567—72.5(455B) Buildings. The following criteria apply to buildings.

72.5(1) *Minimum protection levels.* The minimum level of flood protection for a building depends on the damage potential of the building and contents. "Maximum," "high" and "moderate" damage potential classifications are defined in 567—Chapter 70. Criteria for determining minimum levels of protection are as follows:

a. Buildings with maximum damage potential shall be protected to the level of a flood equivalent to Q500 plus 1 foot. Determination of the elevation of the department regional flood is recommended as an alternative to establish an appropriate level of protection for a building which has maximum damage potential (see discussion of flood frequencies and magnitudes in 567—subrule 75.2(1)).

b. Buildings with high damage potential shall be protected to the level of a flood equivalent to Q100 plus 1 foot.

c. Buildings with moderate damage potential shall be protected to the level of a flood equivalent to Q50.

d. Buildings adjacent to an impoundment shall be protected to the elevation of the top of the dam unless the dam has adequate spillway capacity to discharge the flood corresponding to the damage potential of the building at an elevation below the top of the dam.

e. Buildings downstream from a dam shall be protected to a level established by the department after due consideration of the hazards posed by the dam for buildings downstream.

72.5(2) *Flood protection methods.* The following flood protection methods are required for buildings to which a minimum flood protection level applies.

a. Structural design and flood proofing. Basement walls and floors below the applicable minimum flood protection level shall be structurally designed and constructed to be flood proof and able to withstand hydrostatic pressure and buoyant forces associated with a water table elevation equivalent to the minimum flood protection level. However, attached garages and storage space may be constructed below the applicable minimum protection level without flood proofing if all electrical circuit boxes, furnaces, and hot-water heaters are located above the applicable minimum protection level.

b. Sanitary sewer drains. Sanitary sewer drains below the applicable minimum flood protection level shall be provided with automatic closure valves to prevent backflow.

72.5(3) *Location.* The criteria for location of a building include consideration of the potential for obstructing flood flows and the potential hazards which may arise when the building is surrounded by floodwater. Criteria for location of buildings in floodways and flood plains are as follows:

a. Obstruction. Buildings shall not be located in the floodway of a stream so as to result, individually or collectively, in any increase in the elevation of Q100 as confined to the floodway. The floodway boundary applicable to an individual application shall be determined as necessary by the department in accordance with the criteria in rule 567—75.4(455B). Analysis of the effect that a building in the floodway would have on flood levels shall be based on the assumption that all similarly situated landowners would be allowed an equal degree of development in the floodway.

b. Public damages. Buildings shall be located to minimize public damages associated with isolation due to flooding of surrounding ground. In identifying the potential for public damages, the department shall determine whether there is a need for access passable by wheeled vehicles during Q100. The need for such access shall be determined on the basis of the criteria for evaluating flood warning and response time in 567—subrule 75.2(3).

c. Existing buildings—replacement and improvements. In applying the criteria in paragraphs *"a"* and *"b"* of this subrule to projects which improve or replace existing lawful buildings the department shall give consideration to the policies for protection of existing development in rule 567—75.6(455B).