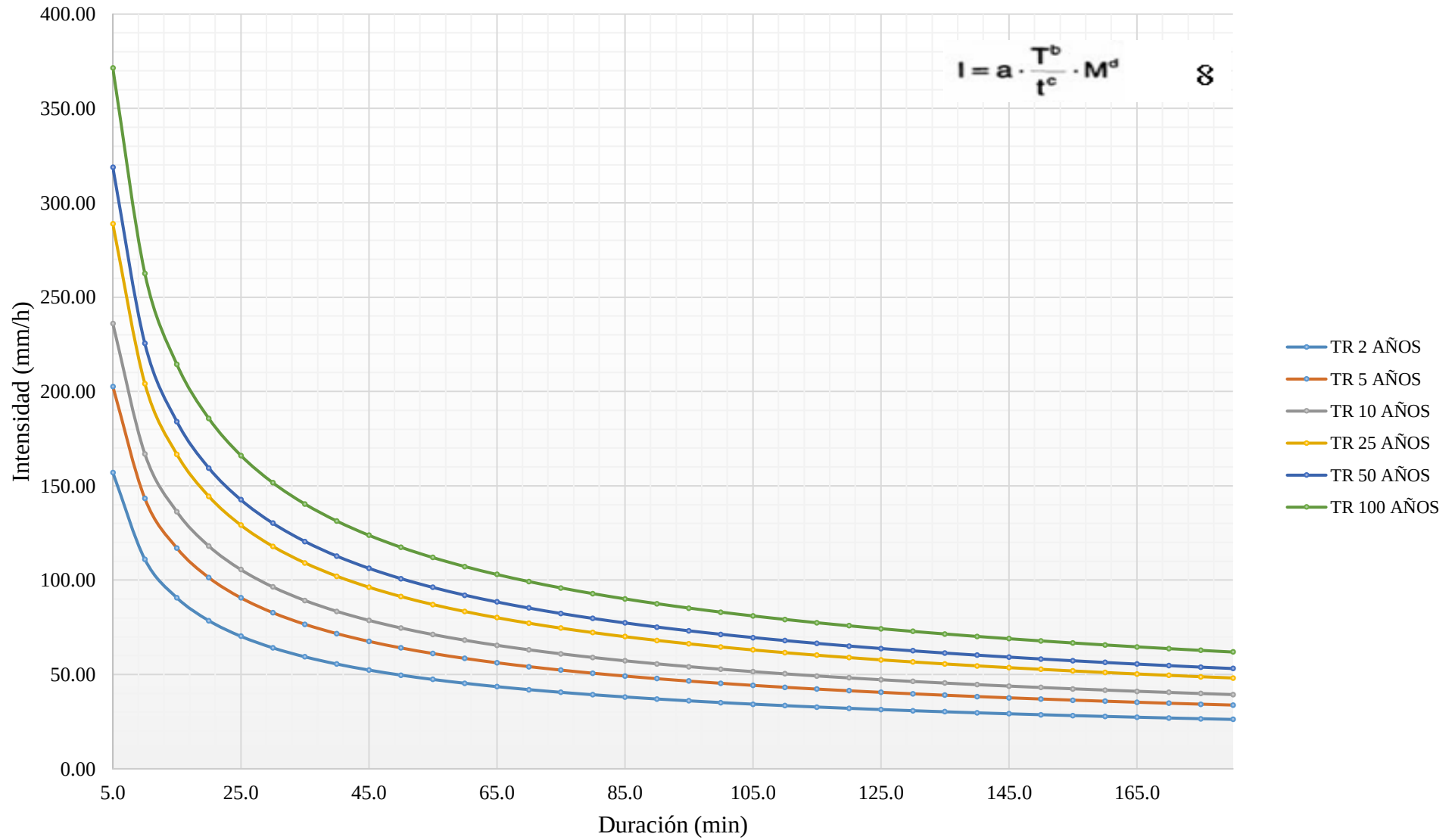


		CONSTRUCCION DE UN PUENTE EN EL CORREGIMIENTO DE BONGA MELLA EN EL MUNICIPIO DE SAN PELAYO, DEPARTAMENTO DE CORDOBA					BUSERCO	
ANEXO 3 CALCULO DE INTENSIDAD PARA GENERACIÓN DE CURVAS IDF								
Análisis para curvas IDF cálculos con curvas sintéticas región caribe ec 8 (Díaz Granados)								
Valores Calculados Para El Proyecto Bonga Mella								
Tiempo de Duración en Horas (t)		Precipitación Maxima en 24 Horas (mm)						
		151.747	151.747	151.747	151.747	151.747	151.747	
		Periodo de Retorno en Años (TR)						
Minutos	Horas	2	5	10	25	50	100	INTENSIDAD DE LLUVIAS EN MM/HORAS
5.0	0.08	165.67	202.68	236.06	288.79	336.36	391.77	
10.0	0.17	117.15	143.31	166.92	204.20	237.84	277.02	
15.0	0.25	95.65	117.02	136.29	166.73	194.20	226.19	
20.0	0.33	82.84	101.34	118.03	144.39	168.18	195.88	
25.0	0.42	74.09	90.64	105.57	129.15	150.42	175.20	
30.0	0.50	67.64	82.74	96.37	117.90	137.32	159.94	
35.0	0.58	62.62	76.60	89.22	109.15	127.13	148.07	
40.0	0.67	58.57	71.66	83.46	102.10	118.92	138.51	
45.0	0.75	55.22	67.56	78.69	96.26	112.12	130.59	
50.0	0.83	52.39	64.09	74.65	91.32	106.37	123.89	
55.0	0.92	49.95	61.11	71.18	87.07	101.42	118.12	
60.0	1.00	47.83	58.51	68.15	83.37	97.10	113.09	
65.0	1.08	45.95	56.21	65.47	80.09	93.29	108.66	
70.0	1.17	44.28	54.17	63.09	77.18	89.90	104.70	
75.0	1.25	42.78	52.33	60.95	74.56	86.85	101.15	
80.0	1.33	41.42	50.67	59.02	72.20	84.09	97.94	
85.0	1.42	40.18	49.16	57.25	70.04	81.58	95.02	
90.0	1.50	39.05	47.77	55.64	68.07	79.28	92.34	
95.0	1.58	38.01	46.50	54.16	66.25	77.17	89.88	
100.0	1.67	37.05	45.32	52.79	64.57	75.21	87.60	
105.0	1.75	36.15	44.23	51.51	63.02	73.40	85.49	
110.0	1.83	35.32	43.21	50.33	61.57	71.71	83.53	
115.0	1.92	34.55	42.26	49.22	60.22	70.14	81.69	
120.0	2.00	33.82	41.37	48.19	58.95	68.66	79.97	
125.0	2.08	33.13	40.54	47.21	57.76	67.27	78.35	
130.0	2.17	32.49	39.75	46.30	56.64	65.97	76.83	
135.0	2.25	31.88	39.01	45.43	55.58	64.73	75.40	
140.0	2.33	31.31	38.30	44.61	54.58	63.57	74.04	
145.0	2.42	30.76	37.64	43.84	53.63	62.46	72.75	
150.0	2.50	30.25	37.00	43.10	52.72	61.41	71.53	
155.0	2.58	29.76	36.40	42.40	51.87	60.41	70.36	
160.0	2.67	29.29	35.83	41.73	51.05	59.46	69.26	
165.0	2.75	28.84	35.28	41.09	50.27	58.55	68.20	
170.0	2.83	28.41	34.76	40.48	49.53	57.69	67.19	
175.0	2.92	28.00	34.26	39.90	48.81	56.85	66.22	
180.0	3.00	27.61	33.78	39.34	48.13	56.06	65.29	
Coeficientes	a	24.85						
	b	0.22						
	c	0.50						
	d	0.10						

CURVAS INTENSIDAD DURACION Y FRECUENCIA - IDF P MAX 24 H
DEL PROYECTO BONGA MELLA OBTENIDAS POR ISOYETAS

$$I = a \cdot \frac{T^b}{t^c} \cdot M^d \quad 8$$



		CONSTRUCCION DE UN PUENTE EN EL CORREGIMIENTO DE BONGA MELLA EN EL MUNICIPIO DE SAN Pelayo, DEPARTAMENTO DE CORDOBA					BUSERCO	
ANEXO 3 CALCULO DE INTENSIDAD PARA GENERACIÓN DE CURVAS IDF								
Análisis para curvas IDF cálculos con curvas sintéticas región caribe ec 8 (Díaz Granados)								
Valores Calculados Para El Proyecto Bonga Mella								
Tiempo de Duración en Horas (t)		Precipitación Media en 24 Horas (mm)						
		88.888	88.888	88.888	88.888	88.888	88.888	
		Periodo de Retorno en Años (TR)						
Minutos	Horas	2	5	10	25	50	100	INTENSIDAD DE LLUVIAS EN MM/HORAS
5.0	0.08	157.05	192.12	223.77	273.75	318.84	371.37	
10.0	0.17	111.05	135.85	158.23	193.57	225.45	262.59	
15.0	0.25	90.67	110.92	129.19	158.05	184.08	214.41	
20.0	0.33	78.52	96.06	111.88	136.87	159.42	185.68	
25.0	0.42	70.23	85.92	100.07	122.42	142.59	166.08	
30.0	0.50	64.11	78.43	91.35	111.76	130.17	151.61	
35.0	0.58	59.36	72.61	84.58	103.47	120.51	140.36	
40.0	0.67	55.52	67.93	79.11	96.78	112.73	131.30	
45.0	0.75	52.35	64.04	74.59	91.25	106.28	123.79	
50.0	0.83	49.66	60.75	70.76	86.57	100.83	117.44	
55.0	0.92	47.35	57.93	67.47	82.54	96.13	111.97	
60.0	1.00	45.34	55.46	64.60	79.02	92.04	107.20	
65.0	1.08	43.56	53.28	62.06	75.92	88.43	103.00	
70.0	1.17	41.97	51.35	59.80	73.16	85.21	99.25	
75.0	1.25	40.55	49.61	57.78	70.68	82.32	95.89	
80.0	1.33	39.26	48.03	55.94	68.44	79.71	92.84	
85.0	1.42	38.09	46.60	54.27	66.39	77.33	90.07	
90.0	1.50	37.02	45.28	52.74	64.52	75.15	87.53	
95.0	1.58	36.03	44.08	51.34	62.80	73.15	85.20	
100.0	1.67	35.12	42.96	50.04	61.21	71.30	83.04	
105.0	1.75	34.27	41.92	48.83	59.74	69.58	81.04	
110.0	1.83	33.48	40.96	47.71	58.36	67.98	79.18	
115.0	1.92	32.75	40.06	46.66	57.08	66.48	77.44	
120.0	2.00	32.06	39.22	45.68	55.88	65.08	75.80	
125.0	2.08	31.41	38.42	44.75	54.75	63.77	74.27	
130.0	2.17	30.80	37.68	43.88	53.69	62.53	72.83	
135.0	2.25	30.22	36.97	43.06	52.68	61.36	71.47	
140.0	2.33	29.68	36.31	42.29	51.73	60.26	70.18	
145.0	2.42	29.16	35.68	41.55	50.83	59.21	68.96	
150.0	2.50	28.67	35.08	40.85	49.98	58.21	67.80	
155.0	2.58	28.21	34.51	40.19	49.17	57.27	66.70	
160.0	2.67	27.76	33.96	39.56	48.39	56.36	65.65	
165.0	2.75	27.34	33.44	38.95	47.65	55.50	64.65	
170.0	2.83	26.93	32.95	38.38	46.95	54.68	63.69	
175.0	2.92	26.55	32.47	37.82	46.27	53.89	62.77	
180.0	3.00	26.17	32.02	37.29	45.62	53.14	61.89	
Coeficientes	a	24.85						
	b	0.22						
	c	0.50						
	d	0.10						

CURVAS INTENSIDAD DURACION Y FRECUENCIA - IDF P MEDIA
DEL PROYECTO BONGA MELLA OBTENIDAS POR ISOYETAS

$$I = a \cdot \frac{T^b}{t^c} \cdot M^d \quad 8$$

