

Worksheet for Commercial Building Planning

Note: This checklist helps ensure that all major code items were checked BEFORE applying for permit.

ADDRESS OF PROJECT:

Chapter 3 Information

301-312 OCCUPANCY CLASSIFICATION: (From Chapter 3, designate the building's use and occupancy. If the building has more than one use, indicate whether you are using non-separated uses or separated uses from Sec. 508)

508.3.2 NON-SEPARATED USES

YES NO

List all occupancy groups:

Which occupancy group is considered the most restrictive in your proposal including Section 403 and Chapter 9 requirements?

508.3.3 SEPARATED USES

YES NO

List all separations (in hours from Table 508.3.3) and occupancy groups:

Chapter 4 Information

Does your proposed building use any of the "special" types of buildings or areas noted in chapter 4? Please answer yes or no to ALL categories below.

402 Covered Mall Buildings		403 High-Rise Buildings	
404 Atriums		405 Underground Buildings	
406 Motor-vehicle-related occupancies		407 Group I-2 occupancy	
408 Group I-3 occupancy		409 Motion Picture Projection Room	
410 Stages or Platforms		411 Special Amusement Building	
412 Aircraft-related occupancy		413 Combustible storage	
414 Hazardous materials		416 Application of flammable finishes in any area	
417 Drying room in any portion of the building		418 Organic coating manufacturing in any area of the building	



415 H-1, H-2, H-3, H-4, and H-5 Occupancy: YES NO

Indicate below which one, and give details about the hazardous materials, including class ratings per the tables in chapter 4.

419 For multi-family buildings (condo's. or apt's.), separations are shown on plan sheet _____

For any of the special uses listed above, please indicate below each particular section of the requirements and where on the plans the compliance with that section can be found.

Sub-section # from IBC	Sheet in drawings from where item is addressed	Explanation

Chapter 5 Information

503 Area from Table 503 (unadjusted)	
503/6 Sprinkler area increase (%)	(circle one) 200% or 300%
506 Area increase (% from frontages)	(cannot exceed 75%)
504 Height from T. 503 (unadjusted)	
504 Sprinkler # of stories increased	Table allows stories; increased to stories
504 Sprinkler height increase (feet)	Table allows feet; increased to feet
Your proposed building's areas by:	
Basement area:	
(Is this basement considered a "story" per 502.1?)	<input type="radio"/> YES <input type="radio"/> NO (describe why not)
Main level area:	
Main level outdoor covered areas:	
2nd floor level area:	
2nd level outdoor covered areas:	
3rd floor level area:	
3rd level outdoor covered areas:	
4th floor	
4th level outdoor covered areas:	
Additional floor areas:	
Add'l levels outdoor covered areas:	
TOTAL of all levels (w/ outdoor covered areas)	
505 Mezzanines (area and describe location)	
506.4 Mixed Occupancy (per your answer to above question about non- or separated occupancies)	(separated occupancies must calculate the various ratios per floor, see 506.4, and write all ratios here).

Note: Many people are under the misconception that outdoor covered areas do not apply to the floor area. Per the definitions in Ch. 2, floor area includes area "within the horizontal projection of the roof or floor above." The City of Orange does not count standard roof overhangs, but does count drive-thru covered areas, covered porches, and similar covered spaces.

507 Are you claiming provisions of an unlimited area building?	<input type="radio"/> YES <input type="radio"/> NO (if no, skip to 508)
507.2 Non-sprinklered, one-story, F-2 or S-2 occupancy?	<input type="radio"/> YES <input type="radio"/> NO
507.3 Sprinklered, one-story, B,F,M or S occupancy or one-story A-4 occupancy with other than Type V construction?	<input type="radio"/> YES <input type="radio"/> NO
EXCEPTIONS Are you using any of the exceptions to qualify for 507.3?	<input type="radio"/> YES <input type="radio"/> NO

Describe which exception from 507.3 you are using and then answer questions below:

507.4 2-story allowed?	<input type="radio"/> YES <input type="radio"/> NO	507.7 High-hazard use groups proposed?	<input type="radio"/> YES <input type="radio"/> NO
507.5 Reduced open space allowed?	<input type="radio"/> YES <input type="radio"/> NO	507.8 Aircraft paint hangar proposed?	<input type="radio"/> YES <input type="radio"/> NO
507.6 Group A-3 bldg.?	<input type="radio"/> YES <input type="radio"/> NO	507.9 Group E building?	<input type="radio"/> YES <input type="radio"/> NO

509 SPECIAL PROVISIONS (exceptions to allowable floor area and allowable heights/stories)

Does your building propose to use any of the special provisions of this section (primarily used for parking garages beneath multi-story apartments or multi-story, multi-use buildings)? YES NO

Describe which sub-section applies to your building for Section 509 and where on the plans each compliance item is shown.

Sub-section # from IBC	Sheet in plans where this specifically is shown (separations, etc)?	Explanation of how you comply with this sub-section:
509.1		
509.2		
509.3		
509.4		
509.5		
509.6		
509.7		
509.8		

Chapter 6 Information

601 – 603 TYPE OF CONSTRUCTION, you must classify the building into a Type I, II, III, IV, or V, with either an A or B designation following. A indicates fire-rated construction, B indicates un-rated construction:

Proposed building type of construction:

Table 601 Indicate each of the building elements (columns, walls, roof, etc.) and where on the plans such fire-ratings are shown. If your proposed building is Type B (unrated), then SKIP to 602.

	Fire rating in hours	Describe construction (gyp board, spray on, etc.)	Sheet of plans
Columns			
Girders			
Trusses			
Exterior bearing walls			
Interior bearing walls			
Floor			
Roof			

Table 602 Indicate all exterior wall's distance for fire separation (to property line or other fire separation distance) and area of openings in that wall as a % of the wall (per Table 704.8)

	Exterior Wall	Distance	Fire-rating required per Table 602	Area of openings as % of wall
North				
South				
East				
West				

Chapter 7 Information

Tell what page of the plans each of the fire walls, fire barriers, shafts, fire partitions, smoke partitions, or smoke barriers are on (include a brief description of why this firewall or fire barrier, etc., or shaft is required, i.e., "this firewall separates the B occupancy from the H occupancy building area").

Sheet of plans	Type of wall shown (fire wall, fire barrier, shaft enclosure, smoke partition, fire partition, smoke barrier, etc.)	Fire rating (in hours)
(Description of why it is fire rated)		
(Description of why it is fire rated)		

704.11 Parapets are required unless you meet one of the exceptions. Please describe which exception you are using to avoid parapets (the most common thing is to avoid parapets).

Exception #	Describe how your building complies with exception:	Sheet of plans where this is shown

712.1 Details of all fire penetrations are shown on sheet(s) _____ or specifications page ____, need exact materials to be used, including company, brand, and model #.

715 Fire doors are indicated on the door schedule on sheet _____, or are listed separately by specification page _____.

716 Mechanical plans sheet _____ shows all fire, smoke, or combination fire/smoke dampers?

Chapter 8 Information

Table 803.5 Are there any unusual interior finishes being proposed? If so, please describe:

Chapter 9 Information

City of Orange has a special ordinance regarding fire sprinklers. Please indicate whether you have complied with this ordinance and whether fire sprinklers are required:

Checked City ordinance and fire sprinklers required? YES NO

Checked City ordinance and fire alarms required? YES NO

If the building requires fire alarm or fire sprinkler, indicate the company and/or fire protection engineer who is designing these systems:

Company Name & Address:

Phone: _____ Fax: _____ Contact name: _____

Even though Chapter 5 and City requirements may have been met, Chapter 9 may require a fire sprinkler system anyway. Please list each occupancy of the building and its "Fire Area" per Chapter 9.

Occupancy group	Fire Area	Sprinklers Required?
		<input type="radio"/> YES <input type="radio"/> NO
		<input type="radio"/> YES <input type="radio"/> NO
		<input type="radio"/> YES <input type="radio"/> NO
		<input type="radio"/> YES <input type="radio"/> NO
		<input type="radio"/> YES <input type="radio"/> NO

Chapter 10 Information

1003.2 Minimum ceiling height provided in egress system: _____ Height: _____

1003.3.3.3 Projections into egress ways, such as trim, are in compliance: _____

1003.3.4 Sheet of plans showing any projections: _____

1003.4 Floor Surface of egress is of the following materials:

1003.5 Changes in elevation in any egress way is shown on sheet _____ of plans

1004 Occupant loads

Describe each individual area	Occupant ratio assigned	Occupant load
		Occ. Load Total:

1005 Egress width, calculated per table 1005.1 based on total occupant load is:

Stairway areas: _____ inches

Other egress areas: _____ inches

1006 All egress areas have been illuminated per this section and are shown on sheet _____ of plans

1007 Two items in this section are often missed, two handicap accessible entrances required and areas of refuge per 1007.6. Please verify that these items are shown on the plans.

1008 The most common problems with doors are the following:

Landings provided at all doors

Lever hardware on all doors

Door hardware (shown on plan sheet #?)

1008.1.8.3 No locks or latches on any door allowed, with 4 exceptions. If you are using any of the exceptions shown, please describe. The most common exception is using "This Door to remain unlocked . . ." at the main entry".

1008.1.9 Panic hardware required by this section? YES NO

(If yes, describe which rooms/areas have panic hardware and where on the plans such hardware is specified?)

Room/area:

Room/area:

1009.3 Stairways, 7" max. riser height (4" min.) and 11" min. tread (7/11 rule); 1012.5 is often overlooked: Handrails shall extend 12" beyond the top riser and continue to slope for the depth of one tread (11") beyond the bottom riser. Handrail extensions are shown on sheet _____ of the plans.

1012 Handrail requirements are now in this section. Please review and ensure compliance.

1011 Exit signs are shown on sheet _____ of the plans.

1013 Guards (formerly called guardrails) are shown on sheet _____ of the plans.

1014 Do any of the conditions shown in this EXIT ACCESS section apply to your proposed building?

	Used?	Where?
1014.2 Egress through intervening spaces	<input type="radio"/> YES <input type="radio"/> NO	
1014.2.1 Multiple tenants	<input type="radio"/> YES <input type="radio"/> NO	
1014.2.2 Group I-2	<input type="radio"/> YES <input type="radio"/> NO	
1014.3 Common path of egress travel	<input type="radio"/> YES <input type="radio"/> NO	
1014.4 Aisles	<input type="radio"/> YES <input type="radio"/> NO	
1014.4.1 Aisles in Group B and M	<input type="radio"/> YES <input type="radio"/> NO	
1014.4.2 Seating at tables	<input type="radio"/> YES <input type="radio"/> NO	
1014.5 Egress balconies	<input type="radio"/> YES <input type="radio"/> NO	
1014.5.1 Wall Separation	<input type="radio"/> YES <input type="radio"/> NO	
1014.5.2 Openness	<input type="radio"/> YES <input type="radio"/> NO	

1015 & 1019 How many exits are required based on occupant load: _____ total # of exits required by Table 1015.1, or by Table 1019.1 or Table 1019.2 (If you qualify for one exit, please describe below)

(Explain qualifications for one exit)

1016 Exit travel distance for the worst case scenario is _____ feet, shown on sheet _____ of the plans.

1017 Corridors are required to be rated?	<input type="radio"/> YES <input type="radio"/> NO	Where is this shown on plans?
1020 Is vertical exit enclosure req'd @ stairways or other locations? Exceptions apply?	<input type="radio"/> YES <input type="radio"/> NO	
1021 Exit passageways were used?	<input type="radio"/> YES <input type="radio"/> NO	
1022 Horizontal exits were used?	<input type="radio"/> YES <input type="radio"/> NO	
1023 Are there any exterior exit stairways or exterior exit ramps?	<input type="radio"/> YES <input type="radio"/> NO	

1024 Do all exits provide an access to the public way? YES NO
 If no, then describe below which exception was used to satisfy the requirement.

1025 Does your proposal contain any areas or rooms for assembly occupancy? YES NO

If yes, show where each item is on the plans:

Section	Plans Sheet
1025.2 Assembly main exit	
1025.3 Assembly other exits	
1025.4 Foyers and lobbies	
1025.5 Interior balcony & gallery/means of egress	
1025.6 Width for assembly	
1025.7 Travel distance	
1025.8 Common path of travel	
1025.9 Assembly aisles are required	
1025.10 Clear width serving seating	
1025.11 Assembly aisle walking surfaces	
1025.12 Seat stability	
1025.13 Handrails	
1025.14 Assembly guards	
1025.15 Bench seating	

1026 Is Emergency Escape and rescue required? YES NO

Egress windows are shown on plan sheet _____

Chapter 11 Information

Most common problems with the new ANSI standard are doors encroaching into toilet and sink clear floor areas, door maneuvering clearances (18" to the side of door, etc.), the new vertical grab bar, and often exterior accessibility not shown anywhere (this can be shown on the civil plans). Have you checked these types of items and shown on the plans?

YES NO

Major elements of accessibility:

Elevators required? YES NO

Main entrance must be accessible, is this shown on plans? YES NO

Accessible parking totals (with at least one van accessible space) How many total did you provide?

Exterior elements of accessibility shown on site and/or civil plans? YES NO

Chapter 12 Information

1210.1 Toilet room floors shall have smooth, hard, non-absorbent finish (concrete, tile, etc.) which extends upward onto the walls at least 5 inches.

1210.2 Walls within 2' of urinal/water closet shall have smooth, hard, nonabsorbent finish to a height of 4 feet; see **EXCEPTIONS**.

Chapter 16 Information

1607.1 Minimum uniform and concentrated live loads used for this design are:

Uniform: _____ Concentrated: _____

1601 All Richland structural design criteria have been met (2006 IBC):

(indicate what criteria you or your structural engineer designed to)

Seismic zone _____ Wind Speed _____ Wind Exposure _____

Ground Snow Load _____ Frost depth: _____ (Note: All these must be shown in the structural calculations).

Chapter 29 Information

Type of Occupancy	Watercloset count	Urinal count	Lavatory count	Shower/tub count

Almost all commercial buildings require separate male and female restrooms. If you are claiming an exception to this as described in the State amendment, please describe how you comply with the exception:

(Explanation)

Other minor items that must be shown on the plans:

- 804-806 Flame spread for interior finishes, verify plans and/or specifications follow Table 803.5.
- 1203.2 Attic ventilation required at 1/300th attic area (or 1/150th for all upper venting).
- 1203.3 Crawl space ventilation required at 1/1500th the floor area (w/ vapor retarder on ground).
- 1209.1 Crawl access required 18"x24" minimum (larger if there is any mech. equip. in the crawl space).
- 1209.2 Attic access required 20"x30" minimum (larger if any mech. equip. in attic--see IMC).
- 1404.2 Weather-resistive barrier of 15 lb. building felt or approved housewrap shall be applied over studs or sheathing on all exterior walls.
- 1405 Veneers, verify type of veneer being used and appropriate requirements.
- 1505.1 Table 1505.1, each construction type (II-B, etc.) must have roof class covering per this table. Roof covering must match Chapter 7 requirements for roof assembly.
- 1506 Roof drainage and overflow, verify overflows on plans.
- 1807.2 Damp-proofing required on basement walls
- 2406.4 **Safety glazing** at various locations, adjacent to doors, etc. (Please clearly show this on plans, not just in a window schedule).

Structural Reminders (Wood Construction)

- 2304.3.2 Headers at all openings must be shown on a plan/schedule and sized for imposed loads.
- 2304.3.3 Shrinkage must be accounted for in buildings where the wood walls support more than 2 floors and a roof; structural analysis required.
- 2304.9.1 Standard nailing schedule, double-check to make sure there are notes or specifications that cover these items; important item is roof sheathing nailed 8d @ 6" o.c.—in order to do this, you need solid blocking (see Table 2304.9.1, item #31 and footnote b)
- 2304.11.2.1 Min. 18" clearance below all wood floor joists, min. 12" clearance below all floor girders.
- 2304.11.2.2 Min. 8" clearance from grade to mudsill plate.
- 2304.11.2.6 Pressure-treated posts required, or provide 8" high piers in crawl space.
- 2305.3.3 Design for shear walls (see 2308.2 below) must meet 3 1/2:1 ratio (height to width).
- 2308.2 Conventional light-frame construction can ONLY be used if ALL criteria here is met (e.g., if trusses are more than 40 feet, then fully engineered building required, etc.)

Other Codes

- IMC Verify furnace location requirements, service lighting, etc. (Sec. 304.5)
- 2003 UPC Check water supply piping sizes, drainage piping sizes, etc., based on fixture units for such.

FOR R1 (hotels) and R2 (apartments) OCCUPANCIES, verify the following:

- 304.5 UMC** Fuel burning equipment cannot be located in a bedroom, bathroom, or closet, or in an enclosed space with access only thru such rooms; furnace requires 30" working space in front.
- 408.6 UPC** Water closet area requires 30" minimum width, 24" clear space in front of toilet
- 1003.3.1.7** Landings at doors, not more than 8" drop to exterior landing.
- 310.4** Sleeping rooms, verify egress req's..
- 310.6.1** Ceiling height req's. for habitable rooms is 7'-6"; for kitchens, hallways, bathrooms, etc., 7'-0".
- 310.6.2** Minimum floor areas for rooms (Sec. 310.6.2 and 310.6.3)

Certification By Licensed Professional Engineer Or Architect

By signing here, I attest and affirm that I am the architect or engineer of record in accordance with Appendix Sec. 106.3.4 of the adopted IBC (design professional in responsible charge), and that I have reviewed and coordinated, or will review and coordinate, all submittal documents prepared by others, including phased and/or deferred submittal items, for compatibility with the design of the building. I will review and coordinate all required shop drawings and submit approved shop drawings to the City of Orange prior to the installation of the items in question. I further attest that this code worksheet has been filled out by me or under my direct supervision and represents a good faith effort to comply with all building code and building code related requirements and that code and code-related requirements of this worksheet have been shown on the submitted construction plans.

Signature of architect of record
(or engineer of record for entire project)

Date:

