ZONING CHECKLIST FOR BUILDERS

INSTRUCTIONS

1) The accompanying Zoning Decisions provides further commentary to help step through each decision.
2) This information is supplemental to that collected for heat loss and heat gain calculations.
3) Builder to complete the checklist as best feasible, discuss with mechanical designer, and finalize it together.

Builder Identifier *(Company name, staff representative, and contact info)*

Duct Designer Identifier *(Company name, staff representative, and contact info)*

Duct design certification:

House Identifier

Model name or plan number:

Street or Lot address *(**if** single application for a specific home)*:

Regional boundaries *(**if** a template plan used within a region)*:

CIRCLE ONE OPTION PER DECISION AND PROVIDE ADDITIONAL INFORMATION AS REQUIRED

Decision 1: Choose the Type of House being Zoned

A) Multi-level homes

Three or more floors including basement

Enter no. of floors incl'g bsmt: _____

B) Bungalow

Two or fewer floors including basement

Enter no. of floors incl'g bsmt: _____

C) Large Custom home

Large homes requiring more than one zone per floor

Enter no. of floors incl'g bsmt: _____

Decision 2: Divide the House into Zones

A) Assign one zone per floor

One zone per floor provides EXCELLENT comfort control and provides the MOST flexibility for energy savings using zone temperature setbacks. Does not apply to larger homes with distinctly different loads on a single floor.

Enter the no. of zones req'd: _____

Zone the ductwork with each floor as a separate zone

B) Group some floors into a single zone

This option provides GOOD comfort control and provides SOME flexibility for energy savings using zone temperature setbacks. Applies to smaller footprint homes with 4 or more levels. See support material for additional details on this option.

Enter the no. of zones req'd: _____

***Attach** a description or sketch of the desired ductwork zoning arrangement*

C) Custom zoning design, with multiple zones on some floors

This option is used for larger homes and bungalows with distinctly different loads on a single floor. See support material for additional details on this option.

Enter the no. of zones req'd: _____

***Attach** a description or sketch of the desired ductwork zoning arrangement*

Decision 3: Choose the Type of Zoned System to Install

A) Factory-Integrated Zoned HVAC

Factory-built zoning solutions are simple to install and commission, and are shipped with all zoning controls and air-flow dampers assembled in a single box.

B) Site-Assembled Zoned HVAC

Site-built zoning solutions require building-up a zoned system from multiple components from one or more suppliers. Site-assembled systems require more time and expertise to install and commission.

C) Zoned Duct System Only

Non-zone HVAC equipment connected to a zoned duct system. Zone-Ready Installations defer the comfort & energy-saving benefits of zoning to a future time when zoned HVAC equipment is installed. ***(skip to Decision 5)***

Decision 4: Choose Approach to Meeting a Demand from a Single Zone

A) System fully modulates or stages airflow

This type of system has a minimum airflow that is less than or equal to the flow that can be accepted by the smallest zone that could be calling. It provides the best comfort, control and least energy consumption.

B) System uses 'dump zone'

When the minimum airflow of the system is more than a single zone can accept, the system dumps excess heated or cooled air into another zone. The system may or may not modulate or stage airflow.

C) System uses a by-pass damper

Systems that use by-pass dampers recirculate supply air back into the return duct, which increases energy usage.

Decision 5: Choose Change-Over Approach Between Heating and Cooling

A) Controller enables occupant to seasonally switch-over from heating to cooling

This type of controller maximizes energy efficiency and comfort. A central, manual change-over control is used.

B) Controller automatically switches over between heating and cooling

Controllers that allow some zones to call for heating while other zones call for cooling will lower system efficiency and increase energy usage.

Decision 6: Choose Thermostat Type

A) Programmable

A programmable thermostat in each zone provides the ability to save energy by using zone setbacks during unoccupied periods.

B) 'Smart' Programmable

The "Smart thermostat" is a new class of product which extends functionality beyond fixed scheduling of temperature and WiFi connectivity. Smart thermostats may include learning or predictive functions, adaptive sensors (e.g. motion, proximity, ambient light, etc.), and/or geo-fencing links to determine occupancy. They automatically adjust temperature for both comfort and energy savings.

C) Non-Programmable

Non-programmable thermostats provide manual set-point adjustments in each zone, but eliminate the opportunity for energy savings resulting from automatic setback of heating and cooling during unoccupied periods of the day.

Decision 7: Choose Duct System Velocity/ Static-Pressure Characteristics

A) Low-Velocity (low static pressure)

Low-velocity systems are the traditional market-dominant duct technology. They use larger cross-section ducts and their low-static pressure design minimizes blower energy consumption. The large cross-section ducts can be more challenging to integrate and install in joist and wall cavities.

B) Medium-Velocity (medium static pressure)

Medium-velocity systems are starting to be used as a "middle-of-the-road" option between low and high velocity systems. Medium-velocity systems use medium cross-section ducts which result in medium static pressures and slightly higher blower energy consumption than low-velocity systems. The medium cross-section ducts are more easily integrated and installed in joist and wall cavities.

C) High-Velocity (high static pressure)

High-velocity/high static pressure systems use small cross-section ducts and their high-static pressure design result in greater blower energy consumption. The small cross-section ducts are easily installed inside joist and wall cavities.

Please provide any other instructions or Zoned System Design preferences below

Please indicate any other General Instructions. This could include such things as preferences on heating equipment (e.g. "NG furnace", "multi-stage or modulating furnace" "combo system", etc), cooling equipment (e.g. "15 SEER A/C", "multi-stage or modulating A/C condenser", etc), or other specific requirements for the zoned mechanical design.