BAYAREA COUNCIL

January 7, 2019

Chair Jody A. Breckenridge
Director Jeff Del Bono
Director Anthony J. Intinoli, Jr.
Director Nicholas Josefowitz

Re: Request WETA funding for Feasibility Study on Hovercraft Service

Dear Chair Breckenridge and WETA Board of Directors:

As we build on the solid momentum created by WETA of re-establishing robust water transit on San Francisco Bay, I believe we should take the next steps toward seriously considering the addition of hovercraft to our fleet. As you know, several areas of the Bay, that offer significant potential ridership, are hampered by the need to dredge and wake restrictions that slow down traditional ferry vessels. Hovercraft may offer the opportunity to overcome these hurdles and open up new areas of the region that badly need congestion relief, as well as provide avenues for response in the event of a major public emergency. I ask for your support to fund a study a study the topic to follow up WETA's previous work in 2011.

As you may recall, I recently traveled with Executive Director Nina Rannells and a delegation of business and local leaders to investigate hovercraft service and hovercraft manufacturing in England. I, along with other attendees of the delegation, came away very impressed with the robust service provided in conditions that in some ways mimic the Bay, or are even more difficult than the conditions we face here. The manufacturer we visited, Griffon Hoverwork, has built more than 200 hovercraft, and has more than 150 operating across the globe today. In North America, they are partnered with Vigor, based in Seattle, which has built several ferries for WETA, and has built hovercraft for other US clients.

While not the solution for every setting, and certainly not required where standard ferries are able to operate, hovercraft do offer several compelling features worthy of consideration:

- They float on a cushion of air, eliminating the need to dredge;
- With little to no water resistance, they can travel faster on the water than boats (25-30% faster than catamarans under normal conditions), and without a significant wake, don't need to slow when close to shorelines, bringing significant travel time improvements;
- The vessel cost is roughly the same as for catamarans;
- For 150 passenger craft, hovercraft operate at $800/hour (including fuel and crew costs), which is a potential 5-50% cost savings over catamaran operation at that size;
- Insurance costs are similar;
- They consume less fuel;
- They produce lower underwater sound than catamarans;
- With recent design improvements, they produce approximately the same decibel level as catamarans above water;

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- The "docking" and landside infrastructure costs can be significantly less, with a need only of a 30 m x 30 m ramp, made of gravel, wood, or concrete. In deeper water, they can use floating landing platforms;
- The hovercraft service in England carries nearly 1 million passengers a year and is heavily relied upon by persons living on or visiting the isle of Wight.

As stated above, makers of hovercraft agree that where you can use a regular ferry, you should use a regular ferry. It's only in areas and conditions ill-suited or too expensive for traditional ferries where hovercraft excel. And, they do have some downsides:

- While the technology has advanced by leaps and bounds in reality, a hard set perception of hovercraft is that they are very noisy;
- They can be slowed by very strong headwinds (this can be reduced with "tacking" maneuvers by the captain);
- The craft carry less passengers than many new catamarans (80-200 passengers);
- Putting the service into effect would require new operations and maintenance skills and materials;
- Compatibility with existing WETA passenger loading infrastructure may be a challenge, or infeasible. Therefore new, separate docking in some spots, such as the SF Ferry Building (if service goes there), may be required, or the new hovercraft would need to be custom built to fit current WETA facilities.

In 2011, WETA seriously considered hovercraft service to Hercules, as well as Martinez and Antioch. The report commissioned at the time had many favorable findings, though did point to the challenges of setting up a new parallel maintenance and operations system. Ron Cowan was a long proponent of hovercraft service, and several decades ago ran a pilot in the Bay that carried 25,000 Bay Area residents. Further, hovercraft have long been called for to bolster WETA's emergency response capabilities, which when partnered with existing craft, would allow the agency to pick up or deliver passengers or equipment to almost any spot on the Bay.

Hovercraft could deliver water transit service to the huge employment and population growth of the South Bay, especially cities and corporate office parks directly on the water. Many firms and cities have expressed strong interest in hovercraft. Hovercraft could also reach parts of the North Bay, such as the silted in Port Sonoma, or the previously studied Hercules, Martinez or Antioch.

The key word is this discussion is "could." In fact, we don't know. We don't know the operating costs in the Bay Area. We don't know how hovercraft would fit with existing regulations. We don't know which spots would be best for landing ports, given bayside characteristics and connecting roads and other transportation facilities. We don't know how to best model passenger capacity with potential ridership.

These are questions I believe WETA should be able to answer as the Board considers the agency's future direction. Therefore I propose we commission a study to answer them.

One possible approach, only a suggestion, would be to partner with Griffon Hoverwork, which offers a consultancy service on all aspects of hovercraft operation. They are able to do route analysis, business planning, terminal design, crew development, engineer training and a broad range of after sales services. They consult on all aspects of design and research into hover technology.

Whether performed with Griffon or not, I propose we commission a qualified local planning firm and/or university transportation institute to examine the best sites, the best craft configuration, the personnel requirements, the infrastructure requirements, ticketing plans, integration with other transport, and other matters Board members and WETA staff think best.

May we please place this issue on the agenda for an upcoming WETA Board meeting? Thank you for your consideration.

Sincerely,

Jim Wunderman
Vice-Chairman
WETA

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