

2.4.3. Smoke Management

- 2.4.3.1.** The design objective of the smoke management approach is to
- Maintain the tenable condition, where large unoccupied spaces and unoccupied volumes are used as smoke reservoir for a specific time or extract and exhaust the smoke to achieve a smoke layer interface at a height which does not expose occupants to smoke and thus enabling their egress from that space unaffected.
 - Mechanical smoke exhaust to remove smoke from a space to slow the rate of smoke layer descent for a period that allows occupants to safely egress from space.
 - Smoke purging, post fire incident, to minimize the smoke damage to the building interior.
- 2.4.3.2.** Smoke Management Systems shall be engineered Smoke control systems and shall include the following evaluations in a building.
- Fire Dynamics
 - Fire Size and Location
 - Materials likely to burn
 - Fire plume geometry
 - Smoke layer impact on means of egress
 - Tenability conditions during the period of occupant egress
 - Response and performance of building systems, including passive barriers, automatic sprinkler systems, automatic detection systems and smoke control
 - Response time required for building occupants to reach building exits, time required to exit through large volumes such as atria.
- 2.4.3.3.** Smoke Management Systems shall be one or a combination of the following systems, based on the building smoke control strategy.
- Atrium or large volume Smoke Control System**
 - Smoke Extraction System**
 - Corridor and Open circulation area Smoke Purging System**
 - Natural Ventilation System**
 - Mechanical Ventilation System**