

ROOFS AND ROOF STRUCTURES (Chapter 15)

<u>✓</u>	Performance requirements (1505.0)	<u>✓</u>	Low-slope roof coverings (1507.5)
<u>C</u>	Fire classification (1506.0)		Flashing (1508.0)
<u>N/A</u>	Slope-slope roof coverings (1507.4)	<u>N/A</u>	Roof structures (1510.0)

STRUCTURAL SYSTEMS (Chapters 16, 17, 18)

STRUCTURAL LOADS (Chapter 16)

DESIGN LOADS ON CONSTRUCTION DOCUMENTS (1603.1)

Uniformly distributed floor live loads (1603.2, 1606.0)

Floor Area Use

Loads Shown

<u>RESIDENTIAL</u>	<u>40 PSF</u>	<u>0.10</u>	Earthquake loads (1603.6, 1610.0)
<u>OFFICES/CHURCH</u>	<u>50 PSF</u>	<u>0.10</u>	Peak velocity-related acceleration, A_v (1610.1.3)
<u>PUBLIC AREAS/CONCRETE</u>	<u>100 PSF</u>	<u>0.10</u>	Peak acceleration, A_a (1610.1.3)

Live load reduction (1603.2, 1606.7)

Roof live loads (1603.3, 1607.0)

Roof snow loads (1603.4, 1608.0)

DESIGN WIND
Ground snow load, P_g (1608.2)

46 PSF
If $P_g > 10$ psf, flat-roof snow load, P_f (1608.3)

1.0
If $P_g > 10$ psf, snow exposure factor, C_e (Table 1608.3.1)

1.1
If $P_g > 10$ psf, roof thermal factor (Table 1608.3.2)

1.0
If $P_g > 10$ psf, snow load importance factor, I (Table 1608.3.3)

NONE
Sloped roof snowload, P_s (1608.4)

Wind loads (1603.5, 1609.0)

85 MPH
Basic wind speed (1609.3)

B/C
Wind exposure category (1609.4)

1.1
Wind importance factor, I (Table 1609.5)

INTERNAL PRESSURE COEFFICIENT (Table 1609.7[6])

WIND DESIGN PRESSURE, P (1609.7)

SOIL-PROFILE TYPE (Table 1610.3.1)

SEISMIC HAZARD EXPOSURE GROUP (1610.1.5)

SEISMIC PERFORMANCE CATEGORY (1610.1.7)

SEISMIC STRUCTURAL SYSTEM AND SEISMIC-RESISTING SYSTEM (Table 1610.3.3)

RESPONSE MODIFICATION FACTOR, R , AND DEFLECTION AMPLIFICATION FACTOR, C_d (Table 1610.3.3)

ANALYSIS PROCEDURE (1610.4, 1610.5)

OTHER LOADS

ATTIC LOAD (1606.2.2, 1606.2.3)

PARTITION LOADS (1606.2.0)

CONCENTRATED LOADS (1606.3)

IMPACT LOADS (1606.6)

MISC. LOADS (1606.4, 1606.8, 1606.9, 1607.5, 1612.0)

STRUCTURAL DESIGN CALCULATIONS

Submitted for all structural members (107.7)

NOTES: N.R. — Not required
N.A. — Not applicable

ADMINISTRATION (Chapter 1)

Complete construction documents (107.5, 107.6, 107.7)

Signed/sealed construction documents (107.7, 114.1)

BUILDING PLANNING (Chapters 3, 4, 5, 6)

USE OR OCCUPANCY CLASSIFICATION (302.0-313.0)

Single Use Group B/R2 Specific occupancy areas (302.1.1)

Mixed Use Groups _____ Accessory areas (302.1.2)

GENERAL BUILDING LIMITATIONS (Chapters 5 & 6)

Apply Case 1 to determine the allowable height and area and permitted types of construction for a building containing a single use group or nonseparated mixed use groups. Apply Case 2 to determine the allowable height and area and permitted types of construction for a building containing separated mixed use groups.

AREA MODIFICATIONS TO TABLE 503

% of Allowable tabular area (Table 503)	<u>A = 100%</u>	<u>B = 100%</u>
% Reduction for height (Table 506.4)	<u>20%</u>	<u>20%</u>
% Increase for open perimeter (506.2)	<u>50%</u>	<u>10%</u>
% Increase for automatic sprinklers (506.3)	<u>100%</u>	<u>100%</u>
Total percentage factor	<u>A = 20%</u>	<u>B = 190%</u>
Conversion factor (Total percentage factor/100%)	<u>2.3</u>	<u>1.9</u>

Open perimeter (506.2)	<u>A = 90'</u>	<u>A = 54'</u>
Open perim.	<u>B = 76'</u>	<u>B = 34'</u>
% Open perimeter =	<u>144</u>	<u>288</u>
% Tab. area increase =	<u>2x25 = 50%</u>	<u>2x25 = 50%</u>
(Open perim./perim.) x 100%	<u>144/288 = 50%</u>	<u>76/190 = 40%</u>
% Tab. area increase =	<u>2x25 = 50%</u>	<u>2x25 = 50%</u>
(Total % Open perim. - 25%)	<u>50% - 25% = 25%</u>	<u>40% - 25% = 15%</u>

CASE 1 — SINGLE USE OR NONSEPARATED MIXED USE GROUPS (313.1.1)

Using Table 503, identify the allowable height and area of the single use group or the most restrictive of the nonseparated mixed use groups. Construction types that provide an allowable tabular area equal to or greater than the adjusted floor area and allowable heights (as modified by Section 504.0) equal to or greater than the actual building height are permitted.

Actual floor area	<u>3738</u>	ft ²	Actual building height	<u>34</u>	feet	<u>3</u>	stories
Adjusted floor area*	<u>1640</u>	ft ²	Allowable building height	<u>55</u>	feet	<u>3</u>	stories

*Adjusted floor area = actual floor area/conversion factor

Permitted types of construction RC Type of construction assumed for review (602.3) SB

OCCUPANT NEEDS (Chapters 40, 44, 42)

MEANS OF EGRESS (Chapter 10)

OCCUPANT LOAD (1008.0 and Table 1008.1.2)

CAPACITY OF EGRESS COMPONENTS (1009.0 and Table 1009.2)

Location	Floor Area	Sq. ft./person load	Occ. loads	Other occ. loads	Total	Egress width (inches/occupant)	Stairways	Doors/ramps/corridors	Stairways	Doors/ramps/corridors
BUILDING A BASEMENT, 1207/1012					12	45.25 SHOWN EACH STAIRWAY (2)				
GROUND 1765 / - OFFICES					18	36" SHOWN				
CUMMINS REAR 881/7					126					
CRIC Bed / 718/35					21					
2 RES 4221/200					21					
3 RES 4221/200					21					
BUILDING A TOTAL					50					
BUILDING B, BASE - 1264/300 MECH					5					
1 3433/200					17					
2					17					
3					12					
					50					

NUMBER OF EXITS (1010.0)

Location	Required	Shown
1ST OFFICE	1	1
1ST COMMON AREA	2	2
1ST CHILL	2	2

ATRIUMS

<input checked="" type="checkbox"/> Automatic sprinkler system (404.2)	<input type="checkbox"/> Public garages (408.0)
<input checked="" type="checkbox"/> Occupancy (404.3)	<input type="checkbox"/> Use Group I-2 (409.0)
<input checked="" type="checkbox"/> Smoke control (404.4)	<input type="checkbox"/> Use Group I-3 (410.0)
<input checked="" type="checkbox"/> Enclosure (404.5)	<input type="checkbox"/> Stages and platforms (412.0)
<input checked="" type="checkbox"/> Fire alarm system (404.6)	<input type="checkbox"/> Special amusement buildings
<input checked="" type="checkbox"/> Travel distance (404.7)	<input type="checkbox"/> HPM facilities (416.0)
<input checked="" type="checkbox"/> OTHER SPECIAL USE AND OCCUPANCY	<input type="checkbox"/> Hazardous materials (307.8, 4 (418.0))
<input checked="" type="checkbox"/> Underground structures (405.0)	<input type="checkbox"/> Use Groups H-1, H-2, H-3 and (418.0)
<input checked="" type="checkbox"/> Open parking structures (406.0)	<input type="checkbox"/> Swimming pools (421.0)
<input checked="" type="checkbox"/> Private garages (407.0)	<input type="checkbox"/> Storage racks (422.0)

FIRE PROTECTION (Chapters 6, 7, 8, 9)

FIRERESISTANT MATERIALS AND CONSTRUCTION (Chapter 7 and Table 602)

Note: Entry in indicates required rating in hours. NC indicates noncombustible construction required.

COMBUSTIBILITY (603.0, 604.0, 605.0, 606.0)	<input checked="" type="checkbox"/> NC
EXTERIOR WALLS (507.2, 705.0, 716.6)	<input checked="" type="checkbox"/> NC
CONSTRUCTION DOCUMENTS (703.0)	<input checked="" type="checkbox"/> NC
EXTERIOR WALLS (507.2, 705.0, 716.6)	<input checked="" type="checkbox"/> NC
FIRE PARTITIONS	<input checked="" type="checkbox"/> NC
OTHER FIRERESISTANT CONSTRUCTION	<input checked="" type="checkbox"/> NC

Fire separation distance	North	East	South	West
A 40'	40'	40'	40'	40'
B 40'	40'	40'	40'	40'

<input checked="" type="checkbox"/> Nonloadbearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Exterior opening protectives (705.3, 706.0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Continuity of exterior walls (705.6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> FIRE SEPARATION ASSEMBLIES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Exit enclosures (709.0, 710.0, 1014.1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> 2 HR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> 2 HR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> 1 HR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Percentage of open perimeter _____ %
 Completely suppressed: Yes _____ No
 Compartmentation: Yes _____ No
 Fire resistance rating of vertical opening enclosure: Yes _____ No
 Type of HVAC system _____
 Automatic fire detection: Yes _____ No
 Fire alarm system: Yes _____ No
 Smoke control: Yes _____ No
 Adequate exit routes: Yes _____ No
 Maximum exit access travel distance: Yes _____ No
 Means of egress emergency lighting: Yes _____ No
 Safety parameters: _____

Area per floor _____
 Percentage of height reduction _____
 Corridor wall rating _____
 Required door closers: Yes _____ No
 serving number of floors _____
 type and location _____
 type _____
 type _____
 Dead ends: Yes _____ No
 Elevator controls: Yes _____ No
 Mixed use groups: Yes _____ No

Fire safety (FS) _____
 Means of egress (ME) _____
 General safety (GS) _____

3408.6.3 Compartmentation	_____	_____	_____
3408.6.4 Tenant and dwelling unit separations	_____	_____	_____
3408.6.5 Corridor walls	_____	_____	_____
3408.6.7 HVAC systems	_____	_____	_____
3408.6.8 Automatic fire detection	_____	_____	_____
3408.6.9 Fire alarm system	_____	_____	_____
3408.6.10 Smoke control	_____	_____	_____
3408.6.11 Means of egress	_____	_____	_____
3408.6.12 Dead ends	_____	_____	_____
3408.6.13 Max. exit access travel distance	_____	_____	_____
3408.6.14 Elevator control	_____	_____	_____
3408.6.15 Means of egress emergency lighting	_____	_____	_____
3408.6.17 Sprinklers	_____	_____	_____
3408.6.18 Specific occupancy area protection	_____	_____	_____
Building score — total value	_____	_____	_____

**** No applicable value to be inserted.

BUILDING SAFETY EVALUATION SCORE (Table 3408.9)

Formula	Table 3408.7	Table 3408.8	Score	Pass	Fail
FS-MFS ≥ 0	(FS)	(MFS)	=		
ME-MME ≥ 0	(ME)	(MME)	=		
GS-MGS ≥ 0	(GS)	(MGS)	=		

FS = Fire Safety
 ME = Means of Egress
 GS = General Safety

MFS = Mandatory Fire Safety
 MME = Mandatory Means of Egress
 MGS = Mandatory General Safety

BOCA® NATIONAL BUILDING CODE/1999 PLAN REVIEW RECORD

Valuation: \$2,300,000
 Fee: \$2,221.00
 JURISDICTION: PORTLAND
 BUILDING LOCATION: 55 GRANV ST. (OVR 804)
 BUILDING DESCRIPTION: 2 - SUNNY BUILDINGS
 REVIEWED BY: [Signature]
 Plan Review # 090182
 Date: 3/17/04

No.	DESCRIPTION	Code Section
205.2	REAR WALL BUILDING B - SEPARATION	205.2
A1.2	STCS IN HALLS ASSEMBLY 39 NOT 45	1214.2
A1.2	ALBERT STREET HALL - SHOWN BY 2000 CODE	
A1.2	USE ONLY LA NEPA IS SYSTEM	313.12
A1.2	EXIT ACCESS CORRIDORS ARE SHOWN IN PLANS - 1 Hr IN CODEBOOK 1/3 HP?	
	SPACE w/ 2 Hr PROTECTION	
	REAR WALL BUILDING B - SEPARATION	
	EXHAUST SYSTEMS FOR BARRIERS PENETRATIONS	
	FLOOR CEILING ASSEMBLY - DAMPERS	



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