

Factory

Hazardous

Institutional

Mercantile

Residential

Storage

Utility and Miscellaneous

A-1

A-2

A-3

A-4

A-5

F-1 Moderate

F-1-1 Detonate

F-1-2 Condition

F-1-3 Condition

F-1-4

R-1

S-1 Moderate

Parking Garage

F-2 Low

H-2 Dehagrate

H-3 Combust

H-4 Health

H-5 HPM

R-2

S-2 Low

Open

High-piled

Enclosed

Repair Garage

Accessory Occupancy Classification(s): M (A-2 becomes 'M' Per 303.1.2)

Incidental Uses (Table 509):

Special Uses (Chapter 4 - List Code Sections):

Special Provisions (Chapter 5 - List Code Sections):

Mixed Occupancy: ☒ No ☐ Yes Separation: None Hr. Exception: 508.3

☒ 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.

Actual Area of Occupancy A

Actual Area of Occupancy B

Allowable Area of Occupancy A

Allowable Area of Occupancy B

≤ 1

N/A

N/A

+ .... =

N/A

≤ 1.00

STORY NO.

DESCRIPTION AND USE

(A) BLDG AREA PER STORY (ACTUAL)

(B) TABLE 506.2 AREA

(C) AREA FOR FRONTAGE, INCREASE<sup>1</sup>

(D) ALLOWABLE AREA PER STORY OR UNLIMITED<sup>2</sup>

1

Mercantile

6,132

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 =  $\frac{N}{A} (F)$   
b. Total Building Perimeter =  $\frac{N}{A} (F)$   
c. Ratio  $(F/P) = \frac{N}{A} (F/P)$   
d.  $W$  = Minimum width of public way =  $\frac{N}{A} (F)$   
e. Percent of frontage increase  $I_f = 100 [(F/P - 0.25) \times W/30] = \frac{N}{A} (%)$   
2. Unlimited area applicable under conditions of Section 507.  
3. Maximum Building Area = total number of stories in the building  $\times D$  (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 unspinklered area value in Table 506.2.

ALLOWABLE HEIGHT

Building Height in Feet (Table 504.3) <sup>1</sup>	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE <sup>1</sup>
Building Height in Stories (Table 504.4) <sup>1</sup>	40'	2'	

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		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
		REQ'D	PROVIDED (w/ REDUCTIONS)				
Structural Frame including columns, girders, trusses	N/A	0	0	N/A	N/A	N/A	N/A
Bearing walls	N/A	0	0	N/A	N/A	N/A	N/A
Exterior	N/A	N/A	N/A	N/A	N/A	N/A	N/A
North	N/A	N/A	N/A	N/A	N/A	N/A	N/A
East	N/A	N/A	N/A	N/A	N/A	N/A	N/A
West	N/A	N/A	N/A	N/A	N/A	N/A	N/A
South	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Interior	N/A	0	0	N/A	N/A	N/A	N/A
Nonbearing walls and partitions	N/A	0	0	N/A	N/A	N/A	N/A
East	N/A	N/A	N/A	N/A	N/A	N/A	N/A
West	N/A	N/A	N/A	N/A	N/A	N/A	N/A
South	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Interior walls and partitions	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Floor Construction including supporting beams and joists	N/A	0	0	N/A	N/A	N/A	N/A
Floor Ceiling Assembly	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Column Supporting Floor	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roof Construction, including supporting beams and joists	N/A	0	0	N/A	N/A	N/A	N/A
Column Supporting Roof	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shaft Enclosures - Elev	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shaft Enclosures - Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Corridor Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Occupancy/Fire Barrier Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Party Fire wall Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Smoke Barrier Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Smoke Partition	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tenant/Dwelling Unit Sleeping Unit Separation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Incidental Use Separation	N/A	N/A	N/A	N/A	N/A	N/A	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 (%)
30' or greater	Unprotected, nonsprinklered	No limit	N/A

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ☒ Yes

Exit Signs: ☐ No ☒ Yes

Fire Alarm: ☒ No ☐ Yes

Smoke Detection Systems: ☐ No ☒ Yes

Carbon Monoxide Detection: ☐ No ☒ Yes

☐ Partial

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: G001

☐ Fire and/or smoke rated wall locations (Chapter 7)

☐ Assumed and real property line locations (if not on the site plan)

☒ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)

☒ Occupant loads for each area

☐ Exit sign locations (1015)

☐ 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 (901.7)

☐ The square footage of each smoke compartment for Occupancy Classification 1-2 (407.5)

☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (SECTION 1107)

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
N/A								

ACCESSIBLE PARKING (SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	90' SPACES	112' SPACES	
29,456 SF	36	36	1	1	2
TOTAL 29,456 SF					

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

USE	WATERCLOSETS			URINALS	LAVATORIES			DRINKING FOUNTAINS		
	MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX	SHOWER/TUBS	REGULAR	ACCESSIBLE
	EXISTING	NEW	REQUIRED		EXISTING	NEW	REQUIRED	EXISTING	NEW	REQUIRED
SPACE	2	3	0	2	2	2	0	N/A	1	1

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

SPECIAL APPROVALS

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

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 versus the 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 - Built up roof (TPO Roofing, 5/8" of Rigid Insulation, 3/4" T&G wood decking)  
U-Value of total assembly - 0.030  
R-Value of insulation - 32.5  
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 - Brick veneer on wood frame structure  
U-Value of total assembly - 0.038  
R-Value of insulation - 19 (cavity) and 10 (continuous)  
Openings (windows)  
U-Value of assembly - 0.400  
Solar heat gain coefficient - 20  
projection factor - Varies  
Doors R-Values - N/A  
Openings (doors with glazing)  
U-Value of assembly - 1.070  
Solar heat gain coefficient - 0.73  
projection factor - Varies  
Doors R-Values - 2.5

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

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

Floors slab on grade  
Description of assembly - 4" concrete slab over 8" crushed stone  
U-Value of total assembly - 0.69  
R-Value of insulation - 15.0  
Horizontal/vertical requirement - 2ft Horizontal and vertical  
Slab heated - N/A

STRUCTURAL DESIGN

DESIGN LOADS:

Importance Factors: Wind (Iw) 1.0  
Snow (Is) 1.0  
Seismic (Ig) 1.0

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

Ground Snow Load: 30 psf

Wind Load: Basic Wind Speed 110 mph (ASCE-7-16)  
Exposure Category B  
Wind Base Shears (for MWFRS) Vx = 17.4 Vy = 11.0

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 Ss 25.6 %g S1 8.3 %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 Vx = 6.0 Vy = 5.4  
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) 3000 psf  
Presumptive Bearing capacity N/A psf  
Pile size, type, and capacity N/A  
SPECIAL INSPECTIONS REQUIRED: ☒ Yes ☐ No

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone  
winter dry bulb: 10.4°F  
summer dry bulb: 99°F

Interior design conditions  
winter dry bulb: 70°F  
summer dry bulb: 74°F  
relative humidity: 50%

Building heating load: 222,918 Btuh - 18.5 tons  
Building cooling load: 267,495 Btuh - 22.3 tons

Mechanical Spacing Conditioning System  
Unitary  
description of unit: Three roof top York Units With Gas Heat: (1) 12.5 Ton, (1) 10.0 Ton, (1) 7.5 Ton  
heating efficiency: 80%  
cooling efficiency: (1) 12.5 EER, (2) 13.1 EER  
size category of unit: (2) UNITS > 65,000 & < 135,000 + (1) UNIT > 135,000 & < 240,000 BTUH

Size category. If oversized, state reason: N/A  
Chiller  
Size category. If oversized, state reason: N/A  
List equipment efficiencies: N/A

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:  
Energy Code ☐ Performance ☐ Prescriptive  
ASHRAE 90.1: ☒ Performance ☐ Prescriptive

Lighting schedule (each fixture type)  
lamp type required in fixture - see Lighting Fixture Schedule (sheet E111)  
number of lamps in fixture - see Lighting Fixture Schedule (sheet E111)  
ballast type used in fixture - N/A  
number of ballasts in fixture - N/A  
total wattage per fixture - see Lighting Fixture Schedule (sheet E111)  
total interior wattage specified (7,726 watts) vs allowed (whole building or space by space) (4,967 watts)  
total exterior wattage specified (894 watts) vs allowed (761 watts) + supplemental wattage (600 watts)

Additional Prescriptive Compliance  
(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

PROJECT NAME:  
NEW SHEETZ STORE

BOONE

East King Street  
and New Market Blvd.  
Boone, NC 28607

OWNER:  
SHEETZ, INC.

5700 SIXTH AVE.  
ALTOONA, PA 16602

CESO ARCHITECTS, INC.

CONSULTANT

PROFESSIONAL

KEYPLAN

ISSUE: 07.28.2023

SITE ID NO: 214353

AUTHOR BY: DTR

REVIEW BY: AW, ELM

VERSION: 6132L\_v1.4

Appendix B

G003

PERMIT REVIEW DRAWINGS