

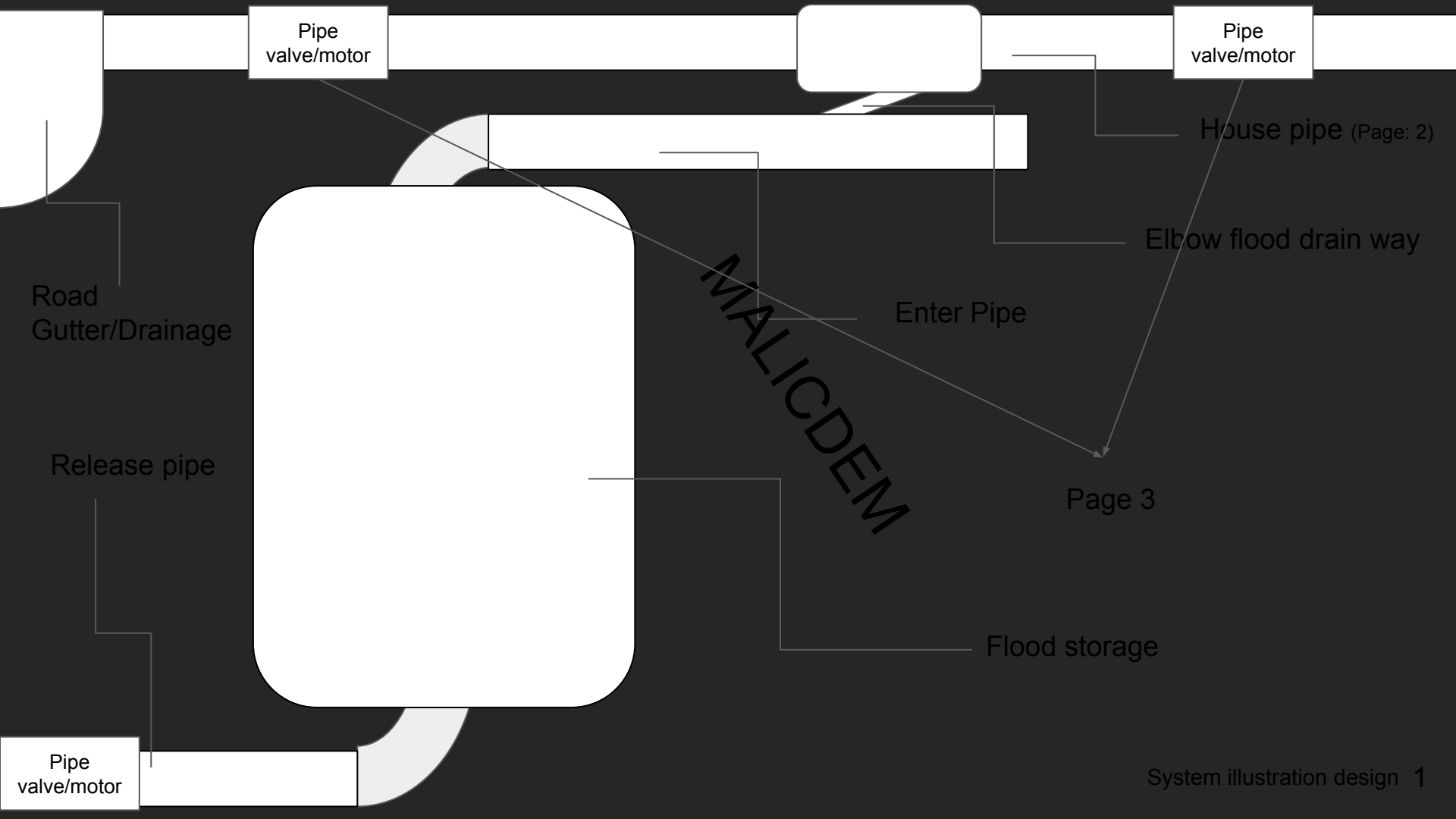
~~CONFIDENTIAL~~ UNRELEASE

Unnamed Pipe system



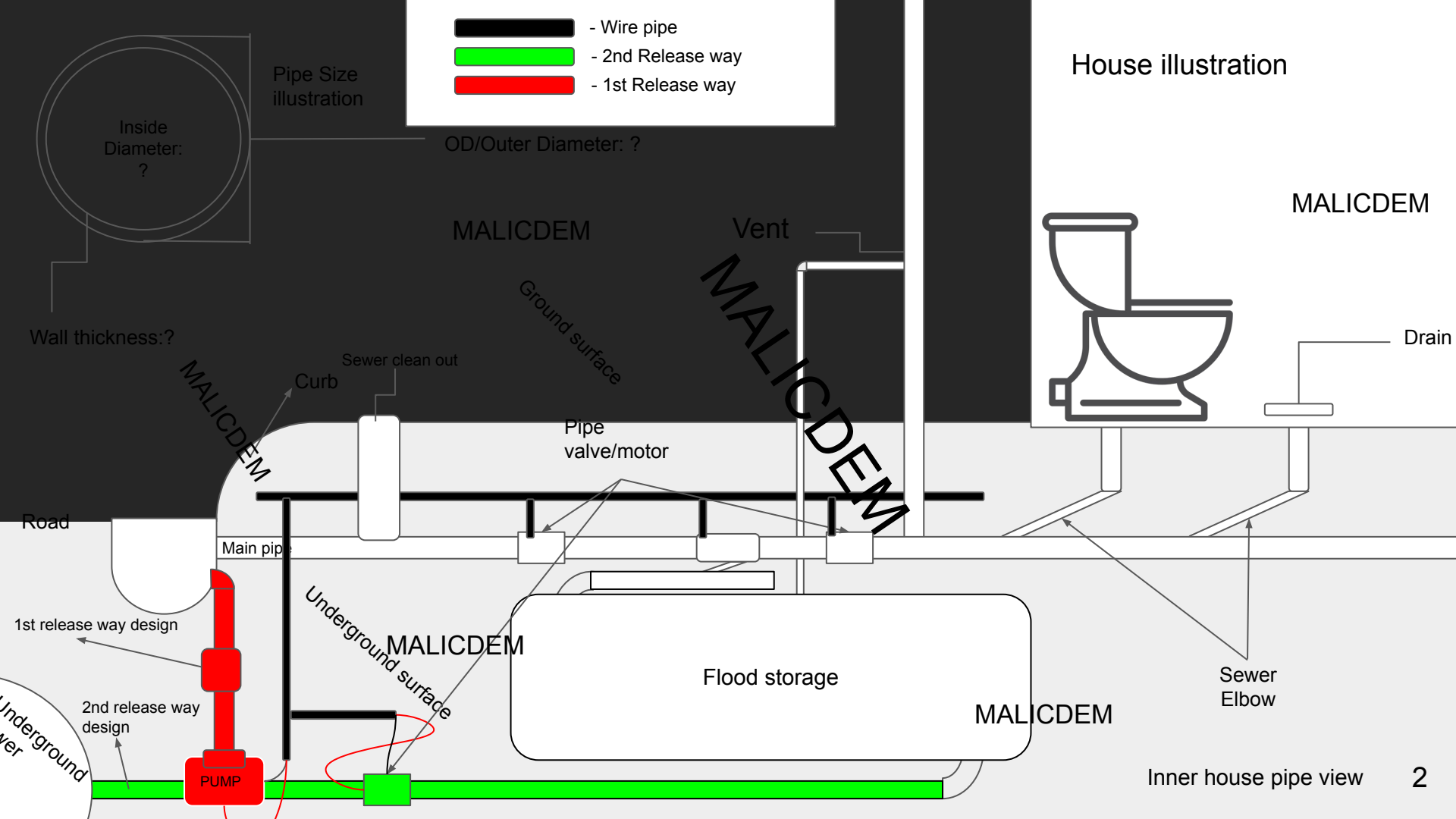
M.K.E.A/PIRON

Designed by: Ligolas Neo Malicdem

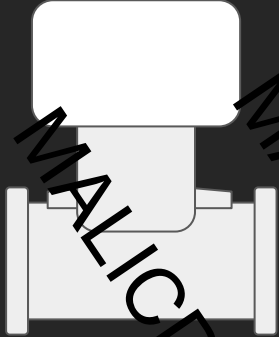


WARNING:

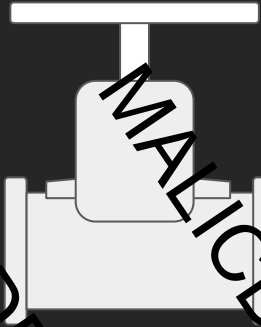
P-TRAP NOT ILLUSTRATED



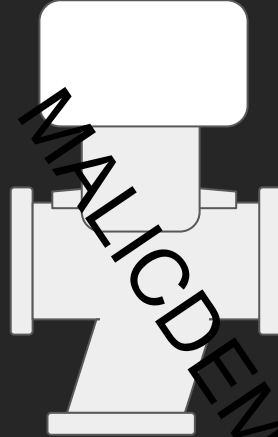
Motorized 2 way
pipe valve



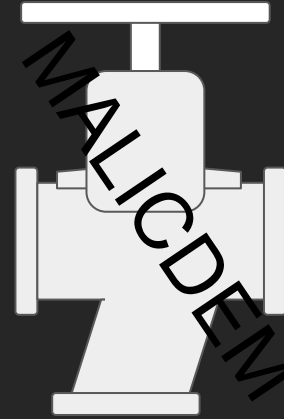
Manual 2 way pipe
valve



Motorized 3 way
pipe valve

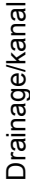


Manual 3 way pipe
valve

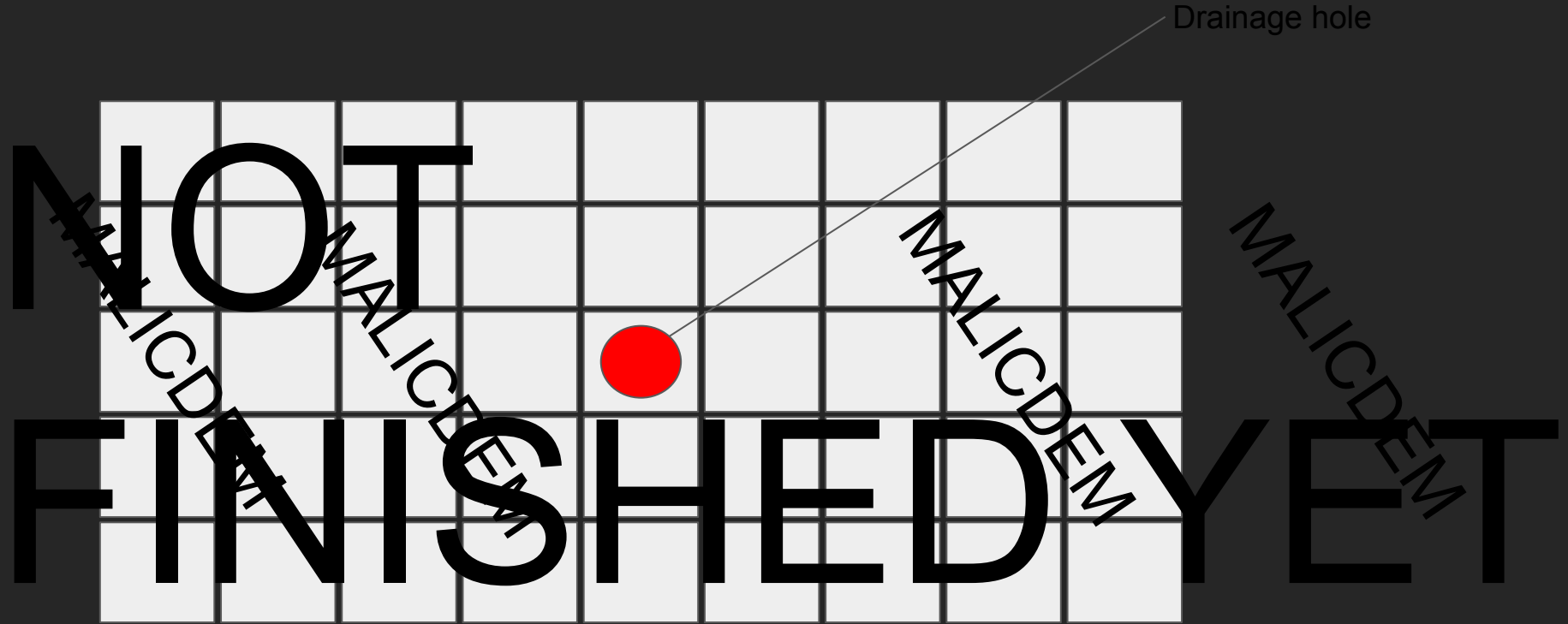


FLOOD DRAIN SYSTEM DESIGN

The diagram shows a house layout with various plumbing fixtures and pipes. A large red 'X' is drawn over the entire diagram, indicating it is not finished. The text 'NOT FINISHED YET' is written in large, bold, black letters across the center of the image. The plumbing fixtures include a sink, a toilet, a bathtub, and a drain. The pipes are labeled 'MALICDEM' and 'MALICDEM'.



DESIGN 1: TileS Drain Top View



DESIGN 1: TileS Drain Side View

Hidden design drain pipe on tiles.
Designed for living room to drain possible
flood. Pipe is (normally) connected to main
pipe.

Tiles

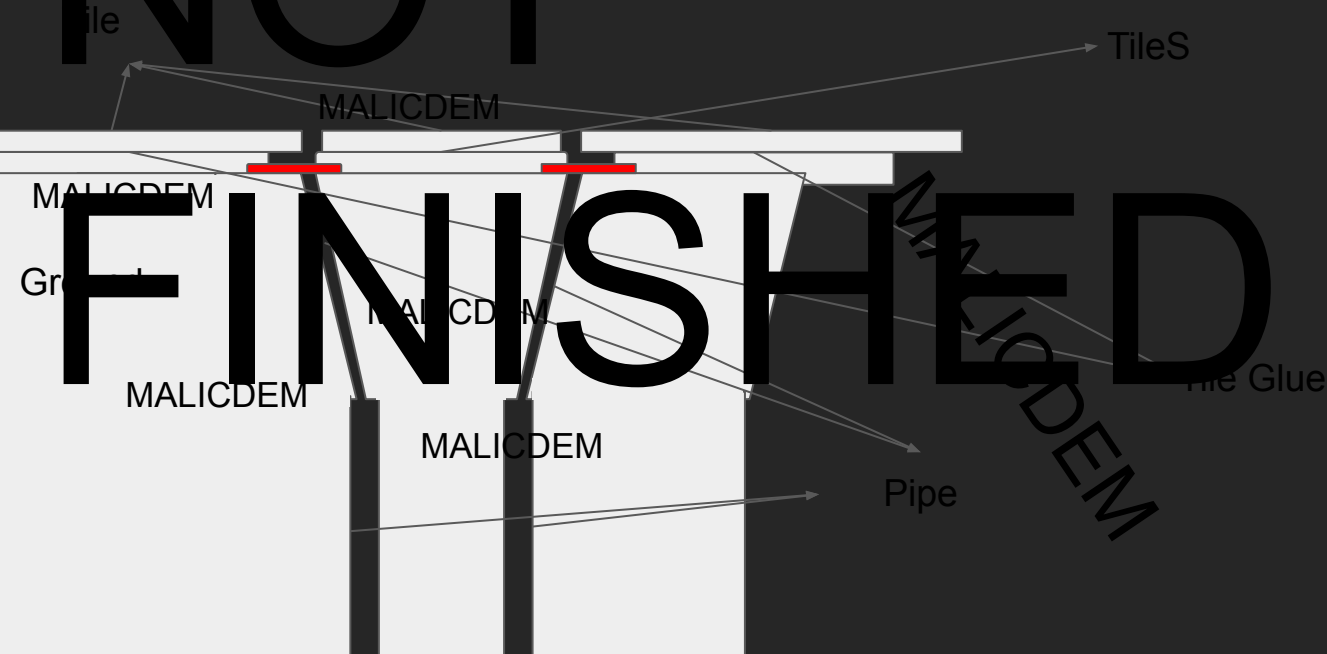
Mesh filter

Pipes

Tile
Ground

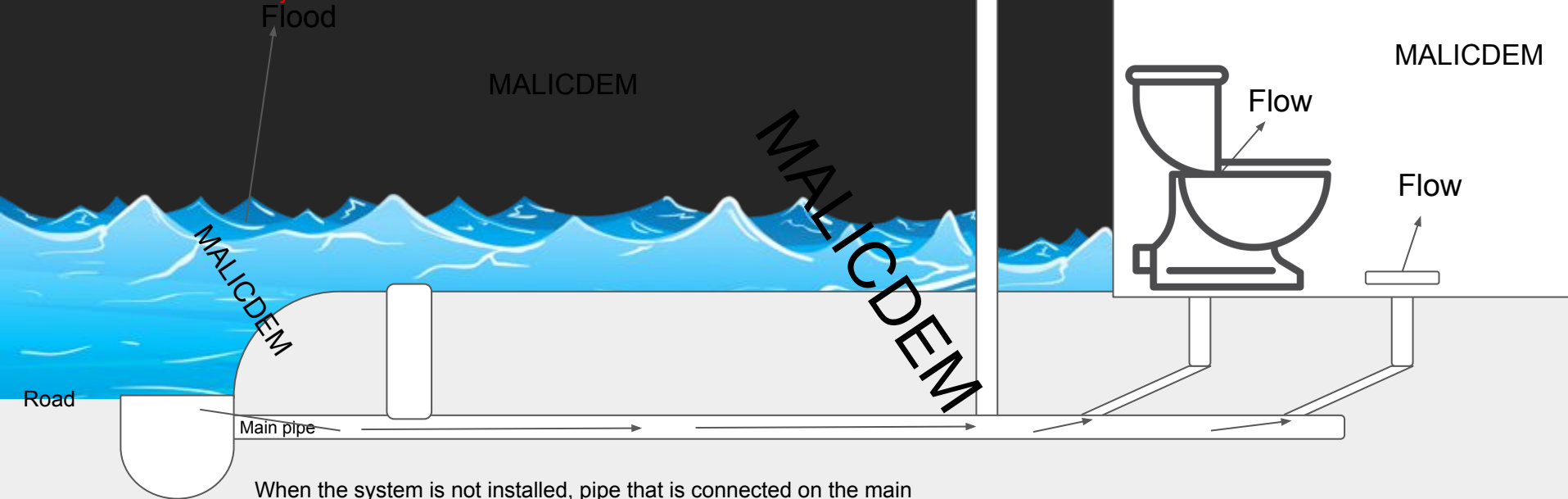
DESIGN 1: TileS Drain **Documentation**

TileS provides a stealth design drain pipe system designed to be placed on living room to flush out possible flood that enters the house. You glue any types of tiles on TileS to make it removable. The design features a removable mesh filter to avoid any type of insects such as worm, and dirt to escape. It is advisable to place a motorized valve on the pipe to avoid gas smell coming from the toilet or the sewer. The wiring of this motorized valve will be placed on the main pipe controller which you can see on the wiring page.



Scenario 1: Flooded **Inside and outside NO SYSTEM**

Note: The illustration shows the flood reaches the house, or is higher than the house's ground floor. **Assume that the house has barrier that flood cannot enter any door.**

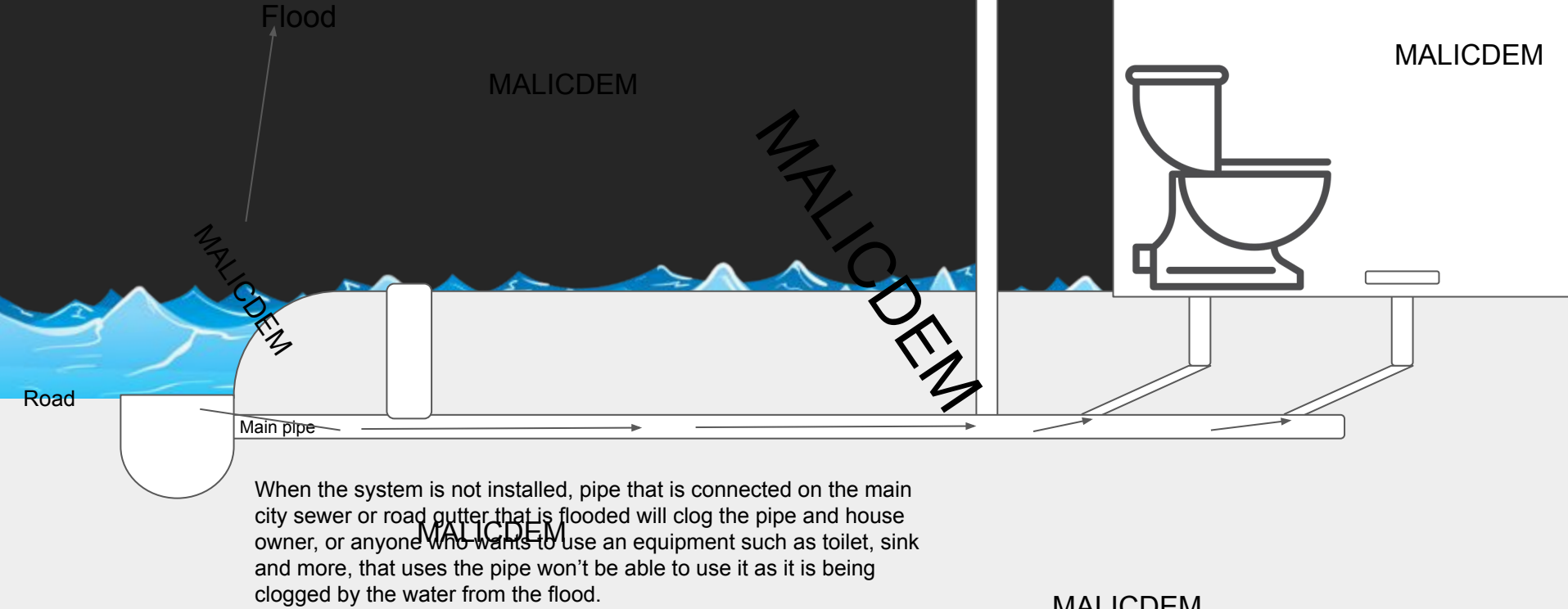


When the system is not installed, pipe that is connected on the main city sewer or road gutter that is flooded will flow directly to the main house pipe. Following the arrow that is inside the pipe, that is how the water will flow, once inside, the water can flow directly to your drainage flooding the inside of your bathroom or lavatory. No matter how high a door barrier is to avoid flooding, the pipe itself can cause house to be flooded.

House illustration

MALICDEM

MALICDEM



Scenario 1: Flooded Inside and outside W/SYSTEM

Note: The illustration shows the flood reaches the house, or is higher than the house's ground floor. Assume that the house has barrier that flood cannot enter any door.

Warning: Wires not visible



LOCK

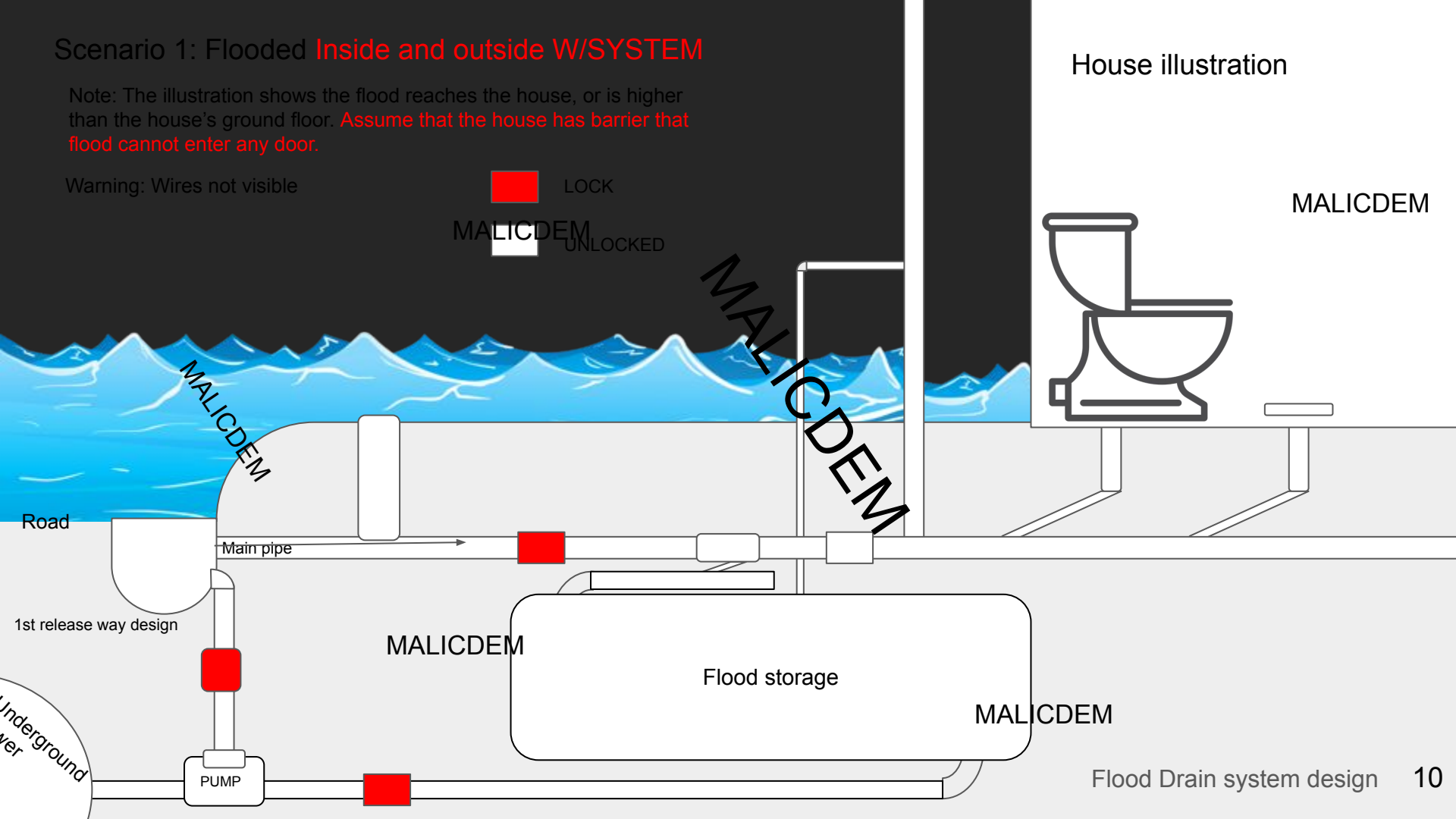
MALICDEM



UNLOCKED

House illustration

MALICDEM



Scenario 1: Flooded **Inside and outside W/SYSTEM**

Note: The illustration shows the flood reaches the house, or is higher than the house's ground floor. **Assume House is prone to flooding INSIDE,**

Warning: Wires not visible



LOCK

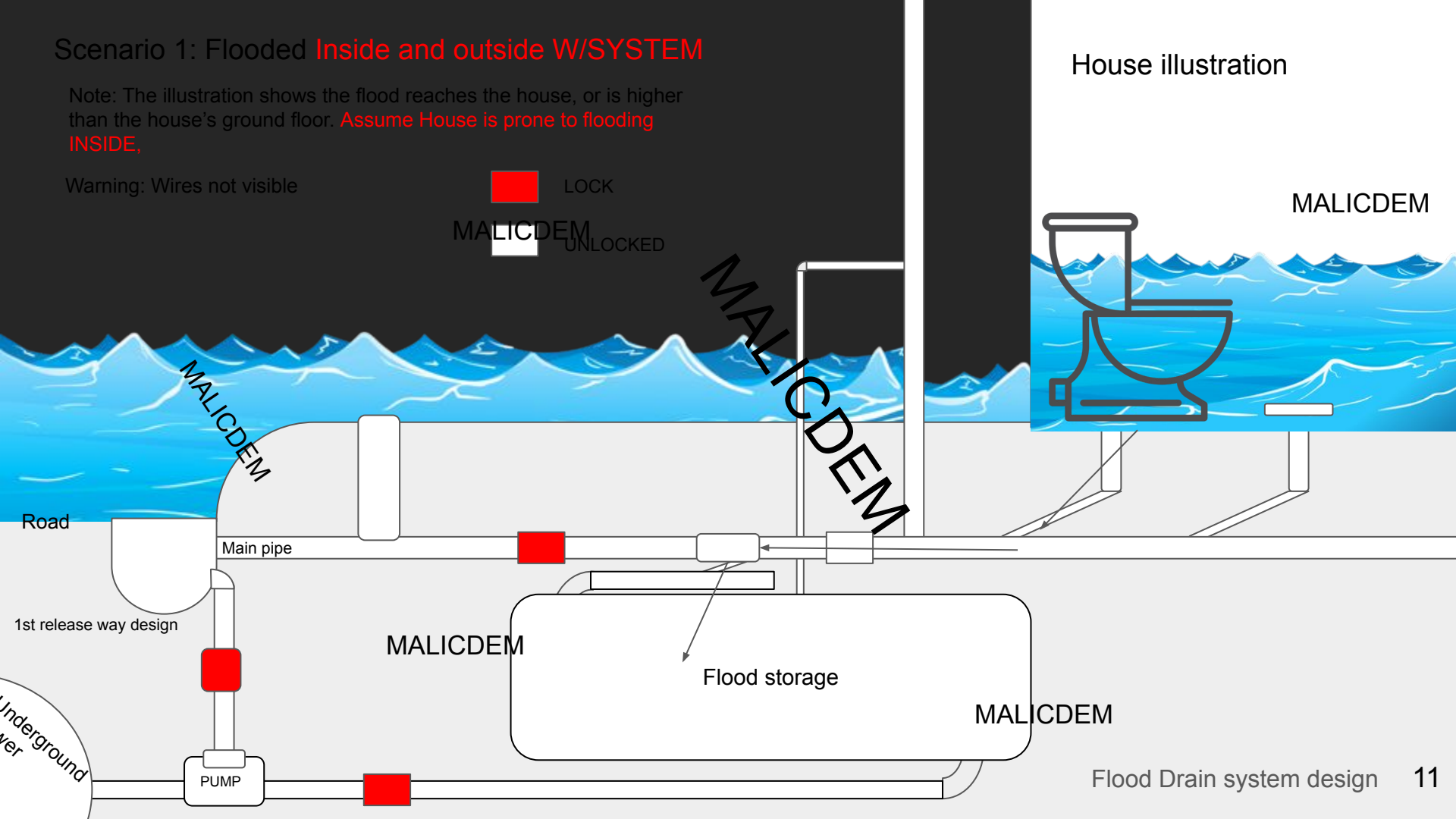
MALICDEM



UNLOCKED

House illustration

MALICDEM



FLOOD DRAIN RELEASE SYSTEM DESIGN

Scenario 1: RELEASE SEQUENCE

Note: The illustration shows how after the flood is gone and the pipe is calm, the pipe initiates to release mode, releasing the water stored in the Flood storage.

Warning: Wires not visible



LOCK

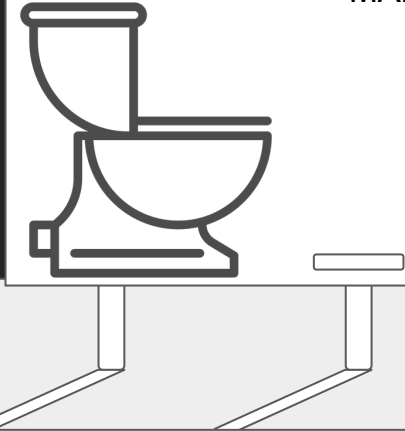
MALICDEM



UNLOCKED

House illustration

MALICDEM



MALICDEM

MALICDEM

MALICDEM

MALICDEM

Flood storage

Main pipe

PUMP

FLOOD DRAIN RELEASE
SYSTEM

ILLUSTRATION 1: RELEASE DESIGN (CLOSE VIEW)

This pipe is optional if underground sewer is available. If available, another motorized valve should be placed between the underground sewer pipe to pump.

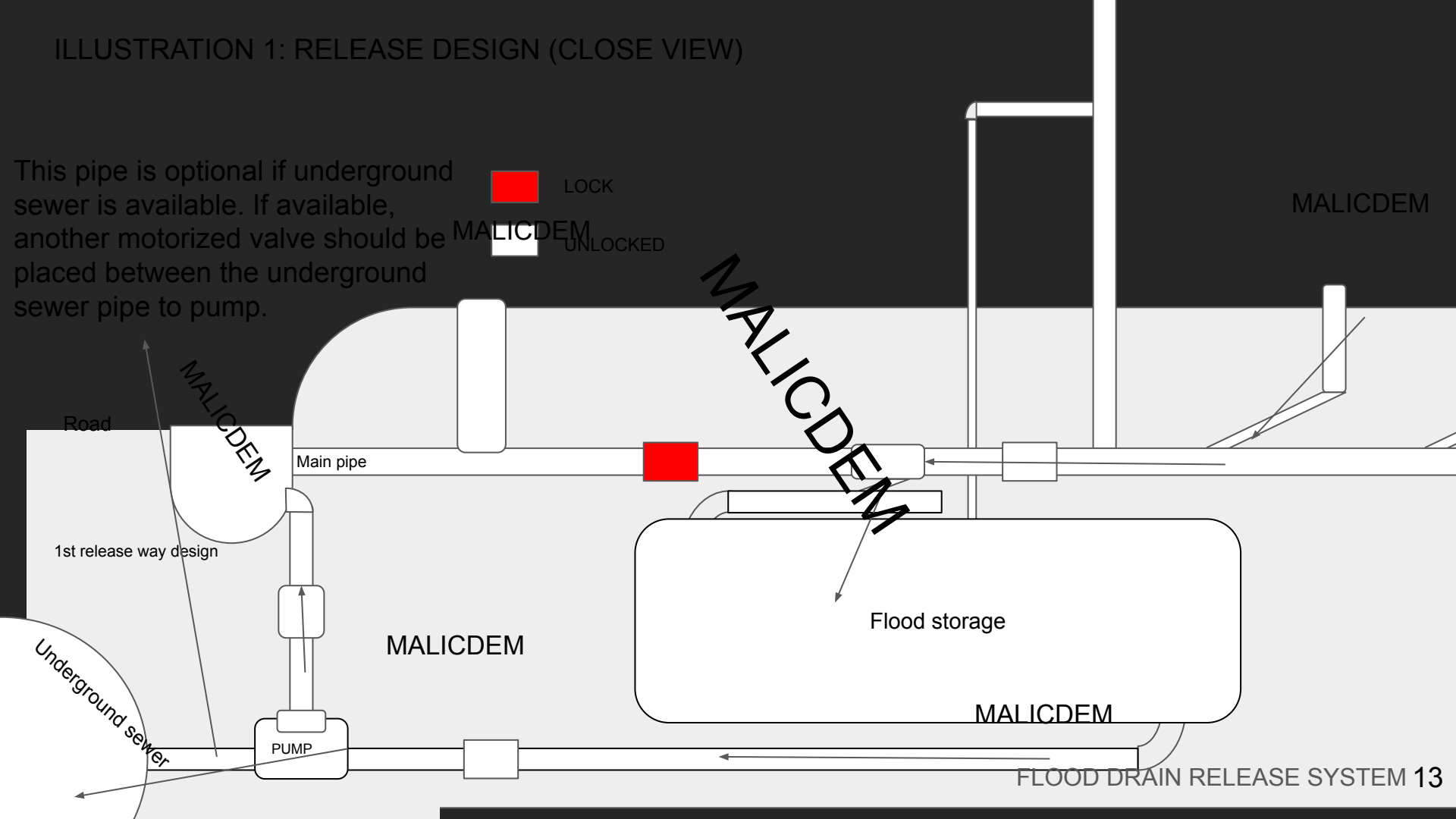
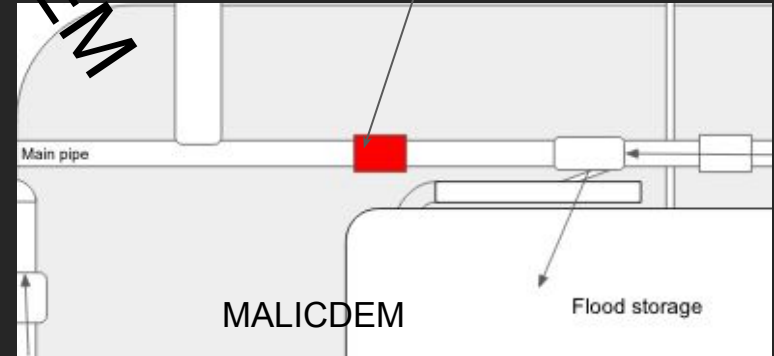


ILLUSTRATION 2: RELEASE DESIGN - BY TEXT

When releasing, the 1st valve will close/lock. The flood storage will then check the ventilation if clear through sensor detection.

The Flood storage will then start the pump initiation.

The Flood storage will then unlock its pipe to release the water stored. If there are two or more Flood storage, all of them will release water by sequence, meaning the second Flood storage will not release if the first is not done.



FAIL DESIGN

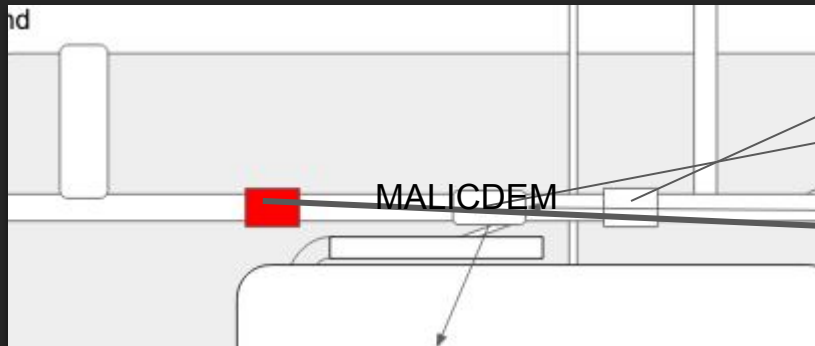
FAIL 1: PIPE CLOG ON MAIN DURING LOCK (FLOOD OCCURING)

When the valve detected a flood, backup valve will be activated. If backup valve detects no issue upon activating, the sequence will continue. Other solution is if the valve clogged is located next to the Flood storage valve, the Flood storage will activate its lock.

MALICDEM

FAIL 2: PIPE CLOG ON MAIN DURING LOCK (RELEASING)

When the valve detected a flood, backup valve will be activated. If backup valve detects no issue upon activating, the sequence will continue. Other solution is if the valve clogged is located next to the Flood storage valve, the Flood storage will activate its lock.



Backup Valve

Flood storage Valve

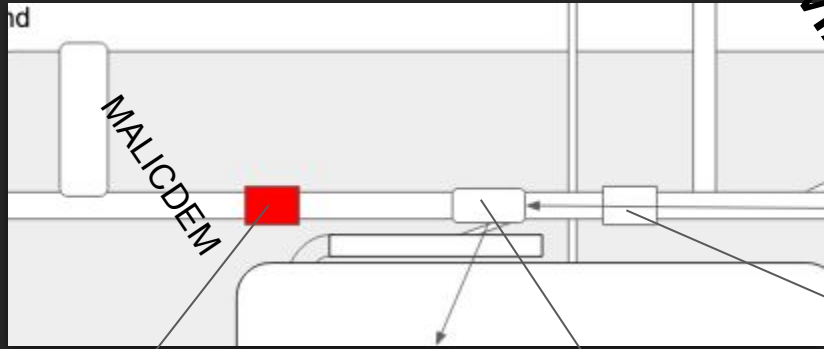
First Valve (Main Valve)

MALICDEM

FAIL 3: PIPE CLOG ON ANY PIPE DURING LOCK (FLOOD OCCURING)

Pipe clog during lock on any pipe will result into the system algorithm looking for the best lined up or backup valve to lock.

Explanation; Illustration: If the backup valve on the main pipe is clogged, the next valve available will lock, or the valve before the backup valve.



Clogged

Will lock

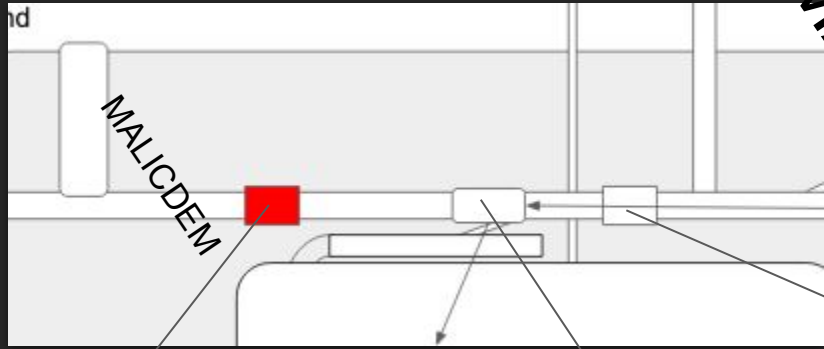
Clogged

If clogged too, the system/panel will alert the user/owner the event in which for the owner to prepare for a possible flow onto the toilet, drain and more.

FAIL 3: PIPE CLOG ON ANY PIPE DURING LOCK (RELEASING)

Pipe clog during lock on any pipe will result into the system algorithm looking for the best lined up or backup valve to lock.

Explanation; Illustration: If the backup valve on the main pipe is clogged, the next valve available will lock, or the valve before the backup valve.



If clogged too, the system/panel will alert the user/owner the event, this will require service to check for the cause of clog.

FAIL 4: PIPE VALVE WON'T LOCK - NO CLOG(BOTH EVENT)

This will follow the procedure of 1,2, and 3. Service is required,

FAIL 5: VENT NOT GOOD(RELEASING)

MALICDEM

MALICDEM

The procedure will continue. The warning/detection is just to assess the user of the occurrence.

FAIL 6: FLOOD STORAGE IS FULL(FLOOD OCCURING)

If two or more flood storage is available, the system will redirect(This design is available on GitHub) the pipe to the other system. If full, the system may try to check if it can temporarily release to sewer available, otherwise it will lock main pipe, and its own valve. The user can also initiate override to activate flush release on the sewer during flood, the flush release will provide pressure during releasing to fight the flood.

MALICDEM

MALICDEM

FAIL 7: VALVES ARE NOT WORKING (FLOOD EVENT)

When valves are not working during the flood event, the backup inflatable rubbers will be inflated to seal the pipes. While sealed, the system will look for what is wrong.

MALICDEM

(Designed for the integrated panel only)

Detailed:

V-NC01=Valve connection shorted

V-NC02=Valve connection is cut

V-C00=Valve is clogged

FAIL 8: VALVES ARE NOT WORKING (RELEASING)

This will deflate the rubber seal. (when inflated upon flood event)

Service required.

Manual check connection for valve

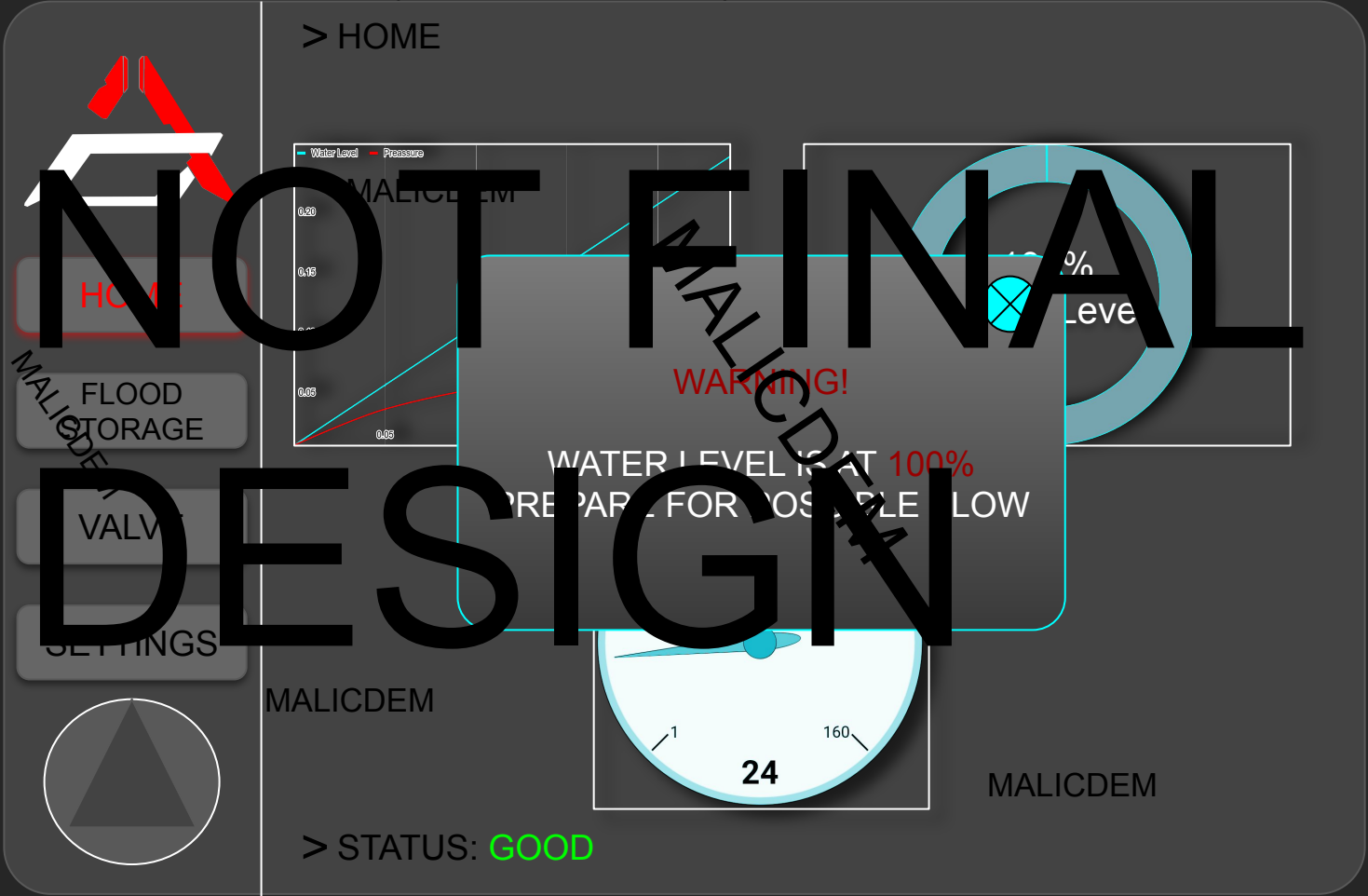
FAIL 9: INFLATABLE RUBBER UNSUCCESSFUL INFLATE(BOTH EVENT)

Manual check connection for valve

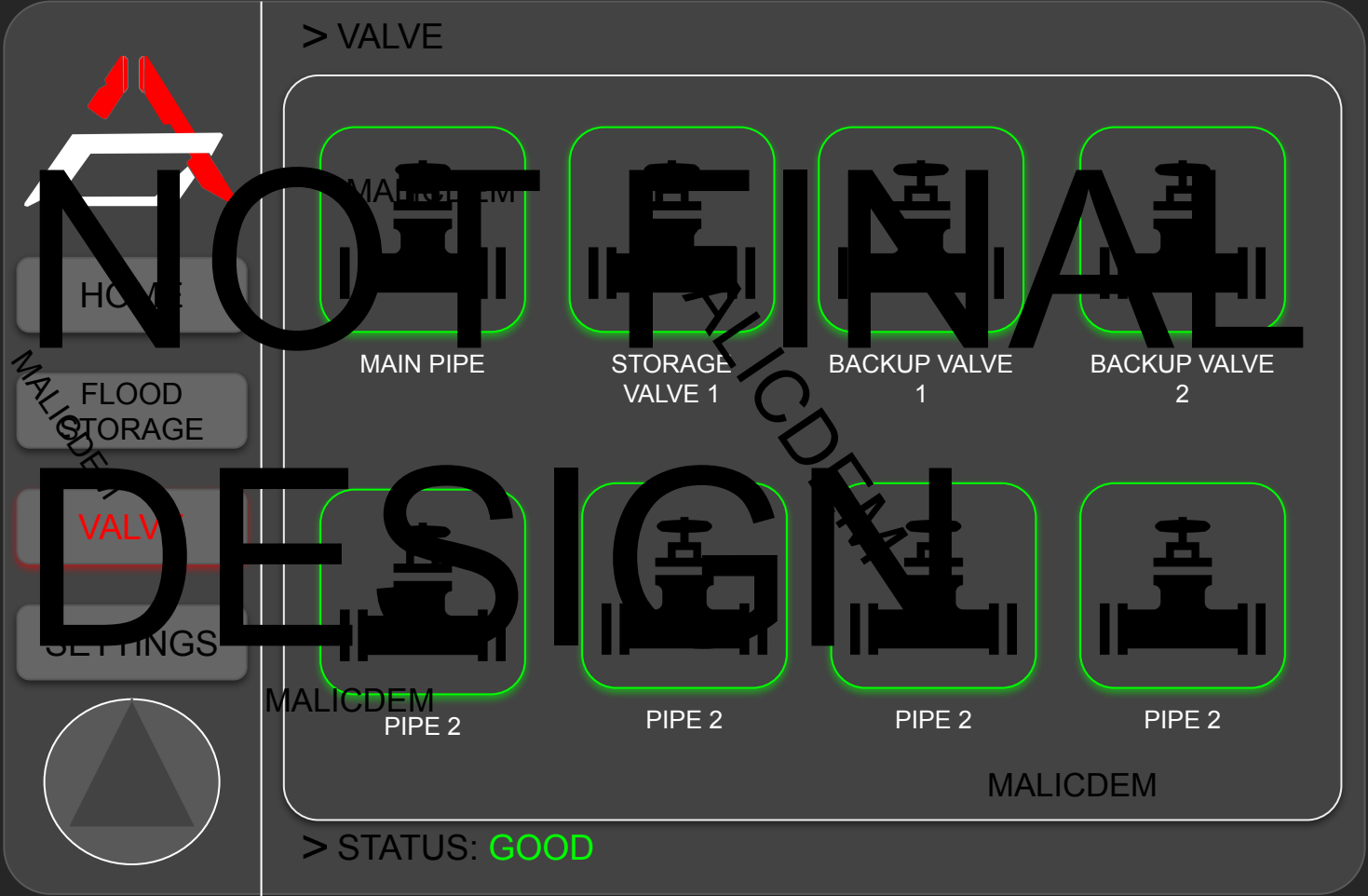
Service required.

MALICDEM

FAIL 6: FLOOD STORAGE IS FULL(FLOOD OCCURING)



FAIL 7 ILLUSTRATION: VALVES NOT WORKING(BOTH EVENT - GOOD STATUS)

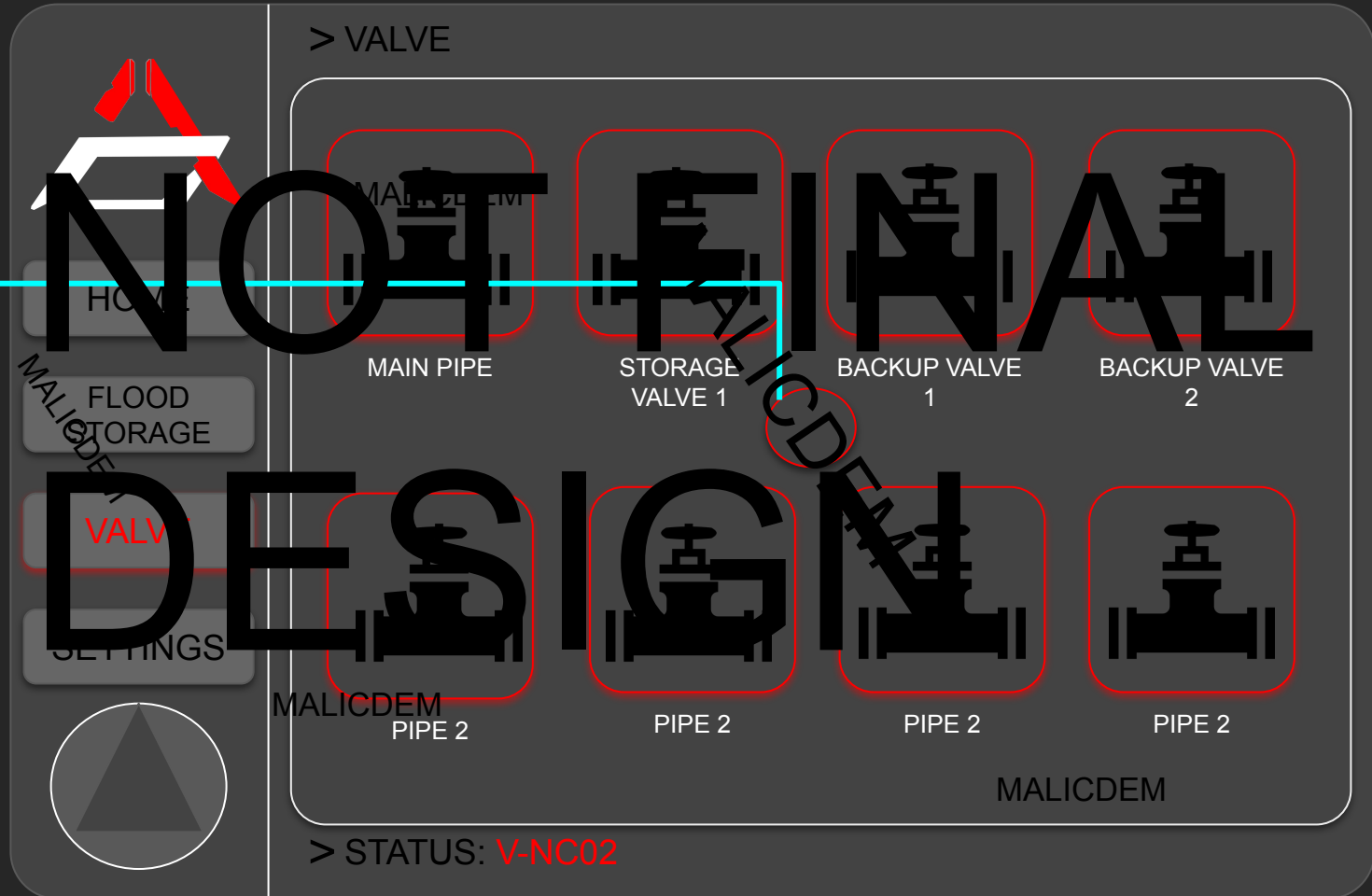


MALICDEM

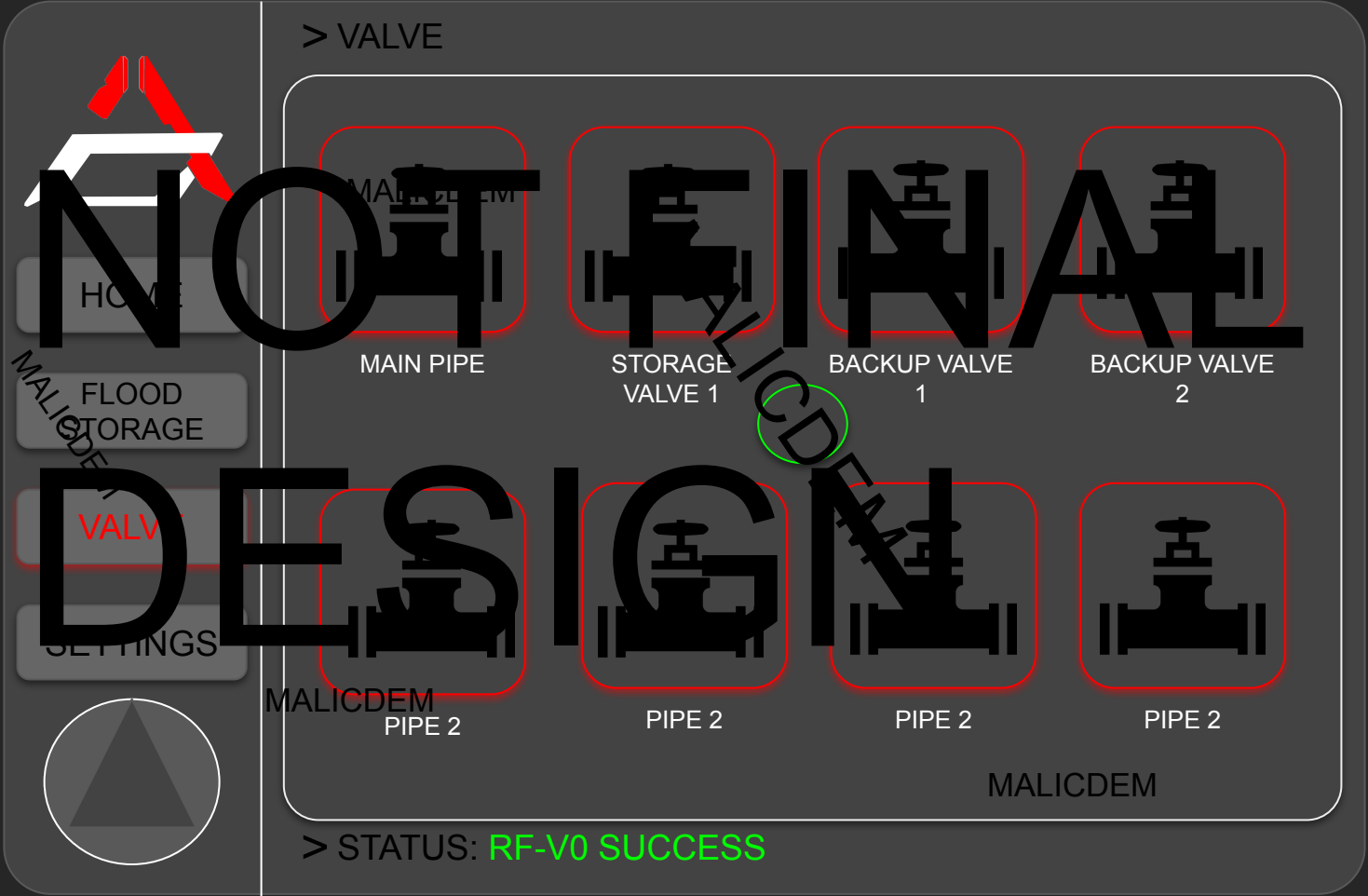
MALICDEM

FAIL 7 ILLUSTRATION: VALVES NOT WORKING(BOTH EVENT - BAD STATUS)

Button for Inflatable Rubber Available When Status is bad.

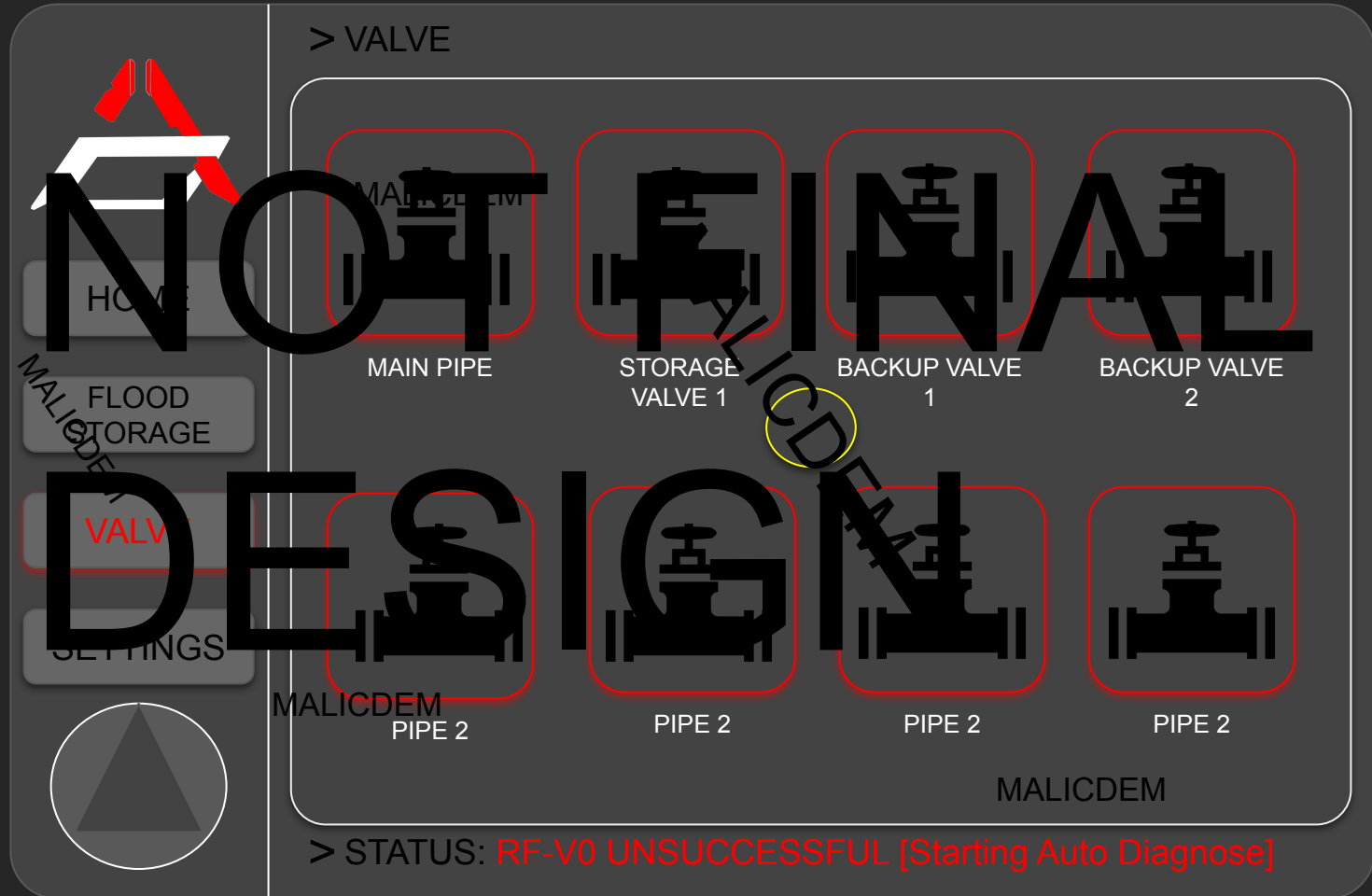


FAIL 7 ILLUSTRATION: VALVES NOT WORKING(BOTH EVENT - BAD STATUS - Inflate Success)



MALICDEM

FAIL 7 ILLUSTRATION: VALVES NOT WORKING(BOTH EVENT - BAD STATUS - Inflate Unsuccessful)



PANEL DESIGN

NOT FINAL DESIGN



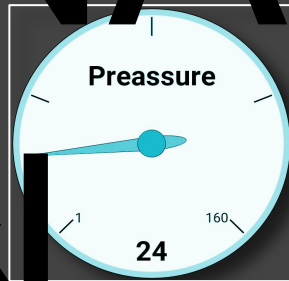
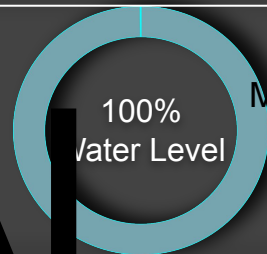
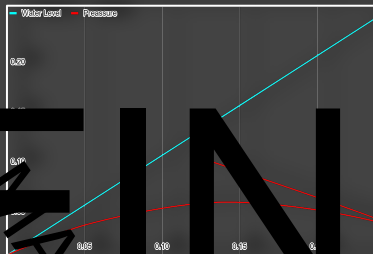
>HOME

HOME

FLOOD
STORAGE

VALVE

SETTINGS



>STATUS GOOD

OVERRIDE

MALICDEM

NOT FINAL
DESIGN

9.3x6.7"

MALICDEM

14.2"

MALICDEM

TOUCH SCREEN

BUTTON

MALICDEM

OVERRIDE



UPDATES ON GITHUB