

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADSS SALES REP	
PROJECT NO.	



20128 MILL STREET (NORTH) UXBRIDGE, CANADA

MC-4500 STORMTECH CHAMBER SPECIFICATIONS

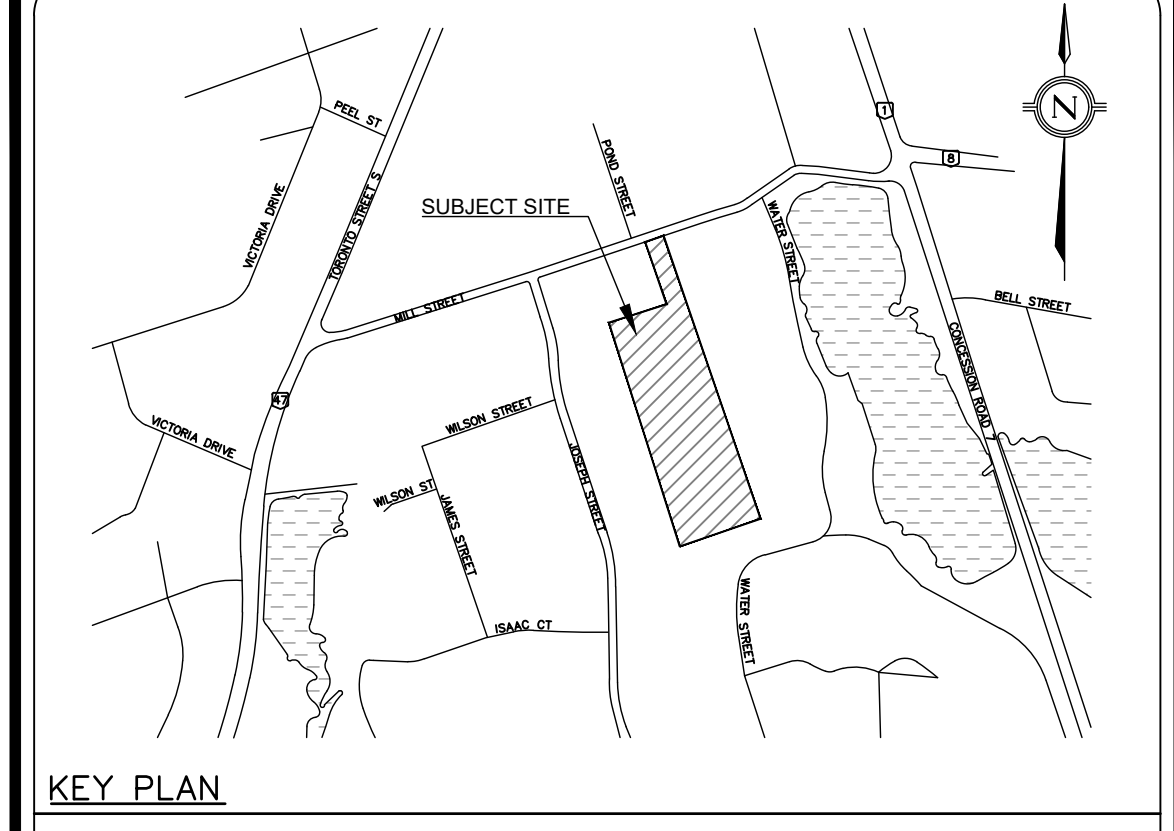
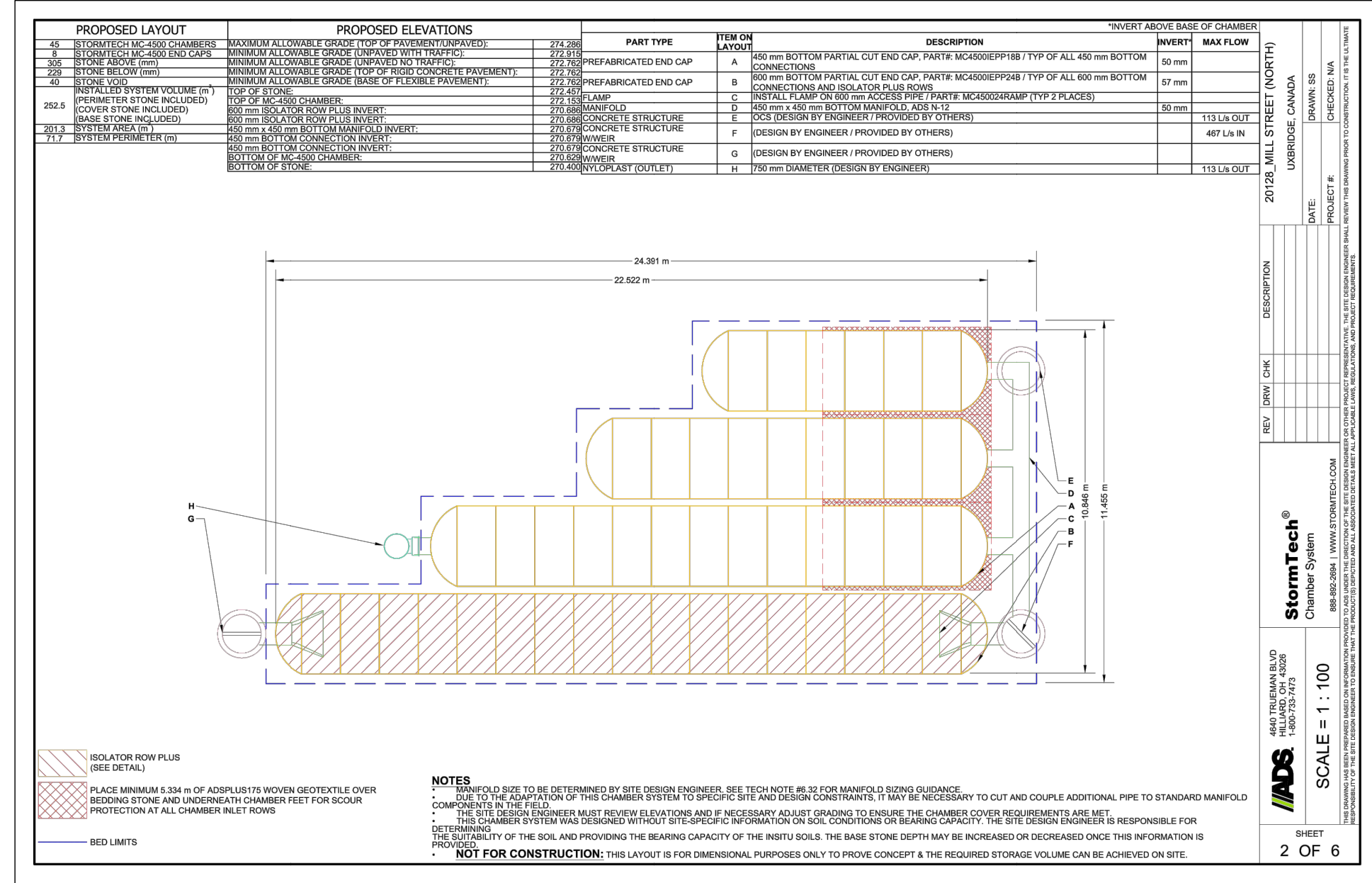
- CHAMBERS SHALL BE STORMTECH MC-4500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMER.
- CHAMBERS SHALL BE CERTIFIED TO CAN 7000 "TYPICAL SUBSURFACE STORMWATER MANAGEMENT STRUCTURES" AND MEET THE REQUIREMENTS OF CAN 7000, STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBER SYSTEMS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPED FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL MANHOLE, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE ARCHITECTURAL AND STRUCTURAL SPECIFICATIONS SECTION 2.1.2.1 ARE MET FOR 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS BASED ON THE CSA BRIDGE TRUCKS AND THE HIGHEST DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND APPROVED LOAD CAPACITY TESTS DETERMINED IN ACCORDANCE WITH ASTM F3070 STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS. LOAD CAPACITY TESTS SHALL INCLUDE 1) HYDROSTATIC DESIGN PRESSURE LOAD ON MANHOLE COVER TO MAINTAIN PERMANENT (5-7%) COVER LOAD AND 2) AIRHOIST DESIGN LOAD (1-WEEK) AIRHOIST DESIGN TRUCK.
- REQUIREMENTS FOR MANHOLE AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTERNAL, INTERLOCKING STRUCTURAL LOGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 20 mm (3/4").
 - THE FRONT OF THE ARCH SHAPE DURING INSTALLATION AT THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 2.2.4 OF ASTM F3070 SHALL BE GREATER THAN OR EQUAL TO 200 LBS/INCH AND 1) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AND 2) TO RESIST CHAMBER DEFORMATION DURING OPERATION.
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IMPORTANT NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLER.
- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3300/4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH AGGREGATE OR GRAVEL UNLESS APPROVED BY THE ENGINEER.
- STORMTECH RECOMMENDS BACKFILL METHOD:
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NOTES FOR CONSTRUCTION EQUIPMENT

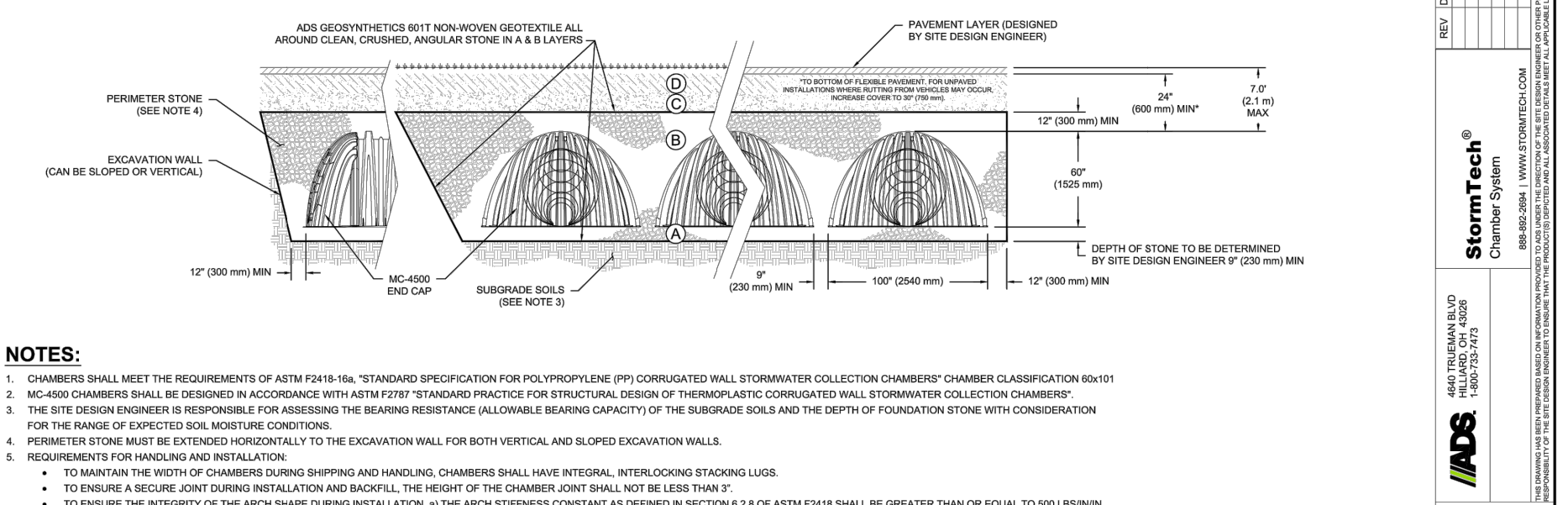
- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3300/4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED.
 - NO ROVERS, TRACK LOADERS, OR LOADERS ARE ALLOWED UNLESS PROPER FILL DEPTH ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3300/4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3300/4500 CONSTRUCTION GUIDE".
- ALL 100 mm (4") DIAMETER COVER MATERIALS MUST BE CHAMBERS OR REINFORCED CONCRETE MANHOLES, OR EQUIPMENT USE OF A DIGGER TO PUSH EMBEZZLEMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ONLY CHAMBERS DAMAGED BY USING THE "DIGGER AND PUMP" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.



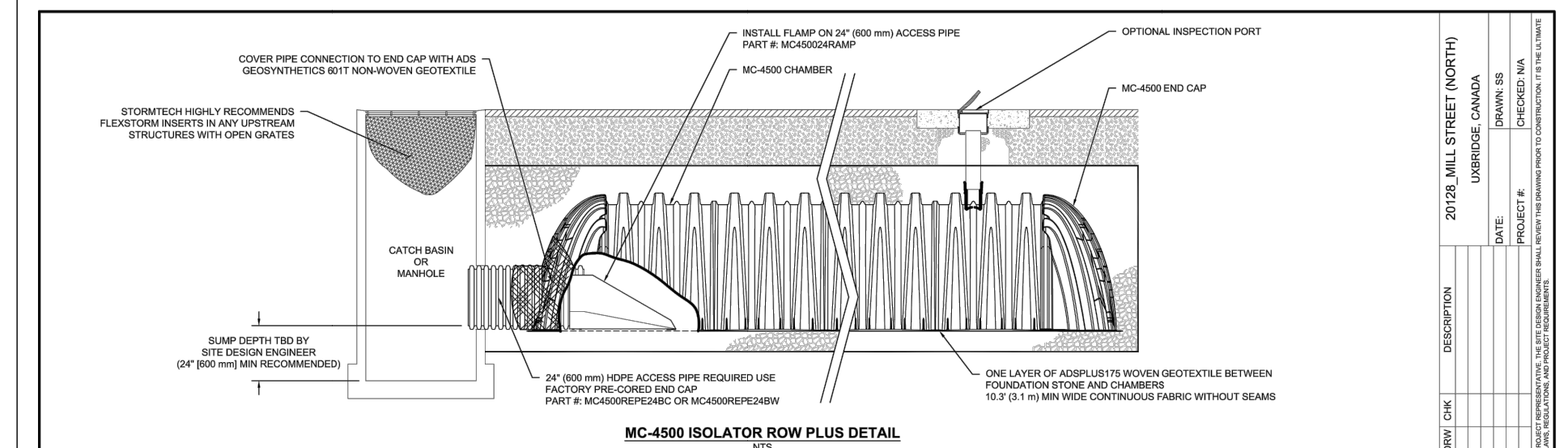
LEGEND

Symbol	Description
Symbol	Description
Symbol	Description

MATERIAL LOCATION	DESCRIPTION	ASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL MATERIAL TWO LAYERS OF 150mm FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF PAVEMENT OR UNPAVED FINISHED DRIVEWAY. NOTE THAT FINISHED DRIVEWAY MAY BE PART OF THE 'E' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLAN. FURNISH WITH ALL NECESSARY MATERIALS AND EQUIPMENT.
C	INTERNAL FILL MATERIAL FOR LAYERS 'C' STARTS FROM THE TOP OF THE EMBEZZLEMENT STONE LAYERS TO 150mm ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE USED IN LIEU OF THIS LAYER.	ASHTO M947 A-1, A-2, A-3, A-4 OR ASHTO M957 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9	BEGIN COMPACTIONS AFTER 300mm OF MATERIAL OVER THE CHAMBER IS REACHED. COMPACTION SHALL BE TO THE REQUIRED DENSITY FOR THE MATERIAL TYPE AND CLASSIFICATION. COMPACTION SHALL BE TO THE REQUIRED DENSITY FOR THE MATERIAL TYPE AND CLASSIFICATION.
B	EMBEZZLEMENT STONE FILL SUBMERGED UNDER THE CHAMBER FROM THE FOUNDATION STONE (A) LAYERS TO THE LAYER ABOVE.	ASHTO M947 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9	NO COMPACTION REQUIRED.
A	FOUNDATION STONE FILL BELOW CHAMBERS FROM THE SURFACE UP TO THE TOP OF THE CHAMBER.	ASHTO M947 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9	FLATE CRUSHED OR ROLL TO ADEQUATE FLAT SPACING

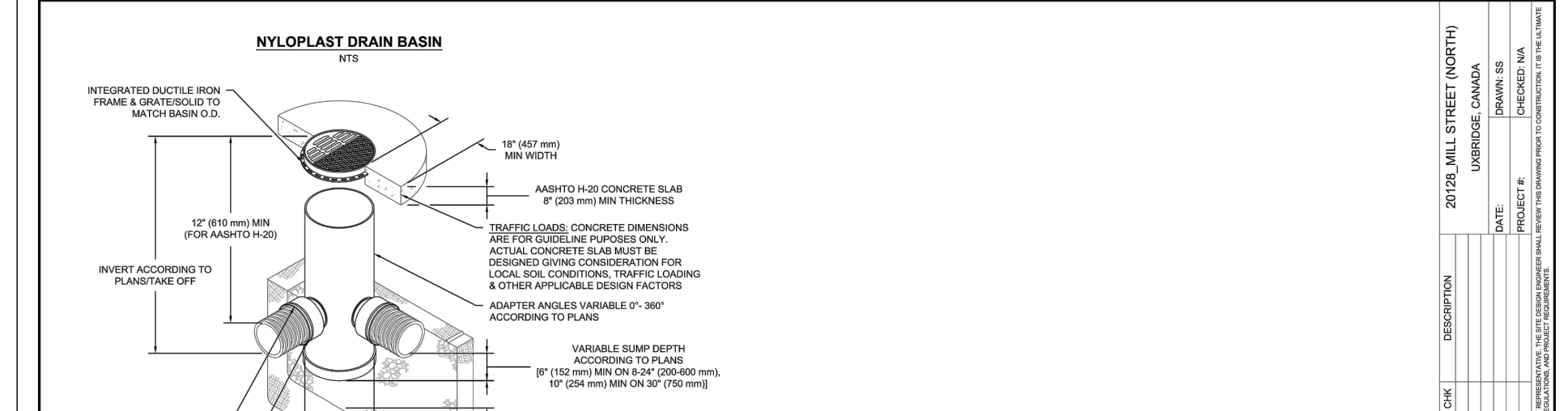
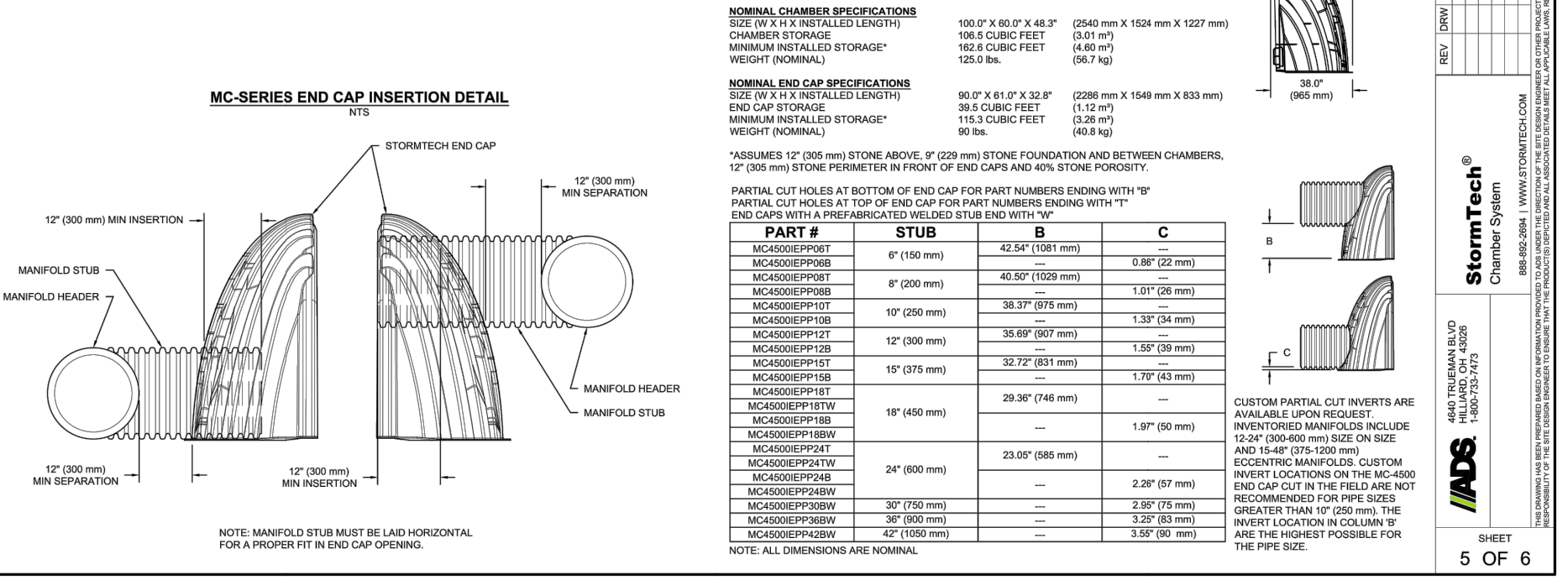
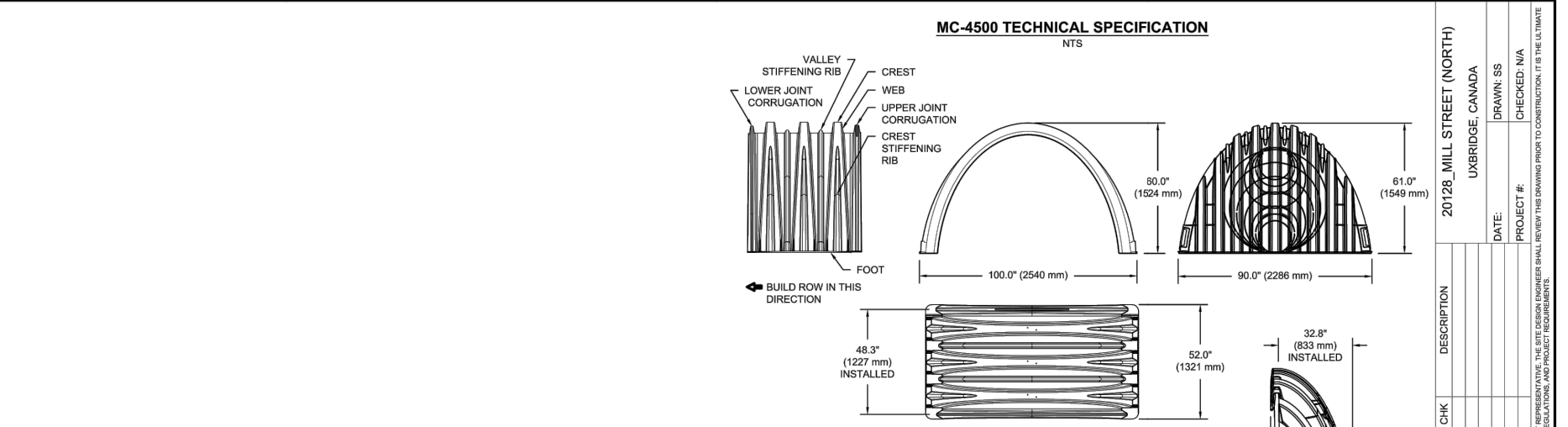


- PLEASE NOTE:
- THE LATEST ASHTO SPECIFICATIONS ARE FOR QUANTITIES ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR STONE WOULD STATE "CLEAN, CRUSHED, ANGULAR NO. 4 (3/4 INCH) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR A LAYER OF MATERIAL WHEN PLACED AND COMPACTED IN 150mm (6 INCH) LIFTS USING A ROLLER OR VIBRATORY COMPACTOR EQUIPMENT. FOR SPECIAL LOADS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 - EMBEZZLEMENT STONE FILL MATERIAL CAN BE PLACED ON TOP OF THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'A' AT THE SITE DESIGN ENGINEER'S DISCRETION.



- INSPECTION & MAINTENANCE
- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- REMOVE COVER LID ON MANHOLE LAST ALIEN DRAIN
 - REMOVE AND CLEAN EXTERIOR SURFACE IF INSTALLED
 - USE A PLUMB LINE AND STATION ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
 - REMOVE COVER FROM STRUCTURE AT DOWNSTREAM END OF ISOLATOR ROW PLUS
 - USE A PLUMB LINE, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
 - REMOVE COVER FROM CHAMBER AND INSPECT FOR SEDIMENT AND CHAMBER DAMAGE
 - REMOVE COVER FROM CHAMBER AND INSPECT FOR SEDIMENT AND CHAMBER DAMAGE
 - IF SEDIMENT IS AT OR ABOVE 75mm (3 INCH) PROCESS TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN UP ISOLATOR ROW PLUS USING THE STAIN PROCESS
- APPLY CLEANING SOLUTION TO ISOLATOR ROW PLUS WITH BRUSH FROM UPSTREAM END OF 45° (1:1) OR MORE IS REFERRED
 - APPLY CLEANING SOLUTION TO ISOLATOR ROW PLUS WITH BRUSH FROM DOWNSTREAM END OF 45° (1:1) OR MORE IS REFERRED
 - VACUUM STRUCTURE SWAMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS, RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BARRIERS 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 OBSERVATION OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATION.
 - CONTACT JETTING AND DUCTING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



- NOTES
- 300 (12 INCH) MINIMUM GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 65-46-12.
 - 300 (12 INCH) MINIMUM FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-60.
 - DRAIN BASIN SHALL BE CUSTOM MANUFACTURED ACCORDING TO MANHOLE TABLE.
 - ORANGE CORNER FITS AND JOINTS SHOULD BE USED FOR ALL MANHOLES.
 - FOR CORROSION RESISTANCE, USE 304 STAINLESS STEEL MANHOLE COVERS AND FITS.
 - FOR CORROSION RESISTANCE, USE 304 STAINLESS STEEL MANHOLE COVERS AND FITS.
 - TO ORDER CALL 888-414-7176
- | A | PART # | GRATES/SOLID COVER OPTIONS |
|-----|--------|----------------------------|
| 12" | 28960 | PERFORATED LIGHT DUTY |
| 12" | 28960 | PERFORATED MEDIUM DUTY |
| 12" | 28960 | PERFORATED HEAVY DUTY |
| 12" | 28960 | SOLID |
| 15" | 28960 | PERFORATED LIGHT DUTY |
| 15" | 28960 | PERFORATED MEDIUM DUTY |
| 15" | 28960 | PERFORATED HEAVY DUTY |
| 15" | 28960 | SOLID |
| 18" | 28960 | PERFORATED LIGHT DUTY |
| 18" | 28960 | PERFORATED MEDIUM DUTY |
| 18" | 28960 | PERFORATED HEAVY DUTY |
| 18" | 28960 | SOLID |

LEGAL & TOPOGRAPHY
 PROVIDED BY: SCHAEFFER DZALDOV BENNETT LTD.
 64 JARDIN DRIVE
 CONCORD, ON, L4K 3P3
 PHONE: (416) 987-0101

BENCHMARK AND ELEVATION
 ELEVATIONS SHOWN HEREON ARE GEODETIC (CGVD-1928 : PRE-1978 ADJUSTMENT) AND ARE REFERRED TO MINISTRY OF TRANSPORTATION OF ONTARIO BENCHMARK NO. 00819778487, HAVING A PUBLISHED ELEVATION OF 274.359 METERS.

No.	REVISIONS/ISSUED	DATE	BY	CITY
1.	2ND SPA SUBMISSION	2021/06/25	PT	

counterpoint ENGINEERING INC.
 COUNTERPOINT ENGINEERING INC.
 8395 Jane St., Suite 100, Vaughan, ON L4K 5Y2 Phone 905.328.1404 Fax 905.328.1405

APPLICANT:
 MOSAIK (UXBRIDGE) INC.

SITE LOCATION:
 62 MILL STREET
 THE TOWNSHIP OF UXBRIDGE
 L9P 1H9, ONTARIO

SITE PLAN FILE No.:

DESIGNED BY:	CHECKED BY:	DATE:
SS	PT	JUNE 2021
DRAWING BY:	CHECKED BY:	PROJECT NO.:
SC	PT	20128
SCALE:	DRAWING NO.:	
1:500m	ND-03	