

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER:	HAIDER NASRULLAH 647-850-9417 HAIDER.NASRULLAH@ADS-PIPE.COM
ADS SALES REP:	MICHAEL REID 613-882-4186 MICHAEL.REID@ADS-PIPE.COM
PROJECT NO:	S181876
ADS SITE COORDINATOR:	MATTHEW BEGHIN 519-710-3687 MATTHEW.BEGHIN@ADS-PIPE.COM



ADVANCED DRAINAGE SYSTEMS, INC.



PROJECT PYTHON

OTTAWA, ON.

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL BE CERTIFIED TO CSA B184, "POLYMERIC SUB-SURFACE STORMWATER MANAGEMENT STRUCTURES", AND MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- 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 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 CSA S6 CL-625 TRUCK AND 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 F2787, "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 75 mm (3").
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 23° C / 73° F), 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 SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - THIS PROJECT REQUIRES COMPACTION OF EMBEDMENT STONE AND REQUIREMENTS FOR STONE HARDNESS AND SHAPE WHICH ARE NOT SPECIFIED IN OTHER STORMTECH DOCUMENTS. CONTRACTORS MUST FOLLOW THE SPECIAL PROVISIONS IN THIS PLAN SET.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER 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 LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 230 mm (9") SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 300 mm (12") INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE WELL GRADED BETWEEN ¾" AND 2" (20-50 mm).
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- 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 MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- FULL 900 mm (36") 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 CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING 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.



MC-4500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-4500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL BE CERTIFIED TO CSA B184, "POLYMERIC SUB-SURFACE STORMWATER MANAGEMENT STRUCTURES", AND MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
- 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 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 CSA S6 CL-625 TRUCK AND THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
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 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 23° C / 73° F), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
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 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

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- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER 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 LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 230 mm (9") SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 300 mm (12") INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE WELL GRADED BETWEEN ¾" AND 2" (20-50 mm).
- STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 300 mm (12") BETWEEN ADJACENT CHAMBER ROWS.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL 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 MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
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CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT - SYSTEM 1	
37	STORMTECH MC-3500 CHAMBERS
10	STORMTECH MC-3500 END CAPS
305	STONE ABOVE (mm)
229	STONE BELOW (mm)
40	% STONE VOID
218.3	INSTALLED SYSTEM VOLUME (m³) (PERIMETER STONE INCLUDED)
218.8	SYSTEM AREA (m²)
63.9	SYSTEM PERIMETER (m)

PROPOSED ELEVATIONS - SYSTEM 1	
101.810	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
99.982	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
99.829	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
99.829	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
99.829	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
99.677	TOP OF STONE:
99.372	TOP OF MC-3500 CHAMBER:
98.738	450 mm TOP MANIFOLD INVERT:
98.281	600 mm ISOLATOR ROW INVERT:
98.229	BOTTOM OF MC-3500 CHAMBER:
98.000	UNDERDRAIN INVERT:
98.000	BOTTOM OF STONE:

101.810	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
99.982	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
99.829	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
99.829	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
99.829	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
99.677	TOP OF STONE:
99.372	TOP OF MC-3500 CHAMBER:
98.738	450 mm TOP MANIFOLD INVERT:
98.281	600 mm ISOLATOR ROW INVERT:
98.229	BOTTOM OF MC-3500 CHAMBER:
98.000	UNDERDRAIN INVERT:
98.000	BOTTOM OF STONE:

150 mm ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN
(SIZE TBD BY ENGINEER / SOLID OUTSIDE PERIMETER STONE)

150 mm FLAP GATE ON UNDERDRAIN AT STRUCTURE
(DESIGN BY ENGINEER / PROVIDED BY OTHERS)

450 mm X 450 mm ADS N-12 TOP MANIFOLD
INVERT 509 mm ABOVE CHAMBER BOTTOM
(SEE NOTES/TYP 2 PLACEMENT)

450 mm PARTIAL CUT END CAP, PART# MC3500IEPP18
MC3500IEPP18
TYP OF ALL MC-3500 450 mm TOP CONNECTIONS

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

- 600 mm PARTIAL CUT END CAP, PART# MC3500IEPP24BC OR MC3500IEPP24BW**
TYP OF ALL MC-3500 600 mm BOTTOM CONNECTIONS AND ISOLATOR ROWS

INSPECTION PORT (SEE DETAIL)

ISOLATOR ROW (SEE DETAIL)

PLACE MINIMUM 5.33 m OF ADS GEOSYNTHETICS 315WTM WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

Dimensions:
Overall Length: 20.806 m
Internal Length: 18.625 m
Overall Width: 11.181 m (4.856 m + 6.325 m)
Internal Width: 16.440 m
Chamber Spacing: 2.184 m

Project Information:
PROJECT: 4640 TRUEMAN BLVD HILLIARD, OH 43026
SCALE = 1 : 100
DATE: 05/05/20
PROJECT #: S18187
DESIGNER: JMQ
CHECKED: RCT
REVISIONS:
06/01/20 JMQ REVISED SYSTEM 1&4
05/28/20 RCT NEW SITE PLAN/MARKUPS

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ADS ADVANCED DRAINAGE SYSTEMS, INC.

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION AND BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION AND BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED.



4640 TRUEMAN BLVD
HILLIARD, OH 43026

ADVANCED DRAINAGE SYSTEMS, INC.

SCALE = 1 : 100

3 SHEET OF 1

PROPOSED LAYOUT - SYSTEM 2	
195	STORMTECH MC-3500 CHAMBERS
26	STORMTECH MC-3500 END CAPS
305	STONE ABOVE (mm)
229	STONE BELOW (mm)
40	% STONE VOID
1,054.7	INSTALLED SYSTEM VOLUME (m³) (PERIMETER STONE INCLUDED)
1,020.1	SYSTEM AREA (m²)
128.7	SYSTEM PERIMETER (m)

PROPOSED ELEVATIONS - SYSTEM 2	
102.010	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
100.182	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
100.029	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
100.029	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
100.029	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
99.877	TOP OF STONE:
99.572	TOP OF MC-3500 CHAMBER:
98.938	450 mm TOP MANIFOLD INVERT:
98.481	600 mm ISOLATOR ROW INVERT:
98.429	BOTTOM OF MC-3500 CHAMBER:
98.200	UNDERDRAIN INVERT:
98.200	BOTTOM OF STONE:

102.010	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
100.182	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
100.029	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
100.029	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
100.029	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
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98.938	450 mm TOP MANIFOLD INVERT:
98.481	600 mm ISOLATOR ROW INVERT:
98.429	BOTTOM OF MC-3500 CHAMBER:
98.200	UNDERDRAIN INVERT:
98.200	BOTTOM OF STONE:

450 mm PARTIAL CUT EDGE

TYP OF ALL

	— 36.204 m —		PLACE MINIMUM 5.33 m OF A GEOTEXTILE OVER BEDDING FEET FOR SCOUR PROTECTION
	— 33.915 m —		

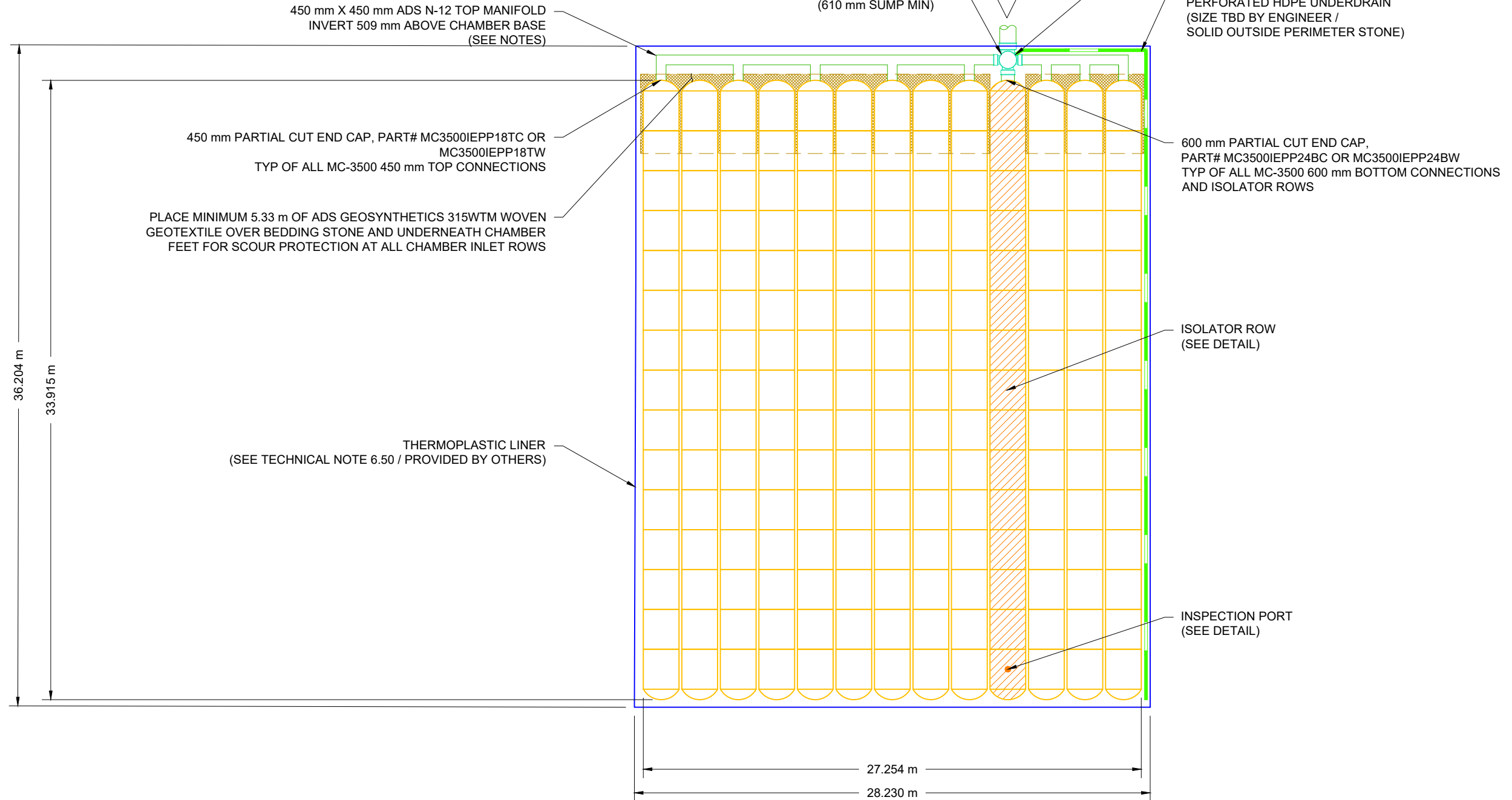
	(SEE TECHNICAL SPECIFICATIONS)
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- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
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- ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

- PROPOSED 900 mm NYLOPLAST W/ELEVATED BYPASS MANIFOLD
 MAXIMUM INLET FLOW 458 L/s
 MAXIMUM OUTLET FLOW 226 L/s

150 mm FLAP GATE ON UNDERDRAIN AT STRUCTURE
 (DESIGN BY ENGINEER / PROVIDED BY OTHERS)

150 mm ADS N-12 DUAL WALL
 REFORCED HDPE UNDERDRAIN



06/01/20	RCT	JM/Q	REVISED SYSTEM 1&4		
05/28/20	RCT	JM/Q	NEW SITE PLAN/MARKUPS		
DATE	DWNN	CHKD	DESCRIPTION		
OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.					

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ADVANCED DRAINAGE SYSTEMS, INC.

SCALE = 1 : 250

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY THE CLIENT. THE ENGINEER ASSUMES NO RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE

4DS[®]
HILLIARD, OH 43026
4640 TRUEMAN BLVD

4 SHEET OF 16

PROPOSED LAYOUT - SYSTEM 3

72	STORMTECH MC-3500 CHAMBERS
8	STORMTECH MC-3500 END CAPS
305	STONE ABOVE (mm)
600	STONE BELOW (mm)
40	% STONE VOID
455.7	INSTALLED SYSTEM VOLUME (m³) (PERIMETER STONE INCLUDED)
348.7	INSTALLED SYSTEM VOLUME (m³) ABOVE ELEVATION 97.652 (PERIMETER STONE INCLUDED)
388.1	SYSTEM AREA (m²)
103.8	SYSTEM PERIMETER (m)

PROPOSED ELEVATIONS - SYSTEM 3

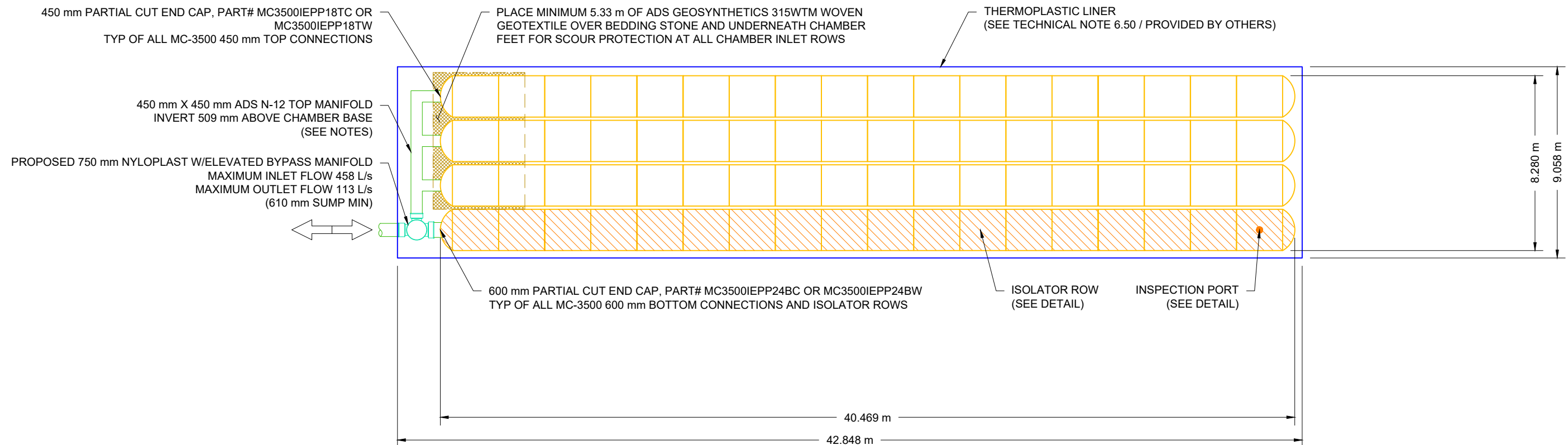
102.000	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
99.353	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
99.200	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
99.200	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
99.200	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
99.048	TOP OF STONE:
98.743	TOP OF MC-3500 CHAMBER:
98.109	450 mm TOP MANIFOLD INVERT:
97.652	600 mm ISOLATOR ROW INVERT:
97.600	BOTTOM OF MC-3500 CHAMBER:
97.000	BOTTOM OF STONE:

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

TIER 1 DEEP COVER SPECIAL PROVISIONS

1. INSTALLATION REQUIREMENTS SHALL BE AS SPECIFIED IN THE STORMTECH DESIGN MANUALS AND CONSTRUCTION GUIDES EXCEPT AS MODIFIED IN THESE SPECIAL PROVISIONS.
2. ATTENTION IS CALLED TO "TABLE 1 - ACCEPTABLE FILL MATERIALS" IN THE STORMTECH CONSTRUCTION GUIDE AND ALL OTHER APPEARANCES OF THE "ACCEPTABLE FILL MATERIALS TABLE. FOR AREAS OF THE SYSTEM WITH COVER ABOVE 7 FEET (2.1 m) FOR THE MC-4500 AND ABOVE 8 FEET (2.4 m) FOR THE MC-3500, EMBEDMENT STONE SHALL BE COMPACTED WITH 3 PASSES OF A WALK BEHIND VIBRATORY PLATE COMPACTOR OR JUMPING JACK IN 12" (300 mm) LIFTS.
3. STONE SHALL HAVE RELATIVELY FLAT SIDES AND SHARP EDGES (ANGULAR) OR RELATIVELY FLAT SIDES AND ROUNDED EDGES AND SHALL CONTAIN LESS THAN 20% FLAT OR ELONGATED PARTICLES. FLAT OR ELONGATED STONE IS UNACCEPTABLE. FOR DESCRIPTIONS OF ANGULARITY SEE ASTM D2488 "STANDARD PRACTICE FOR DESCRIPTION AND IDENTIFICATION OF SOILS (VISUAL-MANUAL PROCEDURE)".
4. STONE SHALL BE HARD AND DURABLE. IT IS THE ENGINEER'S OR CONTRACTOR'S RESPONSIBILITY TO SELECT HARD AND DURABLE STONE. STORMTECH CONSIDERS AN LA ABRASION VALUE OF LESS THAN OR EQUAL TO 30 TO BE HARD STONE.
5. FOUNDATION STONE SHALL BE MECHANICALLY COMPACTED WITH A VIBRATORY ROLLER OR VIBRATORY PLATE IN 6" (152 mm) LIFTS.
6. EMBEDMENT STONE MUST BE DUMPED IN PLACE BY A STONE SHOOTER OR CONVEYOR OR EXCAVATOR.
7. INSPECTION DURING THE INSTALLATION BY THE ENGINEER, OWNER OR OTHER REPRESENTATIVE IS RECOMMENDED. THE INSPECTION SHALL INCLUDE OBSERVATIONS OF THE CHAMBER SYMMETRY DURING BACKFILLING TO ENSURE THE CONTRACTOR'S METHODS ARE NOT CAUSING UNACCEPTABLE DISTORTION OF THE CHAMBERS.
8. AN ADS FIELD TECHNICIAN WILL CONDUCT A PRE-CONSTRUCTION MEETING TO TRAIN REPRESENTATIVES OF THOSE RESPONSIBLE FOR CONSTRUCTING THE SYSTEM AND THOSE CONDUCTING THE MANDATORY INSPECTIONS OF THE INSTALLATION.



PROJECT PYTHON

OTTAWA, ON.

DRAWN: RCT

CHECKED: JMQ

DATE	DRWN	CHKD	DESCRIPTION
08/01/20	RCT	JMQ	REVISED SYSTEM 1&4
05/28/20	RCT	JMQ	NEW SITE PLAN/MARKUPS



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ADVANCED DRAINAGE SYSTEMS, INC.

SCALE = 1 : 200

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

PROPOSED LAYOUT - SYSTEM 4

261	STORMTECH MC-4500 CHAMBERS
12	STORMTECH MC-4500 END CAPS
305	STONE ABOVE (mm)
229	STONE BELOW (mm) STANDARD PARAMETERS
750	STONE BELOW (mm) TIER 1 PARAMETERS
40	% STONE VOID
1,503.7	INSTALLED SYSTEM VOLUME (m³) (PERIMETER STONE INCLUDED)
1,298.1	INSTALLED SYSTEM VOLUME (m³) ABOVE ELEVATION 95.75 (PERIMETER STONE INCLUDED)
988.0	SYSTEM AREA (m²)
166.6	SYSTEM PERIMETER (m)

PROPOSED ELEVATIONS - SYSTEM 4

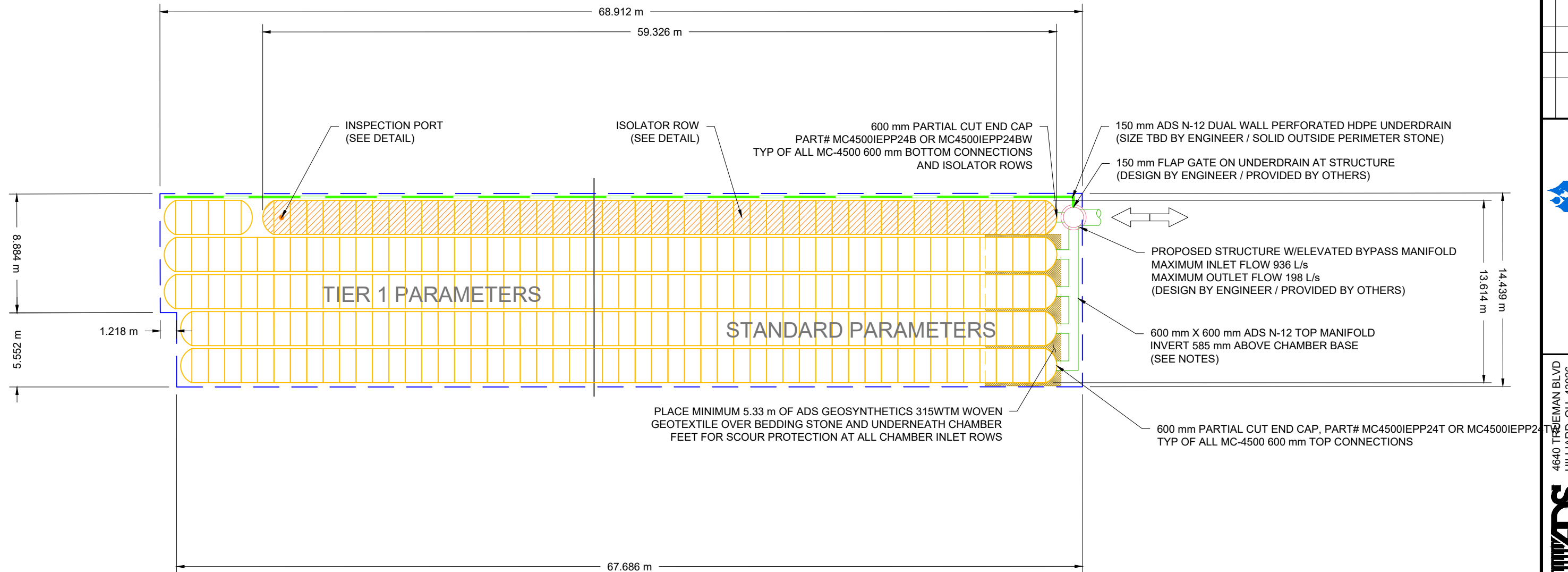
100.400	MAXIMUM GRADE PER ENGINEERS PLANS (TIER 1 PARAMETERS):
99.603	MAXIMUM GRADE PER ENGINEERS PLANS (STANDARD PARAMETERS):
98.265	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
98.113	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
98.113	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
98.113	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
97.808	TOP OF STONE:
97.503	TOP OF MC-4500 CHAMBER:
96.564	600 mm TOP MANIFOLD INVERT:
96.036	600 mm ISOLATOR ROW INVERT:
95.979	BOTTOM OF MC-4500 CHAMBER:
95.750	UNDERDRAIN INVERT:
95.750	BOTTOM OF STONE: (STANDARD PARAMETERS)
95.229	BOTTOM OF STONE: (TIER 1 PARAMETERS)

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

TIER 1 DEEP COVER SPECIAL PROVISIONS

1. INSTALLATION REQUIREMENTS SHALL BE AS SPECIFIED IN THE STORMTECH DESIGN MANUALS AND CONSTRUCTION GUIDES EXCEPT AS MODIFIED IN THESE SPECIAL PROVISIONS.
2. ATTENTION IS CALLED TO "TABLE 1 - ACCEPTABLE FILL MATERIALS" IN THE STORMTECH CONSTRUCTION GUIDE AND ALL OTHER APPEARANCES OF THE "ACCEPTABLE FILL MATERIALS TABLE. FOR AREAS OF THE SYSTEM WITH COVER ABOVE 7 FEET (2.1 m) FOR THE MC-4500 AND ABOVE 8 FEET (2.4 m) FOR THE MC-3500, EMBEDMENT STONE SHALL BE COMPACTED WITH 3 PASSES OF A WALK BEHIND VIBRATORY PLATE COMPACTOR OR JUMPING JACK IN 12" (300 mm) LIFTS.
3. STONE SHALL HAVE RELATIVELY FLAT SIDES AND SHARP EDGES (ANGULAR) OR RELATIVELY FLAT SIDES AND ROUNDED EDGES AND SHALL CONTAIN LESS THAN 20% FLAT OR ELONGATED PARTICLES. FLAT OR ELONGATED STONE IS UNACCEPTABLE. FOR DESCRIPTIONS OF ANGULARITY SEE ASTM D2488 "STANDARD PRACTICE FOR DESCRIPTION AND IDENTIFICATION OF SOILS (VISUAL-MANUAL PROCEDURE)".
4. STONE SHALL BE HARD AND DURABLE. IT IS THE ENGINEER'S OR CONTRACTOR'S RESPONSIBILITY TO SELECT HARD AND DURABLE STONE. STORMTECH CONSIDERS AN LA ABRASION VALUE OF LESS THAN OR EQUAL TO 30 TO BE HARD STONE.
5. FOUNDATION STONE SHALL BE MECHANICALLY COMPACTED WITH A VIBRATORY ROLLER OR VIBRATORY PLATE IN 6" (152 mm) LIFTS.
6. EMBEDMENT STONE MUST BE DUMPED IN PLACE BY A STONE SHOOTER OR CONVEYOR OR EXCAVATOR.
7. INSPECTION DURING THE INSTALLATION BY THE ENGINEER, OWNER OR OTHER REPRESENTATIVE IS RECOMMENDED. THE INSPECTION SHALL INCLUDE OBSERVATIONS OF THE CHAMBER SYMMETRY DURING BACKFILLING TO ENSURE THE CONTRACTOR'S METHODS ARE NOT CAUSING UNACCEPTABLE DISTORTION OF THE CHAMBERS.
8. AN ADS FIELD TECHNICIAN WILL CONDUCT A PRE-CONSTRUCTION MEETING TO TRAIN REPRESENTATIVES OF THOSE RESPONSIBLE FOR CONSTRUCTING THE SYSTEM AND THOSE CONDUCTING THE MANDATORY INSPECTIONS OF THE INSTALLATION.



PROJECT PYTHON
OTTAWA, ON.

DATE:	03/03/20	DRAWN:	RCL
PROJECT #:	S181876	CHECKED:	JMQ

PROJECT #:	3181870	CHECKED: JMG
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DATE	DRWN	CHKD	DESCRIPTION
06/01/20	RCT	JMQ	REVISED SYSTEM 1&4
05/28/20	RCT	JMQ	NEW SITE PLAN/MARKUPS



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4640 TREEMAN BLVD
HILLIARD, OH 43026

SCALE = 1 : 300

6 SHEET OF 16

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

PROPOSED LAYOUT - SYSTEM 5	
164	STORMTECH MC-4500 CHAMBERS
8	STORMTECH MC-4500 END CAPS
305	STONE ABOVE (mm)
229	STONE BELOW (mm)
40	% STONE VOID
822.4	INSTALLED SYSTEM VOLUME (m³) (PERIMETER STONE INCLUDED)
632.6	SYSTEM AREA (m²)
131.9	SYSTEM PERIMETER (m)

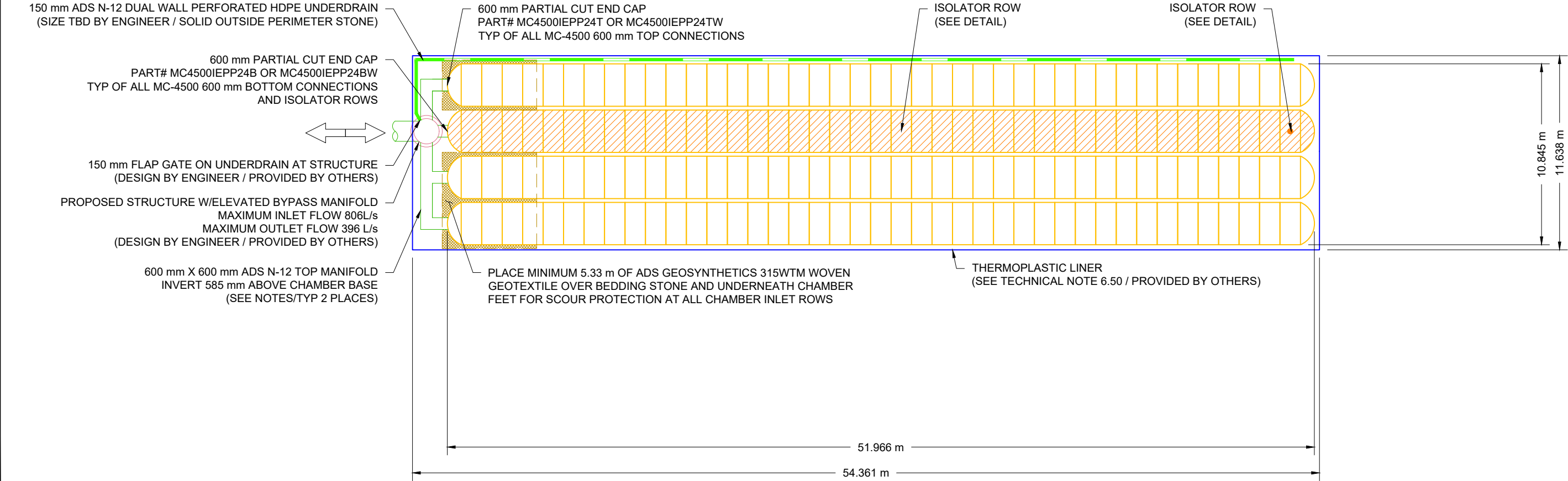
PROPOSED ELEVATIONS - SYSTEM 5	
101.900	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):
100.315	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
100.163	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
100.163	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):
100.163	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):
99.858	TOP OF STONE:
99.553	TOP OF MC-4500 CHAMBER:
98.614	600 mm TOP MANIFOLD INVERT:
98.086	600 mm ISOLATOR ROW INVERT:
98.029	BOTTOM OF MC-4500 CHAMBER:
97.800	UNDERDRAIN INVERT:
97.800	BOTTOM OF STONE:

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECHNICAL NOTE 6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
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- AN ADS FIELD TECHNICIAN WILL CONDUCT A PRE-CONSTRUCTION MEETING TO TRAIN REPRESENTATIVES OF THOSE RESPONSIBLE FOR CONSTRUCTING THE SYSTEM AND THOSE CONDUCTING THE MANDATORY INSPECTIONS OF THE INSTALLATION.



PROJECT PYTHON
OTTAWA, ON.

DATE: 05/05/20
DRAWN: RCT
PROJECT #: S181876
CHECKED: JMQ

06/01/20
05/28/20
DATE

RCT
RCT
DRWN

REVISID SYSTEM 1&4
NEW SITE PLAN/MARKUPS
DESCRIPTION

StormTech
Detention • Retention • Water Quality
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860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM

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ADVANCED DRAINAGE SYSTEMS, INC.
SCALE = 1 : 250

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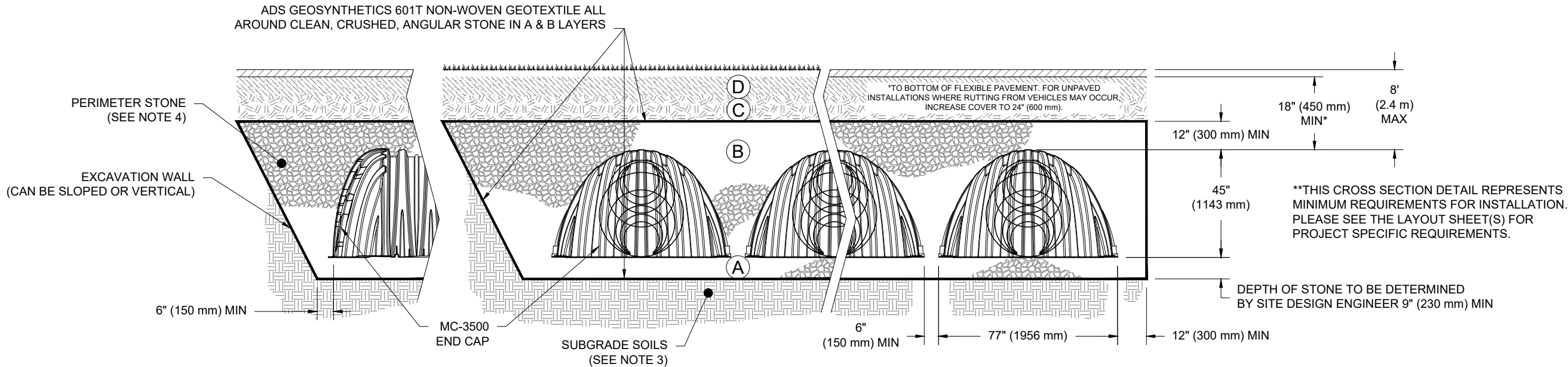
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ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

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 PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	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 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- 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 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES 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 COMPACTION 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.



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "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 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

PROJECT PYTHON
OTTAWA, ON.

DATE: 05/05/20
DRAWN: RCT
PROJECT #: S181876
CHECKED: JMQ

REVISED SYSTEM 1&4
NEW SITE PLAN/MARKUPS


06/01/20
05/28/20

RCT
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DESCRIPTION
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DATE



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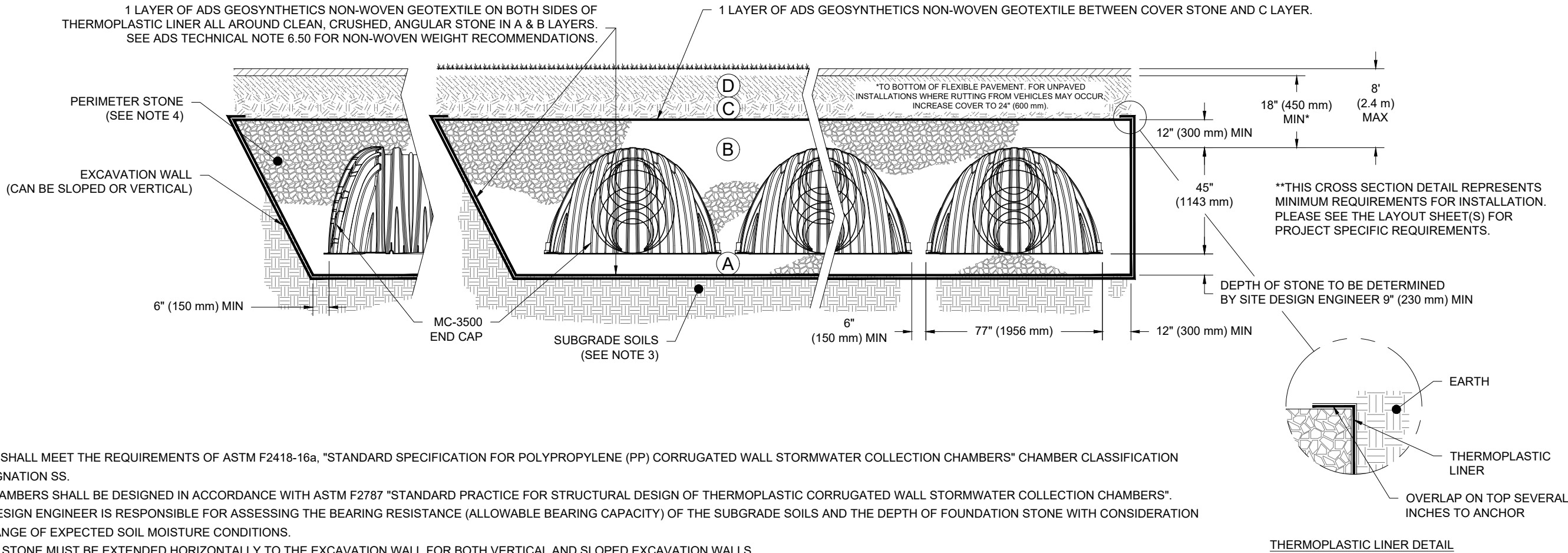
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ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

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 PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	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 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

1. 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".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. 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.



NOTES:

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4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. 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 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

PROJECT PYTHON
OTTAWA, ON.

DATE: 05/05/20
DRAWN: RCT
PROJECT #: S181876
CHECKED: JMQ

REVISED SYSTEM 1&4
NEW SITE PLAN/MARKUPS

06/01/20
05/28/20

RCT
RCT

JMQ
JMQ

DESCRIPTION
CHKD

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StormTech
Detention • Retention • Water Quality
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ADVANCED DRAINAGE SYSTEMS, INC.

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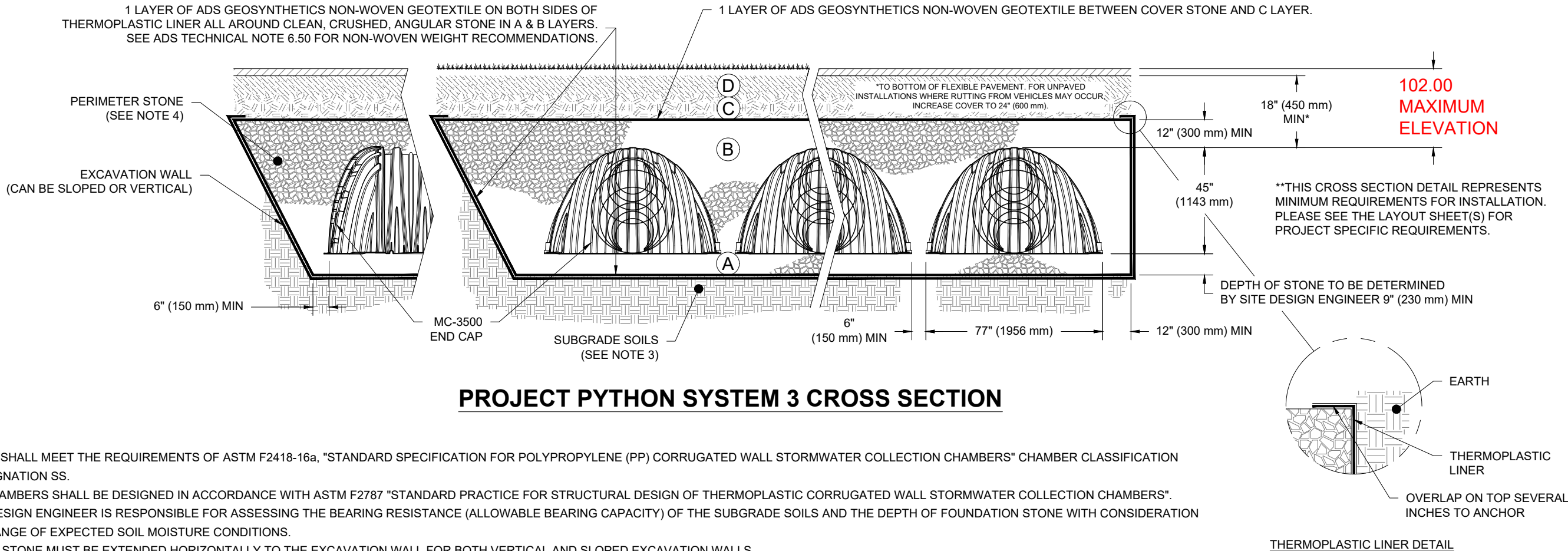
9 SHEET
OF 16

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 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 PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
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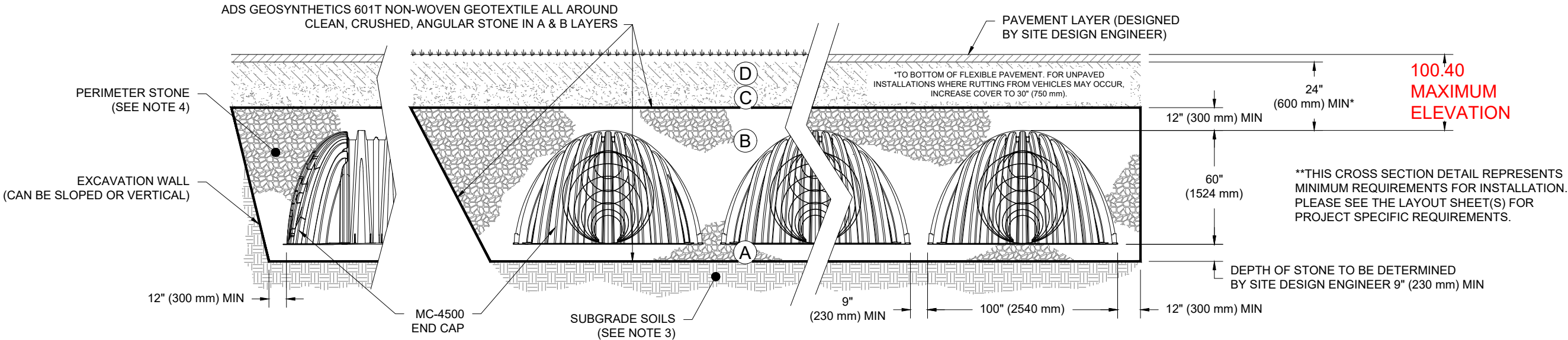
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ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

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PROJECT PYTHON SYSTEM 4 CROSS SECTION

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ADVANCED DRAINAGE SYSTEMS, INC.

11
OF

SHEET
16

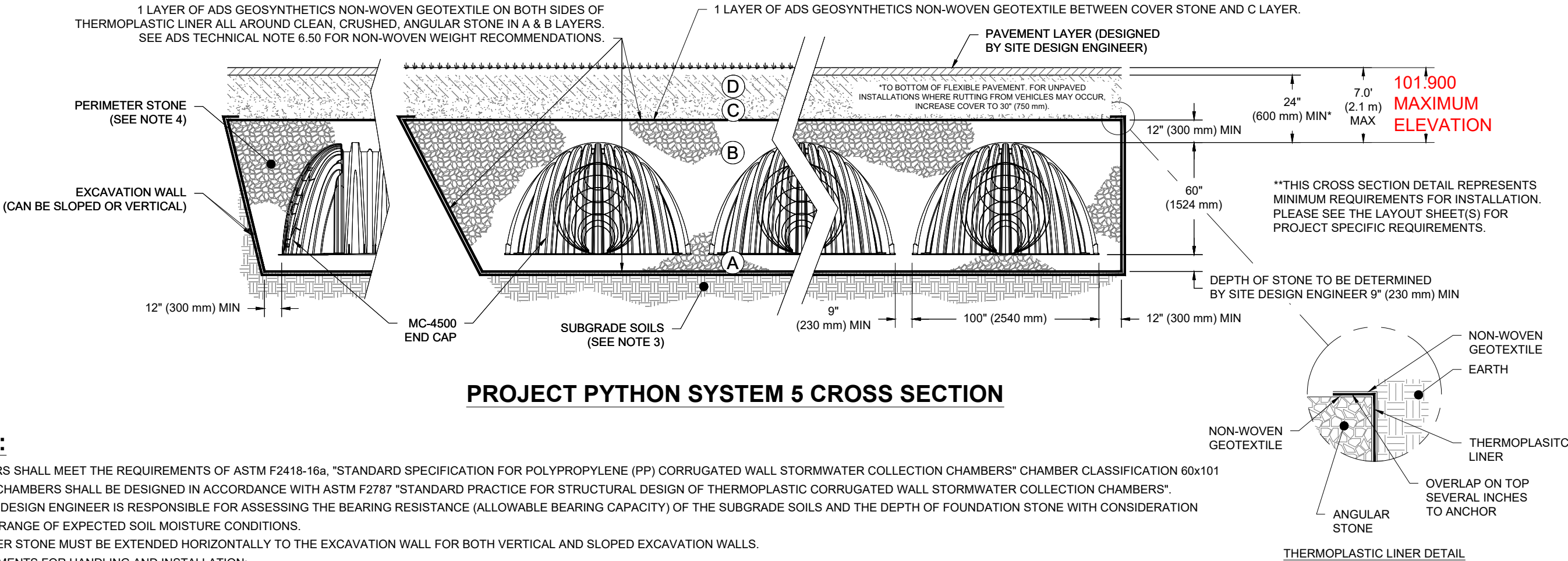
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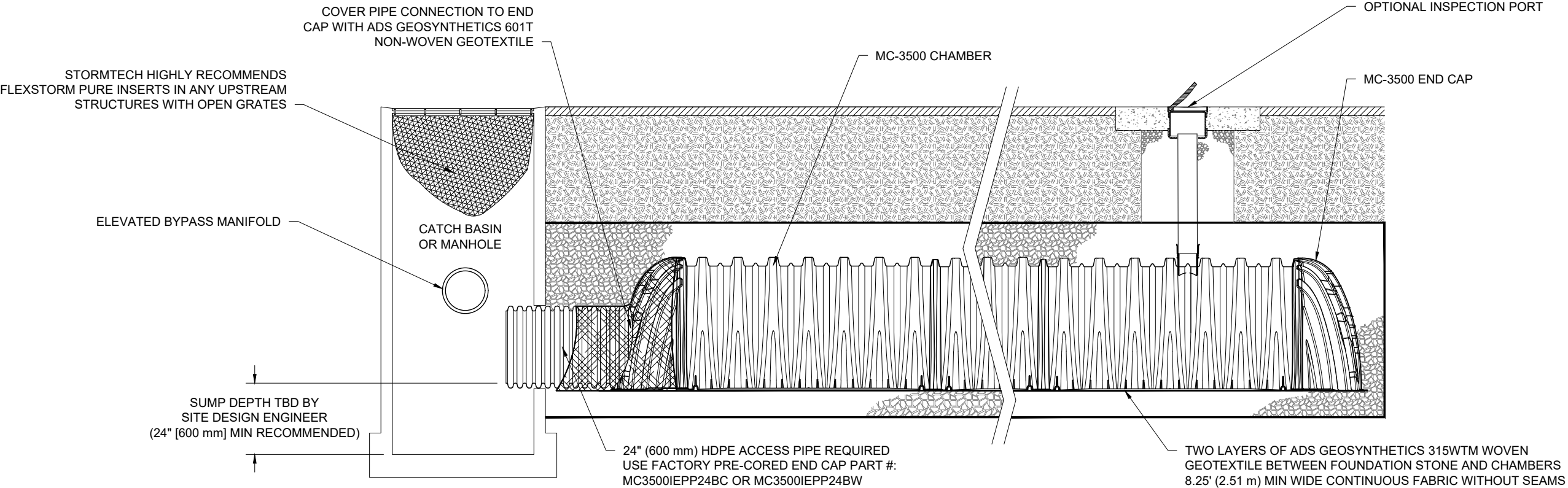
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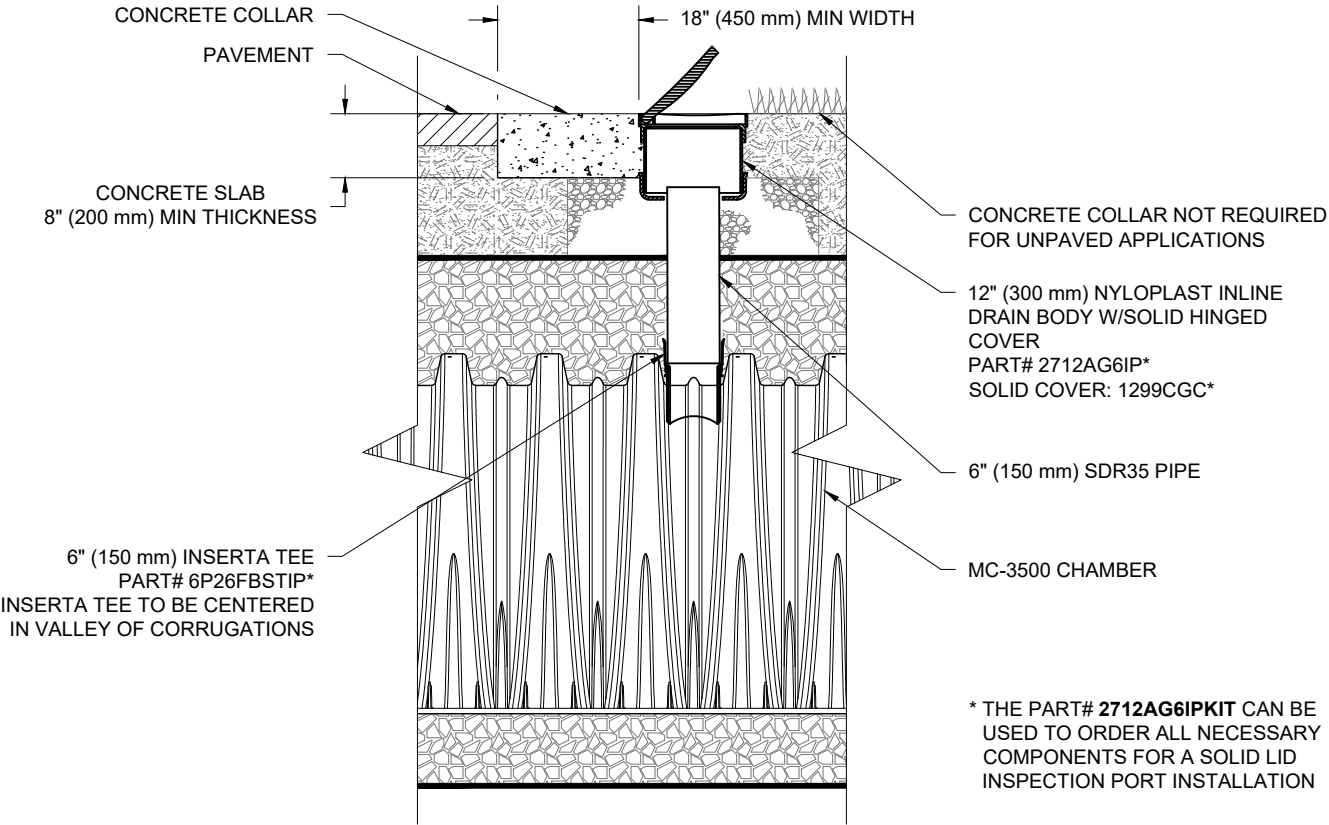
MC-3500 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
- A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
- B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
 - B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - C. 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

1. 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.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



MC-3500 6" (150 mm) INSPECTION PORT DETAIL
NTS

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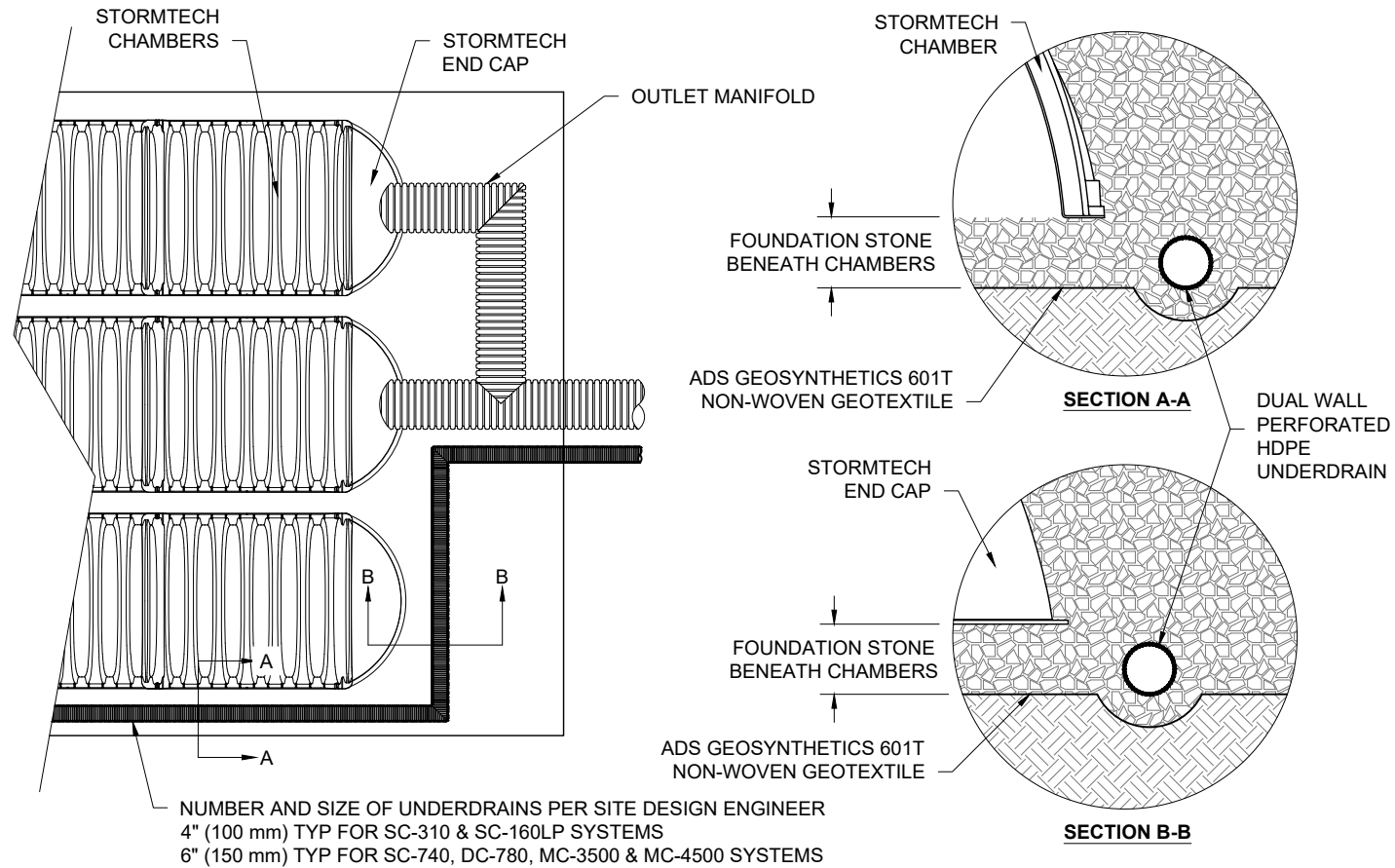
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SHEET
OF

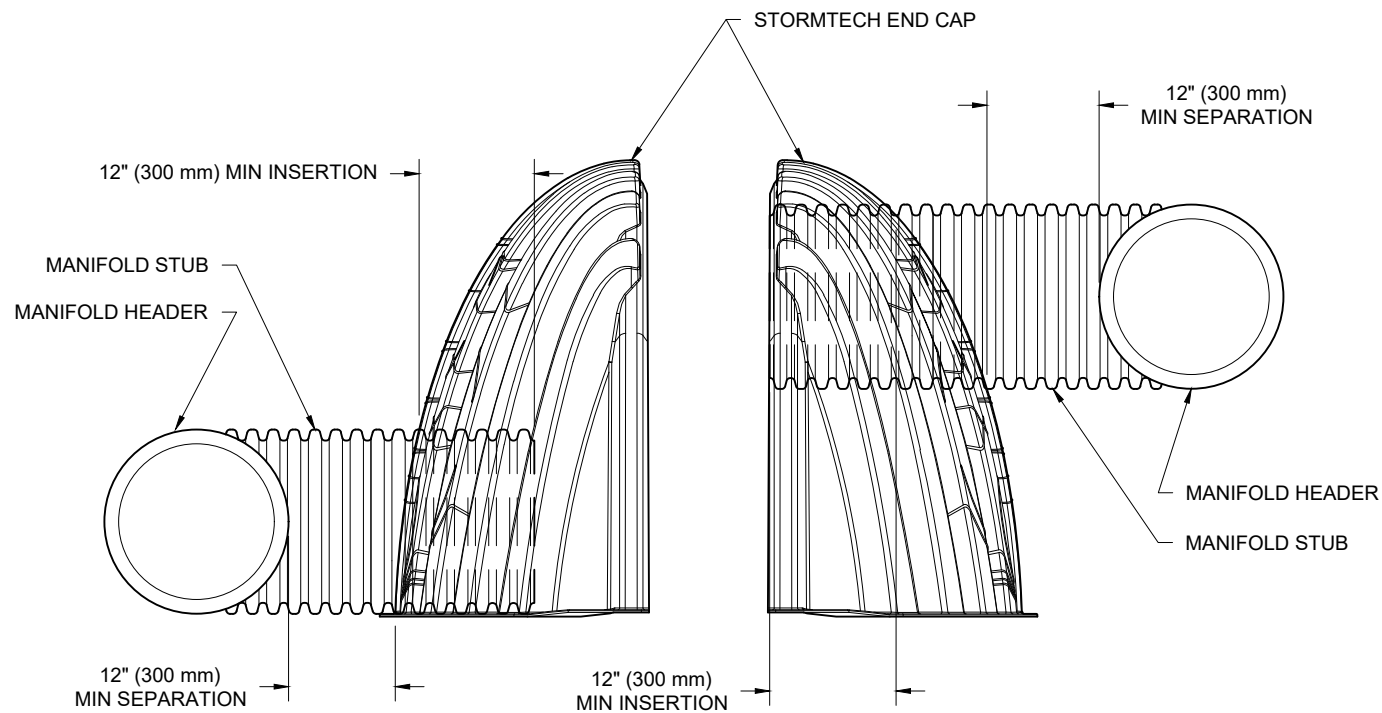
UNDERDRAIN DETAIL

NTS



MC-SERIES END CAP INSERTION DETAIL

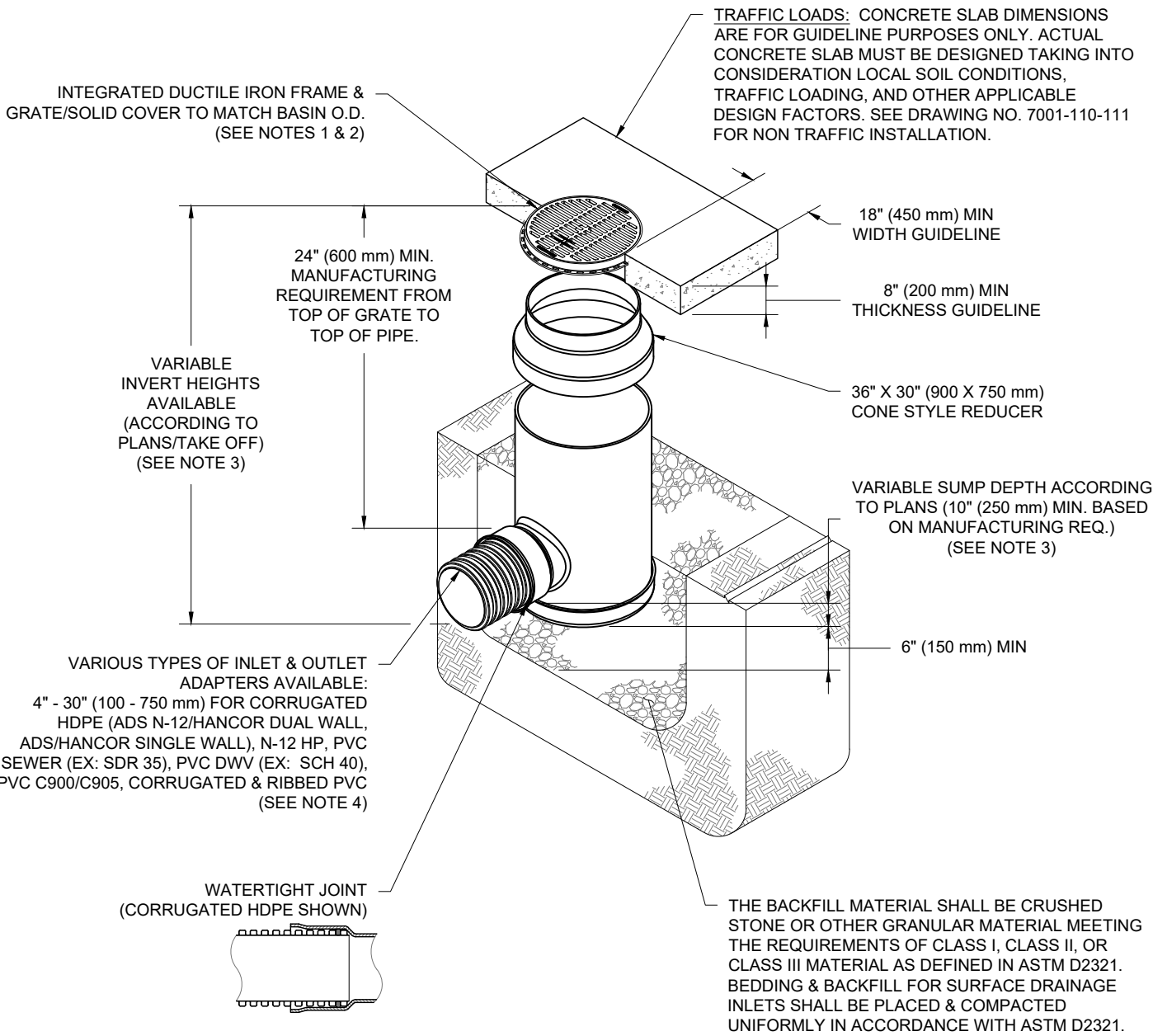
NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

36" (900 mm) NYLOPLAST DRAIN BASIN

NTS



NOTES

1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" (2.13 m) DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5. ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

GRATE OPTION	LOAD RATING	PART #	DWG #
PEDESTRIAN	MEETS H-20	3099CGP	7001-110-220
STANDARD	MEETS H-20	3099CGS	7001-110-221
SOLID COVER	MEETS H-20	3099CGC	7001-110-222
DOME	N/A	3099CGD	7001-110-223

PROJECT PYTHON

OTTAWA, ON.

DATE: 05/05/20

DRAWN: RCT

PROJECT #: S181876

CHECKED: JMQ

3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

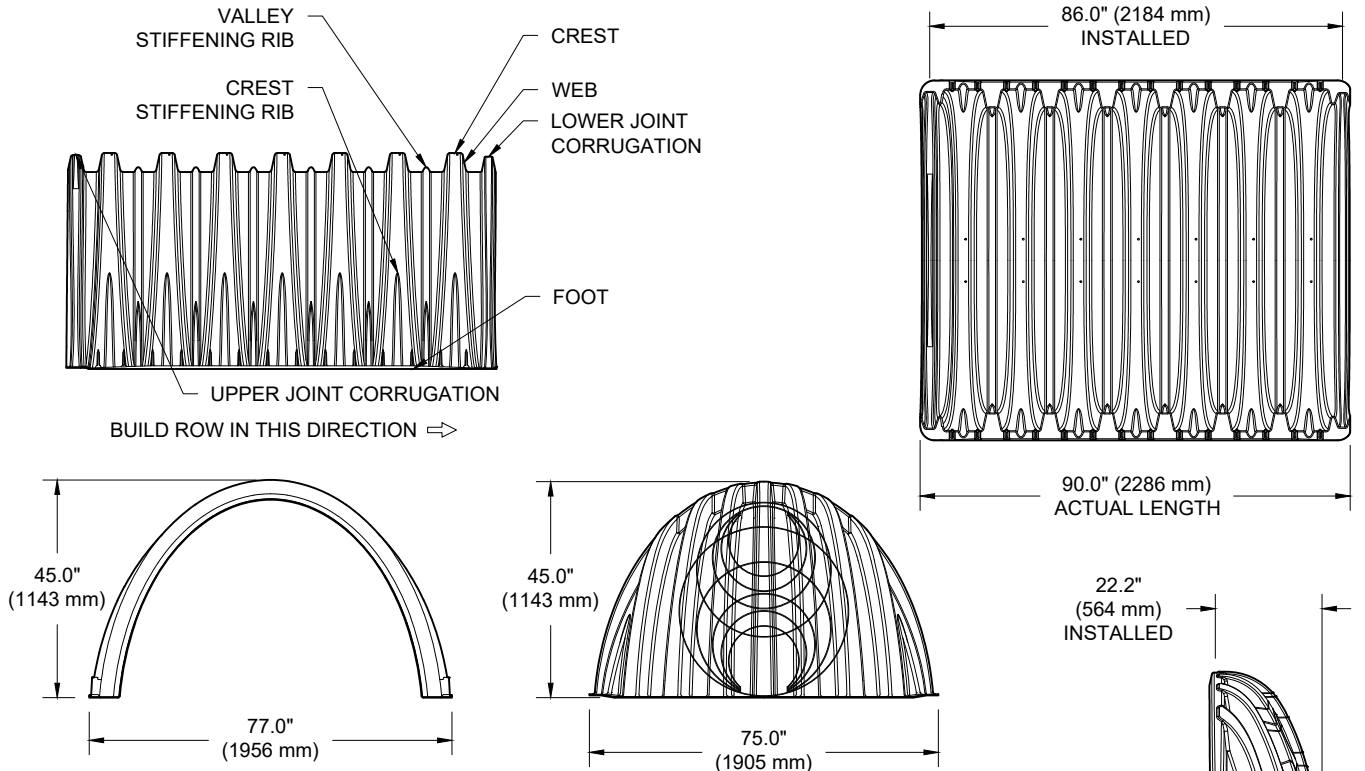


4640 TRUEMAN BLVD
HILLIARD, OH 43026



MC-3500 TECHNICAL SPECIFICATION

NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" (152 mm) STONE BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

PARTIAL CUT HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PARTIAL CUT HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"

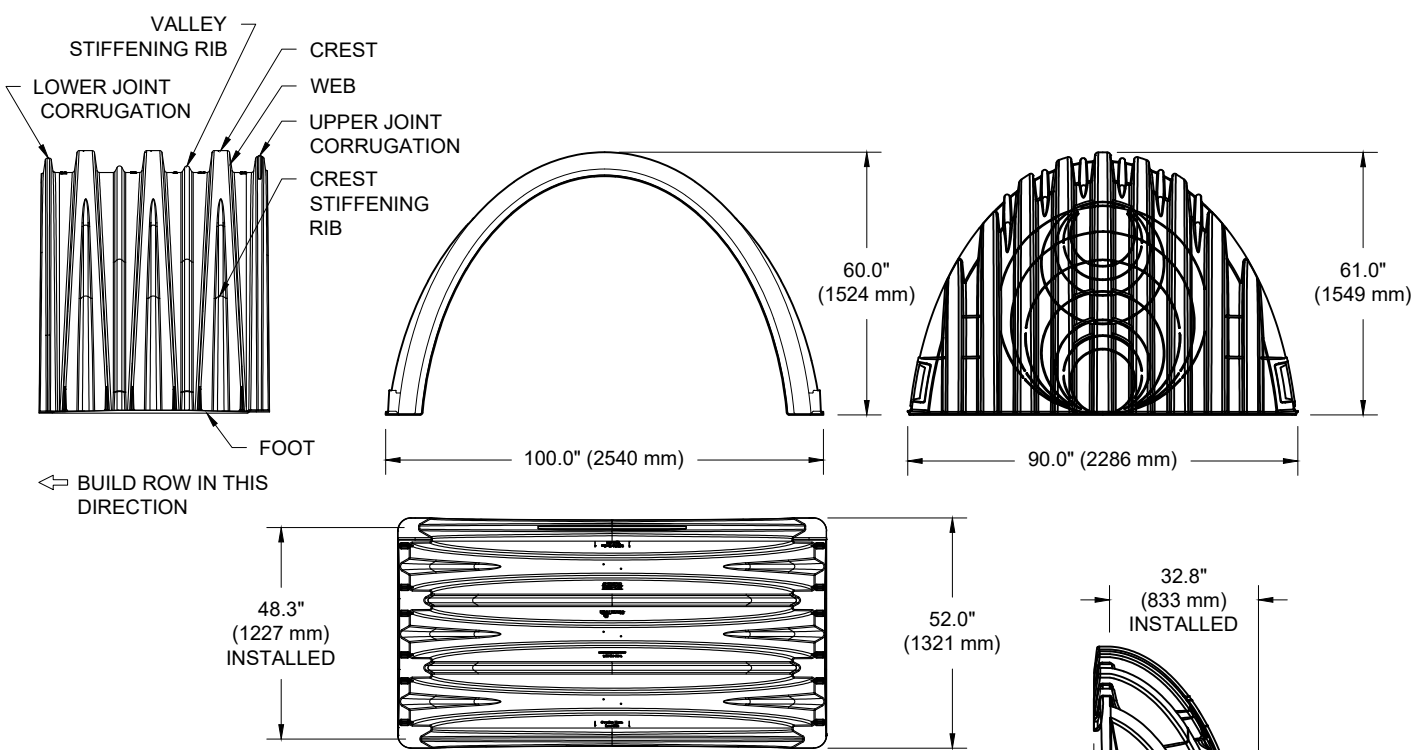
PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW		---	1.77" (45 mm)
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TC		---	---
MC3500IEPP24TW		---	2.06" (52 mm)
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW	30" (750 mm)	---	2.75" (70 mm)
MC3500IEPP30BC		---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL

CUSTOM PARTIAL CUT INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

MC-4500 TECHNICAL SPECIFICATION

NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	100.0" X 60.0" X 48.3"	(2540 mm X 1524 mm X 1227 mm)
CHAMBER STORAGE	106.5 CUBIC FEET	(3.01 m³)
MINIMUM INSTALLED STORAGE*	162.6 CUBIC FEET	(4.60 m³)
WEIGHT (NOMINAL)	125.0 lbs.	(56.7 kg)

NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	90.0" X 61.0" X 32.8"	(2286 mm X 1549 mm X 833 mm)
END CAP STORAGE	39.5 CUBIC FEET	(1.12 m³)
MINIMUM INSTALLED STORAGE*	115.3 CUBIC FEET	(3.26 m³)
WEIGHT (NOMINAL)	90 lbs.	(40.8 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

PARTIAL CUT HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PARTIAL CUT HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC4500IEPP06T	6" (150 mm)	42.54" (1081 mm)	---
MC4500IEPP06B		---	0.86" (22 mm)
MC4500IEPP08T	8" (200 mm)	40.50" (1029 mm)	---
MC4500IEPP08B		---	1.01" (26 mm)
MC4500IEPP10T	10" (250 mm)	38.37" (975 mm)	---
MC4500IEPP10B		---	1.33" (34 mm)
MC4500IEPP12T	12" (300 mm)	35.69" (907 mm)	---
MC4500IEPP12B		---	1.55" (39 mm)
MC4500IEPP15T	15" (375 mm)	32.72" (831 mm)	---
MC4500IEPP15B		---	1.70" (43 mm)
MC4500IEPP18T	18" (450 mm)	29.36" (746 mm)	---
MC4500IEPP18TW		---	1.97" (50 mm)
MC4500IEPP18B		---	1.97" (50 mm)
MC4500IEPP18BW	24" (600 mm)	23.05" (585 mm)	---
MC4500IEPP24T		---	2.26" (57 mm)
MC4500IEPP24TW		---	2.26" (57 mm)
MC4500IEPP24B		---	2.26" (57 mm)
MC4500IEPP24BW	30" (750 mm)	---	2.95" (75 mm)
MC4500IEPP30BW		---	2.95" (75 mm)
MC4500IEPP36BW	36" (900 mm)	---	3.25" (83 mm)
MC4500IEPP42BW	42" (1050 mm)	---	3.55" (90 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL

CUSTOM PREFABRICATED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

PROJECT PYTHON

OTTAWA, ON.

DATE: 05/05/20

DRAWN: RCT

PROJECT #: S181876

CHECKED: JMQ

StormTech
Retention • Retention • Water Quality
520 CROMWELL AVENUE | ROCKY HILL | CT | 06067
860-529-8188 | 860-892-2694 | WWW.STORMTECH.COM

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DS
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