

- NOTES:**
- HYDROSTOR HS180 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787-13 AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418-12. HS180 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION GUIDELINES.
  - SUBGRADE: TRENCH BOTTOMS WITH UNSTABLE OR UNYIELDING MATERIAL SHALL BE EXCAVATED TO A DEPTH DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE MATERIAL. FOR UNSTABLE MATERIALS, GEOTEXTILE MAY BE USED TO STABILIZE THE TRENCH BOTTOM. IF DIRECTED BY THE ENGINEER, THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING SUBGRADE SUITABILITY.
  - GEOTEXTILE: A 4oz (136 gm<sup>2</sup>) OR HEAVIER NON-WOVEN GEOTEXTILE FILTER FABRIC SHOULD BE USED FOR EMBEDMENT BACKFILL MATERIAL SIZED 3/4 - 1 1/2 INCH (19 - 37 mm). A 6oz (203 gm<sup>2</sup>) NON-WOVEN GEOTEXTILE FILTER FABRIC SHOULD BE USED FOR EMBEDMENT BACKFILL MATERIAL SIZED 1 1/2 - 2 INCH (38 - 50 mm). GEOTEXTILE FILTER FABRIC IS PLACED AROUND THE SYSTEM TO PREVENT NATIVE SOIL FROM MIGRATING INTO THE EMBEDMENT BACKFILL MATERIAL. TO ENSURE FABRIC IS SUITABLE WITH IN-SITU SOILS, A GEOTECHNICAL ENGINEER SHOULD BE CONSULTED.
  - FOUNDATION: SUITABLE MATERIAL SHALL BE A 3/4 - 2 INCH (19 - 50 mm), WASHED, CRUSHED ANGULAR STONE, OR AASHTO M33 SIZES (3, 357, 4, 467, 5, 56, 57) WITH WASHED, CRUSHED, ANGULAR STONE ADDED TO THE GRAVATION, e.g., WASHED, CRUSHED, ANGULAR #3 (AASHTO M33) STONE. EMBEDMENT BACKFILL SHALL EXTEND FROM TOP OF FOUNDATION TO NOT LESS THAN 12 INCHES (300 mm) ABOVE THE TOP OF THE CHAMBER. NO COMPACTION IS REQUIRED BUT AN EFFORT SHOULD BE MADE TO HAND KNIFE STONE IN BETWEEN ALL CORRUGATIONS.
  - INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE A GRANULAR, WELL GRADED SOIL WITH LESS THAN 35% FINES OR AASHTO M33 SIZES (3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 86, 9, 10). MOST PAVEMENT SUBBASE MATERIALS FALL WITHIN THIS GRADING CRITERIA. INITIAL BACKFILL SHALL EXTEND TO TOP OF EMBEDMENT BACKFILL TO NOT LESS THAN 23.5 INCHES (590 mm) ABOVE THE TOP OF THE CHAMBER. COMPACT TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
  - FINAL BACKFILL: SUITABLE MATERIAL SHALL BE ANY SOIL DIRECTED BY THE ENGINEER. FINAL BACKFILL SHALL EXTEND FROM TOP OF INITIAL BACKFILL TO NO MORE THAN 8 FEET (2.4 m) ABOVE THE TOP OF THE CHAMBER. COMPACT LEVELS SHOULD FOLLOW ENGINEER'S RECOMMENDATIONS.
  - MINIMUM COVER: FOR TRAFFIC APPLICATIONS A MINIMUM COVER OF 23.5 INCHES (590 mm) IS REQUIRED, MEASURED FROM THE TOP OF THE CHAMBER TO THE BOTTOM OF THE FLEXIBLE PAVEMENT FOR UNPAVED INSTALLATIONS WHERE RUTTING MAY OCCUR. INCREASE COVER TO 30 INCHES (750 mm) FOR H-20 LOADING. ADDITIONAL COVER MAY BE REQUIRED FOR CONSTRUCTION LOADS.
  - MAXIMUM COVER: A COVER HEIGHT OF OVER 8 FEET (2.4 m) IS NOT RECOMMENDED. COVER HEIGHT IS MEASURED FROM THE TOP OF THE CHAMBER TO THE TOP OF THE PAVEMENT.
  - EMBEDMENT BACKFILL: SUITABLE MATERIAL SHALL BE A 3/4 - 2 INCH (19 - 50 mm), WASHED, CRUSHED ANGULAR STONE, OR AASHTO M33 SIZES (3, 357, 4, 467, 5, 56, 57) WITH WASHED, CRUSHED, ANGULAR STONE ADDED TO THE GRAVATION, e.g., WASHED, CRUSHED, ANGULAR #3 (AASHTO M33) STONE. EMBEDMENT BACKFILL SHALL EXTEND FROM TOP OF FOUNDATION TO NOT LESS THAN 12 INCHES (300 mm) ABOVE THE TOP OF THE CHAMBER. NO COMPACTION IS REQUIRED BUT AN EFFORT SHOULD BE MADE TO HAND KNIFE STONE IN BETWEEN ALL CORRUGATIONS.

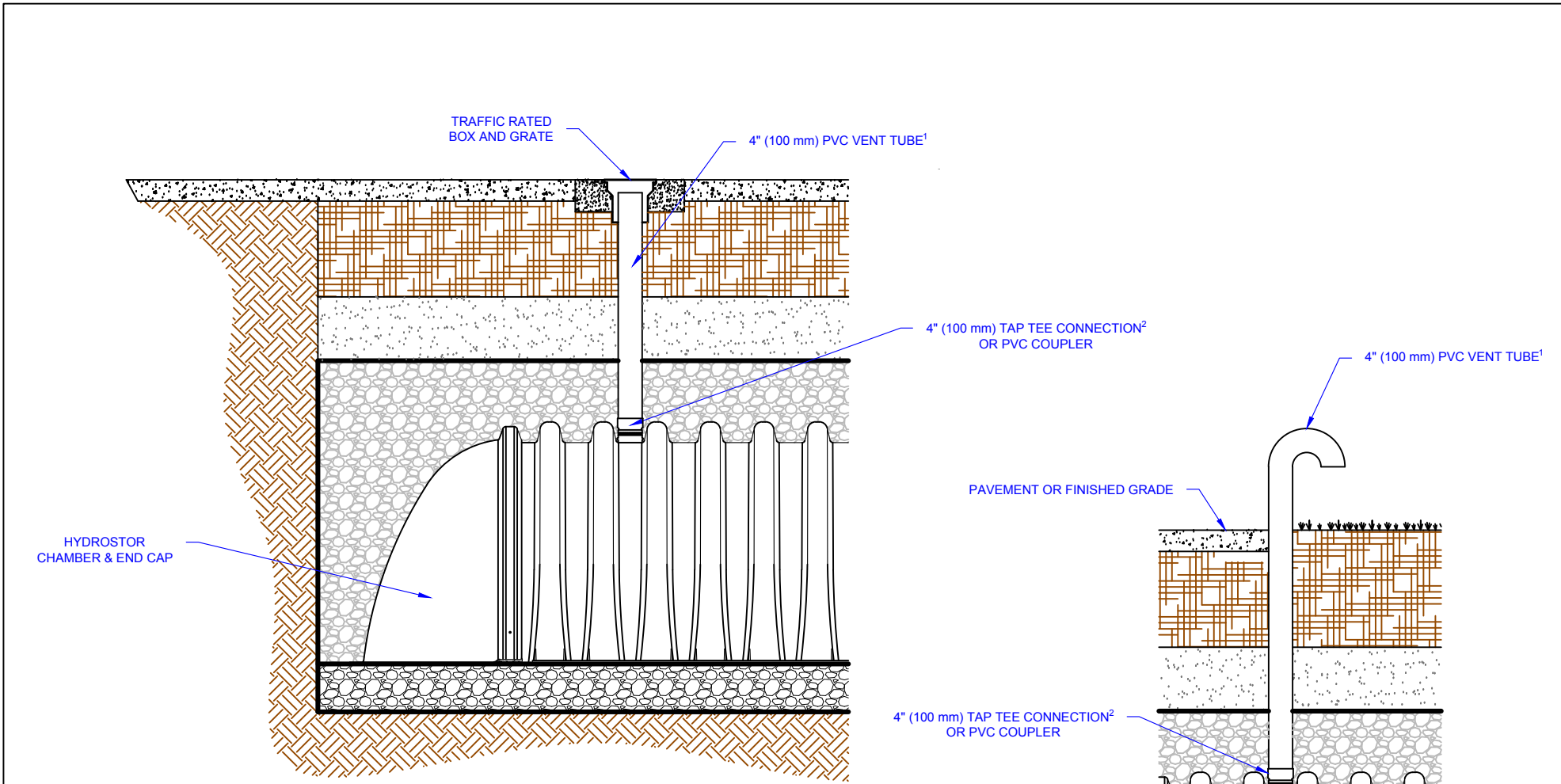
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**TYPICAL CROSS SECTION HYDROSTOR HS180 CHAMBER**

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BY	BMI	
CHKD	NTS	
SCALE	1 OF 1	

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- NOTES:**
- A 4" (100 mm) VENT TUBE MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY (HS180) CHAMBER CIRCULAR CUT OUT POINT (HSTS).
  - TAP TEE CONNECTION MAY CONSIST OF QWIKSEAL, INSERT A TEE OR APPROVED EQUAL.
  - ALL PVC FITTINGS TO BE SOLVENT CEMENTED.
  - LOAD RATING: HS180 CHAMBERS ARE TRAFFIC RATED FOR H-20 VEHICLES WITH ADDITIONAL CONSIDERATION FOR LANE LOADS, COMMONLY REFERRED TO AS HL-93 LOAD RATING (AASHTO DESIGN TRUCK).
  - PVC PIPE MAY BE EITHER SDR 35 OR SCH 40.
  - PVC PIPE MAY BE SOLID OR PERFORATED PER ENGINEER.

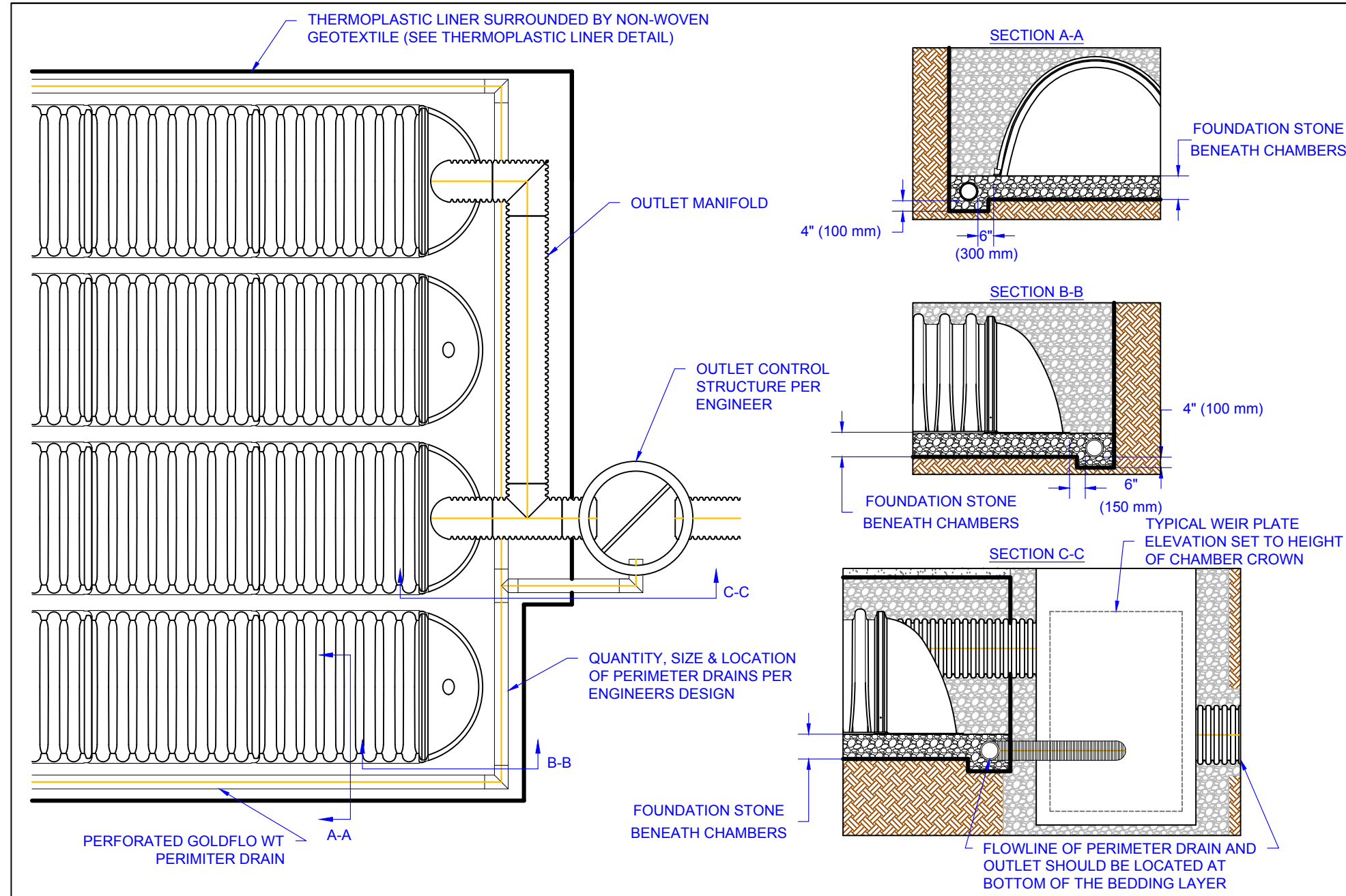
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**VENT TUBE DETAIL HYDROSTOR CHAMBERS**

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CHKD	NTS	
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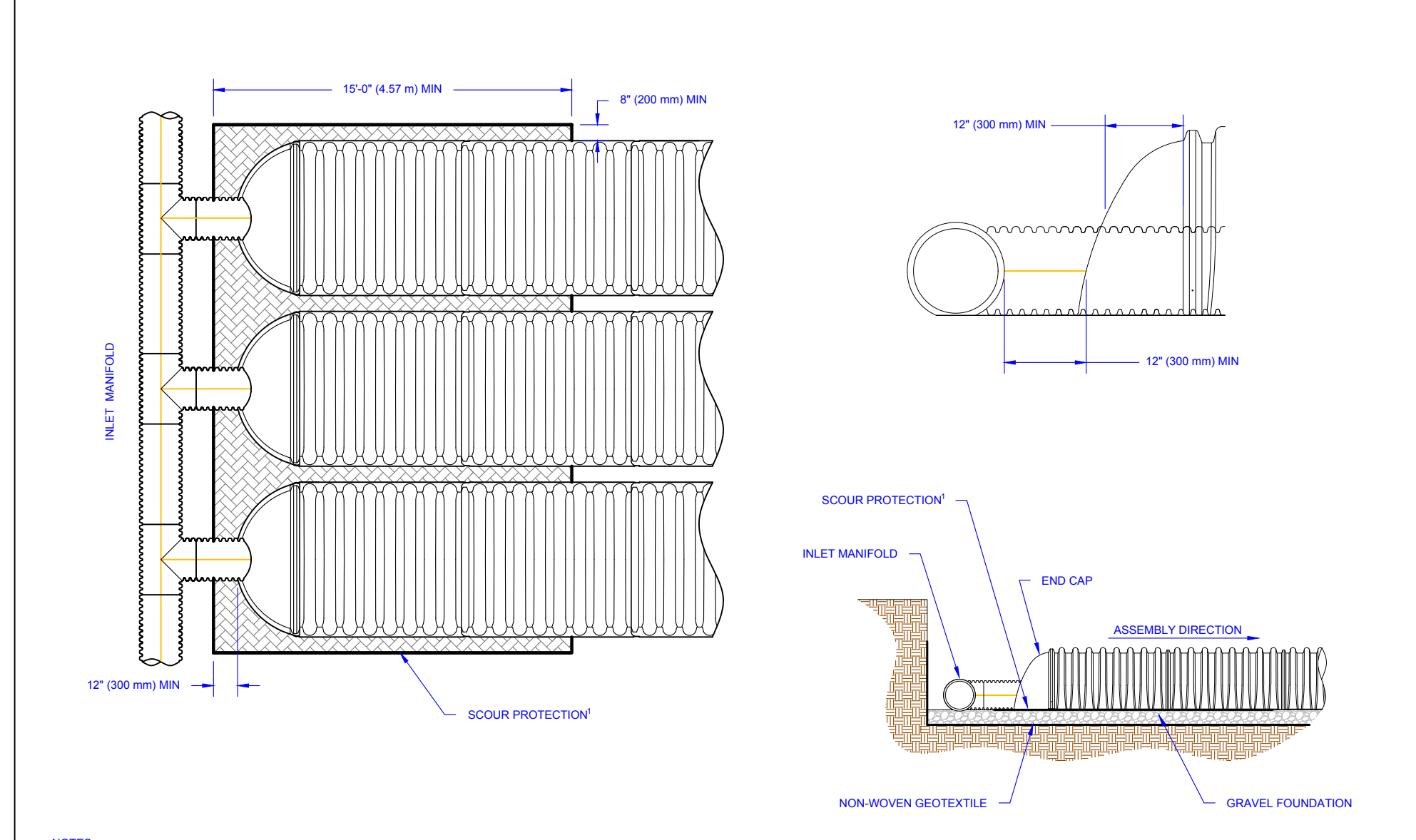
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**PERIMETER DRAIN DETAIL HYDROSTOR CHAMBERS**

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CHKD	NTS	
SCALE	1 OF 1	

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- NOTES:**
- SCOUR PROTECTION SHOULD USE A 6oz (203 gm<sup>2</sup>) WOVEN GEOTEXTILE. GEOTEXTILE SHOULD MEET AASHTO M288 CLASS 1 SPECIFICATION.
  - SCOUR PROTECTION IS ONLY NEEDED WITH CHAMBER ROWS CONNECTED TO THE INLET MANIFOLD.

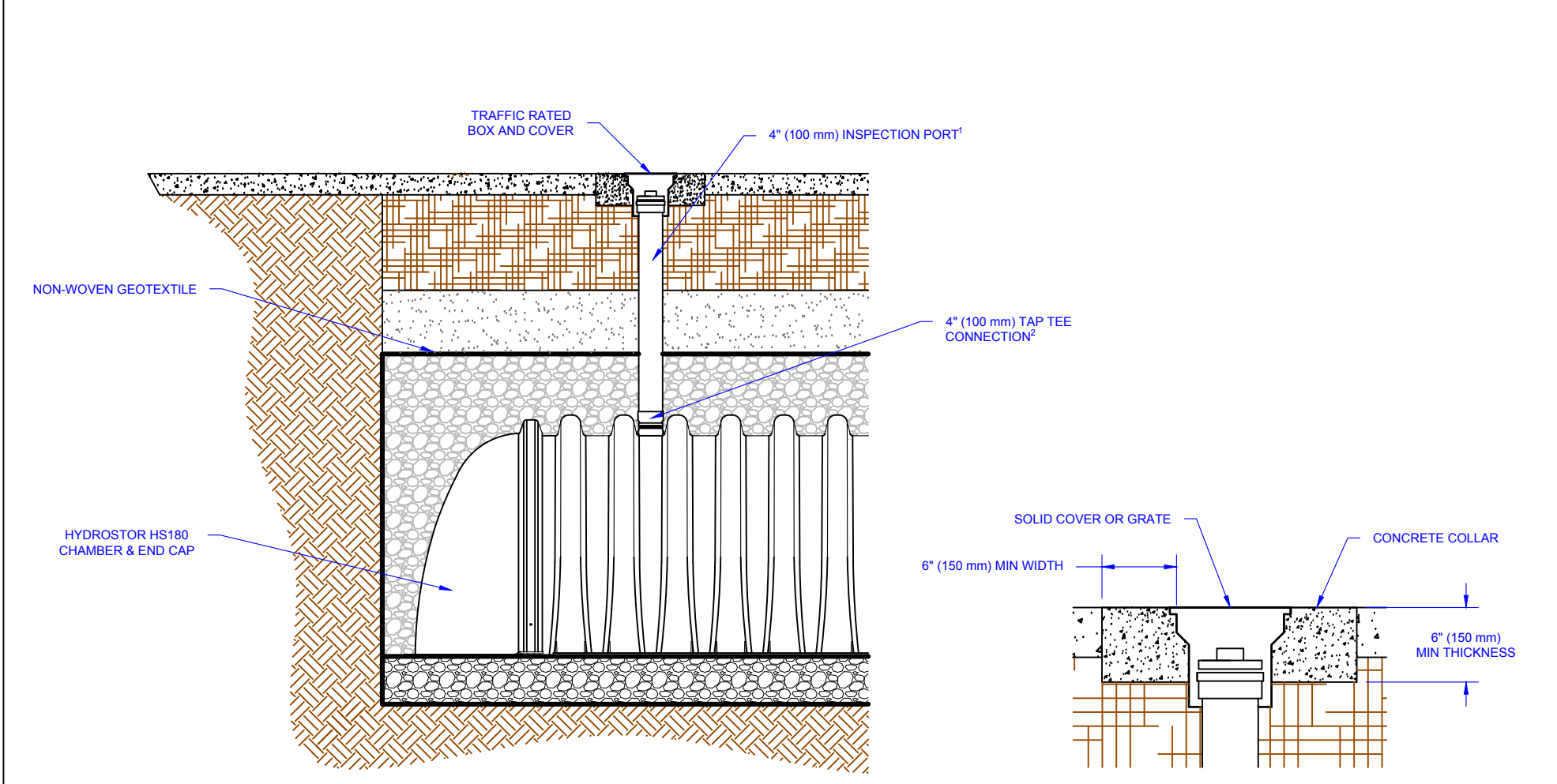
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**SCOUR PROTECTION DETAIL HYDROSTOR CHAMBERS**

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BY	BMI	
CHKD	NTS	
SCALE	1 OF 1	

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- NOTES:**
- A 4" (100 mm) INSPECTION PORT MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.
  - TAP TEE CONNECTION MAY CONSIST OF QWIKSEAL, INSERT A TEE OR APPROVED EQUAL.
  - ALL PVC FITTINGS TO BE SOLVENT CEMENTED.
  - LOAD RATING: HS180 CHAMBERS ARE TRAFFIC RATED FOR H-20 VEHICLES WITH ADDITIONAL CONSIDERATION FOR LANE LOADS, COMMONLY REFERRED TO AS HL-93 LOAD RATING (AASHTO DESIGN TRUCK).
  - PVC PIPE MAY BE EITHER SDR 35 OR SCH 40.

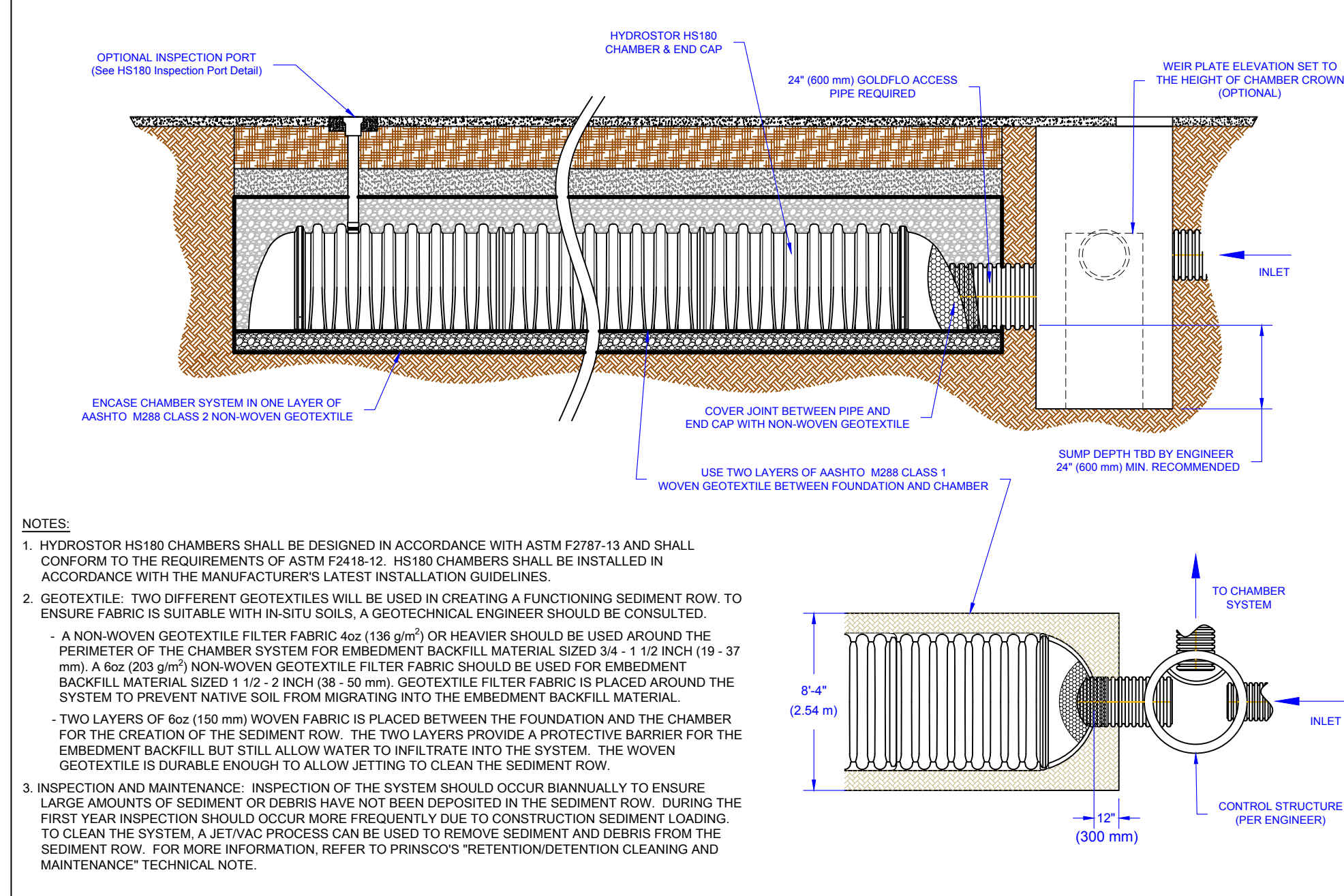
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**INSPECTION PORT DETAIL HYDROSTOR HS180 CHAMBER**

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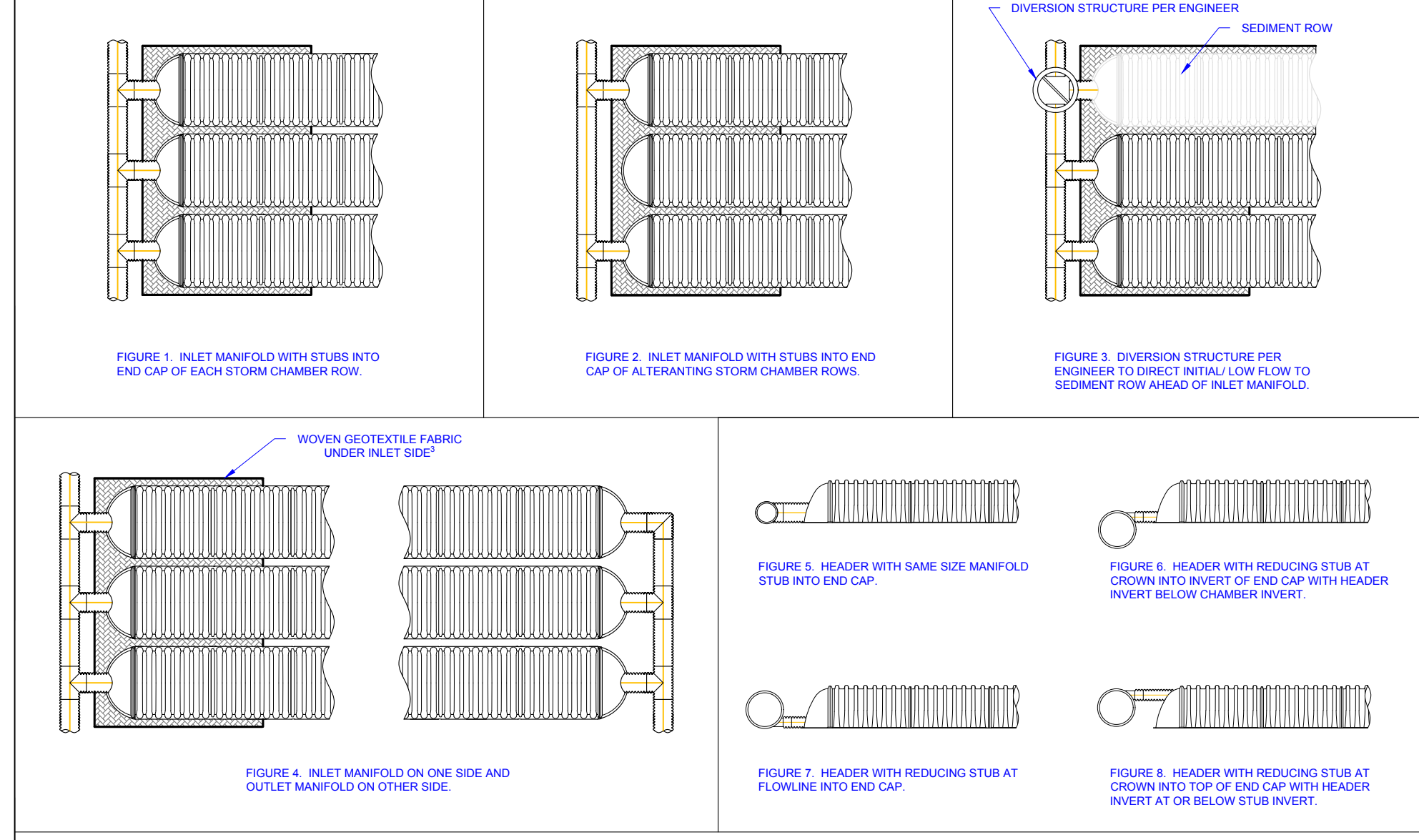
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**SEDIMENT ROW DETAIL HYDROSTOR HS180 CHAMBER**

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CHKD	NTS	
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- NOTES:**
- THERE ARE MANY INLET HEADER AND OUTLET HEADER POSSIBILITIES. THE CONFIGURATIONS SHOWN ON THIS DRAWING ARE JUST A FEW OF THE OPTIONS.
  - INLET AND OUTLET MANIFOLDS SHALL BE INSERTED AT LEAST 12" (300 mm) INTO CHAMBER END CAPS. MANIFOLD HEADERS SHALL BE AT LEAST 12" (300 mm) FROM THE BASE OF THE END CAPS.
  - PRINSCO RECOMMENDS SCOUR CONTROL MEASURE AT INLETS. POSSIBILITIES FOR SCOUR CONTROL MEASURES AT INLETS ARE SHOWN IN THE SCOUR PROTECTION DETAIL. REFER TO PRINSCO'S SCOUR PROTECTION DETAIL.

THIS DETAIL DEPICTS RECOMMENDED INSTALLATION PRACTICES AND IS NOT INTENDED TO SUPERSEDE ANY NATIONAL, STATE OR LOCAL SPECIFICATIONS. PRINSCO BEARS NO RESPONSIBILITY FOR ANY ALTERATIONS, REVISION AND/OR DEVIATION FROM THIS STANDARD DETAIL. PRINSCO HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICE FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION TO VERIFY SUITABILITY. © PRINSCO, INC.

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**HEADER CONFIGURATIONS HYDROSTOR CHAMBERS**

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**HydroStor HS180**

**Chamber Specifications**

Chamber Size (L x W x H)	88.7" x 77.8" x 45.5" (2,253 x 1,967 x 1,156 mm)
Installed Length	85.3" (2,167 mm)
Chamber Storage	113.6 ft <sup>3</sup> (3,222 m <sup>3</sup> )
Min. Installed Storage*	180.0 ft <sup>3</sup> (5,100 m <sup>3</sup> )
Weight / Chamber	127 lbs (57.6 kg)
Chambers / Pallet	17
Approx. Weight / Pallet	2,400 lbs (1,090 kg)

**End Cap Specifications**

End Cap Size (L x W x H)	26.2" x 76.4" x 44.6" (665 x 1,941 x 1,133 mm)
Installed Length	21.7" (551 mm)
End Cap Storage	19.0 ft <sup>3</sup> (0.54 m <sup>3</sup> )
Min. Installed Storage*	48.0 ft <sup>3</sup> (1.36 m <sup>3</sup> )
Weight / End Cap	65 lbs (29.48 kg)

**GENERAL NOTES:**

- THE INSTALLATION FOR THE LATEST HYDROSTOR CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST HYDROSTOR INSTALLATION INSTRUCTIONS.
- THE CONTRACTORS ARE ADVISED TO REVIEW AND UNDERSTAND THE INSULATION INSTRUCTIONS BEFORE BEGINNING SYSTEM INSTALLATION. VISIT PRINSCO.COM OR CALL 800-892-1725 TO RECEIVE A COPY OF THE LATEST HYDROSTOR INSTALLATION INSTRUCTIONS.
- THE CONTRACTOR IS REQUIRED TO CALL THEIR LOCAL SALES REPRESENTATIVE TO SCHEDULE A FREE PRE-CONSTRUCTION MEETING WITH THE MANUFACTURER.

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**SPECIFICATION DRAWING HYDROSTOR HS180 CHAMBER**

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\*Assumes 12" (300 mm) stone above chambers/end caps, 6" (150 mm) of stone perimeter in front of end caps and 40% stone porosity.