

**Stormwater Management Facility
Maintenance Agreement**

Cover Page

Document drafted by:

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Foley & Lardner LLP
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Return to:

City of Manitowoc 17 Chg
Attn: City Clerk/Deputy Treasurer
900 Quay Street
Manitowoc, WI 54220

STORMWATER MANAGEMENT FACILITY MAINTENANCE AGREEMENT

This Stormwater Management Facility Maintenance Agreement (hereinafter, “**Agreement**”) by and between the City of Manitowoc, Wisconsin, a municipal corporation (the “**City**”), 900 Quay Street, Manitowoc, Wisconsin 54220-4543, and Wisconsin Aluminum Foundry Company Inc., 838 South 16th Street, Manitowoc WI 54220 (hereinafter “**Owner/Developer**”). The City, together with the Owner/Developer, may be referred to individually as a “party” and collectively as the “parties”.

RECITALS

This Agreement specifically applies to the following parcel located at 838 South 16th Street, Manitowoc WI 54220, Parcel No. 05200020818000 (the “**Property**”), further described as:

A PARCEL OF LAND LOCATED IN THE EAST ½ OF THE NEW ¼ AND THE WEST ½ OF THE NE ¼ OF SECTION 30, T.19N., R.24E., CITY OF MANITOWOC, MANITOWOC COUNTY, WISCONSIN ALSO LOCATED IN LOTS 1-20, BLOCK 207, IN LOTS 1-18 BLOCK 208 AND IN VACATED SOUTH 17TH STREET ADJACENT TO SAID BLOCKS.

NOW, THEREFORE, in consideration of the Recitals and the mutual promises herein made and for other good and valuable consideration, the receipt and sufficiency of which the parties hereby acknowledge, the Owner/Developer and the City agree as follows:

AGREEMENT

1. Recitals. The Recitals are deemed to be true and correct.
2. Owner/Developer Responsibilities. The Owner/Developer guarantees to the City that it will perform the following related to the Site Plan:
 - A. The Owner/Developer shall be responsible for the routine and extraordinary maintenance of the stormwater facilities located on the Property, which include, but are not limited to, one Underground Detention System and other appurtenant facilities designed to treat stormwater, or collect, channel, hold, inhibit or divert the movement of stormwater through and from the Property. Said stormwater facilities are hereinafter collectively referred to as the “**Facility**” identified in Exhibit “A”. Owner/Developer shall perform all stormwater management practices identified in Exhibit “B”; said Exhibits “A” and “B” are attached and incorporated herein by reference.
 - B. The Facility is for the benefit of the Owner/Developer, and the Owner/Developer shall maintain and inspect the Facility and all appurtenances related thereto as required under Exhibit “B” and shall comply with a maintenance plan which is on file in the City’s Engineering Department. The City Engineering Department shall be defined herein as the City Engineer or designee as its authorized representative.

- C. The Owner/Developer shall submit to the City Engineering Department an annual Facility inspection report for each and every calendar year (hereinafter, “calendar year” is defined as October 1st through and including the following September 30th) beginning with the calendar year after which the Facility has been placed in service and approved by the City. The report shall be filed with the City’s Engineering Department on or before October 1st of each calendar year and shall be in form and content as reasonably required by the City. For example, if the Facility was placed in service in calendar year 2021, the first inspection report shall be due on or before October 1, 2022.
- D. The City or its designee is authorized by the Owner/Developer to access the Property, as necessary, to conduct inspections of the Facility to ascertain compliance with this Agreement; provided, however, that the City shall give the Owner/Developer reasonable prior written notice before accessing the Property for purposes of inspecting the Facility. In conducting inspections of the Facility pursuant to this Section 2(D), the City and its personnel shall make good faith efforts to minimize disruptions to or interference with ongoing business activities at the Property.
- E. Upon the City providing written notification to the Owner/Developer of a problem with the Facility that requires correction, any corrective actions specified by the City in the written notification shall be performed by the Owner/Developer within a reasonable time frame as set forth in writing by the City Engineering Department.
- F. The City is authorized to perform the corrective action(s) identified in Section 2(E) above if the Owner/Developer does not make the required corrections, or if such corrections are not implemented to the City's sole satisfaction, within a reasonable time period specified in writing by the City Engineering Department, and after written notice from the City to the Owner/Developer specifically identifying how such corrective actions remain deficient or otherwise unacceptable to the City. The cost and expense of such corrections shall be expressly borne by the Owner/Developer.
- G. The Owner/Developer acknowledges that, per Section 28.090(2)(f) of the City of Manitowoc Municipal Code, the City Engineer has the authority to stop work, amend, or alter any construction or reconstruction of the Facility.

3. Best Management Practices (BMP). The Owner/Developer agrees to follow the State of Wisconsin Department of Natural Resources (“WDNR”) Technical Standards for erosion and sediment control and post-construction storm water management at the Facility. Owner/Developer shall comply with the standards and guidelines of the WDNR with respect to stormwater management, and shall comply with any additional storm water management requirements as required by City regulation or as may be reasonably required by the City Engineering Department.

4. Representations. All representations and warranties of the Owner/Developer and the City set forth in this Agreement shall at all times be true, complete, and correct.
5. Obligation to Maintain and Repair. The Owner/Developer shall, during the term of this Agreement, keep and maintain the Facility in good repair and working order, and will make or cause to be made from time to time all necessary repairs thereto, and renewals and replacements thereof, so as to maintain a fully operational Facility that functions to control and manage stormwater related to the Property. Facility maintenance responsibilities are detailed in Exhibit "B".
6. Insurance. During the term of this Agreement, the Owner/Developer shall continually maintain in effect insurance against such risks, both generally and specifically with respect to the Facility, as are customarily insured against improvements of like size and character including at least, but not limited to, Commercial General Liability Insurance, including Blanket Contractual Liability Insurance, against liability for personal injury, including the death of persons resulting from injuries occurring on or in any way related to the Property, in the minimum amount of two million (\$2,000,000) dollars per occurrence and against liability for damage to the Property occurring on, or in, or relating in any way to the Facility in the minimum amount of two million (\$2,000,000) dollars per occurrence. All insurance policies shall be purchased and maintained with insurance companies authorized to do business in the State of Wisconsin. Certificates and endorsements of all such insurance shall be filed with the City Clerk's office, with the City named as an additional insured, and shall further be subject to the review and approval of the City Attorney, such approval not to be unreasonably withheld. Copies of said policies, certificates and endorsements listing the City as an additional insured shall be provided to the City Engineering Department within fourteen (14) consecutive calendar days after the Owner/Developer executes this Agreement. Each such policy of insurance shall contain a provision that the insurance company shall give the City at least thirty (30) consecutive calendar days prior written notice of cancellation, non-renewal or material change during the term of this Agreement (or if the insurance company is unable or unwilling to provide such notification, the Owner/Developer shall provide said notice). In the event of a proposed cancellation or non-renewal of any such policy by an insurance company, the Owner/Developer shall secure adequate replacement insurance policies prior to the effective date of such cancellation or non-renewal.
7. Claims; Injury and Property Damage. During the term of this Agreement, and to the extent covered by the insurance required by Section 6, the Owner/Developer agrees to protect, defend, indemnify and hold the City, its officers, agents and employees free and harmless from and against any and all claims of third parties which result in losses, penalties, damages, settlements, costs, charges, professional fees, attorney's fees, or other expenses or liabilities in connection with or arising out of Owner/Developer's obligations to the City under this Agreement. Notwithstanding the foregoing, in no event shall the Owner/Developer or its insurer be liable for or have any indemnification obligations for any losses, damages, costs, fees, expenses, etc. arising out of the City's negligent or more culpable conduct, or failure to perform its obligations under this Agreement. The Owner/Developer further agrees that the City will, if the City and the Owner/Developer mutually deem it appropriate, provide any additional defense to any claim hereunder, the full costs of which shall be borne by the Owner/Developer. Furthermore, if a third party shall make a claim against the City related to the Facility, the Owner/Developer, at its sole

option, shall have the right to participate in, or assume the defense of any such claim, provided however, the City shall remain liable for all costs, including attorney's fees, to the extent of the City's negligence or more culpable conduct, or failure to perform its obligations.

8. **Notice and Right to Cure.** A material default or material breach (whether material default or material breach, hereinafter referred to as a "**Breach**") of this Agreement shall be defined as the failure of a party to perform any material term, covenant, condition, warranty or promise of this Agreement required to be performed by the Owner/Developer or the City. In the event of any Breach of this Agreement, the non-Breaching party shall deliver written notice to the Breaching party detailing the Breach, and such non-Breaching party shall, upon written notice from the other party, proceed immediately to cure or remedy such Breach, and in any event shall cure any such Breach within thirty (30) consecutive calendar days of the receipt of such notice, if such Breach is of a nature that can be reasonably cured within such thirty (30) day period. If such Breach is of a nature that cannot be reasonably cured within such thirty (30) day period, such party shall not be considered to be in Breach so long as it has commenced such cure and is diligently pursuing the same. In the case such action is not taken or is not diligently pursued, the aggrieved party may have available the remedies provided for herein; however, it is expressly agreed that a Breach of this Agreement by the City shall not entitle the Owner/Developer to terminate this Agreement.
9. **Additional Remedies.** The rights and remedies of the Owner/Developer and the City, whether provided at law or in equity or by this Agreement, shall be cumulative, and the exercise of any one or more such remedies shall not preclude the exercise at the same or different times of any other such remedies for the same event of Breach or of any remedies for any other event of Breach by the other party. In the event that any party Breaches any of its obligations under this Agreement and has not cured or remedied such Breach as set forth in Section 8, and following written notice to the Breaching party as provided in Section 8, then the non-Breaching party shall have the right to institute any other actions or proceedings as it may have available at law or equity if it deems desirable for effectuating the purposes of this Agreement; provided that any delay by the non-Breaching party in instituting or prosecuting any such action or proceedings or otherwise asserting its rights under this section shall not operate as a waiver of such rights or to deprive or limit the non-Breaching party of such rights in any way, so long as the Party in Breach is not materially prejudiced by such delay.
10. **No Waiver.** No waiver in fact made by either party with respect to any specific default or Breach by the other party under this Agreement shall be considered or treated as a waiver of the waiving party's right to insist upon strict compliance with respect to any other defaults or Breaches by the other party under this Agreement.
11. **Continuing Obligations.** The obligations of each of the parties shall continue until such time as this Agreement is terminated in writing by the Owner/Developer and the City.
12. **Termination.** This Agreement shall terminate, and become immediately null and void, upon the date of execution of a written instrument releasing the Owner/Developer and the City from all obligations hereunder.

13. Approvals in Writing. Whenever under this Agreement approvals, authorizations, determinations, satisfactions, or waivers are authorized or required, such approvals, authorizations, determinations, satisfactions, or waivers shall be effective and valid only when given in writing, signed by the duly authorized officer of the City or the Owner/Developer, as the case may be, and delivered to the party to whom it is directed at the address specified in Section 14. Wherever an approval is required by the terms of this Agreement, and request or application for such approval is duly made, such approval shall not be unreasonably withheld.
14. Inspection of Records. The City shall have the right to inspect any and all non-privileged records, contracts, financial statements, ledgers, or written documents which relate to and are generated by the responsibilities and obligations of the Owner/Developer under the terms of this Agreement, and which are related to verification or documentation of the activities or actions related to the Facility. This right of inspection shall apply to not only those records and documents that are within the physical control and custody of the Owner/Developer, but the Owner/Developer shall also provide copies of any non-privileged contracts, agreements or other documents with third parties if so requested by the City, that are necessary to verify or document the Facility's compliance with the terms and conditions of this Agreement.
15. Notices and Demands. A notice, demand or other communication under this Agreement by any party to any other party shall be sufficiently given or delivered if it is dispatched by facsimile transmission, or by first class mail, or by registered or certified mail, postage prepaid, return receipt requested, or delivered personally as set forth below:

Owner/Developer: Sachin Shivaram, CEO
Wisconsin Aluminum Foundry Company Inc.
838 South 16th Street
Manitowoc WI 54220

With a copy to: Bob Braun, President
Wisconsin Aluminum Foundry Company Inc.
838 South 16th Street
Manitowoc WI 54220

And a copy to: Erika Baurecht (agreement drafter)
Foley & Lardner LLP
777 E. Wisconsin Ave.
Milwaukee WI 53202

City: City of Manitowoc
Attn: City Clerk
900 Quay Street
Manitowoc WI 54220-4543

with a copy to: City Engineer
City of Manitowoc
900 Quay Street

The above addresses may be changed at any time by the parties by notice given in the manner provided above.

The parties further agree that electronically reproduced signatures such as by facsimile transmission are valid for execution or amendment of this Agreement, and that electronic transmission/facsimile is an authorized form of notice as that term is used in this Agreement.

16. No Liability of the City; Third Party Beneficiaries. The City shall have no obligation or liability to any lender, architect, engineer, contractor, or subcontractors, or any other party retained by the Owner/Developer in the event that the City is required to perform any of the Owner/Developer's obligations and responsibilities under the terms and conditions of this Agreement. Each party specifically agrees that no representations, assurances, or guaranties shall be made by a party to any third party that is contrary to this Section 15. This Agreement shall not confer any rights or remedies upon any person or entity other than the parties named herein and their respective successors and permitted assigns.
17. Severability. If any provision of this Agreement is deemed by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement or the application of such term or provision to parties or circumstances, other than those as to which it is invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and shall be enforced to the extent permitted by law.
18. Amendments. This Agreement is the entire agreement between the parties and can only be modified or changed in writing executed by all parties.
19. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties hereto, as well as their respective successors, heirs, transferees, and assigns. Any transfer of any party's interest contrary to the terms and conditions of this Agreement shall not release the transferor from his or its obligations hereunder.
20. Recordation. This Agreement or at the City's sole option, a Memorandum of Agreement, and any subsequent modifications thereof or additions thereto, shall be, upon being duly executed, recorded by the City at the Owner/Developer's sole expense, at the Register of Deeds for Manitowoc County, Wisconsin, and shall be deemed to be and interpreted as a covenant running with the Property. The City shall, upon the parties' agreement to terminate this Agreement, file and record at the Owner/Developer's expense an instrument at the Register of Deeds for Manitowoc County terminating the Agreement.
21. Time of Essence. Time is of the essence as to this Agreement and of every term, covenant, condition, warranty or promise to be performed by the parties.
22. Assignment. The Owner/Developer shall not assign this Agreement or any part of it, without the prior written consent of the City, which consent shall not be unreasonably withheld.

23. **Applicable Law.** This Agreement shall be deemed to have been made in Manitowoc County, Wisconsin, and shall be governed by, construed under, and enforced in accordance with, the law of the State of Wisconsin, except as otherwise provided herein. All actions or proceedings relating directly or indirectly to this Agreement, whether sounding in contract or tort, shall be litigated only in the circuit court located in Manitowoc County, Wisconsin. All parties to this Agreement hereby subject themselves to the jurisdiction of the circuit court for Manitowoc County, Wisconsin.
24. **Headings.** The section titles have been inserted in this Agreement primarily for convenience, and do not define, limit or construe the contents of such paragraphs. If headings conflict with the text, the text shall control.
25. **Pronouns.** Pronouns in this Agreement (including, but not limited to, those referring to the Owner/Developer and the City), importing any specific gender shall be interpreted to refer to limited liability companies, corporations, partnerships, men and women, as the identity of the parties hereto, or the parties herein referred to, may require. Pronouns, verbs, and/or other words in this Agreement importing the singular number shall be interpreted as plural and plural words as singular, as the identity of the parties hereto, or the parties or objects herein referred to, may require.
26. **Integration and Conflicts.** This Agreement and any special terms and conditions appended hereto at the time of execution of this Agreement, shall constitute the entire, integrated agreement of the parties hereto with respect to the matters addressed herein. This Agreement, and each and every term and condition, may be added to or amended only by the mutual written agreement of the parties as permitted in Section 17, which amendment or modification shall be executed with the same formalities as this Agreement shall have been executed. Special terms and conditions, if any, which are agreed upon by the parties hereto at the time this Agreement is executed, shall be reduced to writing in accordance with Section 12. If the provisions of any other agreement or contract between the parties hereto conflicts with the provisions of this Agreement with respect to the subject matter hereof, the provisions of this Agreement shall control.
27. **Relationship of Parties.** Nothing in this Agreement nor any act of the Owner/Developer or the City shall be deemed or construed to create any relationship of third party beneficiary, of principal or agent, of limited or general partners, of joint venture, or of any association whatsoever between the parties hereto.
28. **Construction.** All parties have contributed to the drafting of this Agreement. In the event of a controversy, dispute or contest over the meaning, interpretation, validity, or enforceability of this Agreement or any of its terms or conditions, there shall be no inference, presumption or conclusion drawn whatsoever against any party hereunder by virtue of that party having drafted this Agreement or any portion thereof.
29. **Creation of New Tracts of Land from Owner/Developer Property.** Unless so directed by the City, on or after the effective date of this Agreement, any land divisions of the Property that create new parcels, or any developments occurring on the Property under a lease or similar arrangement, and which in each case are designed to drain stormwater to the Facility, shall be the subject of a written amendment to this Agreement or a similar agreement with the City on terms and conditions substantially the same as those included in this Agreement.

30. Counterparts. This Agreement may be executed in counterpart originals, each of which when duly executed and delivered shall be deemed an original and all of which when taken together shall constitute one instrument.

31. Date. This Agreement shall be dated and effective and binding as of the date of the last execution.

[SIGNATURE PAGES FOLLOW]

WISCONSIN ALUMINUM FOUNDRY COMPANY INC.

By: Bob Braun
Its: PRESIDENT - FOUNDRY
Date: NOV 29, 2022

STATE OF WISCONSIN) SS.
MANITOWOC COUNTY

Personally, came before me this 29 day of November, 2022, the above named Bob Braun to me known, who executed the foregoing instrument and to me known to be the President of Wisconsin Aluminum Foundry Company Inc., and acknowledged that he executed the foregoing instrument in such capacity of said corporation, by its authority.

Margaret Halverson
Notary Public
Manitowoc County, Wisconsin
My commission (expires)(is):
September 15, 2026



CITY OF MANITOWOC, a Wisconsin Municipal Corporation

By: _____
Justin M. Nickels, Mayor

Date

By: _____
Mackenzie Reed, City Clerk

Date

STATE OF WISCONSIN) SS.

MANITOWOC COUNTY

Personally, came before me this ____ day of, 202__, the above signed Justin Nickels and Mackenzie Reed, to me known who executed the foregoing instrument and to me known to be such Mayor and City Clerk of the City of Manitowoc, WI, a Wisconsin Municipal Corporation, and acknowledged that they executed the foregoing instrument as such Officers of said City, by its authority.

Notary Public
Manitowoc County, Wisconsin
My commission (expires)(is):

Exhibit A - Location Map

Storm Water Management Practices Covered by this Agreement

The storm water management practices covered by this Agreement are depicted in the reduced copy of the construction plans, as shown below. The practices include one (1) stormwater Underground Detention System and all associated pipes located in a Parcel of land located in the EAST ½ OF THE NW ¼ AND THE WEST ½ OF THE NE ¼ of Section 30, T.19N., R24E., City of Manitowoc, Manitowoc County, Wisconsin.

Location Map

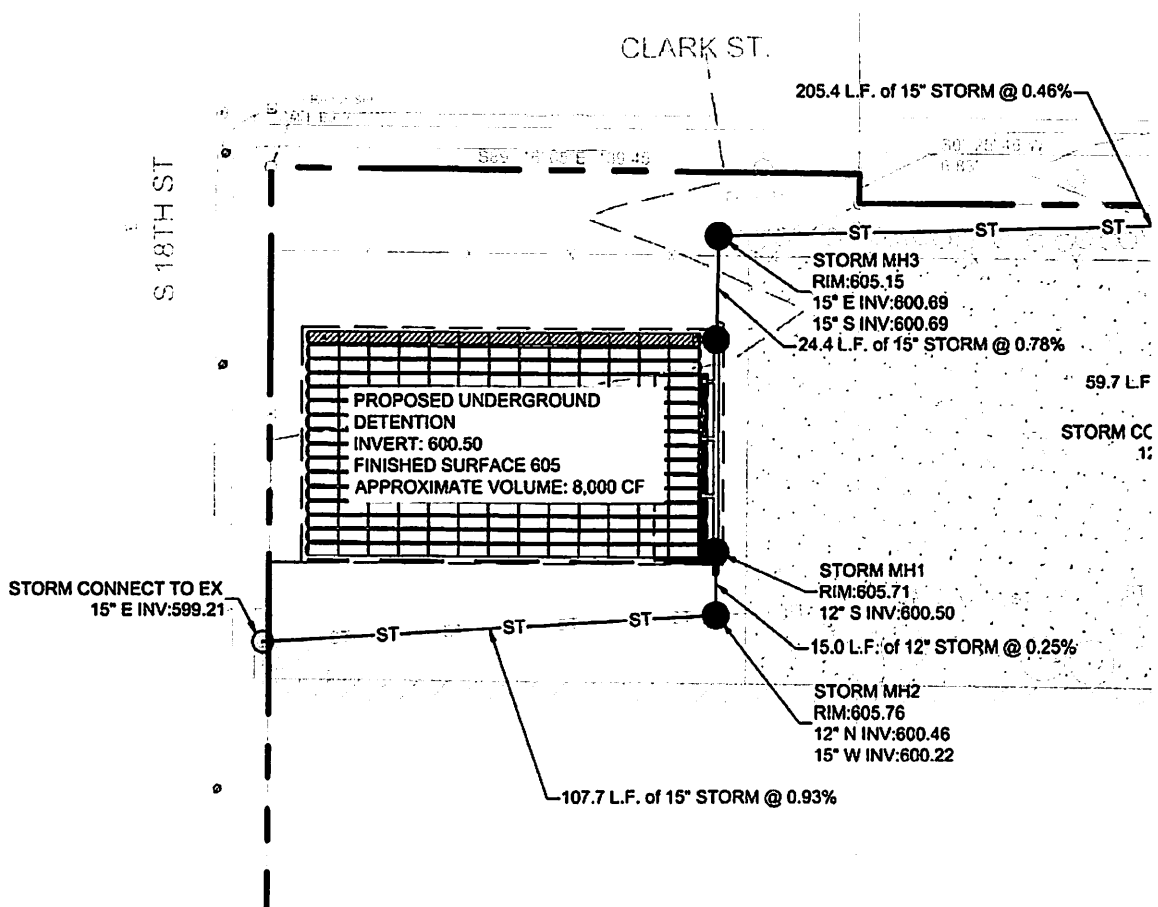


Exhibit B

Minimum Storm Water Practice Maintenance Requirements

This exhibit explains the basic function of each of the storm water practices listed in Exhibit A and prescribes the minimum maintenance requirements to remain compliant with this Agreement. The maintenance activities listed below are aimed to ensure these practices continue serving their intended functions in perpetuity. The list of activities is not all inclusive, but rather indicates the minimum type of maintenance that can be expected for this particular site. Access to the stormwater practices for maintenance vehicles is shown in Exhibit A. Any failure of a storm water practice that is caused by a lack of maintenance will subject the responsible party to enforcement of the provisions listed in this Agreement by the City of Manitowoc.

System Description:

For details on the Stormwater wet Pond and a complete list of Maintenance responsibilities see the Stormwater Management Plan and the Erosion Control Plan for the Wisconsin Aluminum Foundry Company Expansion on file at the City of Manitowoc Engineering Office.

Stormwater Underground Detention Details:

PROJECT INFORMATION	
ENGINEERED PROJECT MANAGER	JAKE BRUNDELER 262-794-2306 JAKE.BRUNDELER@ADSPIPE.COM
ADS SALES REP1	DAVID LANDWEHR 920-680-7227 DAVID.LANDWEHR@ADSPIPE.COM
PROJECT NO	1301905

Advanced Drainage Systems, Inc.

ADS
SiteAssist
FOR STORMTECH
INSTALLATION INSTRUCTIONS
VISIT OUR APP

MANITOWOC ALUMINUM FOUNDRY EXPANSION

MANITOWOC, WI

SC-160LP STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-160LP.
2. CHAMBERS SHALL BE ARCH SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO BRIDGE DESIGN SPECIFICATIONS, SECTION 12.1.2 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.
6. 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 MPA 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.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STAKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 1/8".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LB-FT². THE ASC IS DEFINED IN SECTION 4.2.9 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.
8. 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 1.50 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 BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DESIGNED 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.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

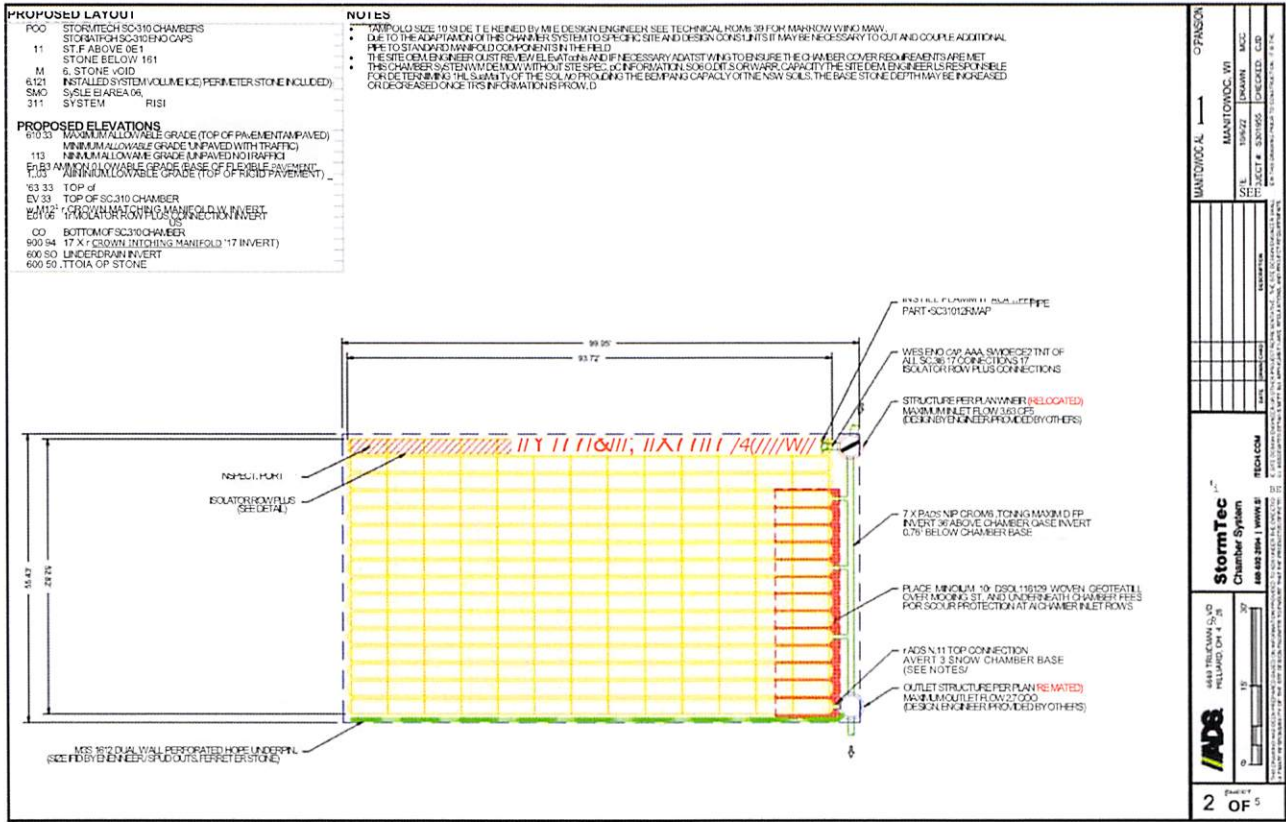
IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-160LP SYSTEM

1. STORMTECH SC-160LP CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-160LP CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-160LP CONSTRUCTION GUIDE".
3. FOUNDATION STONE AND EMBEZZMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE, AASHTO M33.357, 4, 487.5, 96 OR 57.
4. THE FOUNDATION STONE SHALL BE LEVELLED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. THE DEPTH OF FOUNDATION STONE SHALL BE DETERMINED BASED ON THE SUBGRADE BEARING CAPACITY PROVIDED BY THE SITE DESIGN ENGINEER.
6. THE CONTRACTOR MUST REPORT ANY DISCREPANCY CONCERNING CHAMBER FOUNDATION DESIGN AND SURGRADE BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
7. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
8. CHAMBERS SHALL BE INSTALLED "TOE TO TOE" NO ADDITIONAL SPACING BETWEEN ROWS IS REQUIRED.
9. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONE SHOTEN 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.
10. ADS RECOMMENDS THE USE OF "LEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-160LP CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON SARE CHAMBERS.
 - NO RUBBER-TYRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-160LP CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-160LP CONSTRUCTION GUIDE".
2. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

CONTACT STORMTECH AT 1.888.857.2194 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



MANUFACTURED BY STORMTECH

MADE IN CANADA

StormTech Chamber System

11 OF 11

2 OF 5

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS			
MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION DENSITY REQUIREMENT
FIN FILL MATERIAL FOR LAYER 'A' STARTS FROM THE TOP OF THE CHAMBER TO THE BOTTOM OF THE FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE IS A PART OF THIS LAYER.	ANY MATERIALS, METRE ROCKS OR PERMITS OR PLANS CHECK PLANS FOR FINISH SURFACE FOUR FEET	NA	PREPARE PER SITE DESIGN ENGINEER'S RANS PAVED INSTALLATION. MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
INITIAL FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE BASEMENT STONE OR LAYER TO 150mm (6") TO THE OR THE CHAMBER. NOTE THAT PAVEMENT SUBBASE IS A PART OF THIS LAYER.	AGGREGATE PROCESSED	AASHTO M11 0.1, 0.24, A1 OR AMNT01447 3.337, 4.467.5, M, 57, 6, 67, M, 7, M, 0 W O 10	BEFORE COMPACTION AFTER 1000mm (40") OF LAYER OVER THE CHAMBER IS PLACED, CONTRACT ADDITIONAL LAYERS IN 50mm (2") INCREMENTS. USE PROCESSED AGGREGATE MATERIAL AND USE RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12000 (11500) 0.410. FORCE NOT TO EXCEED 20000 IN (RM MO).
BASEMENT STONE FILL SURROUNDING L COVERS FROM THE FOUNDATION STONE CALAYER TO MEV LAYER ABOVE.	CLEAN MAMA ANWAR STONE	AAMT01146 3.5% U, 4.467.5 6E67	NO COMPACTION REQUIRED.
FILLAR STONE FILL BELOW LAYERS FROM THE SUBBASE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN CRUSHED, ANGULAR STON	A1N4101447 1367, A, 467.6, 36.57	PLATE COMPACTION OR ROLL TO A D NEAR PAT SURFACE
<p>PLEASE NOTE:</p> <p>1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE A SPECIFICATION OR M STONE WOULD STATE CLEAN, CRUSHED, ANGULAR NO 4 MAMT0 1443, STONE 2. STORMTECH COMPACT, REQUIREMENTS ARE MET FOR ALL LOCATION MATERIALS WHEN PLACED AND COMPACTED AT # 6 (ISO mm) MAK. LIFTS LIFT'S IWO FULL COVERAGE SWIM A VBRATORY COMPACTOR WHERE NEUTRAL SURFACES LL BE CONFORMED BY COMPACTION FOR STAN REDUCE M LOAD Ca0710. A FUT SURFACE ACCIEVED BY RAKING OR DRAG, WITHOUT COACTION/AMMENT. FOR SPECIAL IUD DESIGNS, CONT. STORMTECH FOR COMPACT REQUIREMENTS</p> <p>4. ONCE LAYER 'C' IS PLACED, ANY SOLIDATER, CANE RACED IN LAYER 'D' UP TO FORMED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THEATER, REQUIREMENTS OF LAYER C OR 17 AT THE SITE DESIGN ENGINEERS ...</p> <p>ADS C.05 WITHETICS NIT NONWOVEN GEOTEKSTIL ALL A10A CLEAN CRUSHED, ANGULAR STONE PI A I B LAYERS</p> <p>BY SITE DES. ENGINEER</p>			
PAVE. VENT. YER M SI			
B (CAN BE OPENED OR		N.Dim CROSS SECTION DETAIL REPRESENTS MINIMUM REQUIREMENTS FOR STAFFING. PLEASE REFER TO THE LAYOUT SHEET FOR PROJECT SPECIFIC REQUIREMENTS.	
H MANHOLE		DEPTH OF STONE TO BE DETERMINED BY SITE DESIGN ENGINEER 471160 mm (19")	
<p>NOTES:</p> <p>1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F1011 (POLYETHYLENE) OR AWWA F1011 (POLYPROPYLENE) STANDARD SPECIFICATION FOR CORRUGATED WALL STAINLESS STEEL COLLECTION CHAMBER.</p> <p>2. CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH AWWA M22 FOR STRUCTURAL DESIGN OF TRIAXIALLY CORRUGATED WALL STC. WATER COLLECTION MATERIALS.</p> <p>3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING CAPACITY OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION OF THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.</p> <p>PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO 1.5M (5 FT) FROM THE CHAMBER JOINT FOR VERTICAL AND SLOPED EXCAVATION WALLS.</p> <p>6. AECUO, 703 F. HANDLING AND INSTALLATION</p> <ul style="list-style-type: none"> TO MAINTAIN THE WIDTH OF CHAMBER 6 DU. SHIPPING AND HANDLING MANNERS SHALL HAVE INTEGRAL INTERLOCK, STACLG. LUGS. TO EMJ. A SECURE JOINT DURFIF W INSTALLATION ANORACLL. T. HEIGR OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3" TO E. ME INTEGRITY OF T. ARCH SIN. DURING INSTALLATION. T. ARCH STIFFNESS CONSTANT AS DEEMED BY SECTION 8.2.11 OF ASTM R15. SEE MEAT, TARN OR EQUAL TO LEV. M. 10 TO RESIST CHAMBER DEFORMATION DURING INSTALLATION. AT ELEVATED TEMPERATURES (ABO. 77 F / 927 C). CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS 			

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Minimum Maintenance Requirements Underground Detention System:

To ensure the proper function of the storm water management practices described above, the following activities must be completed:

1. All outlet pipes must be checked monthly to ensure there is no blockage from floating debris or ice. Any blockage must be removed immediately.
2. No buildings and other structures, light poles, or landscaping are allowed over the underground detention basin.
3. Riprap outfall must be checked after heavy rains minimum semi-annually, May and October, for signs of erosion. Any eroding areas must be repaired immediately to prevent premature sediment build-up in the basin. Seeding and erosion matting is recommended for repairing eroded grass areas. Additional riprap is recommended for repairing eroded riprap areas.
4. No trees are to be planted or allowed to grow over the underground detention basin.
5. Any other repair or maintenance needed to ensure the continued function of the storm water practices or as reasonably required by the City.

Inspection & Maintenance Underground Detention System:

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 vacuum annually or when inspection shows that maintenance is necessary.

1. Inspect isolator row for sediment
 - a. Inspection ports (if present)
 - i. Remove/open lid on Nyloplast inline drain
 - ii. Remove and clean Flexstorm filter if installed.
 - iii. Using a flashlight and stadia rod, measure depth of sediment and record on maintenance log.
 - iv. Lower a camera into isolator row for visual inspection of sediment levels (optional).
 - v. If sediment is at, or above, 3" (80 mm) proceed to step 2. If not, proceed to step 3.
2. Clean out isolator row using the JETVAC process:
 - a. A fixed culvert cleaning nozzle with rear facing spread of 45" (1.1m) or more is preferred.
 - b. Apply multiple passes of JETVAC until backflush water is clean.
 - c. Vacuum structure sump as required.
3. Replace all covers, grates, filters, and lids; record observations and actions.
4. Inspect and clean basins and manholes upstream of the StormTech system.
5. Any other repair or maintenance needed to ensure the continued function of the storm water practices or as ordered by the City.

Minimum Maintenance Requirements Storm Sewer and Storm Catch Basins:

To ensure the proper function of the storm water management practices described above, the following activities must be completed:

1. Inspect all inlet/catch basins/area drains to ensure no clogging of the surface grates, or no blockage from floating debris or ice within the basins. Any blockage must be removed immediately.
2. Inspect the sump to determine the level of sediment build up. Remove sediment when it reaches a level within six inches of the discharge pipe invert.
3. Inspect the structural integrity of the structure/pipe connections. If any structural damage to the inlet/catch basin structure/pipe connections is identified the damage shall be repaired.
4. Inspect the pipe connections to ensure no clogging or blockage of the pipe. Any clogging or blockage must be removed immediately.

5. Any other repair or maintenance needed to ensure the continued function of the storm water practices or as reasonably required by the City.