General Plan Correction List

This list focuses on International Building Code and International Fire Code requirements and must be used with applicable occupancy and specialty corrections lists. Occupancy and specialty checklists exist for both IBC and IFC Only projects and NFPA 101 Life Safety Code applicable projects. These specialty checklists address code requirements applicable to IBC Chapter 4 Special Use requirements, occupancy driven requirements, fire protection, life safety, and accessibility in public buildings.

Plans are reviewed for compliance with the State of Tennessee Adopted Codes in accordance with the following: Rule 0780-02-02-.01, Rule 0780-02-01-.02, and T.C.A. 68-120-204.

In the event of conflict between code requirement(s), the more stringent limitation or requirement shall prevail.

Items listed require correction by revised sealed plans, addenda, field orders, or change orders before a plans approval is issued for construction. Answers in letter form are not acceptable except to explain where the code compliance changes have been made. Starting construction before plans approval may be considered as just cause to issue a Stop Work Order. Rule 0780-02-03-.02(1)

Plan Submission Requirements

1. Provide a PDF copy of plans properly sealed, signed and dated by a Tennessee registrant in accordance with the Architects and Engineers Licensing Law and Rules, IBC Section 107, Rule 0780-02-03-.03(3) and A&E Rule 0120-02-.08(3).

2. Provide PDF copy of the specifications manual, IBC Section 107, Rule 0780-02-03-.03(3) and A&E Rule 0120-02-.08(3).

3. Provide COMcheck or REScheck (for R-3 and R-2 or R-4 three stories or less above grade plane only) Compliance Certificates for energy code compliance with seal, signature and date by a Tennessee registrant. Software & Web Tools are available at http://www.energycodes.gov/software-and-web-tools. For COMcheck submittals, include all categories for the project scope of work: i.e. exterior envelope, interior lighting, exterior lighting, and mechanical. If the scope of work in an existing building does not require an upgrade to current IECC requirements, include a sealed letter identifying the exception(s) used. Combine all individual energy documents into one pdf and submit through TN SFMO Portal under “Energy Certificates”.

Plan Information

1. Provide the building name, 911 street address (if one has been assigned), city and county.

2. Provide the use and occupancy classification(s). For multiple occupancy classifications, show the classification of each area on the plans.

3. For multiple occupancies, identify the design approach. For example: non-separated mixed occupancy, separated mixed occupancy, or a combination thereof.
4. Provide the responding fire department's information: Include the Fire Chief/Fire Marshal's name, mailing address, phone, and email.

5. Provide the local building official information: Include the official's name, mailing address, phone, and email.

6. Buildings must be designed to the minimum State of Tennessee adopted codes and standards. The adopted codes are to be listed on all plans submitted for review. The codes currently adopted the State of Tennessee are:

   (1) International Building Code (IBC), 2012 edition, except for:
       (a) Chapter 11 Accessibility; and,
       (b) Chapter 34, Section 3411 Accessibility For Existing Buildings;
   (2) International Fuel Gas Code, 2012 edition;
   (3) International Mechanical Code, 2012 edition;
   (6) International Energy Conservation Code, 2012 edition (Group F-1, F-2, S-1, & S-2 Only)
       (a) Moderate-hazard factory industrial, Group F-1;
       (b) Low-hazard factory industrial, Group F-2;
       (c) Moderate-hazard storage, Group S-1; and,
       (d) Low-hazard storage, Group S-2; (scope of work related to existing buildings)
   (9) 2010 ADA Standards for Accessible Design (for buildings required to comply with Tennessee Public Building Accessibility Act)
   (10) NFPA 101 Life Safety Code, 2012 edition (State Buildings, Educational occupancies and any occupancy requiring an inspection by the TSFMO for initial licensure)

7. Provide the scope of work. For example: new construction, an addition to an existing building, an alteration to an existing building, a repair of an existing building, or a change of use and occupancy classification.

8. If a state agency will license the facility, identify the licensing agency and the license type.

9. Identify special requirements of IBC Chapter 4 “Special Detailed Requirements Based on Use & Occupancy” that have been incorporated into the plans.

10. Identify the construction type.

11. Identify if the building is protected by a fire sprinkler system. Identify the sprinkler standard used and the hazard classification.

12. List other required IBC Chapter 9 Fire Protection Systems used in the design.

13. Identify the number of stories and height of the building. Show the allowable number of stories and height and modification calculations used. For unlimited area buildings, show that all requirements are met.
14. Provide the IECC Climate Zone.

15. Provide a legend of abbreviations used on the plans and their meaning.

16. Provide the following:
   (1) Floor and roof live loads
   (2) Ground snow load
   (3) Ultimate design wind speed, Vult, (3-second gust), miles per hour (mph) (km/hr) and nominal design wind speed, Vasd as determined in accordance with Section 1609.3.1 and wind exposure
   (4) Seismic design category and site class in accordance with Section 1613.3.5

17. Fire separation requirements based on the distance of exterior walls to property lines

18. Hourly ratings of structural members, floors, roofs, exterior and interior bearing and nonbearing walls.

19. Hourly rating of corridors, shaft enclosures, stairway enclosures, tenant separations, dwelling or sleeping unit separations, and occupancy separations.

20. Provide an updatable “Index of Drawings” which reflects the most current drawing revision and the date revised with each submission. IBC 107.2.1

21. The following drawings were indexed but not provided with the submittal. IBC 107.2.1:

22. The following drawings were submitted but not shown in the “Index of Drawings” IBC 107.2.1:

**Life Safety Plan**
In other than R-2, R-3, and I-1 occupancies, provide a complete Life Safety Plan showing:

1. Show the means of egress of rooms to an exit and a public way

2. Show the travel distance to reach an exit from most remote space in the building.

3. Show the longest common path of travel. IBC 1016.1 and Table 1016.2

3. Show the fire-resistance ratings of exits and corridors

4. Show occupant load calculations with occupant load factors for each space based on its intended use IBC Table 1004.1.2

5. Show the number of occupants at exits and exit discharges and the clear width of the doors. IBC 1005.3 and 1008.1.1

**Building Data Height & Area Evaluation**
1. The building exceeds the allowable area for this type of use, construction type and open space. IBC Table 503.
2. The building exceeds the allowable number of stories for this type of use, construction type and open space. IBC Table 503.

3. The building exceeds the allowable height for this type of use, construction type and open space. IBC Table 503.

**Fire-Rated Assemblies, Listings, & Detailing**

1. Use International Building Code terms for fire-resistance assemblies:

   - **FIRE WALL.** A fire-resistance-rated wall having protected openings, which restricts the spread of fire and extends continuously from the foundation to or through the roof, with sufficient structural stability under fire conditions to allow collapse of construction on either side without collapse of the wall. IBC Section 202 & 706.

   - **FIRE BARRIER.** A fire-resistance-rated wall assembly of materials designed to restrict the spread of fire in which continuity is maintained. IBC Section 202 & 707

   - **FIRE PARTITION.** A vertical assembly of materials designed to restrict the spread of fire in which openings are protected. IBC Section 202

   - **SMOKE BARRIER.** A fire-resistance-rated wall assembly of materials designed to restrict the spread of fire in which continuity is maintained. IBC Section 202 & 709

   - **SMOKE PARTITION.** A continuous membrane that is designed to form a barrier to limit the transfer of smoke. NFPA Definitions & IBC 710

   - **HORIZONTAL ASSEMBLIES.** A fire-resistance-rated floor or roof assembly of materials designed to restrict the spread of fire in which continuity is maintained. IBC Section 202

2. Provide a wall type legend that identifies fire walls, fire barriers, fire partitions, smoke barriers and/or smoke partitions and their rating in hours. The same wall legend shall be used on all plan disciplines. Specify the Gypsum Association assembly number or the UL (or other) assembly number.

3. For all fire rated assemblies, provide Gypsum Association or UL assembly listing (or other) details in their entirety including design illustrations and material specifications without modification or manipulation, IBC 107.2.1, 703.3. Provide construction details and fire rating calculations for IBC Section 721 assemblies. IBC 107.2.1 Include the following:

   1. Fire Rated Walls, Columns, Beams, Floor/Ceiling and Roof/Ceiling Assemblies.
   2. Fire Rated Joint Systems for fire rated assembly connections such as wall-to-wall, floor-to-floor, floor-to-wall, head-of-wall, and bottom-of-wall joints where not inherently tight.
   3. Curtain Wall Joint Systems for perimeter fire containment systems such as unrated curtain wall-to-rated floor assemblies where not inherently tight.


4. Show assembly numbers on Architectural sectional detail drawings. IBC 107.2.1, 703.3
Civil Drawings
1. Provide Civil Engineering drawings showing the location and footprint of all new and existing structures, property lines and/or assumed property lines, grade elevations, water mains and other utilities, fire hydrants, fire department access and all ingress/egress to public ways. Include size and location of LP-Gas storage tanks and any other above ground storage tanks. IBC 107.2.5

2. Fire apparatus access road must meet the following minimum criteria:
   
   (1) Access to extend to within 150 ft. of all portions of the building. IFC 503.1.1
   (2) Access route to be 20 ft. wide with a 13 ft. 6 in. minimum vertical clearance. IFC 503.2.1
   (3) Dead-ends cannot exceed 150 ft. unless an approved turnaround area. IFC 503.2.5
   (4) Supporting documentation based on responding fire department's apparatus detailing the Local requirements for access road surface loads, turning radius, bridges and elevated surfaces, grade and angles of approach & departure and approval of fire department connection location(s) must be shown on the site access design and signed by the Chief of the Responding Fire Department prior to submittal. IBC 107.2.1, IFC 503.2.3, 503.2.4, 703.2.6, IFC 503.2.7, IFC 503.2.8 and 912.2

3. When there is no fire main available, provide engineered design intent for a dependable supply with appurtenances to satisfy hydrant requirements. Show the location of reservoirs, tanks, fire pump house, private fire mains, etc. with preliminary design calculations on the plans furnished by the engineer of record. IBC 107.2.1, IFC 507.2

4. When fire main is available and there are no existing fire hydrants near the building site, provide hydraulic design values for any new proposed site water main(s) and fire hydrant(s). Provide calculations for water flow (gpm) and residual pressure (psi) on plans furnished by the engineer of record. IBC 107.2.1, IFC 507.3

5. Provide the following flow test data on the plans for existing fire hydrants. IBC 107.2.1, IFC 507.4
   
   Show flow test data next to the hydrant tested. **Hydrant flow test must have been conducted within the last six months during peak demand hours.**
   
   (1) Static pressure (psi), residual pressure 20 psi min., and flow 500 gpm min. Department of Environment & Conservation Rules and Regulations 0400-45-01-.17(18).
   (2) Name and address of party responsible for performing test, date test taken (within the last 6-months), time test taken (a.m./p.m.), and elevation of test hydrant.

6. Fire hydrants must be provided so that any portion of the building's exterior is within 400 ft. (for unsprinkled buildings) or 600 ft. (for sprinkled buildings) hose lay of a fire hydrant measured along vehicle access route. (IFC 507.5.1) Check with a local fire code official as some jurisdictions require closer spacing.

7. Hydrants shall be located not less than 40 ft. from the buildings to be protected. IFC 507.2.1, NFPA 24 7.2.3

8. Fire department connections shall be installed in accordance with the NFPA standard applicable to the system design. (IBC/IFC 912.1) With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the buildings for other fire apparatus. The location of fire department connections shall be approved by the fire chief. IBC/IFC 912.2
General Means of Egress Evaluation

The general requirements specified in Sections 1003 through 1013 shall apply to all three elements of the means of egress system, in addition to those specific requirements for the exit access, the exit and the exit discharge (IBC1003.1). For projects that require use of NFPA 101, use the more restrictive requirement.

1. The means of egress shall have a ceiling height of not less than 7 feet 6 inches. IBC 1003.2

2. Walking surfaces of the means of egress must have a slip-resistant surface and be securely attached. IBC 1003.4

3. Where changes in elevation of less than 12 inches exist in the means of egress, sloped surfaces shall be used. Where the slope is greater than one unit vertical in 20 units horizontal (5-percent slope), ramps complying with Section 1010 shall be used. Where the difference in elevation is 6 inches or less, the ramp shall be equipped with either handrails or floor finish materials that contrast with adjacent floor finish materials. IBC 1003.5

4. The path of egress travel along a means of egress shall not be interrupted by any building element other than a means of egress component as specified in this chapter. Obstructions shall not be placed in the required width of a means of egress except projections permitted by this chapter. The required capacity of a means of egress system shall not be diminished along the path of egress travel. IBC 1003.6

5. The number of occupants shall be calculated as prescribed in Table 1004.1.2. For areas without fixed seating, the occupant load shall not be less than that number determined by dividing the floor area under consideration by the occupant load factor assigned to the function of the space as set forth in Table 1004.1.2.

6. For areas having fixed seats and aisles, the occupant load shall be determined by the number of fixed seats installed therein. The occupant load for areas in which fixed seating is not installed, such as waiting spaces, shall be determined in accordance with Section 1004.1.2 and added to the number of fixed seats. The occupant load of wheelchair spaces and the associated companion seat shall be based on one occupant for each wheelchair space and one occupant for the associated companion seat. For areas having fixed seating without dividing arms, the occupant load shall not be less than the number of seats based on one person for each 18 inches of seating length. The occupant load of seating booths shall be based on one person for each 24 inches of booth seat length measured at the backrest of the seating booth. IBC1004.4

7. The capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor of 0.3 inch per occupant. Where stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required capacity of the stairways serving that story. IBC 1005.3.1

Exception: For other than Group H and I-2 occupancies, the capacity, in inches, of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor of 0.2 inch per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.
8. The capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.2 inch per occupant. IBC 1005.3.2

*Exception:* For other than Group H and I-2 occupancies, the capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.15 inch per occupant in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.

9. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress are required by Section 1015.1 or 1021.1 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress. IBC 1007.1

10. Egress must not be through kitchens, storage rooms, closets, or any space identified as a hazardous location. IBC 1014.2

11. Dead ends in exits and exit access must not exceed 20 feet (see exceptions). IBC 1018.4
The common path of travel must not exceed the distances in Table 1014.3.

**TABLE 1014.3 COMMON PATH OF EGRESS TRAVEL:**

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>WITHOUT SPRINKLER SYSTEM (feet)</th>
<th>WITH SPRINKLER SYSTEM (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Occupant Load</td>
<td></td>
</tr>
<tr>
<td></td>
<td>≤ 30</td>
<td>&gt; 30</td>
</tr>
<tr>
<td>B, S</td>
<td>100</td>
<td>75</td>
</tr>
<tr>
<td>U</td>
<td>100</td>
<td>75</td>
</tr>
<tr>
<td>F</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>H-1, H-2, H-3</td>
<td>Not Permitted</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>R-2</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>R-3</td>
<td>75</td>
<td>125</td>
</tr>
<tr>
<td>I-3</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>All others</td>
<td>75</td>
<td>75</td>
</tr>
</tbody>
</table>

12. Where two exits or exit access doors are required from a building or area, they must be separated by one-half the diagonal dimension of the building or area served or one-third in fully sprinkled buildings. IBC 1015.2.1

13. At least two means of egress must be provided in any room or space when the occupant load exceeds the values of Table 1015.1 or common path of travel exceeds the limitations of Section 1014.3. As needed, apply 1015.3 (Boiler, incinerator and furnace rooms), 1015.4 (Refrigeration machinery rooms) and 1015.5 (Refrigerated rooms or spaces).
TABLE 1015.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY:

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>MAXIMUM OCCUPANT LOAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, B, E, F, M, U</td>
<td>49</td>
</tr>
<tr>
<td>H-1, H-2, H-3</td>
<td>3</td>
</tr>
<tr>
<td>H-4, H-5, I-1, I-2, I-3, I-4, R</td>
<td>10</td>
</tr>
<tr>
<td>S</td>
<td>29</td>
</tr>
</tbody>
</table>

14. Exit access travel distance shall be measured from the most remote point within a story along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit. IBC 1016.3

15. Exit access travel distance shall not exceed the values given in Table 1016.2.

TABLE 1016.2 EXIT ACCESS TRAVEL DISTANCE:

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>WITHOUT SPRINKLER SYSTEM (feet)</th>
<th>WITH SPRINKLER SYSTEM (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, E, F-1, M, R, S-1</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>I-1</td>
<td>Not Permitted</td>
<td>250</td>
</tr>
<tr>
<td>B</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>F-2, S-2, U</td>
<td>300</td>
<td>400</td>
</tr>
<tr>
<td>H-1</td>
<td>Not Permitted</td>
<td>75</td>
</tr>
<tr>
<td>H-2</td>
<td>Not Permitted</td>
<td>100</td>
</tr>
<tr>
<td>H-3</td>
<td>Not Permitted</td>
<td>150</td>
</tr>
<tr>
<td>H-4</td>
<td>Not Permitted</td>
<td>175</td>
</tr>
<tr>
<td>H-5</td>
<td>Not Permitted</td>
<td>200</td>
</tr>
<tr>
<td>I-2, I-3, I-4</td>
<td>Not Permitted</td>
<td>200</td>
</tr>
</tbody>
</table>

16. Two exits, or exit access stairways or ramps providing access to exits, from any story or occupied roof shall be provided where one of the following conditions exists, IBC 1021.2:

(1) The occupant load or number of dwelling units exceeds one of the values in Table 1021.2(1) or 1021.2(2).

(2) The exit access travel distance exceeds that specified in Table 1021.2(1) or 1021.2(2) as determined in accordance with the provisions of Section 1016.1.

17. Three exits, or exit access stairways or ramps providing access to exits at other stories, shall be provided from any story or occupied roof with an occupant load from 501 to and including 1,000. Four exits, or exit access stairways or ramps providing access to exits at other stories, shall be provided from any story or occupied roof with an occupant load greater than 1,000. IBC 1021.2.4

18. Exits shall discharge directly to the exterior of the building. The exit discharge shall be at grade or shall provide direct access to grade. The exit discharge shall not reenter a building. IBC 1027.1

The exit discharge shall provide a direct and unobstructed access to a public way. IBC 1027.5
Architectural Floor Plans

Provide dimensioned floor plans which show the use of each space (IBC 107.2.1). For projects that require use of NFPA 101, use the more restrictive requirement.

1. Show a 1-, 2- or 3-hour rated fire barrier between separated occupancies or uses. IBC 508.1, 508.4 and Table 508.4 No separation is required between non-separated occupancies. IBC 508.3.3

2. Incidental use Areas must be separated and/or protected in accordance with IBC Table 509. IBC 509.4

3. Show the rating of corridors, shaft enclosures, stairway enclosure, tenant separations, dwelling or sleeping unit separations, and occupancy separations. IBC 107.2.1

4. Vertical openings shall comply with IBC Section 712. IBC 712.1

5. Elevator, exit stairways, and mechanical shafts must be enclosed with a 1-hour rated fire barrier for up to 3-stories or 2-hour for 4-stories or more. (IBC 713.4 and 1022.2) See 1009.3 for exceptions.

6. Doors serving 50 or more people and stairway doors must swing in the direction of exit travel. IBC 1008.1.2

7. Interior exit stairways shall lead directly to the exterior of the building or shall be extended to the exterior of the building with an exit passageway conforming to the requirements of Section 1023, except as permitted in Section 1027.1. IBC 1009.2 Floor openings between stories created by exit access stairways shall be enclosed. IBC 1009.3

8. Exit access stairway enclosures shall be constructed as fire barriers in accordance with Section 707 or horizontal assemblies in accordance with Section 711, or both. IBC 1009.3.1 Exit access stairway enclosures shall have a fire-resistance rating of not less than 2 hours where connecting four stories or more, and not less than 1 hour where connecting less than four stories. The number of stories connected by the exit access stairway enclosures shall include any basements, but not any mezzanines. IBC 1009.3.1.2

9. Corridors shall be fire-resistance rated as fire partitions in accordance with Table 1018.1 and Section 708. The minimum width of corridors specified in Table 1018.2 shall be as determined in Section 1005.1, IBC 1018.2. For projects that require use of NFPA 101, use the more restrictive requirement, when a difference in the adopted Codes exists.

**TABLE 1018.1 CORRIDOR FIRE-RESISTANCE RATING:**

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>OCCUPANT LOAD SERVED BY CORRIDOR</th>
<th>REQUIRED FIRE-RESISTANCE RATING (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Without sprinkler system</td>
</tr>
<tr>
<td>H-1, H-2, H-3</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>H-4, H-5</td>
<td>Greater than 30</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>A, B, E, F, M, S, U</td>
<td>Greater than 30</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>Greater than 10</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>I-2, I-3</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
<tr>
<td>I-1, I-3</td>
<td>All</td>
<td>Not Permitted</td>
</tr>
</tbody>
</table>
TABLE 1018.2 MINIMUM CORRIDOR WIDTH:

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>WIDTH (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any facilities not listed below</td>
<td>44 inches</td>
</tr>
<tr>
<td>Access to and utilization of mechanical, plumbing or electrical systems or</td>
<td>24 inches</td>
</tr>
<tr>
<td>equipment</td>
<td></td>
</tr>
<tr>
<td>With a required occupancy capacity less than 50</td>
<td>36 inches</td>
</tr>
<tr>
<td>Within a dwelling unit</td>
<td>36 inches</td>
</tr>
<tr>
<td>In Group E with a corridor having a required capacity of 100 or more</td>
<td>72 inches</td>
</tr>
<tr>
<td>In corridors and areas serving gurney traffic in occupancies where patients</td>
<td>72 inches</td>
</tr>
<tr>
<td>receive outpatient medical care, which causes the patient to be incapable</td>
<td></td>
</tr>
<tr>
<td>of self-preservation</td>
<td></td>
</tr>
<tr>
<td>Group I-2 in areas where required for bed movement</td>
<td>96 inches</td>
</tr>
</tbody>
</table>

10. Fire partition rated corridors must be continuous from the point of entry to an exit and must not be interrupted by intervening rooms (see Exception). IBC 1018.6

11. Exit stairways must be separated from the interior of the building by one or two-hour rated fire barrier. (IBC 1022.2) A fire-resistance rated exit enclosure must provide a continuous protected path of travel to an exit discharge or public way. (IBC 1022.3) A maximum of 50% of the required number and capacity of exit enclosures may discharge through areas on the level of exit discharge in sprinklered buildings (see exceptions). IBC 1027.1

12. Exit passageways serving as an exit component in a means of egress system shall have walls, floors and ceilings of not less than a 1-hour fire-resistance rating, and not less than that required for any connecting interior exit stairway or ramp. Exit passageways shall be constructed as fire barriers. The minimum unobstructed width of exit passageways shall be determined as specified in Section 1005.1 but such width shall not be less than 44 inches, except that exit passageways serving an occupant load of less than 50 shall not be less than 36 inches in width. IBC 1023.3, 1023.2

13. Exterior walls and unprotected openings must be rated by one hour fire barrier with 45-minute rated opening protection for either the unprotected exterior wall of an exit stairway or an adjacent unprotected exterior wall that is less than 180° for a 10 ft. horizontal projection and extending vertically from the ground to a point 10 ft. above the topmost landing. IBC 1022.7

14. Exterior exit stairways and ramps serving as an element of a required means of egress shall be separated from the interior of the building as required in Section 1022.2. Openings shall be limited to those necessary for egress from normally occupied spaces. IBC 1026.1, 1026.6

15. Horizontal exits serving as an exit in a means of egress system shall be provided by a fire wall complying with Section 706; or it shall be provided by a fire barrier continuous from exterior wall to exterior wall and complying with Section 707 or a horizontal assembly complying with Section 711, or both. The minimum fire-resistance rating of the separation shall be 2 hours. Opening protects in horizontal exits shall also comply with Section 716. Duct and air transfer openings in a fire wall or fire barrier that serves as a horizontal exit shall also comply with Section 717. The horizontal exit separation shall extend vertically through all levels of the building unless floor assemblies have a fire-resistance rating of not less than 2 hours with no unprotected openings. IBC 1025.1, 1025.2
16. Elevators shall not be in a common shaft enclosure and shall not open into a stairway. IBC 1022.4 and 3002.7

17. Elevator machine rooms and machinery spaces must be rated the same as the hoist-way enclosure with rated door assemblies of 60-min. or 90-min. IBC 3006.4

18. Openings in exit enclosures shall be limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure. BC 713.7.1 Penetrations other than those necessary for the purpose of a shaft are prohibited in shaft enclosures. IBC 713.8.1

19. Provide an attic draft-stopping floor plan for buildings of combustible construction buildings (see exceptions). IBC 107.2.1 and 718.4

**Building Elevations**

1. Provide building elevations showing north, south, east & west elevations. IBC 107.2.1 and Chapter 2 Definition of Building Height & Grade Plane. Show the following items:
   
   (1) Finished ground levels adjoining the building at exterior walls.
   
   (2) The calculated grade plane (average of finished ground levels).
   
   (3) Dimension the height of each level from the referenced grade plane.
   
   (4) Dimension the average height of the highest roof structure from the referenced grade plane.

**Architectural Wall/Floor Sections and Details**

1. Construction Type I and II Partitions must be constructed of noncombustible materials or fire retardant treated wood. IBC 603.1 Combustibles are not permitted in concealed spaces of Type I and II construction (see exceptions). IBC 718.5

2. Fire barrier walls must extend continuously through concealed spaces from the top of the foundation or assembly below to the underside of a floor or roof sheathing. IBC Section 707 and 707.5

3. The supporting construction must be protected to afford the required fire-resistance rating of the horizontal assembly supported. IBC 711.4

4. A shaft that does not extend to or through the underside of the roof deck of the building must be enclosed at the top with the same rating as the shaft separation. (IBC 713.12) Shafts that do not extend to the bottom of the structure must be separated with shaft rated protection at the bottom. IBC 713.11

5. Equipment recessed in a fire-resistance rated wall must not decrease the rating of that wall. IBC 714.3.2

6. Fire-blocking must be installed in combustible construction to cut off vertical and horizontal concealed draft openings and must form an effective barrier between floors, between a top story and a roof or attic. IBC 718.2 and 718.2.1

7. Draft-stopping must be installed in floors and attics in buildings of combustible construction buildings. IBC 718.3 and 718.4—see exceptions.
**Stair, Ramp, Handrail & Guard Details**

1. Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches. When a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches. IBC 1008.6

2. Stair treads must be minimum 11 in. and risers must be a maximum 7 in., but not less than 4 in., and with leading edge of a tread (nosing) meeting profile criteria. IBC 1009.7.2

3. The width of stairways shall be determined as specified in Section 1005, but shall not be less than 44 inches. (IBC 1009.4) Minimum headroom clearance in a stairway enclosure is 80 in. IBC 1009.5

4. There shall be a stairway landing at the top and bottom of each stairway. The width of the landing shall not be less than the width of the stairways they serve. IBC 1009.8

5. Handrails are required on both sides of stairs with extensions and mounted between 34 in. and 38 in. measured vertically to the top of the railing from the top of a stair tread nosing. (IBC 1009.15 and 1012.2) Handrail extensions must return to a wall, guard, or a walking surface. IBC 1012.6

6. One stair must extend to the roof for buildings four or more stories in height above grade plane (see Exception). IBC 1009.16

7. All interior exit ramps shall be enclosed in accordance with the applicable provisions of Section 1022. Exit access ramps shall be enclosed in accordance with the provisions of Section 1009.3 for enclosure of stairways. IBC 1010.2

8. Ramps used as part of a means of egress shall have a running slope not steeper than one unit vertical in 12 units horizontal (8-percent slope). The slope of other pedestrian ramps shall not be steeper than one unit vertical in eight units horizontal (12.5-percent slope). (IBC 1010.3) The slope measured perpendicular to the direction of travel of a ramp shall not be steeper than one unit vertical in 48 units horizontal (2-percent slope). IBC 1010.4

9. Ramps shall have landings at the bottom and top of each ramp, points of turning, entrance, exits and at doors. (IBC 1010.7) Ramps with a rise greater than 6 inches shall have handrails on both sides. (IBC 1010.9) Edge protection complying with Section 1010.10.1 or 1010.10.2 shall be provided on each side of ramp runs and at each side of ramp landings. IBC 1010.10

10. Guards must be provided at the open side of a means of egress that exceeds 30 in. above the floor or grade below at any point within 36” horizontally to the edge of the open side. (IBC 1013.2) Guards mounting height minimum is 42 in. (see exceptions) and maximum 4 in. sphere clearance for intermediate rails. IBC 1013.3 and 1025.14

11. Exit stairways extending below the level of exit discharge must have a discharge identification barrier with directional exit sign to prevent unintentional travel beyond the level of exit discharge. IBC 1022.8
Door/Door Hardware/Window Schedules and Details

1. Provide a door schedule and opening details. Schedule must show the rating of opening protectives and the door hardware set number. IBC 107.2.1

2. The minimum width of each egress door opening shall be sufficient for the occupant load served and shall provide a minimum clear width of 32 inches (see exceptions), a minimum height of 80 in., and the width of any single door must not exceed 48 in. IBC 1008.1.1

3. Egress doors shall be of the pivoted or side-hinged swinging type (see exceptions). IBC 1008.1.2

4. The floor on both sides of any door must be substantially level and may not vary more than one-half inch for a distance at least equal to the width of the widest door leaf. IBC 1008.1.5

5. Provide design criteria for the delayed egress locks, access-controlled egress doors or electromagnetically locked egress doors. IBC 1008.1.9.2, 1008.1.9.3 and 1008.9.4
   The design must show which system is used, a legend for access-control components, location of these devices, device mounting heights, system connections to electrical power, system connections to the fire alarm system, and system operation statement.

6. Openings in an exit access stairway enclosure shall be protected in accordance with Section 716 as required for fire barriers. Doors shall be self- or automatic-closing by smoke detection in accordance with Section 716.5.9.3 and IBC 1009.3.1.4

7. In a corridor 20-minute fire door assembly, the glazing material in the door itself shall have a minimum fire-protection-rated glazing of 20 minutes and shall be exempt from the hose stream test. Glazing material in any other part of the door assembly, including transom lights and sidelights, shall be tested in accordance with NFPA 257 or UL 9, including the hose stream test, in accordance with Section 716.6. IBC 716.1, 716.5 and Table 716.5.

8. Fire door assemblies in interior exit stairways and ramps and exit passageways shall have a maximum transmitted temperature rise of not more than 450°F above ambient at the end of 30 minutes of standard fire test exposure. (IBC 716.5.5) Exception: The maximum transmitted temperature rise is not required in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

9. Roll-up doors in a fire-resistance rated barrier or partition, smoke partition, or smoke barrier must be activated by smoke detectors. (IBC 716.5.9.3 and 715.5.11) Heat detection is permitted if ambient conditions prohibit installation of smoke detection. IBC 907.4.3

10. Provide a door hardware schedule in the plans or specifications. IBC 107.2.1

11. Closures and positive latching hardware are required on fire rated door assemblies and doors in smoke partitions and barriers. IBC 716.5.9

12. Except as specifically permitted by this section, egress door shall be readily openable from the egress side without the use of a key or special knowledge or effort. IBC 1008.1.9

13. Provide a glazing schedule. IBC 107.2
14. Rated glazing is required in fire window assemblies located in fire rated walls. IBC 716.6, Table 716.6

15. Glazing in doors, within 24 inches of doors, within 18 inches above finished floor, exceeding 9 square feet, or within 36 inches of walking surface must be safety glazed or tempered. IBC 2406.4.2 and 2406.4.3

**Reflected Ceiling Plan/Interior Elevations and Finishes**

1. Provide a reflected ceiling plan showing lights, diffusers, exit sign, sprinkler heads, smoke detectors and emergency lights, etc. IBC 107.2.1.

2. Interior wall and ceiling finish requirements shall be specified for rated exit stairways, exit access corridors, rooms and enclosed spaces as defined by occupancy group. IBC 803.9 and Table 803.9

3. Interior floor finish and floor covering materials shall comply with Sections 804.2 through 804.4.2. IBC 804.1

4. Combustible materials installed on or embedded in floors of buildings of Type I or II construction shall comply with Sections 805.1.1 through 805.1.3. IBC 805.1

5. In occupancies in Groups A, E, I and R-1 and dormitories in Group R-2, curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 806.2 or be noncombustible. IBC 806.1

   *Exceptions:*
   
   (1) Curtains, draperies, hangings and other decorative materials suspended from walls of sleeping units and dwelling units in dormitories in Group R-2 protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1 and such materials are limited to not more than 50 percent of the aggregate area of walls.

   (2) Decorative materials, including, but not limited to, photographs and paintings in dormitories in Group R-2 where such materials are of limited quantities such that a hazard of fire development or spread is not present.

6. In Groups I-1 and I-2, combustible decorative materials shall meet the flame propagation criteria of NFPA 701 unless the decorative materials, including, but not limited to, photographs and paintings, are of such limited quantities that a hazard of fire development or spread is not present. In Group I-3, combustible decorative materials are prohibited. IBC 806.1

7. Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered interior finish if they cover 10 percent or more of the wall or of the ceiling area, and shall not be considered decorative materials or furnishings. IBC 806.1

8. In Group B and M occupancies, fabric partitions suspended from the ceiling and not supported by the floor shall meet the flame propagation performance criteria in accordance with Section 806.2 and NFPA 701 or shall be noncombustible. IBC 806.1

9. Thermal and acoustical insulation shall comply with Section 720. IBC 807.1
10. Acoustical materials complying with the interior finish requirements of Section 803 shall be installed in accordance with the manufacturer's recommendations and applicable provisions for applying interior finish. IBC 808.1.1 Acoustical ceiling systems that are part of fire-resistance-rated construction shall be installed in the same manner used in the assembly tested and shall comply with the provisions of Chapter 7. IBC 808.1.1.2

Structural Drawings
1. Construction documents shall show the size, section and relative locations of structural members with floor levels, column centers and offsets dimensioned. The design loads and other information pertinent to the structural design required by Sections 1603.1.1 through 1603.1.9 shall be indicated on the construction documents. IBC 1603.1 Include the following: Floor Live Load, Roof Live Load, Roof Snow Load Data, Wind Design Data, Earthquake Design Data, Geotechnical Data, Flood Design Data, Special Loads, and Systems and components requiring special inspections for seismic resistance.

2. Each building and structure shall be assigned a risk category in accordance with Table 1604.5. IBC 1604.5 Where a building or structure is occupied by two or more occupancies not included in the same risk category, it shall be assigned the classification of the highest risk category corresponding to the various occupancies. Where buildings or structures have two or more portions that are structurally separated, each portion shall be separately classified. Where a separated portion of a building or structure provides required access to, required egress from or shares life safety components with another portion having a higher risk category, both portions shall be assigned to the higher risk category. IBC 1605.4.5.1

3. Identify structural connection details for fire walls for foundation, floor, and roof which under fire conditions will allow collapse of the structure on either side. IBC 706.1, 706.2, Table 706.4, and 706.6

4. Engineered Wood Truss Shop drawings must be submitted prior to installation. IBC 2303.4.1.4.
   
   Note: Shop drawings and structural calculations prepared by a fabricator shall be submitted for approval to the Architect or Engineer of record prior to being submitted for review to the TSFMO.

   (1) All truss calculations and shop drawings shall be stamped by the architect or engineer of record (signed and dated Shop Drawing Review stamp). The review shall be made by a Tennessee-registered professional architect or engineer. Rule 120-2-.08(2)(a)

   (2) Shop drawing information will be a stipulation on the plans upon initial approval of the project. No response is required for this item at this time. IBC 107.3.4.1

5. Engineered Steel Joist Drawings must be submitted prior to installation. IBC 2207.4

   (1) All joist/truss calculations and shop drawings shall be stamped by the architect or engineer of record (signed and dated Shop Drawing Review stamp). The review shall be made by a Tennessee-registered professional architect or engineer. Rule 120-2-.08(2)(a)

   (2) Shop drawing information will be a stipulation on the plans upon initial approval of the project. No response is required for this item at this time. IBC 107.3.4.1
Mechanical Drawings

1. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code. Construction documents shall indicate where penetrations will be made for mechanical systems, and the materials and methods for maintaining required structural safety, fire-resistance rating and fireblocking. IBC 107.2.1 and IMC 106.3.1

2. Penetrations of exit stairways with steam lines, gas lines, roof drain piping, water lines, electrical conduit, and HVAC duct are prohibited. Only sprinkler piping, standpipes, and electrical conduit serving the stairway, or duct systems/other equipment necessary for stair pressurization, are permitted. IBC 1022.5

3. Corridors must not serve as supply, return, exhaust, relief, or ventilation air ducts (see exceptions). IBC 1018.5

4. Shaft enclosures that are permitted to be penetrated by ducts and transfer openings must be protected with combination fire/smoke dampers (see exceptions). IBC 717.5.3

5. Fire dampers are required where duct systems penetrate a one hour or more fire-resistance rated fire partition, fire barrier, and fire wall. (IBC 716.5) Fire dampers may be omitted in fire partitions where the duct penetrating the wall meets minimum exceptions. IBC 717.5.4

6. Fire dampers may be used instead of a fire rated shaft when duct systems penetrate a fire-resistance-rated floor/ceiling assembly that connects no more than two stories. IBC 717.6.1

7. Duct systems penetrating non-fire rated floor/ceiling horizontal assemblies must be protected by a shaft enclosure under IBC Section 713 or equipped with a fire damper at each floor line where the duct connects no more than 3-stories (see Exception No. 2 for duct penetrating one floor). IBC 717.6.3

8. Smoke dampers must be installed in duct system penetrations at smoke barriers unless the duct is a part of a smoke removal system. IBC 717.5.5

9. Ceiling dampers or other methods of protecting openings in rated floor/ceiling or roof/ceiling assemblies must comply with the construction details of the tested floor/roof/ceiling assemblies with listed ceiling air diffusers or listed ceiling dampers. IBC 716.6, 716.6.2

10. Smoke dampers shall close upon actuation of a listed smoke detector or detectors installed in accordance with Section 907.3 and one of the method describe in Section 717.3.3.2.

11. HVAC systems greater than 2,000 cfm serving more than one room must have a duct mounted smoke detector mounted in the return air stream. (IBC 907.2.13.1.2) These smoke detectors must be wired to a fire alarm system when one is provided in a constantly attended location for supervisory signals. IBC 907.3.1

12. HVAC return air riser systems serving two or more stories must have duct mounted smoke detector shutdown at each connection to the vertical riser. (IBC 907.2.13.1.2) These smoke detectors must be wired to a fire alarm system when one is provided in a constantly attended location for supervisory signals. IMC 907.3.1
13. In Type I or II construction, materials exposed to plenum airflow must be noncombustible or limited combustible and have a maximum smoke developed index of 50. IBC 718.5 and IMC 602.2.1

14. Show venting of elevator hoist ways serving four stories or more (see exceptions for sprinkled buildings). IBC 3004.1

15. Provide commercial kitchen hood ventilation system Design Intent information by a Tennessee registered engineer. See the Kitchen Hood and Duct Design Intent Ventilation Control and Fire Protection of Commercial Cooking Operations correction list.

16. Provide UL (or other) fire-stop details in their entirety including design illustrations and material specifications without modification or manipulation for penetrations through rated assemblies. IBC 107.2.1 and Section 714

**Plumbing Drawings**

1. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code. Construction documents shall indicate where penetrations will be made for pipes, fittings and components and shall indicate the materials and methods for maintaining required structural safety, fire-resistance rating and fireblocking. IBC 107.2.1 and IPC 106.3.1

2. Penetrations of exit stairways with steam lines, gas lines, roof drain piping, water lines, electrical conduit, and HVAC duct are prohibited. Only sprinkler piping, standpipes, and electrical conduit serving the stairway, or duct systems/other equipment necessary for stair pressurization are permitted. IBC 1022.5

3. Provide UL (or other) fire-stop details in their entirety including design illustrations and material specifications without modification or manipulation for penetrations through rated assemblies. IBC 107.2.1, Section 714

**Fire Suppression Design Intent**

1. Automatic sprinkler systems in new buildings shall be provided in locations specified in Sections 903.2.1 through 903.2.12. IBC 903.2

   Note: Automatic sprinkler system design intent must be sealed by a registered engineer. Shop drawings signed by a Responsible Managing Employee must be submitted for code compliance review after the design intent has been approved. The shop drawings must bear an approval stamp from the engineer of record before they are submitted. Shop drawing information is generally a stipulation on the plans approval letter. Rule 0780-02-03-.03(2)

2. In all occupancies other than Group U, an automatic sprinkler system shall be installed for building design or hazards in the locations set forth in Sections 903.2.11.1 through 903.2.11.6. IBC 903.2.11 Includes the following:

   (1) Stories without openings.
   (2) Rubbish and linen chutes.
   (3) Buildings 55 feet or more in height.
(4) Ducts conveying hazardous exhausts.
(5) Commercial cooking operations.
(6) Other required suppression systems. (See Table 903.2.11.6)

3. A Class I wet standpipe system must be provided in all sprinklered buildings or Class III in nonsprinklered buildings where the highest floor level is 30 feet above the lowest level of fire department access. (IBC 905.3.1) A standpipe hose outlet must be located at each intermediate stair landing in all required exit stairways. IBC 905.4

4. Portable fire extinguishers must be provided. IFC Section 906 and 2002 NFPA 10

5. Provide UL (or other) fire-stop details in their entirety including design illustrations and material specifications without modification or manipulation for penetrations through rated assemblies. IBC 107.2.1 Section 714

**Electrical Drawings**

1. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official. IBC 107.2.1

2. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied. IBC 1006.1 In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:

   (1) *Aisles* and unenclosed egress stairways in rooms and spaces that require two or more *means of egress*.

   (2) *Corridors, interior exit stairways* and *ramps* and *exit passageways* in buildings required to have two or more *exits*.

   (3) Exterior egress components at other than their levels of *exit discharge* until *exit discharge* is accomplished for buildings required to have two or more *exits*.

   (4) Interior *exit discharge* elements, as permitted in Section 1027.1, in buildings required to have two or more *exits*.

   (5) Exterior landings as required by Section 1008.1.6 for *exit discharge* doorways in buildings required to have two or more *exits*.

   The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 2702. IBC1006.3

3. Exit signs must be visible from all directions of travel and have an emergency power source or be a listed self-illuminating type sign. IBC 1011.1 and 1011.6.3

4. Electrical outlet boxes located on opposite sides of fire-resistance rated walls must be separated by a horizontal distance of 24 in. IBC 716.3.2

5. Recessed light fixtures in fire-resistance rated ceilings must be protected or be listed for use in a fire-resistance rated assembly. IBC 716.4.1.2
6. Provide ground fault interrupters for receptacles in bathroom, kitchens, garages, and outdoors. 2011 NFPA 70 210.8

7. Provide balanced electrical panel load schedules. 2011 NFPA 70 Article 220

8. Provide a minimum 3 ft. horizontal, the greater of 6½ ft. vertical or the height of the equipment, and the greater of 30 in. wide or the width of the equipment working space in front of electrical equipment. (IFC 605.3 and 2008 NFPA 70 110.26(A) (1-3), Table 110.26(A)(1)) Working spaces may not be used for storage and may not contain ductwork, piping, etc.

9. There must be one entrance not less than 32 in. wide and 6½ ft. high at each end of the working space for electrical equipment rated for 1,200 amperes or more and 6 ft. (1.8m) wide containing over current devices, switching devices, or control devices. (2011 NFPA 70 110.26(C)(2)) Both entrances shall open in the direction of the egress and be equipped with panic bars, pressure plates, or other devices that are normally latched but open under simple pressure.

10. Dry-type transformer installed indoors and rated 112½ KVA or less must have a separation of at least 12 in. from combustible material unless separated from the combustible material by a fire-resistant, heat-insulated barrier. 2011 NFPA 70 450.21(A)

11. Individual dry-type transformers of more than 112½ KVA rating must be installed in a transformer room of minimum 1-hour fire-resistance construction unless specified otherwise. 2011 NFPA 70 450.21(B)

12. Provide UL (or other) fire-stop details in their entirety including design illustrations and material specifications without modification or manipulation for penetrations through rated assemblies. IBC 107.2.1, Section 714

**Fire Alarm Design Intent**

1. An approved fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code. (IBC 907.2) A minimum of one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or water flow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

2. A fire alarm system control panel or annunciating device must be located in an area where trouble signals are monitored audibly and visually and which are distinctive from alarm signals. 2010 NFPA 72 10.12 and 10.16

3. Automatic smoke detection must be provided at each fire alarm control panel excluding annunciator panels in areas not continuously occupied that contain controlling equipment. (IBC 907.4.1, 2010 NFPA 72 10.15) Heat detection is permitted if ambient conditions prohibit installation of smoke detection. IBC 907.4.1

4. A fire alarm zone indicator panel shall be located at grade level at the normal point of fire department access or at a constantly attended building security control center. IBC 907.6.3.1
5. Manual pull devices must be located not more than 5 ft. from the entrance to exterior exit doors and doors accessing stairway exits (see exceptions). IBC 907.4.2

6. Where an automatic smoke detection system is required it shall utilize smoke detectors unless ambient conditions prohibit such an installation. In spaces where smoke detectors cannot be utilized due to ambient conditions, approved automatic heat detectors shall be permitted. IBC 907.4.3 Location and spacing shall be in accordance with NFPA 72 17.7.3.

7. Smoke detectors controlling hold open devices must be located in accordance with 2010 NFPA 72 17.7.5.6. Hold open devices must be supervised by the fire alarm system. IBC 907.3

8. Smoke-activated doors. Automatic-closing doors installed in the locations listed in IBC 715.4.7.3 shall be automatic closing by the actuation of smoke detectors installed in accordance with IBC 907.10 or by loss of power to the smoke detector or hold-open device. Doors that are automatic closing by smoke detection shall not have more than a 10-second delay before the door starts to close after the smoke detector is actuated. IBC 715.4.7.3

9. Visible alarm notification appliances must be provided in public and common areas including 20% spare capacity provisions addition in employee work spaces. IBC 907.5.2.3

10. Show decibel (dBA) rating for all audible notification devices and candela (cd) rating for all visible notification devices on drawings next to each signaling device. IBC 107.1.1, 907.5.2

11. Audible device spacing must be compliant with 2010 NFPA 72 18.4, Table A.18.4.3.

12. Visual device spacing must be compliant with 2010 NFPA 72 18.5, Tables 18.5.4.3.1(a) & 18.5.4.3.1(a).

13. An automatic sprinkler system when installed must be connected to the fire alarm system. IBC 903.4 & IFC 903.4

14. Show the following electrical and fire alarm connections. IBC 907.3

   (1) Door hold open, delayed egress locks, access-controlled egress doors or electromagnetically locked egress doors.
   (2) Air distribution system duct smoke detectors.
   (3) Commercial kitchen hood ventilation fire extinguishing system.
   (4) Commercial kitchen cooking equipment shunt trip circuit breakers and gas solenoid valves unless a mechanical gas line shut-off is specified.
   (5) Sprinkler system flow switch or alarm check valve connection to the general building alarm and central station.
   (6) Sprinkler system water control valve supervisory alarm connection for tamper switches.

15. Provide a note on the drawings stating the following: “All required documentation regarding the design of fire detection, alarm, and communications systems and the procedures for maintenance, inspection, and testing of fire detection, alarm, and communications systems shall be maintained at an approved, secured location for the life of the system.” IFC 901.6.2.1

16. The Fire Alarm Control Panel circuit disconnecting means shall have a red marking, shall be accessible only to authorized personnel, and shall be identified as “FIRE ALARM CIRCUIT.” The location of the circuit disconnecting means shall be permanently identified at the fire alarm control unit. 2010 NFPA 72 10.5.5.2.2