

November 1, 2021

Checklist for Minimum Required Information for Commercial Plan Reviews:

(Note: the following information must be placed on plans. Do not submit as separate 8 ½ x 11 sheet). All text on all sheets shall be a minimum of 3/32" high to be legibly scanned to our archives.

Submit stamped/signed documents (unlocked) to eplans@douglas.co.us

Code Analysis and Cover Sheet

- Project Description: include a short narrative describing use of space and the current scope of work.
- A sheet index is required, and the sheets in the submitted set need to be in the order shown on the sheet index, all the same size sheets. Submit all disciplines simultaneously for original plan review and any responses to plan review comments.
- Project Address and Suite Number
- Applicable Codes (show entire list as indicated)
 - 2018 International Building Code
 - 2018 International Mechanical Code
 - 2018 International Plumbing Code
 - 2018 International Fuel Gas Code
 - 2020 National Electrical Code
 - 2018 International Energy Conservation Code
 - 2009 ICC/ANSI-117.1 (Accessibility Code)
- Allowable Height and Number of Stories per Table 504.3 and 504.4, IBC-2018, if applicable (core/shell)
- Proposed or Existing Number of Stories
- Proposed Building Height (show dimensions on Building Elevations) if applicable (core/shell)
- Is there a Full Sprinkler System? (yes or no); (must be NFPA 13 unless allowed otherwise by code) Note: if part of the building is not sprinklered, do not show the building as fully sprinklered.
- Construction Type (based on Table 601, IBC-2018)
- Allowable Square Footage for Building (based on Table 506.2 and other sections of Chapter 5 of IBC-2018, if applicable (core/shell)
 - Any allowed area increases for sprinkler, if applicable and if needed
 - Any allowed area increases for building frontages (show calculations), if applicable (and needed)
- Existing/New Building Square Footage per story (including basements) and total building square footage, if applicable (core/shell)

- Current Affected Square Footage for current scope of work (if different from total building square footage, e.g., a tenant finish project within a building)
- Occupancy Classifications for all uses in building (based on Chapter 3, IBC-2018)
- If Mixed Occupancy, declare in the code information which code provisions are being used for occupancy separations. Refer to IBC section 508 for Accessory (508.2), Non-separated (508.3) or Separated (508.4). Note that Incidental uses should be considered as part of a main occupancy group (and calculated/labeled as such) and separated from other spaces as required by IBC table 509. Show separations per table 508.4.
- Occupant Loads for each Occupancy Group (including incidental and accessory occupancy groups) and Total Occupant Load (include the Occupant Load Factor used based on applicable room functions (including incidental and accessory occupancies) based on Table 1004.5, IBC-2018)
- All conference rooms, training rooms, reception waiting areas, lounges, break rooms, and other accessory assembly areas will be considered part of the main occupancy group but must be calculated on a per-room basis with the applicable occupant load factor (15 sf per person) for the room function shown on Table 1004.5 for the square footage of the room. Any room over 49 occupants will require two exits.
- Show the number of exits required, based on the Occupant Loads calculated and Common Path of Egress Travel length
- Show a calculation for total exit width required based on IBC section 1005.
- Show plumbing fixture calculations, indicating required fixtures per IBC 2018, chapter 29 (per occupancy group, broken down by gender), including toilets/urinals, lavatories, drinking fountains, and service sinks. Round all partial fixtures up within each occupancy group required (do not round up at point of grand total). Also indicate number of fixtures provided).

Egress Plan

Show the following (show all graphically, with distances indicated):

- Provide the egress plan at an architectural scale (1/16" = 1'-0" minimum). Information shown must be at a legible scale, and all exit access must be shown.
- Diagonal distance of suite or building. Show graphically to distinguish from other distances required.
- Distance between exits ("as the crow flies"). Show graphically to distinguish from other distances required.
- Occupancy groups in the building
- Occupancy Separation walls and/or fire walls, fire barriers, and fire partitions, and/or horizontal exits, as applicable
- Exit Access Travel Distances (EATD) from most remote points in space to exit discharge (show/measure path parallel and perpendicular to walls, around planned furniture, not diagonally across room). Show path graphically to distinguish from other distances required.
- Common Path of Travel Distances (CPET), from most remote points in suite to point in suite or building where two separate and distinct exits become available. Show distance to comply with section 1006.3.3 and table 1006.2.1. Show path graphically to distinguish from other distances required.

Calculate EATD and CPET as follows:

- Measure from most remote point in space, with path shown parallel and perpendicular to walls (not diagonally). Show furniture and/or equipment as necessary to show path of travel.
- Provide Common Path of Exit Travel distance (CPET) and Exit Access Travel Distance (EATD) along a graphic path shown on the exit/egress plan.
- Common Path of Exit Travel distance is calculated from the most remote point in the space to the point at which two separate and distinct paths to two separate exits become available. See definition for Common Path of Egress Travel in IBC Chapter 2, Definitions.
- Exit Access Travel Distance is calculated from the most remote point to the exit access (as differentiated by *Exit Access Stairway*, which is not a rated exit—see Chapter 2 definitions), as follows:
 - Exit Access Doorway (may be the door to the enclosed, 1 hour fire resistive rated stair) –or–
 - If it's an allowed open stair, the EATD will need to be calculated to the bottom of the stair and to the exit discharge (include the distance to the exit discharge on the exterior of the building, out from under any entry way overhangs or canopy).
 - Note, if an enclosed stair does not exit directly to the exterior, then there would need to be an exit passageway (a 1-hour fire-resistive-rated protected path of egress travel in a horizontal direction to the exit discharge—see definition of Exit Passageway in IBC Chapter 2 definitions).
 - If the stair does not open directly outside, and there is no required exit passageway, calculate the EATD to the point where the path of travel discharges to a public way, out from any building overhangs or canopies.

Permits for New Buildings:

- New buildings and any remodel/addition work involving the exterior of the building require approval from Engineering (303.660.7490) and Planning/Zoning (303.660.7460) prior to building permit review application. Contact the respective departments for information on their processes and to schedule a pre-submittal meeting through Planning. Minor exterior remodel work requires only Zoning approval.
- If the permit is for a new building, or an addition to an existing building, we will require an architectural site plan showing the building, the lot lines, Fire Separation Distances, fire department access, any fences/gates required by pools (where applicable), parking spaces with handicap spaces indicated, curb ramps, sidewalks, septic leech field and well (where applicable), etc.
- State on drawings which 2018 IECC Energy Compliance Path is being taken (Prescriptive, Component Performance Alternative, Trade-off with ERA/HERS cost path).

- An energy compliance certificate (usually COMCheck but depends on the compliance path chosen) will be required, stamped/signed, for the building envelope, mechanical system, service water heating system, and interior and exterior lighting. They will need to be based on the 2018 IECC, and the inspection checklist should be included, with the location of the information on the plans shown in the Comments/Assumptions section. All of the information required by the IECC will need to be shown on the drawings, along with an assembly summary. This information should not be shown only in the Specification, but rather in the drawing notes.
- Plans should include energy code compliance sections that show the continuity of the building envelope from foundation to walls to roof at a legible scale, where all assemblies and systems are shown, noted, and a summary given for the chosen compliance path. Show the following:
 - Min Roof R-value (see C402.2.1)
 - Min R-value for walls adj to unconditioned space see C402.2.2)
 - Min R-value for exterior walls including opaque doors (see C402.2.2)
 - Window area U-factor, SHGC, overhang size, etc. (see C402.4)
 - Min R-value for floors over unconditioned space (see C402.2.3)
 - Min R-value for below grade walls (see C402.2.5)
 - Min R-value for slab-on-grade (see C402.2.4)
- Per 2018 IECC:

**SECTION C103
CONSTRUCTION DOCUMENTS**

C103.1 General. Construction documents and other supporting data shall be submitted in one or more sets with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the *code official* is authorized to require necessary construction documents to be prepared by a registered design professional.

Exception: The *code official* is authorized to waive the requirements for construction documents or other supporting data if the *code official* determines they are not necessary to confirm compliance with this code.

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C103.2 Information on construction documents. Construction documents shall be drawn to scale on suitable material. Electronic media documents are permitted to be submitted where *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment as herein governed. Details shall include, but are not limited to, the following as applicable:

1. Insulation materials and their *R*-values.
2. Fenestration *U*-factors and solar heat gain coefficients (SHGCs).
3. Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.
4. Mechanical system design criteria.
5. Mechanical and service water heating systems and equipment types, sizes and efficiencies.
6. Economizer description.
7. Equipment and system controls.
8. Fan motor horsepower (hp) and controls.
9. Duct sealing, duct and pipe insulation and location.
10. Lighting fixture schedule with wattage and control narrative.
11. Location of *daylight* zones on floor plans.
12. Air sealing details.

C103.2.1 Building thermal envelope depiction. The *building thermal envelope* shall be represented on the construction drawings.

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- Door and Window elevations and schedules should show fenestration performance to comply with the energy code. Include *U*-factors, SHGC, and maximum air leakage per manufacturer label based on independent testing agency.
- For new buildings, a Geotechnical/Soils Report will be required, and referenced on the Structural Drawings.
- If the building is new, a copy of the water and sewer permits will be required from the applicable jurisdiction, or if applicable, well and septic tank permits from State of Colorado and Douglas County Health, respectively, will be required.

Permits for all Commercial Projects:

- A fire permit will be required for all commercial permit applications, and we will require a copy of the fire permit before we can release the building permit.
- Zoning approval is required before the building permit can be released for all projects.
- A list of the GC and MEP subs will be needed for the project, once chosen, before the building permit can be released.
- Approval by the water/sewer district may be required, based on scope of work

Permits for all Food Related Spaces (including Restaurants) and Public Swimming Pools:

- If the project is, or has as part of it, a restaurant or food-related processes, approvals from Douglas County Health will be required. Public swimming pools will require Douglas County Health Dept approval also.

Elevator Permits:

- If applicable to the project, a separate elevator plan review on the elevator shop drawings and cut sheets, and a permit and inspections will be required by a third-party entity coordinated through Douglas County Building Department.

General Information—applicable to Core/Shell and Interior Remodel/Tenant Finish:

(additional information may be required, based on scope of work of the project):

- Provide an electronic pdf set, stamped/signed per above. An application will be required with project valuation, along with the Douglas County Zoning Disclosure form. More information is available on the Douglas County website.
<http://www.douglas.co.us/land/building/>
- Applicant is responsible to submit to applicable Fire Department and Water/Sewer District for separate plan review and permit process.
- All sheets must be wet stamped and signed by a Colorado Registered Design Professional (architect) for architectural sheets, and a Colorado Licensed Professional Engineer (for engineering sheets). We can accept digital stamp/signatures, but do not lock them digitally. We must be able to add our approval stamps and flatten the drawings to protect our stamps.
- Architectural, Structural (if applicable), Mechanical, & Plumbing drawings are required, applicable to scope of work
- If rated walls (fire barriers, fire walls, fire partitions, horizontal and vertical assemblies, smoke barriers, smoke partitions) are part of the project, applicable details from UL (or other testing agency) will be required with pertinent keynotes included. These can be provided on the drawing set or as separate 8 ½ x 11s. Project specific details showing rated wall and horizontal assembly details are also required.
- Provide a valuation of the project scope for purposes of calculating the plan review fee, due at the time of permit application/submittal. A fee schedule is provided on our website (see above) and provides an approximation of the applicable permit fees for the entire scope of work. Use tax is calculated by dividing the valuation in half and multiplying it by 0.01.

Please contact a Douglas County Commercial Plans Examiner for more information on your specific project.