



INFORMATION & INSTALLATION MANUAL FOR AUTOMATIC FLIP-UP FLOOD BARRIER



We reserve the right to upgrade the design to improve the performance or the installation convenience without advanced notice to customer.



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ADVANTAGE:

1. No power or human labor required, fully driven by water itself);
2. Lightweight structure for manual operation;
3. Can be constructed in either ramp form sitting directly on ground or embedded form flush to ground.

PRODUCT SPECIFICATION:

FLOOD HEIGHT:

H0.6-H1.5meter to be customized as per request;

LENGTH:

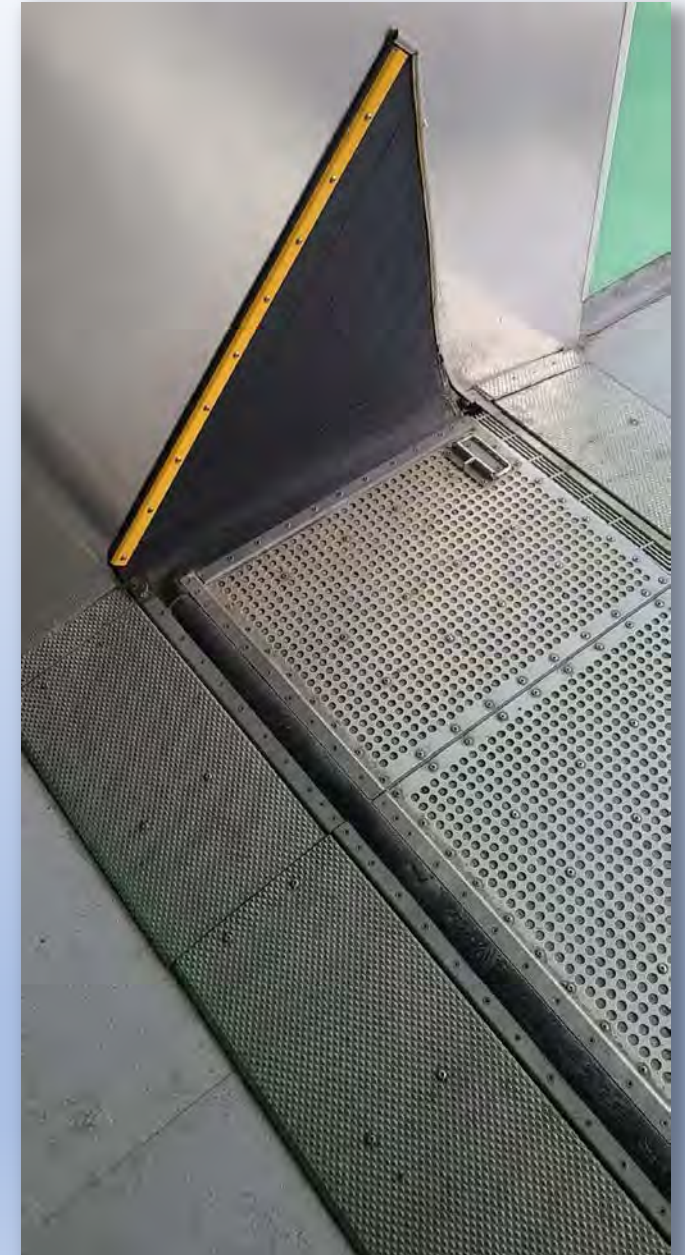
Fits the doorway width between side walls (Supply in module);

OVER-PASS WEIGHT:

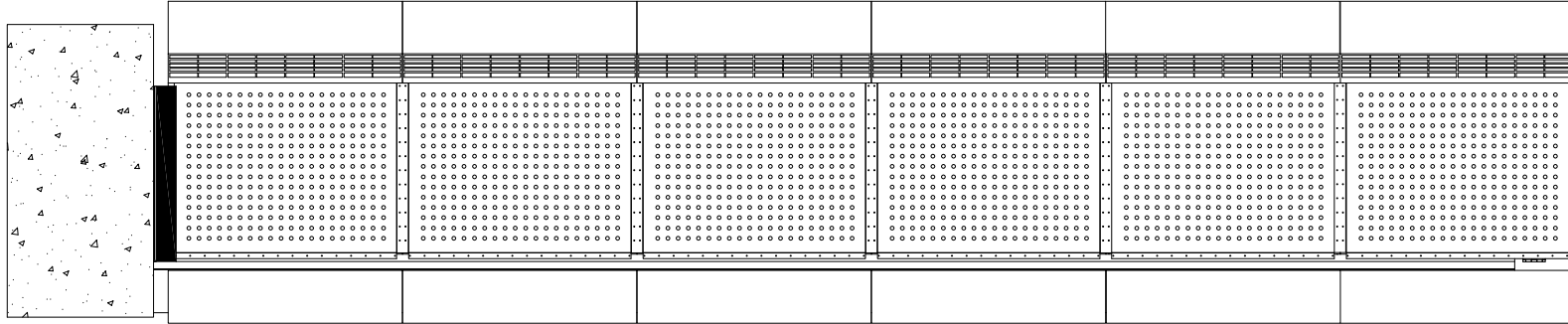
Allow vehicle within 4.5 Metric Tons (higher strength can be customized if required).

REQUIREMENT:

1. Side Wall (to attach the end retaining rubber);
2. Flat ground plastering $\pm 3\text{mm}$;
3. Require ground slotting work for containing space if flush to ground is required.
4. Drainage inside the box can be considered to be pre-constructed before start the installation or prepare a small pump to drain the water inside after flood



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TOP VIEW WHEN CLOSED



NEWFLAG TECHNOLOGY CO., LTD.
Add.: 1803,Oriental Square, NO.777, Changjiang
Rd., Jiangyin, Wuxi City, Jiangsu Province, China
214400.

TEL/FAX: +86 510 8617 8756
MOB.: +86 189 6162 8536
WEB.: www.flooddefend.com
E-MAIL: keanu@newflagtech.com

Design

Geo Guo

Unit: mm

Scale: 1:1

AUTOMATIC FLOOD BARRIER
(Hydrodynamic Water Driven)

Edit

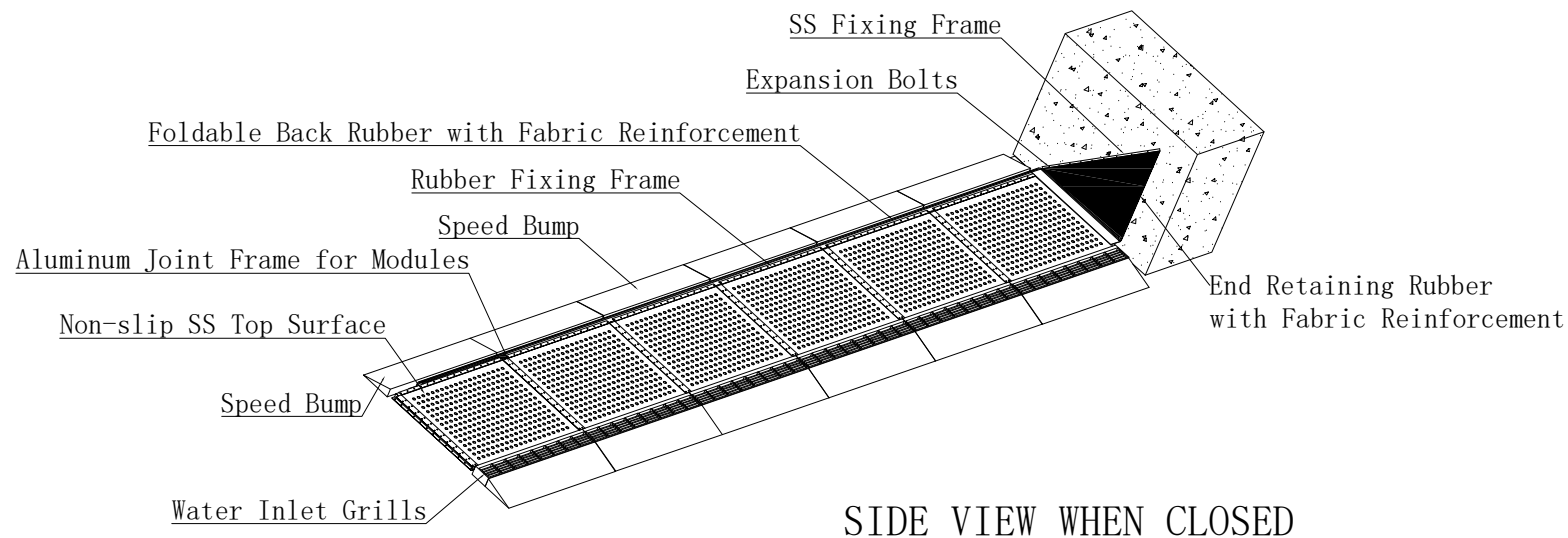
Keanu Lee

Date:
SEP-07-2024

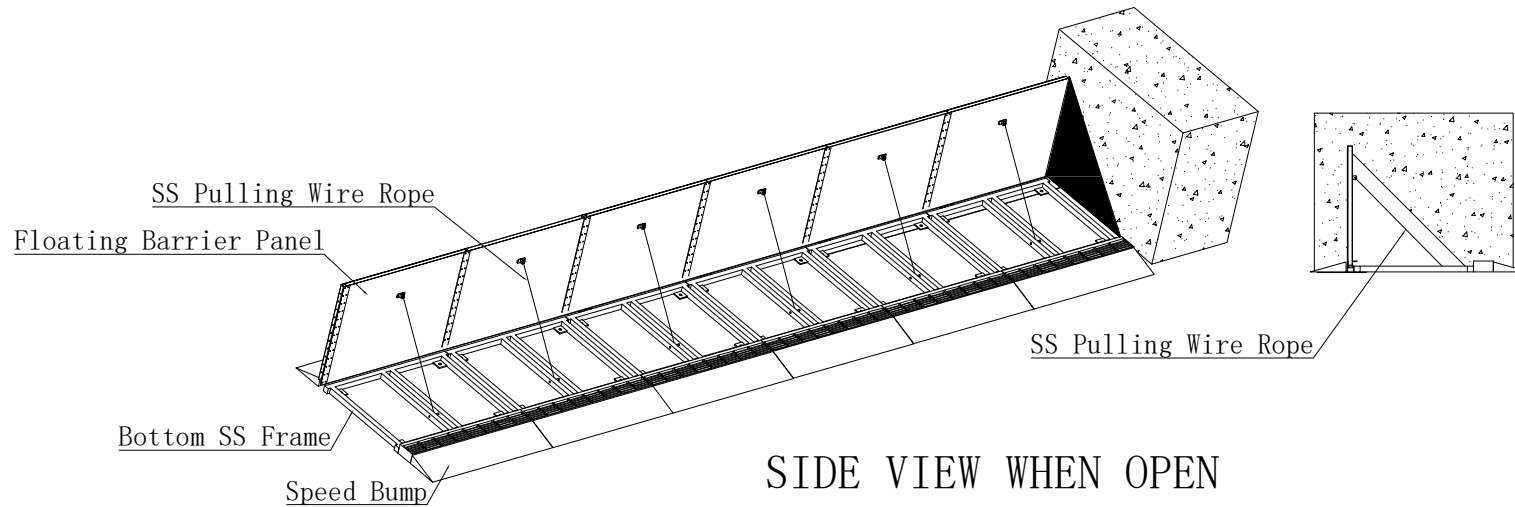
Drawing NO.:

1-CA-0710
Version 2.0

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SIDE VIEW WHEN CLOSED



SIDE VIEW WHEN OPEN



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Design

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AUTOMATIC FLOOD BARRIER
(Hydrodynamic Water Driven)

Edit

Keanu Lee

Date:

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Drawing NO.:

2-CA-0710
Version 2.0

Bill of Materials

ITEM	SPECIFICATION	FUNCTION
Floating Barrier Panel	Lmax. 3000*Wmax. 1500*T25mm PER MODULE	Floating Subject
Non-slip SS Sheet	T1.2mm	Anti-Slip
Alu. Joint Frame	W52*H28.5*1.7mm	Module Joint
Bottom Frame	SUS304L Square Tube 30*30*2mm	Structure Support
Speed Bump	H50*W100*L1000mm/PC	Low the vehicle speed
Water Inlet Grills	SUS304L H55*W50*1000mm/PC	Water inlet
Pulling Wire Rope	Ø2.5mm SS Wire Rope	Prevent over-flip
Foldable Back Rubber	T5mm Fiber Reinforced Rubber	Water stop at width
Rubber Fixing Frame	SUS304L T2*20mm	Fixing on barrier panel
Expansion Bolts	SUS304L M10*100mm	Structure fixing on ground
End Retaining Rubber	T5mm Fiber Reinforced Rubber	Water stop at wall
Fixing Frame on Wall	SUS304L T5*W30*L	End rubber fix on wall

NEWFLAG Automatic Flood Barrier which is hydrodynamic driven by rising flood water itself, can be customized in module supply form according to the doorway width at site. It consists of the bottom frame, floating barrier panel with non-slip surface in module supply, and the end sealing rubber attached to the side wall. The rising or retreating flood water will flip up or close down the barrier panel automatically and it does not require power or human to intervene. It can be also manual lifted by an adult due to its lightweight technology. The structure is designed simple to reduce the risk of failure and easy to repair or replace the quick wearing spare parts.

Installation Technical Requirements: the overall installation accuracy is $\pm 5\text{mm}$, ground flatness requirements $\leq 3\text{mm/m}$. According to the requirements of site, it can be constructed in ① Ramp form directly sitting on existing ground with speed bump attaching both sides (Product height when closed is approx. 55–60mm above the ground); ② Embedded form with top surface flush to ground by slotting the ground for containing space.

The weight of the lightweight barrier panel with great strength is about 18.5KGs/Square Meter which can withstand the crush of vehicle weights 4.2 metric tons. We can customize the barrier panel for the requirement even for container truck.

*Alarming system is optional if required.



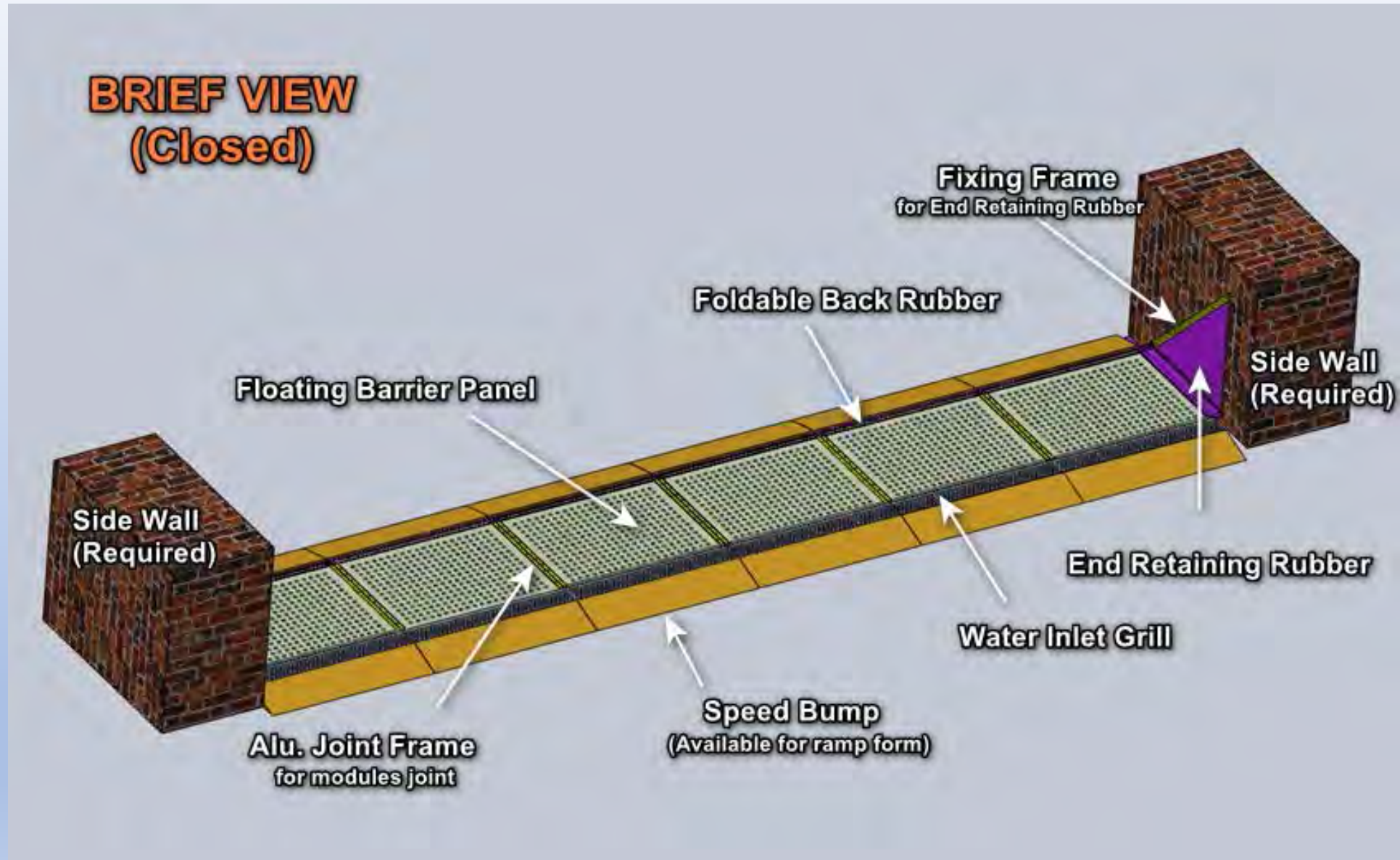
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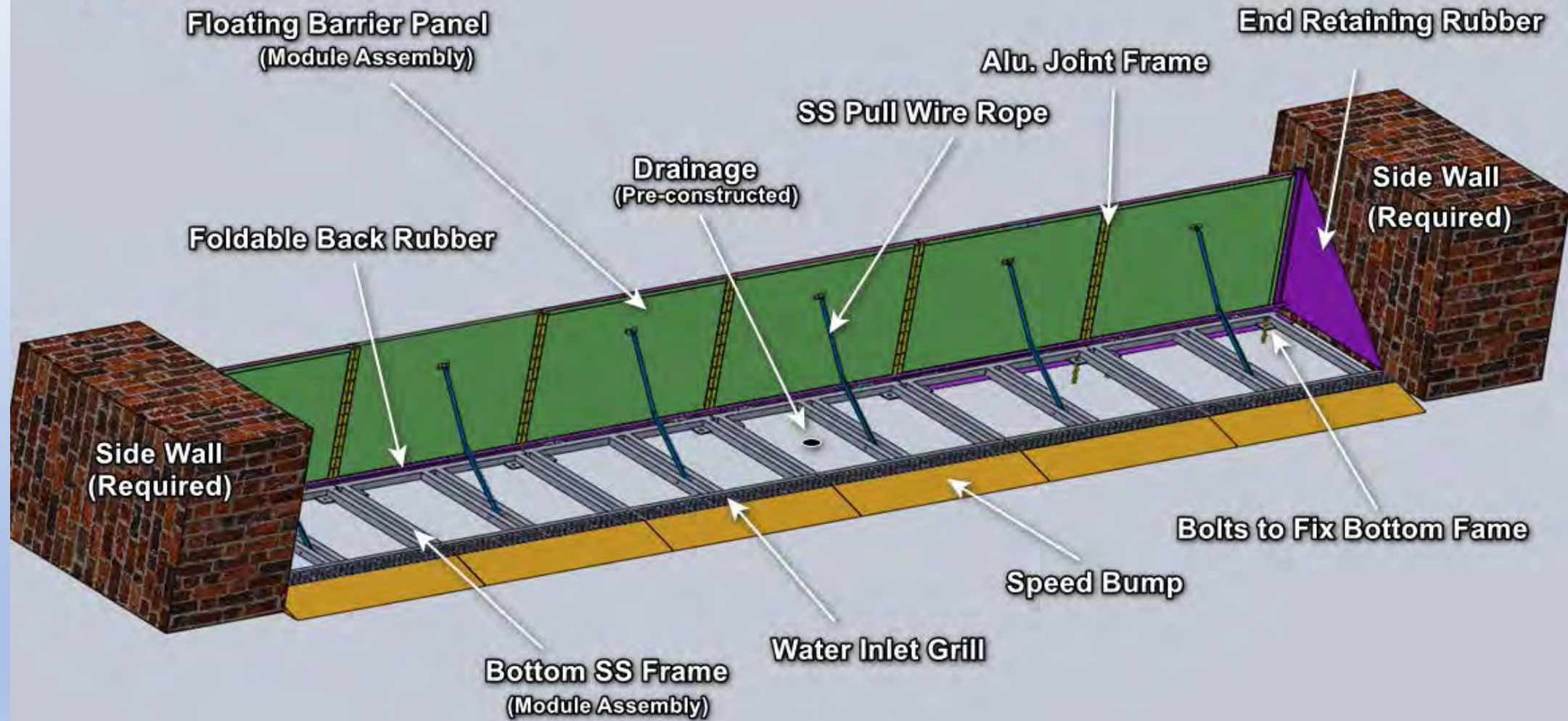
TEL/FAX: +86 510 8617 8756
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Design	Geo Guo	Unit: mm	AUTOMATIC FLOOD BARRIER (Hydrodynamic Water Driven)
		Scale: 1:1	
Edit	Keanu Lee	Date: SEP-07-2024	Drawing NO.: 3-CA-0710 Version 2.0

3D VIEW IN DIFFERENT ANGLES



BRIEF VIEW (Open)



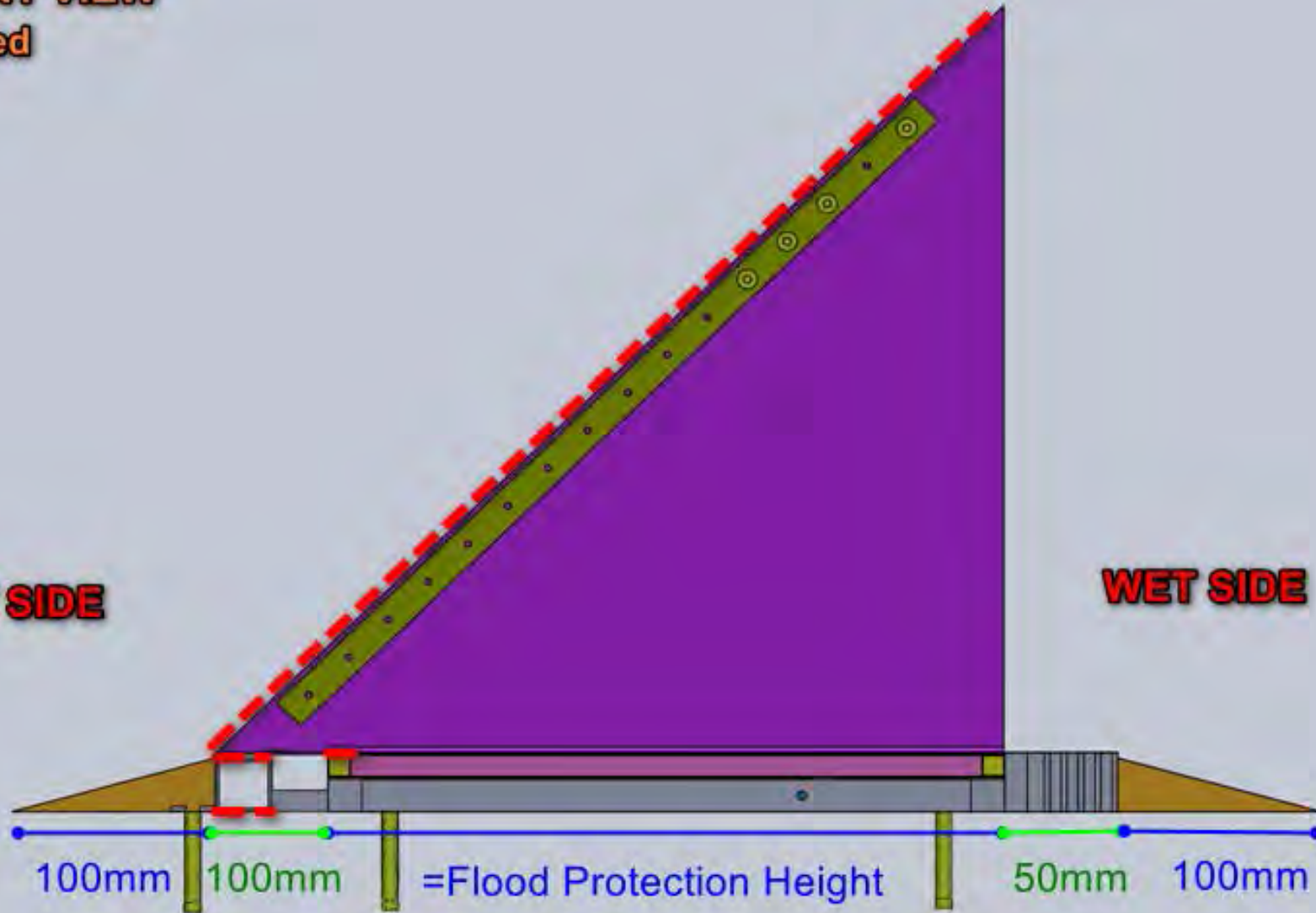


SEALANT VIEW

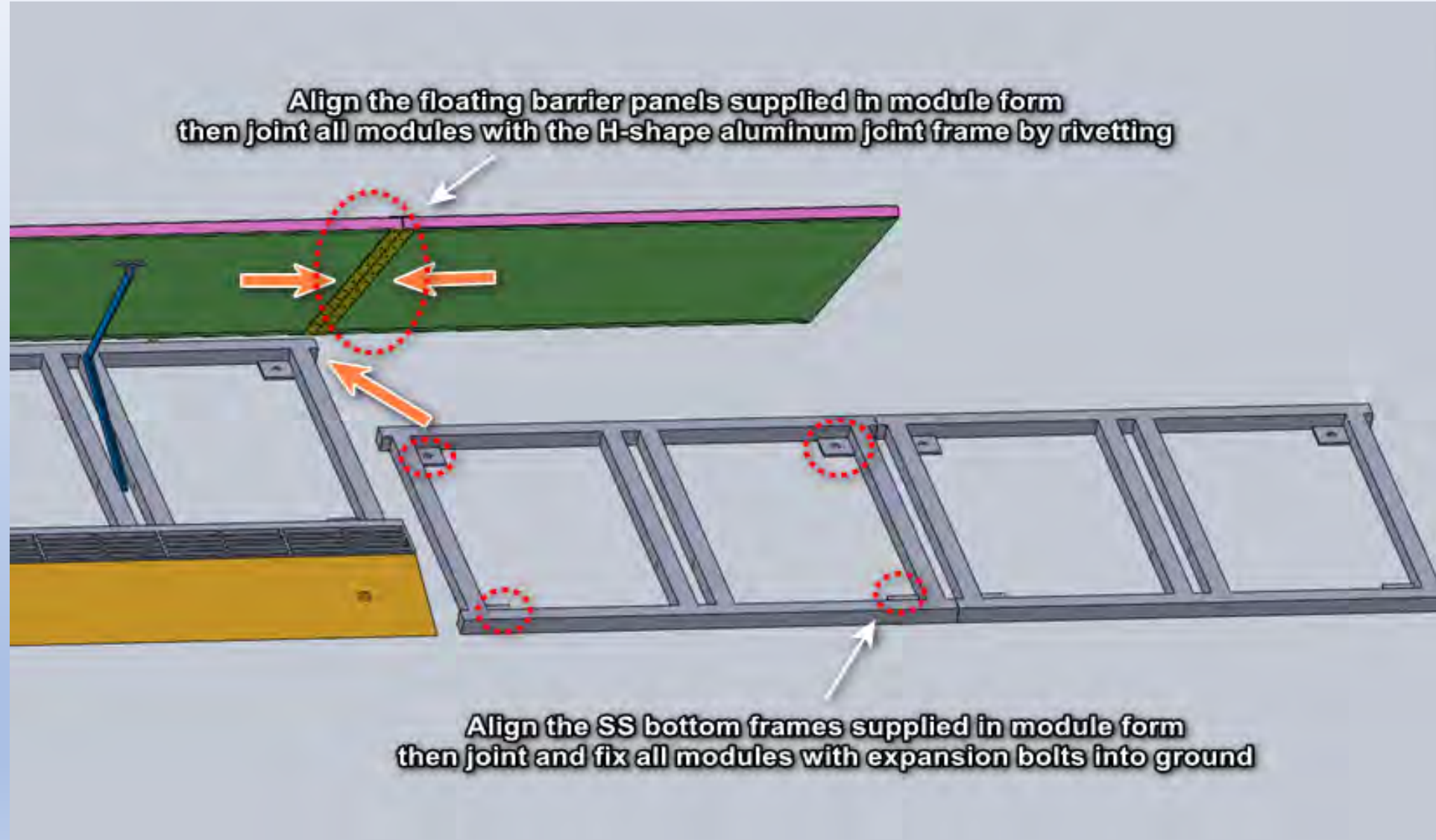
In red

DRY SIDE

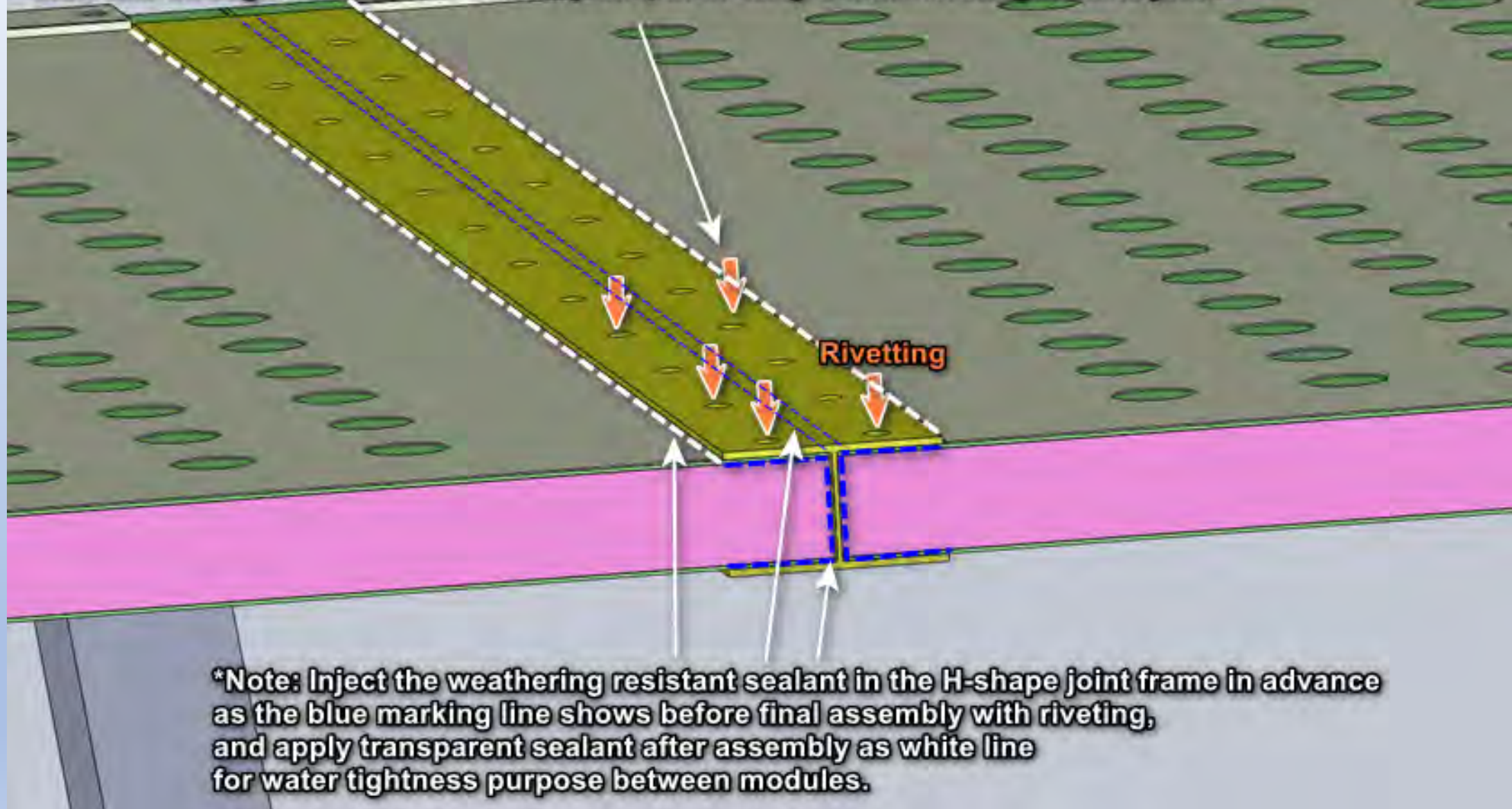
WET SIDE



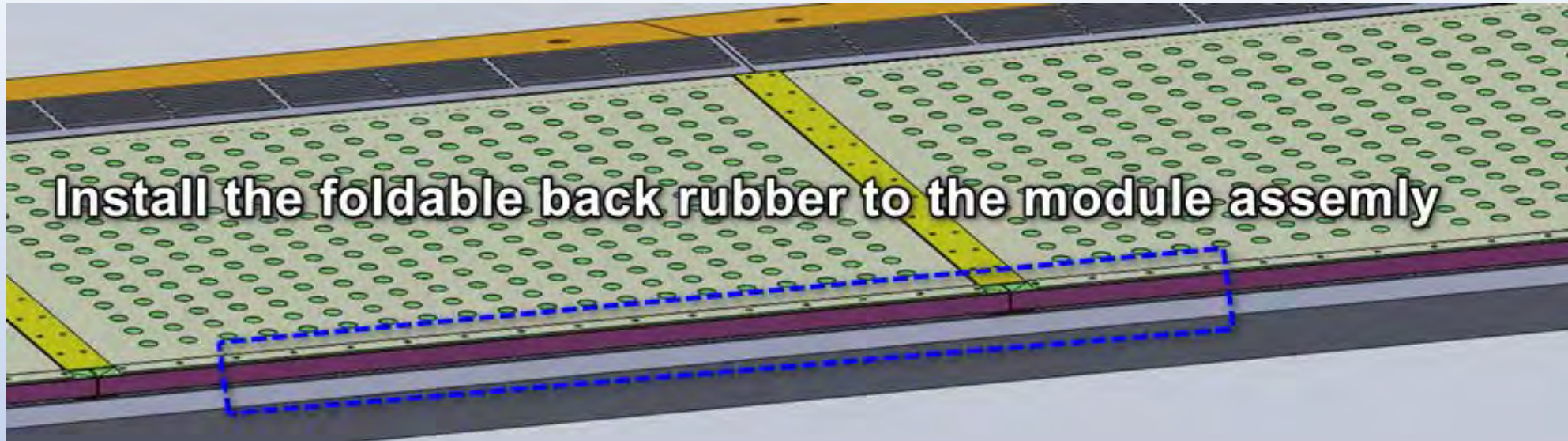
DETAILED INSTALLATION STEPS



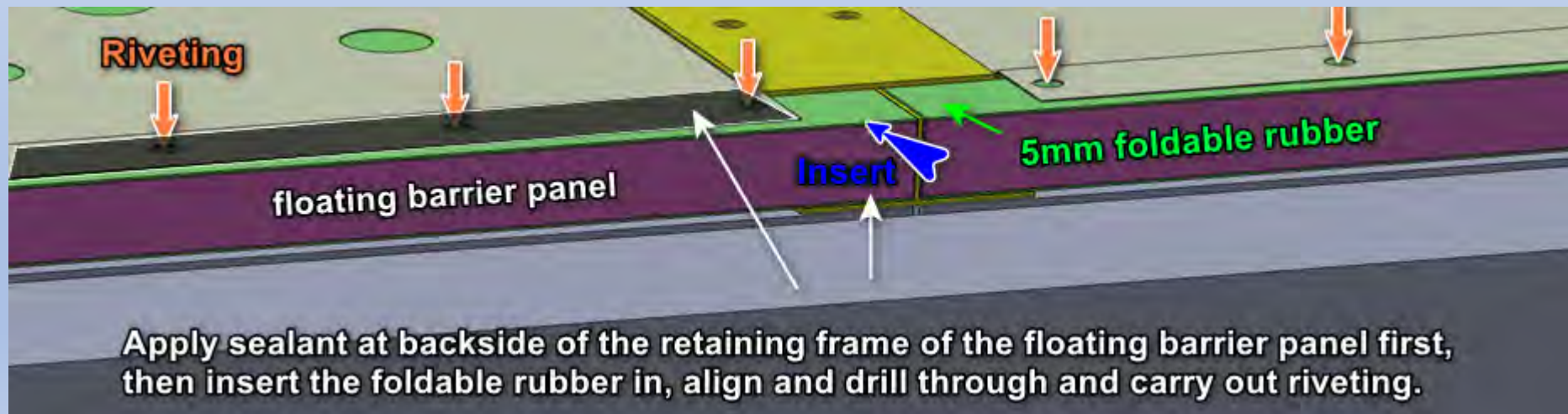
Match the barrier panel into the H-shape joint frame with pre-drilled holes, align and mark all the holes' position on the barrier panel, then drill through holes on the barrier panel, then carry out the riveting work to joint

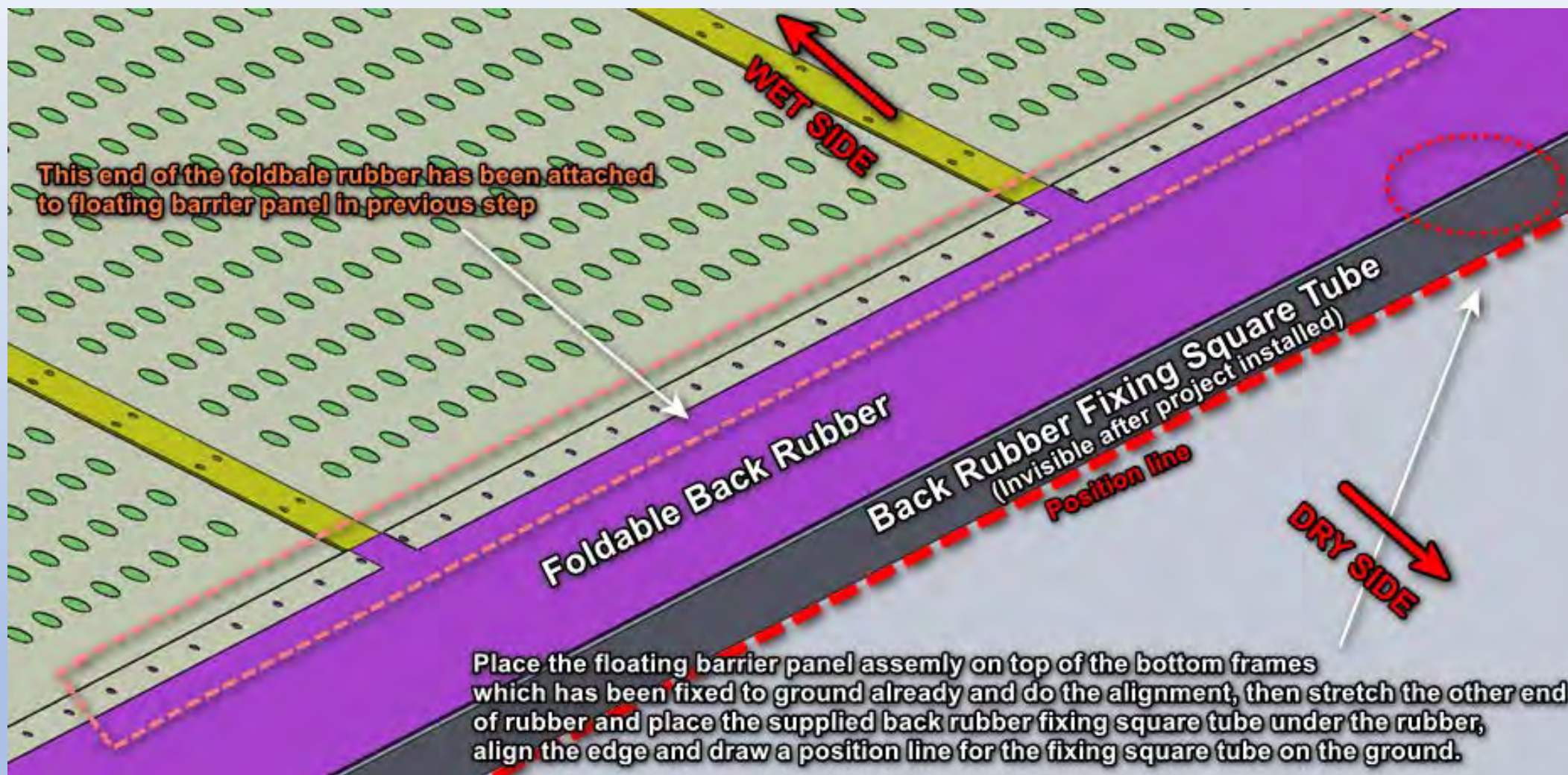


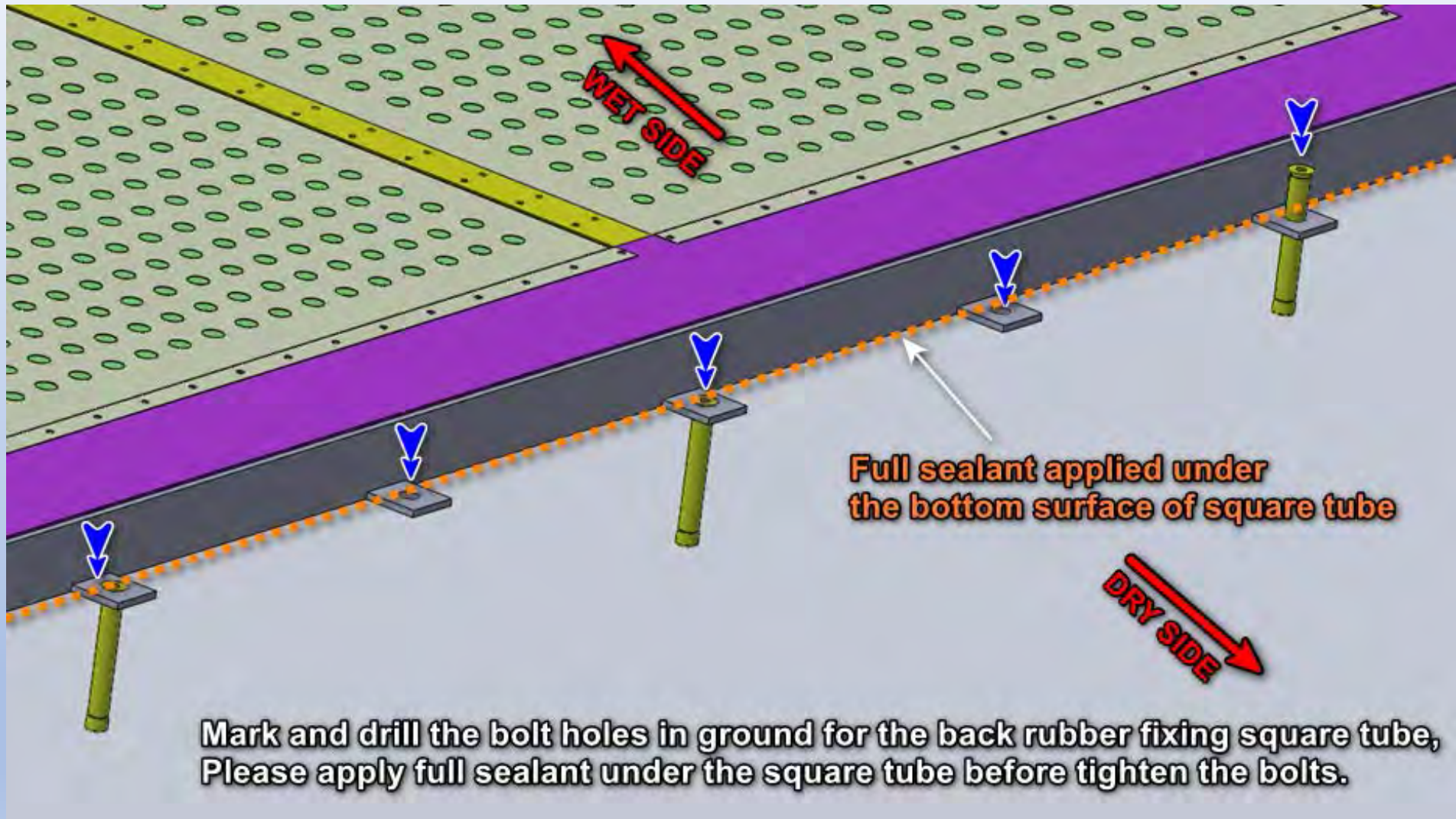
***Note:** Inject the weathering resistant sealant in the H-shape joint frame in advance as the blue marking line shows before final assembly with riveting, and apply transparent sealant after assembly as white line for water tightness purpose between modules.



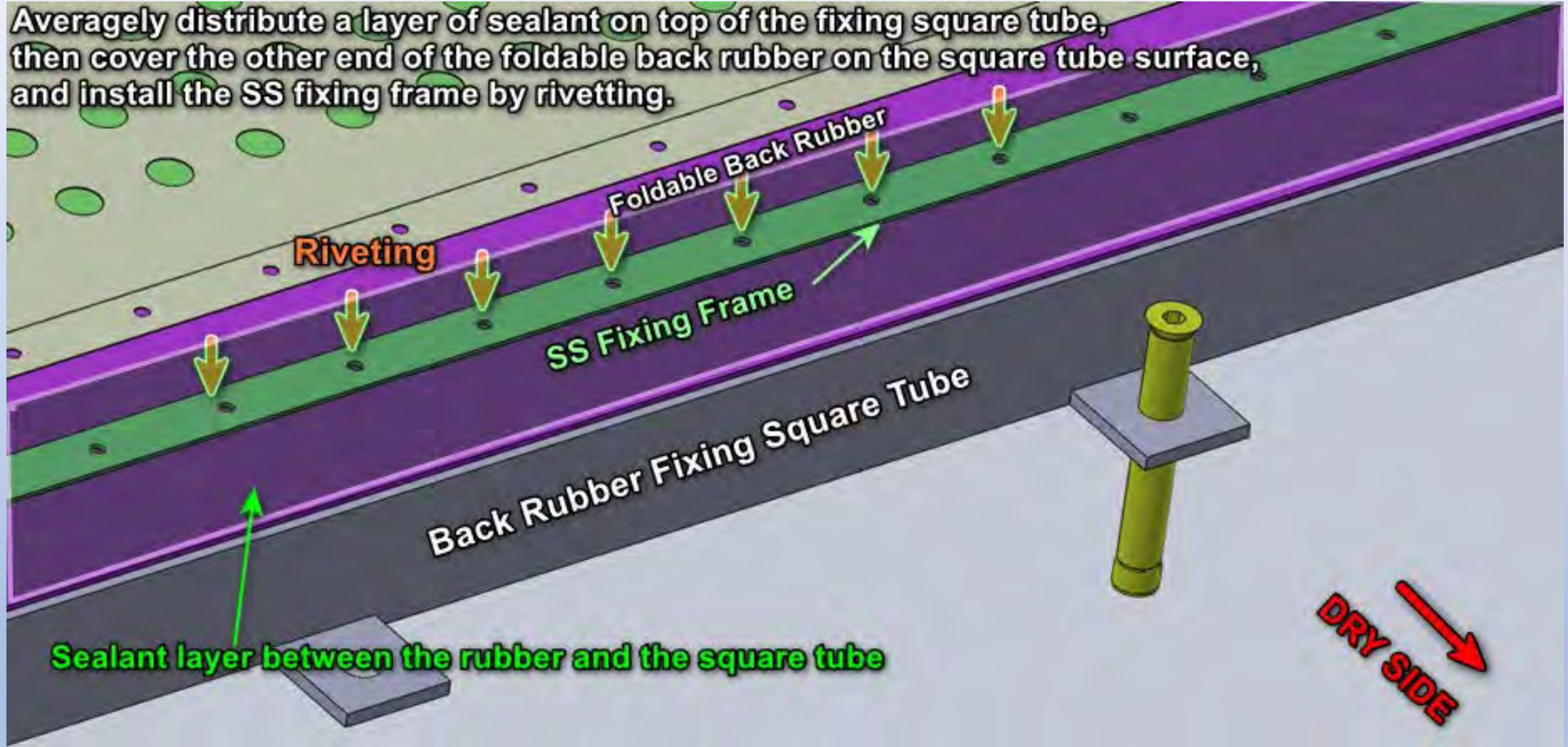
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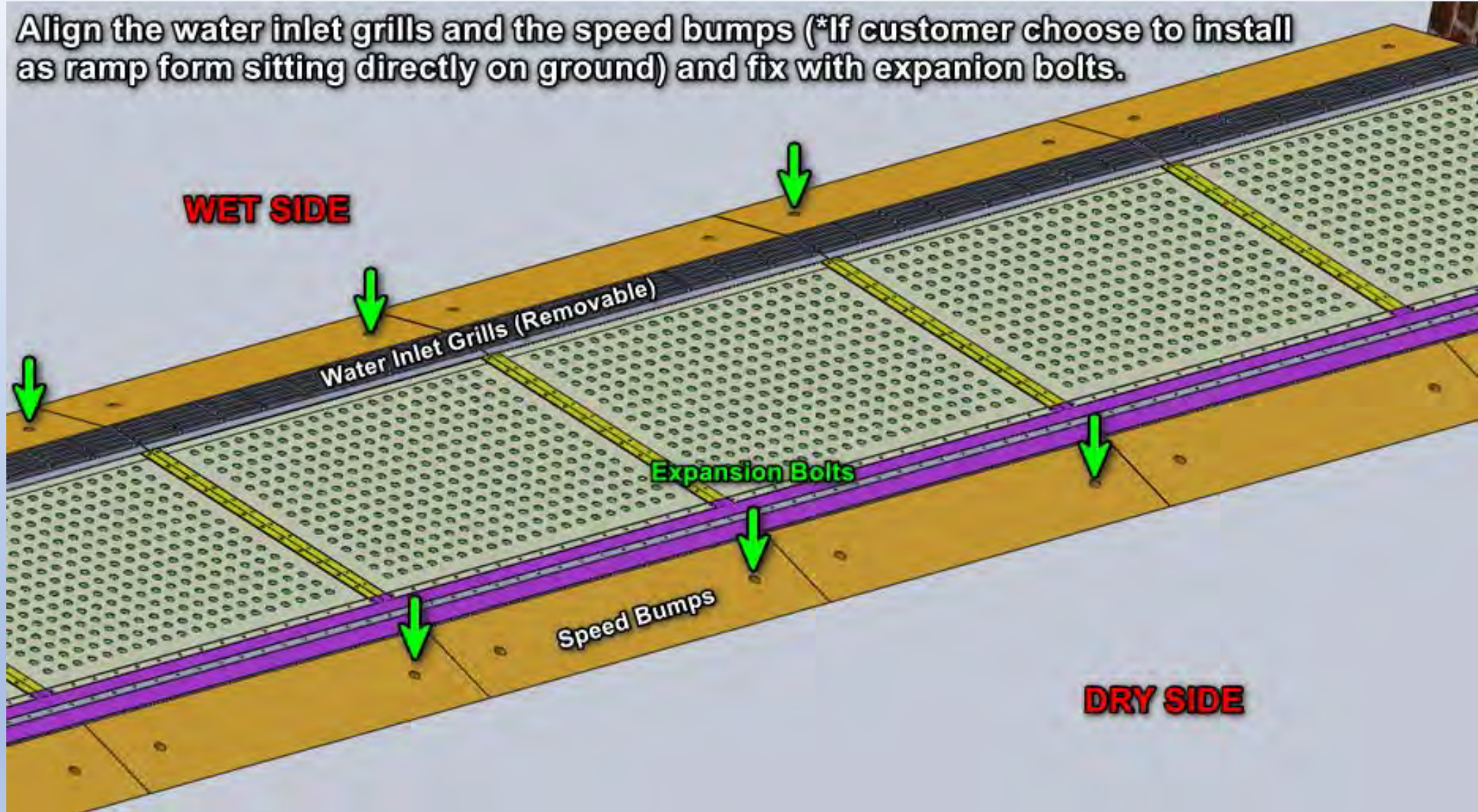




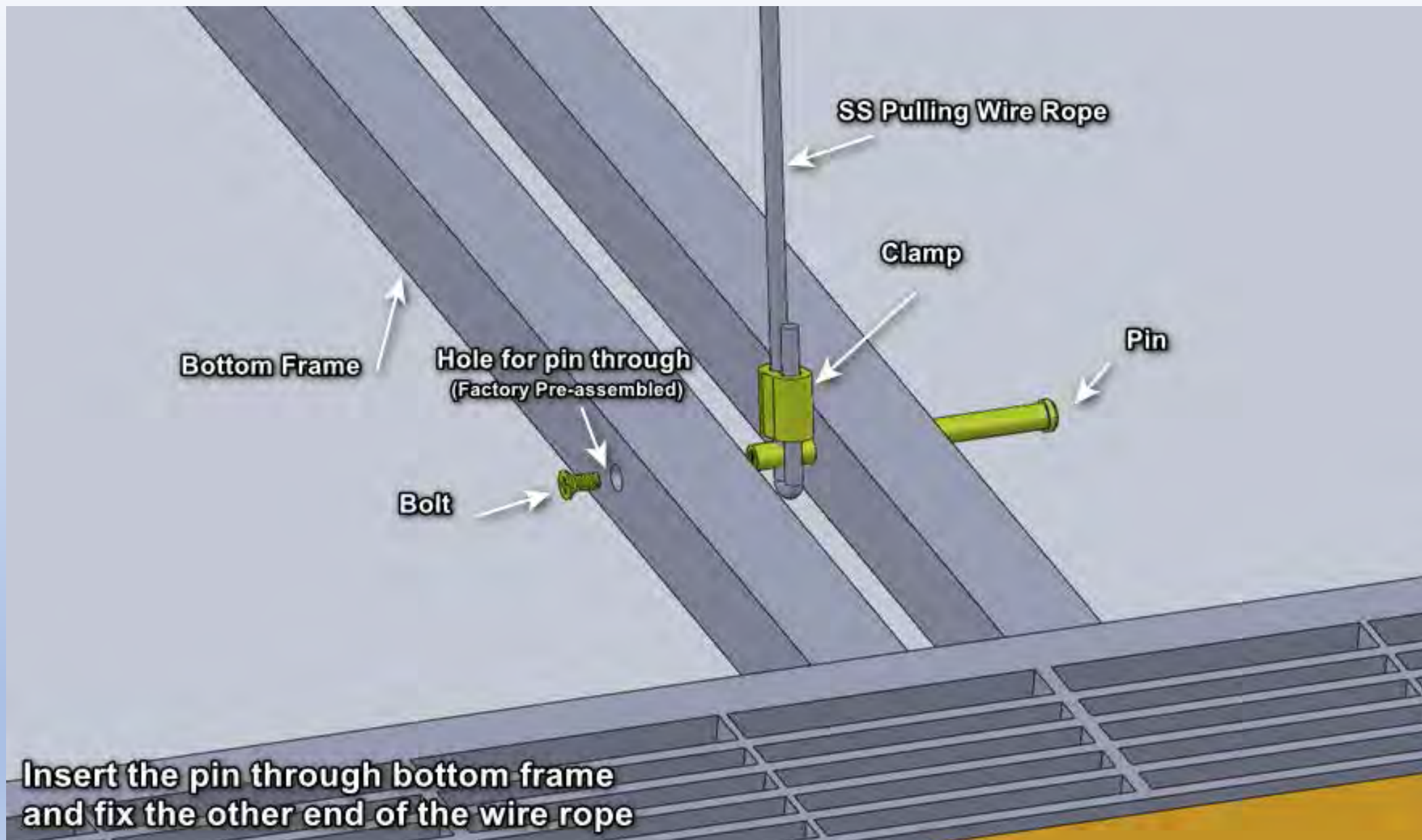
Averagely distribute a layer of sealant on top of the fixing square tube, then cover the other end of the foldable back rubber on the square tube surface, and install the SS fixing frame by rivetting.



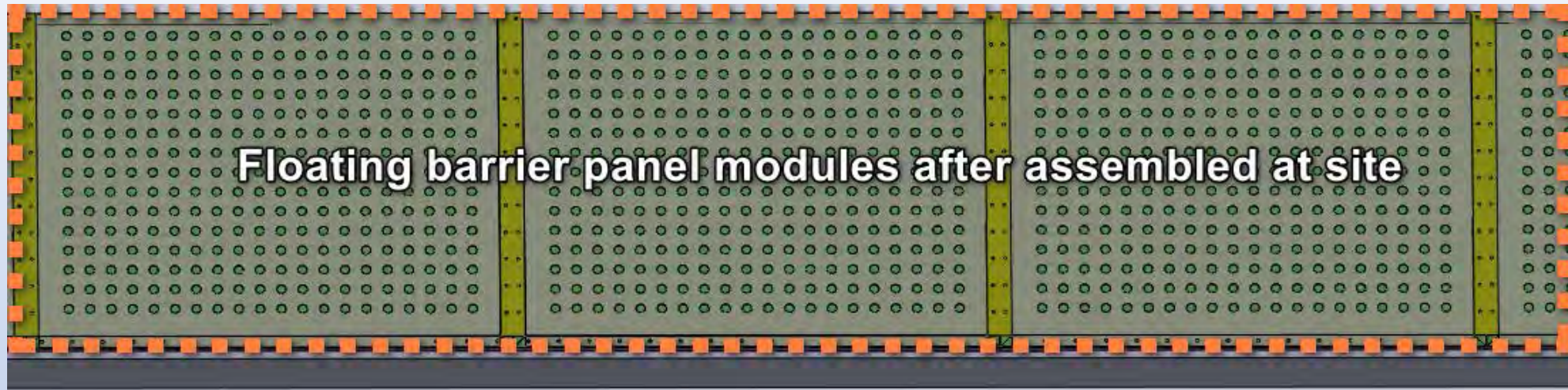
Align the water inlet grills and the speed bumps (*If customer choose to install as ramp form sitting directly on ground) and fix with expansion bolts.



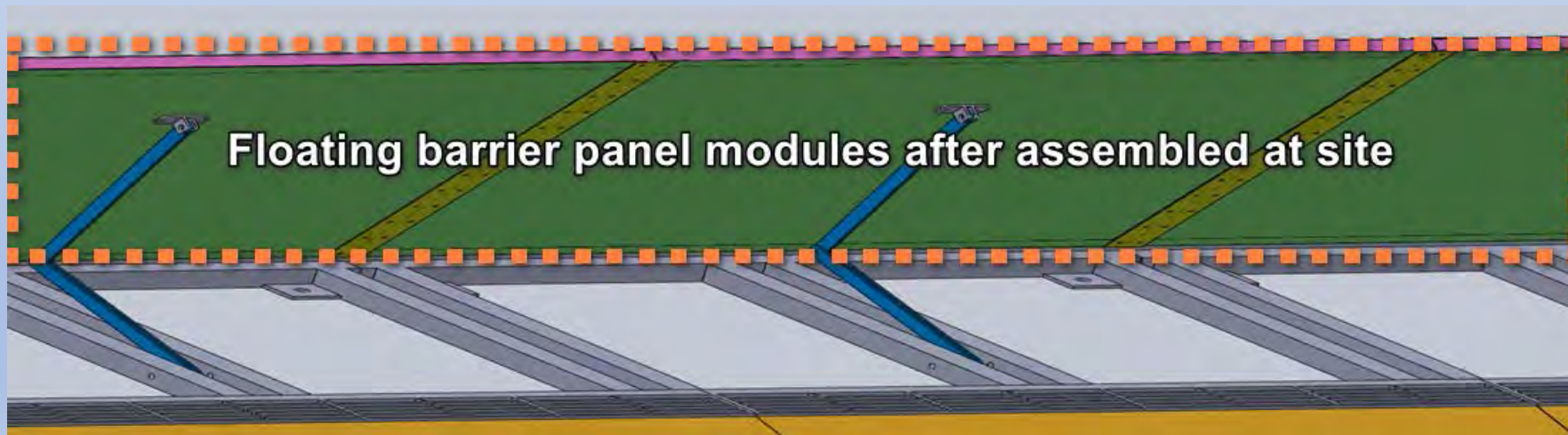




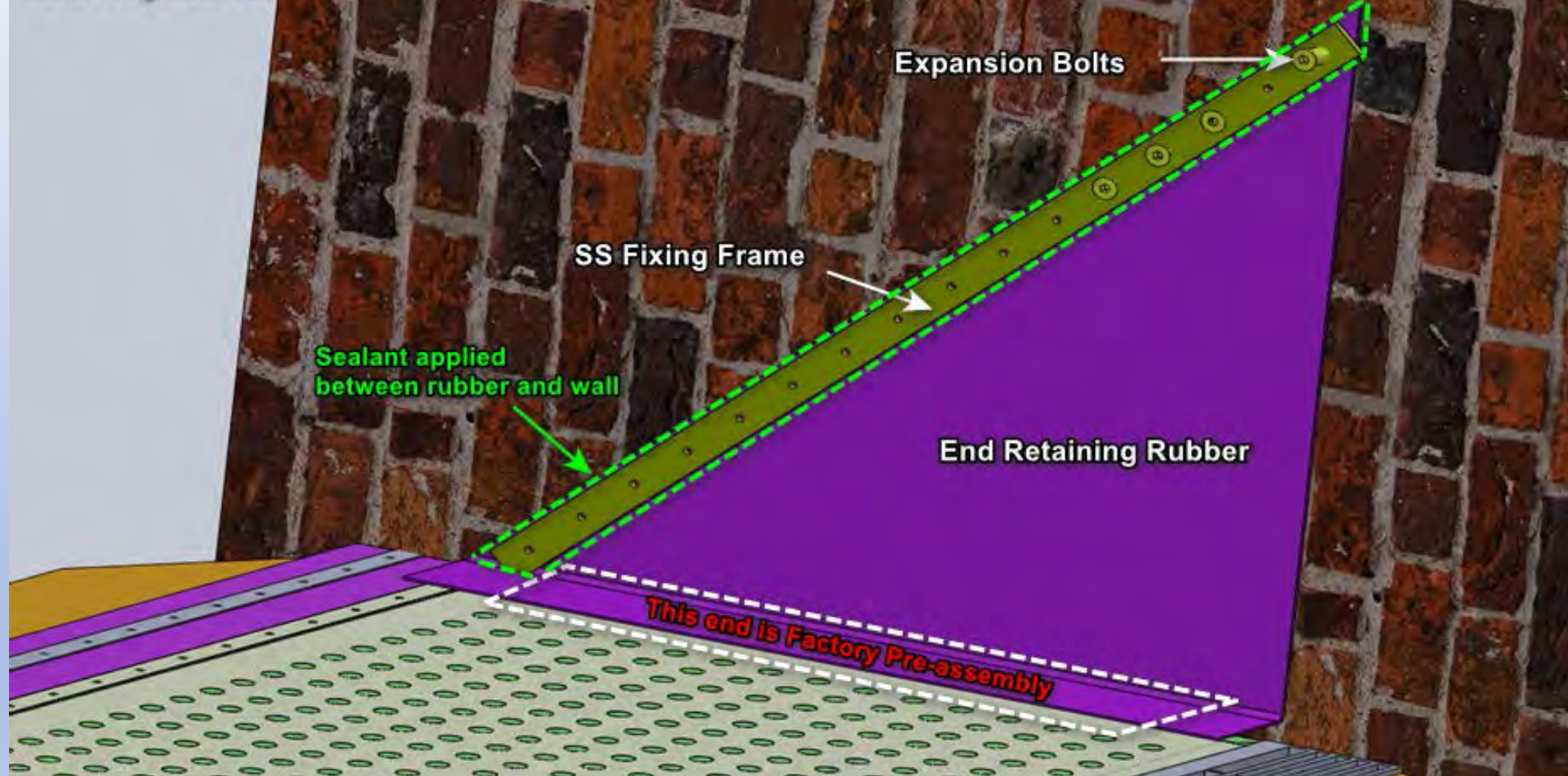
CLOSED VIEW AFTER MODULE ASSEMBLED



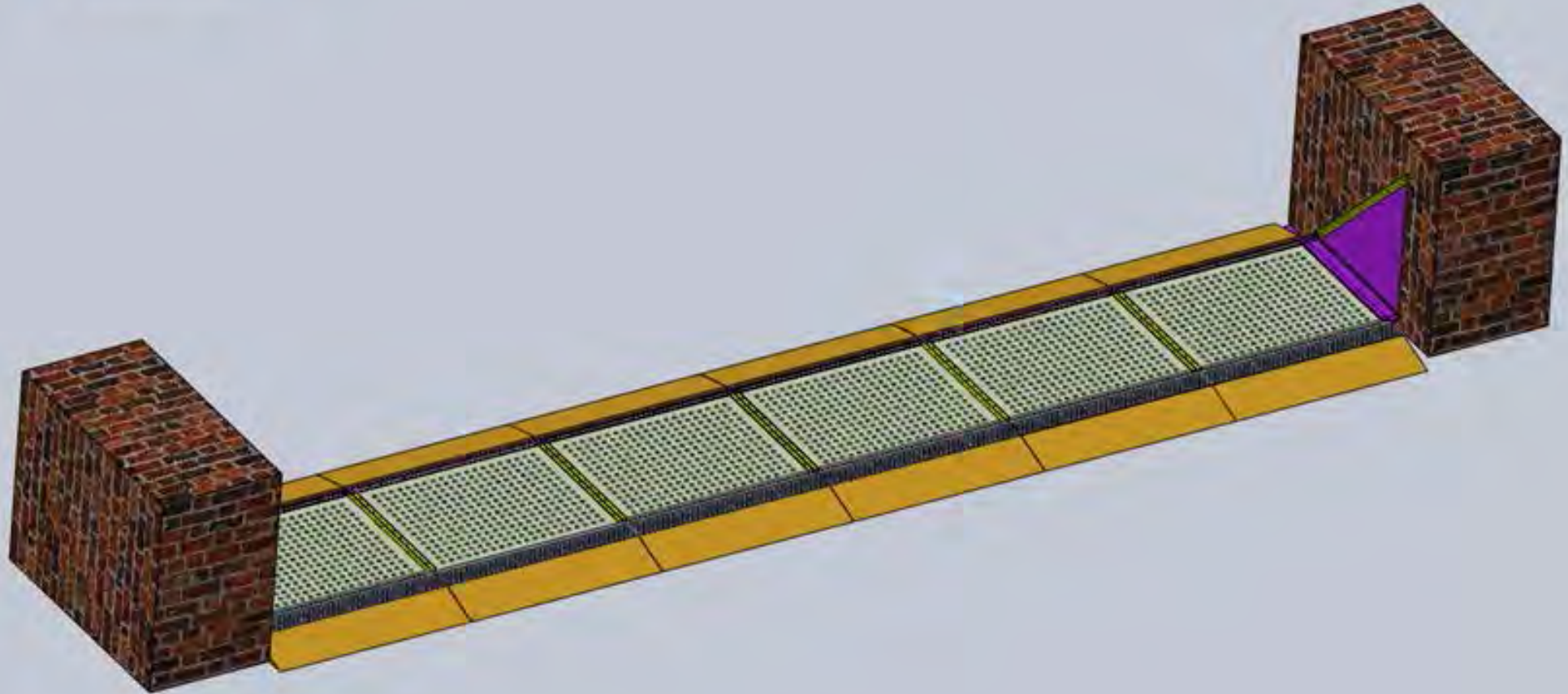
OPEN VIEW AFTER MODULE ASSEMBLED



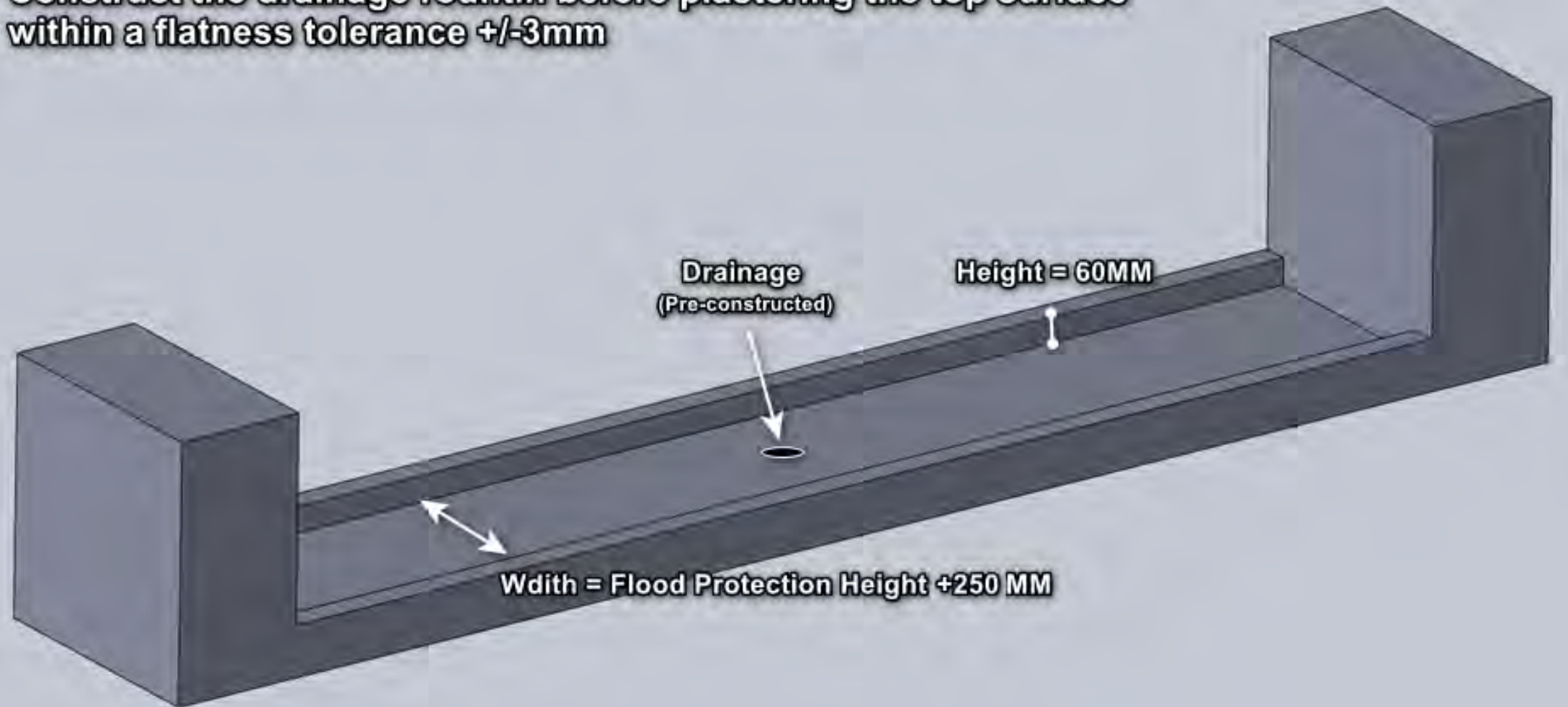
**Stretch the end retaining rubber and attach to the side wall
with expansion bolts and fixing frame**



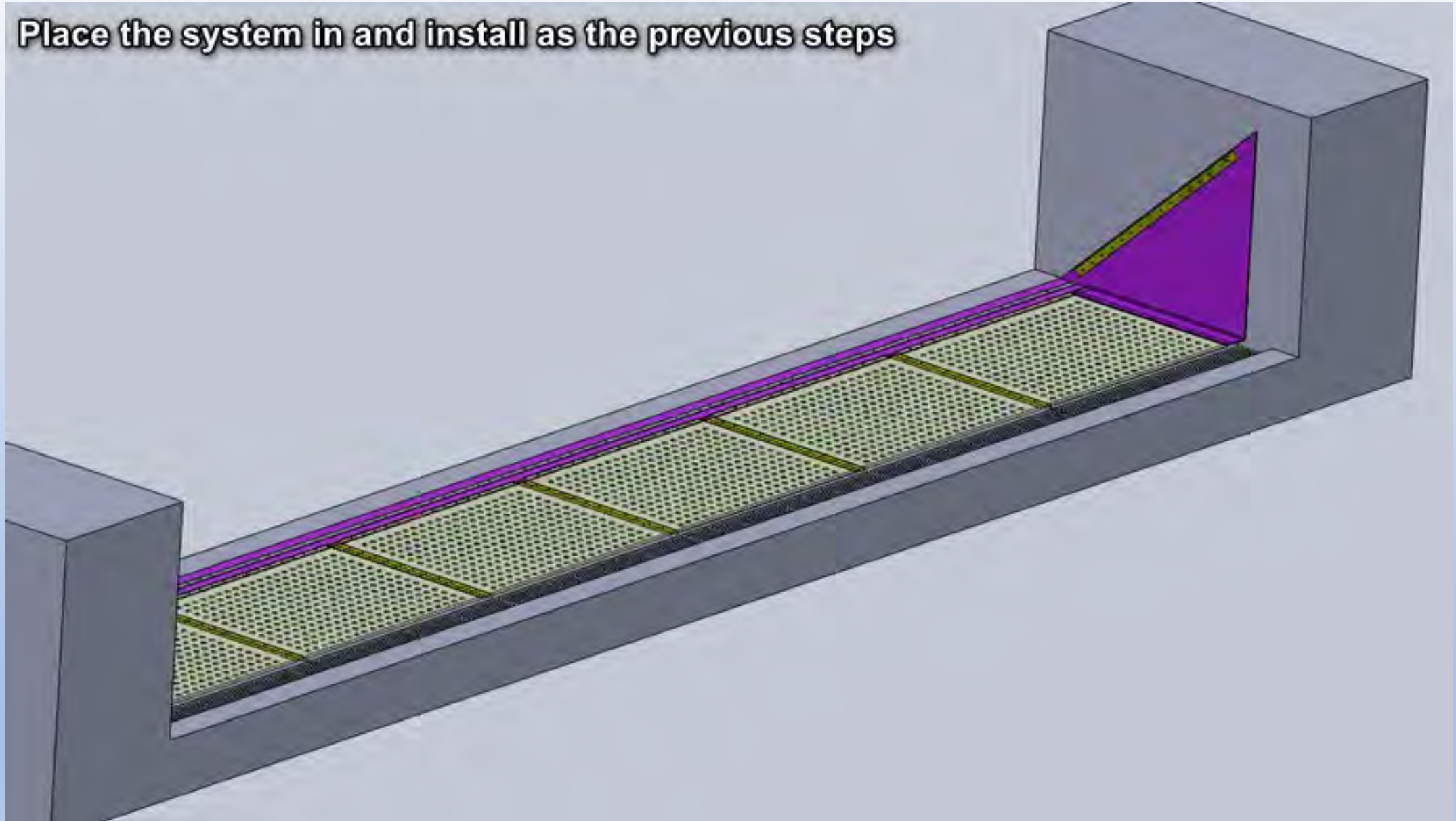
**RAMP FORM
FINISHED**



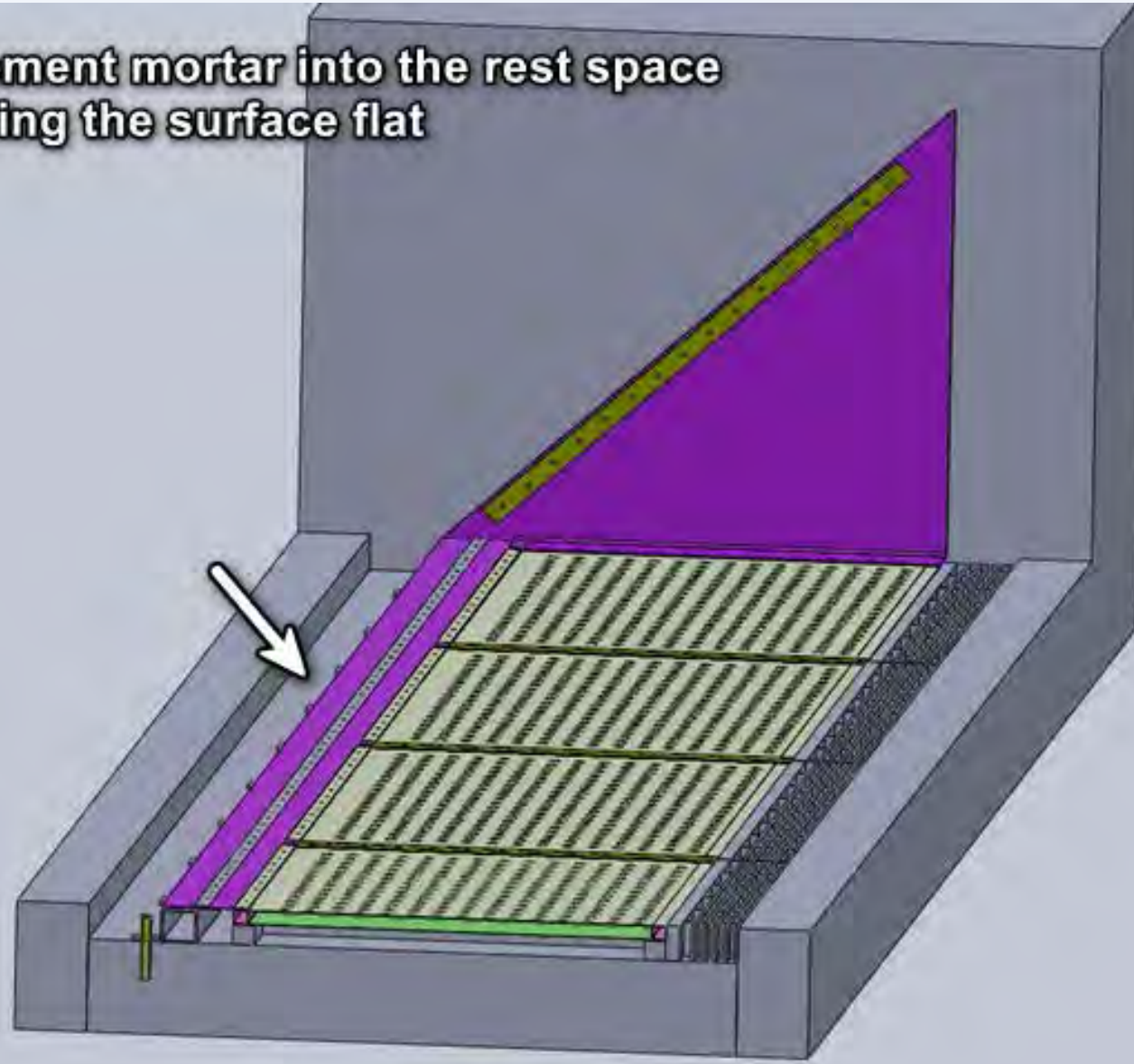
**Solt a channel in ground to contain the flood barrier system
Construct the drainage rountin before plastering the top surface
within a flatness tolerance +/-3mm**



Place the system in and install as the previous steps



**Pour the cement mortar into the rest space
and plastering the surface flat**



**FLUSH TO GROUND FORM
FINISHED**

