CHAPTER 1 - CONSERVATION AND EFFICIENCY

601.02 CONDENSATE DRAINAGE

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INTENT

To utilise efficient condensate discharge system to prevent leaks into the buildings, mold growth and associated health hazards.

REQUIREMENT

For all buildings including existing buildings, where condensate water is produced by air conditioning equipment, the condensate water must be collected and disposed appropriately. Condensate collection pans and drainage pipes must be installed to provide proper drainage and to prevent any stagnant water. A minimum air break of 25 mm must be provided between the condensate piping and the wastewater pipe. If the condensate water is not reused, it must be discharged into the wastewater system through a properly sized water trap.

SIGNIFICANCE

Air conditioning systems absorb heat from inside the building and transfer it outside. As the air gets circulated within HVAC systems, due to the temperature difference between the outside air and the cooled air, condensation occurs. In places having high humidity and hot climate, air conditioning equipment produces significant amount of condensate water. Condensate water needs to be removed to prevent damage to equipment and building structure. Stagnant water poses a serious health hazard, as it is a potential place for microbial growth that affects the indoor air quality for building occupants.

Proper collection and disposal of condensate will contribute to the air conditioning system's efficiency and in reducing indoor air quality hazards. As the condensate water has low mineral quality it can be reused for various purposes like irrigation, flushing of toilets, cooling towers, evaporative coolers and many more.

APPLICABILITY

This regulation is applicable to all building types. Refer to Table 101.07(1) in Section One - Administration for detailed applicability levels.

IMPLEMENTATION

This regulation requires project team to design condensate drainage system, to ensure condensate from all cooling coils of FAHUs, AHUs, FCUs, CCUs etc., is collected from the drain pan outlet to an appropriate location for disposal in the wastewater system or to a location where it can be stored for reuse.