FORM C ATTACHMENT A-2

Tables and Calculations

TABLE 1 – DISCHARGE POINT INFORMATION AND DISCHARGE QUANTITY

Discharge Point	Location	Latitude	Longitude	Class	C	I (in/hr	A (Acres)	Q (cfs)
Outfall 1	Stream Intermittent	N22.0019600D	W159.3744707D	2	0.85	5.52	0.36	1.69
Outfall 2	Stream Intermittent	N22.0033336D	W159.3747882D	2	0.85	5.52	0.34	1.6
Outfall 3	Stream Intermittent	N22.0049466D	W159.3751574D	2	0.85	5.52	1.38	6.47
Outfall 4	Stream Perennial	N22.0101974D	W159.3824752D	2	0.85	5.52	0.74	3.47

Total Discharge (Q_{total}) = 13.23 cfs

Runoff Calculations

Q = CIA

where: Q = quantity of storm water runoff in cu. ft/sec.

C = runoff coefficient

A = disturbed area in acres

Tc = Rainfall intensity for the duration equal to time of concentration

= 10 min (minimum)

For this project:

C = 0.87 for paved areas

C = 0.80 for unpaved shoulders

(Using composite drainage areas, a weighted value runoff coefficient shall be computed. The weighted value of runoff coefficient for this project, C = 0.85)

I = 5.52 (see calculations below)

A = varies (see table below)

I = I x Cf

i = 2.4 (intensity of a 2-yr 1-hr rainfall)

Cf = 2.30 (correction factor)

I = 2.40 x 2.30 = 5.52

Disturbed Area: (Includes Staging/Storage Areas, see note below)

I-1 = 0.18 Acs

I-2 = 0.17 Acs

I-3 = 0.73 Acs

I-4 = 0.26 Acs

S-1 = 0.18 Acs

S-2 = 0.17 Acs

S-3 = 0.65 Acs

S-4 = 0.48 Acs

NOTE: Since this is a linear project, there will be several locations of Staging/Storage Areas. Probable Storage/Staging Areas will be located along the unpaved shoulder within the state right of way.

Discharge (Q) to Outfall 1 (Aliomanu Stream)

Q_{I-1} = (0.85) x (5.52 in/hr) x (0.18 Acs)

Q_{I-1} = 0.84 cfs

Discharge (Q) to Outfall 1 (Aliomanu Stream)

Q_{I-2} = (0.85) x (5.52 in/hr) x (0.17 Acs)

Q_{I-2} = 0.80 cfs

Discharge (Q) to Outfall 1 (Aliomanu Stream)

Q_{I-3} = (0.85) x (5.52 in/hr) x (0.73 Acs)

Q_{I-3} = 3.43 cfs

Discharge (Q) to Outfall 2 (Anahola Stream)

Q_{I-4} = (0.85) x (5.52 in/hr) x (0.26 Acs)

Q_{I-4} = 1.22 cfs

Discharge (Q) to Outfall 1 (Aliomanu Stream)

Q_{S-1} = (0.85) x (5.52 in/hr) x (0.18 Acs)

Q_{S-1} = 0.84 cfs

Discharge (Q) to Outfall 2 (Anahola Stream)

Q_{S-2} = (0.85) x (5.52 in/hr) x (0.17 Acs)

Q_{S-2} = 0.80 cfs

Discharge (Q) to Outfall 3 (Anahola Stream)

Q_{S-3} = (0.85) x (5.52 in/hr) x (0.65 Acs)

Q_{S-3} = 3.05 cfs

Discharge (Q) to Outfall 3 (Anahola Stream)

Q_{S-4} = (0.85) x (5.52 in/hr) x (0.48 Acs)

Q_{S-4} = 2.25 cfs