CONCENTRIC SECURITY UNIVERSITY

# Why Is Security Barrier Drainage Important?

Removal of water from the equipment is crucial to ensuring reliability and longevity of the equipment. Water pooling in a barrier can quickly damage actuators, motors, switches, and wiring which cause rapid deterioration and failure of equipment. Every system installation is different based on the equipment required, system location, slope availability, specifications, and soil type. Each application must be analyzed to determine the most practical and cost effective method to get the water away from the barrier system as quickly as possible. Depending on the application, a combination of drainage types may be required.

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| **Natural Drain** | Using gravity to move water to a natural low spot. Also known as "Daylight" drains | |
| | **Applications** | Shallow mount systems, raised road applications, in conjunction with sump pit |
| | **Advantages** | Simple installation with minimal plumbing<br>Cost effective |
| | **Disadvantages** | Verify the low area will drain at all times. Pooling water in the low area will backup water into the plumbing and barrier system. |
| **French Drain** | Using gravity to move water to a rock filled underground pit | |
| | **Applications** | Shallow mount barrier systems, in conjunction with sump pit |
| | **Advantages** | Useful in areas that receive little or small amounts of rain per year and which the soil will percolate the water quickly and naturally |
| | **Disadvantages** | Additional area must be excavated for the elongated pit<br>Large amounts of water will not drain quickly |
| **Storm Drain** | Using gravity to move water to an existing pipe/riser | |
| | **Applications** | Shallow mount barrier systems, bollards systems |
| | **Advantages** | Minimal plumbing<br>Can be cost effective |
| | **Disadvantages** | Difficulty of entering steel or concrete pipe/riser<br>Hydraulically operated system draining directly to storm drain may be prohibited by facility specification (oil water separator may be required)<br>Proximity of drain to barrier system allowing gravity to remove water |
| **Sump Pits** | Using natural drainage to a pit, then using a sump pump to move the water to a drain area. | |
| | **Applications** | Bollard systems, shallow mount barrier systems |
| | **Advantages** | Pumps the water from a low point to surface level |
| | **Disadvantages** | Additional equipment must be installed and maintained (i.e. sump pit, motor, power to motor and plumbing to final drain area)<br>Higher cost |



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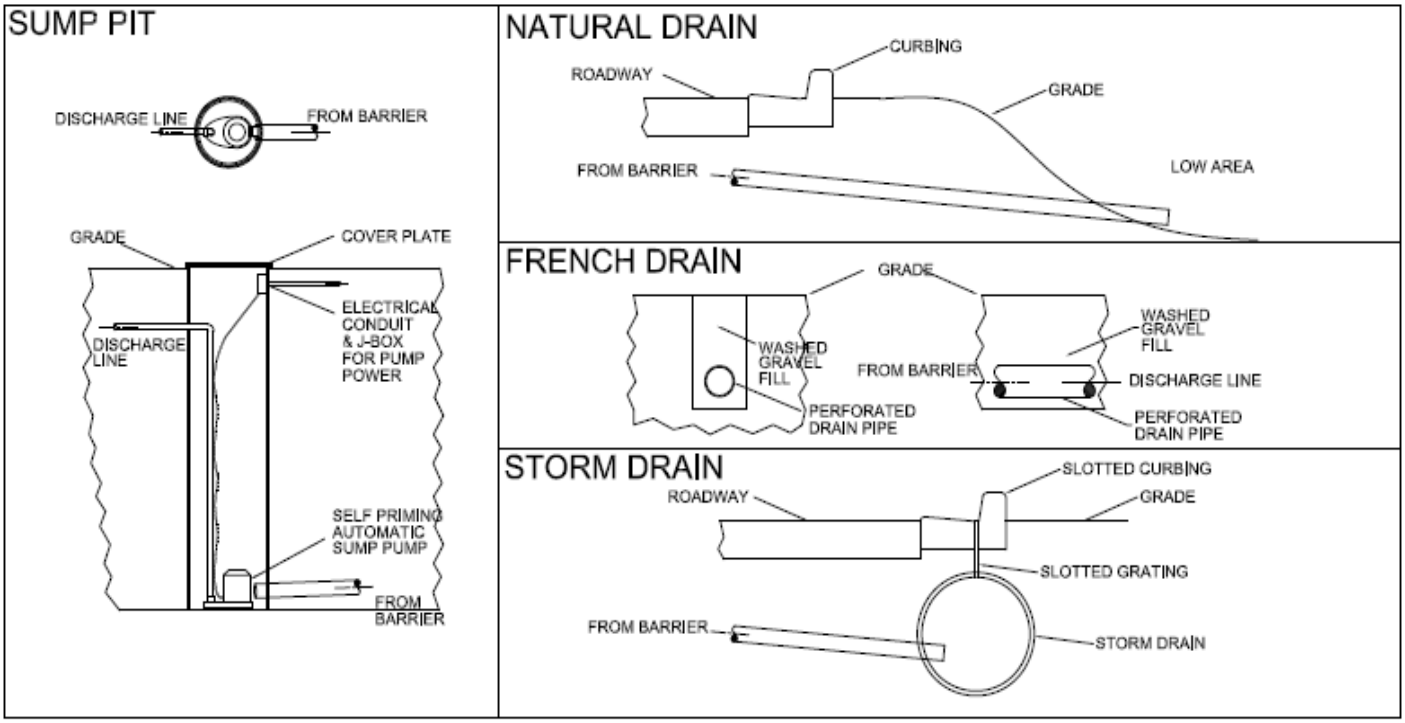


CONCENTRIC SECURITY
UNIVERSITY

Concentric Security University
7560 Main Street, Sykesville, MD 21784
P 410.552.9950 F 410.552.9939
Website: www.ConcentricU.com
Email: info@ConcentricU.com