

# APPENDIX G

## SiteSaver Installation Manual and Installation Photographs

## **SiteSaver Installation Guide/Pre-Construction Form**

### **Recommended Tools to Have Onsite**

- Adjustable 4-way chains or slings and/or swivel appropriately sized for lifting components
- Clevis/clutches (x4) to connect lifting chains/slugs to lifting hardware (provided) or utility hooks
- Utility hooks (x4) needed for placement of internal plate components
- Manhole ladder
- Hammer drill with ½" concrete bit to anchor internal plate components to concrete vault
- Drill with ¼" bit to connect net support frame to internal plate components
- Impact drill with ½" extended socket for concrete wedge anchors
- Hammer 2lb. for concrete wedge anchors
- Caulk gun
- Proper PPE protection (i.e. gloves when handling aluminum components)

### **Installation Procedure**

#### **1. Preconstruction Meeting**

- Prior to delivery, the installing contractor is responsible to arrange with StormTrap a preconstruction site meeting. It is recommended that all involved parties participate in the meeting. It is also recommended that the preconstruction meeting be completed prior to preparation of the subbase. Any installation questions/concerns as well as shipping logistics/sequencing should be discussed and determined at this time. The objective of the preconstruction meeting is as follows:
  - i. Determine an acceptable delivery time and date as well as provide StormTrap with any specific delivery instructions
  - ii. Verify that the equipment used to set/install the system is adequate. It is the responsibility of the installing contractor to ensure the equipment is adequate. StormTrap will provide the necessary information regarding weight and size of the components in order to assist the contractor to make an informed decision.
  - iii. Review this document with the contractor and address any questions/concerns prior to the components arriving onsite.

#### **2. Site Preparation Excavation**

- In addition to the overall system dimensions, the sub base of the system will extend beyond the dimensions of the SiteSaver system. Refer to the approved SiteSaver drawings for sub base requirements and system dimensions.

#### **3. Site Preparation Foundation**

- SiteSaver modules shall be placed on a bed of clean, crushed, angular stone as detailed in the approved drawings.
- Both the aggregate and geogrid (if required) shall be installed with a minimum 2'-0" overhand beyond the limits of the SiteSaver system (refer to SiteSaver approval drawings for depth of subgrade and specifications as subbase preparation can vary from project to project).

- Refer to the approved SiteSaver drawings for the required minimum soil pressure.
- Soil strengths are to be verified in the field by others.

#### **4. Delivery**

- StormTrap will do everything possible to maintain trucking schedule, however, StormTrap is not responsible for trucks that are late due to Acts of God (traffic, weather, etc). Therefore, StormTrap cannot guarantee load times
- A \$65.00 per hour detention fee will be charged for any trucks being held on site longer than an hour past their scheduled delivery time.
- If the contractor needs to cancel any shipments, they must do so 72 hours prior to their scheduled arrival at the job site. If canceled after that time a partial or full load of freight will be charged to the installing contractor). Please contact your account representative or StormTrap at 815-941-4663.
- BEFORE removing any units from the flatbeds, the contractor is responsible to inspect and verify that the units have arrived in an undamaged state. StormTrap will not accept any backcharges or returns for the product once it is removed from the mode of transportation.
  - i. If the SiteSaver components are damaged StormTrap, LLC must be contacted immediately to assess the damage and to determine whether or not the components will need to be replaced.
  - ii. If any unit arrives at the job site damaged do not unload it; contact StormTrap immediately. Any damage not reported before the truck is unloaded will be the contractor's responsibility. Photos should be emailed and documented.
- SiteSaver units cannot be altered in any way after manufacturing without written consent from StormTrap, LLC.

#### **5. Lifting**

- All the precast units are supplied with cast-in lifting anchors to enable safe handling. To prevent stress and possible concrete cracking, all units must be handled using the cast-in lifting anchors and associated lifting clutches. Installers should use approved lifting equipment only. It is the installing contractor's responsibility to ensure the lifting clutches are available on site. The lifting points of anchors are clearly shown on the StormTrap drawings.
- Wherever possible, all components should be lifted from the delivery truck and set directly onto the prepared subgrade. If temporary storage of the components is required onsite, they should be placed carefully on level, even ground. Modules should not be stacked on top of each other.
- Take care not to strike the modules or components together when unloading or lowering occurs. Be aware of pinch hazard at all times and don't walk or work under suspended loads.

#### **6. Sequencing of Offloading and Installation**

- The components should be offloaded in the following order:
  - i. Remove the internals from the base module and set to the side
  - ii. Offload and set the base module

- iii. Reconnect to the internals and place in the base module in the final location
- iv. Offload and set the top module
- v. Connect internals to top module using supplied anchors
- vi. Connect net frame to internals and top module using supplied anchors, nuts, bolts, and washers

#### 7. Installation Step-by-Step Guide

- See Figures Below

#### 8. Backfill Procedure

- The remaining backfill placed around the perimeter of the SiteSaver units must be deposited on both sides at the same time and to approximately the same elevation. At no time shall the fill behind one sidewall be more than 2'-0" higher than the fill on the opposite side. Backfill shall be compacted to 95% standard proctor density or otherwise specified by the engineer or approved SiteSaver drawings. Care shall be taken to prevent any wedging action against the structure, if shoring is not utilized, all slopes bounding or within the area to be backfilled must be stepped or serrated to prevent wedge action. Recommended backfill to consist of ¾" coarse aggregate stone or approved equal and shall conform to the specified density/lateral saturated pressure requirements specified on the approved drawings.
- Top or fill material can consist of a variety of materials including but not limited to stone, clay, ¾" with or without fines and not to exceed the specified backfill density requirements
- When compaction is to be completed overtop the SiteSaver system, vibratory action shall be disengaged at all times. Equipment above the system shall not exceed the minimum loading requirements shown in the approved SiteSaver drawings.
- After the minimum required amount of cover is placed over top of the system, the standard designed loads can be utilized over the system.

#### 9. Contact Information

- StormTrap PM Name
- StormTrap PM Phone Number
- StormTrap PM Email Address

I understand the above reviewed SiteSaver installation procedures and agree to adhere to these points and the approved SiteSaver drawings. Any discrepancies found should be brought to StormTrap's attention.

Accepted By:

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Inspect the Components

Inspect the Top and Base Modules, Internal Components, Waterproofing Material, Lifting and Installation Hardware



1



## Offload Internals and Set Aside

Use Utility Hooks to Offload Internals and Temporarily Set Aside



2



## Set Base Module

Use Provided Lifting Hardware to Offload Base Module



## Apply Waterstop

Place Waterstop Along the Perimeter of the Base Module



## Set Internal Components

Use Utility Hooks to Slowly Lower Internal Components onto the Wall Angles in Base Module (Hinged Component is on Outlet Side)



## Set Top Module

Use Provided Lifting Hardware to Slowly Lower Top Module onto the Base Module (Square Opening to Inlet Side)



\*When setting top module care should be taken to prevent any damage to the internal components



## Anchor Internals & Net Frame

Use Supplied Wedge Anchors to Connect Internals and Net Frame to Top Module

