



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**National Ocean Service**  
**Center for Operational Oceanographic Products and Services**  
**Silver Spring, MD 20910**

08/08/2019

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Thank you for being an active partner with the National Oceanic and Atmospheric Administration (NOAA) in the Physical Oceanographic Real-Time System, or PORTS®, program. This letter documents the current installation and data dissemination parameters associated with the Vincent Thomas Bridge air gap sensor, included in the Los Angeles/Long Beach PORTS®. It is important that these parameters are clearly understood by those using the air gap data, and to that end, we ask that you assist us in sharing the enclosed information broadly among the local maritime community.

Prior to installation of an air gap sensor and dissemination of the resulting real-time air gap data, NOAA works closely with our partner and other local users to define the point on the bridge from which the distance to the water's surface will be displayed as the air gap measurement on the PORTS® webpage. This "air gap reference point" on the bridge might or might not differ from low steel, as defined by the USCG. It is also important for the community to understand that the real-time air gap measurement on the PORTS® webpage will vary from the fixed vertical bridge clearance value displayed on the associated NOAA Nautical Chart.

The point on the bridge designated as the air gap reference point is not necessarily directly below the location of the air gap sensor, since the sensor's location is often restricted by available bridge infrastructure. If the position of the air gap reference point designated by our partner is not co-located with the sensor, NOAA precisely measures the elevation offset between the two positions and adjusts the air gap value reported on the PORTS® webpage accordingly. The air gap reference point, the sensor location, and the offset parameters specific to the Vincent Thomas Bridge air gap sensor are detailed below.

It is important to note that there may be other non-structural components – such as navigation lights, radar beacons/RACON, etc. – attached to the bridge that extend below the point designated as the air gap reference point. Further, non-structural components may be newly installed, moved, or adjusted after the time of sensor installation and air gap reference point designation. It is a collective responsibility to be aware of and communicate changes to such non-structural components, so that all users are aware and any necessary changes to the air gap measurement can be discussed, agreed to, and implemented on the Los Angeles/Long Beach PORTS® webpage by NOAA.

NOAA understands that real-time air gap measurements at the Vincent Thomas Bridge are important for marine navigation decisions. In the case of a data outage, NOAA will first work to resolve the issue remotely by calling into the air gap sensor platform. If remote intervention is not successful, NOAA will work to arrange a site visit to the air gap sensor within five working days. Typically, this requires close coordination with the local partner and the bridge owner/manager to arrange access and any necessary lane closures.

### Vincent Thomas Bridge

The PORTS® air gap sensor on the Vincent Thomas Bridge in Los Angeles, California, is installed underneath the bridge, adjacent to the catwalk, and just west of the center of the bridge at truss #79. The air gap sensor is installed 6.660m north of the north side green center channel navigation light. See Images 1 and 2 for photographs of the air gap sensor installation on the Vincent Thomas Bridge. See Image 3 for the location of the air gap sensor on the Vincent Thomas Bridge.

At the time of the most recent installation in May 2018, NOAA worked with our Los Angeles/Long Beach PORTS® program partner, the Los Angeles Pilot Service, and the local maritime community to determine that the low steel elevation for the air gap measurement of the Vincent Thomas Bridge would be the bottom of the north side green center channel navigation light. NOAA determined the offset value by measuring the vertical distance from the air gap sensor leveling plate to the bottom of the north side green navigation light using a Leica Wild tilting level, a level rod, and a steel measuring tape. The offset was determined to be 1.117 meters. See Image 4 for a schematic of the air gap sensor elevation offset at the Vincent Thomas Bridge.

Therefore, the PORTS® air gap sensor measurement at the Vincent Thomas Bridge currently displayed on the NOAA PORTS® Los Angeles/Long Beach website (<https://tidesandcurrents.noaa.gov/ports/index.html?port=ll>) represents the distance between the surface of the Los Angeles Main Channel and the bottom of the green center channel navigation light. This measurement does not account for other non-structural components hanging below the bridge.

Please reach out to our Maritime Services Program Manager, Christopher DiVeglio, at [christopher.diveglio@noaa.gov](mailto:christopher.diveglio@noaa.gov) or 240-533-0571, with questions about the present state of the Vincent Thomas Bridge air gap sensor included in the Los Angeles/Long Beach PORTS®, or if adjustments to the data dissemination parameters will better suit the needs of the pilots and local maritime community.

Sincerely,



Rich Edwing, Director  
NOAA Center for Operational Oceanographic Products and Services

cc: Captain Tom Jacobsen, Jacobsen Pilots  
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Capt. Rebecca Ore, USCG Sector LA/LB Command  
Carl Hausner, USCG, 11th District Bridge Section  
Mr. Jim Fields, USACE LA/LB Harbor  
Mr. Mohammed Chang, Navigation Section, USACE LA District

Images 1 and 2. Air Gap Sensor Installation on the Vincent Thomas Bridge.



Image 3. Location of the Air Gap Sensor Installation on the Vincent Thomas Bridge.

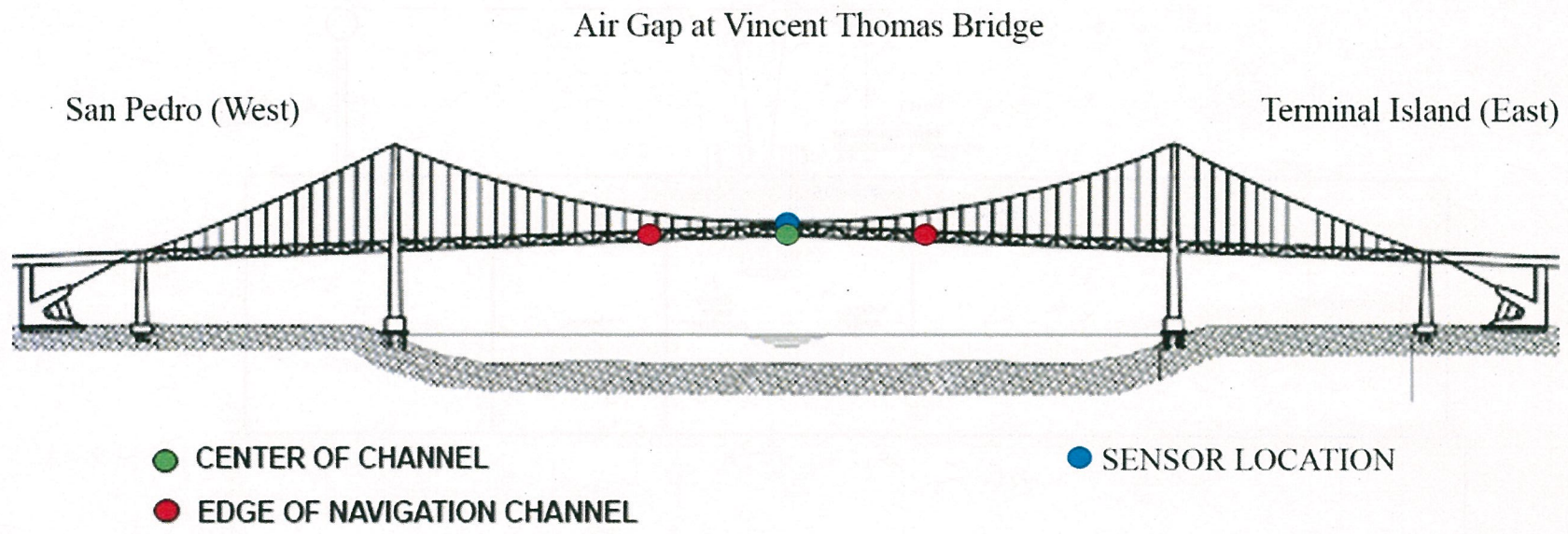


Image 4. Schematic of the Air Gap Sensor Elevation Offset at the Vincent Thomas Bridge.

