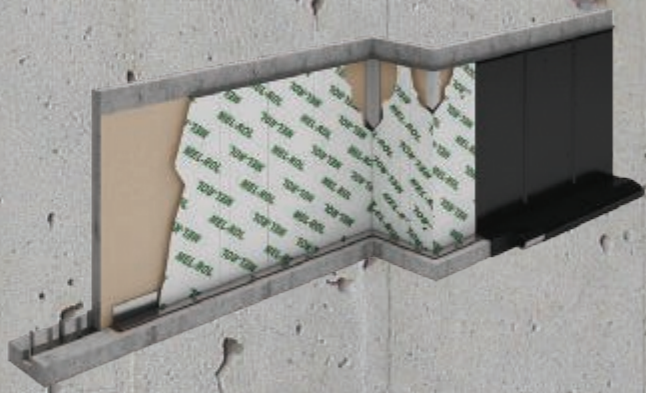


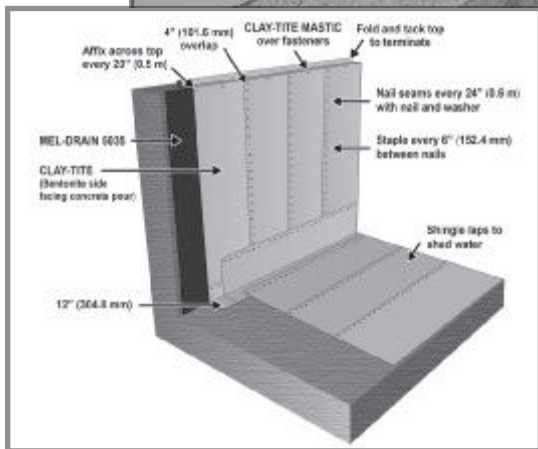
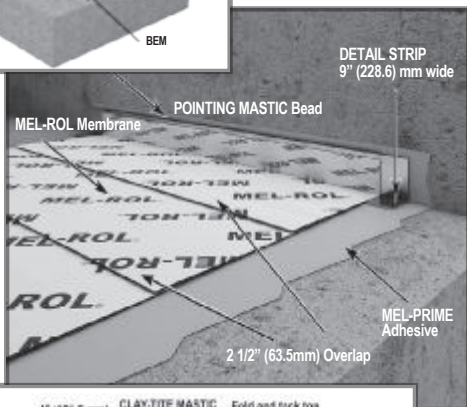
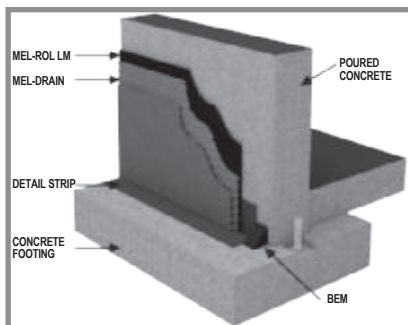
W. R. MEADOWS WATERPROOFING



CONTRACTORS HANDBOOK



02 Waterproofing & Vaporproofing Systems



WATERPROOFING & VAPORPROOFING

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PRODUCTS

For over 90 years, **W. R. MEADOWS** has been recognized as the leader in developing and producing quality products for the construction industry. We have built a coveted reputation among architects, engineers and contractors for producing the highest quality products backed by over 90 years of experience.

W. R. MEADOWS manufactures a complete line of waterproofing and moisture control products. When these products are used in combination as a system, they ensure that your project has complete moisture migration protection.

All products are designed to work as a system and are available from your local W. R. MEADOWS authorized distributor. Call W. R. MEADOWS at 1-800-342-5976 to locate a distributor in your area.



CLAY-TITE™

CLAY-TITE is a dual layer waterproofing consisting of virgin HDPE (20 mil), sodium bentonite, and a protective layer consisting of a non-woven polypropylene.

The HDPE provides the first layer of waterproofing, while the bentonite's self-sealing capabilities ensure positive puncture protection under hydrostatic conditions. The polypropylene fabric protects the bentonite from direct installation of shotcrete.



WATERPROOFING & VAPORPROOFING

MEL-ROL®

MEL-ROL waterproofing system is a flexible, versatile, dependable bituminous, roll-type waterproofing membrane. It is composed of a nominally 56-mil thick layer of polymeric waterproofing membrane on a heavy duty, four-mil thick, cross-laminated polyethylene carrier film. The two components are laminated together under strict quality-controlled production procedures.



A handy overlap guideline is printed 2 ½" (63.5 mm) in from the material edge on each side to assure proper overlap coverage and to assist in maintaining a straight application. Special exposed polymeric membrane strips are provided on both sides for positive membrane-to-membrane adhesion in the overlap area. The membrane strips are protected by a pull-off release strip. All components of the MEL-ROL waterproofing system work together to provide a cost-effective, positive waterproofing system that's quick and easy to apply. The roll size of MEL-ROL is 38.5" (.98 m) wide x 62.5' (18.29 m) long.

MEL-ROL LM

MEL-ROL LM is a single-component, polymer-modified, cold-applied, water-based, liquid waterproofing membrane ideal for below-grade vertical seamless waterproofing



applications. We have taken the same high quality rubber polymers found in MEADOWS' successful MEL-ROL "peel and stick" membrane, and converted them into a heavy-bodied, high solids, quick drying liquid membrane.

With MEL-ROL LM, installation time is reduced, utilizing either a spray or roller application. A variety of different protection courses, insulation boards or drainage boards can be embedded into the membrane to create a superior waterproofing system. With the application of PERMI-NATOR® vapor barrier over the membrane, a composite system can be created that has the combined advantages of both "peel and stick" and liquid-applied membranes.

MEL-ROL LM (ALL SEASON)



MEL-ROL LM (ALL SEASON) is a single component, polymer modified, cold-applied, liquid waterproofing membrane ideal for below-grade vertical seamless waterproofing applications. We have taken the same high quality rubber polymers

found in MEADOWS' successful MEL-ROL "peel and stick" membrane, and converted them into a heavy bodied, high solids, quick drying liquid membrane. The liquid-membrane technology allows faster installation times using either a spray or roller application.

PRECON®

PRECON is a composite sheet membrane comprised of a



WATERPROOFING & VAPORPROOFING

non-woven fabric, an elastomeric membrane, and W. R. MEADOWS' exclusive, patented plasmatic core (U.S. Patent No. U.S. 7,179,761). The plasmatic core is a seven-layer matrix designed for toughness and provides the lowest water vapor transmission (WVT) rating on the market. Once concrete is poured against PRECON and the concrete cures, a mechanical bond forms that secures the concrete to the membrane.



PRECON is used as a blindside membrane in vertical applications where access to the positive side is limited. The membrane can also be used for horizontal applications for underslab waterproofing and vaporproofing.

HRM 714

HRM 714 hot-applied rubberized asphalt waterproofing membrane is a 100% solids blend of asphalts, synthetic rubber polymers, and filler formulated to provide toughness with flexibility and low moisture vapor permeance.



HYDRALASTIC 836

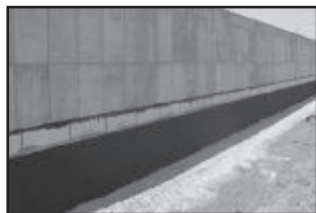
HYDRALASTIC 836 is a cold-applied, solvent-free, single-component waterproofing compound. It does not shrink, has a low volatile



organic compound (VOC) content, and has a very low odor. It will not crack in extreme cold or slump due to softening at high temperatures.

HYDRALASTIC 836 SL

HYDRALASTIC 836 SL is a single-component, cold-applied, solvent-free, water-activated, waterproofing system. The product is designed for horizontal and vertical surfaces. It does not shrink, has a low volatile organic compound (VOC) content. It will not crack in extreme cold or flow due to softening at high temperatures.



MEL-DRAIN™

MEL-DRAIN is a dimple-raised, molded polystyrene sheet bonded to high strength polypropylene fabric. This geocomposite allows

the passage of moisture through the fabric while preventing fine soils from entering the drainage channel. Various drain designs are available, depending on soil pressure and flow specifications. (An optional polyester backing film is available when used in conjunction with flexible waterproofing material.) The family of MEL-DRAIN products provides excellent protection in vertical, horizontal, and site applications.



PREMOULDED MEMBRANE® VAPOR SEAL WITH PLASMATIC® CORE (PMPC)

PREMOULDED MEMBRANE VAPOR SEAL with PLASMATIC CORE (PMPC) is a patented seven-ply, weather-coated, permanently bonded, semi-flexible vaporproofing/waterproofing membrane. It is composed



of an exclusive plasmatic core suspended mid-point between two layers of a homogeneous, bituminous material, and then sealed under heat and pressure between liners of asphalt-impregnated felt and a glass-mat liner. An asphalt weather coat is applied to the glass-mat liner and covered with a polyethylene anti-stick sheet.

PMPC provides a positive, easy-to-install, economical, true vaporproofing and waterproofing system for horizontal applications. Properly applied, it stops moisture migration in footings, concrete floors and structural slabs. PREMOULDED MEMBRANE VAPOR SEAL with PLASMATIC CORE is both waterproof and vaporproof.

It offers a perm rating of less than 0.002 perms, the lowest in the industry. The product is the ultimate when a true vapor seal is required. Among its unique features is the built-in protection course, which resists jobsite puncturing and the abrasive action of concrete placement. PMPC conforms to ASTM E 1993-98. The exclusive PLASMATIC CORE adds flexibility, greater tensile strength, and excellent handling characteristics, in addition to providing unequalled vapor barrier properties.

WATERPROOFING & VAPORPROOFING





PERMINATOR®

PERMINATOR underslab vapor barrier is a new generation of polyolefin-based resin/chemical technology. PERMINATOR provides the vapor barrier industry with

a highly effective, economical choice for helping to reduce the penetration of moisture and water vapor through the slab into the structure, thereby helping to reduce fungus, mildew and mold growth. PERMINATOR also helps reduce radon gas from entering the structure.

PERMINATOR is tough enough to withstand normal construction jobsite conditions and traffic. It will not crack, puncture, snag, split, or tear easily.

New resin technology allows dramatically greater puncture resistance while maintaining one of the lowest perm ratings in the market.

PERMINATOR prevents uncontrolled moisture from entering the slab allowing the slab to maintain the maximum slab moisture emission rate and relative humidity level as allowed by flooring manufacturer's specifications.

PERMINATOR is available in 10 mil and 15 mil thicknesses. Both versions are furnished in 200' (61 m) long rolls.

PERMINATOR's 12' wide (15 mil) and 15' wide (10 mil) rolls require fewer seams in application. Installation is quick and easy. All joints/seams, both lateral and butt, should



be overlapped 6" and taped using 4" wide PERMINATOR TAPE. PERMINATOR rolls fast and smoothly over level tamped soil or compacted fill. PERMINATOR also meets or exceeds all requirements of ASTM E 1745-11 Class A, B & C.

ACCESSORIES

BEM

CLAY-TITE ADHESIVE

CLAY-TITE GRANULAR PACK

CLAY-TITE MASTIC

DETAIL STRIP

MEADOW-CRETE® GPS

MEADOW-PATCH® 5

MEADOW-PATCH 20

MEL-PRIME™

MEL-PRIME W/B

MEL-ROL LIQUID MEMBRANE

PRECON FABRIC TAPE

PERMINATOR TAPE

PMPC TAPE

POINTING MASTIC

PROTECTION COURSE

REINFORCING FABRIC HCR

REZI-WELD™ LV

TERMINATION BAR

MEL-ROL LOW TEMP

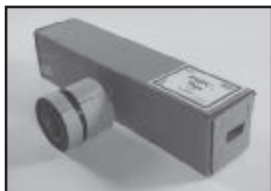
WATERSTOP EC



DETAIL STRIP



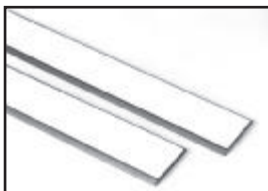
PERMINATOR TAPE



PMPC TAPE



MEL-PRIME W/B



TERMINATION BAR



MEL-PRIME

WATERPROOFING & VAPORPROOFING



THE APPLICATION

The complete line of W. R. MEADOWS waterproofing products is designed for each and every application. For specific questions not covered in this section, please request a data sheet or call W. R. MEADOWS technical services at 1-800-342-5976.

CLAY-TITE

Surface Preparation ... Surface must be smooth, sound, and void-free prior to installation of CLAY-TITE. All openings >1" (25.4 mm) must be detailed using plywood, grout, or alternate method to provide a sound substrate. Remove all sharp protrusion greater than 1/4" (6.4 mm)

For areas in which the ground water has a high sodium level (sea water or brackish water), contact W. R. MEADOWS technical services for recommendations. CLAY-TITE HSR from W. R. MEADOWS may be required in this installation. A water test may be needed to determine the suitability of the membrane for use in specific ground conditions.

Detailing ... W. R. MEADOWS offers CLAY-TITE MASTIC and CLAY-TITE ADHESIVE for seam laps. CLAY-TITE MASTIC is to be used in situations below the water table or when temperatures are going to be below 40° F (4° C). CLAY-TITE ADHESIVE is to be used when above the water table and temperatures are above 40° F (4° C). In most applications, CLAY-TITE MASTIC is the preferred product.

Blindside Installation ... Ensure that surface to be waterproofed is sound and void-free. The use of MEL-DRAIN 5035 from W. R. MEADOWS is recommended for all applications. Mechanically attach MEL-DRAIN to soil retention. CLAY-TITE can be installed either vertically or horizontally with



the HDPE surface towards the drainage board. Mechanically affix CLAY-TITE across the top every 20" (508 mm). Lap all seams a minimum of 4" (101.6 mm). If installed in the horizontal direction, ensure that seams are shingled in a manner to shed water. All seams should be nailed every 2' (0.6 m) and a staple placed between the nails. Apply CLAY-TITE MASTIC from W. R. MEADOWS over all fasteners. For detailed instructions, refer to CLAY-TITE BLINDSIDE INSTALLATION GUIDELINE available at www.wrmeadows.com.

Backfilled Wall ... Install CLAY-TITE with the bentonite side towards the concrete. At the top of the membrane, affix TERMINATION BAR from W. R. MEADOWS. All lap seams must overlap at least 4" (101.6 mm). Make sure to shingle all overlaps to shed water. Mechanically attach all seams at 3' (0.9 m) on center and apply PMPC TAPE from W. R. MEADOWS on joint. For detailed instructions, refer to CLAY-TITE BACKFILLED WALL INSTALLATION GUIDELINES available at www.wrmeadows.com.

Underslab ... CLAY-TITE is designed to act both as a waterproofing and vapor barrier membrane when installed underslab. Place membrane bentonite side up on the mud slab or over compacted sub-grade. Overlap and stagger seams at least 4" (101.6 mm). Protect from flooding prior to pouring of concrete. Refer to ACI 302.1R-04: Chapter 4 – Site Preparation and Placing Environment for sub-grade preparation. For detailed instructions, refer to CLAY-TITE UNDERSLAB INSTALLATION GUIDELINES available at www.wrmeadows.com.

Penetrations and Protrusions ... Fill void around penetration with CLAY-TITE GRANULAR PACK from W. R. MEAD-



OWS or CLAY-TITE MASTIC. Trowel CLAY-TITE MASTIC covering the penetration. Using a 6" (152.4 mm) cut strip of CLAY-TITE, form a collar around the penetration and hold in place with fasteners. Install WATERSTOP EC from W. R. MEADOWS around the penetration.

MEL-ROL

MEL-ROL waterproofing system provides a cost-effective answer to properly waterproof foundations, vertical walls and below-grade floors in residential and commercial construction. It is equally effective for use as between-the-slab waterproofing on plaza decks, parking decks and structural slabs. Use it as a waterproofing membrane to isolate mechanical and electronic rooms, laboratories, kitchens and bathrooms. MEL-ROL offers positive protection when "wrapped around" major rapid transit, vehicular, utility and pedestrian tunnel projects. MEL-ROL can also be used on insulated concrete forms (ICF).

Concrete should be cured at least 72 hours, be clean, dry, smooth and free of voids. Repair spalled areas; fill all voids and remove all sharp protrusions.

Apply in dry, fair weather when the air and surface temperatures are above 40° F (4° C). Do not apply to frozen concrete. MEL-ROL LOW TEMP can be used when air and surface temperatures are between 20° F (-7° C) and 60° F (16° C).

Apply MEL-PRIME adhesive to surfaces that will be covered within one working day. If left exposed overnight, additional adhesive must be applied. Follow all instructions and precautions on containers.

REMOVE release paper from MEL-ROL from the top edge of the roll and firmly press exposed area to the wall.



Remove the release paper from the rolls in a downward direction, pressing MEL-ROL into place on the wall.

Use DETAIL STRIP for impaction sheet coverage. First, fold strips lengthwise and then cut at the fold. Material is then ready to install as 4 ½" (114.3 mm) strips on either side of the rebar. Any excess can be turned down on the face of the footing. Next, fill the voids around rebar in the keyway with HYDRALASTIC 836. Pour the walls. Install DETAIL STRIP horizontally along the wall where it meets the footing, placing half the material up the wall and the other half onto the footing. Extend the material 4 ½" (114.3 mm) beyond outside corners. Slit extended portion of DETAIL STRIP lengthwise. Place the horizontal flap out onto the footing and bend the vertical flap around the wall. MEL-ROL can be applied to concrete, masonry surfaces, wood, insulated wall systems and metal. All substrates must be clean, dry and free of all surface irregularities.

HORIZONTAL APPLICATION ... Remove release paper on edge, then position the MEL-ROL membrane. Pull balance of release paper off, running the roll from low to high points, so all laps will shed water. Stagger end laps and overlap all seams at least 2 ½" (63.5 mm). Apply a double-thickness of the MEL-ROL membrane over construction, control and expansion joints and over cracks greater than 1/16" (1.59 mm) wide.

VERTICAL WALL APPLICATION ... Masonry walls may require the application of a cementitious parge-coat. Allow the parge-coat to dry before priming and applying MEL-ROL. When applied, the parge-coat will produce a smooth, uniform and well-bonded surface. Remove release paper, then apply vertically in lengths approximately 8' (2.44 m) long over the top of the horizontal



DETAIL STRIP at the footing. Overlap seams at least 2 ½" (63.5 mm). Tightly butt edges of membrane and apply POINTING MASTIC in corner applications.

To the top terminations, apply POINTING MASTIC at least 1/8" (3.18 mm) thick and 1" (25.4 mm) wide. TERMINATION BAR may also be used to mechanically fasten the membrane.

Once positioned, immediately hand-rub the MEL-ROL membrane firmly to the surface, removing any bubbles or wrinkles, then pressure roll the complete surface to assure positive adhesion.

Before MEL-ROL is applied, place a vertical DETAIL STRIP on inside corners extending the material 4 ½" (114.3 mm) beyond each side of the corner. Terminate at the footing and finish the corner with POINTING MASTIC.

Bend DETAIL STRIP vertically over the outside corner and extend 4 ½" (114.3 mm) beyond each side of the corner. Terminate the material at the footing. Finish the corner with POINTING MASTIC.

All protrusions should be sealed with two layers of membrane applied at least 6" (152.4 mm) in all directions. Seal all terminations with POINTING MASTIC. Around drains, apply two layers of MEL-ROL and put a bead of POINTING MASTIC between the membrane and clamping rings and at all terminations, drains and protrusions. See ASTM D 5898.

A thorough inspection should be made before covering and all necessary repairs made immediately. Tears and inadequate overlaps should be covered with MEL-ROL ... slit fish-mouths and patch. Seal edges of all patches with POINTING MASTIC. Where applicable, horizontal applications can be flood-tested for 24 hours. All leaks should be marked and repaired when membrane dries.



Protect the membrane on all vertical and horizontal installations with the immediate application of PROTECTION COURSE if no drainage system is used, or MEL-DRAIN. To secure PROTECTION COURSE, use POINTING MASTIC as an adhesive, and/or physically attach at the top edge using TERMINATION BAR. Backfilling should be done immediately, using care and caution to avoid damaging the waterproofing application.

MEL-ROL LM

MEL-ROL LM can be used on new and remedial waterproofing applications on concrete or masonry block substrates. Since the formula is water-based, MEL-ROL LM can also be used on both ICFs and “green concrete” applications.

All surfaces must be clean (free of coatings and curing compounds), free of frost, relatively smooth and structurally sound. Patch any bug holes, tie holes, large gaps or cracks with MEADOW-PATCH 5 or MEADOW-PATCH 20 from W. R. MEADOWS. All loose laitance on the substrates, such as dirt, dust, loose stones and debris, should be either swept or blown clean.

All shrinkage cracks less than 1/16" should be pre-treated with a 60-mil coat of MEL-ROL LM 6" (15 cm) wide. All cracks greater than 1/16" should be taped with DETAIL STRIP prior to application of the membrane. For specific project recommendations, please contact W. R. MEADOWS technical services.

MEL-ROL LM is designed to be used from the pail or drum with little or no mixing. However, if water appears on the surface of the unit, thoroughly mix with a low speed mechanical mixer prior to application.

To reduce blistering on concrete surfaces, a thin coat of



MEL-ROL LM diluted with water may be required. (Approximate dilution ratio of MEL-ROL LM to water is between 4:1 and 5:1.)

Thoroughly mechanically mix primer. Prime the entire concrete surface to be waterproofed by spraying or rolling on a single coat at a coverage rate of 100-150 sq. ft./gal. Allow primer to dry (approximately one hour, depending on temperature and conditions). After surface preparations are complete, detailing should be addressed. The desired thickness of membrane coverage is 120 mils for inside/outside corners and non-moving and hairline cracks, as well as around drains and penetrations. All control and expansion joints should be taped with DETAIL STRIP before application of membrane.

MEL-ROL LM can be applied directly from the container using a $\frac{3}{4}$ " nap roller. Apply in two coats, each 30 mils thick, allowing first coat to reach initial set prior to application of second coat.

MEL-ROL LM may be sprayed on vertical surfaces at the minimum coverage thickness of 60 mils wet (45 mils dry). A single coat may achieve desired coating thickness. However, if material slumps due to temperature or substrate conditions, two coats (30 mils wet) may be necessary. Apply the second coat after the first coat has dried (approximately one to two hours).

HORIZONTAL APPLICATION ... Contact your local W. R. MEADOWS sales office for specific recommendations.

Frequently inspect surface area with a wet mil gauge to ensure desired consistent thickness is achieved. Porous substrates or masonry block walls may require additional coats to obtain desired thickness.



MEL-ROL LM is most effectively applied by using the Graco HydraMax 350 or the Graco GH833 Big Rig.

The Graco heavy-duty texture gun is recommended for use with the following tips. For best results, use the 0.051" (Graco GHD551) heavy-duty switch tip. For spraying of primer coat, a smaller orifice tip such as the 0.035" (Graco GHD635) can be used. Tips should be reversible types for easy clean out.

Cover vertical applications with PROTECTION COURSE, MEL-DRAIN or 10 mil PERMINATOR. On vertical surfaces, coverings can be embedded into the membrane shortly after application.

Allow 24 hours for complete cure of membrane prior to backfilling.

PRECON

Surface Preparation ... Inspect all surfaces for any conditions detrimental to the proper completion of the work. Surfaces should be structurally sound. Remove debris or any other foreign material that could damage the membrane.

Application Method ... PRECON may be applied at temperatures down to 40° F (5° C); however, in less than ideal environments or marginal conditions, consider the use of PRECON LOW TEMP below 60° F (16° C). PRECON LOW TEMP can be used in temperatures down to 25° F (-4° C) MEL-PRIME™ from W. R. MEADOWS should be used to enhance the bond at the selvedge edge when conditions warrant it with both PRECON and PRECON LOW TEMP.

Prior to application of the blindside membrane, attach MEL-DRAIN rolled matrix drainage system from W. R. MEADOWS to lagging or soil retention system.



In vertical applications of PRECON, mechanically attach with fasteners every 12" (31 cm) across the top, within ½" (13 mm) of the top edge of the membrane. Install the membrane with the fabric side facing toward the concrete pour.

Remove release paper on 6" (152.4 mm) overlap. Apply membrane and roll press into place with a tile type roller.

End Laps ... Overlap membrane 6" (152.4 mm). Prior to overlap, apply BEM, HYDRALASTIC 836 or MEL-ROL LIQUID MEMBRANE (two-component) from W. R. MEADOWS in area to be lapped. Roll press membrane into BEM, HYDRALASTIC 836 or MEL-ROL LIQUID MEMBRANE. At terminations of membrane, apply BEM, HYDRALASTIC 836 or MEL-ROL LIQUID MEMBRANE 12" (31 cm) wide centered over the termination and while still wet, embed 12" (31 cm) wide DETAIL FABRIC into the HYDRALASTIC 836 or MEL-ROL LIQUID MEMBRANE and roll press into place. Ensure that DETAIL FABRIC is centered over the termination with 6" (15.2 cm) on each side of lap edge. Apply additional HYDRALASTIC 836 on all terminations of DETAIL FABRIC.

Penetrations and Protrusions ... Detail around all horizontal and vertical penetrations using BEM or MEL-ROL LIQUID MEMBRANE (two-component) from W. R. MEADOWS. Apply BEM or MEL-ROL LIQUID MEMBRANE by forming a fillet around the pipe or protrusion, overlapping the fabric side of PRECON and the protrusion a minimum of 2.5" (64 mm). If the gap between the protrusion and the membrane is greater than ½" (13 mm), apply PRECON FABRIC TAPE over the uncured BEM or MEL-ROL LIQUID MEMBRANE. All penetration and protrusion surfaces must be clean, rust-free, and sound prior to application of BEM or MEL-ROL LIQUID MEMBRANE.



PRECAUTIONS

Concrete should be poured within 60 days of membrane installation. For installations below 40° F, contact W. R. MEADOWS technical services.

MEL-ROL LM (ALL SEASON)

MEL-ROL LM (ALL SEASON) can be used on new and remedial waterproofing applications on concrete or masonry block substrates. Application can be performed in colder weather when water-based products cannot be used.

Do not apply to “green” (fresh) concrete. Concrete must be cured a minimum of 14 days prior to application. Do not use with insulated concrete forms (ICFs). Polystyrene insulation boards may be used only after membrane has thoroughly cured a minimum of 72 hours, and there is no danger of residual solvent degrading the boards.

All surfaces must be clean and dry, free of frost, relatively smooth and structurally sound. Patch any bug holes, tie holes, large gaps or cracks with MEADOW-PATCH 5 or MEADOW-PATCH 20 from W. R. MEADOWS. All loose laitance on the substrates, such as dirt, dust, loose stones and debris should be either swept or blown clean.

All shrinkage cracks less than 1/16” should be pre-treated with a 60-mil wet coat of MEL-ROL LM (ALL SEASON) at 6” wide. All cracks greater than 1/16” should be pre-treated with W. R. MEADOWS DETAIL STRIP prior to application of the membrane. For specific project recommendations, please contact W. R. MEADOWS technical services.

MEL-ROL LM (ALL SEASON) is designed to be used from the pail or drum with little or no mixing. For spray applications, MEL-ROL LM (ALL SEASON) MUST BE A MINIMUM OF 60° F



(15° C) WHEN SPRAYING. Material will become very thick and difficult to spray at lower temperatures. MEL-ROL LM (ALL SEASON) must be stored in a heated trailer and/or passed through a heat exchanger for successful spraying.

To reduce potential blistering on poured concrete foundations, a thin primer coat of the material may be required.

Prime the entire concrete surface to be waterproofed by spraying or rolling on a single coat of MEL-ROL LM (ALL SEASON) at a coverage rate of 100-150 sq. ft./gal. Allow the primer to dry, which is approximately 1 – 2 hours, depending on jobsite conditions (temperature, humidity, air flow, etc.).

After surface preparations are complete, detailing should be addressed. The desired thickness of membrane coverage is 120 mils for inside/outside corners and non-moving and hairline cracks, as well as around drains and penetrations. All control and expansion joints should be taped with DETAIL STRIP before application of membrane.

MEL-ROL LM (ALL SEASON) can be applied directly from the container using a $\frac{3}{4}$ " nap roller. Apply in two coats, each 40 mils thick, allowing first coat to reach initial set prior to application of second coat. In low temperatures, MEL-ROL LM (ALL SEASON) must be kept warm using pail or drum heaters. The product should be heated to 60° F.

MEL-ROL LM (ALL SEASON) should be sprayed at a minimum thickness of 80 mils wet (45 mils dry). A single coat may achieve desired coating thickness. However, if material slumps due to temperature or substrate conditions, two coats (40 mils wet) may be necessary.

If MEL-DRAIN is used with MEL-ROL LM (ALL SEASON), use plastic-backed MEL-DRAIN to prevent waterproofing



membrane from being pushed into plastic core.

For horizontal applications, please contact a W. R. MEADOWS representative at 1-800-342-5976.

Frequently inspect surface area with a wet mil gauge to ensure desired consistent thickness is achieved. Porous substrates or masonry block walls may require additional coats to obtain desired thickness.

Allow membrane to cure a minimum of 48 hours prior to application of a protection course. Membrane should be covered within 30 days after application. Cover with PROTECTION COURSE, MEL-DRAIN or 10 mil PERMINATOR. A prime coat of MEL-ROL LM (ALL SEASON) or beads of POINTING MASTIC can be used to secure the protection to the wall.

Polystyrene insulation boards can be applied only if the membrane has thoroughly cured (72 hrs. minimum) and there is no danger of residual solvent degrading the boards.

Allow 48 hours for complete cure of membrane prior to backfilling.

HRM 714

HRM 714 is hot-applied to form a continuous elastomeric membrane. It is ideal for waterproofing bridge, parking, plaza, or promenade decks; tunnels; pedestrian concourses; and similar types of construction where a monolithic waterproofing membrane is desirable.

APPLICATION

Positive slab drainage is recommended by means of a minimum 1/8" (3 mm) in 12" (300 mm) slope and



preferably 1/4" (6 mm) in 12" (300 mm) slope to adequate drainage.

Equipment ... Use an insulated, double-shell, oil-jacketed kettle. Do not use a direct-fired roofer's kettle. The melting kettle requires an engine-driven agitator and thermometers for both the oil and the compound.

A positive high limit control which will shut down the heating system if the heat transfer oil or the compound reaches the safe heating limit is recommended. Preferable is a totally automatic temperature control system controlling both the heat transfer oil temperature and the compound temperature.

Highly advantageous is a pressure draw-off and application system including a pump, high pressure/high temperature insulated hose, and piping to provide constant recirculation of the compound. An air pressure means of purging the hose and pipe lines of the compound at shut-down should also be included.

Heating ... On start-up, raise the oil bath temperature to 450° F (230° C) maximum. Place HRM 714 into the kettle. Do not remove the polyethylene liner. Its incorporation into the material does not affect its performance. As the compound becomes fluid, add additional quantities up to the required amount, agitating continuously.

Recommended pouring temperature range is 360° - 400° F (182° - 205° C). Do not hold material at pouring temperature for longer than five hours. If pouring is to be delayed, reduce temperature to between 270° - 320° F (132° - 160° C) and hold until pouring is to be resumed. Do not heat the compound above 410° F (210° C).



Prolonged heating (longer than five hours) or heating above 410° F (210° C) may cause the compound to gel in the melter. A rapid increase in viscosity of the material accompanied by stringiness indicates that gelling has begun. The compound temperature must be reduced promptly or the material should be removed promptly from the kettle.

Surface Preparation ... Prior to commencement of the waterproofing application, the following preparation may be necessary:

Chip or grind off concrete spills from subsequent pours. Fill depressions in the concrete left by form boards, footprints, screed rail chairs, etc. with MEADOW-PATCH 5 from W. R. MEADOWS. Remove areas of heavy laitance with a grinder, brush hammer, scabber, or similar device.

Grind off sharp projections, fishtails, and sharp corners. Patch honeycombed concrete with MEADOW-PATCH 5.

On existing structures, remove old waterproofing. Remove lightly scaled concrete down to sound concrete and restore to proper cross section and grade with a Portland cement mixture. Where scaled and spalled concrete exposes reinforcing steel, remove concrete to below exposed steel and replace with MEADOW-CRETE GPS from W. R. MEADOWS.

Do not use hot-mix patching to level up a deck prior to waterproofing.

Concrete surface suitable for membrane application should be wood-float finish or better and be clean and free of oil, grease, curing compounds, dampness, frost, dust, or loose particles that could affect penetration of the adhesive and adhesion of



HRM 714. Sand-blasting and vacuuming are recommended after which no traffic should be permitted in the area.

For proper surface conditioning application and techniques, contact W. R. MEADOWS technical services.

Cracks, Joints, Other Discontinuities ... In cracks up to 1/8" (3 mm) wide, construction joints, and changes in plane, where no movement is expected, fill cracks and joints and coat area with HRM 714 1/8" (3 mm) thick x 10" (250 mm) wide centered over the crack and embed a 6" (150 mm) strip of REINFORCING FABRIC HCR into the HRM 714 while it is still hot, ensuring that air is not trapped. Allow to cool before applying the final coat of HRM 714.

Cracks over 1/8" (3 mm) wide should be repaired with high density concrete and cover using a 9" (225 mm) wide, 30 mil thick REINFORCING FABRIC HCR embedded in a 1/8" (3 mm) x 12" (300 mm) wide coat of HRM 714 centered over the crack.

Expansion joints up to 1" (25 mm): Drape an 18" (450 mm) wide sheet of reinforced butyl or neoprene rubber (minimum 60 mil thick) into the joint in a "U" shape to a depth twice the width of the opening. Where joints are already filled with a sealant that may not be compatible with HRM 714, stop membrane application short of the expansion joint edge and embed sheeting over the joint, using a backer rope and extending at least 8" (20 mm) on each side of the expansion joint. Apply a 1/8" (3 mm) x 13" (330 mm) wide coating of HRM 714 to the deck on each side of the joint and place the rubber sheet into it, while the HRM 714 is still hot. Lap all end laps of reinforcing sheet 6" (150 mm) and seal with HRM 714. Allow to cool before applying the final coat of HRM 714 membrane.



Expansion joints 1" (25 mm) or more wide: refer to W. R. MEADOWS technical services or approved applicator.

Surface Conditioning ... Apply MEL-PRIME solvent-based adhesive to surfaces that will be waterproofed at a coverage rate of 250 - 300 ft.²/gal (6.14 - 7.37 m²/L). Make sure surface dries to tack-free before application of HRM 714.

Flashing ... Wash surfaces of all metal, including flashings, vents, drains, etc., with solvent, dry with clean cloths, and condition with MEL-PRIME solvent-based adhesive. Allow MEL-PRIME to dry before applying HRM 714 membrane.

Vertical Surfaces ... Apply 1/8" (3 mm) coating of HRM 714 a minimum of 6" (150 mm) or more as required up vertical surfaces to a height which is greater than the maximum depth of water which may be ponded due to the operation of a controlled flow drain, temporary drain blockage, etc. Apply 1/8" (3 mm) thick HRM 714 coating 6" (150 mm) onto concrete deck and, while the HRM 714 is still hot, embed 6" (150 mm) wide REINFORCING FABRIC HCR (47 mil thick) placed 3" (75 mm) vertically and 3" (75 mm) horizontally. Allow to cool before applying the final coat of HRM 714 membrane.

Drains ... Coat area 16" (400 mm) wide around drain with HRM 714. Place REINFORCING FABRIC HCR (47 mils thick) over the coated drain flange, extending 12" (300 mm) around flange. Allow to cool before applying the final coat of HRM 714 membrane.

COMPOUND APPLICATION

Apply HRM 714 evenly by flowing onto the deck and spread with a squeegee to a minimum recommended thickness of 1/8" (3 mm) or more, as specified, covering all previously



placed material over cracks, joints, flashings, etc.

HRM 714 may be applied to vertical and horizontal surfaces. Avoid air entrapment. The membrane should be uniform in thickness as possible and essentially free of visible pinholes and blisters. After completion of membrane application, complete successive steps as soon as possible.

When HRM 714 is applied over a steel deck overlaid with gypsum board or plywood, no adhesive is required. Cover joints between gypsum board or plywood sheets with a 6" (150 mm) wide spun-bonded polyester (10 mil) pressed into a 1/16" (1.5 mm) thick layer of HRM 714. Be sure to remove air pockets, then apply a 1/16" (1.5 mm) coat of HRM 714 over the entire area. A layer of 39" (991 mm) wide spun-bonded polyester (10 mil) reinforcement sheet should be applied over the hot membrane. Apply the reinforcement sheet parallel with the longer dimension of the gypsum board or plywood sheets. Lap the reinforcement 2" (50 mm) and bond lap with HRM 714. Apply a second layer of HRM 714 at a minimum thickness of 1/8" (3 mm) to completely embed the reinforcement fabric.

PROTECTION

Install PROTECTION COURSE from W. R. MEADOWS to protect the membrane from damage during construction or backfill operations. If a delay of 48 hours or more is anticipated in the application of the next phase of construction, flood coat the PROTECTION COURSE with roofing asphalt. Alternatively, place a temporary cover of polyethylene film over the HRM 714 membrane and keep free of traffic until PROTECTION COURSE can be installed and covered.

If a hot-mix asphaltic wearing surface is to be applied, place PROTECTION COURSE while the HRM 714 membrane is still



tacky. Apply an emulsion primer tack-coat to PROTECTION COURSE and place the asphaltic surface promptly. The asphaltic pavement should be at least 2" (50 mm) thick. Alternatively, install 2 – 3" (50 – 75 mm) of no-fines concrete over PROTECTION COURSE to serve as a percolation layer which is stable and which will withstand construction traffic. This percolation layer improves drainage and prevents damage due to ice formation and is, therefore, preferable to the use of compacted screenings as an underlay for an asphaltic wearing surface.

Similarly, a no-fines concrete percolation layer is recommended under exposed concrete slabs and under landscaped areas. Cover the no-fines concrete with a filtration sheet, such as spun-bonded nylon (1.5 oz. per sq. yd.) to keep the fines from landscaping soil from clogging the percolation layer.

PRECAUTIONS

Do not leave permanently exposed. Do not apply to concrete surfaces which are not properly conditioned. Do not apply to lightweight concrete containing moisture.

Application of adhesive and membrane at ambient temperatures below 40° F (5° C) requires extra care in surface conditioning.

HRM 714 is not compatible with pitch or derivatives of coal tar.

HYDRALASTIC 836

HYDRALASTIC 836 can be used on interior or exterior concrete surfaces, where protection from water intrusion is desired. The product can be used for both above-grade and below-grade applications. HYDRALASTIC 836 is excellent for horizontal and vertical



applications, such as waterproofing plaza decks, planter boxes, and sealing parapets. The product is ideal for positive-side waterproofing for foundations and also in between-slab applications. HYDRALASTIC 836 can also be used in vertical applications.

APPLICATION

Surface Preparation ... HYDRALASTIC 836 is intended for concrete, asphalt, metal, and wood surfaces. These surfaces need to be free of all coatings, such as curing compounds, sealers, etc. These surfaces may need to be cleaned by sand blasting, power washing, wire brushing, and any other suitable cleaning techniques. Use alcohol to remove all dirt, oil, loose paint, frost, and other contamination from all working surfaces. **DO NOT USE** petroleum solvents such as mineral spirits or xylene. In cold temperatures, the surface must be free of frost.

Do not use asphalt-based products on concrete or metal surfaces. Do not condition any concrete or metal surfaces with asphalt primer. Asphalt primer acts as a bond breaker and softens the cured material. Residual asphalt or old, non-live coal tar pitch-coated surfaces are OK. In this case, a sample area test is suggested.

Mixing ... Gentle mixing may be necessary if product has settled.

Application Method ... Make sure product is at room temperature (store at room temperature for 24 hours) before application to ensure ease of application. Apply by trowel, squeegee, or roller. A flat-blade squeegee is suggested for best results. Notched rubber squeegees waste material and do not provide a uniform coat. Flat-blade squeegees provide a uniform mil thickness. In cool weather the



ribbons of adhesive caused by a notched squeegee may not level out.

Test periodically to make sure adequate adhesion is achieved. HYDRALASTIC 836 has a work life of one hour, so make sure all spreading and finessing of the product is done within this timeframe. For critical waterproofing applications, or if reinforcing fabric is required, use REINFORCING FABRIC HCR from W. R. MEADOWS.

If a second coat is necessary, apply as soon as possible, but no more than eight hours apart. As ambient temperatures and surface temperatures increase [80° - 85° F (26.6° - 29.4° C)], the oils in the product rise to the surface and act as a bond breaker.

For next-day applications, rub the tie-in area down [6"-8" (152 - 203 mm wide)] with acetone or alcohol. This removes the oil film.

Protect the Membrane ... On all vertical and horizontal installation with PERMINATOR, PROTECTION COURSE (PC2), or MEL-DRAIN from W. R. MEADOWS. Application of protection should be done after material can be walked on.

HYDRALASTIC 836 will not wash off if rain begins during or after application. But, all work shall stop if rain commences.

Drying Time ... HYDRALASTIC 836 features a fast drying time. Drying time is usually four hours, depending on temperature. After four hours, another coat can be applied.

Cleanup ... Uncured HYDRALASTIC 836 cleans up easily with alcohol. Cured material is best removed by mechanical means.

PRECAUTIONS

HYDRALASTIC 836 is not recommended in areas subject to



continuous immersion. For this purpose, use the GEMITE line of products. Do not use on surfaces that are later to be painted. Do not store in high temps. Refer to Safety Data Sheet for health and safety information.

HYDRALASTIC 836 SL

HYDRALASTIC 836 SL is a single-component, cold-applied, solvent-free, water-activated, waterproofing system. The product is designed for horizontal and vertical surfaces. It does not shrink, has a low volatile organic compound (VOC) content. It will not crack in extreme cold or flow due to softening at high temperatures.

APPLICATION

New Concrete ... For best results, all new concrete surfaces should be given a light trowel finish or screed to provide a flat, uniform surface. The surface should then be finished with a light broom profile. Wet curing is recommended. All membrane curing compounds must be mechanically removed. New concrete should be power washed or blown clean with oil-free compressed air before coating application to ensure removal any dirt build or contaminants that may interfere with bond of primer or HYDRALASTIC 836 SL.

Surface Preparation ... HYDRALASTIC 836 SL is intended for concrete, metal, and wood surfaces. For existing concrete remedial work or new concrete lacking profile, lightly roughen or rough grind substrate. Concrete surfaces require a medium sandpaper finish equal to or greater than ICRI CSP #3. Surface preparation may be completed by shot blasting. Install a 100 - 200 ft.² (9.30 - 18.58 m²) mockup of the system to be installed and approved for actual coverage rates and functionality before proceeding.

The concrete must be structural sound and free of all con-



taminates, including oil, grease, dust, laitance and other bond-breaking materials. Mechanically abrade the concrete surface by grinding, abrasive blasting, or shot blasting to ICRI Guideline No. 310.2R, CSP 3 - 5.

All surfaces must be thoroughly dry to ensure proper performance of the HYDRALASTIC 836 SL system.

Joints, Cracks, and Flashing ... Apply a stripe coat of HYDRALASTIC 836 SL over all cracks up to 1/16" (1.58 mm) width. All cracks over 1/16" (1.58 mm) width must be caulked.

Priming ... For porous substrates and where air and/or moisture release may cause pinhole or blister problems to occur in the applied membrane, priming the substrate prior to application of HYDRALASTIC 836 SL is recommended. Discovery of these issues is generally revealed in the mockup. For priming recommendations and installation, refer to the Priming Installation guideline provided at www.wrmeadows.com.

Decrease Blistering ... This is a water-activated waterproofing compound, as such water is required for proper curing. The waterproofing membrane should be properly mixed with water to achieve optimal performance. Add up to one quart (0.95 L) of potable water per five gal. (18.9 L) pail of HYDRALASTIC 836 SL. It is required to add at least one pint (0.47 L) of potable water to increase cure and decrease the probability of blistering occurring. Also, applying HYDRALASTIC 836 SL in the cooling part of the day or not in direct sunlight will decrease probability of blistering due to outgassing from the concrete.

Mixing Mix ratio: 20 parts HYDRALASTIC 836 SL to one part water by volume. HYDRALASTIC 836 should be thoroughly mixed before adding water. Add up to one quart



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(0.95 L) of water to five gallons (18.9 L) of HYDRALASTIC 836 SL and mix thoroughly for three minutes using a mechanical mixer at slow speed to ensure a homogeneous material. Use a mixing blade designed for paints or coatings, not a mud or mortar mixer. Take care not to allow entrapment of air into the material.

Application Method ... Make sure product is conditioned at 75° F (23.9° C) by storing product overnight or at least 12 hours prior to use for ease of application.

Apply evenly by trowel, squeegee, or roller. A flat-blade squeegee is suggested for best results. Notched rubber squeegees waste material and do not provide a uniform coat. Flat-blade squeegees provide a uniform mil thickness. HYDRALASTIC 836 SL can also be applied horizontally with a squeegee or roller. Cure time will vary depending on temperature and humidity. Attention to proper slope to drain is essential for proper waterproofing. HYDRALASTIC 836 SL has a work life of 20 minutes at 75° F (23.9° C) with the addition of potable water. Make sure all spreading and finishing of the product has been completed within this timeframe.

In critical waterproofing applications such as plaza decks, podiums, or other similar horizontal waterproofing applications, a 120-mil layer of HYDRALASTIC 836 SL embedded with REINFORCING FABRIC HCR from W. R. MEADOWS is recommended. For all horizontal installations, refer to High Build Reinforced System installation guidelines provided at www.wrmeadows.com for proper installation guidelines. If there are no details available for your specific application, please contact a W. R. MEADOWS representative for recommendations.

If a second coat is necessary, apply as soon as first coat has set sufficiently to support subsequent coat. At 75° F (23.9°



C) and 50% relative humidity, allow coating to cure a minimum of 2 - 4 hours before proceeding to subsequent coats, but no more than eight hours apart. As ambient, substrate, and material temperatures increase, an oily-like film may develop on the surface and act as a bond breaker. For next-day or second-coat applications, rub the tie-in area down [6" – 8" (152 – 203 mm wide)] with acetone, mineral spirits, or xylene. This removes the oil film. Do not use alcohol."

HYDRALASTIC 836 SL can be applied up to 15 mils in a single vertical application until the minimum 60 mils or project specified mil thickness requirement is achieved.

For next-day or second-coat applications, rub the tie-in area down [6" – 8" (152 – 203 mm wide)] with acetone, mineral spirits, or xylene. This removes the oil film. Do not use alcohol.

Protect the Membrane ... Protect HYDRALASTIC 836 SL with MEL-DRAIN™ (type with the polymeric backing film) from W. R. MEADOWS or contact W. R. MEADOWS for additional protection course options. Application of protection should be done after material can be walked on without causing damage to the integrity of the membrane.

HYDRALASTIC 836 SL will not typically wash off if rain begins during or after application. Stop all work if rain begins and protect open or unused material from rainfall.

Cleanup ... Uncured HYDRALASTIC 836 SL cleans up easily with acetone, mineral spirits, or xylene. Cured material is best removed by mechanical means.

PRECAUTIONS

Do not expose product to exterior UV for longer than 14 days. HYDRALASTIC 836 SL is not to be used as a liner in



a water-containing structure and is not to be used as an exposed or wearing surface. For this purpose, use the GEM-ITE® line of products. HYDRALASTIC 836 SL is not compatible with asphalt, polymeric-based products, or asphaltic membranes. Do not use on surfaces that are later to be painted. It cannot withstand direct wear or abrasion. Containers that have been opened must be used as soon as possible. Do not dilute product with solvent under any circumstance. HYDRALASTIC 836 SL is not recommended for use over magnesite, gypsum, lightweight concrete, or where chained or studded tires may be used. Concrete must exhibit 3000 psi (20.7 MPa) minimum strength. Use denatured alcohol to remove all grime, oil, paint, frost, and other contamination from all working surfaces. Always install a mockup prior to full installations.

Refer to safety data sheet for health and safety information. **WARNING:** This product contains isocyanates.

MEL-DRAIN

Used in conjunction with a total W. R. MEADOWS moisture protection system, MEL-DRAIN is the ideal choice for enhanced waterproofing protection of basement walls, plaza decks, earth-sheltered homes, commercial buildings, retaining walls, underground parking, site drainage, etc.

For vertical, below-grade applications, unroll MEL-DRAIN with flat, core side against the wall or waterproofing material. POINTING MASTIC or MEL-PRIME are excellent adhesives compatible with this installation. The flat side core lip is overlapped to provide a continuous drainage layer. Extra filter fabric is provided at the edges for overlapping with the next sheet. MEL-DRAIN is easily cut with construction knives or scissors.



For horizontal applications, unroll and overlap so that water runs with overlap. Add appropriate ballast as needed to hold down drainage board.

If MEL-DRAIN is used with MEL-ROL LM or MEL-ROL LM (ALL SEASON), use plastic-backed MEL-DRAIN to prevent waterproofing membrane from being pushed into plastic core.

PREMOULDED MEMBRANE VAPOR SEAL WITH PLASMATIC CORE (PMPC)

PMPC, when properly applied, is designed to stop moisture migration (liquid or vapor) in footings, concrete floor slabs and structural slabs, which greatly reduces fungus, mildew and mold. It is especially useful under slabs overlaid with wood, tile, epoxy and urethane coatings, carpeting and resilient or seamless flooring systems, since it helps prevent warping and buckling caused by moisture migration. PMPC also greatly reduces radon gas from entering the structure.

When estimating the amount of PMPC required, figure the actual area plus 20% for overlap when using sheets. For rolls, figure actual areas, plus 12% for overlap.

PMPC can be cut with a roofer's or linoleum knife, using a straight edge.

Normally to facilitate bending at a change in plane, such as at corners or footings, a 2" x 4" can be used to make the bend. In cold weather conditions, lightly heat the bending area and make the bend.

Pointing with POINTING MASTIC should be done wherever an edge is exposed to prevent water from traveling under a sheet.



By installing PMPC on the ground prior to placing the concrete floor, moisture will be prevented from coming through the floor slab.

In addition to the horizontal on or below-grade application, PMPC can be placed on the intermediate structural slab, forming a “sandwich slab” installation. As a result, moisture is prevented from filtering downward from mechanical floors dedicated to heating and air conditioning equipment. This helps prevent damage to lower floor levels.

PMPC can be applied directly over tamped grade, because it does not require a gravel bed, a bed of sand and/or “crusher rock” prior to the installation of the floor slab, although these practices are acceptable. If PMPC is to be placed over a large angular fill, see 4.1.4 of ACI 302.1R-04 for recommendations. Material is placed in position by either the “Dutch Lap” method with laps sealed with CATALYIC BONDING ASPHALT, or by the “butt-joint” method with joints sealed with PMPC TAPE poly-side up. These methods provide a permanent, monolithic vapor seal, without voids or open seams. If desired, on structural floor slabs of multi-level buildings, sheets may be placed in a bed of hot asphalt for continuous adhesion. Remove plastic film at joints prior to applying HYDRALASTIC 836 or PMPC TAPE.

PERMINATOR

PERMINATOR underslab vapor barrier is primarily designed for underslab construction, where the soil has been tamped and leveled or compacted fill has been applied. The 200' (61m) long sheets are unrolled as is or cut to size and installed using the overlapping method. Overlaps are 6" wide and these seams are sealed using 4" wide



PERMINATOR TAPE.

PERMINATOR can also be used as a protection course for waterproofing membranes. The desired sheet lengths are cut to size and retained at the top of the waterproofing membranes by PERMINATOR TAPE or TERMINATION BAR.

Level, tamp or roll earth or granular material beneath the slab base as specified by supplied architectural drawings. Follow ASTM E-1643-10. (Standard practice and procedure for installation of vapor retarder used in contact with earth or fill under concrete slabs.) For sub-grade preparation prior to placement of PERMINATOR, please see ACI 302.1R.17.

Horizontal Application ...Unroll 200' (61 m) PERMINATOR over the area where the slab is to be poured. Cut to size if necessary. PERMINATOR should completely cover the pour area. All joints/seams, both lateral and butt, should be overlapped 6" and taped using 4" wide PERMINATOR TAPE. (Note: The PERMINATOR TAPE area of adhesion should be free from dust, dirt and moisture to allow maximum adhesion of the pressure-sensitive tape.)

The most efficient installation method includes placing PERMINATOR on top of the footing and against the vertical wall. This will sandwich PERMINATOR between the footing, vertical wall and poured concrete floor. This will help protect the concrete slab from external moisture sources once the slab has been placed.

Before placing concrete slab, make sure all penetrations, block-outs and damaged areas are repaired/addressed.

Numerous municipal building codes do not allow the placement of vapor barriers over the footing, due to breaking of the bond between the wall and footing.



Although this is not an optimal application method, W. R. MEADOWS approves this alternate method when required by building code.

Cut a slit around pipes, ductwork, rebar, and wire penetrations to place the initial layer of PERMINATOR. To further protect the concrete slab from external moisture sources, use a piece of PERMINATOR and place a collar around this as well.

1. Cut a piece of PERMINATOR a minimum width of 12". The length should be 1 1/2 times the pipe circumference. With a roofer's knife or scissors, cut "fingers" half the width of the film.

2. Wrap around and tape the collar onto the pipe and completely tape fingers to the bottom layer of PERMINATOR.

Using POINTING MASTIC as the sealant around clusters of pipe or conduit can be also be used.

In the event that PERMINATOR is damaged during or after installation, repairs must be made. Cut a piece of PERMINATOR large enough to cover any damage by a minimum overlap of 6" in all directions. Clean all adhesion areas of dust, dirt and moisture. Tape down all edges using PERMINATOR TAPE.

NOTE: It is not necessary to overlay PERMINATOR with gravel or sand. PERMINATOR is tough enough to withstand normal construction abuse and traffic. Most flooring companies recommend the placement of the concrete slab directly on the vapor barrier. We agree, since this eliminates the potential for trapping moisture in a blotter-effect, causing it to resurface through the slab into the flooring systems. Consult local building codes and regulations, plus architectural and design firm guidelines,



prior to application.

Vertical Wall Application ...Install MEL-ROL waterproofing membrane or MEL-ROL LM liquid waterproofing membrane according to installation instructions. While the membrane is still tacky, install PERMINATOR as a protective course over the applied waterproofing membrane. Using TERMINATION BAR with concrete nails or PERMINATOR TAPE at the termination of the waterproofing membrane is advisable in some applications. Supervised care must be taken during backfilling against the material so that it is not damaged or punctured. If damage occurs, patch using the techniques outlined previously.

RECOMMENDED TOOLS

Broom
Caulking Gun
Chalk Line
Impact Hammer
Paint Brushes and Roller

WATERPROOFING INSULATED CONCRETE FORMS (ICF)

At W. R. MEADOWS, we get many questions about the proper way to waterproof ICFs. The use of our MEL-ROL and MEL-ROL LM as the overall waterproofing membrane will work for this type of application.

The following products will be used in waterproofing ICFs:

BEM	Protective Wear
MEL-ROL LIQUID MEMBRANE	Razor Knife
MEL-ROL	Sprayer
MEL-ROL LM	Straight Edge
TERMINATION BAR	Tile Roller



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Surface Preparation ... Remove any oxidized foam (rasp) from the surface.

Joint Treatment ... All joints in the ICF need to be addressed. For applications of MEL-ROL, if joints in the ICF are wider than ¼", they should be filled with either MEL-ROL LIQUID MEMBRANE or BEM prior to priming and installation of the waterproofing membrane. Also pay close attention to where the wall meets the footing. This area should be treated with BEM or MEL-ROL LIQUID MEMBRANE. This treatment creates a cant where the wall meets the footing. In applications of MEL-ROL LM, all joints need to be filled with BEM.

Priming ... When using MEL-ROL to waterproof the ICF, priming must be done. MEL-ROL LM should be used as the primer. The prime-coat should be in the range of 5-10 mils. After proper priming (if required) and joint detail, the ICF surface is ready for the application of MEL-ROL or MEL-ROL LM. Apply the product as outlined in the applications directions listed previously. When using MEL-ROL, TERMINATION BAR is required to seal the top edge.

After proper priming (if required) and joint detail, the ICF surface is ready for the application of MEL-ROL or MEL-ROL LM. Apply the product as outlined in the applications directions listed previously. When using MEL-ROL, TERMINATION BAR is required to seal the top edge.

SPRAYER EQUIPMENT

Extensive field testing has shown that the **Graco GH 833 Big Rig** or **Hydra Max 350** (now obsolete) sprayers work best for spraying of the water-based MEL-ROL LM and MEL-ROL LM (ALL SEASON) products. We are not aware of



any other types of sprayers being used successfully with our products. Initially, we had used the **Gmax 7900 Roof Rig**, but we have found that the pressures (4000 psi) attained by the **Graco GH 833 Big Rig** and **Hydra Max 350** units yield more consistent, trouble-free results. The **Graco GH 833 Big Rig** and **Hydra Max 350 units** are capable of a 3.5 – 4.0 gal./min. (13.2-15.1 L/min.) output, compared to a 2.1 gal./min. (7.9 L/min.) for the **Gmax 7900 Roof Rig**. The water-based emulsion products are extremely shear sensitive and should **NOT** be applied through gear-type pumps or pressurized follower plate systems. These systems will cause the emulsions to break, which will then clog the equipment. MEL-ROL LM (ALL SEASON) is not shear sensitive and will remain stable when applied by most standard spray equipment.

The **Graco GH 833 Big Rig** unit come equipped with 100' of hose, a texture spray gun, and several tips. NOTE: The standpipe on the sprayer **MUST** be opened and checked for the presence of a filter element and plastic sleeve. These **MUST BOTH** be removed prior to use, as they will cause clogging.

Both the **Graco GH 833 Big Rig** and **Hydra Max 350** can be used for five-gal. pails or 55-gal. drums. Extensions on the pumps are able to create enough suction to allow material to be pulled from the top of a standing drum (or tote) of product. (An option available for the **Graco GH 833 Big Rig** allows the pump to be placed directly over a drum for improved pumping of thicker materials in cooler weather.)



EQUIPMENT

Hose -We have used up to 100' of hose with these products. (Longer lengths may work; possibly up to 150') The hose must be rated for use up to 4000 psi for these units. W. R. MEADOWS recommends using separate hoses specific to each material.

Spray Gun -The Graco heavy duty texture gun is required (part #241705). It does not contain a paint filter and works well for these products. Other Graco guns have not worked, as they contain a diverter pin in the spray nozzle that will constantly clog the gun.

Spray Tips -We have used the 0.051" (Graco 551,651) tip successfully for spraying and this is our preferred tip size for the MEL-ROL LM products.

APPLICATION

Priming -Priming of poured concrete substrates is recommended to minimize the potential for blistering of the membrane after it is applied and when exposed to direct sunlight. Once applied, the primer coat should be allowed to dry and be allowed to "warm up" while exposed to direct sunlight. Allowing the primer to be exposed to direct sunlight prior to the membrane application will allow the surface to "warm up" (due to the black color) and help "de-gas" the surface. This "de-gassing" releases the air/moisture vapors in the pores of the substrate, allowing them to expand and dissipate prior to the membrane application. If the primer is not exposed to direct sunlight for a sufficient time interval prior to membrane application, then blistering of the membrane may occur.

Primer Dilution/Application Rate - Dilute the water-based LM products 4-5 parts product to one part water. Apply



at 100-150 ft.²/gal. (2.4 – 3.6 m²/L) and allow to dry approximately one hour. MEL-ROL LM (ALL SEASON) does not need to be diluted and should also be applied at 100-150 ft.²/gal. (2.4 – 3.6 m²/L)

APPLICATION - MEMBRANE

Spray-Several coats may be required to obtain the recommended thickness without excessive running or slumping of the wet membrane in hot weather. Allow the first coat to dry approximately one hour before application of the second coat.

NOTE: MEL-ROL LM can be sprayed easily when the material temperature is 40°F (4.4° C) or above.

The material temperature of MEL-ROL LM (ALL SEASON) should be 60° F (15.6° C) or above to be successfully sprayed. These products become quite thick and more difficult to spray as temperatures fall below 60° F. (15.6° C) The ALL SEASON products should be stored at 60° F (15.6° C) or above prior to use, and the containers should be kept in a heated enclosure at the jobsite during cold weather.

Roller-Material can be roller applied if a ¾" (19.05 mm) minimum nap roller is used. Several coats will typically be required to obtain the desired thickness. Allow the first coat to dry thoroughly before second coat is applied. Foam-type rollers or shorter naps should not be used, as they will simply slide on the substrate. Rinse and store all rollers used for water-based products in a container of water when not in use. This is necessary, as the material will cure very quickly on the rollers if allowed to "dry out." If this does occur, the rollers will need to be discarded or cleaned with solvent and allowed to dry thoroughly prior to re-use.



EQUIPMENT CLEANUP

MEL-ROL LM:

1) Solvents must **NOT** come in contact with the liquid emulsion MEL-ROL LM while in the sprayer, as they will immediately break the emulsion and plug up the entire sprayer system.

2) Before starting to spray, the sprayer **MUST** be flushed with clean water.

3) When spraying is complete, material must **NOT** be left in the pump, lines or gun as the MEL-ROL LM emulsion will quickly begin to break and cure in the equipment. When finished spraying, **WATER ONLY** should be **PROMPTLY** flushed through the system until pump and hose run clear. Do **NOT** add soap to the flush water, as it too will break the emulsion. "Simple Green" cleaner is the only cleaner found that can be used successfully.

4) When spraying is complete, solvents, including xylene, toluene, mineral spirits, paint thinner, gasoline, etc., must **NOT** be used for the **INITIAL** flushing of the system. These solvents will break the emulsion and clog the system.

5) Aromatic solvents (xylene or toluene) are recommended for the **FINAL** flushing **AFTER** water has been flushed through the pump and lines. If solvent is pumped through the system after being flushed with water, all equipment **MUST** be flushed with water before spraying emulsion. All traces of solvent **MUST** be completely removed.



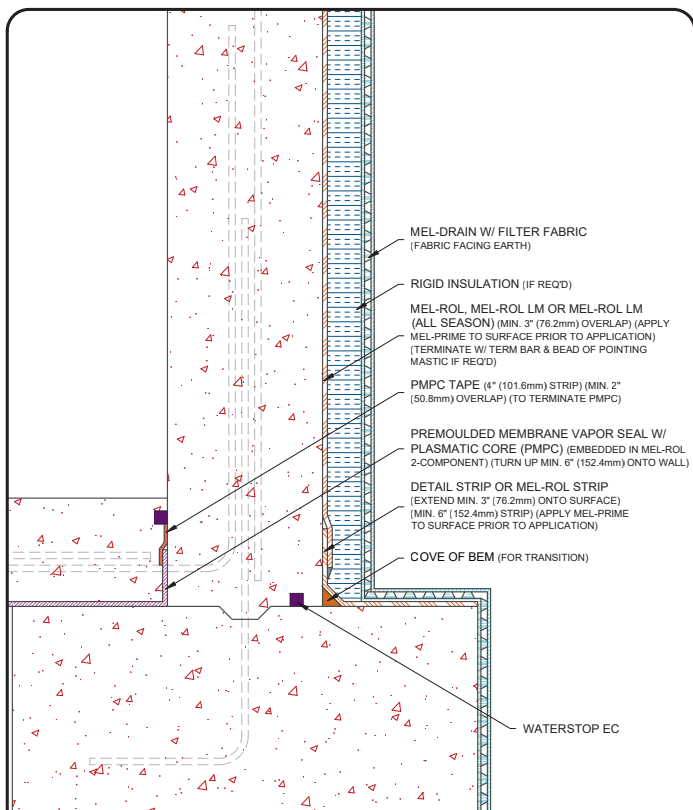
Note: Aromatic solvent may be used to soak and clean the pump housing, gun, and tips. Solvents can be left in the sprayer for short durations (days) to aid in cleaning of the system. Solvents left in the sprayer for extended periods may begin to degrade the seals and hose. Again, all traces of solvent **MUST** be removed prior to using the equipment with the water-based emulsion products.

MEL-ROL LM (ALL SEASON):

1) While MEL-ROL LM (ALL SEASON) is stable in the sprayer, once spraying is complete, solvents should be flushed through the system until pump and hose run clear. Aromatic solvents (xylene or toluene) work best, but mineral spirits, paint thinner, etc., can also be used. Solvents can be left in the sprayer for short periods of time, but should NOT be allowed to remain in the sprayer for extended periods of time, as they may begin to degrade the seals and hose.

2) When switching from a solvent-based to a water-based product: After flushing with solvent, water **MUST** be flushed through the **ENTIRE** system until all traces of solvent have been removed. When beginning to spray a water-based emulsion product, if **ANY** solvent remains in the sprayer, the pump, hose, gun, and spray tips **WILL CLOG** and need to be cleaned out.





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300 INDUSTRIAL DR.
HAMPSHIRE, IL 60140-0338
1-800-342-5978

TITLE:

MEL-ROL&PMPC TURNED UP SLAB- ON FOOTING

(STR. SLAB) (BELOW WATER TABLE) (INSULATION)

SCALE:

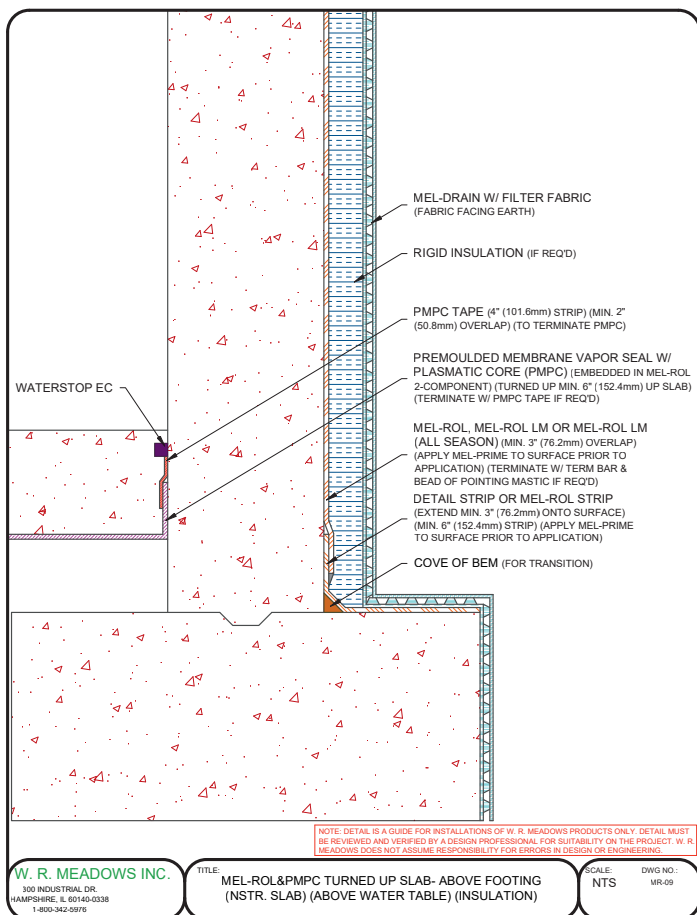
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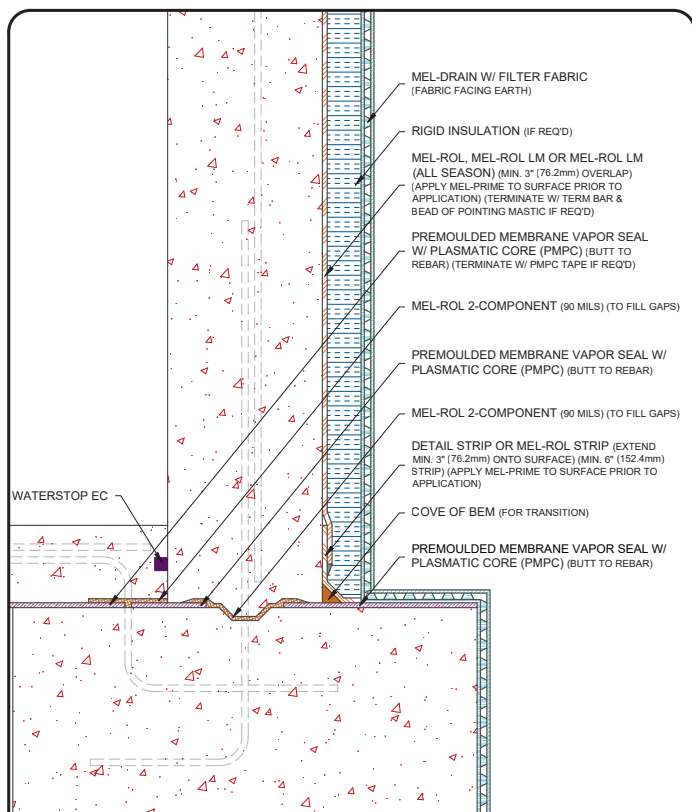
DWG NO.:

MR-03

WATERPROOFING & VAPORPROOFING







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1-800-342-5976

TITLE:
MEL-ROL&PMPC @ FOUNDATION BASE- TO FOOTING- PMPC ON
FOOTING (STR. SLAB) (BELOW WATER TABLE) (INSULATION)

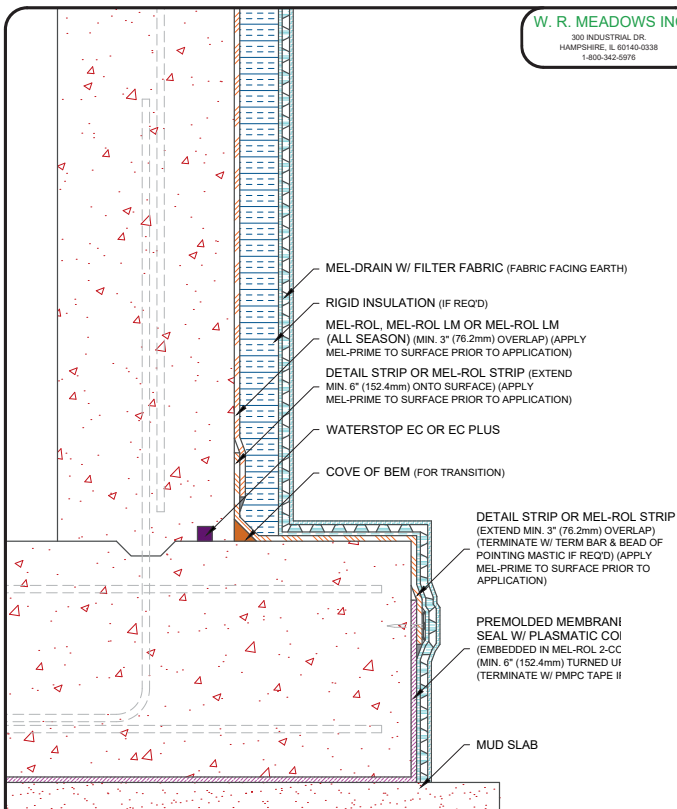
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DWG NO.:
MR-17

WATERPROOFING & VAPORPROOFING



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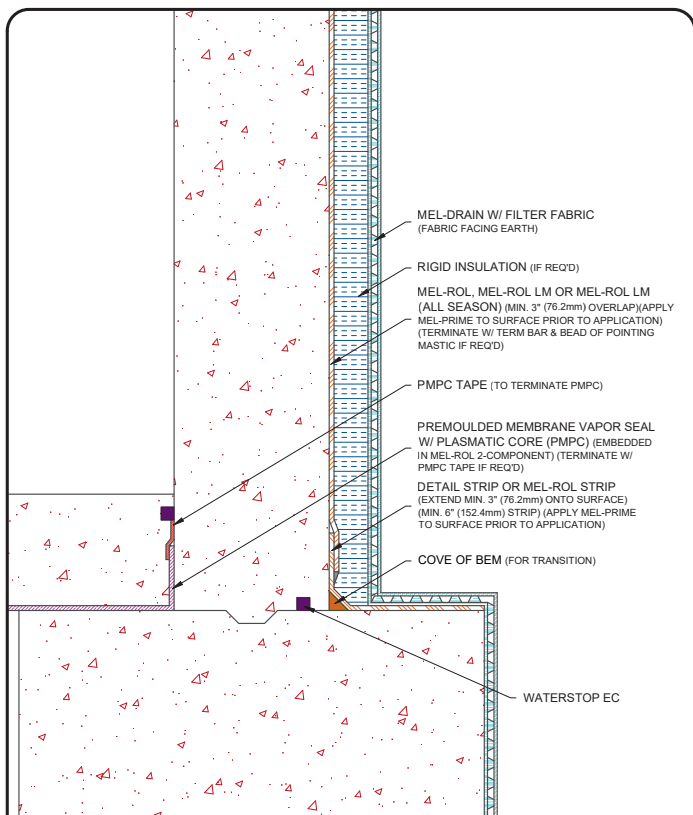
TITLE:

MEL-ROL&PMPC @ FOUNDATION BASE- PMPC UP FOOTING
(STR. SLAB) (ABOVE WATER TABLE) (INSULATION)

SCALE:
NTSDWG NO.:
MR-07

WATERPROOFING & VAPORPROOFING





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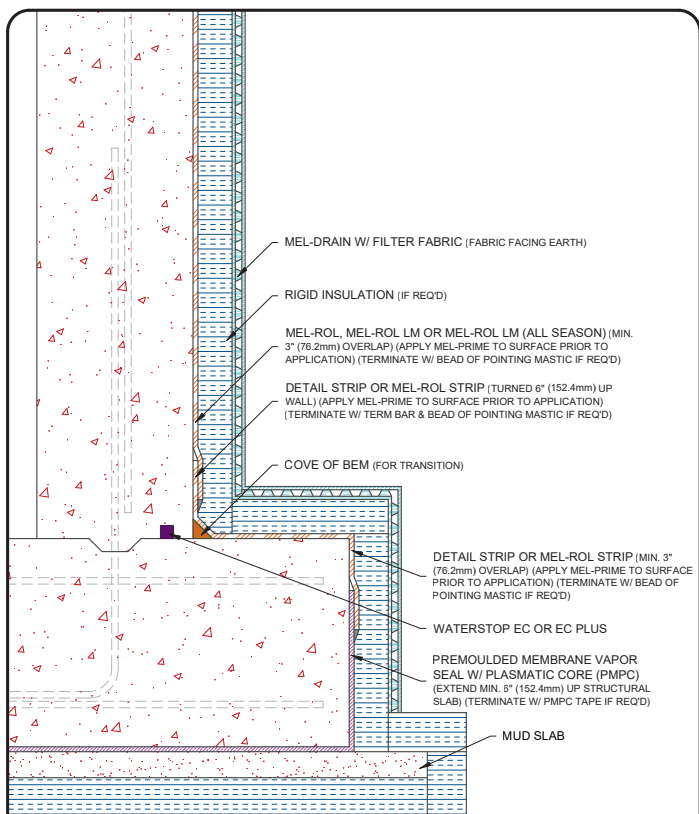
MEL-ROL&PMPC @ FOUNDATION BASE- ON FOOTING
(STR. SLAB) (BELOW WATER TABLE) (INSULATION)

SCALE:
NTS

DWG NO.:
MR-01

WATER PROOFING & VAPORPROOFING





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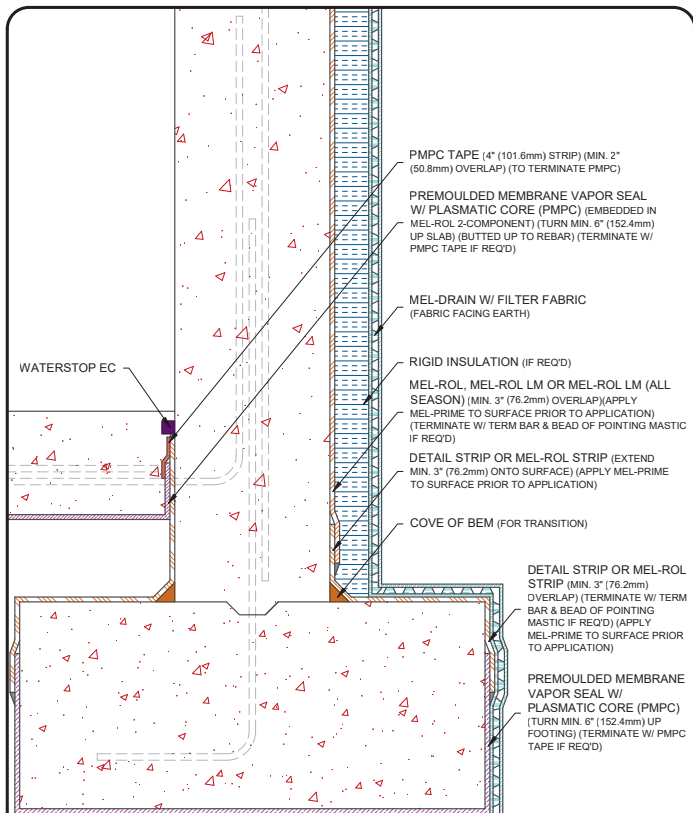
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HAMPSHIRE, IL 60140-0338
1-800-342-9976

TITLE: MEL-ROL&PMPC @ FOUNDATION BASE- MUD SLAB
(STR. SLAB) (ABOVE WATER TABLE) (INSULATION)

SCALE: NTS
DWG NO.: MR-06

WATERPROOFING & VAPORPROOFING





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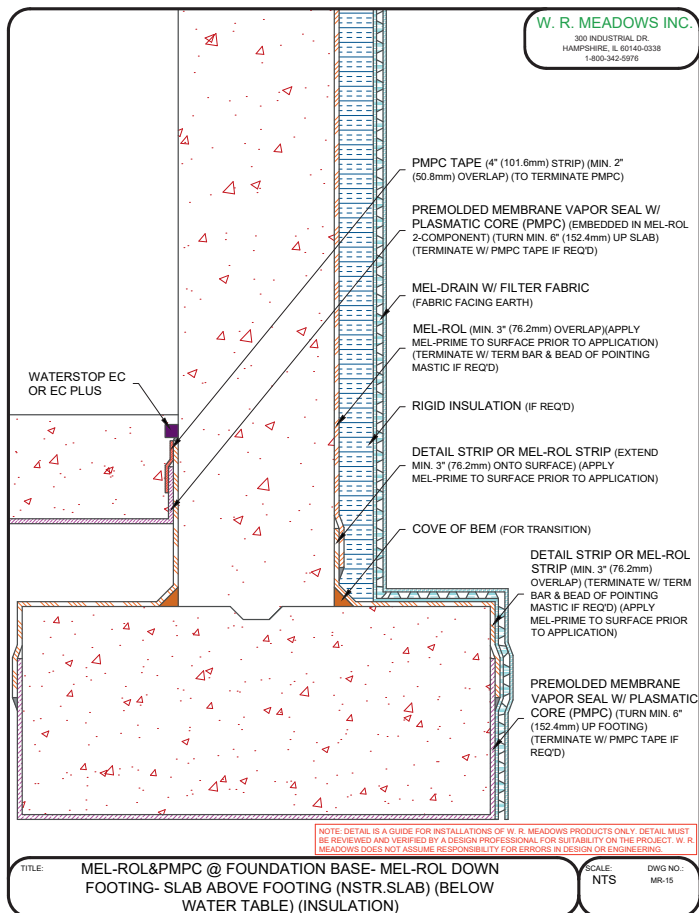
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DOWN FOOTING- SLAB ABOVE FOOTING (STR.
SLAB) (BELOW WATER TABLE) (INSULATION)

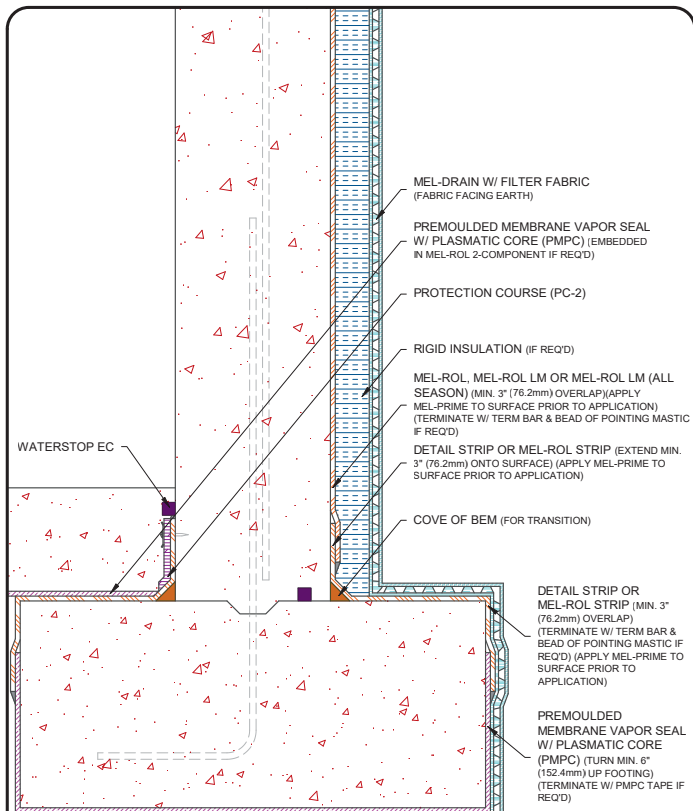
SCALE:
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DWG NO.:
MR-16

WATERPROOFING & VAPORPROOFING







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1-800-342-5978

TITLE:

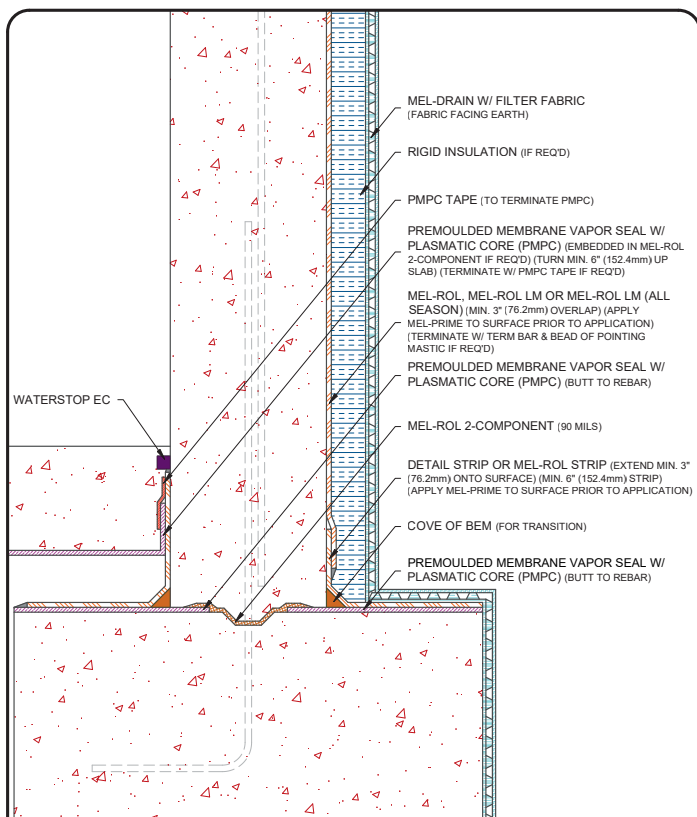
MEL-ROL&PMPC @ FOUNDATION BASE- MEL-ROL DOWN FOOTING (NSTR. SLAB) (BELOW WATER TABLE) (INSULATION)

SCALE:
NTS

DWG NO.:
MR-14

WATER PROOFING & VAPORPROOFING





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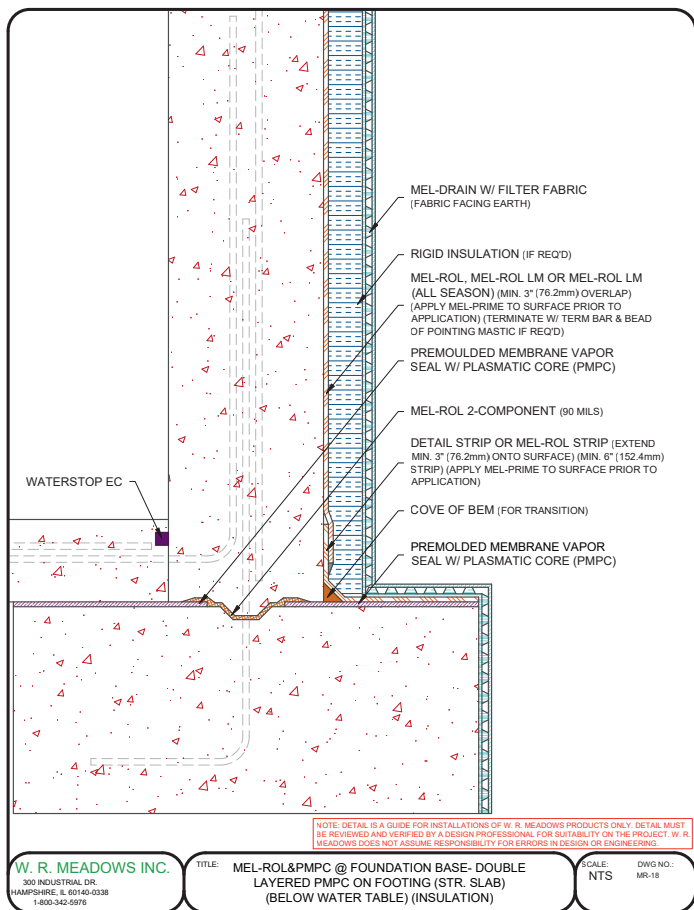
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SCALE: NTS

DWG NO.: MR-13

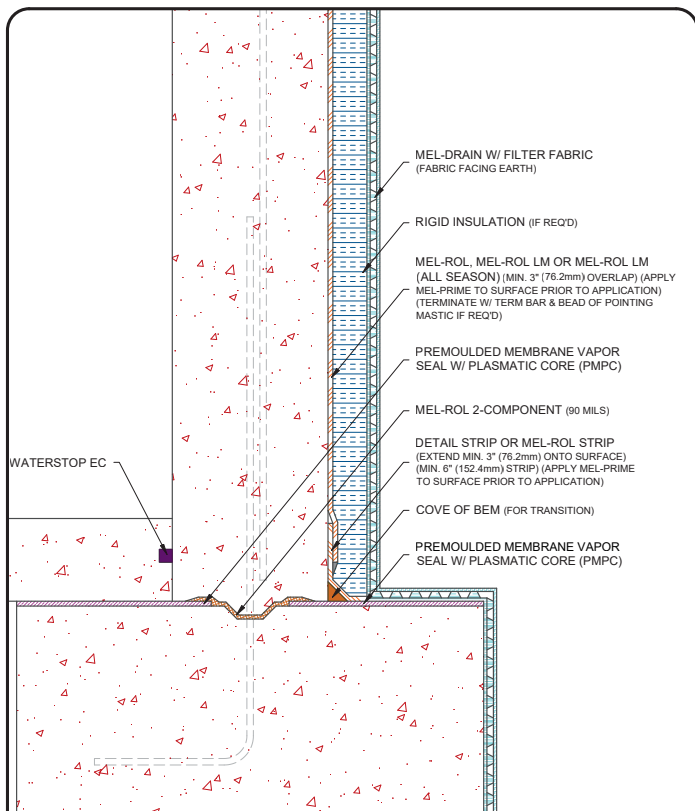
WATERPROOFING & VAPOR PROOFING





WATERPROOFING & VAPORPROOFING





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1-800-342-5976

TITLE:

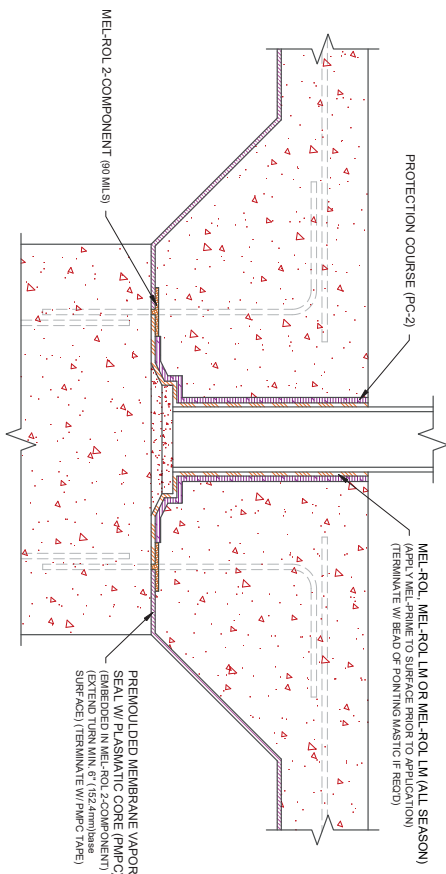
**MEL-ROL&PMPC @ FOUNDATION BASE- DOUBLE
LAYERED PMPC ON FOOTING (NSTR. SLAB)
(BELOW WATER TABLE) (INSULATION)**

SCALE:
NTS

DWG NO.:
MR-12

WATERPROOFING & VAPOR PROOFING





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1-800-342-5976

TITLE

MEL-ROL&PMPC @ COLUMN BASE: (STR. SLAB) (BELOW WATER TABLE)

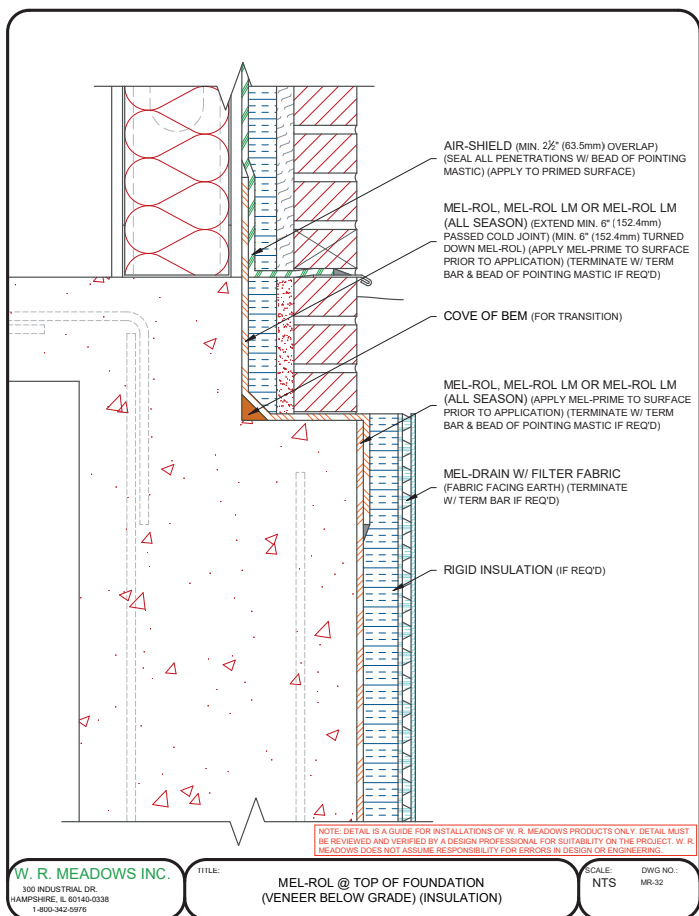
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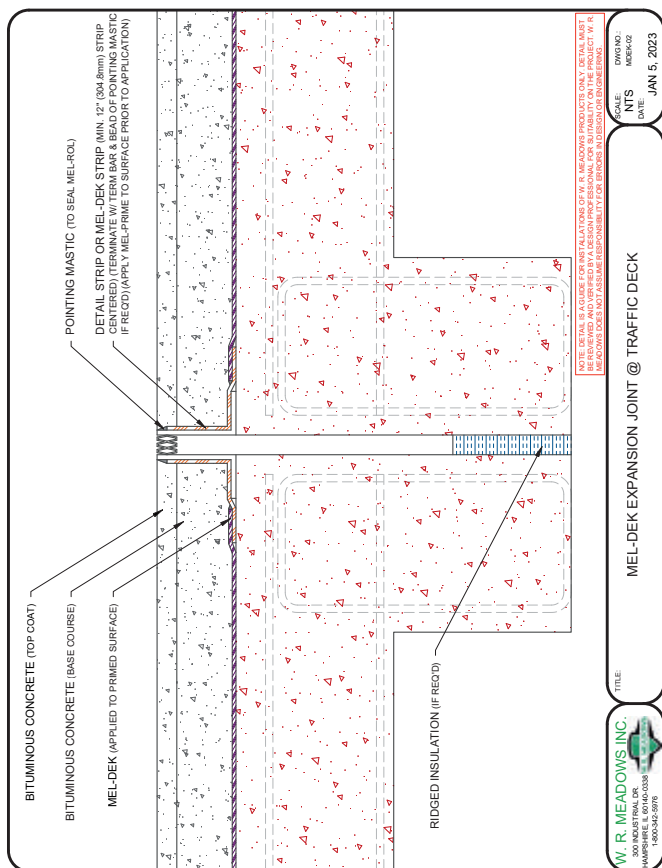
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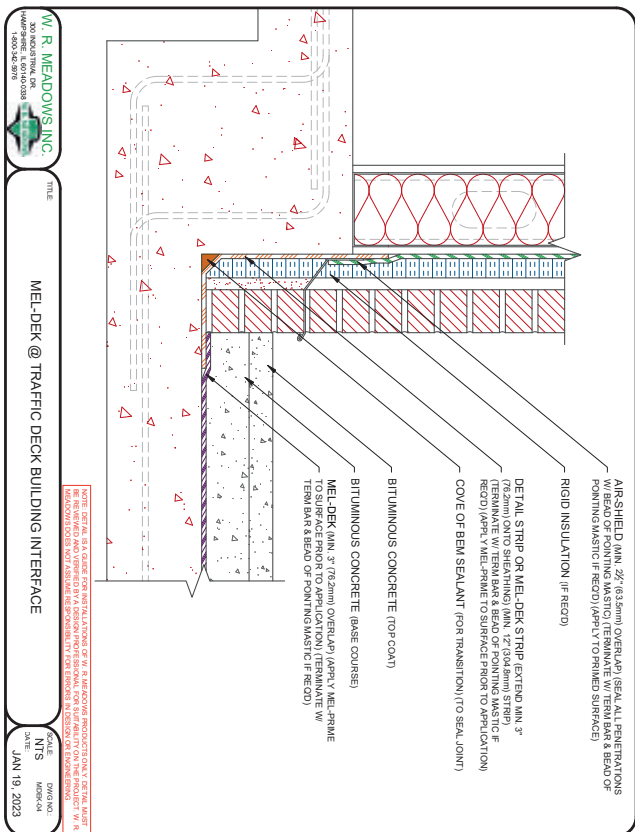
WATERPROOFING & VAPORPROOFING

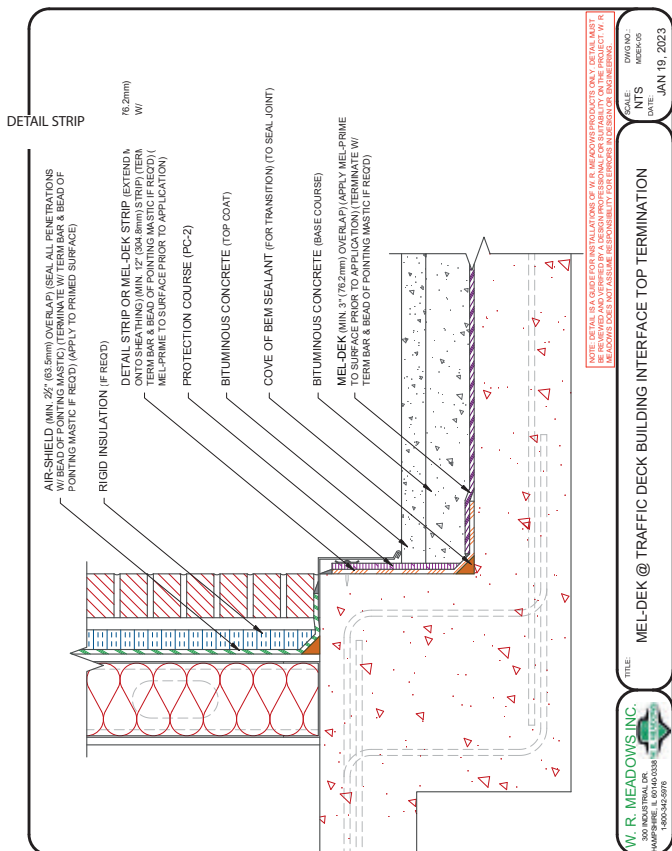


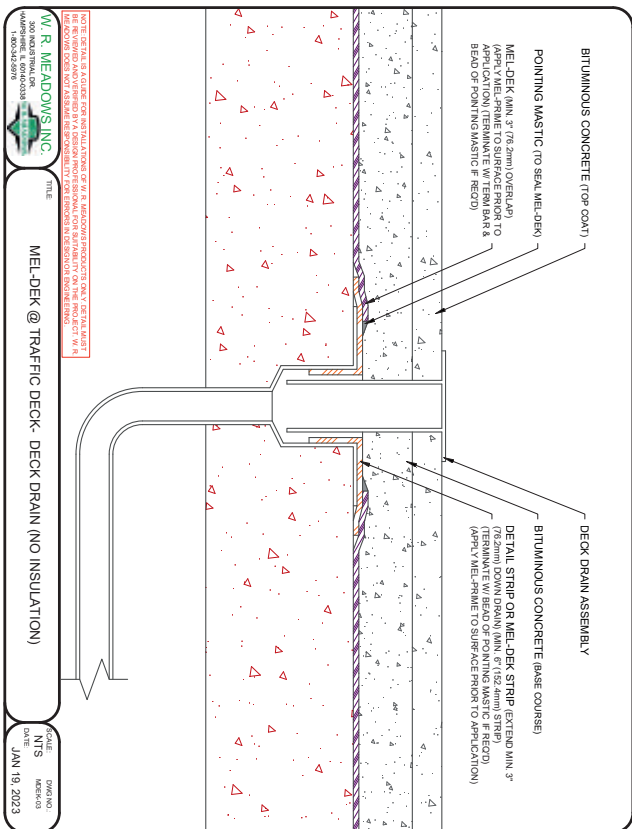


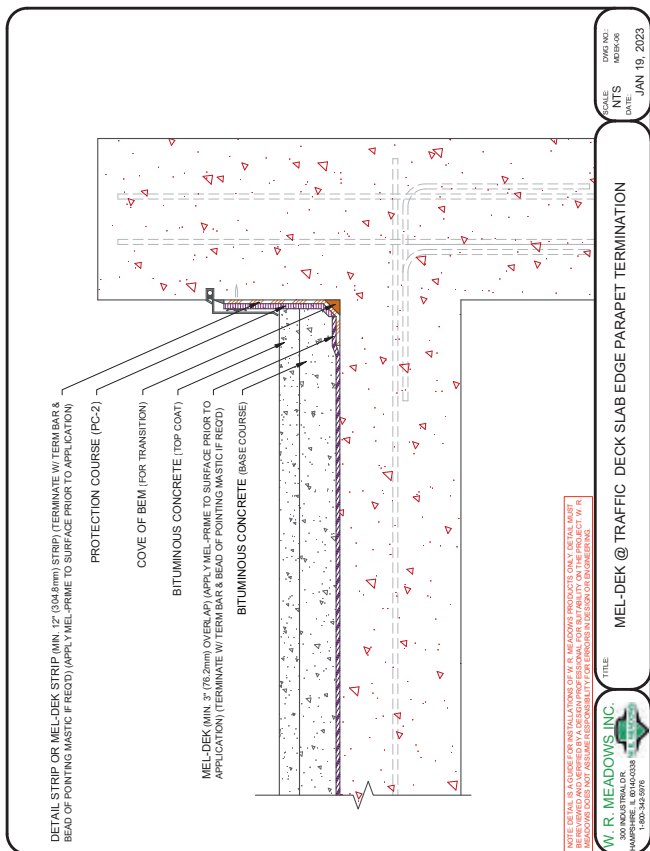


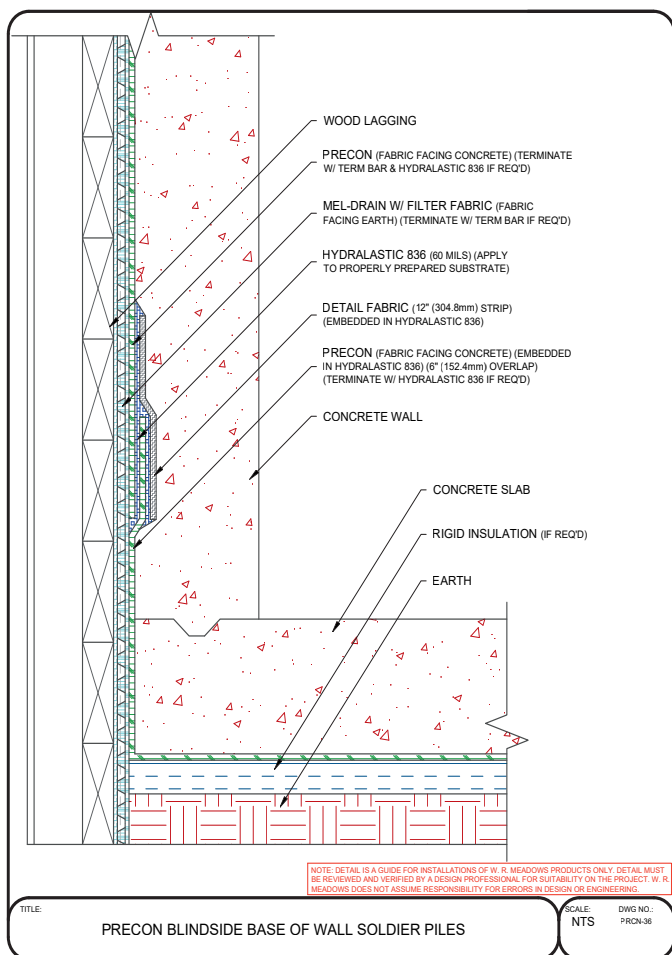


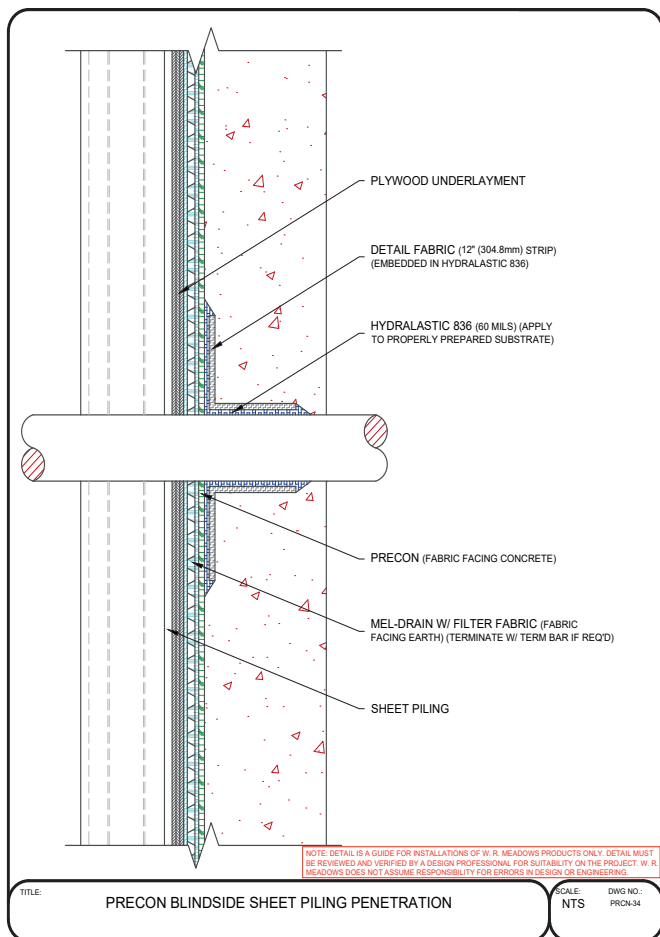


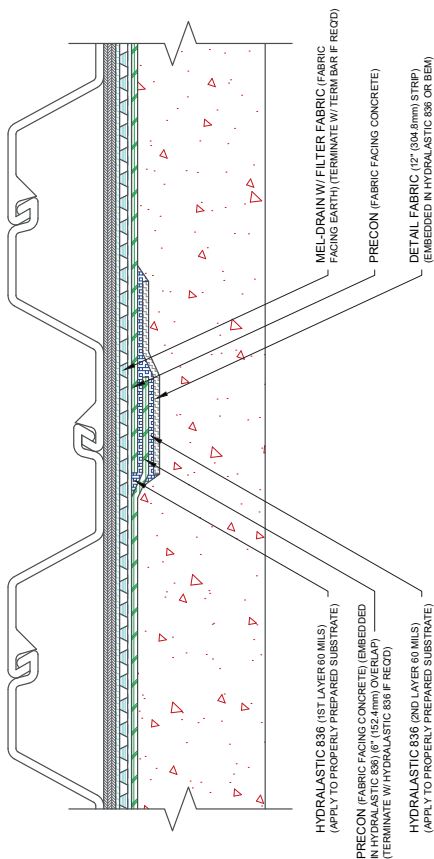












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TITLE:

PRECON BLINDSIDE SHEET PILING (PLANVIEW)

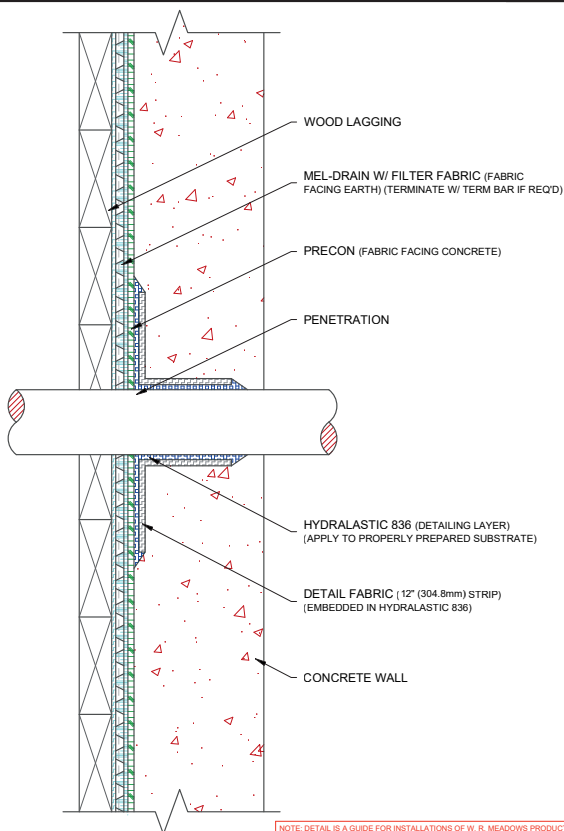
SCALE:

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DWG NO.:

PRQJ-31





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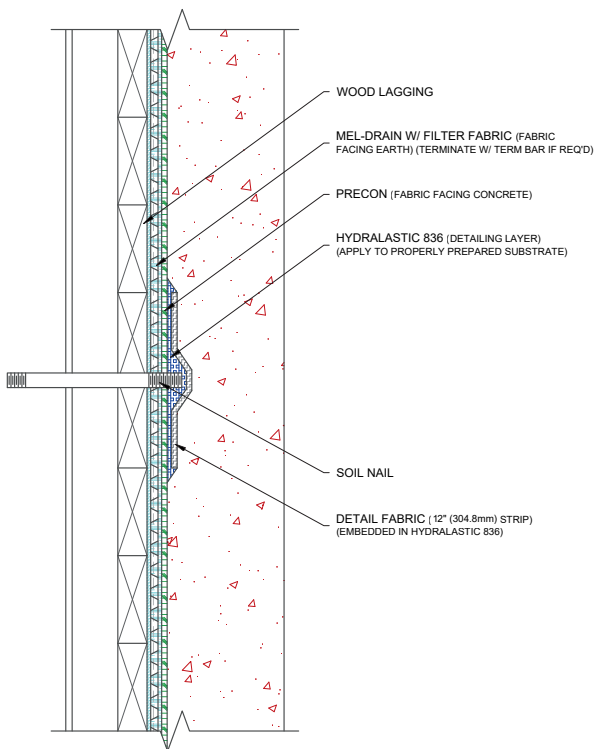
PRECON BLINDSIDE SOLDIER PILE PENETRATION

SCALE:
NTS

DWG NO.:
PRCN-37

WATERPROOFING & VAPORPROOFING





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TITLE:

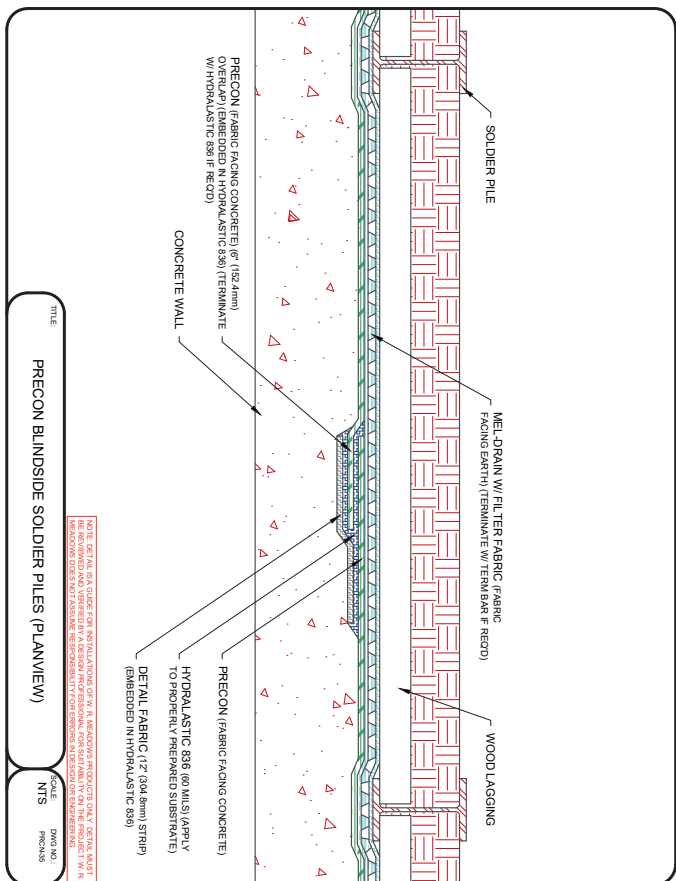
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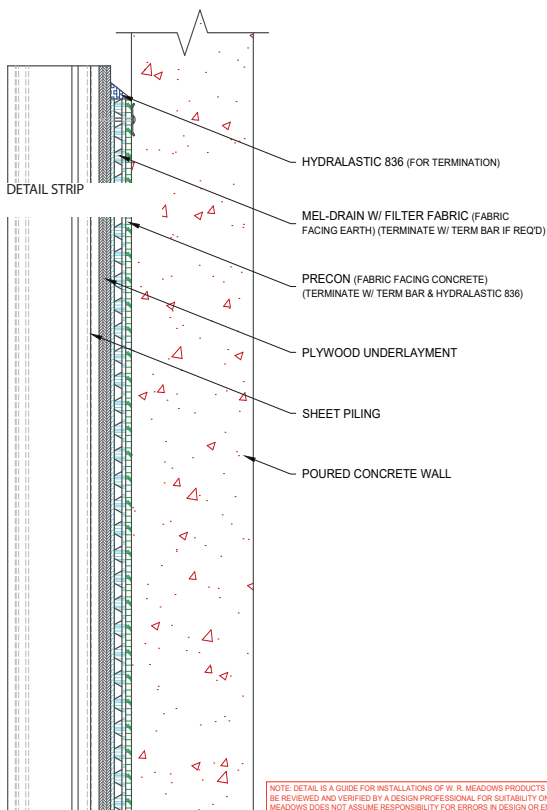
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DWG NO.:
PRCN-38

WATERPROOFING & VAPORPROOFING



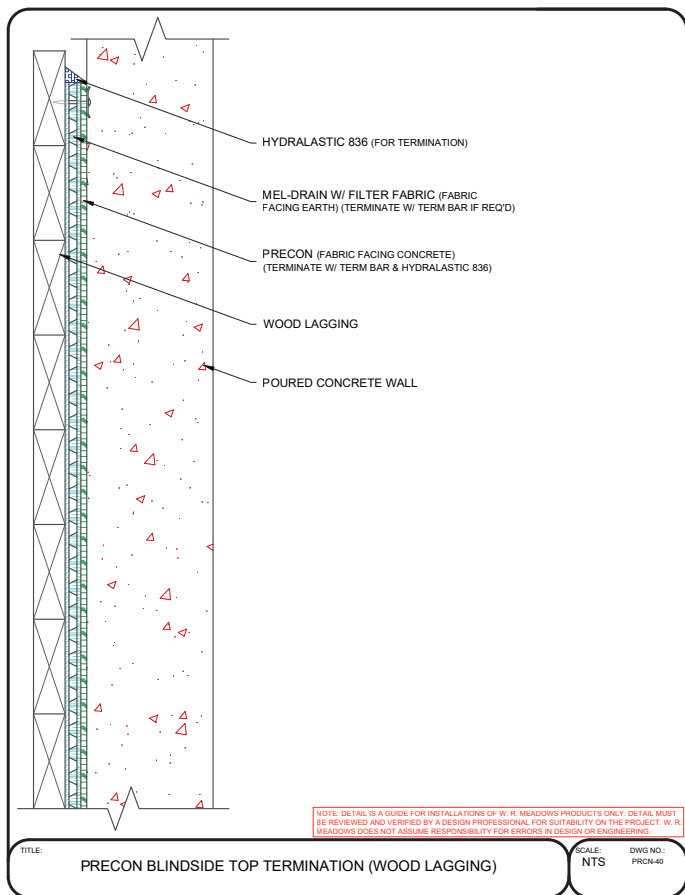


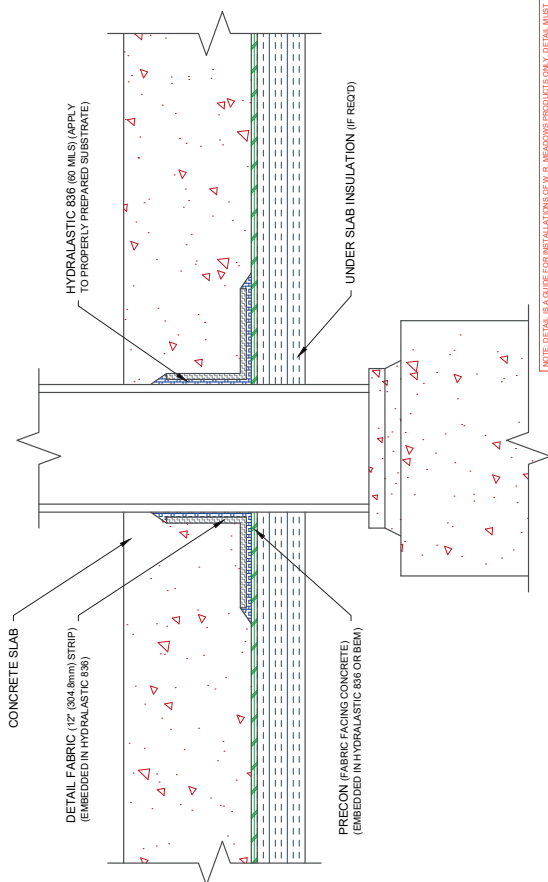


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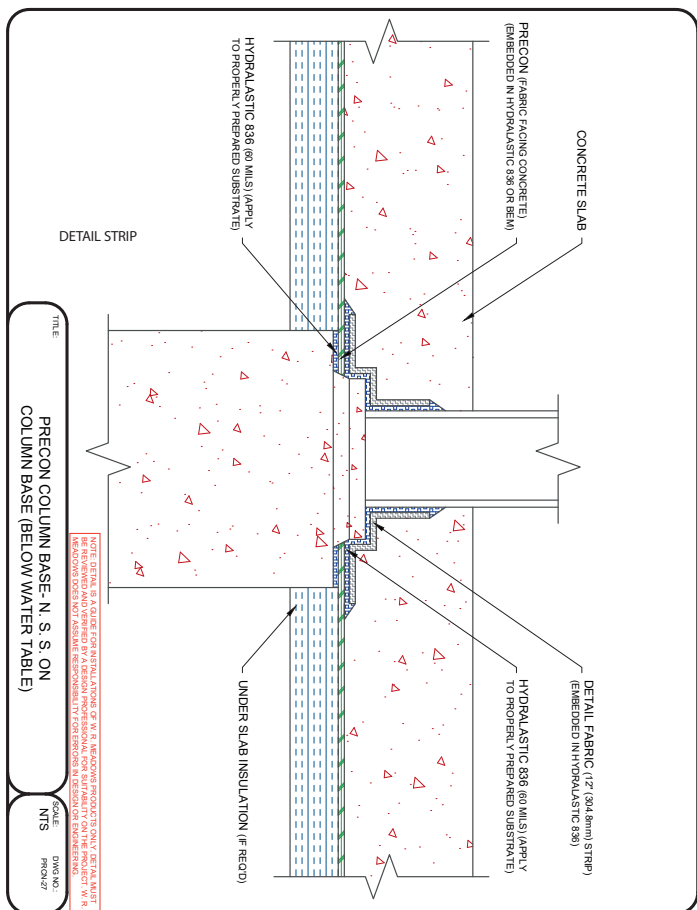
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PRCN-32

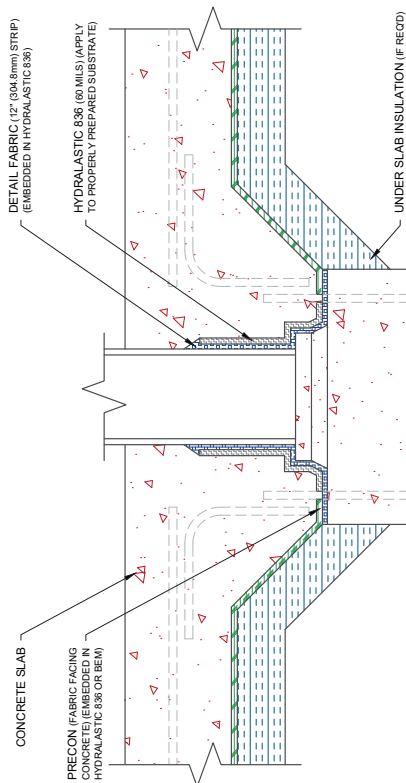




TITLE

PRECON COLUMN BASE- N. S. S. ABOVE
COLUMN BASE (BELOW WATER TABLE)SCALE:
NTSDWG. NO.
PRC01/26





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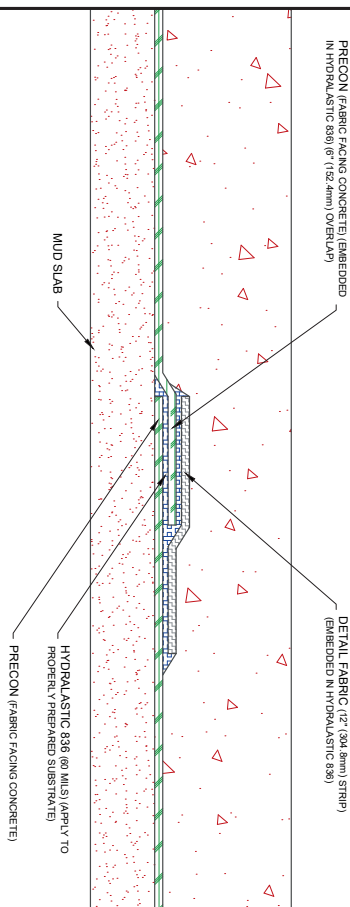
TITLE:

PRECON COLUMN BASE- S. S. ON
GRADE (BELOW WATER TABLE)

SCALE:
NTS

DWG NO.:
PRCH-30





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TITLE:

PRECON END OF SHEET OVERLAP- SLAB ON GRADE

SCALE:

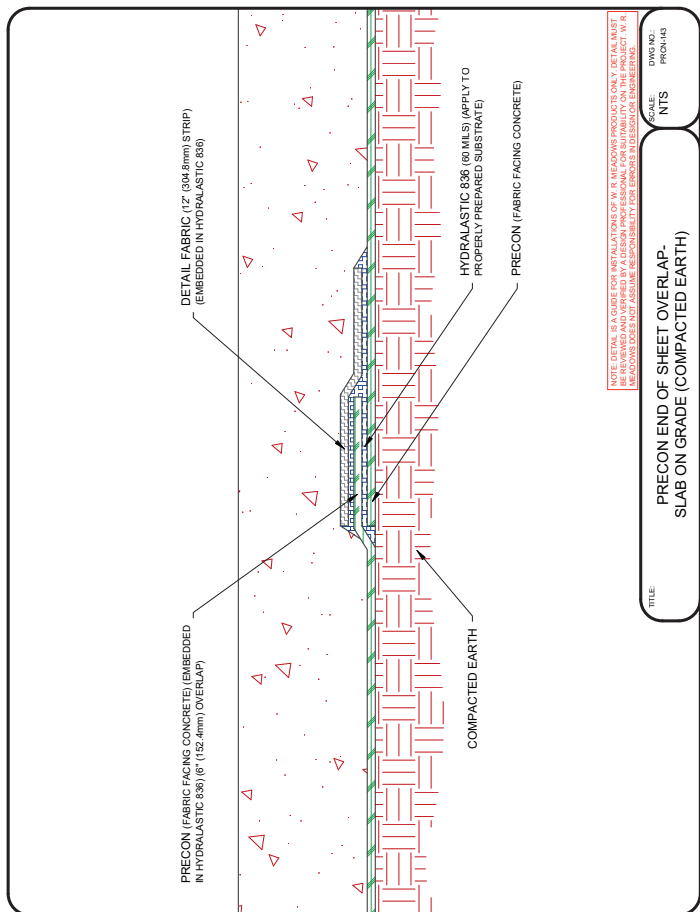
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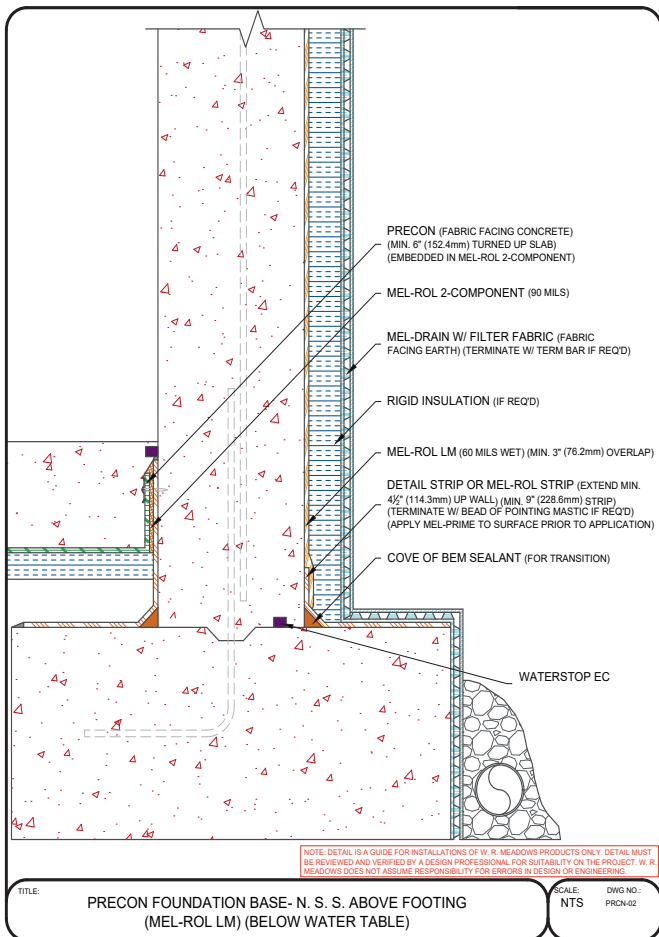
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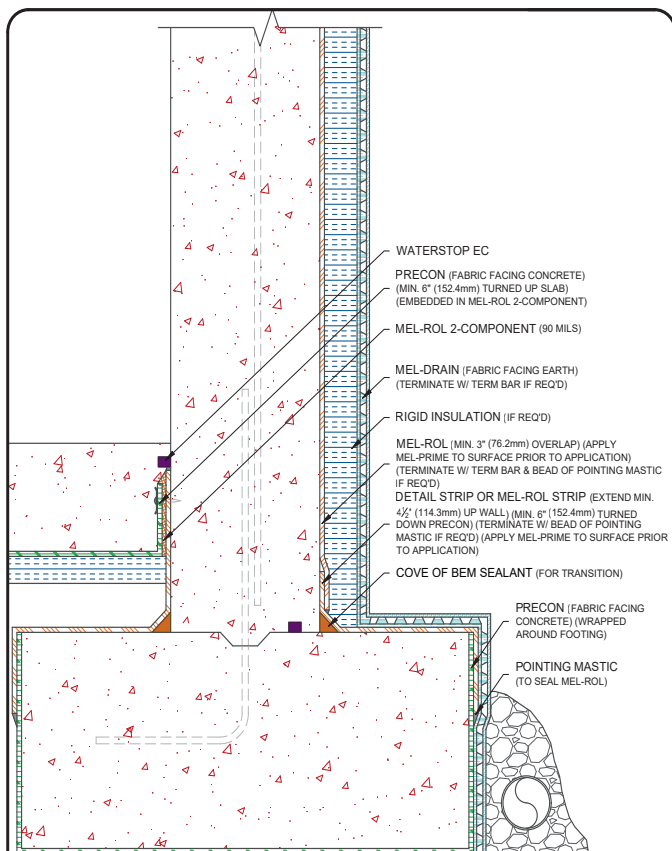
PRC-22

WATERPROOFING & VAPORPROOFING









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TITLE:

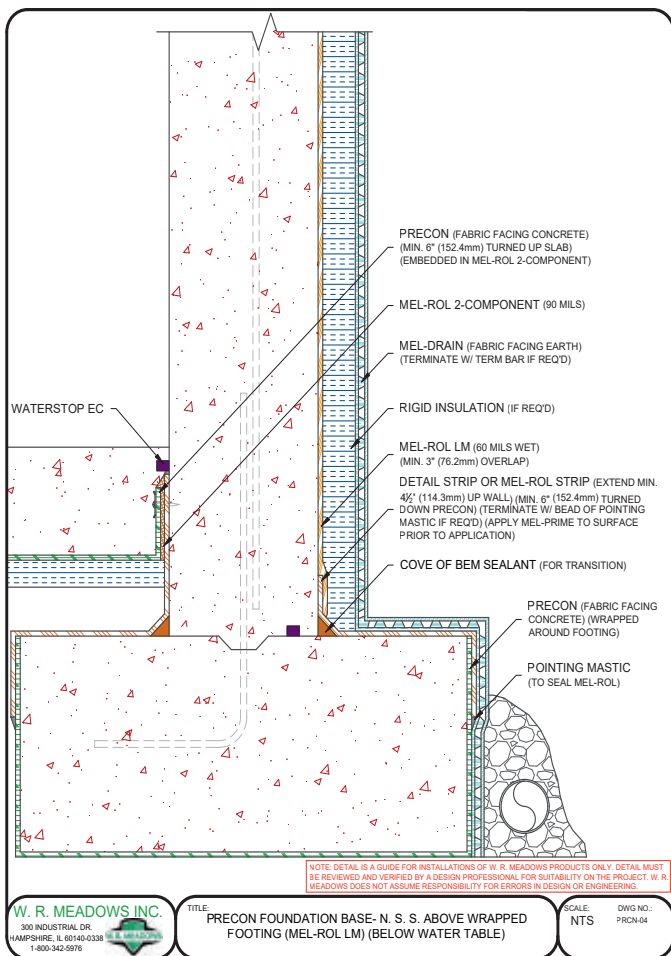
**PRECON FOUNDATION BASE- N. S. S. ABOVE WRAPPED
FOOTING (MEL-ROL) (BELOW WATER TABLE)**

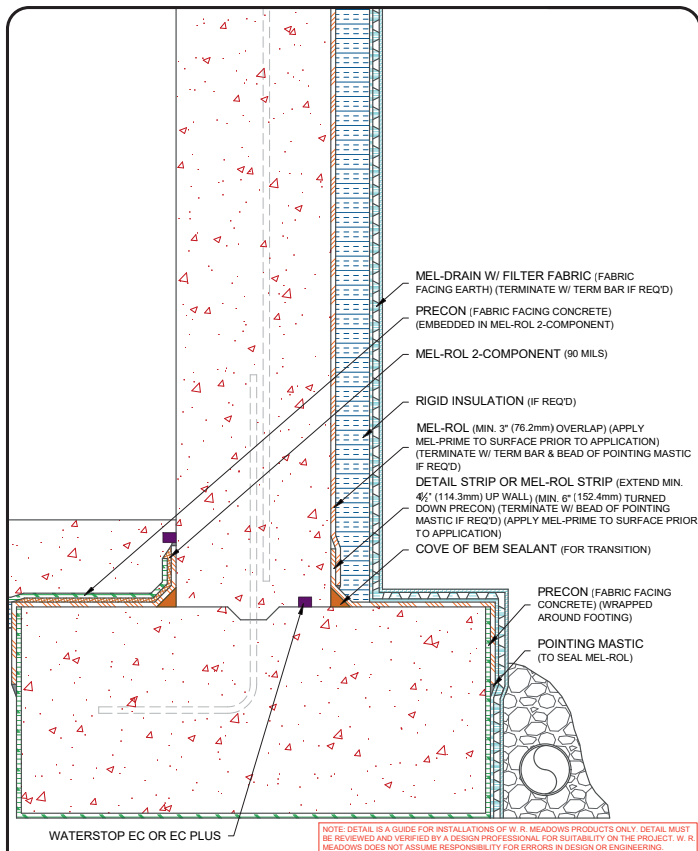
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DWG NO.:
PRCN-07

WATERPROOFING & VAPOR PROOFING







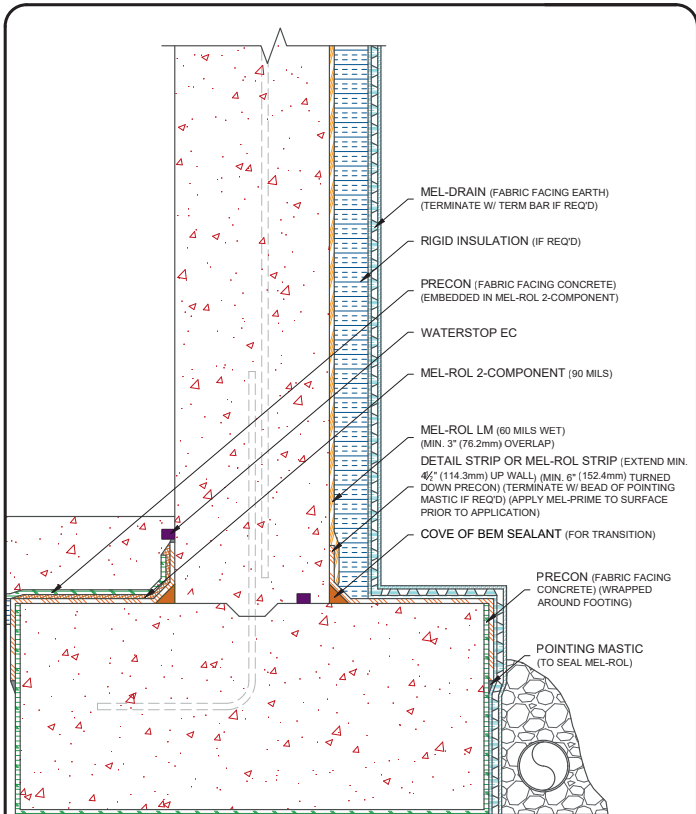
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PRECON FOUNDATION BASE- N. S. S. ON WRAPPED
FOOTING (MEL-ROL) (BELOW WATER TABLE)

SCALE:
NTSDWG NO.:
PRCN-06

WATERPROOFING & VAPOOROOFING





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TITLE:

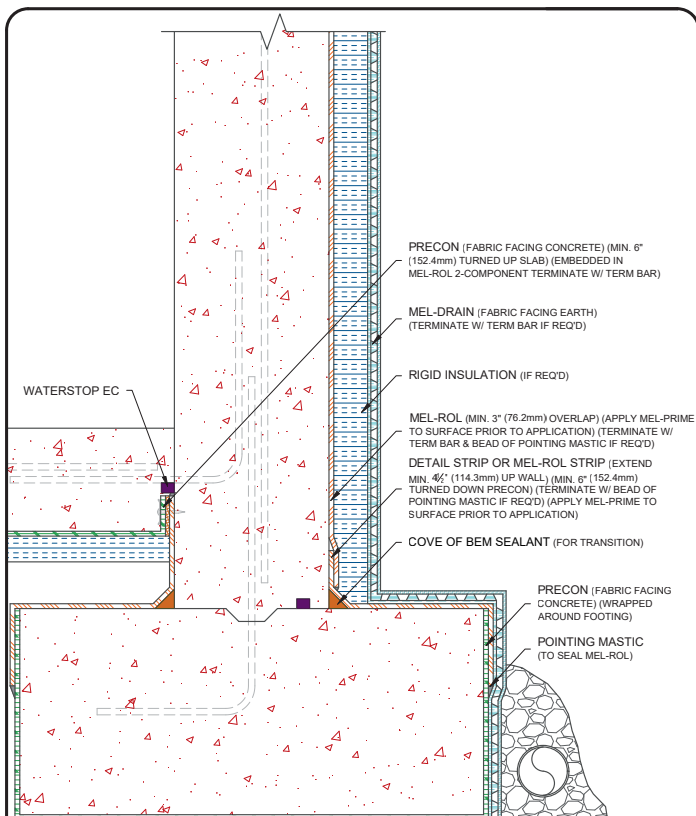
**PRECON FOUNDATION BASE- N. S. S. ON WRAPPED
FOOTING (MEL-ROL LM) (BELOW WATER TABLE)**

SCALE:
NTS

DWG NO.:
PRCN-03

WATERPROOFING & VAPORPROOFING





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1-800-342-6976



TITLE:

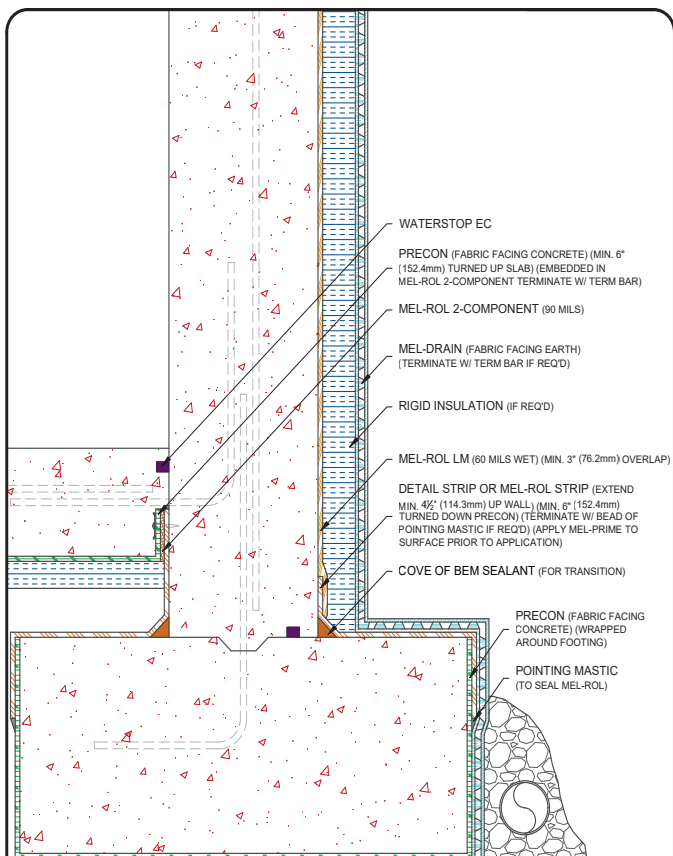
**PRECON FOUNDATION BASE- S. S. ABOVE WRAPPED
FOOTING (MEL-ROL) (BELOW WATER TABLE)**

SCALE:
NTS

DWG NO.:
PRCN-14

WATERPROOFING & VAPOUR PROOFING





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TITLE:

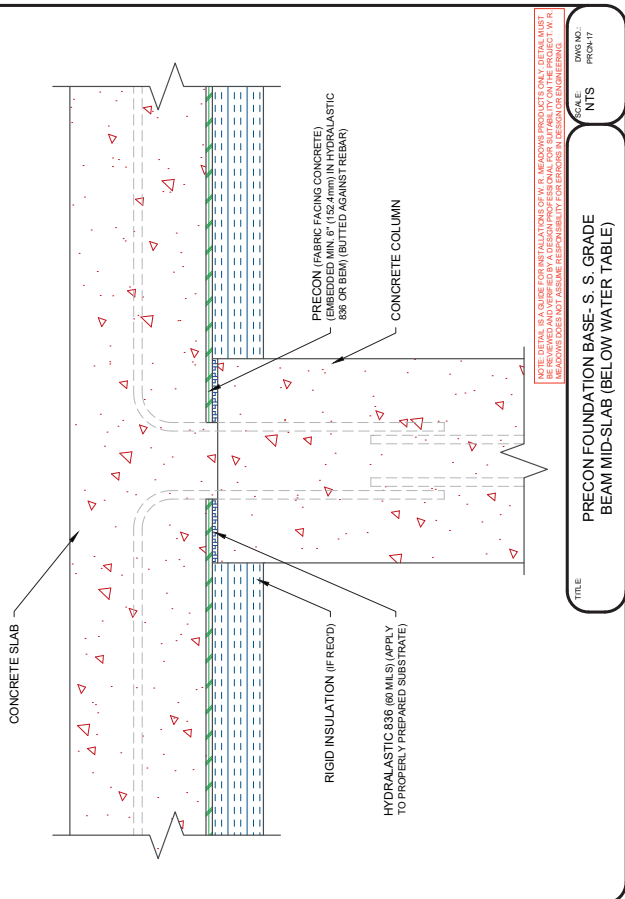
PRECON FOUNDATION BASE- S. S. ABOVE WRAPPED
FOOTING (MEL-ROL LM) (BELOW WATER TABLE)

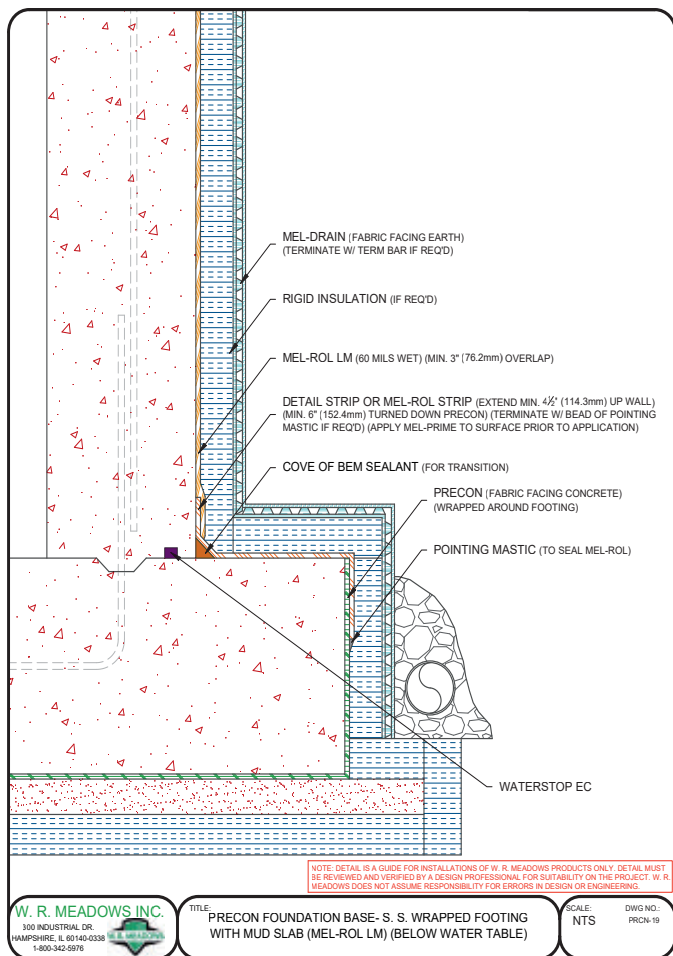
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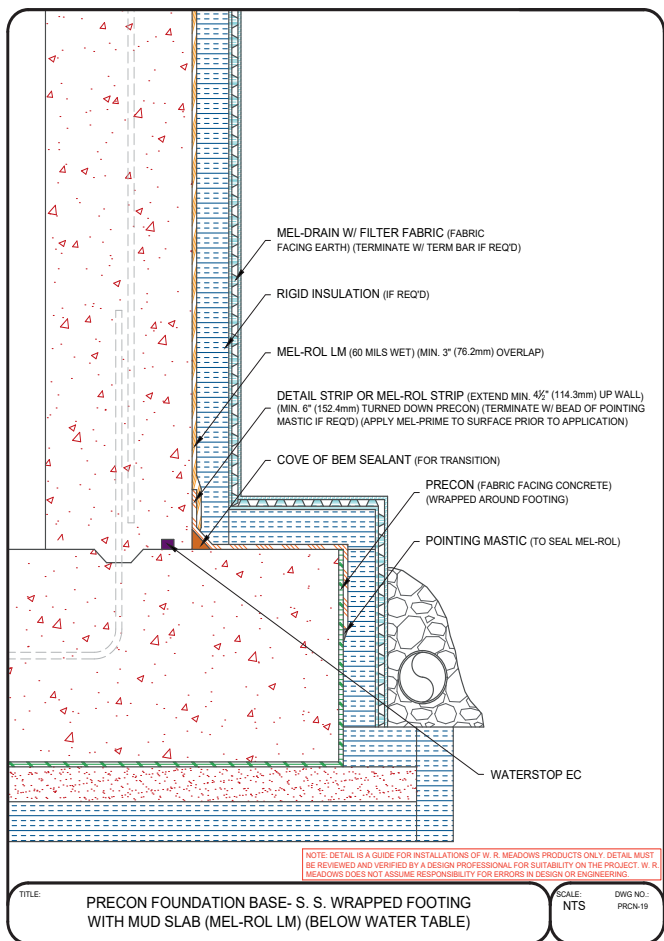
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PRCN-11

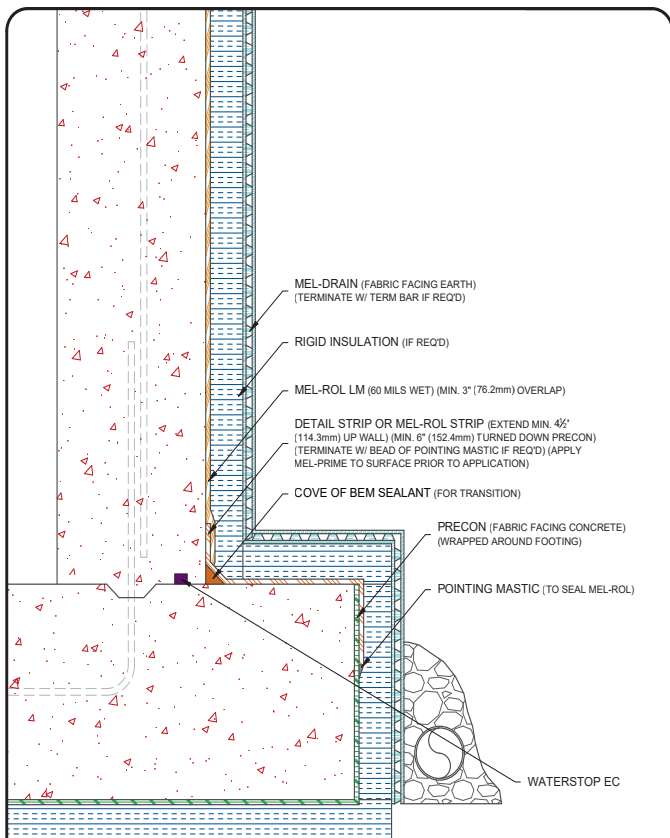
WATERPROOFING & VAPORPROOFING











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W. R. MEADOWS INC.
300 INDUSTRIAL DR.
HAMPSHIRE, IL 60140-0338
1-800-342-5976



TITLE:

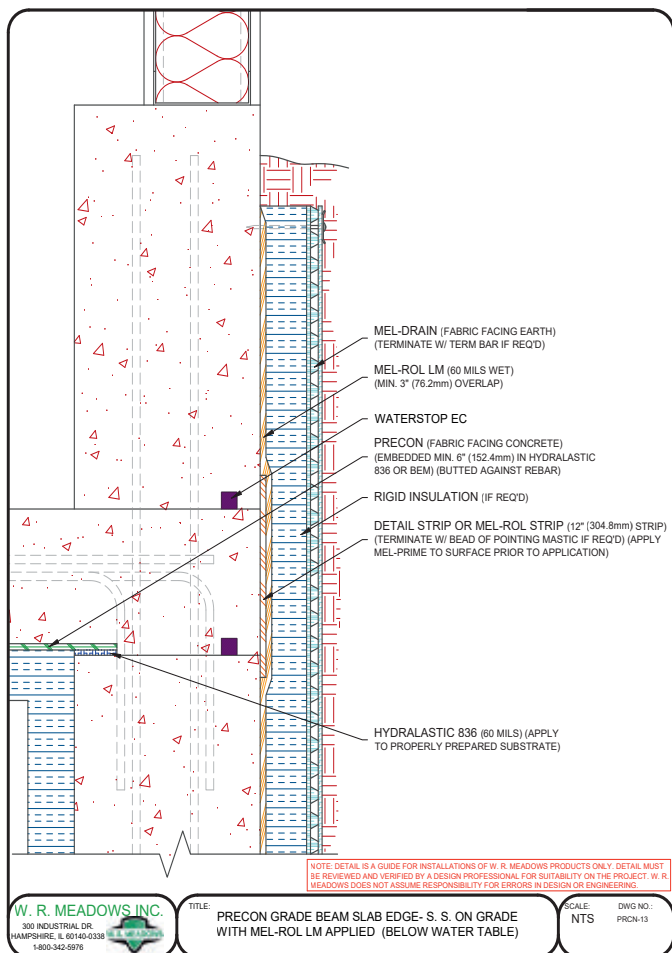
**PRECON FOUNDATION BASE- S. S. WRAPPED FOOTING
NO MUD SLAB (MEL-ROL LM) (BELOW WATER TABLE)**

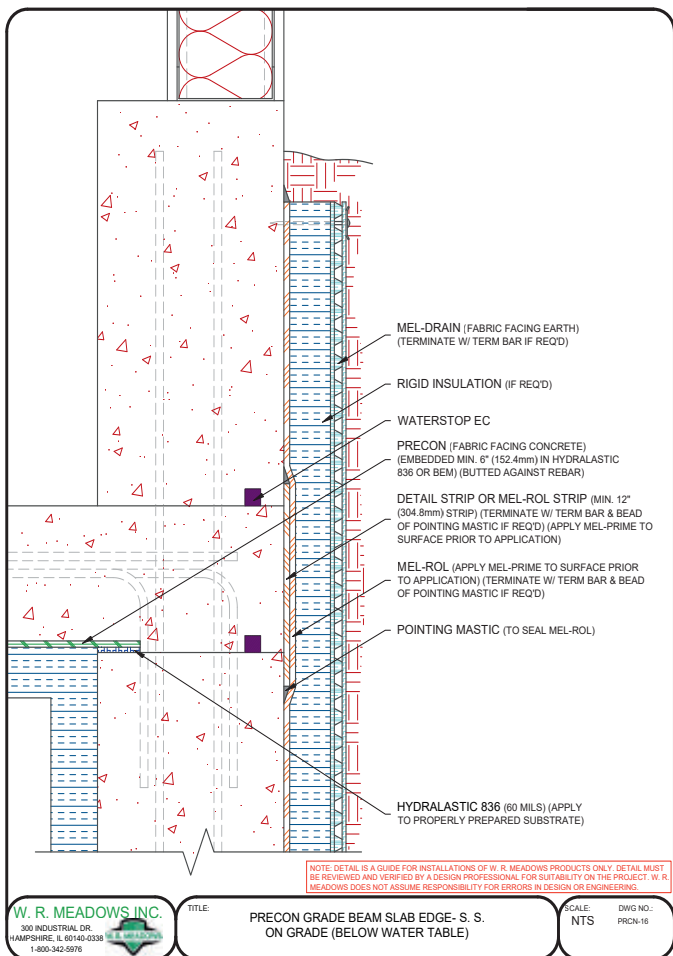
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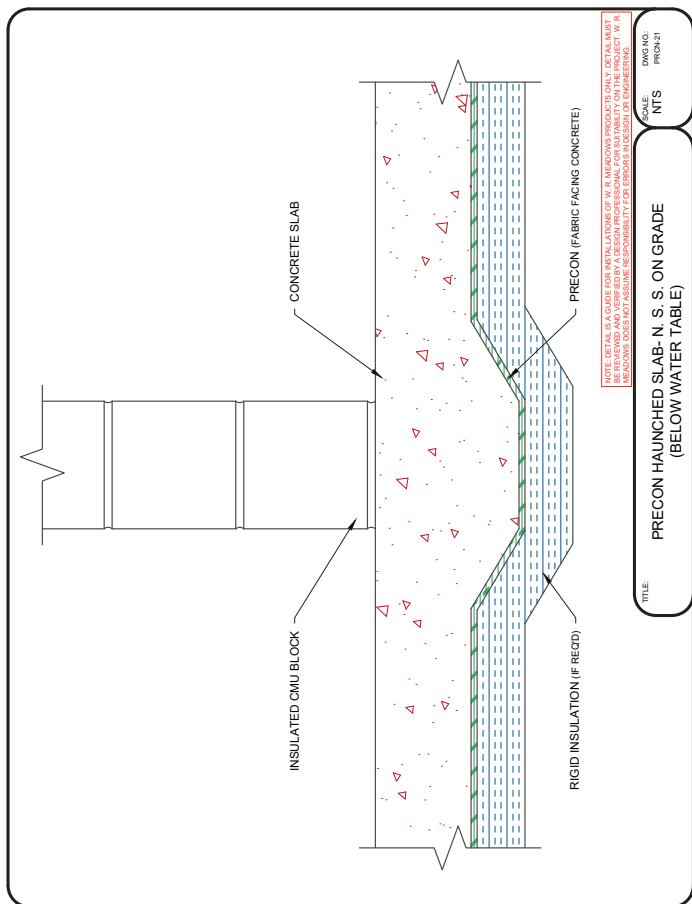
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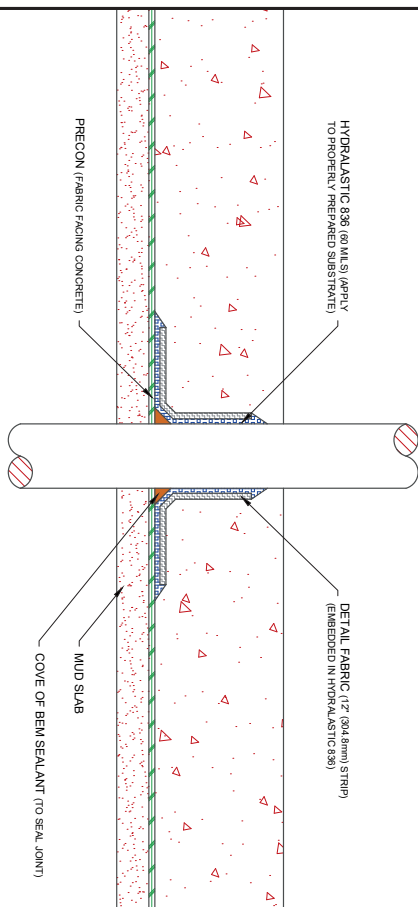
WATERPROOFING & VAPOR PROOFING











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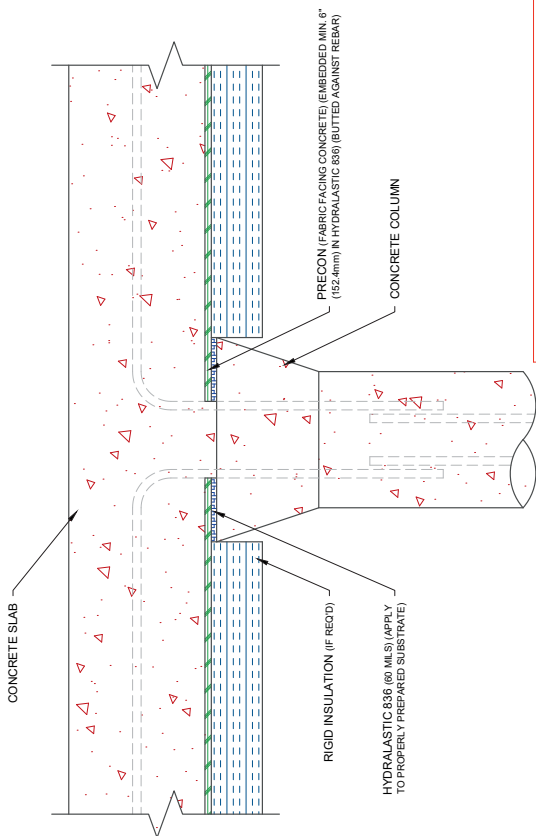
PRECON MEMBRANE PENETRATION

SCALE:

NTS

DWG NO.:
PRCN24





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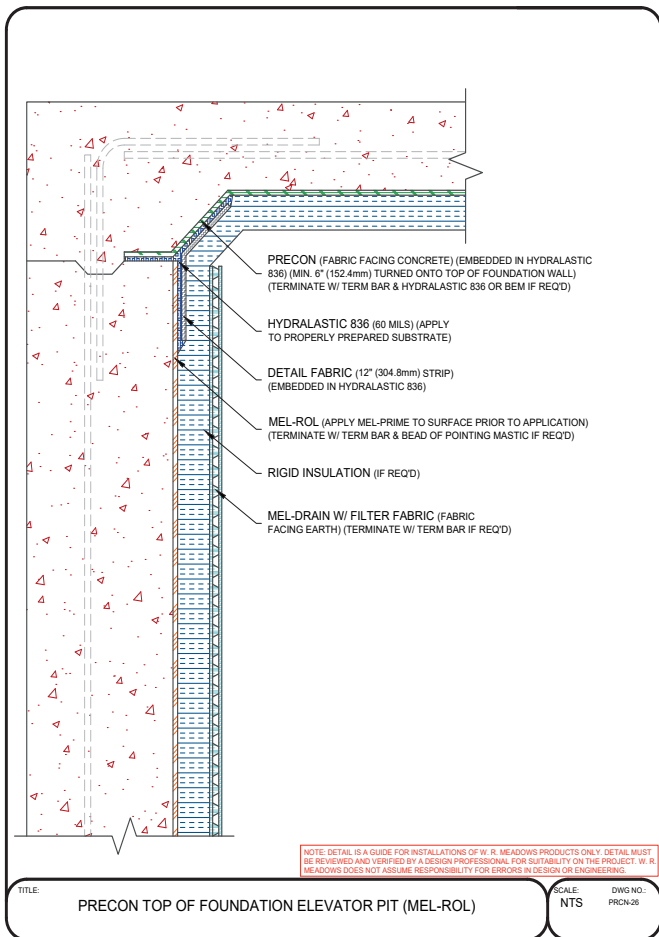
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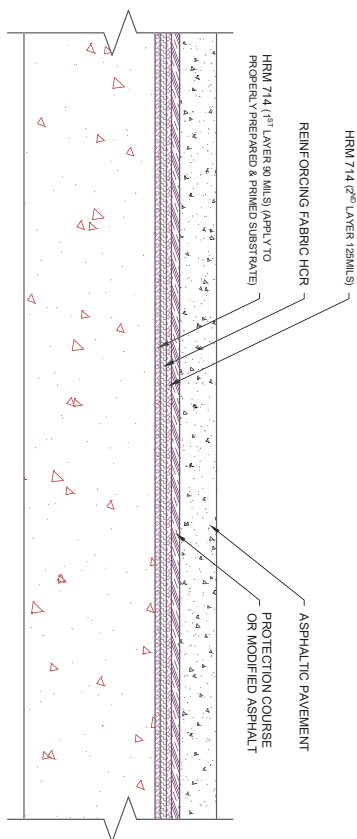
PRECON PILE CAP- S. S. ON GRADE (BELOW WATER TABLE)

SCALE: NTS

DWG NO.: PRCH12







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300 INDUSTRIAL DR.
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1-800-342-5976

TITLE

HRM 714- ASPHALTIC PAVEMENT OVERLAY (NO INSULATION)

SCALE

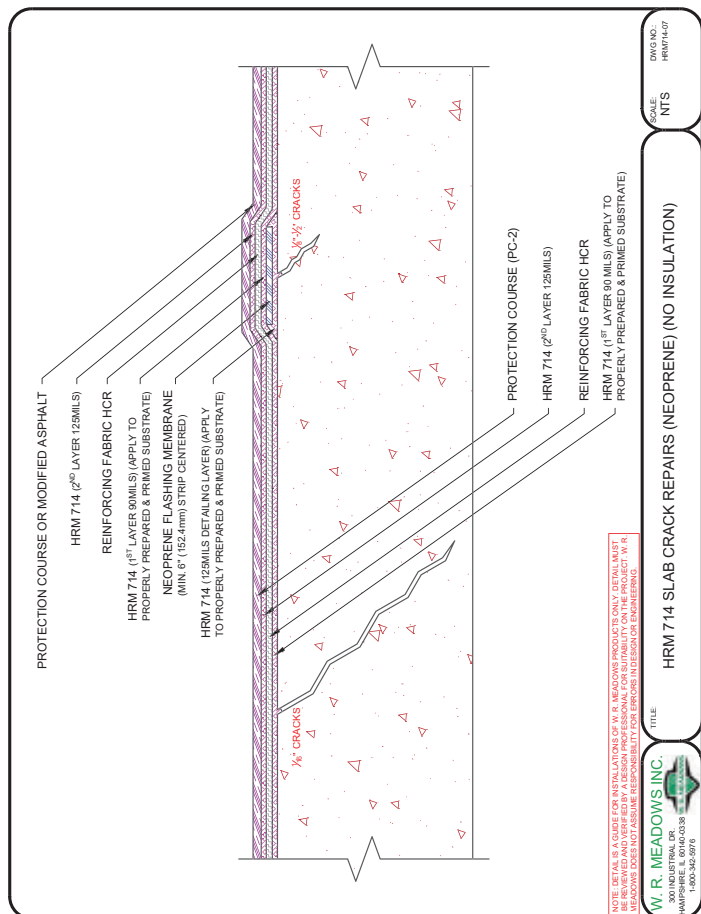
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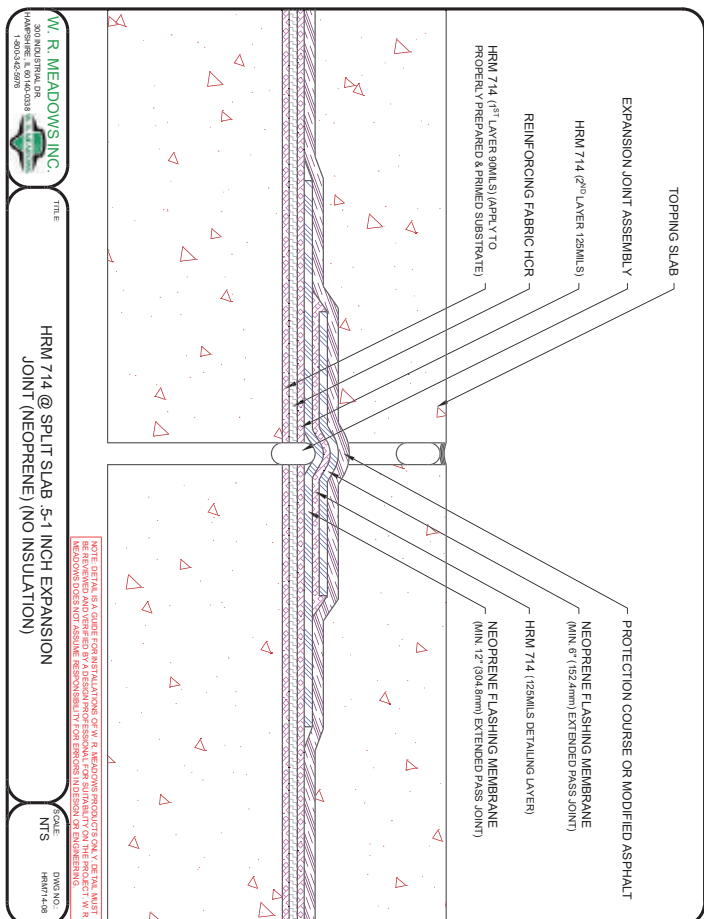
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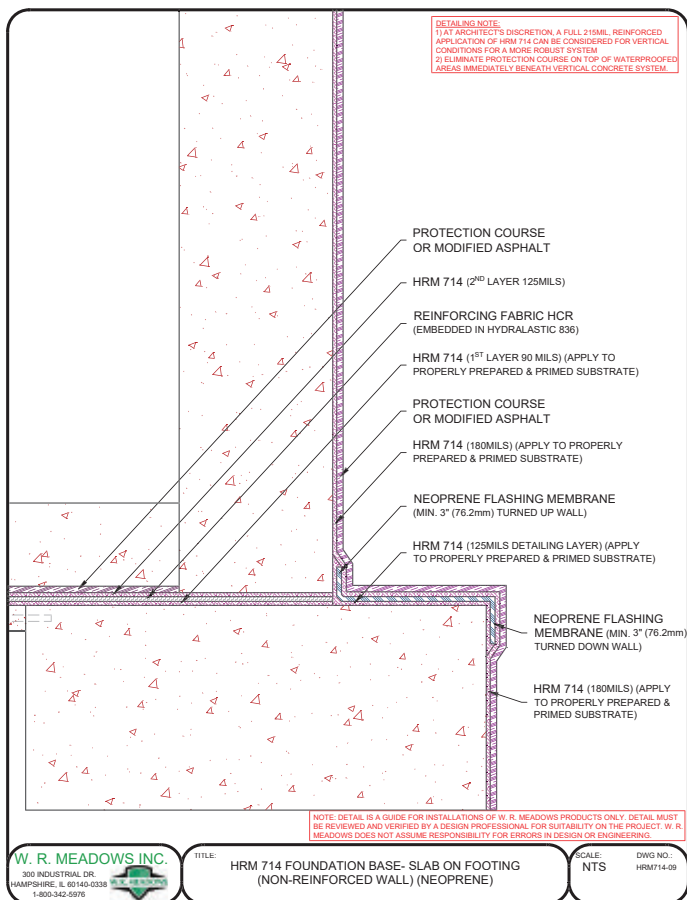
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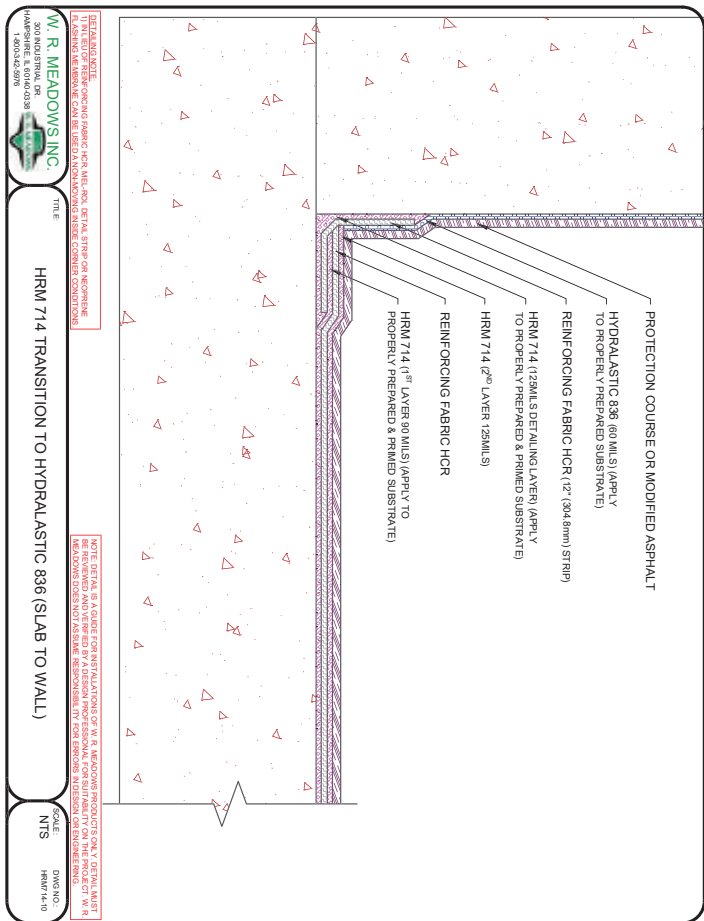
WATERPROOFING & VAPORPROOFING

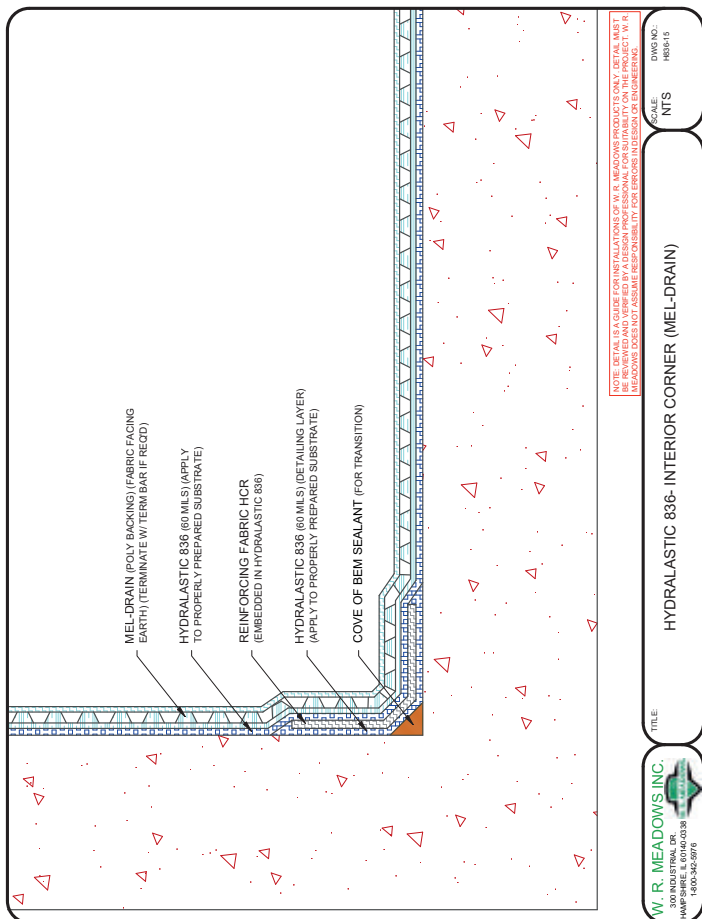


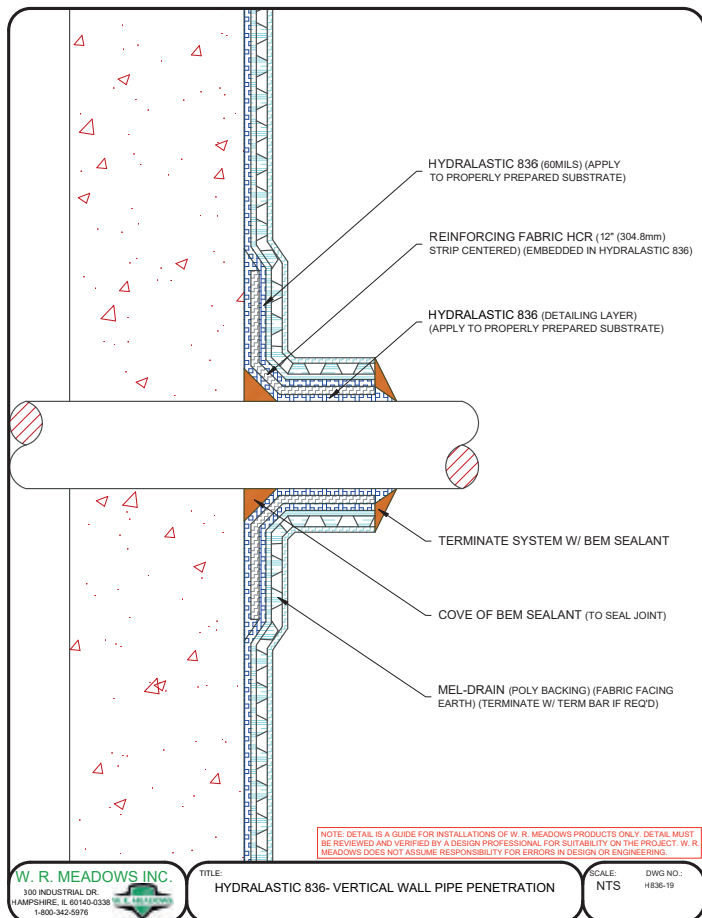


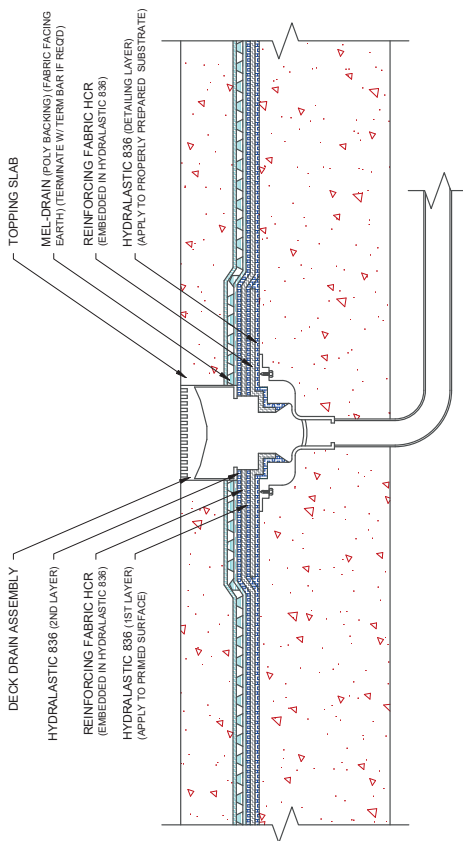












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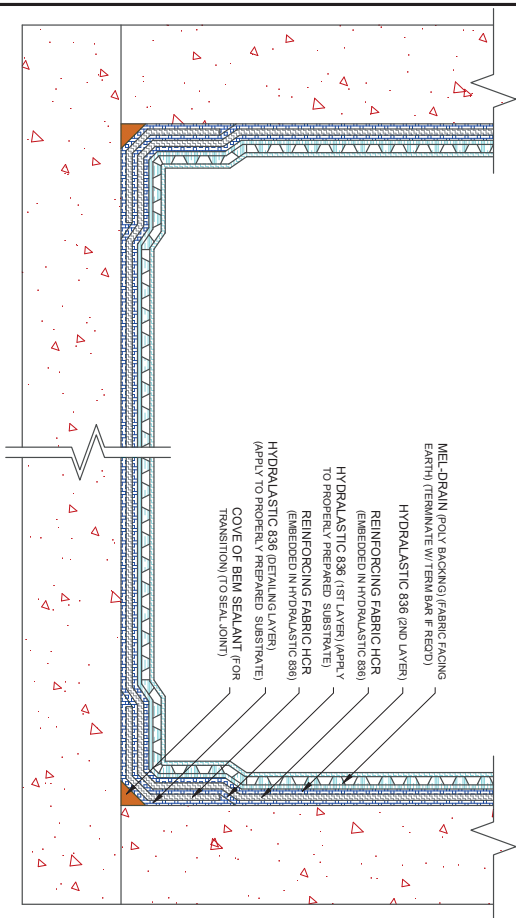
DWG NO.
H836-21

SCALE:
NTS

TITLE:
HYDRALASTIC 836 @ PLAZA DECK COMPOSITE DECK DRAIN (NO INSULATION)

W. R. MEADOWS INC.
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HAMPSHIRE, IL 60140-0038
1-800-362-5976





W. R. MEADOWS INC.

300 INDUSTRIAL DR.
HAMPSHIRE, IL 60140-0338
1-800-345-9795

TITLE

HYDRALASTIC 836 @ PLANTER (NO INSULATION)

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SCALE:

NTS

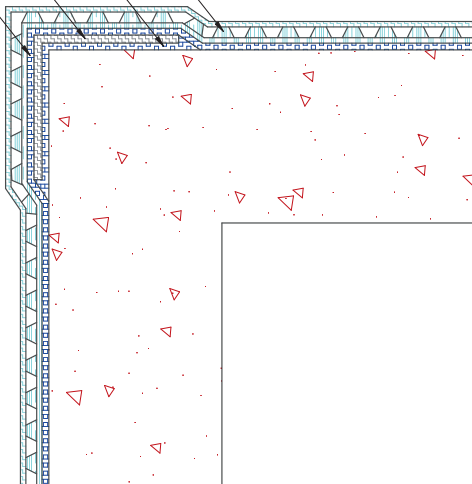
DWG NO.:
H20603

HYDRALASTIC 836 (60 MILS) (APPLY TO PROPERLY PREPARED SUBSTRATE)

DETAIL FABRIC (12" (304.8mm) STRIP) (EMBEDDED IN HYDRALASTIC 836)

HYDRALASTIC 836 (DETAILING LAYER) (APPLY TO PROPERLY PREPARED SUBSTRATE)

MEL-DRAIN (POLY BACKING) (FABRIC FACING EARTH) (TERMINATE W/ TERM BAR IF REQ'D)



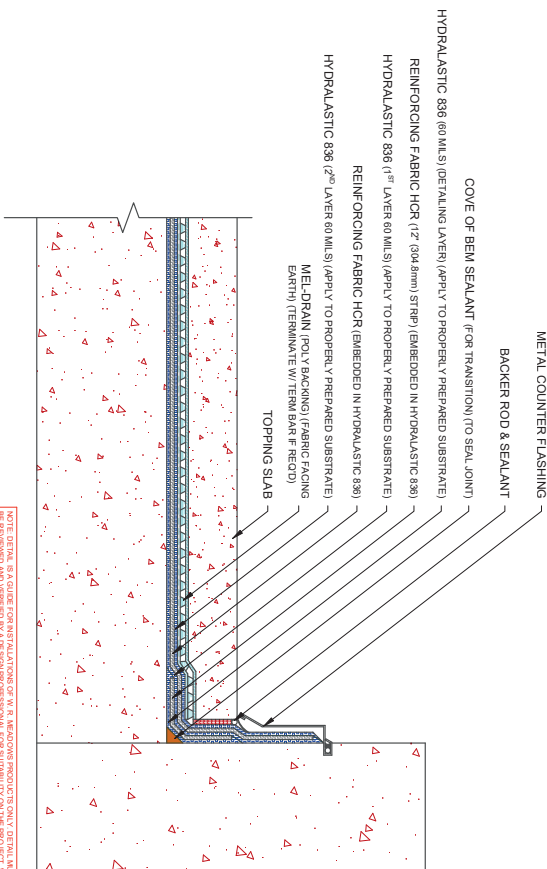
NOTE: DETAIL IS A GUIDE FOR INSTALLATIONS OF W. R. MEADOWS PRODUCTS ONLY. DETAIL MUST BE REVIEWED AND VERIFIED BY A DESIGN PROFESSIONAL FOR SUITABILITY ON THE PROJECT. W. R. MEADOWS DOES NOT ASSUME RESPONSIBILITY FOR ERRORS IN DESIGN OR ENGINEERING.

SCALE: NTS
DWG NO.: H836.08

TITLE: HYDRALASTIC 836- EXTERIOR CORNER (MEL-DRAIN) (PLANVIEW)

W. R. MEADOWS INC.
300 INDUSTRIAL DR.
HAMPSPERE, IL 60140-0338
1-800-342-5976





HYDRALASTIC 836 @ PLAZA DECK COMPOSITE
SLAB PARAPET TERMINATION (NO INSULATION)

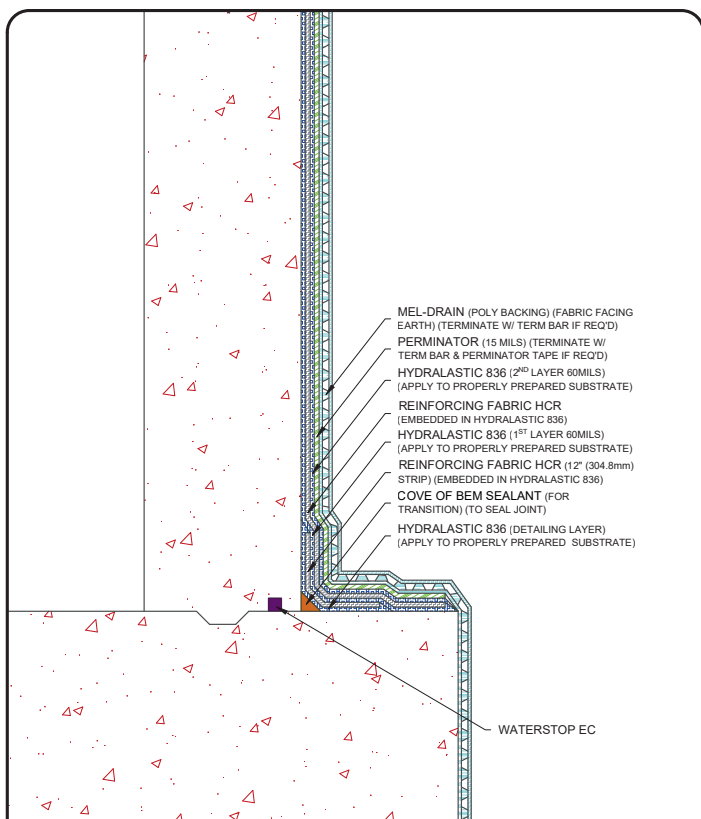
W. R. MEADOWS, INC.
300 INDUSTRIAL DR.
HAWTHORNE, IL 60140-0338
1-800-342-3976

TITLE

SCALE
NTS

DWG NO.
H836-27





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300 INDUSTRIAL DR.
HAMPSHIRE, IL 60140-0338
1-800-342-5976



TITLE:

HYDRALASTIC 836- FOUNDATION BASE WATERPROOFING

SCALE:

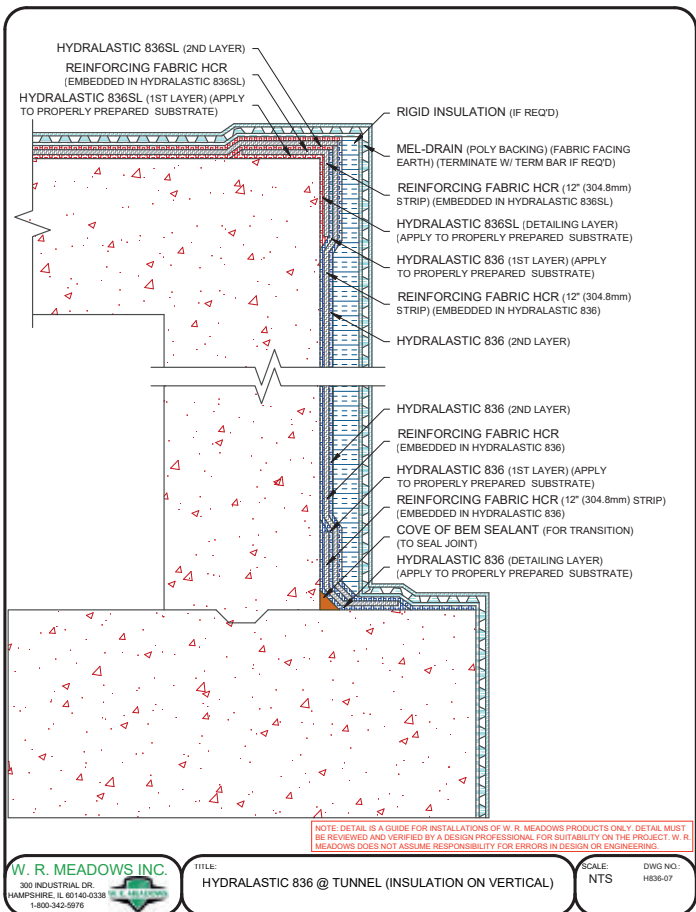
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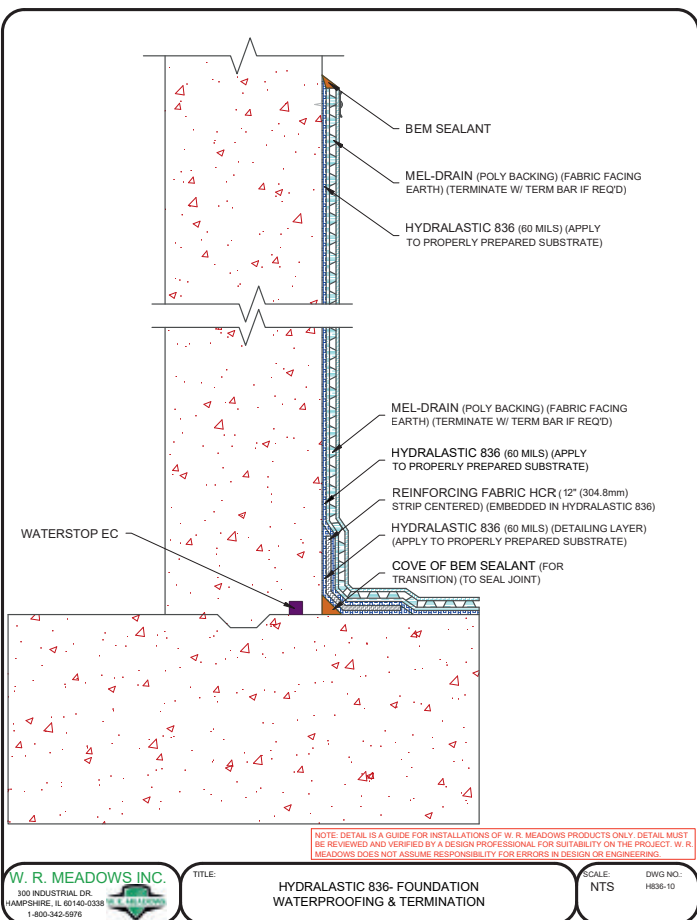
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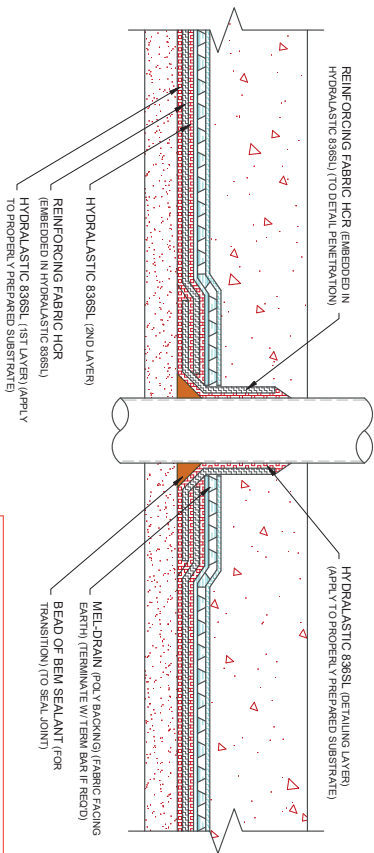
H836-02

WATERPROOFING & VAPORPROOFING









W. R. MEADOWS INC.

300 INDUSTRIAL DR.
HAMPSHIRE, IL 60140-0038
1-800-342-5976

TITLE

HYDRALASTIC 836 SL - APPLICATION @ PENETRATION

SCALE

NTS

DATE

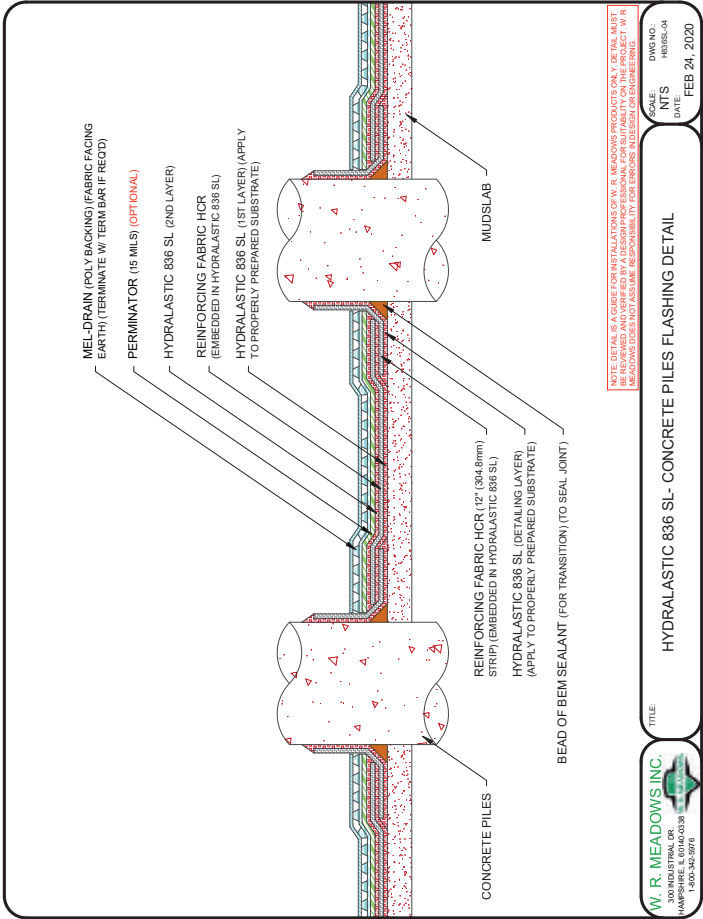
JUNE 4, 2020

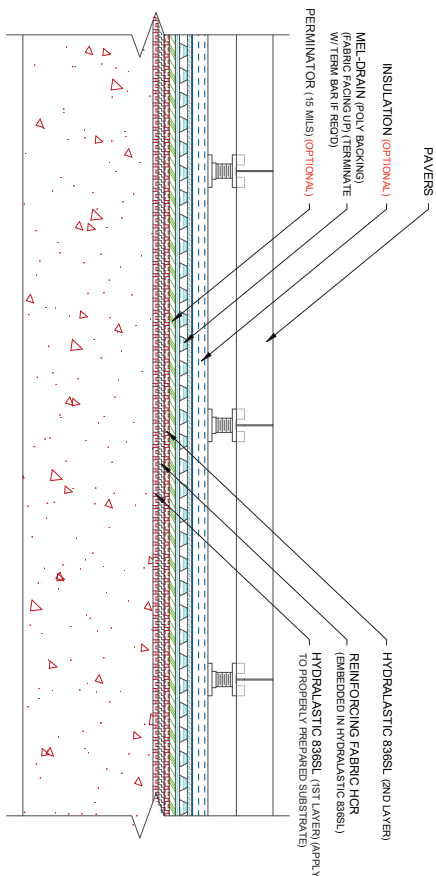
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H836SL-00

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300 INDUSTRIAL DR.
HAMPSHIRE, IL 60140-0036
1-800-342-5976



TITLE

HYDRALASTIC 836 SL- HIGH BUILD SYSTEM (MEL-DRAIN&PERMINATOR) (PAVERS)

SCALE

NTS

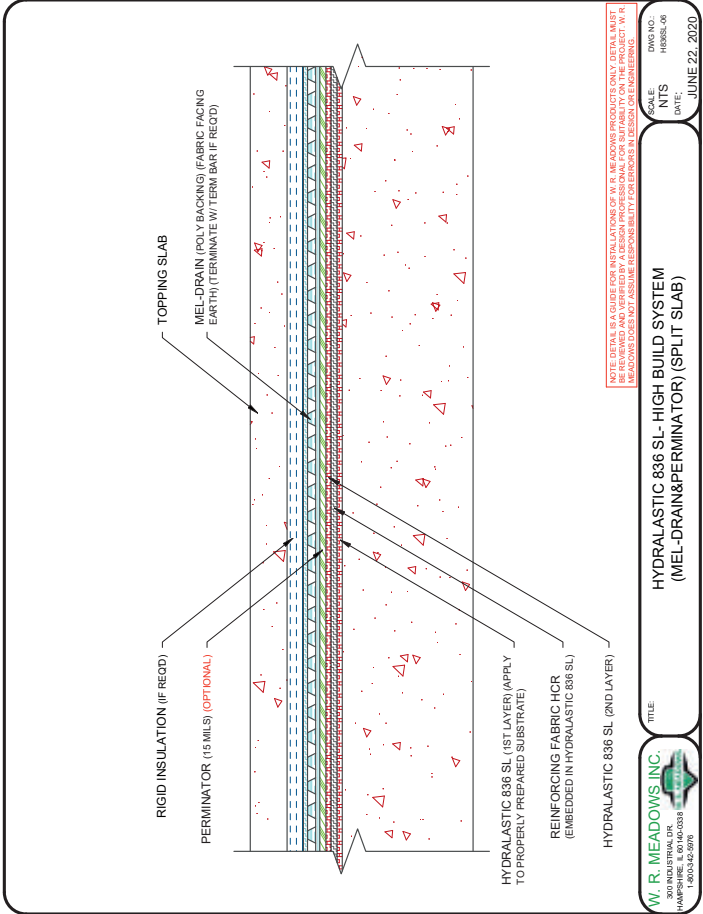
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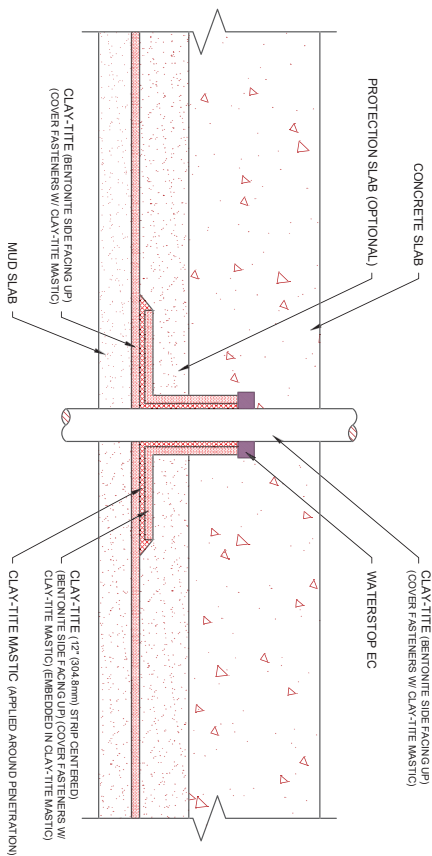
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DATE

JUNE 17, 2020







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W. R. MEADOWS INC.

300 INDUSTRIAL DR.
HAWK SHIRE, IL 60140-0388
1-800-342-8978

TITLE

CLAY-TITE CAST IN PLACE THROUGH FLOOR PENETRATION

SCALE:

NTS

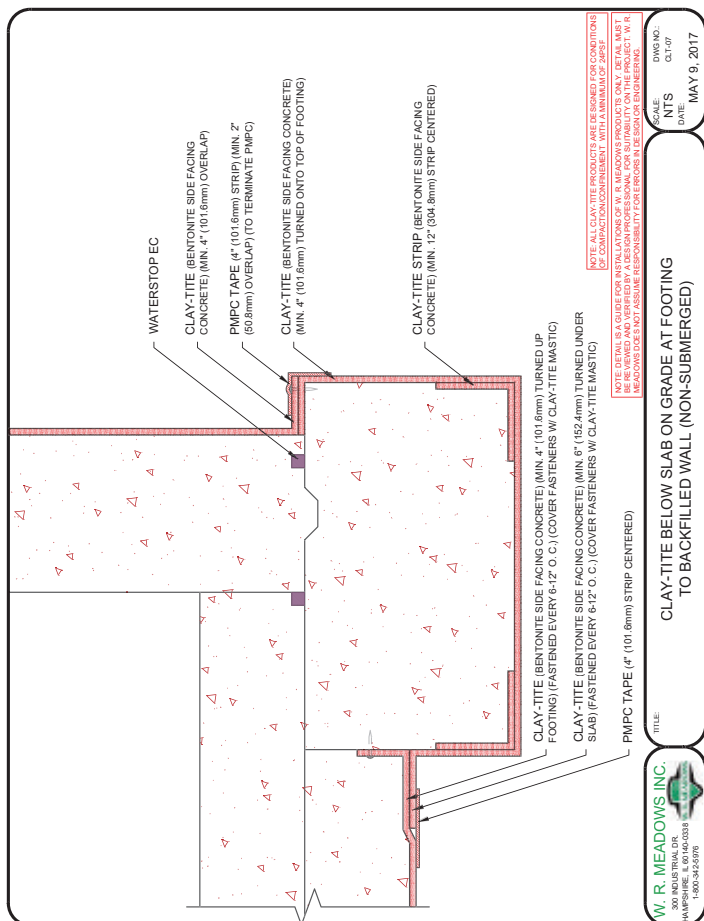
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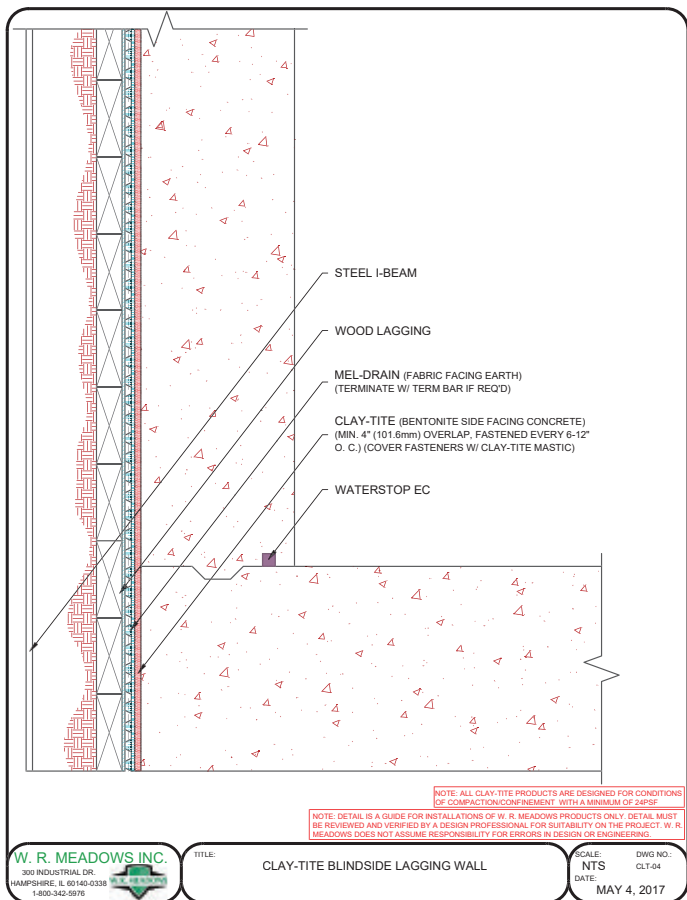
DATE

MAY 16, 2017

WATERPROOFING & VAPORPROOFING

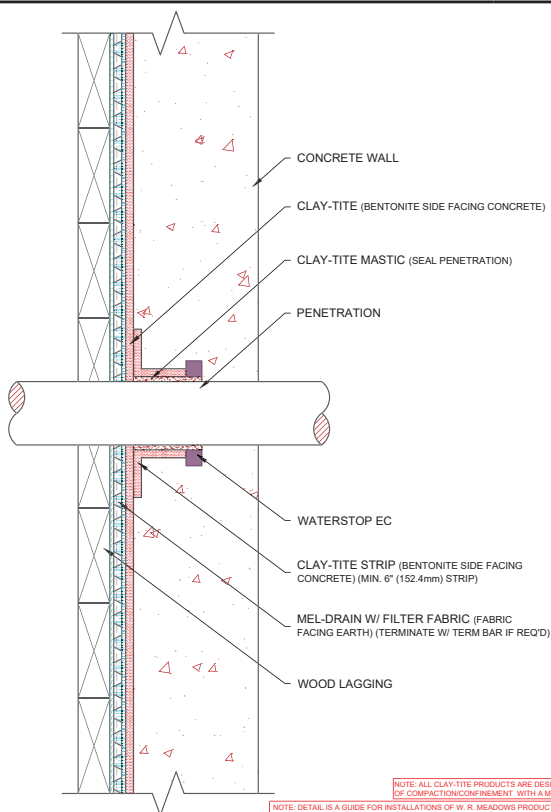






WATERPROOFING & VAPORPROOFING





W. R. MEADOWS INC.
 300 INDUSTRIAL DR.
 HAMPSHIRE, IL 60140-0338
 1-800-342-5976



TITLE:

CLAY-TITE BLINDSIDE WALL PIPE PENETRATION

SCALE:
 NTS
 DATE:

DWG NO.:
 CLT-05

MAY 5, 2017

WATERPROOFING & VAPORPROOFING





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HAMPSHIRE, IL 60140-0333
1-800-342-5976

TITLE

CLAY-TITE BLINDSIDE TERMINATION AT GRADE

SOCALLES

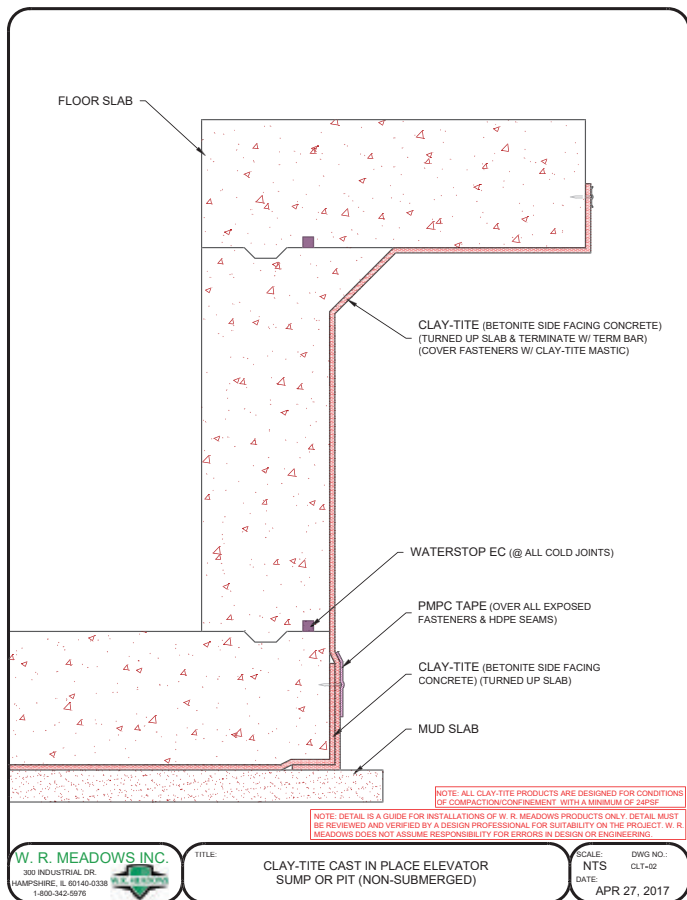
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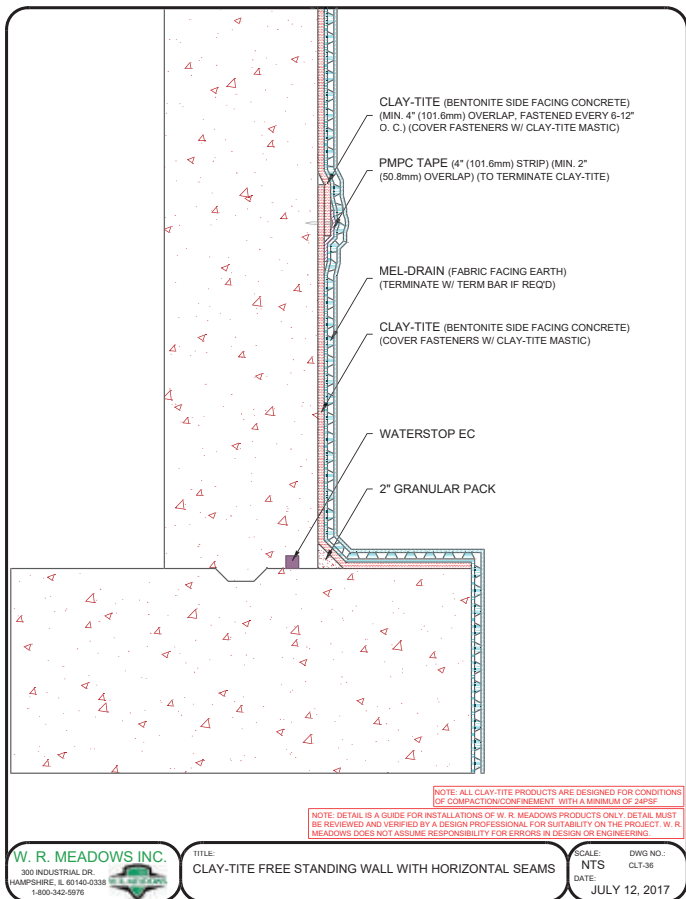
02-T-03

DATE: _____

MAY 2, 2017

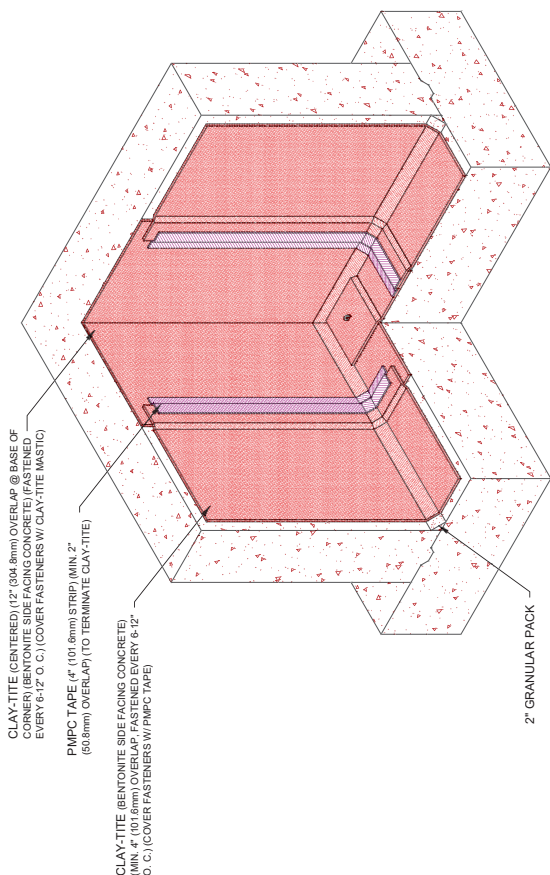






WATERPROOFING & VAPORPROOFING





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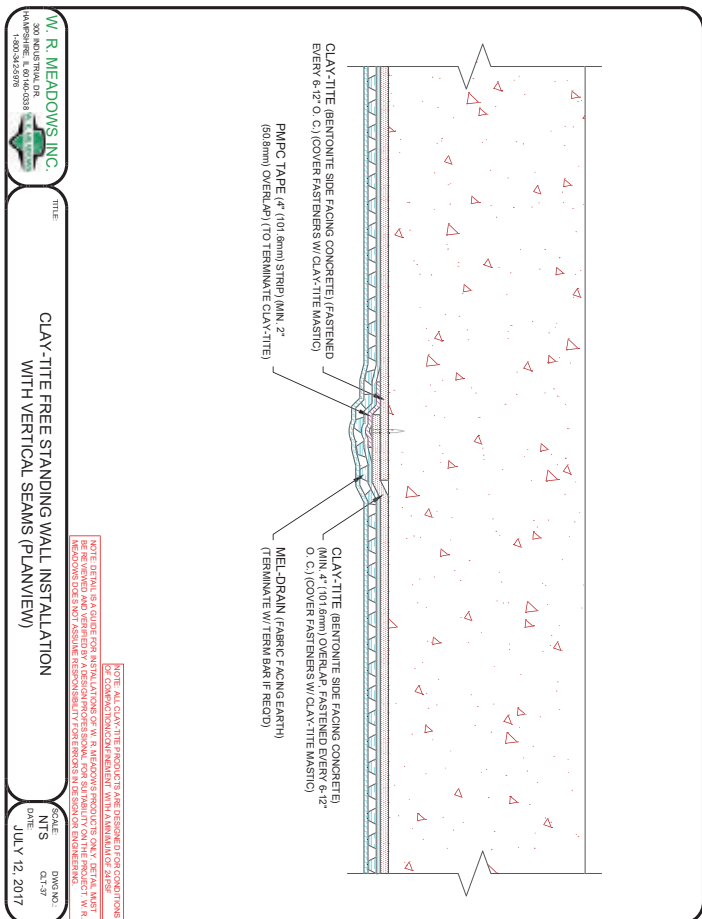
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DATE: JULY 18, 2017
DWG NO.: CLT34

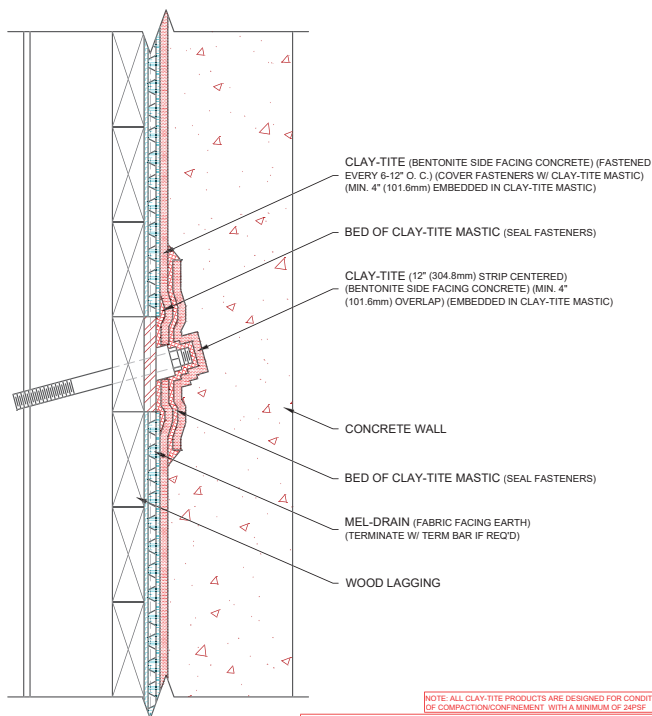
TITLE: CLAY-TITE FREE STANDING WALL TYPICAL INSIDE CORNER

W. R. MEADOWS INC.
300 INDUSTRIAL DR.
HAMPSPHIRE, IL 60140-0338
1-800-342-6976

WATERPROOFING & VAPORPROOFING







W. R. MEADOWS INC.
 300 INDUSTRIAL DR.
 HAMPSHIRE, IL 60140-0338
 1-800-342-5976



TITLE:

CLAY-TITE NON-DETENTIONED TIE-BACK

SCALE:
 NTS
 DATE:

DWG NO.:
 CLT-26

JULY 6, 2017

WATERPROOFING & VAPORPROOFING





W. R. MEADOWS, INC.

P.O. Box 338 • Hampshire, IL 60140-0338

Phone: 847/214-2100 • Fax: 847/683-4544

1-800-342-5976

www.wrmeadows.com • info@wrmeadows.com

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for Standard Details for Adhered Sheet Waterproofing



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