



## APPENDIX E

### SiteSaver Design Drawings

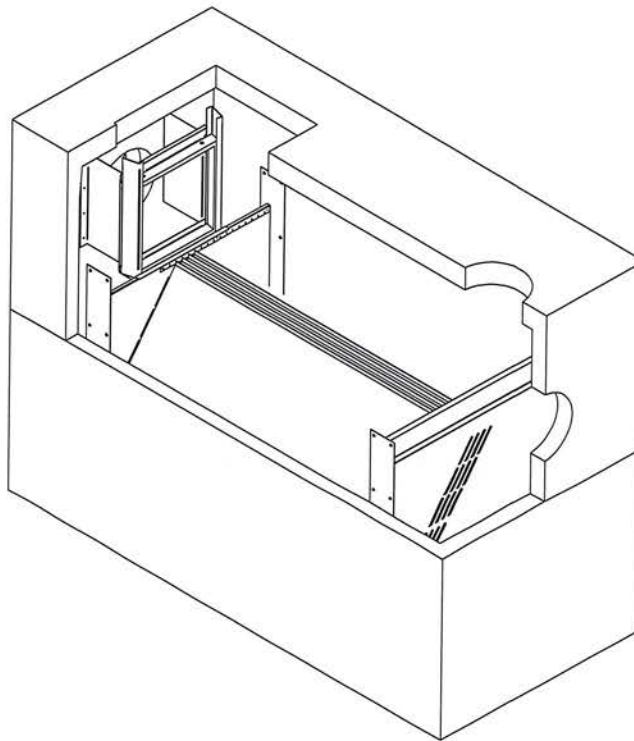
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# SiteSaver®

## STORMWATER TREATMENT SYSTEMS



SHEET INDEX	
PAGE	DESCRIPTION
0.0	COVER SHEET
1.0	SITESAVER DESIGN CRITERIA
2.0	SITESAVER SYSTEM LAYOUT
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3.1	SITESAVER INSTALLATION PROCEDURE
4.0	SITESAVER BACKFILL SPECIFICATIONS
5.0	RECOMMENDED PIPE / ACCESS OPENING SPECIFICATIONS

**STORMTRAP CONTACT INFORMATION**

SITESAVER SUPPLIER: STORMTRAP  
 CONTACT NAME:  
 CELL PHONE:  
 SALES EMAIL:



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COVER SHEET

**SHEET NUMBER:**

**0.0**

SITESAVER® STSS-4

**SYSTEM INFORMATION**

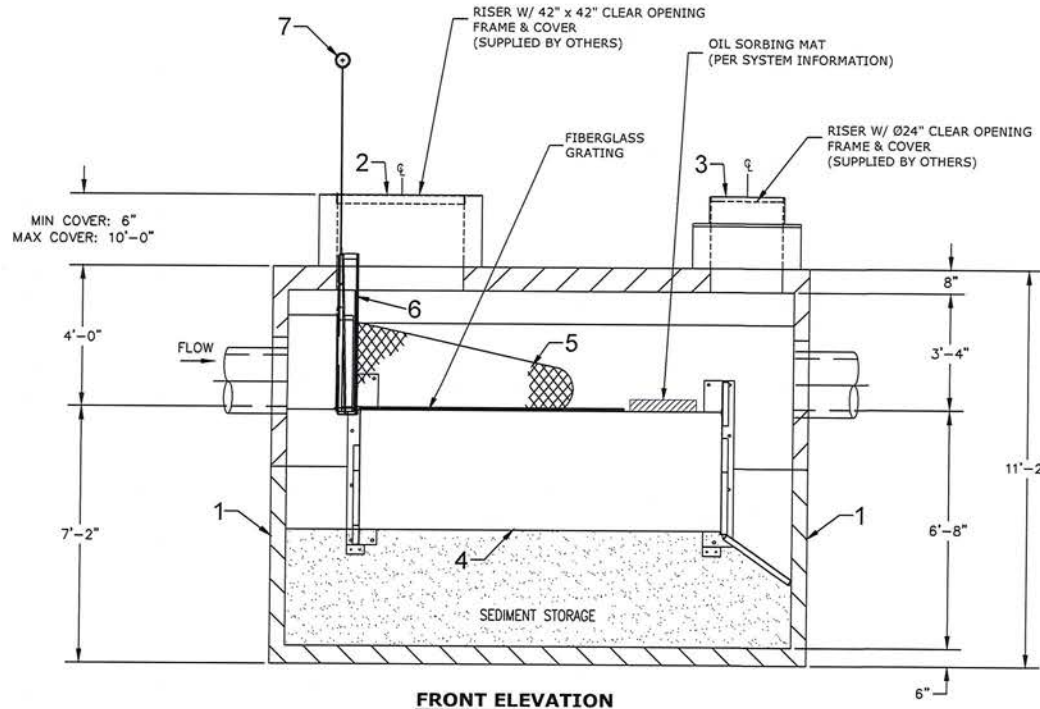
WATER QUALITY FLOW RATE:	CFS
PEAK FLOW RATE:	CFS
OIL SPILL CAPACITY:	GALLONS
OIL SORBING MAT:	
SEDIMENT STORAGE:	FT <sup>3</sup>
EFFECTIVE SETTLING AREA:	86.0 FT <sup>2</sup>
FOOTPRINT AREA:	104.8 FT <sup>2</sup>
INLET TYPE:	MTRL
OUTLET TYPE:	MTRL

**BILL OF MATERIALS**

ITEM	QTY	DESCRIPTION
1	1	SITESAVER MODULE (TOP & BOTTOM)
2	1	42" X 42" HATCH (SUPPLIED BY OTHERS)
3	1	Ø24" MANHOLE FRAME & COVER (SUPPLIED BY OTHERS)
4	1	SITESAVER SS4 INSERT
5	1	NET BAG 303048
6	1	NET FRAME
7		NET LIFTING SLING (CABLE W/RING)
8	1	FIBERGLASS GRATING
9	1	INSTALLATION HARDWARE KIT
10	3	SWELLSTOP ROLLS
11		OIL SORBING MATS

**NOTES & SPECIFICATIONS:**

- SITESAVER MODULES SHALL BE MANUFACTURED AND INSTALLED ACCORDING TO SHOP DRAWINGS APPROVED BY THE INSTALLING CONTRACTOR AND ENGINEER OF RECORD. THE SHOP DRAWINGS SHALL INDICATE SIZE AND LOCATION OF ROOF OPENINGS AND INLET/OUTLET PIPE TYPES, SIZES, INVERT ELEVATIONS, AND SIZES OF OPENINGS.
- COVER RANGE MIN 0.50' MAX 10.00' (CONSULT STORMTRAP FOR ADDITIONAL COVER OPTIONS)
- ALL DIMENSIONS AND SOIL CONDITIONS, INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY, ARE REQUIRED TO BE VERIFIED IN THE FIELD BY OTHERS PRIOR TO SITESAVER INSTALLATION.
- CONTRACTOR TO MAKE STRUCTURE WATERTIGHT IN THE FIELD.
- CONTRACTOR TO ENSURE FRAMES & COVER CLEAR OPENING DIMENSIONS & LOAD RATINGS ARE MET.
- NET BAGS: 48" LG. WITH 30" x 30" INLET OPENING (NOMINAL DIMENSIONS).
- CONCRETE: 6,000 P.S.I. @ 28 DAYS 5%-8% ENTRAINED AIR.
- HS-20 LOAD RATING WITH 6" MIN TO 10'-0" MAX EARTH COVER.
- WATER TABLE IS ASSUMED BELOW SYSTEM INVERT AND SOIL DENSITY OF 120 PCF
- LIFTING: (8) 6" MIN. SLAB UTILITY ANCHORS.  
(4) UTILITY ANCHORS FOR RISER SECTIONS.
- STRUCTURE TOLERANCE= 1/4".
- WEIGHT: INSERT: 1,500#  
BOTTOM SECTION: 20,700# (WEIGHT VARIES)  
TOP SECTION: 21,700# (WEIGHT VARIES)



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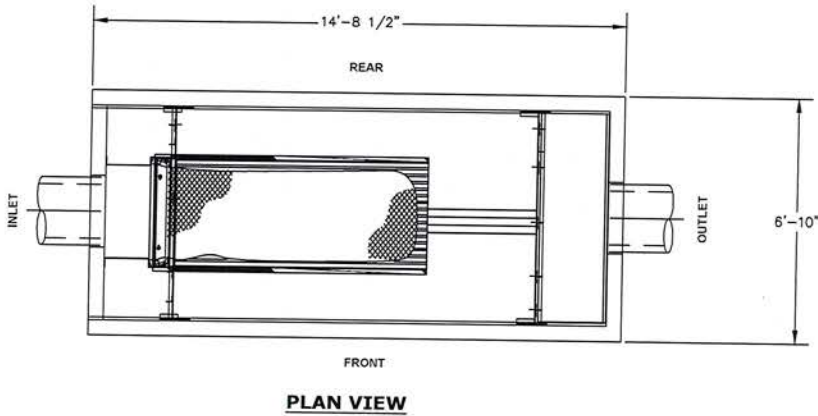
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SITESAVER DESIGN CRITERIA

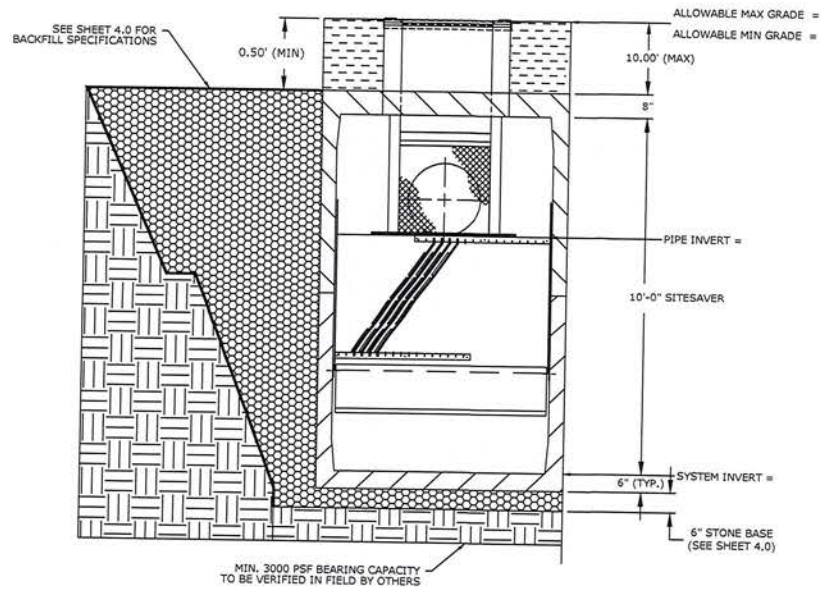
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**1.0**



**DESIGN CRITERIA**

ALLOWABLE MAX GRADE:	10.00 FT
ALLOWABLE MIN GRADE:	0.50 FT
INSIDE HEIGHT ELEVATION:	FT
SYSTEM INVERT:	FT
PIPE INVERT:	FT

- NOTES & SPECIFICATIONS:**
1. DIMENSIONING OF SITESAVER SYSTEM SHOWN BELOW ALLOW FOR A 3/4" GAP BETWEEN CONCRETE COMPONENTS, 1/4" GAP FOR STEEL COMPONENTS.
  2. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD BY OTHERS.
  3. SEE SHEET 3.0 FOR INSTALLATION SPECIFICATIONS.
  4. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE CONSISTENCY/ACCURACY TO FINAL ENGINEER OF RECORD PLAN SET.



**10'-0" SITESAVER**



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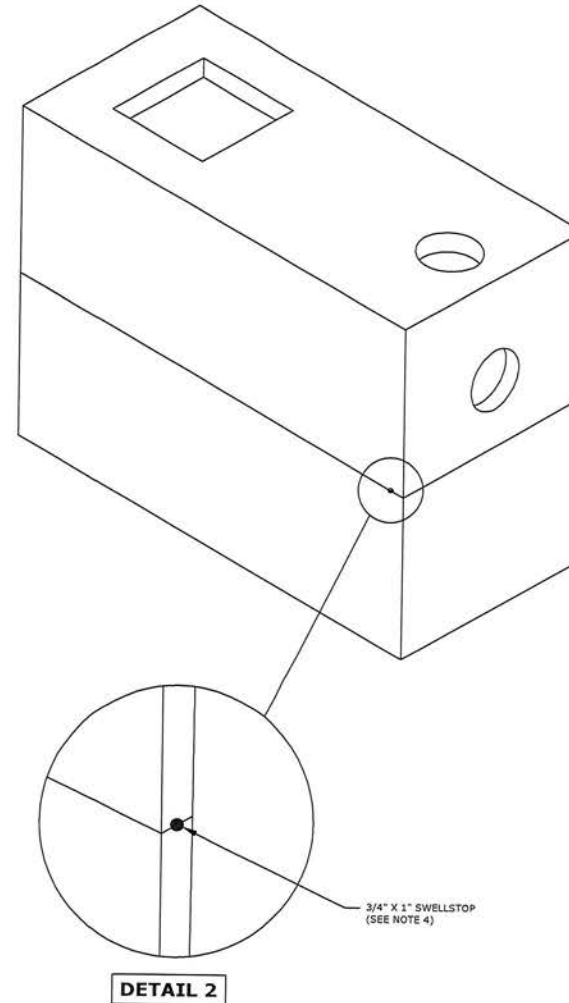
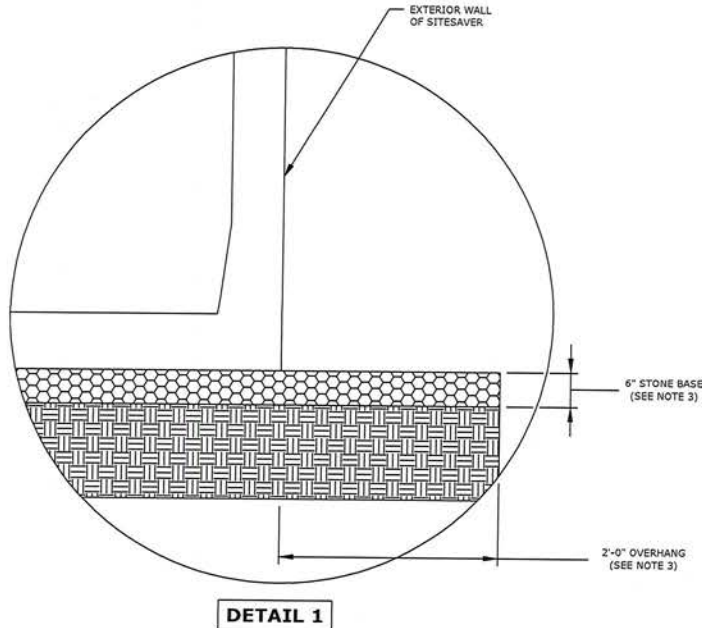
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SHEET TITLE:  
 SITESAVER SYSTEM LAYOUT

SHEET NUMBER:  
**2.0**

**SITESAVER INSTALLATION SPECIFICATIONS**

1. SITESAVER SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C891, STANDARD FOR INSTALLATION OF UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES, THE FOLLOWING ADDITIONS AND/OR EXCEPTIONS SHALL APPLY:
2. IT IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO ENSURE THAT PROPER/ADEQUATE EQUIPMENT IS USED TO SET/INSTALL THE MODULES.
3. SITESAVER MODULES CAN BE PLACED ON A LEVEL, 6" FOUNDATION OF 3/4" AGGREGATE EXTENDING 2'-0" PAST THE OUTSIDE OF THE SYSTEM (SEE DETAIL 1) AND SHALL BE PLACED ON PROPERLY COMPACTED SOILS (SEE SHEET 2.0 FOR SOIL BEARING CAPACITY REQUIREMENTS), AND IN ACCORDANCE WITH ASTM C891 STANDARD PRACTICE FOR INSTALLATION OF UNDERGROUND PRECAST UTILITY STRUCTURES.
4. THE HORIZONTAL JOINT BETWEEN THE TOP AND BASE LEG CONNECTION OF THE SITESAVER MODULES SHALL BE SEALED WITH SIKA GREENSTREAK SWELLSTOP 3/4" X 1" PER MANUFACTURER'S INSTRUCTIONS. (SEE DETAIL 2)
5. IF THE CONTRACTOR NEEDS TO CANCEL ANY SHIPMENTS, THEY MUST DO SO 48 HOURS PRIOR TO THEIR SCHEDULED ARRIVAL AT THE JOB SITE. IF CANCELED AFTER THAT TIME, PLEASE CONTACT THE PROJECT MANAGER.
6. IF THE SITESAVER MODULE(S) IS DAMAGED IN ANY WAY PRIOR, DURING, OR AFTER INSTALL, STORMTRAP MUST BE CONTACTED IMMEDIATELY TO ASSESS THE DAMAGE AND TO DETERMINE WHETHER OR NOT THE MODULE(S) WILL NEED TO BE REPLACED. IF ANY MODULE ARRIVES AT THE JOBSITE DAMAGED DO NOT UNLOAD IT; CONTACT STORMTRAP IMMEDIATELY. ANY DAMAGE NOT REPORTED BEFORE THE TRUCK IS UNLOADED WILL BE THE CONTRACTOR'S RESPONSIBILITY.
7. SITESAVER MODULES CANNOT BE ALTERED IN ANY WAY AFTER MANUFACTURING WITHOUT WRITTEN CONSENT FROM STORMTRAP.



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SITESAVER  
 INSTALLATION  
 SPECIFICATIONS

**SHEET NUMBER:**

**3.0**



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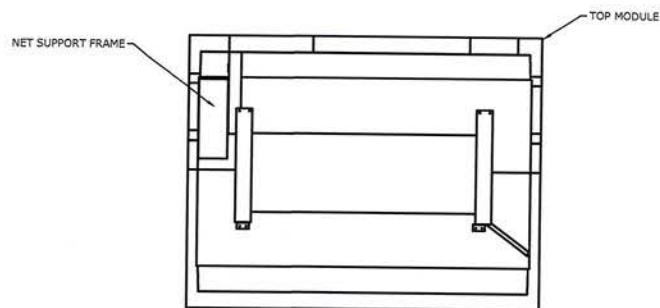
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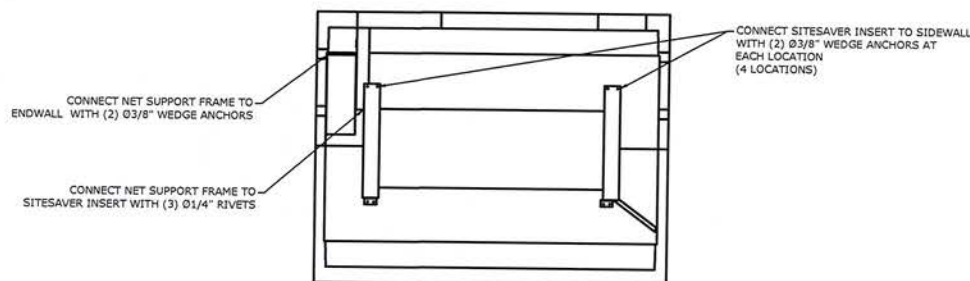
SITESAVER  
 INSTALLATION  
 PROCEDURE

**SHEET NUMBER:**

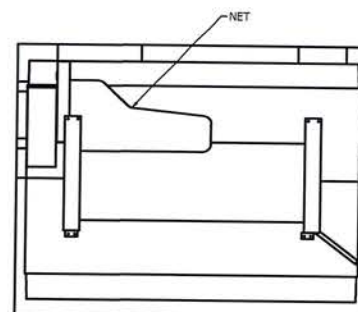
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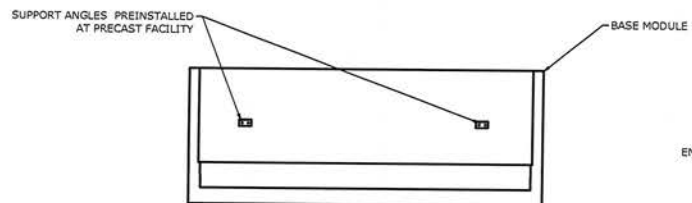
**STEP 3 - SET TOP MODULE & NET SUPPORT FRAME**



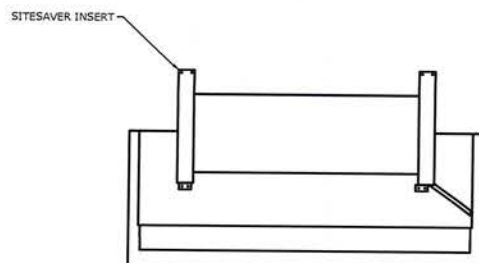
**STEP 4 - CONNECT INTERNALS TO MODULES**



**STEP 5 - PLACE NET**



**STEP 1 - INSTALL BASE MODULE**



**STEP 2 - PLACE INTERNALS**

ZONE CHART		
ZONES	ZONE DESCRIPTIONS	REMARKS
ZONE 1	FOUNDATION AGGREGATE	#5 (3/4") AGGREGATE (SEE NOTE 4 FOR DESCRIPTION)
ZONE 2	BACKFILL	#5 (3/4") AGGREGATE (SEE NOTE 4 FOR DESCRIPTION)
ZONE 3	FINAL COVER OVERTOP	MATERIALS NOT TO EXCEED 120 PCF

**SITESAVER ZONE INSTALLATION SPECIFICATIONS/PROCEDURES**

1. THE FILL PLACED AROUND THE SITESAVER MODULES MUST DEPOSITED ON BOTH SIDES AT THE SAME TIME AND TO APPROXIMATELY THE SAME ELEVATION. AT NO TIME SHALL THE FILL BEHIND ONE SIDE BE MORE THAN 2'-0" HIGHER THAN THE FILL ON THE OPPOSITE SIDE. BACKFILL SHALL EITHER BE COMPACTED AND/OR VIBRATED TO ENSURE THAT BACKFILL AGGREGATE/STONE MATERIAL IS WELL SEATED AND PROPERLY INTER LOCKED. CARE SHALL BE TAKEN TO PREVENT ANY WEDGING ACTION AGAINST THE STRUCTURE, AND ALL SLOPES WITHIN THE AREA TO BE BACKFILLED MUST BE STEPPED OR SERRATED TO PREVENT WEDGING ACTION. BACKFILL MATERIAL SHALL BE CLEAN, CRUSHED, ANGULAR No. 5 (AASHTO M43) AGGREGATE. IF NATIVE EARTH IS SUSCEPTIBLE TO MIGRATION, CONFIRM WITH GEOTECHNICAL ENGINEER AND PROVIDE PROTECTION AS REQUIRED.
2. DURING PLACEMENT OF MATERIAL OVERTOP THE SYSTEM, AT NO TIME SHALL MACHINERY BE USED OVERTOP THAT EXCEEDS THE DESIGN LIMITATIONS OF THE SYSTEM. WHEN PLACEMENT OF MATERIAL OVERTOP, MATERIAL SHALL BE PLACED SUCH THAT THE DIRECTION OF PLACEMENT IS PARALLEL WITH THE OVERALL LONGITUDINAL DIRECTION OF THE SYSTEM WHENEVER POSSIBLE.
3. THE FILL PLACED OVERTOP THE SYSTEM SHALL BE PLACED AT A MINIMUM OF 6" LIFTS. AT NO TIME SHALL MACHINERY OR VEHICLES GREATER THAN THE DESIGN HS-20 LOADING CRITERIA TRAVEL OVERTOP THE SYSTEM WITHOUT THE MINIMUM DESIGN COVERAGE. IF TRAVEL IS NECESSARY OVERTOP THE SYSTEM PRIOR TO ACHIEVING THE MINIMUM DESIGN COVER, IT MAY BE NECESSARY TO REDUCE THE ULTIMATE LOAD/BURDEN OF THE OPERATING MACHINERY SO AS TO NOT EXCEED THE DESIGN CAPACITY OF THE SYSTEM. IN SOME CASES, IN ORDER TO ACHIEVE REQUIRED COMPACTION, HAND COMPACTION MAY BE NECESSARY IN ORDER NOT TO EXCEED THE ALLOTTED DESIGN LOADING.
4. FREE DRAINING AGGREGATE - 80% AGGREGATE RETAINED ON 1/2" SIEVE MAJORITY OF AGGREGATE SIZE BETWEEN 1/2" AND 1" ONLY 5% OF MATERIAL PASSING #200 SIEVE NO FINES.



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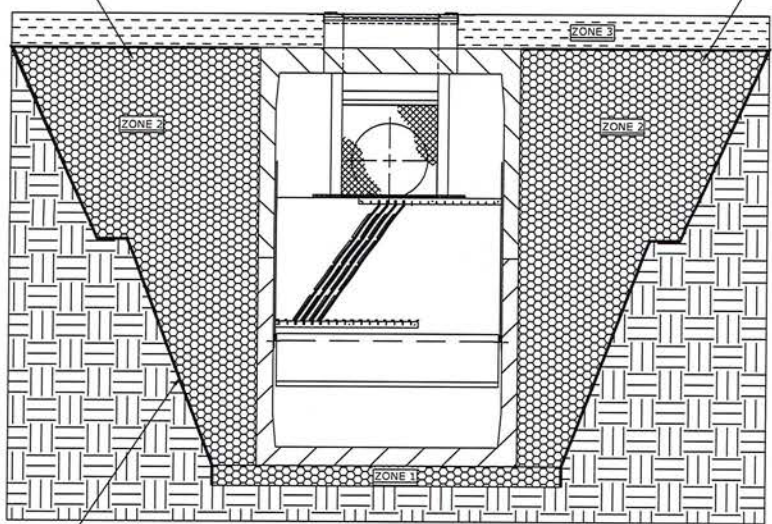
SITESAVER  
 BACKFILL  
 SPECIFICATIONS

**SHEET NUMBER:**

**4.0**

GEOFABRIC/GEOTEXTILE OR EQUAL (SEE NOTE 1)

GEOFABRIC/GEOTEXTILE OR EQUAL (SEE NOTE 1)



STEPPED OR SERRATED AND APPLICABLE OSHA REQUIREMENTS (SEE BACKFILL NOTE 1)

**BACKFILL DETAIL**

**RECOMMENDED  
ACCESS OPENING SPECIFICATION**

1. A TYPICAL ACCESS OPENING FOR THE SITESAVER SYSTEM ARE 2'-0" IN DIAMETER AND 42" X 42" SQUARE. CONSULT STORMTRAP FOR ALTERNATE OPENING SIZES AND LOCATIONS. ALL OPENINGS MUST RETAIN AT LEAST 1'-0" OF CLEARANCE FROM THE END OF THE SITESAVER MODULE UNLESS NOTED OTHERWISE. ALL ACCESS OPENINGS TO BE LOCATED AS SHOWN UNLESS OTHERWISE SPECIFIED.
2. SITESAVER LIFTING INSERTS MAY BE RELOCATED TO AVOID INTERFERENCE WITH ACCESS OPENINGS OR THE CENTER OF GRAVITY OF THE MODULE AS NEEDED.
3. ACCESS OPENINGS SHOULD BE LOCATED IN ORDER TO MEET THE APPROPRIATE MUNICIPAL REQUIREMENTS. STORMTRAP RECOMMENDS AT LEAST TWO ACCESS OPENINGS PER SYSTEM FOR ACCESS AND INSPECTION.
4. USE PRECAST ADJUSTING RINGS AS NEEDED TO MEET GRADE. STORMTRAP RECOMMENDS FOR COVER OVER 2' TO USE PRECAST BARREL OR CONE INSPECTIONS.

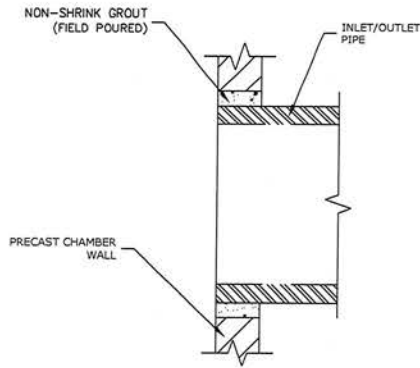
**RECOMMENDED  
PIPE OPENING SPECIFICATION**

1. MINIMUM EDGE DISTANCE FOR AN OPENING ON THE OUTSIDE WALL SHALL BE NO LESS THAN 1'-0".
2. MAXIMUM OPENING SIZE TO BE DETERMINED BY THE MODULE HEIGHT. PREFERRED OPENING SIZE Ø 30" OR LESS. ANY OPENING NEEDED THAT DOES NOT FIT THIS CRITERIA SHALL BE BROUGHT TO THE ATTENTION OF STORMTRAP FOR REVIEW.
3. CONNECTING PIPES SHALL BE INSTALLED WITH STRUCTURAL GRADE CONCRETE OR HIGH STRENGTH, NON-SHRINK GROUT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI SHALL BE USED (SEE PIPE CONNECTION DETAIL).
4. THE ANNULAR SPACE BETWEEN THE PIPE AND THE HOLE SHALL BE FILLED WITH HIGH STRENGTH NON-SHRINK GROUT.

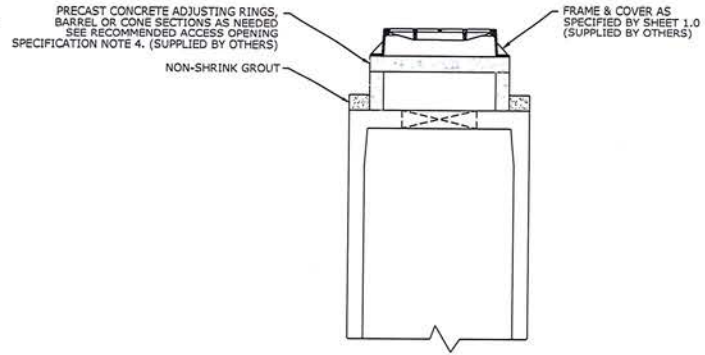
**RECOMMENDED PIPE  
INSTALLATION INSTRUCTIONS**

1. CLEAN AND LIGHTLY LUBRICATE ALL OF THE PIPE TO BE INSERTED INTO SITESAVER.
2. IF PIPE IS CUT, CARE SHOULD BE TAKEN TO ALLOW NO SHARP EDGES. BEVEL AND LUBRICATE LEAD END OF PIPE.
3. ALIGN CENTER OF PIPE TO CORRECT ELEVATION AND INSERT INTO OPENING.

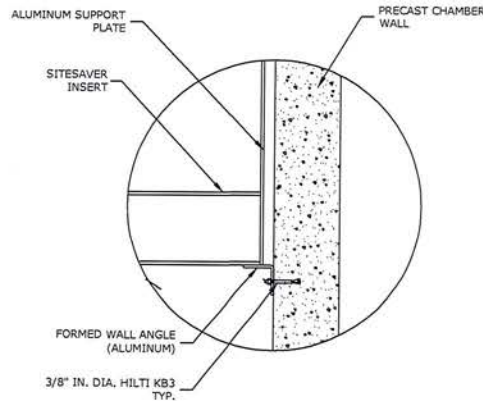
NOTE: ALL ANCILLARY PRODUCTS RECOMMENDED AND SHOWN ON THIS SHEET ARE RECOMMENDATIONS ONLY AND SUBJECT TO CHANGE PER THE INSTALLING CONTRACTOR.



**PIPE CONNECTION DETAIL**



**RISER DETAIL**



**TYPICAL INCLINED  
INSERT CONNECTION**



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**SHEET TITLE:**

RECOMMENDED  
PIPE / ACCESS  
OPENING  
SPECIFICATIONS

**SHEET NUMBER:**

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# StormTrap

REGULAR CONCRETE STORMWATER MANAGEMENT  
 THIS STORMTRAP DESIGN MAY BE COVERED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS:  
 NO. 6,031,402; 7,160,095; 5,770,650; 6,167,767;  
 7,444,555; 4 CA PATENT NO. 2,445,009; 152,015

1287 WINDHAM PARKWAY  
 ROCKFORDVILLE, IL 60446  
 Phone: 815-391-4454 / Fax: 815-391-5347

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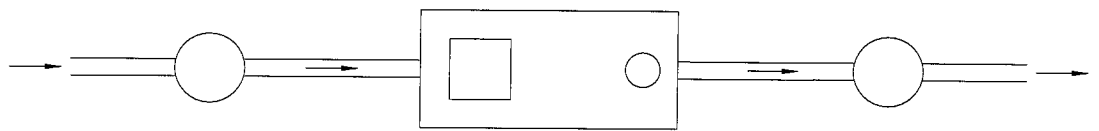
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SITESAVER  
 INLINE/OFFLINE  
 CONFIGURATION  
 EXAMPLES

**SHEET NUMBER:**

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INLINE CONFIGURATION



OFFLINE CONFIGURATION

