

RESIDENTIAL
STRUCTURAL

TORNADO BATHROOM

INNOVATION



PDF

WE CAN DO IT BETTER!

**PROTECTION AGAINST
WIND, FIRE AND FLOOD**



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PROTECTION AGAINST
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All new builds are required to have a Pre-Cast Concrete Room (on a Concrete Pad) completed before the rest of the building is commenced. As the Bathroom is the most functional room and the historically safest room, this study bases its research and plans on the bathroom.

In time, we see a process where developers put down a concrete pad, followed by a Pre-Cast bare room. That room is used as a secure tool-room, during the build of the main structure, then the bathroom is fully fitted to client specifications.

As the room is intrinsically stable, the room can also be a solid core for a building-wide support structure including cantilevered supports, stairwells etc...

Regardless of Natural Disaster, this core structure is designed to save lives and to provide a starting point for any rebuilding that is necessary. It also means that basic bathroom facilities can be more readily maintained during the worst of times.

We see that modular homes and tiny homes are constructed without a bathroom, but are assembled alongside an existing Pre-Cast room. (Concept Plans included).

The Tornado Bathroom is designed to be released to the Public Domain, with a small fee for Certification. This will ensure that Genuine Tornado Bathrooms meet required standards and are maintained in a Register to assure their increased valuation and re-saleability.

Public availability allows Pre-Cast manufacturers around the world to take up the concept and provide the greatest variety of designs to be included. Designs are available for multi-story condos, Industrial, Commercial and Government Buildings, HOA Community Rooms etc...

The Domistat Tornado Bathroom is designed to Save Lives in a natural disaster.

- Hurricane
- Tornado
- Flood (Subject to weatherproof seals)
- Fire (Fire rating to be determined)

The Domistat Tornado Bathroom is designed to be incorporated into all new buildings:

- Private Residential
- Commercial Buildings
- Public Buildings
- Schools
- Public Restroom Facilities

*The Domistat Tornado Bathroom is **NOT** designed to provide shelter in the event of:*

- Nuclear Attack (Fallout Shelter)
- Panic Room (Home Invasion)
(although it may provide some measure of protection)

The Domistat Tornado Bathroom does NOT NEED to be a bathroom, e.g.:

- Campgrounds and RV Parks - Community Facilities
- Gated Communities - Community Halls
- Places of Worship - Bathrooms and extended rooms

The Domistat Tornado Bathroom needs to be equipped with emergency Supplies including:

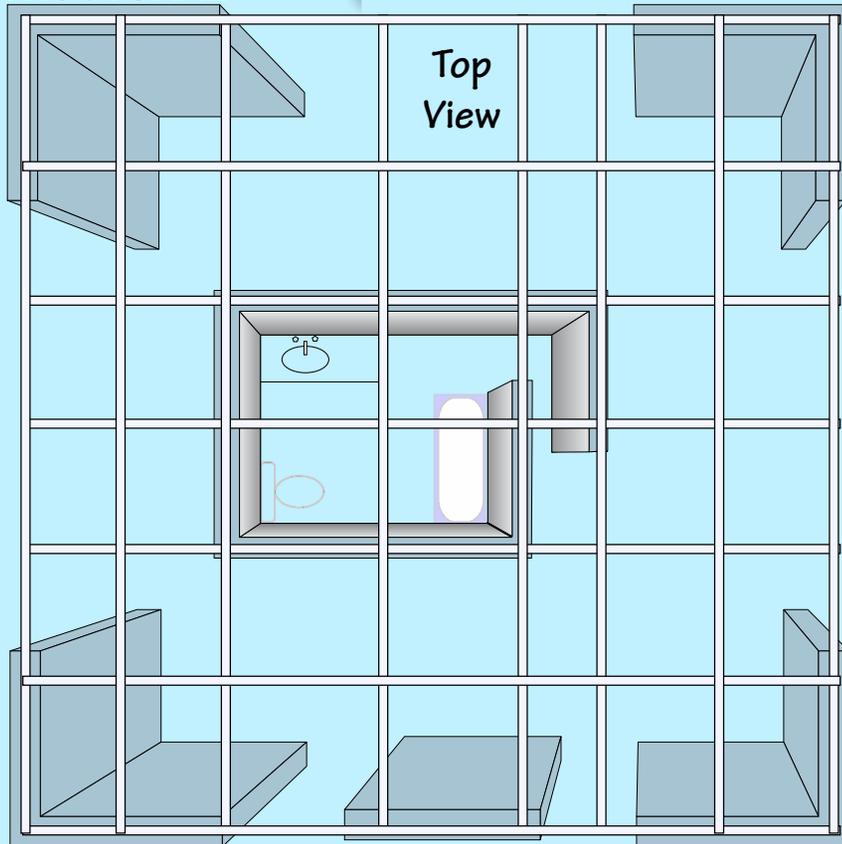
- Flashlights
- Fire Extinguishers
- First Aid Kits
- Radio (including extra batteries) - Weather Radio
- Signalling Device - e.g. Air Horn with Batteries.

Bring also:

- Food Personal Cell Phones Document Files Laptop computer



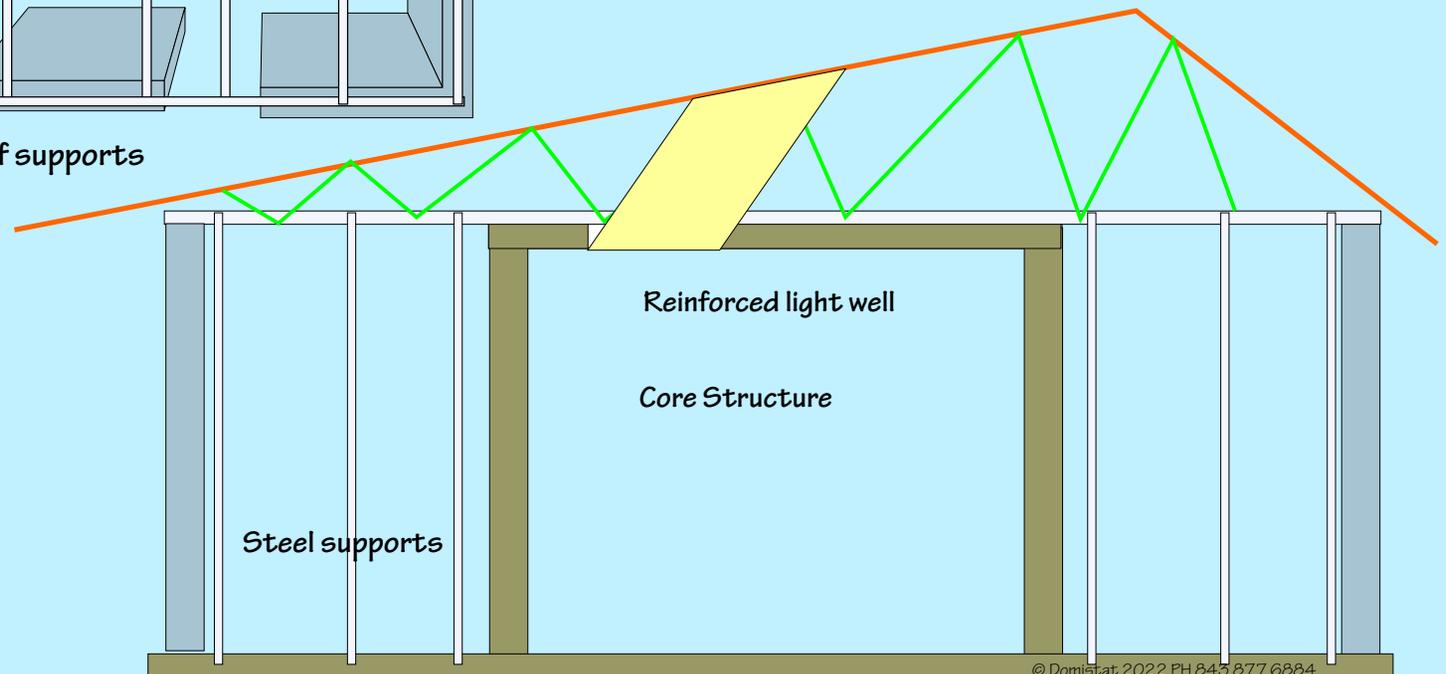
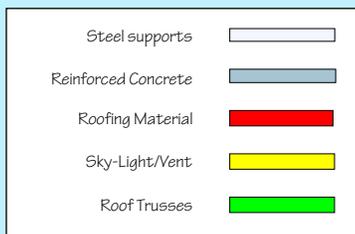
Built like a Bridge!



Domistat Bathroom Core

When used as a Central Core support, the structure can have steel reinforcement beams attached and further supported at external walls.

Load bearing steel roof supports



Domistat Safety Reinforced Concrete Bathroom Module

Example Layout

12' x 12' floorspace - 120 sf usable.

Reinforced concrete slab floor throughout house.

Heavily Compressed aggregate/ soil base under Bathroom area.

Reinforced concrete slab walls throughout room Bolted to Floor and Ceiling or Fully Pre-Cast with Acryete Rod Lighting

Laminated Glass / Acrylic / Glass Window Able to be covered by Reinforced WC Door in Lock-Open position

First Aid and emergency supply cabinet.

Water available from underground tank or well.

Emergency hand/foot pump available.

Low voltage emergency lighting with battery backup.

Tell-tale flashing lights to exterior.

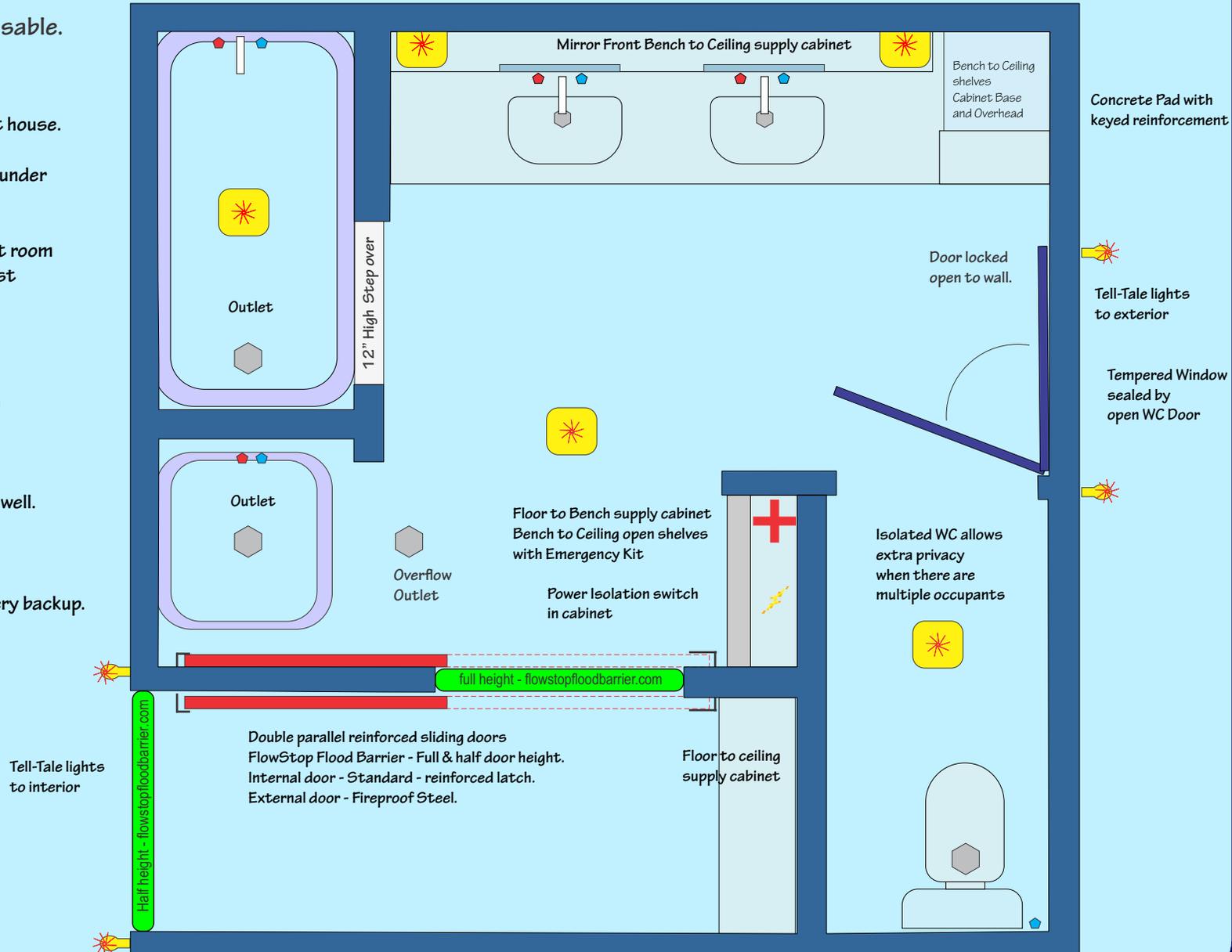
Power Isolater switch to cut off power to main house or entire property.

Fully Wheelchair accessible.

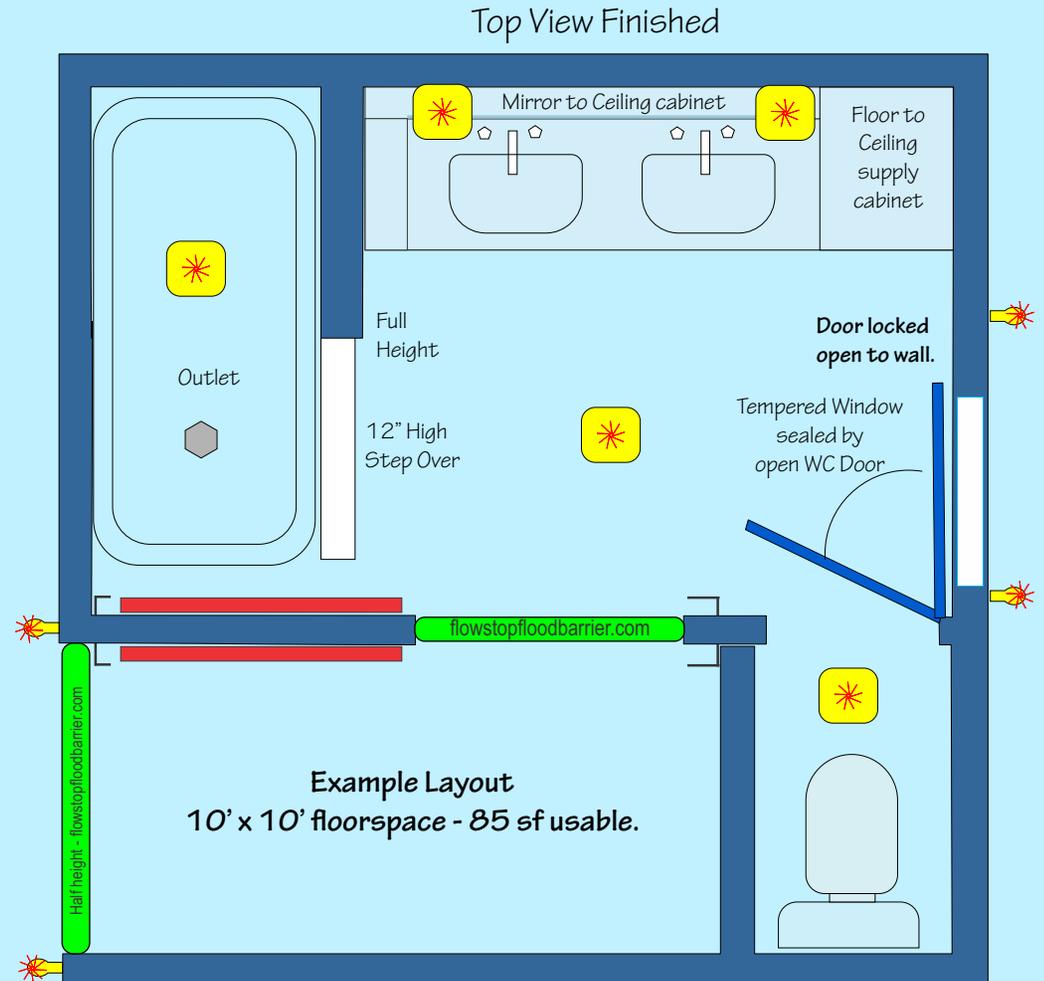
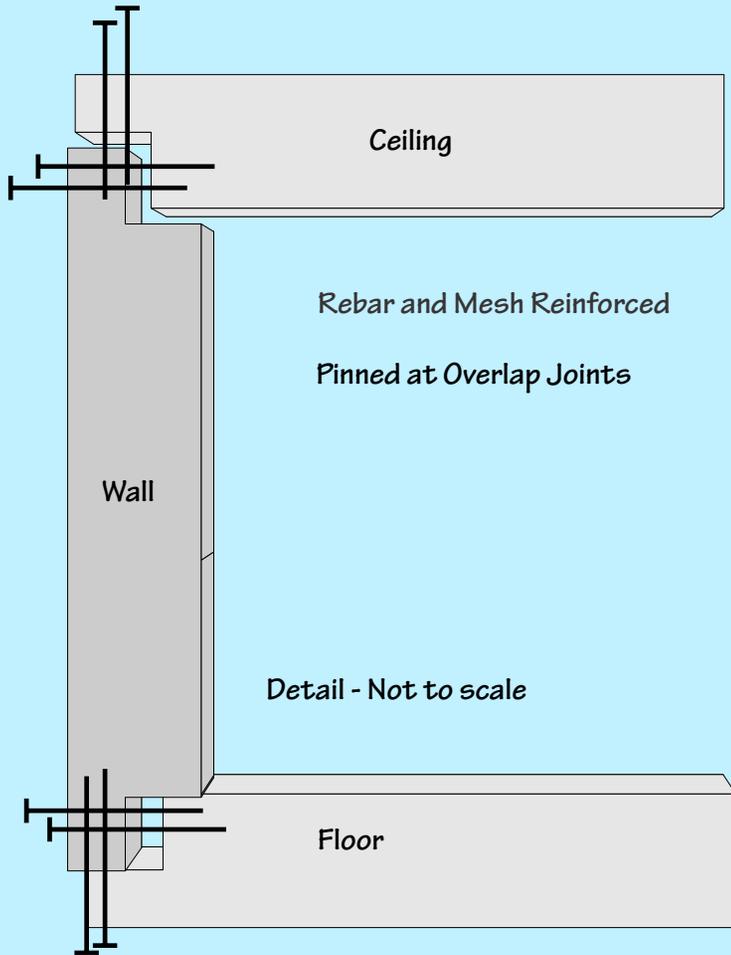
Optional Flood Barriers

ICC 500 Impact Ventilation Shutters

Top View Finished

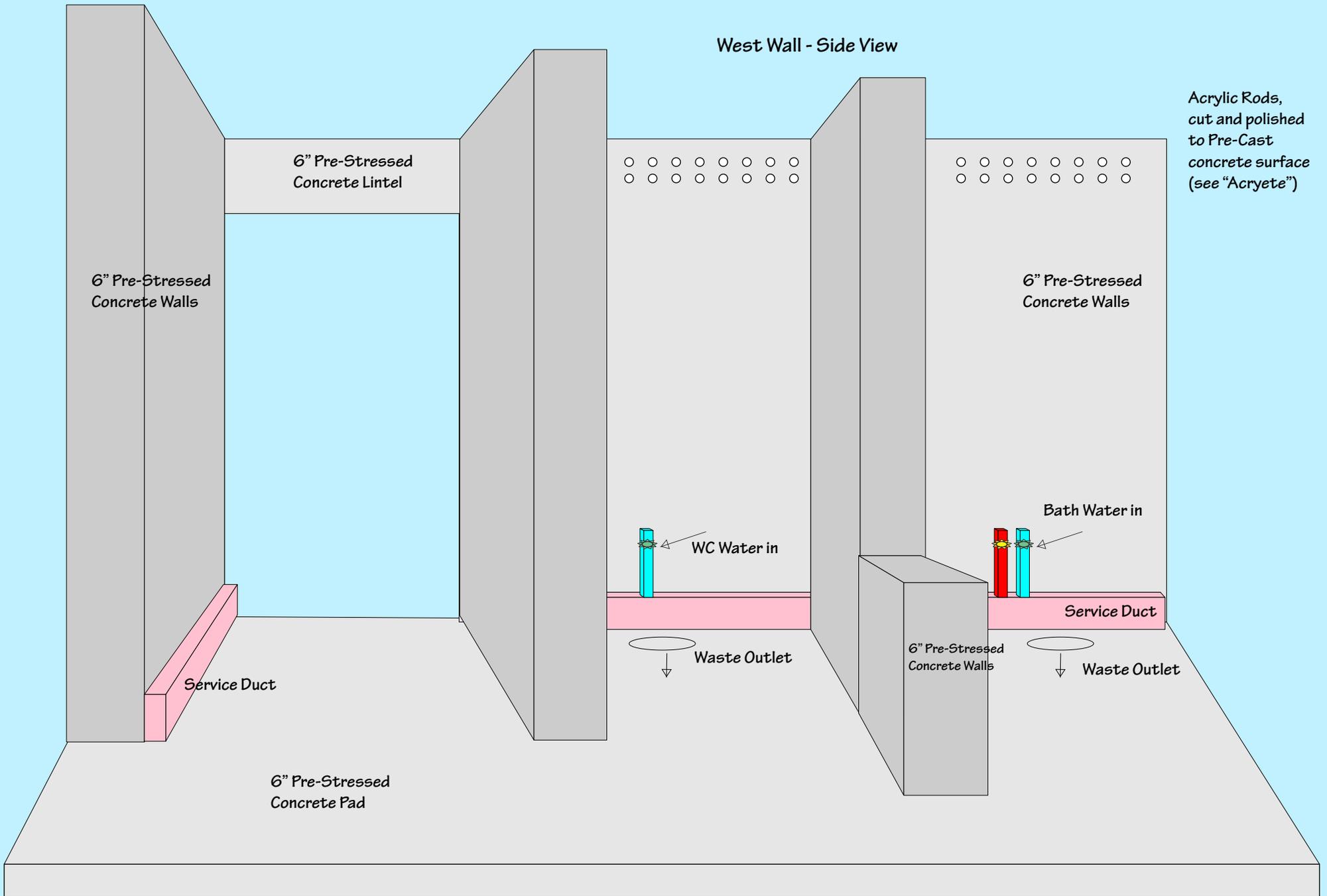


Domistat Safety Reinforced Concrete Bathroom Module



Where full Pre-Cast rooms are not viable, Slab Construction may be required.
Also ideal for 'Demountable' units for use on major construction sites or as a Post-Fix to provide greater safety over existing facilities



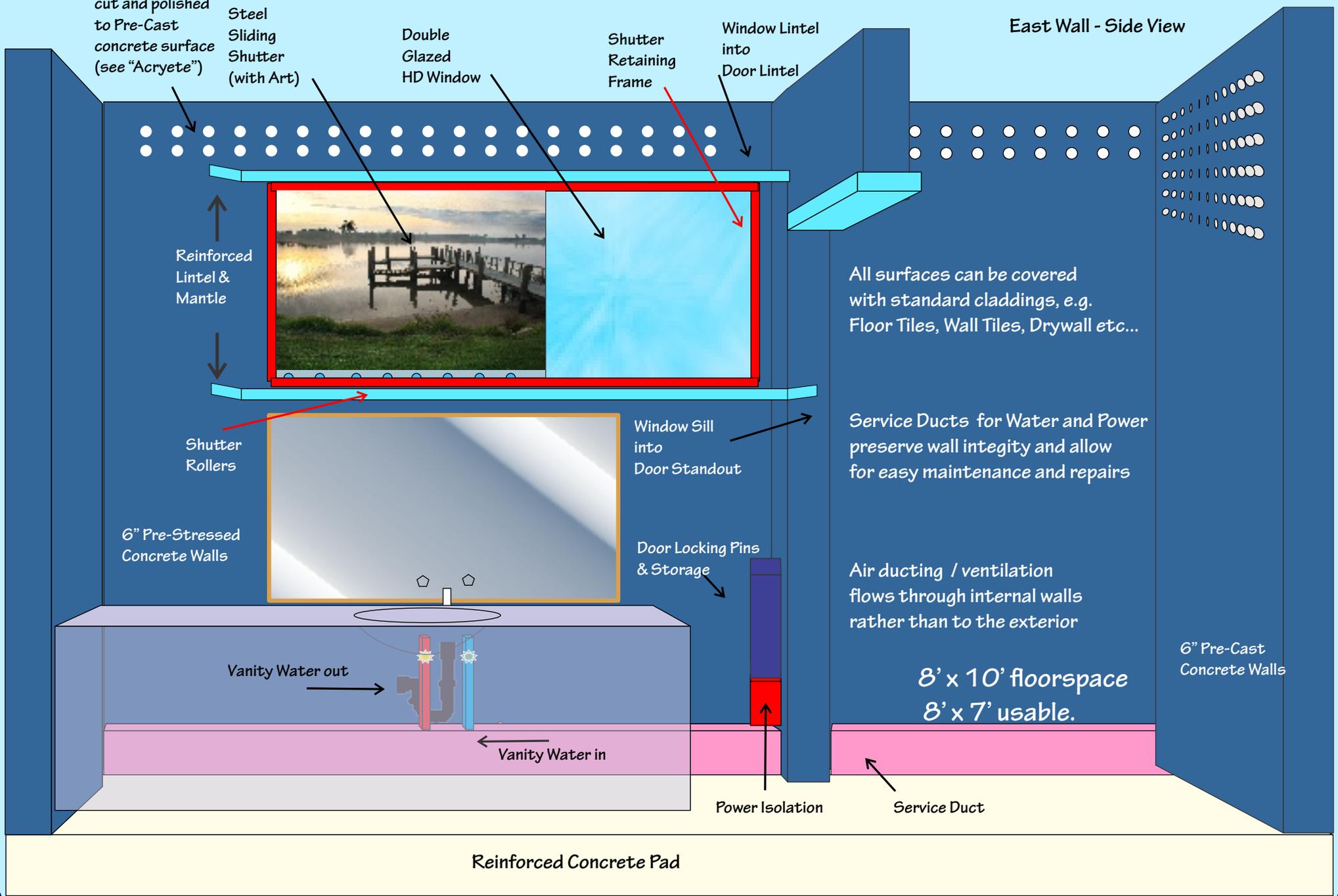


RESIDENTIAL STRUCTURAL

TORNADO BATHROOM

INNOVATION

East Wall - Side View



Top View

8' x 10' floorspace - 8' x 7' usable.

Floor - Concrete Pad

Walls - Reinforced Concrete

Ceiling - Reinforced Concrete

Door 1 - Fire Rated Steel - Breakaway

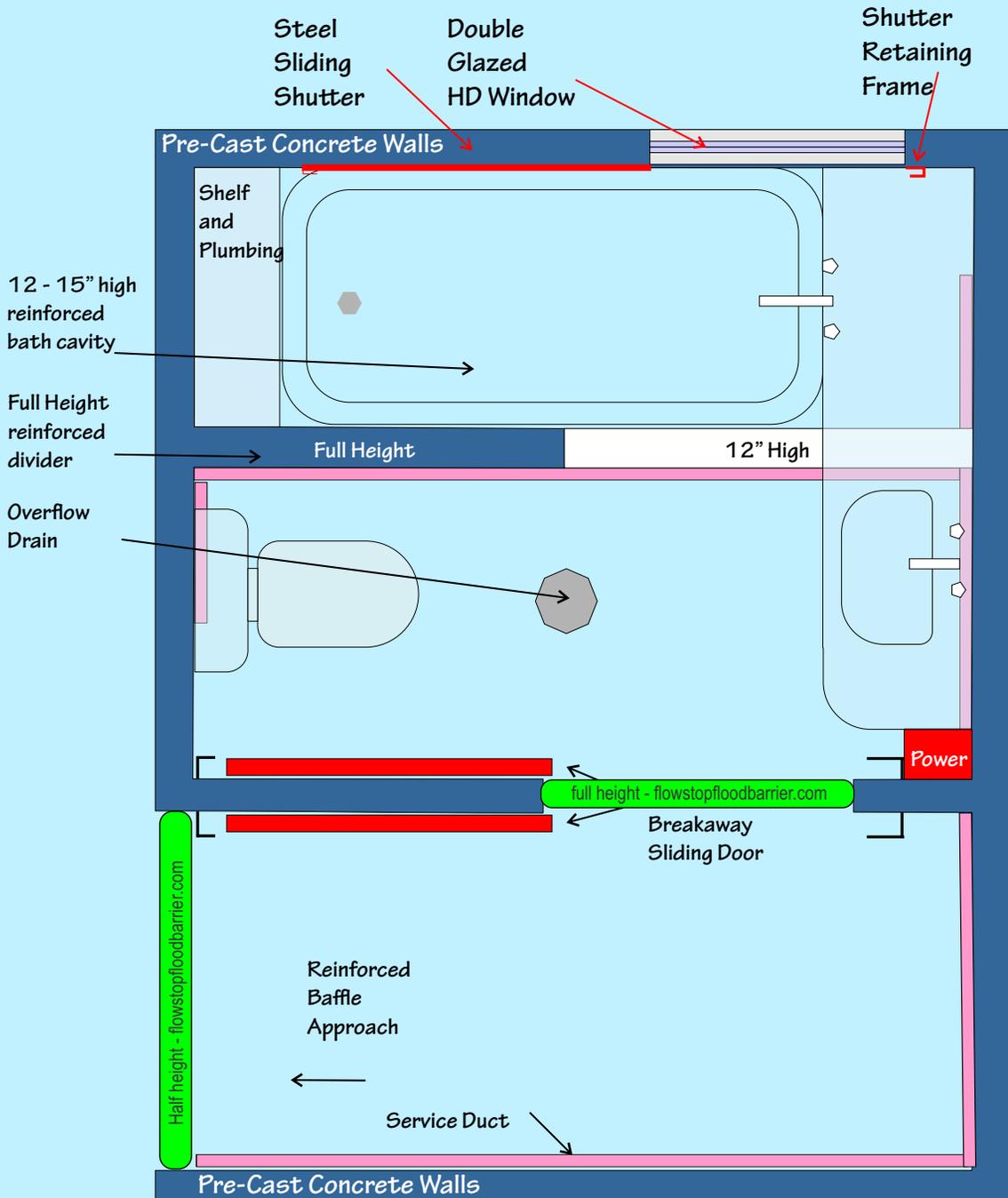
Door 2 - Standard - Breakaway

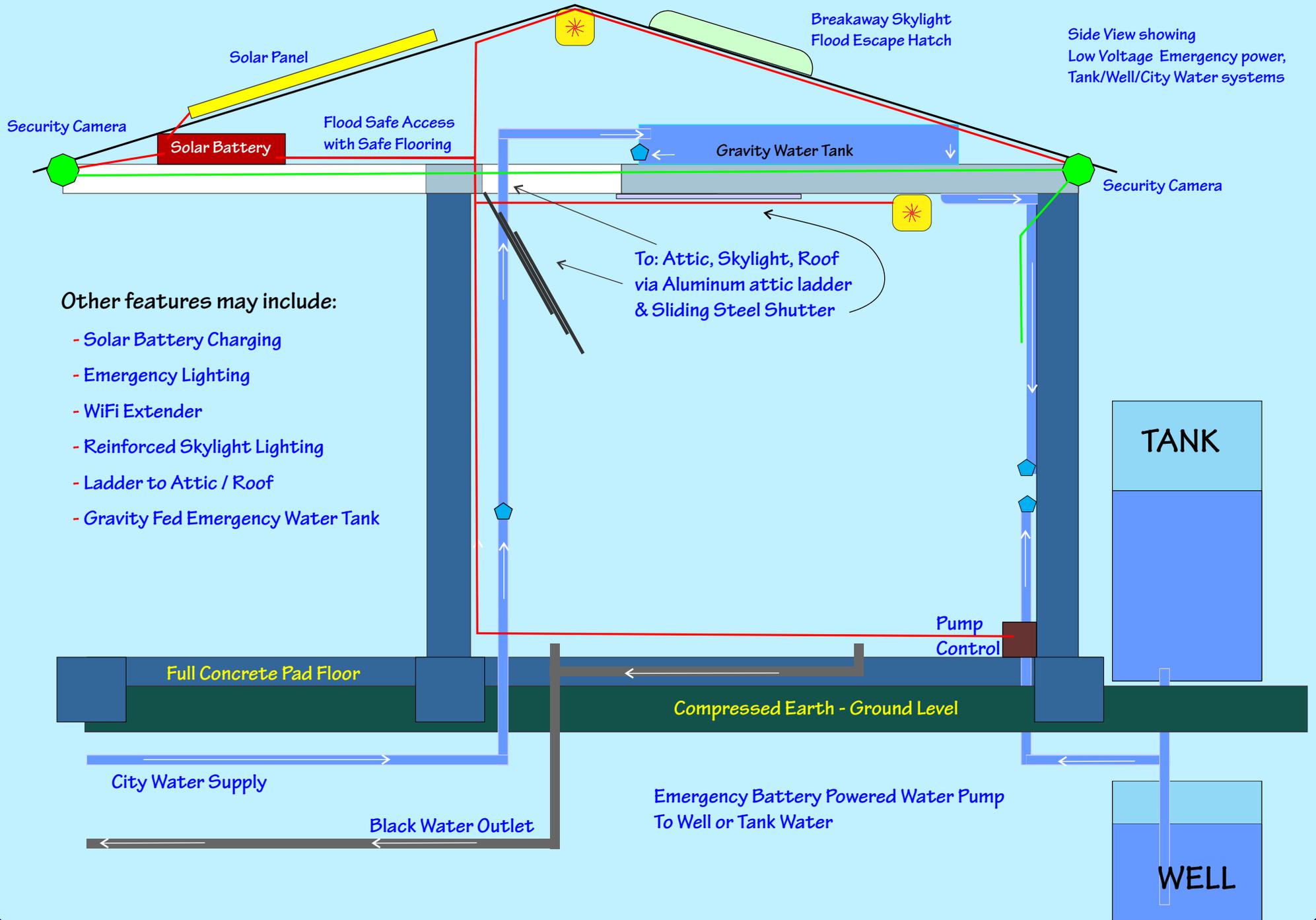
Windows - Reinforced + Slide Steel Hatch

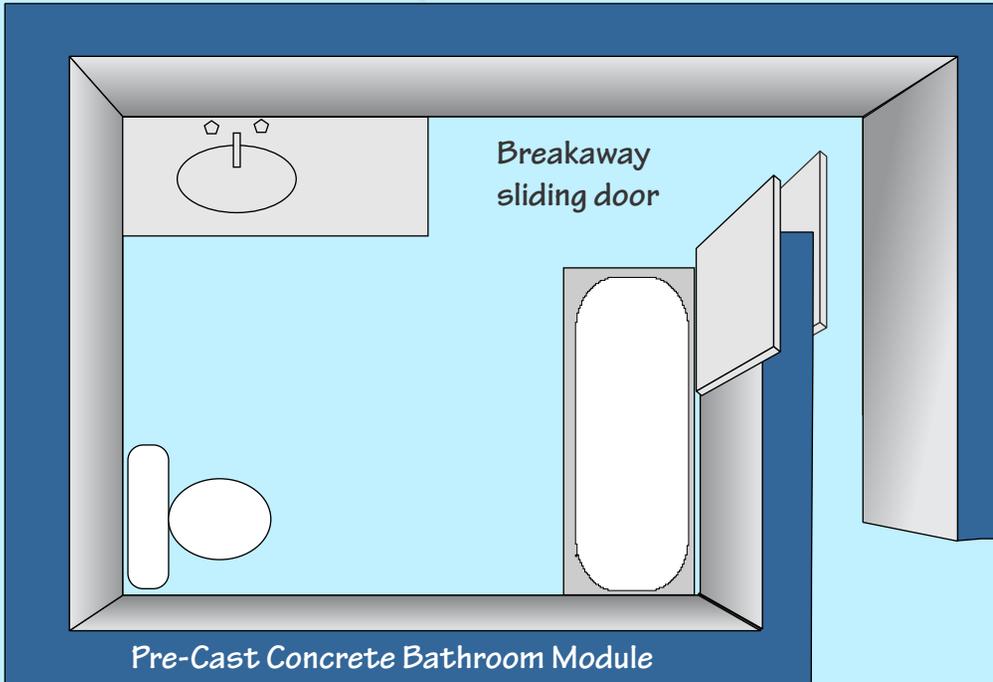
Skylight - Slide Steel Hatch

Outlet Drain - leads to P trap and Sullage Pit

Emergency Kit in Cabinet over Bath







In daily use, the Tornado Bathroom is virtually indistinguishable from a standard family bathroom. Fully tiled and decorated, with all the amenities required, the extra functionality of the room is entirely hidden from view.

When needed, the true nature of the room reveals the life saving benefits required.

Doors and windows sealed, external cameras maintain a view of the outside world, even when power is cut. Lighting is maintained and fresh water is always available.

While the roof is also completely sealed, fresh air is still ducted into the room, and external flashing lights alert First Responders of your presence.

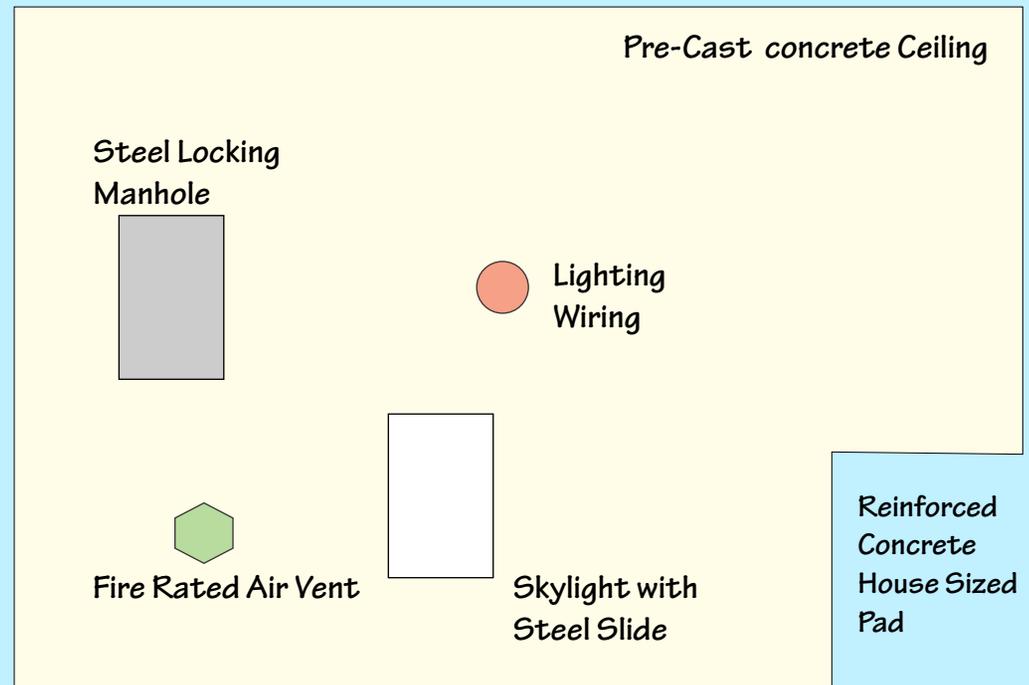
Once inside, the occupants cannot be trapped, the breakaway door opens to a pre-cast secure baffle inside the home.

In the event of catastrophic flooding, a drop down ladder allows occupants access to the finished attic, and if required, access to the rooftop.

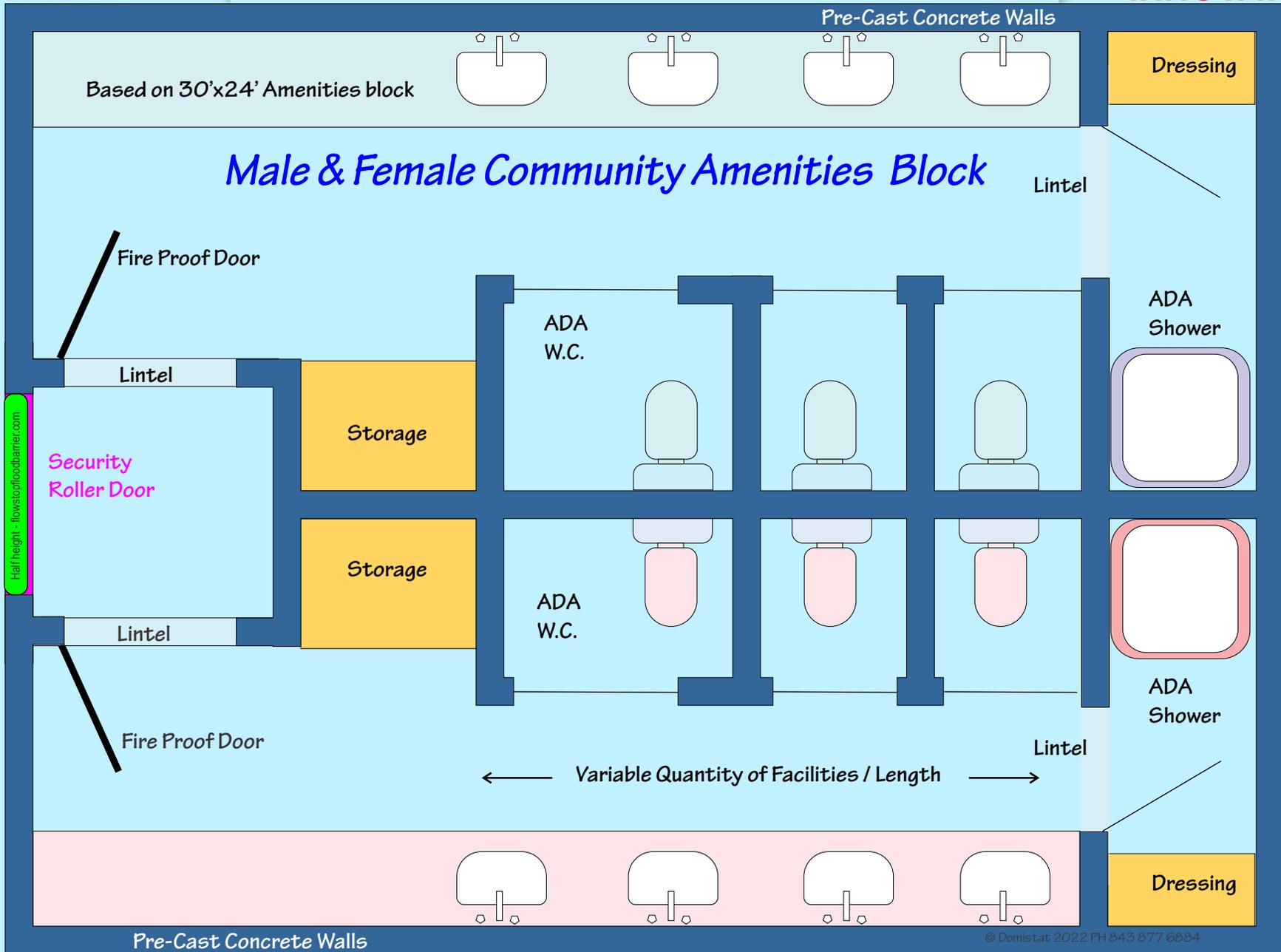
A flag can be raised to further identify that there are occupants inside.

Unlike basements or external bunkers, where access can be covered by debris, and can actually trap people inside, the Tornado Bathroom allows people to safely shelter in place and exit whenever it is safe to do so.

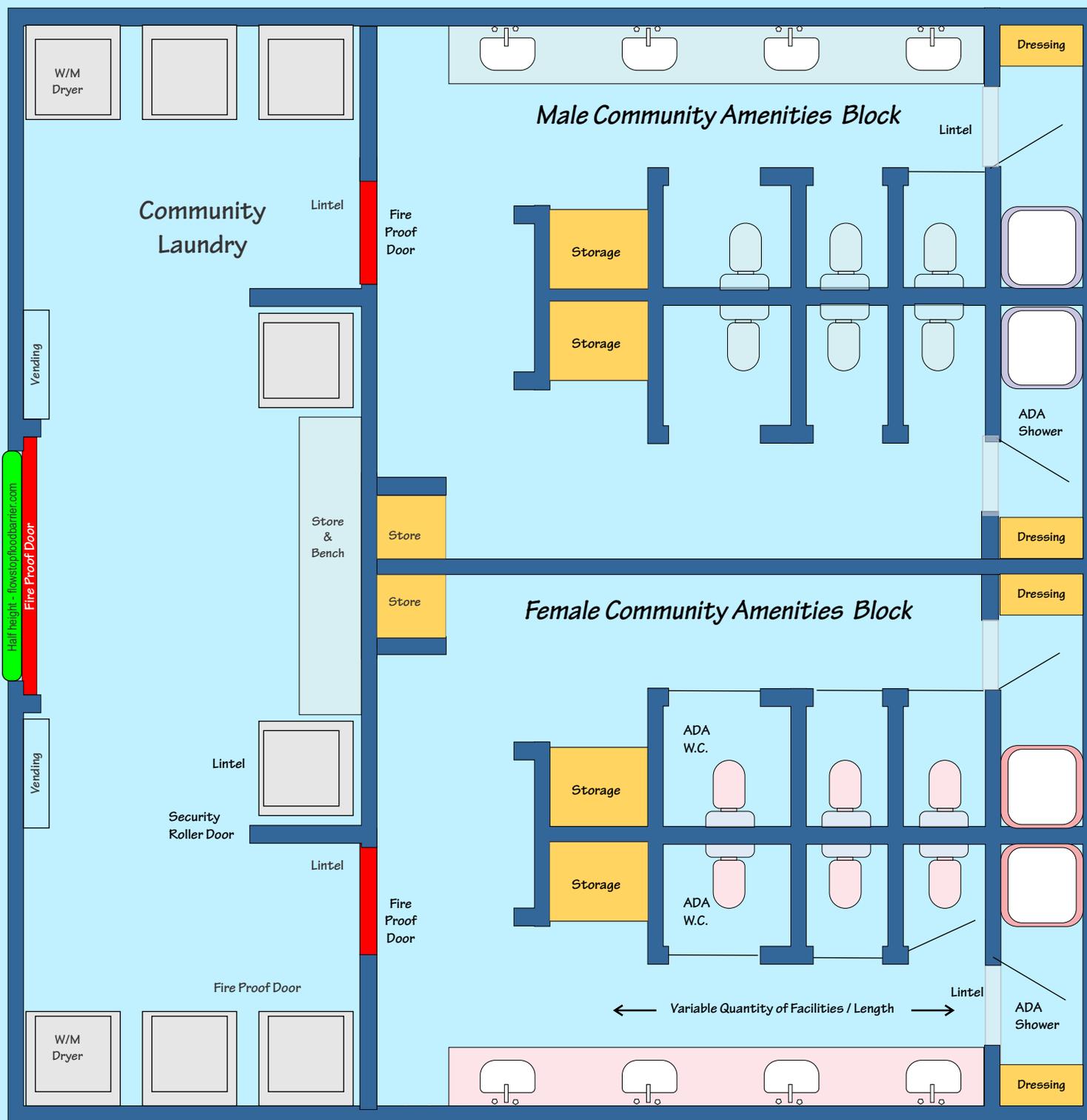
The Tornado Bathroom is designed to be safe from the elements but accessible to people, so should not truly be relied on as a "Safe Room" in the event of home invasion.



TORNADO BATHROOM



An Amenities block is ideal for gated style communities, especially when located near other facilities such as swimming pools, recreation centers or when adjoining other community facilities



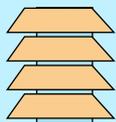
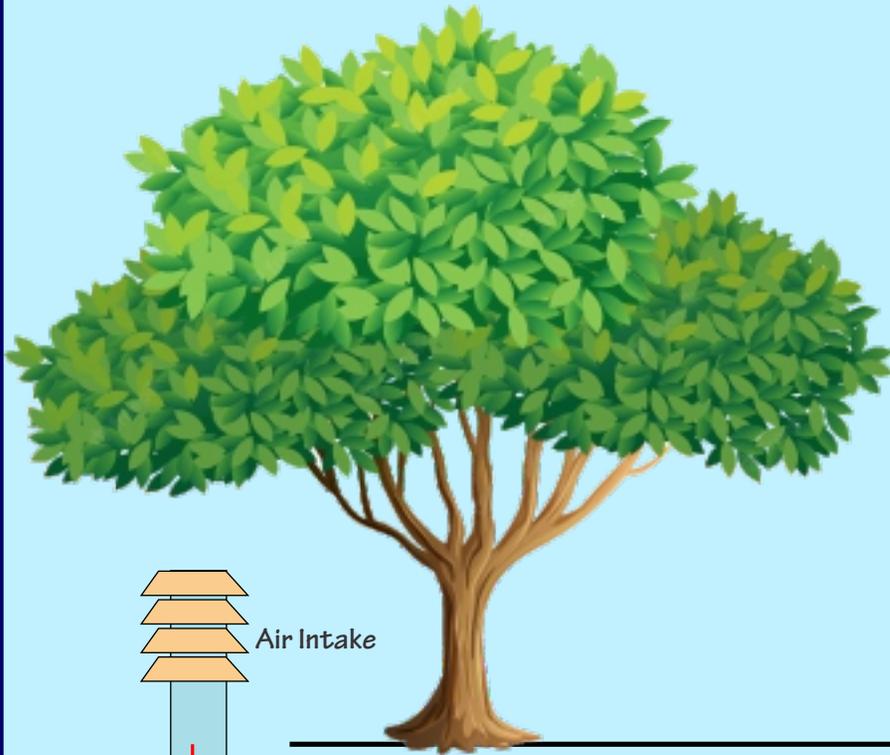
Community Amenities Blocks for Tiny House Communities, Modular, Company Towns, Temporary Accommodation, RV and Camping Grounds can vary greatly in size and variety of amenities included.

This sketch is designed to show the building integrity that can be provided by reinforced concrete construction. (shown in dark blue)

By having all internal walls fully reinforced, construction is simplified and the building is even more resilient.

Direct & Windowed ventilation gaps can be managed by occupants with sliding steel shutters, as used in residential bathrooms.

Domistat Safety Reinforced Community Bathroom Module



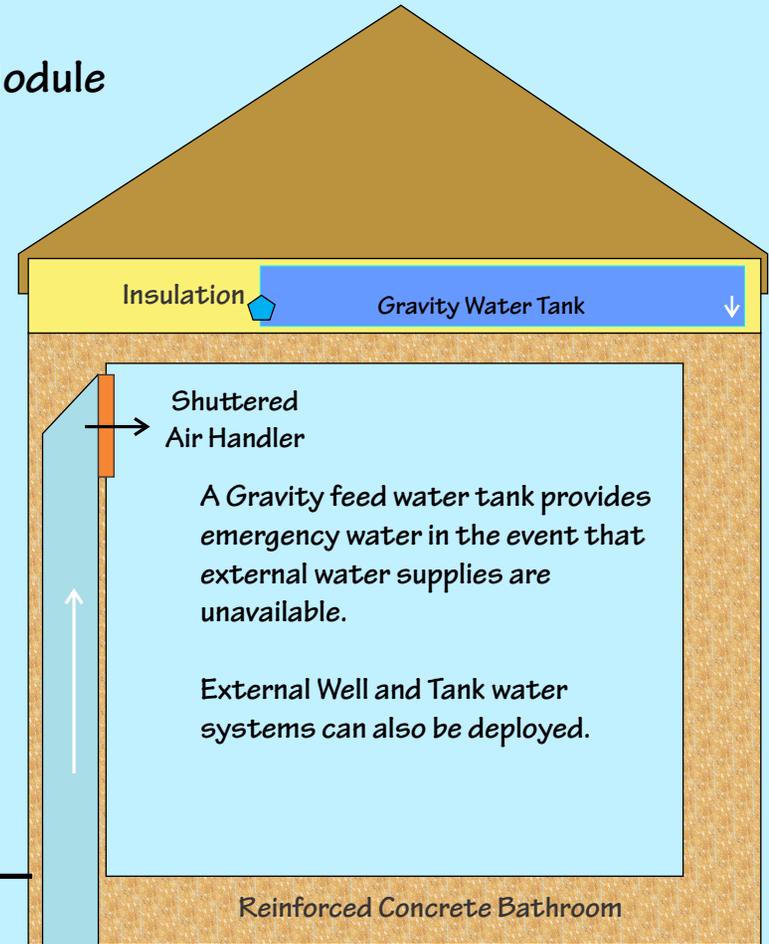
Air Intake



min. 6ft

Earth / Air Tunnel provides stabilized ventilation for long duration occupancy.

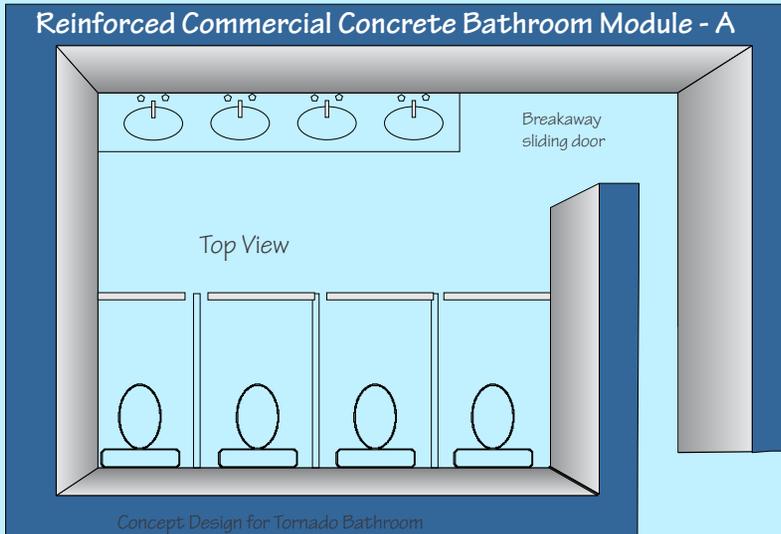
Air Stabilization Duct



To protect occupants further, community based Tornado Bathrooms should always include protected Air Handler's to ensure an adequate flow of air, even when the rooms are sealed against the elements. Earth / Air Tunnels are a cost effective method of providing continual ventilation.

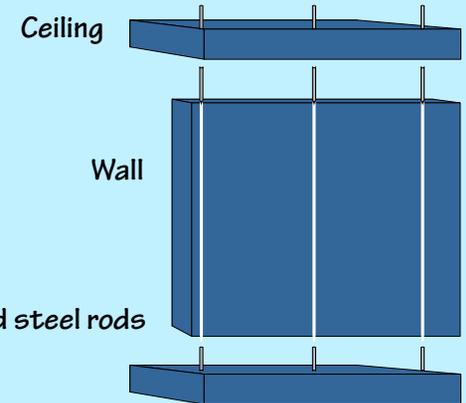


Reinforced Commercial Concrete Bathroom Module - A



Commercial and Industrial vary widely, so custom plans can be drawn to accommodate all requirements.

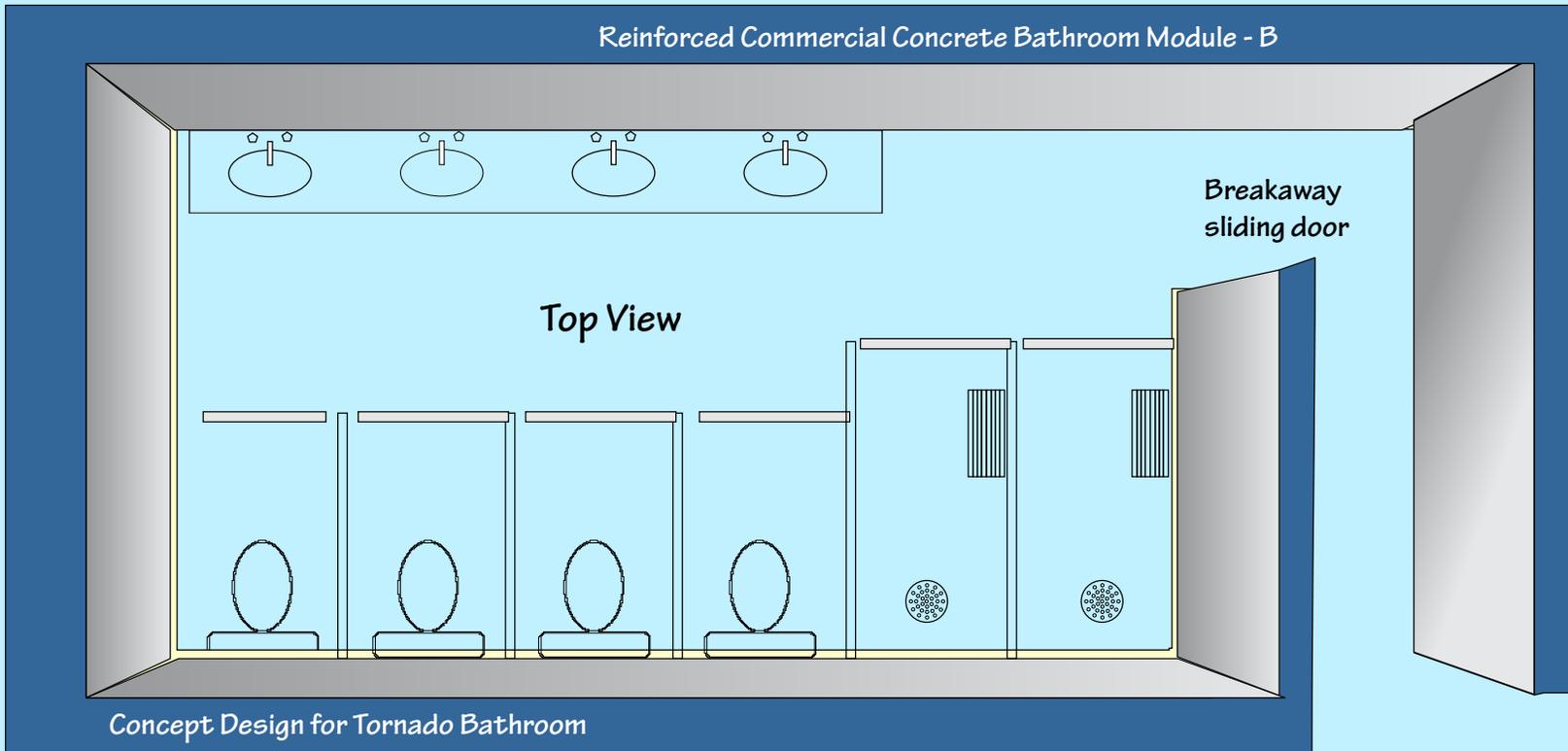
Size limitations may require reinforced concrete slab construction rather than full pre-cast concrete



Secured via reinforced steel rods

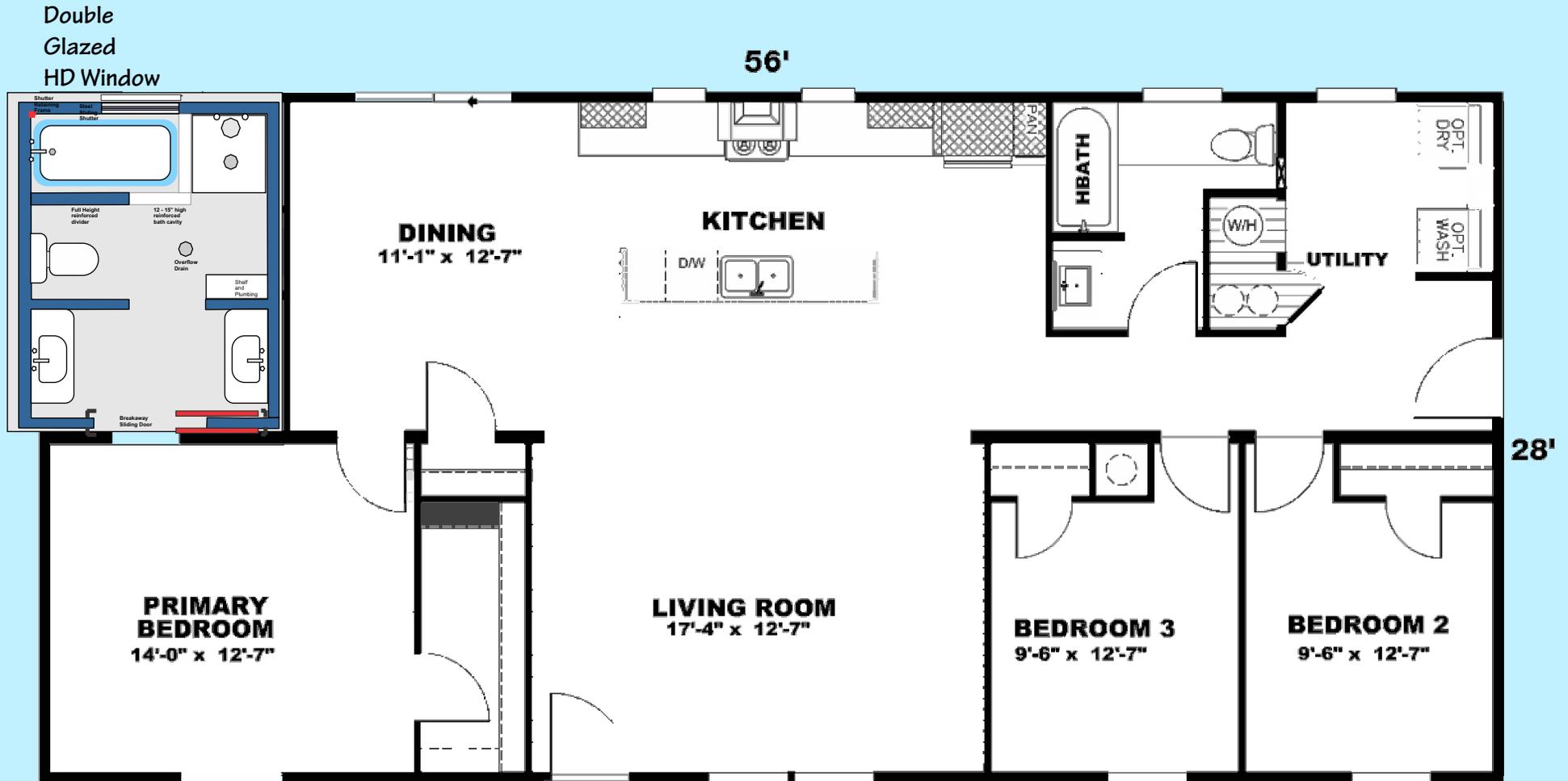
Domistat Safety Reinforced Commercial / Industrial Bathroom Module

Reinforced Commercial Concrete Bathroom Module - B



Weather Sealed Pad or Base

Added to existing Modular Home to provide secondary bathroom that doubles as a Tornado Bathroom.



Modular homes can be designed without a bathroom,
so they can be attached directly to the Domistat Module

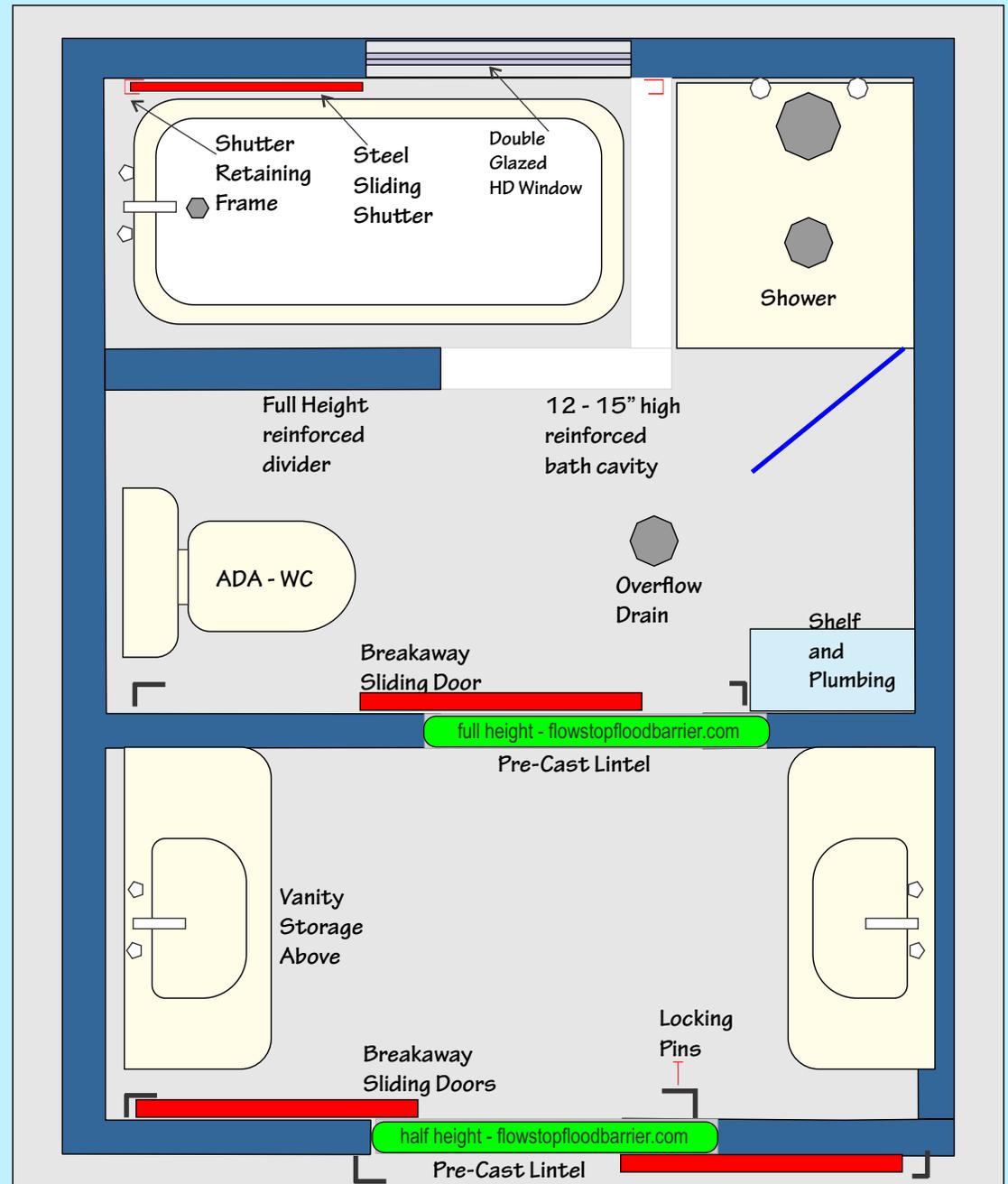
Domistat Safety Reinforced Concrete Bathroom Module

Delivered and installed Prior to
Boxabl or Modular Home
Delivery / Setup

Pad poured with outlets
Tornado bathroom placed
Used as lock-able storage during setup.
Tiled and fitted on-site
Modular home delivered
Bolted to bathroom.

Floor - Concrete Pad
Walls - Reinforced Concrete
Ceiling - Reinforced Concrete
Door 1- Fire Rated Steel - Breakaway
Door 2-Standard - Breakaway
Windows - Reinforced + Slide Steel Hatch
Skylight - Slide Steel Hatch
Outlet Drain - leads to P trap and Sullage Pit
FlowStop - Flood Barriers

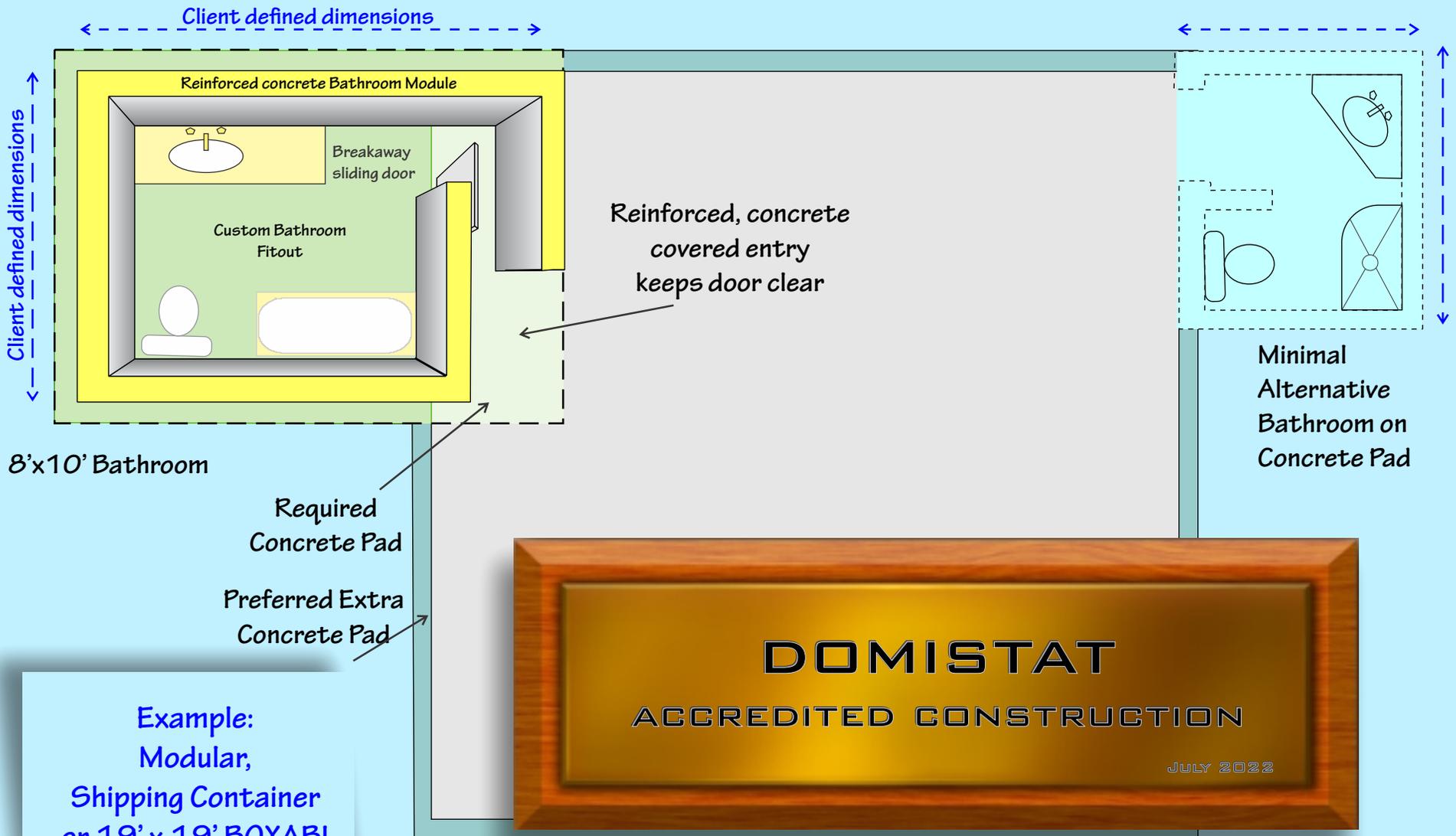
8' x 10' floorspace



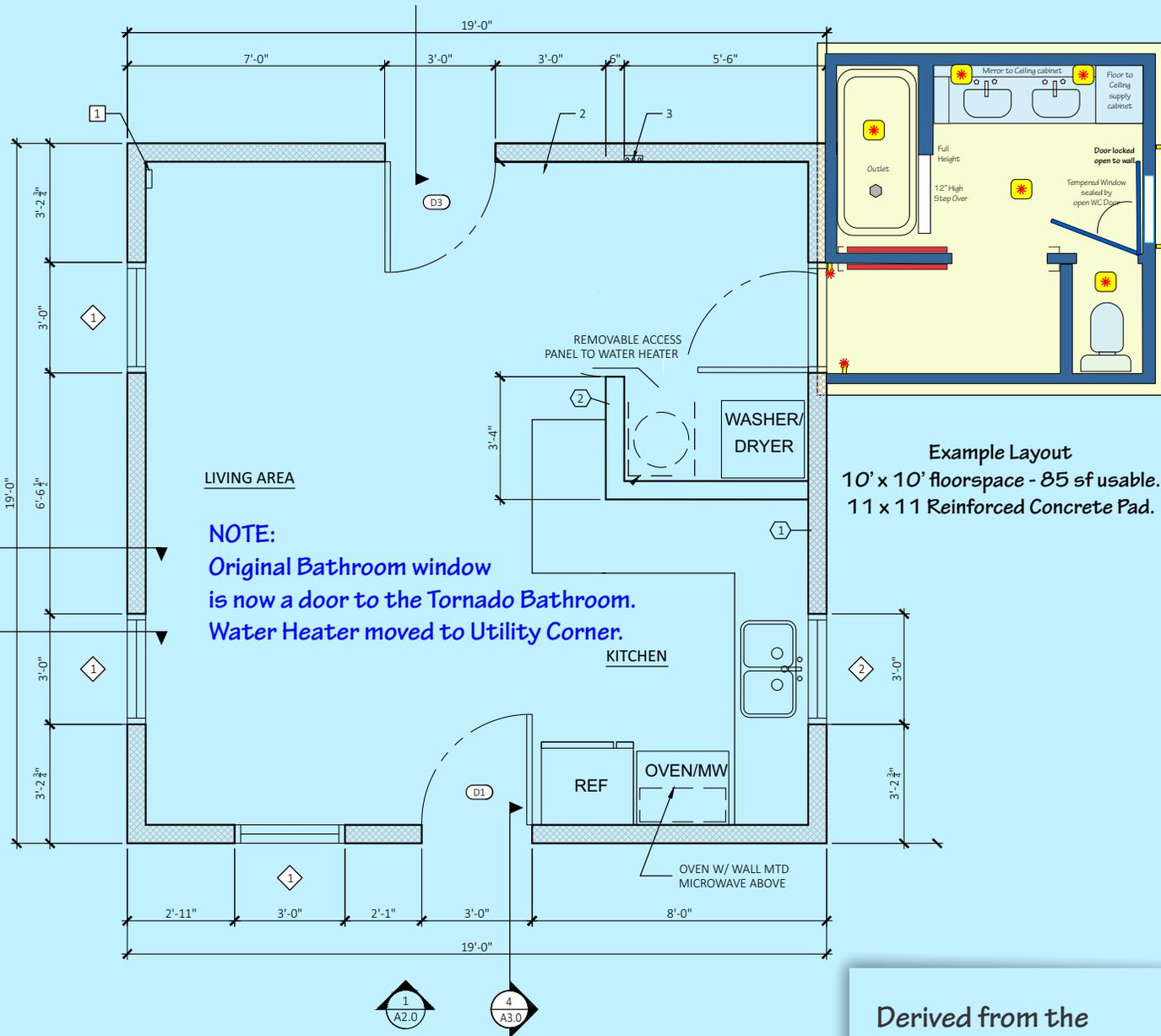
Attach to main house structure

Boxabl / Modular Residence with Tornado Resistant Bathroom Module

Simplified view



Example:
Modular,
Shipping Container
or 19' x 19' BOXABL
Residence



The Tornado Bathroom is delivered and installed onsite prior to delivery of the Casita '3'

Site prep requires deep concrete foundation and water, sewer and all power/light connections to be 'Plugged in' to the Casita once delivered and assembled.

The rooms would be bolted to each other. The height and roof line of the Tornado Bathroom can be designed to match current or future Boxabl Designs.

The Casita3 would then include a full Tornado Bathroom, with a choice of variable sizes while providing extra living space.

See specific files re: Tornado Bathroom specs.

1 FLOOR PLAN
A1.0 Relative scale only.

Derived from the original plans of the Casita 2 from:

BOXABL INC.

5345 EAST NORTH BELT ROAD
NORTH LAS VEGAS, NV 89115, USA

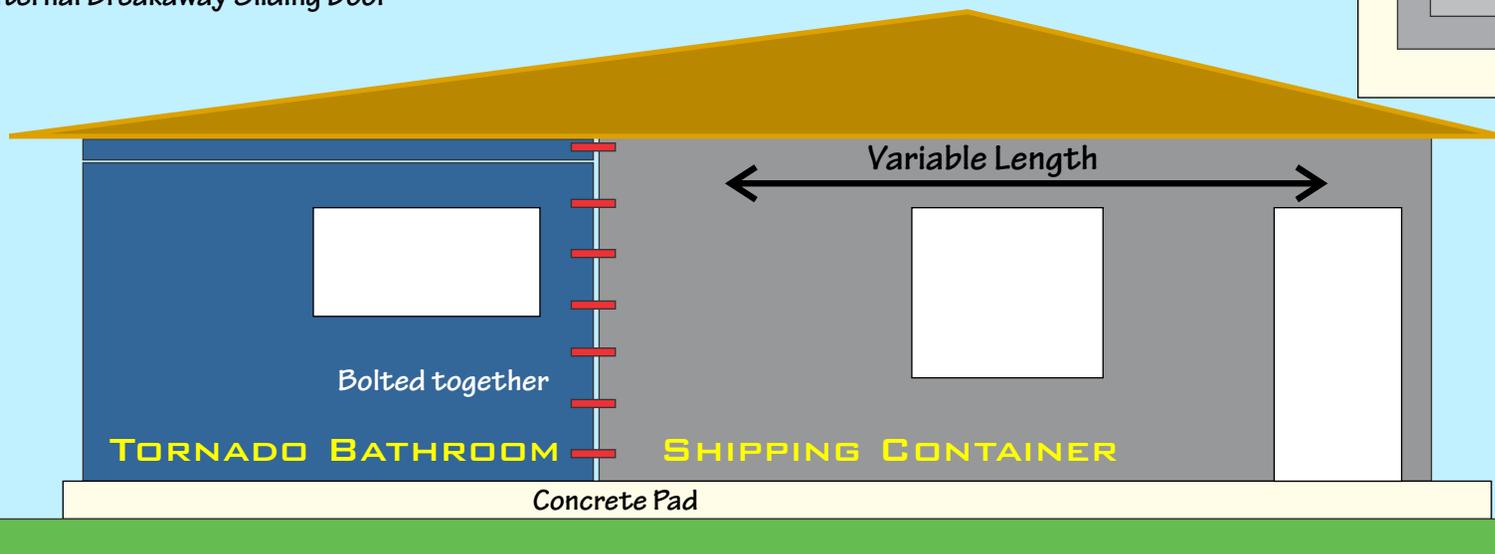
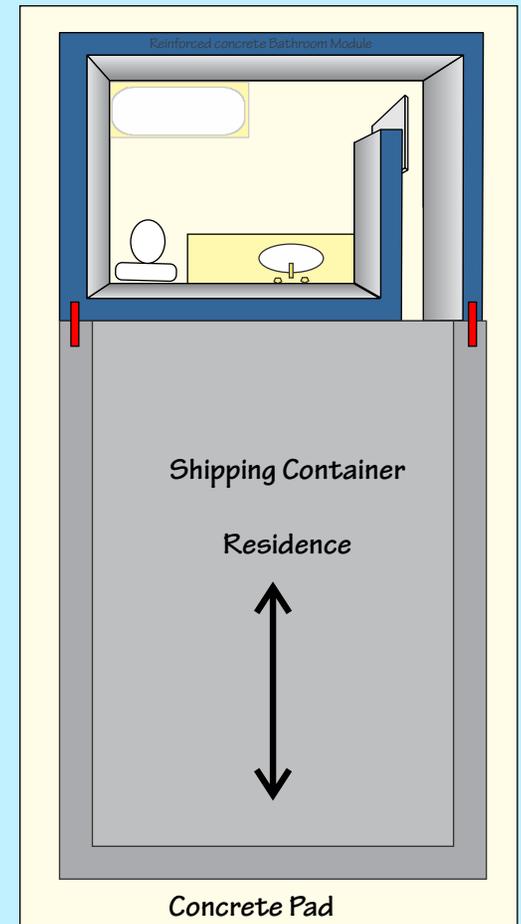
+1(702) 500-9000 HELLO@BOXABL.COM



Concept Design for Tornado Bathroom in Shipping Container Residence

Primary Features

- Precast Concrete Module
- Concrete Ceiling and Floor
- Sliding Steel Internal Window Shutters
- Sliding Steel Ventilation Covers
- Sliding Steel Attic Cover
- Sliding Steel Skylight Cover
- Internal Breakaway Sliding Door



Battery backup systems can often be located in the attic space, keeping them away from the elements, but accessible for maintenance and upgrades.

Depth of footings / foundations should be determined by soil test.

Garages and Indoor / Outdoor paved spaces should maintain a 1° pitch to allow for drainage.

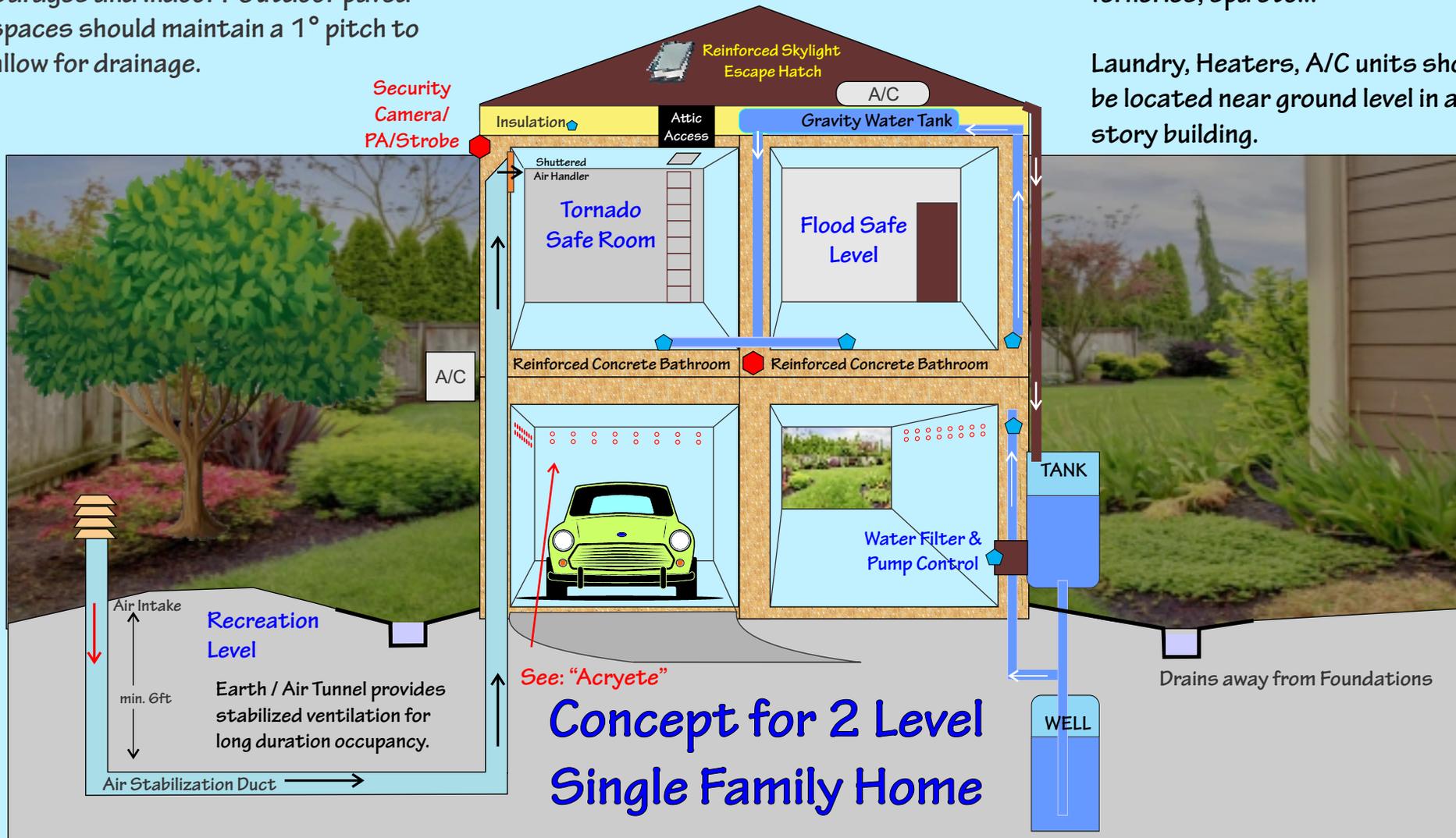
A Gravity feed water tank provides emergency water in the event that external water supplies are unavailable.

External Well and Tank water systems can also be deployed.

The house has gutters and drains all around to keep water from flowing to foundations. Some water can be recycled.

The ground floor can incorporate Indoor / Outdoor Living space, garages, ferneries, spa etc...

Laundry, Heaters, A/C units should not be located near ground level in a multi-story building.



**Concept for 2 Level
Single Family Home**



The Tornado Bathroom can be manufactured and delivered as a base module to virtually any home site in the USA. Pre-Cast Concrete companies can be authorized to produce accredited Domistat Tornado Bathrooms to order.

Once secured to a concrete pad, the bathroom is tiled and fitted to the utilities on site.

A wide variety of sizes and configurations are available to suit the style and size of home that is planned.

While the rest of the home is being built, The Domistat Tornado Bathroom can double as a lockable toolshed for contractor use.

Devastation like this occurs regularly in the USA

Insurance providers should be able to reduce premiums for all homes where the Domistat Tornado Bathroom is installed.

We call on the Federal, State and Local Governments to give incentives to anyone wishing to upgrade their personal security this way.

The value of housing will increase substantially, based on an Accredited Domistat Tornado Bathroom built into the home.



Pre-Cast Concrete Saves Lives

Pre-Cast Road Bridge Culverts were the inspiration for the Domistat Tornado Bathroom.

Pictured are a series of 8' x 10' x 6' culverts being positioned for a roadway.

Note the crane hooks are currently attached to reinforced 'eyes' in the top of the culvert.

This is the primary proposed deployment scheme for the Pre-Cast version of the Domistat Tornado Bathroom.

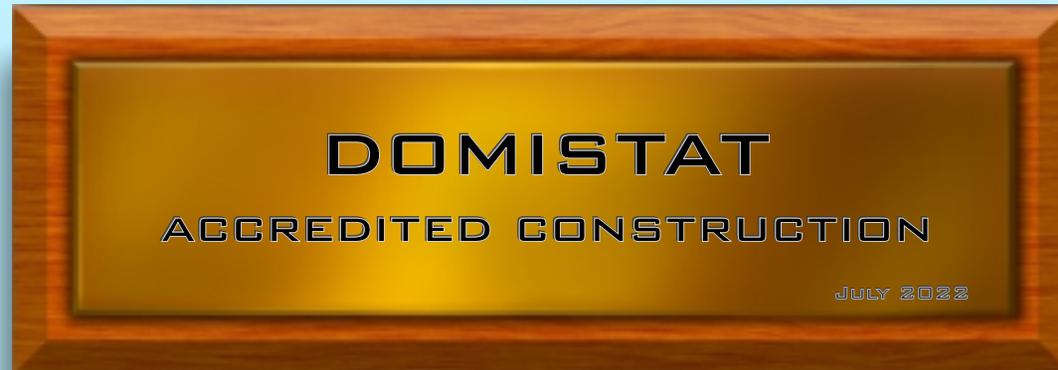


This photo shows a part of Haiti after Hurricane Matthew tore through in early October 2016.

Note that even cinder block housing offered no protection for human safety.

In the event of a Category 5 Hurricane, the only buildings that have any possibility surviving anything other than total destruction are those with fully reinforced construction, with interlocking, reinforced steel in concrete.

Pre-Cast construction offers the safest way to guard against the forces of natural disaster.



Rather than sell Tornado Bathrooms, Domistat is considering licensing their Named Usage for a nominal fee and providing a Certificate of Authenticity and Display Plaque to verified Building Contractors.

This allows anyone to use these concepts free of charge, but retains value and goodwill for contractors who maintain their training and credentials, as well as promoting the Authentic Domistat Tornado Bathroom.

We believe that a more diverse range of designs will continue to improve this concept and that housing values will increase as the long term value of an Authorized Domistat Tornado Bathroom will be proven.

In time, we feel that single family home allotments will require a suitable Placement Pad and Tornado Bathroom "Shell" to be in place before Building Permits will allow the construction of the rest of the residence.

Further Engineering Studies are required to Certify Fire Resistance, Flood Mitigation and other tolerances to Natural Disasters. We are actively looking for suitable partners to explore every possible contingency.



Perhaps our ancestors first crawled into caves when their rough encampments were blown away in a storm. Ever since then, mankind has continued to progress his housing out into the open, struggling with the cost of quality materials and the suitability to combat the elements.

Every year, we see devastating footage of homes and lives torn apart, deaths, and rolling poverty caused by natural disasters.

The Government comes along afterwards and attempts to alleviate some of the suffering, but how powerful would it be, if every home had a Tornado Bathroom, that was also a building core, a structural support for any level of home to be built around?

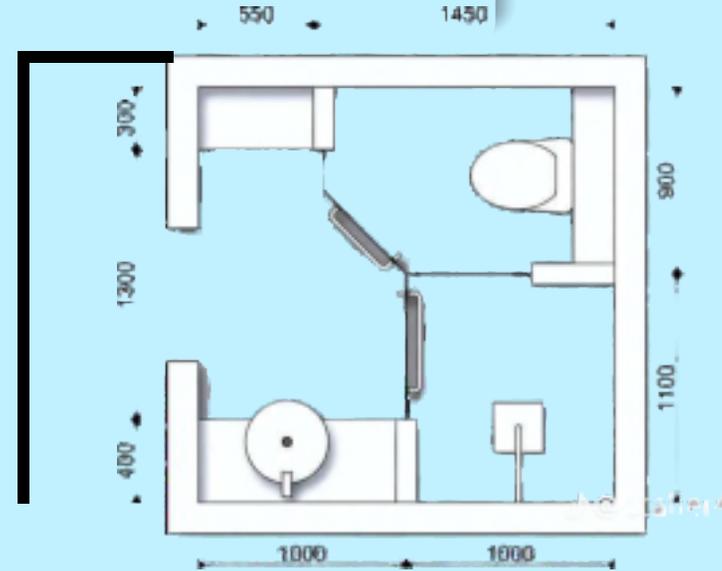
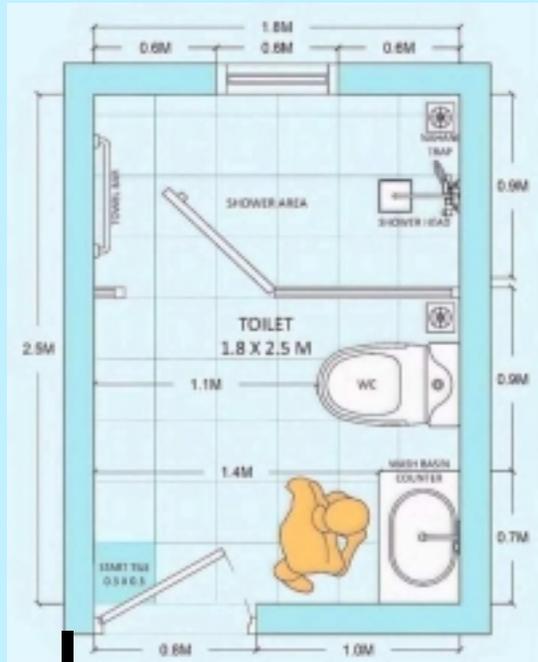
A Modular Home or Trailer could be bolted onto a Precast Concrete Tornado Bathroom, which may even provide an anchor for lightweight buildings.

A Custom Home is simply built around the Tornado Bathroom core, but can use the stability to cantilever other parts of construction.

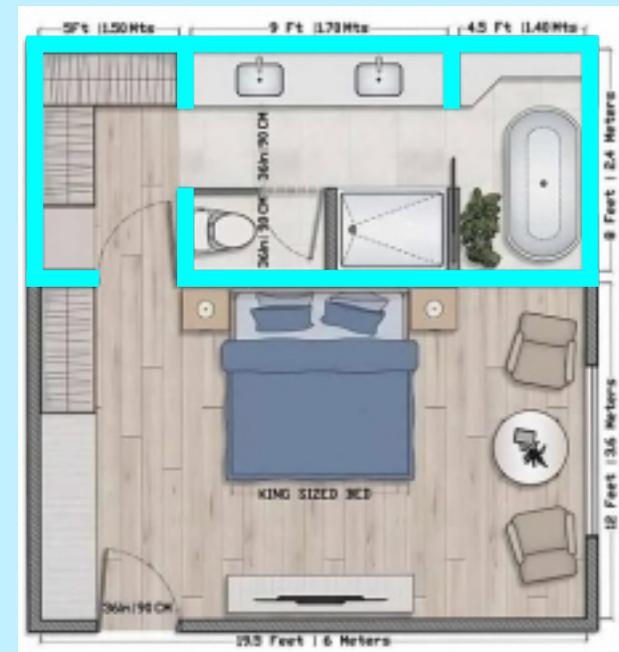
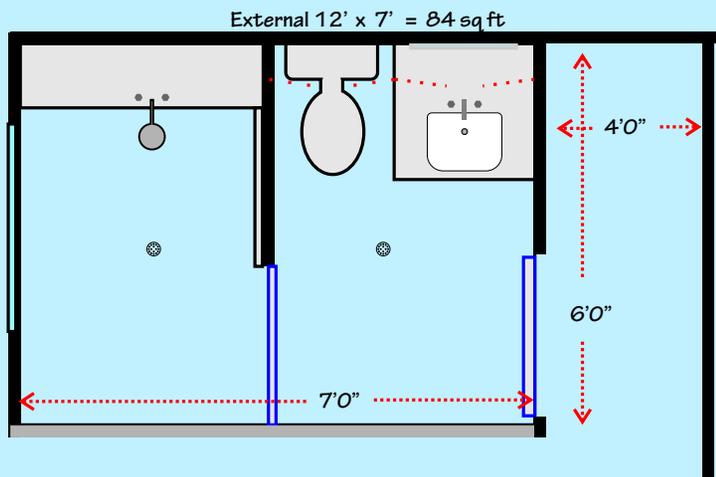
We have all seen brick fireplaces still standing after a natural disaster. We all need a bathroom in our home. None of us can afford the cost or real estate to construct a backyard bunker that would rarely be used and generally house more spiders than people.

By creating a mind-set that says, "All homes need the basic infrastructure of a Tornado Bathroom", we accept that storms do happen, and even if some areas of the house are damaged, there will be the basics to build on from...

Hope.



Submitted
Bathroom
Designs

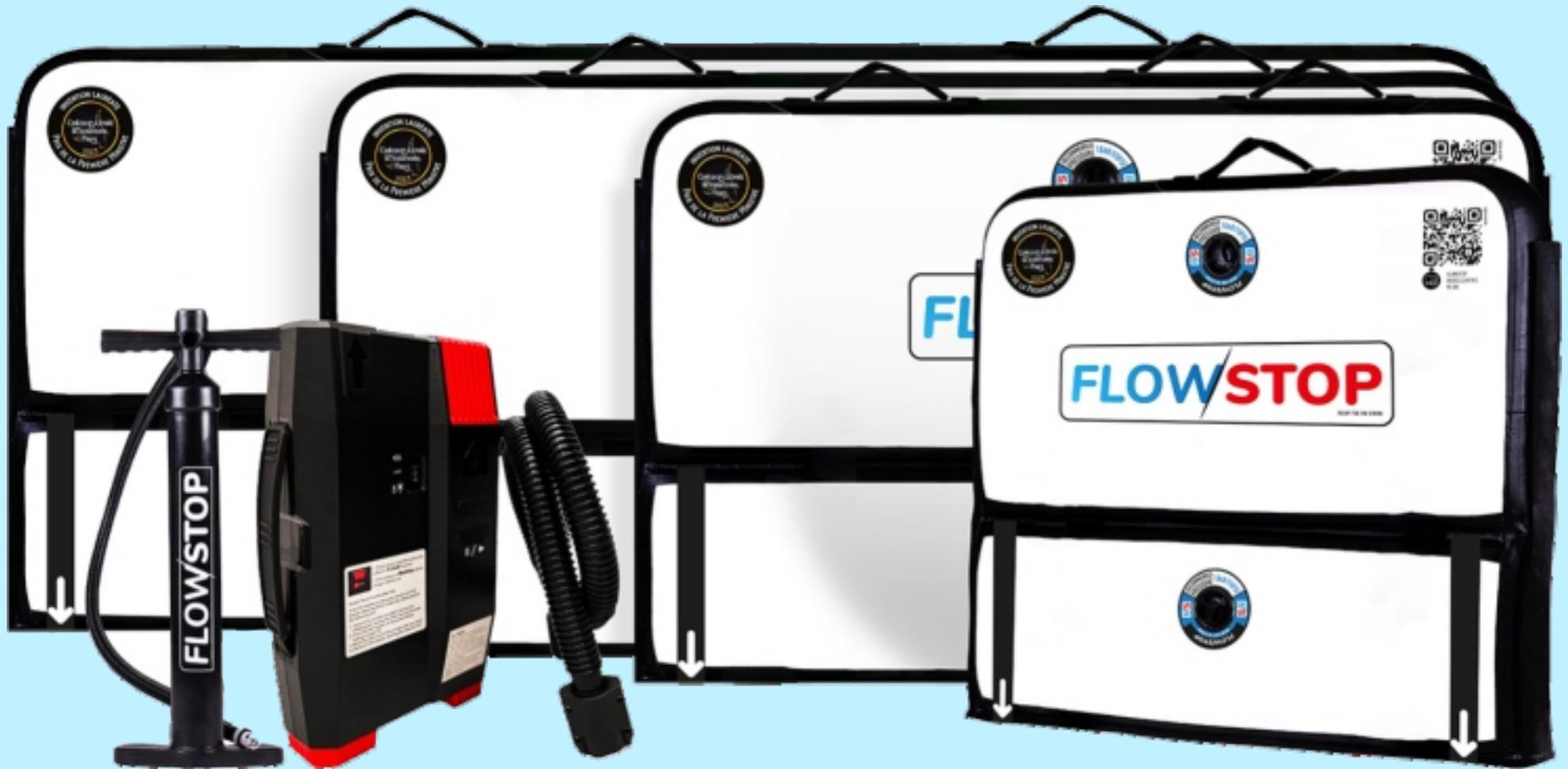


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TORNADO BATHROOM

FLOWSTOP FLOOD BARRIERS

INNOVATION



The FLOWSTOP range of products are ideal for emergency use as they can also protect windows from flying debris during high wind events

www.flowstop.co

TORNADO BATHROOM

DOORBLOCK BARRIER

Simply close the internal hinged door and drop the DoorBlock into the holes that are situated on either side of the opening to stop any movement of the door.

This can prevent falling debris from breaking through the door, and can assist in providing security where the Tornado Bathroom is used as a Panic Room.

Side view - Interior Door Barrier

