**Section 890.1340 Determination of Sizes for Drainage System**

a) Maximum Fixture Unit Load. The maximum number of DFUs that may be connected to a given size of building drain, horizontal branch, or vertical soil or waste stack is established in Appendix A.Tables G and H. Exception: As an alternative to using Appendix A.Tables G and H to design and size the building drain, horizontal branch, or vertical soil or waste stack, the system may be designed and sized employing current engineering practices, provided that the design/plans are signed and sealed by an Illinois licensed professional engineer, an Illinois licensed architect or an individual Certified in Plumbing Design (CPD) by the American Society of Plumbing Engineers and approved in writing by the Department.

b) Minimum Size of Building Drain, Horizontal Branches, Drainage Piping

1) The minimum size of any gravity building drain shall be 4 inches in diameter.

2) Pressure-building drains shall not be used where gravity drains may be installed. Pressure-building drains shall be sized in accordance with the ejector pump manufacturer's recommendation, but shall not be less than 2 inches in diameter.

3) Gravity drained horizontal branches of the building drain shall be sized in accordance with Appendix A.Table H.

4) No portion of the drainage system installed underground or below a basement or cellar shall be less than 2 inches in diameter. The venting system is excluded from this requirement.

5) The drainage piping shall not be reduced in size in the direction of flow.

c) Minimum Size of Soil and Waste Stacks. No soil or waste stack shall be smaller than the largest horizontal branch connected to the stack, except that a 4 inch by 3 inch water closet connection shall not be considered as a reduction in pipe size.

d) Waste Stacks Serving Kitchen Sinks. In one- or two-family dwellings in which the waste stack or vent receives the discharge of a kitchen-type sink and also serves as a vent for fixtures connected to the horizontal portion of the branch served by the waste stack, the minimum size of the waste stack up to the highest sink branch connection shall be 2 inches in diameter. Above that point the size of the stack shall be governed by the total number of drainage fixture units vented by the stack. (See Appendix J.Illustration F.)

e) Future Fixtures. If the future installation of fixtures is provided for during initial construction, the fixtures provided for shall be considered in determining the required size of drain pipes and vent piping. Piping provided for future installation of fixtures shall be terminated with a plugged fitting or fittings at the stack so as to form no dead ends. In a multi-story building, when openings are roughed in for future fixtures below the uppermost level, properly sized vent piping shall be connected to the vent system and carried down to the appropriate lower level and be capped or plugged in an accessible location for venting of the future fixtures.

(Source: Amended at 38 Ill. Reg. 9940, effective April 24, 2014)