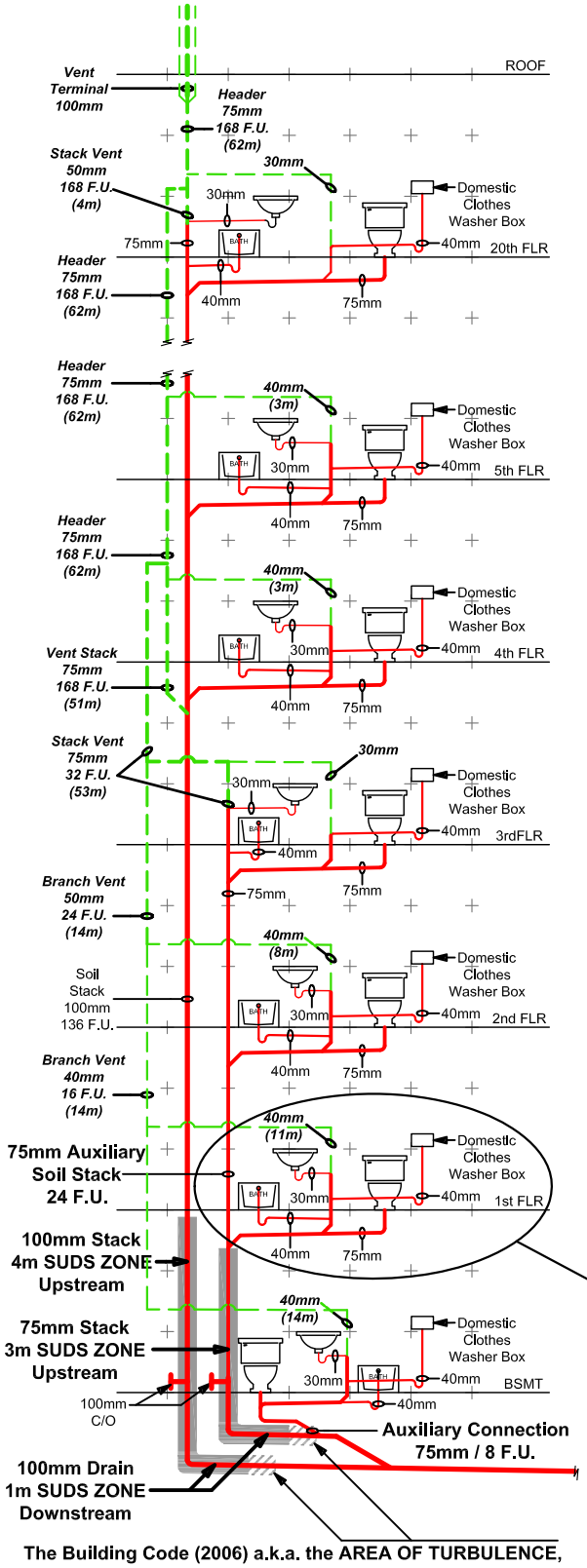
SUDS ZONES and AUXILIARY STACKS



The Building Code (2006)

7.4.2.1.(4) A *soil* or *waste pipe* that serves more than one clothes washer, and in which pressure zones are created by detergent suds, shall not serve for connecting other *soil* or *waste pipes*.

The National Standard Plumbing Code (US 2003),

One of the traditional codes, lists the following special requirements to avoid suds problems:

11.11 SUDS PRESSURE ZONES

11.11.1 General

Where suds-producing fixtures on upper floors discharge into a soil or waste stack, suds pressure zones shall exist as described in Section 11.11.2. Fixture or branch drain connections shall not be made to such stacks in the suds pressure zones except where relief vents complying with Section 12.15 are provided. Suds-producing fixtures include kitchen sinks, laundry sinks, automatic clothes washers, dishwashers, bathtubs, showers, and other fixtures that could discharge sudsy detergents.

11.11.2 Locations in Stacks Serving Suds-Producing Fixtures

a. Zone 1 - at offsets greater than 45 degrees from vertical. A suds pressure zone shall extend 40 pipe diameters up the stack above the offset, 10 pipe diameters downstream from the base of the upper portion of the stack, and in the horizontal offset, 40 pipe diameters upstream from the top of the lower portion of the stack.

b. Zone 2 - at the base of a soil or waste stack. A suds pressure zone shall extend 40 pipe diameters up the stack above its base.

c. Zone 3 - in the horizontal drain beyond the base of a soil or waste stack. A suds pressure zone shall extend 10 pipe diameters from the base of the stack. Also, if a turn greater than 45 degrees occurs in the horizontal drain less than 50 feet from the base of the stack, suds pressure zones shall exist 40 pipe diameters upstream and 10 pipe diameters downstream from the horizontal turn.

d. Zone 4 - in a vent stack at the base of a soil or waste stack. Where a vent stack connects above or beyond the base of a soil or waste stack, a suds pressure zone shall extend up the vent stack to a level equal to the level of the suds pressure zone in the soil or waste stack.

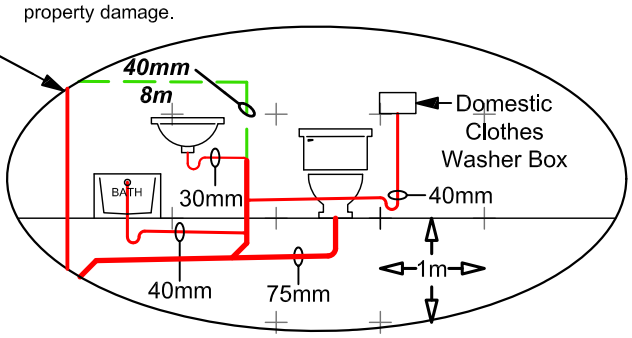
11.11.3 Separate Stacks

Where soil or waste stacks serving suds-producing fixtures extend six or more floors above the base of the stack or above a horizontal offset in the stack, the lowest four floors above the base or horizontal offset shall be drained by a separate stack. In the case of a horizontal offset, the separate stack for the four floors above the offset may be reconnected to the main stack below the offset, provided that the point of connection is not a suds pressure zone in either stack.

Auxiliary Stacks and Auxiliary Connections,

Is a new stack with or without an additional connection discharging downstream of a soil or waste stack serving fixtures in a high-rise building. The connection of an Auxiliary Stack or an Auxiliary Connection will prevent;

1. Negative air pressure causing trap seal loss,
2. Back Pressure causing the trap seal to be pushed up into the fixture, or
3. Sudsing causing soap suds to push through the trap seal resulting is property damage.



7.4.2.1.(2) The connection of a *soil* or *waste pipe* to a *nominally horizontal soil* or *waste pipe* or to a *nominally horizontal offset* in a *soil* or *waste stack* shall be respectively at least 1 500 mm measured horizontally from the bottom of a *soil* or *waste stack* or from the bottom of the upper vertical section of the *soil* or *waste stack* that,

(a) receives a discharge of 30 or more *fixture units*, or (b) receives a discharge from *fixtures* located on 2 or more *storeys*.