

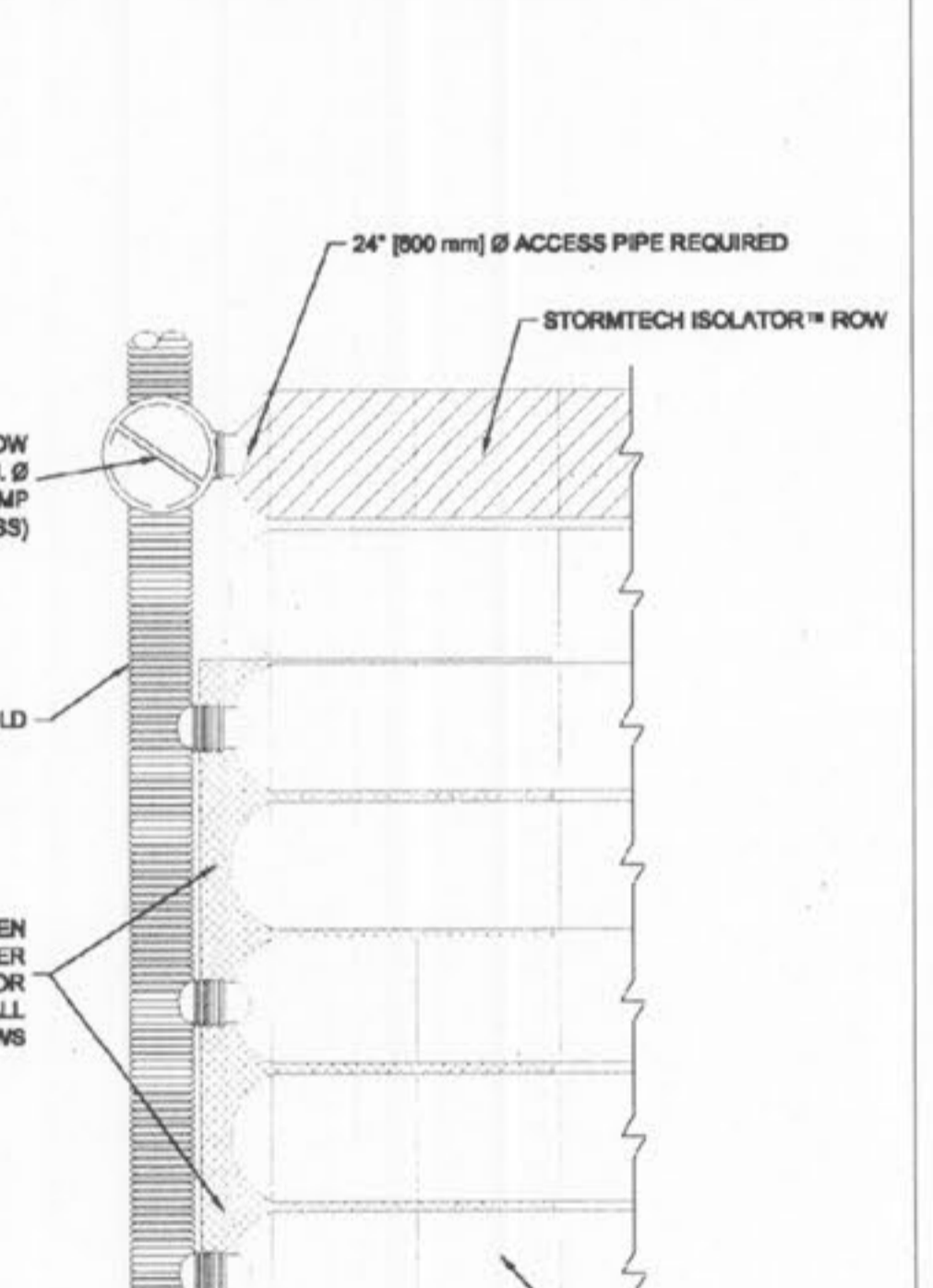
ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION ¹	COMPACTION/DENSITY REQUIREMENT
① FILL MATERIAL FOR LAYER OF STUBS FROM THE TOP OF THE 12" LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THIS LAYER.	ANY SOLIDROCK MATERIALS, MATRY ² SOLS OR PER ENGINEER'S PLAN. CHECK PLAN FOR PAVEMENT REQUIREMENTS.	N/A	PREPARE PER ENGINEER'S PLAN. PAVED INSTALLATIONS MAY HAVE STORMTECH MATERIAL AND PREPARATION REQUIREMENTS.
② FILL MATERIAL FOR LAYER OF STUBS FROM THE TOP OF THE EMBANKMENT STONE OF LAYERS TO 24" (610 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THIS LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <math>< 35\% \text{ FINES}</math>, MOST PAVEMENT SUBBASE MATERIALS CAN BE USED INSTEAD OF THIS LAYER.	3, 357, 4, 467, 5, 55, 67, 6, 67, 66, 7, 76, 8, 86, 9, 90	85% COMPACT AFTER 24" (610 mm) OF MATERIAL OVER THE CHAMBER BY REACHED. COMPACT ADDITIONAL LAYERS IN 8" (203 mm) MAX. LIFTS TO A MIN. 95% STANDARD PROCTOR DENSITY.
③ EMBANKMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE TO THE 12" LAYER ABOVE.	CLEAR, CRUSHED, ANGULAR STONE. NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 - 2 INCH [19 - 51 mm].	3, 357, 4, 467, 5, 55, 67	NO COMPACTION REQUIRED.
④ FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT BOTTOMS OF THE CHAMBER.	CLEAR, CRUSHED, ANGULAR STONE. NOMINAL SIZE DISTRIBUTION BETWEEN 3/4 - 2 INCH [19 - 51 mm].	3, 35, 4, 467, 5, 55, 67	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY ¹ .

PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR ORIGINATORS ONLY. THE STONE MUST ALSO BE CLEAR, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR 3/4" STONE WOULD STATE: "CLEAR, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."
 2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTOR REQUIREMENTS ARE MET FOR LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 8" (203 mm) MAX. LIFTS USING TWO FULL COVERS WITH AN APPROPRIATE COMPACTOR.

MC-3500 STORMWATER CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500 OR APPROVED EQUAL.
- CHAMBERS SHALL BE MADE FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET.
 - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL CROSS SECTION IS BASED.
- THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.



NOMINAL MC-3500 CHAMBER SPECIFICATIONS

SIZE (L x W x H)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE	WEIGHT
90" x 77" x 45" [2286 mm x 1956 mm x 1143 mm]	113.0 m ³ [3.20 m ³]	176.8 m ³ [5.01 m ³]	124 lbs. [56.2 kg]

NOMINAL MC-3500 END CAP SPECIFICATIONS

SIZE (L x W x H)	END CAP STORAGE	MINIMUM INSTALLED STORAGE	WEIGHT
26.5" x 71" x 45.1" [673 mm x 1803 mm x 1145 mm]	15.6 m ³ [0.44 m ³]	45.6 m ³ [1.29 m ³]	43 lbs. [19.5 kg]

PART NUMBERS ENDING WITH "B" ARE FOR STUBS AT BOTTOM OF END CAP. PART NUMBERS ENDING WITH "T" ARE FOR STUBS AT TOP OF END CAP.

PART#	STUB	B	C
MC3500TEPE12T	12" [300 mm]	26.36" [670 mm]	N/A
MC3500TEPE12B	12" [300 mm]	N/A	1.35" [34 mm]
MC3500TEPE15T	15" [375 mm]	N/A	N/A
MC3500TEPE15B	15" [375 mm]	N/A	1.50" [38 mm]
MC3500TEPE18T	18" [450 mm]	20.03" [509 mm]	N/A
MC3500TEPE18B	18" [450 mm]	N/A	1.77" [45 mm]
24" TOP STUB CORED ENDCAP NOT AVAILABLE			
MC3500TEPE24B	24" [600 mm]	N/A	2.06" [52 mm]

NOTE: ALL DIMENSIONS ARE NOMINAL.

STORMTECH INVENTORIED MANIFOLDS AND PRECORED END CAPS INCLUDE 24" (600 MM) BOTTOM (MC3500TEPE24B), 18" (450 MM) BOTTOM (MC3500TEPE18B) AND 15" (375 MM) TOP (MC3500TEPE15T). OTHER PIPE SIZES AND PRECORED END CAPS ARE AVAILABLE UPON SPECIAL ORDER.

- FOUNDATION GEOTEXTILE FABRIC**
- GEOTEXTILE FABRIC AT BASE OF FOUNDATION ROCK FOR THE STORMTECH UNITS SHALL BE MIRAFI 600X OR EQUAL.
 - GEOTEXTILE FABRIC SHALL BE PLACED DIRECTLY ON PREPARED SUBGRADE. THE FABRIC SHOULD BE ROLLED OUT FLAT AND TIGHT WITH NO FOLDS.
 - GEOTEXTILE FABRIC SHALL BE ORIENTED IN THE DIRECTION OF THE STORMTECH UNITS.
 - ADJACENT GEOTEXTILE ROLLS SHALL BE OVERLAPPED A MINIMUM OF 18".
 - PRIOR TO BASE ROCK PLACEMENT, THE GEOTEXTILE SHALL BE HELD IN PLACE USING PINS OR SOIL NAILS AND EACH END OF THE ROLL SHALL BE HELD IN PLACE WITH PILES OF BASE ROCK PRIOR TO ADDITIONAL BASE ROCK PLACEMENT.
 - FILL OVER GEOTEXTILE FABRIC SHALL BE PLACED IN 8" TO 12" LOOSE LIFTS.
 - TRACKED CONSTRUCTION EQUIPMENT SHOULD NOT BE OPERATED DIRECTLY UPON THE GEOTEXTILE. A MINIMUM OF 6" OF COMPACTED FILL IS REQUIRED FOR TRACKED VEHICLE OPERATION.
 - NO MORE THAN ONE SPLICE PER RUN SHALL BE ALLOWED. SPLICES IN A RUN SHALL BE OVERLAPPED AT LEAST 5'. SPLICES IN ADJACENT RUNS SHALL BE STAGGERED A MINIMUM OF 15'.

STORMWATER CHAMBER SPECIFICATIONS

SCALE: NTS
 DATE: 7-17-08
 DRAWN BY: JLM
 CHECKED: KAM

MC-3500 INLET AND SCOUR PROTECTION

SCALE: NTS
 DATE: 7-17-08
 DRAWN BY: JLM
 CHECKED:

MC-3500 TECHNICAL SPECIFICATIONS

SCALE: NTS
 DATE: 12-16-09
 DRAWN BY: JLM
 CHECKED:

PLANNING & DEVELOPMENT #1804.08 APPROVED AUGUST 6, 2009

STORM SEWER DETAILS

WOODBURY PLACE

ST. CHARLES COUNTY, O'FALLON, MISSOURI

Surveyed:

Drawn: CH

Checked: TOC/AM

Scale: AS SHOWN

Date: DECEMBER 7, 2009

Job: 11354

Sheet: C122

Revised: 19 JAN 2010

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