Title Feasibility Study of FHWA Model for Prediction of Noise Generated from Water Vehicles in Canals

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ABSTRACT

In this study, the mathematic model of Federal Highway inistration was applied for a prediction of noise generated long-tailed boat. Primary data for the study were collected measuring speed and noise level of 460 samples to formulate logarithmic equation. This equation together with 61 sets of riable of Leq, the number of boat, the average speed and the nal width were used to calculate for the value of constant C the model. The derived model was tested with 67 measured Leqs. e logarithmic equation of speed and noise level is

$$Loe = 49.4 + 26.9 \log S \quad (r = 0.9607)$$

e derived model is

$$Leq\ (h) = \overline{Loe} + 10 \log (N/ST) + 10 \log (15/d)^{1+0.5} + \Delta S - 14.9$$

It was found that as high as 61.2 % of the calculated deviate from the measured Leq only by ± 2 dBA. The rest within ± 5 dBA, which is satisfactory.