FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 3 OF 5

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
CARMEL-BY-THE-SEA, CITY OF	060196
DEL REY OAKS, CITY OF	060197
GONZALES, CITY OF	060198
GREENFIELD, CITY OF	060446
KING CITY, CITY OF	060199
MARINA, CITY OF	060727
MONTEREY, CITY OF	060200
MONTEREY COUNTY, UNINCORPORATED AREAS	060195
PACIFIC GROVE, CITY OF	060201
SALINAS, CITY OF	060202
SAND CITY, CITY OF	060435
SEASIDE, CITY OF	060203
SOLEDAD, CITY OF	060204

FEMA

PRELIMINARY
11/13/2015

REVISED:

FLOOD INSURANCE STUDY NUMBER
06053CV003B

Version Number 2.3.2.1

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Published Separately

Flood Insurance Rate Map (FIRM)

Table 24: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	89,355	625	3,390	11.1	486.8	486.8	486.8	0.0
B	90,512	355	3,070	12.2	493.8	493.8	493.8	0.0
C	91.721	400	4,450	8.4	501.8	501.8	501.8	0.0
D	92,537	525	3,220	11.7	503.3	503.3	503.3	0.0
E	94,015	315	2,780	13.5	509.8	509.8	510.2	0.4
F	95,735	335	3,290	11.4	518.3	518.3	518.4	0.1
G	97,197	835	3,660	10.3	526.1	526.1	526.1	0.0
H	98,528	280	2,580	14.6	535.0	535.0	535.0	0.0
I	99,878	810	3,750	10.0	541.8	541.8	541.8	0.0
J	102,287	655	3,680	10.0	554.2	554.2	554.3	0.1
K	103,437	855	3,990	9.2	560.6	560.6	560.6	0.0
L	104,364	630	3,300	11.1	567.1	567.1	567.2	0.1
M	105,784	665	4,480	8.2	573.7	573.7	573.7	0.0
N	107,194	690	4,510	8.1	579.0	579.0	579.0	0.0
O	109,504	435	3,200	9.0	593.0	593.0	593.0	0.0
P	110,674	845	4,620	6.2	596.8	596.8	596.8	0.0
Q	112,013	525	3,170	9.1	600.5	600.5	600.5	0.0
R	113,009	280	2,070	13.9	608.6	608.6	608.6	0.0
S	114,269	370	2,250	12.8	619.5	619.5	619.5	0.0
T	115,096	280	2,070	13.9	624.8	624.8	624.9	0.1
U	117,027	275	2,250	12.8	632.8	632.8	633.2	0.4
V	118,150	295	2,440	11.8	640.8	640.8	640.8	0.0

[1]Feet above confluence with Salinas River

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
W	120,107	220	2,480	11.6	652.1	652.1	652.1	0.0
X	121,537	205	2,420	11.9	660.2	660.2	660.2	0.0
Y	122,347	235	1,870	15.3	664.3	664.3	664.3	0.0
Z	124,277	200	1,774	16.7	677.7	677.7	677.7	0.0
AA	125,562	205	2,240	12.8	686.6	686.6	686.6	0.0
AB	126,999	290	3,010	9.3	696.9	696.9	696.9	0.0
AC	128,569	385	2,970	9.4	704.6	704.6	704.6	0.0
AD	130,682	255	2,260	12.4	716.6	716.6	716.6	0.0
AE	131,684	235	1,830	15.3	723.3	723.3	723.3	0.0
AF	133,812	320	3,210	8.7	735.9	735.9	735.9	0.0
AG	134,822	170	1,590	17.6	742.5	742.5	742.5	0.0
AH	136,516	265	2,290	12.2	753.5	753.5	753.5	0.0
AI	137,356	495	3,050	9.2	758.9	758.9	758.9	0.0
AJ	139,465	265	2,100	13.3	776.1	776.1	776.1	0.0
AK	140,922	190	1,930	14.5	786.9	786.9	786.9	0.0
AL	140,996	180	2,130	13.1	788.7	788.7	788.7	0.0

[1]Feet above confluence with Salinas River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ARROYO SECO

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	467	147	464	3.8	240.4	240.4	240.4	0.0
B	871	56	210	8.4	246.8	246.8	246.8	0.0
C	1,021	95	409	4.3	250.1	250.1	250.1	0.0
D	1,640	78	330	5.4	256.1	256.1	256.1	0.0
E	3,304	87	355	5.0	282.1	282.1	282.1	0.0
F	4,373	46	311	5.7	296.9	296.9	297.2	0.3
G	4,560	107	399	4.4	300.8	300.8	300.8	0.0
H	4,894	92	328	5.4	301.6	301.6	301.9	0.3
I	5,743	119	441	4.0	309.2	309.2	309.6	0.4
J	6,784	75	266	6.7	316.1	316.1	316.8	0.7
K	6,842	97	314	5.6	317.4	317.4	317.5	0.1
L	7,300	72	202	8.8	318.8	318.8	318.9	0.1
M	7,382	90	432	4.1	323.1	323.1	232.1	0.0
N	7,733	126	523	3.4	328.9	328.9	329.0	0.1
O	8,017	98	223	7.2	328.9	328.9	328.9	0.0
P	9,146	65	181	8.9	335.9	335.9	335.9	0.0
Q	9,408	101	204	7.9	341.3	341.3	341.4	0.1
R	10,237	30	134	12.0	347.8	347.8	347.8	0.0
S	10,395	213	885	1.8	351.2	351.2	351.2	0.0
T	10,893	77	275	5.8	351.4	351.4	351.5	0.1
U	11,765	73	316	5.1	357.4	357.4	357.4	0.0
V	11,999	48	154	10.2	358.0	358.0	357.9	0.1

[1]Feet above confluence with El Toro Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CALERA CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
W	12,423	41	173	9.0	362.1	362.1	362.1	0.0
X	12,510	24	164	9.5	364.6	364.6	364.6	0.0
Y	12,784	44	302	5.2	367.6	367.6	367.6	0.0
Z	12,832	33	279	5.6	368.7	368.7	368.7	0.0
AA	13,454	70	377	4.2	372:8	372.8	372.8	0.0
AB	13,672	26	145	10.8	372.8	372.8	372.8	0.0
AC	13,816	101	243	6.5	378.3	378.3	378.3	0.0
AD	14,966	61	168	9.3	383.8	383.8	383.9	0.1
AE	15,537	114	248	6.3	388.8	388.8	389.0	0.2
AF	15,940	55	268	5.8	392.5	392.5	392.5	0.0
AG	16,178	39	104	8.1	394.1[2]	393.8[2]	393.8	0.0
AH	16,970	35	146	5.8	401.2[2]	400.5[2]	400.5	0.0
AI	17,221	32	121	7.0	406.5[2]	405.7[2]	405.7	0.0
AJ	17,373	27	110	2.2	409.7[2]	408.4[2]	408.4	0.0
AK	17,991	56	85	2.3	415.4[2]	414.0[2]	414.1	0.1
AL	18,351	114	138	4.4	416.4[2]	416.2[2]	416.2	0.0
AM	18,582	87	207	4.6	418.2	418.2	418.6	0.4
AN	20,645	110	320	3.0	437.5	437.5	435.2	0.7
AO	20,684	72	217	4.4	438.4	438.4	438.6	0.2
AP	21,098	193	327	2.0	441.8	441.8	441.9	0.1
AQ	21,149	136	263	3.7	442.3	442.3	442.3	0.0
AR	22,662	33	207	4.7	457.9	457.9	457.9	0.0
AS	23,025	50	145	6.7	459.7	459.7	459.7	0.0
AT	23,655	41	178	5.4	468.6	468.6	468.6	0.0

[1]Feet above confluence with El Toro Creek

[2]Reduced floodway discharge

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CALERA CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AU	23,594	40	149	6.5	467.1	467.1	467.1	0.0
AV	23,655	41	178	5.4	468.6	468.6	468.6	0.0

[1]Feet above confluence with El Toro Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CALERA CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	1,450[1]	1,170	12,870	0.1	16.0	16.0	16.0	0.0
B	2,244[1]	60	460	1.3	16.6	16.6	16.6	0.0
C	2,729[1]	474	3,601	0.2	16.6	16.6	16.6	0.0
D	3,379[1]	346	2,702	0.2	16.6	16.6	16.7	0.1
E	4,024[1]	80	543	1.1	16.6	16.6	16.7	0.1
F	4,591[1]	50	311	2.0	16.6	16.6	16.7	0.1
G	5,139[1]	50	305	2.0	16.6	16.6	16.8	0.2
H	5,524[1]	55	580	1.0	28.3	28.3	29.3	1.0
I	6,703[1]	135	812	1.2	31.6	31.6	32.6	1.0
J	7,353[1]	16	61	11.2	40.4	40.4	40.4	0.0
K	7,903[1]	50	115	10.4	50.4	50.4	50.5	0.1
L	8,513[1]	24	172	4.0	61.7	61.7	61.7	0.0
M	9,353[1]	16	62	11.1	75.2	75.2	75.2	0.0
N	9,923[1]	50	208	3.8	81.6	81.6	82.5	0.9
O	10,703[1]	45	141	5.8	86.1	86.1	86.5	0.4
P	12,923[1]	146	1,372	0.5	99.6	99.6	100.0	0.4
Q	13,523[1]	346	2,702	0.2	99.6	99.6	100.0	0.4
R	14,663[1]	36	308	2.2	110.5	110.5	111.3	0.8
S	15,228[1]	40	201	1.8	110.7	110.7	111.5	0.8
T	16,283[1]	24	68	5.4	116.0	116.0	116.0	0.0
U	340[2]	19	37	8.0	236.0	236.0	236.0	0.0
V	1,135[2]	23	58	5.1	242.9	242.9	242.9	0.0
W	1,895[2]	16	42	7.0	251.9	251.9	251.9	0.0

[1]Feet above confluence with Monterey Bay

[2]Feet above Blue Lakespur Lane

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CANYON DEL REY

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	2,585[1]	18	52	5.7	259.9	259.9	259.9	0.0
Y	3,480[1]	70	864	1.8	297.7	297.7	298.7	1.0
Z	4,690[1]	48	388	1.2	297.9	297.9	298.9	1.0
AA	5,445[1]	263	1,999	0.3	317.4	317.4	318.4	1.0
AB	6,195[1]	108	763	0.7	317.4	317.4	318.4	1.0
AC	7,275[1]	64	148	3.3	324.6	324.6	324.6	0.0
AD	7,935[1]	75	570	0.3	346.5	346.5	347.5	1.0
AE	8,865[1]	13	73	1.8	348.9	348.9	348.9	0.0
AF	9,780[1]	56	491	0.7	365.0	365.0	365.0	0.0
AG	10,780[1]	43	81	3.8	368.3	368.3	368.3	0.0
AH	11,941[1]	260	1,873	0.2	390.3	390.3	391.3	1.0
AI	12,941[1]	255	1,735	0.2	390.3	390.3	391.3	1.0

[1]Feet above Blue Lakespur Lane

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CANYON DEL REY

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	10,140	510	4,090	5.6	39.4	39.2	39.7	0.5
B	10,501	551	4,548	5.0	39.7	39.7	40.6	0.9
C	12,343	1,520	7,459	3.0	42.4	42.4	43.3	0.9
D	13,373	910	4,812	4.7	44.1	44.1	45.0	0.9
E	13,978	852	4,406	5.2	46.0	46.0	46.5	0.5
F	14,613	1,090	6,382	3.6	47.0	47.0	47.9	0.9
G	15,070	827	4,471	5.1	48.3	48.3	48.6	0.3
H	15,740	600	3,787	6.0	49.3	49.3	50.0	0.7
I	16,921	445	2,394	7.6	53.3	53.3	54.2	0.9
J	17,117	456	3,034	6.0	55.1	55.1	55.6	0.5
K	18,531	227	2,870	6.3	58.1	58.1	58.9	0.8
L	20,107	742	5,250	4.3	61.6	61.6	62.5	0.9
M	20,989	620	3,927	5.3	63.7	63.7	64.4	0.7
N	21,330	700	4,184	5.0	64.3	64.3	65.3	1.0
O	22,394	250	3,101	6.7	67.9	67.9	68.9	1.0
P	23,764	240	3,364	6.2	72.2	72.2	72.8	0.6
Q	24,520	290	3,472	6.0	74.5	74.5	74.8	0.3
R	25,396	573	3,001	7.0	76.7	76.7	76.8	0.1
S	26,240	380	3,231	6.5	78.7	78.7	79.7	1.0
T	27,993	410	5,257	4.0	83.2	83.2	84.0	0.8
U	29,401	170	2,719	7.7	85.8	85.8	86.2	0.4
V	30,087	355	3,971	5.3	87.4	87.4	88.4	1.0
W	35,444	308	4,029	5.2	101.8	101.8	101.8	0.0
X	35,747	442	5,100	4.1	102.5	102.5	102.4	0.0

[1]Feet above confluence with Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CARMEL RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Y	37,100	428	4,341	4.8	104.4	104.4	104.8	0.4
Z	38,494	130	1,942	10.8	110.4	110.4	110.3	0.0
AA	40,243	170	2,824	7.4	117.3	117.3	117.4	0.1
AB	40,967	250	3,671	5.7	118.8	118.8	119.0	0.2
AC	42,352	197	2,419	8.6	122.9	122.9	122.9	0.0
AD	43,052	235	2,733	7.1	125.3	125.3	125.8	0.5
AE	44,103	189	2,502	7.8	128.7	128.7	129.0	0.3
AF	45,140	160	2,176	8.9	132.2	132.2	132.3	0.1
AG	46,225	185	2,484	7.8	136.1	136.1	136.2	0.1
AH	47,602	268	3,041	6.4	141.0	141.0	141.3	0.3
AI	48,650	225	2,685	7.2	145.2	145.2	145.3	0.1
AJ	49,362	191	2,719	7.1	148.1	148.1	148.4	0.3
AK	51,120	259	2,625	7.4	152.8	152.8	152.8	0.0
AL	52,141	248	2,489	7.8	157.6	157.6	157.6	0.0
AM	52,851	295	3,205	6.1	159.5	159.5	160.3	0.8
AN	53,918	300	2,998	6.5	166.3	166.3	167.3	1.0
AO	54,566	168	2,169	8.9	168.2	168.2	169.2	1.0
AP	55,645	368	3,840	5.1	171.5	171.5	172.3	0.8
AQ	56,605	417	2,811	6.9	175.1	175.1	175.4	0.3
AR	57,242	512	3,661	5.3	179.8	179.8	180.4	0.6
AS	60,555	198	2,059	9.4	193.8	193.8	193.8	0.0
AT	61,943	278	3,395	5.7	203.3	203.3	203.8	0.5
AU	62,633	233	2,545	7.6	205.6	205.6	205.9	0.3
AV	64,412	600	4,045	4.8	212.9	212.9	213.9	1.0

[1]Feet above confluence with Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CARMEL RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AW	65,101	513	3,471	5.6	216.9	216.9	217.9	1.0
AX	66,155	353	2,802	6.9	221.6	221.6	222.6	1.0
AY	66,848	316	2,164	8.2	225.8	225.8	225.8	0.0
AZ	67,552	886	3,495	5.1	230.8	230.8	231.5	0.7
BA	68,259	213	1,846	9.6	233.2	233.2	233.5	0.3
BB	68,598	221	2,294	7.7	235.7	235.7	236.6	0.9
BC	69,296	263	2,787	6.4	239.9	239.9	240.4	0.5
BD	70,643	503	2,698	6.6	247.1	247.1	247.5	0.4
BE	71,554	463	3,384	5.2	252.0	252.0	253.0	1.0
BF	72,441	429	3,142	5.6	257.6	257.6	258.0	0.4
BG	73,853	491	2,904	6.1	264.3	264.3	265.3	1.0
BH	74,559	276	2,178	8.1	268.9	268.9	269.1	0.2
BI	75,273	493	3,098	5.7	272.3	272.3	273.3	1.0
BJ	76,281	419	2,746	6.5	279.6	279.6	280.0	0.4
BK	77,010	191	1,872	9.5	284.7	284.7	285.7	1.0
BL	77,128	225	2,538	6.9	286.8	286.8	287.8	1.0
BM	77,912	309	2,740	6.2	290.8	290.8	291.3	0.5
BN	78,151	436	3,592	4.7	291.7	291.7	292.6	0.9
BO	79,246	391	2,834	6.0	298.3	298.3	298.4	0.1
BP	80,500	210	2,602	6.5	309.3	309.3	310.2	0.9
BQ	81,216	130	1,843	9.2	312.8	312.8	313.3	0.5
BR	81,541	126	1,701	9.9	314.2	314.2	315.2	1.0
BS	82,596	129	1,802	9.4	321.7	321.7	321.9	0.2
BT	82,935	235	2,588	6.5	324.5	324.5	324.5	0.0

[1]Feet above confluence with Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CARMEL RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BU	84,207	170	1,573	10.7	332.3	332.3	332.7	0.4
BV	84,389	147	1,911	8.8	336.2	336.2	336.2	0.0
BW	85,997	401	2,475	4.9	344.3	344.3	344.9	0.6
BX	86,447	362	1,987	6.1	347.4	347.4	347.8	0.4
BY	87,827	430	2,511	4.8	359.0	359.0	359.1	0.1
BZ	90,305	259	1,898	6.4	379.2	379.2	379.2	0.0
CA	91,638	123	1,118	10.8	389.1	389.1	389.1	0.0
CB	92,573	388	2,666	4.5	397.3	397.3	397.3	0.0
CC	93,448	165	1,332	9.1	406.3	406.3	406.3	0.0
CD	94,504	207	1,800	6.7	415.1	415.1	415.1	0.0
CE	95,896	114	1,235	9.8	427.0	427.0	427.0	0.0
CF	96,919	117	1,200	10.1	435.8	435.8	435.8	0.0
CG	97,531	299	2,097	5.8	443.0	443.0	443.0	0.0
CH	98,050	152	2,295	5.3	449.8	449.8	449.8	0.0
CI	98,154	158	1,902	6.4	458.1	458.1	458.1	0.0
CJ	99,060	140	1,557	7.8	463.6	463.6	463.6	0.0
CK	99,763	133	1,190	10.2	469.7	469.7	469.7	0.0

[1]Feet above confluence with Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CARMEL RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	828	140	961	4.7	54.8	54.8	55.8	1.0
B	1,020	183	943	4.8	55.4	55.4	56.2	0.8
C	2,596	203	742	6.1	58.2	58.2	59.2	1.0

[1]Feet above convergence with Carmel River Main Channel

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CARMEL RIVER HACIENDA CARMEL OVERBANK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	8,298	15	19	6.6	10.4	10.4	10.4	0.0
B	9,148	10	16	7.8	15.1	15.1	15.1	0.0
C	9,280	25	23	5.4	16.9	16.9	17.6	0.7
D	9,486	15	24	5.2	19.4	19.4	19.4	0.0
E	9,836	20	59	2.1	25.4	25.4	25.4	0.0
F	10,856	15	31	4.0	25.5	25.5	26.0	0.5
G	11,078	30	123	1.0	29.1	29.1	30.0	0.9
H	11,698	15	20	6.3	31.3	31.3	31.8	0.5
I	11,960	25	61	2.0	37.6	37.6	37.6	0.0
J	12,200	15	34	3.7	40.1	40.1	40.1	0.0
K	12,665	20	63	2.0	45.0	45.0	45.4	0.4
L	12,805	20	89	1.4	46.9	46.9	47.5	0.6
M	13,041	40	178	0.7	48.6	48.6	49.1	0.5
N	13,592	25	54	2.3	49.7	49.7	50.4	0.7
O	13,796	35	147	0.9	54.3	54.3	54.5	0.2
P	14,496	25	47	2.7	56.9	56.9	57.8	0.9
Q	14,746	30	125	1.0	61.7	61.7	62.3	0.6
R	15,146	15	41	3.0	61.7	61.7	62.4	0.7
S	15,499	15	24	5.2	63.5	63.5	64.2	0.7
T	15,745	15	39	3.2	65.7	65.7	66.6	0.9
U	16,077	15	46	2.7	67.8	67.8	68.7	0.9
V	16,589	15	38	3.3	72.1	72.1	72.7	0.6
W	16,939	15	34	3.7	75.0	75.0	75.9	0.9

[1]Feet above confluence with Moro Cojo Slough

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CASTROVILLE BOULEVARD WASH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	17,116	20	73	1.7	78.3	78.3	78.4	0.1
Y	17,288	25	99	1.3	79.5	79.5	79.6	0.1
Z	17,414	40	147	0.9	79.8	79.8	80.6	0.8
AA	18,114	45	143	0.9	79.9	79.9	80.7	0.8
AB	18,248	20	32	3.9	81.6	81.6	81.7	0.1
AC	18,382	15	44	2.8	82.8	82.8	83.0	0.2
AD	19,628	20	54	2.3	84.2	84.2	84.7	0.5
AE	18,767	30	93	1.3	84.4	84.4	85.4	1.0
AF	18,927	10	30	4.2	84.7	84.7	85.6	0.9

[1]Feet above confluence with Moro Cojo Slough

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CASTROVILLE BOULEVARD WASH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	1,300	160	849	1.7	8.7	7.9[2]	8.0[2]	0.1
B	3,023	150	638	2.2	8.7	7.9[2]	8.7[2]	0.8
C	3,532	100	267	6.0	8.9	8.9	9.9	1.0
D	4,767	115	1,162	1.3	20.6	20.6	21.6	1.0
E	5,502	56	604	2.3	20.8	20.8	20.8	0.0
F	6,434	66	803	1.7	25.9	25.9	26.1	0.2
G	7,507	87	372	3.9	26.3	26.3	27.0	0.7
H	8,582	130	1,297	0.1	28.3	28.3	29.2	0.9
I	9,477	70	656	0.2	28.3	28.3	29.2	0.9
J	10,592	70	708	0.2	28.3	28.3	29.2	0.9
K	11,620	130	732	6.1	28.3	28.3	29.2	0.9
L	12,884	61	15	6.5	39.3	39.3	39.3	0.0
M	14,107	70	27	3.5	54.2	54.2	54.2	0.0
N	14,853	67	16	5.8	65.6	65.6	65.6	0.0

[1]Feet above confluence with Elkhorn Slough

[2]Elevation computed without consideration of tidal effects from Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CORNCOB CANYON CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	498	25	70	2.8	144.9	144.9	144.9	0.0
B	859	30	50	3.9	147.4	147.4	147.4	0.0

[1]Feet above confluence with Gonzales Slough

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: EAST BRANCH GONZALES SLOUGH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	3,080	99	447	4.5	63.8	63.8	63.9	0.1
B	4,898	78	298	6.7	78.1	78.1	78.1	0.0
C	6,528	91	420	4.8	94.0	94.0	94.1	0.1
D	8,208	106	463	4.3	108.4	108.4	108.4	0.0
E	9,768	91	421	4.8	120.4	120.4	120.4	0.0
F	11,438	101	359	5.6	129.7	129.7	130.2	0.5
G	13,318	59	228	8.8	149.4	149.4	149.4	0.0
H	14,968	72	389	5.1	164.3	164.3	164.4	0.1
I	17,058	61	436	4.6	178.3	178.3	179.0	0.7
J	18,988	67	442	4.5	190.9	190.9	191.9	1.0
K	20,888	53	267	7.1	206.0	206.0	206.0	0.0
L	22,205	185	476	4.5	226.2	226.2	226.3	0.1
M	22,674	148	506	4.3	231.3	231.3	231.3	0.0
N	22,906	144	450	4.8	234.7	234.7	234.7	0.0

[1]Feet above confluence with Salinas River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: EL TORO CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	700	407	5,724	0.2	8.7	5.2[2]	5.2[2]	0.0
B	2,640	661	5,302	0.2	8.7	5.2[2]	5.2[2]	0.0
C	5,803	711	5,748	0.2	8.7	5.2[2]	5.2[2]	0.0
D	8,171	1,407	13,117	0.1	8.7	5.2[2]	5.2[2]	0.0
E	10,902	697	4,913	0.3	8.7	5.2[2]	5.2[2]	0.0
F	13,794	898	5,015	0.3	8.7	5.2[2]	5.2[2]	0.0
G	16,581	582	3,960	0.3	8.7	5.2[2]	5.2[2]	0.0
H	19,470	885	4,732	0.3	8.7	5.2[2]	5.2[2]	0.0
I	21,973	565	2,763	0.5	8.7	5.3[2]	5.3[2]	0.0
J	25,058	764	2,496	0.6	8.7	5.3[2]	5.3[2]	0.0
K	27,785	354	1,391	1.2	8.7	5.4[2]	5.4[2]	0.0
L	30,779	358	1,410	1.2	8.7	5.6[2]	5.7[2]	0.1
M	32,388	290	1,316	1.3	8.7	5.7[2]	5.8[2]	0.1
N	34,292	508	3,711	0.6	8.7	7.9[2]	8.4[2]	0.5
O	35,797	519	3,698	0.6	8.7	7.9[2]	8.5[2]	0.6
P	37,897	441	3,647	0.4	8.7	7.9[2]	8.5[2]	0.6
Q	39,119	476	2,628	0.6	8.7	7.9[2]	8.5[2]	0.6
R	40,875	251	1.174	1.5	8.7	8.0[2]	8.6[2]	0.6
S	42,255	167	574	2.5	8.7	8.1[2]	8.7[2]	0.6
T	43.064	282	879	1.7	8.7	8.4[2]	9.2[2]	0.8
U	44,592	300	754	2.3	11.1	11.1	11.4	0.3
V	45,697	313	1,508	0.9	14.7	14.7	14.8	0.1
W	47,492	426	1,153	1.5	14.8	14.8	15.0	0.2

[1]Feet above confluence with Pacific Ocean

[2]Elevation computed without consideration for tidal effects from Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELKHORN SLOUGH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	48,452	294	1,004	1.6	19.1	19.1	19.1	0.0
Y	49,911	237	722	2.5	22.2	22.2	22.8	0.6
Z	51,696	11.0	387	4.7	25.8	25.8	26.5	0.7
AA	52,971	174	420	4.1	30.6	30.6	31.5	0.9
AB	53,930	50	295	5.3	36.1	36.1	36.7	0.6
AC	56,205	250	313	6.6	42.3	42.3	42.6	0.3
AD	57,854	46	207	6.1	50.8	50.8	50.8	0.0
AE	58,887	39	213	5.9	54.4	54.4	54.4	0.0
AF	60,983	42	225	5.6	63.1	63.1	63.1	0.0
AG	62,967	34	148	10.2	67.2	67.2	67.8	0.6
AH	65,752	74	219	8.3	76.2	76.2	76.5	0.3
AI	67,386	45	272	5.5	81.6	81.6	82.5	0.9
AJ	69,670	50	237	6.2	89.7	89.7	90.0	0.3
AK	71.721	45	226	5.3	96.8	96.8	97.4	0.6
AL	73,372	39	171	7.0	105.0	105.0	105.1	0.1
AM	74,849	44	145	7.9	110.5	110.5	110.5	0.0
AN	76,029	57	256	4.5	117.4	117.4	118.3	0.9
AO	77,983	81	249	4.0	132.3	132.3	132.6	0.3
AP	79,233	188	321	3.2	139.5	139.5	139.7	0.2
AQ	80,177	24	53	7.5	147.2	147.2	147.4	0.2
AR	81,222	25	74	5.4	156.4	156.4	156.4	0.0
AS	82,738	23	54	7.5	174.0	174.0	174.0	0.0

[1]Feet above confluence with Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELKHORN SLOUGH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	4,492	884	5,929	0.3	52.9	52.9	53.8	0.9
B	5,429	414	1,345	1.5	52.9	52.9	53.9	1.0
C	6,586	124	358	5.6	55.8	55.8	56.4	0.6
D	7,440	110	310	6.8	58.1	58.1	58.3	0.2
E	7,632	50	266	7.5	58.3	58.3	58.4	0.1
F	8,426	62	338	5.9	60.3	60.3	60.8	0.5
G	9,816	58	308	6.5	67.7	67.7	68.1	0.4
H	10,389	72	413	4.8	71.7	71.7	72.3	0.6
I	10,739	64	235	8.5	79.9	79.9	80.1	0.2
J	12,439	288	594	3.4	90.6	90.6	91.2	0.6
K	13,191	44	230	8.7	93.4	93.4	93.9	0.5
L	13,989	58	359	5.6	96.9	96.9	97.4	0.5
M	15,563	145	668	3.0	107.5	107.5	108.5	1.0
N	16,795	159	429	4.7	113.8	113.8	113.9	0.1
O	17,433	72	480	4.2	119.6	119.6	119.7	0.1
P	18,735	53	183	10.9	122.5	122.5	122.5	0.0
Q	19,688	51	220	9.1	127.7	127.7	127.7	0.0
R	20,763	58	262	7.6	136.1	136.1	136.1	0.0
S	21,609	39	196	10.2	140.3	140.3	140.3	0.0
T	22,447	106	365	5.5	144.7	144.7	144.9	0.2
U	23,348	88	251	8.0	149.9	149.9	149.9	0.0
V	24,750	244	486	4.1	159.5	159.5	159.6	0.1
W	25,682	203	537	3.7	162.3	162.3	162.9	0.6
X	26,432	308	421	4.7	166.6	166.6	166.6	0.0

[1]Feet above confluence with Reclamation Ditch

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: GABILAN CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Y	27,762	1,170	390	5.1	172.1	172.1	172.2	0.1
Z	28,452	336	433	4.6	176.4	176.4	176.5	0.1
AA	29,555	235	364	5.5	183.1	183.1	183.1	0.0
AB	30,404	118	273	7.3	186.5	186.5	186.5	0.0
AC	31.681	54	332	6.0	194.9	194.9	194.9	0.0

[1]Feet above confluence with Reclamation Ditch

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: GABILAN CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,559	25	40	2.7	136.1	136.1	136.9	0.8
B	2,678	140	1,770	0.2	136.2	136.2	137.1	0.9
C	3,714	145	1,760	0.2	136.2	136.2	137.1	0.9
D	3,823	85	380	0.6	136.2	136.2	137.1	0.9
E	4,025	35	40	5.9	136.6	136.6	137.1	0.5
F	4,266	100	1,220	0.2	138.0	138.0	138.4	0.4
G	4,554	70	850	0.3	138.0	138.0	138.4	0.4
H	4,684	65	300	1.0	138.0	138.0	138.4	0.4
I	4,926	65	670	0.4	138.0	138.0	138.4	0.4
J	5,057	90	880	0.4	138.0	138.0	138.4	0.4
K	6,178	105	800	0.4	138.0	138.0	138.4	0.4
L	6,412	105	1,220	0.3	140.7	140.7	140.9	0.2
M	7,325	184	1,900	0.2	140.7	140.7	140.9	0.2
N	7,551	210	1,760	0.2	141.6	141.6	141.8	0.2
O	8,753	85	400	0.9	141.7	141.7	141.8	0.1
P	10,109	55	200	1.9	145.1	145.1	145.1	0.0
Q	10,290	60	330	1.2	145.1	145.1	145.2	0.1

[1]Feet above U.S. Highway 101 culvert

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: GONZALES SLOUGH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	456	16	61	3.2	386.5	386.5	386.6	0.1
B	1,020	40	36	5.5	402.4	402.4	402.4	0.0
C	1,222	35	199	1.1	414.8	414.8	415.1	0.3
D	1,500	27	55	3.9	421.3	421.3	421.6	0.3
E	1,946	14	25	7.7	434.3	434.3	434.3	0.0
F	2,247	12	23	8.1	444.9	444.9	444.9	0.0
G	2,561	12	42	4.4	458.1	458.1	458.9	0.8
H	3,240	25	44	3.9	480.6	480.6	480.7	0.1
I	3,493	36	72	2.4	490.3	490.3	490.4	0.1
J	4,101	22	53	3.2	517.4	517.4	517.7	0.3
K	4,657	28	77	2.2	538.2	538.2	538.3	0.1
L	5,053	25	35	4.4	552.1	552.1	552.5	0.4
M	5,603	18	24	6.6	573.5	573.5	573.7	0.2
N	6,029	14	22	7.2	589.0	589.0	589.0	0.0
O	6,247	31	28	5.5	600.2	600.2	600.2	0.0
P	6,382	13	22	7.3	604.9	604.9	604.9	0.0

[1]Feet above confluence with San Benancio Gulch

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: HARPER CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	3,844	1,266	7,824	0.1	46.5	46.5	46.5	0.0
B	6,358	498	2,461	0.3	47.3	47.3	47.3	0.0
C	7,424	840	6,800	0.1	47.3	47.3	47.3	0.0
D	8,415	710	4,060	0.2	47.3	47.3	47.3	0.0
E	9,419	29	108	6.5	47.3	47.3	47.3	0.0
F	10,450	39	134	5.2	52.3	52.3	53.3	1.0

[1]Feet above confluence with Reclamation Ditch

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: NATIVIDAD CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	200	1,535	4,419	9.9	11.3	11.3	11.3	0.0
B	2,840	4,570	27,409	1.6	15.0	15.0	15.0	0.0
C	7,680	[2]	[2]	[2]	18.2	18.2	[2]	[2]
D	10,400	[2]	[2]	[2]	20.5	20.5	[2]	[2]
E	13,101	[2]	[2]	[2]	22.4	22.4	[2]	[2]
F	13,219	[2]	[2]	[2]	22.4	22.4	[2]	[2]
G	15,760	[2]	[2]	[2]	24.1	24.1	[2]	[2]
H	46,145	[2]	[2]	[2]	50.4	50.4	[2]	[2]
I	48,395	[2]	[2]	[2]	52.9	52.9	[2]	[2]
J	52,015	[2]	[2]	[2]	56.9	56.9	[2]	[2]
K	54,105	[2]	[2]	[2]	59.5	59.5	[2]	[2]
L	57,665	[2]	[2]	[2]	62.4	62.4	[2]	[2]
M	60,610	[2]	[2]	[2]	64.8	64.8	[2]	[2]
N	60,850	[2]	[2]	[2]	64.8	64.8	[2]	[2]
O	62,270	1,340	7,784	5.5	65.4	65.4	65.4	0.0
P	66,110	300	4,152	10.4	68.1	68.1	68.6	0.5
Q	68,240	300	4,099	10.5	71.2	71.2	71.9	0.7
R	71,020	304	6,052	7.1	77.1	77.1	77.4	0.3
S	73,820	271	5,692	7.6	80.5	80.5	80.8	0.3
T	76,380	500	6,064	7.1	82.6	82.6	83.1	0.5
U	79,237	393	6,471	6.6	85.4	85.4	86.0	0.6

[1]Feet above mouth at Pacific Ocean

[2]Floodway computed without consideration of levee

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: PAJARO RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[2]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A[1]	*	*	*	*	*	*	*	*
B[1]	*	*	*	*	*	*	*	*
C	7,680	5,116	21,892	2.0	15.6	15.6	15.8	0.2
D	10,440	5,488	28,165	1.5	16.1	16.1	16.7	0.6
E	13,101	5,350	28,665	1.5	16.5	16.5	17.3	0.8
F	13,219	5,315	29,269	1.5	16.6	16.6	17.4	0.8
G	15,760	5,422	30,289	1.4	17.0	17.0	17.8	0.8
H	46,145	3,683	18,408	2.3	45.7	45.7	46.7	1.0
I	43,395	2,700	13,953	3.1	47.0	47.0	47.8	0.8
J	52,015	2,200	10,093	4.3	50.8	50.8	51.1	0.3
K	54,105	2,100	10,804	4.0	52.5	52.5	53.2	0.7
L	57,665	2,400	11,024	3.9	55.5	55.5	56.3	0.8
M	60,610	1,375	8,709	4.9	59.5	59.5	59.8	0.3
N	60,850	1,320	9,916	4.3	60.8	60.8	60.8	0.0
O[1]	*	*	*	*	*	*	*	*
P[1]	*	*	*	*	*	*	*	*
Q[1]	*	*	*	*	*	*	*	*
R[1]	*	*	*	*	*	*	*	*
S[1]	*	*	*	*	*	*	*	*
T[1]	*	*	*	*	*	*	*	*
U[1]	*	*	*	*	*	*	*	*

*Data not available

[1]Cross-section data shown on Pajaro River

[2]Feet above mouth of Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: PAJARO RIVER- WITHOUT CONSIDERATION OF LEVEE

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	3,124	119	240	6.3	298.0	298.0	298.8	0.8
B	4,362	67	170	8.8	308.7	308.7	308.7	0.0
C	4,597	54	360	4.2	312.4	312.4	312.4	0.0
D	5,852	27	130	11.5	324.9	324.9	324.9	0.0
E	7,565	42	180	8.3	344.0	344.0	344.0	0.0
F	8,906	38	140	10.7	357.6	357.6	357.6	0.0
G	10,004	61	180	8.3	368.3	368.3	368.3	0.0
H	11,190	42	470	3.2	391.4	391.4	391.9	0.5
I	12,258	30	130	11.5	394.9	394.9	394.9	0.0
J	13,848	42	160	9.4	410.8	410.8	410.8	0.0
K	14,608	54	450	3.3	423.6	423.6	424.5	0.9
L	16,435	46	270	5.6	435.3	435.3	435.3	0.0
M	18,055	40	200	7.5	449.5	449.5	449.5	0.0
N	19,108	53	260	5.8	458.1	458.1	458.1	0.0
O	19,560	68	850	1.8	468.9	468.9	469.6	0.7
P	20,078	35	270	5.6	469.3	469.3	470.3	1.0
Q	20,535	33	140	10.7	470.7	470.7	470.7	0.0

[1]Feet above confluence with Salinas River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: PINE CANYON CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A-Z	*	*	*	*	*	*	*	*
AA	35,065	53	310	1.5	40.5	40.5	40.5	0.0
AB	36,655	537	1,988	0.5	40.8	40.8	40.8	0.0
AC	38,305	45	260	4.0	41.0	41.0	41.0	0.0
AD	40,510	45	278	3.8	42.5	42.5	42.5	0.0
AE	43,094	458	1,486	1.7	43.8	43.8	43.8	0.0
AF	45,749	216	635	1.7	45.8	45.8	45.8	0.0
AG	47,588	4,250	21,018	0.1	46.6	46.6	46.6	0.0
AH	52,228	550	587	0.8	46.6	46.6	46.6	0.0
AI	54,379	49	379	1.2	51.1	51.1	51.6	0.5
AJ	56,144	30	337	1.4	52.4	52.4	52.7	0.3
AK	58,740	64	516	0.9	52.4	52.4	52.7	0.3
AL	61,443	76	498	0.9	58.2	58.2	58.5	0.3
AM	63,616	111	838	0.6	58.4	58.4	58.7	0.3
AN	66,676	132	1,298	0.4	59.5	59.5	59.8	0.3

[1]Feet above confluence with Tembladero Slough

*Data not available

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: RECLAMATION DITCH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,165	1,945	14,019	6.1	11.6	11.6	12.4	0.8
B	6,706	1,360	12,252	6.9	13.4	13.4	14.3	0.9
C	12,144	2,059	17,192	4.9	17.5	17.5	18.5	1.0
D	17,846	4,860	25,254	3.4	20.8	20.8	21.4	0.6
E	20,381	5,522	26,305	3.2	22.7	22.7	23.1	0.4
F	24,235	1,183	13,640	4.2	25.7	25.7	25.9	0.2
G	27,086	3,263	33,500	2.5	26.9	26.9	27.3	0.4
H	31,891	2,591	19,020	4.5	28.4	28.4	28.9	0.5
I	40,762	2,350	26,873	3.2	34.4	34.4	35.4	1.0
J	45,302	4,137	36,383	2.3	35.7	35.7	36.7	1.0
K	51,163	3,215	26,146	3.3	39.0	39.0	39.6	0.6
L	55,598	1,154	14,318	5.9	42.1	42.1	42.5	0.4
M	59,981	2,106	21,044	4.0	45.1	45.1	45.8	0.7
N	65,102	2,336	23,622	3.6	48.3	48.3	49.3	1.0
O	71,438	1,562	20,171	4.2	51.9	51.9	52.8	0.9
P	75,715	345	7,380	11.5	54.0	54.0	55.0	1.0
Q	81,206	905	18,824	4.5	60.1	60.1	60.7	0.6
R	84,797	1208	20,997	4.1	60.8	60.8	61.5	0.7
S	89,866	2,834	41,183	2.1	62.6	62.6	63.4	0.8
T	97,469	4,726	44,627	1.9	63.8	63.8	64.7	0.9
U	355,080	1,385	12,457	6.9	287.2	287.2	287.7	0.5
V	358,618	1,562	14,306	6.0	291.4	291.4	291.9	0.5
W	360888	1,409	14,862	5.8	294.4	294.4	295.1	0.7

[1]Feet above confluence with Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SALINAS RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	363,475	1,719	18,068	4.8	296.1	296.1	296.5	0.4
Y	366,379	1,594	13,075	6.6	298.3	298.3	298.8	0.5
Z	368,966	1,584	16,251	5.3	300.9	300.9	301.5	0.6
AA	459,730	1,432	11,260	7.8	411.1	411.1	411.7	0.6
AB	462,106	1,251	10,670	8.2	415.3	415.3	415.5	0.2
AC	464,904	1,229	12,120	7.3	418.1	418.1	418.7	0.6
AD	466,646	1,347	12,630	7.0	420.8	420.8	421.3	0.5
AE	468,125	1,526	13,590	6.5	422.7	422.7	423.0	0.3

[1]Feet above confluence with Pacific Ocean along profile baseline

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SALINAS RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
F	6,450	1,915	13,440	2.1	25.6	25.6	26.3	0.7

[1]Feet above convergence with Salinas River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SALINAS RIVER OVERBANK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	177	16	50	10.0	237.2	237.2	237.3	0.1
B	599	18	52	9.6	251.1	251.1	251.2	0.1
C	1,123	32	62	8.0	264.8	264.8	264.8	0.0
D	1,343	19	52	9.4	270.3	270.3	270.3	0.0
E	1,519	63	326	1.5	283.7	283.7	283.7	0.0
F	1,847	37	65	7.5	284.7	284.7	284.7	0.0
G	2,358	24	70	6.9	294.9	294.9	294.9	0.0
H	2,886	45	245	1.9	312.5	312.5	312.6	0.1
I	3,398	26	56	8.4	320.1	320.1	320.1	0.0
J	3,710	36	368	1.3	334.2	334.2	334.4	0.2
K	4,121	13	45	10.4	337.2	337.2	337.2	0.0
L	4,670	18	80	6.2	346.8	346.8	346.8	0.0
M	5,121	41	64	7.2	358.0	358.0	358.0	0.0
N	5,570	40	63	7.2	370.5	370.5	370.5	0.0
O	5,881	54	133	2.2	383.4	383.4	383.4	0.0
P	6,374	28	41	6.9	396.1	396.1	396.1	0.0
Q	7,027	22	71	4.4	416.9	416.9	417.7	0.8
R	7,238	25	81	3.5	421.3	421.3	422.2	0.9
S	7,770	13	37	7.6	437.4	437.4	437.8	0.4
T	8,462	20	36	7.6	448.7	448.7	448.7	0.0
U	9,062	14	32	8.6	463.5	463.5	460.5	0.0
V	9,649	11	28	9.1	487.0	487.0	487.0	0.0
W	10,309	15	30	8.1	507.3	507.3	507.3	0.0

[1]Feet above convergence with El Toro Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SAN BENANCIO GULCH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	10,983	42	155	1.5	534.5	534.5	534.5	0.0
Y	11,482	10	26	9.1	550.1	550.1	550.1	0.0
Z	11,801	39	90	2.5	571.3	571.3	571.3	0.0
AA	12,368	43	40	5.5	590.6	590.6	590.6	0.0
AB	12,898	53	94	2.7	609.7	609.7	609.8	0.1
AC	13,595	19	29	7.0	627.6	627.6	627.6	0.0
AD	14,023	14	44	4.9	644.3	644.3	645.0	0.7
AE	14,390	21	29	6.8	656.0	656.0	656.0	0.0
AF	14,921	35	41	4.5	678.8	678.8	678.8	0.0
AG	15,432	9	24	7.6	697.9	697.9	698.0	0.1
AH	15,639	15	46	3.9	705.4	705.4	705.4	0.0
AI	16,083	44	180	1.0	723.8	723.8	723.8	0.0
AJ	16,682	16	40	3.8	744.4	744.4	744.8	0.4
AK	17,688	37	115	1.3	782.8	782.8	782.9	0.1
AL	17,954	18	72	1.9	794.4	794.4	794.4	0.0
AM	18,125	18	21	6.3	800.8	800.8	800.8	0.0
AN	18,374	46	100	2.0	812.9	812.9	812.9	0.0
AO	18,830	10	18	7.5	830.6	830.6	830.6	0.0

[1]Feet above convergence with El Toro Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SAN BENANCIO GULCH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,688	340	1,800	10.4	300.6	300.6	300.6	0.0
B	4,157	340	2,590	7.2	305.7	305.7	306.0	0.3
C	4,585	380	2,920	6.4	309.7	309.7	309.7	0.0
D	5,215	250	1,630	11.4	310.0	310.0	310.0	0.0
E	6,697	769	6,030	3.1	314.7	314.7	315.0	0.3
F	7,754	364	1,890	9.9	319.2	319.2	319.2	0.0
G	8,539	295	3,270	5.7	326.3	326.3	326.3	0.0
H	10,489	478	3,440	5.4	328.4	328.4	328.4	0.0
I	11,839	1,127	8,060	2.3	329.5	329.5	329.7	0.2

[1]Feet above convergence with Salinas River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SAN LORENZO CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	90	14	70	9.8	16.2	16.2	17.0	0.8
B	1,241	78	183	3.8	19.0	19.0	20.0	1.0
C	2,427	112	152	4.5	24.6	24.6	25.0	0.4
D	3,388	30	96	4.6	30.6	30.6	30.7	0.1
E	4,600	32	140	3.2	37.3	37.3	37.9	0.6
F	5,406	83	351	1.3	42.4	42.4	43.4	1.0
G	6,693	36	141	3.1	49.4	49.4	49.8	0.4
H	7,762	60	81	5.4	56.2	56.2	56.3	0.1
I	8,637	63	144	3.1	63.6	63.6	64.0	0.4
J	9,724	51	80	5.5	75.2	75.2	75.4	0.2
K	10,357	33	144	3.1	82.9	82.9	83.2	0.3
L	11,744	23	135	3.3	93.5	93.5	93.5	0.0
M	12,587	26	63	4.8	95.4	95.4	95.6	0.2
N	13,509	20	44	6.8	109.1	109.1	109.1	0.0
O	14,791	28	66	4.6	120.8	120.8	120.8	0.0
P	15,818	31	117	1.3	125.1	125.1	126.1	1.0
Q	16,646	32	220	1.5	147.7	147.7	148.5	0.8
R	17,616	18	103	1.2	155.8	155.8	156.7	0.9
S	18,475	17	23	5.2	165.6	165.6	165.9	0.3
T	19,531	14	19	4.2	175.1	175.1	175.7	0.6
U	20,349	17	26	3.1	190.4	190.4	191.2	0.8
V	21,382	14	14	5.6	210.1	210.1	210.6	0.5
W	22,224	10	13	6.1	236.7	236.7	237.1	0.4

[1]Feet above U.S. Highway 101

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SAN MIGUEL CANYON CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	25,323	61	146	3.2	48.7	48.7	49.7	1.0
B	27,214	94	116	4.0	59.3	59.3	59.7	0.4
C	28,719	69	112	4.2	67.0	67.0	68.0	1.0
D	30,795	20	61	7.6	75.4	75.4	75.5	0.1
E	32,660	29	94	4.9	83.7	83.7	83.7	0.0
F	34,410	36	94	4.9	89.7	89.7	89.7	0.0
G	36,440	38	109	4.3	102.9	102.9	102.9	0.0
H	38,071	29	103	4.5	114.6	114.6	115.4	0.8
I	40,527	120	358	1.3	128.2	128.2	128.6	0.4
J	42,524	87	91	5.1	137.4	137.4	137.9	0.5
K	44,933	72	159	2.9	148.9	148.9	149.4	0.5
L	47,013	52	126	3.7	162.6	162.6	163.4	0.8

[1]Feet above confluence with Tembladero Slough

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SANTA RITA CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	21,800	419	2,230	2.4	12.1	12.1	13.1	1.0
B	22,986	263	2,160	1.8	12.3	12.3	13.3	1.0
C	23,928	335	2,670	1.6	12.6	12.6	13.5	0.9
D	25,043	165	1,270	3.1	12.8	12.8	13.7	0.9
E	26,307	196	1,920	2.5	14.4	14.4	15.3	0.9
F	27,324	95	830	5.5	14.4	14.4	15.4	1.0
G	28,460	286	2,900	1.6	16.1	16.1	16.9	0.8
H	29,651	345	3,500	1.4	16.1	16.1	17.0	0.9
I	30,804	270	2,400	2.0	16.1	16.1	17.0	0.9
J	31,756	233	2,300	1.9	16.1	16.1	17.1	1.0
K	32,448	30	420	0.3	16.2	16.2	17.2	1.0
L	32,816	70	870	0.1	16.2	16.2	17.2	1.0

[1]Feet above confluence with Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TEMBLADERO SLOUGH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	45	25	139	4.3	407.8	407.8	408.8	1.0
B	258	32	133	4.6	411.7	411.7	411.7	0.0
C	659	36	127	4.7	415.2	415.2	415.2	0.0
D	1,417	34	122	4.6	425.3	425.3	425.3	0.0
E	2,399	47	137	4.0	434.3	434.3	434.3	0.0
F	3,463	12	45	10.6	449.7	449.7	449.7	0.0
G	3,551	31	139	3.5	452.4	452.4	452.4	0.0
H	3,670	33	83	5.8	453.2	453.2	453.2	0.0
I	3,948	35	92	5.3	458.9	458.9	458.9	0.0
J	4,350	32	103	4.7	468.7	468.7	468.7	0.0
K	4,642	15	51	9.5	474.2	474.2	474.2	0.0
L	5,109	26	91	5.3	486.8	486.8	486.8	0.0
M	5,297	31	62	7.8	494.0	494.0	493.9	-0.1
N	5,514	29	104	4.7	499.0	499.0	499.0	0.0
0	5,913	24	56	8.7	505.5	505.5	505.5	0.0
P	6,026	65	142	3.4	509.8	509.8	509.8	0.0
Q	6,282	31	67	7.2	512.5	512.5	512.6	0.1
R	6,612	27	88	5.5	521.0	521.0	521.4	0.4
S	7,440	45	104	4.7	537.2	537.2	537.5	0.3
T	8,249	18	79	6.1	549.0	549.0	549.4	0.4
U	8,549	19	49	9.3	552.1	552.1	552.1	0.0
V	9,226	24	85	5.4	568.8	568.8	568.8	0.0
W	9,488	53	108	4.3	572.7	572.7	572.7	0.0

[1]Feet above convergence with Calera Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: WATSON CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	10,027	32	62	7.4	586.3	586.3	586.4	0.1
Y	10,157	28	88	5.2	591.0	591.0	591.0	0.0
Z	10,553	19	70	4.6	596.2	596.2	596.2	0.0
AA	10,607	20	103	3.1	599.3	599.3	599.3	0.0
AB	10,850	88	165	2.0	600.0	600.0	600.0	0.0
AC	11,331	26	44	7.4	605.2	605.2	605.2	0.0
AD	11,928	16	49	6.7	616.0	616.0	616.0	0.0
AE	12,526	11	42	7.7	637.2	637.2	637.2	0.0
AF	12,710	19	39	8.3	650.0	650.0	650.0	0.0
AG	13,045	19	47	7.0	660.2	660.2	660.2	0.0
AH	13,146	43	221	1.5	669.4	669.4	669.5	0.1
Al	13,453	22	53	6.2	671.5	671.5	671.5	0.0
AJ	14,092	30	52	6.2	689.2	689.2	689.2	0.0
AK	14,350	11	50	6.5	700.2	700.2	700.3	0.1
AL	14,713	12	34	9.6	716.6	716.6	716.6	0.0
AM	14,900	23	77	4.2	721.9	721.9	722.0	0.1
AN	14,994	50	192	1.7	729.0	729.0	729.2	0.2
AO	15,320	23	69	4.7	730.1	730.1	730.1	0.0
AP	15,905	30	65	5.0	740.3	740.3	740.3	0.0
AQ	16,071	116	247	1.3	748.2	748.2	748.2	0.0
AR	16,315	25	57	5.8	748.5	748.5	748.5	0.0
AS	16,541	21	58	5.6	753.8	753.8	753.8	0.0
AT	17,393	16	48	6.7	772.2	772.2	772.2	0.0

[1]Feet above convergence with Calera Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: WATSON CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AU	17,435	12	57	5.7	774.5	774.5	774.5	0.0
AV	17,829	25	75	4.3	781.2	781.2	781.2	0.0
AW	17,945	29	79	3.5	787.4	787.4	787.3	-0.1
AX	18,551	12	36	7.6	810.6	810.6	810.9	0.3
AY	18,724	50	126	2.2	812.8	812.8	813.2	0.4
AZ	18,992	21	61	4.5	820.2	820.2	820.6	0.4
BA	19,378	20	36	7.6	837.2	837.2	837.4	0.2
BB	19,520	18	35	8.0	848.7	848.7	849.0	0.3
BC	19,770	26	53	5.2	860.2	860.2	860.5	0.3
BD	20,027	21	37	7.6	867.3	867.3	867.5	0.2
BE	20,076	8	40	6.5	873.2	873.2	874.1	0.9
BF	20,587	37	70	3.9	883.4	883.4	883.6	0.2
BG	20,846	29	53	5.2	886.2	886.2	886.2	0.0

[1]Feet above convergence with Calera Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: WATSON CREEK

Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams

[Not Applicable to this Flood Risk Project]

6.4 Coastal Flood Hazard Mapping

Flood insurance zones and BFEs including the wave effects were identified on each transect based on the results from the onshore wave hazard analyses. Between transects, elevations were interpolated using topographic maps, land-use and land-cover data, and knowledge of coastal flood processes to determine the aerial extent of flooding. Sources for topographic data are shown in Table 23.

Zone VE is subdivided into elevation zones and BFEs are provided on the FIRM.

The limit of Zone VE shown on the FIRM is defined as the farthest inland extent of any of these criteria (determined for the 1% annual chance flood condition):

- The *primary frontal dune zone* is defined in 44 CFR Section 59.1 of the NFIP regulations. The primary frontal dune represents a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes that occur immediately landward and adjacent to the beach. The primary frontal dune zone is subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune zone occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

- The *wave runup zone* occurs where the (eroded) ground profile is 3.0 feet or more below the 2-percent wave runup elevation.

- The *wave overtopping splash zone* is the area landward of the crest of an overtopped barrier, in cases where the potential 2-percent wave runup exceeds the barrier crest elevation by 3.0 feet or more.

- The *breaking wave height zone* occurs where 3-foot or greater wave heights could occur (this is the area where the wave crest profile is 2.1 feet or more above the total stillwater elevation).

- The *high-velocity flow zone* is landward of the overtopping splash zone (or area on a sloping beach or other shore type), where the product of depth of flow times the flow velocity squared (hv^2) is greater than or equal to 200 ft^3/sec^2. This zone may only be used on the Pacific Coast.

The SFHA boundary indicates the limit of SFHAs shown on the FIRM as either “V” zones or “A” zones.

Table 26 indicates the coastal analyses used for floodplain mapping and the criteria used to determine the inland limit of the open-coast Zone VE and the SFHA boundary at each transect.

Table 26: Summary of Coastal Transect Mapping Considerations

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
1	✓	VE 16	N/A	Runup	Runup
2	✓	VE 17	N/A	Runup	Runup
3	✓	VE 20	N/A	Overtopping	Overtopping
4	✓	VE 15	N/A	Runup	Runup
5	✓	VE 24	N/A	Runup	Runup
6	✓	VE 16	N/A	Runup	Runup
7		VE 15	N/A	Runup	Runup
8		VE 14	N/A	Runup	Runup
9		VE 13	N/A	Runup	Runup
10	✓	VE 16	N/A	Runup	Runup
11	✓	VE 16	N/A	Runup	Runup
12	✓	VE 20	N/A	Runup	Runup
13	✓	VE 23	N/A	Overtopping	Overtopping
14	✓	VE 18	N/A	Runup	Runup
15		VE 21	N/A	Runup	Runup
16		VE 23	N/A	Runup	Runup
17		VE 23	N/A	Runup	Runup
18		VE 16	N/A	Runup	Runup
19		VE 15	N/A	Runup	Runup
20		VE 15	N/A	Runup	Runup
21		VE 14	N/A	Runup	Runup
22		VE 21	N/A	Runup	Runup
23	✓	VE 17	N/A	Runup	Runup
24		VE 17	N/A	Runup	Runup
25	✓	VE 13	N/A	Runup	Runup
26	✓	VE 13	N/A	Overtopping	Overtopping
27		VE 9	N/A	Runup	Runup
28		VE 9 – 10 VE 13	N/A	Runup	Runup
29		VE 12	N/A	Runup	Runup

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
30		VE 18	N/A	Runup	Runup
31		VE 11	N/A	Runup	Runup
32		VE 13	N/A	Runup	Runup
33		VE 16	N/A	Runup	Runup
34		VE 32	N/A	Overtopping	Overtopping
35		VE 16	N/A	Overtopping	Overtopping
36		VE 27	N/A	Runup	Runup
37		VE 16	N/A	Runup	Runup
38		VE 16	N/A	Runup	Runup
39		VE 16	N/A	Runup	Runup
40		VE 17	N/A	Runup	Runup
41		VE 16	N/A	Runup	Runup
42		VE 25	N/A	Runup	Runup
43		VE 19	N/A	Runup	Runup
44		VE 18	N/A	Runup	Runup
45	✓	VE 19	N/A	Runup	Runup
46		VE 22 VE 27	N/A	Overtopping	Overtopping
47		VE 26	N/A	Runup	Runup
48		VE 22	N/A	Runup	Runup
49		VE 25	N/A	Runup	Runup
50		VE 39	N/A	Runup	Runup
51		VE 27	N/A	Runup	Runup
52		VE 27 VE 33	N/A	Overtopping	Overtopping
53		VE 29	N/A	Runup	Runup
54		VE 15	N/A	Runup	Runup
55		VE 24	N/A	Runup	Runup
56		VE 16	N/A	Runup	Runup
57		VE 31	N/A	Overtopping	Overtopping

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
58		VE 24	N/A	Overtopping	Overtopping
59		VE 18	N/A	Runup	Runup
60		VE 27	N/A	Runup	Runup
61		VE 20 VE 28	N/A	Overtopping	Overtopping
62		VE 17	N/A	Runup	Runup
63		VE 20	N/A	Overtopping	Overtopping
64		VE 19	N/A	Runup	Runup
65		VE 20	N/A	Runup	Runup
66		VE 36	N/A	Runup	Runup
67		VE 44	N/A	Runup	Runup
68		VE 41	N/A	Runup	Runup
69		VE 24	N/A	Runup	Runup
70		VE 31	N/A	Runup	Runup
71		VE 23	N/A	Runup	Runup
72		VE 28	N/A	Runup	Runup
73	✓	VE 30	N/A	Runup	Runup
74		VE 27	N/A	Runup	Runup
75		VE 20	N/A	Runup	Runup
76		VE 31	N/A	Runup	Runup
77		VE 24	N/A	Runup	Runup
78		VE 31	N/A	Runup	Runup
79		VE 20	N/A	Runup	Runup
80		VE 28	N/A	Runup	Runup
81		VE 22	N/A	Runup	Runup
82		VE 37	N/A	Runup	Runup
83		VE 23	N/A	Runup	Runup
84		VE 20	N/A	Runup	Runup
85		VE 19	N/A	Runup	Runup
86		VE 18	N/A	Runup	Runup

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
87		VE 32	N/A	Runup	Runup
88		VE 20	N/A	Runup	Runup
89		VE 22	N/A	Runup	Runup
90		VE 24	N/A	Runup	Runup
91		VE 24	N/A	Runup	Runup
92		VE 15	N/A	Runup	Runup
93		VE 23	N/A	Runup	Runup

6.5 FIRM Revisions

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 31, "Map Repositories").

6.5.1 Letters of Map Amendment

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA. A LOMA cannot be issued for properties located on the PFD (primary frontal dune).

To obtain an application for a LOMA, visit www.fema.gov/floodplain-management/letter-map-amendment-loma and download the form "MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill". Visit the "Flood Map-Related Fees" section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed

at www.fema.gov/online-tutorials.

For more information about how to apply for a LOMA, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

6.5.2 Letters of Map Revision Based on Fill

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states FEMA's determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and is, therefore, excluded from the SFHA.

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting www.fema.gov/floodplain-management/letter-map-amendment-loma for the "MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill" or by calling the FEMA Map Information eXchange, toll free, at 1-877-FEMA MAP (1-877-336-2627). Fees for applying for a LOMR-F, if any, are listed in the "Flood Map-Related Fees" section.

A tutorial for LOMR-F is available at www.fema.gov/online-tutorials.

6.5.3 Letters of Map Revision

A LOMR is an official revision to the currently effective FEMA map. It is used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. All requests for LOMRs should be made to FEMA through the chief executive officer of the community, since it is the community that must adopt any changes and revisions to the map. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request.

To obtain an application for a LOMR, visit www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/mt-2-application-forms-and-instructions and download the form "MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision". Visit the "Flood Map-Related Fees" section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Monterey County FIRM are listed in Table 27.

Table 27: Incorporated Letters of Map Change

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
14-09-3525P	03-23-2015	Unnamed Ponding Area	06053C0195H

6.5.4 Physical Map Revisions

PMRs are an official republication of a community's NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or improvements, annexations

resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

The community's chief executive officer must submit scientific and technical data to FEMA to support the request for a PMR. The data will be analyzed and the map will be revised if warranted. The community is provided with copies of the revised information and is afforded a review period. When the base flood elevations are changed, a 90-day appeal period is provided. A 6-month adoption period for formal approval of the revised map(s) is also provided.

For more information about the PMR process, please visit www.fema.gov and visit the "Flood Map Revision Processes" section.

6.5.5 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards within a given community. FEMA accomplishes this through a national watershed-based mapping needs assessment strategy, known as the Coordinated Needs Management Strategy (CNMS). The CNMS is used by FEMA to assign priorities and allocate funding for new flood hazard analyses used to update the FIS Report and FIRM. The goal of CNMS is to define the validity of the engineering study data within a mapped inventory. The CNMS is used to track the assessment process, document engineering gaps and their resolution, and aid in prioritization for using flood risk as a key factor for areas identified for flood map updates. Visit www.fema.gov to learn more about the CNMS or contact the FEMA Regional Office listed in Section 8 of this FIS Report.

6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of Monterey County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBMs) and/or Flood Boundary and Floodway Maps (FBFMs) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 28, "Community Map History." A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.

- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 28 but not identified on the map, the community is treated as if it were unmapped.

- *Initial FHBM Effective Date* is the effective date of the first Flood Hazard Boundary Map (FHBM). This date may be the same date as the Initial NFIP Map Date.

- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.

- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community. This is the first effective date that is shown on the FIRM panel.

- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as Physical Map Revisions (PMR) of FIRM panels within the county are completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the Monterey County FIRMs in countywide format was 04/02/2009.

Table 28: Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Carmel-by-the-Sea, City of	06/14/1974	06/14/1974	N/A	04/02/2009	04/02/2009
Del Rey Oaks, City of	05/14/1976	05/14/1976	N/A	11/04/1981	04/02/2009
Gonzales, City of	05/24/1974	05/24/1974	11/28/1975	11/18/1981	04/02/2009
Greenfield, City of	08/06/1976	08/06/1976	None	04/02/2009	04/02/2009
King City, City of	09/02/1970	09/02/1970	05/23/1978	10/15/1981	04/02/2009
Marina, City of	02/17/1988	N/A	02/17/1988	02/17/1988	02/03/1993 04/02/2009
Monterey, City of	10/18/1974	10/18/1974	02/11/1977	07/02/1981	06/17/1986 04/02/2009
Monterey County Unincorporated Areas	02/21/1978	02/21/1978	4/24/1979 11/17/1981	01/30/1984	08/05/1986 11/27/1991 04/02/2009
Pacific Grove, City of	06/14/1974	06/14/1974	N/A	04/02/2009	04/02/2009
Salinas, City of	03/15/1974	03/15/1974	12/06/1974 10/29/1976 06/06/1978	11/04/1981	04/02/2009
Sand City, City of	12/03/1976	12/03/1976	N/A	06/03/1986	04/02/2009
Seaside, City of	06/07/1974	06/07/1974	12/19/1975	07/02/1981	08/19/1986 04/02/2009
Soledad, City of	05/14/1974	05/14/1974	N/A	N/A	07/18/1983 05/15/1984 04/02/2009

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

Table 29 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

Table 29: Summary of Contracted Studies Included in this FIS Report

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
*	09/27/1991	George S. Nolte and Associates	H-4722	*	Monterey County (Unincorporated Areas)
*	*	Schaaf & Wheeler	EMF-87-C-0282	November 1989	*
Carmel River	*	Northwest Hydraulic Consultants	EMF-2001-C0-0015	March 2006	Monterey, City of
Calera, El Toro and Watson Creeks	*	Northwest Hydraulic Consultants	EMF-2001-C0-0015	April 2005	Monterey, City of
Harper Creek and San Benancio Gulch	*	Phillip Williams& Associates, Ltd.	EMF-2003-C0-0043	May 2005	Monterey, City of
Pacific Ocean	*	BakerAECOM	HSFEHQ-09-D-0368	February 2015	Monterey County, Unincorporated Areas
Pajaro River and Thomasello Creek	*	Brown and Caldwell	H-4722	December 1982	Monterey County, Unincorporated Areas
Sources near Del Rey Oaks, City of	05/04/1981	George S. Nolte and Associates	H-4722	July 1980	Del Rey Oaks, City of
Sources near Gonzales, City of	05/18/1981	George S. Nolte and Associates	H-4722	August 1980	Gonzales, City of
Sources near King City, City of	04/15/1981	George S. Nolte and Associates	H-4722	August 1980	King City, City of
Sources near Marina, City of	02/03/1981	George S. Nolte and Associates	H-4722	Unknown	Marina, City of

Table 29: Summary of Contracted Studies Included in this FIS Report, continued

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Sources near Marina, City of	*	Ensign & Buckley, Consulting Engineers	EMW-90-6-3133	December 1991	Marina, City of
Sources near Monterey, City of	06/17/1986	George S. Nolte and Associates	H-4722	December 1979	Monterey, City of
Sources near Salinas, City of	*	George S. Nolte and Associates	H-4722	July 1980	Salinas, City of

* Data Not Provided

7.2 Community Meetings

The dates of the community meetings held for this Flood Risk Project and any previous Flood Risk Projects are shown in Table 30. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

Table 30: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Del Rey Oaks, City of	05/04/1981	04/20/1978	Initial CCO	FEMA, this community and the study contractor
		10/01/1979	Final CCO	FEMA, this community and the study contractor
Gonzales, City of	05/18/1981	April 1978	Initial CCO	FEMA, this community and the study contractor
		07/11/1980	Final CCO	FEMA, this community and the study contractor
King City, City of	04/15/1981	April 1978	Initial CCO	FEMA, this community and the study contractor
		07/11/1980	Final CCO	FEMA, this community and the study contractor
Marina, City of	02/17/1988	*	Initial CCO	FEMA, this community and the study contractor
		04/01/1987	Final CCO	FEMA, this community and the study contractor
	02/03/1993	07/05/1990	Initial CCO	FEMA, this community and the study contractor
		08/04/1992	Final CCO	FEMA, this community and the study contractor
Monterey, City of	07/02/1981	04/20/1978	Initial CCO	FEMA, this community and the study contractor
		07/09/1980	Final CCO	FEMA, this community and the study contractor
	06/17/1986	May 1983	Initial CCO	FEMA, this community and the study contractor
		*	Final CCO	FEMA, this community and the study contractor
Monterey County, Unincorporated Areas	01/30/1984	July 1978	Initial CCO	FEMA, this community and the study contractor
		04/06/1983	Final CCO	FEMA, this community and the study contractor
	09/27/1991	November 1996	Initial CCO	FEMA, this community and the study contractor
		02/21/1990	Final CCO	FEMA, this community and the study contractor
	04/02/2009	10/2004	Initial CCO	FEMA, the study contractor and the Monterey County Water Resources Agency
		03/25/2008	Final CCO	FEMA, Region IX, MAPIX-Mainland, Monterey County, and the City of Soledad

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Monterey County, Unincorporated Areas	<date>	12/03/2014	FRR Meeting	FEMA, this community and the study contractor
		<date>	Initial CCO	
Salinas, City of	05/04/1981	April 1978	Initial CCO	FEMA, this community and the study contractor
		07/08/1980	Final CCO	FEMA, this community and the study contractor
Sand City, City of	06/03/1986	May 1983	Initial CCO	FEMA, this community and the study contractor
		*	Final CCO	FEMA, this community and the study contractor
Seaside, City of	07/02/1981	04/20/1978	Initial CCO	FEMA, this community and the study contractor
		07/09/1980	Final CCO	FEMA, this community and the study contractor
	08/19/1986	May 1983	Initial CCO	FEMA, this community and the study contractor
		*	Final CCO	FEMA, this community and the study contractor

*Data not available

SECTION 8.0 – ADDITIONAL INFORMATION

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see www.fema.gov.

Table 31 is a list of the locations where FIRMs for Monterey County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

Table 31: Map Repositories

Community	Address	City	State	Zip Code
Carmel-by-the-Sea, City of	East Side of Monte Verde Between Ocean and 7th	Carmel-by-the-Sea	CA	93921
Del Rey Oaks, City of	650 Canyon Del Rey Road	Del Rey Oaks	CA	93940
Gonzales, City of	147 4th Street	Gonzales	CA	93926
Greenfield, City of	920 Walnut Avenue	Greenfield	CA	93927
King City, City of	212 Vanderhurst Avenue	King City	CA	93930
Marina, City of	209 Cypress Avenue	Marina	CA	93933
Monterey, City of	Pacific and Madison Streets	Monterey	CA	93940
Monterey County, Unincorporated Areas	893 Blanco Circle	Salinas	CA	93901
Pacific Grove, City of	300 Forest Avenue	Pacific Grove	CA	93950
Salinas, City of	168 West Alisal Street	Salinas	CA	93901
Sand City, City of	1 Sylvan Park	Sand City	CA	93955
Seaside, City of	440 Harcourt Avenue	Seaside		93955
Soledad, City of	248 Main Street	Soledad	CA	93960

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 32.

Table 32 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the State NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that State's or territory's NFIP activities. These agencies often assist communities in developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the

availability and location of State and local GIS data in their state.

Table 32: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library
NFIP website	www.fema.gov/national-flood-insurance-program
NFHL Dataset	msc.fema.gov
FEMA Region IX	FEMA Region IX, 1111 Broadway, Suite 1200, Oakland, CA 94607 (510) 627-7029
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	James Eto California Dept. of Water 1416 9th Street, Room 1601 Sacramento, CA 95814 916-574-1409 jeto@water.ca.gov
State GIS Coordinator	David Harris Agency Information Officer California Resources Agency 1416 Ninth Street, Room 1311 Sacramento, CA 95814 916-445-5088 david.harris@resources.ca.gov

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

Table 33 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.

Table 33: Bibliography and References

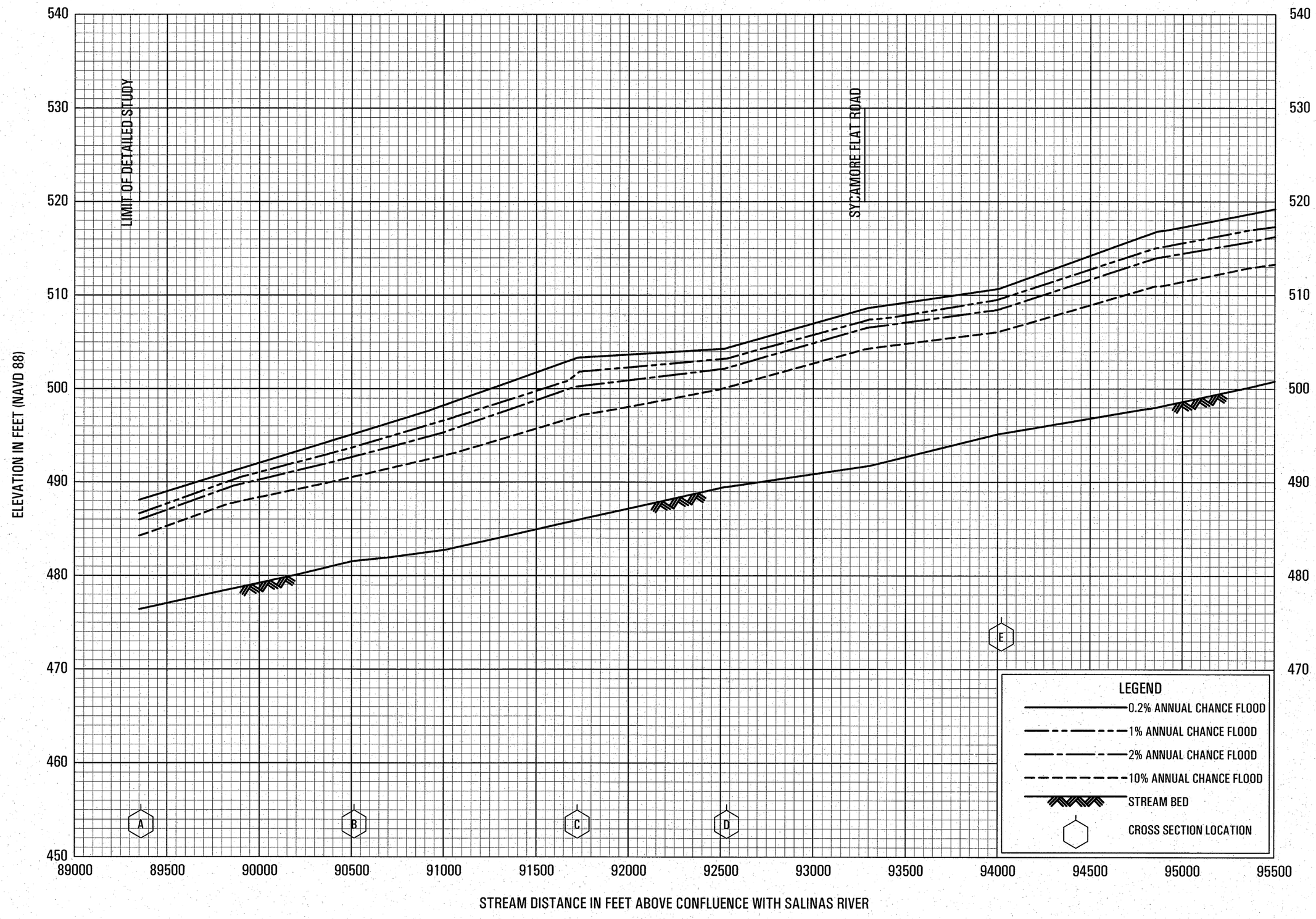
Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Aero-Geodetic Corporation, 1979	City of Marina	*City of Marina Aerial Topographic Maps, Scale 1:2,400, Contour Interval 2 feet*	Aero-Geodetic Corporation	City of Marina, California	November 26, 1979	
BakerAECOM 2012	BakerAECOM	*Topographic Data Development Monterey County, California*			March 30, 2012	
City of Monterey, 1975	City of Monterey	*Topographic Maps, Scale 1:1,200, Contour Interval 2 feet.*		Monterey County California	May 1975	
Divoky, D., 2007		*Supplementary WHAFIS Documentation: WHAFIS 4.0, A Revision of FEMA's WHAFIS 3.0 Program*	Divoky, D.	Atlanta, Georgia	2007	
FEMA, 2005	Federal Emergency Management Agency	*Final Draft Guidelines for Coastal Flood Hazard Analysis and Mapping for the Pacific Coast of the United States*			2005	
FEMA, 1988	Federal Emergency Management Agency	*Wave Height Analysis for Flood Insurance Studies (Technical Documentation for WHAFIS Program Version 3.0)*		Washington, D.C.	1988	

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA, 1986	Federal Emergency Management Agency, Federal Insurance Administration	*Flood Insurance Study, Monterey County, California (Unincorporated Areas)*		Washington, D.C.	August 5, 1986	State University http://university.lib.state.edu
FEMA, 1981	Federal Emergency Management Agency	*Flood Insurance Rate Map, City of Seaside, Monterey County, California*		Washington, D.C.	1981	FEMA Flood Map Service Center http://msc.fema.gov
Harl Pugh & Associates, 1978	Harl Pugh & Associates	*Aerial Photogrammetry of Monterey County, California, Scales 1:6,000 and 1:12,000*		Monterey County, California	September 1978	
MCFCWCD, 1979	Monterey County Flood Control and Water Conservation District	*Monterey County Drainage Study- Carr Lake and Reclamation Ditch. Prepared for the Monterey County Master Drainage Plan*		Monterey County, California	January 1979	
Monterey County Flood Control and Water Conservation District, 1977	Monterey County Flood Control and Water Conservation District	*Monterey County Master Drainage Plan Maps for Canyon Del Rey Watershed, Scale 1:4,800, Contour Interval 10 feet*		Monterey County, California	1977	
Ott Water Engineers, Inc. 1983	Ott Water Engineers, Inc,	*Aerial Photography, Scale 1:4,800, Contour Interval 4 feet*	Ott Water Engineers, Inc		1983	

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Ott Water Engineers, Inc. 1975	Ott Water Engineers, Inc,	*Aerial Photography, Scale 1:1,200, Contour Interval 2 feet*	Ott Water Engineers, Inc		1975	
Spink Corporation, 1978	Spink Corporation	*Aerial Photography, Scale 1:4,800*	Spink Corporation	Sacramento, California	1978	
USACE, 1984	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*Hec-2 Water-Surface Profiles, Users Manual*	U.S. Army Corps of Engineers		May 1984	
USACE, 1906-1956	U.S. Army Corps of Engineers, San Francisco District	*Isohyetal Map, 50-year Normal Annual Precipitation, 1906-1956*	U.S. Army Corps of Engineers		1956	
USACE, April 1974	U.S. Army Corps of Engineers, San Francisco District	*Hydrology Engineering Office Report, Carmel River Basin*		San Francisco, California	April 1974	
USACE, October 1973	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*Generalized Computer Program HEC-2, Water-Surface Profiles*			October 1973	

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USACE, June 1973	U.S. Army Corps of Engineers	*Interim Report for Flood Control and Allied Purposes, Pajaro River Basin, California*		San Francisco, California	June 1973	
USACE, January 1973	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*HEC-1 Flood Hydrograph Package*		Davis, California	January 1973	
USACE, 1973	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*HEC-1 Flood Hydrograph Package, User's Manual*		Davis, California	January 1973	
USACE, 1971	U.S. Army Corps of Engineers	*"Pajaro River Topographic Maps," Scale1:1,200, Contour Interval 2 feet*			1971	
USACE, 1970	U.S. Army Corps of Engineers, San Francisco District	*"A Report on January and February 1969 Floods, Central Coast Streams, California," Vol. II, Appendix B*		San Francisco, California	September 1970	
U.S. Department of Agriculture, 1972	U.S. Department of Agriculture, Soil Conservation Service	*"Hydrology," National Engineering Handbook, Section 4*			August 1972	

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
U.S. Department of the Interior, 1978	U.S. Department of the Interior, Geological Survey	*Unpublished Records*		Washington, D.C.	October 25, 1978	
U.S. Department of the Interior, 1948	U.S. Department of the Interior, Geological Survey	*7.5-Minute series topographic Maps, Scale 1:24,000, Contour Interval 10 feet. Carmel Valley, California,1948 Photorevised 1979; Chualar, California*		Washington, D.C.	Various	
U.S. Water Resources Council, 1977	U.S. Water Resources Council, Hydrology Committee	*"Guidelines for Determining Flood Flow Frequency" Bulletin 17A*			1977	
U.S. Water Resources Council, 1976	U.S. Water Resources Council, Hydrology Committee	*"Guidelines for Determining Flood Flow Frequency" Bulletin 17*			March 1976	
Van der Meer, J.W., 2002		*Wave Run-up and Overtopping at Dikes. Technical Report, Technical Advisory Committee for Water Retaining Structures (TAW)*		Delft, the Netherlands	2002	



FLOOD PROFILES

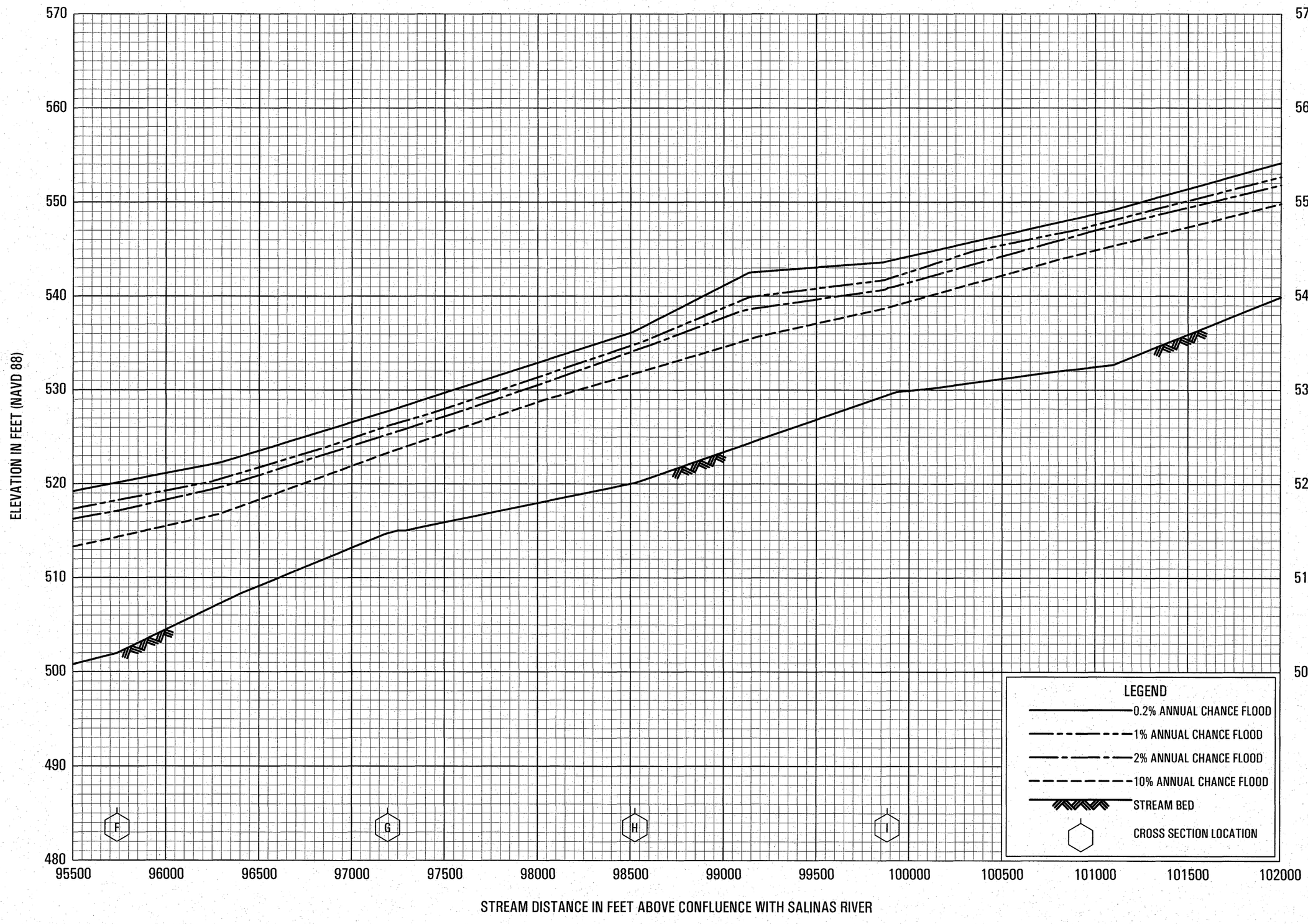
ARROYO SECO

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS

01P



FLOOD PROFILES

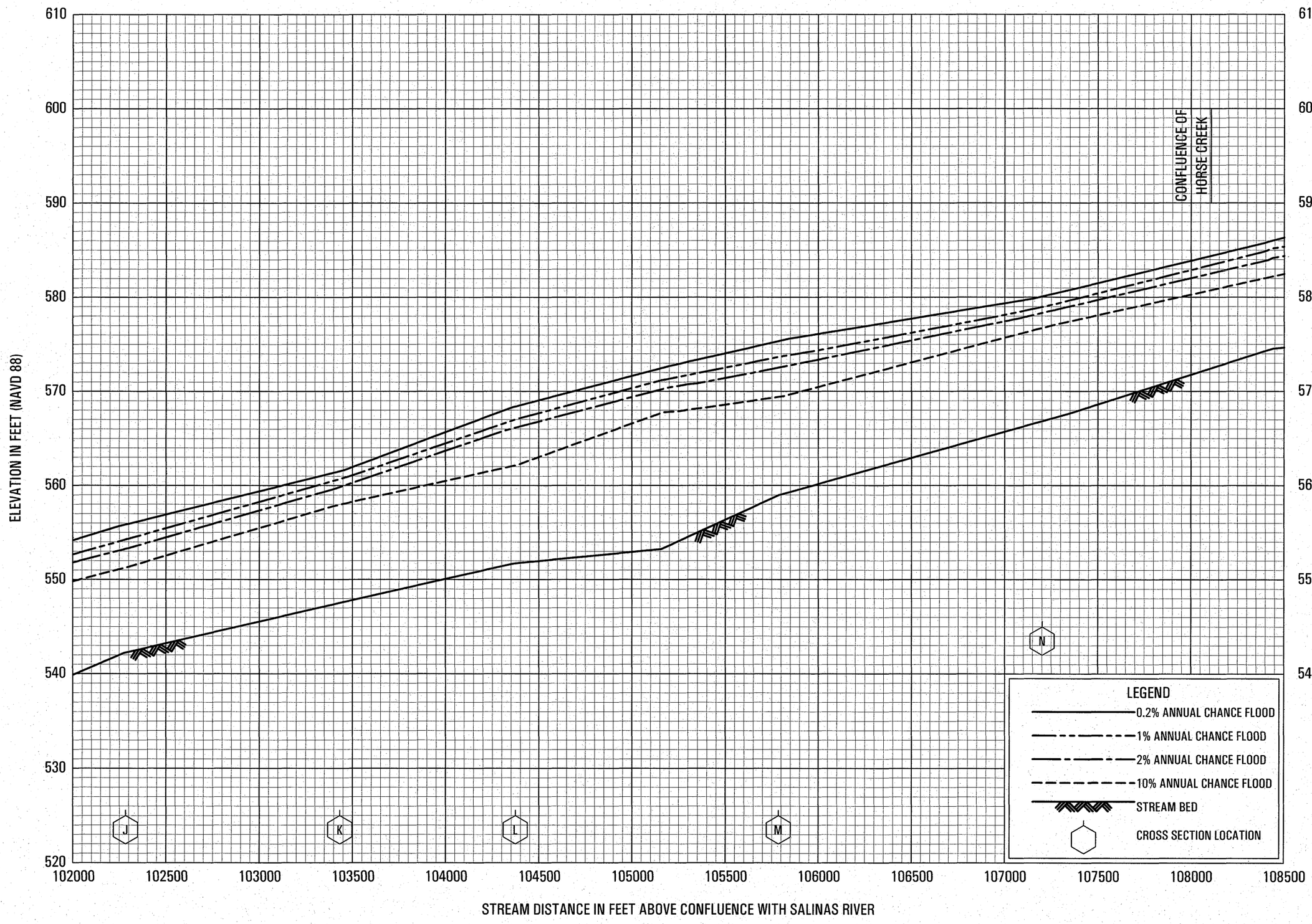
ARROYO SECO

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS

02P



FLOOD PROFILES

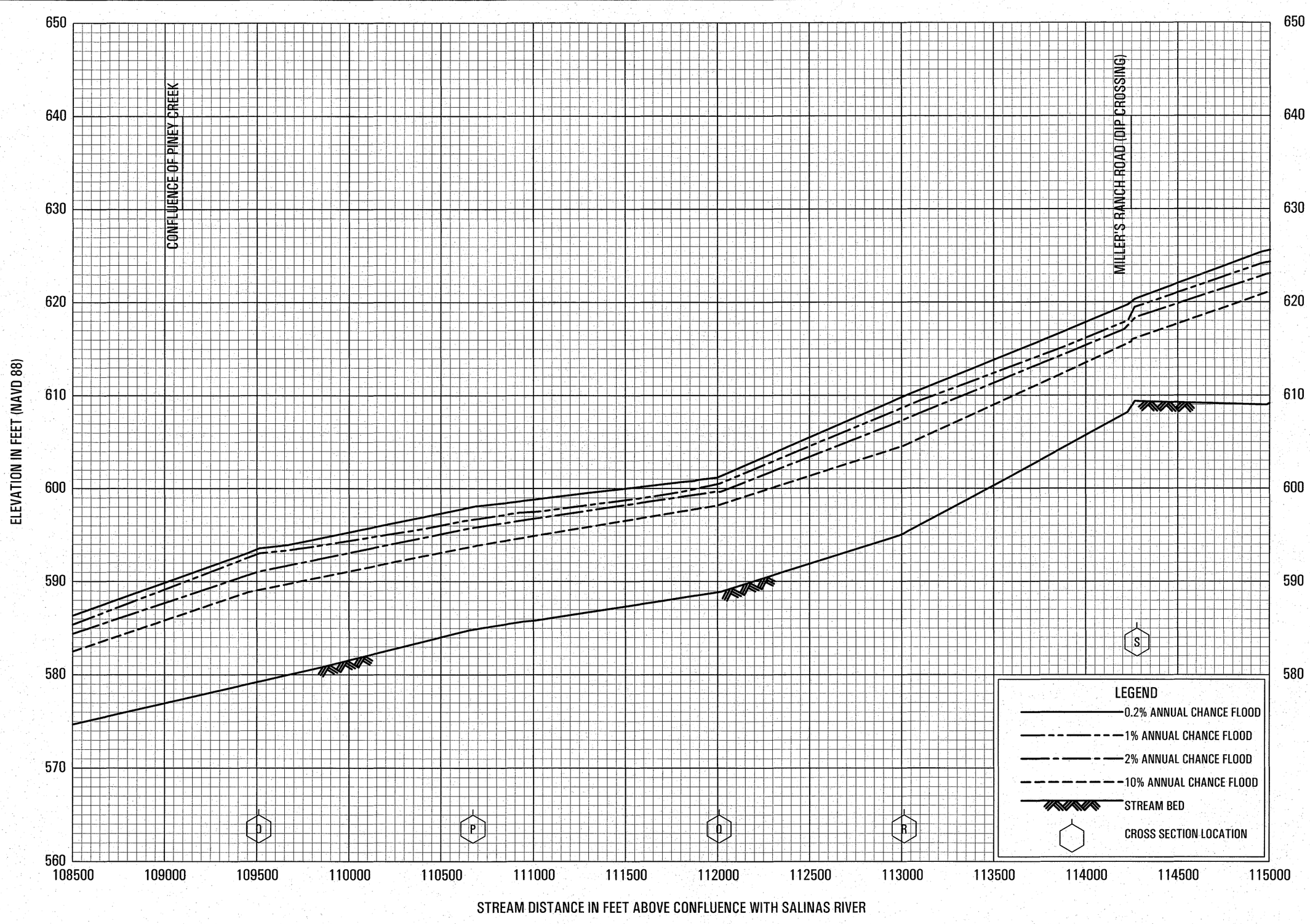
ARROYO SECO

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS

03P



FLOOD PROFILES

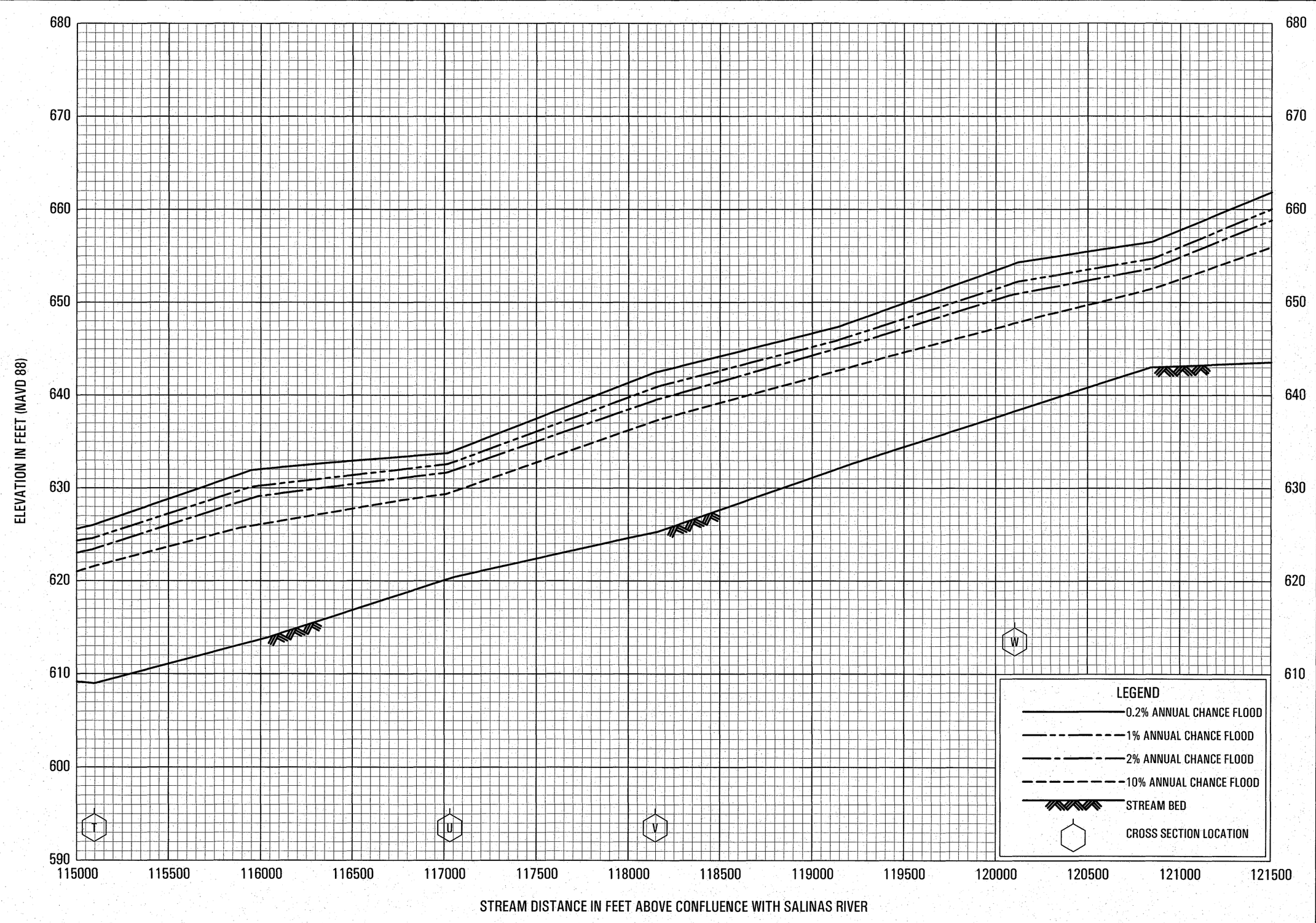
ARROYO SECO

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS

04P



FLOOD PROFILES

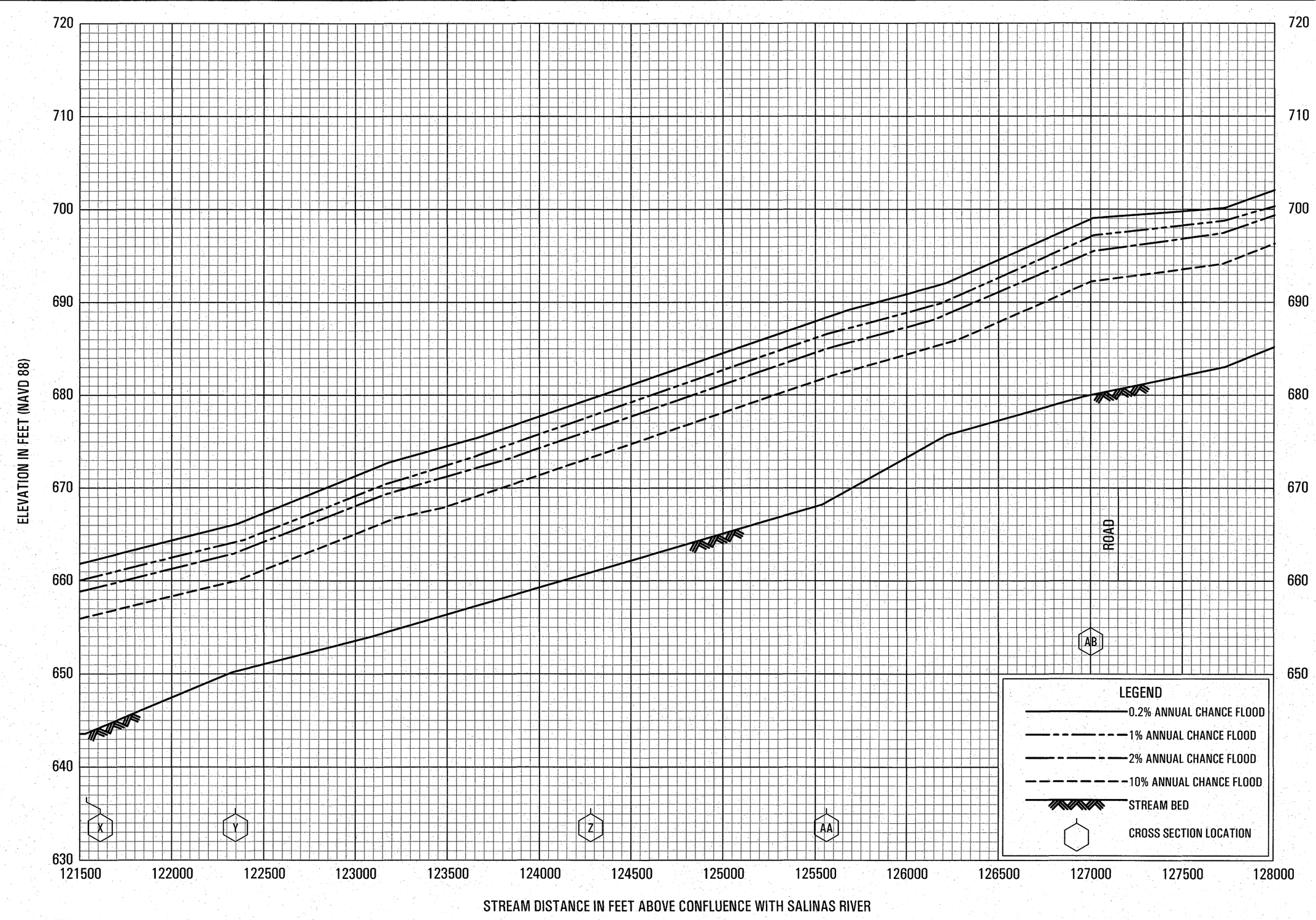
ARROYO SECO

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS

05P



FLOOD PROFILES

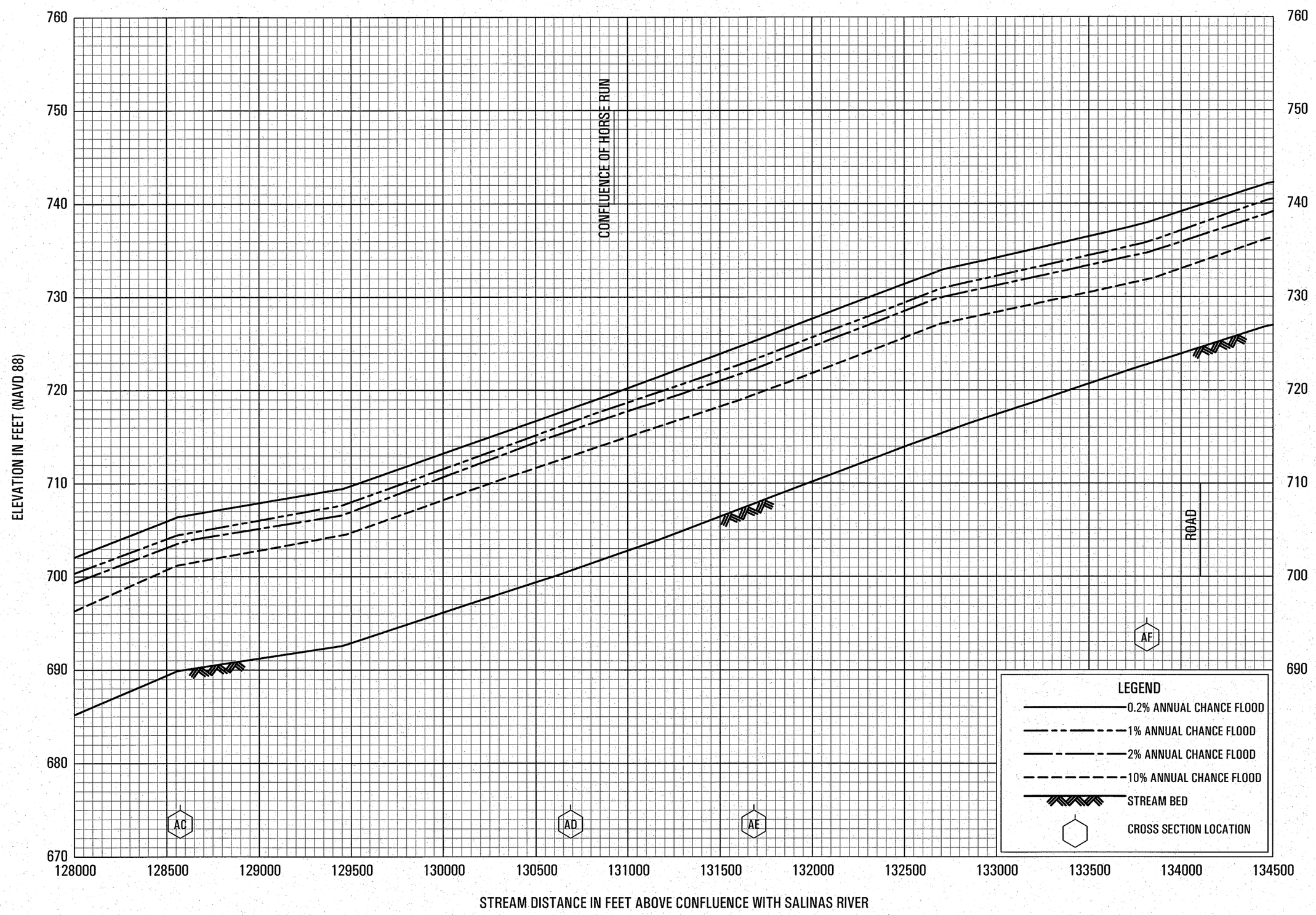
ARROYO SECO

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS

06P



FLOOD PROFILES

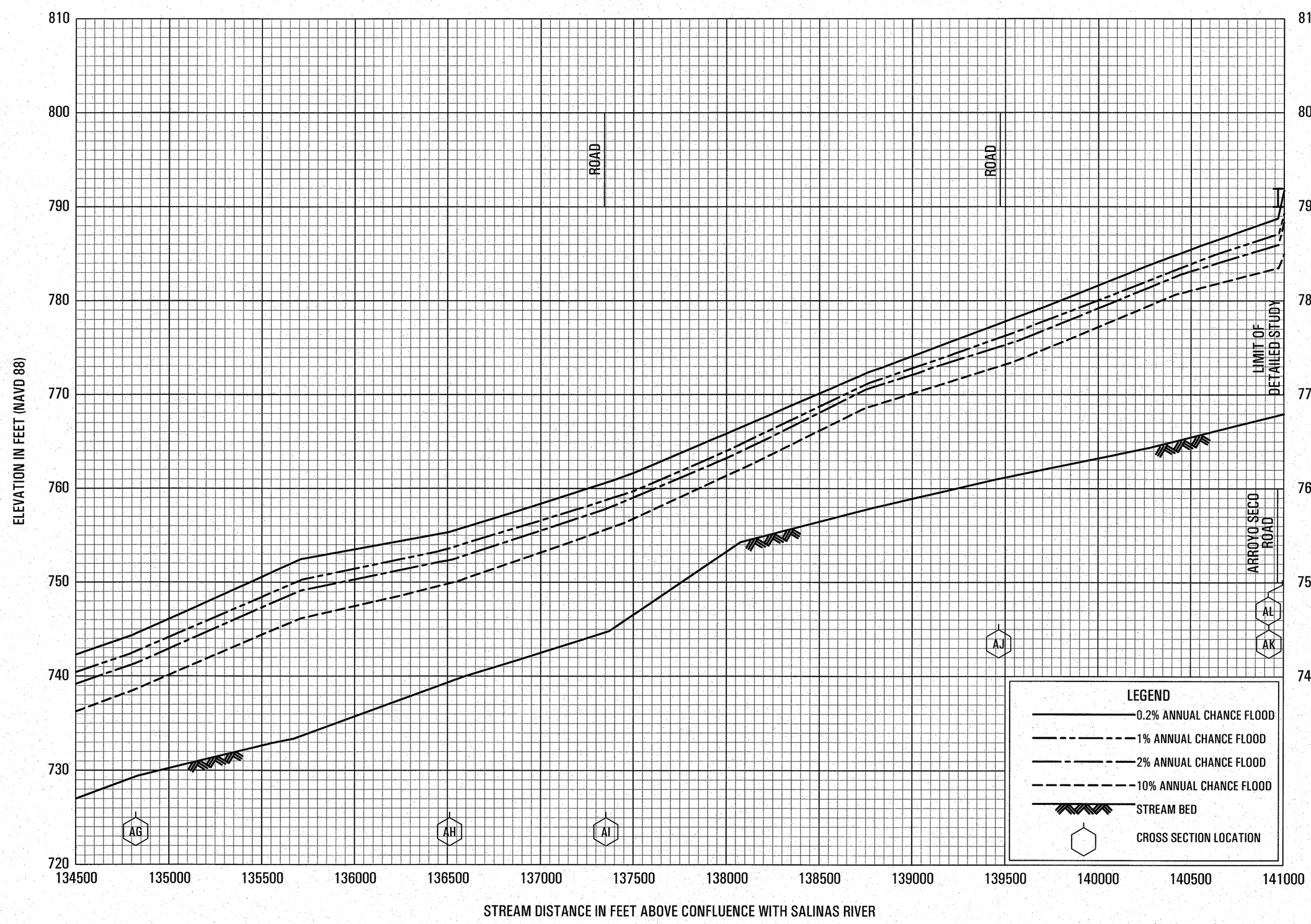
ARROYO SECO

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS

07P



FLOOD PROFILES

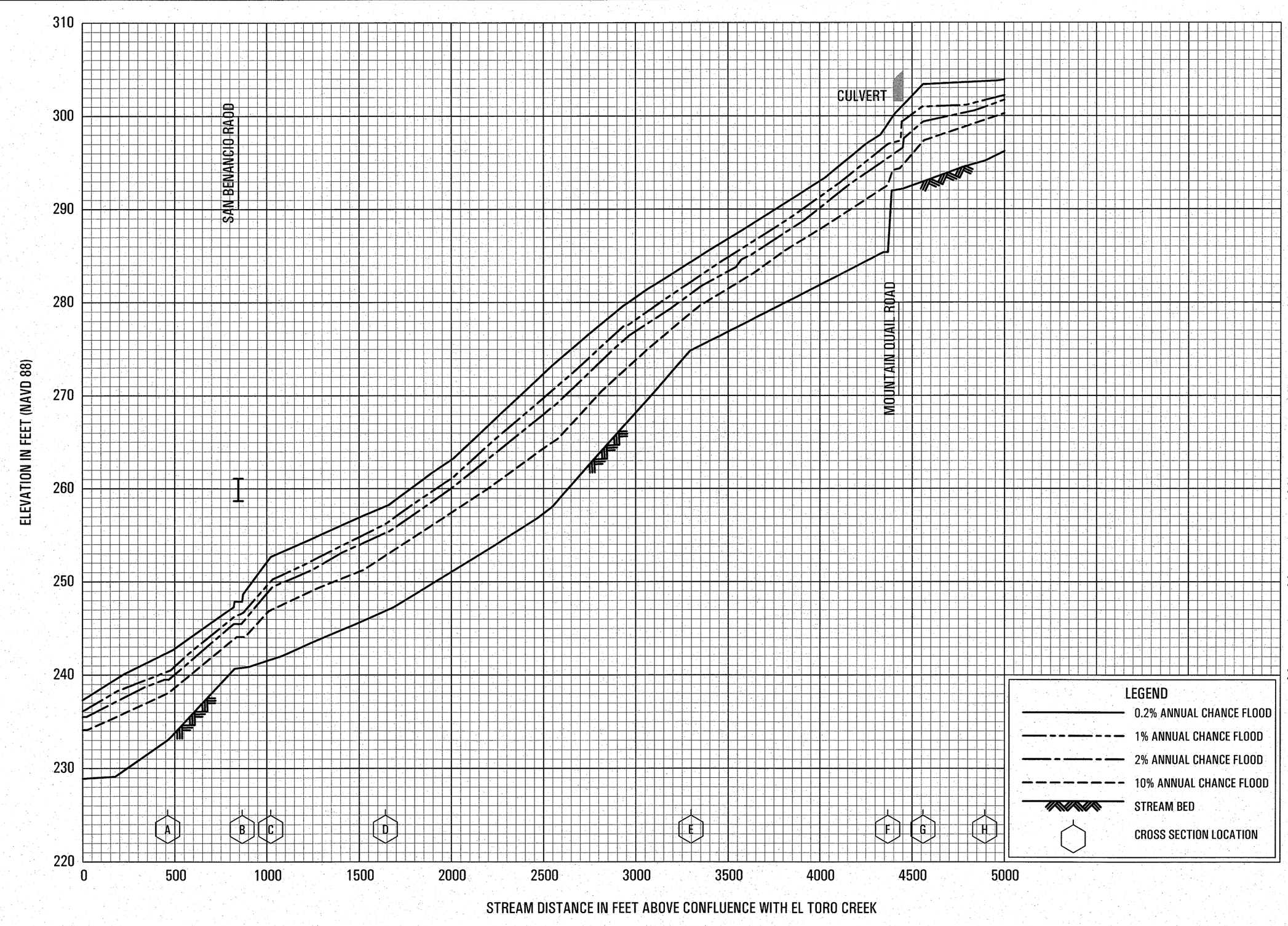
ARROYO SECO

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS

08P



FLOOD PROFILES

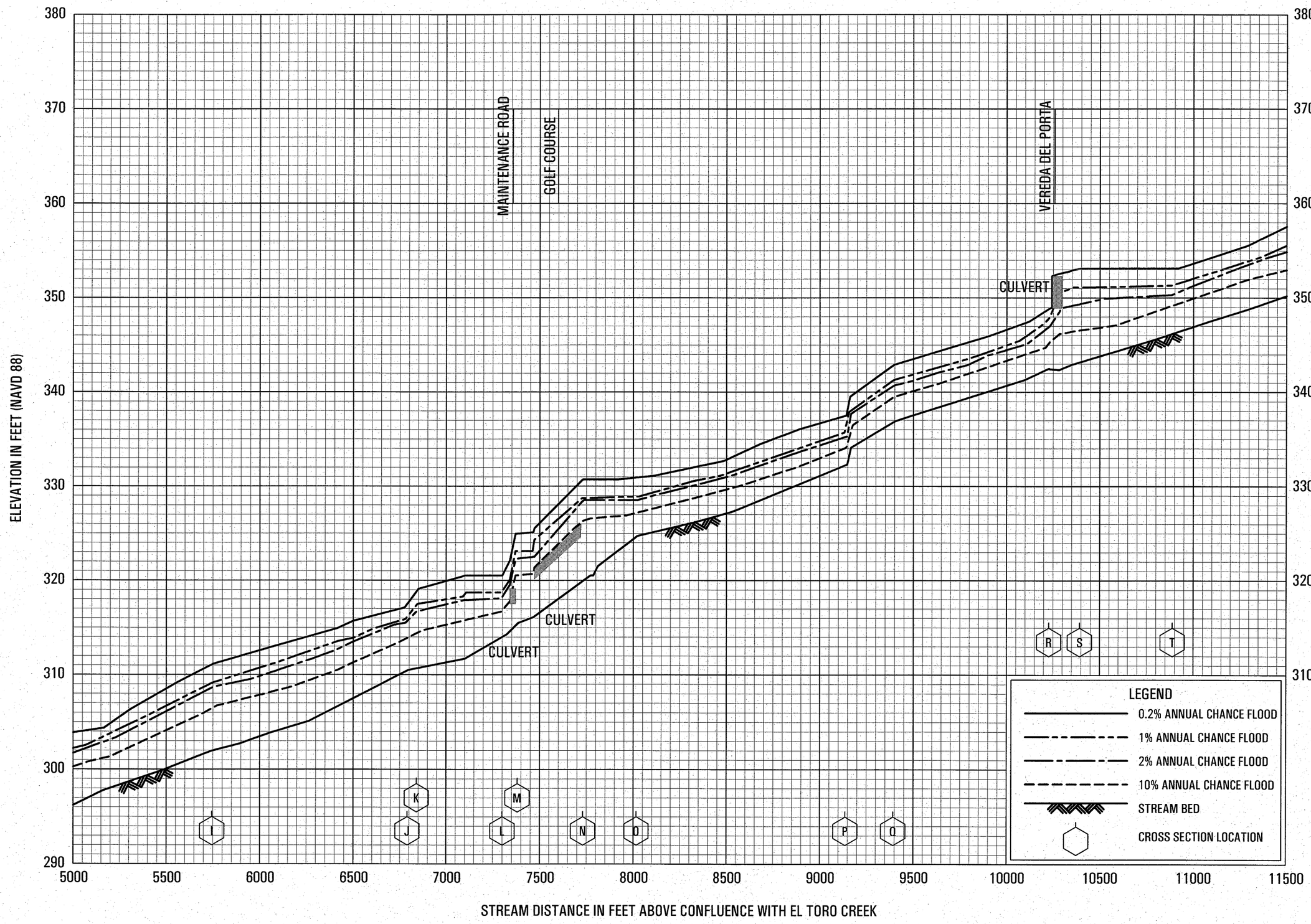
CALERA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS

09P



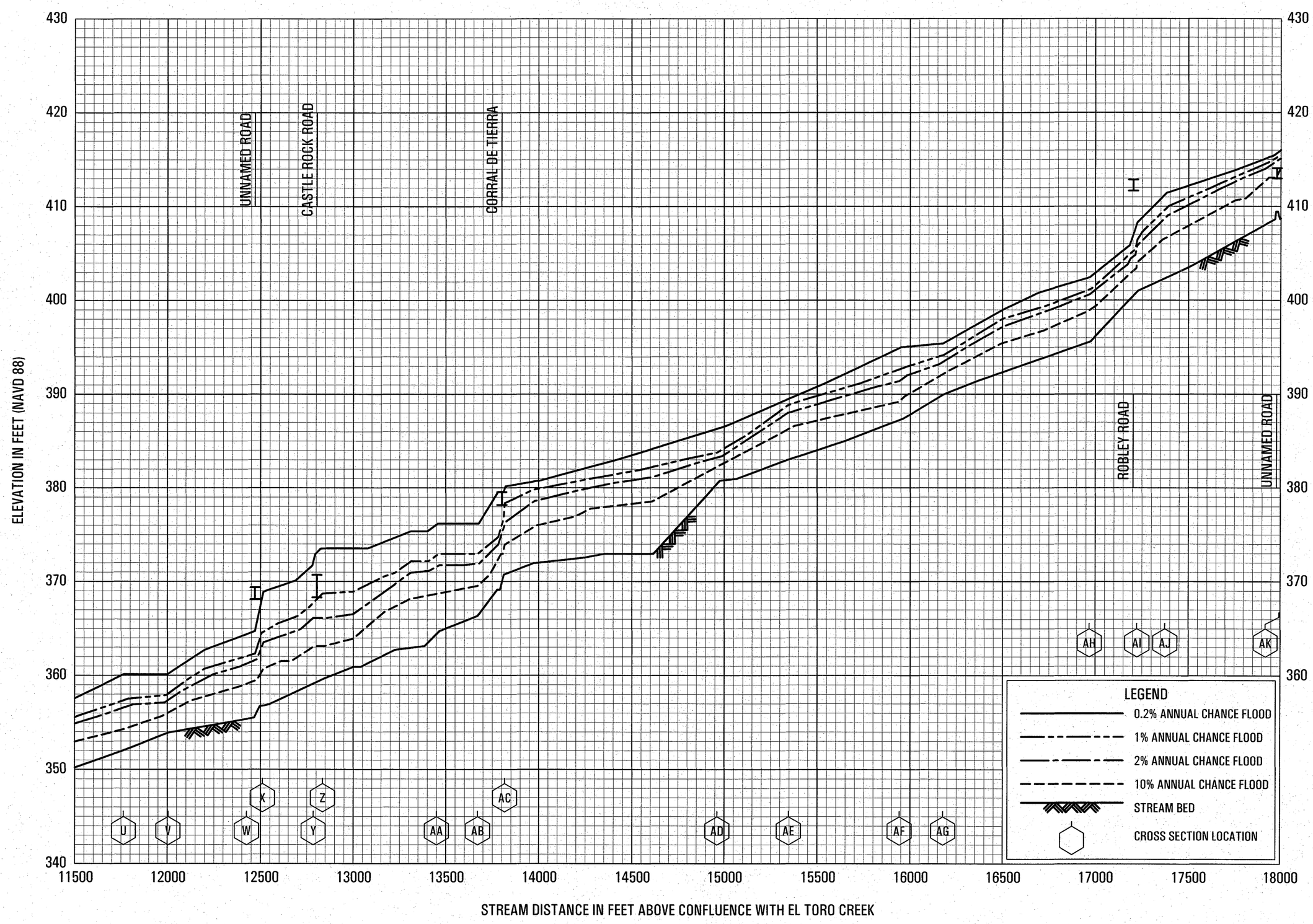
FLOOD PROFILES

CALERA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



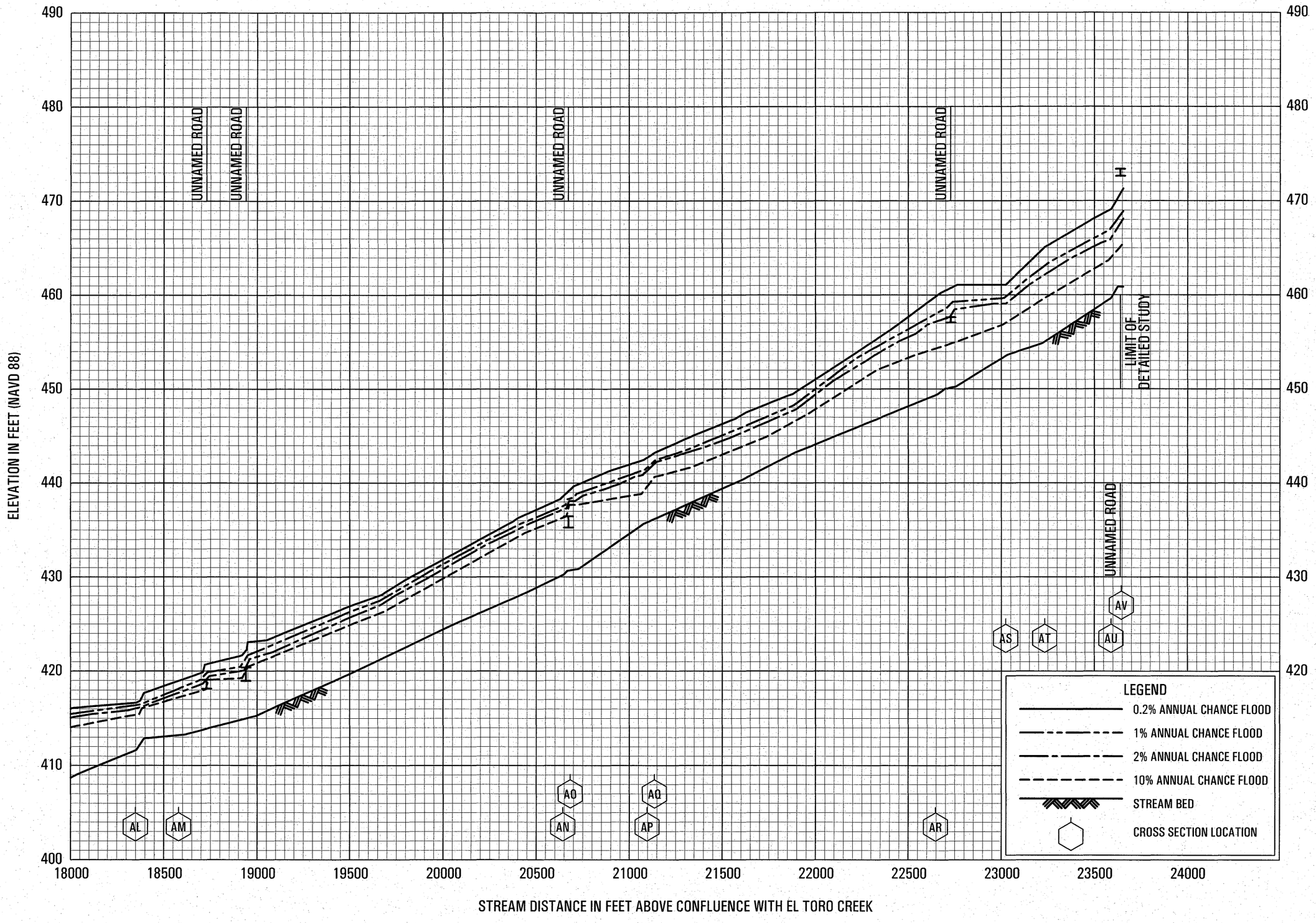
FLOOD PROFILES

CALERA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



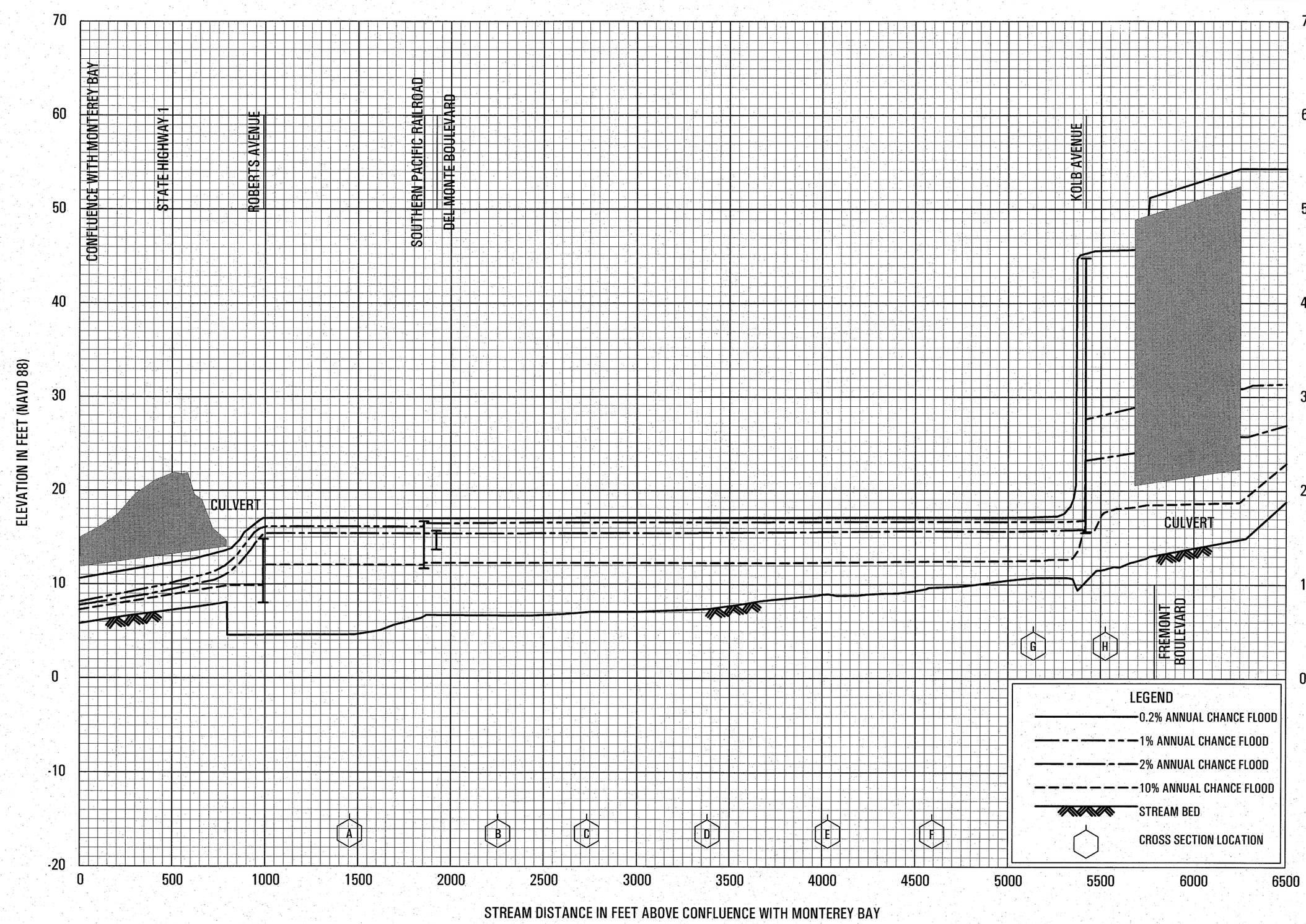
FLOOD PROFILES

CALERA CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



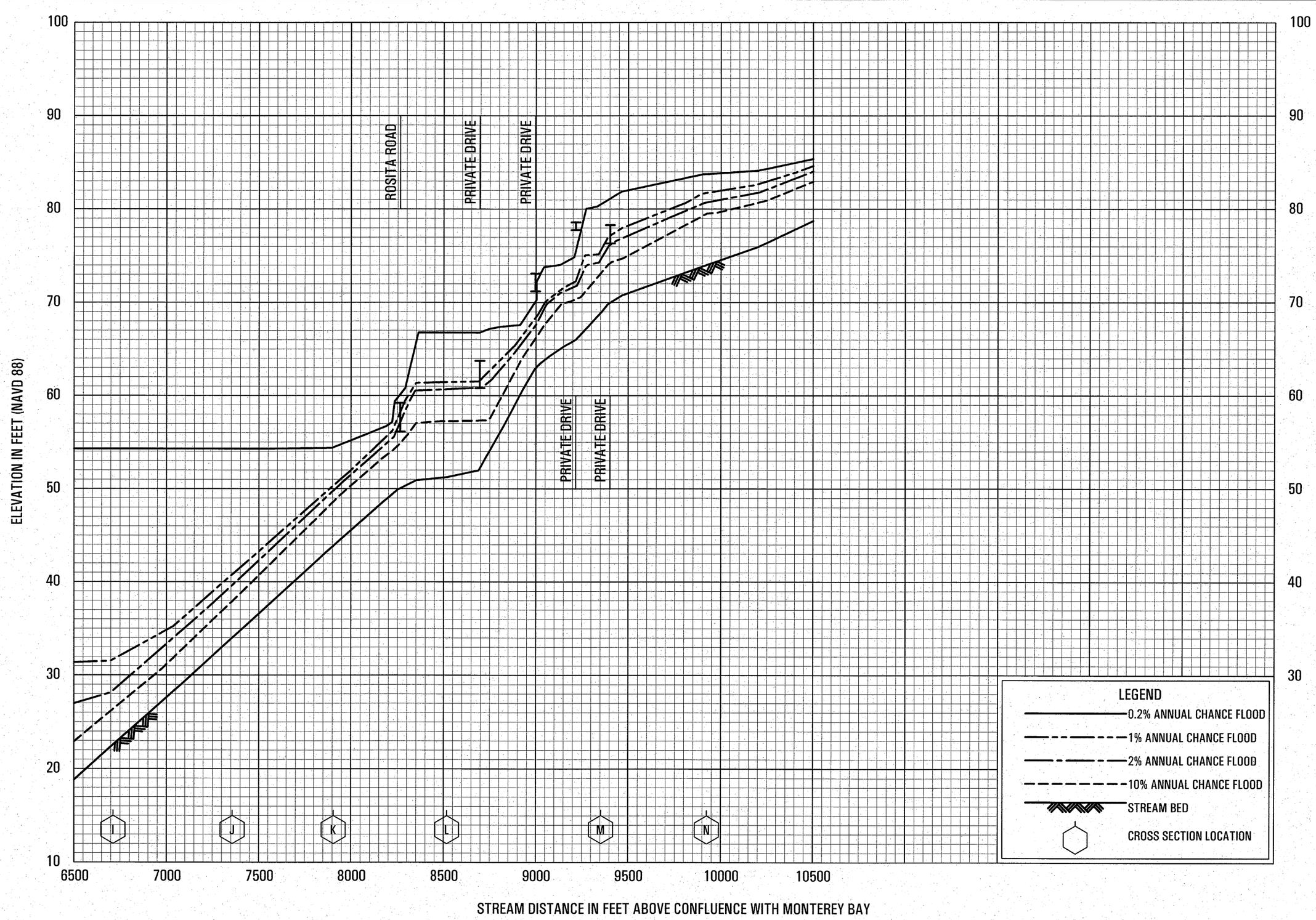
FLOOD PROFILES

CANYON DEL REY

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



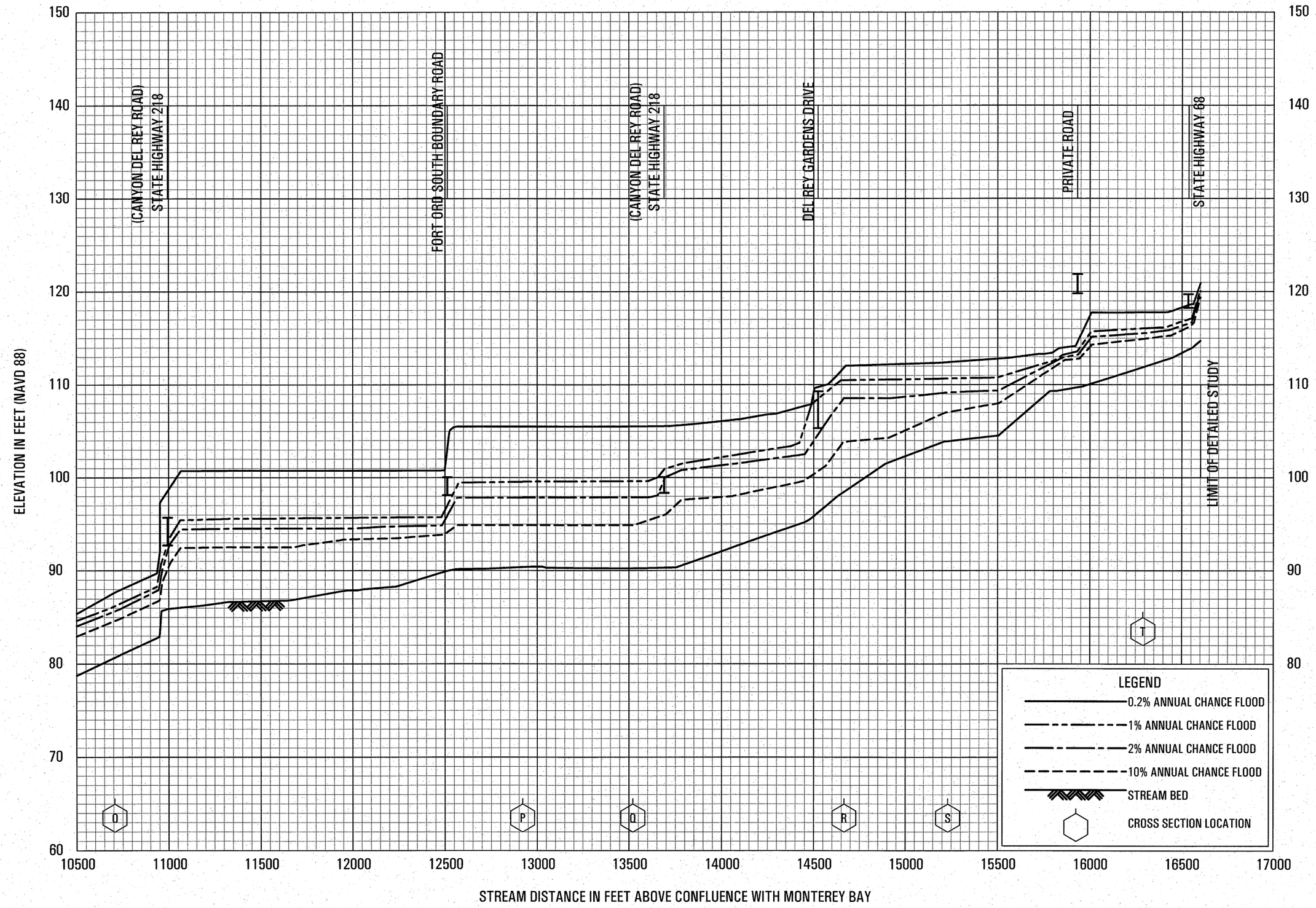
FLOOD PROFILES

CANYON DEL REY

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



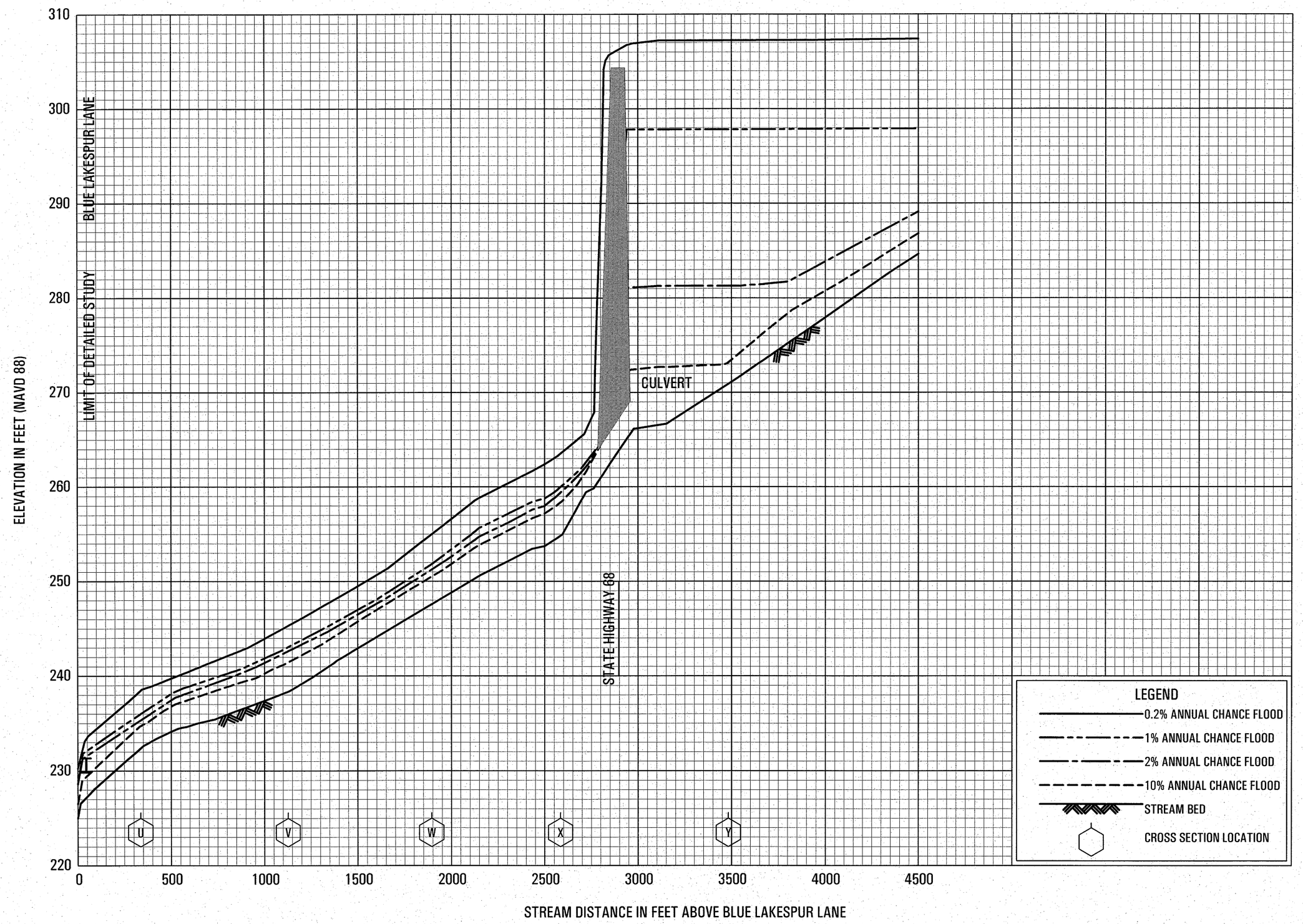
FLOOD PROFILES

CANYON DEL REY

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



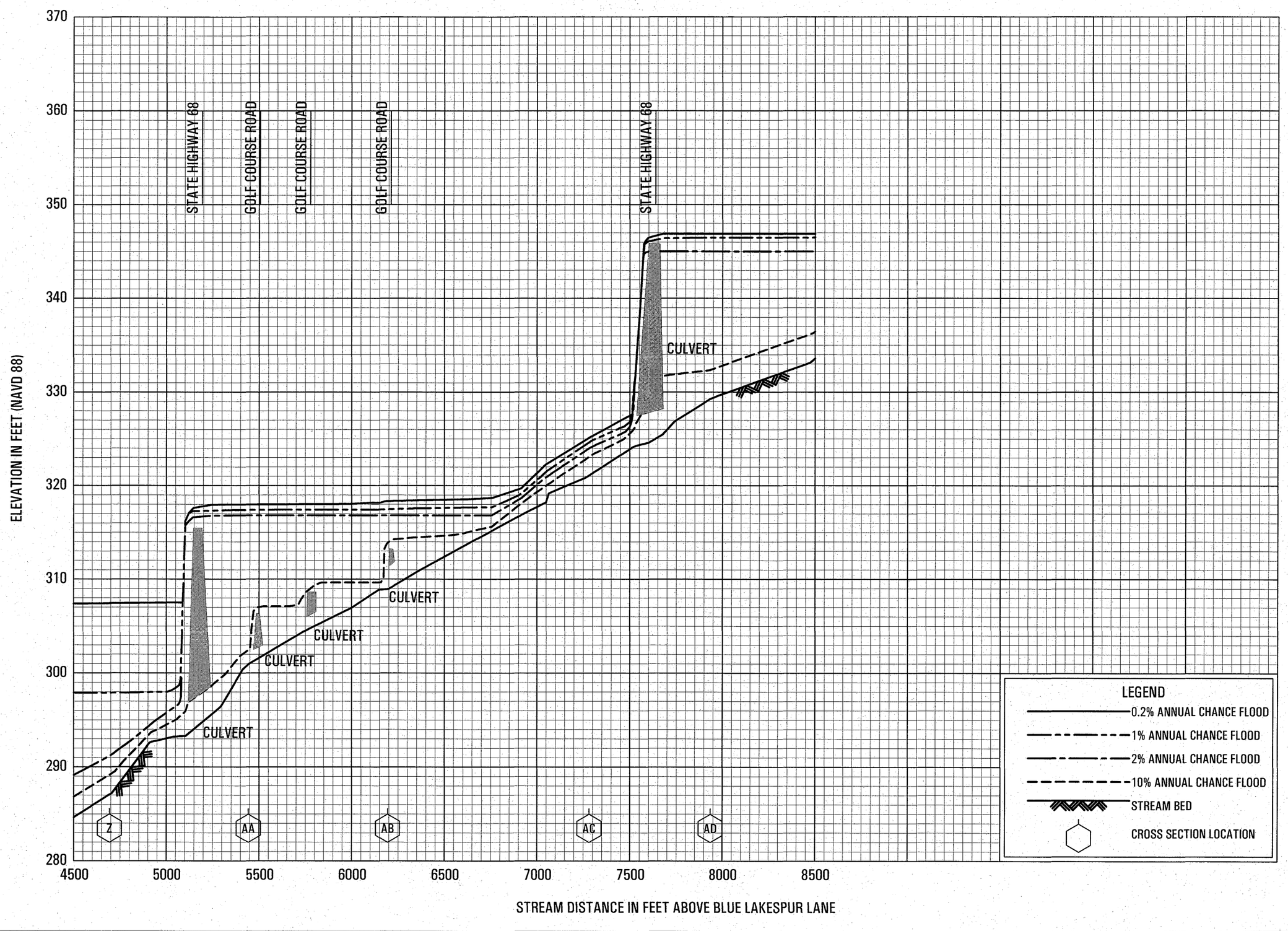
FLOOD PROFILES

CANYON DEL REY

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



FLOOD PROFILES

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FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

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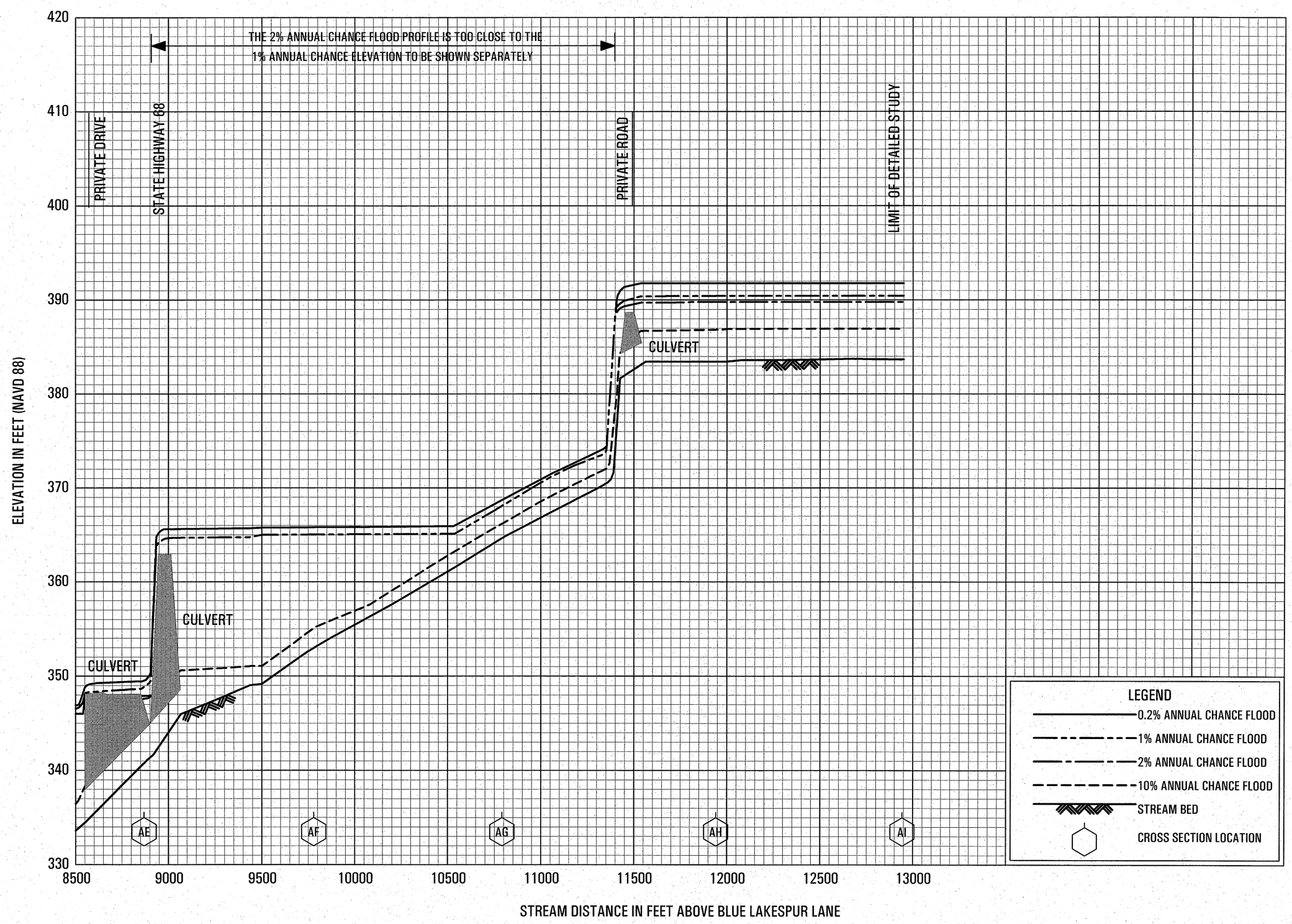


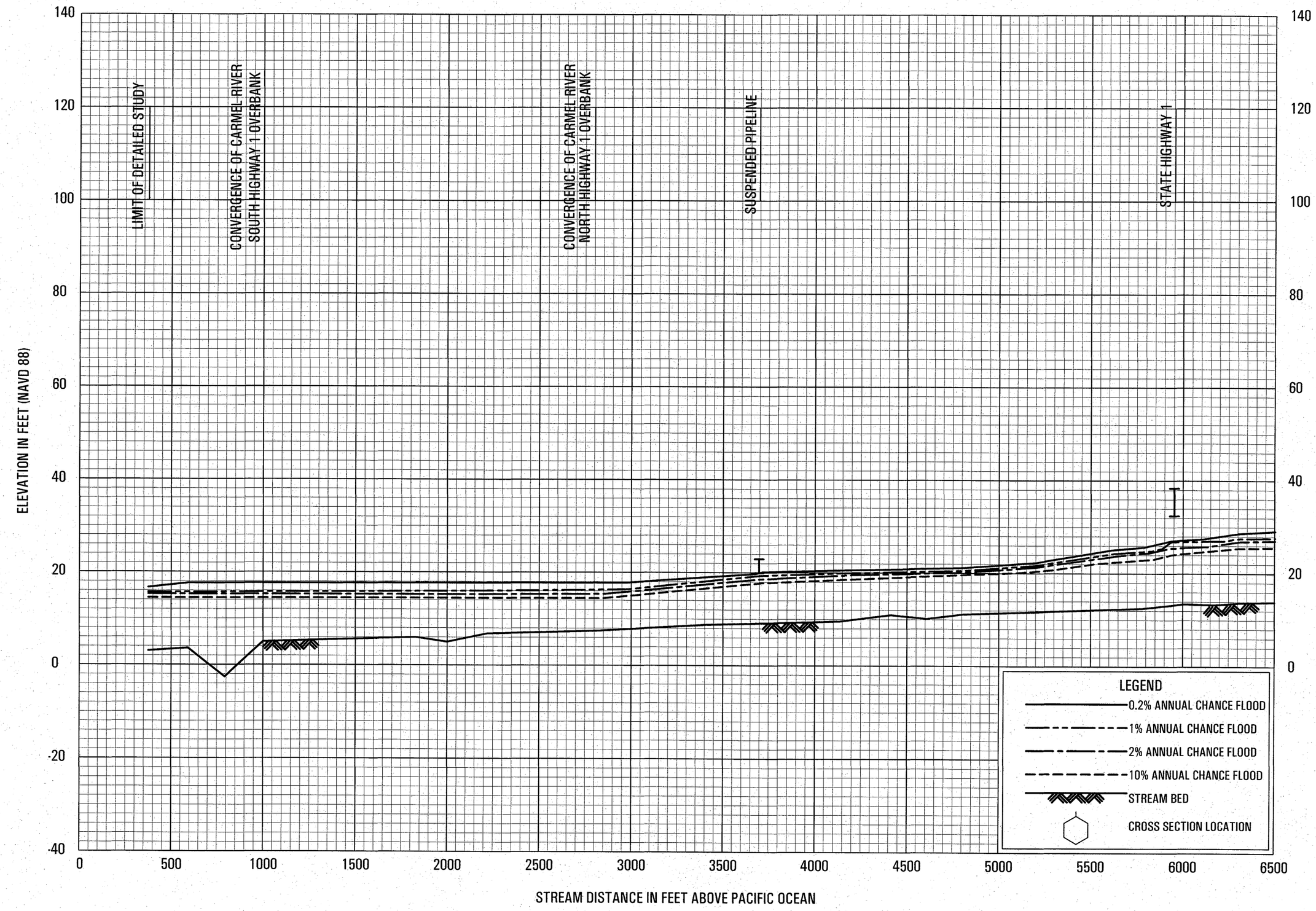
FLOOD PROFILES

CANYON DEL REY

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



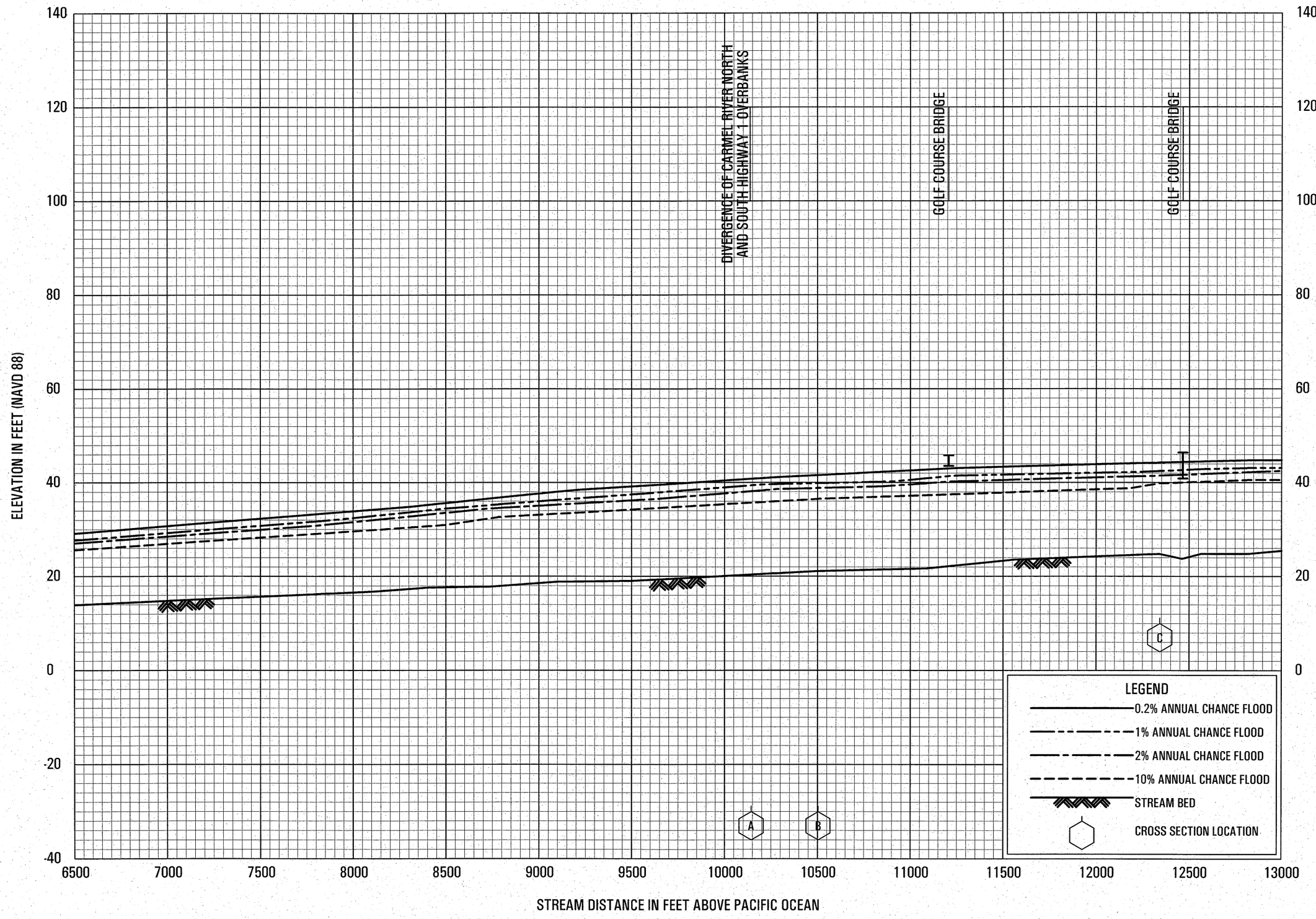
FLOOD PROFILES

CARMEL RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



FLOOD PROFILES

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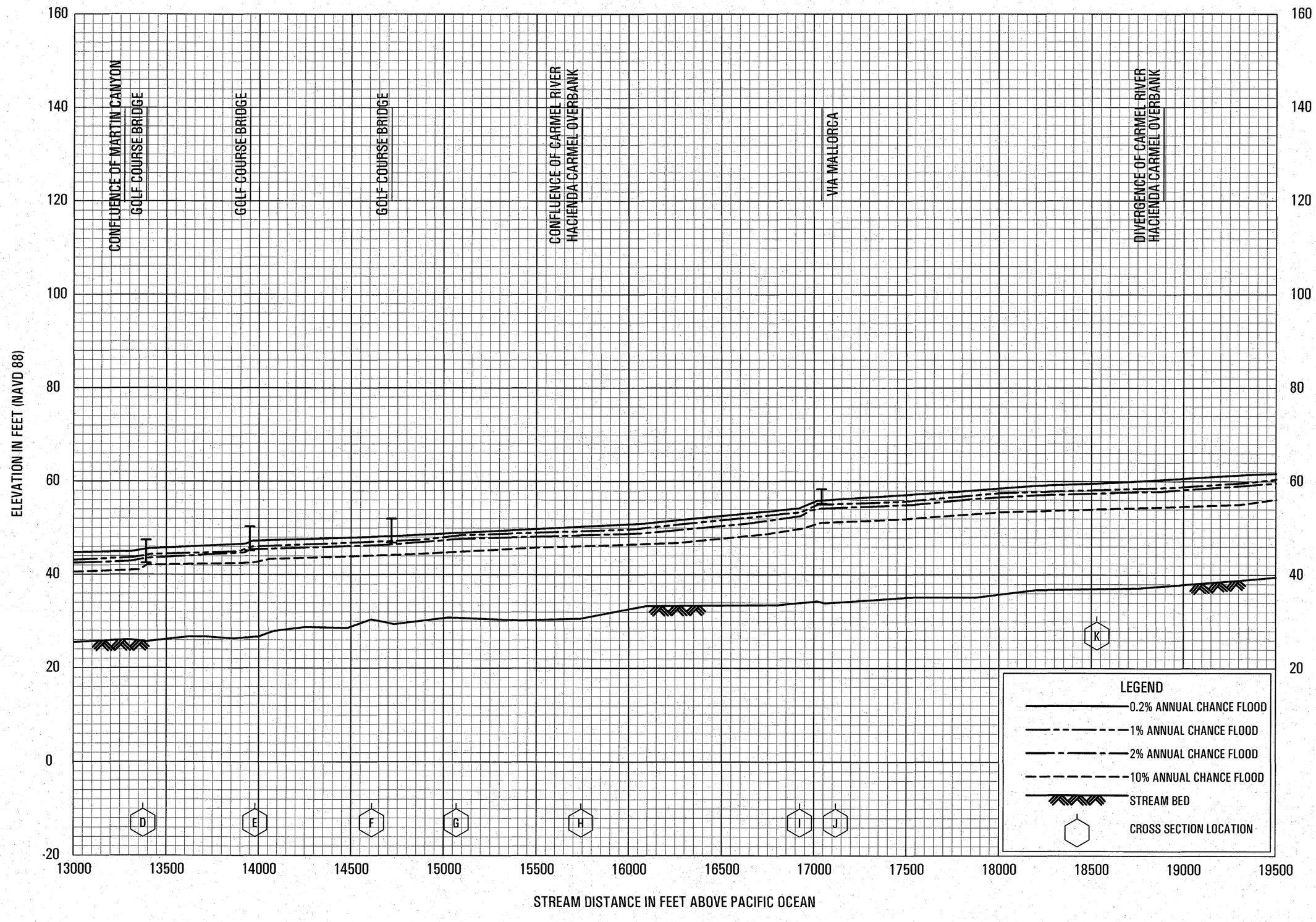
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



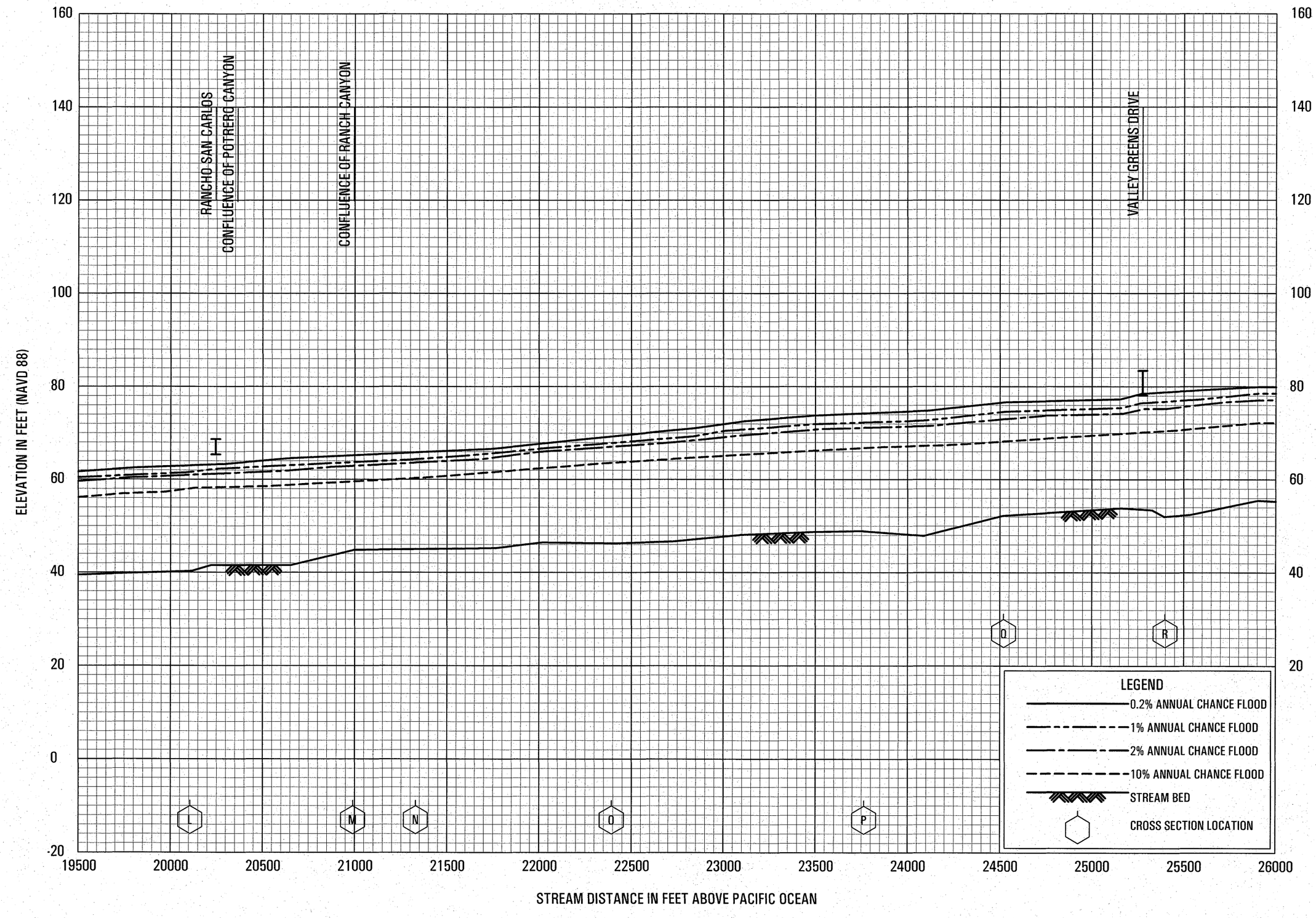
FLOOD PROFILES

CARMEL RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



FLOOD PROFILES

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FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

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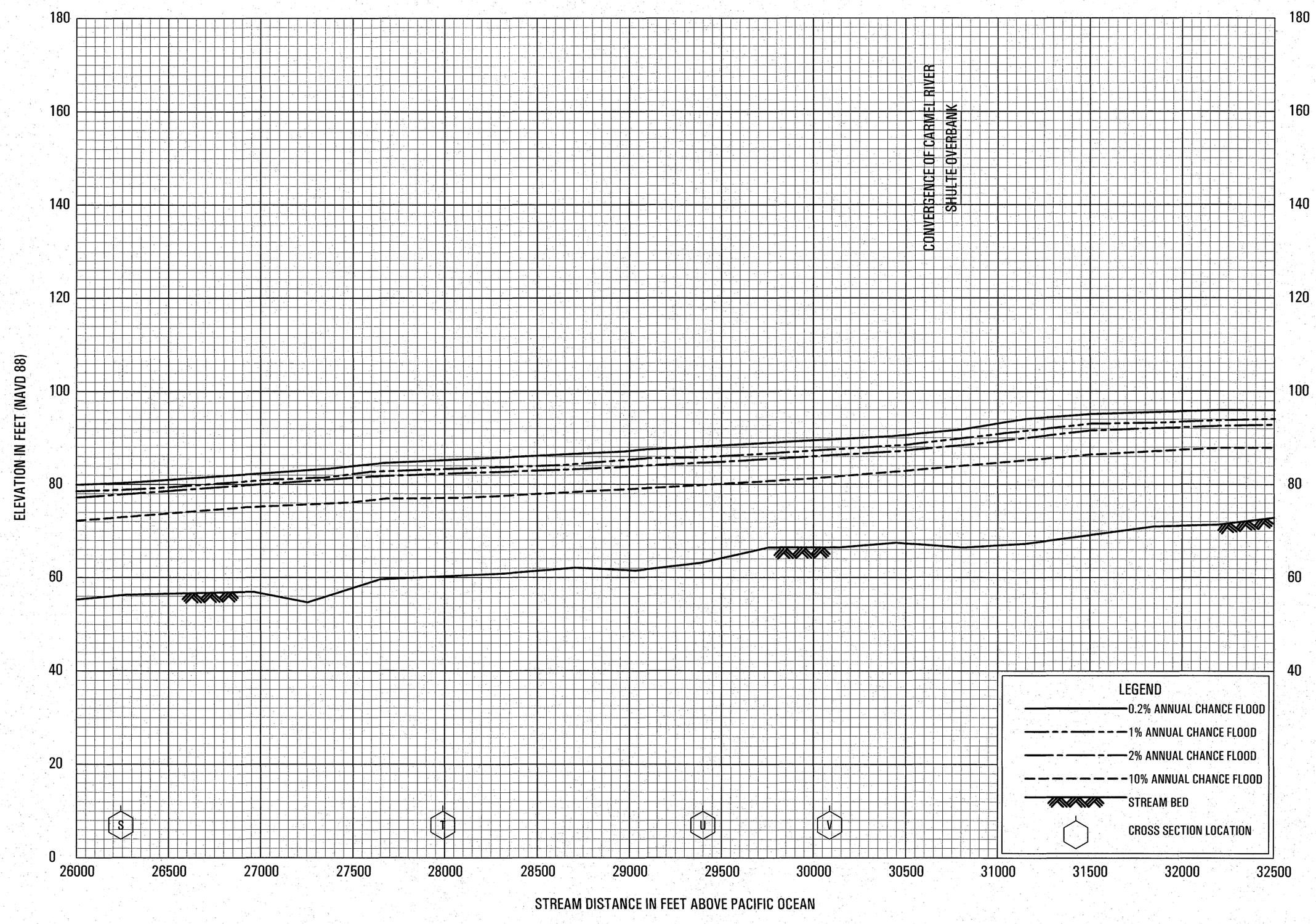

FLOOD PROFILES

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MONTEREY COUNTY, CA

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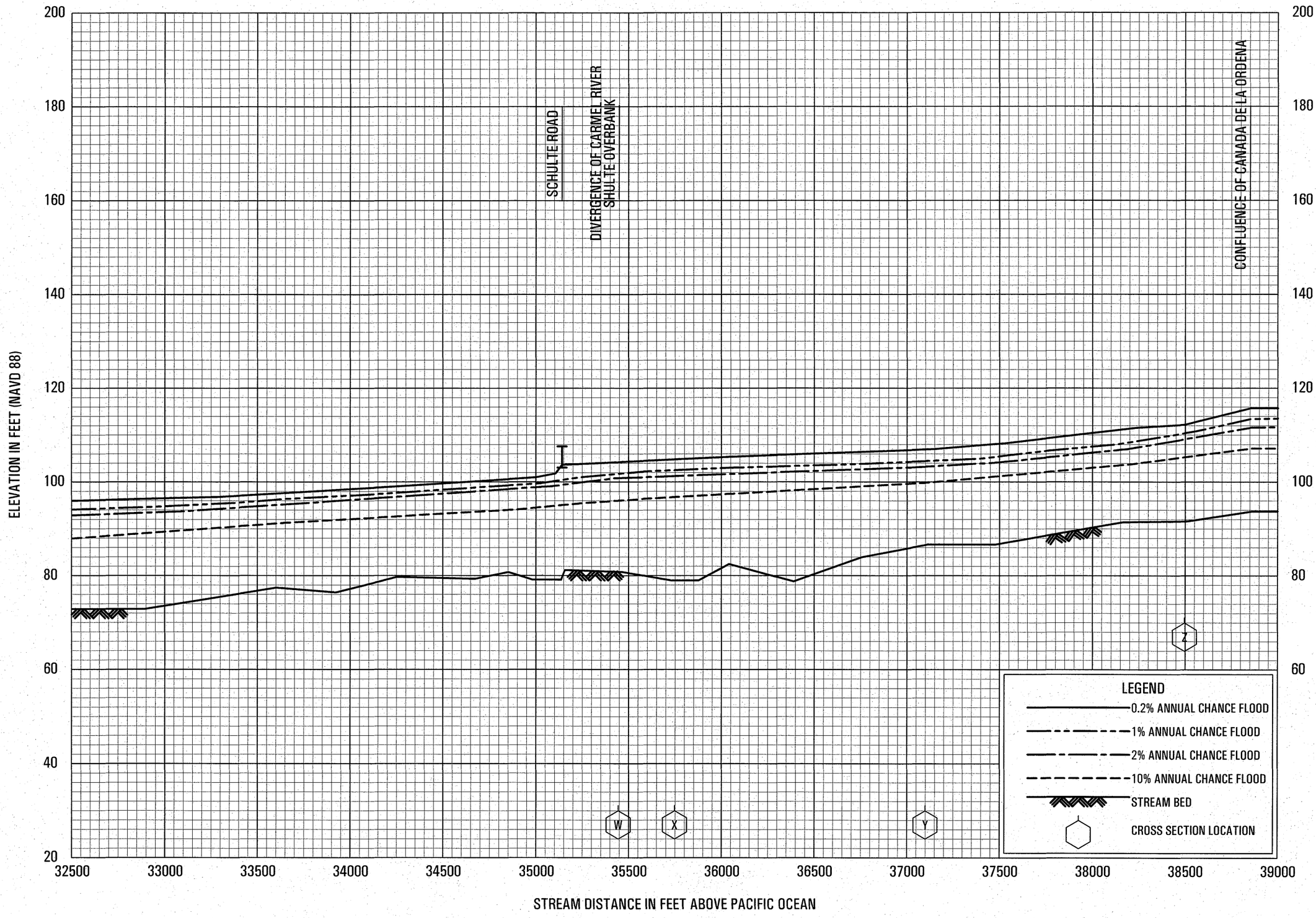

FLOOD PROFILES

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FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

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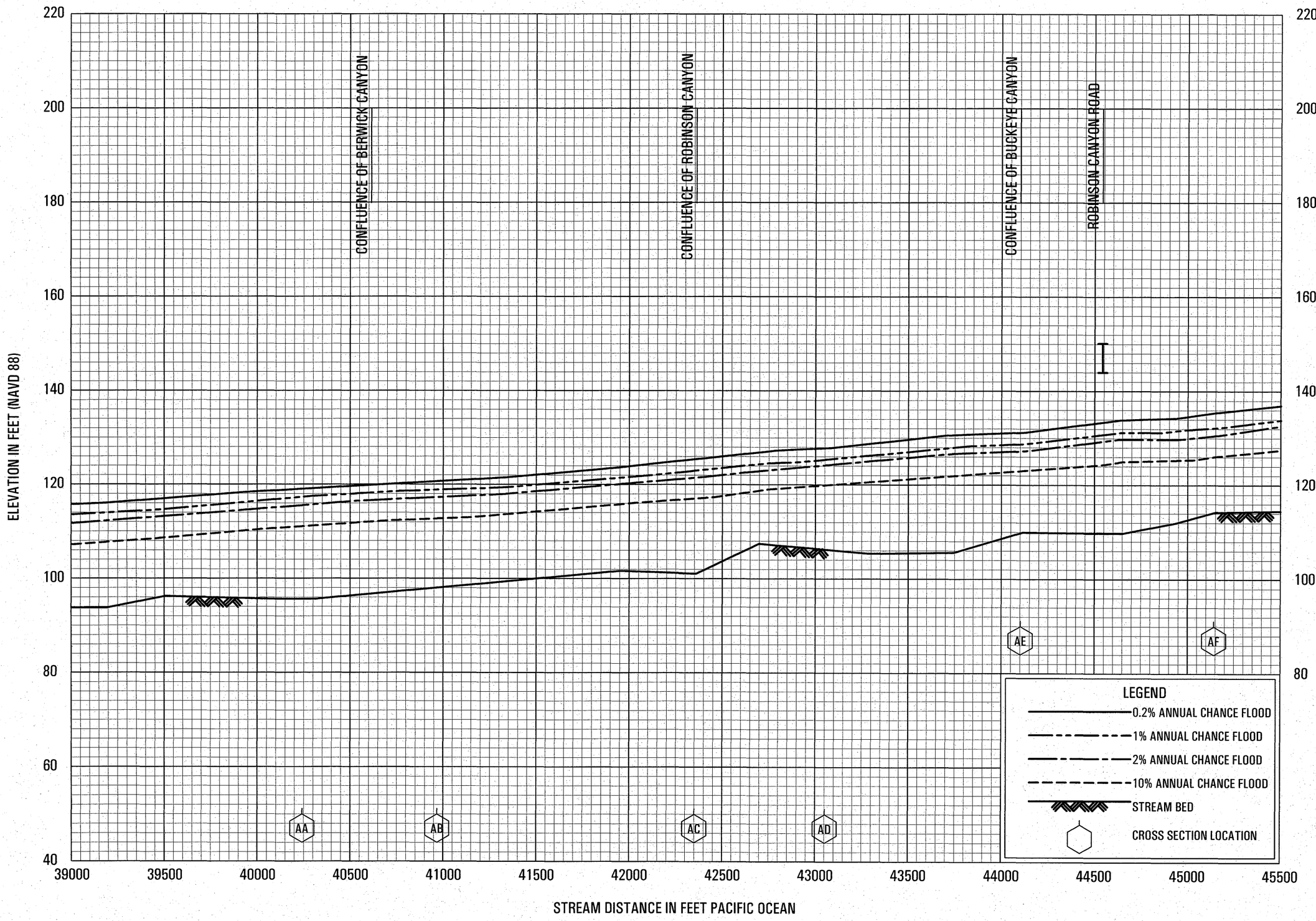

FLOOD PROFILES

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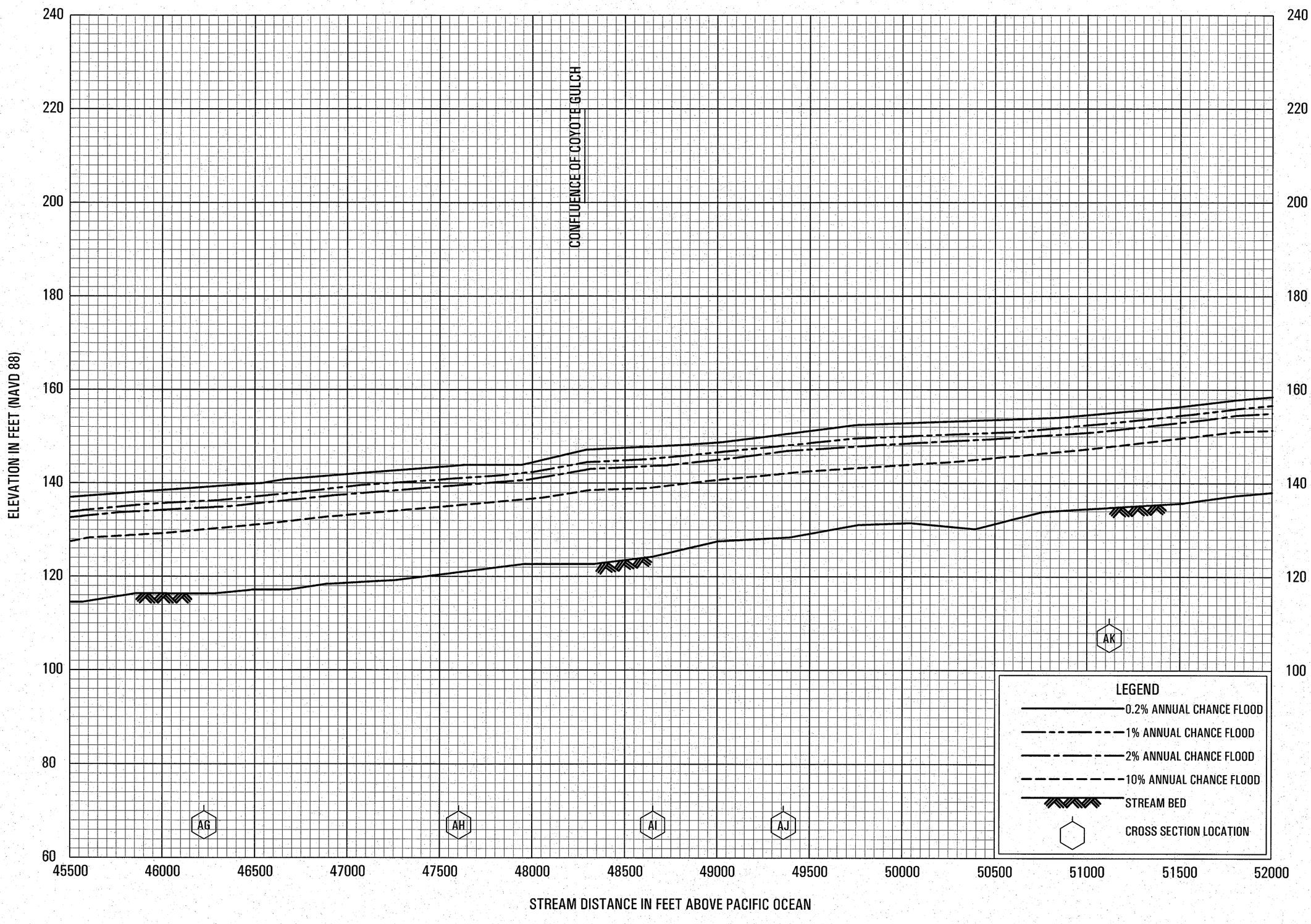
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



FLOOD PROFILES

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FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

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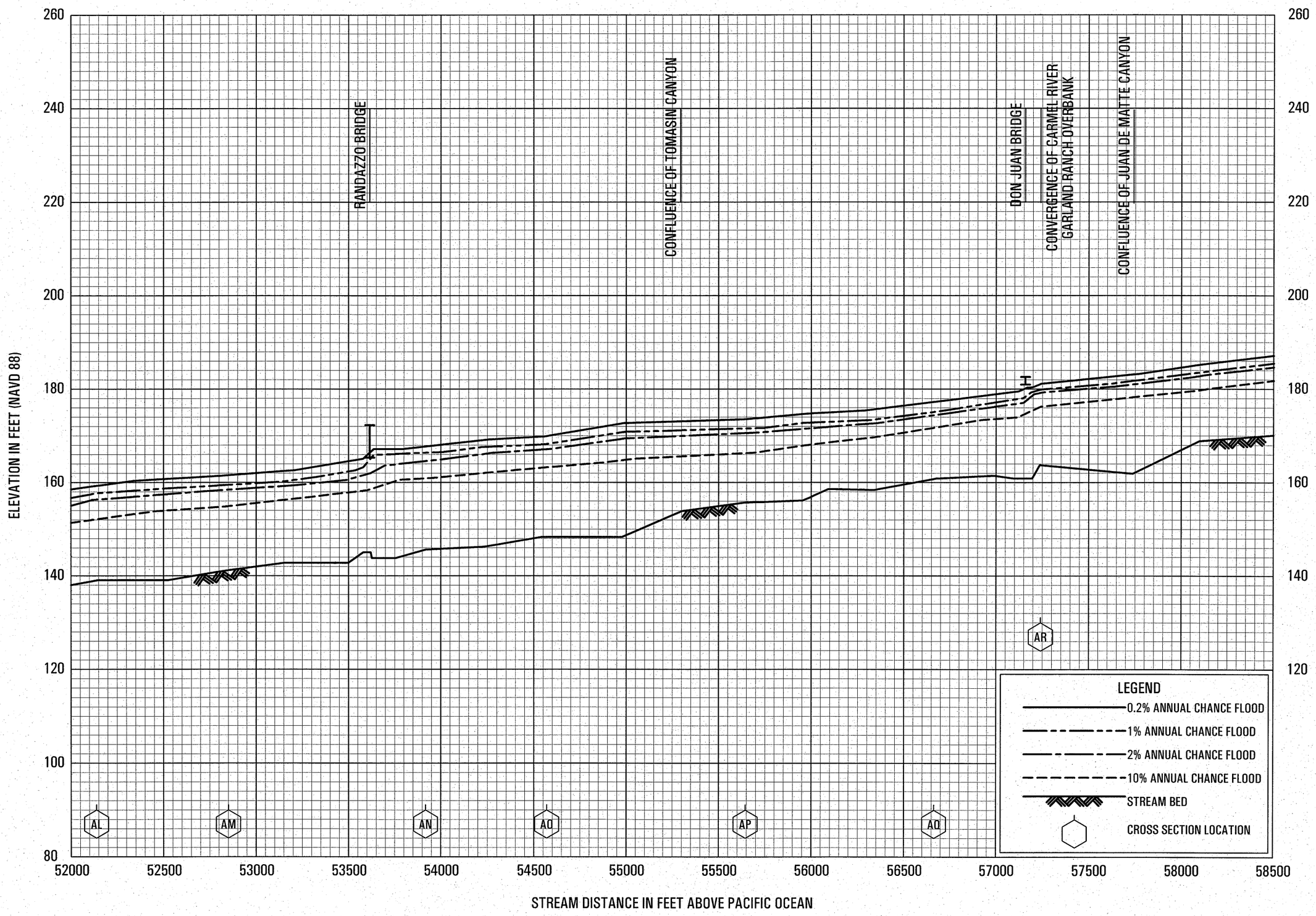

FLOOD PROFILES

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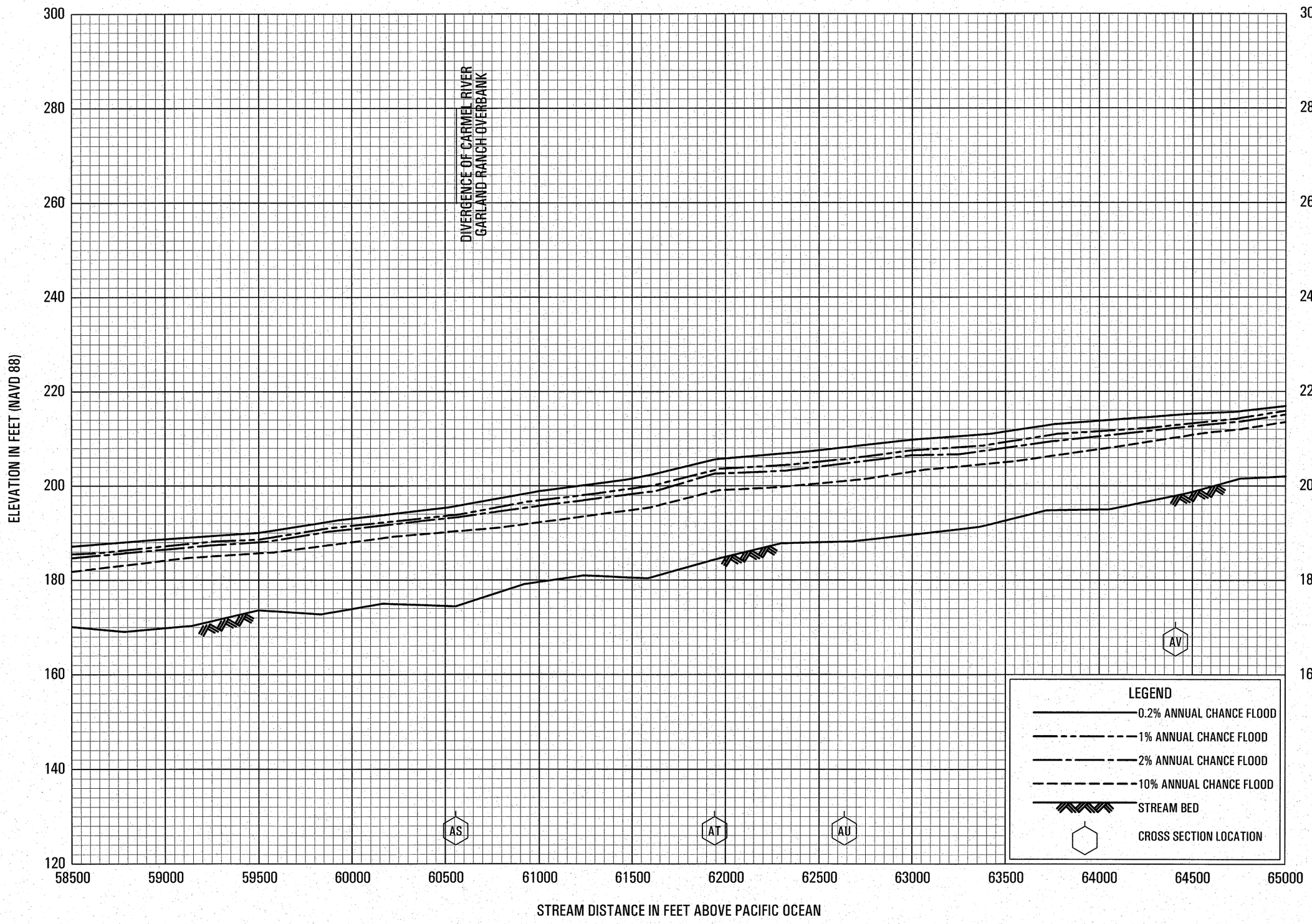
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



FLOOD PROFILES

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FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

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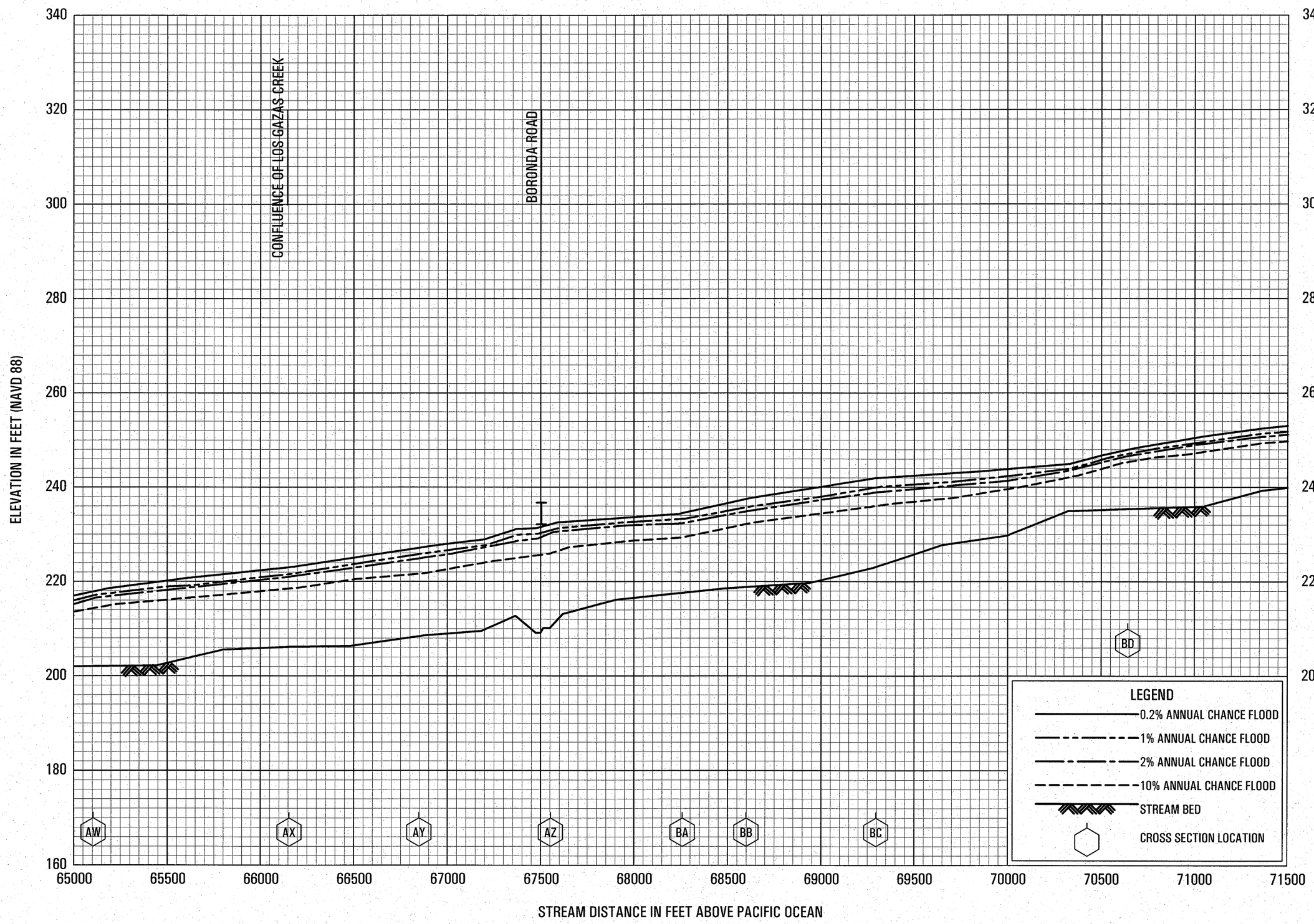

FLOOD PROFILES

CARMEL RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

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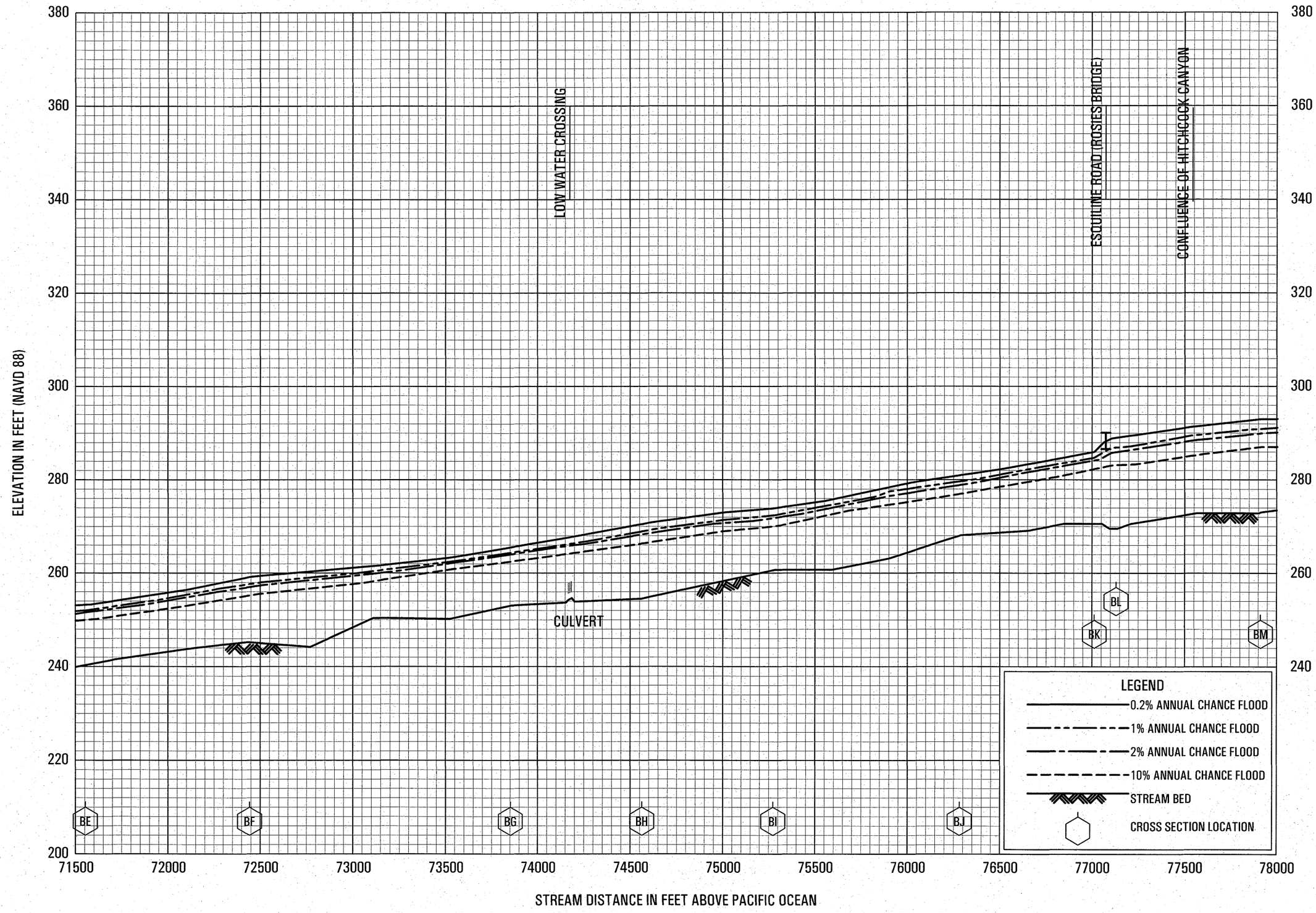

FLOOD PROFILES

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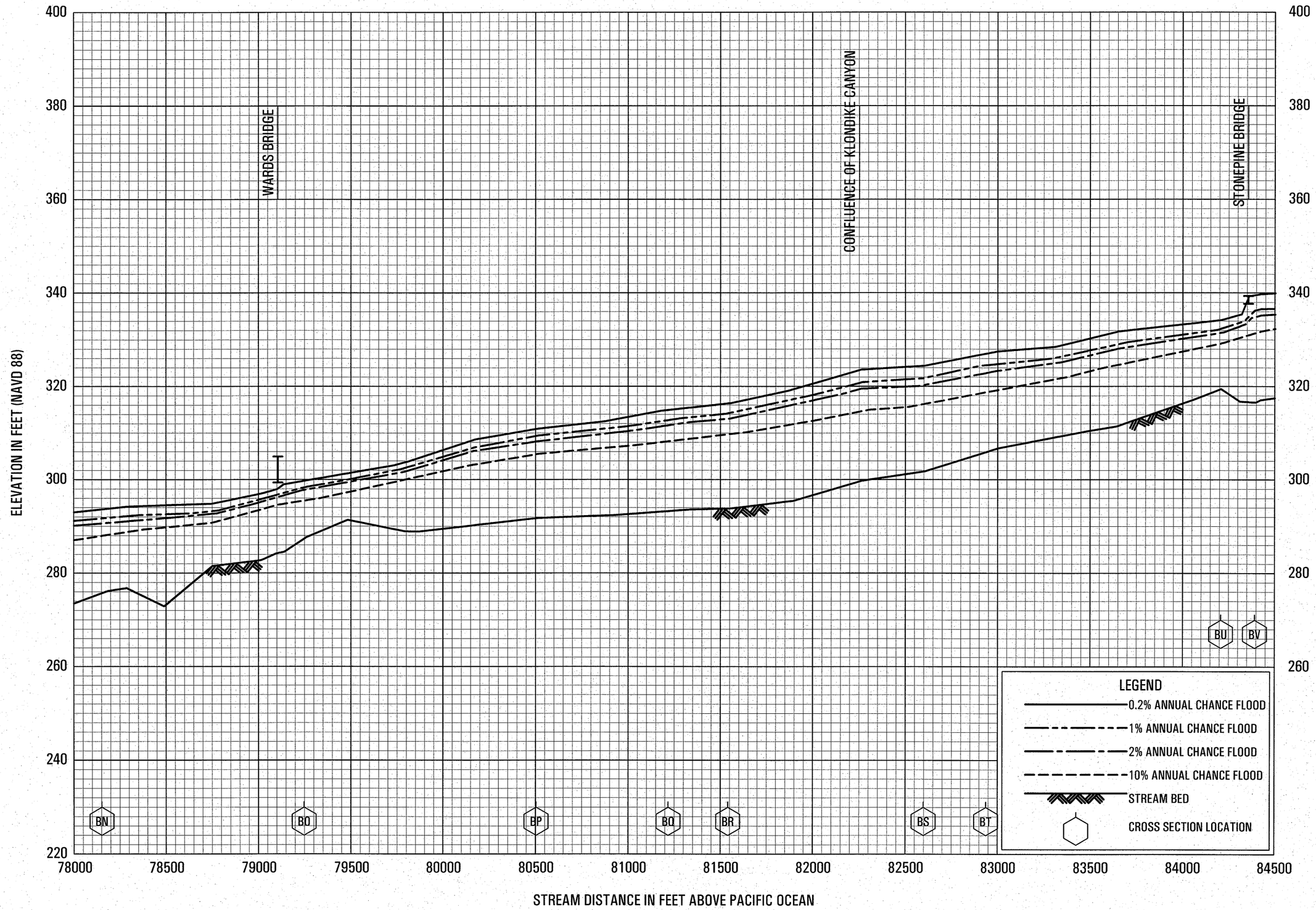
FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



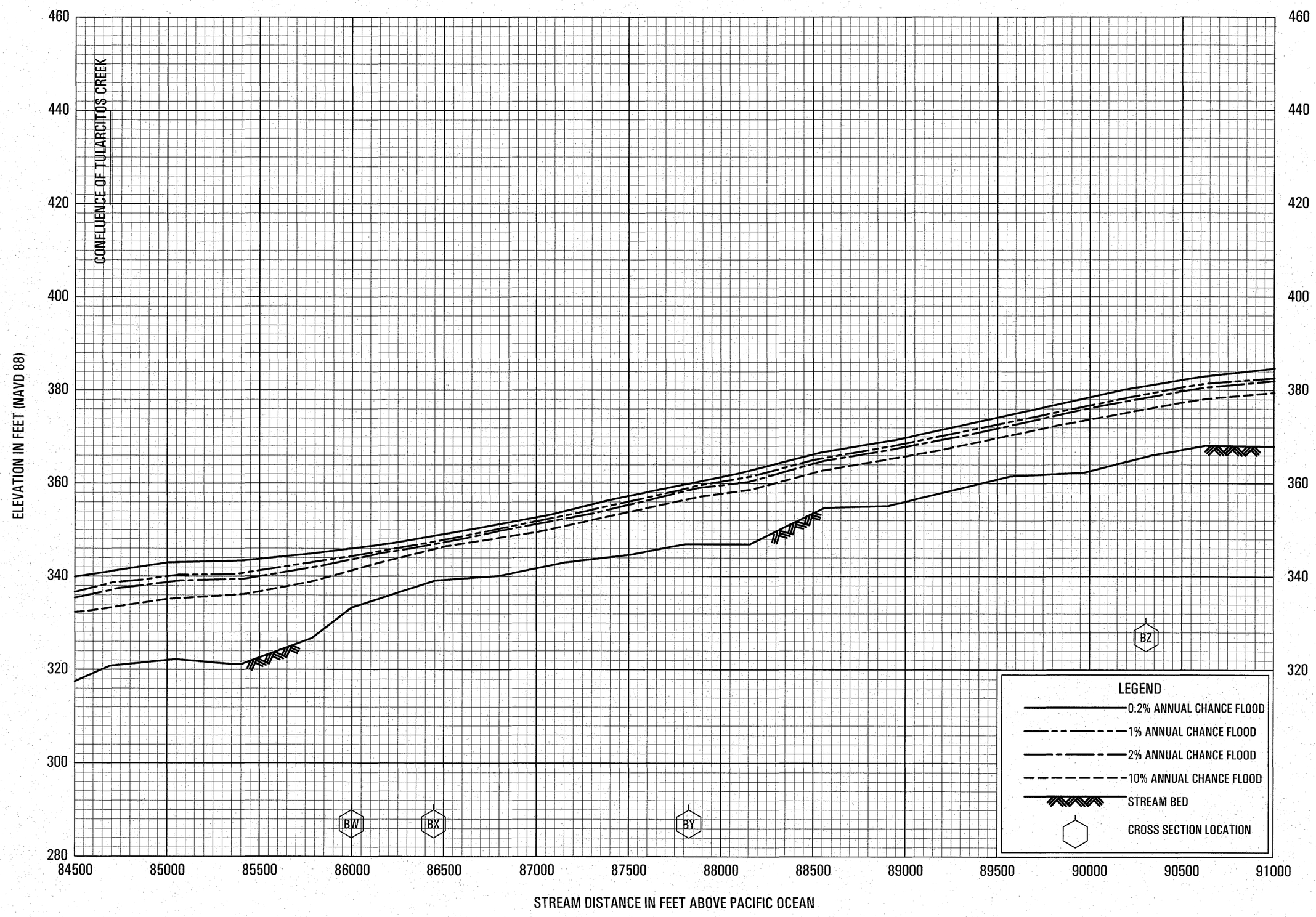
FLOOD PROFILES

CARMEL RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



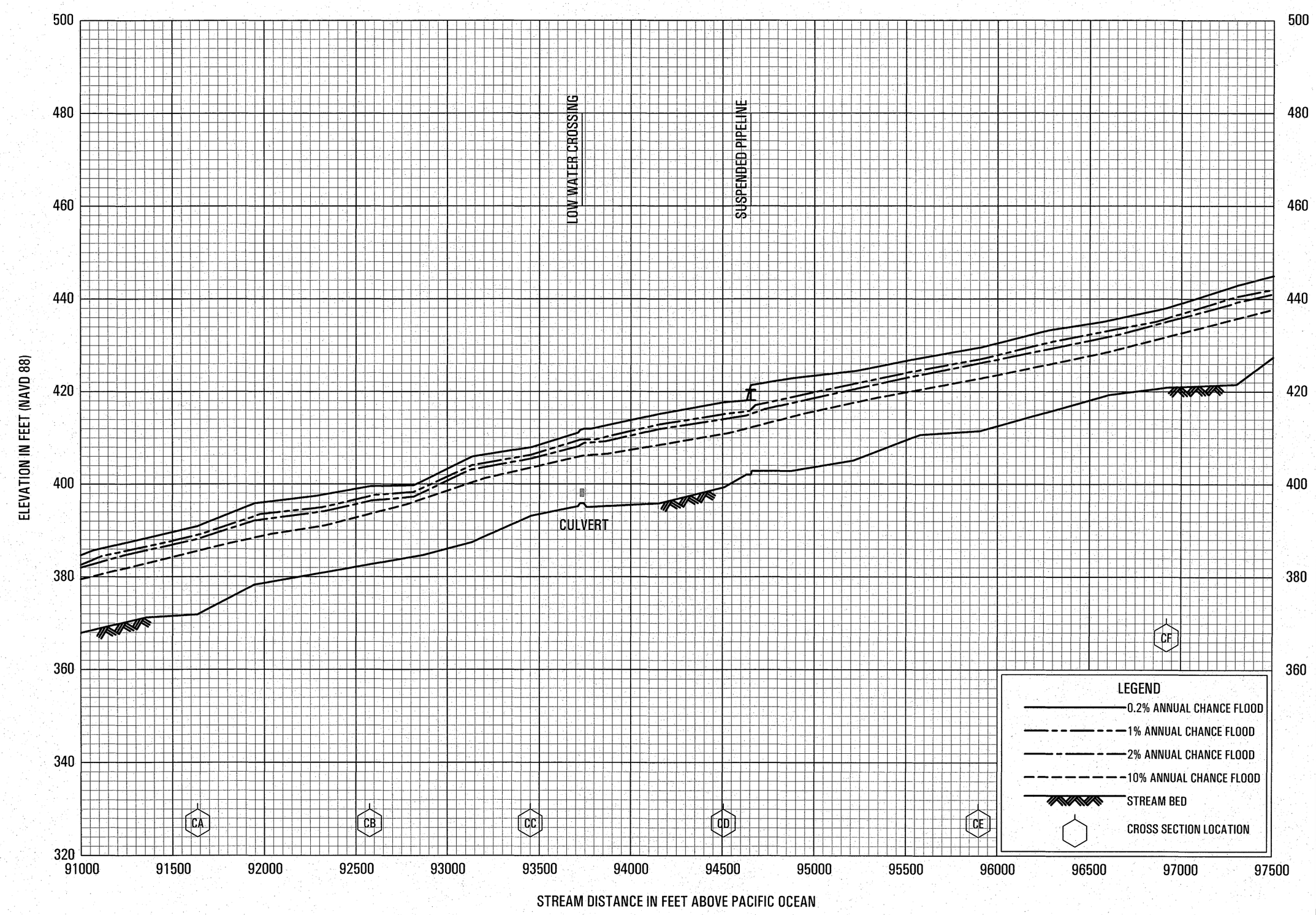
FLOOD PROFILES

CARMEL RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



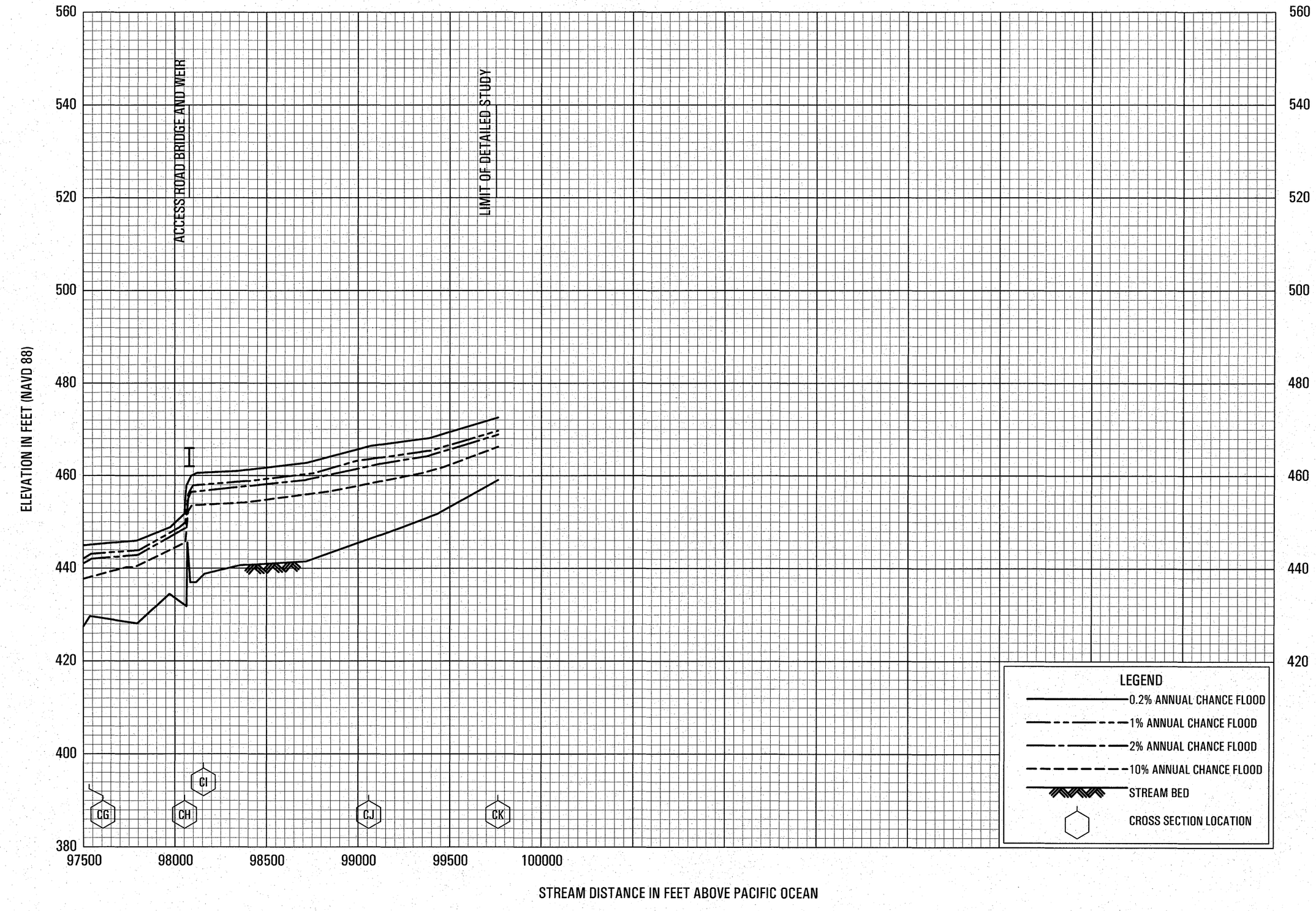
FLOOD PROFILES

CARMEL RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



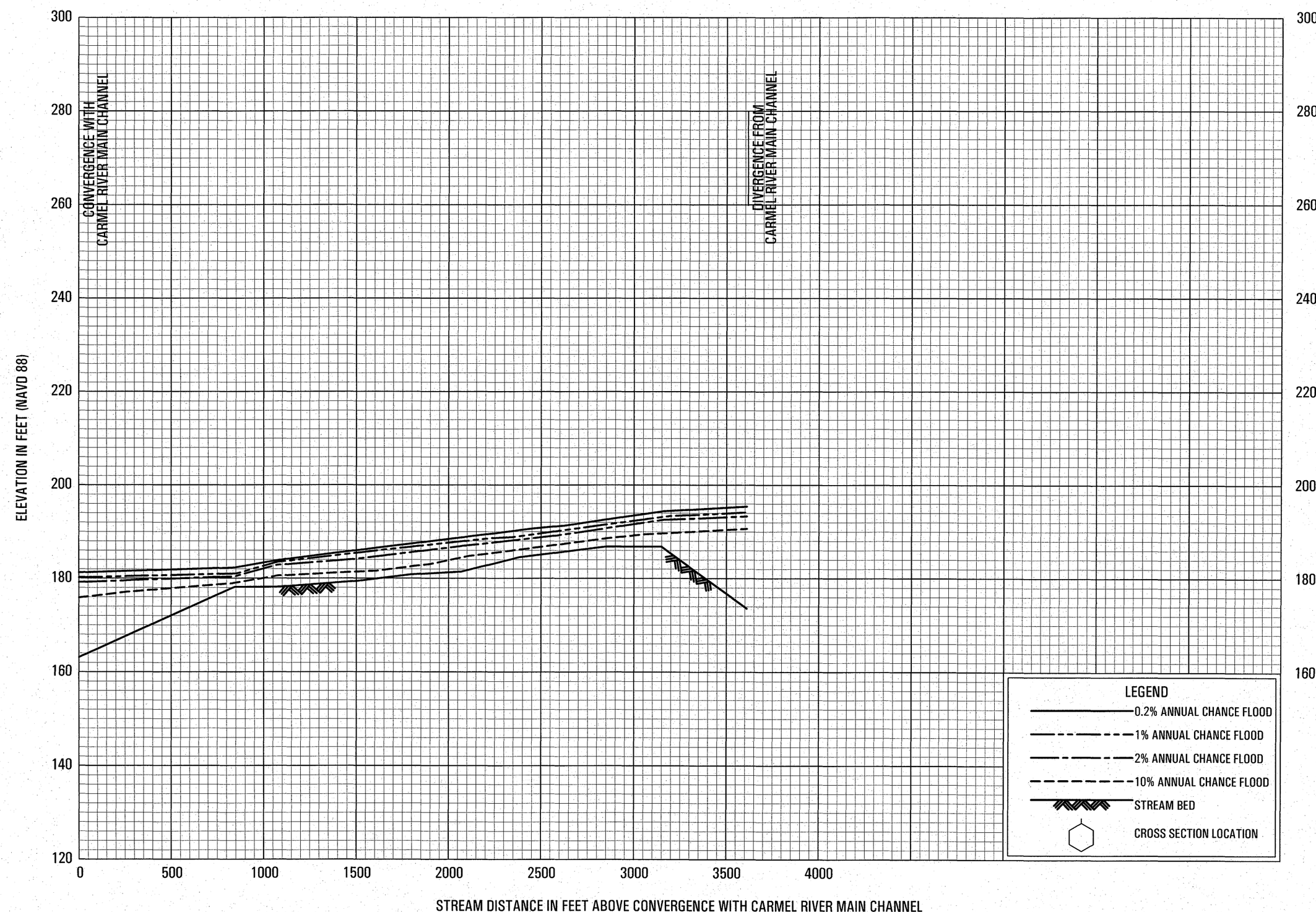
FLOOD PROFILES

CARMEL RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



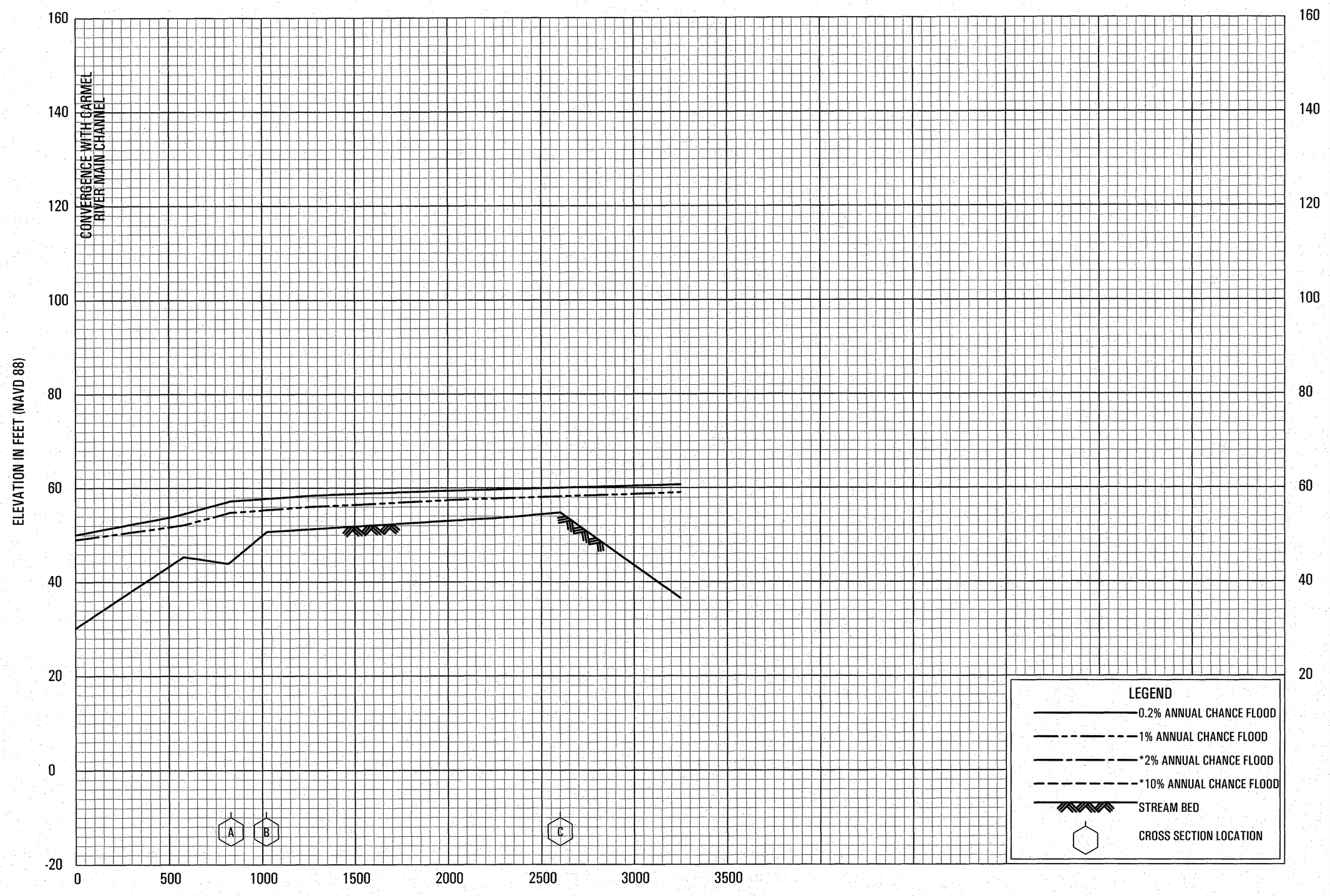
FLOOD PROFILES

CARMEL RIVER GARLAND RANCH OVERBANK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS



FLOOD PROFILES

CARMEL RIVER HACIENDA CARMEL OVERBANK

FEDERAL EMERGENCY MANAGEMENT AGENCY

MONTEREY COUNTY, CA

AND INCORPORATED AREAS