2a. Impermeable Surface Disconnection to Pervious Area

Definition. This strategy involves managing runoff close to its source by intercepting, infiltrating, filtering, treating or reusing it as it moves from the impervious surface to the drainage system. Disconnection practices can be used to reduce the volume of runoff that enters the combined or separate sewer systems. Two kinds of disconnection are allowed: (1) simple disconnection, whereby rooftops and/or on-lot residential impervious surfaces are directed to pervious areas or conservation areas, and (2) disconnection leading to an alternative runoff reduction practice(s) adjacent to the roof (see Figure 3.3.1). Alternative practices can use less space than simple disconnection and can enhance runoff reduction rates.

Disconnection practices reduce a portion of the stormwater retention volume (SWRv). In order to meet requirements for larger storm events, disconnection practices must be combined with additional practices.

Table 3.3.1. Feasibility criteria for simple disconnection

DESIGN FACTOR	DISCONNECTION DESIGN
Contributing Drainage Area	1,000 ft^2 per rooftop disconnection. For non-rooftop impervious areas, the longest contributing impervious area flow path cannot exceed 75 feet.
Required Space	Minimum 150 feet of disconnection area.
Sizing	The available disconnection area must be at least 10 feet wide and 15 feet long. Maximum disconnection width is 25 feet unless the contributing runoff is conveyed via sheetflow or a level spreader. Maximum disconnection length is 100 feet.
Site Topography	Grade of the receiving pervious area is less than 2%, or less than 5% with turf reinforcement. The slope of the receiving areas must be graded away from any building foundations.
Soils	Impervious surface disconnection can be used on any post-construction Hydrologic Soil Group. The disconnection area must be kept well-vegetated with minimal bare spots.
Building Setbacks	5 ft. away from building if the grade of the receiving area is less than 1%

Disconnection practices receive the following retention values:

- D-1. Simple disconnection to a pervious compacted cover area: retention value of 2 cubic feet per 100 square foot of receiving pervious area.
- D-2. Simple disconnection to a conserved natural cover area: retention value of 6 cubic feet per 100 square foot of receiving pervious conservation area.
- D-3. Simple disconnection to a soil compost amended filter path: retention value of 4 cubic feet per 100 square foot of receiving pervious conservation area.