

1. Design Criteria:

- a. Dampproofing shall be allowed to be used where the geotechnical engineer has established no hydrostatic pressure exits in the groundwater. Waterproofing shall be used in all other cases.
 - i. Waterproofing not only protects interior spaces from moisture intrusion but alleviates problems with water-borne minerals and chemical caused deterioration of permeable concrete substrates.
 - ii. Elevator pits shall receive waterproofing
- b. The term “waterproofing” in this document shall refer to both dampproofing and waterproofing.
- c. Waterproofing product selection depends heavily on the specific project context and substrate materials. The design consultant shall carefully specify materials and systems that apply to the project's specific needs.
- d. Selection of the most appropriate product shall consider the following:
 - i. How are penetrations, corners, and joints handled?
 - e. Drainage board shall be used to protect sheet and membrane from surrounding grade from backfill.
 - f. Proper flashing materials shall be used based on manufacturer's instructions specified to connect field areas to penetrations.
 - g. Negative-side waterproofing is not preferred over positive-side waterproofing on new construction. It may be used as a last resort if positive-side application will not adversely affect interior space or structure or existing construction.
 - h. Below-grade vertically applied moisture protection shall be used in conjunction with protective drainage panels to provide an air gap between the membrane and surrounding grade. These may be used in conjunction with positive-side waterproofing.
 - i. Low-VOC products are preferred.
 - i. Drainage panels be drained into the foundation if a drainage system exists as part of the project design.

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5. **Installation, Fabrication, and Construction:**

- a. Repair holes, holes from removed fasteners, pin holes, tears, damage, bubbles, blisters, wrinkles, fish mouths, slump, sag, and all other detections.
- b. Detail repairs as recommended and warranted by system manufacturer.
- c. Preparation of substrate imperfections according to manufacturer instructions shall be specified.
- d. The waterproofing installer shall review all substrates for correct preparation prior to installing damp/waterproofing materials and prepare a written report of all nonconformances. Installation of waterproofing shall not be started until all the reported issues have been resolved.
 - i. This report is not part of commissioning or assembly testing requirements. Its purpose is to document acceptable substrate conditions prior to installation of the membrane barrier.
- e.

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as the sheet membrane to create a double layer of protection at this critical joint.

1. Confirm the sealant material is appropriate and compatible with the membrane and substrate.
 - ii. Apply mastic or an appropriate non-sag sealant over the membrane termination onto the substrate at the bottom of vertical below grade walls to prohibit pressurized water from rising under the membrane at the termination.
 - iii. Provide sealant joint at pipe penetrations through walls to eliminate any 90-degree turnouts. Follow this with a membrane detail strip and a pipe clamp and mastic/sealant on the penetrating pipe if necessary.
- h. Protection/drainage board
- i.