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## PRODUCT DESCRIPTION

The AVM Aussie Tite is a heavy-duty Dual System Waterproofing membrane that is comprised of a high strength 60 mil thermoplastic PVC (Polyvinyl Chloride) with DuPont Elvaloy® KEE that is reinforced with an adhered Reactive Polymer Fleece (RPF) layer that activates when it comes in contact with water.

AVM Aussie Tite Dual Layer performance begins with a 60 mil PVC Membrane that is heat welded providing a continuous layer of robust and long-standing waterproofing protection. The secondary RPF layer is a superabsorbent polymer infused geotextile that activates and swells when it comes into contact water, providing self-sealing and self-healing capabilities in the event the PVC membrane has been damaged or breached. The RPM layer when in confinement will not only provide an active seal but will also prevent the passage of lateral water migration. Aussie Tite 540 requires an overburden with a minimum continuous confinement weight of 15 lb per SqFt.

The Aussie Tite 540 System is designed for horizontal deck applications for both new construction and restoration applications. It is also recommended for use in tunnel and earth covered structure installations and green roofs. For restoration applications (both deck or walls), it can be installed over the top of many existing waterproofing materials including cold-tar pitch so long as the surface is relatively smooth.

## ACCESSORY PRODUCTS

**Aussie Flash R (Reinforced):** 60 mil thick white/gray PVC flashing membrane used for detailing and flashing applications. Used for butt-joints, field patches, curbs, walls & in penetration details. Use white side for UV exposed areas.

**Aussie Flash NR (Non-Reinforced):** 12" wide 60 mil thick PVC flashing membrane used for detailing and flashing applications. Used for butt-joints, field patches, curbs, walls & in penetration details.

**Aussie Flash DM (Detail Membrane):** Non-reinforced PVC flashing membrane that is very flexible and has the ability to conform to more detailed areas. Used in corners, T-joints, & to wrap penetrations.

**Aussie Fleece (RPF):** Reactive Polymer Fleece membrane. Used for transition details, corners, butt-joints and as a protection from small surface defects.

**Aussie Seal M:** Marine grade single component polyether sealant/adhesive. Used to adhere Aussie Swell Red Waterstop, around penetrations, and at terminations.

**Aussie Boot (Various Sizes):** Pre-fabricated PVC flashing boots designed to make field installation of penetrations quicker and easier. Several different sizes depending on the size of the penetration.

**Aussie Tite Coated Metal Flashing:** Stainless steel sheet laminated on a PVC coating for termination applications. Special Order – call for special quote.

**AVM Adhesive 501:** Adhesive for securing the Aussie Tite flashing membranes to different types of surfaces and substrates.

**Inside Corners:** Pre-molded Aussie Tite Flashing DM used to seal inside corners.

**Outside Corners:** Pre-molded Aussie Tite Flashing DM used to seal outside corners.

**T-Joint Covers:** Pre-molded Aussie Tite Flashing DM used to seal T-joints.

**AVM Drain Board:** Drainage composite composed of a molded core profile core & a filter fabric. Used to remove hydrostatic presence in non-hydrostatic conditions. Can also improve substrate conditions.

**AVM Bottom Drain:** Thickened base drain composite designed to collect water from sheet drainage pales and then discharge water through collector pipes to collection system.

**Termination Bar:** Extruded-aluminum or formed-stainless-steel bars with upper flange to receive sealant. Used to terminate membrane at grade or during transitions.

**Aussie Swell Red Waterstop:** Active swelling concrete joint waterstop used around penetrations and applicable concrete joints.

## LIMITATIONS

Aussie Tite 540 should only be installed after proper substrate preparation has been completed with a minimum 15 lb per SqFt and is appropriate to receive waterproofing. The membrane should be fully covered and confined in order to function properly with the self-sealing properties. The Aussie Tite 540 should not be installed over standing water or over icy surfaces, Aussie Tite 540 is not designed to waterproof expansion joints. The AVM Technical team or your local AVM representative should be consulted for any detail or installation guideline not discussed in this product manual.

## SECTION 1 – WELDING

The Aussie Tite 540 membrane is heat welded at the seams so that the overlap consists of a minimum of 3” on both the thermoplastic membrane and the Reactive Polymer layer. Along the roll edges, the Aussie Tite is produced with the RPF offset 3” from the thermoplastic membrane layer to enable welding. Overlap the adjoining membrane edge, thermoplastic to thermoplastic maintaining the minimum of 3” required for the overlaps of both the thermoplastic and the RPF edges.

Prior to project start up, applicators are required to partake in a training course designated by AVM’s Technical Services Team. Upon completion of the training course, the AVM technical team will provide confirmation of completion through certificate indicating individuals are approved to weld on the project. Contact your local AVM sales representative or a member of the AVM Technical Team with inquiries about the Aussie Tite training class.

Each day, for each piece of equipment, cut out and retain a 2” wide welded seam sample; date it and retain for the independent inspector/owner’s representative. Additionally, a successful test strip, already pulled for verification of the weld process must be included. Similarly, date and submit a successful test “pull strip” for the independent inspector. The independent inspector for the project will photo document the test strips and put them in the inspection reports for review by the AVM Technical Team. Further test strips may be required as conditions change during the day, as problems arise, or at the independent inspector/owner’s representative discretion.

Install the Aussie Tite 540 over prepared substrate with the Reactive Polymer layer in direct contact with the structural concrete. In instances where there are multiple membrane edge overlaps (the membrane edges for, a T-Joint Intersection), cut a piece of Aussie Flash DM or T-Joint Cover with a minimum of 4” diameter and center it over the intersection of the T-Joint. Heat weld the Aussie Flash DM patch or T-Joint Cover in place to efficiently seal the pinhole that is created when three membrane sheets come together to form the T-Joint.

### 1.1 – WELDING: Hand Welding

Hand welded should be reserved for detailing or in other areas where the automated welder is difficult to manage. The Aussie Tite 540 and the Aussie Flash R (Reinforced) will require different temperature settings in order to weld the products efficiently. Weather, ambient temperature and storage of the material can also impact the settings required for the hand welder. Each day, the applicator should test the membrane and the flashing by welding scrap material in order to ensure that the correct settings are set on the welder. Once the hand welder temperature setting has been tested, the overlaps of the thermoplastic can be welded following a simple process:

**Tack Weld:** The tack weld allows the intended two sheets of membrane to be held in place against one another, so it does not move or shift during the pre-weld and the final weld. To do this, first overlap the Aussie Tite 540 so the selvedge edge is overlapping the adjacent sheets thermoplastic layer a minimum of 3”. Insert the tip of the nozzle of the hand welder approximately 2-3” into the seam of the while maintaining the 3” overlap between the two membranes. Apply pressure with your fingers over the nozzle tip until you feel the heat through the membrane and then press down onto the membrane firmly to set the tack weld. Repeat this intermittently along the seam while continuing to maintain the 4” overlap.

**Pre-Weld:** Once the tack weld is complete, installers will perform a pre-weld. Insert the nozzle tip of the hand welder into the seam of the membrane overlap approximately 1.5”. The welder should be held so the nozzle tip is parallel to the sheet edge. To start the pre-weld, take a roller and press it over both membranes at the end of the membrane overlap to capture the hot-air and to begin the pre-weld. Begin to create a thin continuous pre-weld by moving the hand welder while concurrently pressing both membrane sheets together with the roller just in front of the welding tip for the length of the weld. Use the crease in the nozzle to gage the depth of the weld which should be approximately 1” inside the membrane overlap seam.

**Final Weld:** Once completed with the Pre-weld, installers will complete the final weld. To begin, take the nozzle tip of the hand welder and insert it into the membrane seam at a 45-degree angle relative to the membrane edge. The heat welder should also be held at a 45-degree angle to the membrane directing the heat to the underlying membrane for a sufficient weld. The angle directed onto the underlying membrane or the settings on the hand welder may vary. Once the proper settings are achieved, apply

pressure with the roller by rolling across the overlap seam with the roller running parallel and just in ahead of the nozzle tip. There should be a dark substance extruding out of the seam edge as the installer moves through the weld.

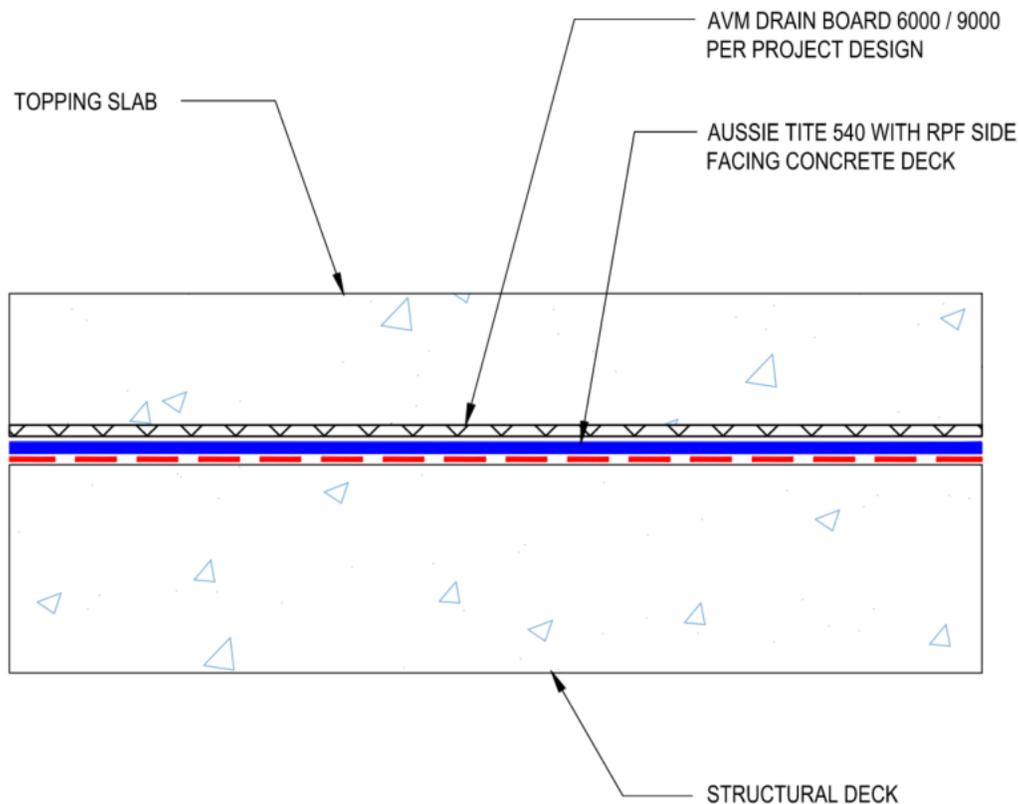
## 1.2 – WELDING: Machine Welding

Automated welders should be used primarily in longer welded sections (2'+) when welding the Aussie Tite membrane. All thermoplastic welds should be continuous and without interruption or defect. Welds should be probed using a cotter pin puller or a tool with a rounded edge to check for defects/deficient welds. For all defects, applicators must reweld section if there is room to do so. If the deficient area does not allow a welder/hand welder to fit, a 4" diameter patch of Aussie Tite DM flashing should be centered over the deficient weld and welded to the Aussie Tite 540 membrane.

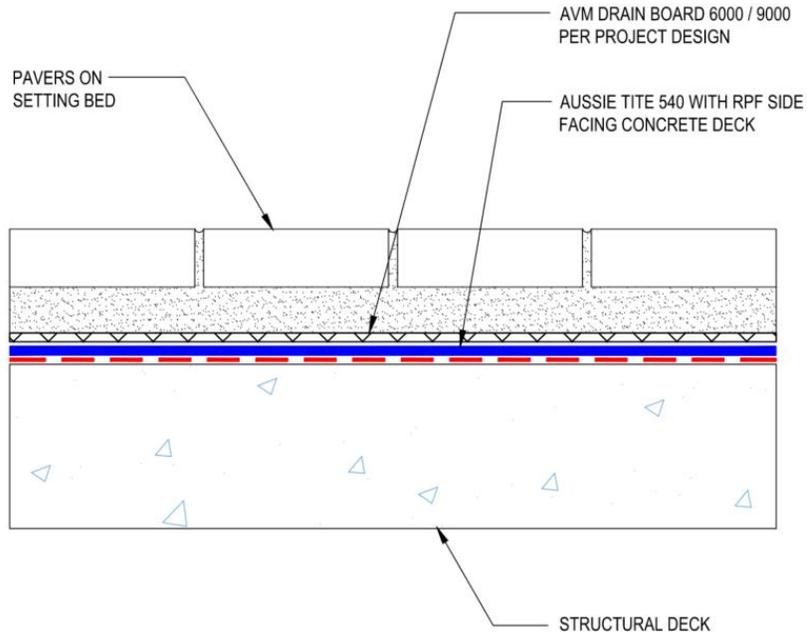
Using an automated welder machine will speed up the installation as there is no need to tack weld or pre-weld in order to properly fuse the membranes together. To create a continuous weld without defect or interruption, use a 1.4" or 1.5" wide nozzle. When utilizing the automated machine welder, the working surface will need to be flat and without ridges/bumps/debris so the welder can move without resistance or obstacles allowing an efficient weld. If the natural surface/substrate is not flat or absent of debris/ridges, a sheet metal or plywood track should be placed under the membrane seam to allow the welding equipment to successfully weld. The track should be wide enough to fit the welding equipment being used.

## SECTION 2 – INSTALLATION

Aussie Tite 540 is perfect for post-applied decks and tunnels, both new construction and restoration construction. The welded thermoplastic layer prevents lateral water migration while the RPF layer swells and seals in the event water manages to bypass the thermoplastic due to damage or a deficient weld. When installing over a deck, always ensure that the membrane is installed with the RPF side facing the concrete and the thermoplastic side facing the installer. The designed drainboard and/or overburden would go on top of the membrane. **Figure 2.1** shows a typical split slab while **Figure 2.2** shows pavers on a setting bed. The membrane can also be installed in planters/greenroofs as well.

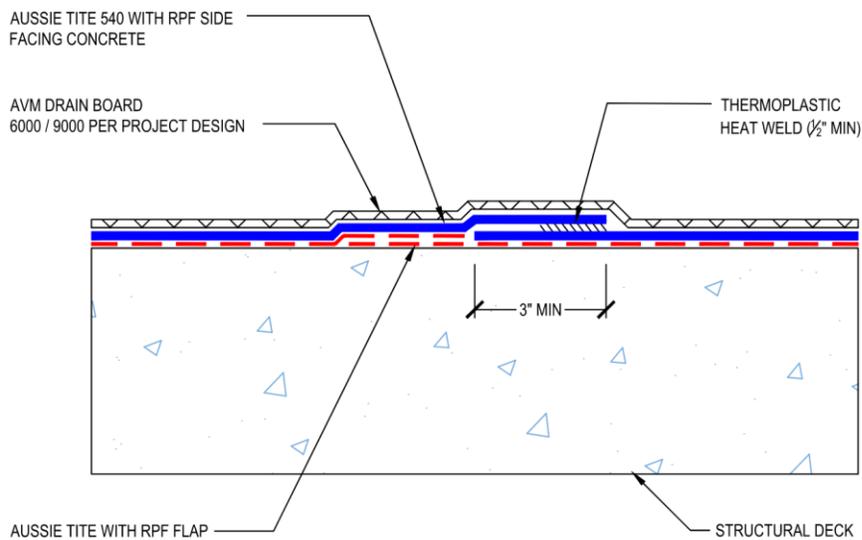


*Figure 2.1 – Split Slab Application*



**Figure 2.2 – Pavers on Setting Bed Application**

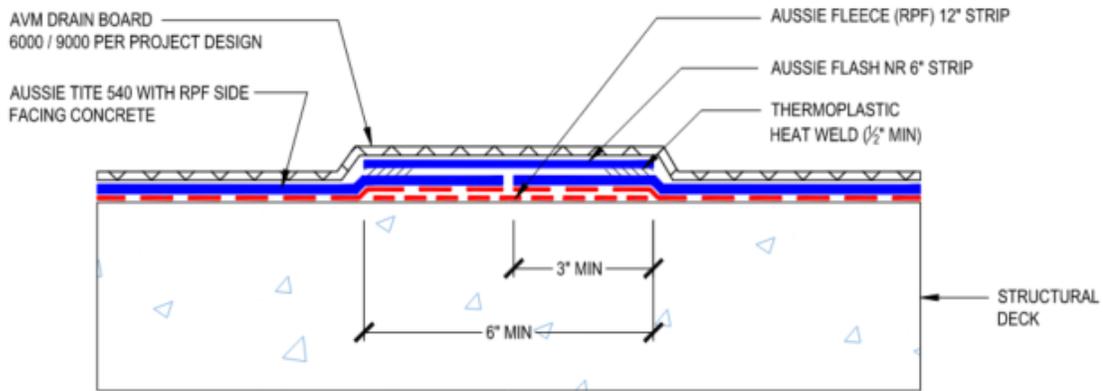
When welding the membrane, there are typical welded overlaps and butt end welded overlaps depending on how the membrane is oriented. When welding a typical welded overlap, one membrane sheet will have the selvage edge of the thermoplastic overlap the selvage edge of the RPF on the other sheet. The overlaps of both the RPF layer and the thermoplastic layer will be 3” during these overlaps. See **Figure 2.3** as a reference.



**Figure 2.3 – Typical Welded Overlap**

Not all overlaps will be like this as there are often times where the membrane will need to be cut in order to fit it in specific areas. When the selvage edges do not match up, a butt end overlap weld would need to be performed. There two options to achieve this depending on the preference of the installer. Option 1, **Figure 2.4**, is done by placing a 12" strip of Aussie Fleece (the RPF membrane) down. Overlap the strip of RPF with the butt ends of the Aussie Tite 540 so each overlap the RPF is approximately 6". To connect the two butt ends of the Aussie Tite 540 membranes, take a 12" strip of the Aussie Flash NR and place it over the butt ends overlapping each membrane sheet approximately 6". Heat weld the edges of the Aussie Flash NR to the Aussie Tite 540 a minimum of 1/2" deep.

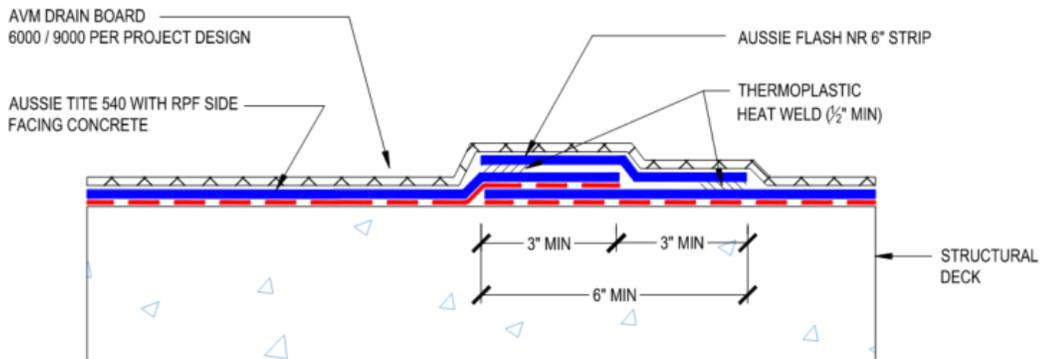
**OPTION 1**



*Figure 2.4 – Butt End Overlap Option 1*

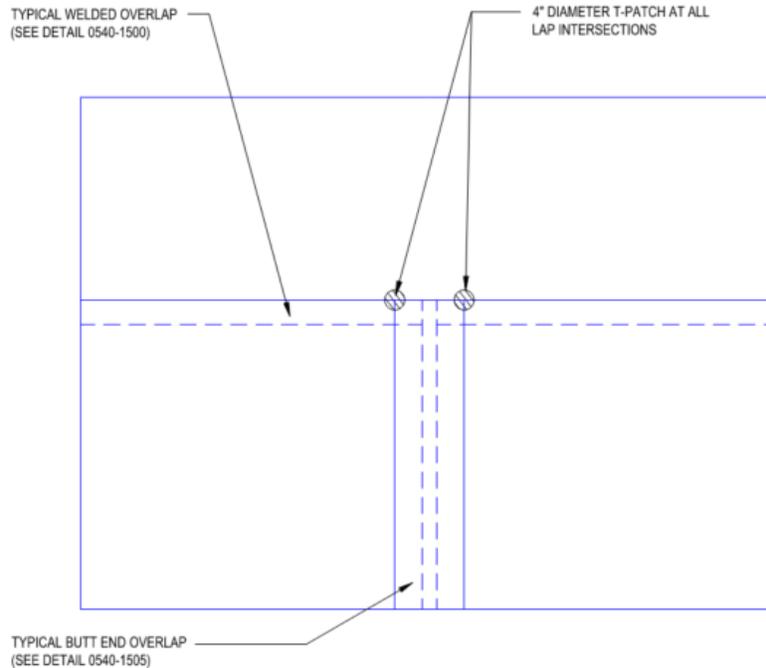
The other option is to overlap the membrane edge of one sheet of Aussie Tite 540 with another sheet of Aussie Tite 540 a minimum of 3". Take a 12" strip of the Aussie Flash NR and center it on the overlap so that it is approximately 6" over both sheets of Aussie Tite 540. Heat weld the edges of the Aussie Flash NR to the Aussie Tite 540 on each side a minimum of 1/2" deep. This option is shown in **Figure 2.5**.

**OPTION 2**



*Figure 2.5 – Butte End Overlap Option 2*

When three overlaps come together to form a t-Joint, a 4" diameter T-Patch needs to be welded at the lap intersections. This is shown in **Figure 2.6**.



**Figure 2.6 – T-Joint Patch**

Corners and transition details for the Aussie Tite 540 can be simple when the installers plan accordingly. When transition from a deck to wall, the installation should begin at the corner where the wall meets the deck. The Aussie Tite membrane should butt against the wall, fastened every 12" O.C. and be rolled out over the deck. With the Aussie Tite 540 placed with the edge butting the wall, take a sheet of Aussie Flash R and begin it extending 6" onto the Aussie Tite 540 from the wall. Heat weld the edge of the Aussie Flash R to the Aussie Tite 540 a minimum of 1/2" deep. Prior to running the Aussie Flash up the wall vertically, place AVM Adhesive 501 on to the wall. Now run the Aussie Flash R up the wall over the Adhesive 501 to fully adhere the flashing membrane to the vertical wall. Use hand rollers to prevent fishmouths in the membrane and to help adhere the membrane. Bring the Aussie Flash up the wall to the project designed termination point onto the wall. Seal the top edge of the Aussie Flash with Aussie Seal M and place 2" X 90 mils behind the top edge of the Flashing. Term bar the top and cover with metal flashing per project design. See **Figure 2.7** for reference.

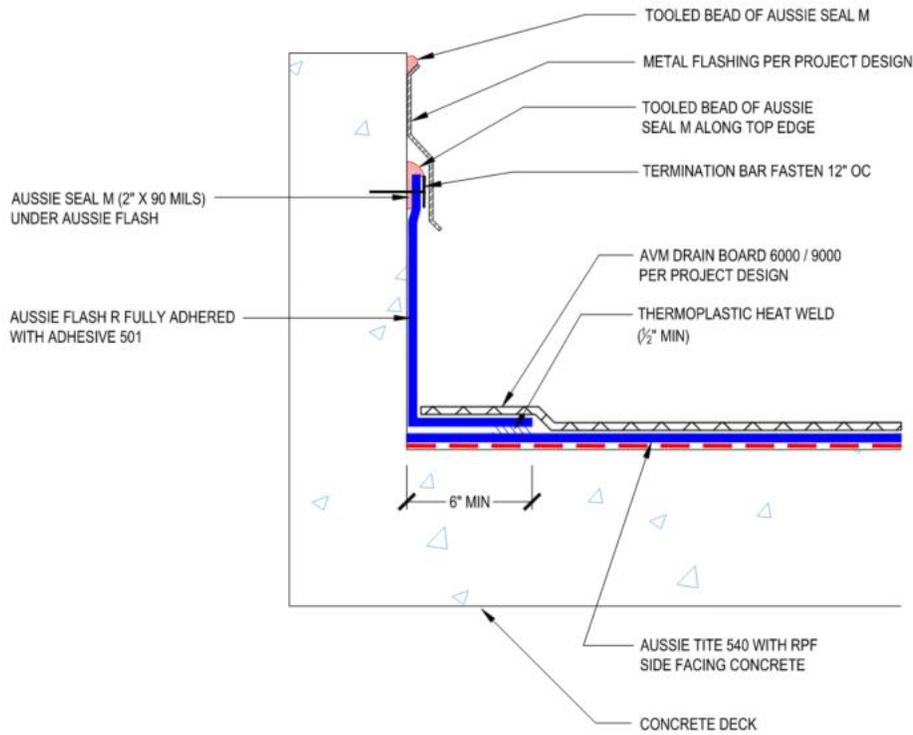


Figure 2.7 – Deck to Wall Transition

Aussie Tite 540 can be installed over existing waterproofing which makes restoration projects quick and cost-effective. Simply remove any loose or unbonded existing waterproofing and install right over it. If necessary, a parge coat may be needed to provide a uniform and sound substrate. This is shown in **Figure 2.8**.

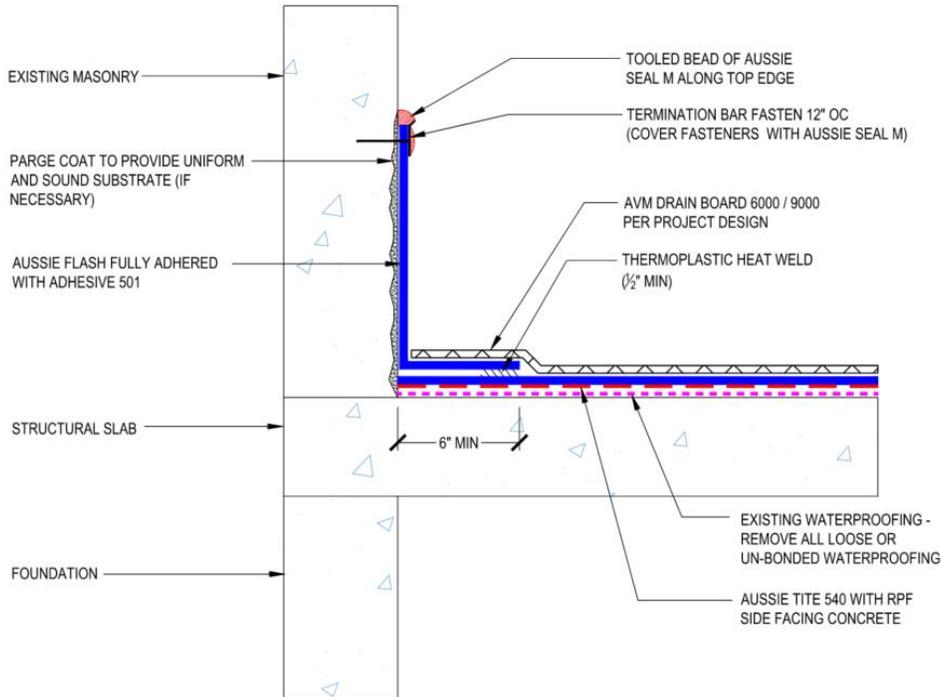
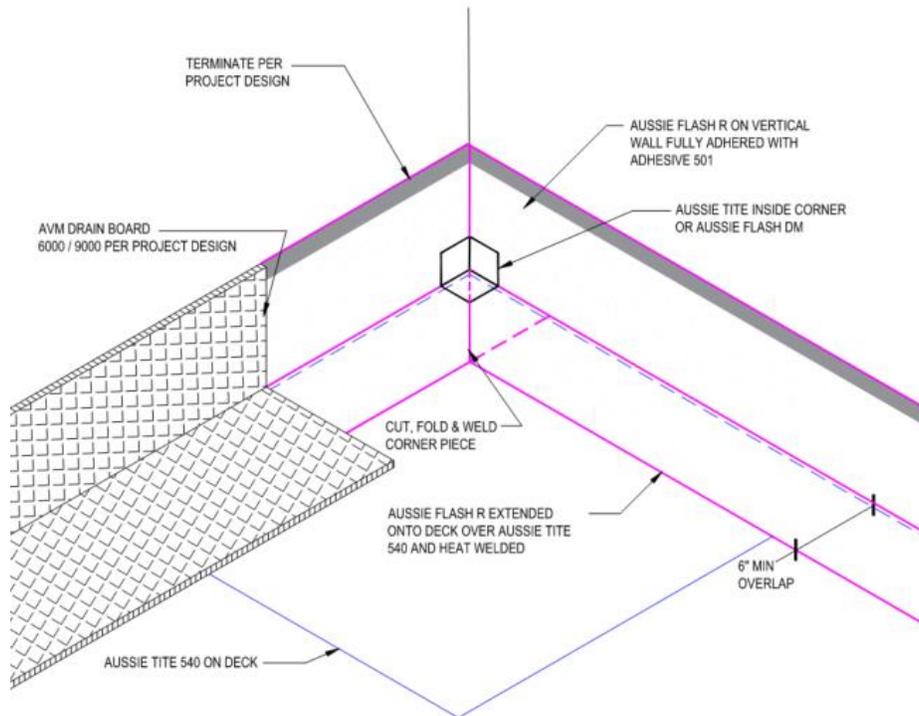


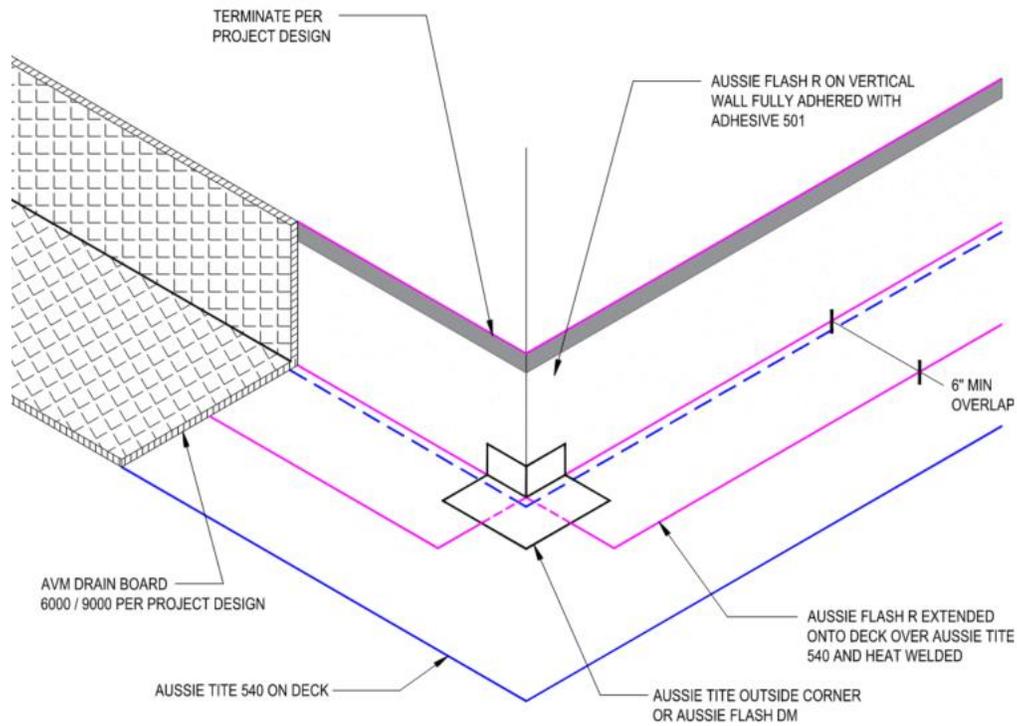
Figure 2.8 – Aussie Tite Over Existing Membrane

With inside corners, the Aussie Tite 540 will be butted to the wall like the above detail depicts. The Aussie Flash R will overlap the Aussie Tite 540 a minimum of 6" and go up vertically with the Adhesive 501 adhering it on the wall. When you get to the corner, you will need to cut, fold and weld the corner piece as shown in **Figure 2.9**. Once the Aussie Flash R is in place and formed in the corner, an additional piece of Aussie Flash DM cut in a circular 4" patch or an Inside Corner will be welded onto the Flash directly in the corner.



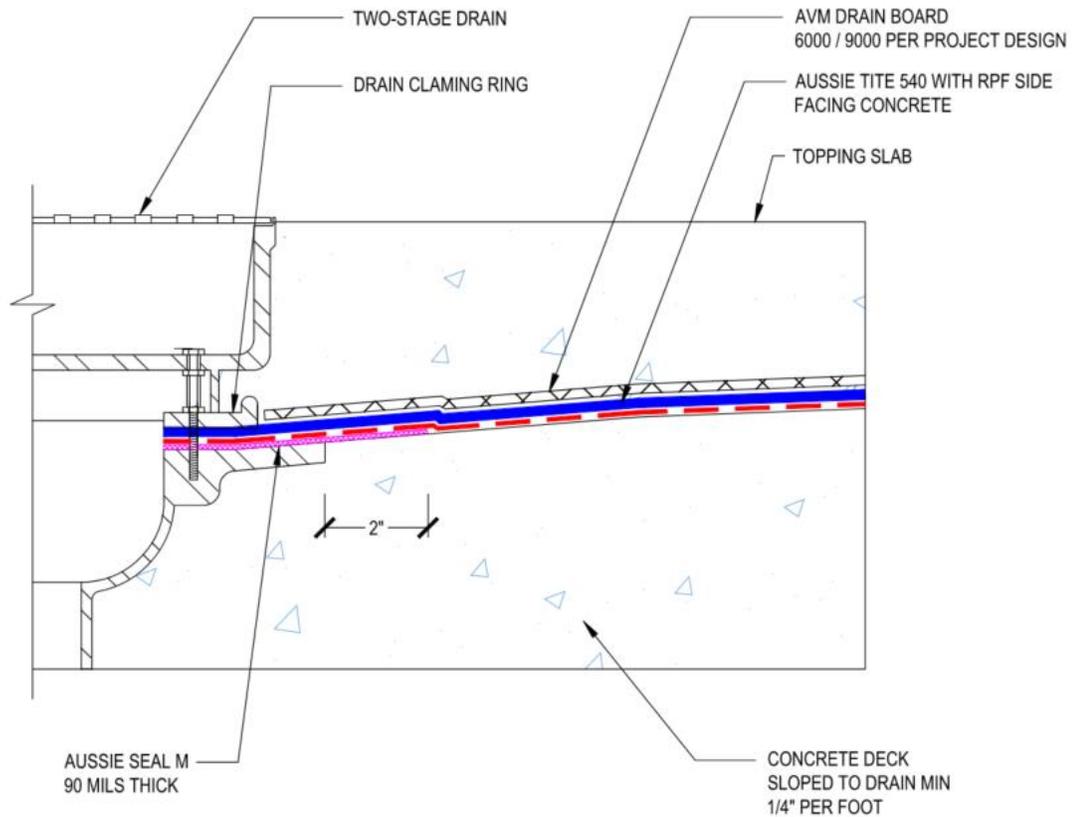
**Figure 2.9 – Inside Corner**

Outside corners will follow the same general guidelines. Cut the Aussie Flash R at the corner to fit around the corner. From there, a 4" diameter patch of Aussie Flash or an Aussie Tite Outside Corner will be welded right at the corner to eliminate any pinholes. See **Figure 2.10** for an Outside Corner detail.



**Figure 2.10 – Outside Corner**

All decks should be sloped  $\frac{1}{4}$ " per foot to a drain to transport water efficiently to a drainage system and away from the deck. To detail around a drain, place Aussie Seal M at 90 mils thick around the base of the drain and have it extend 2" past the drain perimeter and onto the concrete deck. Cut a circular hole in the Aussie Tite 540 to match the drain hole and embed it into the Aussie Seal M that has been placed. Clamp the Aussie Tite 540 using a drain clamping ring to secure the membrane in place and to ensure the water sheds into the drainage system. **Figure 2.11** shows the detailing around a two-stage drain in a split slab application.



**Figure 2.11 – Two Stage Drain in Split Slab Application**

For standard pipe penetrations, cut a hole in the Aussie Tite 540 so it tightly fits over the penetration. Place a 3/4" cant of Aussie Seal M around the base of the penetration over the Aussie Tite 540. Take a sheet of Aussie Flash R and cut a square target piece with will extend a minimum of 8" around the perimeter of the penetration. Cut a hole in the Aussie Flash R to also fit tightly around the penetration with it necking up the penetration (over the Aussie Seal M) about a 1/4" or so. Heat weld around the Aussie Flash R edge onto the Aussie Tite 540 with a minimum of 1/2" deep weld. Use either an Aussie Boot (premade penetration boot) or cut a piece of Aussie Flash DM to wrap the penetration tightly and ensure it goes up the penetration a minimum of 8". The Boot or Aussie Flash DM should also overlap the Aussie Flash in place a minimum of 1.5". Heat the Aussie Flash DM to make it more pliable, stretch and wrap it around the pipe penetration. This sheet will be heat welded to the top edge of the Aussie Flash. The edges of the Aussie Flash DM will also be welded together tightly around the penetration. Use your fingers as you are welding to stretch the membrane as needed and to apply pressure as you are heat welding. Use a stainless-steel clamp to secure the edge of the welded Aussie Flash DM to the penetration. Tool a bead of Aussie Seal M around the top of the clamp to seal it off. **Figure 2.12** shows a typical pipe penetration while **Figure 2.13** shows multiple penetrations (penetrations should be a minimum of 6" apart).

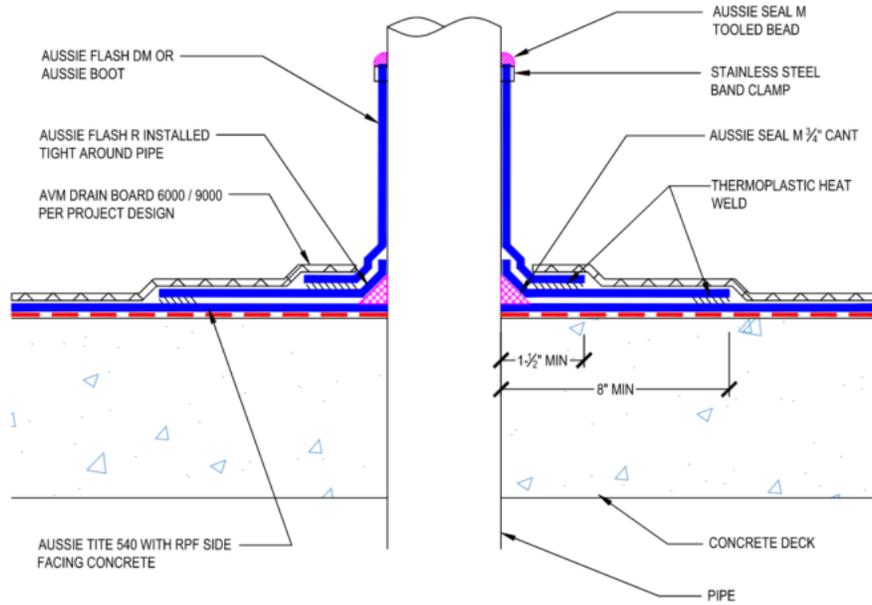


Figure 2.12 – Typical Pipe Penetration

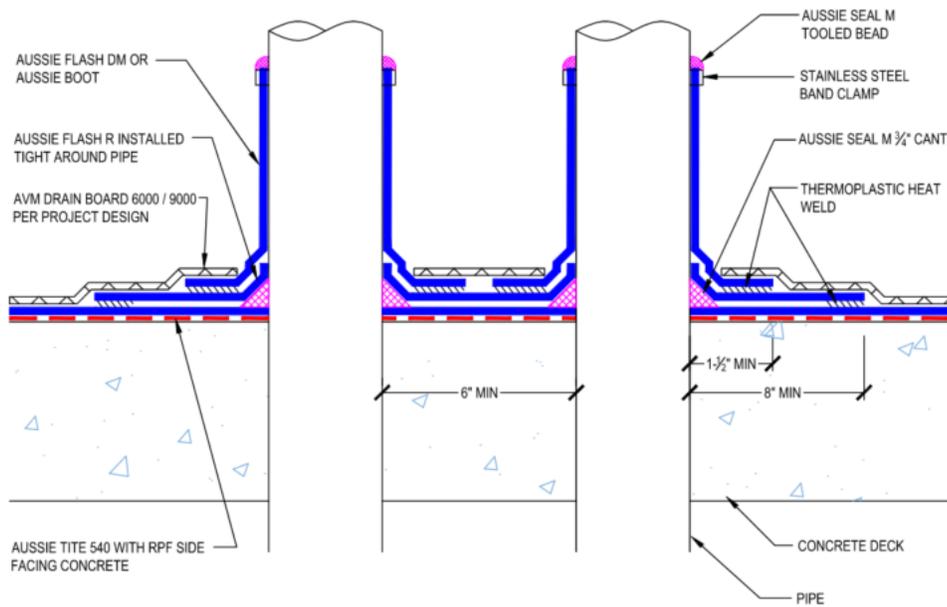


Figure 2.13 – Multiple Penetrations

Pipe Penetrations can also be done per **Figure 2.14**.

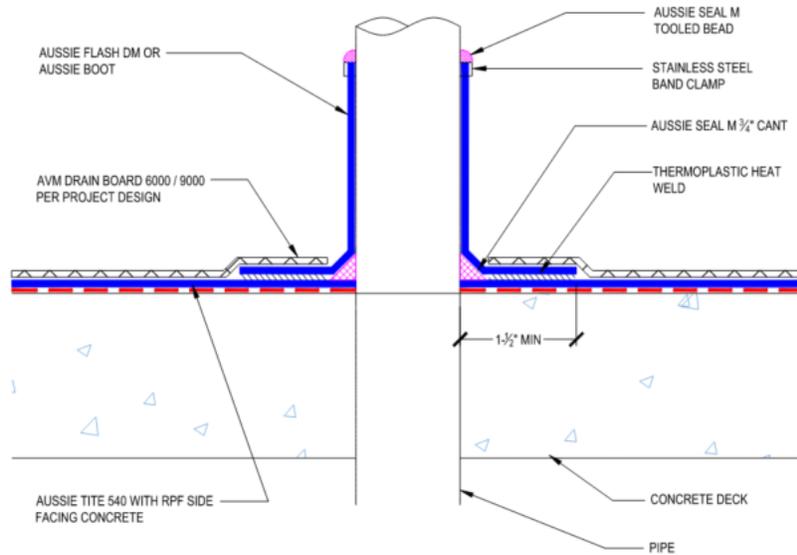


Figure 2.14 – Pipe Penetration Option 2

### SECTION 3 – QUALITY CONTROL

As the installation is being completed, a quality control inspector on site should be probing all seams to ensure there are no deficient welds. All deficient welds will be re-welded or patched by an approved Aussie Tite 540 welder. All welders onsite will be required to attend a training course led by the AVM Technical Team.

ELD (Electronic Leak Detection) testing is required to be performed on the work prior to warranty issuance. All reports must be sent to AVM within 7 days and all areas of non-compliance must be documented as repaired prior to warranty issuance. For all inquiries or to set up a Aussie Tite 540 training, please contact your local AVM Sales Representative or a Technical Services Representative.