

AWD INSTALLATION GUIDELINES

Prefabricated Sheet Drain – Horizontal Applications

REQUIRED MATERIALS

1. Prefabricated sheet drain
2. Attachment materials (see “Drain Attachment Methods”)
3. Utility knife or shears

VERIFY SITE CONDITIONS

1. Verify that site conditions are acceptable for installation of prefabricated sheet drain material.
2. Do not proceed with installation of prefabricated sheet drain material until any unacceptable conditions have been corrected.

PREPARE SUBSTRATE

1. For concrete substrate: clean concrete and apply waterproofing if required. An insulation layer may be installed above or below prefabricated sheet drain material dependent upon design.
2. For soil substrate: insure soil is graded and compacted, and cleared of loose debris.
3. Surface should be sloped or level with outlet(s) designed at the low point(s).

PREFABRICATED SHEET DRAIN ATTACHMENT METHODS

1. For concrete substrate: attachment methods include direct fastening (nails driven through washers using a powder-actuated tool such as a “Hilti gun” or “Ramset gun”), low-solvent construction adhesives (ex: “Liquid Nails”), and double-sided tape. If prefabricated sheet drain is being attached to a waterproofing membrane, discuss approved attachment methods with waterproofing manufacturer.
2. For soil substrate: attachment methods include 4-8” anchor pins or nails driven through washers or wood lathing.

INSTALLING FIRST ROW OF PREFABRICATED SHEET DRAIN

1. Begin at the downstream side of the area to be drained.
2. Unroll prefabricated sheet drain with fabric/dimple side facing up and flat plastic flange on upstream edge of roll.
3. Secure roll in place using approved attachment method.
4. Fold integrated fabric flap over any terminating edges of prefabricated sheet drain to prevent backfill (soil, concrete, etc.) from entering drainage core at terminating edges. If added protection is required/desired, fabric flap may be secured to bottom side of drain mat using tape or spray adhesive.

INSTALLING ADJACENT ROWS OF PREFABRICATED SHEET DRAIN

1. Unroll prefabricated sheet drain with fabric/dimple side facing up and flange on upstream edge of roll.
2. Position roll with the downstream edge overlapping the flat plastic flange of the existing/installed roll.
3. Secure roll in place using approved attachment method.
4. Fold integrated fabric flap from flange edge of existing/installed roll over roll joint to prevent backfill (soil, concrete, etc.) from entering drainage core at roll joint. If added protection is required/desired, fabric flap may be secured using tape or spray adhesive.
5. Fold integrated fabric flap over any terminating edges of prefabricated sheet drain to prevent backfill (soil, concrete, etc.) from entering drainage core at terminating edges. If added protection is required/desired, fabric flap may be secured to bottom side of drain mat using tape or spray adhesive.

ADDITIONAL INSTALLATION DETAILS AND GUIDELINES ATTACHED.

Please contact AWD Technical Support at (800) 242-9425 with any questions.

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Sheet Drain Seam & Penetration Details for Horizontal Application

AWD geocomposite sheet drain products are commonly used in horizontal applications, with soil backfilled and compacted, or concrete poured, against the geotextile filter fabric side of the sheet drain. Care should be taken to insure sheet drain is properly installed utilizing the flat plastic flange on the long edge of each roll to connect one roll to the next. Fabric flaps are provided along the flange edge of each roll for covering the joints between rolls. Please refer to AWD's standard installation details for reference.

Penetrations (such as pipes) through the sheet drain should be sealed using an underground rated tape to insure backfill materials are not able to enter the sheet drain core. AWD recommends and supplies 4"-wide AWD Fitting & Joint Tape for sealing penetrations.

Cuts in the fabric less than 2-inches wide should be sealed using an underground rated tape to insure backfill materials are not able to enter the sheet drain core. Cuts in the fabric larger than 2-inches wide require a patch of filter fabric (of the same type used on the sheet drain) at minimum 3-inches larger in all directions than the cut be used to cover the cut. The patch should be secured in place over the cut using underground rated tape or spray adhesive. AWD recommends and supplies 4"-wide AWD Fitting & Joint Tape for sealing fabric cuts and patches.

Care should be taken when backfilling to insure backfill materials are not able to enter the sheet drain core through roll seams. For additional security, spray adhesive or underground tape can be used to secure fabric flaps in place at roll joints. AWD recommends and supplies 4"-wide AWD Fitting & Joint Tape for this purpose.

A data sheet for AWD Fitting & Joint Tape has been attached for reference. AWD Fitting & Joint Tape is acceptable and compatible for use with all AWD products. Other tapes designed for underground use are acceptable as long as they provide a strong bond and do not deteriorate over time in underground conditions.

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AWD FITTING & JOINT TAPE



PRODUCT DESCRIPTION

AWD Fitting & Joint Tape is recommended for the sealing, seaming, terminating, and connection of AWD Fittings and AWD geocomposite drainage products as referenced in AWD literature, including installation guides, CAD details, and technical bulletins. AWD Fitting & Joint Tape is designed for underground use and provides a strong bond that will not deteriorate over time in typical subsurface conditions.

AWD Fitting & Joint Tape has...

- 40 mil thick composite member,
- Reinforced polyolefin base, laminated to a polypropylene layer
- Adhesive-backed with removable release liner

PHYSICAL PROPERTIES	TEST METHOD	UNIT OF MEASURE	Typical Value
Tensile Strength Machine Direction (Force) Cross Direction (Force)	ASTM D751-95	lbs	130
		lbs	124
Trapezoidal Tear Strength Machine Direction (Force) Cross Direction (Force)	ASTM D4533-91	lbs	46
		lbs	44
Mullen Burst	ASTM D751-95	psi	180
UV Exposure (2000 hours)	ASTM G154-98	%	>90
Permeability (MVTR)	ASTM E96-B	Perms	<0.075
Recycled Content	CALCULATED	%	>45
Roll Size	MEASURED	in x ft	4 x 75

Geocomposite Handling Requirements

The following are manufacturer requirements for the delivery, storage, and handling of American Wick Drain Corporation (AWD) geocomposite drainage products.

PACKAGING & SHIPPING:

- AWD offers the following packaging and shipping options for geocomposite drainage products
 - Rolls palletized and banded (standard/default shipping method)
 - Rolls loose (upon request)
 - Rolls loose in UV-resistant bags (upon request)

DELIVERY:

- Materials shall be delivered in original, unopened, undamaged packaging bearing manufacturer's name and product identification
- Care must be taken during unloading process to insure materials are not damaged
- Materials shall remain in original packaging until time of installation

STORAGE:

- Store materials in protected environment until time of installation
 - Materials not shipped in UV-resistant bags must be stored indoors or under separate UV-protective cover to protect materials from exposure to direct sunlight
 - UV-resistant bagged materials may be stored in outdoor UV-exposed environments for a cumulative maximum of 180 days

INSTALLATION:

- Limit unpackaged material UV exposure to a cumulative maximum of 14 days during installation
- Do not install materials during high wind events
- Do not install materials when ambient temperatures are below 20 degrees Fahrenheit or above 100 degrees Fahrenheit
- Do not expose materials to chemicals that are strong acids, strong bases, or high in solvents content
- Protect materials from site construction damage, flames, and other environmental conditions that may damage the materials

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Geocomposite Drainage Product Temperature Guidelines

AWD geocomposite drainage products are installed in a variety of applications and conditions. This technical bulletin addresses installation and operational temperature recommendations and restrictions.

Installation Temperature Recommendations:

AWD recommends geocomposite drainage products not be installed when the ambient temperature is below 20°F or above 100°F.

Operational Temperature Restrictions:

AWD geocomposite drainage products should not be installed in applications where the long-term operational temperature is expected to be below -20°F or above 150°F.

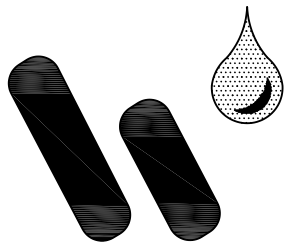
Hot-Applied Layer Restrictions:

AWD does not recommend hot-applied layers (i.e. asphalt, hot-mix setting beds, etc.) with application temperatures greater than 200°F be applied directly in contact with geocomposite drainage products.

In instances where the application temperature is above 200°F, AWD recommends a protective layer (such as an asphaltic protection board) or minimum 1"-thick sand layer be used between the geocomposite drain and the hot-applied layer.

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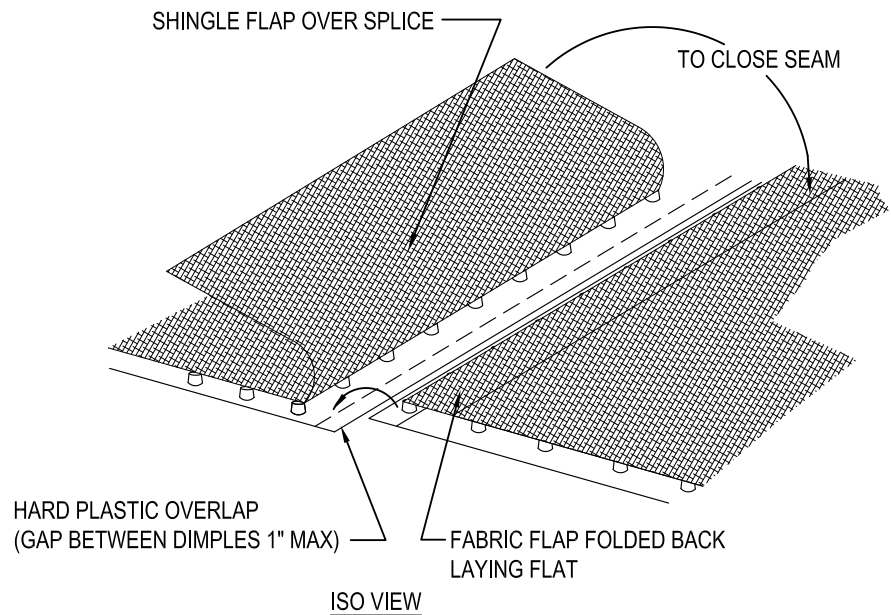
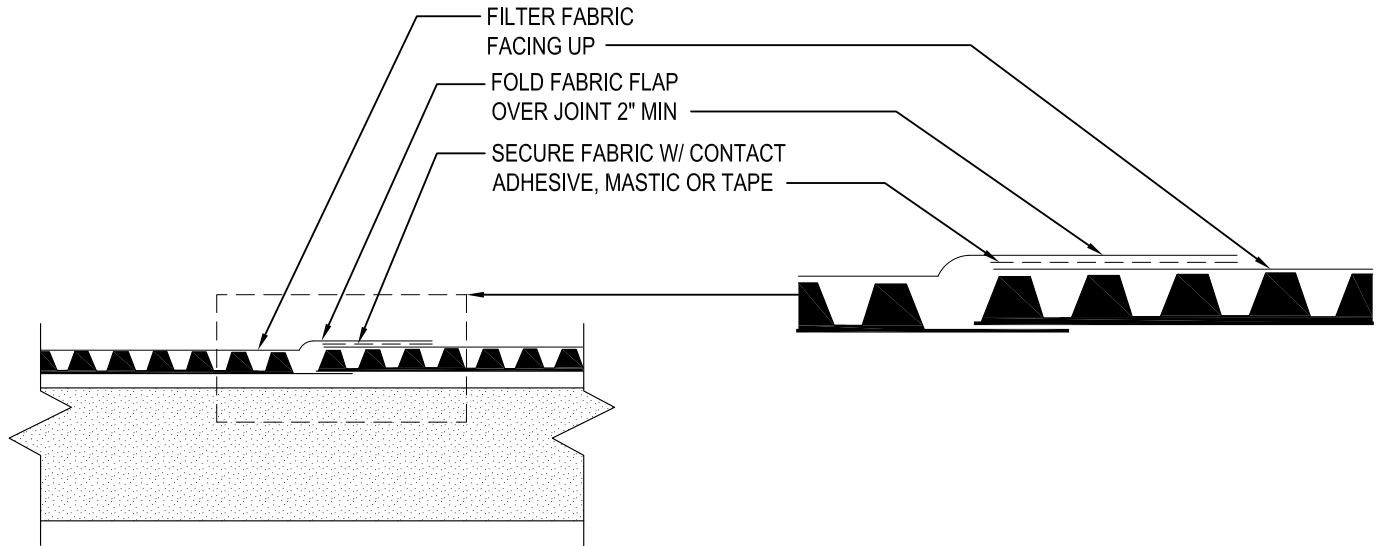
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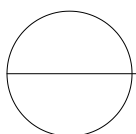
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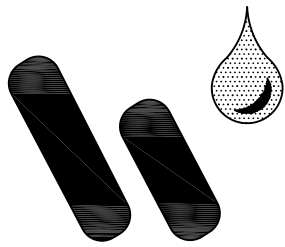
NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.



SHEET DRAIN FLANGE CONNECTION DETAIL PLAN/ISO

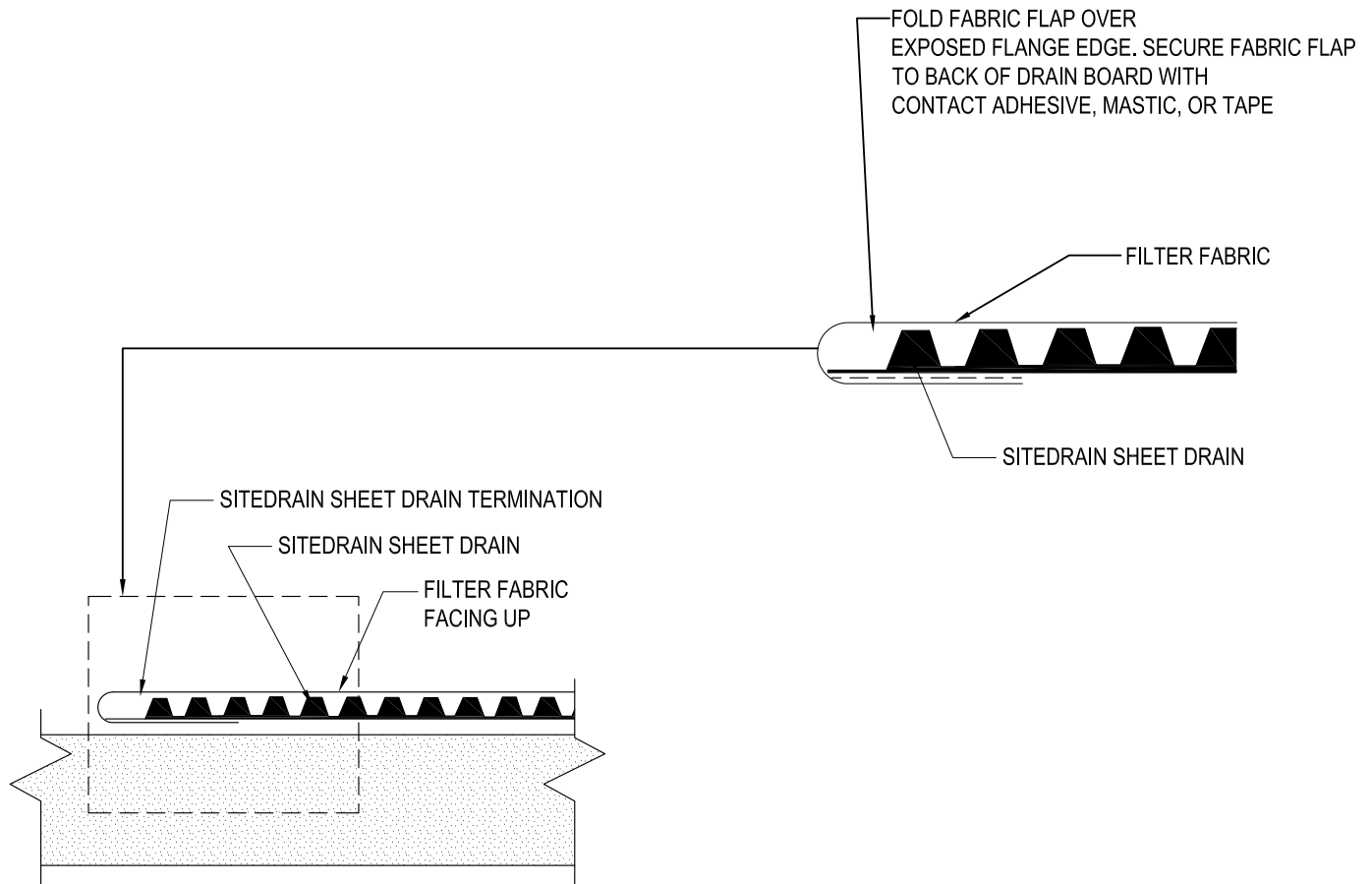
HORIZONTAL ORIENTATION - DIMPLES UP



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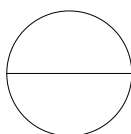
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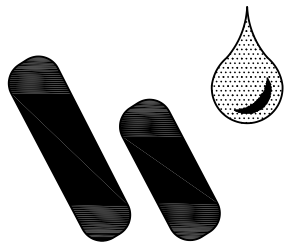
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PANEL TERMINATION DETAIL - FLANGE EDGE

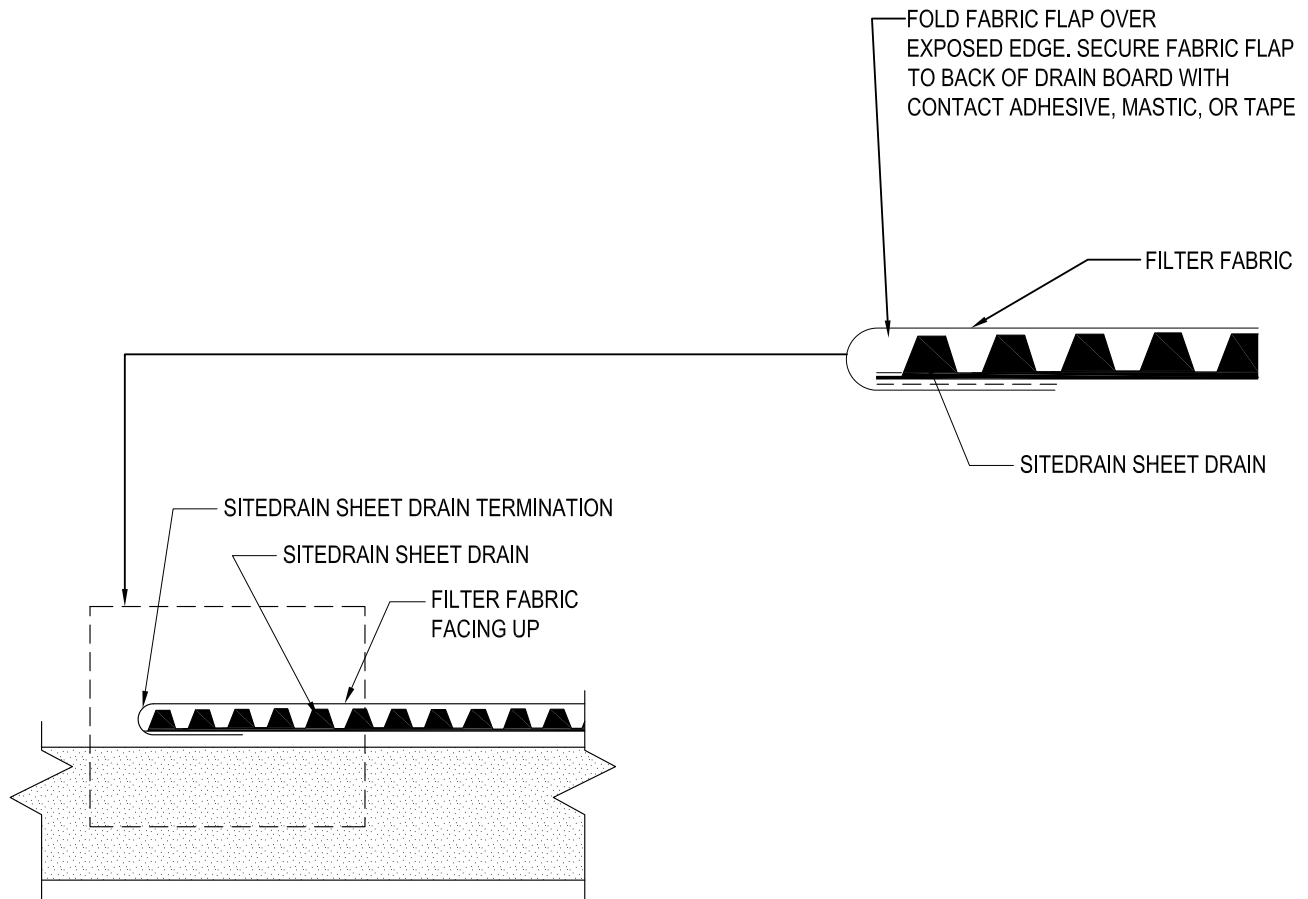
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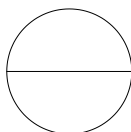
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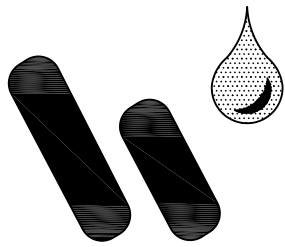
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PANEL TERMINATION DETAIL - NON-FLANGE EDGE

HORIZONTAL ORIENTATION - DIMPLES UP

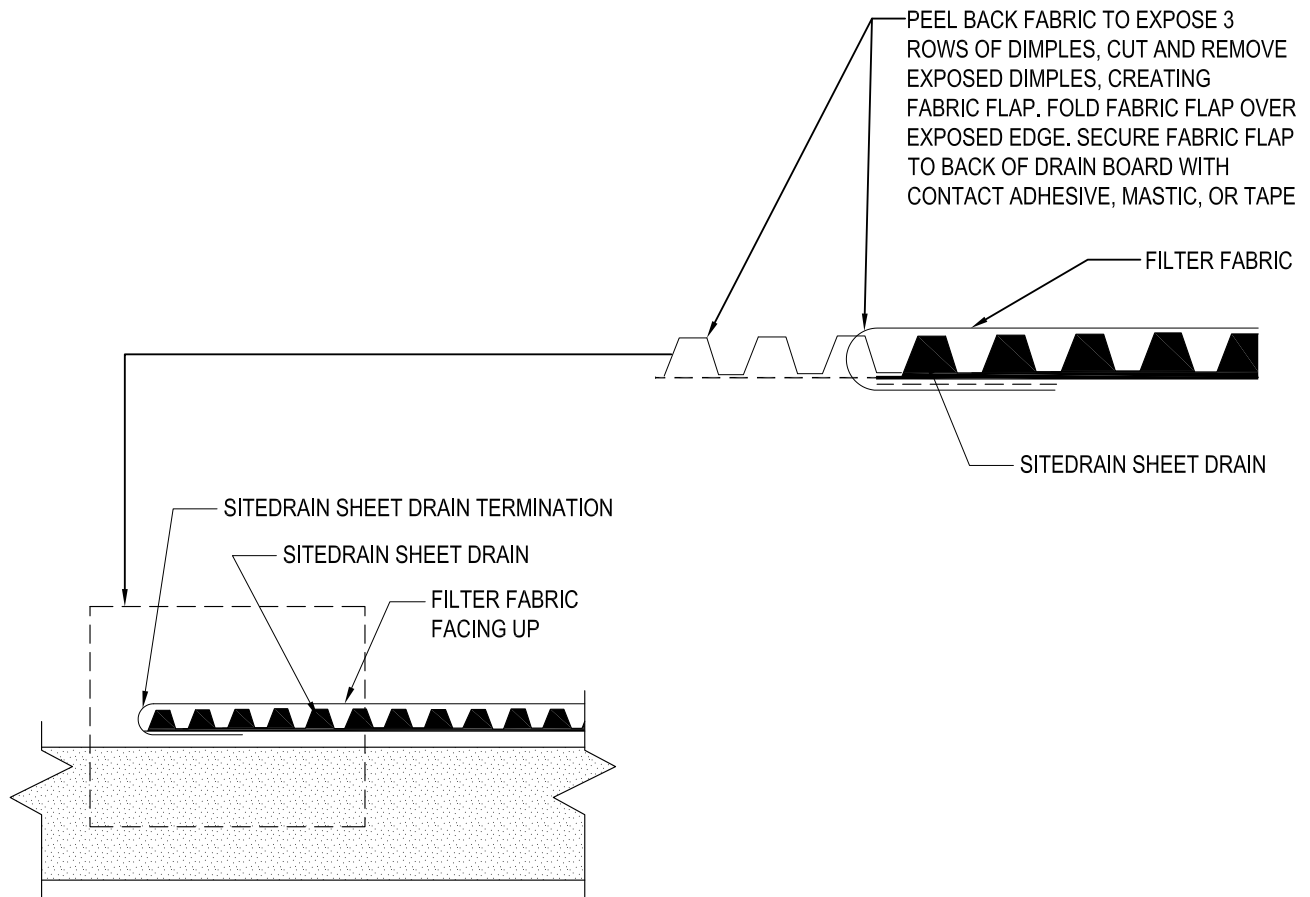
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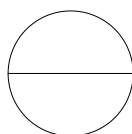
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PANEL TERMINATION DETAIL - CUT TO FIT

HORIZONTAL ORIENTATION - DIMPLES UP

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