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**MANAGER, DEVELOPMENT REVIEW SOUTH**  
**PLANNING, DEVELOPMENT AND BUILDING SERVICES**  
**DEPARTMENT, CITY OF OTTAWA**

**APPROVED**  
By *wildmange* at 4:40 pm, Mar 13, 2026



**SC-740 STORMTECH CHAMBER SPECIFICATIONS**

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE SUBSTRUCTURE 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.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2797, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 900 LB/FT<sup>2</sup>. THE ASIC IS DEFINED IN SECTION 6.2.4 OF ASTM F2418. AND 3) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
  - THE STRUCTURAL EVALUATION SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER.
  - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.56 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2797 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
  - THE TEST DETERMINED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE TESTED MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

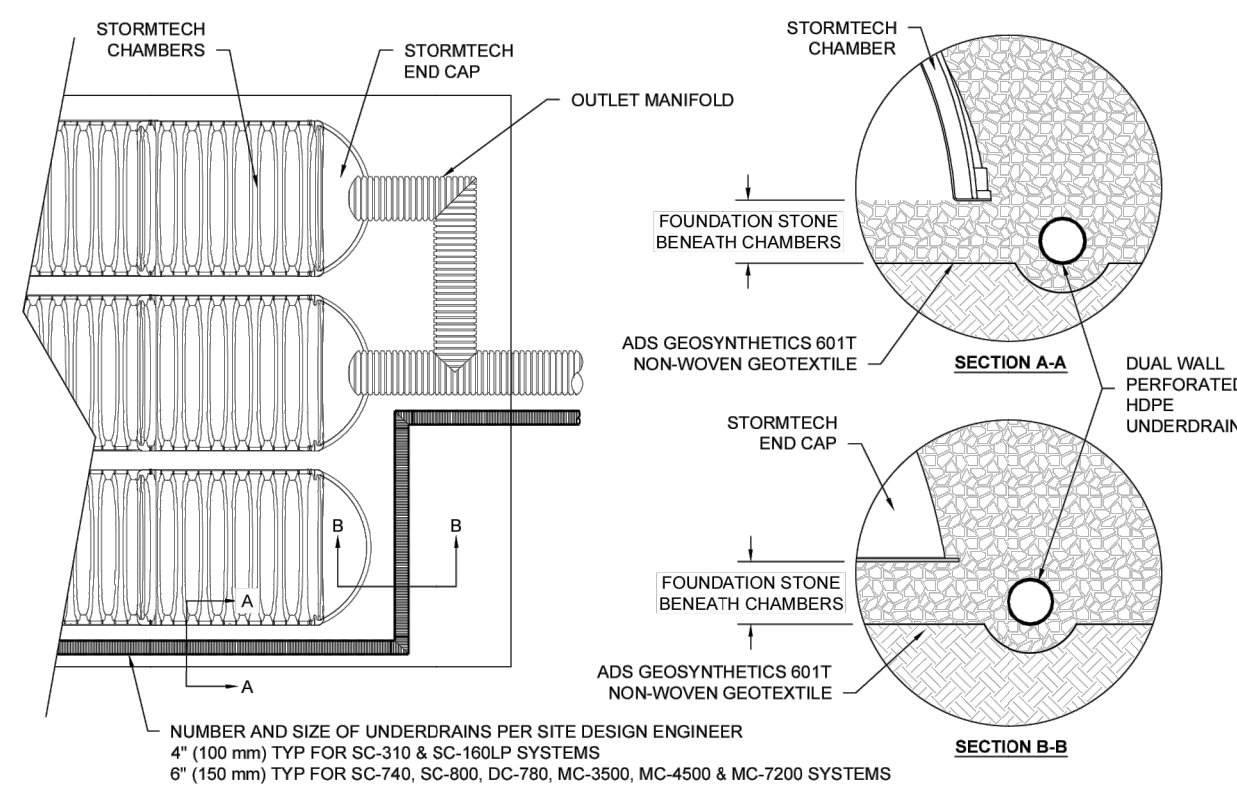
**IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 CHAMBER**

- STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
  - STONE SHOOTERS LOCATED OFF THE CHAMBER BED.
  - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
  - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELLED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM .6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4" (20.50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

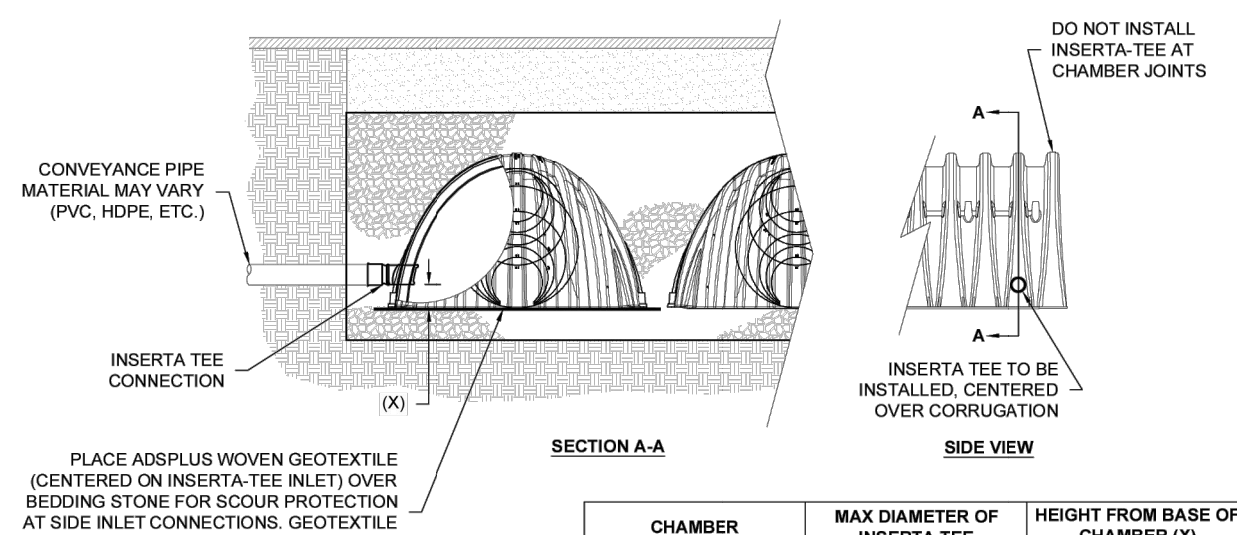
**NOTES FOR CONSTRUCTION EQUIPMENT**

- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
  - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
  - NO RUBBER TRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740DC-780 CONSTRUCTION GUIDE".
  - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310SC-740DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING. USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

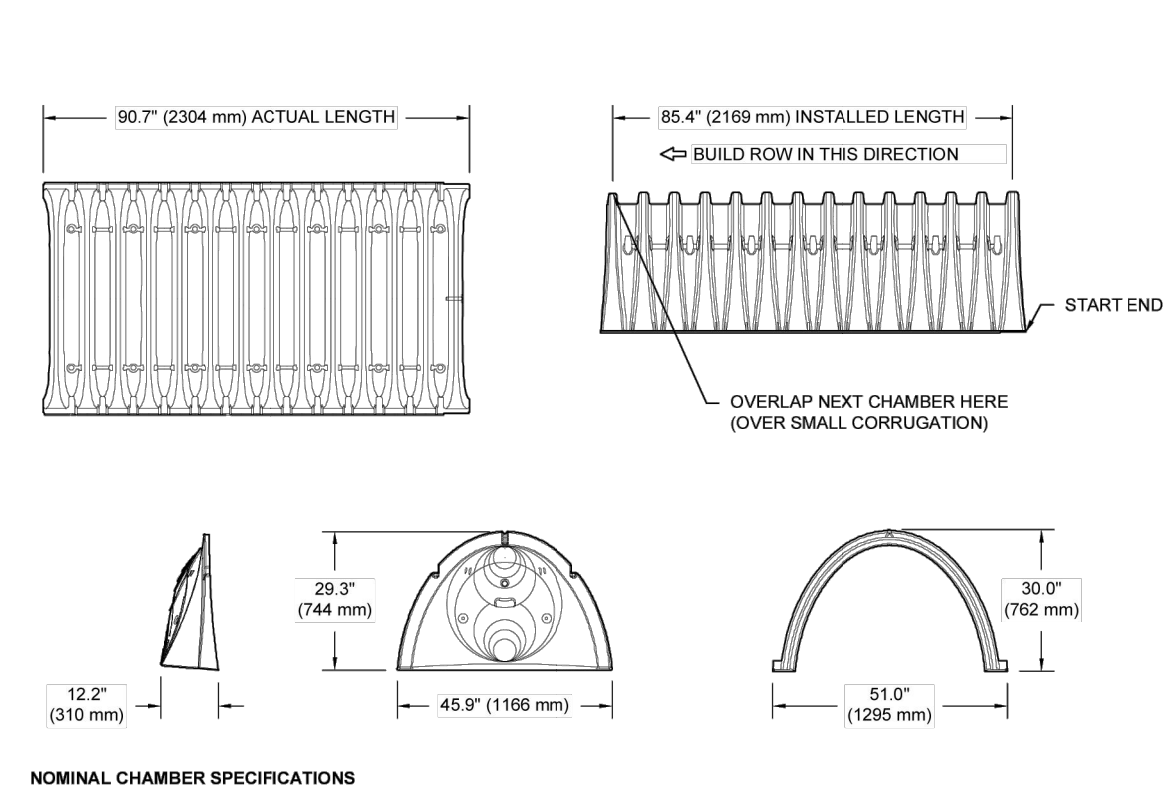


**5 UNDERDRAIN DETAIL**



CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
SC-800	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
MC-7200	12" (300 mm)	8" (200 mm)

**6 INSERTA-TEE SIDE INLET DETAIL**



**NOMINAL CHAMBER SPECIFICATIONS**

SIZE (W X L X INSTALLED LENGTH)	51.0" X 30.0" X 85.4" (1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET (1.30 m <sup>3</sup> )
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET (2.12 m <sup>3</sup> )
WEIGHT	75.9 lbs (33.9 kg)

\*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

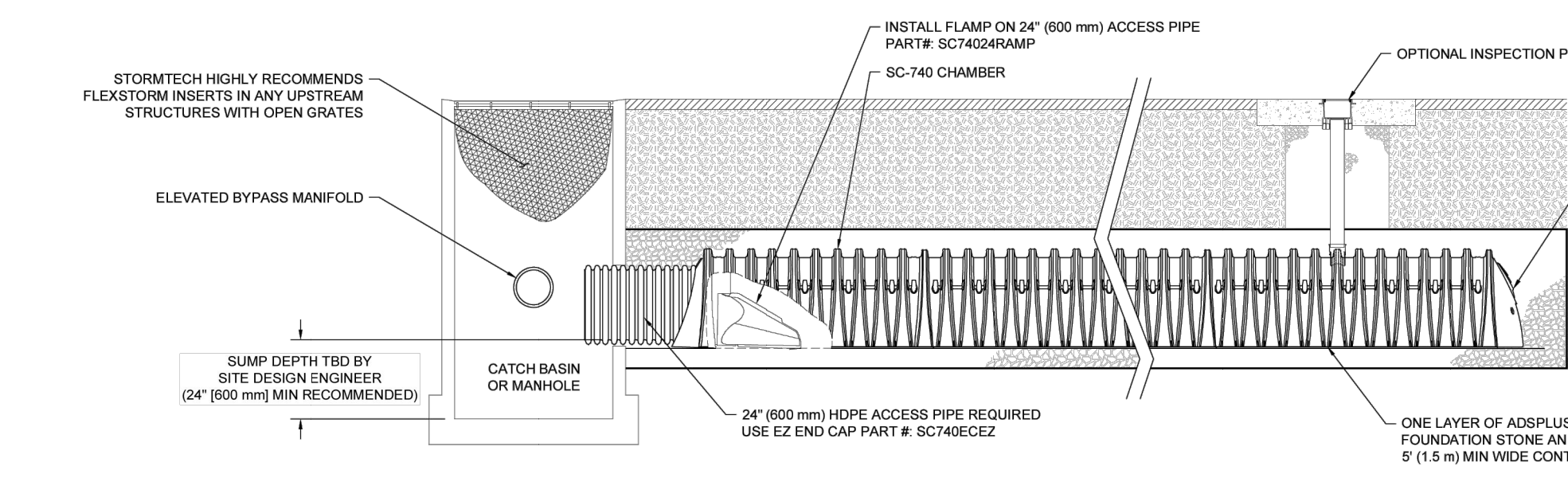
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"  
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"  
PRE-CORED END CAPS END WITH "PC"

PART #	STUB	A	B	C
SC740E007 / SC740E007PC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740E008 / SC740E008PC	8" (200 mm)	12.2" (310 mm)	16.9" (419 mm)	0.9" (13 mm)
SC740E009 / SC740E009PC	8" (200 mm)	12.2" (310 mm)	14.9" (368 mm)	0.6" (15 mm)
SC740E107 / SC740E107PC	10" (250 mm)	13.4" (340 mm)	---	0.7" (18 mm)
SC740E108 / SC740E108PC	10" (250 mm)	13.4" (340 mm)	---	0.7" (18 mm)
SC740E127 / SC740E127PC	12" (300 mm)	14.7" (373 mm)	12.9" (318 mm)	1.2" (30 mm)
SC740E128 / SC740E128PC	12" (300 mm)	14.7" (373 mm)	---	1.2" (30 mm)
SC740E157 / SC740E157PC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740E158 / SC740E158PC	15" (375 mm)	18.4" (467 mm)	---	1.3" (33 mm)
SC740E187 / SC740E187PC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	1.6" (41 mm)
SC740E188 / SC740E188PC	18" (450 mm)	19.7" (500 mm)	---	1.6" (41 mm)
SC740E207 / SC740E207PC	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

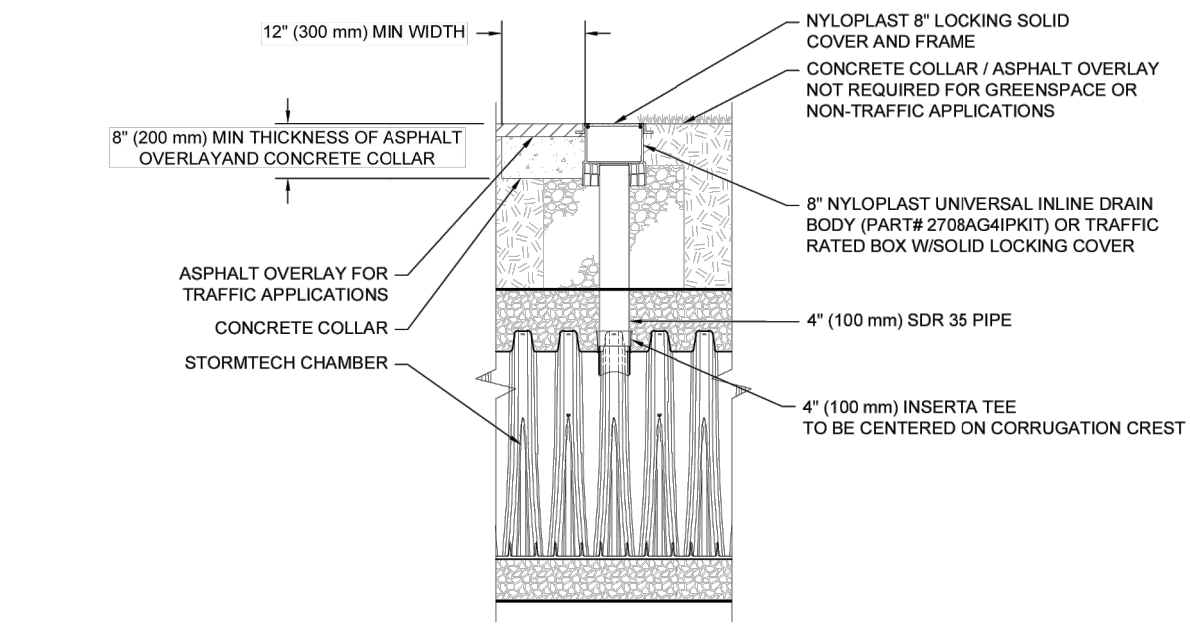
ALL STUBS EXCEPT FOR THE SC740E007 ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.  
\* FOR THE SC740E007 THE 24" (600 mm) STUBS BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm) BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL.

**2 SC-740 TECHNICAL SPECIFICATIONS**



**3 SC-740 ISOLATOR ROW PLUS DETAIL**



**4 4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)**

**INSPECTION & MAINTENANCE**

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
  - REMOVE OPEN LID ON NYLOPLAST INLINE DRAIN BODY AND CLEAN ISOLATOR FILTER IF INSTALLED
  - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - LOWER CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - IF SEDIMENT IS AT, OR ABOVE, 3" (76 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
  - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
  - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - IF SEDIMENT IS AT, OR ABOVE, 3" (76 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A FIXED QUIET CLEANING NOZZLE WITH REAR FAN SPREAD OF 45° (1.1m) OR MORE IS PREFERRED
  - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKLUSH WATER IS CLEAN
  - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

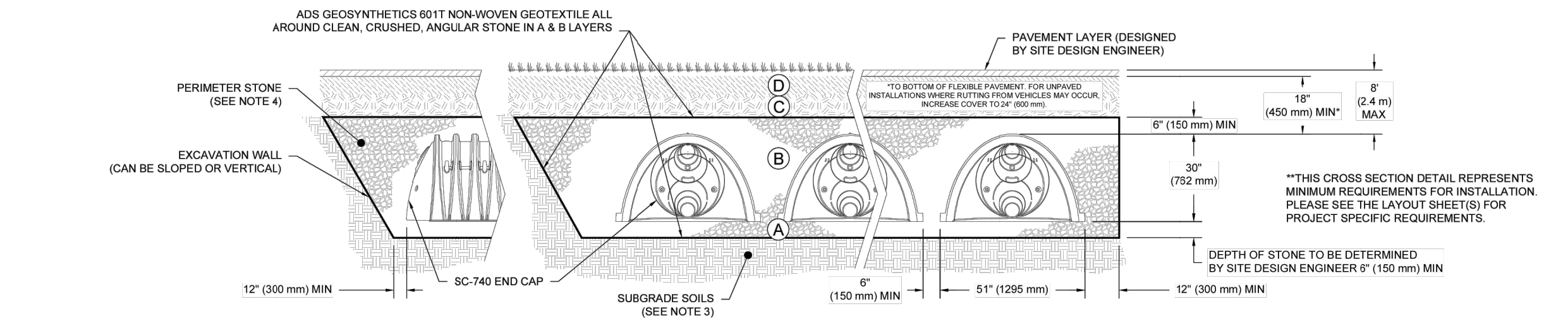
**NOTES**

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

**ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLAN. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B) LAYER TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2, A-3 OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. D. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 90% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 10,000 lbs (4534 kg). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (9072 kg).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A) LAYER TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
  - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) MAX LIFTS USING TWO FULL COVERS WITH A VIBRATORY COMPACTOR.
  - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTOR EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
  - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
  - WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



**NOTES:**

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2797 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.4 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 900 LB/FT<sup>2</sup>. AND 3) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

**1 SC-740 CROSS SECTION DETAIL**

DRAWN: JL DATE: 01/10/24 PROJECT NO: NOT TO SCALE  
 REVIEWED: JLM  
 REV: SC-740 STANDARD DETAILS  
 SHEET 1

Revision	By	Appd.	YY.MM.DD
4	REVISED PER CITY COMMENTS	JP	SG/DT 26.01.09
3	ADDED WATERMAIN ETABLE	JP	SG 25.11.21
2	CLARIFIED GREENBANK ELEVATIONS; REVISED MINOR IE IN GRADES	JP	SG 25.11.07
1	2ND SUBMISSION FOR SITE PLAN APPROVAL	JP	SG 25.09.05
0	1ST SUBMISSION FOR SITE PLAN APPROVAL	JP	SG 25.05.13

File Name:	160402143-HMS-PH7-DB	JP	SG	JP	25.04.17
		Dwn.	Chkd.	Dgn.	YY.MM.DD

Permit-Seal

Client/Project  
Mattamy Homes

HMB PHASE 7

OTTAWA, ON

Title  
DETAILS SHEET

Project No. 160402143 Scale

Drawing No. DS-2 Sheet 7 of 9 Revision 4

DOT-12-25-0068  
PLAN # 19017