

Written by David Jablonski, St. Petersburg, Florida

Subject: Our Resilient Florida Home: A Testament to Non-Toxic, Flood-Proof Construction

To Whom It May Concern,

Our 2,500-square-foot home in St. Petersburg, Florida has proven remarkably resilient against severe flooding, a testament to the effectiveness of the non-toxic, all-natural construction protocols we implemented for flood, mold, and fireproofing. This letter details our experiences, highlighting the exceptional performance of these innovative building methods and materials.

Pre-Hurricane Renovation and Material Selection

We completed a significant 1,400-square-foot addition to our home, achieving occupancy on May 31, 2024. For this renovation, we exclusively utilized affordable, natural, and non-toxic products specified by **George Swanson of Swanson Associates in Austin, Texas**.

One of the most remarkable materials incorporated was **the MGO board**, which replaced standard gypsum drywall, as well as exterior plywood and OSB. Another key component was a specialized formula provided by George Swanson, combining organic **RomaBio "Bio-Grip"** and ultra-fine **Kaolin clay**. This formula was used to treat all "behind the walls/ceilings/floor" areas, ensuring no lingering odors and leaving the studs and cinder blocks as clean as new.

City of St. Petersburg Inspection Process

Our experience with the City of St. Petersburg's inspection process underscored the innovative nature of our construction. Despite the city's claim of being "an innovative city," the use of these advanced materials was initially unfamiliar to inspectors.

During the initial inspection, the building inspector was visibly impressed with the **MGO board** roof, exclaiming, "What is this stuff?" He admitted he had never heard of MGO board and noted "zero" decay on a large stack of raw MGO boards exposed to the elements for six months. Our explanation that all trusses, walls, and wood were coated "For future flood protection, of course!" seemed to satisfy him. Subsequent insulation and closing inspections were remarkably streamlined, with approvals granted over the phone.

A proactive invitation for a follow-up visit allowed the inspector to identify only minor adjustments needed. The final inspection for our occupancy permit on May 31st was equally remarkable: the inspector stated, "I'm not [coming]—you passed—you're fine—

you're good!" This level of trust, leading to an occupancy permit without a physical final inspection, is a testament to the quality and perceived reliability of our construction methods.

Post-Flood Restoration: A New Approach

Our property experienced two significant floods after receiving the occupancy permit. The first, on September 27, 2024, from Hurricane Helene, involved four feet of sewage-laden water. Returning three days later, we found the house surprisingly dry, with only minimal water seepage. Our proactive measures, including the installation of 1/4-inch **MGO board** on the floors, proved highly effective at wicking moisture from the concrete.

On October 9, 2024 Hurricane Milton left approximately six inches of water and the floors were completely dry the next day. In 1,400 square feet of our home, the lower four feet of MGO board and Rockwool insulation had been removed. This area remained perfect, with no odors or stains—a significant improvement from the seven previous floods that resulted in discolored and foul-smelling walls. These two recent events bring our total to nine floods.

Innovations in Flood-Resistant Construction

Moving forward, we adopted a new insulation solution: **Smart Shield insulation**. This 3/4-inch thick, R-22/23 rated insulation is mold-proof, waterproof, and fireproof, and also provides excellent sound insulation. It is now installed four feet up our walls throughout the house. We also replaced the remaining old plaster walls, installing 1/2-inch **MGO board** eight feet high, and used 3/4-inch **MGO board** for our roof sheathing.

Non-Toxic and Mold-Proof Environment

For painting, **RomaBio paint** was chosen, with two coats of a special primer applied to all wood surfaces. Following George Swanson's recommended procedures, we used non-rusting screws and a special non-toxic bonding agent. All products, including mastic for tile, drywall mud, and tape, are non-toxic and designed to create a mold-proof environment.

Unlike previous floods where the smell was horrendous, we now experience zero odor and zero toxins after a flood. While the Rockwool insulation had to be discarded due to sewage

contamination (freshwater would have allowed for reuse), approximately 600 square feet of MGO board was successfully reused.

Design for Resilience

We anticipate future floods and are prepared. We expect to only need to replace the carpet, and the walls will be fine after being wiped down with an anti-microbial solution. George Swanson also advises leaving an inch-long gap between the MGO board and the floor, covered by 5 1/2-inch base molding. This allows the walls to breathe and provides an easy escape route for any water.

Structural Enhancements

In areas where we removed old walls, instead of traditional studs, we doubled up 3/4-inch **Smart Shield** and screwed it directly into the cinder blocks. This created 1 1/2-inch thick, 3 1/2-inch wide "studs," providing a completely wood-free exterior wall in the newly renovated sections. Additional Smart Shield and MGO board were then applied over this structure. This system has proven exceptionally effective.

Permitting and Final Inspection

The permitting process for this extensive work was lengthy, with the permit filed on November 8, 2024, and received in early May 2025. Due to city backlogs, we proceeded with the work. When we finally requested the inspection, the inspector arrived at 4:00 PM on a Friday, briefly reviewed the already enclosed and finished work, and approved it. We passed the inspection.

From a Very Satisfied Customer,
Thank you, George,

Respectfully submitted,

David Jablonski