

### Hammerhead™ Amalgamated Warbasse Houses



## HAMMERHEAD ALUMINUM FLOOD PLANKS

### The Client:

The Amalgamated Warbasse Houses boasts 5 buildings consisting of 2,585 apartments, 6,000+ residents, 100+ employees and even its own independent power plant. Located in Brooklyn, New York this customer sought significant flood protection solutions for the entire property.

### Goals:

Our initial goal was to focus on the independent power plant building. With flood threats becoming more frequent and severe, and microburst storms hitting the New York area more frequently, our mission was to prevent catastrophic flooding that might result in not only damage to the power plant but the loss of power to the 6,000+ residents. As a secondary goal, we sought to prevent damage to critical building infrastructure and to protect the entryways to both the buildings and the retail mall structure in front of the complex.



### The Challenge:

The particular location within Brooklyn for the Warbasse Houses is in Coney Island. With the close proximity to the ocean this property is particularly vulnerable to storm surge threats. It had dealt with the severe flood effects of Hurricane Sandy back in 2012 and lost both power at the power plant and use of its elevators and building infrastructure. For several months, residents of Warbasse were unable to access building services and most had to relocate until renovations and repairs were completed. The need for future flood protection was critical and despite modifications to power distribution, the power plant remained vulnerable and pump rooms and other infrastructure remained susceptible to damage from flooding.

With such a large property the challenge we faced was ensuring that we provided the most optimal and efficient protective product to help combat future intense flooding at the scale of Hurricane Sandy.

### Solution:

Garrison's solution for the Warbasse property was to deploy and install its Hammerhead™ Aluminum Flood Plank system. Hammerhead™ was deployed at all entrances, and bay doors of the power plant. Additionally, we used Hammerhead™ to protect below grade stairwells and loading docks that are located at the rear of all 5 buildings. These entrances also lead to equipment and pump rooms and as such needed to be secure against future flooding.

## CASE STUDY: Hammerhead™ | Amalgamated Warbasse Houses



### Summary:

In 2012, Hurricane Sandy caused over 67 billion dollars worth of damage in the United States. New York City took the majority of the damage from the super storm. For a significant period of time, buildings throughout boroughs like Brooklyn had no access to power or water due to the extreme nature of the flood damage. The Amalgamated Warbasse Houses were no different. "We had no water, not for our toilets, not to drink. We had no heat. Everything was dark," said Barbara Teitelbaum, board member at the Amalgamated Warbasse Houses (NY1). Located in Coney Island and having such a close proximity to the ocean, the damage was overwhelming to both the Warbasse property and its neighbors.

Among the damage was the significant hit that the independent power plant took, as it provided power to all of the Warbasse residents. "We immediately had to shut down our power plant because of the Coney Island Creek overflowing. So we had to find generators," said Michael Silverman, board president of the Amalgamated Warbasse Houses ([NY1](#)). Recovering from Hurricane Sandy and now years later, the Warbasse board looked for dedicated, durable and effective flood protection solutions to their infrastructure.

The Hammerhead™ Aluminum Flood Plank system is designed to protect a variety of entryways from the dangers of flooding. U-Channel posts are installed on both sides of an entryway allowing for individual aluminum planks to be slotted into the posts and tightened down to provide durable flood protection. The system allows for the flexibility of keeping entryways accessible and also providing easy and rapid deployment for when a flood threat arises. The Hammerhead™ System can protect against flooding up to 6.5 feet high (higher with engineering review). The system allows for plank widths up to 12 feet wide.

Hammerhead™ flood logs are ideal for areas where high wind or debris is expected as the fixed posts and clamped planks are durable, rigid and designed to handle heavy impact and high wind speeds, while protecting critical infrastructure against the effects of flooding.

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We concluded that the Hammerhead™ Aluminum Flood Planks were the most effective solution to provide for Warbasse. We deployed Hammerhead™ at every entrance and bay door of their independent power plant. Additionally Hammerheads were used for the appropriate entryways for the equipment and pump rooms. The durability of Hammerhead™ ensures that the most effective measures are in place to combat future flood threats to the Warbasse property.

### Takeaways:

- Protective measures to combat future flood events in New York City require durable and efficient flood protection solutions
- Warbasse provides power through an independent power plant on their property which increased the need to deploy a flood protection solution that could protect their critical infrastructure against future Sandy type storm surges.
- The Hammerhead™ Aluminum Flood Plank System easily installs into entryways using U-Channel Posts and aluminum flood planks (flood logs) that are inserted into the posts when needed.
- Hammerhead™ provides flood protection for openings up to 6.5 feet high (and higher with engineering review).
- The aluminum construction and easy to store nature of the flood logs means that Hammerhead™ can be used as a long term flood mitigation solution
- Efficiently stored and rapidly installed, Hammerhead™ requires less time and human power to deploy when needed
- Hammerheads durable construction makes it suitable for high wind and debris environments
- [View Hammerhead FEA Testing.](#)



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