CARLISLE
Coatings & Waterproofing

FIELD GUIDE

Waterproofing Membrane Systems



CARLISLE COATINGS & WATERPROOFING INCORPORATED

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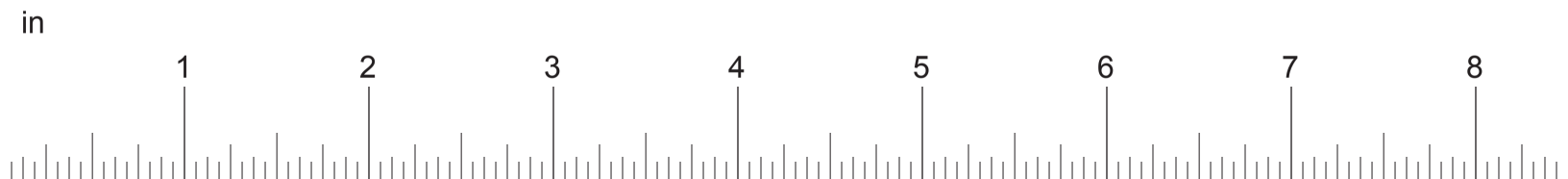

in
1
2
3
4
5
6
7
8

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

TYPICAL USES

CCW-500 is used for waterproofing split-slab construction projects and is especially suited as the waterproofing membrane on roof decks using the inverted roof membrane assemblies and green roof systems.

LIMITATIONS

- Do not use on exposed or wearing surfaces.
- Not recommended over lightweight insulated concrete.
- If metal pan is used for concrete form, the vented metal pan is preferred.
- Consult with Carlisle's representative before using CCW-500 on any type lightweight concrete, concrete with curing compounds or additives or decks that have existing waterproofing materials.
- Do not apply below 0°F or to damp, frosty or contaminated surfaces.

PACKAGING

CCW-500 is packaged in 45-lb blocks, one block per carton, 64 cartons per pallet. Each block is sealed in a polyethylene bag inside the carton. The block, including the bag, is placed in the kettle, leaving only disposal of the carton.

The CCW Reinforcing Fabric is packaged in a rolls of:
59" X 610' (3000 ft^2) weight approx. 30 lbs
36" X 667' (2000 ft^2) weight approx. 24 lbs

COVERAGE

The following is a guide to estimate the amount of materials required for various membrane thicknesses. Approx: 11.39 lbs/gallon.

215 mils applied	=	1.53 lbs/ft^2	=	7.46 ft^2/gal
125 mils applied	=	0.89 lbs/ft^2	=	12.83 ft^2/gal
90 mils applied	=	0.64 lbs/ft^2	=	17.83 ft^2/gal

WARNINGS AND HAZARDS

Use with adequate ventilation. Workers must use proper protection to prevent burns. Refer to the MSDS for important warnings and product information.

INTEGRITY TESTING

Test is required for all expanded warranties beyond the standard material warranty of horizontal applications. The test can be done with Electronic Field Vector Mapping or flood testing. Flood testing requires 2" minimum head of water for a period of 24 hours.

Protection Course: The membrane must be protected from damage. Install CCW-Protection Board H or HS. Integrity testing can be performed with the protection board installed. Install CCW-MiraDRAIN and CCW-Root Barrier relative to the requirements of the designed overburden.

REPAIRS

In the event the CCW-500 Hot-Applied Liquid Membrane is damaged, clean the area with a cloth wet with mineral spirits and apply CCW-500 Hot-Applied Liquid Membrane to the damaged area.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

INSTALLATION

Surface Preparation: New concrete shall be water cured, with a light, hair broom finish, and in place for 14 days minimum, 21 days preferred. Surface shall be structurally sound, dry, and free of dust, dirt, frost, laitance, non-approved curing agent or other contamination that may affect adhesion of the membrane.

Remove splatters, fins, ridges or other projections to provide a level surface. Fill holes, honeycombs, rock pockets, spalls or other voids and indentations with approved concrete patching compound.

Grind or fill surface at cold joints where each pour is at a different plane to provide a smooth and level surface.

Detail Work: Mix CCW-201 Sealant and apply per Carlisle standard details. Allow the sealant to cure overnight.

Detail expansion joints and drains per manufacturer's recommendation.

Apply a thin, even coat of CCW-550 Primer, 6" wide, centered over all non-moving cracks less than 1/16" wide and cold joints. Apply primer at a rate of 500 ft^2 per gallon. Allow primer to dry. Apply a 125 mil thickness coat of CCW-500 Hot-Applied Liquid Membrane over the primed crack or cold joint.

Apply a thin, even coat of CCW-550 Primer, 16" wide, centered over all cracks greater than 1/16" wide, all moving cracks and all previously sealed expansion joints. Allow primer to dry. Apply 90 mils of CCW-500 membrane to cover primed areas. Install a 12"-wide strip of CCW-711W Sheet Membrane Flashing, centered over the cracks and control joints.

Application: Blocks of CCW-500 shall be melted in a twin wall kettle with continuous agitation. Caution: Do not exceed maximum safe operating temperature of 375°F (for best results, use at 350°F.)

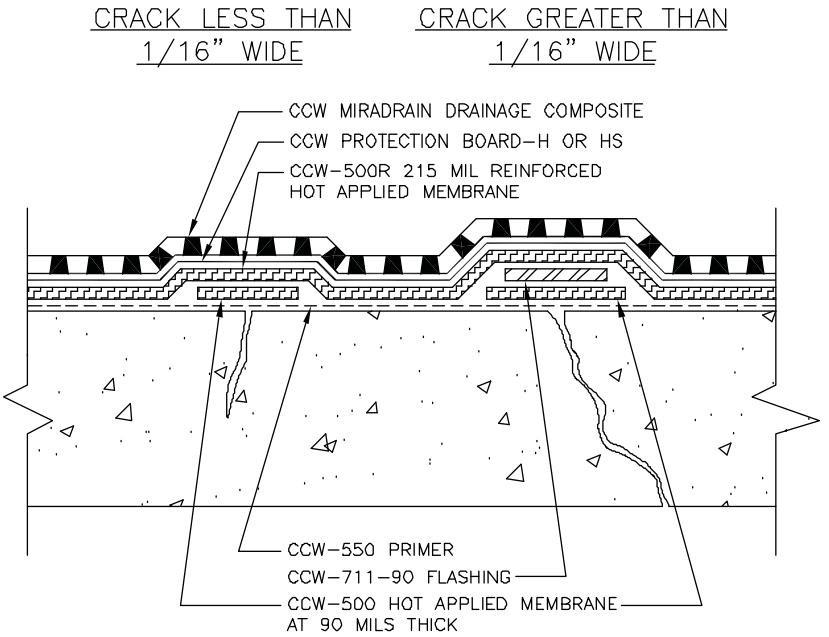
Apply a thin, even coat of CCW-550 Primer to the entire surface to receive waterproofing. At the juncture of all vertical sections with the deck surface, such as parapet walls, columns and all projections through the deck, apply a thin, even coat of CCW-550 Primer to the vertical section to the height indicated on the drawings (8" minimum recommended). Apply primer at a rate of 500 ft^2/gallon. Allow the primer to dry. Note: Membrane will not properly adhere to wet primer.

Penetrations and Flashing details per manufacturer's published drawings.

Apply CCW-500 Hot-Applied Membrane to the primed vertical and horizontal surfaces, including all previously detailed areas. For vertical wall applications of 180 mils, install two coats of CCW-500 with each coat being applied to achieve 90 mils per coat. While to first coat is still warm and tacky, install CCW-500 Reinforcing Fabric and then apply second coat of CCW-500. For horizontal applications of 215 mils, install two coats of CCW-500 with the first coating being applied to achieve 90 mils and the second coat being applied to achieve 125 mils. While the first coat is still warm and tacky, install CCW-500 Reinforcing Fabric and then apply second coat of CCW-500.

CCW-500R Detail

Crack Treatment (500-1)



NOTES

1) APPLY CCW–550 PRIMER 8" WIDE OVER CRACKS LESS THAN 1/16", 16" WIDE OVER LARGER CRACKS.

2) APPLY CCW–500 HOT APPLIED MEMBRANE 6" WIDE, OVER HAIRLINE CRACKS & COLD JOINTS

3) APPLY CCW–500 HOT APPLIED MEMBRANE 16" WIDE, OVER LARGER CRACKS & COLD JOINTS AND INSTALL A 12" WIDE STRIP OF CCW–711–90 FLASHING.

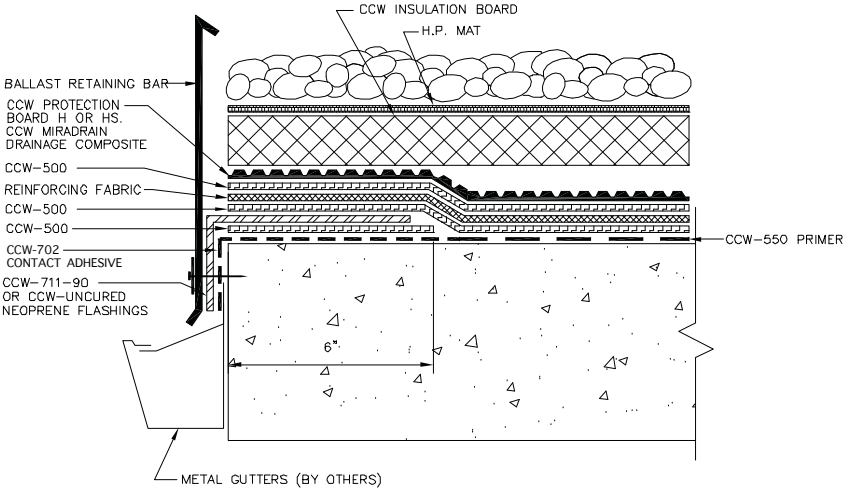
4) APPLY CCW–500R HOT APPLIED MEMBRANE OVER ENTIRE AREA, INCLUDING OVER FLASHING.

5) INSTALL CCW PROTECTION BOARD H OR HS

6) INSTALL CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-500R Detail

Ballast Retaining Bar (500-2A)



NOTES

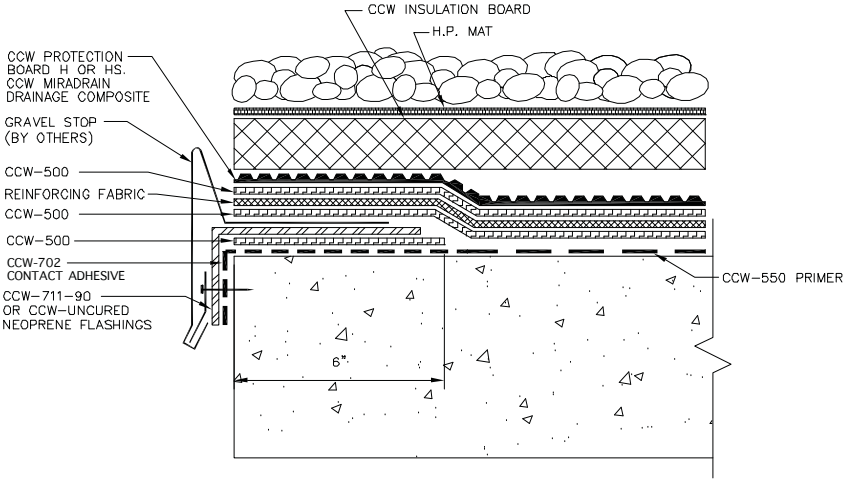
1) BALLAST RETAINING BAR MUST EXTEND ABOVE GRAVEL SURFACE SUFFICIENTLY TO RETAIN GRAVEL AND PREVENT GRAVEL MIGRATION.

2) REFER TO LOCAL CODES FOR PROPER DRAINAGE

3) SLOTS IN BALLAST RETAINING BAR MUST BE FLUSH OR BELOW MEMBRANE LEVEL.

CCW-500R Detail

Gravel Stop Termination (500-2B)



NOTES

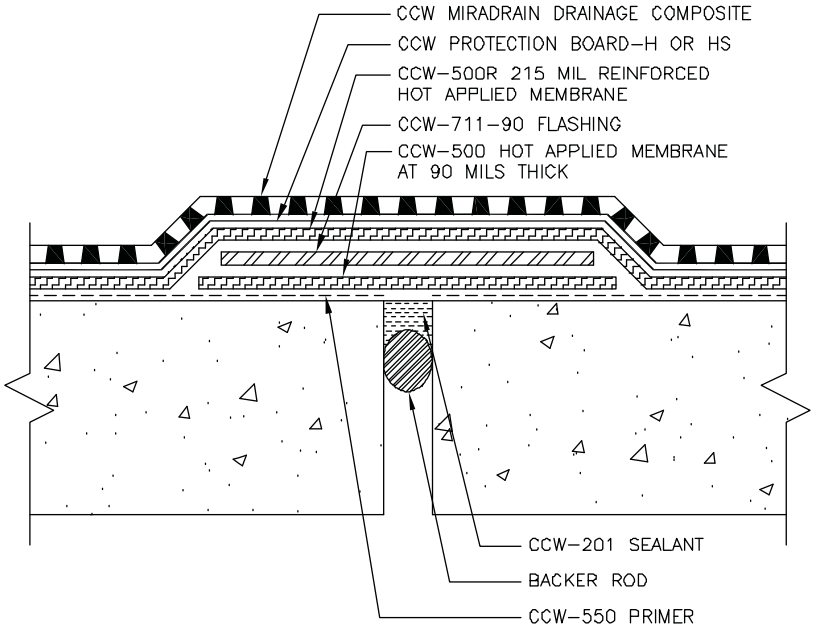
1) FASTENERS AND FASTENERS PATTERN AS RECOMMENDED BY GRAVEL STOP MANUFACTURER.

2) GRAVEL STOP MUST EXTEND ABOVE GRAVEL SURFACE SUFFICIENTLY TO RETAIN GRAVEL AND PREVENT GRAVEL MIGRATION.

3) UNDERSIDE OF GRAVEL STOP FLANGE MUST BE SEALED AT ALL JOINTS CONSULT RESPECTIVE MANUFACTURER FOR APPROPRIATE SEALANT.

CCW-500R Detail

Expansion Joints Less than ½" (500-3A)



NOTES

1) INSTALL BACKER ROD. SEALANT DEPTH SHALL EQUAL 1/2 OF JOINT WIDTH, 1/2" MAX.

2) INSTALL CCW–201 SEALANT. TOOL FLUSH WITH SURFACE. ALLOW TO CURE OVER NIGHT.

3) APPLY CCW–550 PRIMER. 8" ON EACH SIDE OF JOINT.

4) INSTALL CCW–711–90 FLASHING, 12" WIDE.

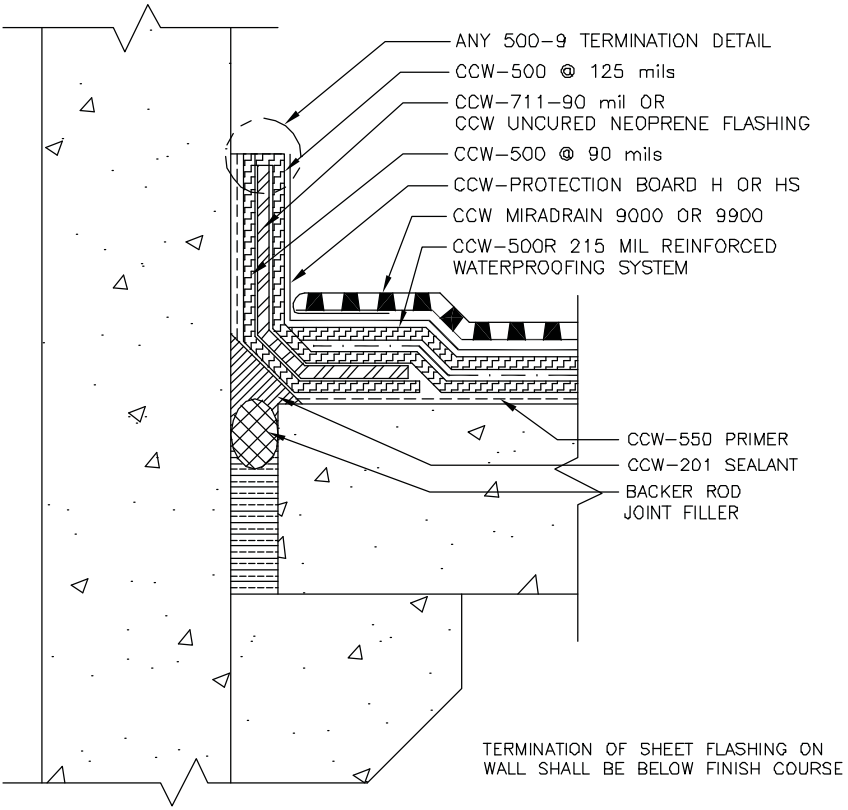
5) APPLY CCW–550 PRIMER. APPLY CCW–500R HOT APPLIED MEMBRANE OVER THE ENTIRE SURFACE. (INCLUDING OVER FLASHING)

6) INSTALL CCW PROTECTION BOARD H OR HS

7) CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-500R Detail

Perimeter Expansion Joint (500-3B)



NOTES

1) INSTALL BACKER ROD.
(DIA = 1 1/2 X JT WIDTH)

2) INSTALL CCW-201 SEALANT.
TOOL SEALANT TO FORM A
1 1/2" X 1 1/2", 45 DEGREE CANT.

3) APPLY CCW-550 PRIMER TO
TERMINATION POINT ON WALL
AND 10" ONTO DECK.

4) INSTALL CCW-711-90 FLASHING.
TERMINATE AT REGLET COUNTER
FLASHING, OR TERMINATION BAR
8" MIN. ABOVE DECK AND 4" MIN.
ONTO DECK.

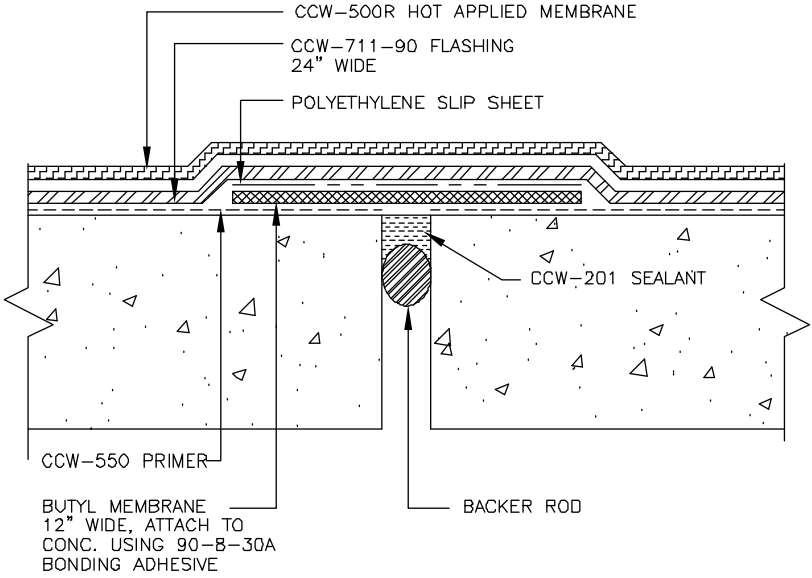
5) APPLY CCW-550 PRIMER.
APPLY CCW-500R HOT APPLIED
MEMBRANE.

6) INSTALL CCW PROTECTION BOARD-H
OR HS

7) INSTALL CCW MIRADRAIN

CCW-500R Detail

Perimeter Expansion Joints Greater than ½" (500-3C)



NOTES

1) INSTALL BACKER ROD. SEALANT DEPTH SHALL EQUAL 1/2 OF JOINT WIDTH, 1/2" MAX.

2) INSTALL CCW–201 SEALANT TOOL FLUSH WITH SURFACE ALLOW TO CURE OVER NIGHT.

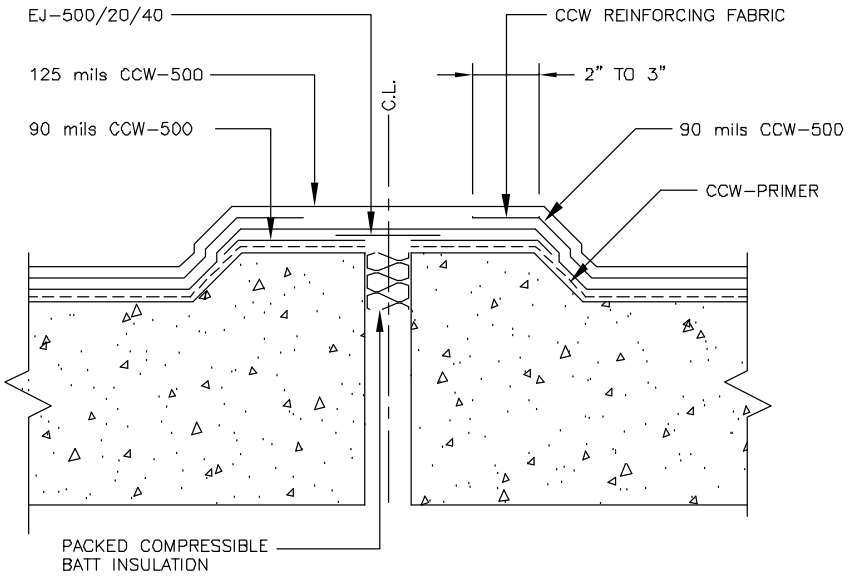
3) INSTALL THE BUTYL MEMBRANE USING 90–8–30A BONDING ADHESIVE

4) APPLY CCW–550 PRIMER ON EITHER SIDE OF BUTYL MEMBRANE

5) INSTALL CCW–711–90 FLASHING OVER SLIP SHEET

CCW-500R Detail

Expansion Joints Greater than ¾" (500-3D)



JOINTS +/– 3/4" USE EJ–500/20

JOINTS +/– 1 3/4" USE EJ–500/40

NOTES

1) APPLY CCW–PRIMER

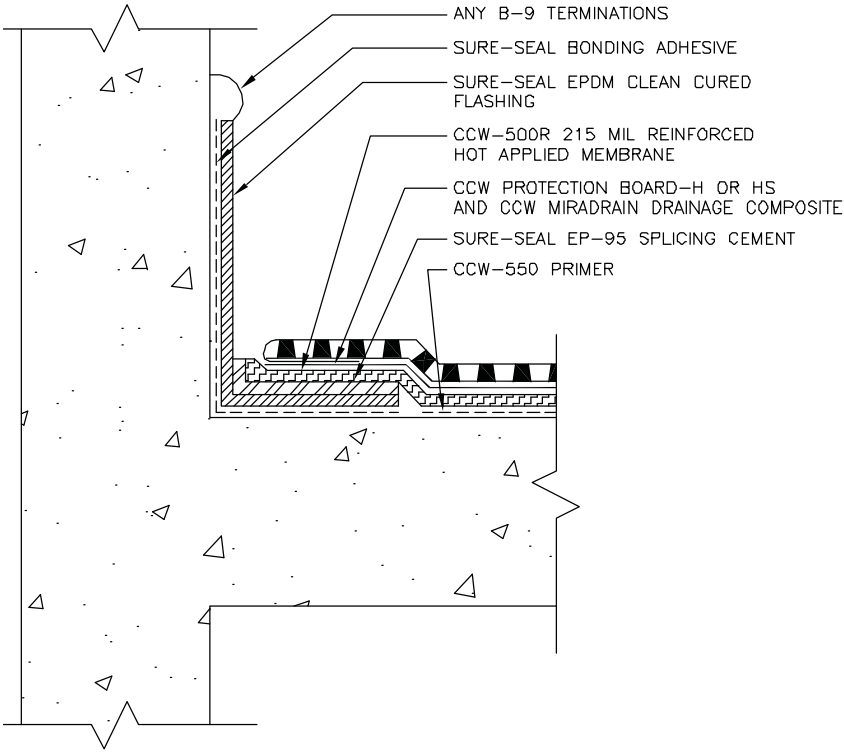
2) APPLY A LAYER OF 90 mil CCW–500, IMMEDIATELY FOLLOWED BY EMBEDDING THE EJ–500. PRESS THE EJ–500 INTO THE HOT CCW–500 TO INSURE FULL CONTACT.

3) EJ–500 MUST BE CENTERED OVER THE JOINT AND APPLIED IN THE LENGTHS OF 10' OR LESS.

4) APPLY THE FIRST COURSE OF 90 mils CCW–500 OVER THE DECK AND EJ–500

CCW-500R Detail

Exposed Curb and Parapet (500-4A)



NOTES

1) MEMBRANE SPLICING PROCEDURE IS FOR THE SPLICES BETWEEN CLEAN CURED EPDM MEMBRANE AND CCW-500

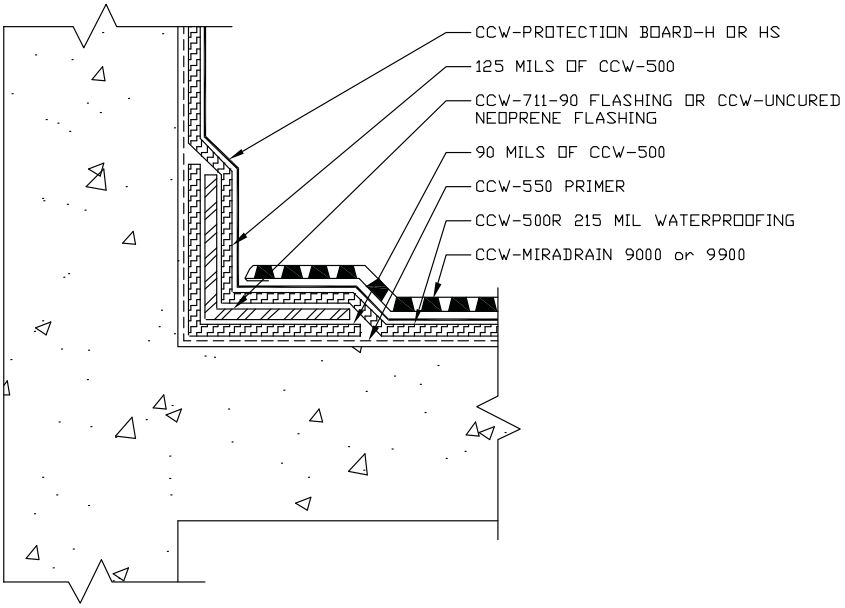
2) VERTICAL EPDM SPLICES SHALL BE OVERLAID WITH 6" WIDE ELASTOFORM FLASHING

3) APPLY SPLICING CEMENT OVER ENTIRE 6" MIN. SPLICE AREA OF THE CLEANED CURED EPDM AND ELASTOFORM OVERLAY PRIOR TO THE APPLICATION OF CCW-500

4) INSTALL CCW PROTECTION BOARD-H OR HS AND CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-500R Detail

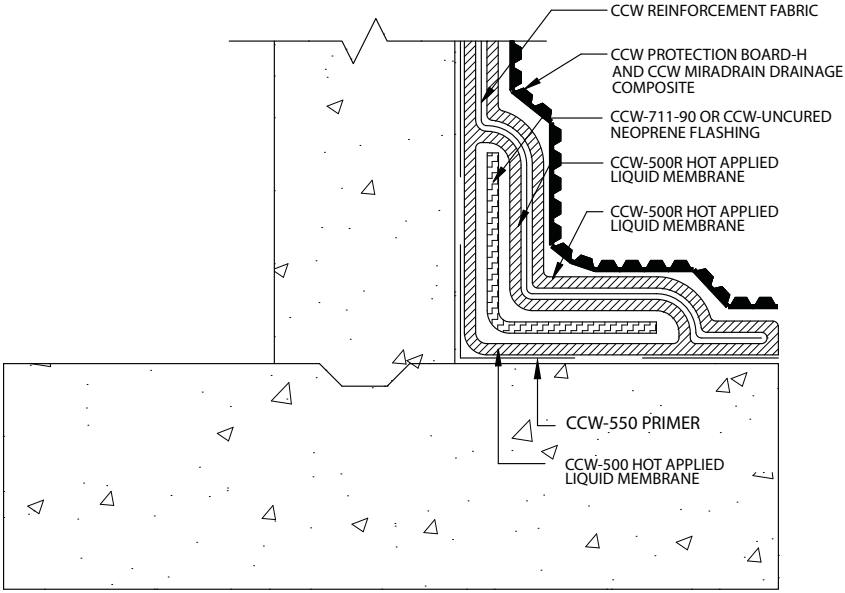
Curb and Parapet (500-4B)



TERMINATION OF SHEET FLASHING ON WALL SHALL BE BELOW FINISH COURSE

CCW-500R Detail

Wall at Footing (500-4C)

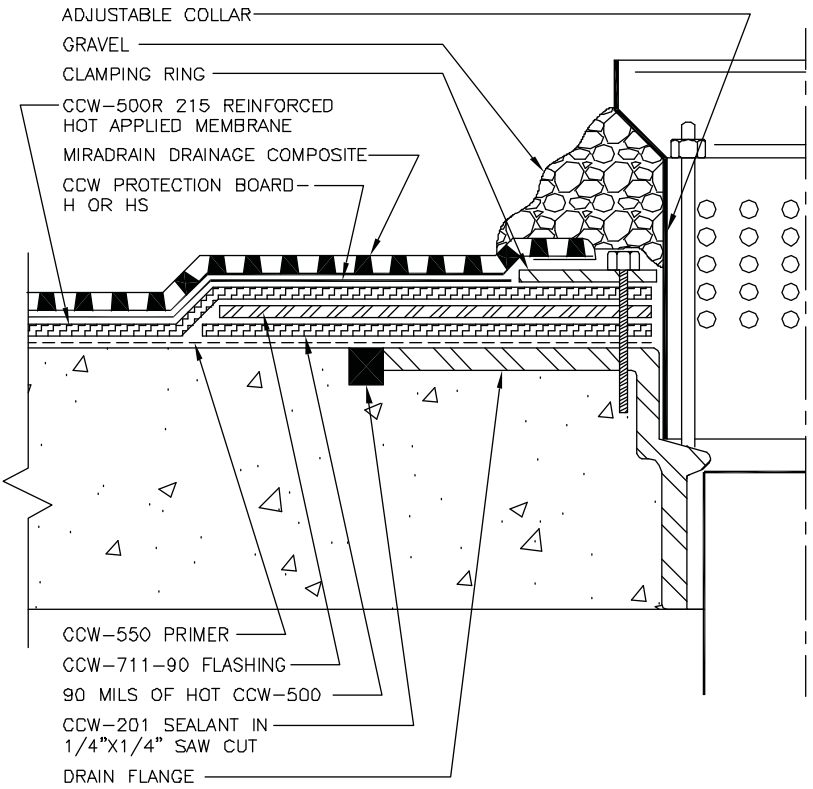


NOTES

1) INSTALL CCW-550 PRIMER TO TERMINATION POINT ON WALL AND ONTO FOOTING.
2) APPLY CCW-500 HOT APPLIED MEMBRANE TO TERMINATION POINT ON WALL AND ONTO FOOTING.
3) INSTALL CCW-711-90 OR CCW-UNCURED NEOPRENE FLASHING ONTO WALL 6" AND ONTO FOOTING 6".
4) APPLY CCW-500 HOT APPLIED MEMBRANE OVER FLASHING.
5) INSTALL CCW REINFORCEMENT FABRIC INTO 1ST LAYER OF CCW-500 HOT APPLIED MEMBRANE
6) APPLY 2ND LAYER OF CC-500 HOT APPLIED MEMBRANE OVER REINFORCEMENT FABRIC
7) INSTALL CCW PROTECTION BOARD-H AND CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-500R Detail

Double Drain (500-6)



NOTES

1) CLEAN FLANGE. APPLY CCW-550 PRIMER TO FLANGE AND 18" ONTO DECK. ALLOW PRIMER TO DRY.

2) APPLY 90 MILS OF HOT CCW-500 TO THE DRAIN FLANGE AND 18" OUT ONTO THE DECK.

3) INSTALL CCW-711-90 FLASHING, IN A SINGLE 3'X3' PIECE, TO THE DRAIN FLANGE AND DECK. CUT OUT CENTER OF FLASHING FLUSH TO THE INSIDE OF THE DRAIN FLANGE.

4) APPLY 125 MILS OF HOT CCW-500 COVERING THE CCW-711-90 FLASHING. SECURE FLASHING IN PLACE UNDER THE CLAMPING RING.

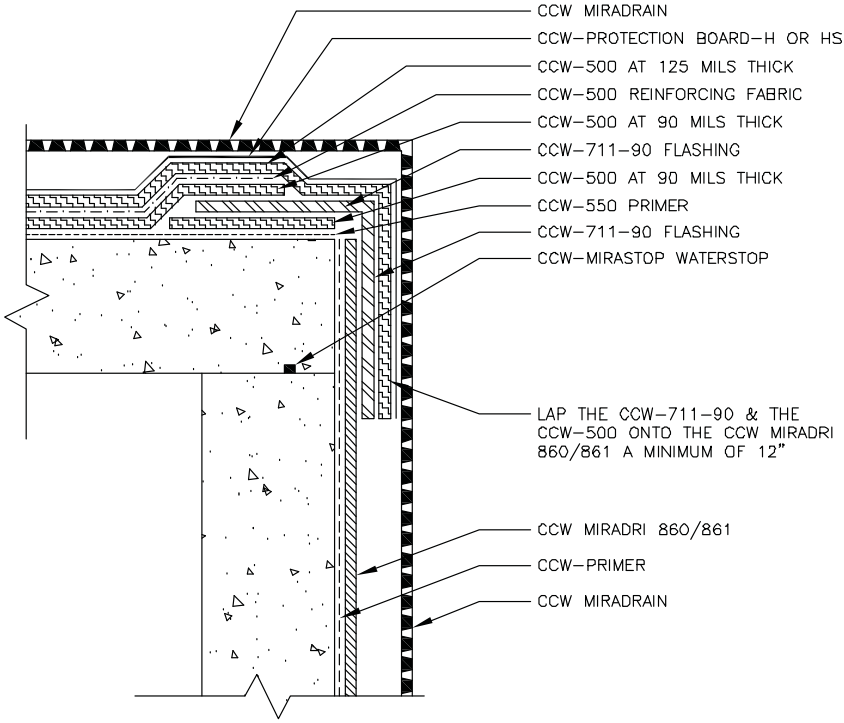
5) APPLY CCW-500R HOT APPLIED WATERPROOFING SYSTEM.

6) INSTALL CCW PROTECTION BOARD-H

7) INSTALL CCW MIRADRAIN DRAINAGE COMPOSITE

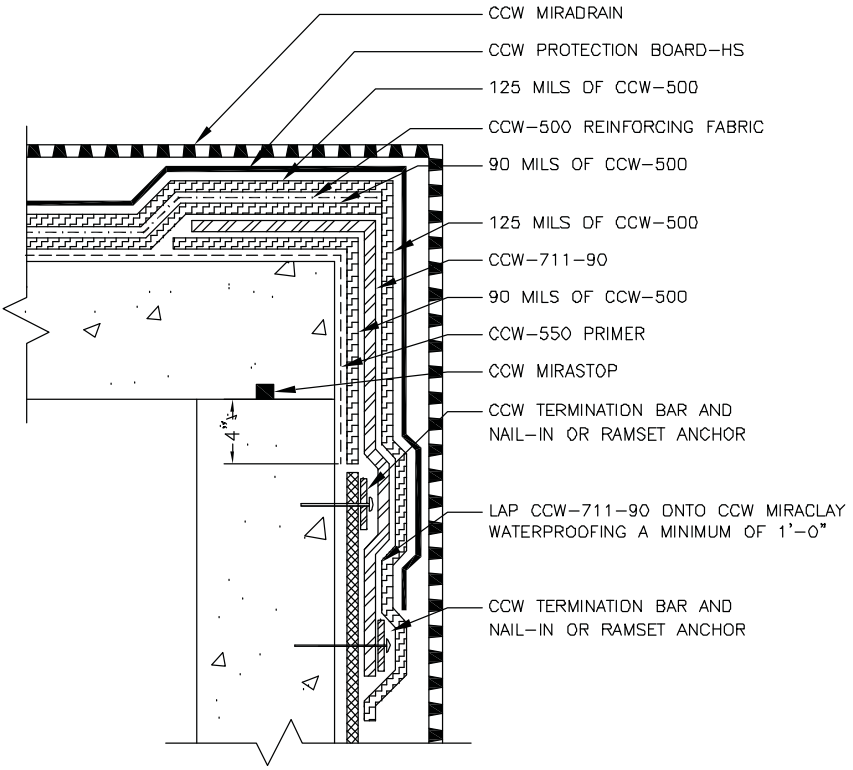
CCW-500R Detail

500R – MiraDRI 860/861 Tie-In (500-7A)



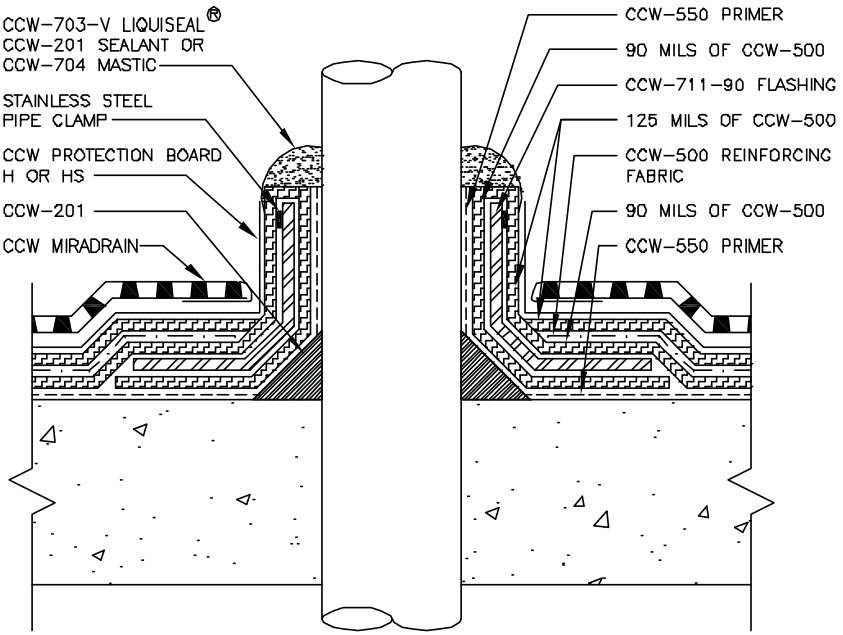
CCW-500R Detail

500R – MiraCLAY Tie-In (500-7B)



CCW-500R Detail

Pipe and Penetration Flashing (500-8A)



TERMINATION OF SHEET FLASHING ON VERTICAL PENETRATIONS SHALL BE BELOW THE FINISH COURSE.

AN ALTERNATE DETAIL IS TO USE A PRE-FORMED "BOOT" IN LIEU OF SEALANT AND SHEET FLASHING. REFER TO BOOT MANUFACTURER'S INSTRUCTIONS

NOTES

1) INSTALL CCW-201 SEALANT. TOOL SEALANT TO FORM A 1 1/2" X 1 1/2", 45 DEGREE CANT. LET CURE OVER NIGHT.

2) APPLY CCW-550 PRIMER. APPLY CCW-500R HOT APPLIED MEMBRANE.

3) INSTALL CCW-711-90 FLASHING. AND CLAMPING RING TO SPECIFIED HEIGHT AND 4" MIN. ONTO CURED CCW-500.

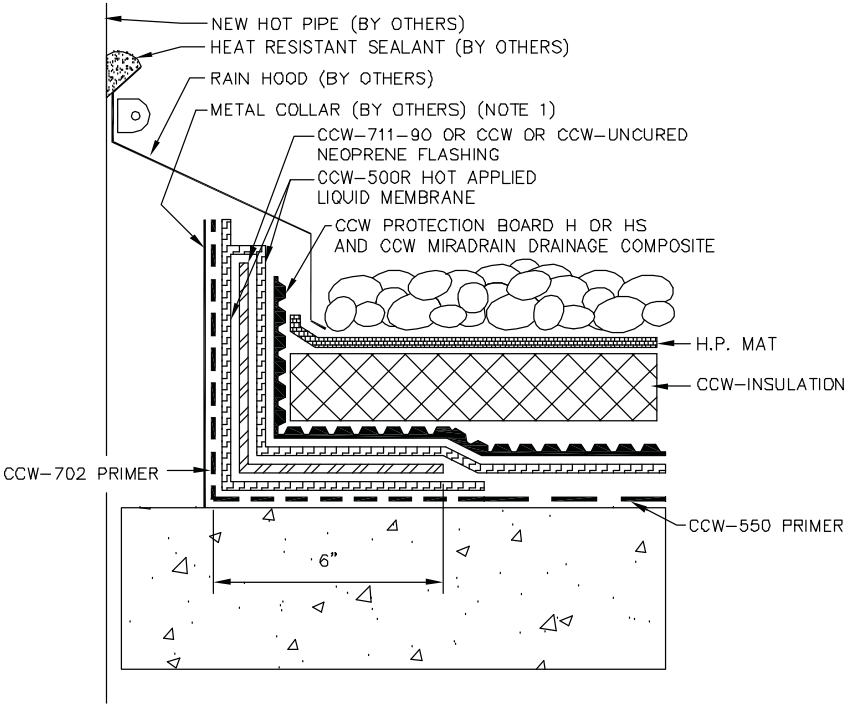
4) APPLY CCW-500 HOT APPLIED MEMBRANE OVER CCW-711-90 FLASHING

5) INSTALL CCW PROTECTION BOARD-H OR HS.

6) INSTALL CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-500R Detail

Field Fabricated New Hot Stack (500-8B)



NOTES

1) REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD–FABRICATED PIPE SEAL

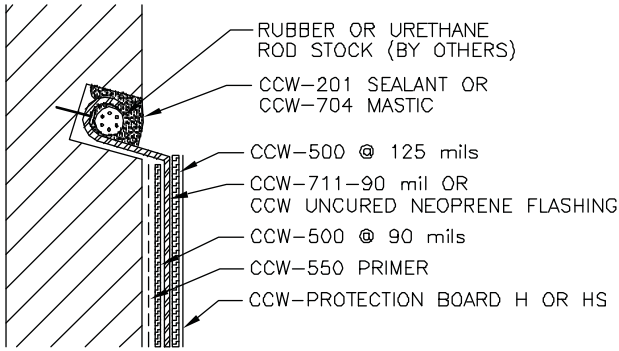
2) FLASHING WRAPPED AROUND PIPE SHALL HAVE 3" (8 cm) MINIMUM MEMBRANE SPLICE.

3) TEMPERATURE MUST NOT EXCEED 180° F (82° C)

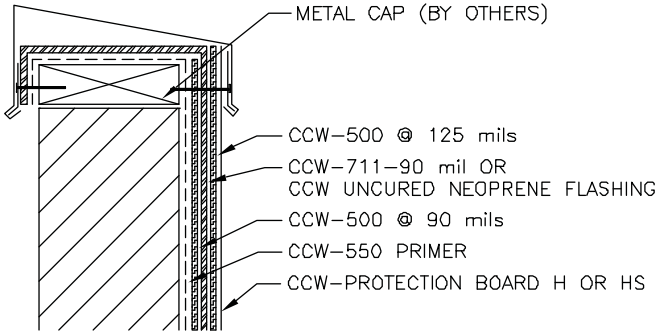
CCW-500R Detail

Vertical Terminations (500-9AB)

500–9–A REGLET FLASHING



500–9–B CAP FLASHING



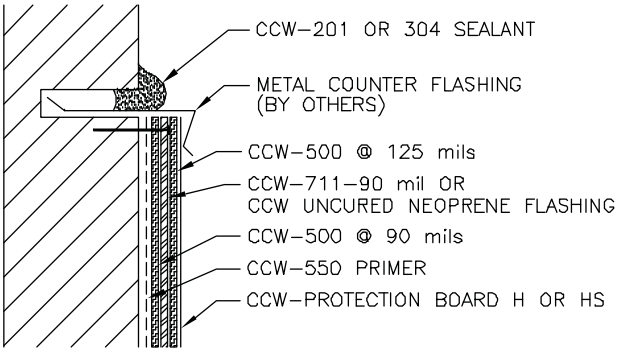
NOTES:

1. DIAMETER OF ROD STOCK MUST EXCEED WIDTH OF REGLET GAP.
2. FASTEN MEMBRANE TO SUBSTRATE 12 INCHES ON CENTER.
2. IF FLASHING MEMBRANE EXTENDS ABOVE FINAL GRADE, COUNTER FLASHING MUST BE PROVIDED

CCW-500R Detail

Vertical Terminations (500-9CD)

500–9–C COUNTERFLASHING

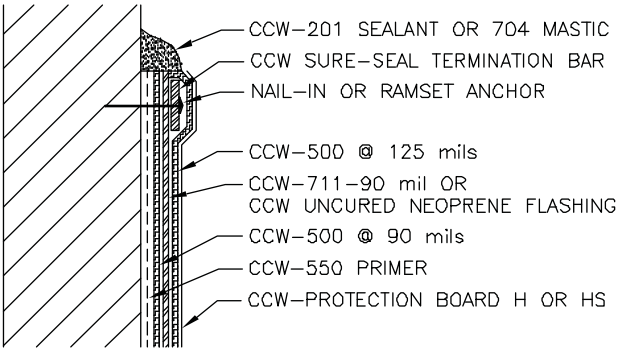


NOTES:

1. FASTEN METAL COUNTERFLASHING TO SUBSTRATE 12 INCHES ON CENTER.

2. IF FASTENER PENETRATES METAL COUNTERFLASHING, USE NEOPRENE WASHER, APPLY WATER CUT–OFF MASTIC OR CAULK FASTENER HEAD.

500–9–D MECHANICAL



NOTES:

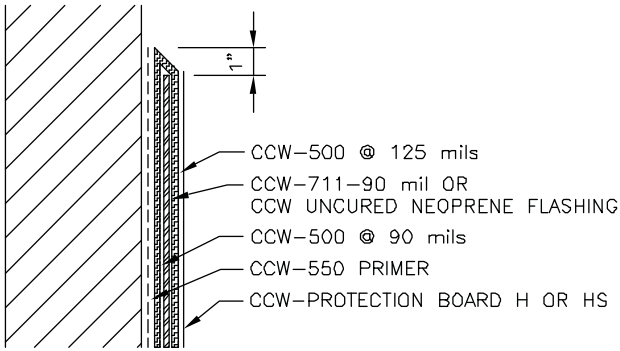
1. APPLY ON HARD SMOOTH SURFACE ONLY; NOT FOR USE ON WOOD.

2. FLASHING MUST BE HELD UNDER CONSTANT COMPRESSION.

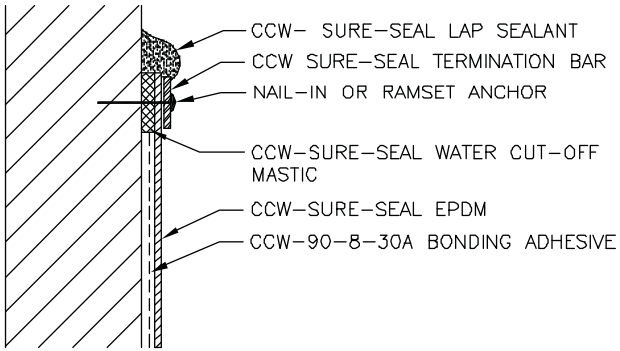
CCW-500R Detail

Vertical Terminations (500-9EF)

500–9–E EMBEDDED TERMINATION



500–9–F EPDM TERMINATION

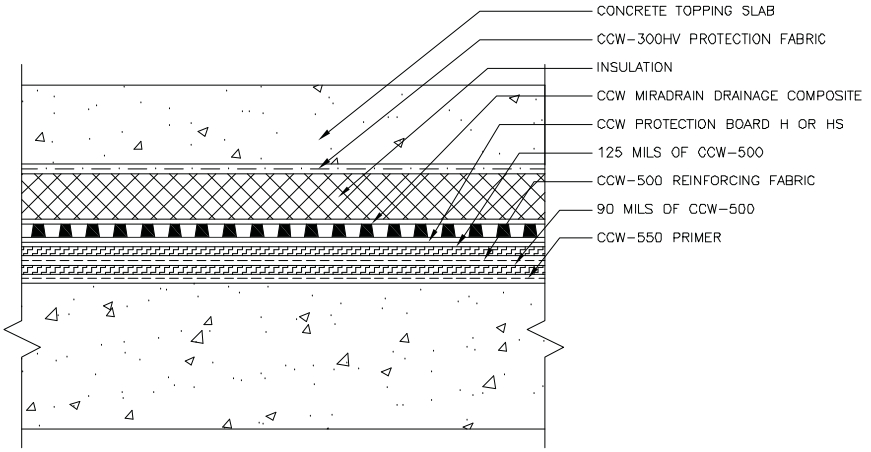


NOTES:

1. IF CCW–711–90 FLASHING OR CCW UNCURED NEOPRENE FLASHING EXTENDS ABOVE FINAL GRADE, METAL COUNTER FLASHING MUST BE USED.

CCW-500R Detail

Insulated Plaza Deck (500-10A)



NOTE:
INSULATION SHALL BE NON-ABSORBENT, CLOSED CELL TYPE.

NOTES

1) APPLY CCW-550 PRIMER TO ENTIRE SURFACE AREA.

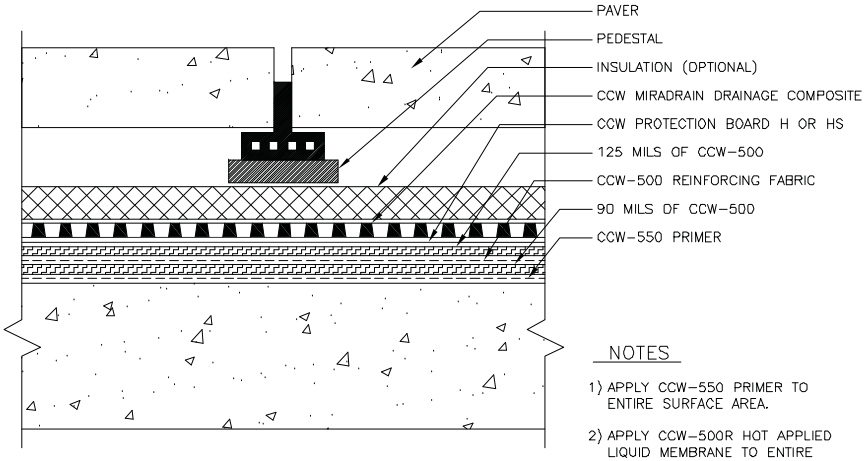
2) APPLY CCW-500R HOT APPLIED WATERPROOFING SYSTEM TO ENTIRE SURFACE AREA.

3) INSTALL CCW PROTECTION BOARD

4) INSTALL CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-500R Detail

Paver Plaza Deck (500-10B)



NOTE:
INSULATION SHALL BE NON-ABSORBENT, CLOSED CELL TYPE.

NOTES

1) APPLY CCW-550 PRIMER TO ENTIRE SURFACE AREA.

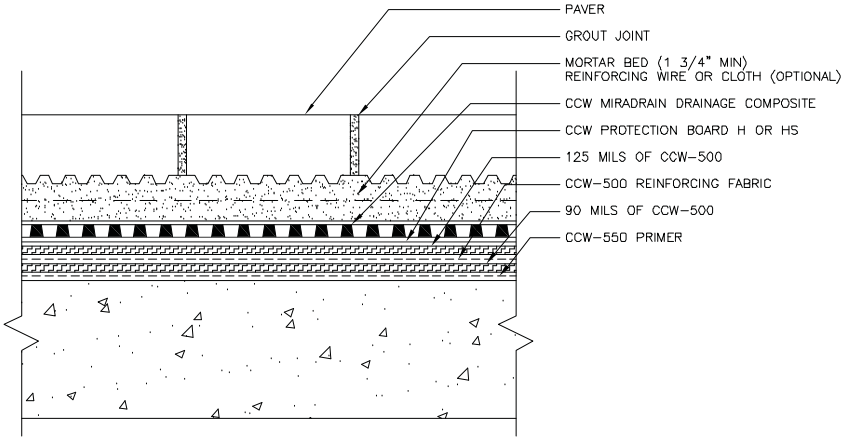
2) APPLY CCW-500R HOT APPLIED LIQUID MEMBRANE TO ENTIRE SURFACE AREA.

3) INSTALL CCW PROTECTION BOARD

4) INSTALL MIRADRAIN DRAINAGE COMPOSITE

CCW-500R Detail

Mortar Bed with Paver Plaza Deck (500-10C)



CERAMIC TILE INSTALLATION SHALL BE AS RECOMMENDED BY TILE COUNCIL OF AMERICA

NOTES

1) APPLY CCW-550 PRIMER TO ENTIRE SURFACE AREA.

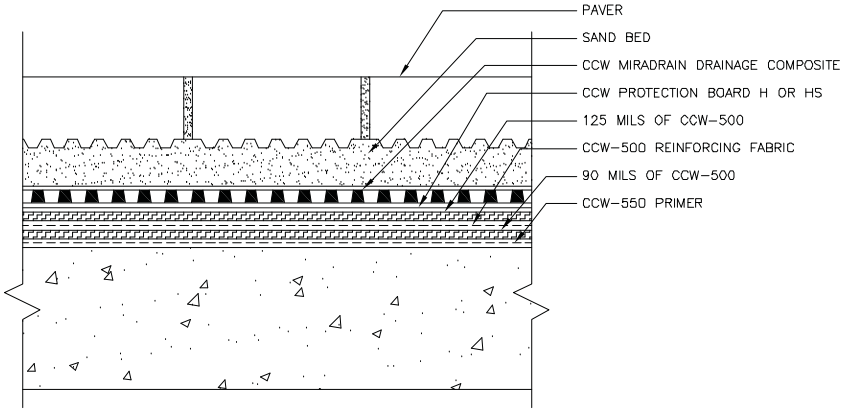
2) APPLY CCW-500R HOT APPLIED LIQUID MEMBRANE TO ENTIRE SURFACE AREA.

3) INSTALL CCW PROTECTION BOARD

4) INSTALL MIRADRAIN DRAINAGE COMPOSITE

CCW-500R Detail

Sand Bed with Paver Plaza Deck (500-10D)



NOTES

1) APPLY CCW-550 PRIMER TO ENTIRE SURFACE AREA.

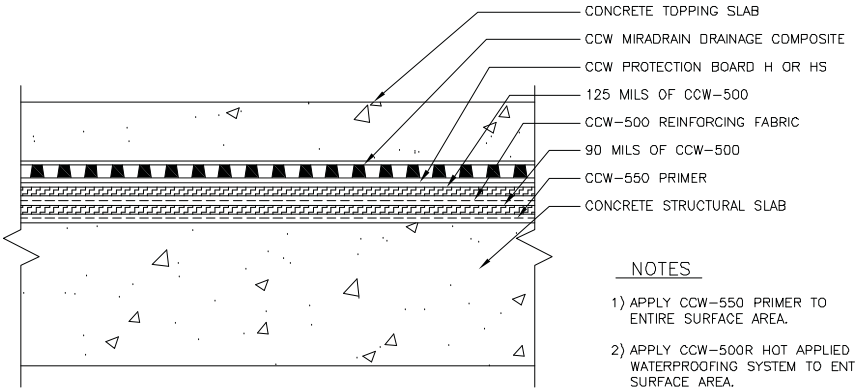
2) APPLY CCW-500R HOT APPLIED LIQUID MEMBRANE TO ENTIRE SURFACE AREA.

3) INSTALL CCW PROTECTION BOARD

4) INSTALL MIRADRAIN DRAINAGE COMPOSITE

CCW-500R Detail

Concrete Topping Slab (500-10E)



NOTES

1) APPLY CCW-550 PRIMER TO ENTIRE SURFACE AREA.

2) APPLY CCW-500R HOT APPLIED WATERPROOFING SYSTEM TO ENT SURFACE AREA.

3) INSTALL CCW PROTECTION BOARI

4) INSTALL CCW MIRADRAIN DRAINAC COMPOSITE

NOTES

1) APPLY CCW-550 PRIMER TO ENTIRE SURFACE AREA.

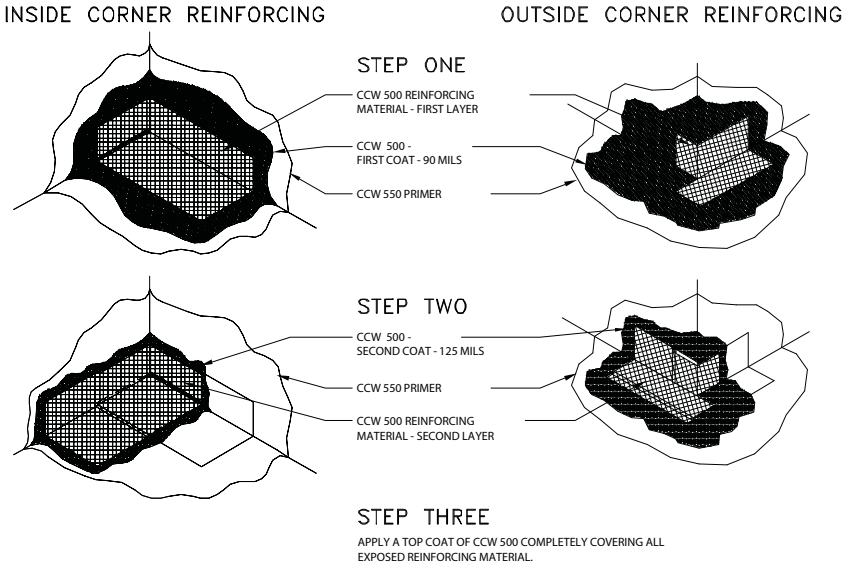
2) APPLY CCW-500R HOT APPLIED WATERPROOFING SYSTEM TO ENTIRE SURFACE AREA.

3) INSTALL CCW PROTECTION BOARD

4) INSTALL CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-500R Detail

Corner Reinforcement (500-15A)



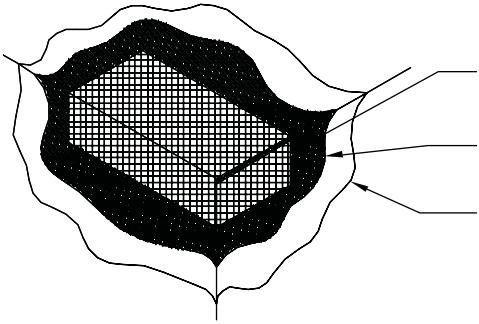
NOTE:

FOR REINFORCING MATERIAL USE EITHER
CCW-500 REINFORCING FABRIC,
CCW-711-90 OR
CCW-UNCURED NEOPRENE FLASHING

CCW-500R Detail

Corner Reinforcement (500-15B)

OUTSIDE CORNER REINFORCING

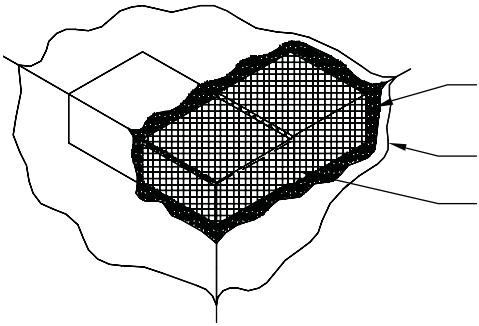


STEP ONE

CCW 500 REINFORCING
MATERIAL - FIRST LAYER

CCW 500 -
FIRST COAT - 90 MILS

CCW 550 PRIMER



STEP TWO

CCW 500 -
SECOND COAT - 125 MILS

CCW 550 PRIMER

CCW 500 REINFORCING
MATERIAL - SECOND LAYER

STEP THREE

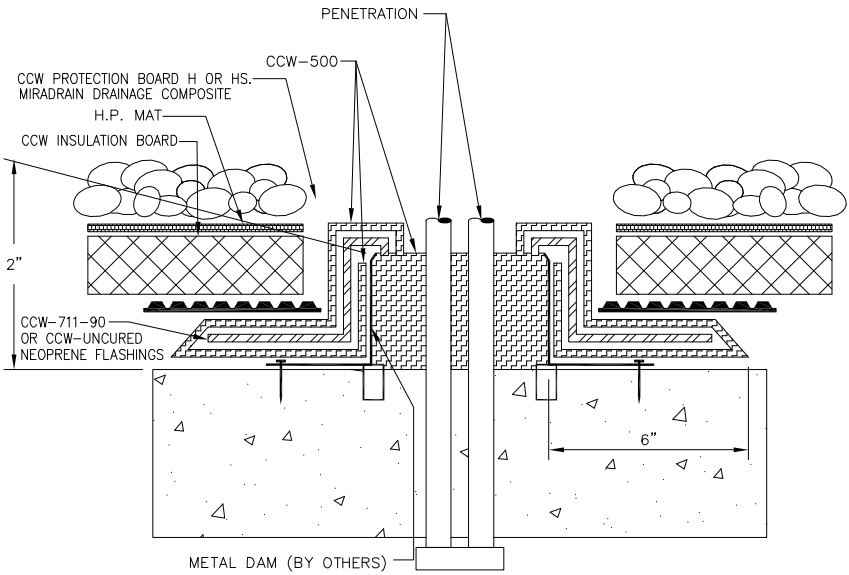
APPLY A TOP COAT OF CCW 500 COMPLETELY
COVERING ALL EXPOSED REINFORCING MATERIAL.

NOTE:

FOR REINFORCING MATERIAL USE EITHER
CCW-500 REINFORCING FABRIC,
CCW-711-90 OR
CCW-UNCURED NEOPRENE FLASHING

CCW-500R Detail

Field Fabricated CCW-500 Pocket (500-16)

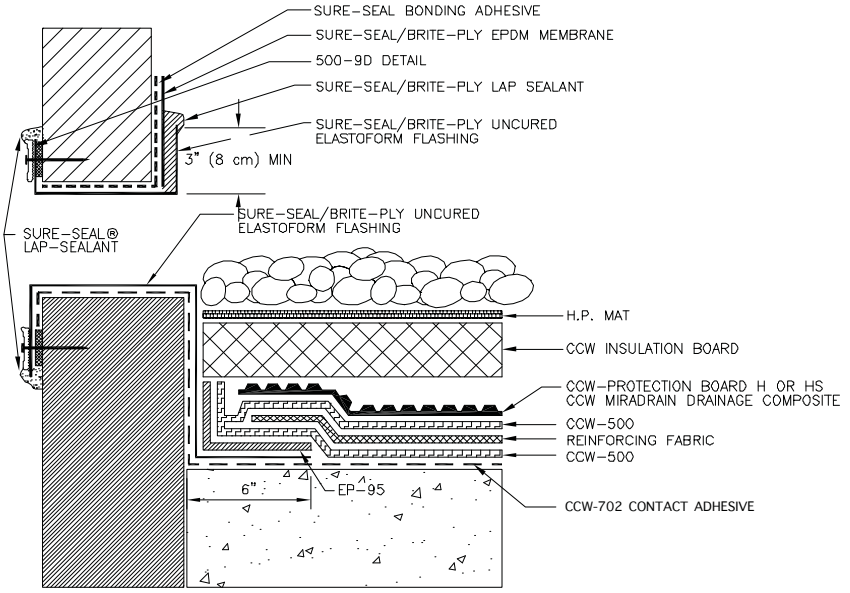


NOTES

1) 180° F (82° C) MAXIMUM TEMPERATURE.
2) CCW–500 MUST CONTACT FLASHING AND DECK MEMBRANE.
3) DECK FLANGE MUST BE CONTINUOUS WITH ROUNDED CORNERS.
4) CCW–500 POCKET MAY BE ROUND.
5) CCW–500 POCKET TO BE 1 IN. (25 cm) MIN. FROM PENETRATION ON ANY SIDE.
6) CCW–500 MUST COMPLETELY FILL CCW–500 POCKET TO PREVENT PONDING OF WATER.
7) CCW–500 TO BE MIN. 2 IN. (5 cm) DEEP.
8) CCW–500 MUST CONTACT THE BARE SURFACE OF THE PENETRATION ALL DEBRIS (PAINT, RUST,LEAD,OTHER FLASHING, ETC.) MUST BE REMOVED FROM THE PENETRATION.

CCW-500R Detail

Overflow Scupper (500-18A)



NOTES

1) MEMBRANE SPLICING PROCEDURE IS FOR THE SPLICES BETWEEN CLEAN CURED EPDM MEMBRANE AND CCW-500.

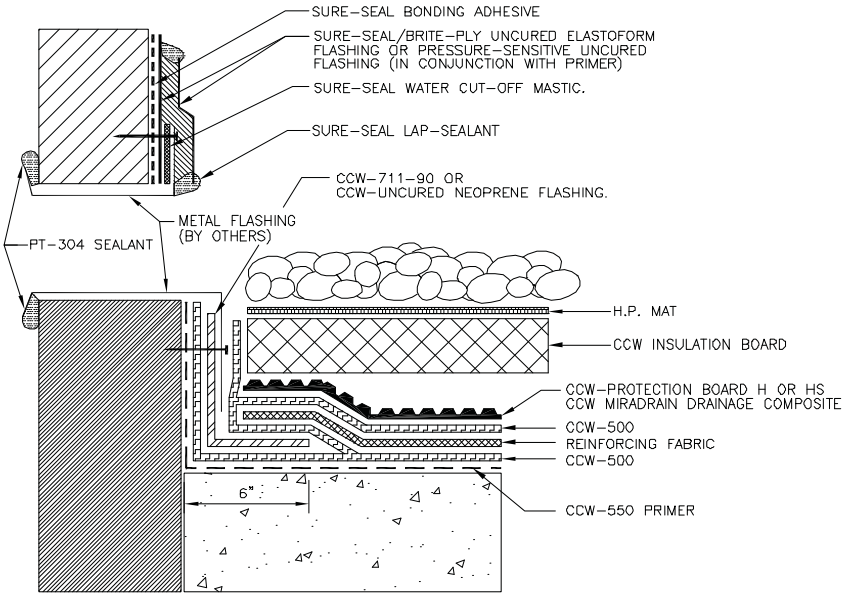
2) VERTICAL EPDM SPLICES SHALL BE OVERLAID WITH 6" WIDE ELASTOFORM® FLASHING.

3) APPLY SPLICING CEMENT OVER ENTIRE 6" MIN SPLICE AREA OF THE CLEANED CURED EPDM AND ELASTOFORM OVERLAY PRIOR TO THE APPLICATION OF CCW-500

4) INSTALL CCW PROTECTION BOARD-H OR HS AND MIRADRAIN DRAINAGE COMPOSITE.

CCW-500R Detail

Overflow Metal Scupper (500-18B)



NOTES

1) METAL SCUPPER BOX MUST HAVE CONTINUOUS SIDES, METAL FLANGE MUST BE CONTINUOUS WITH ROUND CORNERS
2) WATER CUT-OFF MASTIC MUST BE HELD UNDER CONSTANT COMPRESSION.
3) METAL SCUPPER FLANGE ON WALL MUST BE TOTALLY COVERED BY UNCURED ELASTOFORM FLASHING.
4) UNCURED ELASTOFORM FLASHING MUST OVERLAP WALL FLASHING 3" (8 cm) MIN.
5) A MIN. 2" (5 cm) FLASHING SPLICE IS REQUIRED PAST THE NAIL HEAD ON THE METAL FLANGE OF THE SCUPPER.

TYPICAL USES

CCW-525 is available in two viscosities (H & V) for application to horizontal and vertical surfaces. Typical applications are between structural slab and wearing course on parking garages, plaza decks, balconies, roof decks, terraces, mechanical equipment rooms, wetrooms, malls, kitchens and shower stalls. CCW-525 is ideally suited for waterproofing on below-grade foundation walls, tunnels, planters and other areas where a seamless, elastomeric waterproofing is required.

LIMITATIONS

- Do not apply CCW-525 to a wet, damp or contaminated surface
- Not recommended for exposed or wearing surfaces
- If metal pan is used for concrete form, the metal pan must be vented
- Surface temperature must be above 40°F
- Do not use around swimming pools or other areas where pool chemicals are used.

PACKAGING

5-gallon pails and 55-gallon drums

CCW-525-H = Horizontal grade

CCW-525-V = Vertical grade

Carlisle DCH Polyester Reinforcing Fabric = 4”, 6”, 12”, 40” x 324’

CCW-201 Sealant = 1.5 Gallon kit (in 2 gallon pail, plus color pack)

SHELF LIFE

When stored at temperatures below 80°F, shelf life is 12 months in the original, unopened container.

WARNING AND HAZARDS

Combustible liquid and vapor. Keep away from heat and flame. Use only with adequate ventilation. Avoid contact with the eyes or skin, especially open breaks in the skin. In the event of skin contact, remove immediately and wash with warm soapy water. Refer to MSDS for important warnings and product information.

INSTALLATION

Surface Preparation: New concrete shall be water cured, trowel finished, followed by a light, hair broom and in place for 14 days minimum, 28 days preferred. If curing compounds are required, they shall be 100% Sodium Silicate and shall be approved by Carlisle. Surfaces shall be structurally sound, dry, and free of oil, grease, dirt, laitance, curing or release agents and other contamination which may harmfully affect the adhesion of the membrane. Mortar joints on block walls shall be struck flush with the block surface.

Remove splatters, fins, ridges or other projections to provide a smooth, level surface. Fill tie rod holes, honey combs, rock pockets, spalls or other voids and indentations with non-shrink grout. Saw-cut moving cracks greater than 1/16” in width to 1/4” wide x 1/4” deep.

Grind or fill (as required) surface at cold joints where each pour is at a different plane, to provide a smooth and level surface. Clean metal to expose a bright finish.

Detail work: Clean joints and saw cut cracks. All moving cracks over 1/16” wide and all expansion joints less than 1” wide shall be cleaned, primed, fitted with a backing rod and caulked with Carlisle Polyurethane Sealant as recommended by the data sheet. For larger joints, contact Carlisle representative.

Apply a one inch, 45º angle cant of CCW-201 sealant at the juncture of all vertical and horizontal surfaces including at pipes, vents and other projections.

Apply a bondbreaker tape over the Sealant installed in expansion joints. Width of bondbreaker shall be three times joint width.

Apply a 4" - 6" wide stripe coat of CCW-525-V Membrane over all sealed cracks, joints and over all hairline cracks less than 1/16" and cold joints. Apply a stripe coat of CCW-525-V over sealant cants and up the vertical wall to the height called out on the drawings, (minimum eight inches recommended) and onto the horizontal deck 4" - 6". Stripe coat shall be 45 +/- 5 mils thick. Allow stripe coats to cure over night.

Priming: Primer is not required for adhesion to dry, non-porous concrete. However, if pinhole and blister problems occur as a result of air and/or moisture vapors emitted from the concrete and environmental conditions, it is recommended that the surface be primed with CCW-557 Primer. Refer to CCW-557 data sheet for information on the use of this product.

Apply CCW-559 Primer to metal surfaces immediately after sanding and cleaning. Refer to CCW-559 data sheet for information on the use of this product.

For Horizontal: Apply CCW-525 over cleaned, primed flange of drains, taking care not to fill weep holes. Using a notched squeegee, apply CCW-525-H at 22 sq. ft. per gallon or as required to obtain a 60-mil thickness, to the entire area to receive waterproofing, including over all detail coats.

For Vertical: Using a roller, apply CCW-525-V in two coats at a rate of 43 square feet per gallon per coat or as required to obtain 30 mils per coat for a final dry film thickness of 60 mils. Wait 24 hours between each coat.

For reinforced systems: Apply CCW-525-H at 22 square feet per gallon or as required to obtain a 60-mil thickness to the entire area to receive waterproofing, including over all detail coats. Use a 1/4" notched squeegee or flat squeegee with guide pins to achieve a uniform thickness. Immediately install Carlisle DCH white polyester reinforcing fabric into the uncured CCW-525. Install carefully to avoid wrinkles. In the event of wrinkles or fishmouths, cut the fabric and overlap the excess to avoid trapped air. Once the coating has cured to a firm consistency, apply an additional coat of CCW-525 at 22 sq. ft. per gallon or as required to obtain a 60 mil thickness, extending past the edge of the fabric to completely encapsulate it. Total system dry film thickness is 120 mils.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

Protection: The membrane must be protected from damage by future operations and other trades. The applicator shall install protection material applicable to jobsite conditions, to protect the membrane. Protection course must be CCW Protection products that correspond to horizontal or vertical applications.

Install protection course on vertical walls immediately after membrane has cured (36 hrs at 75°F). Install protection course on horizontal application immediately following successful flood testing. If flood test is delayed, install a temporary covering to protect the membrane from other trades.

Flood Test: After membrane has cured 36 to 72 hours, plug drains and provide necessary barriers to contain flood water. Flood deck with a 2" head of water and allow to stand for 24 hours. Check for leaks and immediately make repairs if required. Retest after any repairs have been made.

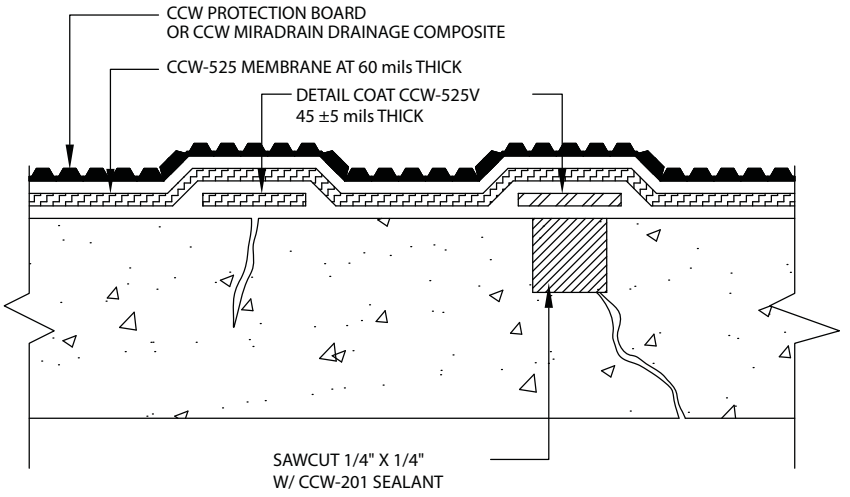
Clean Up: Before material cures, clean adjacent areas to remove stains or spills and clean tools with toluene or xylene. Do not wash off skin with solvents.

CCW-525 Detail

Crack Treatment (525-1)

CRACK LESS THAN 1/16" WIDE

CRACK GREATER THAN 1/16" WIDE



NOTES

1) SAW CUT CRACKS GREATER THAN 1/16" TO 1/4" WIDE X 1/4" DEEP

   REMOVE DUST AND APPLY CCW-555 PRIMER

   APPLY CCW-201 SEALANT
   TOOL FLUSH
   ALLOW TO DRY OVER NIGHT

2) APPLY CCW-525 DETAIL COAT OVER HAIRLINE CRACKS, COLD JOINTS, AND SEALED SAWCUTS

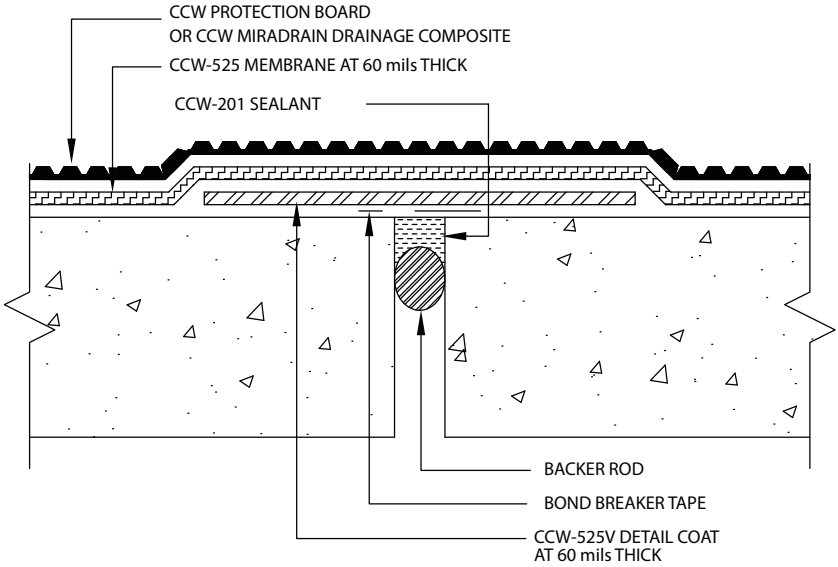
   CLEAN DETAIL COAT WITH A CLEAN CLOTH WET WITH XYLENE SOLVENT PRIOR TO APPLYING CCW-525V

3) APPLY CCW-525 MEMBRANE AT 60 mils THICK

4) INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-525 Detail

Expansion Joints Less than ½" (525-3A)



NOTES

1) INSTALL BACKER ROD.
   SEALANT DEPTH SHALL EQUAL
   1/2 OF JOINT WIDTH, 1/2" MAX.

2) INSTALL CCW-201 SEALANT.
   TOOL FLUSH WITH SURFACE.
   ALLOW TO CURE OVER NIGHT.

3) APPLY BOND BREAKER TAPE OVER
   SEALANT AND 1" ON EACH SIDE
   OF JOINT.

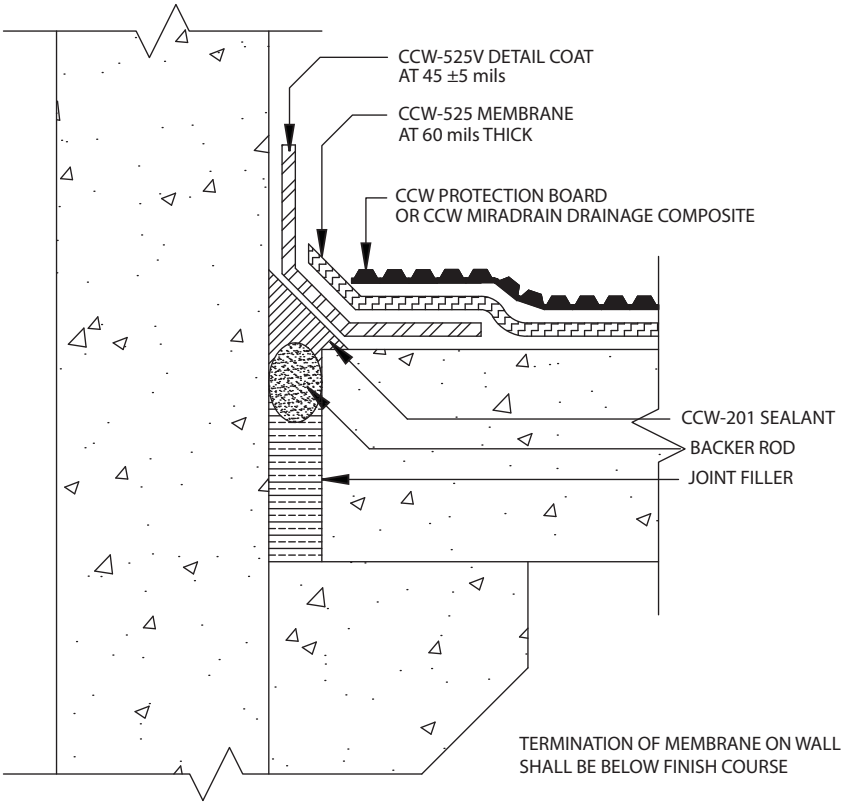
4) APPLY CCW-525V DETAIL COAT AT
   60 mils THICK, EXTEND 4" ON EACH
   SIDE OF JOINT

5) APPLY CCW-525 MEMBRANE AT
   60 mils THICK

6) INSTALL CCW PROTECTION BOARD
   OR CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-525 Detail

Expansion Joint (525-3B)



NOTES

1) INSTALL BACKER ROD.
   (DIA = 1 1/2" X JT WIDTH)

2) INSTALL CCW-201 SEALANT.
   TOOL SEALANT TO FORM A 45°
   CANT. ALLOW TO CURE OVERNIGHT

3) APPLY CCW-525V DETAIL COAT AT
   45 ±5 mils THICK
   EXTEND TO HEIGHT CALLED OUT ON
   DRAWINGS. ALLOW TO CURE OVER NIGHT

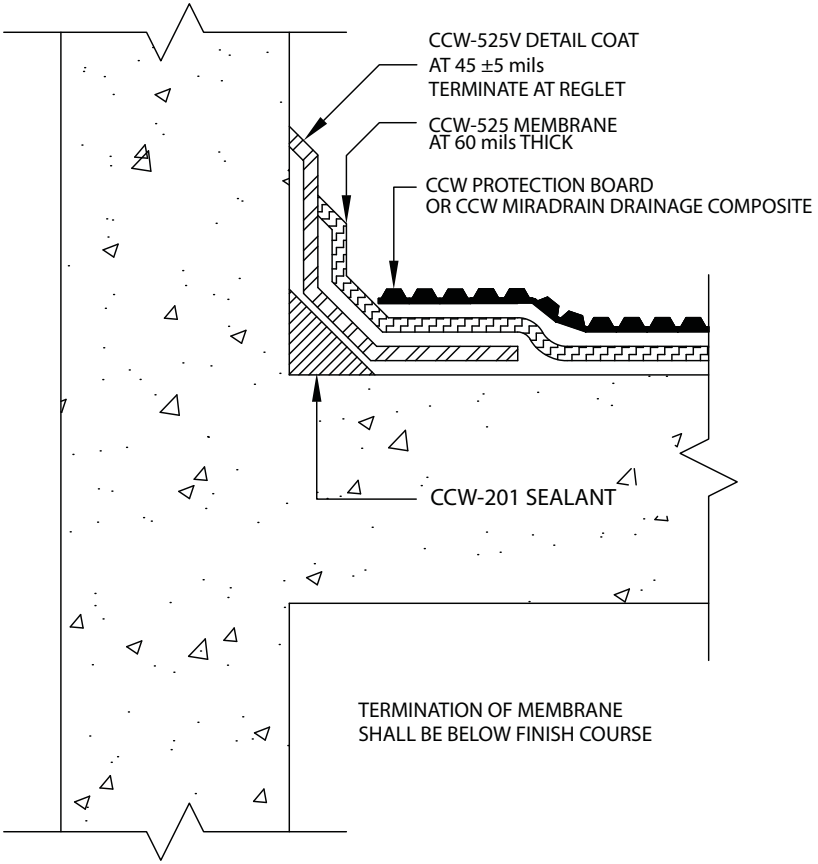
4) CLEAN DETAIL COAT USING A CLEAN
   CLOTH WET WITH XYLENE SOLVENT
   PRIOR TO APPLYING CCW-525

5) APPLY CCW-525 MEMBRANE AT 60 mils
   THICK

6) INSTALL CCW PROTECTION BOARD
   OR CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-525 Detail

Curb and Parapet (525-4)



NOTES

1) INSTALL CCW-201 SEALANT. TOOL SEALANT TO FORM A 45° CANT. ALLOW TO CURE OVERNIGHT

2) APPLY CCW-525V DETAIL COAT AT 45 ±5 mils THICK TERMINATE INTO A REGLET OR USE A COUNTER FLASHING ALLOW TO CURE OVER NIGHT

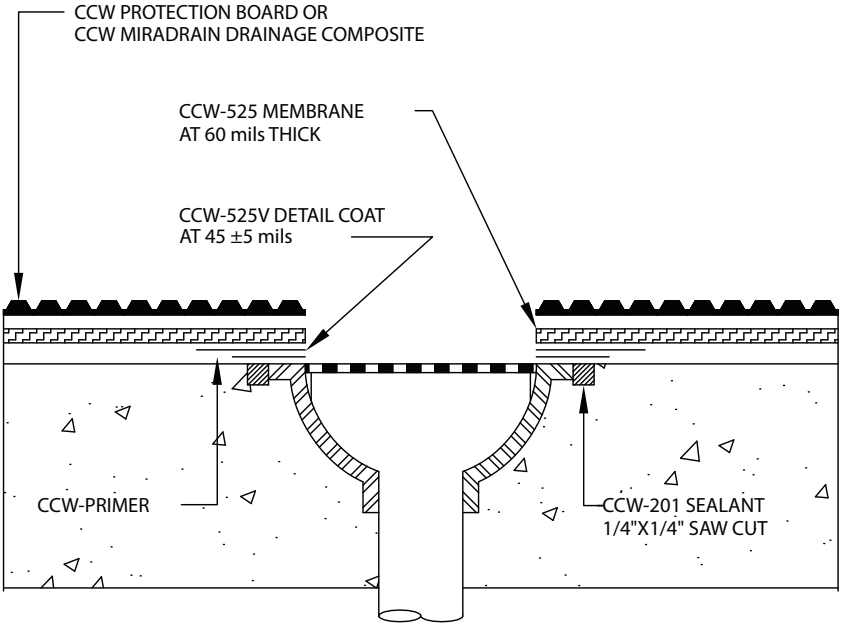
3) CLEAN DETAIL COAT USING A CLEAN CLOTH WET WITH XYLENE SOLVENT PRIOR TO APPLYING CCW-525

4) APPLY CCW-525 MEMBRANE AT 60 mils THICK

5) INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-525 Detail

Drain (525-6)



NOTES

1) SAW CUT (1/4" X 1/4")
AROUND DRAIN FLANGE.

REMOVE DUST - APPLY CCW-555
PRIMER AND ALLOW PRIMER TO DRY.

APPLY CCW-201 SEALANT
TOOL FLUSH
ALLOW TO CURE OVER NIGHT.

2) CLEAN FLANGE TO EXPOSE BRIGHT
METAL

APPLY CCW-557 OR 558 PRIMER
ALLOW TO DRY

3) APPLY CCW-525V DETAIL COAT
AT 45 ±5 mils TO DRAIN FLANGE
AND EXTEND 4" ONTO DECK
ALLOW TO CURE OVER NIGHT

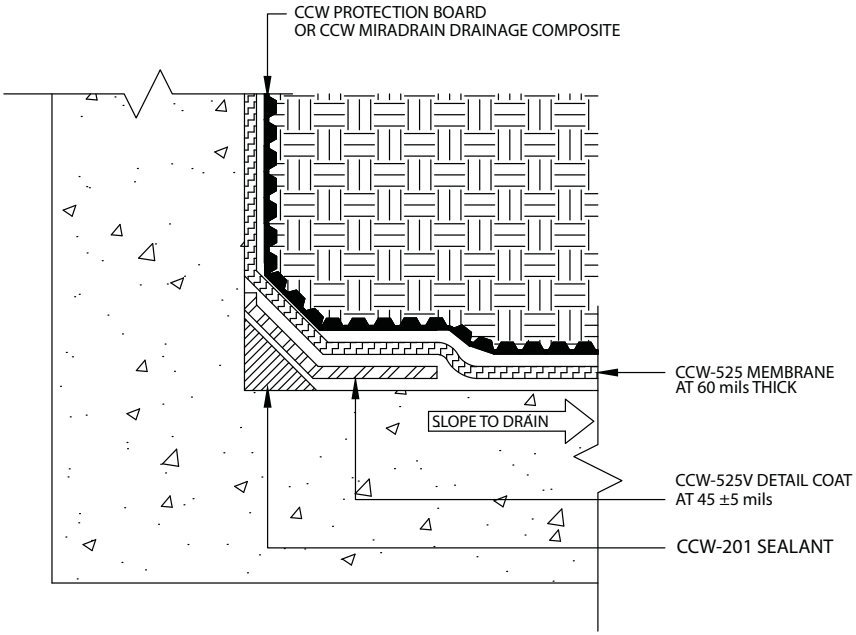
CLEAN DETAIL COAT USING A CLEAN
CLOTH WET WITH XYLENE SOLVENT
PRIOR TO APPLYING CCW-525

4) APPLY CCW-525 MEMBRANE
AT 60 mils THICK

5) INSTALL CCW PROTECTION BOARD OR
CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-525 Detail

Planters (525-7)



NOTES

1) INSTALL CCW-201 SEALANT.
   TOOL SEALANT TO FORM A 45°
   CANT. ALLOW TO CURE OVERNIGHT

2) APPLY CCW-525V DETAIL COAT AT
   45 ±5 mils THICK
   ALLOW TO CURE OVER NIGHT

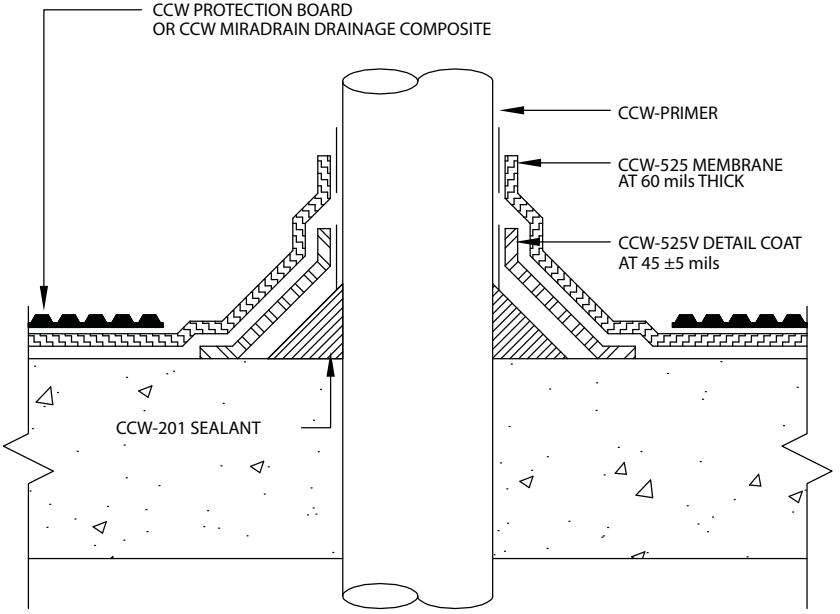
3) CLEAN DETAIL COAT USING A CLEAN
   CLOTH WET WITH XYLENE SOLVENT
   PRIOR TO APPLYING CCW-525

4) APPLY CCW-525 MEMBRANE AT 60 mils
   THICK

5) INSTALL CCW PROTECTION BOARD
   OR CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-525 Detail

Penetration (525-8)



NOTES

1) CLEAN METAL TO A BRIGHT FINISH

2) APPLY CCW-PRIMER
ALLOW TO DRY

3) APPLY CCW-201 SEALANT AROUND
PENETRATION AND TOOL TO FORM A
45° CANT. ALLOW SEALANT TO CURE

4) APPLY CCW-525V DETAIL COAT AT
45 ±5 mils THICK
ALLOW TO CURE OVER NIGHT

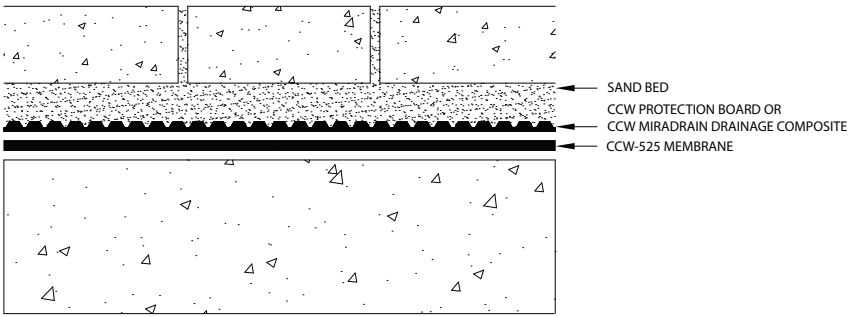
5) CLEAN DETAIL COAT USING A CLEAN
CLOTH WET WITH XYLENE SOLVENT
PRIOR TO APPLYING CCW-525

6) APPLY CCW-525 MEMBRANE AT 60 mils
THICK

7) INSTALL CCW PROTECTION BOARD
OR CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-525 Detail

Pavers (525-10A)



NOTES

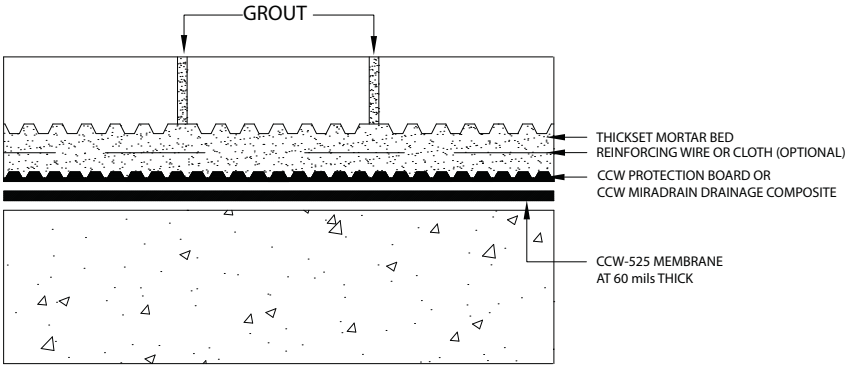
1) APPLY CCW-525 MEMBRANE AT 60 mils THICK

2) ALLOW TO CURE 24 HOURS

3) INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE

CCW-525 Detail

Paver Plaza Deck (525-10B)



CERAMIC TILE INSTALLATION SHALL BE AS RECOMMENDED BY
TILE COUNCIL OF AMERICA

NOTES

1) APPLY CCW-525 MEMBRANE
   AT 60 mils THICK

   ALLOW TO CURE 24 HOURS

2) INSTALL CCW PROTECTION BOARD OR
   CCW MIRADRAIN DRAINAGE COMPOSITE

TYPICAL USES

MiraSEAL is available in a single viscosity for both horizontal and vertical surfaces. Typical applications are between structural slab and wearing course on parking garages, plaza decks, balconies, roof decks, terraces, mechanical equipment rooms, wetrooms, malls, kitchens and shower stalls. MiraSEAL is ideally suited for waterproofing on below-grade foundation walls, tunnels, planters and other areas where a seamless, elastomeric waterproofing is required.

LIMITATIONS

- Do not apply MiraSEAL to wet or contaminated surfaces
- Not recommended for exposed or wearing surfaces
- If metal pan is used for concrete form, the metal pan must be vented
- Surface temperature must be above 40°F

PACKAGING

5-gallon pails

Carlisle DCH Polyester Reinforcing Fabric = 40” x 324’

SHELF LIFE

When stored at temperatures below 80°F, shelf life is 12 months in the original, unopened container.

WARNING AND HAZARDS

Combustible liquid and vapor. Keep away from heat and flame. Use only with adequate ventilation. Avoid contact with the eyes or skin, especially open breaks in the skin. In the event of skin contact, remove immediately and wash with warm soapy water. Refer to MSDS for important warnings and product information.

INSTALLATION

Surface Preparation: New concrete shall be water-cured, trowel-finished, followed by a light, hair broom and in place for 3 days minimum. If curing compounds are required, they shall be 100% Sodium Silicate and shall be approved by Carlisle. Surfaces shall be structurally sound, dry, and free of oil, grease, dirt, laitance, curing or release agents and other contamination that may harmfully affect the adhesion of the membrane. Mortar joints on block walls shall be struck flush with the block surface.

Remove splatters, fins, ridges or other projections to provide a smooth, level surface. Fill tie rod holes, honey combs, rock pockets, spalls or other voids and indentations with non-shrink grout. Saw-cut moving cracks greater than 1/16” in width to 1/4” wide x 1/4” deep.

Grind or fill (as required) surface at cold joints whereeach pour is at a different plane, to provide a smooth and level surface. Clean metal to expose a bright finish.

Detail work: Clean joints and saw-cut cracks. All moving cracks over 1/16” wide and all expansion joints less than 1” wide shall be cleaned, primed, fitted with a backing rod and caulked with Carlisle Polyurethane Sealant as recommended by the data sheet. For larger joints, contact Carlisle representative.

Apply a one inch, 45º angle cant of CCW-201 sealant at the juncture of all vertical and horizontal surfaces including at pipes, vents and other projections.

Apply a bondbreaker tape over the Sealant installed in expansion joints. Width of bondbreaker shall be three times joint width.

Apply a 4”-6” wide stripe coat of MiraSEAL Membrane over all sealed cracks, joints and over all hairline cracks less than 1/16” and cold joints. Apply a stripe coat of MiraSEAL over sealant cants and up the vertical wall to the height called out on the drawings, (minimum eight inches recommended) and onto the horizontal deck 4”-6”. Stripe coat shall be 45 +/- 5 mils thick. Allow stripe coats to cure over night.

Priming: Primer is not required for adhesion to dry, non-porous concrete. However, if pinhole and blister problems occur as a result of air and/or moisture vapors emitted from the concrete and environmental conditions, it is recommended that the surface be primed with CCW-557 Primer. Refer to CCW-557 data sheet for information on the use of this product.

Apply CCW-559 Primer to metal surfaces immediately after sanding and cleaning. Refer to CCW-559 data sheet for information on the use of this product.

For Horizontal: Apply MiraSEAL over cleaned, primed flange of drains, taking care not to fill weep holes. Using a notched squeegee, apply MiraSEAL at 35 sq. ft. per gallon or as required to obtain a 45-mil thickness, and backroll the entire area to receive waterproofing, including over all detail coats. Allow to cure and repeat application to achieve a 60-mil thickness.

For Vertical: Using a roller, apply MiraSEAL in two coats at a rate of 53 square feet per gallon per coat or as required to obtain 30 mils per coat for a final dry film thickness of 60 mils. Wait 4 hours between each coat.

For reinforced systems: Apply MiraSEAL at 26 square feet per gallon or as required to obtain a 60-mil thickness to the entire area to receive waterproofing, including over all detail coats. Use a 1/4” notched squeegee or flat squeegee with guide pins to achieve a uniform thickness. Immediately install Carlisle DCH white polyester reinforcing fabric into the uncured MiraSEAL. Install carefully to avoid wrinkles. In the event of wrinkles or fishmouths, cut the fabric and overlap the excess to avoid trapped air. Once the coating has cured to a firm consistency, apply an additional coat of MiraSEAL at 26 sq. ft. per gallon or as required to obtain a 60-mil thickness, extending past the edge of the fabric to completely encapsulate it. Total system dry film thickness is 120 mils.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

Protection: The membrane must be protected from damage caused by future operations and other trades. The applicator shall install protection material applicable to jobsite conditions, to protect the membrane. Protection course must be CCW Protection products that correspond to horizontal or vertical applications.

Install protection course on vertical walls immediately after membrane has cured (24 hrs at 75°F). Install protection course on horizontal application immediately following successful flood testing. If flood test is delayed, install a temporary covering to protect the membrane from other trades.

Flood Test: After membrane has cured 24-48 hours, plug drains and provide necessary barriers to contain flood water. Flood deck with a 2” head of water and allow to stand for 24 hours. Check for leaks and immediately make repairs if required. Retest after any repairs have been made.

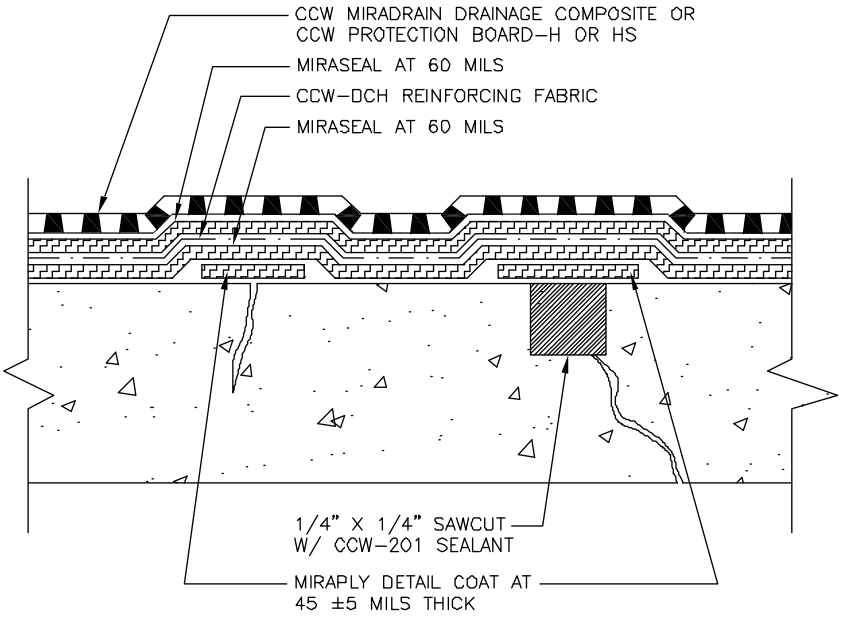
Clean Up: Before material cures, clean adjacent areas to remove stains or spills and clean tools with toluene or xylene. Do not wash off skin with solvents.

MiraSEAL Detail

Crack Treatment (MS-1A)

CRACK LESS THAN 1/16" WIDE

CRACK GREATER THAN 1/16" WIDE



NOTES

1) SAW CUT CRACKS GREATER THAN 1/16" TO 1/4" WIDE X 1/4" DEEP

2) APPLY CCW–201 SEALANT AND TOOL FLUSH. ALLOW TO DRY OVER NIGHT

3) APPLY MIRASEAL DETAIL COAT OVER HAIRLINE CRACKS, COLD JOINTS AND SEALED SAWCUTS A MINIMUM OF 6" WIDE AND 45 MILS THICK AND ALLOW TO CURE

4) APPLY MIRASEAL MEMBRANE AT 60 MILS THICK

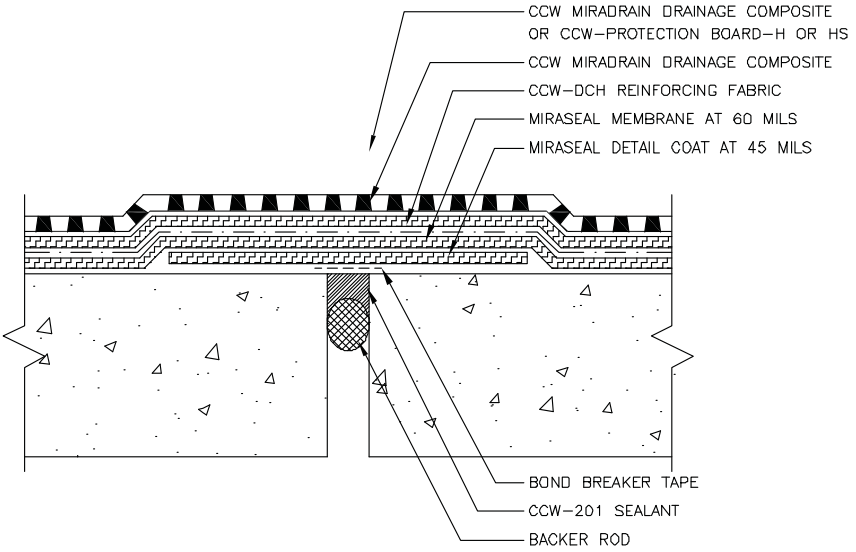
5) INSTALL CCW–DCH REINFORCING FABRIC INTO WET MIRASEAL AND ALLOW TO CURE

6) APPLY MIRASEAL MEMBRANE AT 60 MILS THICK

5) INSTALL CCW MIRADRAIN DRAINAGE COMPOSITE OR CCW PROTECTION BOARD H OR HS

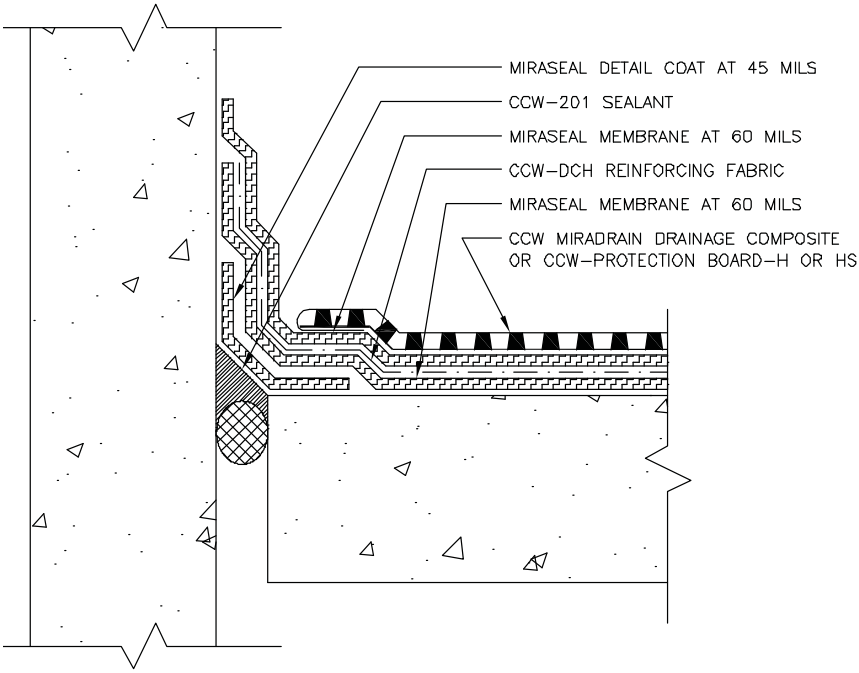
MiraSEAL Detail

Expansion Joints Less than ½" (MS-3A)



MiraSEAL Detail

Expansion Joints Less than ½" (MS-3B)



NOTES

1) APPLY CCW-201 SEALANT AND TOOL TO FORM A 45° CANT. ALLOW TO CURE OVERNIGHT.

2) APPLY A MIRASEAL DETAIL COAT AT 45 MILS THICK. ALLOW TO CURE.

3) APPLY A MIRASEAL MEMBRANE AT 60 MILS THICK.

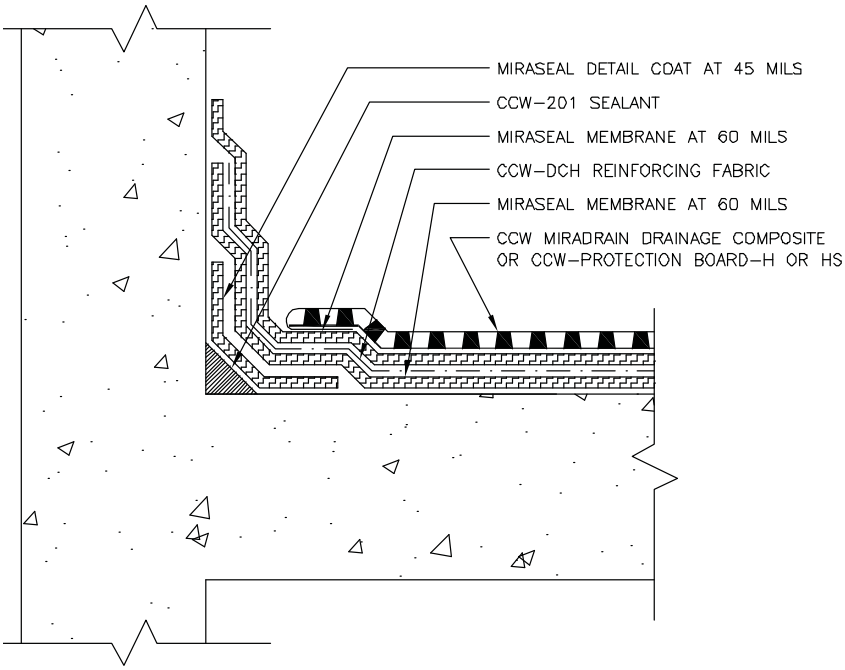
4) INSTALL CCW-DCH REINFORCING FABRIC INTO WET MIRASEAL AND ALLOW TO CURE.

5) APPLY A MIRASEAL MEMBRANE AT 60 MILS THICK.

6) INSTALL CCW MIRADRAIN DRAINAGE COMPOSITE OR CCW-PROTECTION BOARD-H OR HS

MiraSEAL Detail

Curb and Parapet (MS-4A)



NOTES

1) APPLY CCW-201 SEALANT AND TOOL TO FORM A 45° CANT. ALLOW TO CURE OVERNIGHT.

2) APPLY A MIRASEAL DETAIL COAT AT 45 MILS THICK. ALLOW TO CURE.

3) APPLY A MIRASEAL MEMBRANE AT 60 MILS THICK.

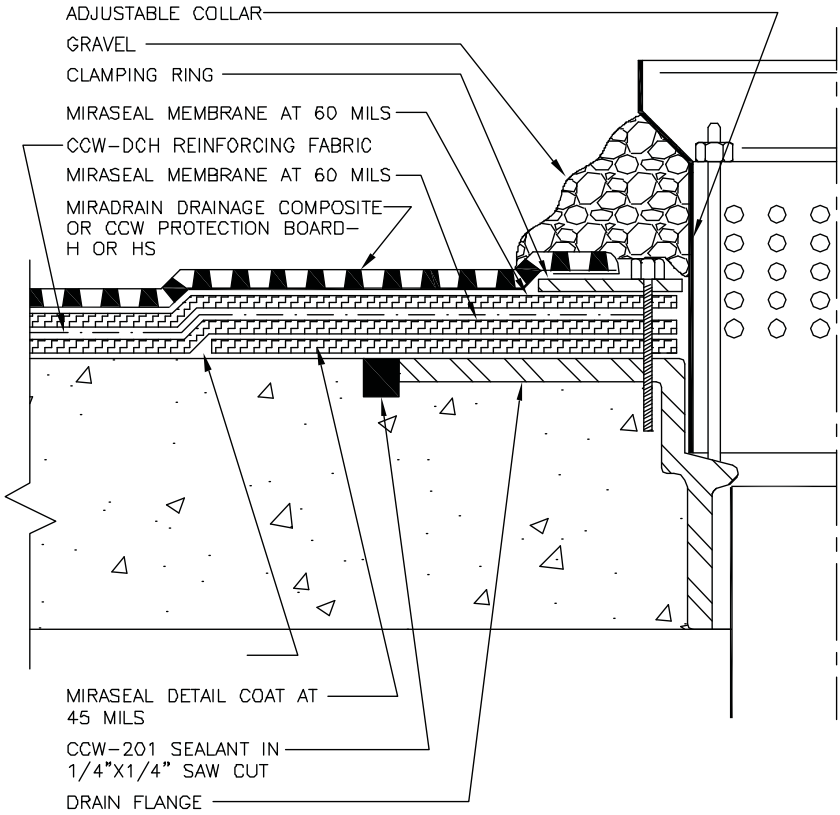
4) INSTALL CCW-DCH REINFORCING FABRIC INTO WET MIRASEAL AND ALLOW TO CURE.

5) APPLY A MIRASEAL MEMBRANE AT 60 MILS THICK.

6) INSTALL CCW MIRADRAIN DRAINAGE COMPOSITE OR CCW-PROTECTION BOARD-H OR HS

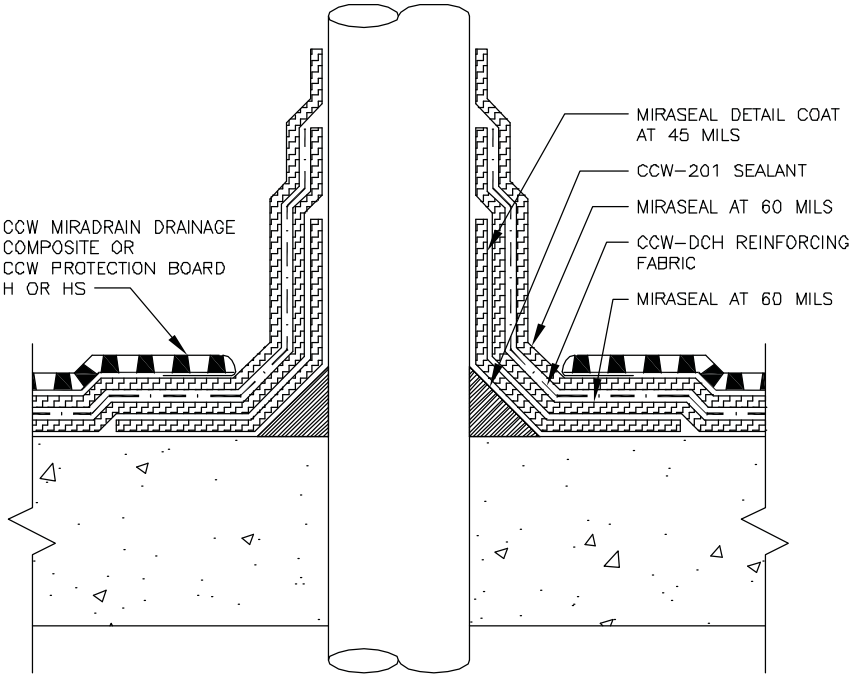
MiraSEAL Detail

Double Drain (MS-6)



MiraSEAL Detail

Pipe and Penetration Flashing (MS-8A)



NOTES

1) CLEAN METAL TO A BRIGHT FINISH.

2) INSTALL CCW–201 SEALANT. TOOL SEALANT TO FORM A 1 1/2" X 1 1/2", 45 DEGREE CANT. LET CURE OVER NIGHT.

3) APPLY MIRASEAL DETAIL COAT AT 45 MILS THICK

4) APPLY MIRASEAL MEMBRANE AT 60 MILS THICK

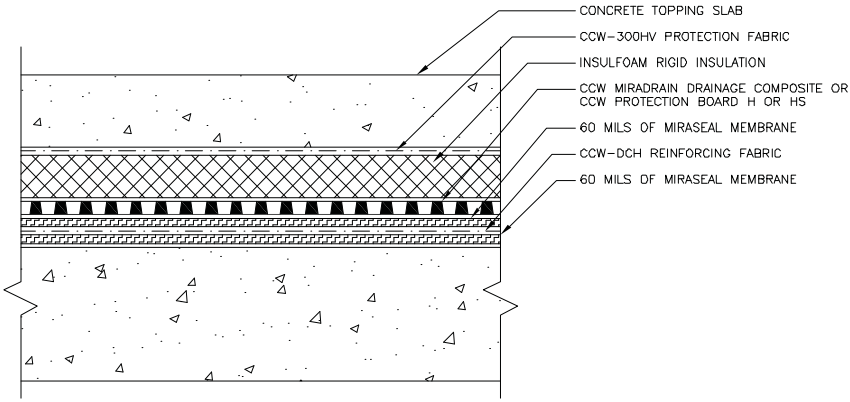
5) INSTALL CCW–DCH REINFORCING FABRIC INTO WET MIRASEAL AND ALLOW TO CURE

6) APPLY MIRASEAL MEMBRANE AT 60 MILS THICK

7) INSTALL CCW MIRADRAIN DRAINAGE COMPOSITE OR CCW–PROTECTION BOARD–H OR HS.

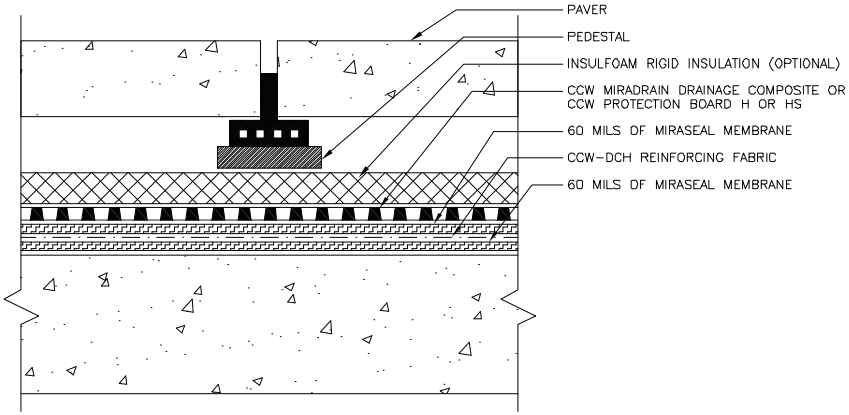
MiraSEAL Detail

Insulated Plaza Deck (MS-10A)



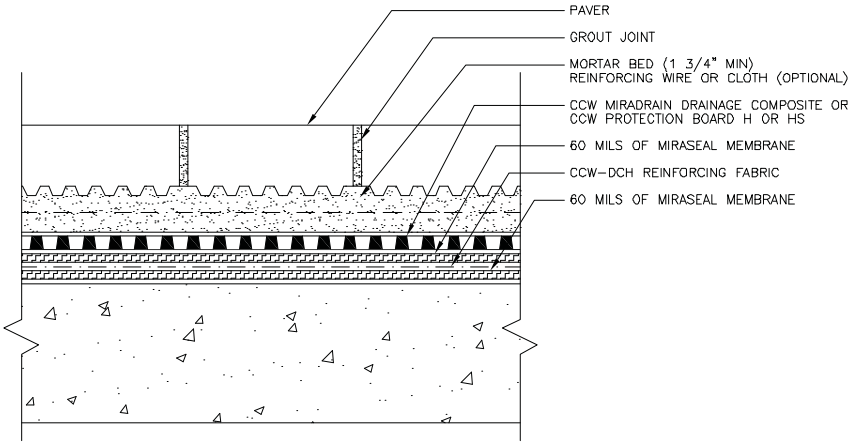
MiraSEAL Detail

Paver Plaza Deck (MS-10B)



MiraSEAL Detail

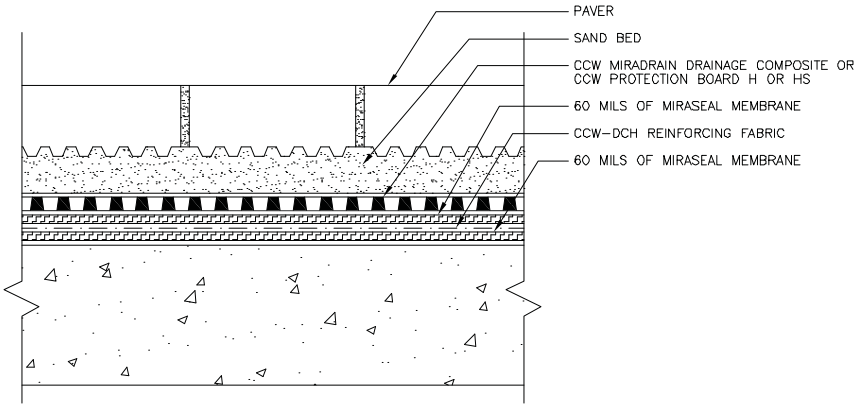
Mortar Bed with Paver Plaza Deck (MS-10C)



CERAMIC TILE INSTALLATION SHALL BE AS RECOMMENDED BY TILE COUNCIL OF AMERICA

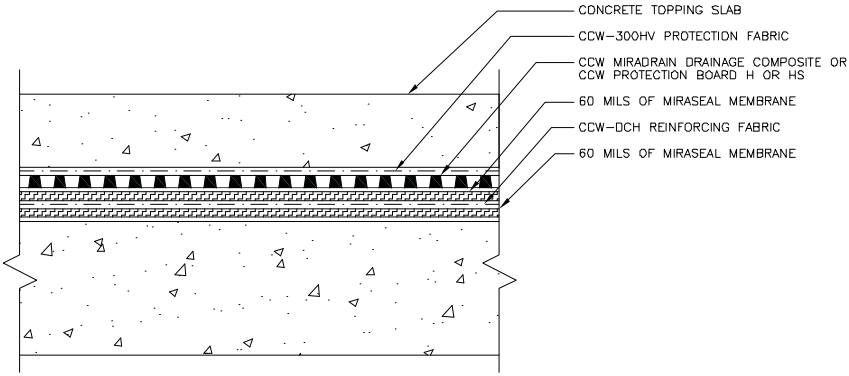
MiraSEAL Detail

Sand Bed with Paver Plaza Deck (MS-10D)



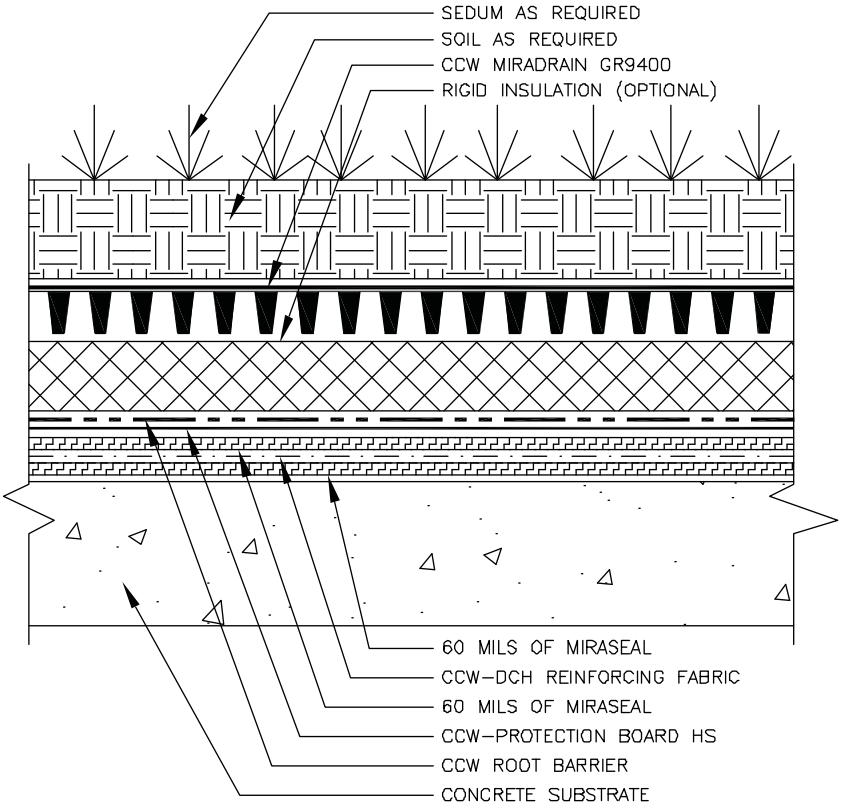
MiraSEAL Detail

Concrete Topping Slab (MS-10E)



MiraSEAL Detail

Garden Roof with MiraDRAIN GR9400 (MS-11A)



TYPICAL USES

Liquiseal is available in two viscosities (H & V) for application to Horizontal and Vertical surfaces. Typical applications are between structural slab and wearing course on parking garages, plaza decks, balconies, roof decks, terraces, mechanical equipment rooms, fountains, kitchens, wetrooms, malls and shower stalls. Liquiseal is ideally suited for waterproofing on below-grade foundation walls, tunnels, planters and other areas where a seamless, elastomeric waterproofing is required.

LIMITATIONS

- Do not apply Liquiseal to a wet, damp or contaminated surface.
- Not recommended for exposed or wearing surface.
- If metal pan is used for concrete form, the metal pan must be vented.
- Surface temperature must be above 40°F and rising.
- Do not use CCW-703-H beneath rubberized asphalt membranes.

PACKAGING

Supplied in kit form:

3.5 gal Part A

0.5 gal Part B

45 lbs/Unit

Shelf Life: 12 months

INSTALLATION

Preparation: An inspection must be made of all surfaces on which the CCW-703 Liquiseal waterproofing membrane is to be installed to ensure that the concrete deck is clean, dry, smooth, and free of contaminants. Do not apply over CCW-550 Primer.

Installation of Liquiseal waterproofing membrane shall not commence until the area to receive the waterproofing has been cleared of all traffic and stored materials of other trades, and all surface dirt and dust removed by blowing with air under pressure, use of a soft broom, or washed with potable water, followed by thorough drying.

Cracks, holes and other surface imperfections exceeding 1/16” in width or 1/16” in depth, as measured at 70°F or less and evident at the conclusion of the curing or drying period, shall be patched with Vertical Grade Liquiseal before the deck is coated.

Vents and Drain Pipes: Voids or openings around vents, pipes, drains, or other protrusions shall be treated with Vertical-Grade Liquiseal waterproofing membrane.

Expansion Joints: Install Sure-Seal® Elastoform Flashing 12 inches wide, centered over the joint, embedding the flashing in Vertical-Grade Liquiseal. Care must be taken not to stretch the flashing, and any entrapped air, wrinkles, or fishmouths should be worked out. As soon as possible, the entire expansion joint should be coated with Horizontal- Grade Liquiseal. Should the flashing at the expansion joint be exposed for a significant period of time, it may be necessary to clean the membrane with an approved solvent prior to applying the final coating of Liquiseal.

Flashing should be installed in lengths as long as possible, lapped a minimum of four inches, and spliced using Sure-Seal EP-95 splicing cement.

Application: Application of Liquiseal Waterproofing Membrane shall not commence if temperatures are below 40ºF, or if the weather is inclement or threatening.

Should the uncured Liquiseal Waterproofing Membrane be exposed to rain prior to obtaining a surface cure, the water will penetrate the surface of the membrane and form craters. If this occurs, allow the waterproofing membrane to cure and dry thoroughly. Remove all dust and dirt and apply a top coating of Liquiseal Waterproofing Membrane to fill all depressions in the membrane.

Mixing/Application: Combine the two components of Liquiseal according to mixing instructions. When mixing Part A and Part B, use a variable-speed 1/2" drill with a Model PS Jiffy blade for a minimum of five minutes.

The mixed batch will provide a pot life of 1-2 hours at 40ºF to 60ºF and 1/2 to 1 hour at 80ºF.

As soon as Liquiseal Waterproofing Membrane is mixed, apply directly to the concrete slab in a uniform application spreading with a squeegee or trowel. Controlled coverage is obtained by applying 4 gallons of Liquiseal per measured 100 square feet, resulting in a seamless membrane approximately .055 +/- .005 inches thick.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

Coves and vertical surfaces should be coated with trowel-applied, Vertical-Grade Liquiseal prior to horizontal application. This initial coating should extend onto the horizontal surface two to three inches. When the deck waterproofing membrane is applied, it should be continued up and over the previously coated applied vertical surface.

Liquiseal can be sprayed with a Graco 45:1 pump, airless gun, (or equal), equipped with a Reverse-A-Clean tip. Material build-up on surfaces will vary with equipment used, texture of finished surface and speed of pass, 20-to 25-mil thickness per pass can be expected.

Protection Course: For at least 24 hours after application of Liquiseal Waterproofing Membrane, the surface should be kept free of all traffic. If the membrane is to be left uncovered for a significant period of time, install CCW Protection Board or CCW MiraDRAIN drainage composite following the 24-hour cure time.

TYPICAL USES

Barricoat-S is a waterproofing and vapor barrier membrane for use in below-grade foundation wall assemblies. Barricoat-S is for use on primarily-vertical surfaces and can be applied directly to concrete, concrete masonry, polystyrene foam insulation board and many other common building materials. Barricoat-S waterproofing plus MiraDRAIN drainage composite are combined for a complete, warranted foundation waterproofing system by CCW.

LIMITATIONS

- Protect from freezing during delivery, storage and handling
- Not intended for permanent exposure. Cover within 30 days of application.
- Not compatible with silicone, coal tar, polysulfide or plasticized PVC.
- Do not apply solvent-based products over Barricoat-S
- Not for use in plaza deck, planter, pond liner or other horizontal waterproofing applications
- Not for use as a negative-side waterproofing membrane.

PACKAGING

Barricoat-S and Barricure are purchased separately. Note that Barricure is a REQUIRED system component. Consumption of Barricure is approximately one pail for every 3 drums of Barricoat-S, or two pails for each tote.

PRODUCT NAME	DESCRIPTION	AVAILABLE ITEMS
Barricoat-S	Spray-applied waterproofing membrane	P/N 304918 – 55-gallon drum filled with 50 gallons of product P/N 305508 – 330-gallon tote
Barricure	Chloride-free curing agent for Barriseal-S	P/N 309736 – 5-gallon pail

PERCENT SOLIDS

63%

COVERAGE

Theoretical coverage rate is 16 sq ft per gallon.

STORAGE

Store product and accessories in area protected from direct sunlight and precipitation, and away from open flames, sparks or welding. Store flammable materials in accordance with federal, state and local regulations. Store drums and totes of Barricoat-S in an area maintained between 50°F and 90°F.

WARNINGS AND HAZARDS

Avoid inhaling Barricoat-S and Barricure™ spray mists. Use only in areas with adequate ventilation. CCW-702, CCW-702 LV, CAV-GRIP and LM 800 XL contain flammable and combustible solvents. Refer to MSDS for Barricoat-S and accessory products for important warnings and information.

INSTALLATION

Concrete shall be cured in place for 3 days minimum. Verify that surfaces are free of visible surface moisture, loose materials, release oils and other contaminants. These shall be removed prior to application by power washing or other suitable method. Fill form tie holes, honeycomb and voids with non-shrink grout or CCW-703 V LiquiSEAL. Barricoat-R may be used to fill voids and irregularities that do not

exceed ¼" depth. Grind fins and similar protrusions flush. On concrete masonry unit (CMU) construction, mortar joints shall be free of voids and struck flush and mortar droppings shall be removed from surfaces.

Procedure for Installation of CCW-201 and CCW-703V LiquiSEAL: Apply according to instructions on product data sheet. Allow sealant to cure fully before covering with Barricoat-R or MiraDRI 860/861 Strips.

Procedure for Installation of Barricoat-R + DCH Reinforcing Fabric: Apply approximately 30 wet mils of Barricoat-R to the substrate with a brush or roller. Immediately set DCH Reinforcing Fabric into Barricoat-R, pressing the fabric into the liquid while smoothing wrinkles with a brush or drywall knife. Lap neighboring pieces of DCH Reinforcing Fabric 2" minimum, and apply Barricoat-R into laps. Immediately cover fabric with a 2nd coat of Barricoat-R, encapsulating it. When the substrate temperature is 32°F or lower, or the ambient temperature is below 50°F, spray the top coat of Barricoat-R with Barricure solution, dispensed either from the co-spray gun with Barricoat-S turned off, or from a garden sprayer. Allow the detail to dry firm before spraying over with Barricoat-S.

Procedure for Installation of MiraDRI 860/861 Strips: When the ambient or substrate temperature is below 40°F, use MiraDRI 861 Strips and follow the cold weather installation procedure indicated on the product data sheet. Prepare the surface with CCW-702 WB or CCW-702/702 LV, following the instructions on product data sheet. Apply CCW-715 to damp or green concrete surfaces. Apply the contact adhesive over enough area that it extends 1" minimum beyond the edge of the installed self-adhering flashing. Cut manageable-sized pieces of self-adhering flashing from the roll using sharp knife, making square, clean cuts. Lap neighboring pieces 5" minimum and sequence the installation to provide shingled laps. Press the self-adhering flashing firmly to the substrate with a hand roller tool, especially at edges and laps. Seal over laps and cuts and around penetrating hardware with LM 800 XL Mastic.

Procedure for Detailing Cracks and Cold Joints: Fill and cover non-moving cracks less than 1/16" with a detail coat of Barricoat-R. Cover cold joints and cracks 1/16" wide and greater with minimum 6" width DCH Reinforcing Fabric encapsulated in Barricoat-R or with 6" width MiraDRI 860/861 Strips. In addition, fill cracks exceeding ¼" width with non-shrink grout or CCW-201 struck flush, and allow the fill to cure before application of the fabric or membrane strips.

Procedure for Detailing Inside & Inside Corners: Cover with minimum 6" width DCH Reinforcing Fabric encapsulated in Barricoat-R or 6" width MiraDRI 860/861 Strips.

Procedure for Detailing Foundation-to-Footing Transition: Apply 12" width DCH Reinforcing Fabric encapsulated in Barricoat-R. Alternate method: fill the angle with a ¾" tooled bead of CCW-201, then cover with 12" MiraDRI 860/861 Strips.

Procedure for Detailing Pipe/Conduit Penetrations: Fill the rough gap around the penetration with non-shrink grout or CCW-201. Wrap pipe or conduit with MiraDRI 860/861 Strips, or DCH Reinforcing Fabric encapsulated in Barricoat-R. Reinforcement shall bear 3"minimum onto the wall and 3" minimum onto the pipe or conduit. Consult CCW shop drawings for more detail.

Procedure for Detailing Expansion Joints, Control Joints and Transitions: Fill expansion joints with a tooled bead of CCW-201 over backer rod. Cover the joint or transition with two, 30-wet-mil coats of Barriseal-R or with MiraDRI 860/861 Strips. Treatment shall bear 4" minimum onto each side of joint. Consult CCW shop drawings for more detail.

Standard Procedure for Spraying Barricoat-S: Obtain full, safe access to the area and mask adjacent surfaces to protect from overspray. Verify that the product is within shelf life, as indicated on the product label. Inspect freeze indicator

on the drum or tote to verify if it has been broken from exposure to freezing temperatures. Open drums or totes bearing broken freeze indicators and inspect material for sludge, particles or separation. Contact CCW Technical Service for more information on product inspection. Load Barricoat-S and Barricure into the spray system and start up according to the instructions given in the CCW Spray Equipment Brochure. Spray the wall surfaces, holding the gun approximately 20" to 24" from the surface. Keep the gun pointed square to the surface while spraying the surfaces from the bottom, upward. Apply a maximum of 90 mils wet thickness per coat. Total membrane thickness after full cure shall measure a minimum of 60 mils. Note that coating thickness measured shortly after spray will only shrink about 10% by volume, since Barricure has already pulled much of the water from the Barricoat-S by the time thickness can be measured. Therefore, minimum thickness measured shortly after spray should read a minimum of 70 mils with a comb type wet mil gauge, or 66 mils with a pin gauge. Spray full thickness over cold joint details and corner details. Provide complete coverage over surfaces, so that there are no voids, pinholes or similar passages through membrane. Allow the membrane to dry completely before subjecting it to inspection for water leakage and adhesion testing. Drying time varies with substrate, ambient temperature and humidity. Membrane is dry when it appears black and rubber-like, and feels dry when pressed. Install MiraDRAIN drainage composite, Protection Board V or insulation board by others over the Barricoat-S membrane before backfill.

Provisions for Spray of Barricoat-S in Cold Weather: If the ambient or substrate temperature is 32°F or lower, incorporate these modifications to the standard procedure: Spray Barricoat-S in two coats at 35-40 wet mils each, allowing drying between coats. Keep drums of Barricoat-S and the spray equipment in an area maintained at or above 50°F, and keep the hose and gun reeled in except during spray.

Provisions for Spray of Barricoat-S on Aerated Concrete, Green Concrete, or Concrete Containing Additives that Cause Gassing: If Barricoat-S tends to blister shortly after spray on the concrete substrate, incorporate these modifications to the standard procedure: Spray the surface with approximately 10 mils wet of Barricoat-S, with the Barricure stream shut off. Allow this "primer coat" of Barricoat-S to dry firm, then apply Barricoat-S co-sprayed with Barricure according to the standard procedure or the cold weather procedure.

Procedure for Repairing Damage to the Installed Membrane: Remove damaged and loosely-adhered material. Clean weathered or dirty surfaces with a clean rag wet with xylene or toluene. Allow any solvent to dry and cover damaged area with three, 30-wet-mil coats of Barricoat-R or a minimum 70-wet-mil coat of Barricoat-S.

Procedure for Installation of MiraDRAIN over Barricoat-S: Allow Barricoat-S membrane to dry completely. Spray CAV-GRIP adhesive over the surface of Barricoat-S, and press MiraDRAIN in place. Install MiraDRAIN, QuickDRAIN and HC connectors in accordance with MiraDRAIN Installation Guide.

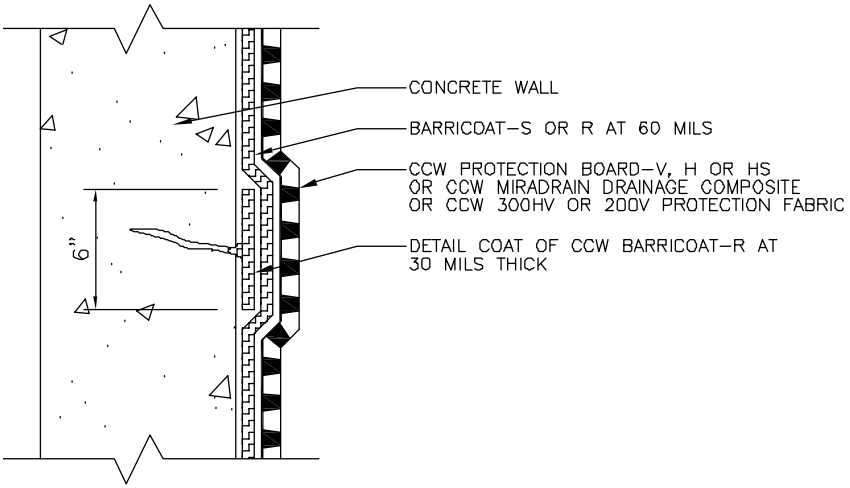
Procedure for Installation of Protection Board V OR Foam Plastic Board Insulation by Others over Barricoat-S: Allow Barricoat-S membrane to dry completely. Attach insulation to surface of membrane with CAV-GRIP or approved insulation adhesive by others. Where CAV-GRIP is used, spray adhesive over surface of Barricoat-S, and press insulation in place.

Procedure for Installation of Insulation Board and MiraDRIAN over Barricoat-S: CCW recommends installation of insulation over the Barricoat-S followed by installation of MiraDRIAN drainage composite over the insulation. Bond the insulation to Barricoat-S according to the aforementioned procedure. Bond MiraDRAIN to the surface of the insulation by spraying CAV-GRIP to back side of MiraDRAIN, and pressing MiraDRAIN to the surface of the insulation.

Barricoat-S Detail

Crack Treatment

Non-Moving Cracks Less than 1/16" (BC-1A)

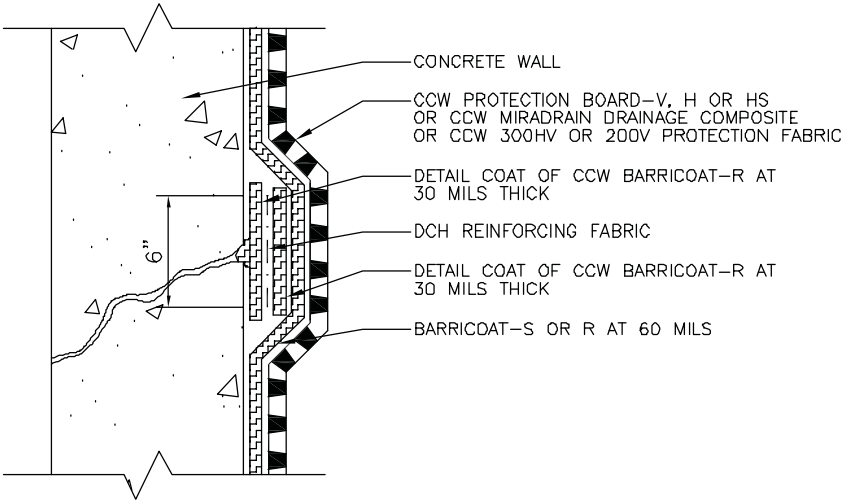


NOTES

1. APPLY BARRICOAT–R 3–INCHES ON EITHER SIDE OF CRACK
2. APPLY BARRICOAT–S OR R AT 60mils
3. INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE.

Barricoat-S Detail

Crack Treatment Greater than 1/16"
Construction Joints or Moving Cracks (BC-1B)

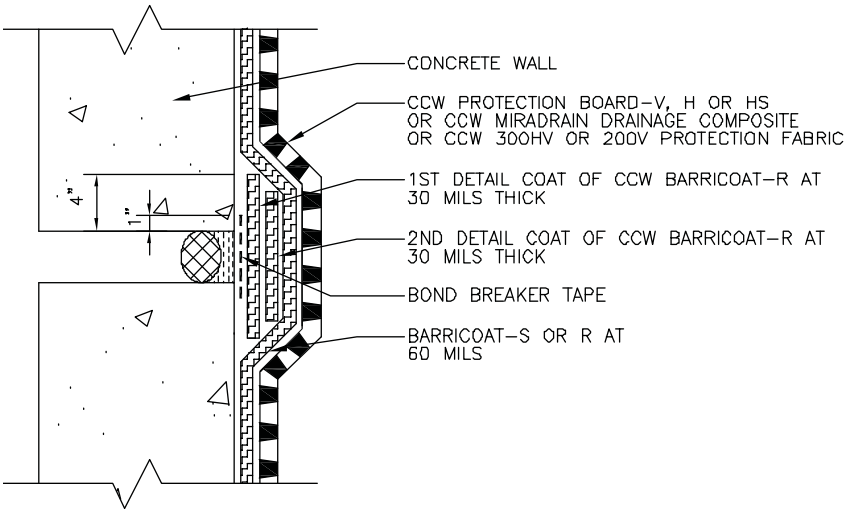


NOTES

1. APPLY BARRICOAT–R 3–INCHES ON EITHER SIDE OF CRACK @ 30mils AND EMBED 6–INCH DCH REINFORCING FABRIC INTO THE BARRICOAT.
2. APPLY 30mils OF BARRICOAT OVER THE DCH REINFORCING FABRIC.
3. APPLY BARRICOAT–S OR R AT 60mils
4. INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE.

Barricoat-S Detail

Expansion Joints Less than ½" (BC-3A)

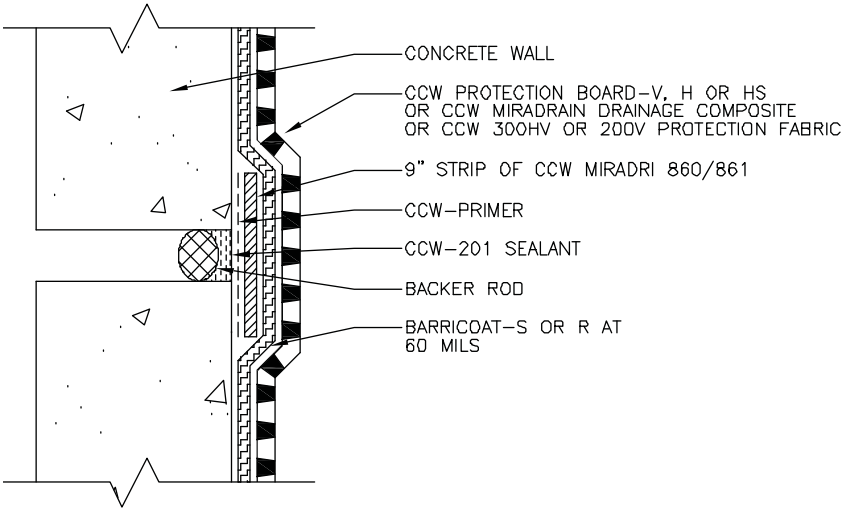


NOTES

1. INSTALL BACKER ROD. SEALANT DEPTH SHALL EQUAL 1/2 OF JOINT WIDTH.
2. INSTALL CCW–201 SEALANT TOOL FLUSH WITH SURFACE ALLOW TO CURE OVER NIGHT.
3. APPLY BOND BREAKER TAPE OVER SEALANT AND 1" ON EACH SIDE OF JOINT.
4. APPLY BARRICOAT–R DETAIL COAT AT 60mils THICK. EXTEND 4" ON EACH SIDE OF JOINT. APPLY IN TWO COATS AT 30mils/COAT.
5. APPLY BARRICOAT–S OR R MEMBRANE @ 60 MILS THICK.
6 INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE.

Barricoat-S Detail

Joints Less than ½" (BC-3B)

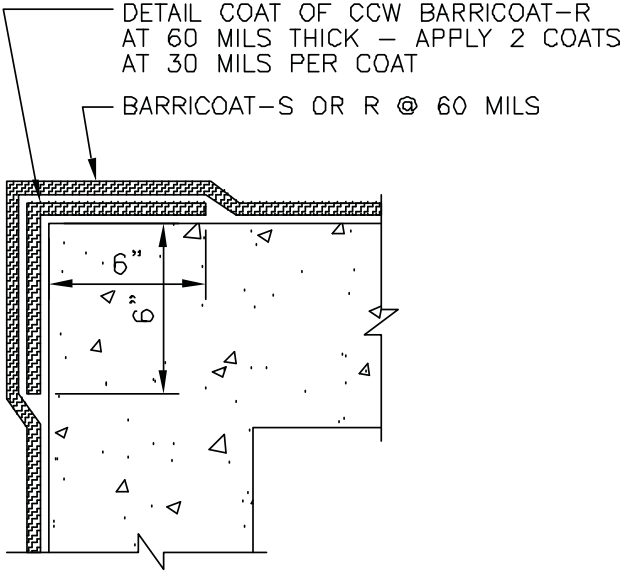


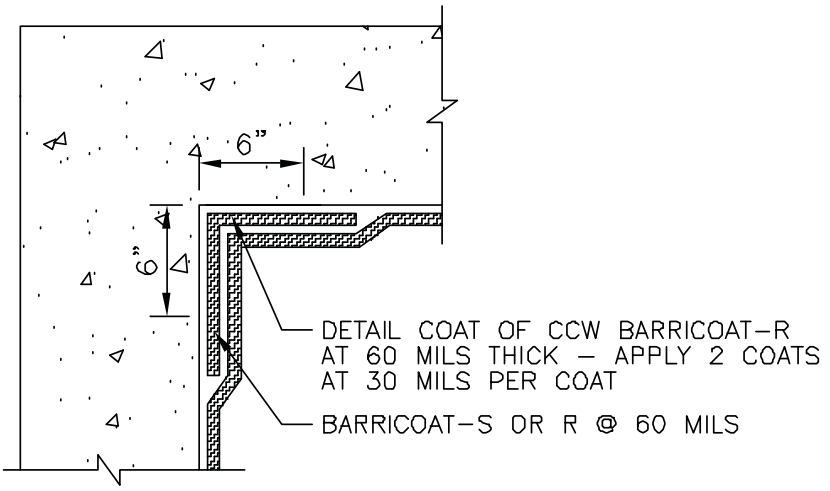
NOTES

1. INSTALL BACKER ROD. SEALANT DEPTH SHALL EQUAL 1/2 OF JOINT WIDTH.
2. INSTALL CCW–201 SEALANT TOOL FLUSH WITH SURFACE ALLOW TO CURE OVER NIGHT.
3. APPLY CCW–PRIMER
4. APPLY 6" STRIP OF CCW MIRADRI 860/861
5. APPLY BARRICOAT–S OR R MEMBRANE @ 60 MILS THICK.
6. INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE.

Barricoat-S Detail

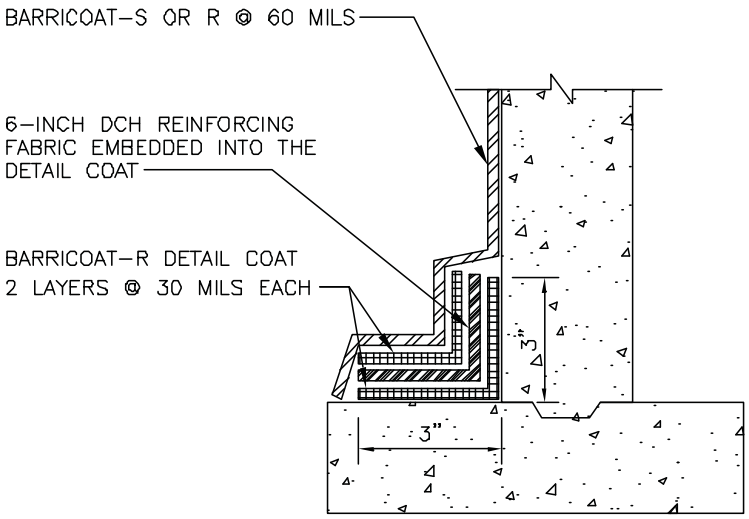
Inside/Outside Corners Angle Changes (BC-4A)

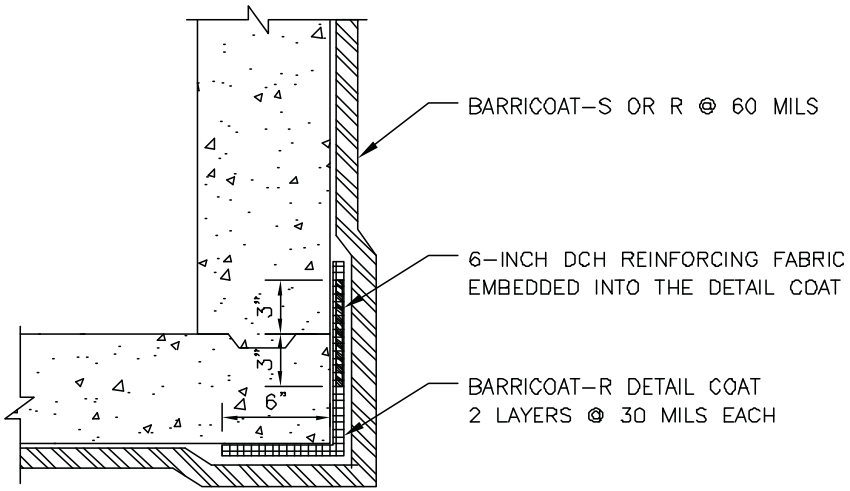




Barricoat-S Detail

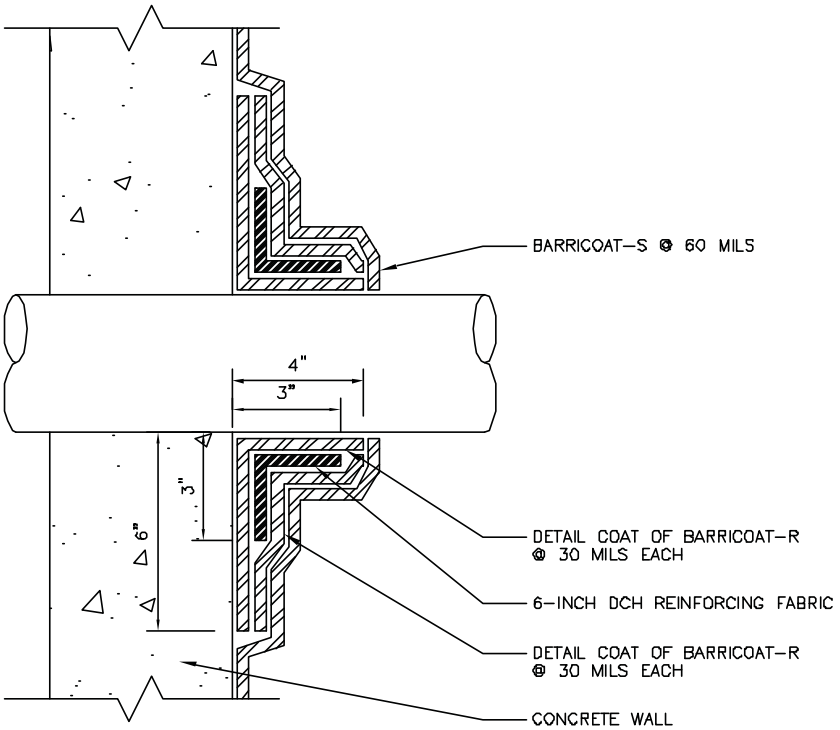
Inside/Outside Angle Changes
With Construction Joint (BC-4B)





Barricoat-S Detail

Penetrations (BC-8)



NOTES

1. CLEAN METAL TO BRIGHT FINISH. SAND SURFACE OF PVC PIPE.
2. APPLY BARRICOAT ROLLER 4–INCH ONTO THE PENETRATION AND 6–INCHES TO THE SUBSTRATE. EMBED DCH TAPE INTO THE 30mil ROLLER. APPLY 30mils OF ROLLER OVER DCH REINFORCING FABRIC.
3. APPLY BARRICOAT–S AT 60mils.
4. INSTALL CCW–PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE

TYPICAL USES

Barricoat-R is often used as an accessory product in the Barricoat-S Spray-Applied Waterproofing system. Barricoat-R can also be used as the principle membrane, and by itself performs as a waterproofing membrane and vapor barrier. Barricoat-R is for use on below-grade, vertical surfaces and can be applied directly to concrete, concrete masonry, polystyrene foam insulation board and many other common building materials. Barricoat-R plus MiraDRAIN drainage composite are combined to form a complete, warranted foundation waterproofing system by CCW.

LIMITATIONS

- Do not apply during rain or snow, or if precipitation is expected in next 16 hours
- Do not apply if temperature is expected to drop below 32°F in the next 16 hours
- Protect from freezing during delivery, storage and handling
- Not intended for permanent exposure. Cover within 30 days of application.
- Not compatible with silicone, coal tar, polysulfide or plasticized PVC.
- Do not apply solvent-based products over Barricoat-R
- Not for use in plaza deck, planter, pond liner or other horizontal waterproofing applications
- Not for use as a negative-side waterproofing membrane.

PACKAGING

Barricoat-R roller grade is available in five-gallon pails.
P/N 304919

PERCENT SOLIDS

64%

COVERAGE

Theoretical coverage rate is 16.75 sq ft per gallon.

STORAGE

Store product and accessories in area protected from direct sunlight and precipitation, and away from open flames, sparks or welding. Store flammable materials in compliance with federal, state and local regulations. Store pails of Barricoat-R in an area maintained between 50°F and 90°F.

WARNINGS AND HAZARDS

Use only in areas with adequate ventilation. CCW-702, CCW-702 LV, CAV-GRIP and LM 800 XL contain flammable and combustible solvents. Refer to MSDS for Barricoat-R and accessory products for important warnings and information.

INSTALLATION

Concrete shall be in place and cured a minimum of 3 days. Verify that surfaces are free of visible surface moisture, loose materials, release oils and other contaminants. These shall be removed prior to application by power washing or other suitable method. Fill form tie holes, honeycomb and voids with non-shrink grout or CCW-703 V LiquiSEAL. Barricoat-R may be used to fill voids and irregularities that do not exceed ¼" depth. Grind fins and similar protrusions flush. On concrete masonry unit (CMU) construction, mortar joints shall be free of voids and struck flush and mortar droppings shall be removed from surfaces.

Procedure for Installation of CCW-201 and CCW-703V LiquiSEAL: Apply according to instructions on product data sheet. Allow sealant to cure fully before covering with Barricoat-R or MiraDRI 860 Strips.

Procedure for Installation of Barricoat-R + DCH Reinforcing Fabric: Apply approximately 30 wet mils of Barricoat-R to the substrate with a brush or roller. Immediately set DCH Reinforcing Fabric into Barricoat-R, pressing the fabric into the liquid while smoothing wrinkles with a brush or drywall knife. Lap neighboring pieces of DCH Reinforcing Fabric 2" minimum, and apply Barricoat-R into laps. Immediately cover fabric with a 2nd coat of Barricoat-R, encapsulating it.

Procedure for Installation of MiraDRI 860 Strips: Prepare the surface with CCW-702 WB or CCW-702/702 LV, following the instructions on the product data sheet. Apply CCW-715 to damp or green concrete surfaces. Apply the contact adhesive over enough area that it extends 1" minimum beyond edge of installed self-adhering flashing. Cut manageable-sized pieces of self-adhering flashing from roll, using sharp knife, and making square, clean cuts. Lap neighboring pieces 5" minimum and sequence the installation to provide shingled laps. Press the self-adhering flashing firmly to the substrate with a hand roller tool, especially at edges and laps. Seal over end laps, non-shingled laps, cuts and around penetrating hardware with LM 800 XL Mastic.

Procedure for Detailing Cracks and Cold Joints: Fill and cover non-moving cracks less than 1/16" with a detail coat of Barricoat-R. Cover cold joints and cracks 1/16" wide and greater with minimum 6" width DCH Reinforcing Fabric encapsulated in Barricoat-R or with 6" width MiraDRI 860/861 Strips. In addition, fill cracks exceeding ¼" width with non-shrink grout or CCW-201 struck flush, and allow the fill to cure before application of the fabric or membrane strips.

Procedure for Detailing Inside & Inside Corners: Cover with 6" width DCH Reinforcing Fabric encapsulated in Barricoat-R or 6" width MiraDRI 860 Strips.

Procedure for Detailing Foundation-to-Footing Transition: Apply 12" width DCH Reinforcing Fabric encapsulated in Barricoat-R. Alternate method: fill the angle with a ¾" tooled bead of CCW-201, then cover with 12" MiraDRI 860 Strips.

Procedure for Detailing Pipe/Conduit Penetrations: Fill the rough gap around the penetration with non-shrink grout or CCW-201. Wrap the pipe or conduit with MiraDRI 860/861 Strips, or DCH Reinforcing Fabric encapsulated in Barricoat-R. Reinforcement shall bear 3"minimum onto the wall and 3" minimum onto the pipe or conduit. Consult CCW shop drawings for more detail.

Procedure for Detailing Expansion Joints, Control Joints and Transitions: Fill expansion joints with a tooled bead of CCW-201 over backer rod. Cover the joint or transition with two, 30-wet-mil coats of Barriseal-R or with MiraDRI 860/861 Strips. Treatment shall bear 4" minimum onto each side of joint. Consult CCW shop drawings for more detail.

Procedure for Application of Barricoat-R: Obtain full, safe access to area, and mask adjacent surfaces to protect from droppings or splatter. Use a medium/long nap roller to cover open surfaces and a brush or a detail roller to cover details. With roller application, apply three coats at 30 mils wet thickness each. Allow the previous coat to dry firm before applying the next. Total membrane thickness after full cure shall measure a minimum of 60 mils. In areas treated with DCH Reinforcing Fabric encapsulated in Barricoat-R, allow details to dry firm, and cover with minimum 30 mils wet of Barricoat-R. Provide complete coverage over surfaces, so that there are no voids, pinholes or similar passages through membrane. Allow membrane to dry completely before subjecting to inspection for water leakage and adhesion testing. Drying time varies with substrate, ambient temperature and humidity. Membrane is dry when it appears black and rubber-like, and feels dry when pressed. Install

MiraDRAIN drainage composite, Protection Board V or insulation board by others over the Barricoat-R membrane before backfill.

Procedure for Repairing Damage to the Installed Membrane: Remove damaged and loosely-adhered material. Clean weathered or dirty surfaces with white rag wet with xylene or toluene. Allow solvent to dry and over damaged area with three, 30-wet-mil coats of Barricoat-R.

Procedure for Installation of MiraDRAIN over Barricoat-R: Allow Barricoat-R membrane to dry completely. Spray CAV-GRIP adhesive over the surface of Barricoat-R, and press MiraDRAIN in place. Install MiraDRAIN, QuickDRAIN and HC Connectors in accordance with the MiraDRAIN installation Guide.

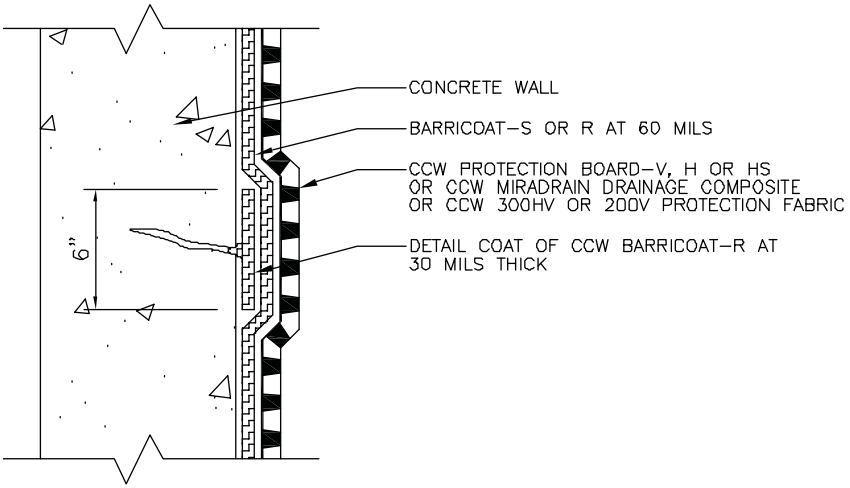
Procedure for Installation of Protection Board V OR Foam Plastic Board Insulation by Others over Barricoat-R: Allow Barricoat-S membrane to dry completely. Attach insulation to the surface of the membrane with CAV-GRIP or approved insulation adhesive by others. Where CAV-GRIP is used, spray the adhesive over the surface of Barricoat-R, and press the insulation in place.

Procedure for Installation of Insulation Board and MiraDRIAN over Barricoat-R: CCW recommends installation of the insulation over the Barricoat-R followed by installation of MiraDRIAN drainage composite over the insulation. Bond the insulation to Barricoat-S according to the aforementioned procedure. Bond MiraDRAIN to the surface of the insulation by spraying CAV-GRIP to back side of MiraDRAIN, and pressing MiraDRAIN to the surface of the insulation.

Barricoat-R Detail

Crack Treatment

Non-Moving Cracks Less than 1/16" (BC-1A)

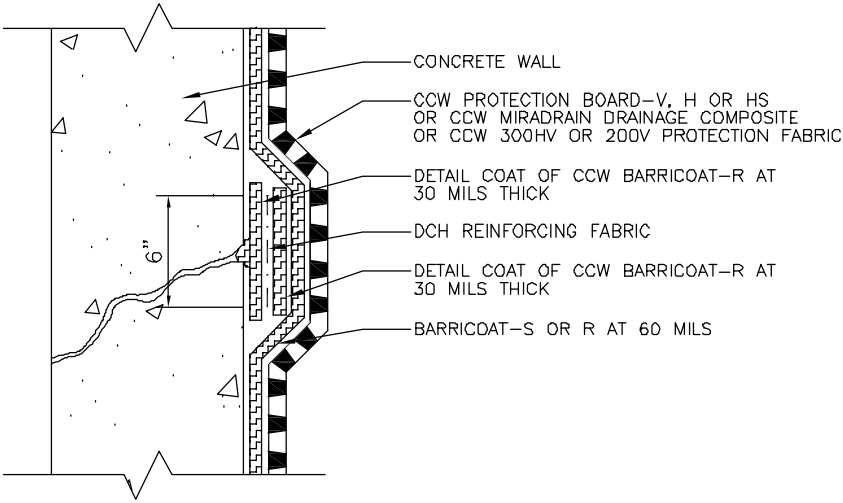


NOTES

1. APPLY BARRICOAT–R 3–INCHES ON EITHER SIDE OF CRACK
2. APPLY BARRICOAT–S OR R AT 60mils
3. INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE.

Barricoat-R Detail

Crack Treatment Greater than 1/16"
Construction Joints or Moving Cracks (BC-1B)

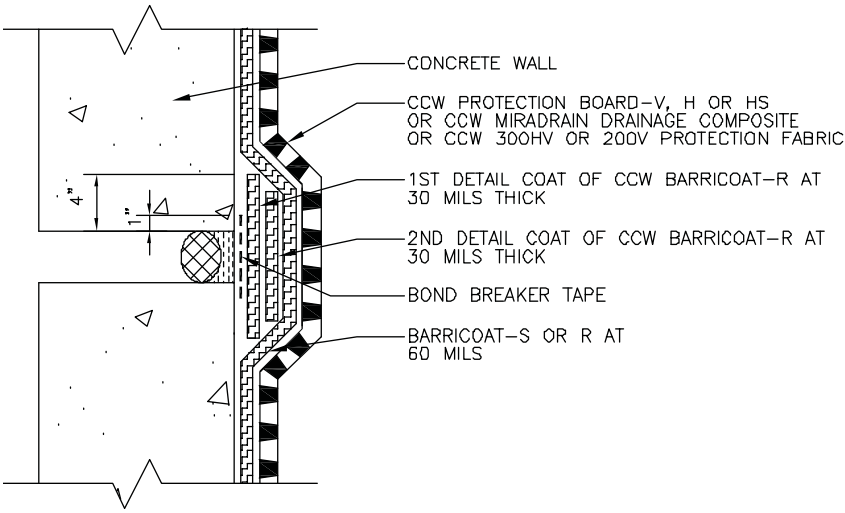


NOTES

1. APPLY BARRICOAT–R 3–INCHES ON EITHER SIDE OF CRACK @ 30mils AND EMBED 6–INCH DCH REINFORCING FABRIC INTO THE BARRICOAT.
2. APPLY 30mils OF BARRICOAT OVER THE DCH REINFORCING FABRIC.
3. APPLY BARRICOAT–S OR R AT 60mils
4. INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE.

Barricoat-R Detail

Expansion Joints Less than ½" (BC-3A)

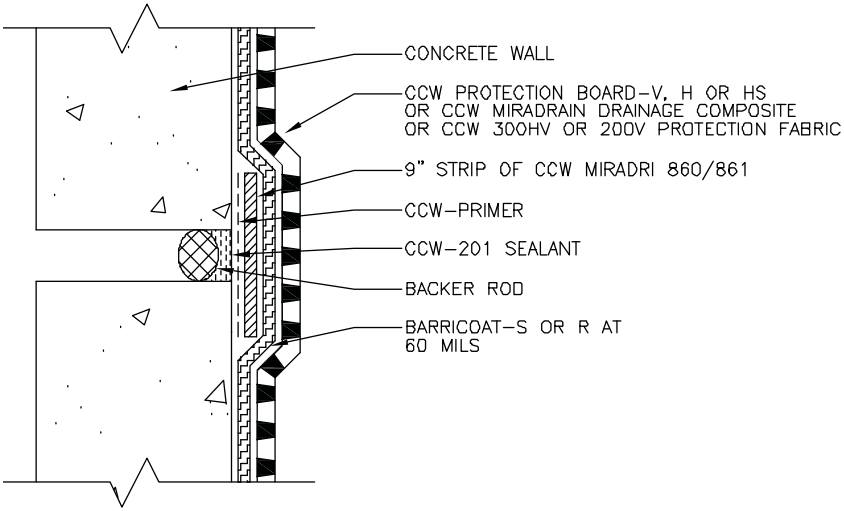


NOTES

1. INSTALL BACKER ROD. SEALANT DEPTH SHALL EQUAL 1/2 OF JOINT WIDTH.
2. INSTALL CCW–201 SEALANT TOOL FLUSH WITH SURFACE ALLOW TO CURE OVER NIGHT.
3. APPLY BOND BREAKER TAPE OVER SEALANT AND 1" ON EACH SIDE OF JOINT.
4. APPLY BARRICOAT–R DETAIL COAT AT 60mils THICK. EXTEND 4" ON EACH SIDE OF JOINT. APPLY IN TWO COATS AT 30mils/COAT.
5. APPLY BARRICOAT–S OR R MEMBRANE @ 60 MILS THICK.
6 INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE.

Barricoat-R Detail

Joints Less than ½" (BC-3B)

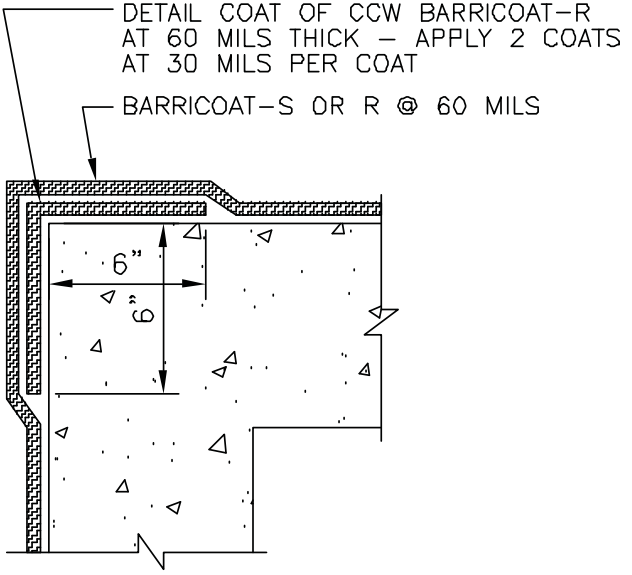


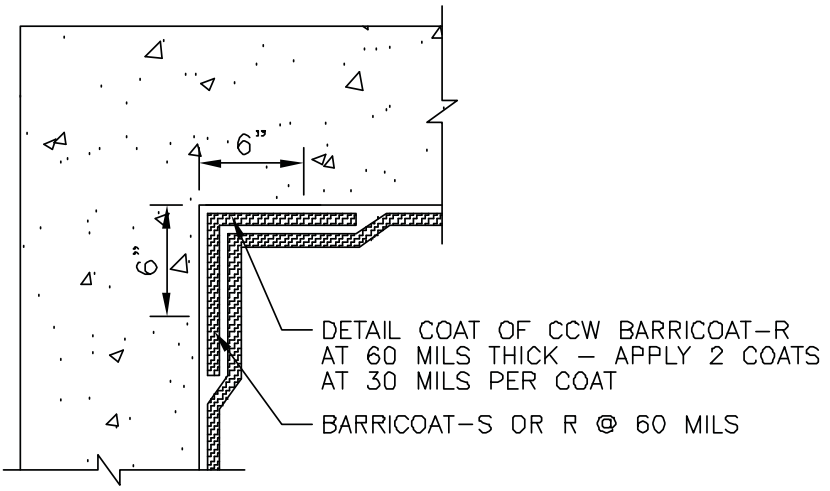
NOTES

1. INSTALL BACKER ROD. SEALANT DEPTH SHALL EQUAL 1/2 OF JOINT WIDTH.
2. INSTALL CCW–201 SEALANT TOOL FLUSH WITH SURFACE ALLOW TO CURE OVER NIGHT.
3. APPLY CCW–PRIMER
4. APPLY 6" STRIP OF CCW MIRADRI 860/861
5. APPLY BARRICOAT–S OR R MEMBRANE @ 60 MILS THICK.
6. INSTALL CCW PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE.

Barricoat-R Detail

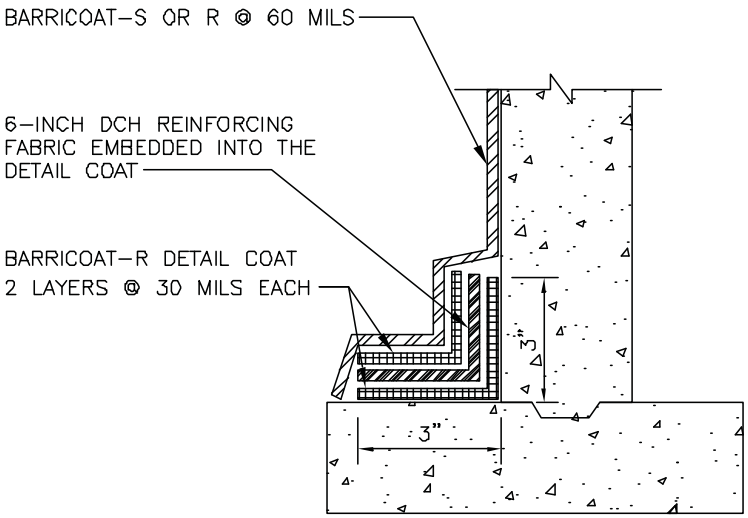
Inside/Outside Corners Angle Changes (BC-4A)

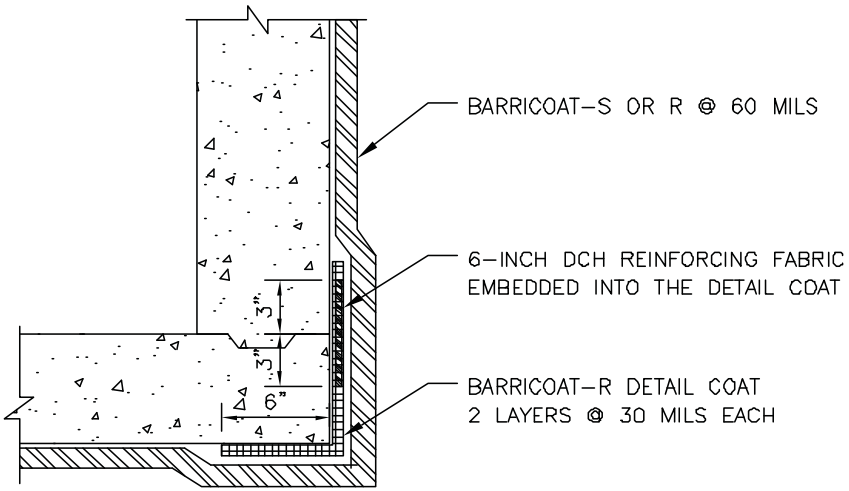




Barricoat-R Detail

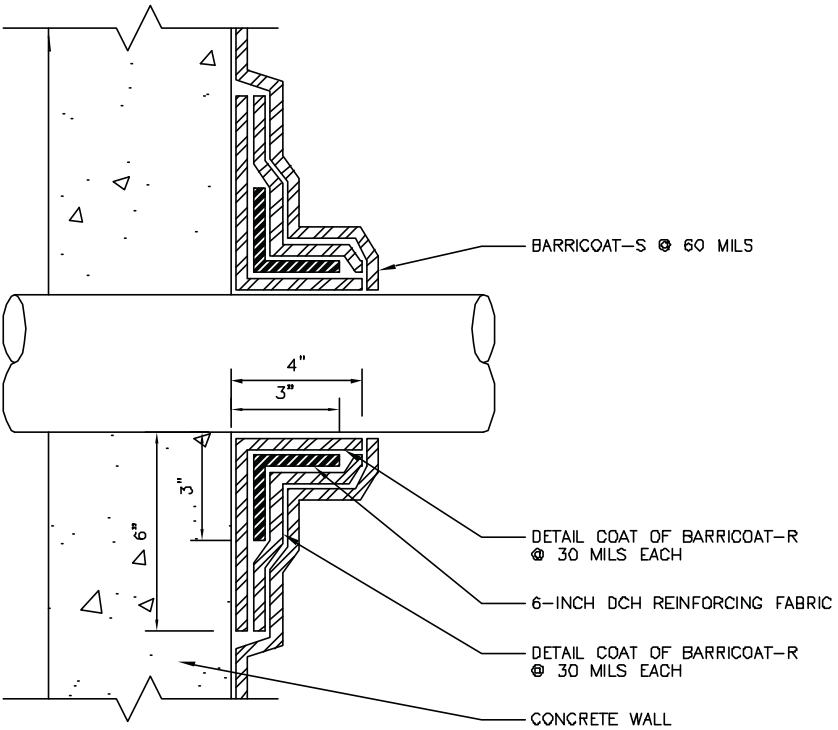
Inside/Outside Angle Changes
With Construction Joint (BC-4B)





Barricoat-R Detail

Penetrations (BC-8)



NOTES

1. CLEAN METAL TO BRIGHT FINISH. SAND SURFACE OF PVC PIPE.
2. APPLY BARRICOAT ROLLER 4–INCH ONTO THE PENETRATION AND 6–INCHES TO THE SUBSTRATE. EMBED DCH TAPE INTO THE 30mil ROLLER. APPLY 30mils OF ROLLER OVER DCH REINFORCING FABRIC.
3. APPLY BARRICOAT–S AT 60mils.
4. INSTALL CCW–PROTECTION BOARD OR CCW MIRADRAIN DRAINAGE COMPOSITE

TYPICAL USES

MiraPLY-H self-adhering blindside waterproofing membrane is designed for waterproofing below-grade structural slabs. MiraPLY-H is also very effective in rehab waterproofing and zero clearance property line construction.

LIMITATIONS

- Protect membrane from torch welding or cutting slag
- Do not use in conjunction with spiked rebar chairs
- Do not leave exposed for more than 60 days (30 with release liner, another 30 days without the release liner)
- Installation below 25°F require special tools and techniques. Consult Technical Services for details.

PACKAGING

4' x 50' (1.22 m x 15.24 m) rolls. Weight: 85 lbs (38.6 kg)

STORAGE

Store in the original packaging until use. Protect from UV exposure and weather below 40°F or above 100°F.

INSTALLATION

SUBSTRATE PREPARATION

Gravel sub-base ¾˝ or smaller aggregate, level and compacted.

Concrete working slabs must be level without any voids, honey-combing or protrusions.

Lagging cannot have gaps larger than 1˝. If there are gaps larger than 1˝, the gaps must either be filled with grout or CCW MiraDRAIN Drainage Composite must be installed.

Shotcrete must be level without any voids, honey-combing or protrusions.

END LAPS AND CUT EDGES

Make sure all lap surfaces are clean, dry and free of contaminates. Install 3˝ CCW-3300 to all end laps and cut edges. Align succeeding sheets and peel the release liner off of the FAT 2´at a time, mating the two sheets of MiraPLY-H together to make sure the lap is tight and secure without wrinkles. To ensure a watertight bond, roll the lap with a hand roller. Stagger end laps approximately 2´. Leave plastic release liner on until ready for concrete pour or placement of rebar.

MIRAPLY REPAIR

Inspect the MiraPLY-H membrane for damaged areas before placement of rebar or concrete. The membrane should be clean with a cloth dampened with water and let dry. Repair slices, cuts and small punctures (1/2˝ or less) with the CCW-3300 tape. Repair larger areas with a piece of CCW-1602 or MiraPLY extending damaged areas approximately 6˝ in all directions. Apply CCW-3300 tape around all edges of the patch.

CONCRETE PLACEMENT

Completely remove all release liners from MiraPLY and CCW-3300 tape. CCW recommends that the concrete should be installed within 60 days of membrane installation.

HORIZONTAL INSTALLATION

Start the installation at one corner of the building. Unroll the first sheet of MiraPLY-H square/parallel to the building wall, starting at one corner with the TPO side down and the adhesive/release liner side with FAT™ facing up so that the succeeding sheet can lap onto it. Unroll the next sheet of MiraPLY-H and align parallel to and overlapping the preceding roll of MiraPLY-H by 3″ (width of the FAT). Make sure that the TPO side of the lap is clean, dry and free of contaminates. Peel the release liner off of the FAT 2′ at a time and mate the two sheets of MiraPLY-H together, making sure the lap is tight and secure without wrinkles. To ensure a watertight bond, roll the lap with a hand roller. Stagger end laps approximately 2′. Leave plastic release liner on until ready for concrete pour or placement of rebar.

HORIZONTAL/VERTICAL TRANSITION INSTALLATION

Start the installation at the side of the building. Unroll the first sheet of MiraPLY-H square/parallel to the building wall, starting 6″ above the floor slab, secure to wall and turn out onto the grade. Make sure membrane is tight to corner without voids. The FAT should be at the grade side so the succeeding sheet can lap onto it. Unroll the next sheet of MiraPLY-H and align parallel to and overlapping the preceding sheet of MiraPLY-H by 3″ (width of the FAT). Make sure that the TPO side of the lap is clean, dry and free of contaminates. Pull the release liner off of the FAT 2' at a time and mate the two sheets of MiraPLY-H together, making sure the lap is tight and secure. Leave plastic release liner on until ready for concrete pour or placement of rebar.

SLAB PENETRATIONS

All penetrations must be secured to prevent any movement. Penetrations must be clean, dry and free from rust. Make sure that the TPO side of the lap is clean, dry and free of contaminates. Cut a 4′x4′ piece of MiraPLY-H and cut a hole in the center the size and shape of the penetration. Slide the 4′x4′ sheet over the penetration and remove plastic release liner. Install a strip of 3" CCW-3300 around penetration. Install a piece of 6″ CCW-1602 around the penetration with 4″ up onto the penetration and 2″ onto the MiraPLY-H. Note that the 2″ edge will have to be slit so that the CCW-3300 can make a radius around the penetration. Cut a 12″x12″ target patch and cut a hole in the center the size and shape of the penetration and slide it over the penetration. Install a piece of 3″ CCW-3300 around penetration with 1½″ on the penetration and 1½″ on the horizontal surface. To ensure a watertight bond, roll the lap with a hand roller.

TYPICAL USES

MiraPLY-V self-adhering blindside waterproofing membrane is designed for waterproofing zero property line applications against soil retention systems. MiraPLY-V is also very effective in rehab waterproofing and ideal for critical positive side waterproofing applications.

LIMITATIONS

- Protect membrane from torch welding or cutting slag
- Do not use in conjunction with spiked rebar chairs
- Do not leave exposed for more than 60 days (30 with release liner and an additional 30 days without liner)
- Installation below 25°F require special tools and techniques. Consult Technical Services for details.

PACKAGING

4' x 50' (1.22 m x 15.24 m) rolls. Weight: 65 lbs (29.5 kg)

STORAGE

Store in the original packaging until use. Protect from UV exposure and weather below 40°F or above 100°F.

INSTALLATION

SUBSTRATE PREPARATION

Gravel sub-base ¾˝ or smaller aggregate, level and compacted.

Concrete working slabs must be level without any voids, honey-combing or protrusions.

Lagging cannot have gaps larger than 1˝. If there are gaps larger than 1˝, the gaps must either be filled with grout or CCW MiraDRAIN Drainage Composite must be installed.

Shotcrete must be level without any voids, honey-combing or protrusions.

END LAPS AND CUT EDGES

Make sure all lap surfaces are clean, dry and free of contaminates. Install 3˝ CCW-3300 to all end laps and cut edges. Align succeeding sheets and peel the release liner off of the FAT 2´at a time, mating the two sheets of MiraPLY-H together to make sure the lap is tight and secure without wrinkles. To ensure a watertight bond, roll the lap with a hand roller. Stagger end laps approximately 2´. Leave plastic release liner on until ready for concrete pour or placement of rebar.

MIRAPLY REPAIR

Inspect the MiraPLY-H membrane for damaged areas before placement of rebar or concrete. The membrane should be clean with a cloth dampened with water and let dry. Repair slices, cuts and small punctures (1/2˝ or less) with the CCW-3300 tape. Repair larger areas with a piece of CCW-1602 or MiraPLY extending damaged areas approximately 6˝ in all directions. Apply CCW-3300 tape around all edges of the patch.

CONCRETE PLACEMENT

Completely remove all release liners from MiraPLY and CCW-3300 tape. CCW recommends that the concrete should be installed within 60 days of membrane installation.

VERTICAL INSTALLATION

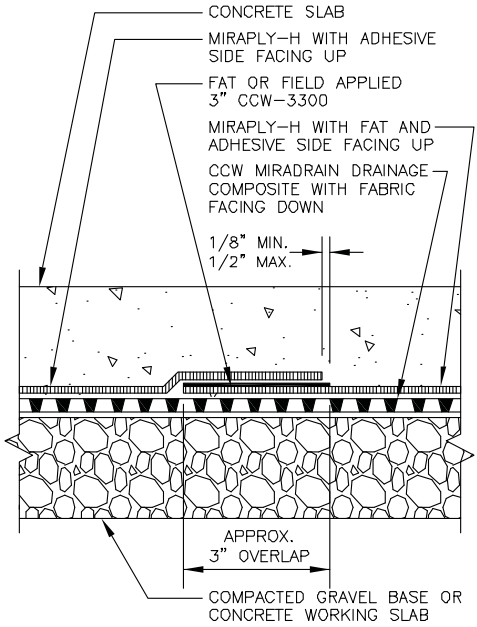
Start the installation at the one end of the wall working from the base up the wall. Remove perforated release liner along edges and mechanically fasten the membrane vertically using fasteners with plastic washer heads that are compatible with the substrate. The MiraPLY-V TPO side should be facing the substrate with the adhesive side/release liner facing the installer. Fasten lap seams every 12″ on center. Fasten the MiraPLY in the field of the membrane as required to keep membrane from blousing. Install the MiraPLY-V in suitable lengths for ease of installation. Install the next row of MiraPLY-V and align parallel to and overlapping the preceding roll of MiraPLY-V 3″. Make sure that the TPO side of the lap is clean, dry and free of contaminates. Mate the two sheets of MiraPLY-H together, making sure the lap is tight and secure without wrinkles. To ensure a watertight bond, roll the lap with a hand roller. Stagger end laps approximately 2′. Leave plastic release liner on until ready for concrete pour or placement of rebar. Cover fasteners with a piece of CCW-1602.

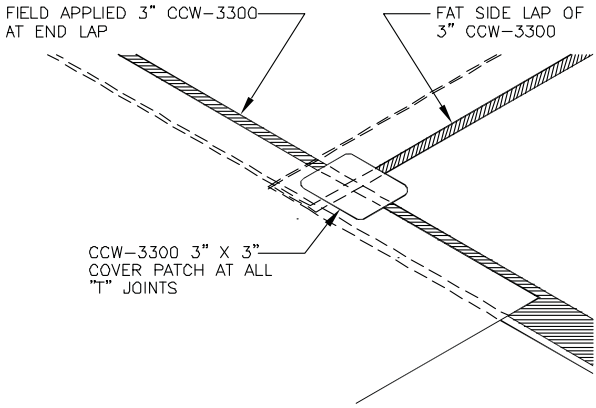
WALL PENETRATIONS

All penetrations must be secured to prevent any movement. Penetrations must be clean, dry and free of rust. Make sure that the TPO side of the lap is clean, dry and free of contaminates. Cut a 4′x4′ piece of MiraPLY-V and cut a hole in the center the size and shape of the penetration. Slide the 4′x4′ sheet over the penetration, remove plastic release liner and fasten to wall. Install a strip of 3″ CCW-3300 around penetration. Install a piece of 6” CCW-1602 around the penetration with 4″ up onto the penetration and 2″ onto the MiraPLY-H. Note that the 2″ edge will have to be slit so the CCW-3300 can make a radius around the penetration. Cut a 12″x12″ target patch and cut a hole in the center the size and shape of the penetration. Slide the patch over the penetration. Install a piece of 3″ CCW-3300 around penetration with 1 ½″ on the penetration and 1 ½″ on horizontal surface. To ensure a watertight bond, roll the lap with a hand roller.

WALL TERMINATIONS

Terminate the MiraPLY-V with the Sure-Seal Termination Bar and Sure-Seal Lap Sealant. Make sure termination is below grade approximately 6″. Install Sure-Seal Termination Bar by fastening the termination bar, compressing the MiraPLY-V to the concrete at 12″ on center with fasteners compatible with the termination bar and substrate. Cover top edge of MiraPLY-V and termination bar with Sure-Seal Lap Sealant.





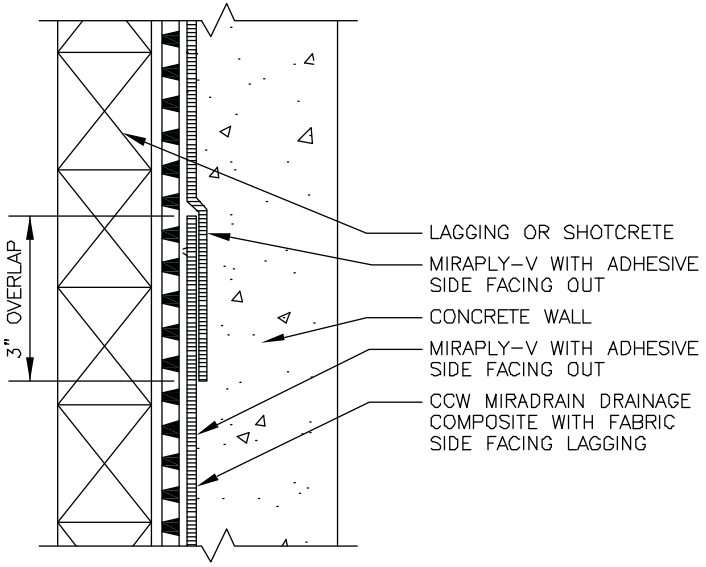
NOTES:

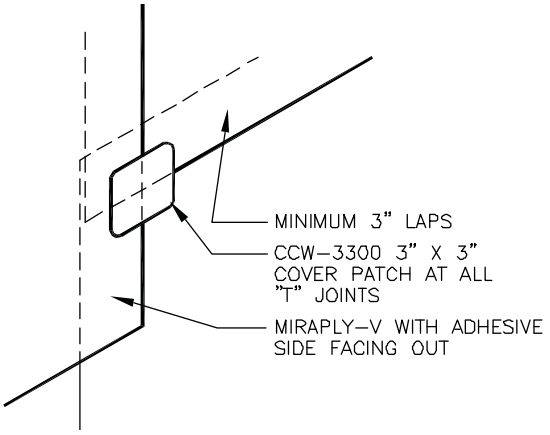
1. ALL LAPS MUST HAVE A 1/8" MINIMUM OF FACTORY OR FIELD APPLIED CCW–3300 SHOWING.

2. ALL END LAPS MUST BE STAGGERED APPROX. 2'–0".

3. ALL"T" JOINTS MUST HAVE A 3" X 3" CAP OF CCW–3300 WITH ROUNDED CORNERS.

4. ALL LAPS MUST BE ROLLED.





NOTES:

1. ALL LAPS MUST BE 3" MINIMUM.

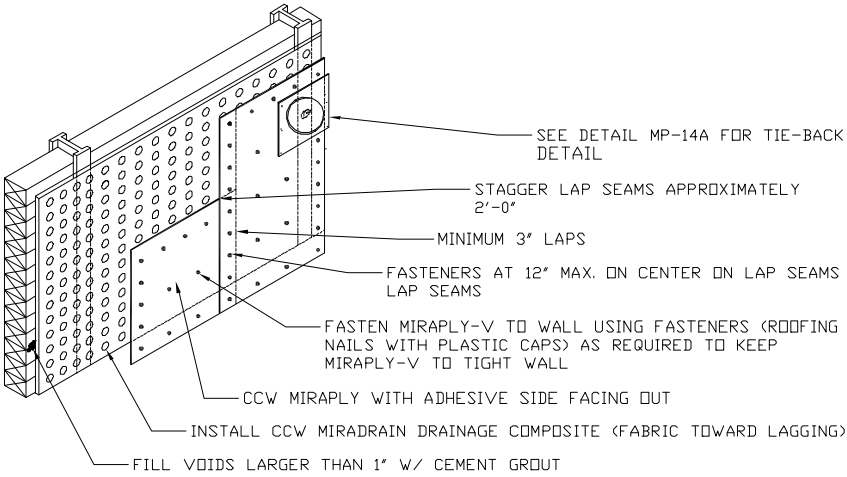
2. ALL END LAPS MUST BE STAGGERED APPROX. 2'–0".

3. ALL"T" JOINTS MUST HAVE A 3" X 3" CAP OF CCW–3300 WITH ROUNDED CORNERS.

4. ALL LAPS MUST BE ROLLED.

MiraPLY Detail

Soldier Beams and Lagging (MP-5A)

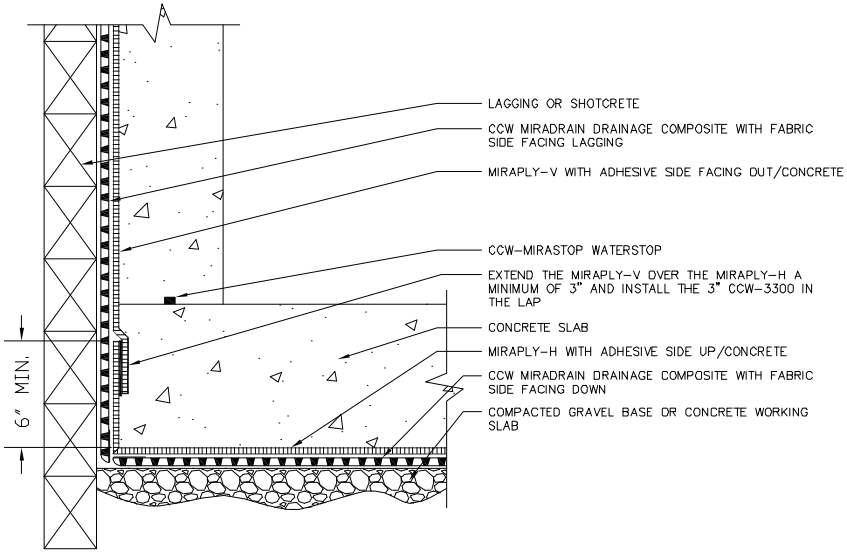


NOTES

1) FILL GAPS GREATER THAN 1" WITH CEMENT GROUT. TROWEL SMOOTH.
2) COVER ROUGH AND IRREGULAR SURFACES WITH CCW MIRADRAIN DRAINAGE COMPOSITE

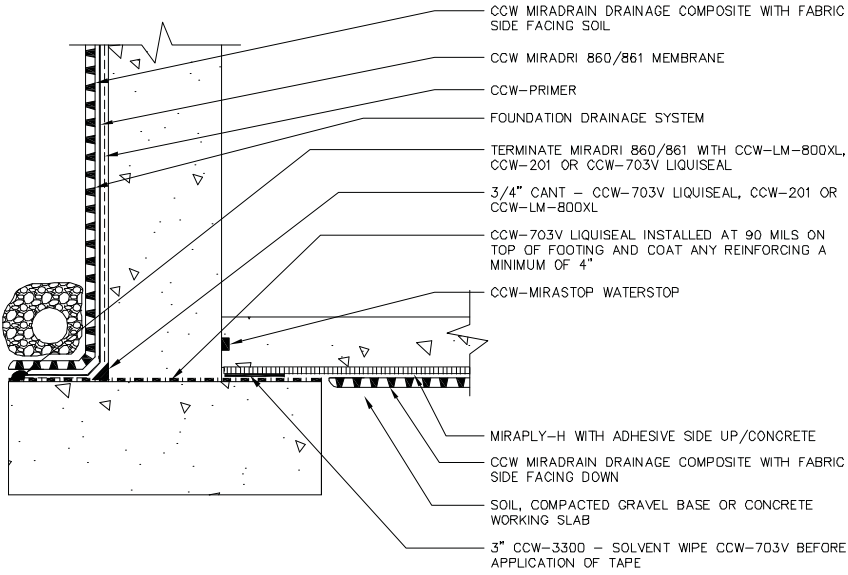
MiraPLY Detail

MiraPLY-H and MiraPLY-V Slab/Foundation Tie-In (MP-7A)



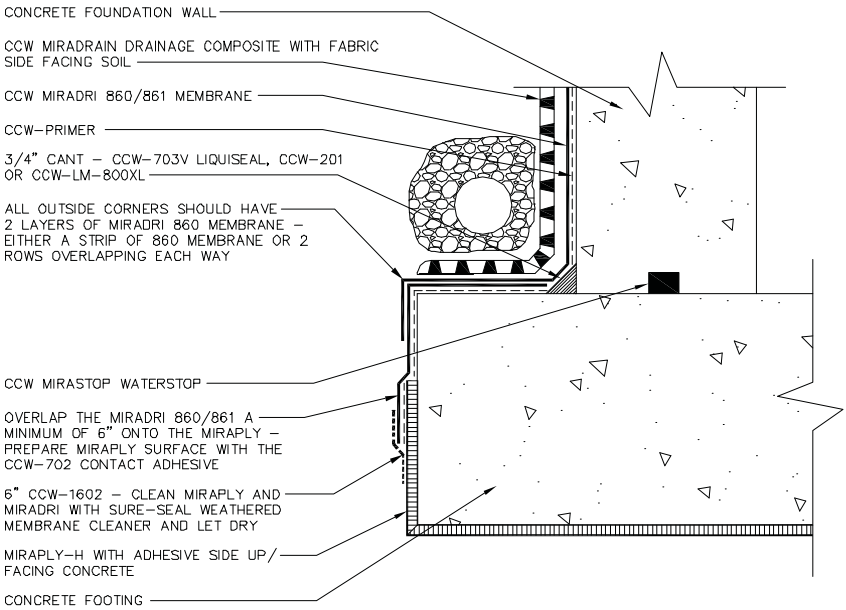
MiraPLY Detail

MiraPLY-H/MiraDRI 860 Foundation Tie-In (MP-7B)



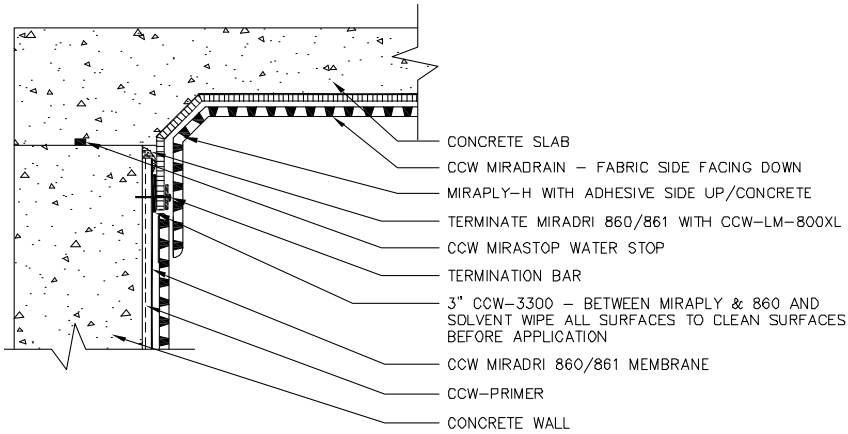
MiraPLY Detail

MiraPLY-H/MiraDRI 860 Foundation Tie-In (MP-7C)



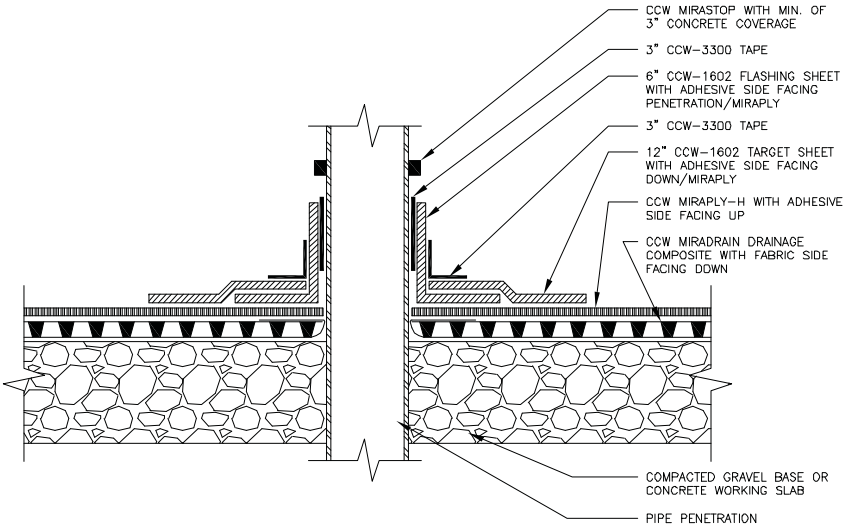
MiraPLY Detail

MiraPLY-H/MiraDRI 860 Foundation Slab Tie-In (MP-7D)



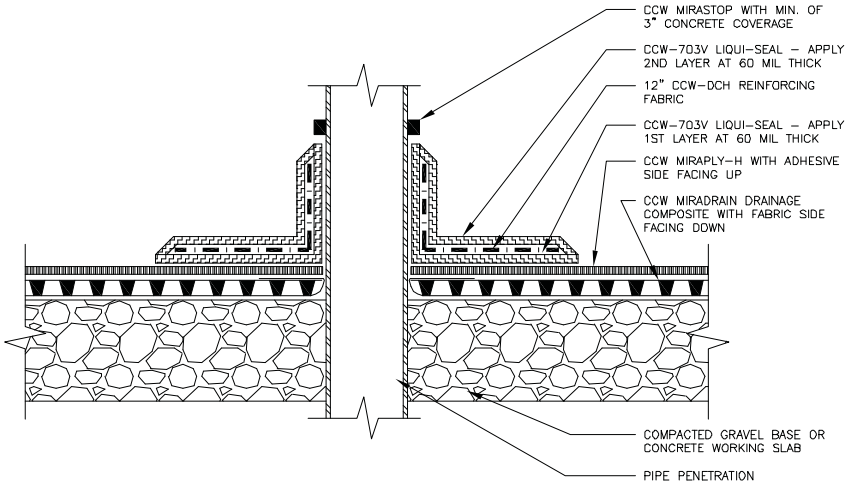
MiraPLY Detail

Slab Pipe Penetration (MP-8A)



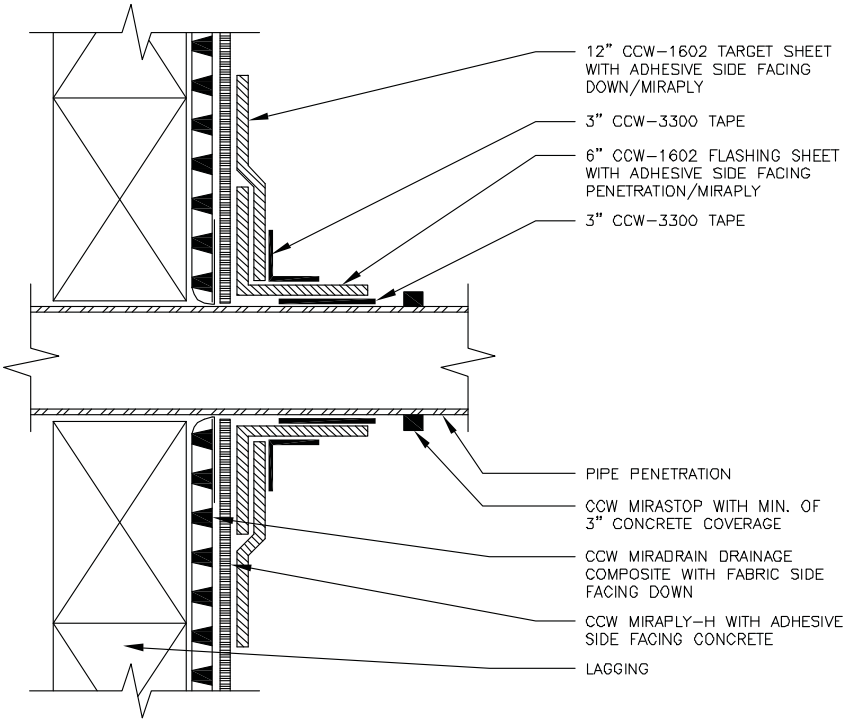
MiraPLY Detail

Slab Pipe Penetration (MP-8B)



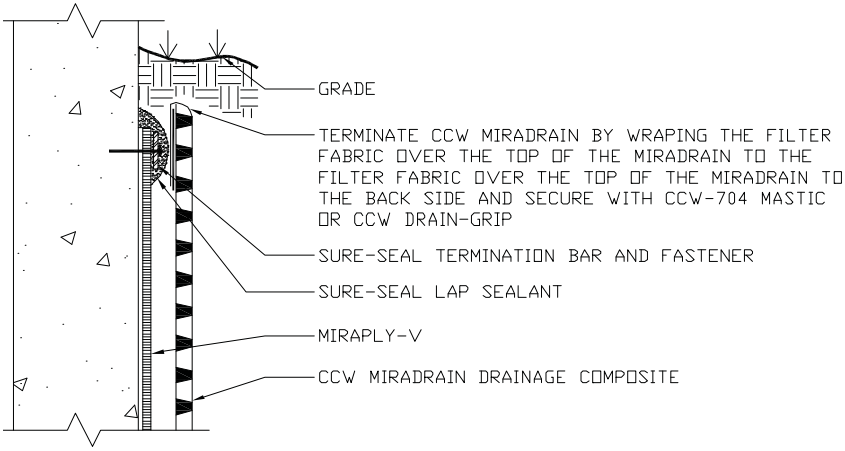
MiraPLY Detail

Lagging Wall Pipe Penetration (MP-8C)



MiraPLY Detail

Mechanical Termination (MP-9A)



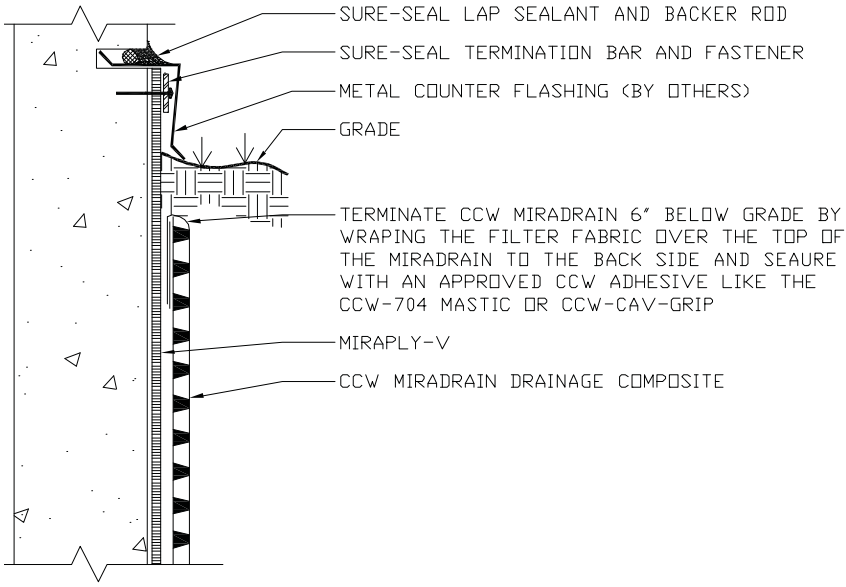
NOTES

1) TERMINATE CCW MIRAPLY-V USING CCW TERMINATION BAR FASTENED AT 6" O.C. WITHIN 1/4" OF EDGE OF MATERIAL

2) APPLY 3/4" LAYER OF SURE-SEAL LAP SEALANT COVERING TOP EDGE OF MIRAPLY-V AND ENTIRE TERMINATION BAR

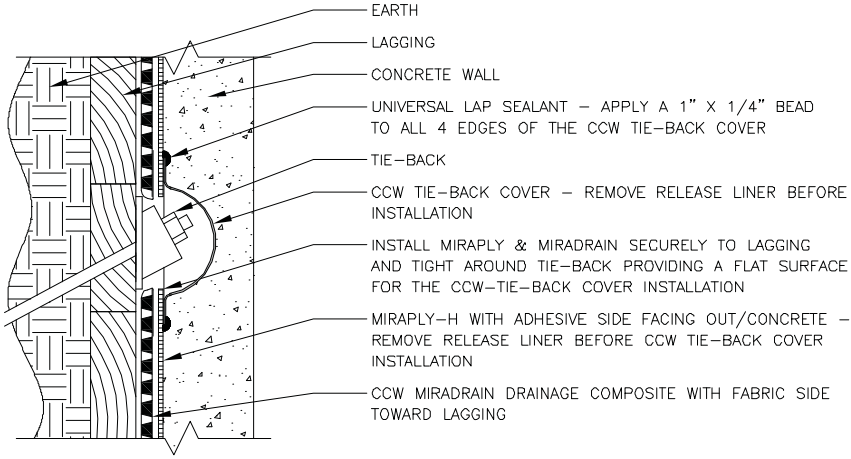
MiraPLY Detail

Exposed Termination (MP-9B)



MiraPLY Detail

Tie-Back Cover Detail (MP-14A)



TYPICAL USES

CCW MiraDRI 860/861 membranes are used for vertical and horizontal waterproofing on structural foundation walls and decks. Below-grade foundation walls, tunnels, split slabs, plaza decks and parking decks are all areas where CCW MiraDRI 860/861 may be applied. CCW MiraDRI 860/861 also may be used in interior areas such as mechanical rooms, laboratories, kitchens and bathrooms. CCW MiraDRI 860/861 should be covered with either CCW 200V/300HV Protection Course, CCW Protection Board, or CCW MiraDRAIN® drainage composites.

LIMITATIONS

- Do not apply where membrane will be subject to continuous exposure to sunlight.
- The membrane should not be left exposed to direct sunlight for longer than 14 days.
- Do not apply primer or membrane to frozen concrete. Optimum results are obtained when membrane is installed at temperatures above 25°F. Between 25°F and 65°F use the CCW MiraDRI 861 membrane. CCW MiraDRI 860 can be used from 40°F and above.
- Do not apply primer or membrane to a damp, frosty or contaminated surface.
- Not recommended as a pond or tank liner except for between slab applications.
- Do not apply over sealants containing coal tar or polysulfides. In the event of existing bitumen-modified materials, consult your Carlisle representative.

PACKAGING

CCW MiraDRI 860/861-36 = 36” wide x 67’ roll (200 ft²) 25 rolls per pallet (5000 ft²) - Weight = 80 lb/roll (approx.)

CCW-702 Solvent Base Contact Adhesive:
5 gallon pails (45 pails per pallet)

CCW-702LV VOC-Compliant S olvent Base Contact Adhesive:
5 gallon pails (45 pails per pallet)

CCW-702WB Water Base Contact Adhesive:
5 gallon pails (45 pails per pallet)

CCW-AWP Water Bas Contact Adhesive:
1 gallon pails (100 pails per pallet)
5 gallon pails (45 pails per pallet)

CCW-715 Damp Concrete Contact Adhesive:
5 gallon pails (45 pails per pallet)

CCW-704 Mastic and CCW LM-800XL:
30 oz. Qt. Tube (12 tubes per carton)
5 gallon pails (45 pails per pallet)

WARNINGS AND HAZARDS

CCW-702 and CCW-704 contain flammable and combustible solvents. Avoid exposure to open flame. Avoid breathing vapors. Use only in areas with adequate ventilation. Refer to MSDS for important warnings and product information.

INSTALLATION

Weather Conditions: CCW MiraDRI 860 is used for applications where the surface temperature is 40°F, (4.4°C,) and above. CCW MiraDRI 861 is used for applications where the surface temperature is between 25°F (-3.9°C,)and 65°F (18°C). Do not apply CCW MiraDRI 860/861 to frozen or wet substrates. The membrane should not be left exposed to direct sunlight for longer than 14 days.

Substrate Preparation: CCW MiraDRI 860/861 can be applied to concrete, metal, wood, insulated wall systems or masonry surfaces. All substrates must be clean, dry and free of surface irregularities.

Concrete Substrates: Structural concrete must be cured a minimum of 7 days and lightweight structural concrete must cure a minimum of 14 days before the application of CCW MiraDRI 860/861. Repair surfaces that are not structurally sound, have voids, protrusions, rough spalled areas, loose aggregate or exposed course aggregate. Void areas should be filled with latex Portland cement, concrete or epoxy concrete and troweled smooth to match the existing surface. Protrusions and other rough areas should be broken off and patched as above. CCW LM-800XL or CCW-201 may be used to fill small voids, honeycombs or bug holes.

Masonry Substrate: Rough masonry may require the surface to be parged with a plaster coat of cementitious material to form a well adhered, smooth and uniform finish. Allow the parge coat to dry before priming and installing the CCW MiraDRI 860/861 waterproofing membrane.

Chemical Additives: Curing compounds should be a clear resin-based material without waxes, oils or pigments. Form release agents must not transfer to the concrete. Curing compounds or form release agents that adversely affect the adherence of the CCW MiraDRI 860/861 waterproofing membrane must be removed from the substrate prior to application.

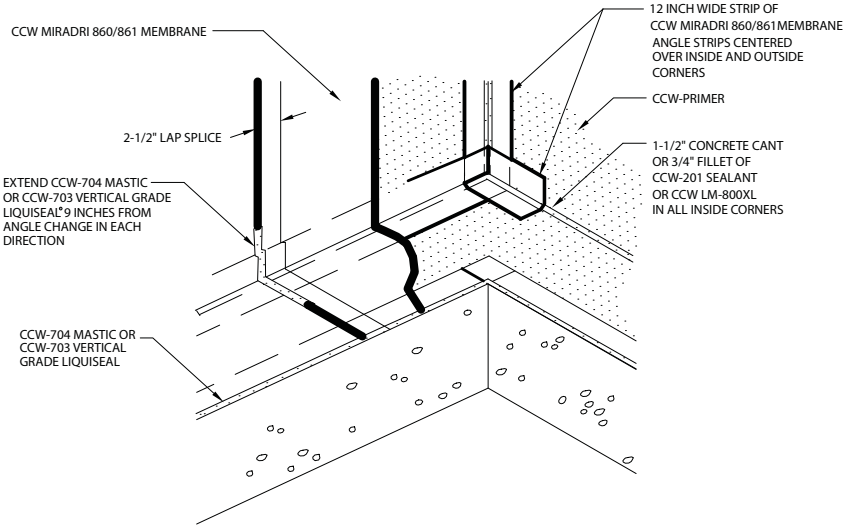
Priming & Detailing: All concrete, metal, masonry, wood and sheathing substrates require a contact adhesive. Insulated concrete forms require a water-based contact adhesive. Carlisle Coatings & Waterproofing recommends an adhesion test of the CCW MiraDRI 860/861 on any bare substrate to verify proper adhesion. Apply the appropriate CCW Contact Adhesive at the specified coverage rate. Apply Contact Adhesive with a lambswool roller, brush or spray apparatus. Allow Contact Adhesive to dry for a minimum of 30 minutes.The CCW Contact Adhesive will dry to a tacky finish. Areas applied but not covered with CCW MiraDRI 860/861 within 24 hours should be reapplied. All vertical to horizontal transitions must have a 3/4” (18 mm) fillet of CCW LM-800XL or CCW-201 Sealant.

The 3/4” (18 mm) fillet must be allowed to cure before covering with the CCW MiraDRI 860/861 membrane. All inside and outside corners, as well as the vertical-to- horizontal transitions, should be double covered. A CCW MiraDRI 860/861 Membrane Strip should be applied to each surface a minimum of 4.5” (112 mm) before being covered by the field membrane.Refer to the standard detail drawings for specific detail instructions.

Vertical Installation: Start at the low point and work towards the high point. Remove 6” (150 mm) to 8” (200 mm) of the release paper, and then begin applying the membrane. Press and smooth the membrane against the substrate while pulling the release paper free. Install membrane with side laps overlapped a minimum of 2.5” (63 mm) and end laps a minimum of 5” (127 mm). Carlisle Coatings & Waterproofing recommends that the membrane be rolled in place immediately after its placement to ensure full adhesion to the primed substrate. Apply a bead of CCW-704 Mastic OR CCW-703V Liquiseal at terminations and cut edges, joints, drains, penetrations and protrusions. For walls over 8’ (240 cm), the membrane should be placed in lifts. Protect the CCW MiraDRI 860/861 membrane with the appropriate CCW MiraDRAIN drainage composite, CCW 200V/300HV Protection Course or CCW Protection Board V.

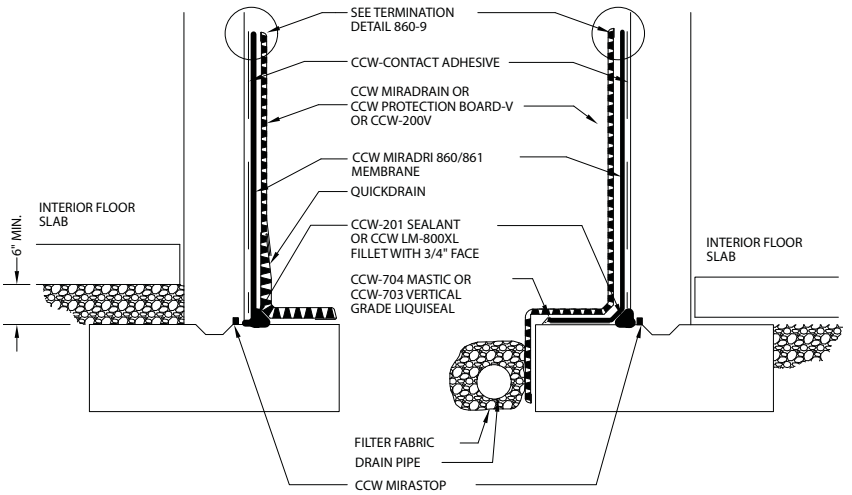
MiraDRI 860/861 Detail

Inside Corner at Footing (860-1)



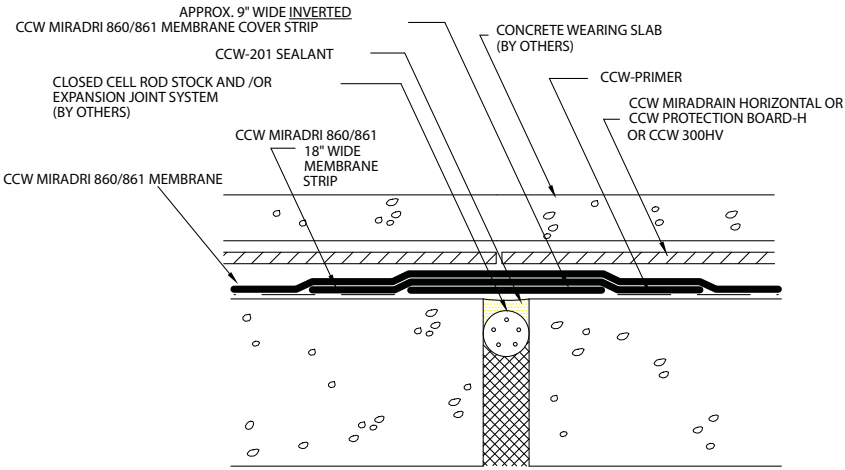
MiraDRI 860/861 Detail

Footing Cross Section (860-2)



MiraDRI 860/861 Detail

Expansion Joint Cover (Deck or Wall) (860-3A)

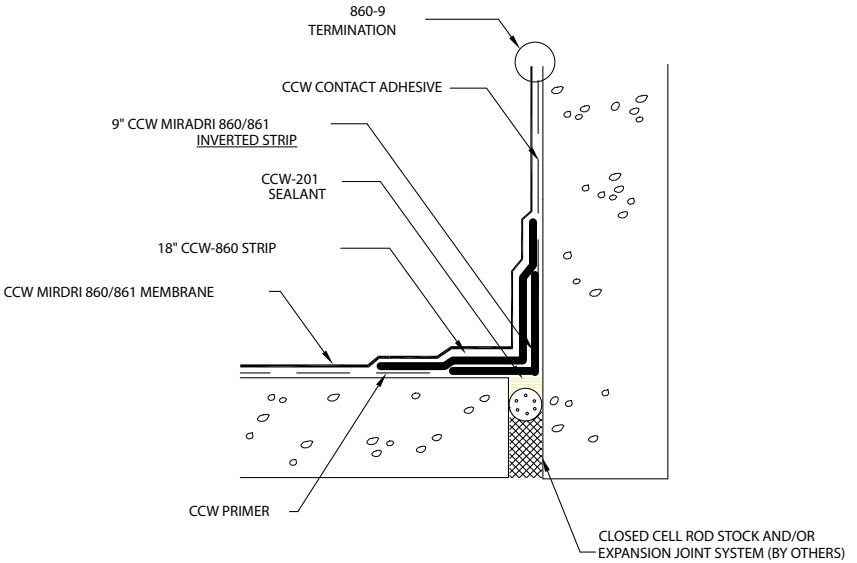


ALTERNATE METHOD:

CENTER 12 INCH WIDE STRIP OF BUTYL MEMBRANE OVER EXPANSION JOINT AND ADHERE TO THE CONCRETE DECK. SPLICE CCW-860 MEMBRANE ONTO BOTH SIDES OF THE BUTYL MEMBRANE STRIP USING SPLICE CLEANER, EP-95 SPLICING CEMENT AND LAP SEALANT.

MiraDRI 860/861 Detail

Expansion Joint Deck to Wall or Curb (860-3B)

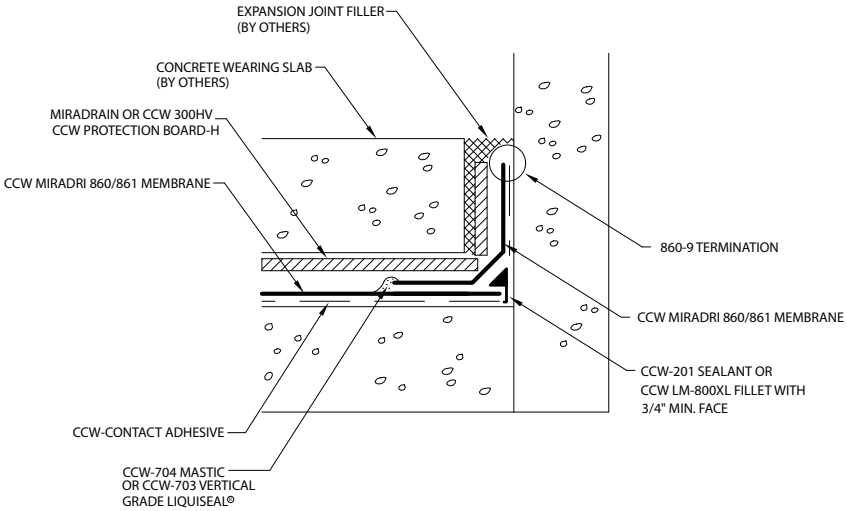


ALTERNATE METHOD:

CENTER 12 INCH WIDE STRIP OF BUTYL MEMBRANE OVER EXPANSION JOINT AND ADHERE TO THE CONCRETE DECK AND WALL. SPLICE CCW-860 MEMBRANE ONTO BOTH SIDES OF THE BUTYL MEMBRANE STRIP USING SPLICE CLEANER, EP-95 SPLICING CEMENT AND LAP SEALANT.

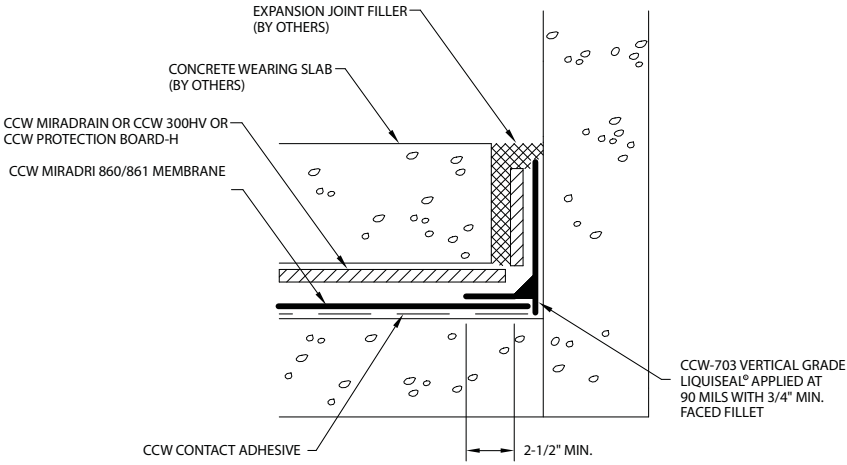
MiraDRI 860/861 Detail

Curb and Parapet (860-4A)



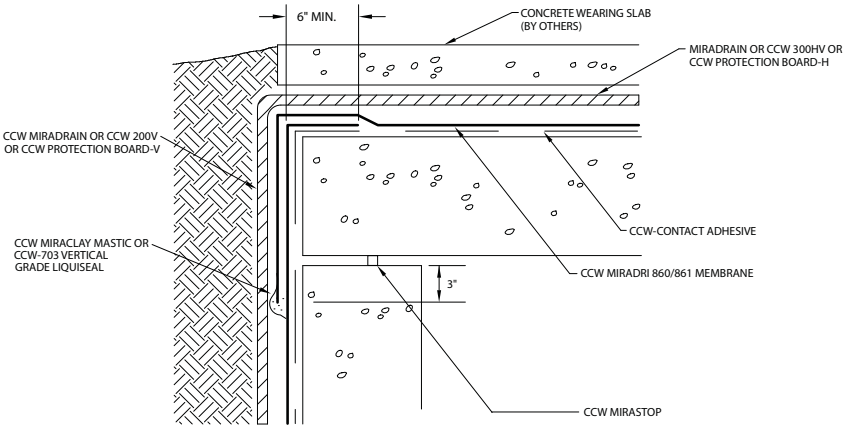
MiraDRI 860/861 Detail

Curb and Parapet (860-4B)



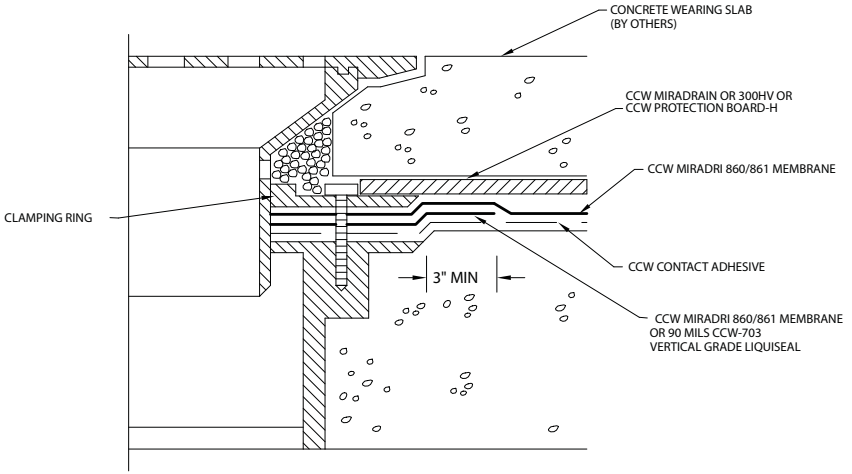
MiraDRI 860/861 Detail

Tunnel/Earth Shelter Structure Outside Corner (860-5A)



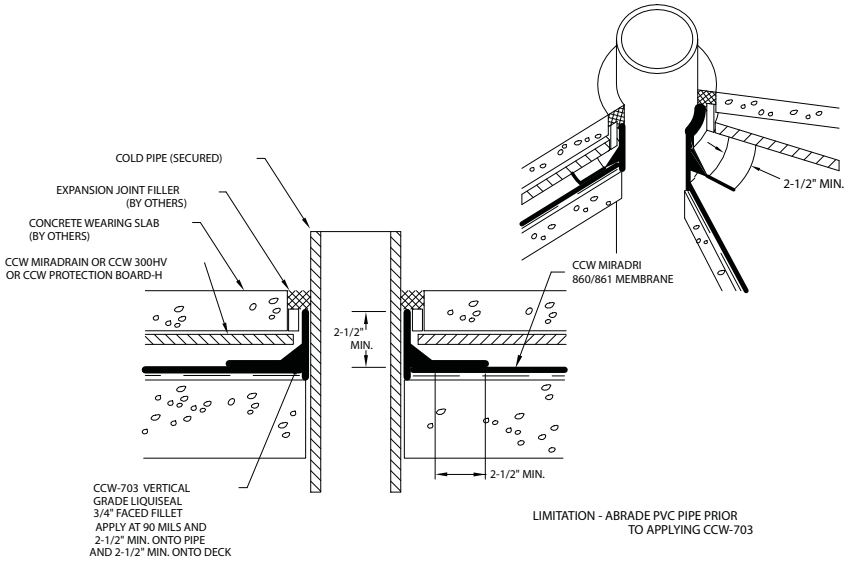
MiraDRI 860/861 Detail

Dual Level Drain (860-6)



MiraDRI 860/861 Detail

Pipe/Penetrations Flashings (860-8A)

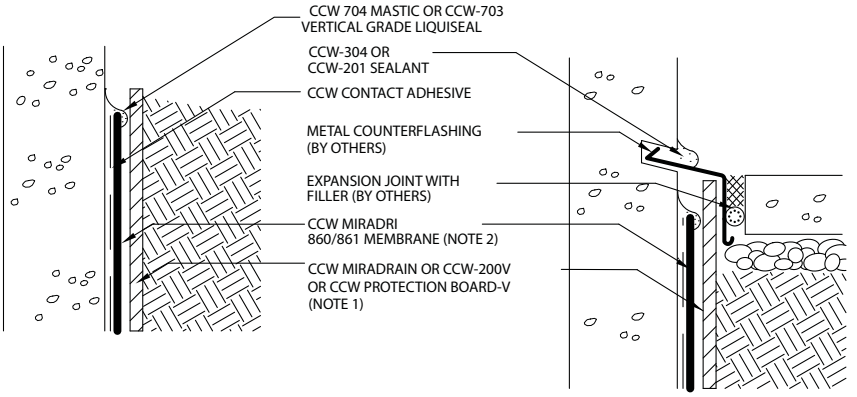


MiraDRI 860/861 Detail

Vertical Termination (860-9A)

OPTION 1

OPTION 2



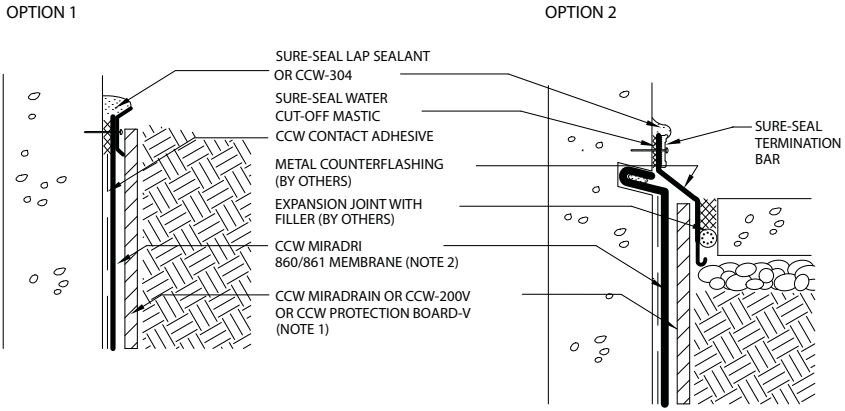
NOTES:

1. STOP CCW MIRADRAIN DRAINAGE BOARD (IF USED) APPROXIMATELY 6 INCHES BELOW FINAL GRADE.

2. IF CCW MIRADRI 860/861 MEMBRANE EXTENDS ABOVE FINAL GRADE, COUNTERFLASHING MUST BE PROVIDED FOR MEMBRANE AND DRAINAGE TERMINATION AND PROTECTION. SEE OPTION 2.

MiraDRI 860/861 Detail

Surface Mounted Bar Termination (860-9B)



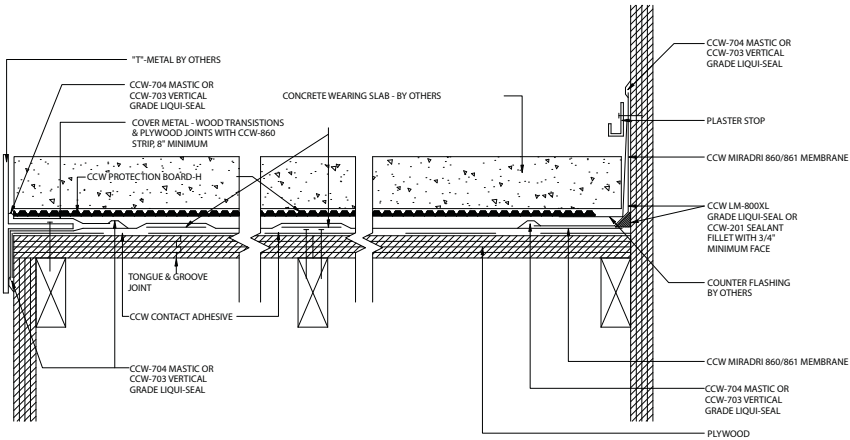
NOTES:

1. STOP CCW MIRADRAIN DRAINAGE BOARD (IF USED) APPROXIMATELY 6 INCHES BELOW FINAL GRADE.

2. IF CCW MIRADRI 860/861 MEMBRANE EXTENDS ABOVE FINAL GRADE, COUNTERFLASHING MUST BE PROVIDED FOR MEMBRANE AND DRAINAGE TERMINATION AND PROTECTION. SEE OPTION 2.

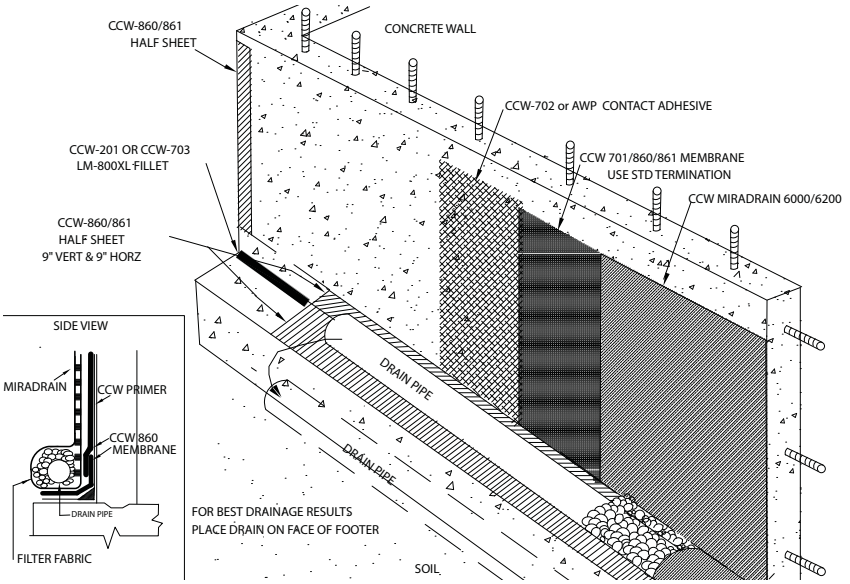
MiraDRI 860/861 Detail

Plywood Decks (860-12)



MiraDRI 860/861 Detail

Footing Cross Section (860-V16)



TYPICAL USES

The Butyl Membrane Waterproofing System is suitable for a wide variety of applications such as:

- Wall and foundation waterproofing, earth shelter, and tunnels.
- Waterproofing beneath shower pans, thick set mortar, kitchens, toilet facilities, janitorial rooms.
- Waterproofing promenades and plaza decks.
- Split-slab waterproofing of multilevel parking facilities.
- Waterproofing of subgrade construction; over mud slabs or sand beds.
- Railroad bridge decks.
- Lining interior fountains.

LIMITATIONS

- Not recommended in areas where membrane will be subject to continuous exposure to sunlight.
- Do not expose membrane and accessories to a constant temperature above 180°F.
- Do not allow waste products (e.g. oil, grease) to come in contact with the membrane.
- Do not install membrane on ASTM D-315 Type I and II low-melting-point asphalt.

PACKAGING

Sizes: Factory fabricated in sheets up to 20 feet (6 m) in width by 100 feet (30m) in length, with factory vulcanized splices. Thicknesses of 0.060” (1.50 mm), 0.090” (2.28 mm), and 0.120” (3.05 mm).

Precut and prefabricated shapes and special sizes available on special order.

Average weight per square foot at 0.060” (1.50 mm) thickness is 0.38 lbs (.17 kg).

WARNINGS AND HAZARDS

Cements, bonding adhesives and splice cleaner contain flammable solvents. Avoid exposure to open flames, sparks, etc. Avoid breathing vapors. Use only in areas with adequate ventilation. Refer to MSDS for important warnings and product information.

INSTALLATION

Installation procedures vary as to the type of application employed and the specific job requirements. When installed correctly, it is difficult to find a more efficient water barrier. While no one particular installation step is complicated, care is most important and best results are obtained when experienced applicators are employed using Carlisle's time-proven recommendations.

Carlisle provides detailed instructions for installing the membrane according to the specific application. Prior to application contact Carlisle for product Material Safety Data Sheets and Technical Data Bulletins for cautions and warnings. The following are general installation procedures:

Surface Preparation: Surfaces on or against which Sure-Seal butyl membrane is to be applied must be clean, smooth, dry, free of fins, sharp edges, loose and foreign materials, oil and grease. Before installing the membrane, the contractor should examine the surfaces and find them satisfactory.

Positioning: Place each sheet of the waterproofing membrane in its final position without stretching and allow the membrane to relax 1/2 hour before making splices or, if required, bonding to the substrate.

Bonding Adhesive Application: Adhesive, as recommended, is applied by roller to the membrane and substrate, as specified.

Recommended installation is to completely adhere membrane to the substrate. Both mating surfaces must be coated with bonding adhesive.

Installing the Membrane: When bonding, apply the adhesive to the sheet and substrate, and allow it to dry until it does not stick to a dry finger touch. Install membrane without stretching, taking care to avoid trapped air bubbles. Subsequent sheets are similarly installed and lap spliced.

Splices: Clean the overlapping areas of membrane and join with specified cleaner, splicing cement, in-seam sealant, lap sealant, or secure tape, if specified, in accordance with manufacturer's recommendations. At angle changes all splices should be reinforced with Elastoform flashing, centered over he splice edge and extending 6" in both directions.

Flashing and Terminations: Flash all pipes, conduits, and other penetrations through waterproofing membrane using field fabricated accessories. Terminate membrane by Carlisle's standard B-9 membrane termination details.

Protection: Upon completion of installation and after flood testing with 2 inches of water, avoid unnecessary traffic on the membrane and install the protection course within 24 hours.

The protection course may be CCW MiraDRAIN® composite or CCW Protection Board.

Install CCW QuickDRAIN perimeter drainage system as the first course of drainage composite immediately after the membrane is installed on vertical surfaces. Install CCW MiraDRAIN drainage composite or CCW Protection Board over the remainder of the membrane. Install CCW MiraDRAIN drainage composite, CCW Protection Board or CCW Protection Fabrics immediately after flood testing on the horizontal surface.

TYPICAL USES

Sure-Seal .060”-thick (1.52 mm) roofi ng membrane is factory fabricated, Ethylene Propylene Diene Terpolymer (EPDM)- based elastomeric homogenous roof coverings which may be used for a variety of waterproofing applications. Fire Retardant (FR) membranes are specially formulated to inhibit spread of flame and meet or exceed code body testing criteria for fi re retardant roofi ng membranes.

LIMITATIONS

Use proper stacking procedures to ensure sufficient stability of the materials. Exercise caution when walking on wet membrane. Membranes are slippery when wet.

PACKAGING

Membranes are available in widths up to 50’ (15 m) and lengths up to 200’ (61 m).

WARNINGS AND HAZARDS

Use proper stacking procedures to ensure sufficient stability of the materials. Exercise caution when walking on wet membrane. Membranes are slippery when wet.

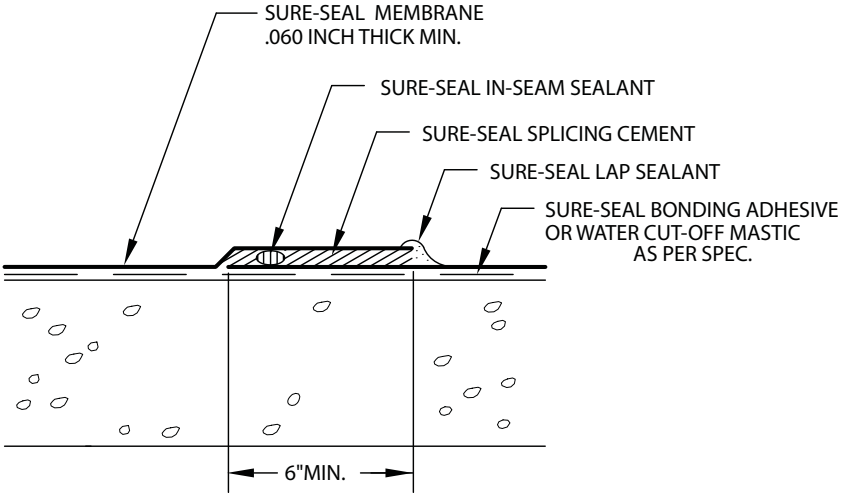
INSTALLATION

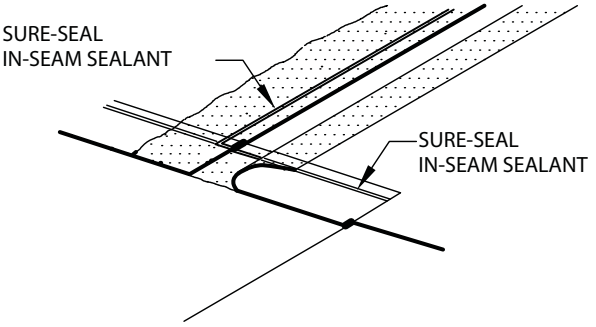
Sure-Seal .060” (1.52 mm) membrane is utilized in Design A, Fully-Adhered (.060” only); Design B, Ballasted Roofing Systems and Design C, Loose-Laid Protected Roofing System. Design A, Fully-Adhered Roofing System/Waterproofing System: The substrate and membrane are coated with Carlisle Bonding Adhesive. The membrane is then rolled into place and brushed down. Splicing cement and In-Seam Sealant are applied to the splice area and lap sealant is used on the splice edge. As an alternate, SecurTAPE™ may be used for splicing.

Consult Carlisle specifications for complete installation information.

Sure-Seal Detail

Membrane Splice (B-1A)



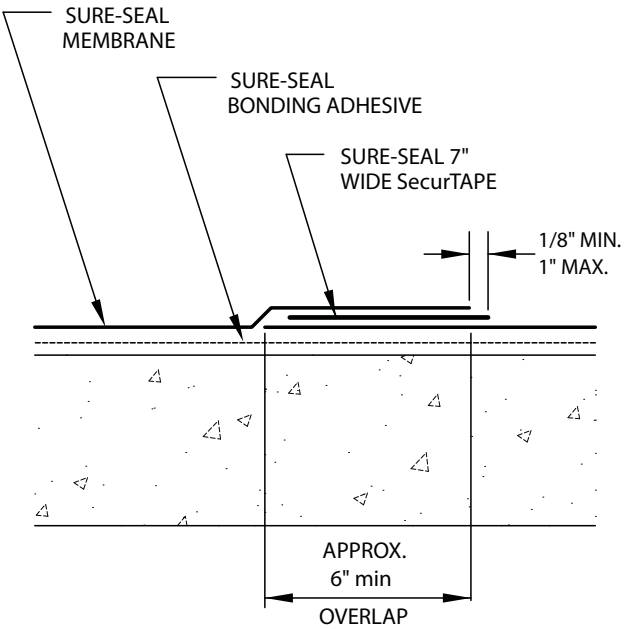


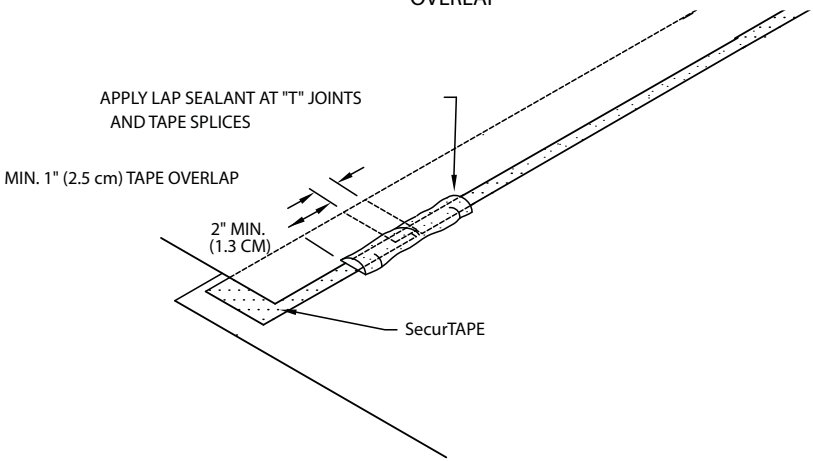
NOTES:

1. MEMBRANE SPLICE PROCEDURE IS FOR SPLICES BETWEEN CURED MEMBRANES.
2. APPLY SPLICING CEMENT OVER ENTIRE 6" MINIMUM SPLICE AREA PRIOR TO APPLICATION OF IN-SEAM SEALANT.
3. IN-SEAM SEALANT SHALL BE CONTINUOUS ALONG THE LENGTH OF THE SPLICE.
4. MAINTAIN A CONTINUOUS BEAD OF IN-SEAM SEALANT AT ALL MEMBRANE SPLICES; ESPECIALLY AT SPLICE INTERSECTIONS.

Sure-Seal Detail

Membrane Splice with SecurTAPE® (B-1C)





NOTES:

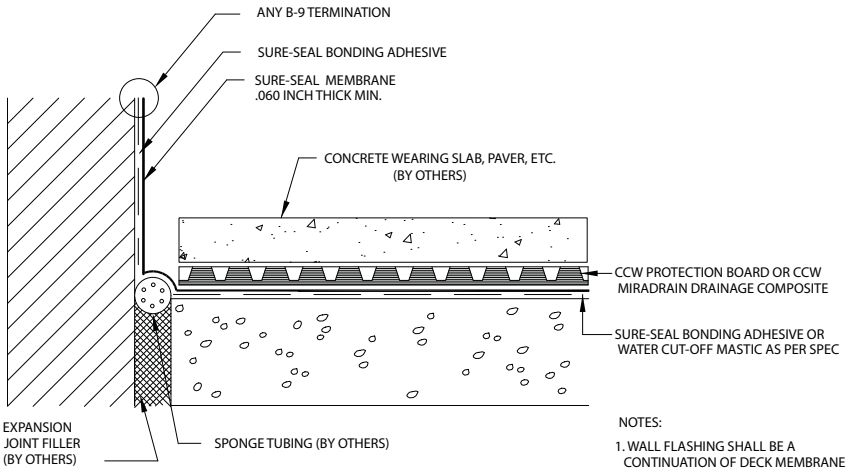
1. PRIOR TO INSTALLATION OF SECURTAPE, APPLY SURE-SEAL PRIMER TO SPLICE AREAS.

2. SECURTAPE IS TO BE OVERLAPPED A MINIMUM OF 1" (2.5 cm) AT THE ENDS OF EACH CUT PIECE.

3. LAP SEALANT IS REQUIRED ON "T" JOINT

Sure-Seal Detail

Expansion Joints (B-3A)



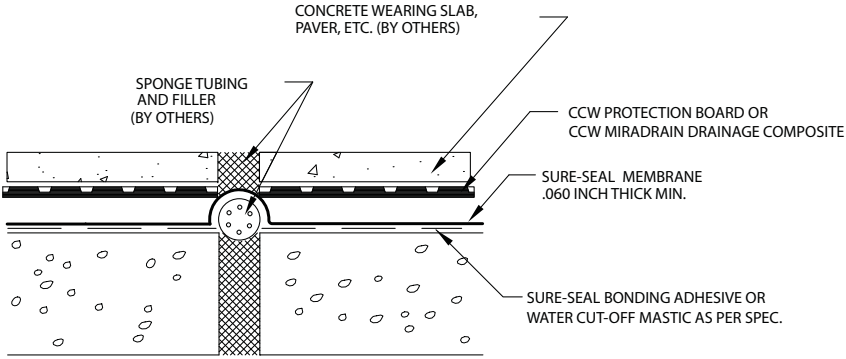
NOTES:

1. WALL FLASHING SHALL BE A CONTINUATION OF DECK MEMBRANE

2. TO REPAIR EXPANSION JOINT, USE 3 LAYERS OF ELASTOFORM FLASHING, OR 1 LAYER OF CURED MEMBRANE

Sure-Seal Detail

Expansion Joints (B-3B)



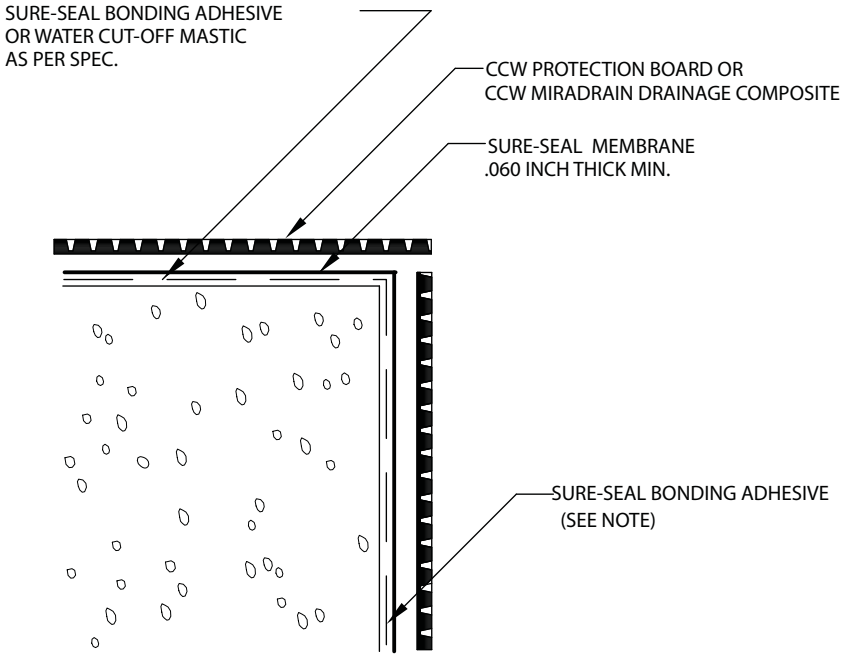
NOTES:

1. TO REPAIR EXPANSION JOINT, USE 3 LAYERS OF ELASTOFORM FLASHING OR 1 LAYER OF CURED MEMBRANE.

2. SLOPE STRUCTURAL SLAB AWAY FROM EXPANSION JOINT.

Sure-Seal Detail

Outside Angle Change (B-4A)

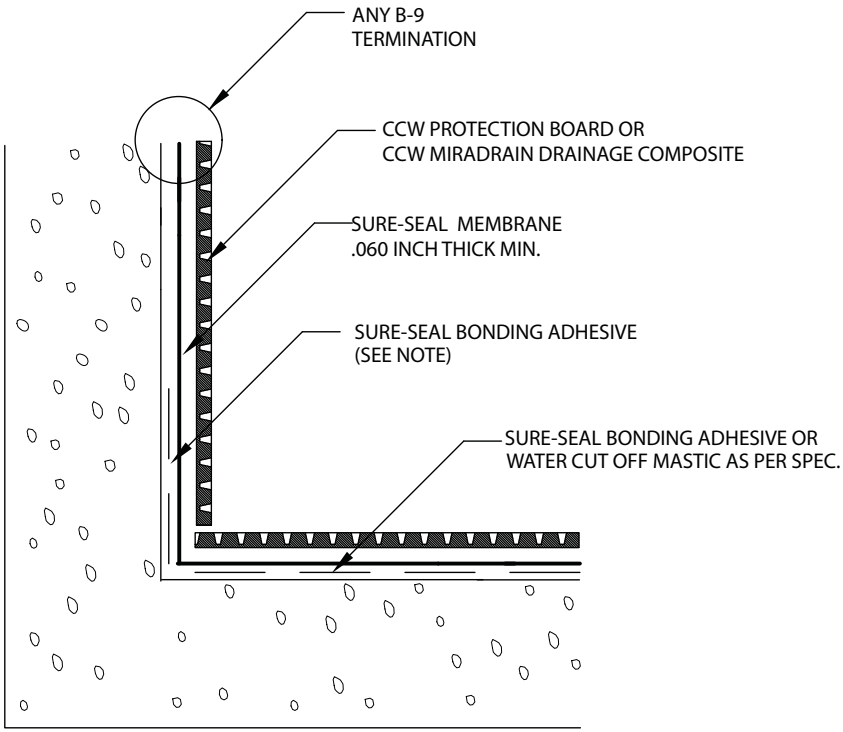


NOTE:

VERTICAL MEMBRANE MAY BE TOTALLY ADHERED, OR MEMBRANE MAY BE ADHERED AT TOP QUARTER OF SHEET WITH ADHERED PERIMETER 12 INCHES TO 24 INCHES WIDE ON OTHER VERTICAL EDGES.

Sure-Seal Detail

Foundation Wall/Footing Inside Angle Change (B-4B)

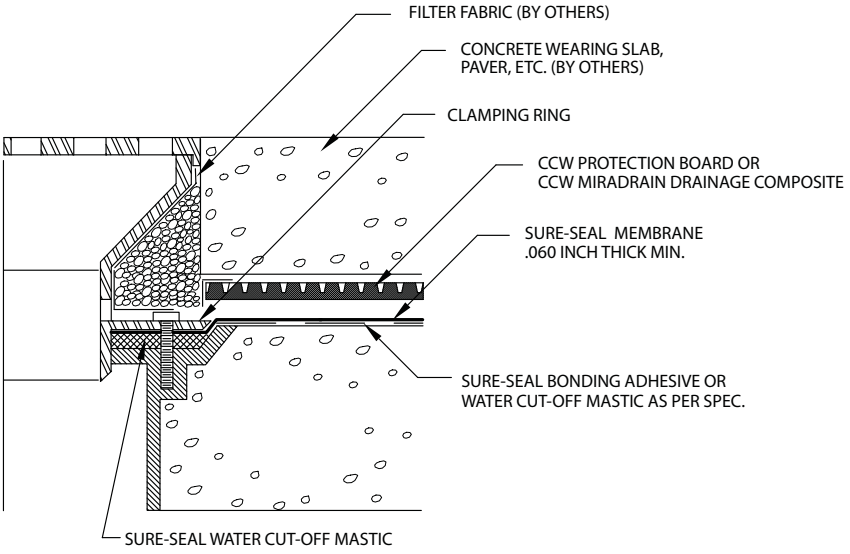


NOTE:

VERTICAL MEMBRANE MAY BE TOTALLY ADHERED,
OR MEMBRANE MAY BE ADHERED AT TOP QUARTER
OF SHEET WITH ADHERED PERIMETER 12 INCHES
TO 24 INCHES WIDE ON OTHER VERTICAL EDGES.

Sure-Seal Detail

Double Drain (B-6)

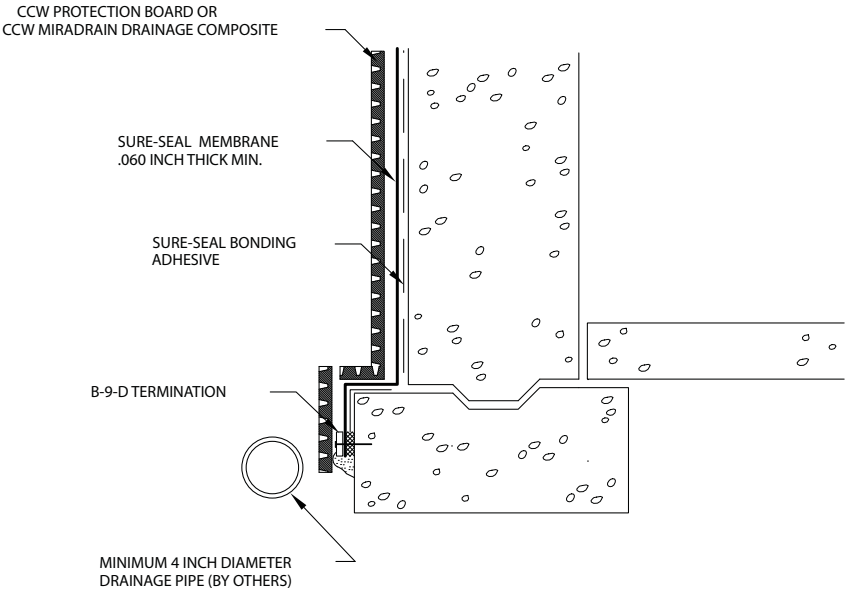


NOTES:

1. REMOVE ALL LEAD AND OTHER FLASHING
2. ALL BOOTS OR CLAMPS MUST BE IN PLACE TO PROVIDE CONSTANT COMPRESSION ON WATER CUT-OFF MASTIC
3. HOLE IN MEMBRANE MUST EXCEED SIZE OF DRAIN PIPE
4. SLOPE OF STRUCTURAL SLAB IS RECOMMENDED TO BE A MINIMUM OF 1/8 INCH PER FOOT FOR DRAINAGE

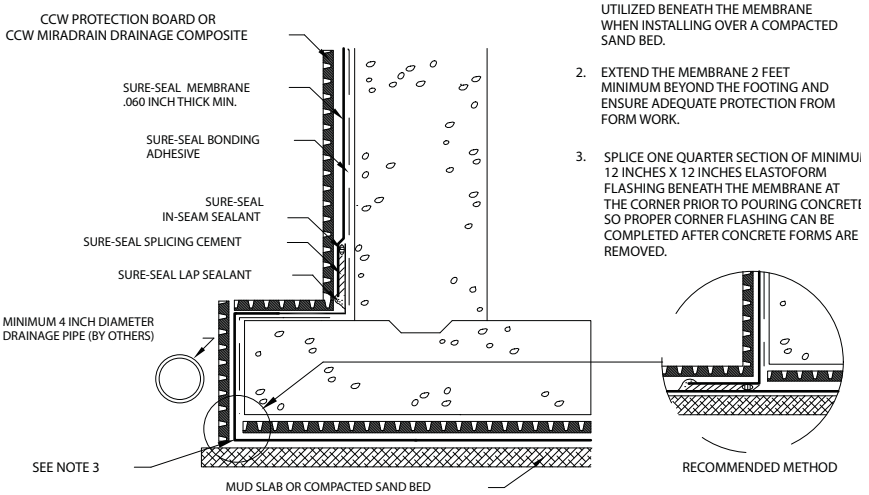
Sure-Seal Detail

Footing Termination (B-7A)



Sure-Seal Detail

Foundation/Slab Tie-In (B-7B)



NOTES:

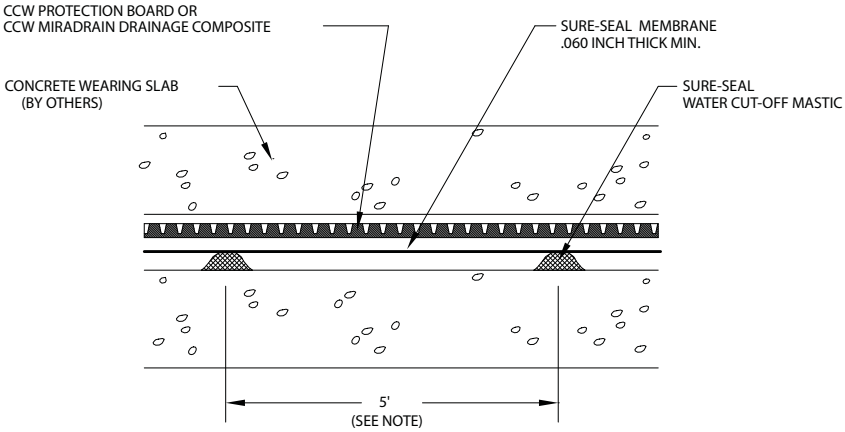
1. HP PROTECTIVE MAT MUST BE UTILIZED BENEATH THE MEMBRANE WHEN INSTALLING OVER A COMPACTED SAND BED.

2. EXTEND THE MEMBRANE 2 FEET MINIMUM BEYOND THE FOOTING AND ENSURE ADEQUATE PROTECTION FROM FORM WORK.

3. SPLICE ONE QUARTER SECTION OF MINIMUM 12 INCHES X 12 INCHES ELASTOFORM FLASHING BENEATH THE MEMBRANE AT THE CORNER PRIOR TO POURING CONCRETE SO PROPER CORNER FLASHING CAN BE COMPLETED AFTER CONCRETE FORMS ARE REMOVED.

Sure-Seal Detail

Water Cut-Off Mastic Grid System (B-8)



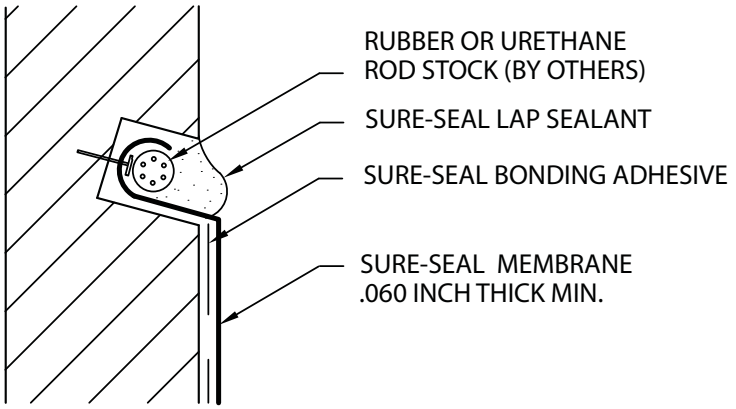
NOTE:

PLACE BEADS OF WATER CUT-OFF MASTIC
IN A PERPENDICULAR PATTERN TO FORM
A GRID OF 5 FOOT BY 5 FOOT SECTIONS

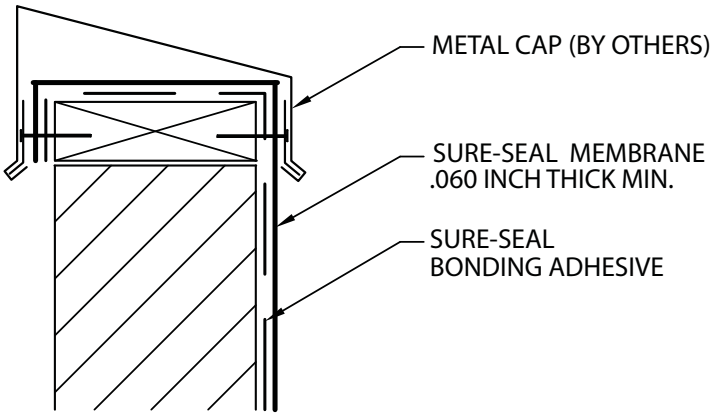
Sure-Seal Detail

Vertical Termination (B-9AB)

B-9-A REGLET



B-9-B CAP FLASHING

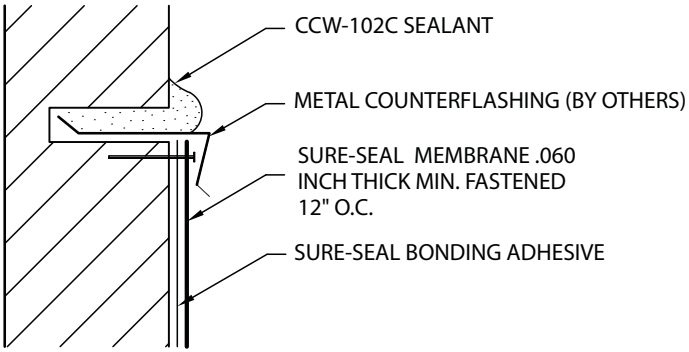


NOTES:

1. DIAMETER OF ROD STOCK MUST EXCEED WIDTH OF REGLET GAP.

2. MECHANICALLY FASTEN MEMBRANE TO SUBSTRATE 12 INCHES ON CENTER.

B-9-C COUNTERFLASHING

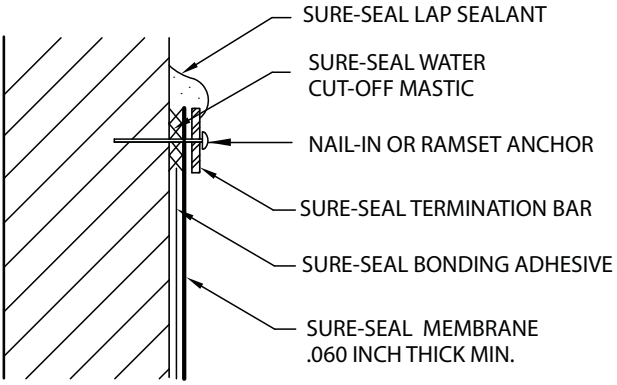


NOTES:

1. IF FASTENER PENETRATES METAL COUNTERFLASHING, USE NEOPRENE WASHER, APPLY WATER CUT-OFF MASTIC OR CAULK FASTENER HEAD.

2. FASTEN METAL COUNTERFLASHING TO SUBSTRATE 12 INCHES ON CENTER.

B-9-D MECHANICAL



NOTES:

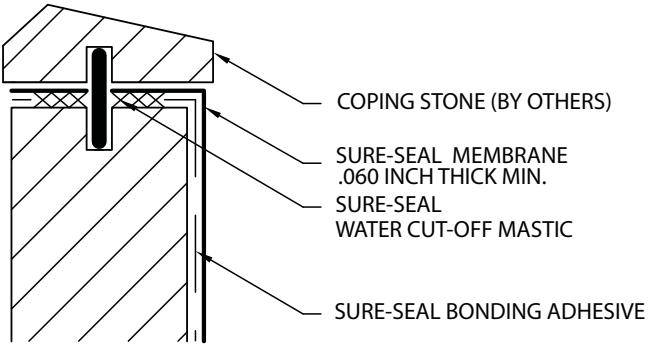
1. APPLY ON HARD SMOOTH SURFACE ONLY; NOT FOR USE ON WOOD.

2. WATER CUT-OFF MASTIC MUST BE HELD UNDER CONSTANT COMPRESSION.

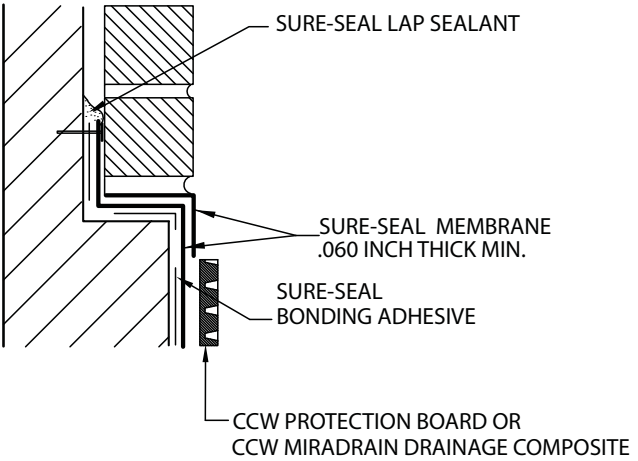
Sure-Seal Detail

Vertical Termination (B-9EF)

B-9-E COPING STONE



B-9-F THRU-WALL

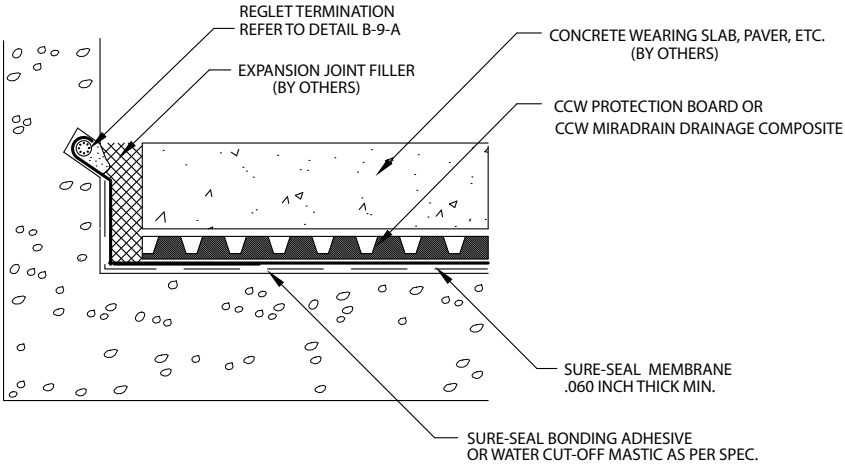


NOTE:

STOP DRAINAGE COMPOSITE APPROXIMATELY 6 INCHES
BELOW FINAL GRADE.

Sure-Seal Detail

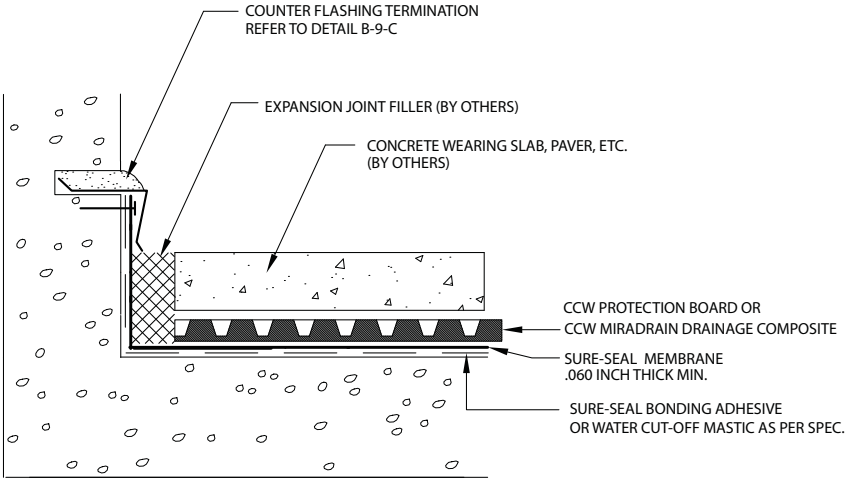
Perimeter Wall Flashing (B-12A)



NOTE: WALL FLASHING SHOULD BE A
CONTINUATION OF DECK MEMBRANE

Sure-Seal Detail

Perimeter Wall Flashing (B-12B)

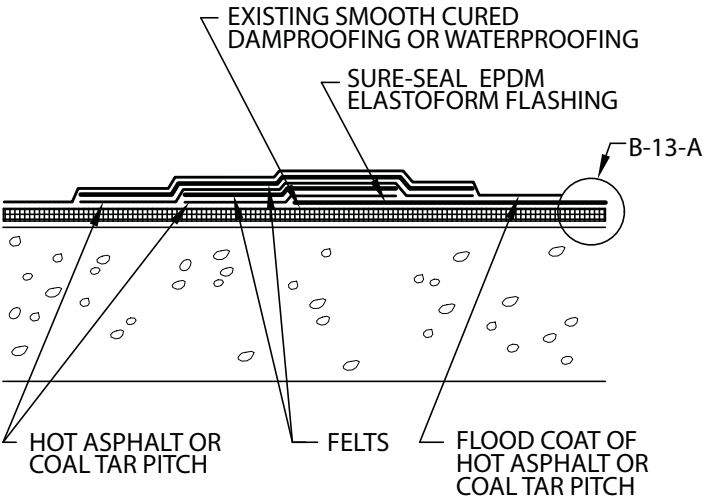


NOTE:
WALL FLASHING SHOULD BE A
CONTINUATION OF DECK MEMBRANE

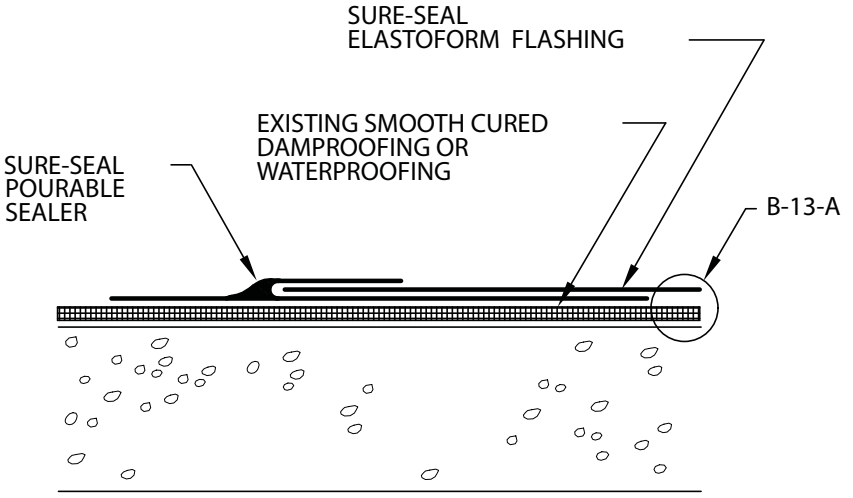
Sure-Seal Detail

Existing Waterproof Tie-In (B-13)

OPTION 1
HOT TIE-IN

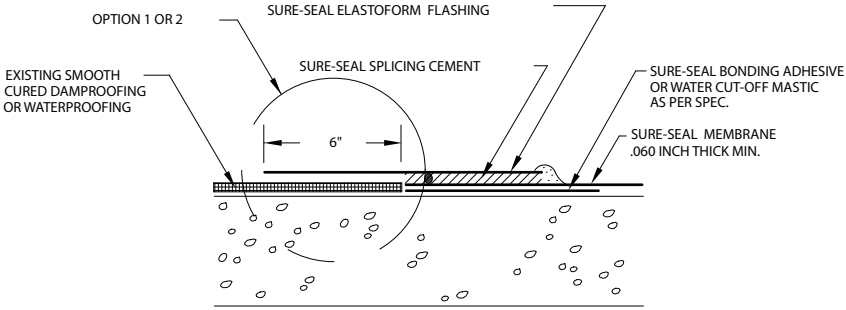


OPTION 2
COLD TIE-IN



Sure-Seal Detail

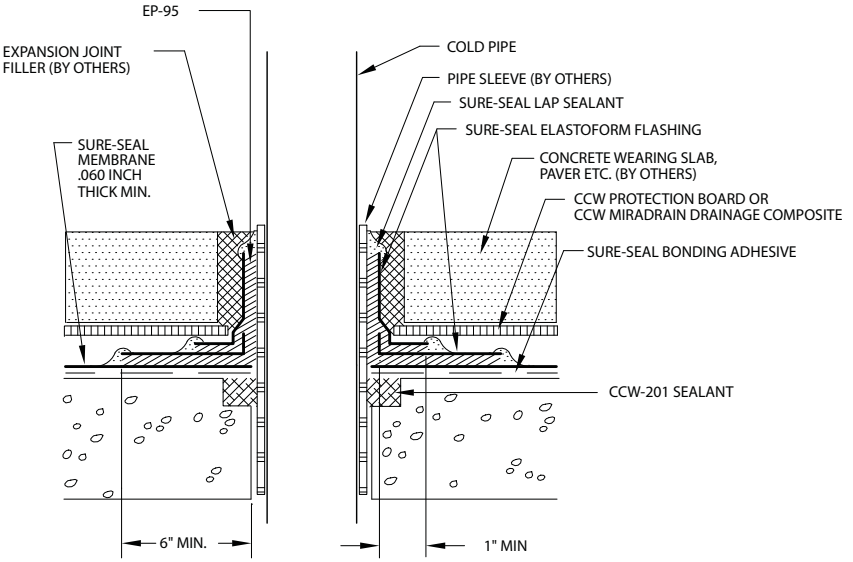
Existing Waterproof Tie-In (B-13A)



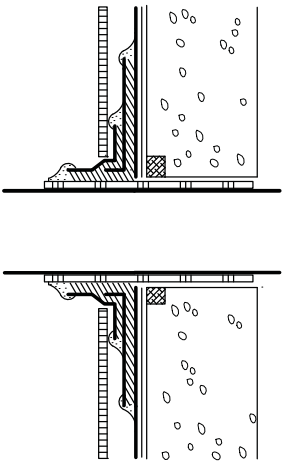
Sure-Seal Detail

Pipe Flashing (B-14)

HORIZONTAL APPLICATION



VERTICAL APPLICATION

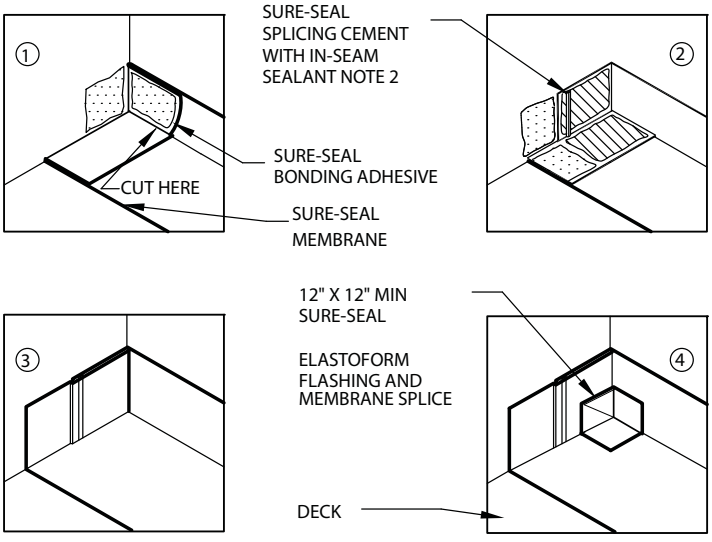


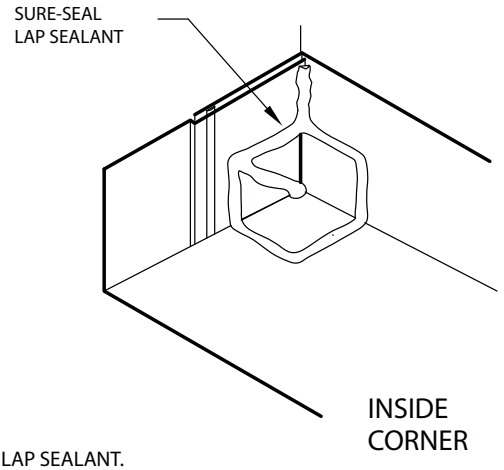
NOTES:

1. HORIZONTAL OR VERTICAL APPLICATION AS SHOWN.
2. REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD-FABRICATED PIPE SEAL.
3. ELASTOFORM FLASHING WRAPPED AROUND PIPE SHALL HAVE 3 INCH MIN. MEMBRANE SPLICE.
4. SEAL BETWEEN THE PIPE SLEEVE AND WALL AS WELL AS BETWEEN PIPE AND PIPE SLEEVE.

Sure-Seal Detail

Field Fabricated Inside Corner (B-15A)



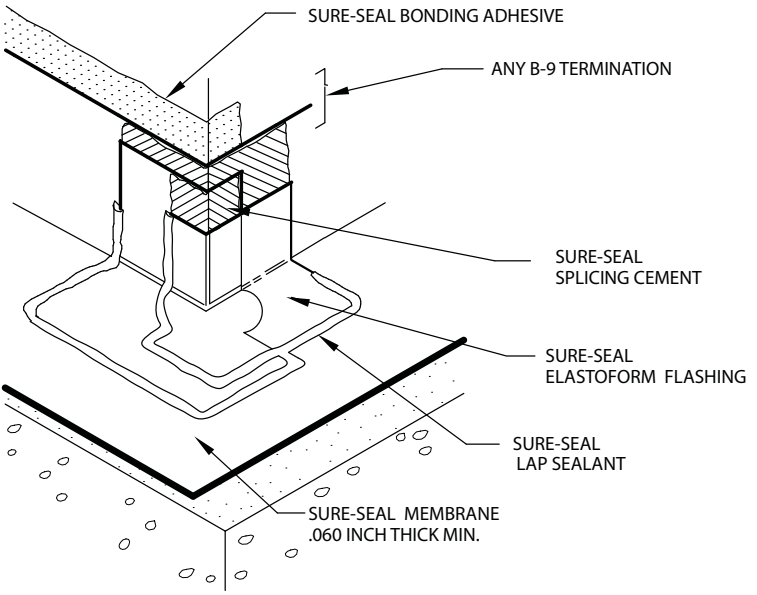


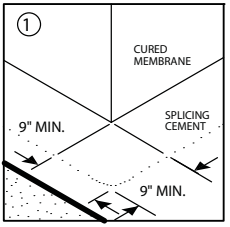
NOTES:

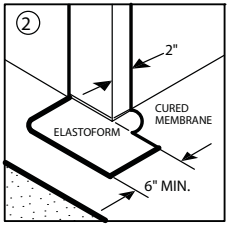
1. SEAL ALL EDGES WITH LAP SEALANT.
2. IN-SEAM SEALANT IS REQUIRED ON ALL VERTICAL SPLICES BETWEEN ADJOINING SECTIONS OF CURED MEMBRANE.
3. ALL MEMBRANE SPLICES SHALL BE A MINIMUM OF 6 INCHES WIDE.

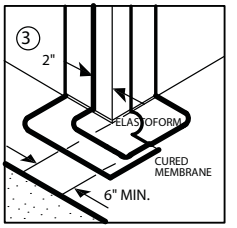
Sure-Seal Detail

Field Fabricated Outside Corner (B-15B)





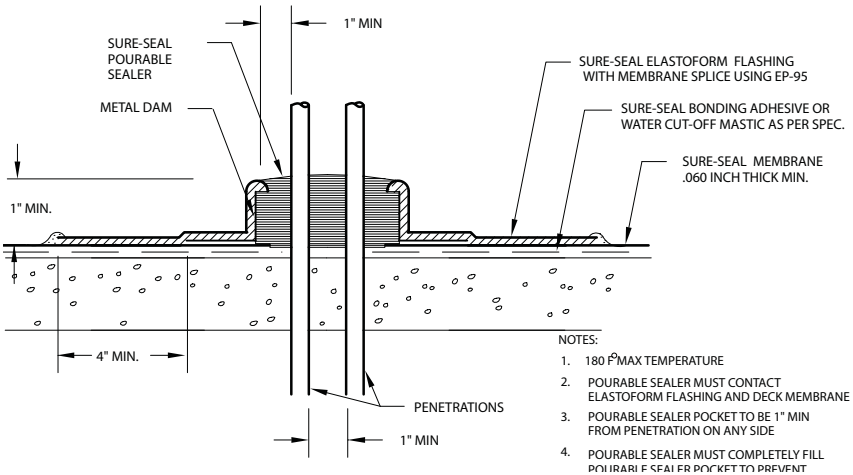




NOTE: SEAL ALL EDGES WITH SURE-SEAL LAP SEALANT

Sure-Seal Detail

Pourable Sealer Pocket (B-16)



NOTES:

1. 180°F MAX TEMPERATURE
2. POURABLE SEALER MUST CONTACT ELASTOFORM FLASHING AND DECK MEMBRANE
3. POURABLE SEALER POCKET TO BE 1" MIN FROM PENETRATION ON ANY SIDE
4. POURABLE SEALER MUST COMPLETELY FILL POURABLE SEALER POCKET TO PREVENT PONDING OF WATER
5. DECK FLANGE MUST BE CONTINUOUS WITH ROUNDED CORNERS
6. POURABLE SEALER TO BE MIN. 1" DEEP
7. POURABLE SEALER POCKET MAY BE ROUND

TYPICAL USES

CCW MiraCLAY is designed for waterproofing below-grade structural slabs as well as construction methods incorporating lagging, concrete caisson or shotcrete retention walls. CCW MiraCLAY is also very effective in rehab waterproofing and zero clearance property line construction.

LIMITATIONS

- CCW MiraCLAY membranes should remain dry before and during installation.
- Improper storage could lead to product deterioration.
- Not for use on CMU foundations.

PACKAGING

Available in 5 ft x 14 ft (70 sq ft) rolls

DETAIL REQUIREMENTS

For standard installation details, follow the CCW MiraCLAY details drawings. For non-standard installation instructions contact your local Carlisle Coatings & Waterproofing representative.

RECOMMENDATIONS

Carlisle Coatings & Waterproofing recommends the use of CCW MiraDRAIN, a geocomposite sheet drain, to facilitate the removal of water away from the structure. The CCW MiraCLAY and CCW MiraDRAIN waterproofing and drainage system provides maximum protection against water penetration.

INSTALLATION – UNDERSLAB APPLICATIONS

CCW MiraCLAY is designed for use under reinforced concrete slabs 4” (100 mm) thick or greater on a compacted earth/gravel substrate. If installed over a mud slab, CCW MiraCLAY requires a minimum 5” (150 mm) thick reinforced concrete slab.

For contaminated site water conditions, as determined by a site water analysis, CCW MiraCLAY EF should be used. When hydrostatic conditions exist, CCW MiraCLAY should be installed under footings and grade beams as shown in CCW MiraCLAY details.

SUBSTRATE PREPARATION: NOTE: Do not begin construction in work areas where there is standing water or in situations which may cause the CCW MiraCLAY to prematurely hydrate.

Before installing CCW MiraCLAY, the substrate must be properly prepared. Substrate may be concrete, earth, sand, pea gravel or crushed stone. Earth and sand substrates should be compacted to a minimum 85% Modified Proctor density. Crushed stone should not be larger than 3/4” (18 mm) in size. Honeycombing, voids and aggregate pockets exceeding 1” in diameter or have a depth greater than 3/4 inch should be filled with a non-shrink cementitious grout. Fill tie-rod holes with a non-shrink cementitious grout. Substrate should be smooth and uniform without sharp projections or pockets. Complete all required elevator pit, sump pit and grade beam and piling work before installing CCW MiraCLAY under main slab area.

INSTALLATION: Install CCW MiraCLAY over the properly prepared substrate with the non-woven geotextile side up. Overlap adjoining edges a minimum of 4” (100 mm); stagger sheet ends a minimum of 24” (600 mm); and nail or staple edges together as required to prevent any displacement during concrete placement. CCW MiraCLAY Granules may also be placed in the seam for additional waterproofing performance.

When the slab is poured in sections, CCW MiraCLAY should extend a minimum 12” (300 mm) beyond the slab edge. When the installation reaches the outer edge of the slab, continue CCW MiraCLAY up and out of the form a minimum of 12” (300 mm). At the corner, CCW MiraCLAY should remain in contact with the substrate

and inside the surface of the concrete form. When the form is removed, the CCW MiraCLAY outside the form should be positioned and fastened onto the footing or vertical wall. Overlay the CCW MiraCLAY a minimum of 6" (150 mm) with the succeeding vertical waterproofing membrane.

At property line retaining walls, such as soldier pile or lagging, continue the underslab CCW MiraCLAY application up the retaining wall a minimum 12" (300 mm) above the top edge of the slab or footing and secure. Overlap the vertical CCW MiraCLAY waterproofing membrane by a minimum of 6" (150 mm) or a minimum of 12" (300 mm) under hydrostatic head conditions.

PROPERTY LINE OR LAGGING APPLICATION

SUBSTRATE PREPARATION: Gaps between the wood lagging greater than 1" (25 mm) must be filled with cementitious grout. In areas with large gaps (1" to 5" / 25 mm to 125 mm) between lagging, install plywood to provide a uniform substrate. Where drainage issues may arise, install CCW MiraDRAIN to provide a uniform substrate as well as to facilitate drainage.

INSTALLATION: Install CCW MiraCLAY with the white non-woven side facing the installer. Secure the CCW MiraCLAY into position with fasteners and 1" (25 mm) washers. Use the appropriate fasteners for the type of substrate used to receive the CCW MiraCLAY. Install succeeding courses of CCW MiraCLAY by overlapping the previous course a minimum of 4" (100 mm). Stagger the seams a minimum of 24" (600 mm). Install in shingle fashion so that the upper roll of CCW MiraCLAY overlaps the lower roll. Fasten membrane once every 18" (45 cm) on seams or as required to prevent blousing. Shotcrete installations require a seam fastening pattern not to exceed 12" O.C. or as necessary to prevent seam blousing.

Extend waterproofing membrane to 6" below grade and fasten membrane to the substrate to maintain constant compression using a 1/8" x 1" (3 x 25 mm) minimum termination bar. Embed the top edge of CCW MiraCLAY and termination bar with a thick bead of CCW MiraCLAY Mastic 2" (50 mm) wide by 1/2" (12 mm) thick.

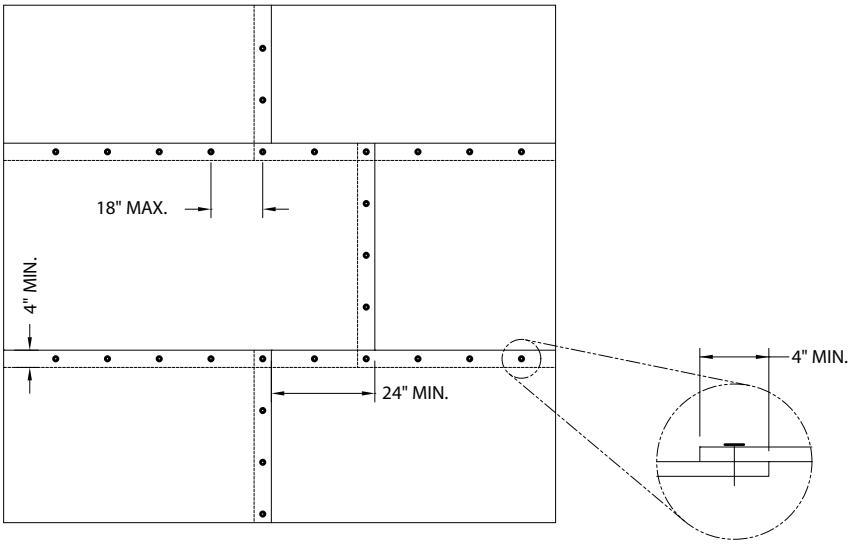
STANDARD FOUNDATION WALLS

SUBSTRATE PREPARATION: The substrate must be properly prepared to receive the CCW MiraCLAY waterproofing membrane. All honeycombs, form-tie cavities and indentations should be filled with CCW MiraCLAY Mastic or filled with latex Portland Cement. Substrate must be smooth and uniform removing any protrusions over 1/2" (12 mm) from the surface. Footings must be free of soil, rocks or debris to provide a suitable substrate to receive the CCW MiraCLAY waterproofing membrane.

INSTALLATION: The CCW MiraCLAY waterproofing membrane should be installed with the white non-woven side facing the applicator. Create a cant at any vertical to horizontal transition by applying a 1.5" (39 mm) to 2" (50 mm) of CCW MiraCLAY Granules or CCW MiraCLAY Mastic along that junction. At the base of the foundation wall where the vertical wall meets the horizontal footing, install CCW MiraCLAY in a horizontal manner extending out onto the footing a minimum of 12" (300 mm). Fasten the CCW MiraCLAY in place with concrete fasteners and 1" (25 mm) washers. Install succeeding courses of CCW MiraCLAY by overlapping the previous course a minimum of 4" (100 mm). Stagger the seams a minimum of 12" (300 mm). Install in shingle fashion so that the upper roll of CCW MiraCLAY overlaps the lower roll. Fasten membrane once every 18" (45 cm) to 3' (90 cm) on seams or as required to prevent blousing. At grade line, terminate CCW MiraCLAY with a rigid termination bar or fasten 12" (300 mm) on center. Embed the top edge of CCW MiraCLAY and termination bar with a thick bead of CCW MiraCLAY mastic 2" (50 mm) wide by 1/2" (12 mm) thick. Backfill must be compactible soils free of construction debris and must be uniformly compacted to a minimum 85% Modified Protor on each lift.

MiraCLAY Detail

Horizontal Splices (C-1)



NOTES

1) ROLL CCW MIRACLAY ONTO APPROVED SUBSTRATE.

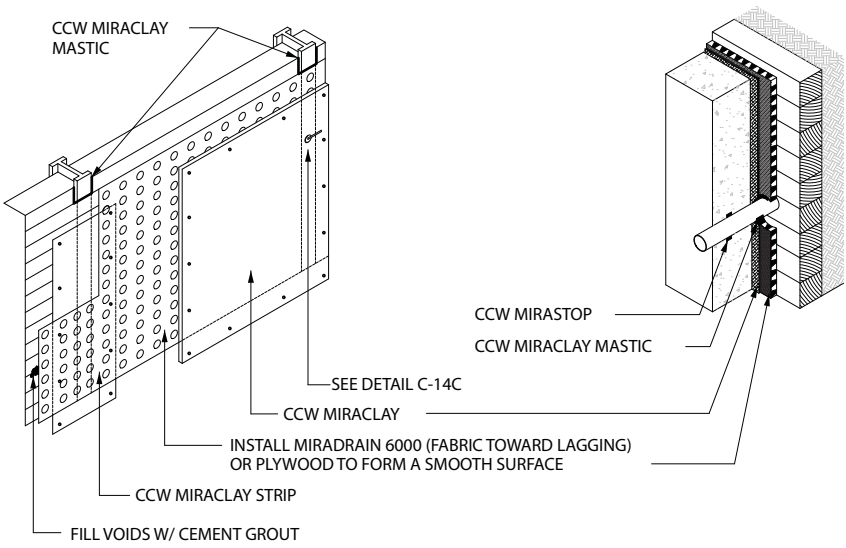
2) LAP SIDE AND END SPLICES A MIN. OF 4"

3) STAGGER END SPLICES A MIN. OF 24"

4) MECHANICALLY FASTEN SHEETS TOGETHER WITH A BOX STAPLER OR SIMILAR DEVICE AT A MAX. OF 18" O.C.

MiraCLAY Detail

Soldier Beams and Lagging (C-5A)



NOTES

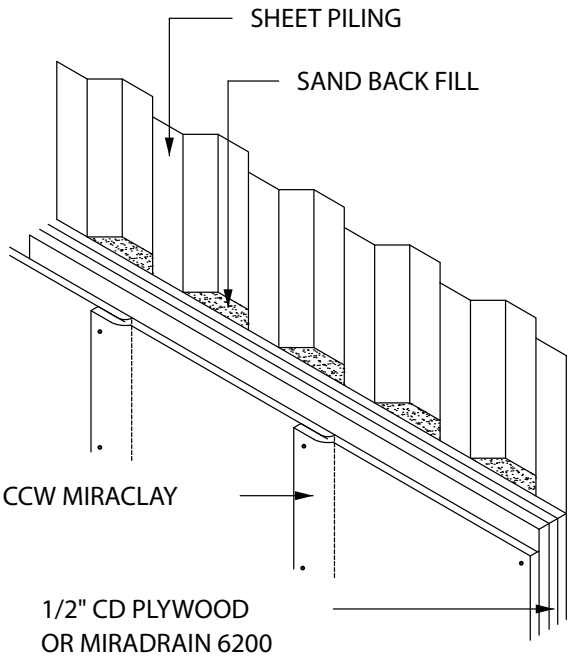
1) FILL GAPS GREATER THAN 1" WITH CEMENT GROUT. TROWEL SMOOTH.

2) COVER ROUGH AND IRREGULAR SURFACES WITH 1/2" CD PLYWOOD OR MIRADRAIN 6000

3) INSTALL STRIPS OF CCW MIRACLAY HORIZONTALLY TO MINIMIZE SPLICES AT BASE OF WALL. (SEE DETAIL C-1)

MiraCLAY Detail

Sheet Piling (C-5B)



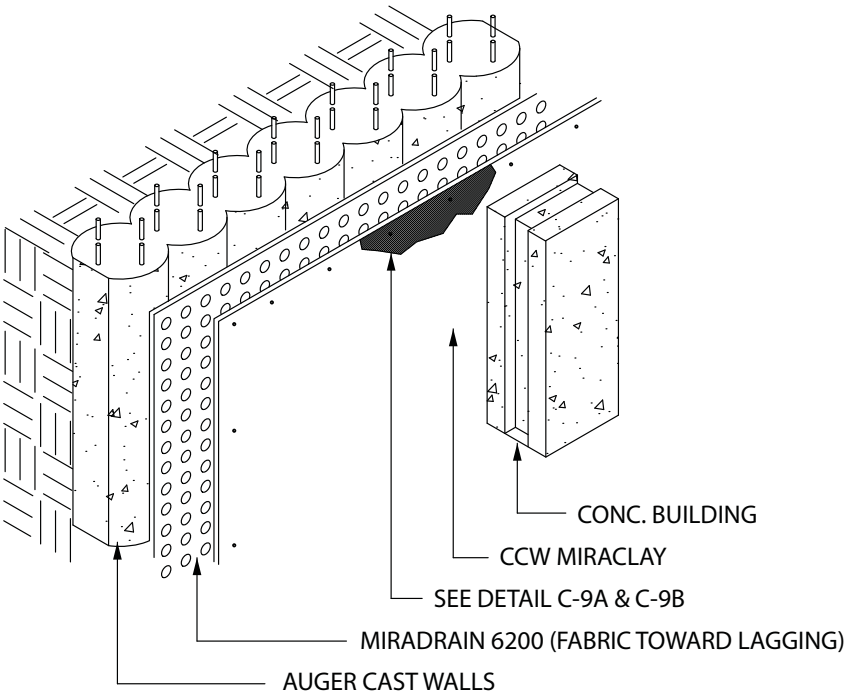
NOTES

1A) APPLY CCW MIRACLAY DIRECTLY TO SHEET PILING, USING A MECHANICAL FASTENING DEVICE.

1B) ALTERNATE METHOD IS TO INSTALL PLYWOOD OR MIRADRAIN 6200 TO FORM A FLAT SURFACE. FASTEN CCW MIRACLAY TO FLAT SURFACE

2) INSTALL CCW MIRACLAY HORIZONTAL TO MINIMIZE SPLICES AT BASE OF WALL (SEE DETAIL C-1)

3) FASTEN CCW MIRACLAY AT THE SEAMS, TO ALLOW IT TO CONFORM TO THE SUBSTRATE. MAX. FASTENER SPACING IS 12" O.C.



NOTES

1) REMOVE SHARP PROTRUSIONS GREATER THAN 3/4"

2) FILL SUBSTRATE VOIDS GREATER THAN 1 INCH WITH CEMENT GROUT. TROWEL SMOOTH.

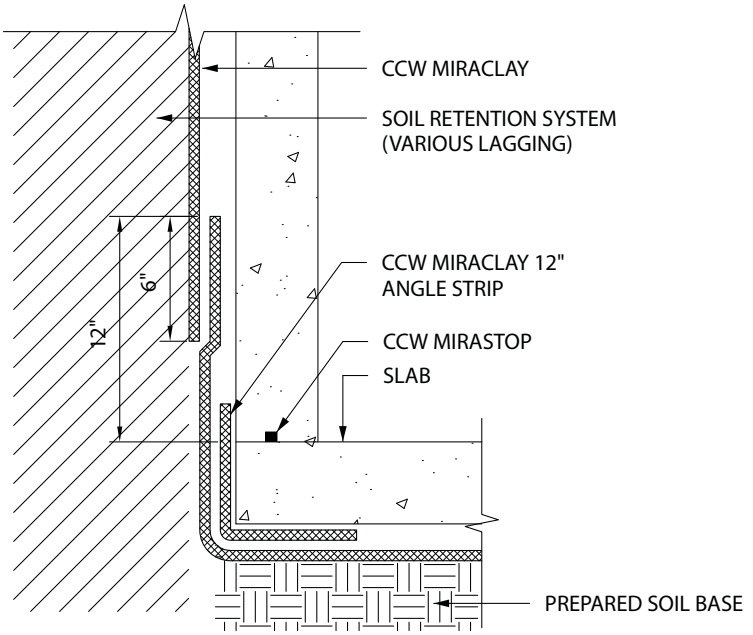
3) SEE DETAIL C-14C FOR TIEBACK PENETRATIONS.

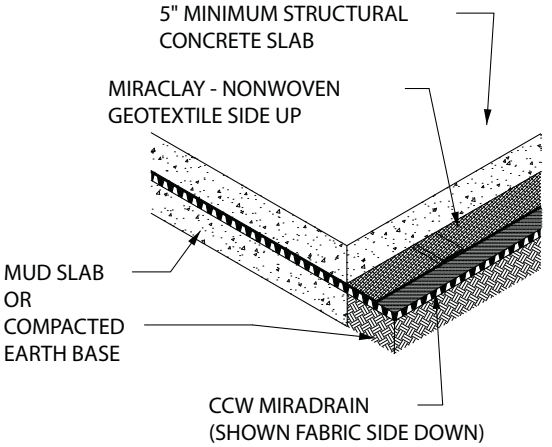
4) INSTALL CCW MIRACLAY HORIZONTALLY TO MINIMIZE SPLICES AT BASE OF WALL (SEE DETAIL C-1)

5) FASTEN CCW MIRACLAY AT THE SEAMS TO ALLOW IT TO CONFORM TO SUBSTRATE. FASTENERS NOT TO EXCEED 12" O.C. MAX.

MiraCLAY Detail

CCW MiraCLAY Foundation/Slab Tie-In (C-7A)



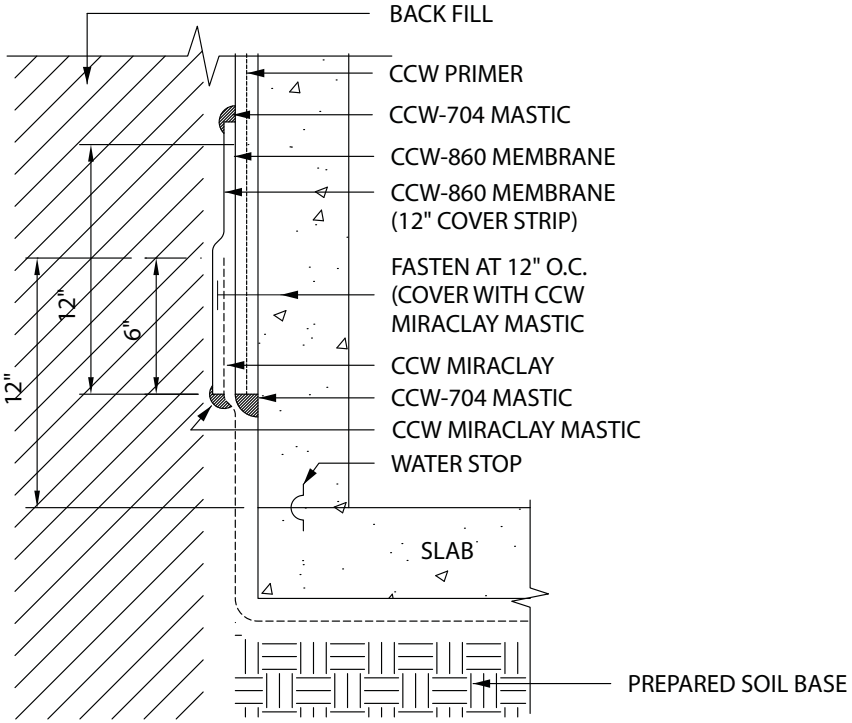


NOTES

PROVIDE ENOUGH UNDER SLAB
CCW MIRACLAY TO EXTEND FOR
THE VERTICAL TIE-IN

MiraCLAY Detail

Sheet Membrane and CCW MiraClay
Foundation/Slab Tie-In (C-7B)



NOTES

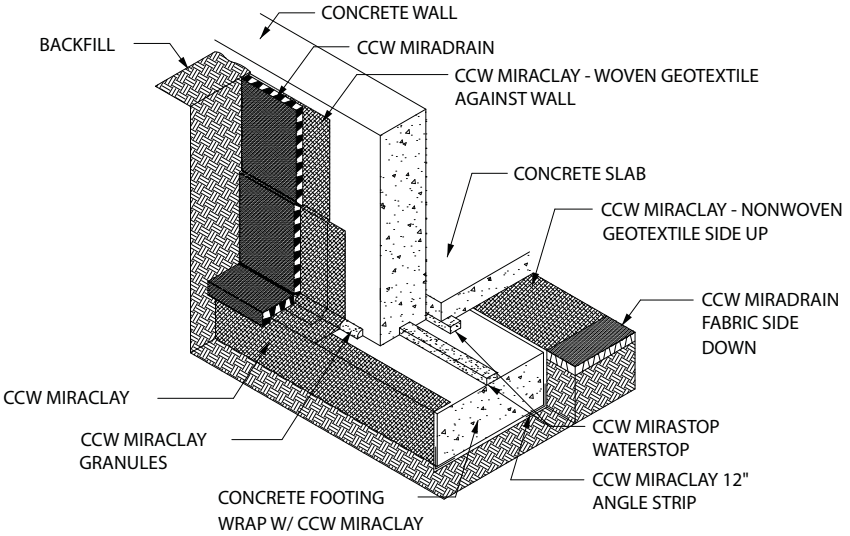
1) CCW MIRACLAY SHOULD OVERLAP THE CCW-860 MEMBRANE A MIN. OF 6".

2) THE 12" CCW-860 COVER STRIP IS SPLICED 6" TO THE CCW-860 MEMBRANE AND THE REMAINING 6" OVER THE CCW MIRACLAY

3) FASTEN CCW MIRACLAY 12" O.C. WITHIN 2" OF TOP EDGE. COVER FASTENERS WITH CCW MIRACLAY MASTIC

MiraCLAY Detail

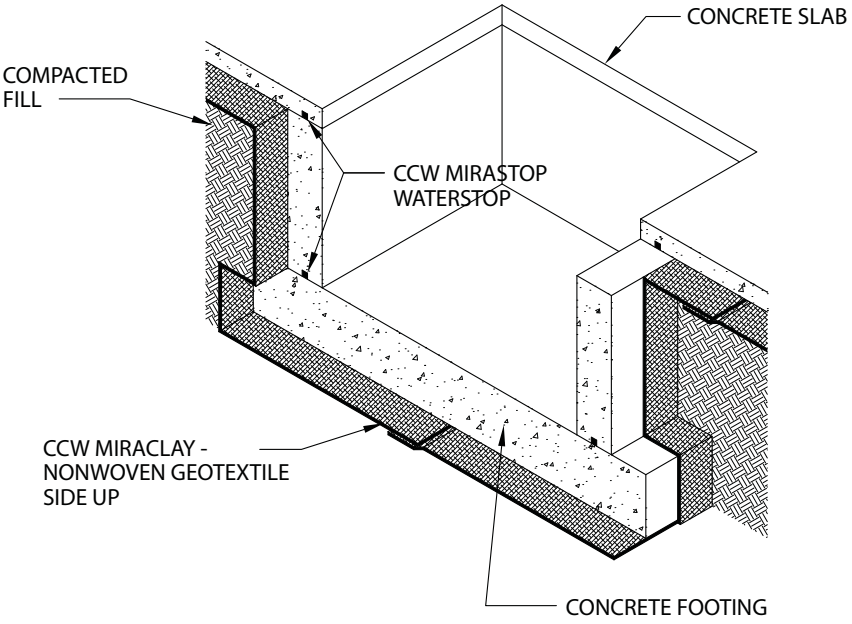
CCW MiraCLAY Hydrostatic Footing/Wall/Floor Detail (C-7C)



NOTE: WRAP FOUNDATION FOOTING WITH CCW MIRACLAY FOR HYDROSTATIC CONDITIONS.

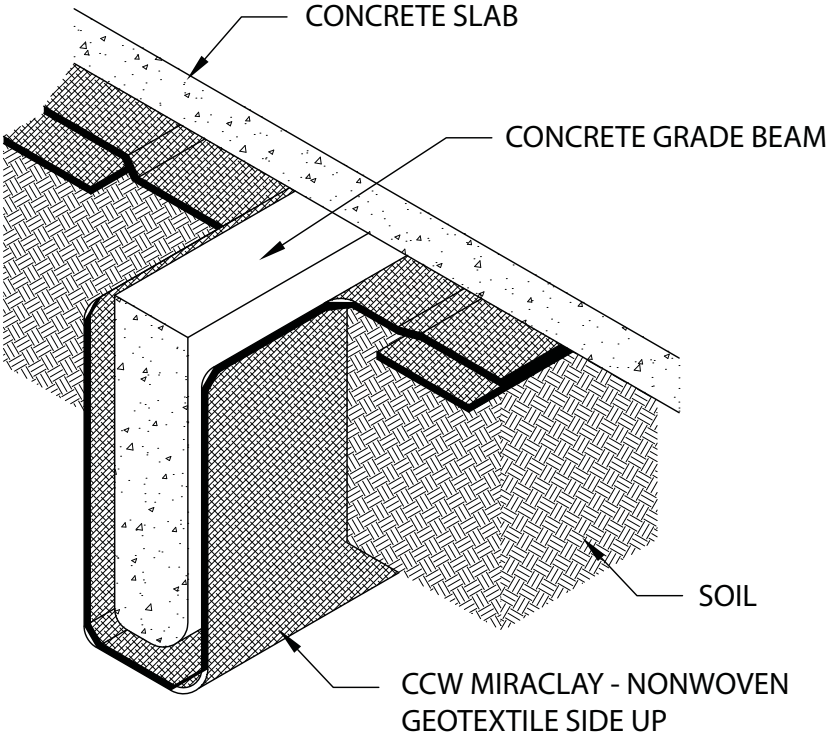
MiraCLAY Detail

Elevator Pit (C-7D)



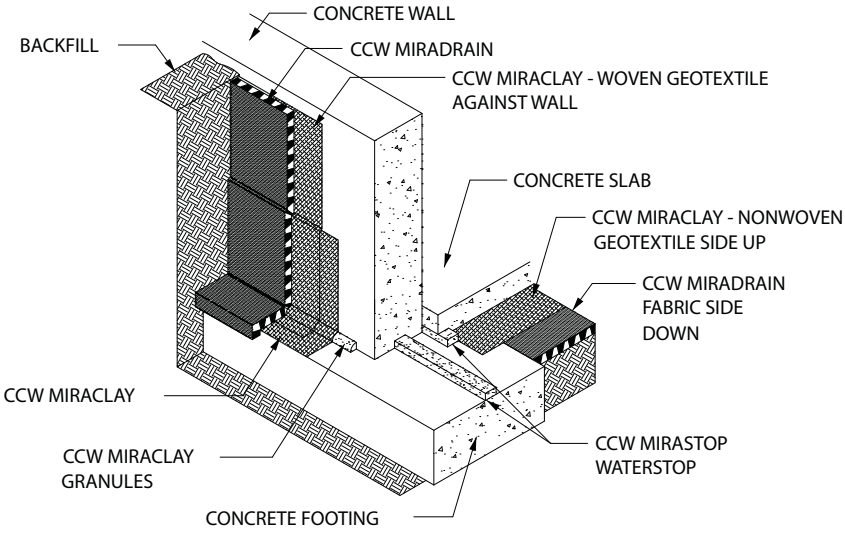
MiraCLAY Detail

Grade Beam (C-7E)



MiraCLAY Detail

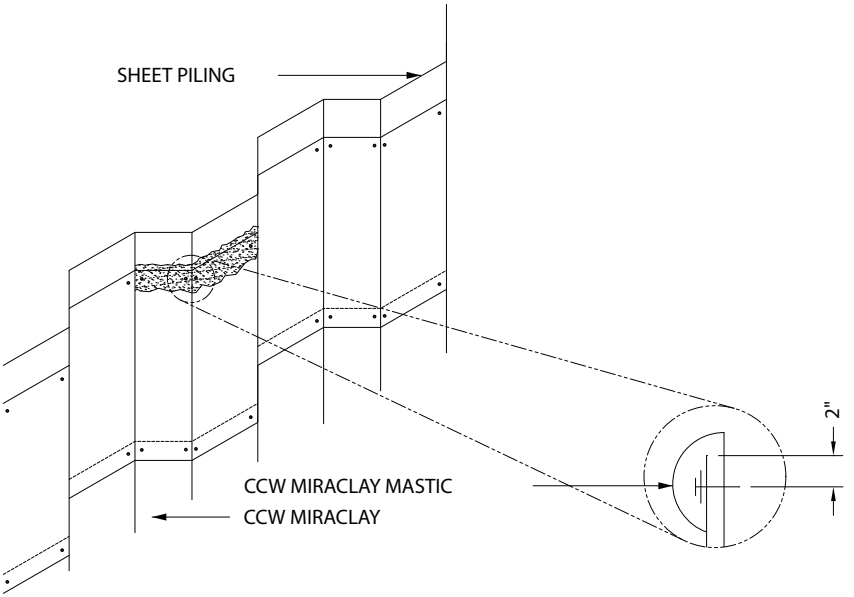
CCW MiraCLAY Footing/Wall/Floor Detail (C-7F)



NOTE: FOR HYDROSTATIC CONDITIONS SEE DETAIL C-7C

MiraCLAY Detail

Sheet Piling Termination (C-9A)



NOTES

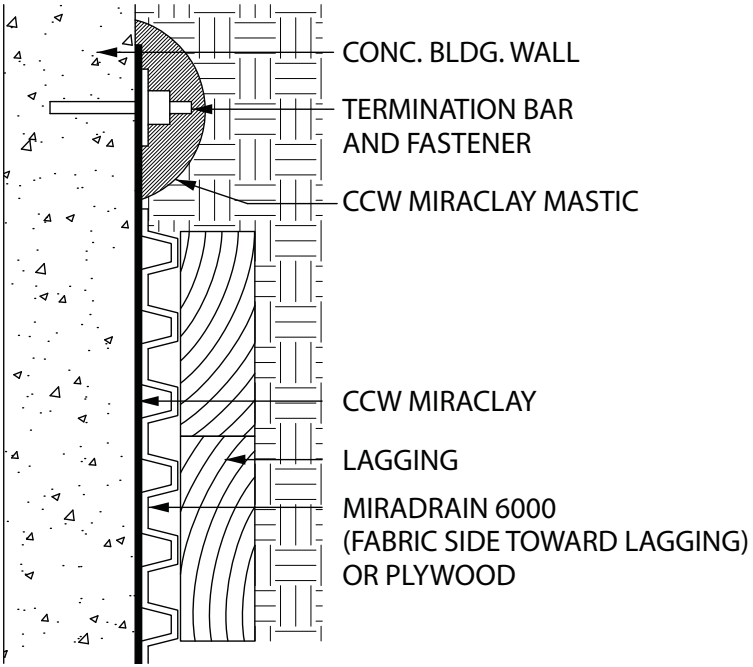
1) FORM CCW MIRACLAY TO THE SHEET PILING WITH MECHANICAL FASTENERS.

2) TERMINATE CCW MIRACLAY USING CCW TERMINATION BAR FASTENED A MAX. OF 12" O.C. WITHIN 2" OF TOP EDGE OF MATERIAL

3) APPLY 3/4" LAYER OF CCW MIRACLAY MASTIC EXTENDING AT LEAST 4" ONTO THE CCW MIRACLAY

MiraCLAY Detail

Wood Lagging Termination (C-9B)



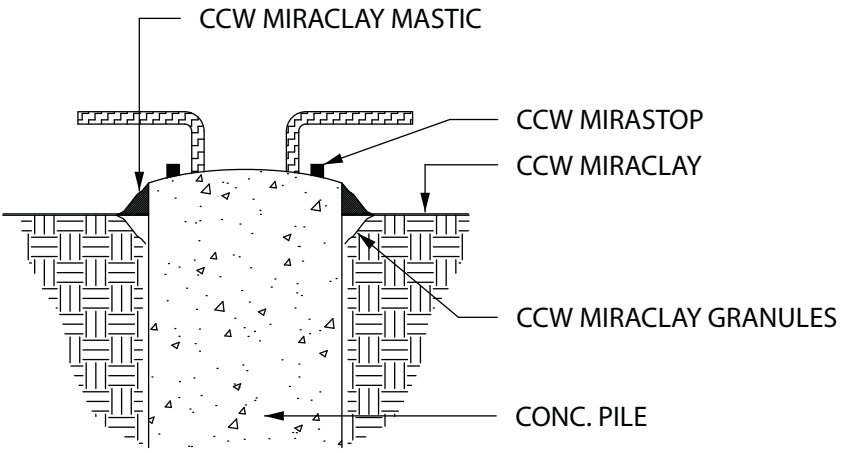
NOTES

1) TERMINATE CCW MIRACLAY USING
CCW TERMINATION BAR FASTENED
AT 18" O.C. WITHIN 2" OF EDGE
OF MATERIAL

2) APPLY 3/4" LAYER OF
CCW MIRACLAY MASTIC EXTENDING
AT LEAST 4" ONTO THE
CCW MIRACLAY

MiraCLAY Detail

Sub Grade Concrete Pile (C-14A)



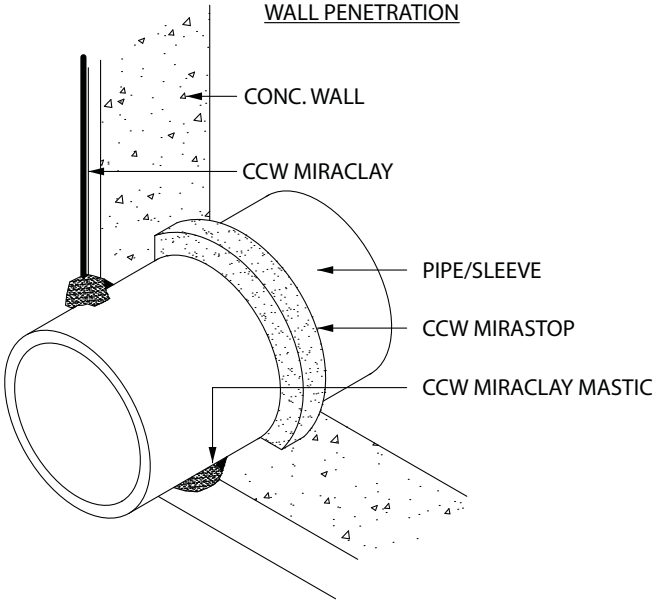
NOTES

1) REMOVE SUB GRADE TO ALLOW
A 2" BY 2" CANT OF
CCW MIRACLAY GRANULES

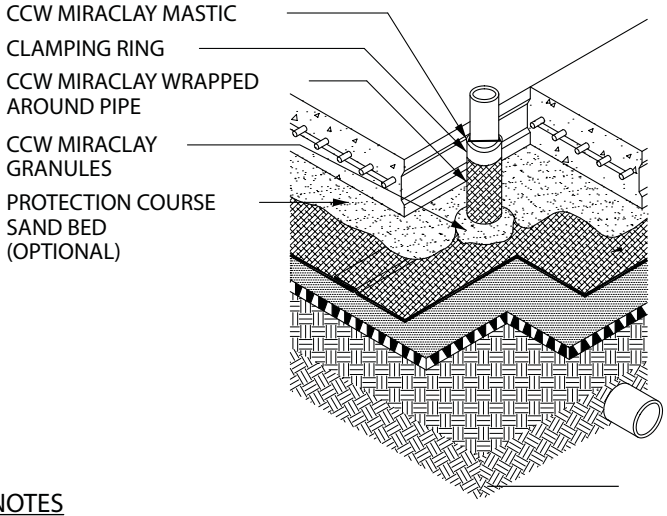
2) CUT CCW MIRACLAY TO FIT
TIGHTLY AROUND PENETRATIONS

3) APPLY A 3/4" THICK LAYER
OF CCW MIRACLAY MASTIC
AROUND PENETRATIONS EXTENDING
ONTO THE CCW MIRACLAY
AND PENETRATIONS

WALL PENETRATION



SLAB PENETRATION

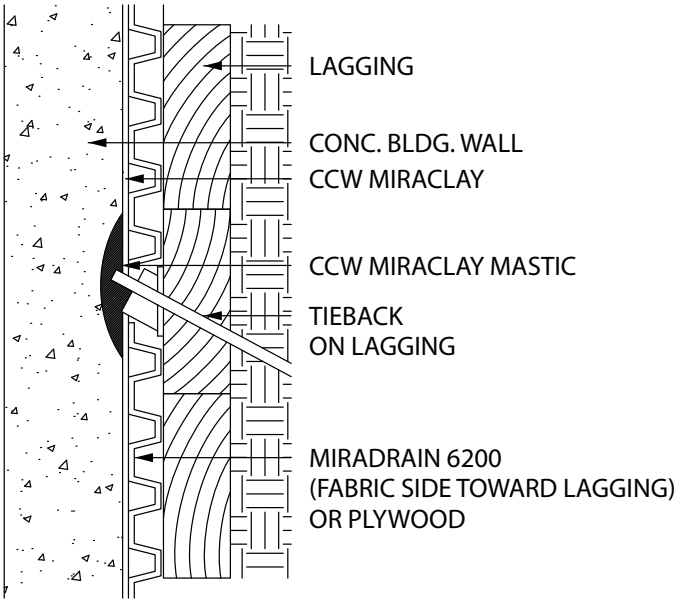


NOTES

1. APPLY 3/4" THICK LAYER OF CCW MIRACLAY MASTIC AROUND THE PENETRATION
2. THIS DETAIL CAN BE USED WITH MULTIPLE HORIZONTAL PENETRATIONS WITH A MINIMUM CLEARANCE OF 6"

MiraCLAY Detail

Sub Grade Horizontal Penetrations (C-14C)



NOTES

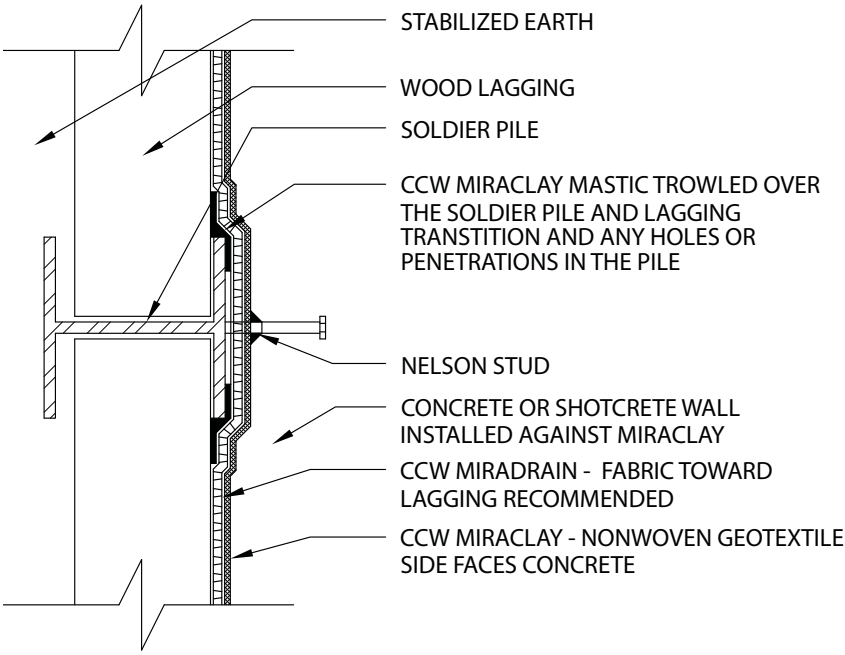
1) COVER TIEBACK WITH 3/4"
LAYER OF CCW MIRACLAY MASTIC

2) APPLY PLASTIC CAP FILLED WITH
CCW MIRACLAY MASTIC OVER
PENETRATIONS EXTENDING GREATER
THAN HALF WAY THROUGH THE
WALL

3) FILL VOIDS BEHIND TIEBACK
WITH CCW MIRACLAY MASTIC

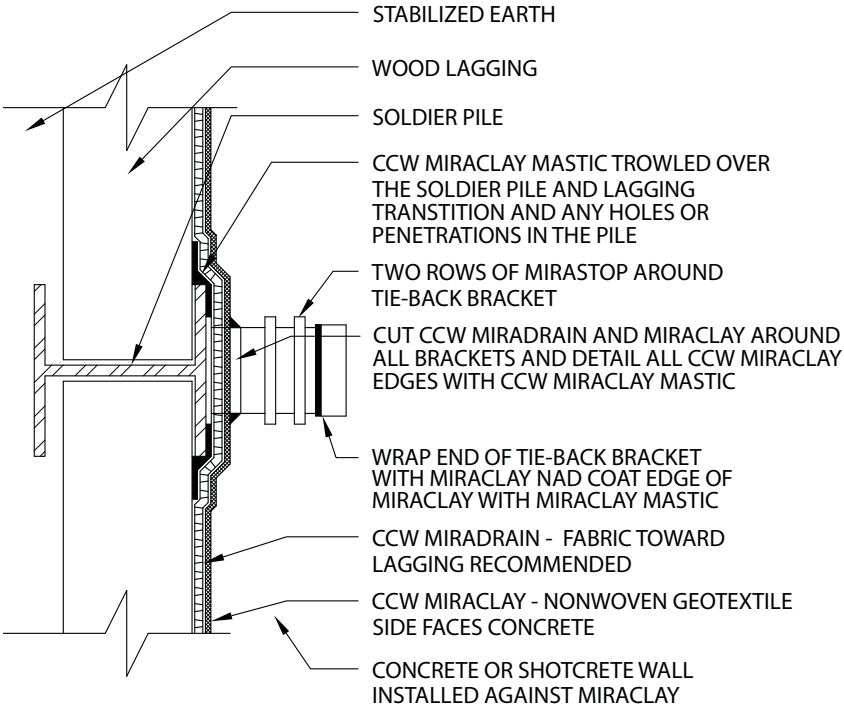
MiraCLAY Detail

Nelson Stud Condition (C-14D)



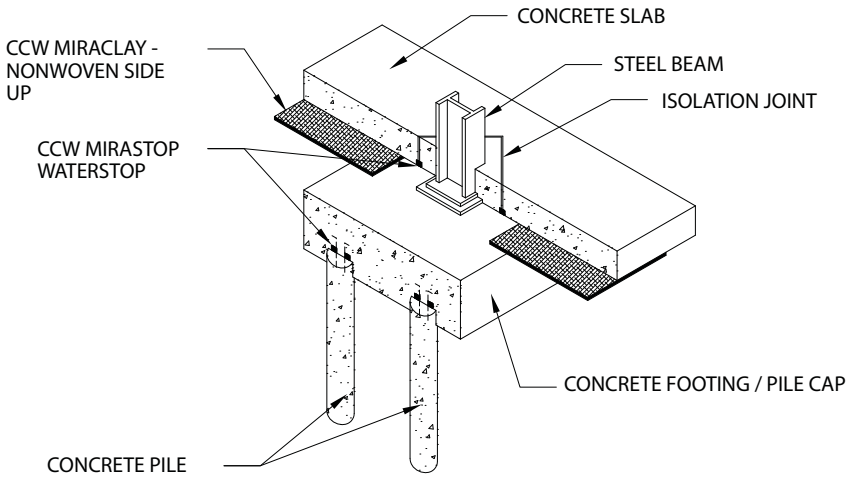
MiraCLAY Detail

Permanate Tie-Back (C-14E)



MiraCLAY Detail

Pile Cap (C-14F)



NOTE:

1. WRAP PILE CAP WITH MIRACLAY FOR HYDROSTATIC CONDITIONS.

TYPICAL USES

The CCW-711W Pre-Pave Sheet Membrane Waterproofing System is especially designed to be used as a waterproofing membrane on the structural slab of bridge decks and parking decks that are to be overlaid with asphalt paving & repaving exsisting roadways. CCW-711W Pre-Pave Sheet Membrane Waterproofing System will protect reflective cracking in the asphalt overlay while helping to retard structures from damage by water and deicing salts.

LIMITATIONS

- Do not use in areas where membrane will be subject to continuous exposure to sunlight.
- Do not apply primer or membrane to damp, frosty or frozen concrete.
- Best results are obtained when membrane is installed at temperatures above 40° F.
- Do not use over sealants containing coal tar or polysulfides.

PACKAGING

CCW-711W is sold in rolls of (one roll per box):
12” X 100’ roll (100 ft^2), 48 boxes per pallet
18” X 100’ roll (150 ft^2), 36 boxes per pallet
24” X 100’ roll (200 ft^2), 24 boxes per pallet
36” X 60’ roll (180 ft^2), 25 boxes per pallet

CCW-550 Primer and CCW-704 Mastic
5 gallon pails (45 pails per pallet)

STORAGE

CCW-711W rolls should be stored on end, under cover, and in areas where the temperature is between 40° and 100°F (4.4° and 38°C). Do not double stack pallets.

WARNINGS AND HAZARDS

CCW-550 and CCW-704 contain flammable and combustible solvents. Avoid exposure to open heat and flame. Avoid breathing vapors. Use only in areas with adequate ventilation. Refer to MSDS for important warnings and product information.

INSTALLATION

Surface Preparation: New concrete shall be in place for 7 days (minimum) and shall be dry. Surface shall have a smooth finish and be free of voids, spalls, sharp protrusions, loose aggregate and form release agents. Curing agents containing wax, oil or pigment must not be used. Forms should be removed as quickly as possible.

In the event of rain, concrete must be allowed to dry before primer is applied. For optimum results, CCW-711W should be applied when air and surface temperatures are above 40°F.

Bridge Deck Preparation Method One (Preferred): Mill all loose unbonded asphalt overlay from the existing deck. Place a bituminous/sand or fine aggregate mixture as a leveling course on the deck. Use CCW-201 Polyurethane Sealant as a cant strip at the intersection of the deck and curb or parapet wall for the transition from the horizontal to the vertical.

Place the CCW-711W membrane from the low to the high point of the deck, so that laps shed water. Overlap all edges at least 2-1/2", stagger end laps and place such that overlaps are in the direction of the paving.

Place a 12" wide strip of CCW-711W along the inside corner of the vertical curb to a height just below the surface of the asphaltic overlayment, extending at least 6" onto the horizontal CCW-711W membrane. Place a bead of CCW-704 Mastic on the top edge of the strip. The curb or parapet wall should be primed if weather conditions make it necessary.

The membrane may be rolled in place with a rubber tire roller before tack coat is applied.

Method Two: Remove all old coating from the concrete by brush blasting. Repair all concrete defects. Prime the deck with CCW-550 or CCW-702 primer during the morning hours. Place a CCW-201 cant strip at the intersection of the deck and curb or parapet wall.

Wait until in-gassing of the deck occurs, usually afternoon when the deck is cooling, before placing membrane. Place the CCW-711W membrane from the low to the high point of the deck, so that laps shed water. Overlap all edges at least 2-1/2", stagger end laps and place such that overlaps are in the direction of the paving.

Place a 12" wide strip of CCW-711W along the inside corner of the vertical curb to a height just below the surface of the asphaltic overlayment, extending at least 6" onto the horizontal CCW-711W membrane. Place a bead of CCW-704 Mastic on the top edge of the strip. The curb or parapet wall should be primed if weather conditions make it necessary.

The membrane may be rolled in place with a rubber tire roller before tack coat is applied.

Parking Deck Preparation

Terminations: Install a 1-1/2" CCW-201 Sealant cant into the inside corner of the curb or parapet and the deck. Allow sealant cant to cure overnight. Apply flashing at curbs to a height just below the surface of the asphaltic overlayment and extend the flashing strip at least 6" onto the horizontal deck surface. For decks with two section drains, install a 3 ft. by 3 ft. sheet centered over the drain and terminate sheet under the clamping ring. Apply final sheet membrane over the flashing and seal the edges with CCW-704 Mastic.

Joints and Cracks: Apply primer and allow to dry. Apply a 12 inch wide strip of CCW-711W Pre-Pave Membrane over all cracks and non-working joints. Apply a double layer of CCW-711W Pre-Pave Membrane over expansion joints in the structural slab. Steel finger joints and other expansion joints should be placed at the level of the asphalt concrete overlayment.

Priming: Stir the primer thoroughly. Apply by spray or with a long nap roller to all concrete surfaces in an even coat. For the CCW-550 apply at 400 to 600 ft^2 per gallon. For the CCW-702 apply at 300 to 350 ft^2 per gallon. At 75° F allow primer to dry 1 hr. minimum, 8 hrs. maximum. Primer has a satisfactory cure when surface is tacky, but does not transfer when touched. If CCW-711W Pre-Pave Membrane is not applied within maximum dry time, re-prime. When applying CCW-711W Pre-Pave Membrane to an asphalt surface, primer is not required but surface must be free of dirt, moisture or other contamination.

Application: Apply CCW-711W Pre-Pave Membrane from low to high point, in a shingle fashion so that laps will shed water. Overlap all edges at least 2-1/2", placed such that overlaps are in the direction of the paving. End laps shall be staggered. Place sheet membrane carefully so as to avoid wrinkles and fishmouths. After installation, roll with a metal roller wrapped with a resilient material 24" wide and weighing at least 100 lbs. or with a rubber tired roller. Seal all terminating edges and 'T' joints with CCW-704 Mastic.

Asphalt Overlayment Placement

Repairs: Before paving begins, inspect all membrane for tears, punctures, fishmouths, air bubbles or voids due to misalignment at seams. Remove damaged membrane. Prime exposed concrete and allow primer to dry. Apply new section of CCW-711W Pre-Pave Membrane to primed concrete extending onto adhered membrane 6" on all sides. Firmly roll repair section to ensure a good seal. Apply CCW-704 Mastic to terminating edges of patch.

Slit fishmouths and overlap the edges. Place CCW-711WPre-Pave Membrane over the repair and extend 6" in all directions. Firmly roll repair section to ensure a good seal. Apply CCW-704 Mastic to the terminating edges of patch.

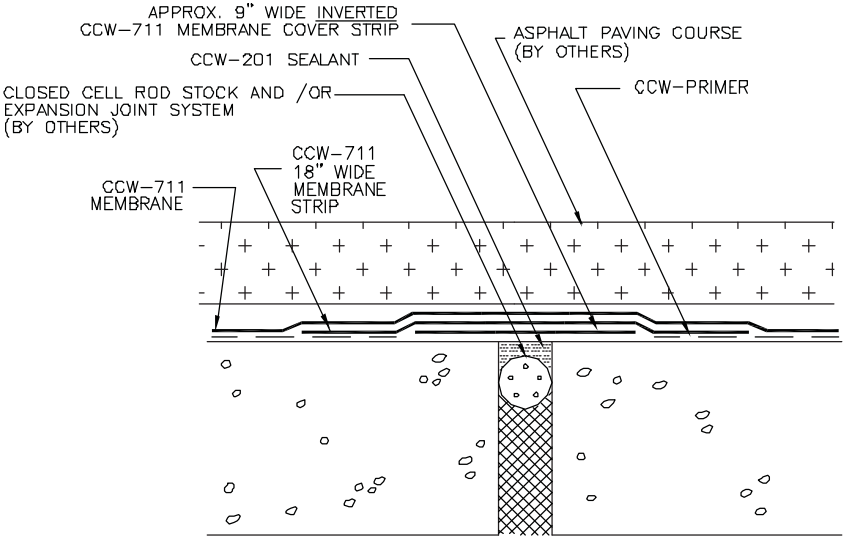
Apply Overlayment: Prior to applying overlayment, spray anionic asphalt emulsion (or equal) tack coat over mesh. CCW-711W Pre-Pave Sheet Membrane should be covered over with asphaltic overlayment in the same day as membrane installation. The temperature of the asphaltic overlayment at the point of application shall be 275°F minimum, 325°F maximum. Asphaltic overlayment shall be compacted to a minimum of 2 inch thick, at 275° - 285°F. A wearing course may be applied at the discretion of the engineer.

Asphaltic overlayment must not be applied if the CCW-711W Pre-Pave Sheet Membrane is wet.

Pneumatic tire equipment is recommended. Equipment must be continuously inspected to ensure tracks or tires are free of burrs, stones or sharp projections which could damage the membrane.

CCW-711W Detail

Expansion Joint Cover (Deck or Wall) (711-3A)

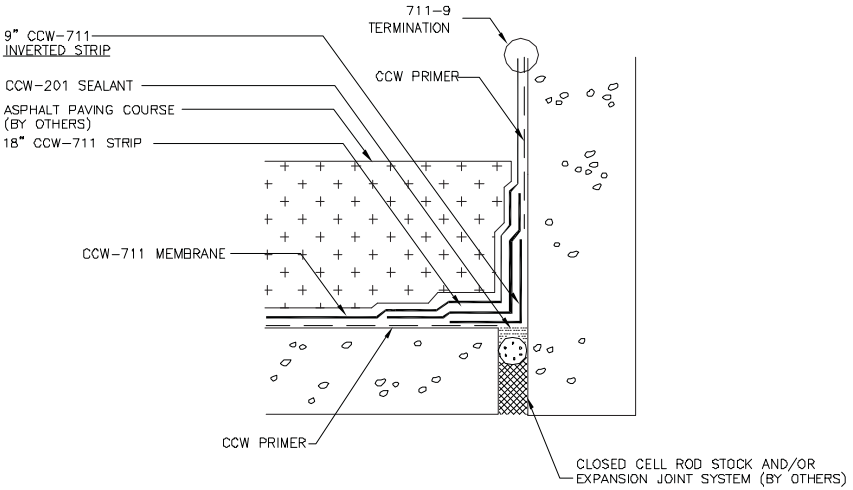


ALTERNATE METHOD:

CENTER 12 INCH WIDE STRIP OF BUTYL MEMBRANE OVER EXPANSION JOINT AND ADHERE TO THE CONCRETE DECK. SPLICE CCW–711 MEMBRANE ONTO BOTH SIDES OF THE BUTYL MEMBRANE STRIP USING SPLICE CLEANER, EP–95 SPLICING CEMENT AND LAP SEALANT.

CCW-711W Detail

Expansion Joint Deck to Wall or Curb (711-3B)

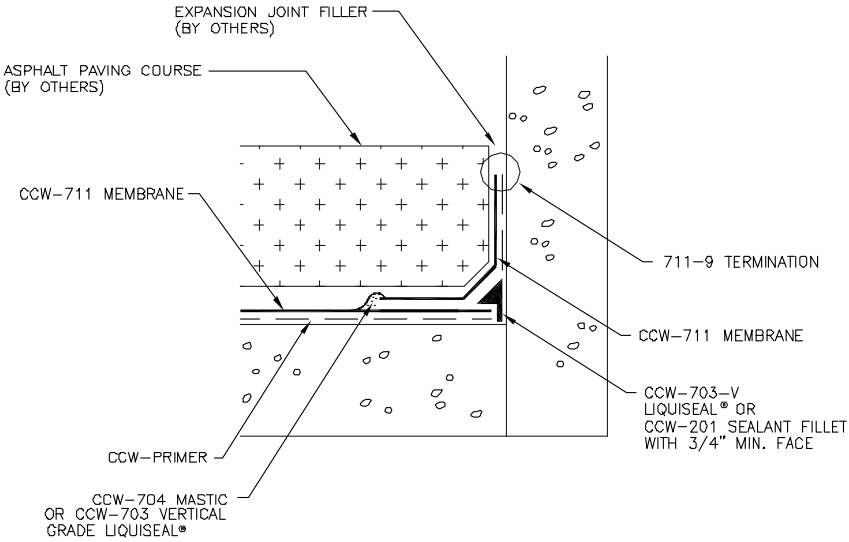


ALTERNATE METHOD:

CENTER 12 INCH WIDE STRIP OF BUTYL MEMBRANE OVER EXPANSION JOINT AND ADHERE TO THE CONCRETE DECK AND WALL. SPLICE CCW–711 MEMBRANE ONTO BOTH SIDES OF THE BUTYL MEMBRANE STRIP USING SPLICE CLEANER, EP–95 SPLICING CEMENT AND LAP SEALANT.

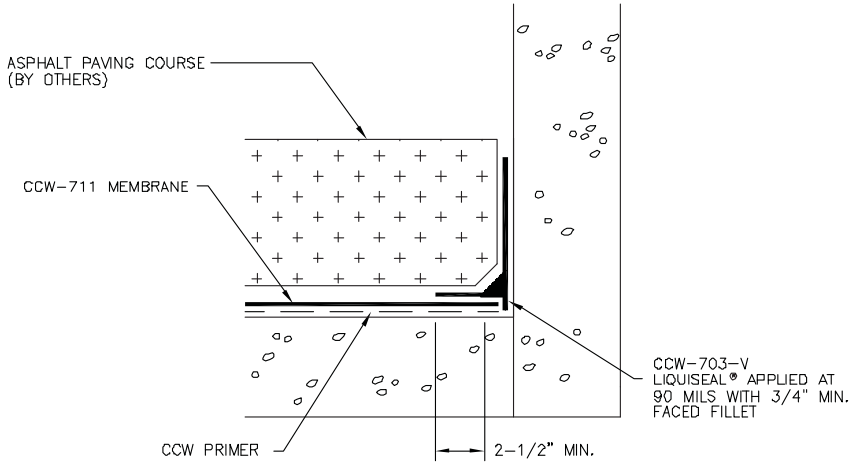
CCW-711W Detail

Curb and Parapet (711-4A)



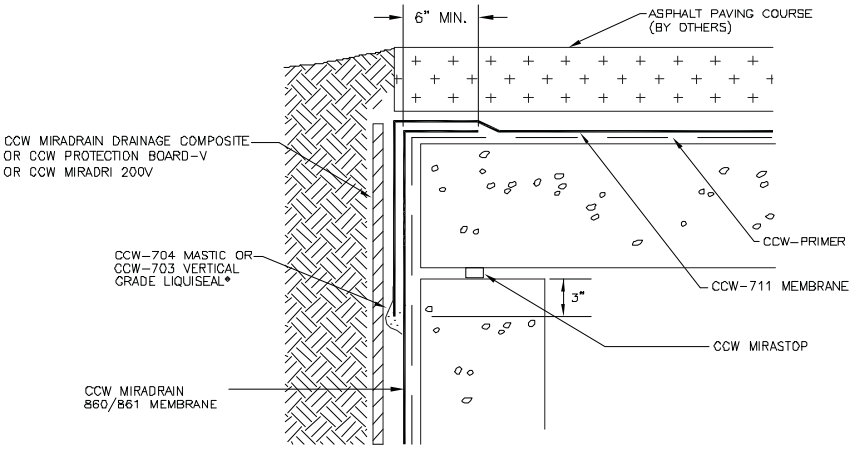
CCW-711W Detail

Curb and Parapet (711-4B)



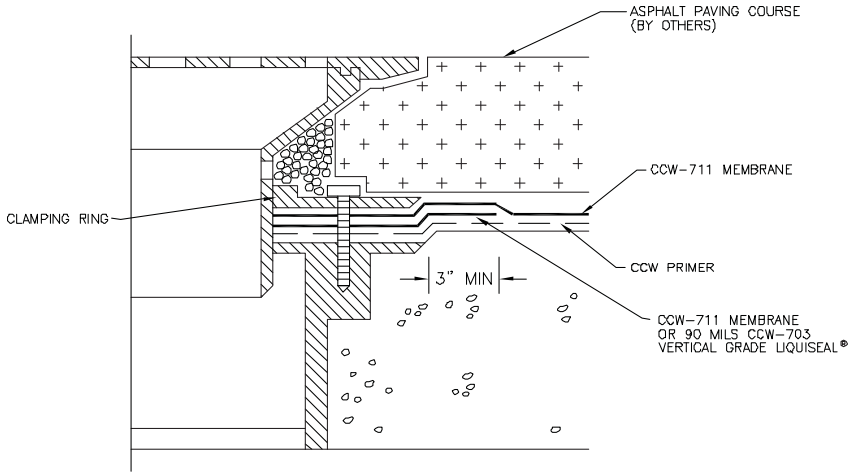
CCW-711W Detail

Asphalt Concrete Paving Over Tunnel
or Other Occupied Space (711-5)



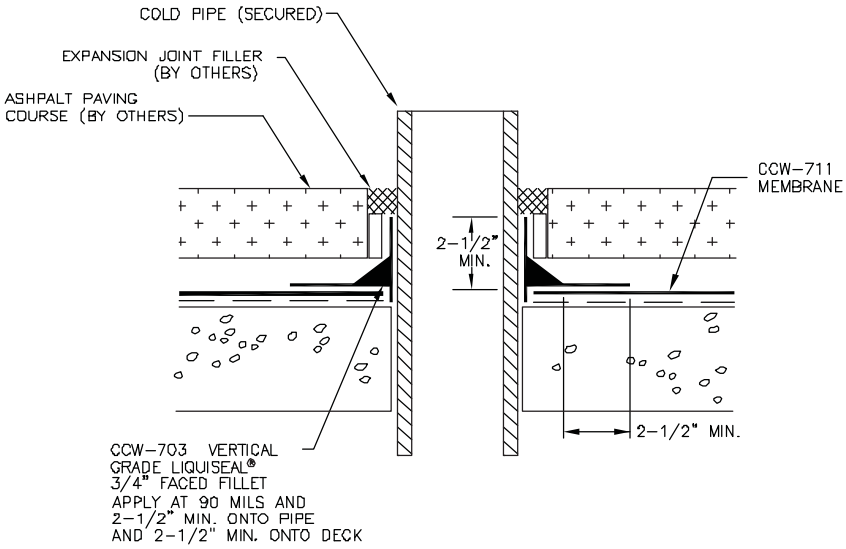
CCW-711W Detail

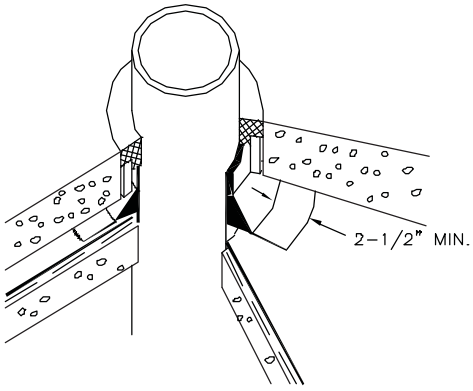
Dual Level Drain (711-6)



CCW-711W Detail

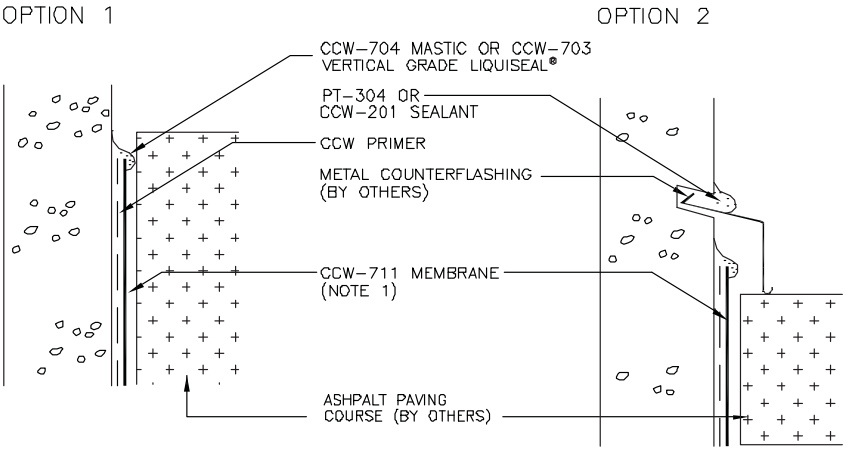
Pipe/Penetrations Flashings (711-8)





CCW-711W Detail

Vertical Termination (711-9)



NOTES:

1. IF CCW–711 MEMBRANE EXTENDS ABOVE FINAL GRADE, COUNTERFLASHING MUST BE PROVIDED FOR MEMBRANE AND DRAINAGE TERMINATION AND PROTECTION. SEE OPTION 2.

TYPICAL USES

CCW-711NW is designed specifically as a moisture barrier for application on existing roadways and airport runways and taxiways. CCW-711NW prevents water permeation or penetration through pavement surfaces, thus avoiding the subsequent damage that excess moisture causes in the roadway sub-base.

PACKAGING

12” x 50’ (.30 m x 15.2 m), 65 lbs (30 kg), 3 rolls/box

18” x 50’ (.46 m x 15.2 m), 65 lbs (30 kg), 2 rolls/box

24” x 50’ (.60 m x 15.2 m), 88 lbs (40 kg), 2 rolls/box

36” x 50’ (.91 m x 15.2 m), 61 lbs (28 kg), 1 roll/box

INSTALLATION

Site Preparation:

Clean the application area and ensure that surface is dry. Prepare surface according to accepted repaving practices. Cracks greater than 3/8” in width should be filled with CCW-201 or CCW-LM-800XL. Apply primer if ambient temperature is above 40°F (4.4°C). Position CCW-711NW roll to span the pavement joint or spalled area.

- Unroll CCW-711NW by peeling away the release paper.
- CCW-711NW should extend beyond cracks a minimum of 6” (15.2 cm).
- After covering area, use a utility knife to cut across the roll. Before opening to traffic or before paving, pneumatically roll the area to ensure good contact and adhesion with the existing surface.

TYPICAL USES

CCW MiraDRAIN 2000 is designed for use in vertical, single-sided drainage applications. Its intermediate flow rate and compressive strength make CCW MiraDRAIN 2000 ideal for use in shallow depths not exceeding 10 ft; where high-flow and high-compressive strength requirements do not exist.

The flat side of CCW MiraDRAIN 2000 fits directly against wall surfaces making it ideal for foundation walls, retaining walls, bridge abutments, and other similar structures. CCW MiraDRAIN 2000 also serves as a protection course over CCW waterproofing membranes.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: 2’ x 50’ (0.6 m x 15.24 m) and 4’ x 50’ (1.22 m x 15.24 m) rolls

Availability: CCW MiraDRAIN 2000 is made in the USA and is sold through a highly qualified sales representative network. CCW MiraDRAIN 2000 is readily available from a national system of Carlisle Coatings & Waterproofing distributors.

Cost: Consult your Carlisle Coatings & Waterproofing representative for price quotes.

STORAGE

Do not store CCW MiraDRAIN 2000 in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 2000 difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USES

CCW MiraDRAIN 5000 is designed for use where double-sided subsurface drainage is required, and is available in two-and four-foot panels. CCW MiraDRAIN 5000 is ideal for chimney drains on slopes or against wood lagging. CCW MiraDRAIN 5000 can also be used to drain the top layer of a landfill enclosure. CCW MiraDRAIN 5000 is capable of collecting large quantities of subgrade moisture and conducting it to a discharge pipe.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: 4’ x 50’ (1.22 m x 15.24 m); 2’ x 50’ (.6 m by 15.24 m).

Availability: CCW MiraDRAIN 5000 is made in the USA and is sold through a highly qualified sales representative network. CCW MiraDRAIN 5000 is readily available from a national system of Carlisle Coatings & Waterproofing warehouses.

Cost: Consult your Carlisle Coatings & Waterproofing representative for price quotes.

STORAGE

Do not store CCW MiraDRAIN 5000 in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 5000 difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USES

CCW MiraDRAIN 6000 is designed for use in high-flow, high-compressive strength, vertical drainage applications where single-sided subsurface drainage is needed.

The flat side of CCW MiraDRAIN 6000 fits directly against wall surfaces making them ideal for foundation walls, retaining walls, bridge abutments, and other similar structures. CCW MiraDRAIN 6000 also serves as protection course over CCW Waterproofing Membranes.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: CCW MiraDRAIN 6000 and 6200 are available in rolls of 4’ x 50’ (1.22 m x 15.24 m).

STORAGE

Do not store CCW MiraDRAIN 6000 in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 6000 difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USES

CCW MiraDRAIN 6200 are designed for use in high-flow, high-compressive strength, vertical drainage applications where single-sided subsurface drainage is needed.

CCW MiraDRAIN 6200 is designed for use over CCW Waterproofing Membranes, where added protection is needed. The high-strength polymeric film adhered to the flat side of the drainage core provides additional factors of safety from potential die cutting into the waterproofing membrane.

The flat side of CCW MiraDRAIN 6000/6200 fits directly against wall surfaces making them ideal for foundation walls, retaining walls, bridge abutments, and other similar structures. CCW MiraDRAIN 6000/6200 also serve as protection courses over CCW Waterproofing Membranes.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: CCW MiraDRAIN 6000 and 6200 are available in rolls of 4’ x 50’ (1.22 m x 15.24 m).

STORAGE

Do not store CCW MiraDRAIN 6200 in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 6200 difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USES

CCW MiraDRAIN 6000DT is designed for use in high-flow, high-compressive strength, vertical drainage applications where single-sided subsurface drainage is needed and where a heavier fabric is required. CCW MiraDRAIN 6000DT is ideally suited for Department of Transportation (DOT) projects.

The flat side of CCW MiraDRAIN 6000DT fits directly against wall surfaces making them ideal for foundation walls, retaining walls, bridge abutments, and other similar structures. CCW MiraDRAIN 6000DT also serves as protection course over CCW Waterproofing Membranes.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: CCW MiraDRAIN 6000DT is available in rolls of 4’ x 50’ (1.22 m x 15.24 m).

STORAGE

Do not store CCW MiraDRAIN 6000DT in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 6000DT difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USES

CCW MiraDRAIN 6000XL is designed for use in high-flow, high-compressive strength, vertical drainage applications where single-sided subsurface drainage is needed.

The flat side of CCW MiraDRAIN 6000XL fits directly against wall surfaces making them ideal for foundation walls, retaining walls, bridge abutments, and other similar structures. CCW MiraDRAIN 6000XL also serves as a protection course over CCW Waterproofing Membranes.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: CCW MiraDRAIN 6000XL and 6200XL are available in rolls of 4’ x 50’ (1.22 m x 15.24 m).

STORAGE

Do not store CCW MiraDRAIN 6000XL in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 6000XL difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USES

CCW MiraDRAIN 6200XL is designed for use in high-flow, high-compressive strength, vertical drainage applications where single-sided subsurface drainage is needed.

CCW MiraDRAIN 6200XL is designed for use over CCW Waterproofing Membranes where extra protection is needed. The high-strength polymeric film adhered to the flat side of the drainage core provides additional factors of safety from potential die cutting into the waterproofing membrane.

The flat side of CCW MiraDRAIN 6200XL fits directly against wall surfaces making them ideal for foundation walls, retaining walls, bridge abutments, and other similar structures. CCW MiraDRAIN 6200XL also serves as a protection course over CCW Waterproofing Membranes.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: CCW MiraDRAIN 6000XL and 6200XL are available in rolls of 4’ x 50’ (1.22 m x 15.24 m).

STORAGE

Do not store CCW MiraDRAIN 6200XL in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 6200XL difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USES

CCW MiraDRAIN 8000 is designed for use in horizontal and vertical drainage applications, where single-sided subsurface drainage is required. The chemical-resistant PVC core is designed specifically for applications where chemical exposure is possible, i.e., airports, helicopter pads, and industrial applications. CCW MiraDRAIN 8000 is particularly resistant to petrochemicals and may be used to provide subsurface drainage around underground storage tanks.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: 4’ x 50’ (1.22 m x 15.24 m) rolls

STORAGE

Do not store CCW MiraDRAIN 8000 in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 8000 difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USES

CCW MiraDRAIN 9000 is designed for use in horizontal plaza, roof deck and between-slab drainage applications where single-sided subsurface drainage is required.

CCW MiraDRAIN 9000 also serves as a protection course when used in conjunction with CCW Waterproofing Membranes.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING INFORMATION

Packaging: CCW MiraDRAIN 9000 is available in rolls of 4' x 50' (1.22 m x 15.24 m).

STORAGE

Do not store CCW MiraDRAIN 9000 in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 9000 difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer's instructions.

TYPICAL USES

CCW MiraDRAIN 9800 is designed for use in high-flow, high-compressive strength, horizontal and vertical drainage applications where maximum filtration is required for subsurface drainage.

CCW MiraDRAIN 9800 is designed for use over CCW Waterproofing Membranes.

The flat side of CCW MiraDRAIN 9800 fits directly against wall surfaces making it ideal for planter, green roof and foundation wall applications. CCW MiraDRAIN 9800 also serves as a protection course over CCW MiraDRI Waterproofing Membranes.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: CCW MiraDRAIN 9800 is available in rolls of 4’ x 50’ (1.22 m x 15.24 m).

STORAGE

Do not store CCW MiraDRAIN 9800 in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 9800 difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USES

CCW MiraDRAIN 9900 is designed for use in horizontal plaza, roof deck and between-slab drainage applications where single-sided subsurface drainage is needed.

Due to the high compressive strength of CCW MiraDRAIN 9900, it can also be used in vehicular traffic areas.

CCW MiraDRAIN 9900 also serves as a protection course when used in conjunction with CCW Waterproofing Membranes.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: CCW MiraDRAIN 9900 is available in rolls of 4’ x 50’ (1.22 m x 15.24 m).

STORAGE

Do not store CCW MiraDRAIN 9900 in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN 9900 difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USE

CCW MiraDRAIN GR9200 is designed for use in horizontal garden roof or large planter applications. CCW MiraDRAIN GR9200 is used in conjunction with CCW 500R, CCW MiraDRAIN 9000/9900 and accessories to provide a complete garden roof system.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: 4’ x 50’ (1.22 m x 15.24 m) rolls

STORAGE

Do not store CCW MiraDRAIN GR9200 in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN GR9200 difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USE

CCW MiraDRAIN GR9400 is designed for use in horizontal green roof or large planter applications. CCW MiraDRAIN GR9400 is used in conjunction with CCW 500R, CCW MiraDRAIN 9000/9800 and accessories to provide a complete green roof system.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: 4’ x 50’ (1.22 m x 15.24 m) rolls

STORAGE

Do not store CCW MiraDRAIN GR9400 in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN GR9400 difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer’s instructions.

TYPICAL USES

CCW MiraDRAIN HC is used in place of traditional aggregate- filled french drains or trench drains. CCW MiraDRAIN HC is primarily used along roads and highways as an edge drain. CCW MiraDRAIN HC is also used on athletic fields, golf courses, playgrounds, airports and as foundation drains.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

Packaging: CCW MiraDRAIN HC is available in rolls of:
4' x 50';
3' x 50', 100', 150';
2' x 100', 150', 500';
18" x 100', 150', 500';
12" x 100', 150', 500';
6" x 100', 150', 500';

STORAGE

Do not store CCW MiraDRAIN HC in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW MiraDRAIN HC difficult.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer's instructions.

INSTALLATION

CCW MiraDRAIN HC can be easily installed using the following procedure:

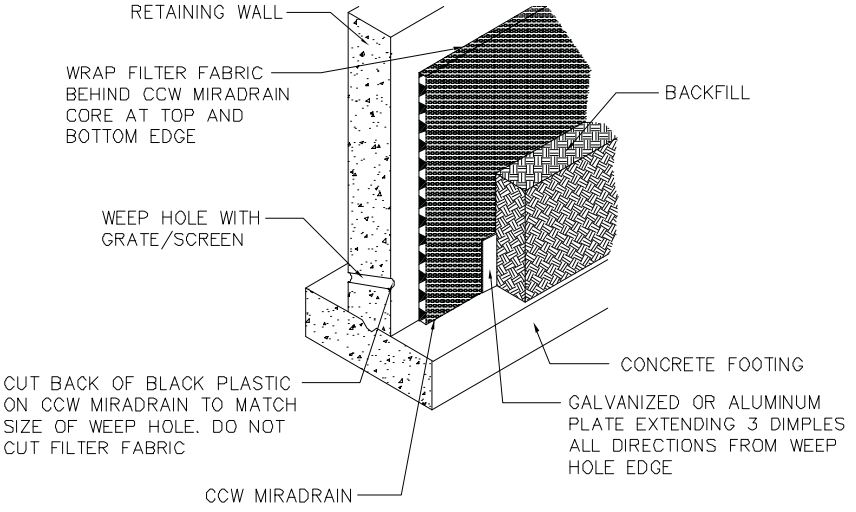
Dig a 4" (10.2 cm) to 6" (15.2 cm) wide trench using a standard trenching machine. The depth of the trench will depend on which drain width and application. When determining the depth add an additional 3" for coverage over the drain. Place the CCW MiraDRAIN HC into the trench to fit against the bottom and sides of the trench. Use the native soil as the backfill and place in layers, compacting prior to adding the next layer. Continue to fill the trench until the desired height is obtained.

Connectors are also available. To connect two rolls together, use the 'splice' connector. After placing the 'splice' over the two ends, use waterproof tape to keep in place. Once the HC is placed in the trench, attach End Outlet to the end of the roll to make the transition from HC to a corrugated 4" pipe. The Side Outlet is used to make line transition from HC for collection of water along the drain length. A 'T' outlet is available to branch one drain to two other rolls. Make sure all connectors are taped with waterproof tape.

These guidelines serve as a basis for installation. Detailed instructions for installation and termination procedures are included in the product packaging.

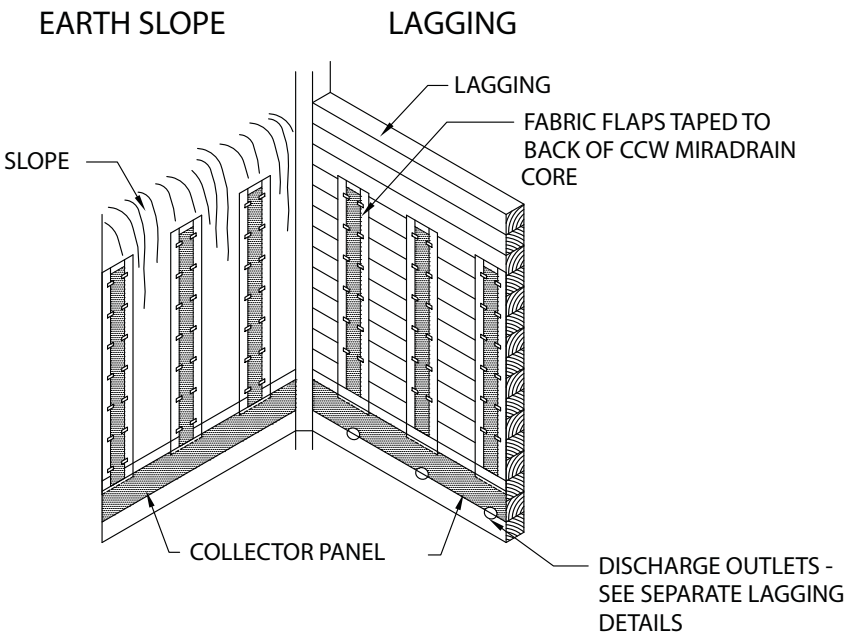
CCW MiraDRAIN HC Detail

Retaining Wall Detail (MD-1)



CCW MiraDRAIN HC Detail

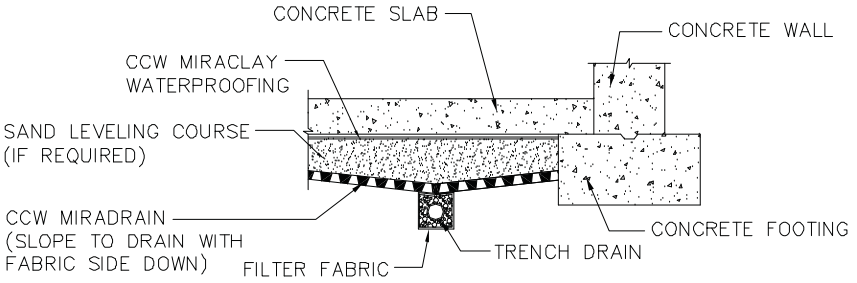
Chimney Drain (MD-2)



NOTES:
1. BACK OF CCW MIRADRAIN CORE SHOULD BE FACING INSTALLER WHEN APPLYING PRODUCT. FABRIC SIDE OF CCW MIRADRAIN IS INSTALLED TOWARDS LAGGING.

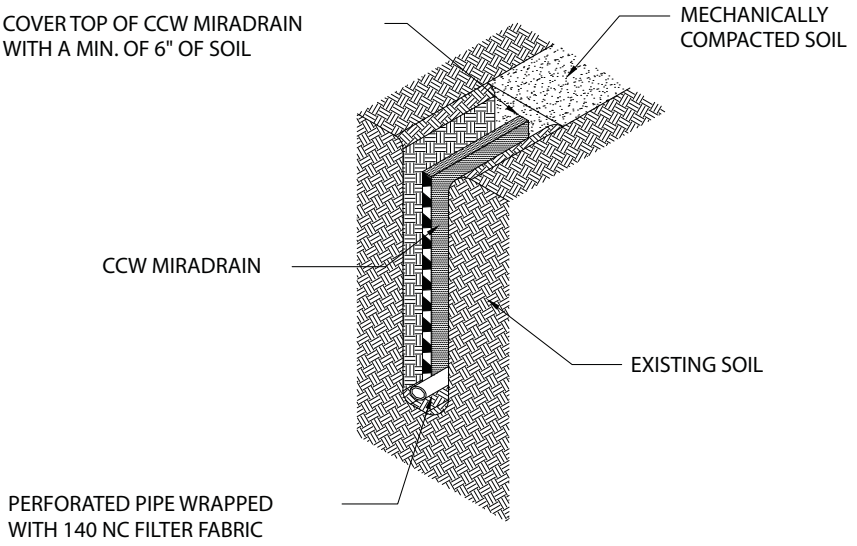
CCW MiraDRAIN HC Detail

Under Slab Drain (MD-3)



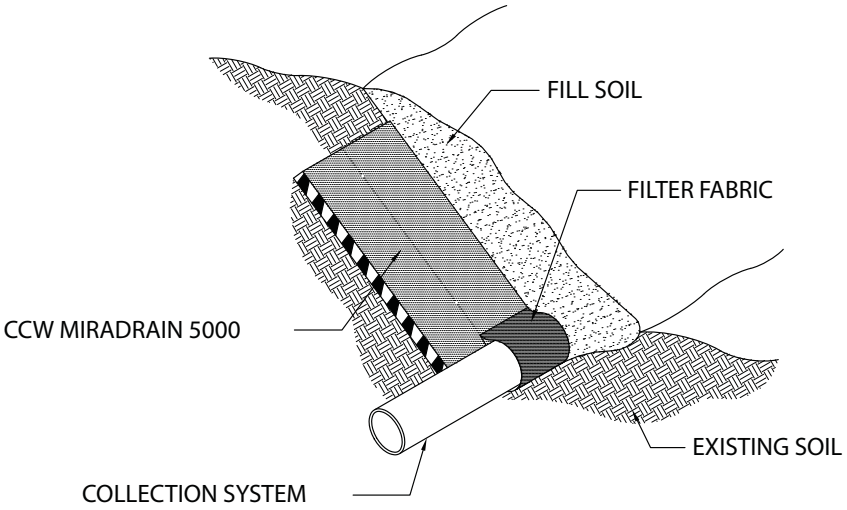
CCW MiraDRAIN HC Detail

Cutoff Drain (MD-4)



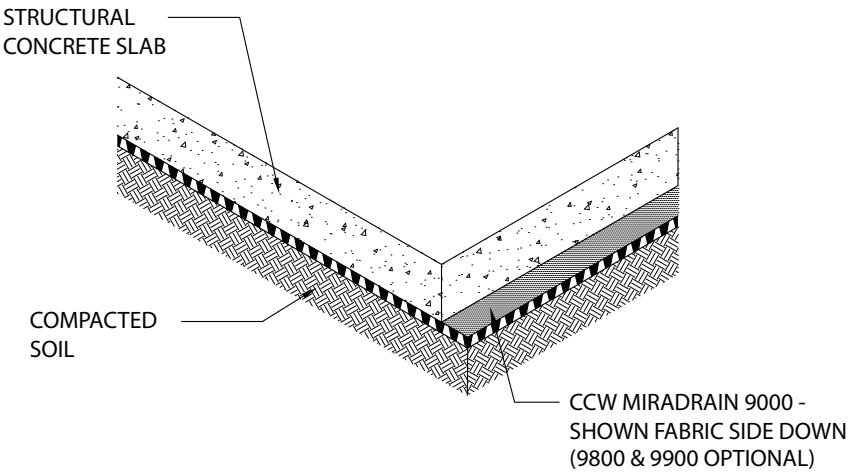
CCW MiraDRAIN HC Detail

Landfill Closure Interceptor Drain (MD-5)



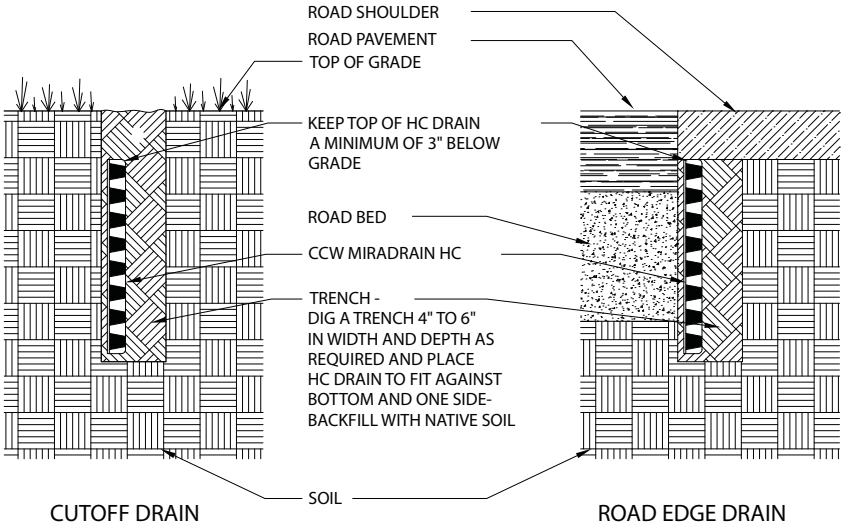
CCW MiraDRAIN HC Detail

Under Slab Total Application (MD-6)



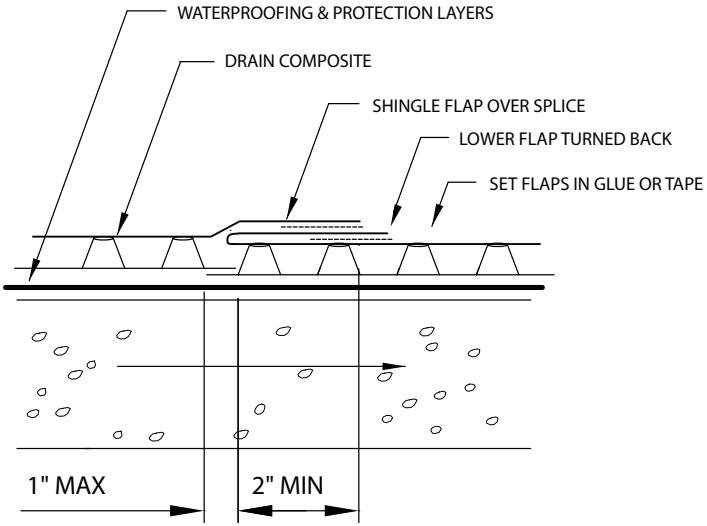
CCW MiraDRAIN HC Detail

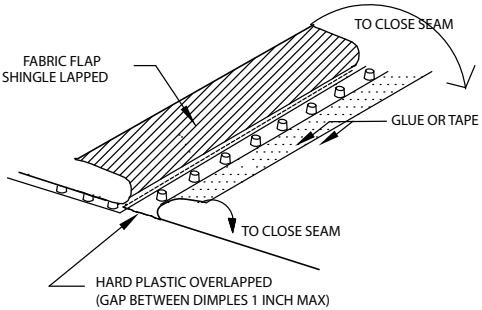
MiraDRAIN HC Details (MD-7)



CCW MiraDRAIN HC Detail

MiraDRAIN Splice (MD-10A)





NOTES:

1. SET DOWN STREAM DRAIN COMPOSITE WITH SEAM FLAP TURNED BACK.

2. SET UPPER DRAIN COMPOSITE WITH HARD PLASTIC PLACED ONTO LOWER COMPOSITE.

3. EXTEND FLAP OF UPSTREAM COMPOSITE OVER LOWER COMPOSITE.

4. GLUE OR TAPE FLAPS INTO POSITION UNTIL OVERBURDEN IS INSTALLED IS COMPLETED.

TYPICAL USES

CCW QuickDRAIN replaces costly conventional perforated pipe/aggregate collection systems for drainage of foundation and retaining walls.

LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

PACKAGING

CCW QuickDRAIN is available in rolls of:
16" X 50' (0.41 m X 15.24 m)

STORAGE

Do not store CCW QuickDRAIN in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration making proper installation of CCW QuickDRAIN difficult.

MAINTENANCE

CCW QuickDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer's instructions.

INSTALLATION

CCW QuickDRAIN can be easily installed using the following procedures:

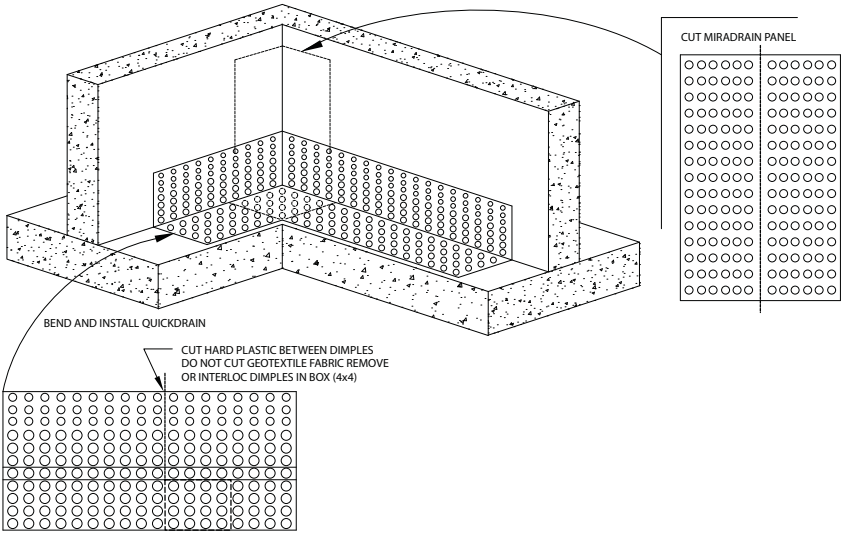
Foundation/Retaining Wall Installation: For optimum performance install CCW QuickDRAIN in a vertical foundation wall to a horizontal footing configuration. Adhere CCW QuickDRAIN to the substrate using CCW CAV-GRIP contact adhesive, mastic or CCW SecurTape. Place the hinged portion of the CCW QuickDRAIN against the vertical/horizontal transition and press into place. Connect adjacent panels by pulling filter fabric back to expose the flange. Overlap the flange of edge drain core on to the flange of the preceding drain core. Cover the joint with the filter fabric. Install CCW MiraDRAIN prefabricated sheet drain in shingle fashion by overlapping the flange of the CCW QuickDRAIN in the direction of water flow and cover with filter fabric. Cover all terminal edges of the core with the fabric flap by tucking it behind the core and if there is insufficient fabric, the core shall be cut out from the fabric by a depth of 3 dimples to provide excess fabric for wrapping behind the core.

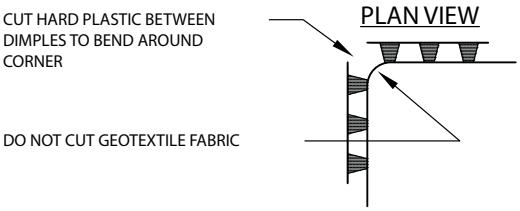
Discharge Connection Installation: Leaving the filter fabric in place, slide the CCW QuickDRAIN Connector outlet over the horizontal portion of the CCW QuickDRAIN, secure with CCW CAV-GRIP or SecurTape and wrap with filter fabric.

Backfilling: Soil should be placed and compacted directly adjacent to CCW QuickDRAIN using plate vibratory compactors. The exhaust of the plate compactor should be turned away from the drain system to prevent damage due to hot exhaust gases.

CCW QuickDRAIN Detail

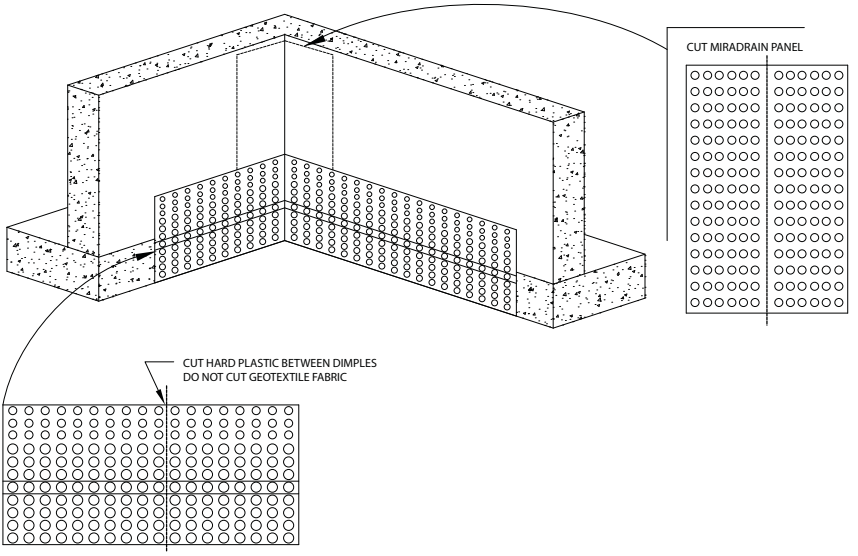
Standard QuickDRAIN Inside Corner (QD-1A)





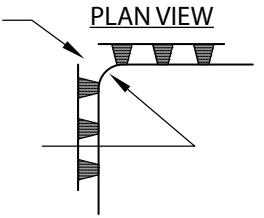
CCW QuickDRAIN Detail

Vertical QuickDRAIN Inside Corner (QD-1B)



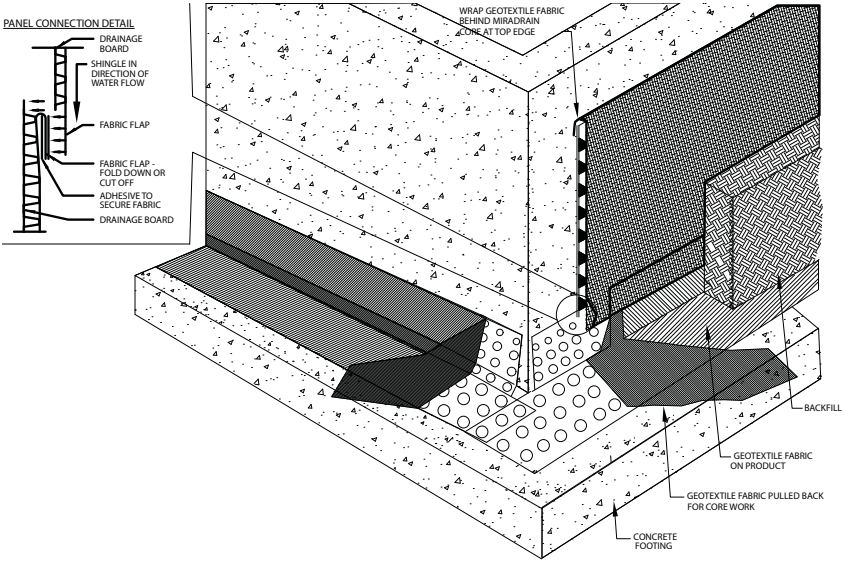
CUT HARD PLASTIC BETWEEN DIMPLES TO BEND AROUND CORNER

DO NOT CUT GEOTEXTILE FABRIC



CCW QuickDRAIN Detail

CCW QuickDRAIN Outside Corner (QD-1C)



NOTES

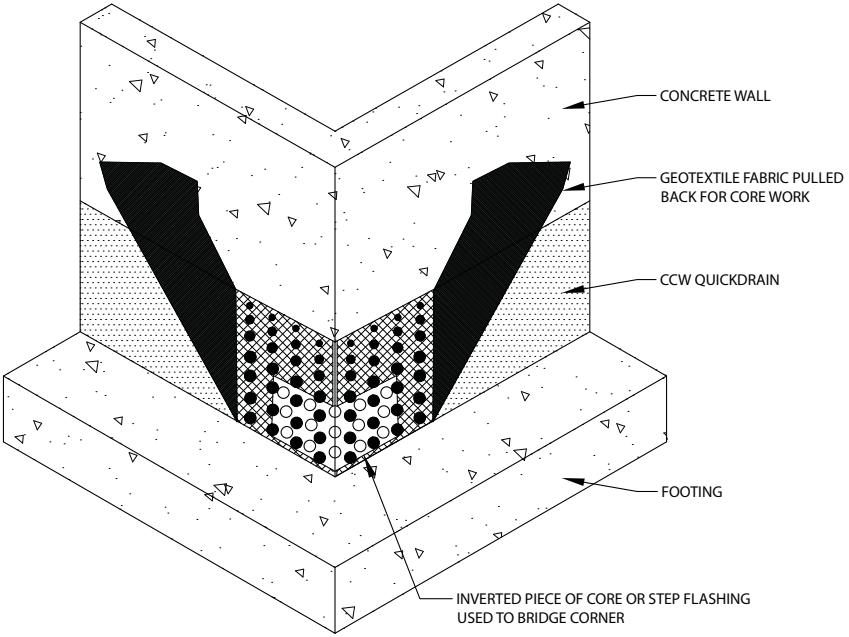
1) PULL BACK GEOTEXTILE FABRIC

2) REMOVE VERTICAL HARD PLASTIC SECTION OF QUICKDRAIN AND EXTEND HORIZONTAL SECTION PAST CORNER OF WALL TO INTERLOCK WITH ADJACENT CCW QUICKDRAIN

3) COVER ALL DIMPLES AND CUT EDGES WITH GEOTEXTILE FABRIC

CCW QuickDRAIN Detail

Vertical QuickDRAIN Outside Corner (QD-1D)

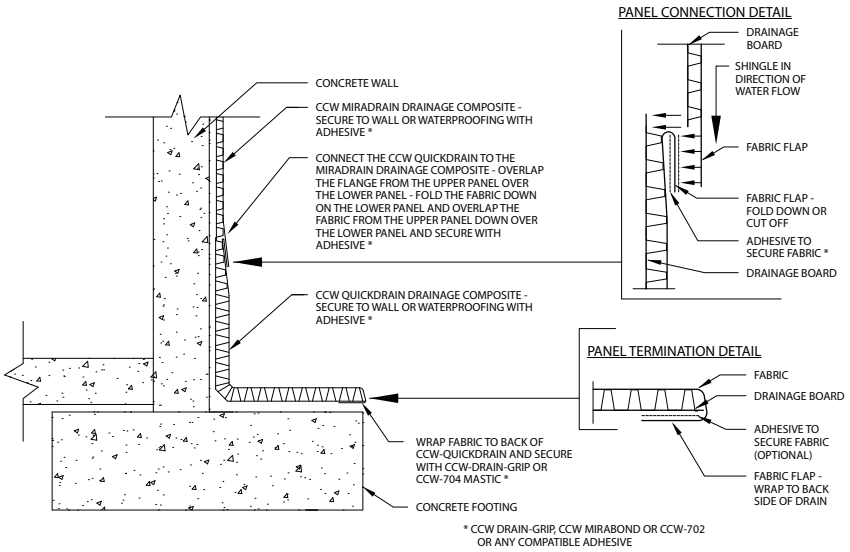


NOTES

1) EXTEND QUICKDRAIN PAST CORNER
2) PULL BACK GEOTEXTILE FABRIC TO EXPOSE CORE. REMOVE ALL EXCESS CORE AND KEEP CORE SCRAPS FOR DETAIL WORK
3) TRIM PIECE OF SCRAP CORE AND PLACE A PIECE AS SHOWN TO BRIDGE CORNER
4) RETURN GEOTEXTILE FABRIC TO CORE. EXTEND GEOTEXTILE FABRIC ONTO QUICKDRAIN OF OTHER WALL.
5) RE-SECURE GEOTEXTILE FABRIC WITH CCW DRAIN-GRIP OR CCW-702

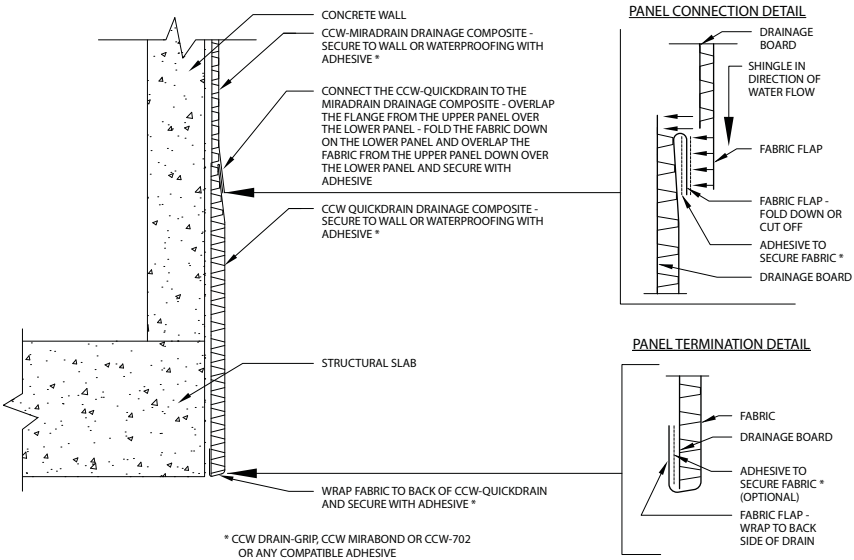
CCW QuickDRAIN Detail

Spread Footing Detail (QD-2A)



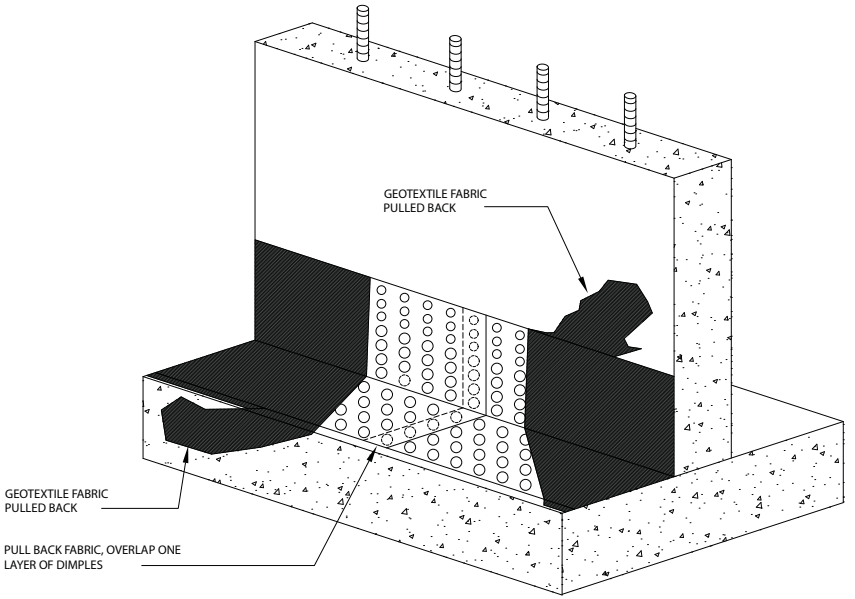
CCW QuickDRAIN Detail

Structural Slab Detail (QD-2B)



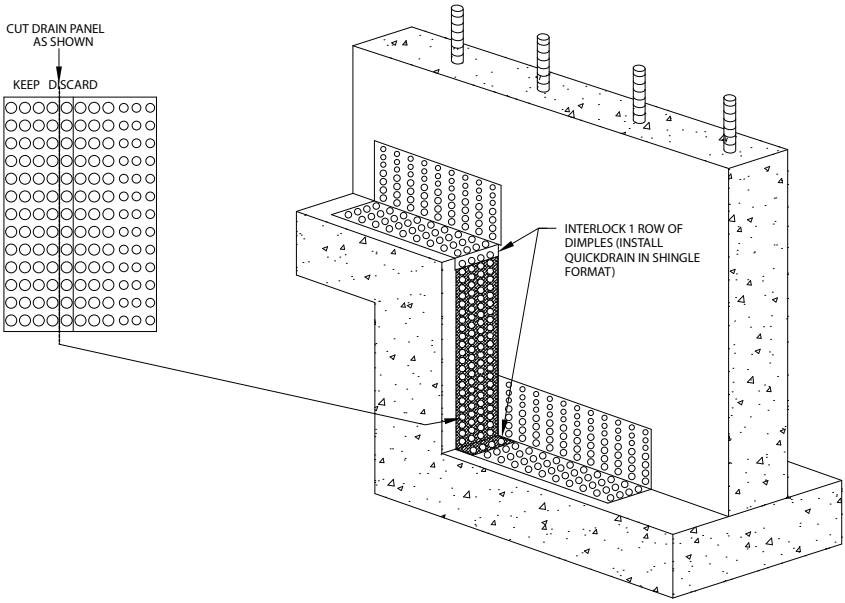
CCW QuickDRAIN Detail

Standard CCW QuickDRAIN Seam (QD-3)

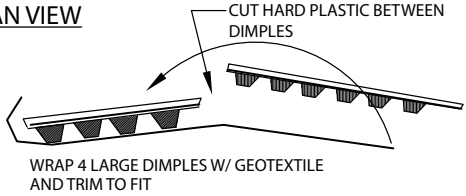


CCW QuickDRAIN Detail

Standard QuickDRAIN Step-Down Footing (QD-4A)

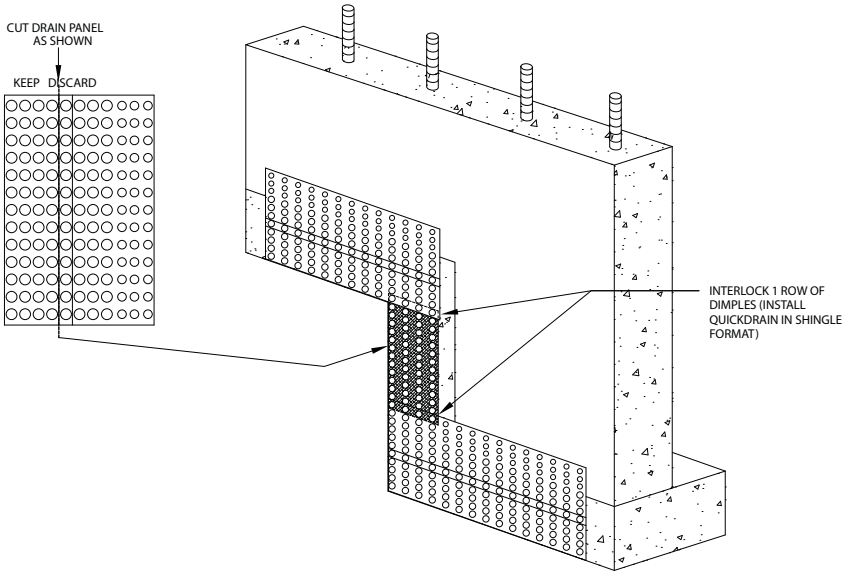


PLAN VIEW

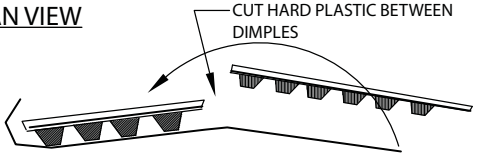


CCW QuickDRAIN Detail

Vertical QuickDRAIN Step-Down Footing (QD-4B)



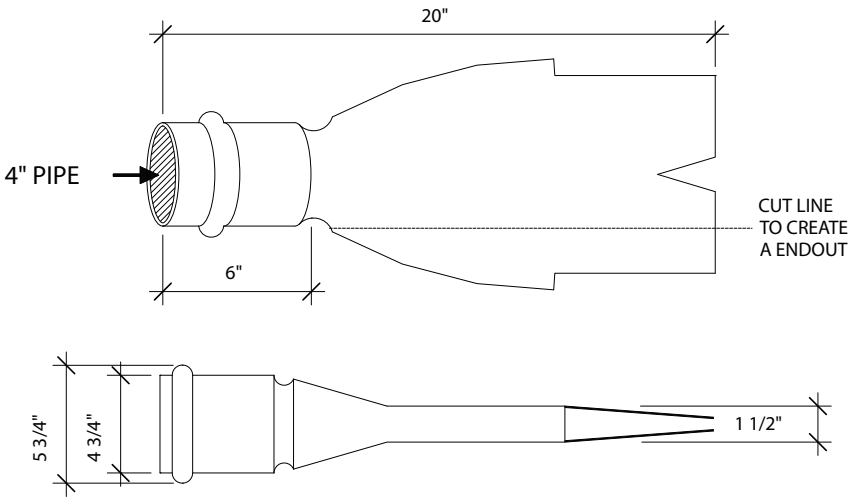
PLAN VIEW



WRAP 4 LARGE DIMPLES W/ GEOTEXTILE AND TRIM TO FIT

CCW QuickDRAIN Detail

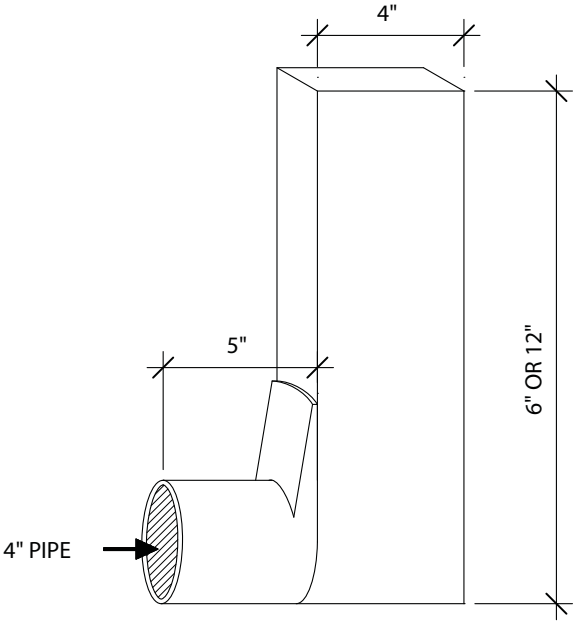
CCW QuickDRAIN Connector (QD-5A)



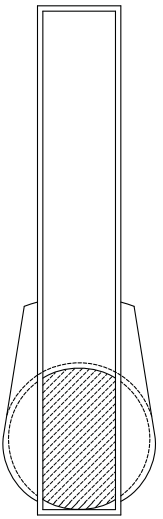
CCW QuickDRAIN Detail

CCW HC 6" & 12" Drainage Connector (QD-5B)

SIDE ELEVATION

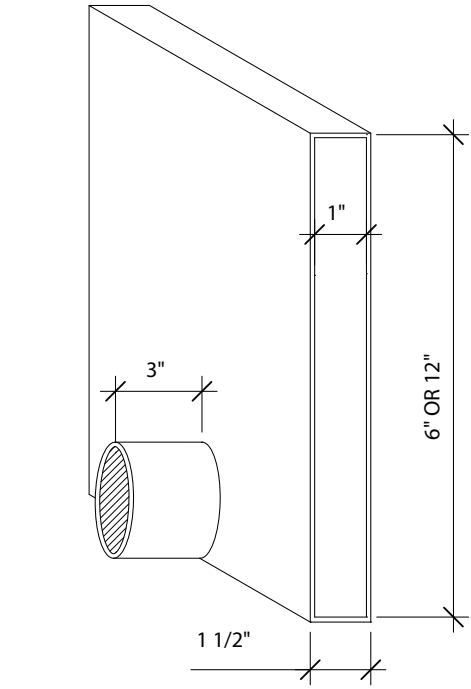


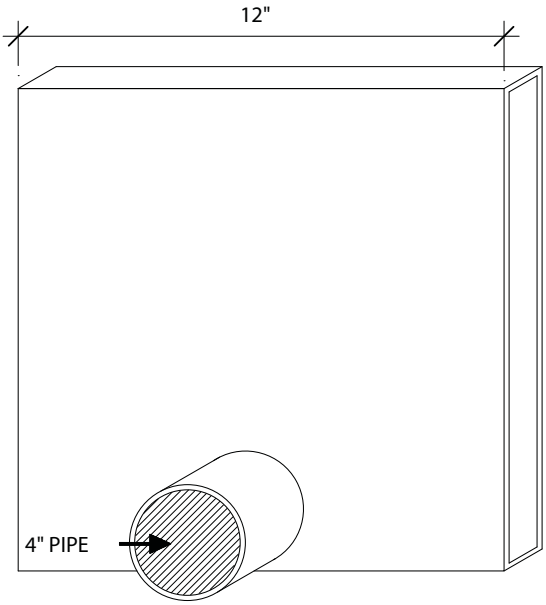
END ELEVATION



CCW QuickDRAIN Detail

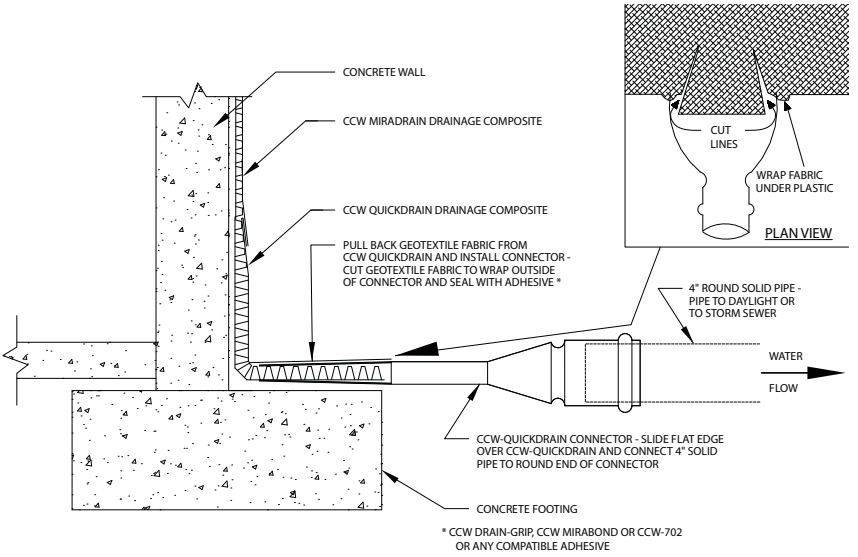
CCW HC 6" & 12" Sideout Drainage Connector (QD-5C)





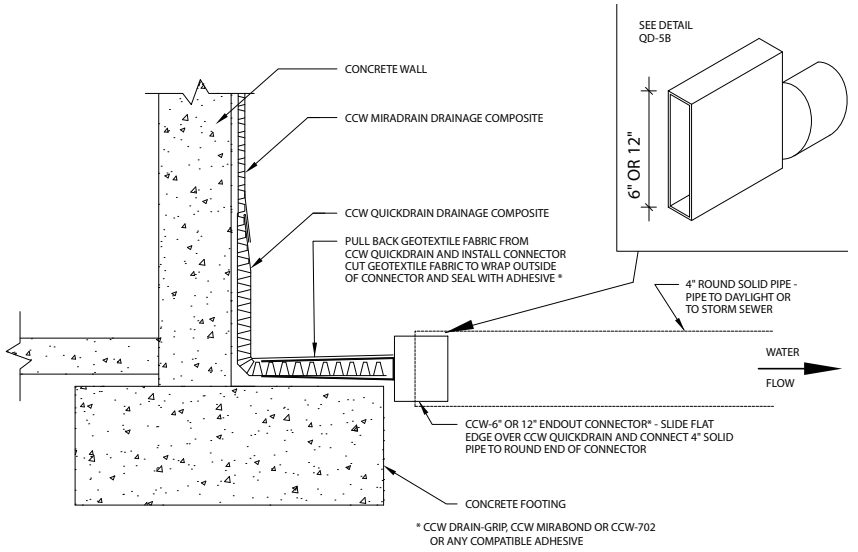
CCW QuickDRAIN Detail

CCW QuickDRAIN Connector Installation (QD-6A)



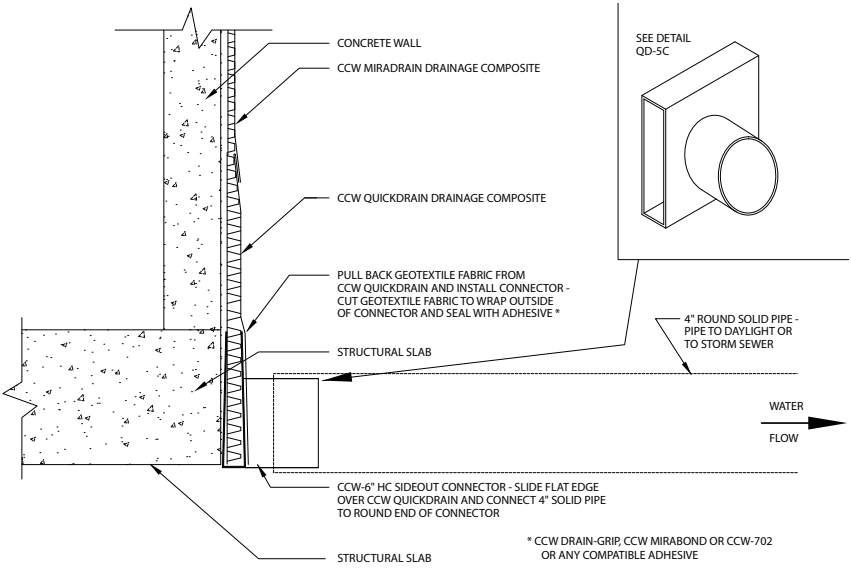
CCW QuickDRAIN Detail

CCW 6” & 12” Endout Connector Installation (QD-6B)



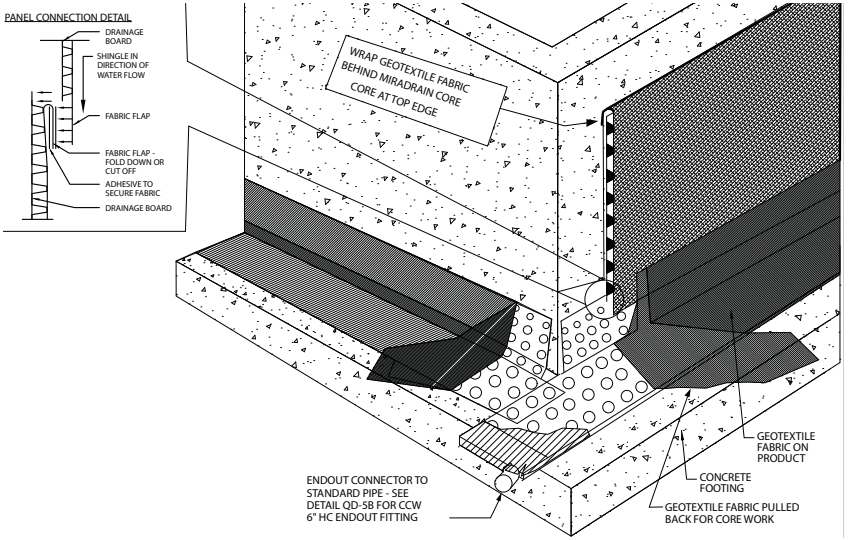
CCW QuickDRAIN Detail

CCW 6" HC Sideout Connector Installation (QD-6C)



CCW QuickDRAIN Detail

CCW 6” HC Connector Endout at Corner (QD-6D)



NOTES

1) PULL BACK GEOTEXTILE FABRIC

2) REMOVE VERTICAL HARD PLASTIC SECTION OF QUICKDRAIN EXTEND HORIZONTAL SECTION TO EDGE AND ATTACH HC 6" ENDOUT CONNECTOR

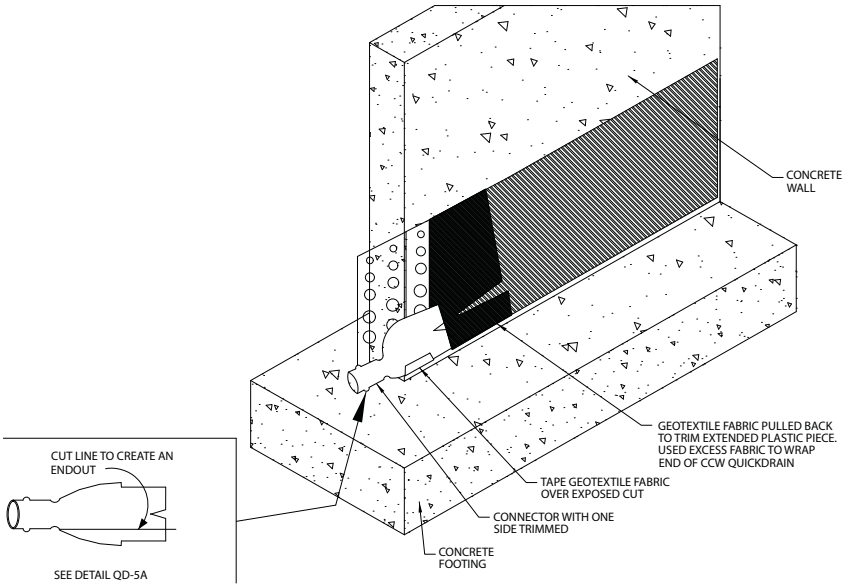
3) REMOVE VERTICAL HARD PLASTIC SECTION OF ADJACENT QUICKDRAIN EXTEND HORIZONTAL SECTION TO ALLOW OVERLAP TO OCCUR

4) COVER ALL DIMPLES AND CUT EDGES WITH GEOTEXTILE FABRIC

5) EXTEND GEOTEXTILE TO COVER CCW HC 6" ENDOUT CONNECTOR

CCW QuickDRAIN Detail

CCW QuickDRAIN Connector at Corner (QD-6E)



NOTES

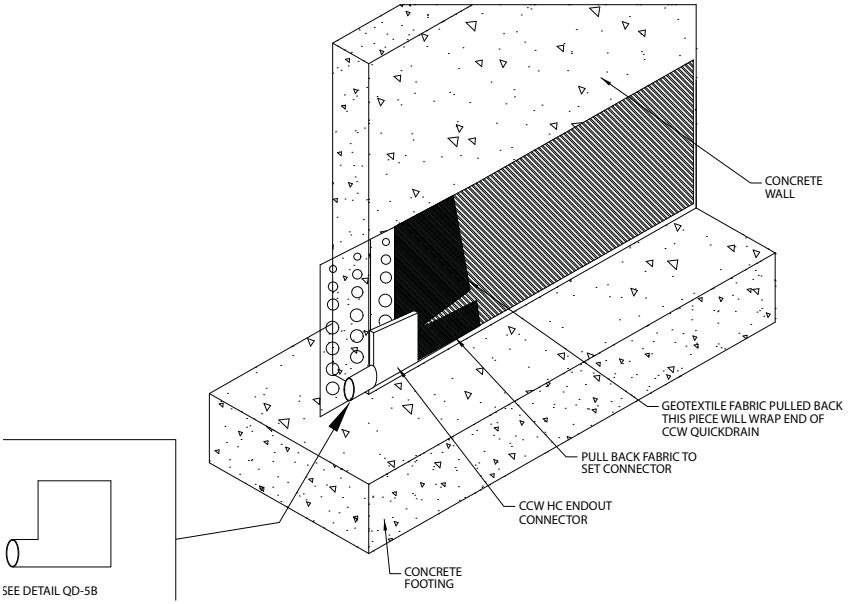
1) EXTEND QUICKDRAIN PAST CORNER MIN. 2 ROWS OF DIMPLES

2) PULL BACK GEOTEXTILE FABRIC TO ALLOW TRIMMING OF EXCESS PLASTIC PAST CORNER

3) RETURN GEOTEXTILE FABRIC ON CORE AND EXTEND TEXTILE TO BACK OF CORE

CCW QuickDRAIN Detail

CCW QuickDRAIN Endout at Corner (QD-6F)



NOTES

1) EXTEND QUICKDRAIN PAST CORNER MIN. 2 ROWS OF DIMPLES

2) PULL BACK GEOTEXTILE FABRIC TO ALLOW TRIMMING OF EXCESS PLASTIC PAST CORNER

3) RETURN GEOTEXTILE FABRIC ON CORE AND EXTEND TEXTILE TO BACK OF CORE

TYPICAL USES

CCW AWP is a single component latex-based contact adhesive. CCW AWP is an accessory product to the CCW MiraDRI 860/861 sheet membrane and is designed to set the dust on concrete and block surfaces, to promote adhesion of the CCW waterproofing membrane to the substrate.

LIMITATIONS

Avoid contact with eyes and skin. In the event of contact, wash off immediately. Refer to MSDS for other important warnings and product safety information.

PACKAGING

1 gallon pails; 180 pails per pallet (45 ct [4-1 gal])
5 gallon pails; 36 pails per pallet

COVERAGE

CCW AWP should be spray applied at a coverage rate of 400 ft² (37.2 m²) per gallon (3.8 liters). Several types of sprayers–Airless, Air Assist, Hudson– may be used. (CCW AWP may also be applied using a roller. However, caution must be taken not to apply excess contact adhesive which could cause longer drying times.) Normal drying time will be approximately 30 minutes depending on job site conditions. Upon curing, CCW AWP will not transfer when touched. Exposed surfaces must be reprimed as they may collect dust and other contaminants causing adhesion problems.CCW AWP should be applied at temperatures above 40°F (4.4°C). Apply to surface the same day of application of self-adhering membrane.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thickerapplication of the product may be necessary to achievethe required dry film thickness for system relative to the substrate.

STORAGE

Do not store CCW AWP in direct sunlight or at temperatures above 110°F (43°C) or below 35°F (2°C). Improper storage could lead to product deterioration.

PACKAGING
5 Gallon pails, 45 pails per pallet

COVERAGE
Coverage rate is 300 to 350 square feet per gallon.

STORAGE
Store at 35° to 110°F (2° to 43°C)

WARNINGS AND HAZARDS
Flammable liquid and vapors. Use only with adequate ventilation and avoid breathing vapors. Refer to MSDS for other important warnings and product safety information.

INSTALLATION
Apply by long nap roller or brush in an even film at 300 to 350 square feet per gallon. Allow adhesive to dry for 20 minutes minimum at 75° F. Porous substrates require reduced coverage rates for proper adhesion. Adhesive has a satisfactory cure when surface is tacky, but will not transfer when touched. Apply only areas to be waterproofed the same day. Reapply if area becomes dirty or wet. When used in adverse climactic conditions (i.e. humid, cool, etc.) or on a porous substrate, additional time will be required.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

Apply to surface the same day of application of self adhering membrane.

COVERAGE
Coverage rate is 300 to 350 square feet per gallon.

PACKAGING
5 Gallon pails, 45 pails per pallet, P/N 316148

STORAGE
Store at 35° to 110°F (2° to 43°C)

WARNINGS AND HAZARDS
Flammable liquid and vapors. Use only with adequate ventilation and avoid breathing vapors. Refer to MSDS for other important warnings and product safety information.

INSTALLATION
Apply by medium nap roller (3/8" nap for best results) or brush in an even film at 300 to 350 square feet per gallon. Allow adhesive to dry for 20 minutes minimum at 75° F. Porous substrates will result in reduced coverage rates for proper adhesion. Adhesive has a satisfactory cure when surface is tacky, but will not transfer when touched. Apply only on areas to be waterproofed the same day. Reapply if area becomes dirty or wet. When used in adverse climactic conditions (i.e. humid, cool, etc.) or on a porous substrate, additional time will be required.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

Apply to surface the same day of application of self adhering membrane.

PACKAGING
5 Gallon pails

COVERAGE
Coverage varies by substrate as follows.

Substrate	Approximate Coverage
DensGlass Gold	200 sq ft per gallon
CMU	200 sq ft per gallon
OSB	300 sq ft per gallon
Concrete	350 sq ft per gallon

STORAGE
Do not store product in direct sunlight or at temperatures above 110ºF or below 35ºF. Improper storage may lead to product deterioration.

WARNINGS AND HAZARDS
Avoid contact with eyes and skin. In the event of contact, wash off immediately. Refer to MSDS for other important warnings and product safety information.

INSTALLATION
Apply by roller, brush or spray. For spray application, several types of sprayers may be used, including Airless, Air-Assist and Hudson. Apply product to surface in even coat without puddles or drips. Allow to dry until there is no transfer when touched with finger.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

Apply to surface the same day of application of self adhering membrane.

PACKAGING
5 Gallon pails, 45 pails per pallet

COVERAGE
Coverage rate is 300 to 350 square feet per gallon.

WARNINGS AND HAZARDS
Flammable liquid and vapors. Use only with adequate ventilation and avoid breathing vapors. Refer to MSDS for other important warnings and product safety information.

INSTALLATION
Apply by long nap roller or brush in an even film at 300 to 350 square feet per gallon. Caution must be taken not to apply excess contact adhesive which could cause longer drying times. Allow adhesive to dry for 1 hour minimum at 75° F. Adhesive has a satisfactory cure when surface is tacky, but will not transfer when touched. Apply only areas to be waterproofed and backfilled the same day. Reapply if area becomes dirty or wet.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

TYPICAL USES

CCW-201 is recommended for joints in tilt-up construction, pre-cast panels and other masonry surface, joints in metal curtain walls, sealing window and door perimeters, control joints, and for most horizontal joints in decks or pavements. CCW-201 is also used at all angle changes and inside corners including all penetrations and decks, walls, curbs, etc.

LIMITATIONS

CCW-201 Sealant is not recommended for:

- Structural, butt, cap, heel or toe bead glazing with certain glass or acrylic sheets.
- Joints less than 1/4" wide x 1/4" deep.
- Continuous immersion without a primer. (avoid continuous immersion applications if chlorine content is greater than 3 ppm)
- Painted surfaces without prior testing.
- Damp or contaminated surfaces, especially joints with polysulfide residue.
- Consult manufacturer when temperature is below 40°F.
- Exposed traffic areas

PACKAGING AND COLORS

1.5 Gallon kit (in 2 gallon pail, plus color pack)

Standard color packs: white, gray, precast, limestone, redwood tan, charcoal and beige

Note: Sealant colors may be effected by acid type cleaning solutions.

Color Pack must always be used.

SHELF LIFE

At temperatures below 80°F, shelf life is 12 months in the original, unopened container.

COVERAGE

The following table is a guide to estimate the number of lineal feet of various size joints filled by one gallon of sealant.

Joint Depth	Joint Width					
	1/4"	3/8"	1/2"	5/8"	3/4"	1"
1/4"	310	210	160	126	—	—
3/8"	—	142	—	85	70	—
1/2"	—	—	—	—	50	40

MAINTENANCE

If sealant is damaged, cut out damaged portion, apply primer and new sealant.

WARNINGS AND HAZARDS

Avoid breathing vapors. Avoid contact with the skin and eyes. In the event of contact with the skin, clean off immediately and wash in warm soapy water. Refer to MSDS for other important warnings and product information.

TYPICAL USES

CCW-704 Mastic is used as a secondary seal on the seams, T-joints, overlaps and other terminations/penetrations of the CCW sheet membrane systems. It is designed for use on the top surface and edges of the CCW Sheet Membrane and should never be used underneath the membrane.

PACKAGING

30 oz.cartridges/12 cartridges per case

Five gallon pails/45 pails per pallet

COVERAGE

A 1/2” bead yields approximately 100 linear feet per gallon.

Estimate one 30 oz. tube for “T” joint and end lap treatment for every 200 sq. ft. of membrane installed.

WARNINGS AND HAZARDS

Contains combustible solvents. Use only with adequate ventilation. Avoid contact with the skin, especially open breaks in the skin. In the event of skin contact, remove immediately and wash with hot, soapy water. Refer to MSDS before use for other warnings and product information.

TYPICAL USES

CCW LM-800XL is an accessory product used in conjunction with CCW MiraDRI 860/861 membranes. CCW LM-800XL is designed to be used as a fillet and reinforcement under CCW MiraDRI 860/861 membranes at footing foundation wall junctures or other inside corners; and between footing and foundations when tying in slab waterproofing with the foundation wall; and pipes and penetrations; and fill small voids in substrate under membrane.

Other applications include terminations and flashing to protrusions from horizontal and vertical surfaces; terminations at drains; and detailing of the substrate prior to CCW MiraDRI 860/861 membrane application. The CCW-LM-800XL can also be used with the CCW-705 Air and Vapor Barrier.

PACKAGING

5 gallon (19 liter) pails;
29 oz. (822 kg) tubes, 12 per box;

WARNINGS AND HAZARDS

CCW LM-800XL Liquid Membrane should not be used near open flame and adequate ventilation should be provided for the protection of the applicators. Do not store CCW LM-800XL in direct sunlight or at temperatures exceeding 95°F. Improper storage could lead to product deterioration.

Tools and equipment may be thoroughly cleaned after the use of CCW-LM-800XL with mineral spirits, taking the necessary precaution when handling combustible materials. Refer to MSDS for other product safety information.

INSTALLATION

CCW LM-800XL should be applied directly from the gallon with a putty knife at 40-50 mil thickness unless otherwise specified. When used as a fillet. At membrane terminations, use 60 mils of CCW LM-800XL as a flashing and apply at the minimum of 2” (5 cm) wide over the CCW membrane, and a minimum of 1” (2.5 cm) onto the surface being waterproofed. CCW MiraDRI 860/861 can be placed over CCW LM-800XL after it has cured a minimum of 1 hour. Allow CCW LM-800XL to cure 24 hours before flood testing. Do not use CCW LM-800XL in applications subject to more than 57.8 ft (17.6m) head of water. Coverage Rate at 3/4” fillet is 30’ per 29 oz. tube, coverage rate at 40-50 mill is 20’-25’ sq ft per gallon.

CCW Protection Board-H

DESCRIPTION

CCW Protection Board-H is a heavy duty asphalt impregnated organic mat with a fine mineral applied to the surface to prevent sticking in the roll. CCW Protection Board-H is very tough and provides positive protection to the waterproofing membrane during installation of other work.

TYPICAL USES

CCW Protection Board-H is used as a protection course on vertical and horizontal surfaces to protect the waterproofing membrane from damage by foot traffic and physical abuse from other trades.

Typical uses include foundation walls, plaza decks, roof terrace decks, parking decks and any other vertical or horizontal surface to which waterproofing membrane has been applied.

PACKAGING

CCW Protection Board-H is 36" wide. It is supplied in rolls of 33.3' long (100 ft^2). The weight of each roll is approximately 60 lbs.

Thickness is 1/8" (+/- .03").

STORAGE

Store so as to prevent damage to the roll. Avoid prolonged exposure to direct sunlight. Protect from extreme environmental conditions. Store away from open flames or welding areas.

INSTALLATION

Horizontal:

Install as soon as possible after flood test has been completed. Butt tightly with no gaps greater than 1/8". When used in conjunction with CCW-500R Hot Rubber Waterproofing System, CCW Protection Board-H shall be installed while the CCW-500 surface is tacky.

Vertical:

Install using CCW CAV-GRIP™ or approved adhesive to adhere to waterproofing membrane and overlap approximately 1/2".

CCW Protection Board-V

Accessory

DESCRIPTION

CCW Protection Board-V is the CCW R-Tech Fanfold that is a high-performance, rigid insulation consisting of a superior closed-cell, lightweight and resilient expanded polystyrene (EPS) with advanced polymeric laminated facers designed to provide protection for waterproofing membranes on vertical walls. CCW Protection Board-V is not affected by moisture or most soil chemicals. Therefore, the protection course remains in place to provide long-term protection to the waterproofing membrane.

TYPICAL USES

CCW Protection Board-V is used to protect waterproofing membranes that have been applied to vertical, below grade foundation walls. The CCW Protection Board-V protects the membrane from damage or aggregate shock during backfilling operations.

CCW Protection Board-V is also suitable for use in planters as a vertical protection course for the waterproofing membrane.

PACKAGING

CCW Protection Board-V is packaged accordion-style in 2' x 4' sections for a 200-square-foot bundle. The protection board unfolds to a 4' x 50' size with a 1/4" thickness and weighs approximately 8 lbs. per bundle.

STORAGE

Store so as to prevent damage to the bundle. Avoid prolonged exposure to direct sunlight. Protect from extreme environmental conditions. Store away from open flames or welding areas.

INSTALLATION

Install CCW Protection Board-V with the white side facing out toward the installer so you can read the writing. The CCW Protection Board-V may be temporarily secured in place with CAV-GRIP™, SecurTAPE™, CCW-3300 or CCW-702WB. Backfill immediately.

CCW Protection Board-HS

DESCRIPTION

CCW Protection Board-HS is a heavy duty modified bitumen protection board consisting of a medium weight fiberglass mat with a high quality SBS (Styrene-Butadiene-Styrene) rubber and asphalt blend. This elastomeric asphaltic blend lends elasticity and flexibility to the sheet. The inorganic fiberglass reinforcing provides high tensile strength, dimensional stability and tear resistance.

CCW Protection Board-HS is designed to be installed as a protection course in the CCW-500R System.

TYPICAL USES

CCW Protection Board-HS is used as a protection course on horizontal surfaces to protect the CCW-500R Membrane System from damage by foot traffic and physical abuse from other trades.

Typical uses include plaza decks, inverted roofing systems, parking decks with asphalt overlayments and other horizontal surfaces to which waterproofing membranes have been applied.

PACKAGING

CCW Protection Board-HS is 39-3/8” wide. It is supplied in rolls of 49’ 2” long (150 ft^2). The weight of each roll is approximately 90 lbs.

STORAGE

Store so as to prevent damage to the bundle. Avoid prolonged exposure to direct sunlight. Protect from extreme environmental conditions. Store away from open flames or welding areas.

INSTALLATION

Embed in hot, liquid CCW-500 and over lap 2 - 3 inches. Seal all laps with CCW-500.

DESCRIPTION
A solvent free, two component polyurethane compound for preparing and leveling rough concrete surfaces prior to the installation of CCW MiraDRI 860/861 Sheet Membrane Waterproofing. The low viscosity compound fills voids and cures to form a well adhered elastomeric membrane.

TYPICAL USES
Liqui-Deck fills and levels rough concrete surfaces, providing a smooth surface for the installation of CCW MiraDRI 860/861Sheet Membrane. The compound cures overnight to a fully adhered elastomeric sheet, providing a temporary waterproofing layer prior to the installation of the waterproofing membrane.

ADVANTAGES
- Fills voids and spalls. Smooths, levels and primes rough decks in one step.
- Useful for both rehab and new construction.
- Provides a temporary waterproofing layer.
- No solvents or VOC's.

LIMITATIONS
- Do not apply compound to a frosty, damp or wet surface.
- Do not proceed with compound application if temperature is below 40°F or if rain is imminent within 8 hours after application.
- If metal pan is used for concrete form, the pan must be vented. Not for use on grade.
- If deck has a between slab membrane, consult with Carlisle representative.

PACKAGING
4 gallon kits consisting of 3½ gallons of Part A in the 5 gallon pail and a ½ gallon can of Part B. Mix only full kits.

Shelf Life: 1 Year

WARNINGS AND HAZARDS
Before use refer to MSDS for important warnings and safety information. Use only in areas with adequate ventilation. Avoid breathing vapors. Avoid contact with eyes and skin. In the event of skin contact, remove immediately and wash with warm, soapy water. Wear eye protection. Always wash hands before eating.

INSTALLATION

The concrete surface must be clean, dry and free of laitance, dirt, oil, grease or other contamination.

New concrete must be in place for 7 days minimum. Curing compounds must be of the self-dissipating type and be approved by the Carlisle representative. Old concrete must be structurally sound. Loose or deteriorated concrete shall be removed. In the event of existing coatings, contact Carlisle.

Pour all of Part B into Part A and mix for a minimum of 5 minutes. Stop midway and scrape the sides and bottom of the pail to ensure that all material is completely and uniformly mixed. Use a heavy duty slow speed drill with a paddle blade or a Model PS Jiffy blade.

After mixing, the material should be applied within an hour. The useful working life of the material will be longer in cool weather and may be reduced in hot weather. In cool weather, store materials in a warm place prior to use. Keep material warm until mixing and application.

Pour Liqui-Deck onto the deck and spread in a uniform coat. Apply sufficient material to fill all voids and depressions and smooth rough areas. A coverage rate of 25 square feet per gallon (100 square feet per kit) yields a 0.060” thick layer. More Liqui-Deck may be required for rough or damaged surfaces.

Allow to cure overnight or until a firm, rubbery layer is produced. Carlisle CCW MiraDRI 860/861 membrane may be applied directly to the cured Liqui-deck surface. No additional contact adhesive is required.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

CCW-3300

Butyl-Based Adhesive/Sealant

DESCRIPTION

CCW-3300 is a butyl-based material between two release liners capable of bonding a variety of items together. CCW-3300 offers an aggressive grip, stays flexible during application, assuring immediate adhesion on contact, and superior long-term bonding. Perfect for metal, plastics and some fabrics, CCW-3300's pressure sensitive properties allow a fast, clean and easy application.

PACKAGING

SIZE	PART NUMBER
1 Case w/ (24) 2" x 50' Rolls	304259
1 Case w/ (16) 3" x 50' Rolls	304260
1 Case w/ (12) 4" x 50' Rolls	304261
1 Case w/ (8) 6" x 50' Rolls	304262
1 Case w/ (4) 12" x 50' Rolls	304983

STORAGE

Temperature 30°F to 110°F

Shelf Life 24 Months

Flammability Non-flammable

(Contains no Asbestos, CFC or PCB)

WARNINGS AND HAZARDS

Surfaces must be clean and free of moisture and contamination. Do not apply this product where temperatures will exceed 200°F. Do not stretch this product during application. Keep out of the reach of children. Review MSDS for safety information prior to use. DO NOT use where acidic or alkaline chemicals are present (ie., lab fume hood, vents, etc.).

INSTALLATION

Preparation: Clean surface - Remove dust, dirt, oil and moisture. Peel off few inches of release liner.

Method: Apply exactly the first time, attempty to remove may damage tape and roofing. DO NOT STRETCH. Press down firmly starting at center and working toward outside edge of tape, removing bubbles. Edges must have no openings, tunnels or fishmouths. Remove white release liner. Matchup surfaces to be joined. Carefully, exactly press the surfaces together.

Temperature: 35°F to 110°F

DESCRIPTION

CCW-1602 is a butyl-based, fabric-faced detailing tape for use with MiraPLY. CCW-1602 offers an aggressive grip and remains fl exible during application, ensuring immediate adhesion on contact and long-term bonding. CCW-1602 is ideal for MiraPLY, metal, plastics and some fabrics. The pressure-sensitive properties of CCW-1602 allow for a fast, clean and easy application.

TYPICAL USES

Detailing tape for use with MiraPLY and other CCW waterproofing systems.

PACKAGING

1 Case w/ (24) 2” x 50’ Rolls, 317742

1 Case w/ (8) 6” x 50’ Rolls, 317743

1 Case w/ (4) 18” x 50’ Rolls, 317744

STORAGE

Temperature	35°F to 110°F (1.7°C to 44°C)
Shelf Life	24 months
Flammability	Non-flammable

WARNINGS AND HAZARDS

Surfaces must be clean and free of moisture and contamination. Do not apply this product where temperatures will exceed 200°F. Keep out of the reach of children. Review MSDS for safety information prior to use. DO NOT use where acidic or alkaline chemicals are present.

INSTALLATION

Preparation: Clean surface – remove dust, dirt, oil and moisture. Peel off few inches of release liner.

Method: Apply exactly the fi rst time; attempting to remove may damage tape. Press down fi rmly starting at center and working toward outside edge of tape, removing bubbles. Remove white release liner of next piece and match up surfaces to be joined. Carefully and exactly press surfaces together.

Temperature: 35°F to 110°F

TPO Coverstrip

Non-Reinforced TPO Flashing

DESCRIPTION

TPO Coverstrip is a nominal 30-mil (0.76 mm) thick non-reinforced TPO flashing laminated to a nominal 30-mil (0.76 mm) thick, fully cured synthetic rubber pressure sensitive adhesive. PS Coverstrip is available in 6-inch (152 mm) width x 100-foot (30.5 m) long rolls and three (3) membrane colors – white, gray, and tan.

TYPICAL USES

TPO Coverstrip is intended to strip in flat metal flanges (i.e. drip edge or self-flashing curb flanges).

PACKAGING

1 Case w/ (2) 6" x 100' Rolls

Shelf Life: 1 Year

STORAGE

Storage and use of PS Coverstrip at temperatures below 40°F (4°C) will result in a loss of adhesive tack, and in extreme cases, will result in no bond to the substrate. Overnight storage must be available to keep the temperature of the Coverstrip at a minimum of 60°F (15°C). Hot boxes for job site storage must be provided to maintain a minimum product temperature of 40°F (4°C).

Coverstrip must be stored in a dry area.

WARNINGS AND HAZARDS

Coverstrip cannot be used for flashing corners, pipes, T-joints, butt joints on Sure-Weld FleeckBACK systems or any angled metal flanges such as gravel stops or other canted metal edgings.

Avoid prolonged contact with skin. In case of contact with skin, thoroughly wash affected area with soap and water.

Prolonged job site storage temperatures in excess of 90°F (32°C) may affect product shelf life.

In warm, sunny weather; keep Coverstrip rolls in their box or in a shaded area until ready to use.

Due to solvent flash-off, condensation may form on freshly applied TPO Primer when the ambient temperature is near the dew point. If condensation develops, the application of TPO Primer and Coverstrip must be discontinued since proper adhesion will not be achieved. Allow the surface to dry and apply a thin freshener coat of TPO Primer to the previously coated surface and apply Coverstrip when conditions allow.

Do not allow waste products (petroleum, grease, oil, solvents, vegetable or mineral oil, animal fats, etc.) or direct steam venting to come in contact with the Coverstrip.

KEEP OUT OF THE REACH OF CHILDREN.

INSTALLATION

Clean the existing membrane (and metal if applicable) with Weathered Membrane Cleaner and HP Splice Wipes or other natural fiber rags. A Carlisle Primer Pad may be necessary to remove a heavy build-up of dirt. Pour a small amount of Weathered Membrane Cleaner over a primer pad and rub area to be welded in a circular motion. Wipe away residual dirt with HP Splice Wipes or other natural fiber rags.

Roller apply TPO Primer or Low VOC TPO Primer to the area of the membrane to be flashed with a short nap length paint roller. The properly primed area will be uniform in color without streaks and free of globs or puddles.

*Do not use HP-250 Primer on TPO membrane.

The entire surface where the flashing will be applied must be clean. The adhesive on the back of the Coverstrip will not adhere to dusted/dirty surfaces. Any residual surface contamination will be detrimental to the bond strength of the adhesive.

Install Coverstrip immediately after TPO Primer or Low VOC TPO Primer flashes off to minimize potential dust contamination and to promote adhesion in colder weather.

Peel off 10-12” (250-300 mm) of the protective release liner from the Coverstrip. Position the flashing over the area to be covered and press down using firm, even hand pressure across the entire area. Continue this process until the full area to be flashed is completed. (Cut-Edge Sealant is not required on edges of Coverstrip).

Immediately roll the Coverstrip with a 2” (50-mm) wide silicone roller using positive pressure. Roll across the coverstrip edge, not parallel to the length. In areas where the Coverstrip crosses a metal joint, a membrane seam (T-joint) or at an end lap use a hot air gun to heat the top surface (TPO flashing) of the Coverstrip and crease the material into the step-off. This process reduces the possibility of a water channel forming.

To achieve proper adhesion of the Coverstrip when job site temperatures fall below 40°F (5°C), heat the cleaned/primed area of the membrane with a hot air gun as the flashing is applied and pressed into place.

TPO Primer

Polymer-Based Splice Primer

DESCRIPTION

TPO Primer is a high solids content, clear (translucent color) polymer-based splice primer used to prepareTPO membrane for improved adhesion to TPO Pressure Sensitive Coverstrip and TPO RUSS.

PACKAGING

1 gallon cans/6 cans per case

Shelf Life: 1 Year in unopened container

COVERAGE

200 – 250 square feet (19 – 24 m^2) (one surface) per gallon

STORAGE

Jobsite storage temperatures in excess of 90°F (32°C) may affect product shelf life. Should the primer be stored at temperatures lower than 60°F (15°C), restore to room temperature prior to use.

WARNINGS AND HAZARDS

WARNING! HARMFUL IF SWALLOWED. FLAMMABLE LIQUID. MAY BE IRRITATING TO SKIN AND EYES.

Wash thoroughly after handling. Avoid contact with eyes, skin and clothing. Use of permeation resistant glove (that meet ANSI/ISEA 105-2005) and safety glasses recommended. Keep away from heat, sparks, motors and open flame. DO NOT SMOKE WHILE USING. Keep lid closed when not in use.

If swallowed, DO NOT INDUCE VOMITING. Call physician immediately. In case of eye contact, flush with water for at least 15 minutes. In case of skin contact, wash with soap and water. If irritation develops, call physician.

In case of fire handle as a solvent or gasoline fire. Use dry chemical, carbon dioxide or foam fire extinguishers. Water fog or spray may be used to smother the fire and cool containers. Do not use a solid stream of water to fight fire because it can scatter and spread the fire.

Thoroughly stir this product until all settled pigment is blended into the solution. Solids suspended in TPO Primer tend to settle; stir or agitate the solution frequently during use.

Use TPO Primer full strength. Do not thin. Thinning will affect performance.

REVIEW THE TPO PRIMER MATERIAL SAFETY DATA SHEET FOR COMPLETE SAFETY INFORMATION PRIOR TO USE.

KEEP OUT OF THE REACH OF CHILDREN.

INSTALLATION

The surface to which the primer is being applied should be dry and clean. TPO membrane can be cleaned with Weathered Membrane Cleaner prior to primer application.

Apply TPO Primer using a paintbrush or medium nap paint roller. The membrane surface should be uniform in color with no streaking or puddling. Apply primer to a wider area than the actual bonding area to insure complete coverage.

Allow primer to dry completely before applying TPO Coverstrip or TPO RUSS. Drying conditions will vary depending on ambient air conditions.

Low VOC TPO Primer

Solvent-Based Splice Primer

DESCRIPTION

Low VOC TPO Primer is a low solids, clear (translucent color) solvent -based splice primer used to prepare TPO membrane for improved adhesion to TPO Coverstrip and TPO Russ. This Low VOC product is ideal for use in states where environmental issues are a concern.

PACKAGING

1 gallon cans/6 cans per case

Shelf Life: 1 Year in unopened container

COVERAGE

200 – 250 square feet (19 – 24 m^2) (one surface) per gallon

STORAGE

Jobsite storage temperatures in excess of 90°F (32°C) may affect product shelf life. Should the primer be stored at temperatures lower than 60°F (15°C), restore to room temperature prior to use.

WARNINGS AND HAZARDS

WARNING! HARMFUL IF SWALLOWED. FLAMMABLE LIQUID. MAY BE IRRITATING TO SKIN AND EYES.

Wash thoroughly after handling. Avoid contact with eyes, skin and clothing. Use of solvent resistant gloves and safety glasses recommended. Keep away from heat, sparks, motors and open flame. DO NOT SMOKE WHILE USING. Keep lid closed when not in use.

If swallowed, DO NOT INDUCE VOMITING. Call physician immediately. In case of eye contact, flush with water for at least 15 minutes. In case of skin contact, wash with soap and water. If irritation develops, call physician.

In case of fire handle as a solvent or gasoline fire. Use dry chemical, carbon dioxide or foam fire extinguishers. Water fog or spray may be used to smother the fire and cool containers. Do not use a solid stream of water to fight fire because it can scatter and spread the fire.

Thoroughly stir this product until all settled pigment is blended into the solution. Solids suspended in Low VOC TPO Primer tend to settle; stir or agitate the solution frequently during use.

Use Low VOC TPO Primer full strength. Do not thin. Thinning will affect performance.

REVIEW THE LOW VOC TPO PRIMER MATERIAL SAFETY DATA SHEET FOR COMPLETE SAFETY INFORMATION PRIOR TO USE.

KEEP OUT OF THE REACH OF CHILDREN.

INSTALLATION

The surface to which the primer is being applied should be dry and clean. If the TPO membrane is exposed to the weather the areas that are to be primed must be cleaned with Weathered Membrane Cleaner prior to the primer application.

Apply TPO Primer using a paintbrush or medium nap paint roller. The membrane surface should be uniform in color with no streaking or puddling. Apply primer to a wider area than the actual bonding area to insure complete coverage.

Allow primer to dry completely before applying TPO Coverstrip or TPO Russ. Drying conditions will vary depending on ambient air conditions.

Universal Single-Ply Sealant One-Part Polyether Sealant

DESCRIPTION
Universal Single-Ply Sealant is a 100% solids, solvent-free, one-part, polyether sealant that provides a weather tight seal to a variety of building substrates. Universal Single-Ply Sealant can be used as a termination bar sealant for TPO and white EPDM Fully Adhered and Mechanically Fastened Roofing Systems. It is also an excellent product for use in counter flashing, coping and scupper details.

See Carlisle specifications and details for specific applications.

TYPICAL USES
Universal Single-Ply Sealant has excellent adhesion to substrates such as stone, masonry, ceramic, marble, wood, steel, aluminum, most plastics and composites. Universal Single-Ply Sealant is not recommended as a glass-glazing sealant.

PACKAGING
10.1 fl. oz. cartridges/24 cartridges per case

Shelf Life: 1 Year in unopened container at 90°F

COVERAGE
25' (7.6 m) per tube or 600' (183 m) per carton using a ¼" (6 mm) bead

STORAGE
Store in original unopened containers in a cool, dry area. Protect unopened containers from heat and direct sunlight. Elevated temperatures will reduce shelf life.

WARNINGS AND HAZARDS
Avoid prolonged contact with skin. Uncured adhesive irritates eyes. In case of contact with eyes, immediately flush with water. Consult a physician if ill effects occur.

For industrial professional use only. May not be repackaged or resold for other than industrial or professional use.

Do not use Universal Single-Ply Sealant in temperatures below 40°F.

REVIEW THE UNIVERAL SINGLE-PLY SEALANT MATERIAL SAFETY DATA SHEET FOR COMPLETE SAFETY INFORMATION PRIOR TO USE.

KEEP OUT OF THE REACH OF CHILDREN.

INSTALLATION
Universal Single-Ply Sealant is a one-component, ready-to-use material that requires no mixing or preparation.

Surface Preparation: Surfaces shall be dry, clean and free of all dust, or contamination, which may harmfully affect the adhesion of the sealant. Cleaning with Carlisle's Weathered Membrane Cleaner may be required.

A quality caulking gun should be used to ensure ease of application.

Universal Single-Ply Sealant typically is tack free in 25 minutes and skins over within 45 minutes. Full cure occurs in 3 to 7 days depending on temperature and humidity.

Clean Up: Remove excess sealant adjacent to joint prior to curing with Carlisle's Weathered Membrane Cleaner. Uncured sealant can also be removed from tools or equipment with the Weathered Membrane Cleaner.

Sure-Seal Termination Bar

Extruded Aluminum Bar

DESCRIPTION

The Sure-Seal Termination Bar is an extruded aluminum bar designed for securing and sealing flashing terminations in accordance with current Carlisle Specifications.

LIMITATIONS

- Apply on a hard, smooth surface only; not for use on wood.
- Water Cut-Off Mastic must be held under constant compression.
- Do not wrap compression termination around corners.
- When field cutting is necessary, remove any burrs or sharp edges from the bar.
- Allow 1/4" (6 mm) minimum to 1/2" (12 mm) maximum spacing between bars.

PACKAGING

5 gallon pails

MATERIAL

- Corrosion resistant 6063-T6 extruded aluminum
- Pre-Punched 6" (150 mm) o.c. and 1" (25 mm) from each end
- Carlisle logo stamped on each section
- Sealant ledge to hold the Lap Sealant and provide stability
- Serrated back provides increased surface area contact with membrane to compress the Water Cut-Off Mastic

INSTALLATION

1. Peel back flashing material approximately 1" (25 mm).
2. Apply Water Cut-Off Mastic between substrate and flashing (approximately 10' (3 m) per tube).
3. Install termination bar by fastening 12" (300 mm) o.c. maximum with a fastener compatible with the substrate to achieve constant compression of Water Cut-Off Mastic. Start fastening at one end of the bar and proceed to the next slot (12" max.) to eliminate bowing caused by improper installation.
4. Trim top edge of flashing flush with top of termination bar.
5. Apply Lap Sealant to top edge of bar and feather.

DCH Reinforcing Fabric

Polyester Fabric

DESCRIPTION

The CCW DCH Reinforcing Fabric is a white polyester fabric designed to work in conjunction with CCW Deck Coating Systems and Liquid-Applied Membranes.

PACKAGING

4” x 324’ (.10 m x 98.8 m)

6” x 324’ (.15 m x 98.8 m)

12” x 324’ (.30 m x 98.8 m)

40” x 324’ (1.02 m x 98.8 m)

COVERAGE

25’ (7.6 m) per tube or 600’ (183 m) per carton using a ¼” (6 mm) bead

STORAGE

Store DCH Reinforcing Fabric so as to prevent damage to the roll. Avoid prolonged exposure to direct sunlight. Protect from extreme environmental conditions. Store away from open flames or welding areas.

INSTALLATION

The DCH fabric is for use in horizontal and detailing applications.

See Deck Coating and Fluid Waterproofing details for proper installation.

DESCRIPTION

The EJ-500 EPDM expansion joint system is used for waterproofing expansion joints in structures, such as commercial and industrial buildings, parking garages, tunnels, etc. The EJ-500 is installed with the Carlisle CCW-500R Reinforced Hot Applied Liquid Membrane System. EJ-500 is supplied directly to the job site in a roll with detail work completed and seamed together by a proprietary vulcanizing process, which results in monolithic and elastic seamed joints. Seaming can also be done on site if required. EJ-500 is a flat profile elastic material manufactured from a saturated elastomer. The EJ-500 EPDM expansion joint system comes in two sizes, the EJ-500/20 and EJ-500/40, designed to accommodate specific horizontal building movements of 3/4" and 1-3/4" respectively.

TYPICAL USES

The EJ-500 EPDM expansion joint system is designed to be used for:

- Plaza Deck Expansion Joints
- Parking Garage Expansion Joints
- Protected Roof Membrane Expansion Joints
- Tunnel Expansion Joints
- Vertical Wall Expansion Joints
- Bridge Expansion Joints

PACKAGING

PROPERTY	EJ-500/20	EJ-500/40
Thickness	0.086"	0.086"
Roll Width	10-1/2"	13-1/4"
Gauge Width	1-1/2"	2-1/4"
Roll Length	Custom	Custom
Weight	0.45 lb/ft	0.60 lb/ft
Color	Red	Red

STORAGE

Store rolls on end, on original pallets or elevated platform. Protect from weather or store in an enclosed area. Do not allow the EJ-500 EPDM expansion joint fleece to get wet.

MATERIAL SELECTION

The EJ-500 EPDM expansion joint system is designed to accommodate 3 way building movements.

MOVEMENT	EJ-500/20	EJ-500/40
Horizontal	+/- 3/4"	+/- 1-3/4"
Vertical	+/- 5/8"	+/- 3/4"
Shear	+/- 5/8"	+/- 3/4"

SURFACE PREPARATION

Refer to Carlisle's manufacturer's guide specifications for detailed waterproof membrane application information. All surfaces must be dry and clean of debris.

INSTALLATION

Identify the start installation location from the plan accompanying the roll of EJ-500 EPDM expansion joint material. Roll out the EJ-500 and allow it to relax prior to application. Make sure that the building expansion joint is clean and free of debris and has been packed with compressible batt insulation. Align the center line of the expansion joint gap with the center line of the EJ-500 EPDM expansion joint material, and verify the EJ-500 conformance to site details prior to the membrane application.

CCW-500 Reinforced Hot Applied Liquid Membrane: Melt the Carlisle CCW-500 in a double walled kettle and bring it to a temperature of 380° F. Apply the first application of the CCW-500 at minimum thickness of 90 mils. Immediately following the application of CCW-500 embed the EJ-500 EPDM expansion joint material, making sure that the bottom polyester fleece is in full contact with the hot liquid asphalt. Press the EJ-500 material into the hot CCW-500 material. The center of the EJ-500 EPDM expansion joint material must be aligned with the center line of the expansion joint gap. Lay the EJ-500 EPDM expansion joint material only in lengths of 10 feet or less to allow for contact with hot, liquid CCW-500 material. Do not lay the EJ-500 in cold CCW-500 material.

Spread an even coat of 90 mils of CCW-500 on the top surface of the EJ-500 EPDM expansion joint ensuring the top white polyester fleece is completely covered. Embed the CCW-500 Reinforcing Fabric overlapping the edge of the EJ-500 2"-3", ensuring full contact. Apply a second application of CCW-500 on top of the CCW-500 Reinforcing Fabric at a minimum of 125 mils thickness.

Protection Course: Install CCW MiraDRAIN Drainage Composite or CCW Protection Board-H Protection Course over the EJ-500 EPDM expansion joint material.

Tie Back Cover

Plastic Flanged Dome

DESCRIPTION

Carlisle Coating & Waterproofing Incorporated's CCW Tie-Back Cover is a preformed, high-impact resistant, heavy-duty ABS plastic dome cover designed to protect the waterproofing membrane in below-grade construction and related conditions. The CCW Tie-Back Cover is an integral part of the MiraPLY self-adhering, blindside waterproof system.

TYPICAL USES

CCW Tie-Back Cover's are primarily used in below-grade, blindside waterproofing applications to cover protruding tie-back associated with lagging and retention walls prior to the placement of structural concrete.

ADVANTAGES

- Fast and simple, one-step installation
- Built-in peel-and-stick technology provides aggressive bond to the waterproofing membrane
- Heavy-duty, high impact composite resists construction traffic and concrete placement
- Impervious to freeze/thaw cycles or adverse weather conditions

PACKAGING

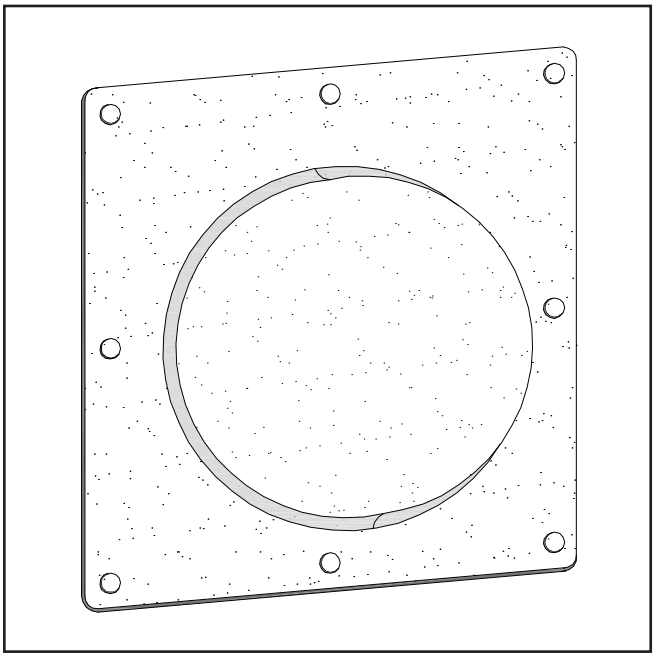
10/box; 6" x 20" x 20". Dome diameter is 14".

INSTALLATION

Install MiraDRAIN and MiraPLY securely to lagging and tight around tie-back providing a flat surface for the CCW Tie-Back Cover installation. Clean MiraPLY surface – remove dust, dirt, oil and moisture, Weathered Membrane Cleaner may be required. Peel off enough of the MiraPLY release liner around tie-back to install CCW Tie-Back Cover. Remove release liner from backside of CCW Tie-Back Cover. Center CCW Tie-Back Cover over tie-back making sure that the MiraPLY extends a minimum of 3" under the CCW Tie-Back Cover.

Install the CCW Tie-Back Cover exactly the first time; attempting to remove may damage tape or MiraPLY. Press CCW Tie-Back Cover firmly against MiraPLY starting a one corner and working around all sides making sure the CCW Tie-Back Cover has 100% adhesion to the MiraPLY. Once adhered, apply a 1" wide x ¼" thick bead of Universal Lap Sealant to all four edges of the cover.

ISOMETRIC DETAIL VIEW



DESCRIPTION

A-1104 Butyl Sealant is an extruded, pressure sensitive gasket sealant designed to seal transitions, terminations and other flashing details in the MiraPLY self-adhering blindside waterproofing system. It is a permanently soft caulking compound which contains a high percentage of virgin butyl rubber to enhance its sealing properties and aging characteristics. A-1104 is formulated to retain low temperature handling properties and adheres tenaciously to the MiraPLY butyl alloy as well as to most clean, dry surfaces such as concrete, steel, galvanized metal, aluminum, plastic materials and wood. A-1104 provides an instant seal for below-grade waterproofing systems and in non-weather exposed areas.

TYPICAL USES

A-1104 is designed for use on various MiraPLY flashing details. It is used in tape and bead form to provide a water, moisture, air and vapor barrier in critical corner applications.

ADVANTAGES

- Chemical Resistance:
  Excellent resistance to water, alcohols, mild acids and bases.
- Non-Corrosive: Will not corrode metals.
- Flexibility: No cracking at -20° F.
- Heavy-Duty: Resists construction traffic and concrete placement.

PACKAGING

1 Case w/ (20) 25’ Rolls, Part Number: 304271

DESCRIPTION
CCW-550 Primer is a single-component, solvent-based bituminous primer especially designed to promote adhesion of the CCW-500 Hot Applied Liquid Membrane by preparing the concrete surface. CCW-550 Primer is spray ready without having to thin or can also be applied with a roller.

TYPICAL USES
Prime all concrete gypsum, masonry, brick and metal surfaces to which the CCW-500 Hot-Applied Membrane is to be applied.

PACKAGING
CCW-550 Primer is packaged in 5-gallon pails and 55-gallon drums.

COVERAGE
Coverage rate will vary. The following is a guide, but Carlisle Coatings & Waterproofing Incorporated can not guarantee coverage rates.

The concrete should show a deep stain as opposed to being fully colored black.

For smooth, hair broom finish, cover concrete 500 sq. ft. per gallon.

All fluid applied product application rates are based on theoretical coverage relative to the percentage of solids in the material. These are minimum application rates to achieve the required dry film thickness for the system and do not account for substrate condition or porosity. A thicker application of the product may be necessary to achieve the required dry film thickness for system relative to the substrate.

WARNINGS AND HAZARDS
Flammable liquid and vapors. Use only with adequate ventilation. Keep liquid and vapors away from open flames. Avoid contact with eyes and skin. In the event of contact, wash off immediately. Wear protective clothing, especially impervious rubber gloves and eye protection. Refer to the MSDS for important warnings and product information.

INSTALLATION
Do not thin CCW-550 Primer before application. CCW-550 is best applied with powered airless spray equipment. CCW-550 Primer can also be applied by roller. Use a screen in the pail to roll off excess primer. The product has a satisfactory cure when it will not transfer when touched. Apply only to areas to be waterproofed the same day. Reapply if area becomes dirty or wet.

DESCRIPTION
Travel-Tack is a solvent-borne, polymer-based contact adhesive for improving the adhesion of CCW-705 Air & Vapor Barrier Strips and Barritape self-adhering flashing strips. Travel-Tack is applied from 15 oz aerosol cans. Travel-Tack can be used to improve adhesion of CCW self-adhering flashing on OSB sheathing, gypsum sheathing, plywood, wood framing, building paper, asphalt impregnated felt, polymer-based house wrap, rigid PVC and metal surfaces.

TYPICAL USES
Travel-Tack is used in conjunction with CCW self adhering flashing in window & door installations and similar wall flashing applications. Travel-Tack improves the adhesion of CCW self-adhering flashing, especially over rough substrates and/or at colder application temperature. Travel-Tack may also be used to bond CCW Sill Wedge and WillFlash Molded Corner Flashing to sheathing and framing.

ADVANTAGES
- Part of a complete CCW window installation system
- High coverage rate = low material cost per installation
- Cans are portable and allow application without any additional dispense equipment
- Quick drying and high tack allow rapid and easy installation of CCW self-adhered flashing
- Clean application – no brushes, rollers or pans to throw away
- White color affords minimal visibility in case of overspray
- VOC Compliant in all 50 states

LIMITATIONS
Cans must be maintained at 70°F or higher to spray well.

PACKAGING
Travel-Tack 12 oz aerosol cans, 12 per carton

WARNINGS AND HAZARDS
USE IN WELL-VENTILATED AREA.Do not puncture or incinerate container. Do not expose to heat or store at temperatures over 120º F. In case of eye contact, flush thoroughly with running water for at least 15 minutes and get medical attention. REFER TO PRODUCT DATA SHEET FOR PERFORMANCE CAPABILITIES.

INSTALLATION
Mask adjacent areas as necessary to avoid overspray. Surfaces should be clean, sound, dry and free of dust or debris. Shake can well. Hold can upright and spray onto surface. Allow Travel-Tack to dry until it can be touched without transfer. Bond as soon as possible after product has dried sufficiently. If adhesive has been left open long enough to become contaminated by dust/debris or loose tack, reapply.

CCW 200V/300HV

DESCRIPTION

CCW 200V and 300HV Protection Fabrics are extremely tough nonwoven polypropylene protection courses, specifically designed by Carlisle Coatings & Waterproofing Incorporated to protect CCW waterproofing membranes.

TYPICAL USES

CCW 200V Protection Fabric is a specifically designed product to cushion and protect the CCW MiraDRI 860/861 and CCW butyl waterproofing membranes in vertical applications.

CCW 300HV Protection Fabric is a thick nonwoven cushioning fabric that provides the ultimate solution for horizontal applications. CCW 300HV is engineered to be placed over CCW MiraDRI 860/861 and CCW Butyl Membrane waterproofing membranes in horizontal and vertical applications. CCW 300HV is also used as the critical moisture retention element in CCW green roof systems.

ADVANTAGES

- High Puncture Resistance: 200V has five times the puncture strength of extruded foam fanfold board. 300HV has more than three times the puncture resistance of 1/8" asphaltic hard board.
- Easy Installation: CCW Protection Fabrics are provided in unique, lightweight, easy-to-install rolls. CCW 200V/300HV products are extremely flexible, aiding the installation process.
- Durable: CCW Protection Fabrics are resistant to installation and site damage caused by construction traffic and debris.
- Resistant: CCW 200V/300HV are inert to biological degradation and resist naturally encountered chemicals, alkalis and acids. Both products are also UV resistant.

LIMITATIONS

CCW 200V/300HV must not be permanently exposed to sunlight. Limit exposure to no more than 30 days prior to covering.

PACKAGING

200V:
40" x 200' (1 m x 61 m) 54 lbs (24 kg):
150" x 200' (3.81 m x 61 m) 140 lbs (63 kg)

300HV:
40" x 200' (1 m x 61 m) 58 lbs (26 kg);
150" x 200' (3.81 m x 61 m) 195 lbs (90 kg)

MAINTENANCE

CCW 200V/300HV requires no maintenance if installed in accordance with the manufacturer's instructions.

DESCRIPTION

Carlisle's Sure Seal® SecurTAPE is an EPDM synthetic rubber-based product which is used for splicing PRE-KLEENED EPDM Thru-Wall Flashing and root barrier and the temporary securment of CCW MiraDRAIN and protection courses. SecurTAPE features a clear poly release film and excellent long-term holding properties.

WARNINGS AND HAZARDS

- Review the applicable Material Safety Data Sheet for complete safety information prior to use.
- Avoid prolonged contact with skin. In case of contact with skin, thoroughly wash affected area with soap and water.
- Job site storage temperatures in excess of 90° F (32° C) may affect product shelf life. Prolonged job site exposure to temperatures below 40° F (4° C) will cause the tape to lose tack and in extreme cases not bond to the substrate. If this situation is encountered, remove tape to warm area and allow it to return to a minimum 60° F (15° C). Do not apply heat directly to tape.
- Sure Seal SecurTAPE must be stored in a dry area. Exposure to moisture can damage the protective release paper, making it difficult to remove.
- Under some weather conditions, condensation can form on the EPDM membrane following the cleaning step. The bond strength of Sure Seal SecurTAPE will be negatively effected under these conditions. When these conditions are encountered the Sure-Seal SecurTAPE should be applied to the primed membrane as soon after priming as possible to minimize condensation formation. A heat gun can be used to dry the surface prior to applying the SecurTAPE. If condensation continues, discontinue the use of Sure Seal SecurTAPE.

INSTALLATION

1. Remove dirt and excess dust from the splice area by wiping with a clean rag. If there is a heavy layer of dirt present, clean the splice area thoroughly with Weathered Membrane Cleaner. This process is essential on membrane that has been exposed for a number of weeks.
2. Mark the bottom sheet with a crayon at the edge of the top sheet along the entire splice length as a guide.
3. Application of Carlisle EPDM Primer:

   Standard EPDM:
   Apply the primer using a clean HP Splice Wipe. SCRUB the area of the membrane to be fl ashed in a circular motion to achieve a thin, even coating. The properly primed area will be uniform in color without streaks and free of globs or puddles.

   PRE-KLEENED™ Membrane:
   Roller-apply the primer to the area of the membrane to be seamed with a short nap-length paint roller. The coated area will be free of globs or puddles.
4. The entire surface where the tape will be applied must be cleaned and primed. The adhesive will not adhere to dusted/dirty surfaces. Any residual surface contamination will be detrimental to the bond strength of the adhesive.

5. Allow the Primer to dry until it does not transfer to a dry finger touch.
6. Install SecurTAPE immediately after the Primer fl ashes off to minimize potential dust contamination and promote adhesion in colder weather.
7. Unroll approximately 3' (1 m) of SecurTAPE. Align the tape with a marked line and press tape down to bottom sheet using firm, even hand pressure. Continue for the length of the splice. Tape roll ends should be overlapped 1" (25 mm). Allow top sheet to rest on poly backing after application. A minimum of 1/8" (3 mm) of tape must extend beyond the splice edge. A continuous piece of SecurTAPE must be used at all fi eld and factory splice intersections.
8. Rolling the SecurTAPE with a 2"-wide steel hand roller after application to the primed substrate will signifi cantly reduce the frequency of air blisters in the completed field seam.
9. Pull the poly backing from the SecurTAPE beneath the top sheet and allow the top sheet to fall freely onto the exposed tape.
10. Press top sheet onto tape using firm, even hand pressure across the splice towards the splice edge.
11. Immediately roll the splice with a 2"-wide steel roller using positive pressure. Roll across the splice edge, not parallel to it.
12. The use of Lap Sealant with SecurTAPE splices is optional except at cut edges of reinforced membrane (exposed scrim reinforcement), where Lap Sealant must be utilized. Lap Sealant may be applied immediately following the completion of a SecurTAPE splice. See Lap Sealant PDS or appropriate detail for more information.
13. To achieve proper adhesion of the SecurTAPE when jobsite temperatures fall below 40°F (5°C), the following steps must be followed:
    a. Heat the primed area of the bottom membrane sheet with a hot-air gun as the SecurTAPE is applied and pressed into place.
    b. The tape must be rolled with a 2"-wide rubber hand roller prior to removal of the release liner when temperatures fall below 20°F (-7°C).
    c. Position the top sheet and strip the release liner per normal procedure.
    d. Prior to rolling the splice area with a 2"-wide steel hand roller, apply heat to the topside of the membrane with a hot-air gun. The heated surface should be hot to the touch. Be careful not to burn or blister the membrane.

DESCRIPTION

CAV-GRIP is a multi-purpose contact adhesive recommended for enhancing bond of CCW self-adhering sheet products and for bonding MiraDRAIN® and board insulation to various substrates. The self-contained spray system delivers a low-pressure web, which allows quick and even coverage without bounce-back. CAV-GRIP is a low-VOC, methylene chloride-free formula.

This unique formula allows tenacious adhesion and quick drying over a wide temperature range. The self-contained spray system consists of a #40 pressurized aerosol cylinders with a special attachment for a spray hose and gun.

With proper operation, this system requires no clean-up or maintenance. CAV-GRIP provides a low-cost, quick and easy solution for proper installation of CCW self-adhering flashings and MiraDRAIN and board insulation.

- Enhancing bond of CCW-705 Air & Vapor Barrier, CCW-705 Air & Vapor Barrier Strips, Barritape™, CCW-705 TWF and Flexphalt TWF to substrate.
- Bonding MiraDRAIN drainage composite to substrate, including the surface of CCW waterproofing membrane.
- Bonding polystyrene foam board insulation to substrate, including surface of CCW waterproofing and air/vapor barrier membranes.

PACKAGING

CAV-GRIP, CCW P/N 305432
Nominal #40 Aerosol Cylinder
Gross Weight: 38 lb.
Fill Weight: 30 lb. of adhesive

Hose:
6’ Length, CCW P/N 304302
12’ Length, CCW P/N 304304
18’ Length, CCW P/N 304304

Spray Gun including Nozzle, CCW P/N 304300

UN-TACK, CCW P/N 308607
#9 Aerosol Cylinder

WARNINGS AND HAZARDS

Flammable liquid propellant and vapor. Keep away from open flame. Use with adequate ventilation. Avoid inhalation of spray mist or vapors. Harmful or fatal if swallowed. May cause eye irritation. Keep out of reach of children. Review Material Safety Data Sheet for complete safety information prior to use. Use of goggles and gloves recommended. Aerosol cylinders are not refillable and when empty are harmless and disposable. Dispose according to local codes and laws. Read safety precautions and warnings on cylinder label. Wear gloves and goggles before using this product. Do not aim spray gun at people or animals at any time.

For Industrial Professional Use Only.

INSTALLATION

Connect gun to hose and connect hose to cylinder. Use plumber’s tape on all fittings and take care not to cross-thread them. Open valve on cylinder to check fittings for leaks.

CAV-GRIP can be applied at ambient temperature of 25º F and up. Propellant in cylinders needs to be maintained above 60ºF for the product to spray well. Substrate shall be clean and dry, free of debris and contaminants.

For application at ambient temperature below 60ºF, store cylinders in heated space and move to project area during application. Cylinders can be kept warm on the jobsite by placing them in a cooler with a heating pad. Otherwise, dispense product from cylinder while it is still warm. When product in cylinder becomes too cold, it will begin to spit rather than spray. At this point, swap cold cylinder for warmer one and return cold cylinder to heated area.

Apply CAV-GRIP in thin, even coating to substrate, as shown in the drawing. Avoid high thickness build-up. Keep gun perpendicular to surface during spray.

Instructions for CCW Self-Adhering Flashing/Membrane Application:

Allow CAV-GRIP to dry until it does not transfer to finger when touched. Limit application of CAV-GRIP to surfaces that will be covered with flashing/membrane the same day.

Instructions for attachment of MiraDRAIN and Polystrene Foam Insulation Board:

Do not apply CAV-GRIP directly to insulation. Apply CAV-GRIP to substrate. Bond insulation or MiraDRAIN over CAV-GRIP as soon as possible after application to allow solvent-laden adhesive to bite into polystyrene polymer. Provide permanent attachment of insulation board above grade by fastening. Provide permanent attachment of MiraDRAIN or insulation board below grade with backfill.

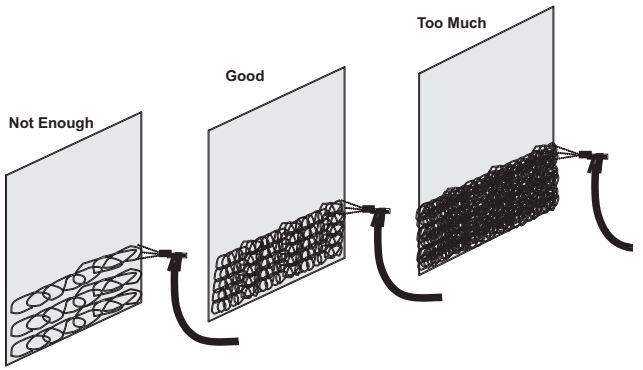
Clean Up:

Use safe solvent to remove from skin. Safe solvent or mineral spirits can be used to clean tools and surfaces. Free stuck valve on gun by attaching hose and gun to cylinder of UN-TACK and triggering gun repatedly until operation is smooth.

CYLINDER DISPOSAL: Dispose of cylinders in accordance with local laws.

STORAGE: Store cylinders in protected, conditioned space with temperature maintained above 60ºF. Do not store cylinders in areas where temperature reaches 110ºF or higher. Contents are flammable. Store in accordance with local, state and federal regulations. Keep cylinder valve open, hose and gun pressurized and gun trigger locked. Periodically spray in safe manner to help prevent possible clogging.

DISPOSAL: Read “Cylinder Disposal” section on cylinder label. If new cylinder is not immediately available, do not evacuate hose and gun. Leave pressure on to help prevent adhesive from hardening in hose and gun.



DESCRIPTION

CCW MiraSTOP Waterstop is a self-adhering, flexible, coiled strip of butyl rubber polymers and expandable bentonite clay waterproofing joint compound.

Offered in two styles, rectangular (RT) and half-circle (HC), CCW MiraSTOP is designed for use in non-moving joints to create watertight concrete joints. CCW MiraSTOP is ideal for many types of cast-in-place and precast below grade concrete applications, such as: construction joints in foundation slabs and below grade walls, precast concrete wall panel systems, septic tanks, sanitary and storm sewer manholes, pipes, utility and burial vaults, wet walls, box culverts and portable water tanks.

CCW MiraSTOP prevents infiltration of below-grade moisture in non-moving joints. When water comes in contact with CCW MiraSTOP it swells to form a strong compression seal.

CCW MiraSTOP should be used in conjunction with CCW waterproofing membranes, such as CCW MiraDRI™ 860/861 and CCW MiraCLAY™.

ADVANTAGES

- Easy to install
- Available in rectangular and half-circle configurations
- Applies in all dry weather conditions – flexible enough for virtually all season applications
- Non-toxic – needs no special handling
- Self-adhering

APPLICATIONS

MiraSTOP Rectangle:

- Vertical and horizontal concrete 8” (200 mm) thick or greater
- Shotcrete foundation walls
- High hydrostatic pressures
- Tie-back plates and penetrations

MiraSTOP Half Circle:

- Vertical concrete 6” (150 mm) thick or greater
- Horizontal concrete 4” (100 mm) thick or greater
- Planter Boxes / Curbs

PACKAGING

CCW MiraSTOP RT (Rectangle) = 1” x 3/4” x 16’-8” coil,
6 rolls per box, 53 lbs.

CCW MiraSTOP HC (Half Circle) = 3/4” x 3/8” x 33’-4” coil,
6 rolls per box, 33 lbs.

WARNINGS AND HAZARDS

Do not allow premature hydration of CCW MiraSTOP.

CCW MiraSTOP Waterstop must have a minimum of 3” of concrete overburden.

INSTALLATION

Remove dust, dirt, loose particles or any other materials which might cause areas of poor adhesion of the CCW MiraSTOP. Apply CCW-702, CCW-702WB, CCW-AWP, CCW-Cav-Grip or Travel Tack two inches wide continuously along the joint. Allow the primer to dry prior to application of CCW MiraSTOP. (Drying time will be approximately 30 minutes. Dry primer will not transfer when touched.) Apply CCW MiraSTOP Waterstop as soon as the primer dries.

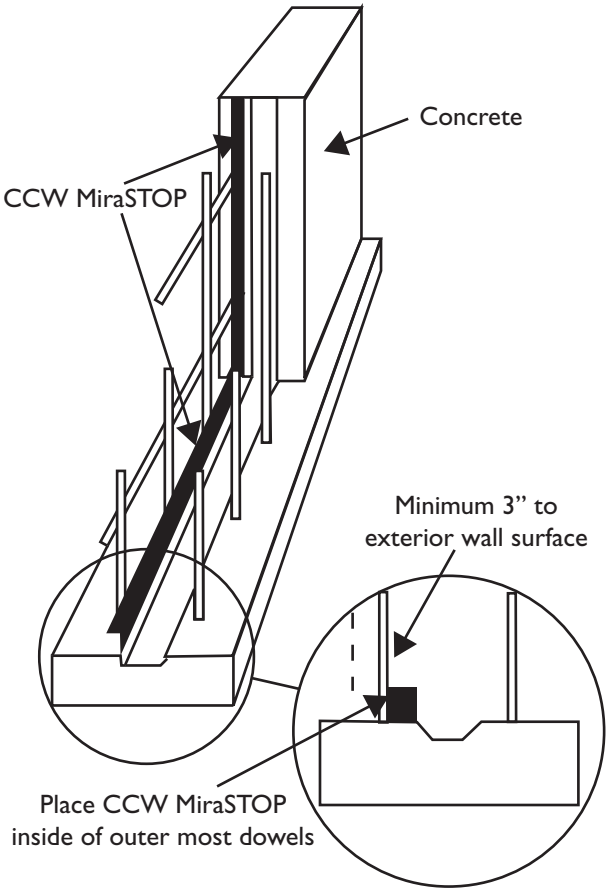
Remove one side of the release paper and firmly press CCW MiraSTOP in place over primed substrate. Press and butt ends of CCW MiraSTOP together to ensure no separation or air pockets. Place CCW MiraSTOP in maximum practical lengths. Square cut ends to fit splices together without overlaps.

Remove the remaining release paper from CCW MiraSTOP immediately prior to the second pour of concrete.

Where adhesion is difficult, it may be necessary to mechanically fasten CCW MiraSTOP starting one inch from the end of the coil and proceeding every ten inches on center.

MAINTENANCE

CCW MiraSTOP requires no maintenance after installation.



CCW Aerosol Spray System

For CAV-GRIP Adhesive

DESCRIPTION

The CCW-Aerosol Spray System is required for the dispensing of CAV-GRIP Contact Adhesive. This reusable system has two components: a specially designed spray gun (tip included), and; a properly designed feeder hose. When ordering the CCW Aerosol Spray System, ensure that the appropriate length of hose is ordered with the spray gun. These components are sold separate from the CAV-GRIP adhesive.

SPRAY SYSTEM PART NUMBERS

DESCRIPTION	PART NUMBER
Spray Gun with tip	304300
6 ft hose	304302
12 ft hose	304303
18 ft hose	304304

Protection Cap 250 FR

Cap Termination Sheet

DESCRIPTION

Protection Cap 250FR is a fire resistant polyester reinforced SBS modified bitumen cap sheet for use with CCW-500R waterproofing and roofing systems. It features a tough, 250 g/m^2 nonwoven polyester mat that is saturated and coated with a blend of SBS rubber and high quality asphalt. This combination provides excellent elongation and flexibility with good tensile strength, toughness and puncture resistance. The covering layer of ceramic-coated roofing granules, available either in black or white, provides durability along with superior resistance to damage from foot traffic. In addition, the white granules offer improved heat reflectivity and resistance to temperature stress.

TYPICAL USES

For use as a finished roof surface in areas where little or no foot traffic is expected such as eyebrows, canopies, and penthouse roofs. Embedded in the upper surface of the CCW-500R System.

ADVANTAGES

- Provides Excellent Puncture and Tear Resistance
- High elongation and recovery properties
- Material meets or exceeds the criteria for ASTM D6164, Type I, Grade G

PACKAGING

Roll Size: 1 Sq (9.29 m^2): length 32' 10" (10m), width 39 3/8" (1 m); Roll weight 101 lbs. (45.8 kg)

STORAGE

Protect materials from excessive heat or cold. Store away from open flames, spraks or welding. For outside storage, protect cartons or rolls from rain, direct sunlight or other harmful environmental conditions. Consult with Carlisle representative for extreme high or low temperature application.

WARNINGS AND HAZARDS

Store away from open flame, sparks, and welding. Protect from rain, dust and harmful environmental conditions.

INSTALLATION

Install into top surface of CCW-500 R system. Embed in hot, liquid CCW-500 making sure that sheet is in full contact with molten material. Overlap selvage edge on prior sheet by 2 - 3 inches. Overlap end laps 6 inches. Seal all overlap areas and edges with CCW-500. Sheet shall be installed so that all laps shed water. Avoid laps that oppose the direction of water flow. In areas which may receive maintenance foot traffic, adhere Sure-Seal Walk-Way Pads to the Protection Cap using CCW-500.

Sure-Seal Weathered Membrane Cleaner Accessory

DESCRIPTION
Sure-Seal Weathered Membrane Cleaner is designed for use with EP-95 Splicing Cement, EPDM membranes and Sure-Seal Lap Sealant. Sure-Seal Splice Cleaner is solvent-based and provides for a clean surface for the application of splicing cements and lap sealants.

PACKAGING
5 gallon pails

COVERAGE
When the ambient temperature is 50°F (10°C) or lower, typical coverage will be 450 linear feet (137 m) of 6" (150 mm) wide splice. When the ambient temperature is 80°F (26°C) or higher, typical coverage will be 225 linear feet (68.5 m) of 6" (150 mm) wide splice.

WARNINGS AND HAZARDS
1. Review the applicable Material Safety Data Sheet for complete safety information prior to use.
2. Splice cleaners are EXTREMELY FLAMMABLE - They contain petroleum distillates that are dangerous fire and explosion hazards when exposed to heat, flame or sparks. Store and use away from all sources of heat, flame or sparks. Do not smoke while applying. Do not use in a confined or unventilated area. Vapors are heavier than air and may travel along ground to a distant ignition source and flash back. A red caution label is required when shipping.
3. Avoid breathing vapors. Keep container closed when not in use. Use with adequate ventilation. If inhaled, remove to fresh air. If not breathing, perform artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.
4. If swallowed, DO NOT INDUCE VOMITING. Call a physician immediately.
5. Avoid contact with eyes. Safety glasses or goggles are recommended. If splashed in eyes, immediately flush eyes with plenty of water for at least 15 minutes. Contact a physician immediately.
6. Avoid contact with skin. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water.

   Note: Carlisle's special solvent resistant Hycron˜ gloves are to be worn when using this product to protect hands from irritating ingredients and from staining.
7. Do not thin Cleaner. Thinning will affect performance.
8. Use Sure-Seal Splice Cleaner only with Sure-Seal EPDM Roofing Systems.
9. Job site storage temperatures in excess of 90°F (32°C) may affect product shelf life. Should the Weathered Membrane Cleaner be stored at temperatures lower than 60°F (15°C), restore to room temperature prior to use.
10. Coverage rates are average and may vary due to conditions on the job site.
11. Avoid contact of cleaner to other than rubber surfaces. Staining will occur.
12. KEEP OUT OF THE REACH OF CHILDREN.

INSTALLATION

Cleaning of membranes and flashings for splicing:

A. Remove all foreign materials by brooming or washing with water. Mixing: Roll or shake container for three minutes.
   1. Excessive mica dust may be removed by brooming or wiping with a dry Carlisle HP Splice Wipe.
   2. If membrane is very dirty, scrubbing with water and a detergent may be necessary. (Tide™ and Lestoil™ have proven effective for this purpose.) Note: Hycron gloves (available from the membrane manufacturer) are required for hand protection when cleaners are being used.

B. Thoroughly roll or shake container until all settled pigments are blended into the solution and transfer to an OSHA approved safety can for dispensing.

C. Saturate a Carlisle HP Splice Wipe or clean, absorbent, natural fiber rag with cleaner.

D. Thoroughly scrub the splice area to produce a surface free of streaks and uniform in color.

E. Use a scrubbing motion parallel to the factory splices to clean all dust from the offset at factory splices, continue scrubbing until the entire surface area is uniform in color.

F. Change the HP Splice Wipe or rag periodically to prevent recontamination of the splice surface and refresh frequently with cleaner (typically 15-20 feet of splice).

G. Allow the splice surface to dry completely before proceeding with Splicing Cement application.

H. After washing and drying of the splice areas, proceed with application of Splicing Cement and Lap Sealant as described for splice procedures.

Sure-Seal HP Splice Wipes

Accessory

DESCRIPTION

Sure-Seal HP Splice Wipes are used in conjunction with Splice Cleaners or HP-250 Primer to clean and prime membrane prior to splicing or applying Lap Sealant.

WARNINGS AND HAZARDS

1. Discard Splice Wipes every 20 linear feet (6 m) of splice.
2. Discard all Splice Wipes that become contaminated with In-Seam Sealant.
3. Always wear protective gloves and glasses when applying Splice Cleaner or HP-250 Primer with HP Splice Wipes.

INSTALLATION

Membrane Splice:

4. Unfold Splice Wipe and saturate with Splice Cleaner or HP-250 Primer.
5. Scrub the mating surface in a round circular motion (Do not wipe on!).
6. Discard used Splice Wipes approximately every 20 linear feet (6 m) of splice.
7. Lap Sealant Application:
8. Unfold Splice Wipe and dampen with Splice Cleaner.
9. Wipe the splice edge at least one inch in both directions before applying Lap Sealant.

Sure-Seal HP-250 Primer

Accessory

DESCRIPTION

Sure-Seal HP-250 Primer is a solvent-based product designed for one-step cleaning and priming of EPDM surfaces prior to the application of SecurTAPE™ and all other pressure-sensitive products. HP-250 can also be used with EP-95 Splicing Cement.

Sure-Seal HP-250 Primer is designed for one-step cleaning and priming of EPDM surfaces prior to the application of SecurTAPE™ and all other pressure-sensitive products.

ADVANTAGES

- One step cleaner and primer used in conjunction with all pressure-sensitive accessories on EPDM and TPO membranes
- Coverage rates up to 450 square feet per gallon with pre-kleened membrane

WARNINGS AND HAZARDS

1. This product is FLAMMABLE. Precautions must be taken to keep the primer away from heat, flame and sparks during storage and use.
2. Keep container closed when not in use. Us with adequate ventilation. Avoid breathing vapors. Avoid contact with eyes and skin.
3. Avoid breathing vapors. Keep container closed when not in use. Use with adequate ventilation. If inhaled, remove to fresh air. If not breathing, perform artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately. During application, efforts must be made to prevent fumes from entering the building via air ventilation ducts. Do not place open containers or mix adhesive near fresh air intake units. When possible, shut down or seal off the closest units.
4. If swallowed, DO NOT INDUCE VOMITING. Call a physician immediately.
5. Chemically-resistant gloves must be worn with HP-250 Primer to protect hands from staining and irritating ingredients. The Hycron® gloves supplied by Carlisle are designed for this purpose.
6. Thoroughly stir this product until all settled pigment is blended into the solution. Solids suspended in HP-250 Primer tend to settle; stir the solution frequently during use (every 15-20 minutes). Use HP-250 full strength. Do not thin. Thinning will affect performance.
7. Sure-Seal HP-250 Primer may cause staining of Sure-White® membrane and other non-black surfaces.
8. Job site storage temperatures in excess of 90ºF (32ºC) may affect product shelf life. Should the primer be stored at temperatures lower than 60ºF (15ºC), restore to room temperature prior to use.
9. Keep can tightly closed when not in use and protect from moisture contamination. Once exposed to moisture in the air, HP-250 begins to cure and may gel within a few days. A gasket of membrane or sealant can be used to create a positive seal.
10. Due to solvent flash-off, condensation may form on freshly applied HP-250 Primer when the ambient temperature is near the dew point. If condensation develops, the application of primer must be discontinued (proper adhesion will not be obtained). Allow the surface to dry and apply a thin freshener coat of primer to the previously coated surface when conditions allow.
11. REVIEW THE HP-250 PRIMER MATERIAL SAFETY DATA SHEET FOR COMPLETE SAFETY INFORMATION PRIOR TO USE.
12. KEEP OUT OF THE REACH OF CHILDREN.

INSTALLATION

1. Remove all foreign material by brooming or washing with water.
   A. Excessive mica dust may be removed by brooming or wiping with a dry Carlisle HP Splice Wipe.
   B. If membrane is very dirty, scrubbing with Weathered Membrane Cleaner may be necessary. This process is essential on membrane that has been exposed for a number of weeks.

      Note: Hycron gloves (available from Carlisle) are required for hand protection when cleaners or primers are being used.
2. Thoroughly stir primer until all settled materials are blended into the solution.
3. Application of HP-250 Primer:
   A. Standard Sure-Seal Membrane - Apply the primer with a clean HP Splice Wipe (or equivalent). Scrub the area of the membrane (where the SecurTAPE, pressure - sensitive product or Splicing Cement is to be applied) in a circular motion to achieve a thin, even coating on the membrane. The properly cleaned/primed area will be uniform in colorwithout streaks and free of globs or puddles.
   B. PRE-KLEENED Membrane - Roller apply the primer to the membrane with a short nap length paint roller. The coated area will be free of globs or puddles.

      NOTE: The use of excessive amounts of HP-250 Primer will not significantly enhance the adhesion of the SecurTAPE or pressure-sensitive product to the EPDM membrane. Use only the amount necessary to obtain 100% coverage of the area where the tape or adhesive will be applied.
4. Allow the HP-250 Primer to dry until it does not transfer to a dry finger touch. Installation of the SecurTAPE or pressure-sensitive product as soon as the primer flashes off minimizes potential dust contamination and promotes adhesion in colder weather.
5. Complete the splice as specified in Carlisle's Specifications and Details.

REVIEW CURRENT CARLISLE SPECIFICATIONS AND DETAILS FOR SPECIFIC APPLICATION REQUIREMENTS.

Sure-Seal In-Seam Sealant

Accessory

DESCRIPTION

Sure Seal In-Seam Sealant is a one-part, gun-grade material designed for use in conjunction with PRE-KLEENED EPDM Thru-Wall Flashing. It is primarily used as an internal waterproof seal for cured-to-cured membrane splices.

Sure Seal In-Seam Sealant is an extremely durable material which dries to the touch in about 30 minutes. When cured it has a rubber like consistency and is resistant to all types of weather extremes.

Sure Seal In-Seam Sealant must be applied in each cured-to-cured membrane splice during the splice procedure.

COVERAGE

15 lineal feet (4.5 meters) per tube applied as a 3/8" (1 cm) diameter bead. (Coverage rates are average and may vary due to conditions on the job site.)

WARNINGS AND HAZARDS

REVIEW THE APPLICABLE MATERIAL SAFETY DATA SHEET FOR COMPLETE SAFETY INFORMATION PRIOR TO USE.

This product is FLAMMABLE. Keep away from sparks and open flame. Do not smoke while using. Keep containers closed when not in use. In case of fire, use water spray, foam, dry chemical or carbon dioxide. Do not use a solid stream of water because it can scatter and spread the fire. Vapors are heavier than air and may travel along ground to distant ignition sources and flash back. Harmful if swallowed or inhaled. Avoid breathing vapors. Wash hands thoroughly after handling. If swallowed, DO NOT INDUCE VOMITING. Call physician immediately. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Causes eye irritation. Avoid contact with eyes. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. May cause skin irritation. Avoid contact with skin. Carlisle's special solvent resistant Hycron® gloves are recommended. In case of skin contact, thoroughly wash affected area with soap and water. Job site storage temperatures in excess of 90° F (32° C) may affect product shelf life. Should the Sure Seal In-Seam Sealant be stored at temperatures below 60° F (15° C), restore to room temperature prior to use.

INSTALLATION

Prepare sheeting for splicing by cleaning the splice with the appropriate cleaner, if necessary. Apply Sure Seal In-Seam Sealant in two beads separated by 2" located 1" from the edge of the splice. Cut the nozzle. Open the foil widely and keep the sealant warm to improve flow. Hot boxes are strongly recommended. Use a low power setting on automatic caulking guns.

Sure-Seal Inside/Outside Corners

Accessory

DESCRIPTION

Sure-Seal Inside/Outside Corners consist of .060” (1.5 mm) Uncured Elastoform Flashing™ with a pre-applied SecurTAPE™ providing .090 mils (2.25 mm) of total thickness. One corner can be installed as either an Inside or an Outside corner.

LIMITATIONS

- A heat gun is required for forming outside corners in colder temperatures as outlined in the current specifications.
- Job site storage temperatures in excess of 90°F (32°C) may affect product shelf life.

PACKAGING

20/Carton

INSTALLATION

See appropriate installation guide.

Sure-Seal HP Protective Mat

Accessory

DESCRIPTION

Carlisle Sure-Seal HP Protective Mat is a nominal 6.0 ounce per square yard (140 grams per square meter) UV resistant polypropylene needle punched fabric. HP Mat can be used above the membrane as a slipsheet for crushed stone or pavers or below the membrane as a minimum underlayment mat for Carlisle's Mechanically-Fastened or Ballasted System applications. Consult current specifications for underlayment requirements.

WARNINGS AND HAZARDS

This product is not hazardous as defined in CFR 1910.1200. Dust may be irritating to respiratory tract and eyes. Material is flammable. Do not expose to open flame

INSTALLATION

BALLASTED APPLICATION
SURE-SEAL HP PROTECTIVE MAT PLACEMENT

1. When specified under EPDM membrane, position Sure-Seal HP Protective Mat loosely over the substrate with all edges overlapped a minimum of 6" (150 mm). The EPDM membrane must be positioned to completely cover the previously installed HP Protective Mat.
2. When required above EPDM membrane under the pavers or crushed stone, position Sure-Seal HP Protective Mat loosely over the membrane after completing all membrane and flashing splices. Adjacent edges must be overlapped a minimum of 6" (150 mm); end rolls must overlap 12" (300 mm). Prior to placement of ballast, extend the Sure-Seal HP Protective Mat a minimum of 2" (50 mm) above the anticipated ballast level at the perimeter and penetrations except the roof drains and scuppers. The fabric must extend to drain bases and scupper openings but must not cover or restrict flow to the drains. Additional matting must be installed around penetrations to prevent direct contact between crushed stone and flashing. Note: Following placement of the fabric, install ballast, temporary ballast, or spot adhere with bonding adhesive to prevent the movement or displacement of unballasted fabric.

MECHANICALLY FASTENED APPLICATION
SURE-SEAL HP PROTECTIVE MAT PLACEMENT:

1. When specified under EPDM membrane, install Sure-Seal HP Protective Mat over the substrate with all edges overlapped a minimum of 3" (75 mm). HP Protective Mat must be fastened to the roof deck; however, on Mechanically Fastened Systems, the seam fastening plates used to secure the membrane will provide adequate fastening for the mat. When the mat is not secured with the seam fastening plates used to secure the membrane, an acceptable fastener and plate must be installed every 50 linear feet (15 m). Spot bonding the HP Protective Mat with bonding adhesive is an acceptable alternative to mechanical fastening.

.

Sure-Seal Clean-Cured EPDM Flashing Accessory

DESCRIPTION

Carlisle Sure-Seal (black) Clean-Cured EPDM Flashing is used for flashing various details in Carlisle Waterproofing Systems. The .060" (1.5 mm) flashing membrane is manufactured from seamless non-reinforced membrane in a totally unique manufacturing process and is very tough and durable. The cured flashing's resiliency enables it to expand and contract without weakening and it resists tearing, flex cracking and abrasion as well as other forms of deterioration caused by extremes of temperature, sunlight, precipitation and all forms of normal weathering.

PACKAGING

Sure-Seal Clean-Cured EPDM Flashing is available in a thickness of .060" (1.50 mm) and widths of 6", 9", 12", and 18" by 100' (15, 23, 30, and 46 cm by 30 m).

WARNINGS AND HAZARDS

1. Review the applicable Material Safety Data Sheet for complete safety information prior to use.
2. Do not allow waste products (petroleum, grease, oil, solvents, vegetable or mineral oil, animal fats, etc.) or direct steam venting to come in contact with the Sure-Seal Clean- Cured EPDM Flashings.

INSTALLATION

1. Carlisle's Clean-Cured EPDM Flashing is used to flash many different roofing system structures and penetrations.

   The specific method of applying the flashing for each individual situation is different. The appropriate Carlisle Specification and/or Detail must be referenced prior to application.
2. Carlisle's Bonding Adhesive is used to bond the Clean-Cured EPDM Flashing to substrates other than the Carlisle EPDM field membrane. The exceptions to this are on details where splicing procedures are required (i.e., gravel stop, etc.).
3. Splices between Carlisle's Clean-Cured EPDM Flashing and the Sure-Seal EPDM field membrane are to be made using Carlisle's Sure-Seal EP-95 Splicing Cement or Sure-Seal Splice Tape.
4. When using Pressure-Sensitive Corners on Clean-Cured Flashing, a base coat of Sure-Seal EP-95 is required on the Clean Cured Flashing.

Sure-Seal 90-8-30A Bonding Adhesive Adhesive

DESCRIPTION
Bonding Adhesive is a high strength solvent-based contact adhesive that allows quick bonding of cured flashings and membranes to various substrates. It is a synthetic rubber adhesive formulated specifically for application with a 1/2" (13 mm) medium nap roller with enough versatility in the tack time of the film to allow large areas to be coated and adhered at one time. Sure-Seal 90-8-30A Bonding Adhesive is designed for bonding EPDM and Sure-Seal (black) EPDM, butyl and epichlorohydrin membranes to various substrates.

PACKAGING
5 gallon pails

COVERAGE
Sure-Seal 90-8-30A Bonding Adhesive - 60 square feet (5.6 sq m) per gallon (finished surface). This rate should be applied to both matting surfaces. Porous surfaces and substrates may require more bonding adhesive than typical coverage rate.

WARNINGS AND HAZARDS
1. Review the applicable Material Safety Data Sheet for complete safety information prior to use.
2. Bonding Adhesive is EXTREMELY FLAMMABLE - It contains petroleum distillates that are dangerous fire and explosion hazards when exposed to heat, flame or sparks. Store and use away from all sources of heat, flame or sparks. Do not smoke while applying. Do not use in a confined or unventilated area. Vapors are heavier than air and may travel along ground to a distant ignition source and flash back. A red caution label is required when shipping.
3. Avoid breathing vapors. Keep container closed when not in use. Use with adequate ventilation. If inhaled, remove to fresh air. If not breathing, perform artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately. During application, efforts must be made to prevent fumes from entering the building via air ventilation ducts. Do not place open containers or mix adhesive near fresh air intake units. When possible, shut down or seal off the closest units.
4. If swallowed, DO NOT INDUCE VOMITING. Call a physician immediately.
5. Avoid contact with eyes. Safety glasses or goggles are recommended. If splashed in eyes, immediately flush eyes with plenty of clean water for at least 15 minutes. Contact a physician immediately.
6. Avoid contact with skin. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water.

   Note: Carlisle's special solvent resistant Hycron™ gloves are recommended to be worn when using this product to protect hands from irritating ingredients.
7. Do not thin Bonding Adhesive. Thinning will affect performance. Excessively thick or jelled material should be discarded.
8. Job site storage temperatures in excess of 90°F (32°C) may affect product shelf life. Should the Bonding Adhesive be stored at temperatures below 60°F (15°C), restore to room temperature prior to use.

9. These materials are sensitive to atmospheric moisture; heat will accelerate the effect of moisture. Opened containers of Bonding Adhesive should be used within 48 hours. Adhesive will begin to thicken after this point, making it difficult, and eventually impossible, to control adhesive thickness. In hot weather, do not leave sealed containers on roof for prolonged periods of time. In cold weather, keep material at room temperature until ready to use. Stir adhesive occasionally while using.
10. Coverage rates are average and may vary due to conditions on the job site.
11. KEEP OUT OF THE REACH OF CHILDREN.

INSTALLATION

1. The surface, on or against which adhesive is to be applied, shall be clean, smooth, dry, free of fins, sharp edges, loose and foreign materials, oil and grease. Depressions greater than 1/4” (6 mm) shall be feathered, using epoxy, mortar or other approved patching material. All sharp projections shall be removed by sweeping, blowing or vacuum cleaning.
2. After thorough stirring (minimum 5 minutes), apply bonding adhesive to substrate and membrane using a 9” (230 mm) wide 1/2” (13 mm) medium nap roller. Application shall be continuous and uniform avoiding globs or puddles. An open time of 5 to 50 minutes is recommended before assembly. Bonding Adhesive must be allowed to dry until it does not string or stick to a dry finger touch. Any coated area that is rained on should be allowed to dry and then recoated. Do not apply adhesive to splice areas. Note: Stir thoroughly until all settled pigments are dispersed and the cement is uniform in color. Minimum 5 minutes stirring is recommended.
3. Mate the membrane with the adhesive-coated substrate while avoiding wrinkles. Immediately brush down the bonded portion of the sheet with a soft bristle push broom or a clean dry roller applicator to achieve maximum contact. In some applications, swelling of the membrane may occur initially, but this will disappear after several days’ exposure. Do not rebroom membrane in an attempt to remove swelling.

Sure-Seal Water Cut-Off Mastic

Adhesive

DESCRIPTION

Water Cut-Off Mastic is a one-component, low viscosity, self-wetting, butyl blend mastic designed to be used in conjunction with roofing and waterproofing systems. It is primarily used as a sealing agent between various membranes and applicable when membrane is being terminated using a compression type seal. Water Cut-Off Mastic is an extremely tacky material and will remain as such when used with compression type terminations.

PACKAGING

10 tubes per carton, 5 gallon pail

COVERAGE

10' (3 m) per tube or 128' (39 m) per gallon using a 7/16" (11 mm) bead.

WARNINGS AND HAZARDS

1. Review the applicable Material Safety Data Sheet for complete safety information prior to use.
2. Water Cut-Off Mastic is FLAMMABLE - It contains solvents that are dangerous fire and explosion hazards when exposed to heat, flame or sparks. Store and use away from all sources of heat, flame or sparks. Do not smoke while applying. Do not use in a confined or unventilated area. Vapors are heavier than air and may travel along ground to a distant ignition source and flash back. A red caution label is required when shipping.
3. Avoid breathing vapors. Keep container closed when not in use. Use with adequate ventilation. If inhaled, remove to fresh air. If not breathing, perform artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.
4. If swallowed, DO NOT INDUCE VOMITING. Call a physician immediately.
5. Avoid contact with eyes. Safety glasses or goggles are recommended. If splashed in eyes, immediately flush eyes with plenty of clean water for at least 15 minutes. Contact a physician immediately.
6. Avoid contact with skin. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water.

   Note: Carlisle's special solvent resistant Hycron™ gloves are recommended to be worn when using this product to protect hands from irritating ingredients.
7. DO NOT USE as splice cement or as an external sealant.
8. Job site storage temperatures in excess of 90°F (32°C) may affect product shelf life. Should the Water Cut-Off Mastic be stored at temperatures below 60°F (15°C), restore to room temperature prior to use.
9. If applied during periods of cold, dampness or high humidity, it is possible that the evaporation of solvents will be substantially reduced, resulting in some slight membrane swelling. This would be further aggravated should the mastic be applied in an unusually heavy coat.
10. KEEP OUT OF THE REACH OF CHILDREN.

INSTALLATION

1. All surfaces to be sealed with Water Cut-Off Mastic must be a masonry, metal or glass substrate and free of moisture, oil, dirt and other foreign materials.
2. Apply a 7/16" (11 mm) bead of Water Cut-Off Mastic between the substrate and the edge of the membrane.
3. Apply appropriate termination material and secure to provide constant compression for the Water Cut-Off Mastic.

Sure-Seal EP-95 Splicing Cement

Adhesive

DESCRIPTION

Sure-Seal Splicing Cement is designed for splicing cured-to-cured EPDM and butyl membranes and for splicing together EPDM Elastoform Flashing™. Sure-Seal Splicing Cement is a high strength solvent-based contact cement which allows quick bonding of flashing, sheeting and cured rubber seams. Sure-Seal Splicing Cement is a synthetic rubber adhesive formulated specifically for application with a ½" (13 mm) medium nap roller and/or a ½" (13 mm) thick paint brush, with enough versatility in the tack time of the film to allow large areas to be coated and adhered at one time.

PACKAGING

6-1 Gallon Pails, 5 Gallon Pails

COVERAGE

NOMINAL SPLICE WIDTH	SURFACE WIDTH COATED (Total Both Surfaces)	LINEAR FEET PER GALLON COVERAGE RATE	GALLON PER 100 FEET OF SPLICE
3" (75 mm)	8" (200 mm)	150' (46 m)	0.67
4" (100 mm)	10" (250 mm)	120' (37 m)	0.83
5" (130 mm)	12" (300 mm)	100' (30 m)	1.00
6" (150 mm)	14" (355 mm)	86' (26 m)	1.16

NOTE: Coverage rates are average and may vary due to conditions on the job site.

WARNINGS AND HAZARDS

1. Review the applicable Material Safety Data Sheet for complete safety information prior to use.
2. Splicing Cements are EXTREMELY FLAMMABLE - They contain petroleum distillates that are dangerous fire and explosion hazards when exposed to heat, flame or sparks. Store and use away from all sources of heat, flame or sparks. Do not smoke while applying. Do not use in a confined or unventilated area. Vapors are heavier than air and may travel along ground to a distant ignition source and flash back. A red caution label is required when shipping.
3. Avoid breathing vapors. Keep container closed when not in use. Use with adequate ventilation. If inhaled, remove yourself to fresh air. If not breathing, perform artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.
4. If swallowed, DO NOT INDUCE VOMITING. Call a physician immediately.
5. Avoid contact with eyes. Safety glasses or goggles are recommended. If splashed in eyes, immediately flush eyes with plenty of water for at least 15 minutes. Contact a physician immediately.
6. Avoid contact with skin. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water. Note: Carlisle's special solvent resistant Hycron™ gloves are to be worn when using these products to protect hands from irritating ingredients.
7. Do not thin Splicing Cements. Thinning will affect performance.

8. Job site storage temperatures in excess of 90°F (32°C) may affect product shelf life. This will eventually thicken the cement. This will cause the product to become difficult or even impossible to use. When storage temperatures become elevated Splicing Cements should be stored in a controlled environment. Should Splicing Cement be stored at temperatures below 60°F (15°C), restore to room temperature prior to use. Stir cement occasionally while using.
9. Opened containers of Splicing Cement should be used within 48 hours. Cement will begin to thicken after this time, making it difficult and eventually impossible, to control adhesive thickness.
10. Coverage rates are average and may vary due to conditions on the job site.
11. KEEP OUT OF THE REACH OF CHILDREN.

INSTALLATION

1. Stir Splicing Cement for five minutes thoroughly scraping the sides and bottom of the can until a solid uniform consistency is achieved. No heavier material should be remaining on the bottom or sides of the can. Some lots may contain more thick material on the bottom than other lots. Stirring for five minutes will make the cement smooth and homogenous.
2. Clean the dry mating surfaces by scrubbing with HP Splice Wipes or clean natural fiber rags saturated with the appropriate cleaner to achieve a solid surface color with no dust streaking. Caution: Wear Hycron gloves when using cleaners.
3. Apply Splicing Cement (stirred for 5 minutes) with a ½" (13 mm) medium nap roller to achieve a heavy, smooth, and consistent 100% coat without puddles. A small, long bristle, ½" (13 mm) paint brush must be used in corners, angle changes and with Sure-Seal P-30 Splicing Cement.
4. Check the dryness of the cement before assembly. The Splicing Cement should be tacky but not move when pushed with a dry finger (Tack and Push Test). Avoid over drying! If cement over-dries and is not tacky then recoat with splicing cement.
5. Apply a continuous 5/32" (4 mm) bead of In-Seam Sealant. Avoid over drying! Refer to current specifications and details for exact locations.
6. Break the membrane edge free and roll (do not flop) the top sheet onto the mating surface. Use care not to stretch or wrinkle the membrane.
7. Use hand pressure to assemble the splice by wiping toward the splice edge.
8. Roll the seam toward the splice edge with a 2" (50 mm) steel hand roller.
9. Apply Lap Sealant per current specifications and details.

Sure-Seal Lap Sealant

Adhesive

DESCRIPTION

Sure-Seal Lap Sealant is designed for sealing splice edges of cured Sure-Seal (black) EPDM and butyl membranes. Sure-Seal Lap Sealant is a heavy bodied trowel or gun consistency material, designed to be used in conjunction with roofing and waterproofing system materials. It is primarily used to seal the exposed edges of rubber membrane splices.

Sure-Seal Lap Sealant is an extremely durable material which dries to the touch in approximately 30 minutes depending on thickness of application and weather conditions. Its cured rubber consistency enables it to expand and contract with the movement of the membrane without cracking or loss of adhesion.

Sure-Seal Lap Sealant may also be used as a sealant in mechanical terminations on vertical or horizontal surfaces, or to seal membranes terminated in reglets in accordance with published details. Sure-Seal Lap Sealant must be applied and feathered on all splice edges by the end of the working day.

PACKAGING

10.3 oz cartridges, 5 gallon pails

COVERAGE

22’ (6.7 m) per tube or 256’ (78 m) per gallon using a 5/16” (8 mm) bead.

WARNINGS AND HAZARDS

1. Review the applicable Material Safety Data Sheet for complete safety information prior to use.
2. Lap sealants are FLAMMABLE-They contain petroleum distillates that are dangerous fire and explosion hazards when exposed to heat, flame or sparks. Store and use away from all sources of heat, flame or sparks. Do not smoke while applying.Do not use in confined or unventilated area. Vapors are heavier than air and may travel along ground to a distant ignition source and flash back. A red caution label is required when shipping.
3. Avoid breathing vapors. Keep container closed when not in use. Use with adequate ventilation. If inhaled, remove to fresh air. If not breathing, perform artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.
4. If swallowed, DO NOT INDUCE VOMITING. Call a physician immediately.
5. Avoid contact with eyes. Safety glasses or goggles are recommended. If contact with eyes occurs, immediately flush eyes with plenty of water for at least 15 minutes. Contact a physician immediately.
6. Avoid contact with skin. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water.

   Note: Carlisle’s special solvent resistant Hycron™ gloves are to be worn when using this product to protect hands from irritating ingredients.
7. Follow Carlisle’s recommended splice instructions. DO NOT USE as splice cement between rubber membrane.
8. Job site storage temperatures in excess of 90°F (32°C) may affect product shelf life. Should the lap sealant be stored at temperatures below 60°F (15°C), restore to room temperature prior to use.

9. By using an excessively wet solvent cloth while cleaning the splice edge, solvent may be left in the offset of the membrane sheets. To avoid causing this problem, use a damp rag and make sure the solvents in the Splice Cleaner are completely flashed off the area before Lap Sealant application.
10. If applied during periods of cold, dampness or high humidity, it is possible that evaporation of solvents will be substantially reduced, resulting in some slight membrane swelling. This would be further aggravated should the sealant be applied in an unusually heavy coat.
11. Coverage rates are average and may vary due to conditions on the job site.
12. KEEP OUT OF THE REACH OF CHILDREN.

INSTALLATION

1. All surfaces to be sealed with Lap Sealant must be firm, dry and free of oil, talc dust and other foreign materials..
2. After seams are cemented together with the proper splicing materials, clean the rubber to remove all foreign materials by wiping with a Carlisle HP Splice Wipe or natural fi ber rag dampened with appropriate cleaner. (Note: Protective gloves MUST be worn while using cleaner.)
3. Apply a 5/16” (8 mm) bead of Lap Sealant (22’ [6.7 m] per cartridge) along the exposed edge of the membrane.
4. Using the feathering tool supplied with the sealant, feather the sealant bead so the high point is above the offset of the splice and the edges are feathered onto the deck.
5. Lap Sealant must be applied and feathered on all splice edges by the end of the working day. Cured-to-cured membrane field splices must be allowed to age at least two hours before Lap Sealant is applied. Elastoform Flashing field seams and splices between cured membrane and Elastoform Flashing may be sealed immediately.

Frequently Asked Questions

HOT RUBBER MEMBRANE ANSWERS

Does CCW-500R have to be reinforced?
Yes, CCW-500R must be reinforced with CCW Reinforcing Fabric to be covered under warranty.

What is the recommended flashing material for CCW-500R?
CCW-711-90 Flashing is recommended to use with CCW-500R. Applied in layers, the first course is CCW-500, which bonds tenaciously with the second course of CCW-711-90 mesh and a third course of CCW-500.

In a rooftop planting system, which root barrier is recommended by CCW?
Root Barrier is an excellent root barrier with the seams welded with a Liester Gun or sealed with CCW SecureTAPE.

Does CCW-500R require a protection board and drain board?
It is required to have both protection board and drainage board to be covered under the Watermark Deluxe and Supreme Warranties, but only one of them is required for the general Watermark product warranty.

What is the coverage rate for CCW 500R?
The recommended coverage rate is 1.53 lbs/ft2 = 215 mils = 7.64 gal/ft2.

Can you put CCW MiraDRAIN directly over CCW-500R?
CCW MiraDRAIN may be used directly over CCW-500R as long as you use Protection Board H.

How long for the structural concrete to Cure?
A minimum 14 days (TDS source)

How wet or dry can the substrate be?
5% or less

What Primer do I use(A), what is the coverage rate (B) and How long do I wait to apply the 500 to the primer(c)?
A. 550 Primer
B. Spray applied
(average 500 square feet to a gallon, depending on porosity of substrate)
C. Min of 30 minutes not longer of 12hrs
D. AWP for VOC

How long can I leave the 500 exposed to the elements?
14 Days using Protection Board H and 60 Days using Protection Board HS

Can I get the MSDS/TDS/LEED Sheet?
Yes, what is your Email or Fax number?
(Information can sourced www.carlisle-ccw.com)

How do I clean spills?
Mechanical abrasion, Mineral Sprits and Citric Cleaner
(test substrate for adverse effect)

At what Temperature do we heat material to?
290 degrees (V) to 390 degrees (H) depending on Vertical or Horizontal application

Frequently Asked Questions

LIQUID APPLIED MEMBRANE ANSWERS

Can I use CCW-525 on a vertical application?
Yes, CCW-525 has both a roller applied vertical grade (CCW-525 V) and a self-leveling horizontal grade (CCW-525 H).

What is the cure time on concrete before installing CCW-525?
Newly poured concrete must cure for a minimum of 7 days, 28 days preferable.

What is the difference between CCW-525 and CCW-703 LIQUISEAL?
CCW-525 is a single component modified polyurethane, while CCW-703 is a two component polyurethane.

Can I use a metal pan for the concrete form when waterproofing with CCW-525?
Yes, as long as the metal pan is vented to allow the slab to breathe and the moisture to escape; this prevents vapor drive from occurring.

SPRAY APPLIED MEMBRANE ANSWERS

Can Barricoat be sprayed with any pump?
No, a special pump is needed to spray the rubberized asphalt emulsion and calcium chloride water together. More information on these specially designed spray pumps.

Will CCW loan the spray pump out to waterproofing contractors?
The pumps are used for demonstrations and training purposes internally and are not available for loan.

What is the mix ratio for Barricure solution that is sprayed with Barricoat?
One 5 gal pail of BarriCURE to 20 gals of water. 5 gals of BarriCURE will co-spray three 55 gal drums of BarriSEAL or BarriCOAT.

At what rate is Barricoat applied?
Barricoat spray pressure should be varied to create a proper spray pattern and the approximate coverage rage for the 60 dry mils is 17 sq.ft./gal. Additional material will be require on rough or porous substrates.

Can Barricoat be brushed or rolled on to a surface?
Yes, Barricoat-R is the roller grade that can be applied with either a short nap roller or a brush.

Can Barricoat be applied to Insulated Concrete Forms (ICF)?
Yes, Barricoat is fully compatible for use with ICF systems.

Frequently Asked Questions

SHEET MEMBRANE ANSWERS

What is the difference between CCW MiraDRI 860 and 861?
CCW 860 is used for applications where the surface temperature is 40ºF (4.4ºC) and above. CCW 861 is used for applications where the surface temperature is between 25ºF (-3.9ºC) and 65ºF (18ºC).

What is the cure time on concrete before installing CCW MiraDRI 860/861?
Structural concrete must be cured a minimum of 7 days and lightweight structural concrete must cure a minimum of 14 days. CCW-715 Damp Concrete Primer may be applied as an alternative to waiting the 14 days, but the system must be back-filled immediately.

Can CCW MiraDRI 860/861 be used to waterproof Insulated Concrete Form (ICF) foundations?
Yes, but CCW-AWP Primer and CCW-LM-800XL Liquid Mastic should first be used to ensure proper adhesion and reinforcement under CCW MiraDRI 860/861 but CCW-702WB or CCW-AWP Primer.

Can I use concrete directly on CCW MiraDRI 860 or 861?
No, concrete can damage CCW MiraDRI 860/861. A course of CCW Protection Board, CCW Protection Fabric or MiraDRAIN installed prior to concrete will prevent damage to CCW MiraDRI 860/861.

Do I need to use a primer when applying CCW 860/861 over plywood?
Yes, CCW recommends that a primer such as CCW-702 VOC compliant solvent based primer, or one of the water based primers (CCW-702WB or CCW-AWP) be first applied to plywood.

What is the shelf life for CCW MiraDRI 860/861?
All CCW products have a 1 year shelf life.

What type of mastic and primer should I use with CCW MiraDRI 860/861?
CCW LM-800XL or CCW-704 mastic should be used with CCW 860/861.

Will CCW MiraDRI 860/861 still be covered under warranty if I don't use CCW MiraDRAIN?
To be covered under warranty, CCW 860/861 must have either CCW Protection Board, CCW Protection Fabric or CCW MiraDRAIN installed over the membrane system.

How do I detail a pitch pocket?
To detail a pitch pocket, you will need a flanged piece of metal flashing to fit around the pitch pocket, which must then be filled with CCW-703H LIQUISEAL® to prevent water from entering the penetration. See detail drawing for more information.

Can I get the MSDS/TDS/LEED Sheet?
Yes, what is your Email or Fax number?
(Information can sourced www.carlisle-ccw.com)

What Primer do I use(A), what is the coverage rate (B) and How long do I wait to apply the 860/861 to the primer(C)?
A. 702 Primer (Solvent), 702 WB(Water Base) or 702 LV(Solvent, OTC Approved)
B. 300 to 350 square feet to a gallon, depending on porosity of substrate
C. Primer is tacky to the touch but will not transfer when touched.

Can I use 704 Mastic under 860/861?
No, Use LM800XL/CCW 201

Frequently Asked Questions

How long for the structural concrete to cure?
7 days (TDS source)

At what Temperature do we apply 860 or 861?
860 – 40 degrees and above
861 – 25 degrees to 65 degrees

How long can I leave the 860/861 exposed to the elements?
14 Days

Do I need to use MiraDRAIN to get a warranty?
A. No – Material
B. Yes for Labor and Material warranty

BENTONITE WATERPROOFING ANSWERS

Are water tests required for CCW MiraCLAY projects?
Yes, any project that has ground water present must have a water test performed. Two liters of ground water must be sent to CCW Tech Services, prior to installation, for further testing to determine if MiraCLAY or MiraCLAY EF should be used.

When installing CCW MiraCLAY, which side should face out?
The non-woven geotextile (fuzzy) side should always face out or towards the applicator. The CCW MiraCLAY name is printed on the non-woven geotextile side.

How much concrete coverage is needed when installing CCW MiraCLAY for underslab applications?
CCW MiraCLAY is designed for use under reinforced concrete slabs 4" (100mm) thick or greater on a compacted earth/gravel substrate. If installed over a mud slab, CCW MiraCLAY requires a minimum 5" (150mm) thick reinforced concrete slab. In addition, a minimum of 2' of compacted dirt must be over CCW MiraCLAY.

What product is recommended to waterproof a retaining wall with shotcrete or formed concrete?
CCW MiraDRAIN with CCW MiraCLAY applied over it to prevent the shotcrete from flowing into the drain board will most effectively waterproof the retaining wall.

Can I put CCW MiraCLAY over concrete blocks?
Yes, as long as the joints are flush with the block and the fasteners do not hit the grout joint.

How do I attach CCW MiraCLAY?
Attach CCW MiraCLAY with 1" washers and concrete nails and a termination bar at the top embedded with a bead of CCW MiraCLAY Mastic 2" wide by 1/2" thick.

Can I get the MSDS/TDS/LEED Sheet?
Yes, what is your Email or Fax number?
(Information can sourced www.carlisle-ccw.com)

What is the splice overlap for MiraCLAY?
A. Min of 4 inches
B. staggered sheet ends min of 24 inches

Is MiraDRAIN required for use with MiraCLAY?
Yes

Are there different versions of MiraCLAY to accommodate ground water contaminations?
Yes (Depending on Water sample Test)

Frequently Asked Questions

DRAINAGE SYSTEM ANSWERS

What is the best way to attach CCW MiraDRAIN to waterproofing?
CCW Drain-Grip is the best choice for attaching MiraDRAIN to waterproofing. CCW-702 or CCW AWP can also be used. When attaching over MiraCLAY or to lagging walls, use mechanical fasteners.

Can CCW MiraDRAIN accept hot asphalt paving?
No, due to the high temperatures, the polystyrene core will melt.

Can concrete be placed on CCW MiraDRAIN?
Yes, but only on MiraDRAIN 9000 & 9900. The high-strength woven geotextile fabric can receive directly poured concrete slabs commonly used for plaza decks, parking decks and split slab construction.

What is CCW QuickDRAIN?
CCW QuickDRAIN is made of a high-impact polystyrene dimpled core that has a graduated profile to draw water away from the structure. It also has non-woven geotextile filter fabric to prevent clogging and a hinged design for easy installation on 90º angles. CCW QuickDRAIN eliminates the need for a traditional drainage collector pipe and aggregate.

Why use CCW QuickDRAIN?
CCW QuickDRAIN replaces costly conventional perforated pipe/aggregate collection systems for drainage of foundation and retaining walls.

How do you splice drainage board panels together?
To splice drainage board panels together, butt the cores of the panels together, then overlap the fabric as shown in detail drawing MD-10A.

Can I get the MSDS/TDS/LEED Sheet?
Yes, what is your Email or Fax number?
(Information can sourced www.carlisle-ccw.com)
B. NO MSDS because of Article letter

How long can I leave the Drain exposed to the elements?
14 Days

How Do I detail the laps?
Filter fabric needs to continuous. For illustration guide go to www.carlisle-ccw.com Detail MD-10A

Which side of the MiraDRAIN should face the wall?
Fabric side out or toward source of water/ Plastic toward substrate

Is the MiraDRAIN Waterproofing?
No, It has two functions (Drainage and Protection course(ONLY One protection Course Needed) for the waterproofing membrane)

Do I need to use MiraDRAIN to get a warranty
A. No – Material
B. Yes for Labor and Material warranty

MEMBRANE SYSTEM AND ACCESSORIES ANSWERS

What is the coldest temperature that a primer can be used?
CCW-702 Primer can be used in temperatures as low as 25ºF

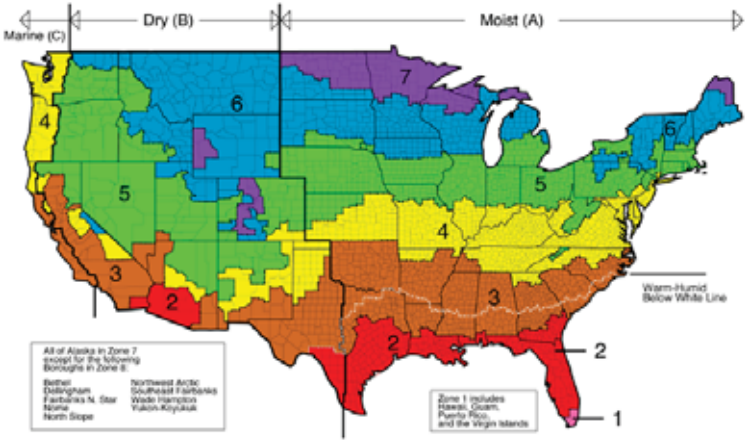
Does CCW AWP Primer require a respirator or mask when applying?
No, CCW AWP Primer is non-toxic and water based, therefore, it does not require a respirator or mask when applying.

Additional Information

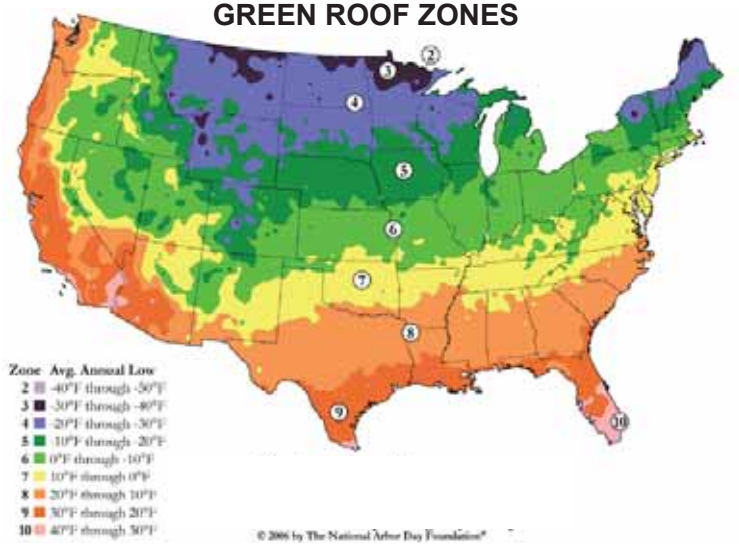
COVERAGE RATE INFORMATION

Wet Mils (at 100% Solids): (1,604/sq. ft./gal.=Mils; 125 Mils=1/8" or 0.125"; 1 Mil=.001")	**Sealant Yield Per Gallon:** (w x d; 128 oz./gal.)
16 mils @ 100.7 sq. ft./gal.	1/4" x 1/4" = 308 ln. ft./gal.
26 mils @ 61.7 sq. ft./gal.	3/8" x 1/4" = 205 ln. ft./gal.
50 mils @ 32.1 sq. ft./gal.	1/2" x 1/4" = 152 ln. ft./gal.
60 mils @ 26.7 sq. ft./gal.	3/4" x 1/2" = 51 ln. ft./gal.
90 mils @ 17.8 sq. ft./gal.	1" x 1/2" = 38 ln. ft./gal.
125 mils @ 12.8 sq. ft./gal.	

DoE'S PROPOSED CLIMATE ZONES



GREEN ROOF ZONES



Contact Information

DEPARTMENT PHONE NUMBERS

Customer Service 888-229-0199
Pricing 800-777-4535
Technical Service 888-229-2199
Residential Customer Service 800-211-7170

DEPARTMENT FACSIMILE NUMBERS

Customer Service 800-285-7430
Pricing 972-941-0996
Wylie Shipping 972-941-0961
Carlisle Shipping 717-960-4494

EMAIL ADDRESSES

General Support: info@carlisle-ccw.com
Customer Service: customerservice@ccw.carlisle.com
Technical Service: technical@ccw.carlisle.com

WEBSITE RESOURCES

Carlisle Coatings & Waterproofing Incorporated:
Main: www.carlisle-ccw.com
Private: ccwclassic.ccwcompanies.com/PRIVATE/index.asp
Green Roof Systems: www.ccwgreenroofs.com

CCM Building Envelope: www.carlislenvelop.com

Carlisle SynTec: www.carlisle-syntec.com

Insulfoam: www.insulfoam.com

Department of Energy: www.energy.gov

PLANT LOCATIONS

Wylie Plant:
900 Hensley Lane, Wylie, Texas 75098
800-527-7092, 972-442-6545, (FAX) 972-442-0076

Terrell Plant:
500 Apache Trail, Terrell, Texas 75160
800-527-7092, 972-442-6545, (FAX) 972-524-7201

Elberton Plant:
1051 Calhoun Falls Hwy., Elberton, Georgia 30635
800-527-7092, 972-442-6545, (FAX) 706-213-8102

Carlisle Plant:
1275 Ritner Hwy., Carlisle, Pennsylvania 17013
800-479-6832, 717-245-7000, (FAX) 717-960-4493

Canadian Plant (DynAir Inc.)
2100 Remembrance Road, Lachine QC H8S 1X3
800-544-5535, 514-639-1616, (FAX) 514-639-5252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