Surface Water Control - April Showers Bring May Flowers

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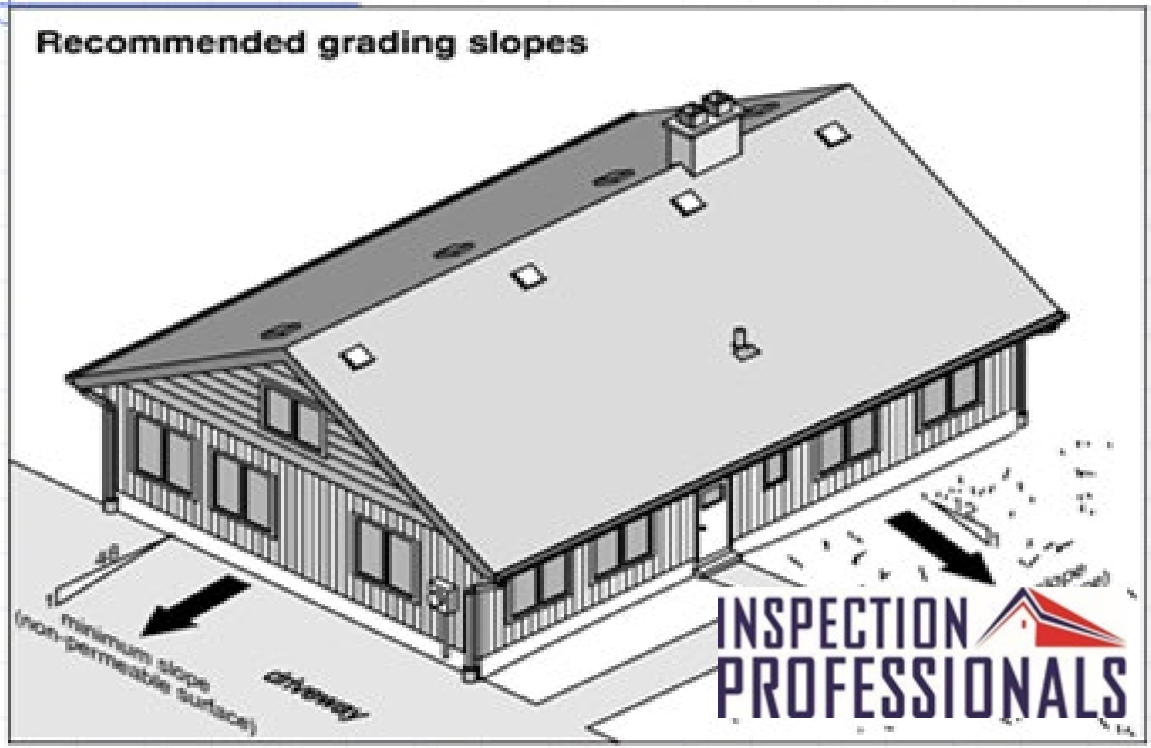
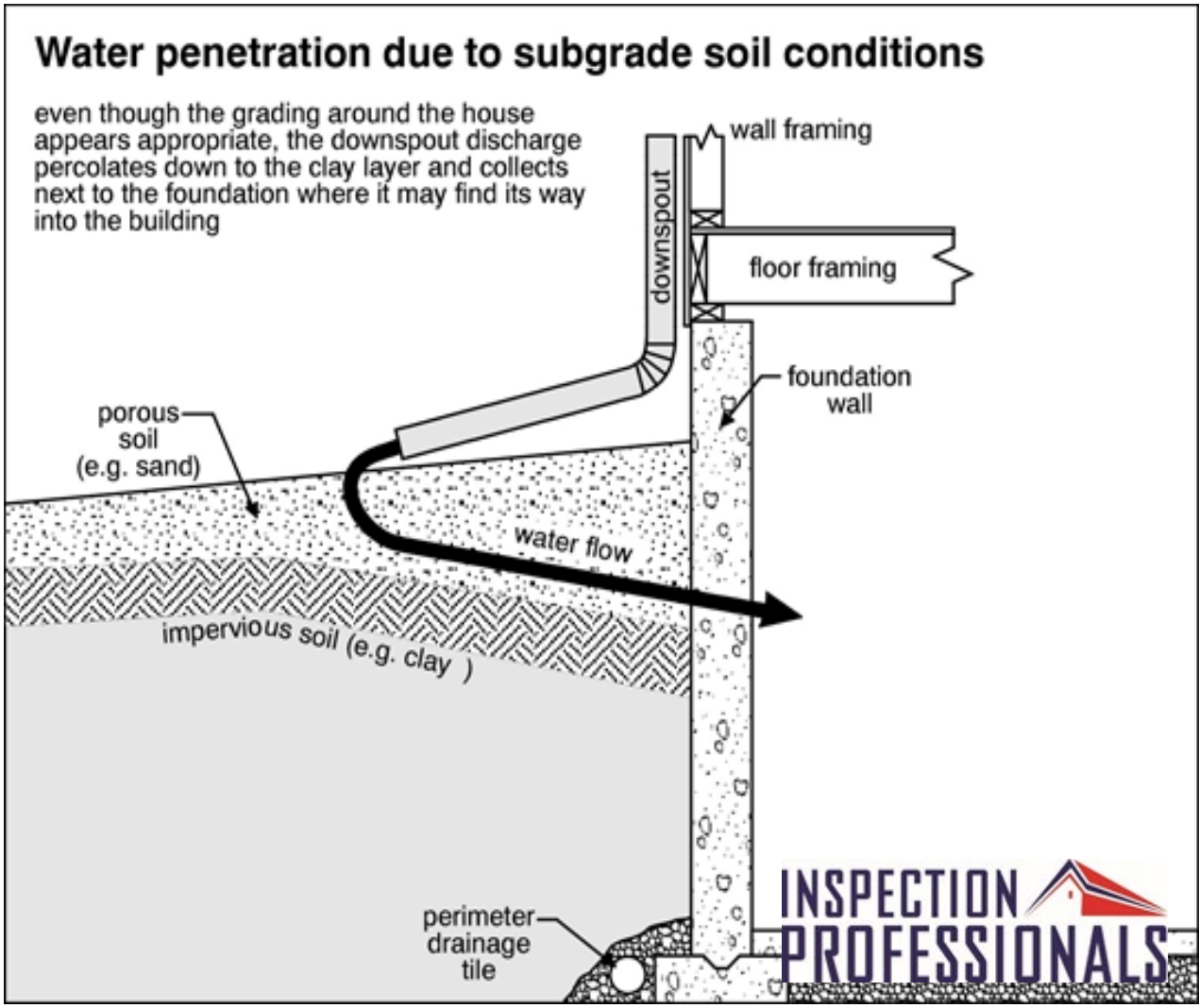
Illustration: Grading

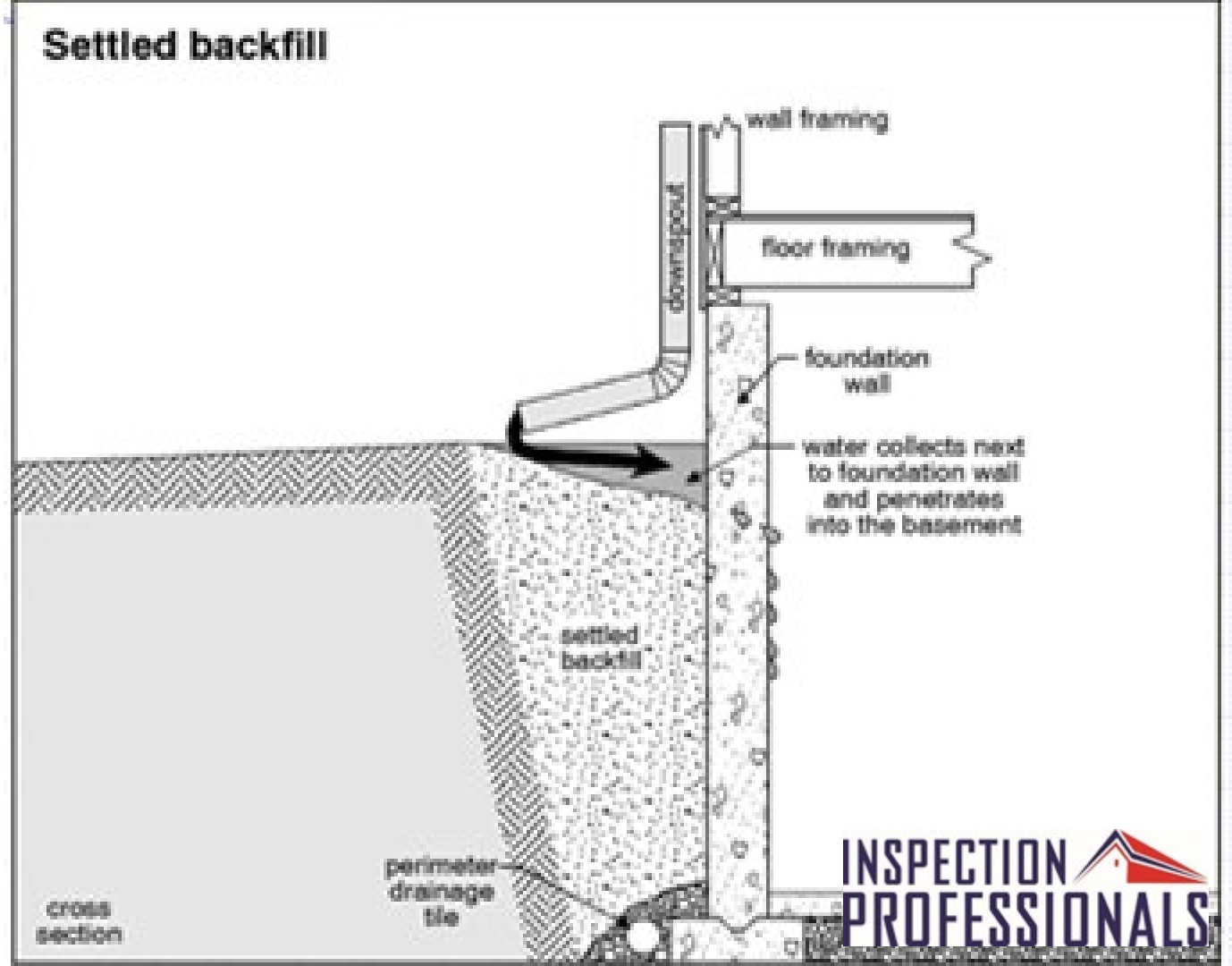
What is grading & why does it show up on every report?



How do we manage this concern when explaining it to our clients/buyers? Why is this so important?



-It is not what you say but how you say it.



Well over 95% of water penetration problems into below grade areas of a home are due to surface water that is not managed properly. When grades slope towards the walls of the house they allow water to accumulate at the walls of the house. The worst areas are typically at downspouts, window wells, and adjacent to exterior steps. The gutter and downspout systems also contribute to water accumulation problems. The problem is rarely due to a high water table, because, homes are typically not built with below grade areas when the water table is high. i.e.: Generally areas close to sea level. In order to divert water away from the walls of the house, the soil must be dense and must slope away from the house. The following is an outline or a guide of how to properly regrade. 1. Remove soft or porous soils, stone or gravel, top soil, mulch and wood chips, etc. from the areas that need regrading. Areas that need regrading will typically be the low areas where water may be accumulating. The top soils and other soft materials can be reused when the new grades are developed. Using stone, sand or gravel is not recommended because they do not divert water. 2. The actual regrading can be done after the preparation outlined above. Use dense soil, such as clay, where possible. Dense soil will divert water, soft soils, such as top soil, will absorb water. The newly graded areas should slope away from the house at rate of 1/2" per foot or more. The new soil should be tamped to eliminate voids and assure that the new grades will function properly. Example: The new grades should be 3" or more higher at the wall than it is 6' away. 3. After this dense soil shelf is completed, the top soil, etc. can be reinstalled. The soft soils have two functions: 1- They will prevent erosion of the dense soil. 2- They are needed to grow grass and shrubs etc. 4. In situations where this type of regrading is not a reasonable option, an interior hydrostatic pressure relief system with a sump pump may be necessary. These systems do not stop the water penetration, however, they are an effective way to control water that enters by receiving it and discharging it to the exterior. Some basements or crawl spaces may have elevated relative humidity with this type of system.

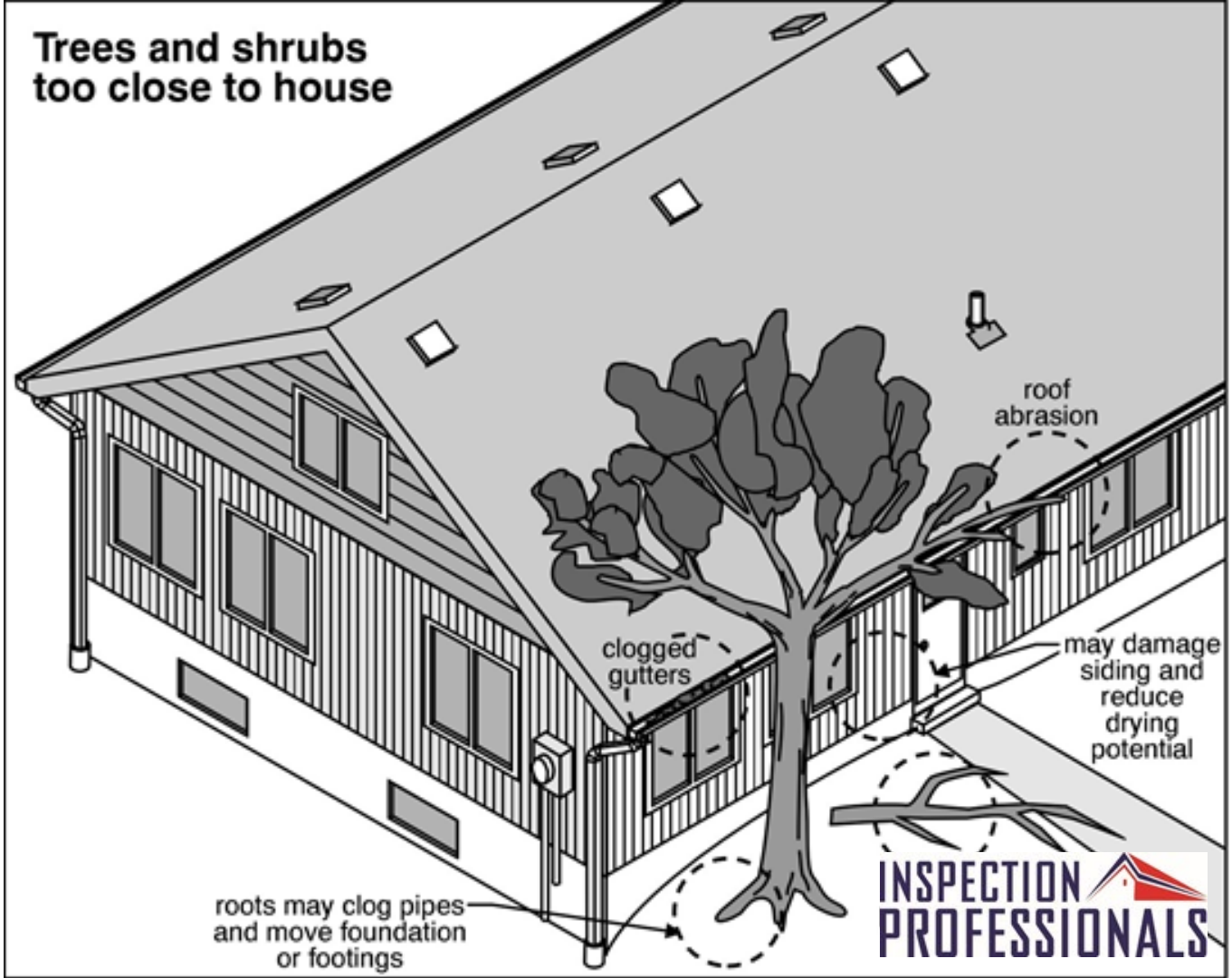
Roof Water Control

-How does this impact water penetration into a below grade area?

-Gutters

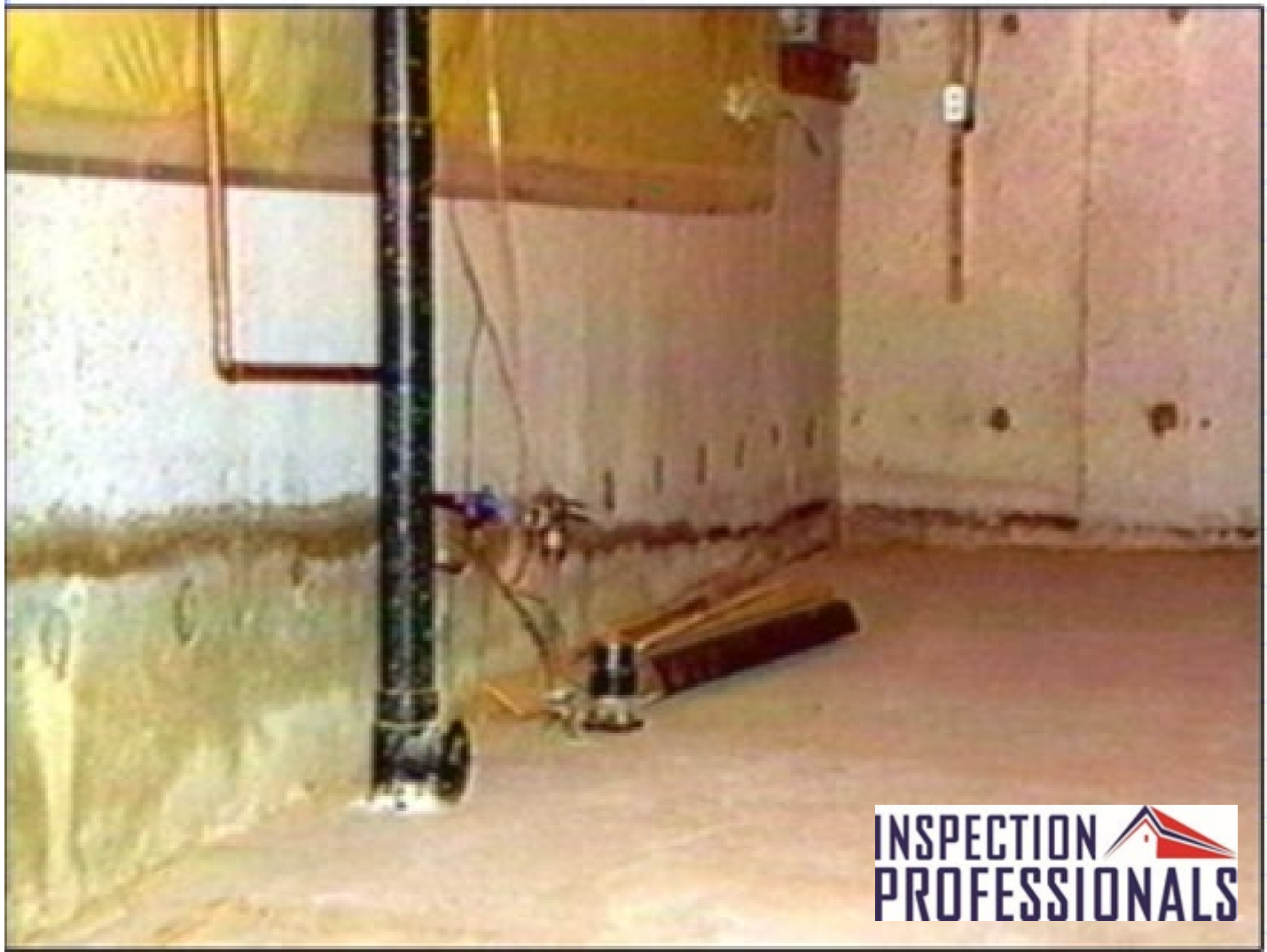
-Downspouts

-Extensions



Effloresence:
-What is efflorescence?
-How is efflorescence related to water control?
-Does this negatively impact the integrity?

What do we have here?



Hydrostatic Pressure:
-How does hydrostatic pressure impact Foundation Walls?
-How does hydrostatic pressure Retaining Walls?

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