

LA CUEVA ARROYO SCOUR ANALYSIS INCLUDING CHANNEL EXCAVATION WITH VERTICAL CONCRETE SCOUR WALL WITHOUT VENTURA CULVERT																									
COL 1	COL 2	COL 3	COL 4	COL 5	COL 6	COL 7	COL 8	COL 9	COL 10	COL 11	COL 12	COL 13	COL 14	COL 15	COL 16	COL 17	COL 18	COL 19	COL 20	COL 21	COL 22	COL 23	COL 24	COL 25	COL 26
SEC. NO.	HEC-RAS STA.		Q100 (CFS)	QD (CFS)	SC (FT/FT)	SAVG (FT/FT)	WD (FT)	LAMDA	LV (FT)	DELTA MAX (FT)	EROS. SET. (FT)	VEL (FPS)	FROUDE	AREA (SF)	TOP WID (FT)	HYD DEP (FT)	UVW (FT)	UVW/WD	YS/Y	YS (FT)	HECRAS DEPTH (FT)	HECRAS FROUDE	SEQ DEP (FT)	FRBRD (FT)	WALL HT (FT)
1	1454.61		3090	618.0	0.0157	0.0332	60.1	841.9	421.0	210.5	240.6	15.84	2.22	209.73	132.29	1.59	481.1	8.00	4.85	7.69	2.38	2.09	4.75	1.77	16.21
2	1381.28		3090	618.0	0.0157	0.0332	60.1	841.9	421.0	210.5	240.6	14.40	1.73	235.07	109.53	2.15	481.1	8.00	4.85	10.41	2.64	1.62	4.45	1.75	18.61
3	1354.10		3090	618.0	0.0157	0.0332	60.1	841.9	421.0	210.5	240.6	13.07	1.62	216.14	106.78	2.02	481.1	8.00	4.85	9.82	2.33	1.64	4.10	1.70	17.62
4	1323.43		3090	618.0	0.0157	0.0332	60.1	841.9	421.0	210.5	240.6	15.32	2.05	193.97	112.24	1.73	481.1	8.00	4.85	8.38	2.16	2.01	4.56	1.75	16.68
5	1297.14		3090	618.0	0.0157	0.0332	60.1	841.9	421.0	210.5	240.6	15.18	2.05	194.45	114.11	1.70	481.1	8.00	4.85	8.26	2.36	2.01	4.72	1.75	16.74
6	1274.91		3090	618.0	0.0157	0.0332	60.1	841.9	421.0	210.5	240.6	14.11	1.85	199.52	110.75	1.80	481.1	8.00	4.85	8.74	2.43	1.88	4.60	1.73	17.07
7	1254.20		3090	618.0	0.0157	0.0332	60.1	841.9	421.0	210.5	240.6	16.79	2.21	184.07	102.96	1.79	481.1	8.00	4.85	8.67	2.74	2.21	5.72	1.81	18.20
8	1238.15		3090	618.0	0.0157	0.0332	60.1	841.9	421.0	210.5	240.6	16.90	2.14	175.60	90.42	1.94	481.1	8.00	4.85	9.42	2.68	1.98	5.29	1.81	18.52
9	1207.37		3090	618.0	0.0157	0.0332	60.1	841.9	421.0	210.5	240.6	17.94	2.23	173.65	86.75	2.00	481.1	8.00	4.85	9.71	2.66	2.16	5.85	1.83	19.40
10	1174.73		3090	618.0	0.0157	0.0332	60.1	841.9	421.0	210.5	240.6	18.05	2.36	172.85	95.24	1.81	481.1	8.00	4.85	8.80	2.60	2.08	5.29	1.83	17.93
COL 1	CHANNEL CROSS-SECTION NUMBER																								
COL 2	HEC-RAS CHANNEL STATION																								
COL 3	NOT USED																								
COL 4	100-YEAR PEAK DISCHARGE, Q (CFS)																								
COL 5	DOMINANT DISCHARGE, QD = 0.2 Q100 (CFS)																								
COL 6	CRITICAL SLOPE, SC = 0.037 QD (^0.133) (FT/FT)																								
COL 7	AVERAGE SLOPE OF THE CHANNEL (FT/FT)																								
COL 8	DOMINANT CHANNEL WIDTH, WD = 4.6QD(^0.4) (FT)																								
COL 9	MEANDER WAVELENGTH, LAMDA = (014)WD (FT) FOR QD > 2000 CFS																								
COL 10	DOWN-VALLEY LENGTH, LV = LAMDA/2 (FT)																								
COL 11	MAXIMUM LATERAL EROSION, DELTA MAX = (16.1)QD(^0.4) (FT) FOR QD > 2000 CFS																								
COL 12	EROSION SETBACK = WD/2 + DELTA MAX (FT)																								
COL 13	CHANNEL VELOCITY FROM HECRAS (FT/SEC)																								
COL 14	FROUDE NUMBER CALCULATED USING HYDRAULIC DEPTH																								
COL 15	CROSS-SECTIONAL AREA FROM HECRAS (SQ. FT)																								
COL 16	TOP WIDTH FROM HECRAS (FT)																								
COL 17	HYDRAULIC DEPTH, HD = A/TW (FT)																								
COL 18	UNCONSTRAINED VALLEY WIDTH, UVW = 2 X EROSION SETBACK (FT)																								
COL 19	RATIO OF UNCONSTRAINED VALLEY WIDTH TO DOMINANT CHANNEL WIDTH, UVW/WD																								
COL 20	RATIO OF SCOUR DEPTH TO FLOW DEPTH, YS/Y (FIGURE 3.31 AMAFCA SEDIMENT AND EROSION DESIGN GUIDE)																								
COL 21	ESTIMATED SCOUR (FT)																								
COL 22	DEPTH OF FLOW FROM HECRAS (FT)																								
COL 23	FROUDE NUMBER FROM HECRAS																								
COL 24	SEQUENT DEPTH (FT)																								
COL 25	FREEBOARD (FT)																								
COL 26	SCOUR WALL HEIGHT = SCOUR DEPTH + SEQUENT DEPTH +FREEBOARD+ TWO FOOT FACTOR OF SAFTEY (FT)																								