ATTACHMENT 2

Quantity of Storm Water Discharge (Item No. 6 of CWB-Individual NPDES Form C)

Estimate the quantity of storm water runoff during construction when the greatest and/or maximum area of disturbance occurs. Provide supporting calculations in an attachment or insert in this section.

Use Rational Method to calculate the runoff. $Q = CiA$
Where $Q = flow\ rate, C = runoff\ coefficient\ related\ to\ permeability\ of\ ground\ surface,$
$i = rainfall\ intensity\ at\ time\ of\ concentration, and$
$A = the\ drainage\ areas\ or\ construction\ site\ areas.$

References:
1. Highways Division, Department of Transportation, State of Hawaii, "*Design Criteria For Highway Drainage*," dated 5/15/06.
2. Department of Public Works, County of Hawaii, "Storm Drainage Standard," dated October 1970.
1. Recurrence Interval = 10 years
2. Rational Method
    a. Runoff Coefficient from Table 1:
$$Infiltration, Neglibible = 0.20$$
$$Relief, Flat = 0.0$$
$$Vegetal\ Cover, Good = 0.03$$
$$Development\ Type, Industrial\ and\ Business = 0.55$$

$$C = 0.20 + 0.0 + 0.03 + 0.55 = 0.78, say\ 0.8$$
    b. Time of Concentration, Plate 3: $Tc = 6\ min$
    c. Rainfall Intensity, I of 10-year, 1-hour Rainfall (Plate 1): $I = 4.3\ inches$
    d. Rainfall Intensity, i at Time of Concentration (Plate 4): $i = 11\ in/hr$

$$Q = CiA = 0.8 * 11 * 5.53 = 48.66\ cfs, Say\ 49\ cfs$$