

2006 IBC BUILDING CODE CHECKLIST FOR COMMERCIAL PROJECTS

(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

(Transfer the resulting data on the building plans – **Life Safety & Building Code Information** drawing sheet

NOTE: This guide is not exhaustive and due diligence should be made to correlate the project with all applicable codes and standards. Reference to sections should be verified and corrected. If any variations are found, please notify TBCI with the corrected reference so that this guide can be updated for future accuracy. A current document will be posted on the www.rlmarch.com web site.

Name of Project: _____
 Address: _____ Zip Code _____
 Proposed Use: _____
 Owner/Authorized Agent: _____ Phone # (_____) _____ - _____ E-Mail _____
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City _____ County _____ State _____

PRIMARY DESIGN PROFESSIONAL:

EDITION OF IBC CODE _____ FOR: New Construction Addition Uplift

EXISTING: Reconstruction Alteration Repair

YEAR CONSTRUCTED _____ ORIGINAL USE _____ RENOVATED _____ CURRENT USE _____

BUILDING DESIGN DATA (Actual)

Construction Type				
I-A	II-A	III-A	IV	V-A
I-B	II-B	III-B		V-B

Mixed construction: No Yes Type(s): _____

Sprinklers: No Partial Yes NFPA 13 NFPA13R NFPA 13D Other Extinguishing _____

Standpipes: No Yes Class I II III Wet Dry

Fire District: No Yes | District Contact & Phone: _____ Flood Hazard Area : No Yes

Building Height: Feet _____ Number of Stories _____ Mezzanine(s): No Yes

Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
___ Floor			
6th Floor			
5th Floor			
4th Floor			
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor			
Basement			
TOTALS			

ALLOWABLE AREA

Primary Occupancy Classification:

Assembly	<input type="checkbox"/> A1	<input type="checkbox"/> A2	<input type="checkbox"/> A3	<input type="checkbox"/> A4	<input type="checkbox"/> A5
<input type="checkbox"/> Business	<input type="checkbox"/> Educational	Factory	<input type="checkbox"/> F1 Moderate	<input type="checkbox"/> F2 Low	
Institutional	<input type="checkbox"/> I1	<input type="checkbox"/> I2	<input type="checkbox"/> I3	<input type="checkbox"/> I4	
<input type="checkbox"/> Mercantile	Residential	<input type="checkbox"/> R1	<input type="checkbox"/> R2	<input type="checkbox"/> R3	<input type="checkbox"/> R4
Hazardous	<input type="checkbox"/> H1- Detonate	<input type="checkbox"/> H2- Deflagrate	<input type="checkbox"/> H3- Combust	<input type="checkbox"/> H4- Health	<input type="checkbox"/> H5- HPM
Storage	<input type="checkbox"/> S1- Moderate	<input type="checkbox"/> S2- Low	<input type="checkbox"/> High Piled		
<input type="checkbox"/> Utility & Miscellaneous	<input type="checkbox"/> Parking Garage	<input type="checkbox"/> Open	<input type="checkbox"/> Closed	<input type="checkbox"/> Repair Garage	

Secondary Occupancy(s): _____

Special Uses: 402 403 404 405 406 407 408 409 410 411 412
 413 414 415 416 417 418 419 420 421

Special Provisions: 509.2 509.3 509.4 509.5 509.6 509.7 509.8

Mixed Occupancy (508): No Yes **Separation (508.3.3):** _____ Hr. **Exception:** _____

- Incidental Use Separation and Protection (508.2) – Accessory Occupancies (508.3.1)
This separation is not exempt as a Non-Separated Use (see exceptions).
- Non-Separated Use (508.3.2)
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 (508.3.3) - 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.

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

_____ + _____ = _____ Is it less than or equal (\leq) 1?

STORY#.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 ⁵ AREA	(C) AREA FOR FRONTAGE INCREASE ¹	(D) AREA FOR SPRINKLER INCREASE ²	(E) ALLOWABLE AREA OR UNLIMITED ³	(F) MAXIMUM BUILDING AREA ⁴

- 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) = _____ - Note: [(F/P) - 0.25] cannot exceed 0.75
 - d. W/30 = Sum of perimeter with (Width of open space each side \geq 20' truncate to 30' MAX) = (W)/30 Note: W/30 will be \leq 1.0
 - e. Percent of frontage increase $I_f = [F/P - 0.25] \times W/30$
 - f. Total square footage increase for frontage is Area from Table 503 _____ x I_f
- 2 The sprinkler increase per Section 506.3 is as follows:
- a. Multi-story building $I_s = 200$ percent (Area from Table 503 (A_t) x 2)
 - b. Single story building $I_s = 300$ percent (Area from Table 503 (A_t) x 3)

3 Unlimited area applicable under conditions of Sections:
 Group B, F, M, S, A-4 (507); Group A motion picture (507.10); Malls (507.11); and H-2 aircraft paint hangers (507.8).

4 Maximum Building Area = (Total number of stories allowed in the building w/ Max 3) x (Sum of $A_t + I_f + I_s$) (See 506.4).

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

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS (504)	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type:		Type:	
Building Height in Feet	Feet	Feet = H + 20' =		
Building Height in Stories	Stories	Stories + 1 =	Stories	

FIRE PROTECTION REQUIREMENTS

LIFE SAFETY PLAN SHEET #, IF PROVIDED. _____

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/_____* REDUCTION)				
Structural Frame, including columns, girders, trusses							
Bearing Walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions							
Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction Including supporting beams and joists							
Roof Construction Including supporting beams and joists							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Tenant Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

SECTION	EMERGENCY SYSTEM	YES	NO
1006	Emergency Lighting:		
1011	Exit Signs:		
907.2	Fire Alarm:		
907.2.10	Smoke Detection Systems:		
1008.1.9	Panic Hardware:		

EXIT REQUIREMENTS

NUMBER AND ARRANGEMENT OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM ² NUMBER OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS ^{1,3} (SECTION 1014.2)	
	REQUIRED	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1016.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS

- 1 Corridor dead ends (Section 1017.3)
- 2 Single exits (Table 1019.2)
- 3 Common Path of Travel (Section 1014.3)

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a) AREA ¹ sq. ft.	(b) AREA ¹ PER OCCUPANT TABLE 1004.1.1	(OL) CALCULATED OCCUPANT LOAD (a) ÷ (b)	(c) CALCULATED EGRESS WIDTH (c) = OL x Factor ²		EXIT WIDTH (in) ^{2,3,4,5,6,7}			
				(c) CALCULATED EGRESS WIDTH (c) = OL x Factor ²		REQUIRED WIDTH (e) ÷ #Exits (Table 1019.1)		ACTUAL WIDTH SHOWN ON PLANS	
				STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL

- 1 See Table 1004.1.1 to determine whether net or gross area is applicable. See definition "Area, Gross" and "Area, Net" (Section 1002)
- 2 Minimum stairway width (Section 1005.1); min. door width (Section 1005.1); min. corridor width (Section 1017.2)
- 3 Minimum width of exit passageway (Section 1020.2)
- 4 See Section 1004.5 for converging exits.
- 5 The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required (Section 1005.1)
- 6 Assembly occupancies – Check this section if Assembly Occupancy is involved (Section 1025)
- 7 Accessible means of Egress (Section 1007, Chapter 11, ADAAG, ANSI A-117.1, Local Accessibility Code enforced)

STRUCTURAL DESIGN – Chapter 16

DESIGN LOADS:

Importance Factors:	Wind (Iw)		
	Snow (Is)		
	Seismic (Ie)		
Live Loads:	Roof	psf	
	Mezzanine	psf	
	Floor	psf	
Snow Load:		psf	
Wind Load:	Basic Wind Speed	mph	
	Exposure Category		
	Wind Base Shears (for MWFRS)	V _x =	V _y =

SEISMIC DESIGN CATEGORY A

Compliance with Section 1616.4 only? Yes No

SEISMIC DESIGN CATEGORY B C D

Seismic Use Group

Spectral Response Acceleration S_s _____ %g S₁ _____ %g

Site Classification _____ Field Test Presumptive Historical Data

Basic structural system (check one)

- | | |
|-----------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> Bearing Wall | <input type="checkbox"/> Dual w/Special Moment Frame |
| <input type="checkbox"/> Building Frame | <input type="checkbox"/> Dual w/Intermediate R/C or Special Steel |
| <input type="checkbox"/> Moment Frame | <input type="checkbox"/> Inverted Pendulum |

Seismic base shear V_x = _____ V_y = _____

Analysis Procedure Simplified Equivalent Lateral Force Modal

Architectural, Mechanical, Components anchored? _____

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 _____

PLUMBING FIXTURE REQUIREMENTS
See International Plumbing Code or Local Code Requirements
NOTE: IPC(2006) Section 403.4 Travel Distance to nearest toilet facility

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

ACCESSIBLE PARKING

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 8' ACCESS AISLE	
TOTAL					

NOTE: New ADA/ABA-AG 2004 Requires 1 of every 6 spaces as van accessible

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DFS, ICC, etc., describe below – attach sheet if needed)

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 data sheet. If energy cost budget method, state the annual energy cost budget vs allowable annual energy cost budget.

The COMCHECK software available as a cost free download from the www.energycodes.gov web site will satisfy most submittal requirements. Use the RESCHECK software for low rise apartment units, single family, duplex, and townhouse buildings.

THERMAL ENVELOPE

Method of Compliance:

- Prescriptive Performance Energy Cost Budget Compliance Software

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
- shading coefficient
- projection factor
- low e required, if applicable
- Door R-Values

Walls adjacent to unconditioned space (each assembly)

- Description of assembly
- U-Value of total assembly
- R-Value of insulation
- Openings (windows or doors with glazing) U-Value of assembly
- Low e required, if applicable 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

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:

- Prescriptive Performance Energy Cost Budget

Lighting schedule

- 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
- total exterior wattage specified vs allowed

Equipment schedules with motors (not used for mechanical systems)

- motor horsepower
- number of phases
- minimum efficiency
- motor type
- # of poles

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Method of Compliance

- Prescriptive Energy Cost Budget

Climate Zone _____

Thermal Zone

- winter dry bulb
- summer dry bulb

List equipment efficiencies

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
 - heat output of unit
 - cooling output of unit

Equipment schedules with motors (mechanical systems)

- motor horsepower
- number of phases
- minimum efficiency
- motor type
- # of poles

Boiler

- total boiler output. If oversized, state reason.

Chiller

total chiller capacity. If oversized, state reason.