

November 27, 2022 Mr. Leo Cosentini California State Water Resources Control Board Division of Water Quality P.O. Box 100 Sacramento, CA 95812-0100

Dear Mr. Cosentini,

Thank you for this opportunity for Fabco Industries, Inc. to submit an amended application to the California State Water Resources Control Board for certification of the **ScreenBox (Application 37)** for certification as a Full Capture System -Trash Treatment Control Device.

As brief description, the Fabco ScreenBox is a catch basin insert installed at the grate frame opening of a catch basin to screen and retain any trash, debris, or particles larger than 5 mm in diameter or greater within an easily maintained metal screening basket. The Fabco ScreenBox allows for a peak flow rate equal to or greater than the peak flow of the storm drain in which it is installed. Provisions have also been made to ensure that Mosquito Vector Control personnel are easily able to inspect the device without needing to lift grates or perform confined space entry. The Fabco ScreenBox has been installed and successfully protects waterways in stormwater infrastructure projects nationwide, including in California within the cities of San Diego, Chula Vista, and Escondido.

The amended application includes a minor update specifying an alternative configuration of the ScreenBox, called the **StormBasket**, in which all metal components are stainless steel. Design, hydraulic capacity, installation, and mosquito vector control access remain unchanged from the standard ScreenBox configuration.

Additionally, within the optional components section, it has been noted that the normally provided bypass hood may be removed if greater bypass flow is needed. The bypass hood is a metal frame which can be installed on top of the ScreenBox to adjust the flow path of the bypass opening, preventing large floating debris from exiting during bypass events.

The application layout has also been updated to align with the September 2024 revision of the Application Requirements for Trash Full Capture System Certification.

Thank you again for your consideration and time taken to review our application. If any additional information is needed, please do not hesitate to contact myself Hilme Athar or our V.P. of Engineering, John Peters. Both of our contact information can be found within the application below.

Sincere regards,

Hilme Athar Sales Engineer 24 Central Drive Farmingdale, NY 11735 (631) 393-6024

Hilme Alhon

hathar@fabco-industries.com



#### 1. Cover Letter

#### 1.A. Device Name and General Description

The <u>ScreenBox</u> is a full capture trash screening device designed and manufactured by Fabco Industries. It is a catch basin insert installed at the grate frame opening of a catch basin. The device is comprised of an adjustable mounting frame and basket with perforated screens for filtration of trash. When installed, all surface runoff flows entering the catch basin are directed downward through the mesh sack, capturing all trash 5 mm or larger. The device is designed to be durable, and easy to install & maintain. The device is available in both aluminum and in stainless-steel. The stainless-steel configuration is called the <u>StormBasket</u>, however, the design, hydraulic function, and vector control access is unchanged from the standard aluminum configuration.

#### 1.B. Applicant's Contact Information and Location

#### **Owner Information:**

John Peters V.P. of Engineering 390 Oser Avenue Hauppauge, NY 11788 (631) 393-6024 johnp@fabco-industries.com

#### **Authorized Representative(s) Contact Information:**

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#### 1.C. Manufacturer's Website Page for Device

https://fabco-industries.com/stormwater-catch-basin-filter-insert-basket/

#### 1.D. Device's Manufacturing Location

Fabco Industries, Inc. 390 Oser Avenue Hauppauge, NY 11788 (631) 393-6024

#### 1.E. Brief Summary of Field/Lab Testing Results

The ScreenBox and StormBasket is designed to capture trash using screening windows found on the basket portion of the device. The screen material is perforated aluminum sheet metal with  $\emptyset 3/16$ " (approximately  $\emptyset 4.8$  mm) round holes. Perforated stainless-steel sheet metal with  $\emptyset 3/16$ " round holes, is utilized in the StormBasket configuration. The entire design flow must flow through the perforated metal so all trash 5 mm and greater in diameter is trapped from the peak design flow. No lab testing is required as all trash 5 mm and greater in diameter are physically blocked by the screening material from flowing forward. Existing installations of the ScreenBox and StormBasket, including project sites within California, have yielded only positive results. All filtered flow rates reported in the hydraulic capacity table (Section 3.C.) have been calculated using the percent open area of the perforated metal, head pressures measured to the bypass of the device, and a standard coefficient of discharge of 0.62 for the orifice equation.

## 1.F. Brief Summary of Device Limitations, and Operational, Sizing, and Maintenance Considerations

The ScreenBox and StormBasket are available in standard sizes for various grate inlet sizes. Custom units are also regularly engineered to meet site-specific design flows and dimensional requirements. Accessibility within an installation site is taken into high consideration and all designs ensure the greatest ease of installation at each site. Mandatory vector control corner fillers are utilized and required for all projects in California to allow access to the bottom of a catch basin by Mosquito Vector Control Personnel without the need for lifting grates or confined space entry.

Regular maintenance is necessary for the ScreenBox to function properly. Fabco typically suggests maintenance be scheduled twice a year, but true necessary maintenance frequency will depend on site-specific conditions. The applicable Municipal Stormwater permit may specify more frequent maintenance intervals as well. The filtered flowrate of the ScreenBox and StormBasket are designed to completely screen at least the trash treatment peak design flow. ScreenBox and StormBasket units are sized to trap trash 5 mm or greater in diameter for flows generated from the 1 year, 1 hour storm. In addition, ScreenBox and StormBasket units are sized to maintain hydraulic capacity prior to required maintenance as specified in the applicable Municipal Stormwater permit. Fabco Industries recommends use of a vacuum truck to most easily clean captured trash within the catch basin insert.

#### 1.G. Description, or List of Locations, where Device has been installed

ScreenBox and StormBasket units have been installed for several stormwater management projects throughout California and nationally. Below are some example current install sites within the state of California:

Current Install Sites						
Project	Contact					
Old Town Transit Center, San Diego, CA	Kevin Rettig					
Sunnyview Avenue, Visalia, CA	Director of Operations California Filtration Specialists LLC Phone: 858-705-6483					
For CP Kelco in San Diego, CA	Email: kevin@cafiltrationspecialists.com					

#### 1.H. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons that manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John Peters

V.P. of Engineering

(631) 393-6024

johnp@fabco-industries.com

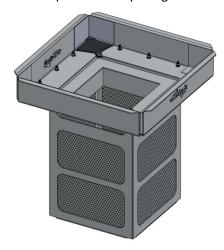
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#### 3. Physical Description

#### 3.A. Trash Capture

The primary component of the ScreenBox and StormBasket that captures trash 5 mm or greater in diameter is the screening basket of the device. The screens of the basket are sheet metal with  $\emptyset 3/16$ " (approximately  $\emptyset 4.8$  mm) round openings. During a storm event, the entire design flow is directed downwards through the screen windows, trapping any trash particles 5mm or greater in diameter within the device and allowing water to flow past into the bottom of the catch basin. Below is a representative image of a ScreenBox and StormBasket unit as well as a descriptive feature list of all components comprising the device:



- The mounting frame consists of four slotted flanges, a top plate, and corner filler pieces (two of which are mandatory vector control corner fillers).
- The flanges, top plate, and corner fillers are fabricated from sheet metal. The screens of the device are fabricated from perforated sheet metal with 3/16" (approximately 4.8 mm) round openings.
  - Aluminum (Standard Configuration) or
  - Stainless-Steel (StormBasket Configuration)
- The vector control corner fillers utilize a neoprene rubber flap which can be pulled open upwards to access a 3" diameter opening allowing visual and physical access to the bottom of a catch basin.
- Each flange is secured to the top plate using stainless steel carriage bolts, flat washers, lock washers, and hex nuts provided by Fabco.

#### 3.B. Peak Flows/Trash Volumes

Please see the table within Section 3.C. for the hydraulic capacity and recommended max trash storage volume of four common standard size ScreenBox and StormBasket units. The ScreenBox and StormBasket are designed to ensure available waterflow area is greater than or equal to the open area of the catch basin outlet pipe opening. This is to ensure the that all trash 5 mm or greater in diameter is trapped for the peak design flow. The area of the bypass opening is also designed to be equal to or greater than the area of the catch basin outlet pipe opening. Maximum trash volume is equal to the total open volume inside the screening basket of the device, with height up to the bypass opening.

#### 3.C. Hydraulic Capacity

ScreenBox and StormBasket Standard Sizes								
	Hydraulic Capacity					Recommended		
Nominal Clear Space	Filtered Flow Rate				Bypass Flow	Max Trash		
Size	Empty (CFS)	25% Full (CFS)	50% Full (CFS)	75% Full (CFS)	Rate (CFS)	Storage Volume (CF)		
18" x 18"	6.4	4.8	3.2	1.6	1.4	0.9		
24" x 24"	12.0	9.0	6.0	3.0	2.6	2.4		
30" x 30"	17.5	13.1	8.8	4.4	3.8	4.55		
36" x 36"	23.1	17.3	11.6	5.8	4.9	7.4		

The orifice equation below is used to calculate the hydraulic capacity of each ScreenBox and StormBasket Unit:

$$Q = C_d A \sqrt{2gh}$$

where,

 $Q = \text{flow rate [in}^3/\text{s]} * \text{converted to [CFS and GPM]}$ 

 $C_d$  = coefficient of discharge [0.62 used by Fabco Industries]

A = area of orifice or net open area [in<sup>2</sup>] = area of screen [in<sup>2</sup>] \* % open area

g = acceleration from gravity [in/s<sup>2</sup>]

h = head acting on centerline of each screening window [in]

#### Example Calculation Empty Filtered Flow Rate for a 22" x 22" ScreenBox and StormBasket:

$$Q_{1} = (0.62) * (274.68[in^{2}] * 51\%) * \sqrt{2 * \left(386.4 \left[\frac{in}{s^{2}}\right]\right) * (5.13[in])}$$

$$Q_{1} = 5,469 \left[\frac{in^{3}}{s}\right] \div 1,728$$

$$Q_{1} = 3.16 [CFS]$$

$$Q_2 = (0.62) * (274.68[in^2] * 51\%) * \sqrt{2 * \left(386.4 \left[\frac{in}{s^2}\right]\right) * (12.38[in])}$$

$$Q_2 = 8,495 \left[ \frac{in^3}{s} \right] \div 1,728$$

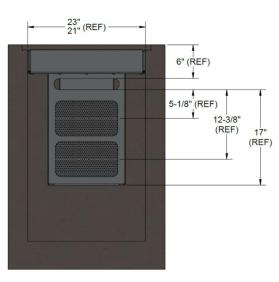
$$Q_2 = 4.92 [CFS]$$

$$Q_3 = (0.62) * (95.55[in^2] * 51\%) * \sqrt{2 * (386.4 \left[\frac{in}{s^2}\right]) * (17.00[in])}$$

$$Q_2 = 3,463 \left[ \frac{in^3}{s} \right] \div 1,728$$

$$Q_2 = 2.00 [CFS]$$

$$Q = Q_1 + Q_2 + Q_3 = 10.08$$
 [CFS]



REFERENCE VIEW

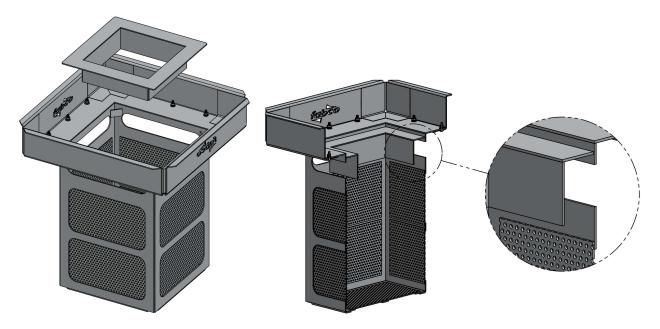
#### 3.D. Comparison Table

Please see table in Section 3.C. for hydraulic capacity of the four most common sizes of the ScreenBox and StormBasket. Please note hydraulic capacity is unchanged for the StormBasket configuration.

#### 3.E. Design Drawings

Please refer to Appendix A for a representative design drawing of the ScreenBox for a Nominal Clear Space of 22" x 22", with mandatory vector control corner fillers. Please see Appendix B for a representative design drawing of the StormBasket configuration.

#### 3.F. Optional Components



An optional bypass hood is provided with the ScreenBox and StormBasket but can be removed if slightly greater bypass flow is necessary. The bypass hood is a metal frame that sits upon four metal tabs along the top of the screening basket. The bypass hood creates a new flow path to the bypass of the device, preventing large floating trash from exiting the screening basket during a bypass event.

#### 3.G. Bypass

The bypasses of the ScreenBox and StormBasket are slot-shaped openings located above the device's screening windows that allow for a flow equal to or greater than that of the outlet pipe opening. The screening windows on the ScreenBox and StormBasket are engineered to filter at least the trash treatment peak design flow. Thus, the bypass openings of the ScreenBox and StormBasket are only used when flow into the catch basin exceeds the peak design flow or when peak flows occur after the device has not been maintained to keep blinding to a minimum.

#### 3.H. Feeder Troughs

The ScreenBox and StormBasket do not include any feeder troughs.

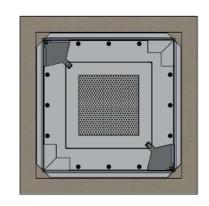
#### 3.I. Calibration Feature

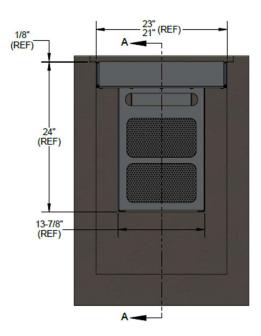
The ScreenBox and StormBasket have a mounting frame with slotted flanges, which allow each flange to adjust within a 1" range. This allows the mounting frame to have a total of 2" adjustability in both the length and width dimensions of the catch basin grate frame. When installing the ScreenBox or StormBasket, the flanges are to be adjusted to fit flush with the grate frame opening before inserting the device into the catch basin and placing in the corner fillers. To adjust the flanges, a 7/16" socket wrench or equivalent tool can be used to loosen the hex nuts securing each flange. The flanges can then be slid into the necessary position and the hex nuts can be re-tightened to secure the flanges in place.

#### 3.J. Previously Trapped Trash

The only scenario in which previously trapped trash can be re-introduced to the downstream stormwater infrastructure is if there is floating trash which rises above and through the bypass opening when a bypass flow scenario occurs as explained in Section 3.G.

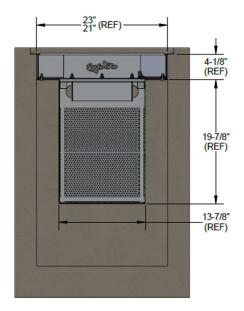
#### 3.K. Photos







ISOMETRIC VIEW W/ CORNER FILLER OPEN



SECTION A-A

#### 3.L. Material Type

Below is a list of all materials which comprise the ScreenBox and StormBasket and where the materials are used on the device:

- Screen Material: Perforated Sheet Metal with Ø3/16" (approx. Ø4.8mm) Round Holes
  - Aluminum (Standard Configuration) or
  - Stainless-Steel (StormBasket Configuration)
- Mounting Frame, Basket Frame, and Corner Fillers: Sheet Metal
  - Aluminum (Standard Configuration) or
  - Stainless-Steel (StormBasket Configuration)
- Vector Control Corner Filler Flap: Neoprene Rubber
- Vector Control Corner Filler Hooking Point: Zinc-Plated Steel Corner Bracket
- Hardware: Stainless Steel Carriage Bolts, Flat Washers, Lock Washers, and Hex Nuts.
- Aluminum tape is also provided to help fill any unwanted gaps after installation.

#### 3.M. Design Life

With expected stormwater conditions and regular maintenance, the ScreenBox and StormBasket configuration have an expected design life of approximately 10 years.

#### 4. Installation Guidance

#### 4.A. Standard Device Installation Procedures and Considerations

The ScreenBox and StormBasket are designed and manufactured to fit within the specific dimensions of each installation site. Fabco requires that before any purchase, a survey form is filled out reporting measurements of the catch basin(s) on site.

Standard installation of a ScreenBox and StormBasket follows the procedure steps below:

- 1. Ensure all site safety requirements are set in place before beginning installation.
- 2. Follow all proper road safety rules & regulations during installation.
- 3. Begin by removing the catch basin grate.
- 4. Carefully place the grate on the ground away from the work area.
- 5. Measure and record the catch basin frame clear opening length, width, and depth.
- 6. Using the clear opening measurements recorded in step 5, adjust the flanges on the ScreenBox or StormBasket to fit flush within the grate frame and rest securely upon the grate support ledges. To adjust the flanges, a 7/16" socket wrench or equivalent tool can be used to loosen the hex nuts securing each flange. The flanges can then be slid into the necessary position and the hex nuts can be re-tightened to secure the flanges in place.
- 7. Place the adjusted ScreenBox or StormBasket into the catch basin.
- 8. Verify each flange is secure and the unit is snug with little movement in the drain.
- 9. Install corner fillers by using the double-sided tape found on each corner filler.
- 10. (If necessary) use provided aluminum tape to fill any unwanted gaps that may remain after installation.
- 11. Reinstall the catch basin grate.

## 4.B. Description of Device Installation Limitations and Non-Standard Device Installation Procedure

Installation of a ScreenBox and StormBasket may be limited by the existing protrusions within a catch basin and/or the lack of grate support ledges. If any non-standard installation is required, the installer should please contact their respective sales representative or Fabco sales support at <a href="mailto:sales@fabco-industries.com">sales@fabco-industries.com</a> or (631) 393-6024. Installation procedure may differ, but the design of the ScreenBox and StormBasket cannot change.

#### 4.C. Methods for Diagnosing and Correcting Installation Errors

Once installed, ensure a proper installation by performing a visual inspection of the entire installed unit. Confirm the device is centered within the catch basin and is sitting securely on the grate support ledges. If the ScreenBox or StormBasket does not fit securely within the catch basin, clear the opening, remove it, and reinstall it again following the instructions in Section 4.A. If issues persist, contact Fabco sales support to further identify possible solutions. If any critical questions at all arise during or after installation, the install team should please contact their respective sales representative or Fabco sales support (Email: <a href="mailto:sales@fabco-industries.com">sales@fabco-industries.com</a>; Phone: (631) 393-6024) for project specific assistance.

#### 5. Operation and Maintenance Information

#### 5.A. Inspection Procedures and Frequency Considerations

Fabco recommends that an installed ScreenBox or StormBasket is inspected and maintained at a minimum of two times a year on a recurring basis for the life expectancy of the unit. It is recommended that the first inspection and maintenance of the year take place at the start of the local rainy season. The second inspection and maintenance of the year should take place at the end of the local rainy season. If there is no definite rainy season at the install location, Fabco suggests that the two minimum inspections and maintenance should be evenly spaced throughout the year. However, the Municipal Storm Water permit may specify more frequent maintenance intervals.

True necessary inspection and maintenance frequency will depend on the amount of stormwater runoff, pollutant loading, and blinding from trash occurring at the installation site. It is recommended that during the first year after installation a higher frequency of inspections is performed (typically, at least 3-4). This is to ascertain the necessary inspection and maintenance frequency for the install site and determine a baseline expected trash load.

Please note no confined entry is required to inspect the ScreenBox or StormBasket. Below is the standard inspection procedure:

- 1. Ensure all site safety requirements are set in place before beginning.
- 2. Follow all proper road safety rules & regulations during the inspection.
- 3. Remove the catch basin grate to gain visual access to the ScreenBox or StormBasket.
- 4. Visually inspect the device for any damage or unfastening that may have occurred.
- 5. Keep a record of inspection, noting any irregularity, damage, or loss of secure mounting.
- 6. Visually inspect the inside of the ScreenBox or StormBasket for heavy sediment, trash, and debris loading. A battery powered flashlight or droplight is recommended for thorough inspection.
- 7. Measure the trash load using a tape measure or equivalent trash measurement tool.
- 8. Record trash load measurement.
- 9. Ensure vector control corner filler view ports are easily opened and accessible.
- 10. (If necessary) take photos and keep on record.
- 11. Perform vector control inspection and keep records.
- 12. Reinstall catch basin grate.

#### 5.B. Description of Maintenance Frequency Considerations

Recurring maintenance is needed to make sure a ScreenBox or StormBasket can function properly in capturing the trash treatment design flow of the drainage structure in which it's installed. Fabco suggests a minimum maintenance schedule of at least two times a year by removing the trash and debris, sand and silt with a vacuum assisted device. Typically, the maintenance should be scheduled for once at the start of the local rainy season and once at the end of the local rainy season. If there is no defined rainy season, the maintenance can be scheduled equally spaced throughout the year. However, the Municipal Storm Water permit may specify more frequent maintenance intervals. Because the actual trash load on a drain can vary from site to site, the inspection record can be used to properly plan the needed maintenance schedule. To minimize maintenance costs Fabco generally suggests that the clean outs take place any time the device is at 50% full trash capacity.

#### 5.C. Maintenance Procedures

Prior to performing the maintenance procedure, all safety and local traffic control protocols should be put into place. Also ensure local PPE requirements are being met by the maintenance team. Below is the step-by step maintenance procedure for the ScreenBox and ScreenBox:

- 1. Remove the catch basin grate and set safely to the side of the drainage access point.
- 2. Visually inspect inside of the ScreenBox or StormBasket for heavy sediment, trash, and debris loading. A battery powered flashlight or droplight is recommended for thorough inspection.
- 3. Remove the sediment, trash, and debris from the system. This can be done manually by hand with shovels and buckets; however, for large scale implementation the most efficient method is to use a vacuum system such as a Vactor truck.
- 4. Visually inspect the device after cleaning and record any damage or unfastening of the device.
- 5. If deemed necessary, a power washer can be used to clean the system further.
- 6. If no critical issues are present or any concerns remain, reinstall the removed catch basin grate.
- 7. All liquid, oils, sediment, debris, trash and other accumulates removed from the catch basin must be handled and disposed of in accordance with local, state, and federal regulations.

Disposal considerations must be part of a well-planned and scheduled maintenance regime. Solid waste disposal can typically be coordinated with a local landfill, whereas liquid waste can be disposed of at either a wastewater treatment plant, or a municipal vacuum truck decant facility.

#### 5.D. Essential Equipment and Materials for Proper Maintenance Activities

Fabco Industries recommends the following equipment for maintenance of the ScreenBox and StormBasket:

- Proper safety equipment including but not limited to hardhats, safety vests, gloves, and eye protection.
- Any required traffic control equipment.
- A battery powered flashlight or drop light.
- Shovels and buckets or industrial vacuum.
- Pressure washer (optional).
- Storm grate removal/reinstallation tools.

## 5.E. Description of the Effects of Deferred Maintenance on Device Structural Integrity, Performance, Odors, Etc.

If maintenance is deferred for the ScreenBox, the full trash and debris capacity of the ScreenBox and StormBasket can be reached causing a bypass event when a rainstorm occurs. During a bypass event, debris and trash will flow past the ScreenBox or StormBasket system and discharge into any downstream stormwater infrastructure or water body. Deferred maintenance will not affect the structural integrity of the ScreenBox or StormBasket.

#### 5.F. Repair Procedures for Device's Structural and Screening Components

If during inspection or maintenance of a ScreenBox or StormBasket it's found that the device needs repair, photographs and documentation should be sent to the Fabco assistance team at: <a href="mailto:sales@fabco-industries.com">sales@fabco-industries.com</a>. The Fabco engineering and technical support team can then assess the damage and suggest a repair plan or begin a warranty repair or replacement.

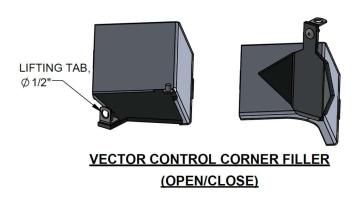
#### 6. Vector Control Accessibility

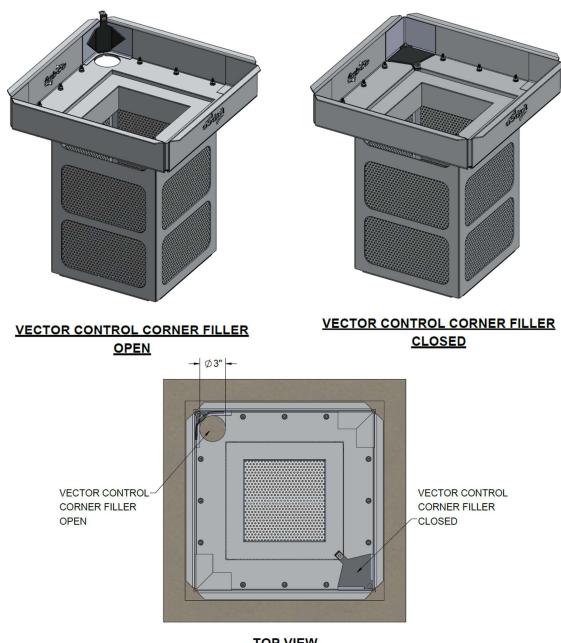
#### 6.A. Date of Application Submittal to Mosquito Vector Control Association

Application to the Mosquito and Vector Control Association of California (MVCAC) for the ScreenBox and StormBasket was submitted on November 15, 2024, and a letter of verification was received on November 26, 2024. See Appendix C for the MVCAC verification letter.

#### 6.B. Description of Access for Vector Control Personnel

The ScreenBox in its standard aluminum configuration and the stainless steel StormBasket configuration have the same vector control functionality. They feature two vector control corner fillers which are self-closing view ports allowing for easy access by Vector Control personnel without requiring any confined space entry or lifting of grates. The view ports are self-closing rubber flaps found on the corners of the ScreenBox and StormBasket. They can be accessed from above the ScreenBox or StormBasket while a catch basin grate is over the unit. The rubber flaps can be pulled open upward with a tool. When open the 3" diameter view port allows visual and physical access to the bottom of the catch basin for inspection or treatment by Mosquito Vector Control personnel.





**TOP VIEW** 

#### **Mosquito Vector Control Association of California Letter of Verification** 6.C.

Please refer to Appendix C to find the MVCAC letter of verification for the ScreenBox and StormBasket.

#### 7. Reliability Information

#### 7.A. Estimated Design Life of Device Components before Major Overhaul

The life expectancy of the ScreenBox and StormBasket is estimated by consideration of the materials used to fabricate the ScreenBox and StormBasket. With expected stormwater conditions and regular maintenance, the ScreenBox and StormBasket has an estimated design life of 10 years.

#### 7.B. Warranty Information

Fabco Industries, Inc., warrants that the ScreenBox and StormBasket shall be free from defects in materials and workmanship for a period of 10 years from the date of delivery. The warranty coverage requires that the products must be installed in accordance with all site conditions required by state and local codes, applicable product or industry specifications and guidelines, manufacturer's installation recommendations and other applicable laws. Specifically excluded from the warranty are damages arising from ordinary wear and tear, alteration, or repair by anyone other than Fabco Industries, Inc. or under the direction of Fabco Industries inc. Furthermore, damage due to accident, misuse, abuse or neglect, or any other event not caused by Fabco Industries Inc, is also not covered by the warranty.

If a warranty claim is made and determined to be valid, Fabco Industries, Inc., will either repair or replace the product, solely at the discretion of Fabco Industries, Inc. All warranty claims must be submitted, evaluated, and approved by Fabco Industries, Inc., for the claim to be determined to be valid. There are no other warranties either expressed or implied other than what is specifically specified herein.

#### 7.C. Customer Support Information

Fabco customer support can provide technical information and help with any questions regarding Fabco Industries' products. You can reach our customer support service at:

Fabco Industries, Inc. 24 Central Drive Farmingdale, NY 11735 Phone: (631) 393-6024

Email: <a href="mailto:sales@fabco-industries.com">sales@fabco-industries.com</a>
Website: <a href="mailto:fabco-industries.com">fabco-industries.com</a>

#### 8. Field/Lab Testing Information and Analysis

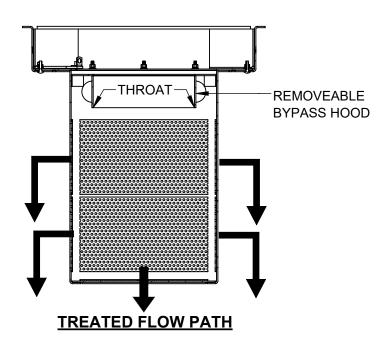
All sizes of the ScreenBox and StormBasket utilize perforated sheet metal with  $\emptyset 3/16$ " (approximately  $\emptyset 4.8$  mm) round openings as the screening material. Field/Lab testing is not required for the ScreenBox and StormBasket. All treated design flow must pass through these screens to enter the outlet pipe, and as such all particles 5mm or larger in diameter within the treatment flow will be physically blocked from passing through. Existing installations of the ScreenBox and StormBasket, including project sites in California, have yielded only positive results.

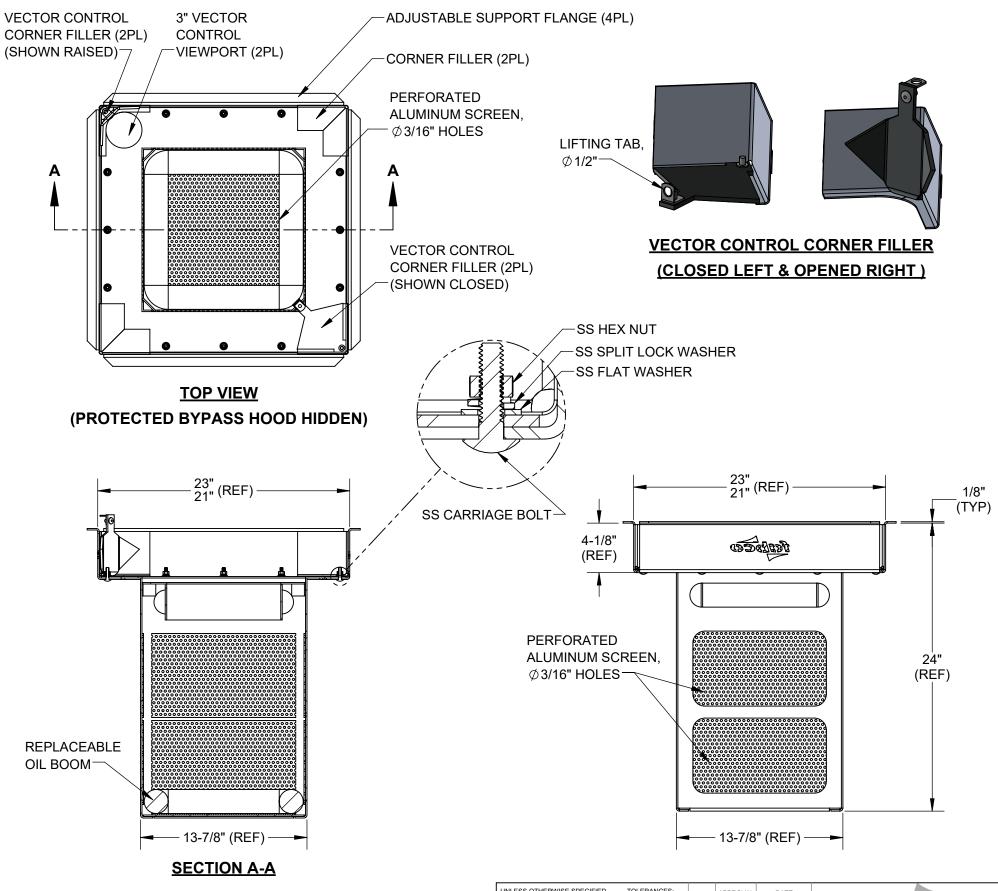
## **APPENDIX A**



1. WEIGHT (EMPTY): 25 LBS EST.

- 2. MATERIAL:
- A) ADJUSTABLE FLANGES AND MAIN FRAME ASSEMBLY: ALUM., 5000 SERIES
- B) PERF: ALUMINUM, Ø 3/16" HOLES, 51% OPEN
- C) SUPPORT HARDWARE: CRES 300 SERIES
- 3. PERFORMANCE CHARACTERISTICS (TYP):
- A) TOTAL FILTERED FLOW RATE: 4520 GPM (10.1 CFS)
- B) FLOW RATE THROUGH BYPASS HOOD\*: 990 GPM (2.2 CFS)
  - \*NOTE THAT THIS IS THE REGULATING FLOW RATE THROUGH THE FILTER.
- C) BYPASS FLOW RATE: 985 (2.2 CFS)
- D) DEBRIS CAPACITY: 1.8 CU. FT
- 4. DESIGNED TO FIT CLEAR OPENING RANGE:
- A) MINIMUM SIZE: 21" X 21" B) MAXIMUM SIZE: 23" X 23"
- 5. RECOMMENDED MINIMUM VAULT DEPTH 2-IN BELOW BOTTOM SCREEN
- 6. TYPICAL INSTALLATION: REMOVE STORM GRATE, MEASURE CATCH BASIN CLEAR OPENING AND ADJUST FLANGES TO REST ON GRATE SUPPORT LEDGE, PLACE SCREEN-BOX IN THE DRAIN OPENING SO THE ADJUSTABLE FLANGES ARE RESTING ON THE GRATE SUPPORT LEDGE. INSTALL CORNER FILL PIECES. REINSTALL STORM GRATE DIRECTLY ON SCREENBOX SUPPORT FLANGES.
- 7. OIL BOOM REPLACEMENT, P/N KSA2222-1V-720







ENGINEER AND CONTRACTOR NOTE: FABCO INDUSTRIES WATER QUALITY INSERTS (WQIS) ARE MANUFACTURED TO PROPERLY FIT INLETS BY USING SPECIFIC INFORMATION COMPILED IN A SURVEY OF THE "AS-BUILT" INLET. IN RETROFIT SITUATIONS THE SURVEY IS DONE TO DOCUMENT THE THREE CRITICAL ASPECTS OF WQI DESIGN (GRATE/FRAME MEASUREMENTS, OPEN/CLEAR SPACE MEASUREMENTS, AND PROTRUSION MEASUREMENTS), IN NEW CONSTRUCTION BUILT, THE PROCESS REVERTS TO THE RETROFIT APPROACH OF SURVEYING THE AS-BUILT INLETS TO CONFIRM FABCO INSERT DESIGN. PLEASE USE THE QR CODE TO ACCESS THE SURVEY FORM AND COMPREHENSIVE GUIDANCE OF THE

PROPRIETARY AND CONFIDENTIAL THIS DOCUMENT IS THE PROPERTY OF FABCO INDUSTRIES AND IS CONVEYED WITH THE EXPRESS CONDITION THAT AND THE INFORMATION CONTAINED IN IT ARE NOT TO BE USED, DISCLOSED, OR REPRODUCED IN WHOLE OR IN OR REPRODUCED IN WHOLE OR IN PART, FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN CONSENT OF FABCO INDUSTRIES; AND THAT NO RIGHT IS GRANTED TO DISCLOSE OR SO USE ANY INFORMATION CONTAINED IN SAID DOCUMENT.

NLESS OTHERWISE SPECIFIED JNLESS OTHERWISE SPECIFIED
SEMOVE ALL BURRS
BREAK SHARP EDGES .002 - .020
FILLETS .020 MAX
DIMENSIONS ARE IN INCHES AND
NCLUDE CHEMICALLY APPLIED
DR PLATED FINISHES ROJECT

TOLERANCES: DEC .00 ± .01 DEC .000 ± .005 FRACT ± 1/16 ANGLE ± 2° C.G. 7/29/2022 CHKR ENGR

FABCO INDUSTRIES, INC. 24 CENTRAL DRIVE FARMINGDALE, NY 11735

fabco SCREENBOX GISB (VECTOR), NOM. C.S. 22" X 22"

KSA2222-1V-000

SURVEY PROCESS. ALTERNATIVELY, NAVIGATE TO www.fabco-industries.com/grate-inlet-survey-guide

**SEE NOTES** WWW.FABCO-INDUSTRIES.COM

В

## **APPENDIX B**

#### **NOTES:**

1. TOTAL WEIGHT, EMPTY: SEE TABLE

2. MATERIALS:

1. FRAME: 13-GA 304 STAINLESS STEEL

2. PERFORATED SCREEN:14-GA 304 STAINLESS STEEL, 5mm HOLES,

51% OPEN AREA

3. HARDWARE: STAINLESS STEEL

4. CORNER FILLERS: 18-GA 304 STAINLESS STEEL

3. PERFORMANCE CHARACTERISTICS: SEE TABLE

4. CLEAR OPENING RANGE: SEE TABLE

5. GENERAL INSTALLATION:

CAREFULLY REMOVE THE STORM GRATE. MEASURE CATCH BASIN FRAME CLEAR OPENING AND ADJUST FLANGES TO REST ON GRATE SUPPORT LEDGE. INSTALL STORMBASKET AND VERIFY EACH FLANGE IS SECURE AND THE UNIT IS SNUG WITH LITTLE MOVEMENT IN THE DRAIN. INSTALL CORNER FILLERS USING PROVIDED DOUBLE-SIDED TAPE. REINSTALL THE STORM GRATE DIRECTLY ON THE STORMBASKET ADJUSTABLE SUPPORT FLANGES.

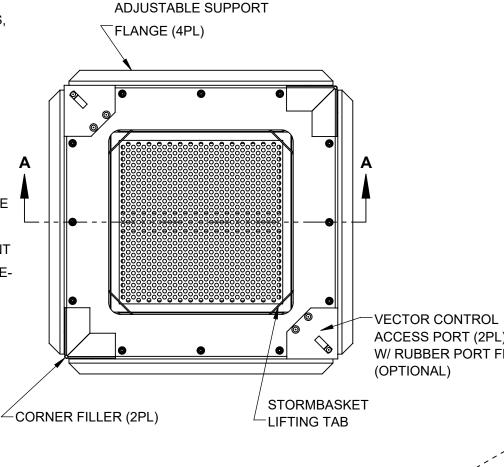
6. RECOMMENDED MINIMUM VAULT DEPTH 2" BELOW STORMBASKET

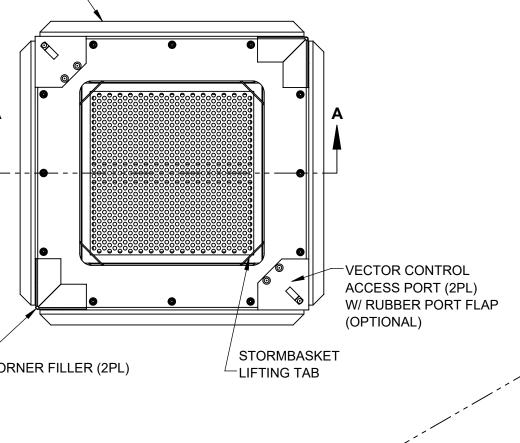
7. OPTIONAL OIL BOOM AVAILABLE IF NECESSARY

8. WARRANTY, 8-YEAR ON ALL COMPONENTS, EXCEPT OPTIONAL OIL BOOM.

9. ALTERNATE FLANGE CONFIGURATIONS AVAILABLE







# **BYPASS** SEE TABLE

**SECTION A-A** 

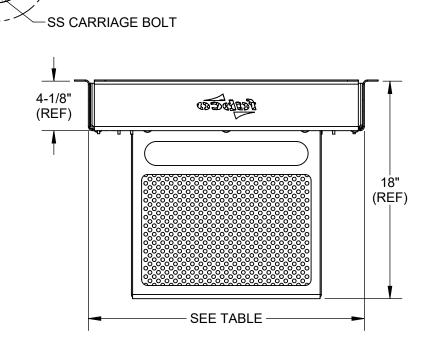
#### TYPICAL STORMBASKET SIZES

Min Size	Max Size	Wt. Est. Empty (LBS)	Storage Capacity (CU-FT)	Filtered Flow (CFS)	Bypass Flow (CFS)
17"x17"	19"x19"	32	0.5	4.5	1.4
23"x23"	25"x25"	50	1.4	8.6	2.5
23"x35"	25"x37"	66	2.7	13.9	3.6
47"x47"	49"x49"	130	9.8	16.1	7.0
	17"x17" 23"x23" 23"x35"	17"x17" 19"x19" 23"x23" 25"x25" 23"x35" 25"x37"	Min Size     Max Size     Empty (LBS)       17"x17"     19"x19"     32       23"x23"     25"x25"     50       23"x35"     25"x37"     66	Min Size         Max Size         Empty (LBS)         Capacity (CU-FT)           17"x17"         19"x19"         32         0.5           23"x23"         25"x25"         50         1.4           23"x35"         25"x37"         66         2.7	Min Size         Max Size         Empty (LBS)         Capacity (CU-FT)         Flow (CFS)           17"x17"         19"x19"         32         0.5         4.5           23"x23"         25"x25"         50         1.4         8.6           23"x35"         25"x37"         66         2.7         13.9

CHOOSE NOMINAL SIZE TO FIT CLEAR SPACE DIMENSIONS (LENGTH AND WIDTH INSIDE OF FRAME). CONTACT FERGUSON REP FOR MEASUREMENT FORM AND HELP WITH PROPER PRODUCT SELECTION PER INLET. CUSTOM SIZES ALSO AVAILABLE.

> FERGUSON CONTACT: JULIE ORNDORFF C: (602) 299-4672

E: JULIE.ORNDORFF@FERGUSON.COM



**REFERENCE VIEW** 

#### CERTIFIED CALIFORNIA WATERBOARD FULL TRASH CAPTURE DEVICE





ENGINEER AND CONTRACTOR NOTE: FABCO INDUSTRIES WATER QUALITY INSERTS (WQIS) ARE MANUFACTURED TO PROPERLY FIT INLETS BY USING SPECIFIC INFORMATION COMPILED IN A SURVEY OF THE "AS-BUILT" INLET. IN RETROFIT SITUATIONS THE SURVEY IS DONE TO DOCUMENT THE THREE CRITICAL ASPECTS OF WQI DESIGN (GRATE/FRAME MEASUREMENTS, OPEN/CLEAR SPACE MEASUREMENTS, AND PROTRUSION MEASUREMENTS), IN NEW CONSTRUCTION BUILT, THE PROCESS REVERTS TO THE RETROFIT APPROACH OF SURVEYING THE AS-BUILT INLETS TO CONFIRM FABCO INSERT DESIGN. PLEASE USE THE QR CODE TO ACCESS THE SURVEY FORM AND COMPREHENSIVE GUIDANCE OF THE SURVEY PROCESS. ALTERNATIVELY, NAVIGATE TO www.fabco-industries.com/stormwater-inlet-survey-assistance

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INLESS OTHERWISE SPECIFIED UNLESS OTHERWISE SPECIFIED
REMOVE ALL BURRS
BREAK SHARP EDGES .002 - .020
FILLETS .020 MAX
DIMENSIONS ARE IN INCHES AND
INCLUDE CHEMICALLY APPLIED
OR PLATED FINISHES OJECT

**SEE NOTES** 

SS HEX NUT

SS SPLIT LOCK WASHER

SS FLAT WASHER

J.C. 9/19/2024 9/19/2024 ENGR J.C. 9/20/2024 FABCO INDUSTRIES, INC. 24 CENTRAL DRIVE FARMINGDALE, NY 11735

WWW.FABCO-INDUSTRIES.COM

fabco **CASQA PERFORATED STORMBASKET** В **KPS-SEE TABLE-1** 

## **APPENDIX C**





One Capitol Mall, Suite 320 • Sacramento, CA 95814 • p: (916) 440-0826 • f: (916) 444-7462 • e: mvcac@mvcac.org

Mr. Hime Athar Fabco Industries, Inc 24 Central Drive Farmingdale, NY 11735

November 26, 2024

Dear Mr. Athar,

Thank you for the submission of the revised Fabco ScreenBox full trash capture device for review by the Mosquito and Vector Control Association of California pursuant to the SWRCB Trash Treatment Control Device Application Requirements. The Association has reviewed the conceptual drawings for the revised Fabco ScreenBox and verifies that provisions have been included in the design that allow for full visual access to all areas for presence of standing water, and when necessary, allows for treatments of mosquitoes.

While this verification letter confirms that inspection and treatment for the purpose of minimizing mosquito production should be possible with the revised Fabco ScreenBox as presented, it does not affect the local mosquito control agency's rights and remedies under the State Mosquito Abatement and Vector Control District Law. For example, if the installed device or the associated stormwater system infrastructure becomes a mosquito breeding source, it may be determined by a local mosquito control agency to be a public nuisance in accordance with California Health and Safety Code sections 2060-2067. "Public nuisance" means any of the following:

- 1. Any property, excluding water, that has been artificially altered from its natural condition so that it now supports the development, attraction, or harborage of vectors. The presence of vectors in their developmental stages on a property is prima facie evidence that the property is a public nuisance.
- 2. Any water that is a breeding place for vectors. The presence of vectors in their developmental stages in the water is prima facie evidence that the water is a public nuisance.
- 3. Any activity that supports the development, attraction, or harborage of vectors, or that facilitates the introduction or spread of vectors. (Heal. & Saf. Code § 2002 (j).)

Declaration of a facility or property as a public nuisance may result in penalties as provided under the Health and Safety Code. Municipalities and the vendors they work with are encouraged to discuss the design, installation, and maintenance of stormwater trash capture devices with their local mosquito control agency to reduce the potential for disease transmission and public nuisance associated with mosquito production.

Sincerely,

Megan MacNee

**MVCAC** Executive Director