

MUMBAI TRANS- HARBOUR LINK (MTHL) PROJECT, MUMBAI

Background

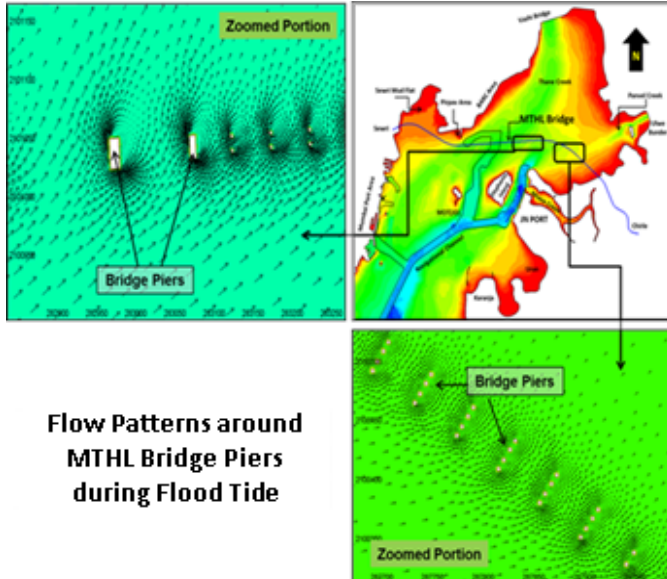
The Mumbai Trans-Harbour Link (MTHL) is a Road Bridge spanning across the Thane creek which connects Sewri on Mumbai and Chirle on Navi Mumbai side. Mumbai, an island city, is facing a problem of traffic congestion over past three decades due to rapid industrialization and scarcity of land for the development of allied infrastructures. Mumbai Metropolitan Region Development Authority (MMRDA) have a proposal to provide a road link between island city and main land (Navi Mumbai) as a direct faster connectivity for the upcoming development in Navi Mumbai Region. The length of MTHL bridge is about 21.8 km and consists of six lanes, each of 3.5 m width. Since MTHL is spanning across Thane creek wherein two major ports viz. Mumbai and Jawaharlal Nehru along with number of waterfront facilities exists, the impact of MTHL on these facilities need to be studied from hydrodynamics consideration.

Studies conducted

- A well-calibrated mathematical model for Thane creek was used to assess the impact of obstructions created due to hundreds of piers/piles of MTHL on the tidal hydrodynamics of Thane creek by simulating pier geometry and prevailing flow field.



Location Plan of MTHL Bridge in Thane Creek



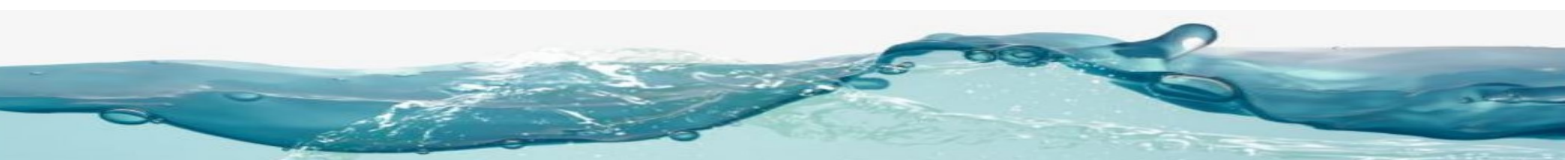
**Flow Patterns around
MTHL Bridge Piers
during Flood Tide**

have any detrimental effect on the Mumbai/Jawaharlal Nehru Ports.

- Overall hydrodynamics of Thane creek remain unaltered thereby it not only allows construction of MTHL but will also maintain smooth operability at Mumbai/ Jawaharlal Nehru ports.
- The plying of barges in and out of Thane creek will remain unaffected due to construction of MTHL.
- MTHL will not impose additional burden of maintenance dredging on waterfront facilities in the creek.

Benefits and Outcome

- CWPRS studies reveal that effect of MTHL on the existing nearby waterfront facilities such as Intake at BARC; BPCL; NSICT berths in JNPT, Marine oil





terminal (MOT) at Jawahar Dweep etc. will be negligible except on the facilities at Pir-Pau wherein reduction in velocity is about 10%.

- The overall effect of MTHL on tidal hydrodynamics of Thane creek is insignificant (less than 2% of total tidal flux entering/leaving Thane creek). Hence, it will not

