

LIQUID RUBBER INDUSTRIES

ENGINEERING SPECIFICATIONS FOR ENGINEERS AND ARCHITECTS

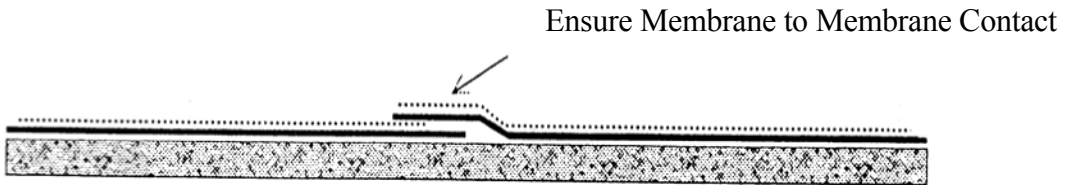


Diagram 2: Membrane Continuation – 150 mm overlap – with Fabric Reinforcement



Diagram 3: Standard Membrane Thickness – Continuous Substrate

Min. 1.5 mm Dry Film Thickness (Dft) on Steel Float Finish / Unstressed Application

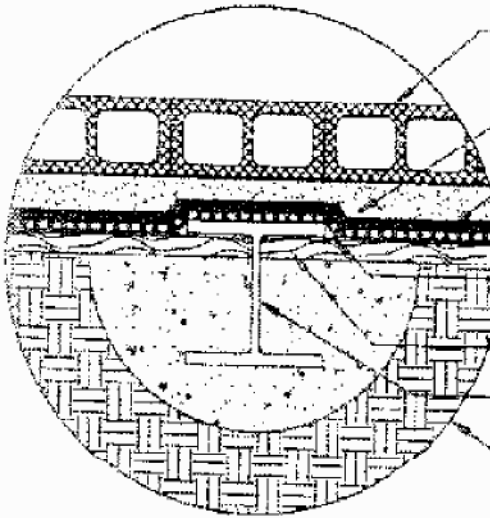
Min 2.0 mm Dft on Timber Float Finish / ¹Standard Application

Min 3.0 mm Dft on Coarse Finish / Standard Application

Min 3.0 mm Dft & Reinforcement Fabric on ²Fluid Retaining Structures

1. Standard Application where Shrinkage cracks & Substrate Movement do not exceed 3 mm Per Location.
3. Fluid Retaining Membranes require submission of calculation of membrane support

WATERPROOFING ZERO LOT LINE MASONRY WALLS



MASONRY WALL

SAND AND CEMENT SLURRY

80 DRY MILS WITH GEO

TROWEL GRADE CANT AT SOLDIER PILES

WOOD LAGGING

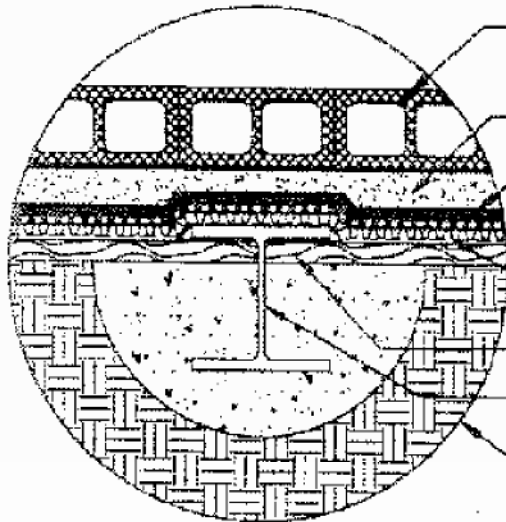
SOLDIER PILE

NATURAL EARTH

THIS DETAIL IS FOR ILLUSTRATIVE PURPOSES ONLY AND IS NOT SCALE



WATERPROOFING ZERO LOT LINE MASONRY WALLS W/ SUBSURFACE DRAIN MAT



MASONRY WALL

SAND AND CEMENT SLURRY

80 DRY MILS WITH GEO

SUBSURFACE DRAIN MAT

WOOD LAGGING

SOLDIER PILE

NATURAL EARTH

Diagram 4: Standard 10 mm wide control joint

Backer Rod
Slip Sheet, min 150 mm wide
Over Protection Board / Slip sheet / Insulation

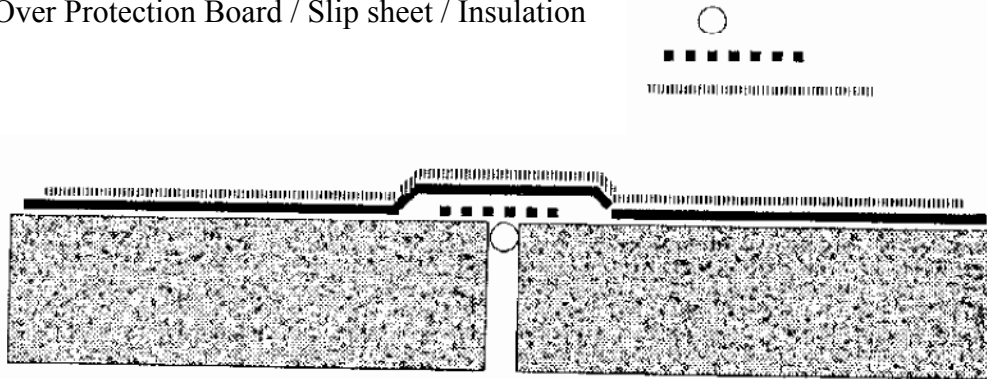


Diagram 5: Fluid Containment

**Structure joint / and movement joint
<+/- 4 mm Repetitive Movement**

Tensile S/S Hinge Form & Silicone Caulk
Slip Sheet, min 200 mm wide, min 3 mm
Dft
Reinforcement Fabric

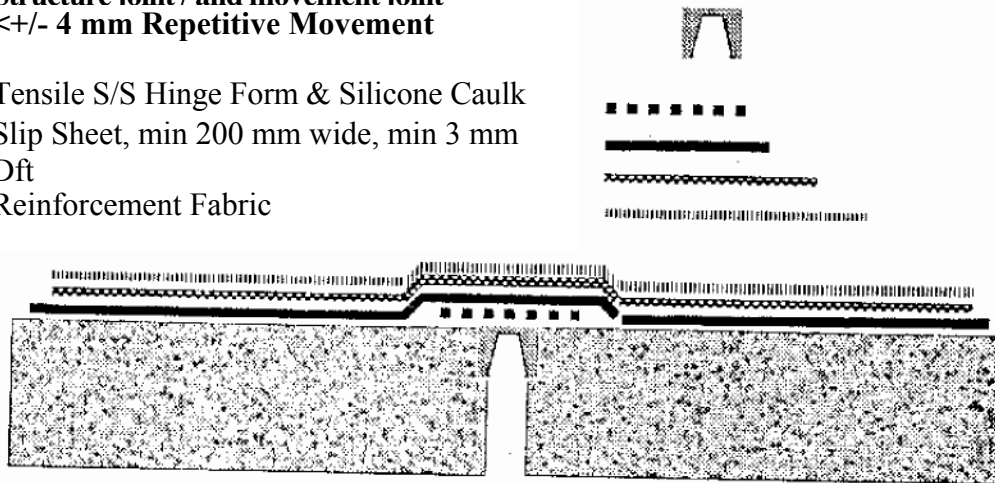


Diagram 6: Expansion Joint

Repetitive Movement

S.S. Cap & Channel Form

Drainage Cell / Channel Separated Insulation min 3mm Dft

Reinforcement Fabric

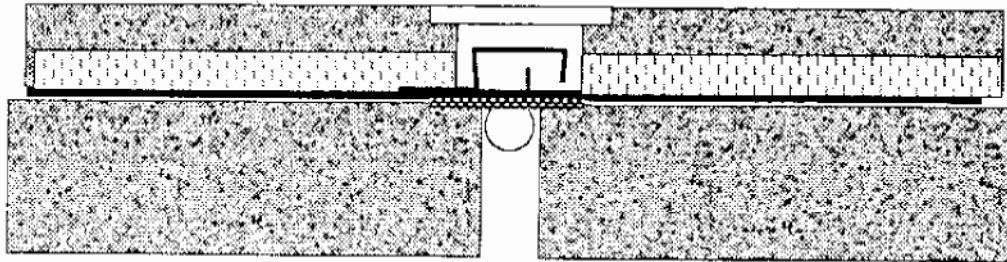
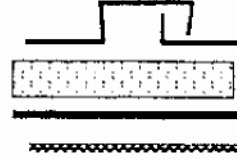
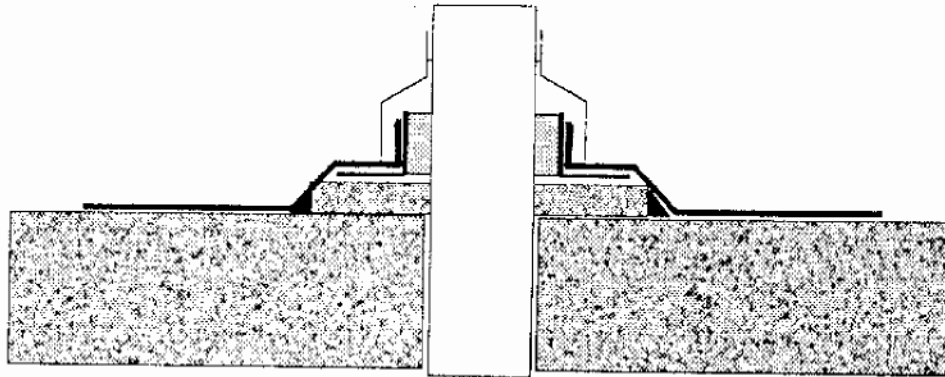


Diagram 7: Base, Collar and Cap to Penetration



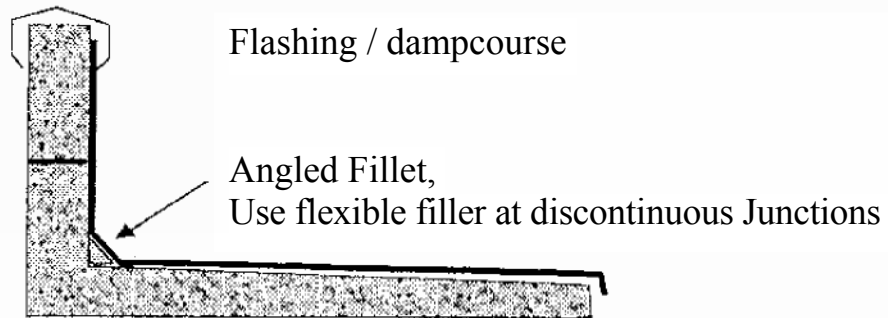


Diagram 8: Angled Fillet

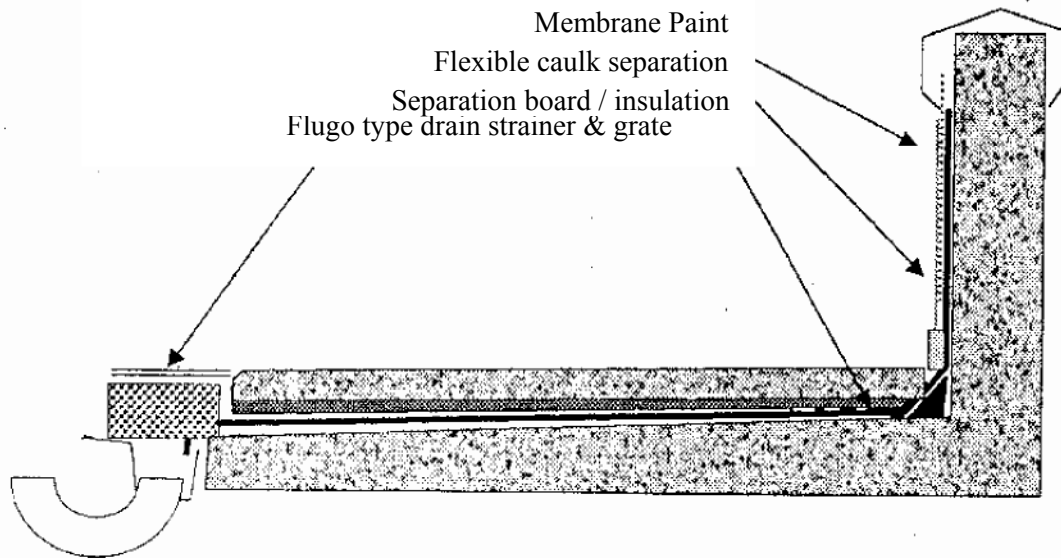
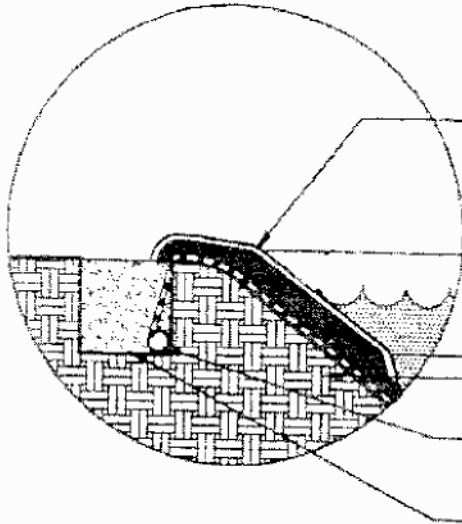


Diagram 9: Horizontal to Vertical Detail (with Drain)

WATERPROOFING PONDS, LAKES AND RESERVOIRS



DRY MILS WITH GEO.

THICKEN TO 120 DRY MILS 6" ABOVE AND BELOW WATERLINE

COMPACTED FILL

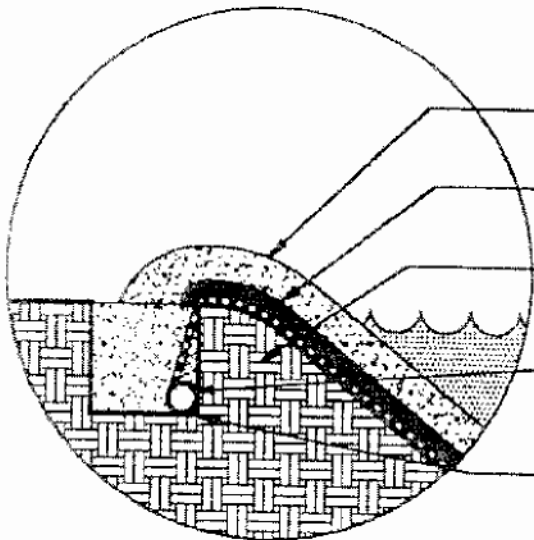
WRAP AND GLUE GEO. AROUND 1" SCHEDULE 40 PIPE

1 FOOT WIDE BY 1 FOOT DEEP PERIMETER TRENCH BACKFILL PRIOR TO SPRAYING

THIS DETAIL IS FOR ILLUSTRATIVE PURPOSES ONLY AND IS NOT TO SCALE



**WATERPROOFING UNDER GUNITE
LAKES AND RESERVOIRS**



GUNITE

100 DRY MILS WITH GEO

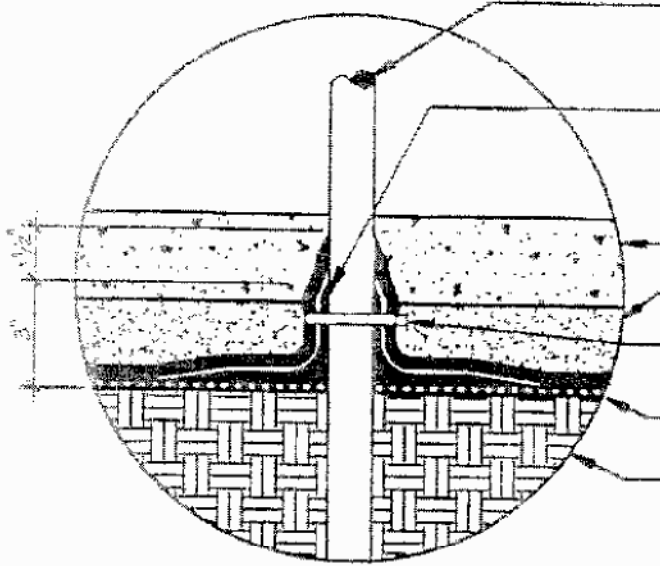
COMPACTED SUBGRADE

WRAP AND GLUE GEO. AROUND 1" SCHEDULE 40 PIPE

1 FOOT WIDE BY 1 FOOT DEEP PERIMETER TRENCH BACKFILL PRIOR TO SPRAYING

WATERPROOFING

PENETRATIONS



PIPE PENETRATION

3" COLLAR OF TROWEL GRADE AT 80 DRY MILS THICK

2" CONCRETE SLAB

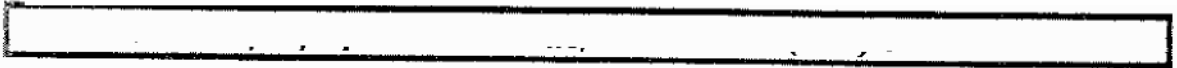
2" SAND COURSE

POLYPROPYLENE CABLE TIE 2" ABOVE BASE OF PENETRATION

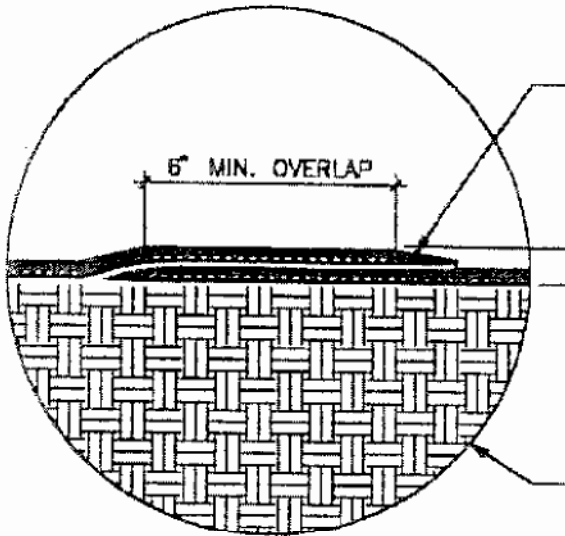
80 DRY MILS WITH GEO. (60 MIL MIN.)

SUBGRADE

THIS DETAIL IS FOR ILLUSTRATION PURPOSES ONLY AND IS NOT TO SCALE



WATERPROOFING MEMBRANE LAP JOINTS

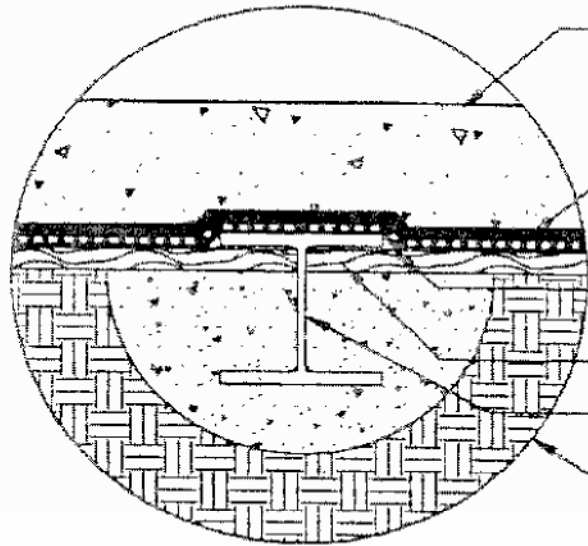


80 MILS WITH GEO. (ADD PROTECTION AS REQUIRED)

160 DRY MILS AT LAP JOINTS. CLEAN THE JOINT AREA WITH A SOFT BRUSH AND WATER BEFORE THE SECOND APPLICATION

SUBGRADE (OR OTHER APPLICATION SURFACE)

**WATERPROOFING ZERO LOSS
SHOTCRETE WALLS**



PLAN VIEW

SHOTCRETE OR CAST-IN-PLACE
CONCRETE WALL

80 DRY MILS NOMINAL WITH SCRIM
(100 DRY MILS IF SHOTCRETE)

TROWEL GRADE CANT AT SOLDIER PILES

WOOD LAGGING

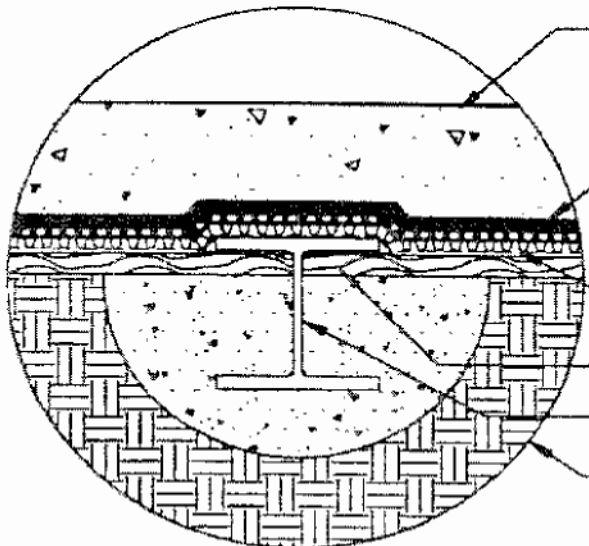
SOLDIER PILE

NATURAL EARTH

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**WATERPROOFING ZERO LOSS
SHOTCRETE WALLS WITH
SUBSURFACE DRAIN MAT**



SHOTCRETE OR CAST-IN-PLACE CONCRETE

80 DRY MILS WITH SCRIM (60 MILS MIN.)
(100 DRY MILS IF SHOTCRETE)

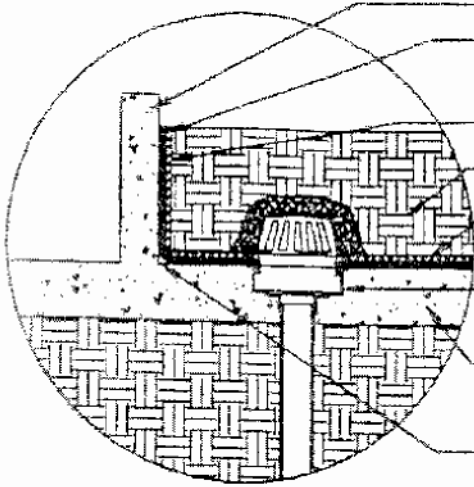
SUBSURFACE DRAIN MAT

WOOD LAGGING

SOLDIER PILE

NATURAL EARTH

WATERPROOFING PLANTERS AND DRAINS



CONCRETE OR MASONRY WALL
80 DRY MILS AT WALLS, FLOOR AND INTO DRAINS

PROTECTION BOARD
PLANTER BACKFILL

PROTECTION MAT

CAST-IN-PLACE DRAIN

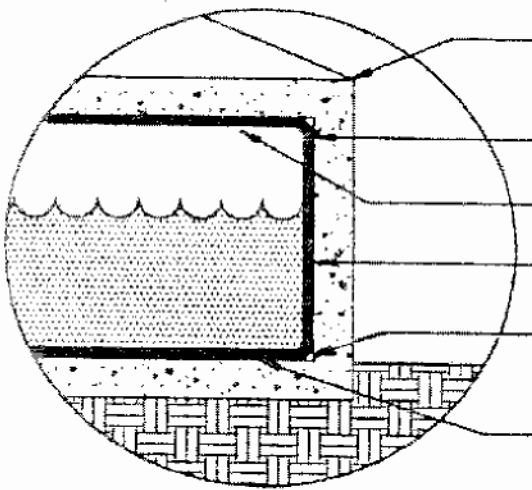
CONCRETE STRUCTURAL DECK (SLOPE TO DRAIN)

3/4" MINIMUM TROWEL GRADE CANT AT ALL CORNERS

THIS DETAIL IS FOR ILLUSTRATIVE PURPOSES ONLY AND IS NOT TO SCALE



WATERPROOFING COVERED STORAGE TANKS



CONCRETE (OR STEEL) WATER STORAGE TANK
(COMPLETELY DRY BEFORE SPRAYING)

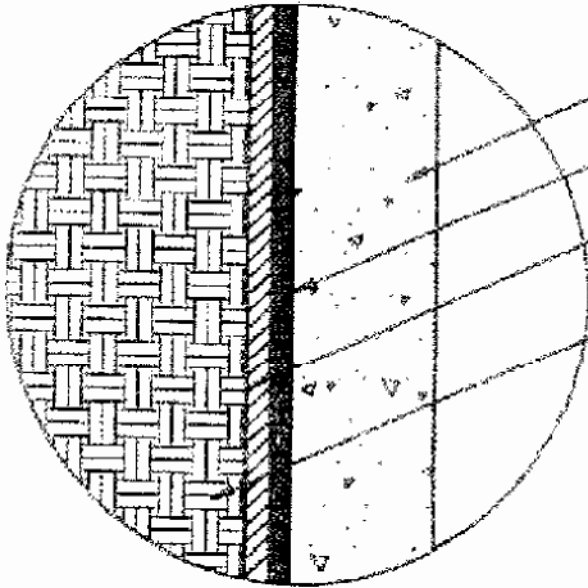
80 DRY MILS TYPICAL AT ALL SURFACES

ROOF MEMBRANE-SPRAY LAST IF REQUIRED
WALL MEMBRANE-SPRAY SECOND STARTING
M

3/4" MINIMUM TROWEL GRADE CANT AT ALL CORNERS

FLOOR MEMBRANE-SPRAY FIRST AND ALLOW
TO CURE COMPLETELY BEFORE PROCEEDING

WATERPROOFING BACKFILLED WALLS



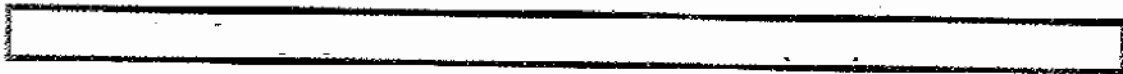
CONCRETE OR MASONRY WALL

80 DRY MILS NOMINAL (60 MILS MINIMUM)

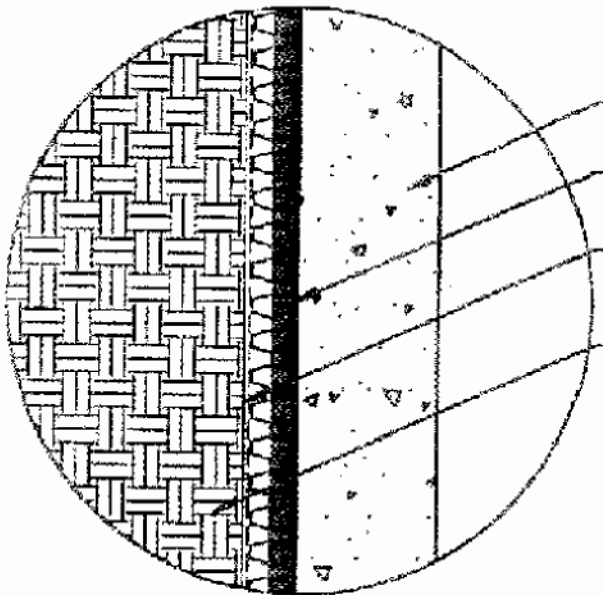
3/8" POLYSTYRENE BOARD

BACKFILL

THIS DETAIL IS FOR ILLUSTRATIVE PUTPOSES ONLY AND IS NOT TO SCALE



WATERPROOFING BACKFILLED WALLS WITH SUBSURFACE DRAIN MAT



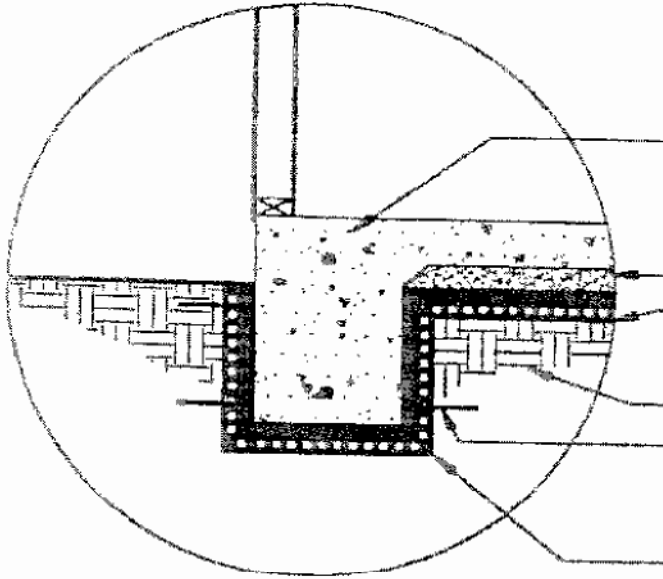
CONCRETE OR MASONRY WALL

80 DRY MILS NOMINAL

SUBSURFACE DRAIN MAT

BACKFILL

WATERPROOFING FOOTINGS AND GRADE BEAMS



CONCRETE FOOTING

2" SAND COURSE

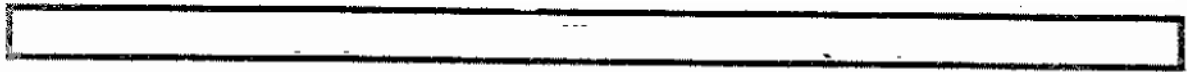
80 DRY MILS NOMINAL WITH GEO. (60 MILS MIN.)

SUBGRADE

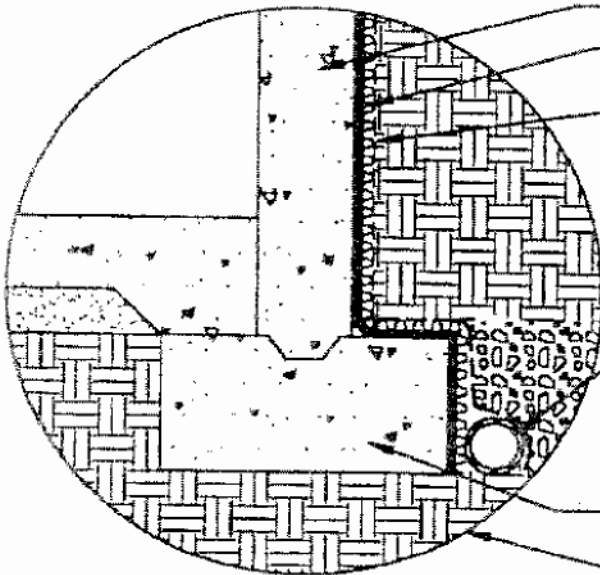
6 RING SHANK NAIL WITH SHINER HEAD
AT 24" O.C. (TYP. 3-PLACES)

CUT GEO. AT INSIDE CORNERS

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WATERPROOFING RETAINING WALL FOOTINGS WITH PERFORATED DRAIN PIPE



SUB GRADE RETAINING WALL

80 DRY MILS (60 MILS MIN.)

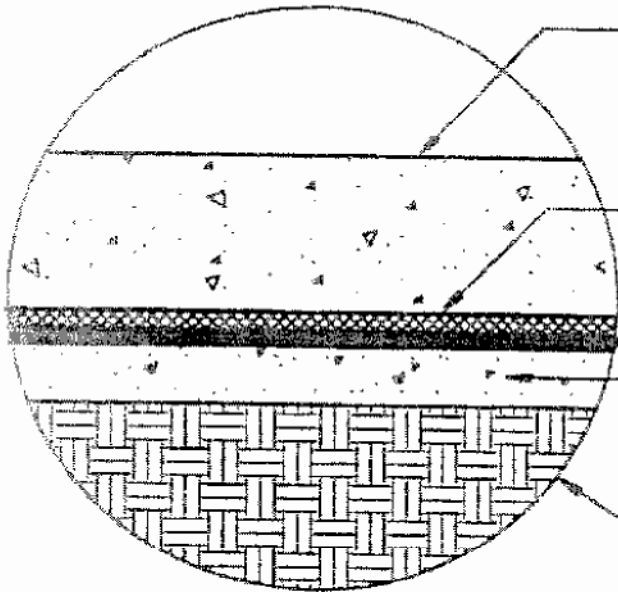
SUBSURFACE DRAIN MAT

PERFORATED PLASTIC DRAIN PIPE SET IN
GRAVEL. SEPARATE GEOTEXTILE FROM
DRAIN MAT AND WRAP AROUND DRAIN PIPE
SEE CIVIL.

CONCRETE FOOTING

SUBGRADE

WATERPROOFING BETWEEN SLAB FLOORS



CONCRETE SLAB

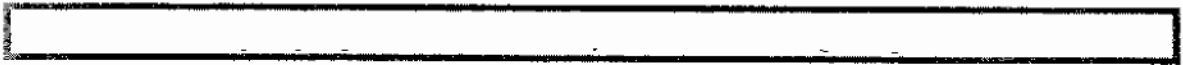
PROTECTION MAT

80 DRY MILS NOMINAL (60 MILS MINIMUM)

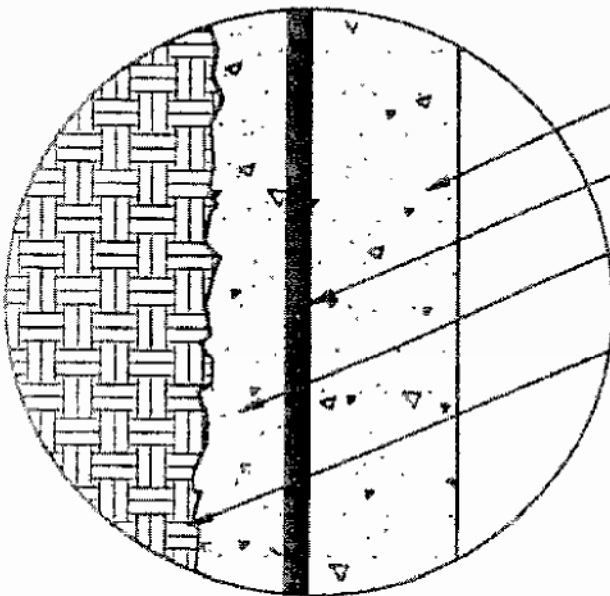
CONCRETE SLAB

SUNBRADE

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WATERPROOFING BETWEEN SHOTCRETE COURSES



SHOTCRETE STRUCTURAL COARSE

100 MILS

SHOTCRETE WASTE COURSE

NATURAL EARTH

