DESIGN OF DRAINAGE SYSTEM OF SWISSBEL HOTEL BINTORO SURABAYA

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ABSTRACT

The construction of Swissbel Hotel that is located at Jalan Bintoro Surabaya with ± 2400 m² large area, close to the city center of Surabaya. The construction of the Swissbel Hotel may result in increased water runoff volume. This condition can affect the coefficient of surface water drainage to raise from 0,17 which was a wasteland to 0,9 with the building. The drainage system at Swissbel Hotel has a concept of harvesting the rainwater for as long as possible and regulating the disposal, so that the water debit from Swissbel Hotel will not overload the drainage of Bintoro. Result of the analysis and calculation shows that the dimension of drainage in the Hotel area is 0,5 m x 0,5 m large. The amount of water debit from Swissbel Hotel area is 0,0644 m³/secon which then will be stored first in a retarding basin and the water gate will be used to expel the excess water in that basin. To keep the water debit coming out of the hotel area to stay less than 0,00746 m³/secon and also to meet the criteria of zero delta Q, a flood routing analysis is carried out.

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