



## DETAILS GUIDE

### PERMA-SHIELD LINING STANDARD

#### TNEMEC COMPANY, INC.

123 West 23rd Avenue, North Kansas City, MO 64116 USA  
+1 816-483-3400 [tnemec.com](http://tnemec.com)

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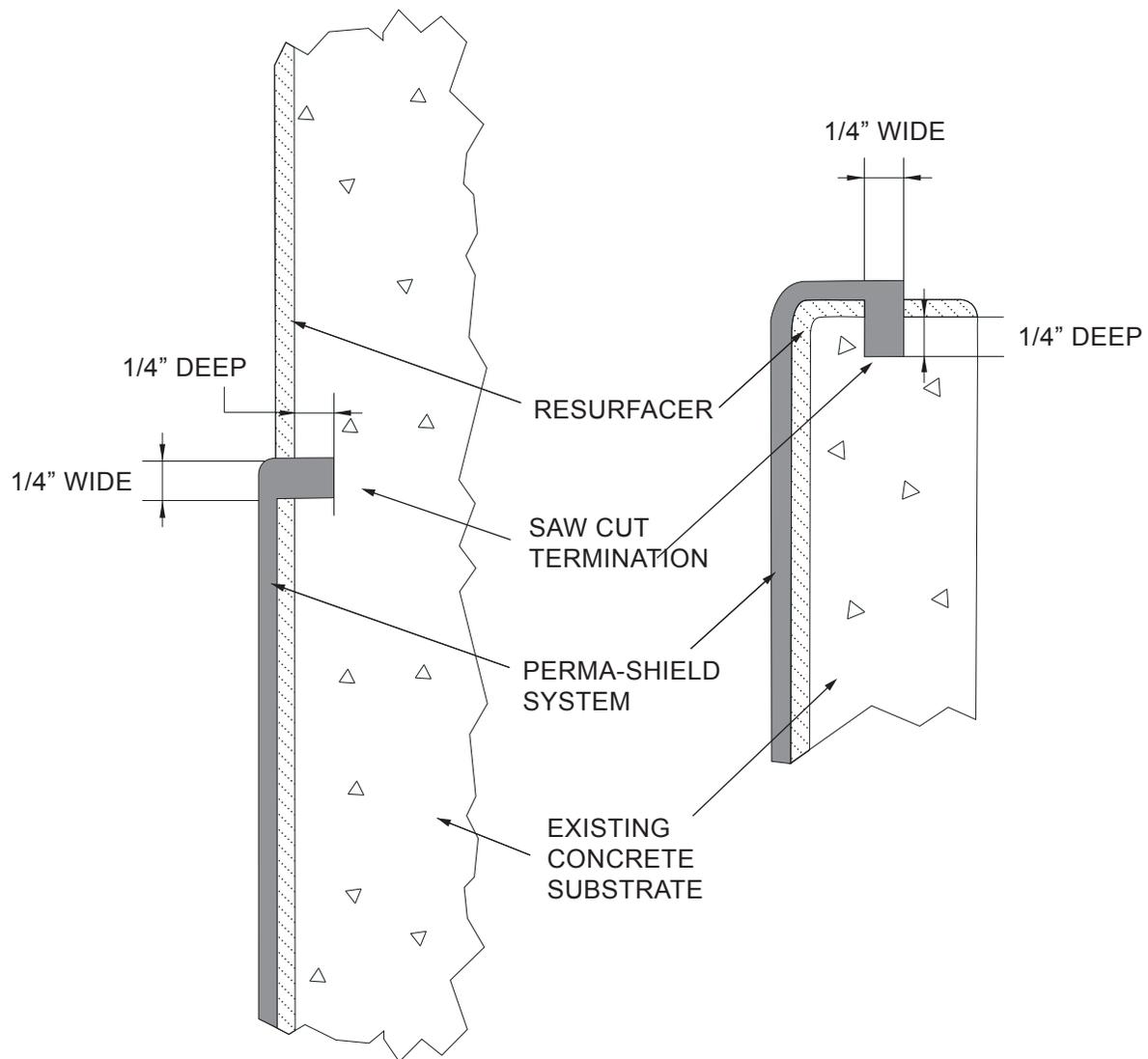
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Cast in Place Drain

***INNOVATION IN EVERY COAT.™***



**Notes:**

1. Depth of saw cut is below resurfacer.
2. Brush or trowel Series 434, 435 or 436 Perma-Shield into saw cut termination.
3. On vertical applications, Series 435 will require Series 211-211 Fumed Silica or other approved bulking powder to fill the 1/4" saw cut.

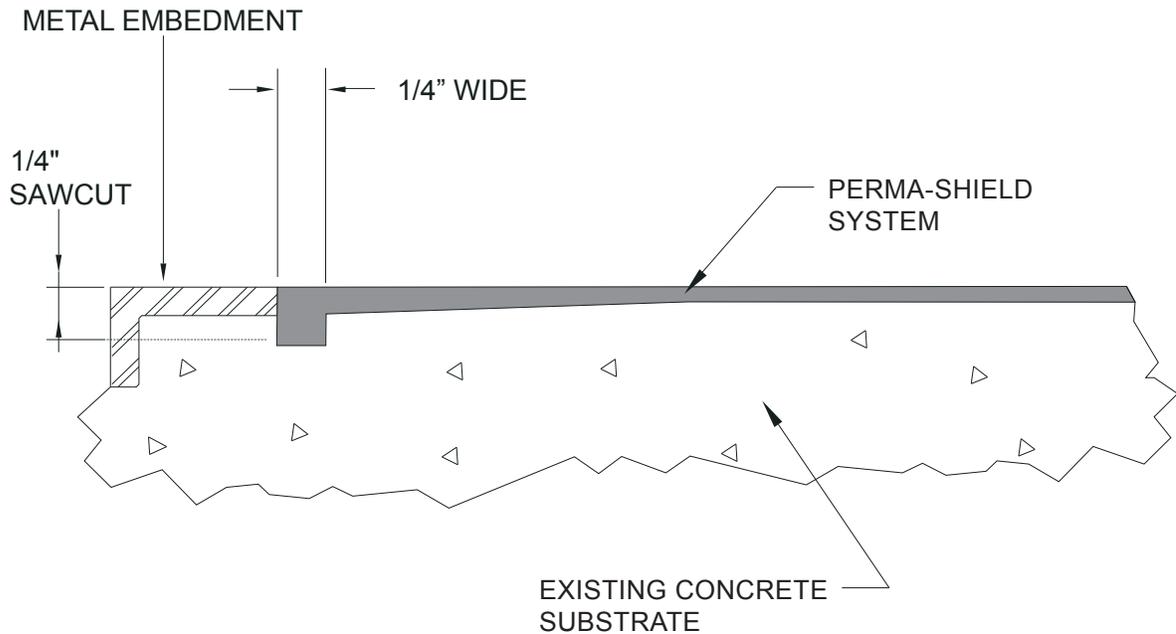
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**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

**LEADING EDGE TERMINATION**

**NO. PLS-1**

**REV.1**



**Notes:**

1. If lining is to be carried over metal embedment, saw cut toe-in termination is still required.
2. On vertical applications, Series 435 will require Series 211-211 Fumed Silica or other approved bulking powder to fill the 1/4" saw cut.

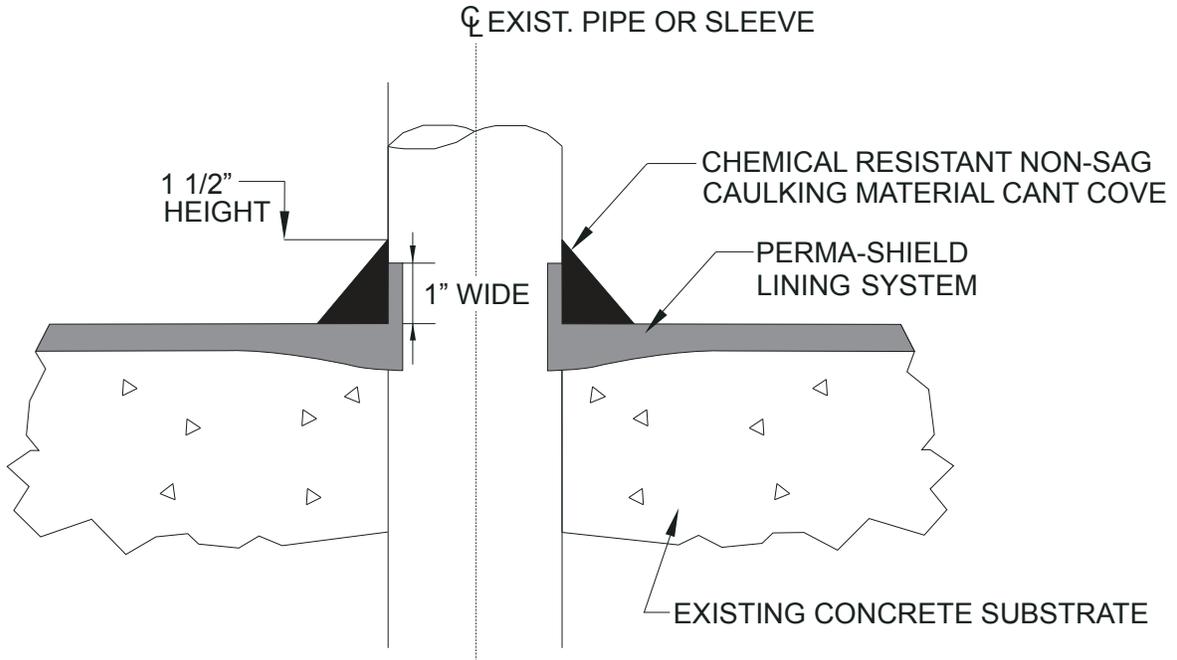
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**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

**TERMINATION OF EMBEDDED METALS**

**NO. PLS-2**

**REV. 1**



**Notes:**

1. Establish deeper surface profile 1" around O.D. of pipe penetration to lock lining system into substrate.
2. Apply Perma-Shield lining system minimum 1" on existing pipe or sleeve.

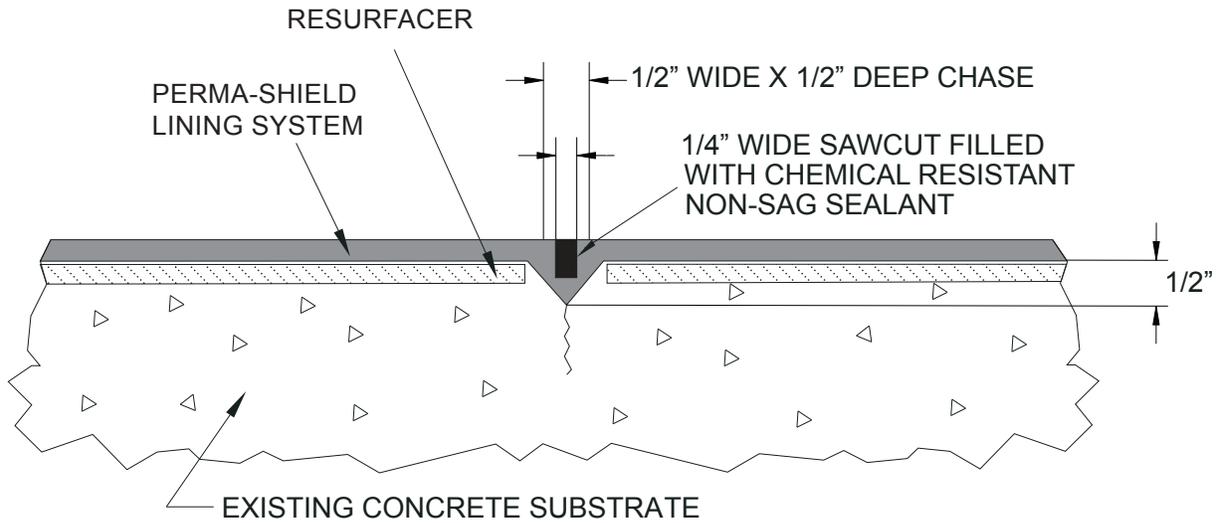
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**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

**SLEEVED OR NON-SLEEVED PIPE PENETRATION**

**NO. PLS-3**

REV.1



**Note:**

1. Resurface with Series 218 MortarClad or Series 215 Surfacing Epoxy.

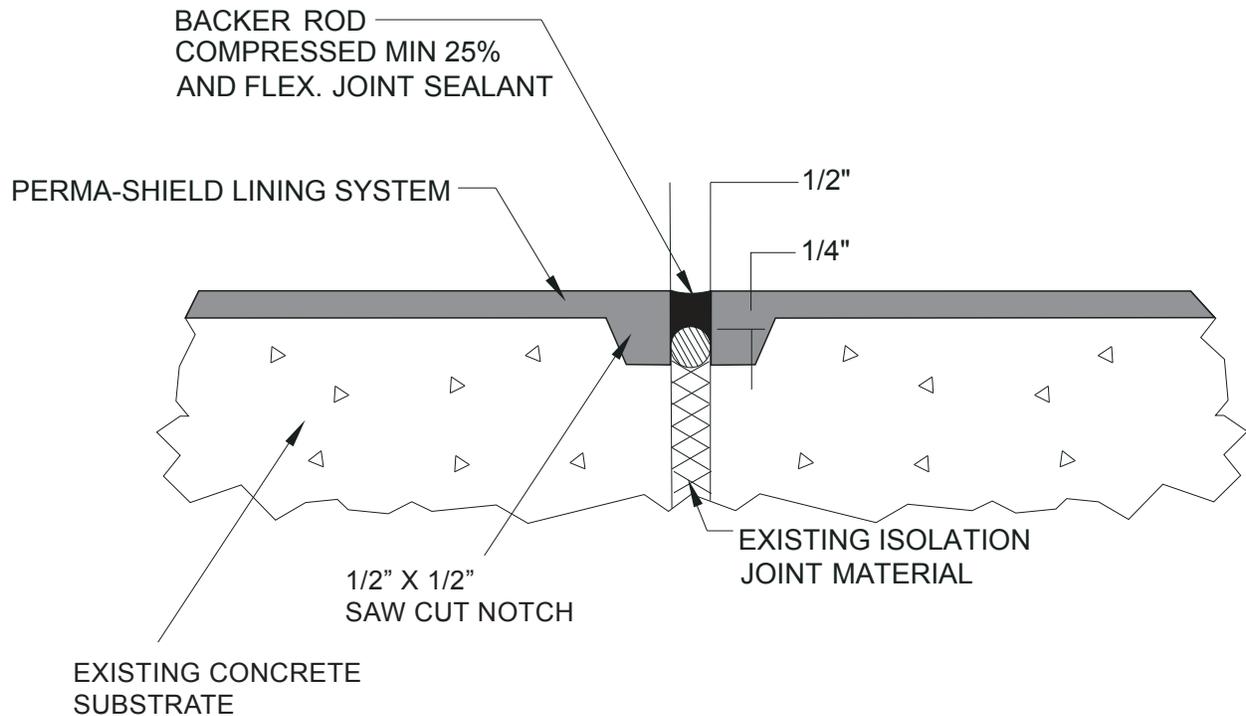
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**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

**CONTROL OR CONSTRUCTION  
JOINTS FOR CRACKS**

**NO. PLS-4**

REV.1



**Notes:**

1. Saw cut and chip 1/2" x 1/2" angled notch each side of existing isolation joint material.
2. Flexible joint sealant width-to-depth ratio shown approximately 2:1. Detail can be built by installing lining system over joint, resawcutting, and installing backer rod and sealant.

**N.T.S.**

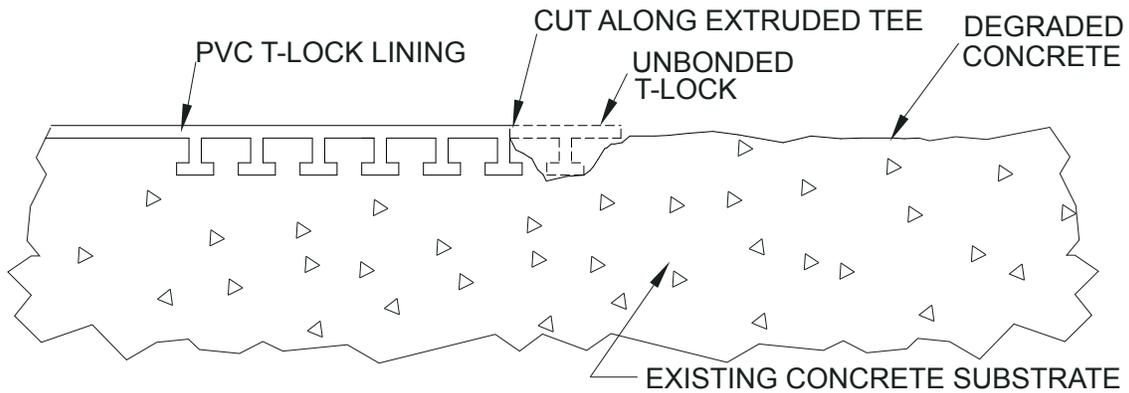
**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

**EXPANSION JOINT**

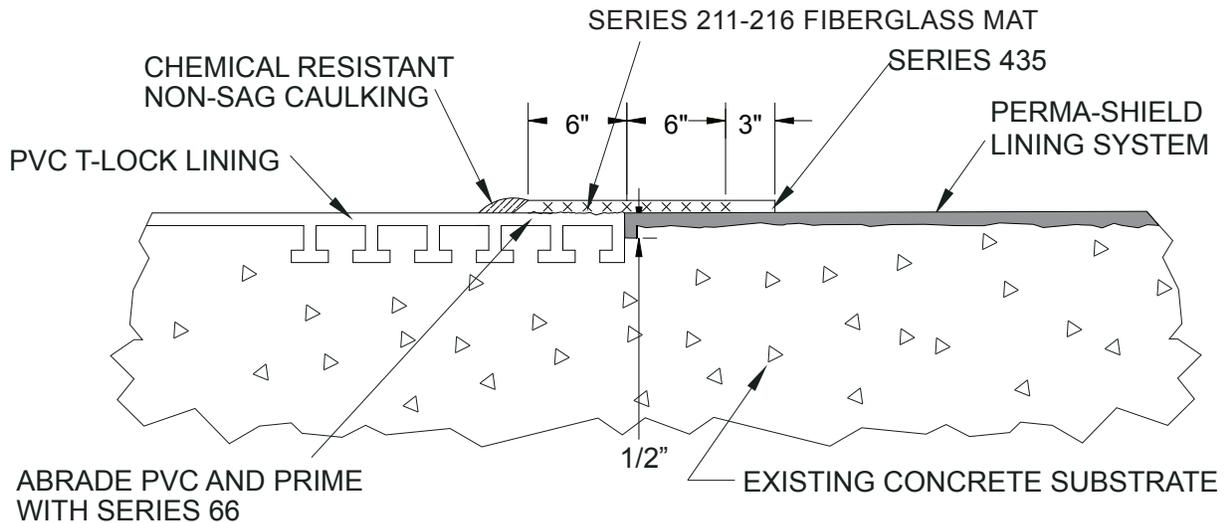
**NO. PLS-5**

REV.1

## SECTION - EXISTING T-LOCK LINER



## SECTION - TERMINATING PERMA-SHIELD AT EXISTING T-LOCK



**Notes:**

1. Apply 10 mils of Series 435 and press fiberglass mat reinforcement into it extending mat 6" each way shown.
2. Apply additional 10 mils of Series 435 to encapsulate fiberglass mat reinforcement.

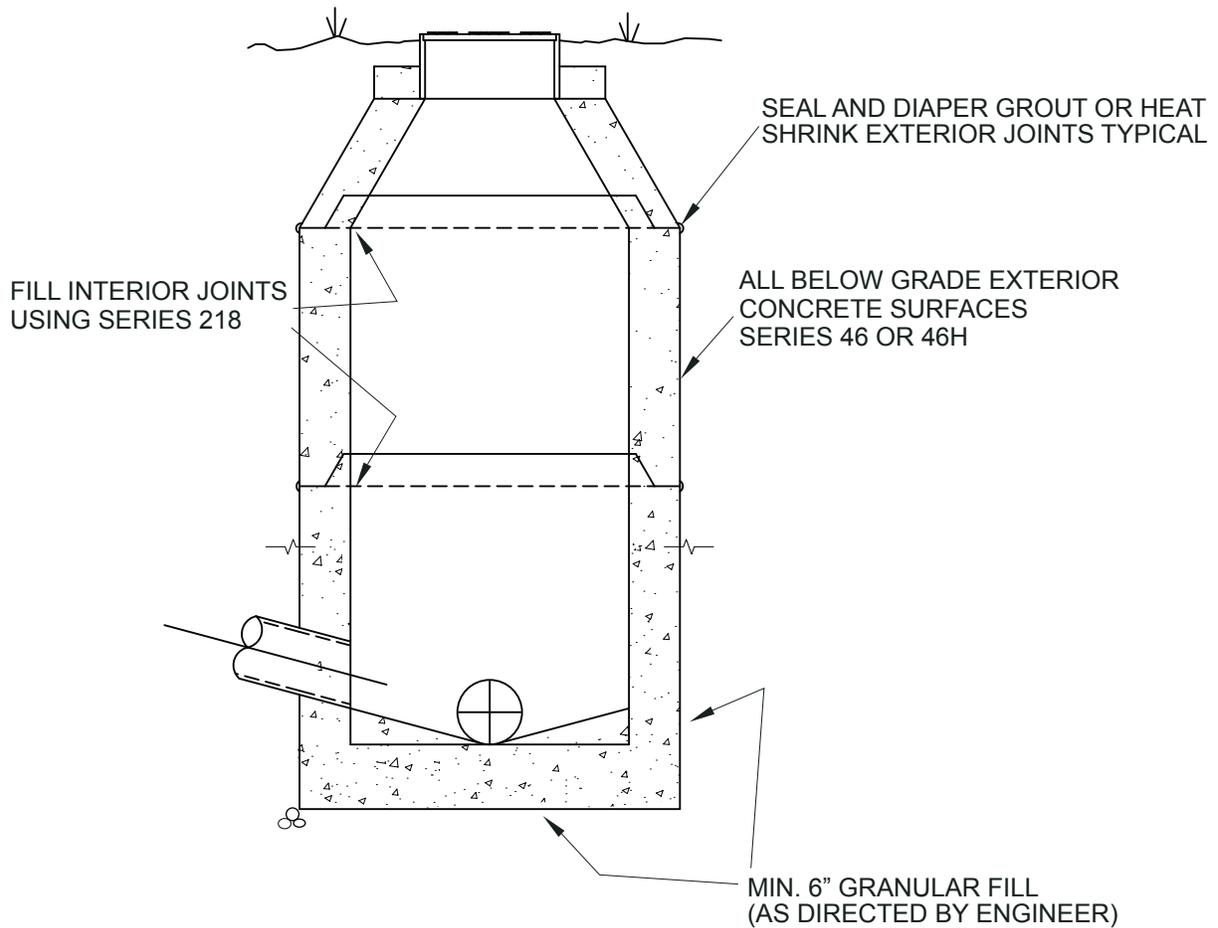
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# TNEMEC PERMA-SHIELD STANDARD LINING DETAILS

TERMINATION AT EXISTING T-LOCK LINER

**NO. PLS-6**

REV.1



**Notes:**

1. All exterior pre-cast or cast in place sections shall be coated with two coats of Series 46-465 or 46H at 8-10mils.
2. All exterior joints, lift holes, inlets and outlets to be sealed and grouted.
3. All interior concrete surfaces prepared to a SSPC-SP13/NACE6, >ICRI CSP 5.
4. All interior joints, lift holes, inlets and outlets to be filled with Series 218.
5. Apply applicable Perma-Shield coating system.

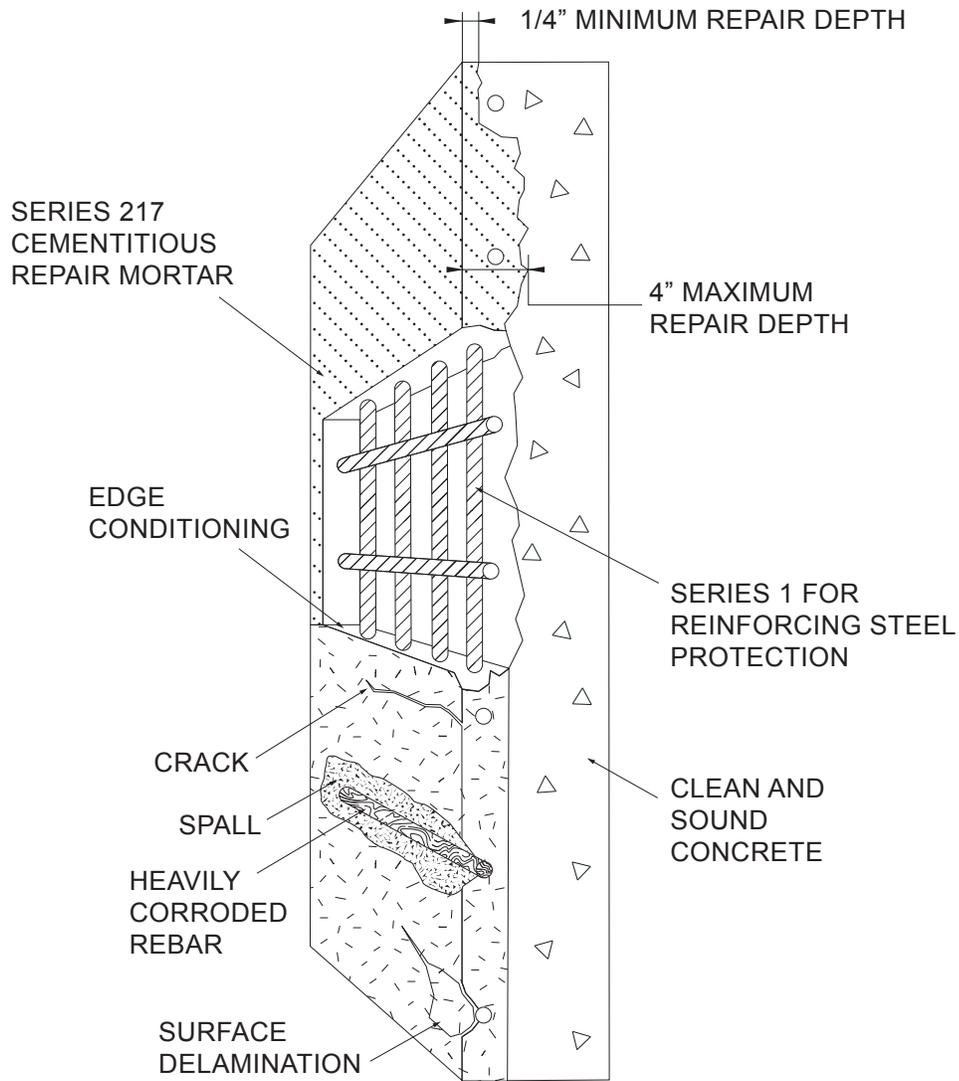
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**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

**NEW MANHOLE INSTALLATION**

**NO. PLS-7**

REV.0



**Notes:**

1. Remove deteriorated or loose concrete surrounding steel reinforcing bar (rebar), including 3/4" around entire circumference of rebar, in accordance with ICRI guidelines No.310.1R.
2. Abrasive blast to a SSPC-SP10/NACE No. 2 or power tool clean to a SSPC-SP11.
3. Apply 1 coat of Series 1 (or similar). Avoid spillage or application onto the parent concrete.
4. Build a substrate flush to original concrete plane.

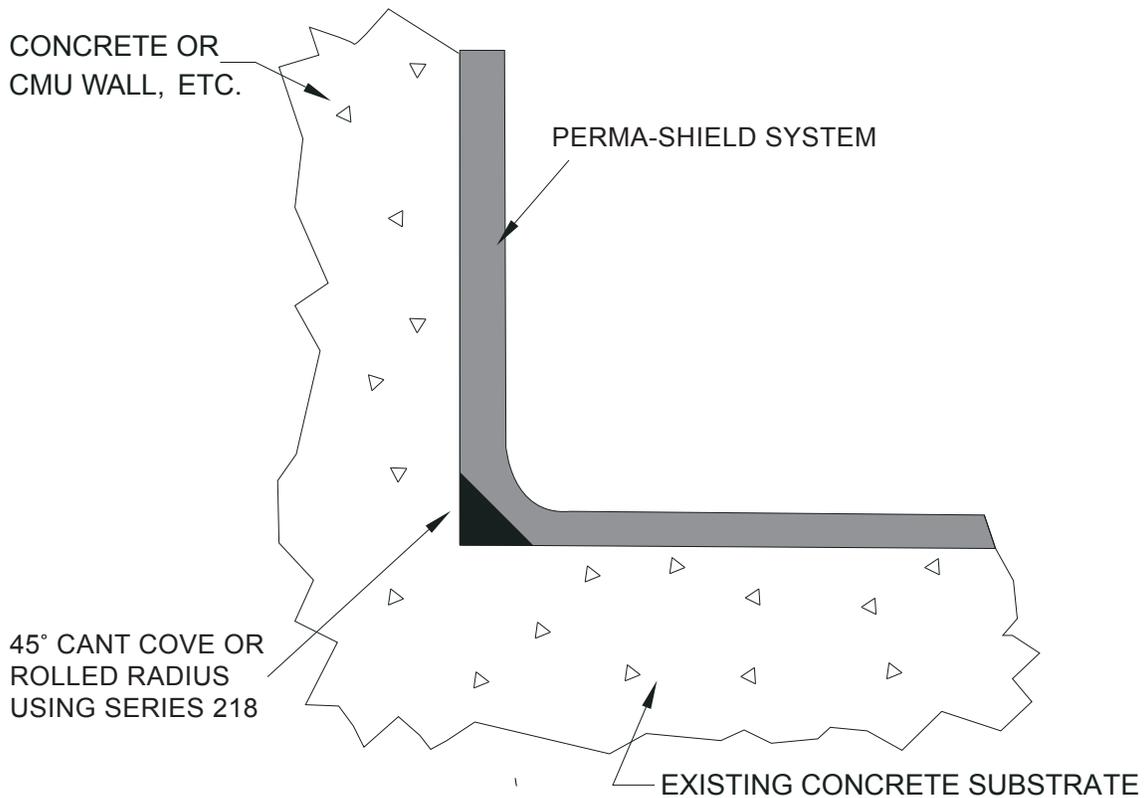
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**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

**EXPOSED REBAR REPAIR**

**NO. PLS-8**

REV.1



**Note:**

1. Series 215 or 434 can be used in lieu of Series 218 to create 1" cant or rolled radius.

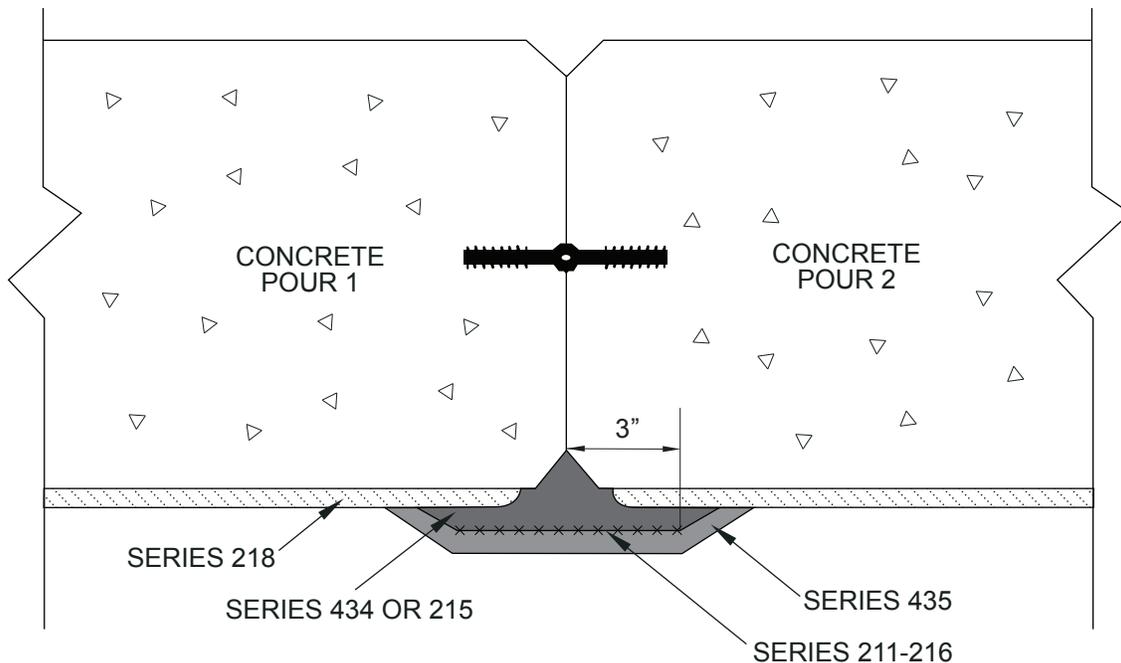
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**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

**WALL TO SLAB TRANSITION**

**NO. PLS-9**

**REV.1**



**Notes:**

1. Let concrete cure a minimum of 28 days.
2. Abrasive blast the concrete surface and joint per SSPC-SP13/NACE No. 6, minimum surface profile ICRI-CSP5.
3. If not a chamfered joint, saw cut minimum 1/2" x 1/2".
4. Apply Series 218 MortarClad resurfacer to walls but hold back from joint.
5. Apply Series 434 Perma-Shield H2S or Series 215 Surfacing Epoxy to fill joint and 3-4 inches into wall at 60-80 mils.
6. While Series 434 or 215 is wet, embed Series 211-216 Fiberglass Mat into Series 434 or 215; use ribbed roller or broad knife to push mat into Series 434 or 215.
7. Immediately apply Series 435 Perma-Glaze saturant coat to joint area and out onto Series 218 resurfacer; let cure.
8. Apply specified system to all surfaces.

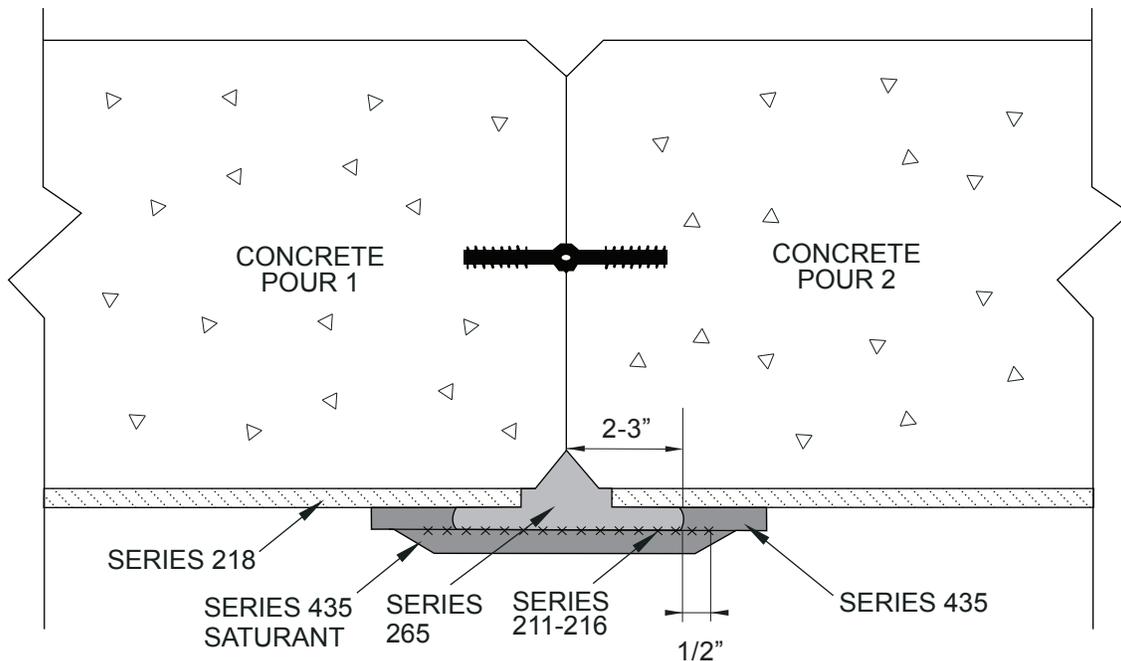
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**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

**CONSTRUCTION JOINT –  
RIGID-REINFORCED**

**NO. PLS-11**

**REV.1**



**Notes:**

1. Let concrete cure a minimum of 28 days.
2. Abrasive blast the concrete surface and joint per SSPC-SP13/NACE No. 6, minimum surface profile ICRI-CSP5.
4. Apply Series 218 MortarClad resurfacer to walls but hold back from joint.
5. Apply Series 265 Elasto-Shield to fill joint and 2-3 inches into wall at 60-80 mils.
6. While Series 265 is wet, embed Series 211-216 Fiberglass Mat into Series 265; use dry roller to push mat into Series 265.
7. Lift edge of Series 211-216 mat using putty knife and apply Series 435 to glue mat to the resurfacer.
8. Apply specified system to all surfaces over top of saturant coat.

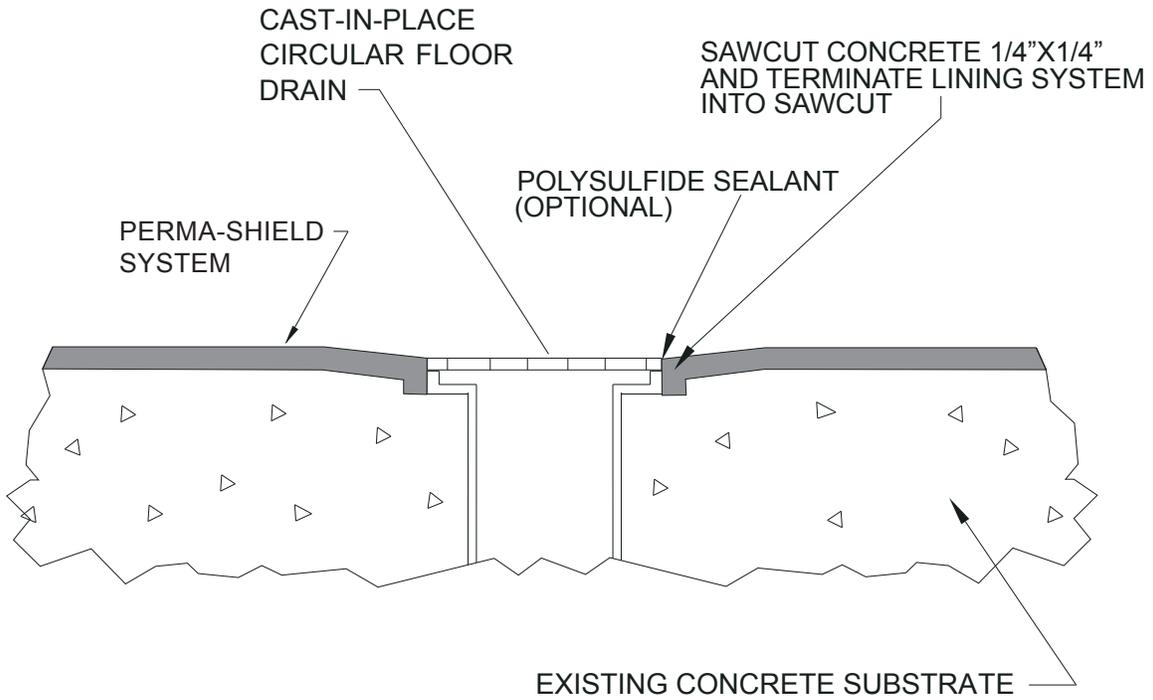
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**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

**CONSTRUCTION JOINT –  
FLEXIBLE-REINFORCED**

**NO. PLS-12**

REV.0



N.T.S.

**TNEMEC PERMA-SHIELD  
STANDARD LINING DETAILS**

TERMINATION OF EMBEDDED PIPE  
FLANGE OR CAST IN PLACE DRAIN

**NO. PLS-13**

REV.0