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MEMORANDUM
From: Jacob Wexler, Chief Engineer
Date: 1/2/2025
Subject: Superior Performance of Our Flood Barrier Products

Legacy Manufacturing LLC is proud to confirm that our flood barrier products **meet and exceed** the performance standards outlined in **FEMA Technical Bulletin 3-93** and **FM Approvals Standard 2510** for flood protection.

Compliance with FEMA 3-93 & FM Approvals Standard 2510

According to **FEMA 3-93, Section 3**, floodproofing measures must make structures **"substantially impermeable"** to floodwater, ensuring that any leakage remains minimal and manageable by drainage systems. Furthermore, **Section 5** states that floodproofing must be **"designed and constructed to withstand flood forces, including hydrostatic and hydrodynamic loads, and the effects of buoyancy."**

Additionally, our barriers exceed the **FM Approvals Standard 2510**, which sets a maximum allowable leakage rate of **0.08 gallons per minute per linear foot (0.3 liters per minute per meter)** of barrier length. Our products outperform this requirement, providing superior protection against water infiltration.

Factors Affecting Flood Barrier Performance

While our flood barriers exceed industry standards in controlled test environments, **proper installation is critical** in achieving optimal performance. Several factors influence effectiveness:

1. Barrier Type & Sealing Mechanism

- **Rigid barriers**, such as our **aluminum shields**, provide the best seal.
- **Proprietary seal –** our extruded seals are excellent for marine applications, and highly resistant to saltwater, UV and weathering.

2. Installation Quality

- **Precise alignment** is crucial—misalignment or gaps can result in excessive leakage. It is imperative to ensure that any potential gaps are sealed when installing the product.
- **Regular inspection and maintenance** help preserve seal integrity over time.

3. Hydrostatic & Hydrodynamic Forces

- **Higher water depths** increase pressure on seals, potentially causing minor seepage.
- **Wave action and debris impact** may temporarily compromise the seal or barrier.

4. Substrate Condition & Surface Preparation

- **Uneven or rough mounting surfaces** can hinder a proper seal, leading to leakage.
- **Corrosion or damage** to the sealing areas must be addressed to maintain effectiveness.

5. Environmental Conditions

- **Temperature fluctuations** can cause material expansion and contraction, impacting the seal.
- **Long-term exposure to UV, chemicals, or salt water** can degrade sealing materials.

Commitment to Superior Flood Protection

Legacy Manufacturing LLC designs and manufactures flood barriers that **exceed FEMA 3-93 and FM 2510 standards**, ensuring **minimal water infiltration and maximum structural integrity**. Through **advanced sealing technology, precision engineering, and rigorous testing**, our products provide **best-in-class flood protection** for critical infrastructure and commercial applications.

For further details on installation best practices or performance specifications, please contact us.

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