

FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 2 OF 3



BURNET COUNTY, TEXAS AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
BERTRAM, CITY OF*	481609
BURNET, CITY OF	480092
BURNET COUNTY, UNINCORPORATED AREAS	481209
COTTONWOOD SHORES, CITY OF	481614
GRANITE SHOALS, CITY OF	481149
HIGHLAND HAVEN, CITY OF	481676
HORSESHOE BAY, CITY OF	480149
MARBLE FALLS, CITY OF	480093
MEADOWLAKES, CITY OF	481613

*No Special Flood Hazard Areas Identified



FEMA

PRELIMINARY
02/15/2017

REVISED:

FLOOD INSURANCE STUDY NUMBER
48053CV002D

Version Number 2.3.3.3

TABLE OF CONTENTS

Volume 1

	<u>Page</u>
SECTION 1.0 – INTRODUCTION	1
1.1 The National Flood Insurance Program	1
1.2 Purpose of this Flood Insurance Study Report	2
1.3 Jurisdictions Included in the Flood Insurance Study Project	2
1.4 Considerations for using this Flood Insurance Study Report	5
SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS	15
2.1 Floodplain Boundaries	15
2.2 Floodways	31
2.3 Base Flood Elevations	32
2.4 Non-Encroachment Zones	32
2.5 Coastal Flood Hazard Areas	32
2.5.1 Water Elevations and the Effects of Waves	32
2.5.2 Floodplain Boundaries and BFEs for Coastal Areas	32
2.5.3 Coastal High Hazard Areas	33
2.5.4 Limit of Moderate Wave Action	33
SECTION 3.0 – INSURANCE APPLICATIONS	33
3.1 National Flood Insurance Program Insurance Zones	33
3.2 Coastal Barrier Resources System	33
SECTION 4.0 – AREA STUDIED	34
4.1 Basin Description	34
4.2 Principal Flood Problems	35
4.3 Non-Levee Flood Protection Measures	35
4.4 Levees	37
SECTION 5.0 – ENGINEERING METHODS	37
5.1 Hydrologic Analyses	38
5.2 Hydraulic Analyses	58
5.3 Coastal Analyses	91
5.3.1 Total Stillwater Elevations	91
5.3.2 Waves	91
5.3.3 Coastal Erosion	91
5.3.4 Wave Hazard Analyses	91
5.4 Alluvial Fan Analyses	91
SECTION 6.0 – MAPPING METHODS	92
6.1 Vertical and Horizontal Control	92
6.2 Base Map	93

Volume 1, continued

Figures

	<u>Page</u>
Figure 1: FIRM Index	7
Figure 2: FIRM Notes to Users	8
Figure 3: Map Legend for FIRM	11
Figure 4: Floodway Schematic	31
Figure 5: Wave Runup Transect Schematic	32
Figure 6: Coastal Transect Schematic	33
Figure 7: Frequency Discharge-Drainage Area Curves	57
Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas	91
Figure 9: Transect Location Map	91

Tables

	<u>Page</u>
Table 1: Listing of NFIP Jurisdictions	2
Table 2: Flooding Sources Included in this FIS Report	17
Table 3: Flood Zone Designations by Community	33
Table 4: Coastal Barrier Resources System Information	34
Table 5: Basin Characteristics	34
Table 6: Principal Flood Problems	35
Table 7: Historic Flooding Elevations	35
Table 8: Non-Levee Flood Protection Measures	36
Table 9: Levees	37
Table 10: Summary of Discharges	39
Table 11: Summary of Non-Coastal Stillwater Elevations	57
Table 12: Stream Gage Information used to Determine Discharges	58
Table 13: Summary of Hydrologic and Hydraulic Analyses	60
Table 14: Roughness Coefficients	90
Table 15: Summary of Coastal Analyses	91
Table 16: Tide Gage Analysis Specifics	91
Table 17: Coastal Transect Parameters	91
Table 18: Summary of Alluvial Fan Analyses	91
Table 19: Results of Alluvial Fan Analyses	92
Table 20: Countywide Vertical Datum Conversion	92
Table 21: Stream-Based Vertical Datum Conversion	93
Table 22: Base Map Sources	93

Volume 2

	<u>Page</u>
SECTION 6.0 – MAPPING METHODS, continued	
6.3 Floodplain and Floodway Delineation	94
6.4 Coastal Flood Hazard Mapping	128
6.5 FIRM Revisions	128
6.5.1 Letters of Map Amendment	128

Volume 2, continued

	<u>Page</u>
6.5.2 Letters of Map Revision Based on Fill	128
6.5.3 Letters of Map Revision	129
6.5.4 Physical Map Revisions	129
6.5.5 Contracted Restudies	130
6.5.6 Community Map History	130
SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION	132
7.1 Contracted Studies	132
7.2 Community Meetings	134
SECTION 8.0 – ADDITIONAL INFORMATION	136
SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES	138

Tables

	<u>Page</u>
Table 23: Summary of Topographic Elevation Data used in Mapping	94
Table 24: Floodway Data	96
Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams	128
Table 26: Summary of Coastal Transect Mapping Considerations	128
Table 27: Incorporated Letters of Map Change	129
Table 28: Community Map History	131
Table 29: Summary of Contracted Studies Included in this FIS Report	132
Table 30: Community Meetings	135
Table 31: Map Repositories	136
Table 32: Additional Information	137
Table 33: Bibliography and References	139

Exhibits

Flood Profiles	<u>Panel</u>
Backbone Creek	01-06 P
Backbone Creek Tributary 1	07 P
Backbone Creek Tributary 2	08-11 P
Belaire Creek	12 P
Coldspring Creek	13-20 P
Colorado River	21-31 P
Daughtery Branch	32-35 P
Dry Branch	36-38 P

Volume 3
Exhibits

Flood Profiles	<u>Panel</u>
Dry Creek	39-41 P
Elm Creek	42-44 P
Hamilton Creek	45-52 P
Haynie Branch	53-56 P
Little Cypress Creek	57-59 P
Little Cypress Creek Tributary 1	60-61 P
Little Cypress Creek Tributary 2	62 P
Sparerib Creek	63-64 P
Stream BC-3	65-67 P
Stream DC-1	68-69 P
Stream DC-2	70-71 P
Stream EC-1	72-73 P
Stream EC-2	74-75 P
Stream EC-3	76-77 P
Stream EC-4	78 P
Stream EC-5	79-80 P
Stream EC-6	81-83 P
Stream EC-7	84-85 P
Stream HC(B)-1	86-87 P
Stream HC(B)-2	88-89 P
Stream HC(B)-3	90-91 P
Stream HC(B)-4	92-93 P
Stream WC-1	94-96 P
Sycamore Creek	97 P
Sycamore Creek Tributary 1	98 P
Sycamore Creek Tributary 2	99 P
Whitman Branch	100-103 P
Whitman Branch Tributary 1 (downstream)	104-105 P
Whitman Branch Tributary 1 (upstream)	106-108 P
Whitman Branch Tributary 1-1	109 P
Williams Creek	110-111 P

Published Separately

Flood Insurance Rate Map (FIRM)

6.3 Floodplain and Floodway Delineation

The FIRM shows tints, screens, and symbols to indicate floodplains and floodways as well as the locations of selected cross sections used in the hydraulic analyses and floodway computations.

For riverine flooding sources, the mapped floodplain boundaries shown on the FIRM have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 23.

In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% annual chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

The floodway widths presented in this FIS Report and on the FIRM were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. Table 2 indicates the flooding sources for which floodways have been determined. The results of the floodway computations for those flooding sources have been tabulated for selected cross sections and are shown in Table 24, "Floodway Data."

Table 23: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
Burnet, City of; Burnet County, Unincorporated Areas	All sources in the northern portion of HUC 12090205 studied in 2014 and 2015	Light Detection and Ranging data (LiDAR)	N/A	5 ft	N/A	N/A	TNRIS 2011
Burnet County, Unincorporated Areas; Marble Falls, City of; Meadowlakes, City of	All sources in the southern portion of HUC 12090205 studied in 2014 and 2015	Light Detection and Ranging data (LiDAR)	N/A	5 ft	1.52 ft	2.98 ft	LCRA 2007
Burnet County, Unincorporated Areas; Marble Falls, City of	Unnamed Tributary (Marble Falls)	Light Detection and Ranging data (LiDAR)	N/A	5 ft	1.52 ft	2.98 ft	LCRA 2007

Table 23: Summary of Topographic Elevation Data used in Mapping, continued

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
Burnet, City of; Burnet County, Unincorporated Areas; Cottonwood Shores, City of; Marble Falls, City of; Meadowlakes, City of	All redelineated sources in HUC 12070203, 12070205, and 12090205 included in the 03/15/2012 FIS Report	Topographic Maps	1:24,000	10 ft	N/A	N/A	USGS 2006
Burnet County, Unincorporated; Granite Shoals, City of; Horseshoe Bay, City of	All redelineated sources in HUC 12090201 included in the 03/15/2012 FIS Report	Light Detection and Ranging data (LiDAR)	N/A	2 ft	N/A	N/A	LCRA 2006
Burnet County, Unincorporated Areas; Marble Falls, City of; Meadowlakes, City of	Colorado River (Lake Marble Falls)	Topographic Maps	1:2,400	2 ft	N/A	N/A	LCRA 1997
Burnet County, Unincorporated Areas; Marble Falls, City of	Colorado River (Lake Travis)	Topographic Maps	1:2,400	2 ft	N/A	N/A	LCRA 1997
Burnet, City of; Burnet County, Unincorporated Areas	All sources studied for the 11/16/1990 FIS Report	Topographic Maps	1:24,000	10 ft	N/A	N/A	USGS various

BFEs shown at cross sections on the FIRM represent the 1% annual chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations.

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	197	235	2,566	13.1	762.3	744.4 ³	744.4	0.0
B	6,119	520	6,012	4.9	763.0	763.0	763.9	0.9
C	7,241	580	5,641	5.2	764.6	764.6	765.5	0.9
D	8,627	420	3,994	7.3	767.3	767.3	767.6	0.3
E	9,748	435	2,371	12.4	768.9	768.9	769.1	0.2
F	11,069	645 ²	6,681	6.0	778.8	778.8	779.3	0.5
G	12,132	760 ²	5,741	6.6	779.9	779.9	780.8	0.9
H	13,183	236	3,149	9.1	782.4	782.4	782.8	0.4
I	13,725	203	2,022	14.2	784.2	784.2	784.4	0.2
J	16,040	450	2,854	8.7	820.5	820.5	820.7	0.2
K	19,540	700	3,281	7.3	849.6	849.6	849.7	0.1
L	21,475	250	2,665	6.3	868.6	868.6	869.4	0.8
M	27,980	450	2,159	5.7	890.3	890.3	891.1	0.8
N	31,325	300	2,291	5.4	899.6	899.6	900.1	0.5
O	32,690	200	1,664	7.5	904.8	904.8	905.0	0.2
P	35,475	200	2,226	6.0	914.4	914.4	915.0	0.6
Q	39,900	275	1,309	5.7	926.5	926.5	926.8	0.3
R	42,875	250	1,493	5.2	938.5	938.5	939.0	0.5
S	45,475	200	1,223	6.1	953.6	953.6	954.0	0.4
T	47,000	349	2,460	3.0	966.7	966.7	967.6	0.9
U	48,210	150	1,106	6.8	972.3	972.3	972.4	0.1

¹Feet above confluence with Colorado River

²Combined Backbone Creek/Backbone Creek Tributary 2 floodway width

³Elevation computed without consideration of backwater effects from Colorado River

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY BURNET COUNTY, TX AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: BACKBONE 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	1,816	93	455	3.4	762.3	759.7 ²	760.2	0.5
B	2,382	95	375	4.1	762.3	762.0 ²	762.2	0.2
C	2,704	94	254	6.0	764.7	764.7	764.7	0.0

¹Feet above confluence with Backbone Creek

²Elevations computed without consideration of backwater effects from Backbone Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BACKBONE CREEK TRIBUTARY 1

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	2,529	495	2,802	4.2	781.6	781.6	782.5	0.9
B	3,635	135	569	5.9	787.7	787.7	788.3	0.6
C	4,779	98	496	6.9	792.7	792.7	793.4	0.7
D	5,819	199	1,243	2.7	799.1	799.1	799.7	0.6
E	6,599	102	402	8.5	805.2	805.2	805.5	0.3
F	7,106	67	603	5.7	808.9	808.9	809.6	0.7
G	7,620	100	513	4.8	809.9	809.9	810.2	0.3
H	9,030	81	345	6.1	820.2	820.2	820.3	0.1
I	10,320	74	292	7.2	835.8	835.8	835.8	0.0
J	11,725	62	265	7.9	858.3	858.3	858.3	0.0
K	13,000	63	240	8.7	877.0	877.0	877.1	0.1
L	14,120	89	379	5.5	891.2	891.2	891.5	0.3

¹Feet above confluence with Backbone Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BACKBONE CREEK TRIBUTARY 2

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	4,310	75	158	5.0	828.2	827.3 ²	827.4	0.1
B	4,900	75	180	4.4	834.5	834.5	834.6	0.1
C	5,310	77	147	5.4	839.4	839.4	839.4	0.0
D	5,420	71	203	3.9	841.0	841.0	841.2	0.2
E	5,800	52	150	5.3	843.2	843.2	843.3	0.1
F	6,020	79	178	4.5	845.3	845.3	845.7	0.4
G	6,520	105	292	2.7	851.1	851.1	851.3	0.2

¹Feet above confluence with Colorado River

²Elevations computed without consideration of backwater effects from Colorado River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BELAIRE 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	490	60	472	8.0	787.5	787.5	788.0	0.5
B	1,100	83	503	7.5	794.6	794.6	795.1	0.5
C	2,140	140	532	7.1	825.1	825.1	825.9	0.8
D	2,900	180	709	4.7	834.3	834.3	834.5	0.2
E	3,825	229	839	4.0	839.5	839.5	840.4	0.9
F	5,050	180	730	4.6	846.5	846.5	847.0	0.5
G	6,275	160	711	4.7	852.7	852.7	853.6	0.9
H	7,225	200	839	3.5	857.4	857.4	858.2	0.8
I	8,930	350	857	2.8	867.1	867.1	867.6	0.5
J	9,950	180	609	3.9	874.0	874.0	874.2	0.2
K	11,000	149	515	4.6	877.5	877.5	878.3	0.8
L	12,875	100	464	5.1	886.9	886.9	887.4	0.5
M	13,970	59	335	7.1	893.4	893.4	894.0	0.6
N	16,015	120	607	3.9	907.6	907.6	908.6	1.0
O	17,300	140	763	3.1	912.0	912.0	912.9	0.9
P	18,400	100	539	4.3	919.2	919.2	919.9	0.7

¹Feet above confluence with Backbone Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: COLDSRING 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	840	58	222	8.0	1,284.2	1,284.2	1,284.2	0.0
B	1,480	80	352	5.0	1,289.7	1,289.7	1,289.9	0.2
C	2,020	150	541	3.3	1,291.8	1,291.8	1,292.8	1.0
D	2,300	140	529	3.3	1,293.8	1,293.8	1,294.3	0.5
E	2,710	150	489	3.6	1,295.8	1,295.8	1,296.0	0.2
F	2,950	100	320	4.0	1,296.8	1,296.8	1,297.0	0.2
G	3,720	100	320	4.0	1,301.6	1,301.6	1,301.7	0.1
H	4,070	100	411	3.1	1,302.4	1,302.4	1,302.9	0.5
I	4,470	101	175	4.3	1,303.5	1,303.5	1,303.8	0.3
J	9,680	100	309	5.8	1,345.2	1,345.2	1,345.2	0.0
K	10,600	99	315	5.7	1,352.6	1,352.6	1,352.9	0.3
L	11,500	102	308	5.8	1,360.5	1,360.5	1,360.5	0.0

¹Feet above confluence with Hamilton Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DAUGHTERY BRANCH

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	3,000	300	2,000	4.0	877.1	877.1	878.0	0.9
B	6,050	150	804	5.4	890.9	890.9	891.2	0.3
C	9,450	100	797	4.9	901.4	901.4	902.0	0.6
D	11,300	150	816	4.8	907.0	907.0	907.2	0.2
E	15,560	450	1,833	3.4	921.8	921.8	922.5	0.7
F	17,390	200	1,260	5.0	927.9	927.9	928.5	0.6
G	21,080	250	1,595	3.9	940.8	940.8	941.3	0.5
H	24,280	200	1,357	4.1	950.9	950.9	951.6	0.7
I	26,380	249	1,539	3.7	959.1	959.1	960.1	1.0

¹Feet above confluence with Backbone Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DRY BRANCH

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	3,490	600	1,655	2.3	890.4	890.4	890.6	0.2
B	5,125	461	1,480	2.6	894.2	894.2	894.3	0.1
C	6,650	440	1,124	3.5	898.7	898.7	899.0	0.3
D	7,955	300	701	2.9	903.7	903.7	904.0	0.3
E	9,500	200	653	3.1	909.3	909.3	910.0	0.7
F	10,745	150	548	3.1	913.2	913.2	913.9	0.7
G	12,470	170	482	3.5	920.2	920.2	921.0	0.8
H	13,740	140	482	3.5	925.6	925.6	926.4	0.8

¹Feet above confluence with Dry Branch

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DRY 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	5,870	120	871	7.4	833.1	833.1	833.4	0.3
B	6,190	150	1,117	5.8	835.3	835.3	835.6	0.3
C	6,520	120	1,122	5.7	836.4	836.4	837.0	0.6
D	6,830	120	1,087	5.9	837.5	837.5	838.1	0.6
E	7,100	140	1,038	6.0	838.8	838.8	839.3	0.5
F	7,370	145	1,044	5.9	840.3	840.3	840.7	0.4
G	9,780	130	622	6.8	854.2	854.2	855.0	0.8
H	10,080	140	896	4.7	856.5	856.5	857.4	0.9
I	10,340	150	727	5.8	858.1	858.1	858.6	0.5
J	10,870	140	948	4.5	860.7	860.7	861.5	0.8
K	11,240	150	863	4.9	862.0	862.0	862.8	0.8
L	11,550	150	931	4.6	863.4	863.4	864.3	0.9
M	11,930	172	1,090	3.1	864.5	864.5	865.5	1.0
N	12,170	130	830	4.1	865.1	865.1	865.9	0.8
O	12,790	130	658	5.2	867.5	867.5	868.4	0.9
P	13,870	190	612	5.6	870.9	870.9	871.5	0.6
Q	13,980	310	1,068	3.2	871.7	871.7	872.6	0.9
R	14,270	320	1,110	3.1	872.8	872.8	873.3	0.5
S	14,400	300	1,010	3.4	873.4	873.4	873.8	0.4
T	14,520	300	739	4.6	874.1	874.1	874.4	0.3
U	14,740	300	1,258	2.7	877.0	877.0	877.2	0.2
V	14,930	136	622	3.4	877.1	877.1	877.5	0.4
W	15,100	136	579	3.6	877.3	877.3	877.9	0.6
X	15,560	120	396	5.3	879.1	879.1	879.3	0.2
Y	15,850	120	468	4.5	880.3	880.3	880.8	0.5
Z	16,250	120	394	5.3	881.6	881.6	882.5	0.9

¹Feet above confluence with Colorado River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELM 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
AA	16,620	120	403	5.2	883.4	883.4	884.4	1.0
AB	17,140	120	450	4.7	885.8	885.8	886.6	0.8
AC	17,710	130	540	3.9	888.0	888.0	889.0	1.0
AD	18,070	120	404	5.2	889.8	889.8	890.5	0.7
AE	18,130	129	691	3.0	890.1	890.1	891.1	1.0
AF	18,510	120	559	3.8	891.1	891.1	891.8	0.7
AG	18,700	120	611	3.4	891.7	891.7	892.4	0.7
AH	18,970	95	436	4.8	892.3	892.3	893.1	0.8
AI	19,040	95	376	5.6	892.5	892.5	893.3	0.8
AJ	19,160	95	443	4.7	893.4	893.4	894.0	0.6

¹Feet above confluence with Colorado River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ELM 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	66,500	264	2,139	9.9	1,172.1	1,172.1	1,172.1	0.0
B	68,670	400	3,165	6.7	1,190.1	1,190.1	1,190.9	0.8
C	70,940	380	2,303	6.3	1,207.9	1,207.9	1,208.7	0.8
D	72,680	500	2,405	6.0	1,216.5	1,216.5	1,216.9	0.4
E	74,450	500	2,643	5.4	1,224.0	1,224.0	1,224.6	0.6
F	76,180	630	2,782	5.2	1,229.0	1,229.0	1,230.0	1.0
G	77,640	500	2,529	5.7	1,234.9	1,234.9	1,235.6	0.7
H	79,480	510	3,205	4.5	1,240.5	1,240.5	1,241.5	1.0
I	80,530	430	3,598	4.0	1,241.8	1,241.8	1,242.8	1.0
J	81,025	300	2,237	6.4	1,242.8	1,242.8	1,243.7	0.9
K	81,530	380	3,050	4.7	1,245.5	1,245.5	1,246.4	0.9
L	83,230	600	2,990	4.8	1,250.1	1,250.1	1,251.0	0.9
M	84,620	440	3,719	3.9	1,255.9	1,255.9	1,256.8	0.9
N	85,600	250	2,144	6.0	1,259.9	1,259.9	1,260.4	0.5
O	86,260	260	2,461	5.3	1,265.5	1,265.5	1,265.8	0.3
P	86,880	260	2,304	5.6	1,266.3	1,266.3	1,266.9	0.6
Q	88,070	220	1,611	8.1	1,272.1	1,272.1	1,272.6	0.5
R	88,900	330	1,929	6.6	1,280.2	1,280.2	1,280.4	0.2
S	89,570	880	4,042	3.2	1,282.8	1,282.8	1,283.2	0.4
T	90,760	260	1,546	7.2	1,286.2	1,286.2	1,286.6	0.4
U	91,820	240	1,672	6.4	1,290.2	1,290.2	1,290.9	0.7
V	93,580	350	1,361	7.8	1,297.5	1,297.5	1,297.9	0.4
W	94,160	400	2,362	4.5	1,300.3	1,300.3	1,301.2	0.9
X	95,380	270	1,741	6.1	1,307.8	1,307.8	1,308.6	0.8
Y	96,670	260	1,896	5.6	1,315.6	1,315.6	1,315.9	0.3
Z	97,730	260	1,911	4.7	1,318.9	1,318.9	1,319.7	0.8

¹Feet above confluence with Colorado River

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: HAMILTON 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
AA	98,300	350	1,918	4.7	1,321.4	1,321.4	1,322.0	0.6
AB	98,760	300	1,086	6.5	1,324.3	1,324.3	1,324.4	0.1
AC	99,350	270	1,297	5.4	1,328.3	1,328.3	1,328.7	0.4
AD	99,940	270	1,332	5.3	1,330.9	1,330.9	1,331.5	0.6
AE	101,040	270	1,388	5.1	1,337.3	1,337.3	1,338.2	0.9
AF	102,290	230	923	6.4	1,346.1	1,346.1	1,346.3	0.2
AG	103,650	114	389	1.7	1,351.0	1,351.0	1,351.8	0.8
AH	104,770	63	146	4.6	1,360.2	1,360.2	1,360.2	0.0
AI	106,160	100	188	3.6	1,373.1	1,373.1	1,373.1	0.0
AJ	107,850	98	205	3.3	1,386.4	1,386.4	1,386.4	0.0
AK	109,340	91	147	2.7	1,395.1	1,395.1	1,395.1	0.0

¹Feet above confluence with Colorado River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: HAMILTON 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	1,400	100	429	5.6	1,259.5	1,259.5	1,260.0	0.5
B	2,630	110	492	4.9	1,269.3	1,269.3	1,270.1	0.8
C	3,430	120	530	4.5	1,277.2	1,277.2	1,278.0	0.8
D	3,980	180	538	4.4	1,281.9	1,281.9	1,282.9	1.0
E	4,530	170	468	5.1	1,288.4	1,288.4	1,288.8	0.4
F	5,060	150	410	3.8	1,294.3	1,294.3	1,295.1	0.8
G	5,390	110	380	4.1	1,296.3	1,296.3	1,297.1	0.8
H	5,890	120	273	5.7	1,300.4	1,300.4	1,300.6	0.2
I	6,360	100	463	3.4	1,306.8	1,306.8	1,307.7	0.9
J	7,180	100	275	5.7	1,320.1	1,320.1	1,320.6	0.5
K	7,990	109	250	6.3	1,332.1	1,332.1	1,332.5	0.4
L	8,920	68	130	6.5	1,351.1	1,351.1	1,351.2	0.1
M	9,420	68	125	6.8	1,363.3	1,363.3	1,363.7	0.4
N	10,170	60	141	6.0	1,385.5	1,385.5	1,385.5	0.0

¹Feet above confluence with Hamilton Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: HAYNIE BRANCH

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	1,770	275	1,244	4.3	889.2	889.2	890.0	0.8
B	3,660	250	1,267	4.5	896.8	896.8	897.1	0.3
C	5,305	350	1,285	4.5	901.1	901.1	902.1	1.0
D	6,750	350	1,438	4.0	907.5	907.5	908.3	0.8
E	8,355	175	877	4.9	911.9	911.9	912.6	0.7
F	10,355	301	1,236	3.5	918.1	918.1	919.1	1.0
G	13,260	250	818	4.7	925.8	925.8	926.3	0.5
H	15,240	300	1,115	3.5	934.8	934.8	935.8	1.0
I	18,250	599	2,843	1.4	948.8	948.8	949.8	1.0
J	20,040	600	1,065	3.6	959.3	959.3	959.9	0.6

¹Feet above confluence with Backbone Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SPARERIB 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	2,110	250	1,980	3.2	922.1	922.1	923.1	1.0
B	4,425	150	928	6.2	929.5	929.5	930.0	0.5
C	5,520	175	1,130	5.1	934.6	934.6	935.4	0.8
D	8,475	249	975	2.9	943.6	943.6	944.2	0.6
E	10,650	400	900	3.1	953.3	953.3	954.0	0.7
F	12,380	81	363	6.2	962.9	962.9	963.3	0.4
G	13,680	150	638	3.5	975.2	975.2	975.5	0.3
H	14,525	146	445	5.1	979.5	979.5	979.5	0.0

¹Feet above confluence with Backbone Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM BC-3

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	2,850	70	205	3.5	902.0	902.0	903.0	1.0
B	3,765	70	167	4.4	905.4	905.4	905.9	0.5

¹Feet above confluence with Dry Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM DC-1

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	1,100	110	371	4.2	903.9	903.9	904.4	0.5
B	2,365	110	440	3.6	909.0	909.0	909.8	0.8
C	3,700	100	453	3.5	913.9	913.9	914.8	0.9
D	5,310	80	395	4.0	919.7	919.7	920.6	0.9
E	6,775	107	353	3.4	926.5	926.5	927.2	0.7
F	7,850	70	324	3.7	931.3	931.3	931.8	0.5
G	9,080	80	263	4.6	936.6	936.6	936.9	0.3
H	10,470	97	502	2.4	943.4	943.4	943.7	0.3
I	11,355	100	408	3.0	946.6	946.6	947.1	0.5

¹Feet above confluence with Dry Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM DC-2

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	2,050	120	199	6.5	836.5	836.5	836.5	0.0
B	2,290	130	369	2.2	838.6	838.6	839.6	1.0
C	2,730	80	292	2.7	841.7	841.7	842.7	1.0
D	2,870	81	276	2.9	842.2	842.2	843.1	0.9
E	3,280	40	144	5.6	844.1	844.1	844.6	0.5
F	3,400	60	197	4.1	845.2	845.2	846.1	0.9
G	3,660	94	314	2.5	846.4	846.4	847.2	0.8
H	3,770	80	256	3.1	848.1	848.1	848.7	0.6
I	3,930	59	178	4.5	849.0	849.0	849.3	0.3
J	4,020	80	236	3.4	849.6	849.6	849.9	0.3
K	4,170	74	190	4.2	850.3	850.3	850.6	0.3
L	4,650	80	225	3.6	856.9	856.9	857.6	0.7
M	4,800	70	201	4.0	858.0	858.0	858.8	0.8
N	4,890	110	276	2.9	858.6	858.6	859.5	0.9
O	5,060	68	165	4.9	859.9	859.9	860.4	0.5
P	5,150	82	235	3.4	861.0	861.0	861.8	0.8

¹Feet above confluence with Elm Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM EC-1

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	1,330	67	131	4.2	847.4	847.3 ²	847.8	0.5
B	1,550	70	180	3.1	849.2	849.2	849.5	0.3
C	1,650	95	264	2.1	849.7	849.7	849.9	0.2
D	1,780	80	126	4.3	850.3	850.3	850.4	0.1
E	1,920	73	138	4.0	851.4	851.4	851.5	0.1
F	2,060	73	142	3.9	852.5	852.5	852.6	0.1
G	2,500	60	178	2.8	854.5	854.5	855.4	0.9
H	2,690	60	158	3.2	855.2	855.2	855.9	0.7
I	2,870	90	195	2.6	856.0	856.0	856.5	0.5
J	3,090	107	143	3.5	857.0	857.0	857.1	0.1

¹Feet above confluence with Elm Creek

²Elevation computed without consideration of backwater effects from Elm Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

BURNET COUNTY, TX

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM EC-2

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	710	84	194	3.1	845.9	845.7 ²	846.1	0.4
B	1,360	50	137	4.4	850.4	850.4	850.6	0.2

¹Feet above confluence with Stream EC-4

²Elevation computed without consideration of backwater effects from Stream EC-4

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM EC-3

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	1,600	90	329	4.3	850.9	850.4 ²	851.2	0.8
B	2,210	61	241	5.8	854.4	854.4	854.6	0.2
C	2,800	66	293	4.8	858.3	858.3	859.2	0.9
D	3,320	70	317	4.4	861.0	861.0	862.0	1.0
E	4,630	70	309	1.8	867.2	867.2	868.2	1.0
F	5,030	59	174	3.2	868.4	868.4	869.0	0.6
G	5,380	59	145	3.8	870.4	870.4	870.5	0.1

¹Feet above confluence with Elm Creek

²Elevation computed without consideration of backwater effects from Elm Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

BURNET COUNTY, TX

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM EC-4

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	610	110	399	2.6	851.3	851.3	851.9	0.6
B	920	109	275	3.8	853.1	853.1	853.1	0.0
C	1,040	110	410	2.6	854.0	854.0	854.1	0.1
D	1,210	100	292	3.6	854.5	854.5	854.7	0.2
E	1,420	100	282	3.7	855.6	855.6	856.1	0.5
F	1,550	99	314	3.3	856.6	856.6	856.8	0.2
G	1,700	140	395	2.7	857.2	857.2	857.3	0.1
H	2,380	60	256	4.1	860.7	860.7	860.7	0.0
I	2,590	101	307	4.1	861.4	861.4	861.7	0.3
J	2,890	101	314	3.3	862.3	862.3	862.8	0.5
K	3,180	107	352	3.0	863.3	863.3	863.5	0.2
L	3,730	84	260	4.0	865.3	865.3	865.7	0.4
M	4,100	97	334	2.7	866.3	866.3	866.9	0.6
N	4,360	71	198	4.5	867.1	867.1	867.5	0.4

¹Feet above confluence with Elm Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM EC-5

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	1,010	80	276	4.3	865.5	865.5	866.1	0.6
B	1,530	110	473	2.5	867.6	867.6	868.4	0.8
C	1,750	91	416	2.9	867.9	867.9	868.9	1.0
D	1,830	80	273	4.4	868.2	868.2	869.0	0.8
E	2,650	80	321	3.7	873.3	873.3	874.3	1.0
F	3,530	80	312	3.8	877.7	877.7	878.7	1.0
G	4,210	100	308	3.9	880.8	880.8	881.7	0.9
H	4,280	100	325	3.7	881.1	881.1	882.1	1.0
I	4,890	84	381	2.9	884.9	884.9	885.5	0.6
J	5,420	90	292	3.8	886.4	886.4	887.4	1.0
K	5,590	80	265	4.2	886.7	886.7	887.7	1.0
L	5,890	70	218	5.1	888.9	888.9	889.8	0.9
M	6,220	90	351	3.1	891.3	891.3	892.2	0.9
N	6,390	80	260	4.2	891.9	891.9	892.6	0.7

¹Feet above confluence with Elm Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM EC-6

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	1,740	123	754	1.9	877.1	876.8 ²	877.6	0.8
B	2,170	100	418	3.5	877.2	877.0 ²	877.9	0.9
C	3,020	100	395	3.7	879.6	879.6	880.6	1.0
D	3,500	110	318	3.9	881.7	881.7	882.3	0.6
E	3,970	100	391	3.2	883.2	883.2	884.2	1.0

¹Feet above confluence with Elm Creek

²Elevation computed without consideration of backwater effects from Elm Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

BURNET COUNTY, TX

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM EC-7

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	1,400	130	489	5.5	1,203.5	1,203.3 ²	1,203.5	0.2
B	2,460	221	557	4.9	1,211.6	1,211.6	1,211.8	0.2
C	3,220	200	509	5.3	1,214.7	1,214.7	1,214.7	0.0
D	4,180	179	682	4.0	1,219.4	1,219.4	1,220.1	0.7
E	4,580	252	610	4.4	1,222.1	1,222.1	1,222.5	0.4
F	5,240	200	803	3.4	1,225.9	1,225.9	1,226.4	0.5
G	5,970	180	674	4.0	1,229.0	1,229.0	1,229.2	0.2
H	6,230	200	1,175	2.3	1,232.4	1,232.4	1,232.7	0.3
I	7,270	130	559	4.8	1,235.2	1,235.2	1,235.8	0.6
J	8,090	201	665	4.1	1,240.0	1,240.0	1,240.4	0.4
K	8,830	236	743	3.1	1,244.3	1,244.3	1,244.6	0.3
L	9,800	206	862	2.6	1,250.6	1,250.6	1,251.0	0.4

¹Feet above confluence with Hamilton Creek

²Elevation computed without consideration of backwater effects from Hamilton Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM HC(B)-1

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	1,380	220	436	3.3	1,285.8	1,285.5 ²	1,286.5	1.0
B	2,160	150	353	4.1	1,293.7	1,293.7	1,294.1	0.4
C	2,770	101	210	6.8	1,299.7	1,299.7	1,299.7	0.0
D	3,830	135	255	3.6	1,306.3	1,306.3	1,306.7	0.4
E	4,260	120	218	4.2	1,311.8	1,311.8	1,312.7	0.9
F	4,770	101	205	4.4	1,321.1	1,321.1	1,321.5	0.4

¹Feet above confluence with Hamilton Creek

²Elevation computed without consideration of backwater effects from Hamilton Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM HC(B)-2

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	650	180	441	4.9	1,318.4	1,318.4	1,318.7	0.3
B	1,750	120	343	6.3	1,326.7	1,326.7	1,326.9	0.2
C	2,790	152	334	4.4	1,336.7	1,336.7	1,337.1	0.4
D	3,480	145	334	4.4	1,344.0	1,344.0	1,344.2	0.2
E	4,330	190	309	4.7	1,351.7	1,351.7	1,351.7	0.0
F	4,760	150	655	2.2	1,356.6	1,356.6	1,357.5	0.9
G	4,950	101	308	4.7	1,357.3	1,357.3	1,357.9	0.6

¹Feet above confluence with Hamilton Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM HC(B)-3

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	860	90	369	5.7	1,355.9	1,355.9	1,356.0	0.1
B	1.530	79	264	8.0	1,364.0	1,364.0	1,364.3	0.3
C	2.340	70	305	6.9	1,370.5	1,370.5	1,371.2	0.7
D	2.900	60	269	3.3	1,376.5	1,376.5	1,377.1	0.6
E	3.540	51	159	5.7	1,382.5	1,382.5	1,382.5	0.0
F	4.510	60	68	1.8	1,394.4	1,394.4	1,394.4	0.0

¹Feet above confluence with Hamilton Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM HC(B)-4

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	940	115	226	3.5	856.5	856.5	856.5	0.0
B	1,890	84	270	3.0	861.5	861.5	862.0	0.5
C	2,900	50	172	4.5	867.7	867.7	868.5	0.8
D	4,075	48	174	4.5	873.9	873.9	874.4	0.5
E	5,100	53	179	4.5	879.7	879.7	880.0	0.3

¹Feet above confluence with Williams Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STREAM WC-1

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	2,191	313	1,378	6.2	762.3	761.0 ²	761.1	0.1
B	3,094	280	1,980	4.3	765.2	765.2	766.2	1.0
C	4,189	195	1,887	3.9	773.3	773.3	774.2	0.9
D	5,366	134	648	11.4	786.6	786.6	786.7	0.1
E	6,028	59	576	12.8	799.5	799.5	800.5	1.0
F	6,441	142	1,240	6.0	806.4	806.4	807.0	0.6
G	7,227	199	1,223	6.0	811.1	811.1	811.1	0.0
H	8,388	179	1,093	6.6	816.8	816.8	817.7	0.9
I	9,541	173	1,376	5.3	824.1	824.1	824.5	0.4
J	10,714	175	1,458	5.0	828.8	828.8	829.5	0.7
K	11,716	175	1,058	6.9	832.6	832.6	833.3	0.7
L	12,585	163	1,008	7.1	836.6	836.6	836.8	0.2
M	13,393	177	1,675	4.3	841.7	841.7	842.7	1.0
N	14,255	153	1,134	6.3	844.6	844.6	844.9	0.3
O	15,511	295	1,063	6.1	849.1	849.1	849.4	0.3
P	16,644	300	1,536	4.2	854.8	854.8	855.8	1.0
Q	18,078	212	564	3.4	863.0	863.0	863.2	0.2
R	19,297	170	552	3.4	876.7	876.7	877.7	1.0
S	20,300	112	265	6.2	889.7	889.7	889.7	0.0
T	21,249	100	887	1.9	913.3	913.3	914.0	0.7
U	22,203	88	246	6.7	921.5	921.5	921.6	0.1
V	23,311	64	248	6.7	935.7	935.7	936.4	0.7

¹Feet above the confluence with Backbone Creek

²Elevation computed without consideration of backwater effects from Backbone Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

BURNET COUNTY, TX

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: WHITMAN BRANCH

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	155	60	344	12.0	772.8	770.4 ²	770.5	0.1
B	997	73	547	7.5	789.2	789.2	789.8	0.6
C	1,987	81	470	8.8	804.2	804.2	804.3	0.1
D	2,909	80	542	6.8	817.1	817.1	817.6	0.5
E	3,892	40	189	11.8	832.6	832.6	832.8	0.2
F	4,528	103	363	6.1	846.0	846.0	846.0	0.0

¹Feet above the confluence with Whitman Branch

²Elevation computed without consideration of backwater effects from Whitman Branch

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

BURNET COUNTY, TX

AND INCORPORATED AREAS

FLOODWAY DATA

**FLOODING SOURCE: WHITMAN BRANCH TRIBUTARY 1
(downstream)**

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	2,740	70	308	9.4	843.4	843.4	843.6	0.2
B	4,025	400	1,110	2.6	855.6	855.6	855.6	0.0
C	5,170	56	279	6.1	861.3	861.3	861.6	0.3
D	6,375	114	707	2.4	868.8	868.8	869.2	0.4
E	8,175	100	442	3.6	872.2	872.2	872.9	0.7
F	9,340	80	392	4.1	876.7	876.7	877.5	0.8

¹Feet above confluence with Backbone Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: WILLIAMS 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

This section is not applicable to this Flood Risk Project.

Table 26: Summary of Coastal Transect Mapping Considerations

[Not Applicable to this Flood Risk Project]

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.

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 Burnet County FIRM are listed in Table 27.

Table 27: Incorporated Letters of Map Change

[Not Applicable to this Flood Risk Project]

6.5.4 Physical Map Revisions

A Physical Map Revisions (PMR) is 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 Burnet County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBM) and/or Flood Boundary and Floodway Maps (FBFM) 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 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.
- *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 PMRs 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 Burnet County FIRMs in countywide format was 11/16/1990.

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)
Bertram, City of ¹	11/16/1990	N/A	N/A	11/16/1990	TBD 03/15/2012
Burnet, City of	05/17/1974	05/17/1974	01/30/1976	09/18/1987	TBD 03/15/2012 11/16/1990
Burnet County, Unincorporated Areas	11/22/1977	11/22/1977	N/A	11/16/1990	TBD 03/15/2012 11/16/2007 09/26/2003
Cottonwood Shores, City of	11/16/1990	N/A	N/A	11/16/1990	TBD 03/15/2012
Granite Shoals, City of	07/18/1975	07/18/1975	N/A	11/16/1990	TBD 03/15/2012
Highland Haven, City of ^{2, 3}	11/22/1977	11/22/1977	N/A	03/15/2012	N/A
Horseshoe Bay, City of ^{2, 3}	11/22/1977	11/22/1977	N/A	03/15/2012	TBD
Marble Falls, City of	05/31/1974	05/31/1974	11/08/1977 05/28/1976	11/16/1990	TBD 03/15/2012 11/16/2007 09/26/2003
Meadowlakes, City of	11/16/1990	N/A	N/A	11/16/1990	TBD 03/15/2012 11/16/2007 09/26/2003

¹ No Special Flood Hazard Areas Identified

² Dates for this community were taken from Burnet County, Unincorporated Areas

³ This community did not have a FIRM prior to the first countywide FIRM for Burnet County

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
All approximate sources in HUC 12090205 studied in 2015	TBD	RAMPP	HSFEHQ-09-D-0369	2015	Burnet, City of; Burnet County, Unincorporated Areas; Marble Falls, City of
All approximate sources in HUC 12090205 studied in 2014	TBD	RAMPP	HSFEHQ-09-D-0369	2014	Burnet, City of; Burnet County, Unincorporated Areas
All redelineated sources included in the 03/15/2012 FIS Report	03/15/2012	Half Associates, Inc.	N/A	N/A	Burnet, City of; Burnet County, Unincorporated Areas; Cottonwood Shores, City of; Granite Shoals, City of; Horseshoe Bay, City of; Marble Falls, City of; Meadowlakes, City of
All sources studied for the 11/16/1990 FIS Report	11/16/1990	Fort Worth District of the U.S. Army Corps of Engineers (COE)	EMW-E-1153	November 1987	Burnet, City of; Burnet County, Unincorporated Areas
Backbone Creek (ZONE AE)	TBD	Half Associates, Inc.	114-832-1284	2015	Burnet County, Unincorporated Areas; Marble Falls, City of; Meadowlakes, City of
Backbone Creek Tributary 1	TBD	Half Associates, Inc.	114-832-1284	2015	Burnet County, Unincorporated Areas; Marble Falls, City of; Meadowlakes, 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
Backbone Creek Tributary 2 (ZONE AE)	TBD	Half Associates, Inc.	114-832-1284	2015	Burnet County, Unincorporated Areas; Marble Falls, City of
Colorado River (Lake Travis)	03/15/2007	Half Associates, Inc.	MAS-TA04	September 2002	Burnet County, Unincorporated Areas
Colorado River (Lake Marble Falls)	09/26/2003	Lower Colorado River Authority	EMT-2000-CA-0087	October 2001	Burnet County, Unincorporated Areas; Marble Falls, City of; Meadowlakes, City of
Little Cypress Creek	TBD	RAMPP	HSFEHQ-09-D-0369	2015	Burnet County, Unincorporated Areas
Little Cypress Creek Tributary 1	TBD	RAMPP	HSFEHQ-09-D-0369	2015	Burnet County, Unincorporated Areas
Little Cypress Creek Tributary 2	TBD	RAMPP	HSFEHQ-09-D-0369	2015	Burnet County, Unincorporated Areas
Sycamore Creek	TBD	RAMPP	HSFEHQ-09-D-0369	2015	Burnet County, Unincorporated Areas
Sycamore Creek Tributary 1	TBD	RAMPP	HSFEHQ-09-D-0369	2015	Burnet County, Unincorporated Areas
Sycamore Creek Tributary 2	TBD	RAMPP	HSFEHQ-09-D-0369	2015	Burnet County, Unincorporated Areas
Unnamed Tributary (Marble Falls)	TBD	Half Associates, Inc.	114-832-1284	2013	Burnet County, Unincorporated Areas; Marble Falls, City of
Whitman Branch	TBD	Half Associates, Inc.	114-832-1284	2015	Marble Falls, City of
Whitman Branch Tributary 1 (downstream)	TBD	Half Associates, Inc.	114-832-1284	2015	Marble Falls, 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
Whitman Branch Tributary 1 (upstream)	TBD	RAMPP	HSFEHQ-09-D-0369	2015	Marble Falls, City of
Whitman Branch Tributary 1-1	TBD	Halff Associates, Inc.	114-832-1284	2015	Marble Falls, City of

7.2 Community Meetings

The dates of the community meetings held for this Flood Risk Project and 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
Bertram, City of	TBD	TBD	Initial CCO	FEMA, the community, and the study contractor
		TBD	Final CCO	FEMA, the community, and the study contractor
Burnet, City of	TBD	TBD	Initial CCO	FEMA, the community, and the study contractor
		TBD	Final CCO	FEMA, the community, and the study contractor
Burnet County, Unincorporated Areas	TBD	TBD	Initial CCO	FEMA, the community, and the study contractor
		TBD	Final CCO	FEMA, the community, and the study contractor
Cottonwood Shores, City of	TBD	TBD	Initial CCO	FEMA, the community, and the study contractor
		TBD	Final CCO	FEMA, the community, and the study contractor
Granite Shoals, City of	TBD	TBD	Initial CCO	FEMA, the community, and the study contractor
		TBD	Final CCO	FEMA, the community, and the study contractor
Highland Haven, City of	03/15/2012	04/27/2007	Initial CCO	FEMA, the community, the county, Lower Colorado River Authority, TXDOT, and the study contractor
		05/22/2009	Final CCO	FEMA, the community, and the study contractor
Horseshoe Bay, City of	TBD	TBD	Initial CCO	FEMA, the community, and the study contractor
		TBD	Final CCO	FEMA, the community, and the study contractor
Marble Falls, City of	TBD	TBD	Initial CCO	FEMA, the community, and the study contractor
		TBD	Final CCO	FEMA, the community, and the study contractor
Meadowlakes, City of	TBD	TBD	Initial CCO	FEMA, the community, and the study contractor
		TBD	Final CCO	FEMA, the community, and the study contractor

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 Burnet 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
Bertram, City of ¹	City Hall 110 East Vaughan Street	Bertram	TX	78605
Burnet, City of	City Hall 1001 Buchanan Drive Suite 4	Burnet	TX	78611
Burnet County, Unincorporated Areas	County Courthouse 220 South Pierce Street	Burnet	TX	78611
Cottonwood Shores, City of	City Hall 3808 Cottonwood Drive	Cottonwood Shores	TX	78657
Granite Shoals, City of	City Hall 410 Phillips Ranch Drive	Granite Shoals	TX	78654
Highland Haven, City of	City Hall 510 Highland Drive Suite A	Highland Haven	TX	78654
Horseshoe Bay, City of	City Hall 1 Community Drive	Horseshoe Bay	TX	78657
Marble Falls, City of	Economics Development Corporation 801 4 th Street	Marble Falls	TX	78654
Meadowlakes, City of	City Hall 177 Broadmoor Street	Meadowlakes	TX	78654

¹ No Special Flood Hazard Areas Identified

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 VI	Jennifer Knecht FEMA Region Representative FEMA Region VI 800 North Loop 288 Denton, TX 76209 (940) 898-5553 Jennifer.Knecht@fema.dhs.gov
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Michael Segner State NFIP Coordinator Texas Water Development Board 1700 North Congress Avenue P.O. Box 13231 Austin, TX 78711-3231 (512) 463-3509 Fax: (512) 475-2053 michael.segner@twdb.state.tx.us
State GIS Coordinator	Mike Ouimet State GIS Coordinator 300 West 15th Street P.O. Box 13564 Austin, TX 78711-3564 (512) 305-9076 Fax: (512) 475-4759 mike.ouimet@dir.state.tx.us

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

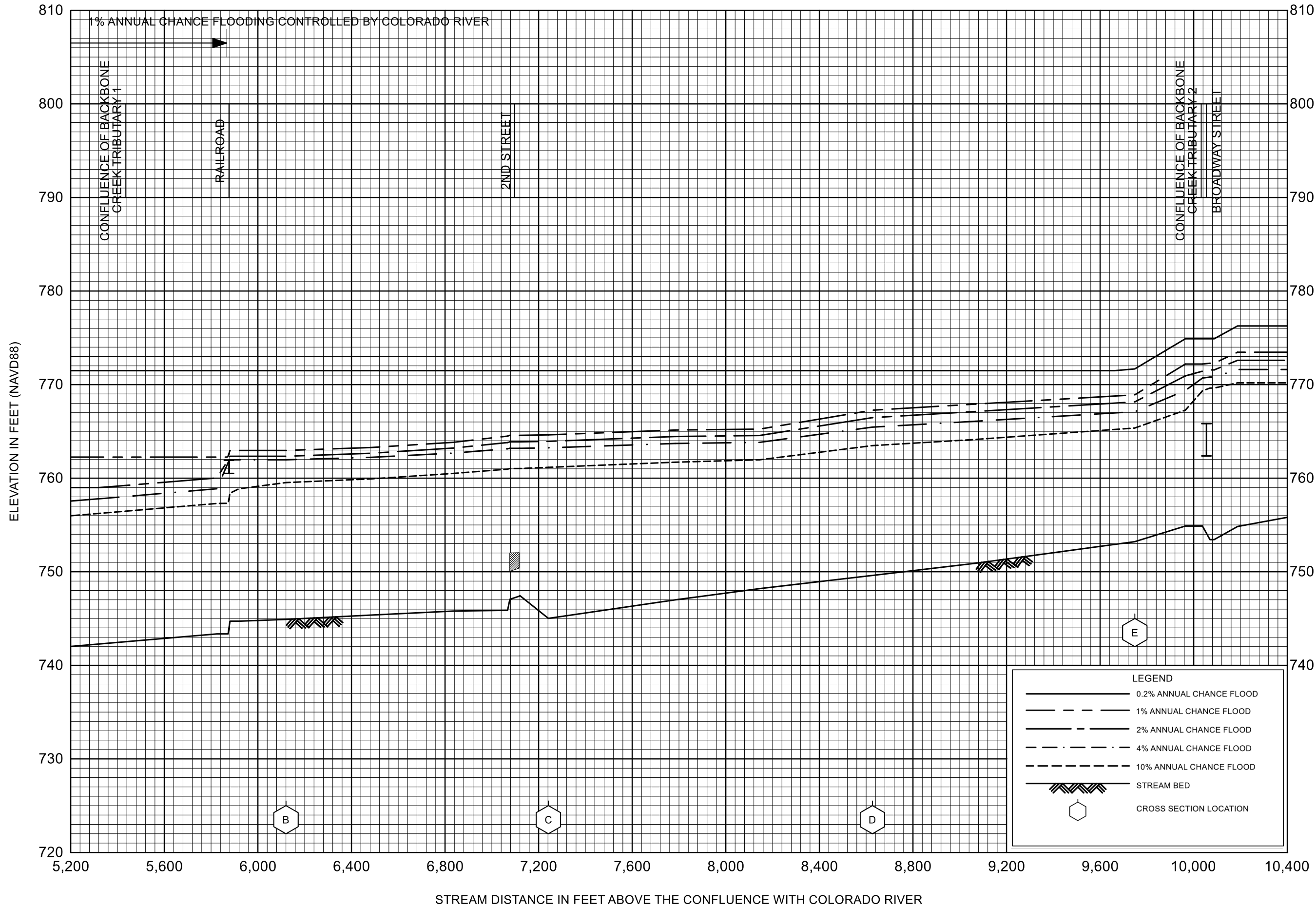
Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA 2012	Federal Emergency Management Agency	<i>Flood Insurance Study, Burnet County, Texas, and Unincorporated Areas</i>		Washington, D.C.	March 15, 2012	FEMA Flood Map Service Center msc.fema.gov
LCRA 1997	Lower Colorado River Authority	<i>Aerial Mapping Project Along the Colorado River; Contour Data; Scale 1:2,400; Contour Interval 2 Feet</i>			1997	
LCRA 2006	Lower Colorado River Authority	<i>LCRA 2006 LiDAR Data. Contour Interval 2 feet.</i>			2006	
LCRA 2007	Lower Colorado River Authority	<i>LCRA 2007 140cm</i>	Sanborn		2007	Texas Natural Resources Information Systems https://tnris.org/data-catalog/entry/lcra-2007-140cm/
LCRA 2008	Lower Colorado River Authority	<i>LCRA Dams Form the Highland Lakes</i>			2008	Lower Colorado River Authority http://www.lcra.org/water/dams-and-lakes/Pages/default.aspx
LRWPP 2013	The Lampass River Watershed Partnership	<i>Lampass River Watershed Protection Plan</i>	Lisa Prcin, Raghavan Srinivasan, and Pamela Casebolt	Temple, Texas	May 2013	Lampass River Watershed Protection Plan lampassriver.org

Table 33: Bibliography and References, continued

Citation in this FIS	Publisher/ Issuer	<i>Publication Title, "Article,"</i> Volume, Number, etc.	Author/ Editor	Place of Publication	Publication Date/ Date of Issuance	Link
TNRIS 2011	Texas Natural Resources Information Systems	<i>StratMap 2011 50cm Bell, Burnet, McLennan</i>	Photo Science		2011	Texas Natural Resources Information Systems https://tnris.org/data-catalog/entry/stratmap-2011-50cm-bell-burnet-mclennan/
USACE 1973	U.S. Army Corps of Engineers, Southwestern Division	<i>SUPER Computer Program</i>	R. Hula	Dallas, Texas	1973	
USACE 1998	U.S. Army Corps of Engineers, Hydrologic Engineering Center	<i>Hec-5, Simulation of Flood Control and Conservation Systems, Version 8.0</i>		Davis, California	1998	
USGS 2006	U.S. Department of Interior, Geological Survey	<i>USGS Digital Elevation Models. Contour Interval 10 feet.</i>			2006	

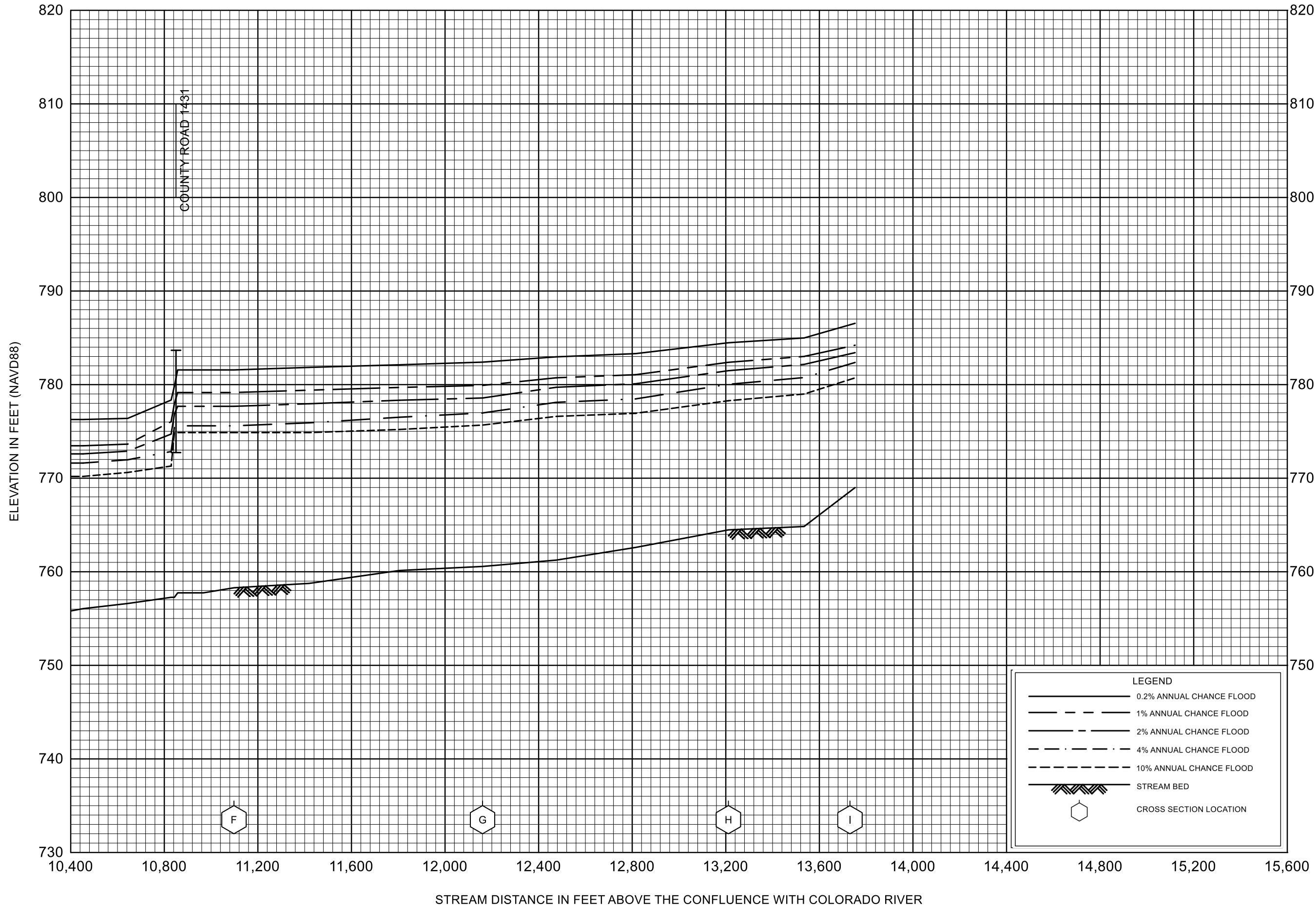
Table 33: Bibliography and References, continued

Citation in this FIS	Publisher/ Issuer	<i>Publication Title, "Article,"</i> Volume, Number, etc.	Author/ Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS various	U.S. Department of Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1: 24,000, Contour Interval 10 Feet: Pace Bend, Texas, 1967; Spicewood, Texas, 1967; Travis Peak, Texas, 1966; Smithwick, Texas, 1967, Marble Falls, Texas, 1967; Dunman Mountain, Texas, 1967, Photorevised 1982; Longhorn Cavern, Texas, 1967; Kingsland, Texas, 1967, Photorevised 1982; Lake Buchanan, Texas, 1967, Photorevised 1979; Council Creek, Texas, 1967; Tow, Texas, 1967, Photorevised 1976; and Gorman Falls, Texas, 1959.</i>		Washington, D.C.	Various	



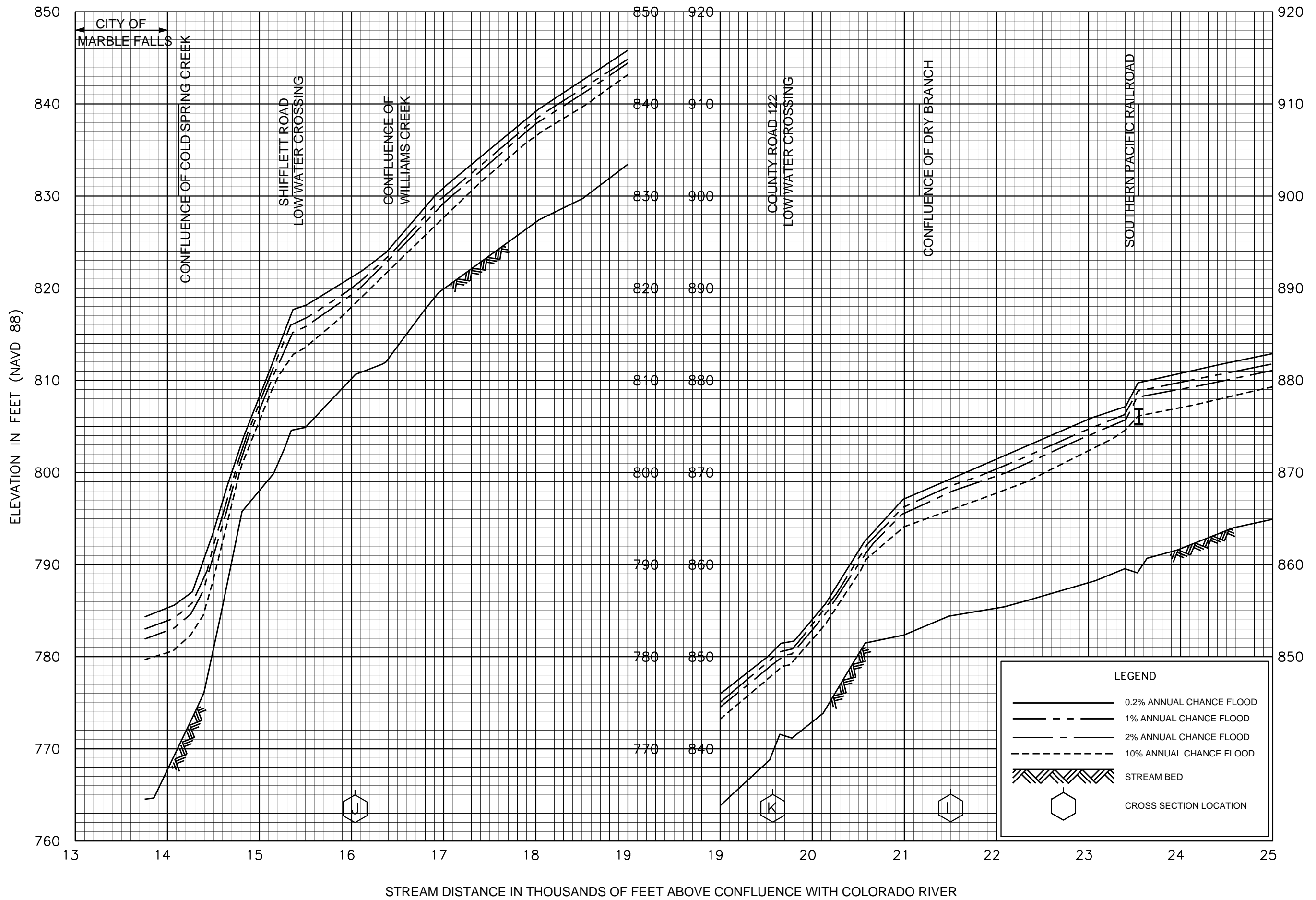
FLOOD PROFILES
BACKBONE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS



**FLOOD PROFILES
BACKBONE CREEK**

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS



FLOOD PROFILES

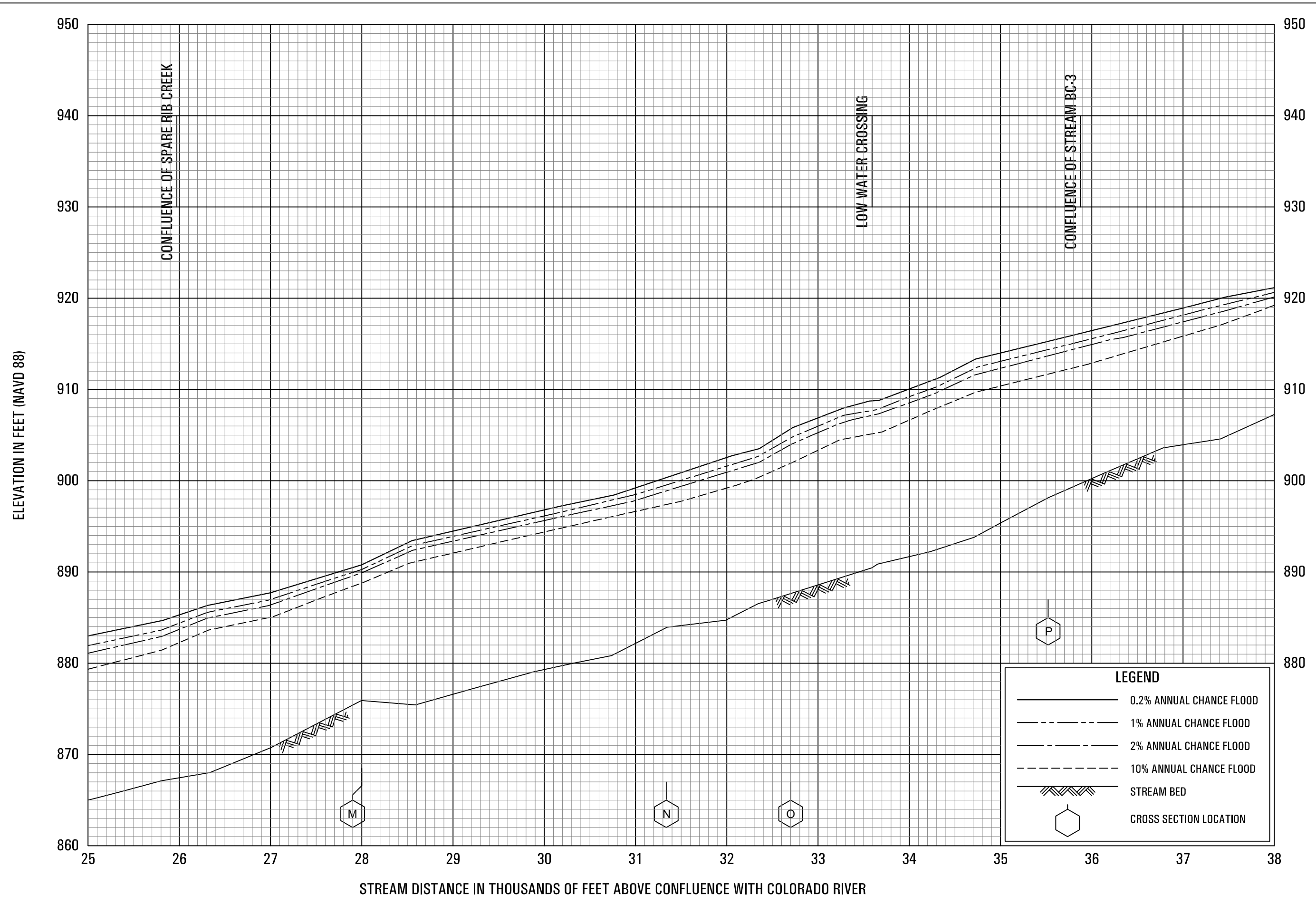
BACKBONE CREEK

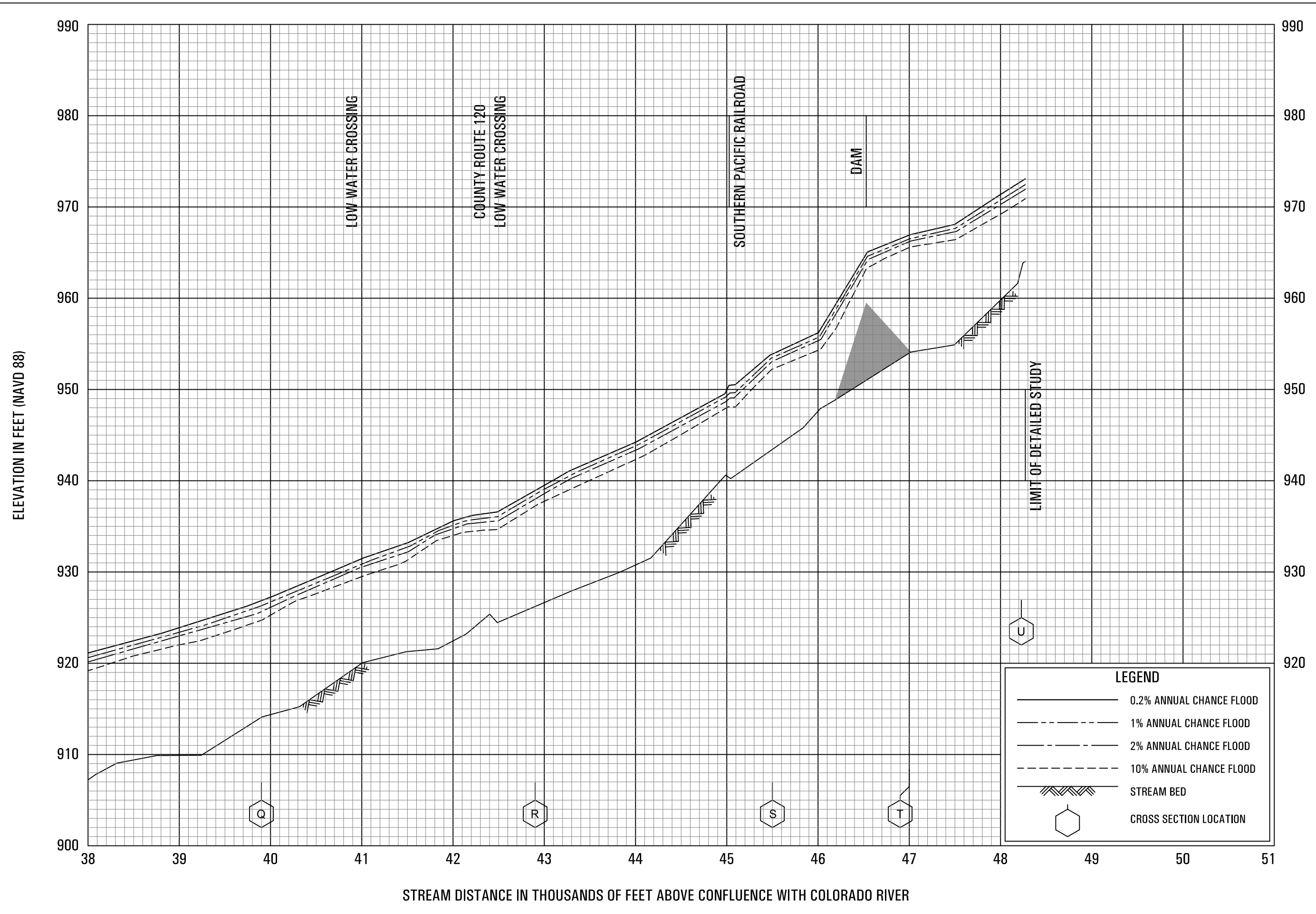
FEDERAL EMERGENCY MANAGEMENT AGENCY

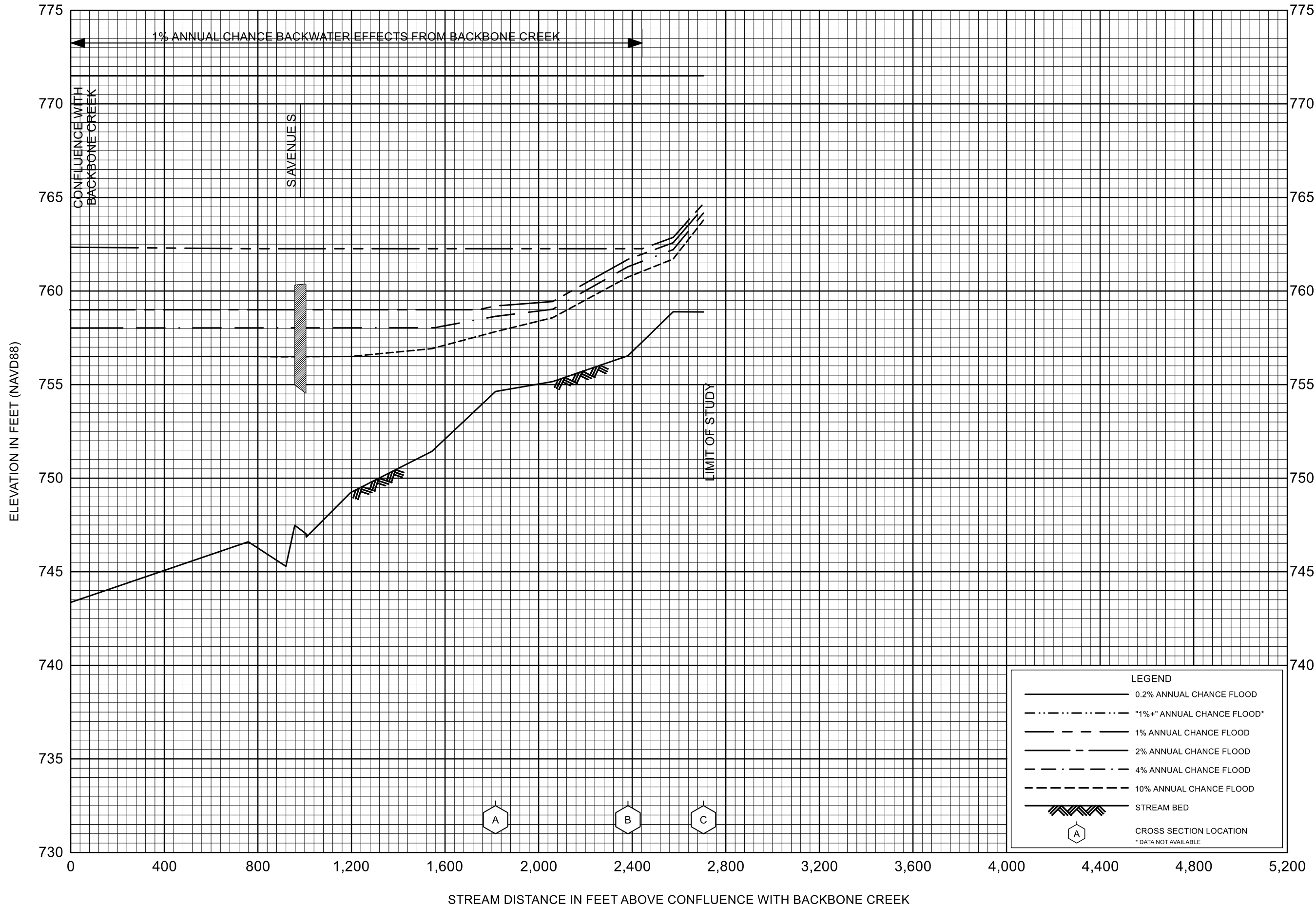
BURNET COUNTY, TX

AND INCORPORATED AREAS

04P



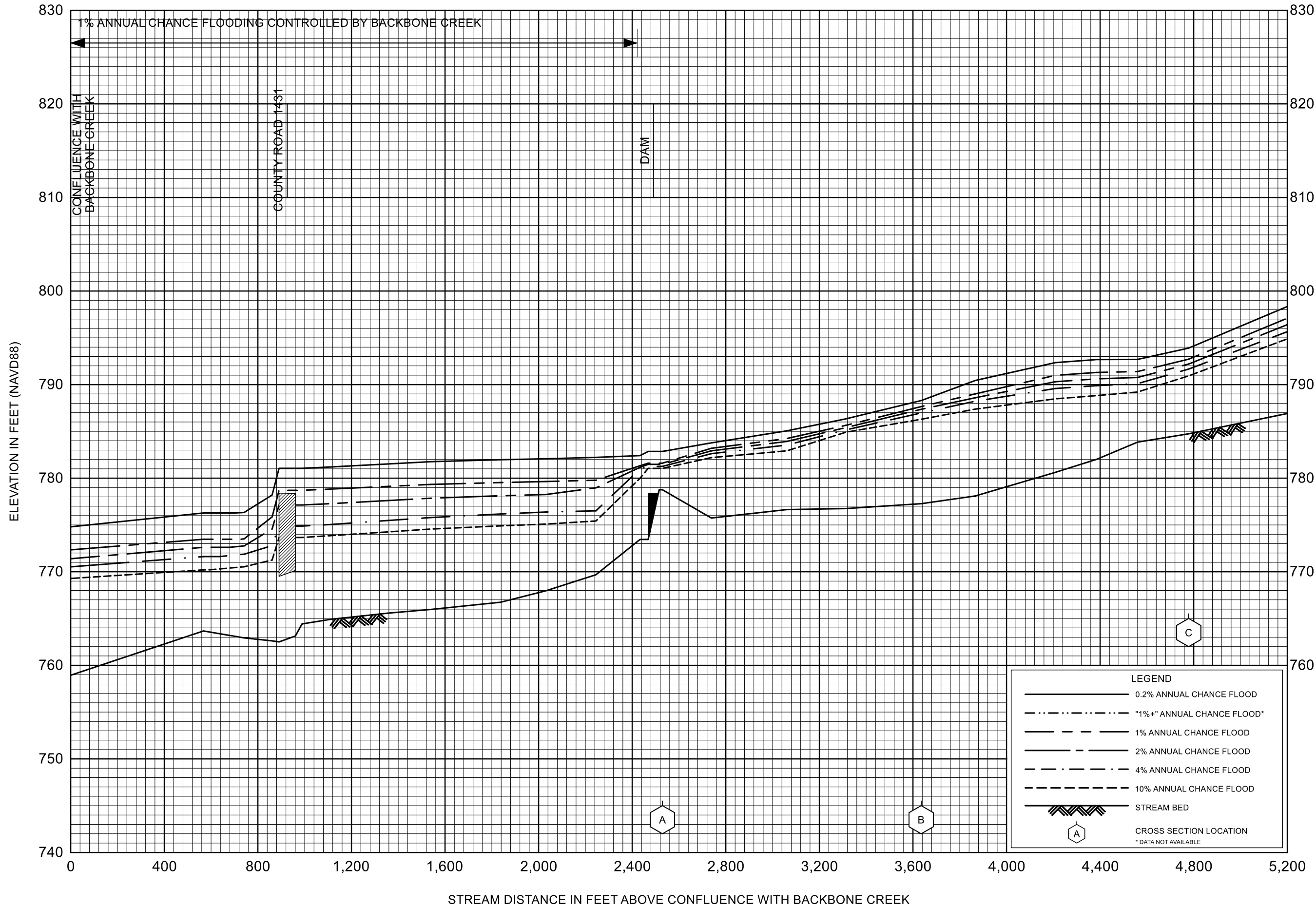




FLOOD PROFILES

BACKBONE CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS

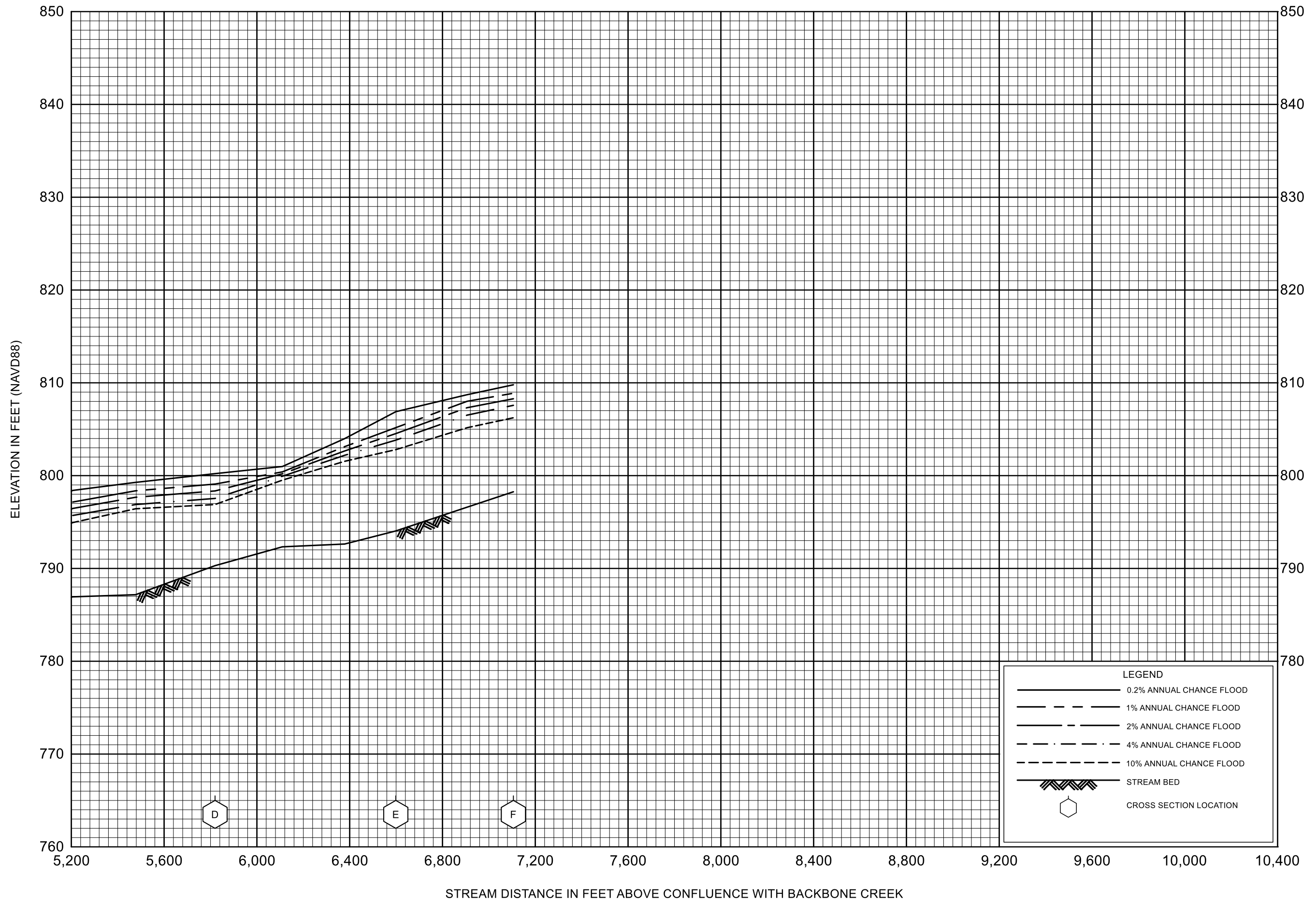


FLOOD PROFILES

BACKBONE CREEK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

BURNET COUNTY, TX
AND INCORPORATED AREAS

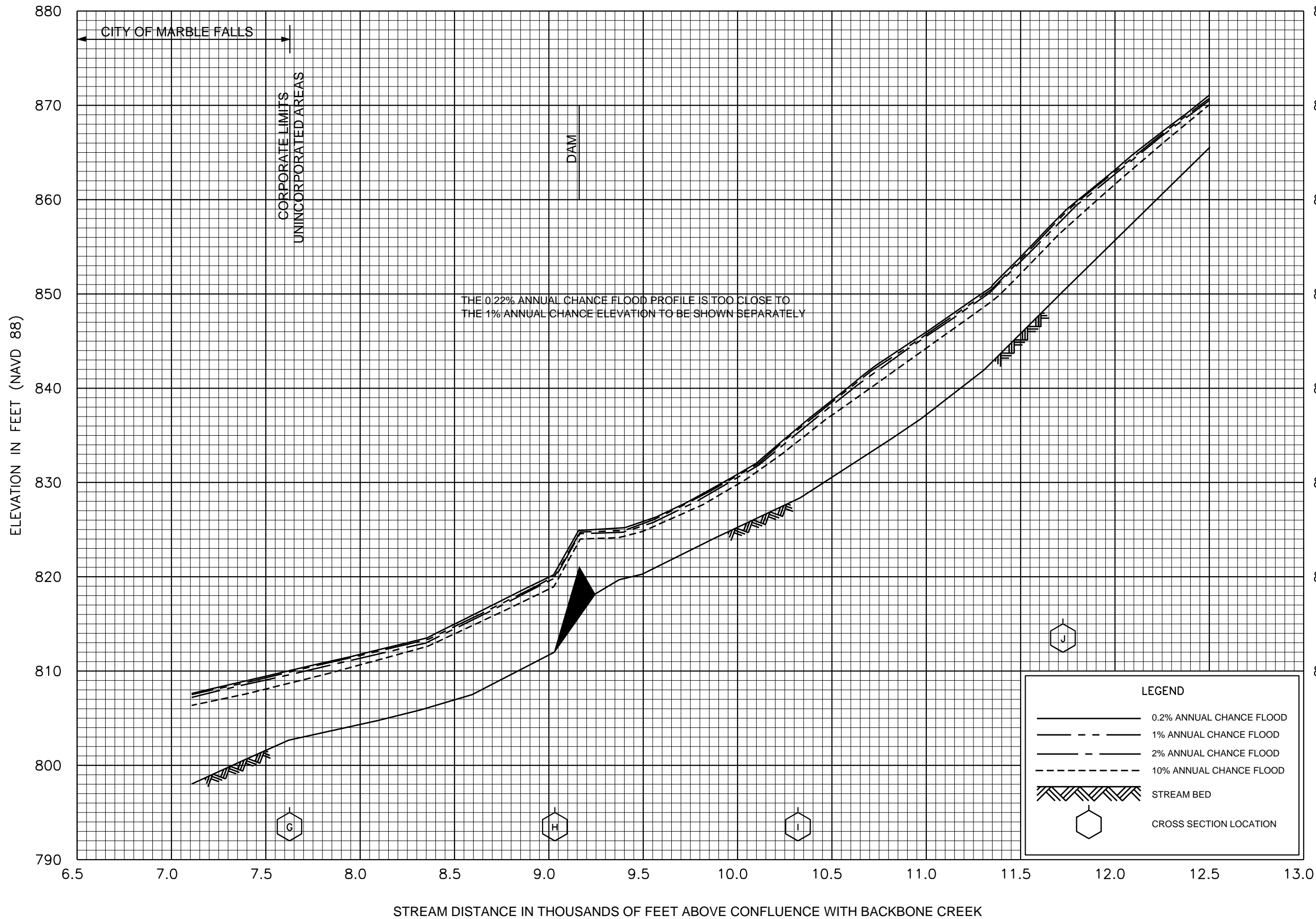


FLOOD PROFILES

BACKBONE CREEK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

BURNET COUNTY, TX
AND INCORPORATED AREAS



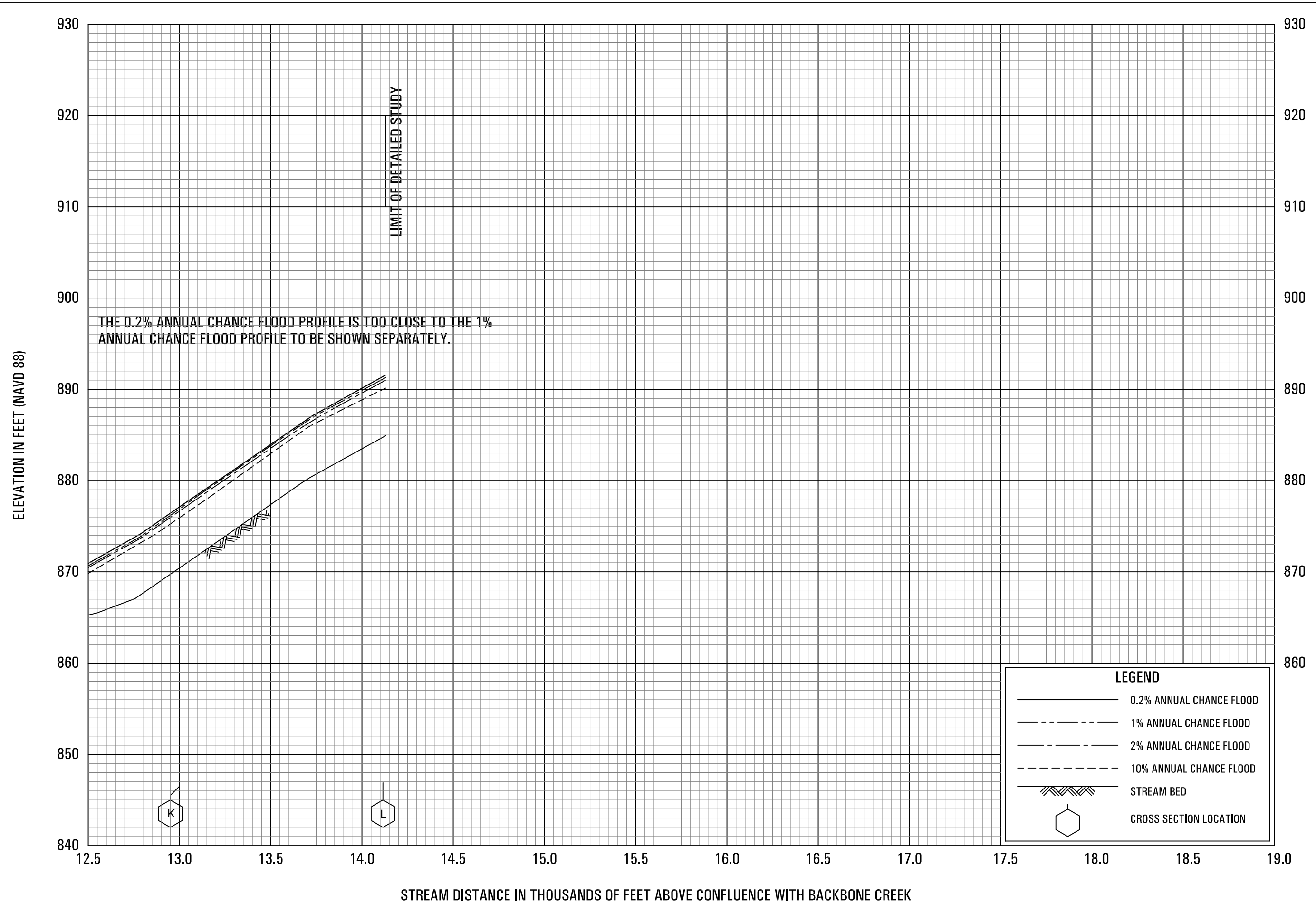
FLOOD PROFILES

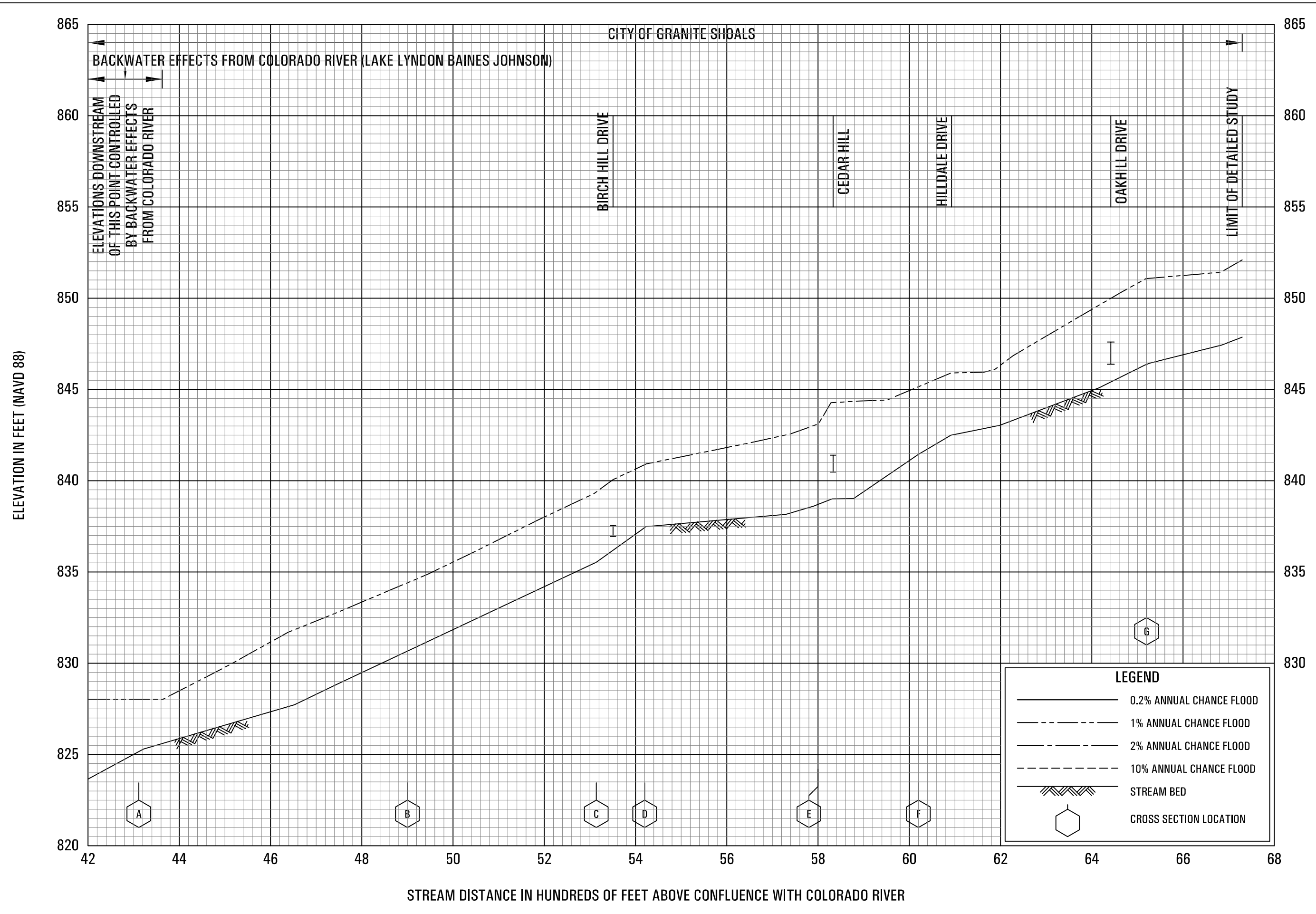
BACKBONE CREEK TRIBUTARY 2

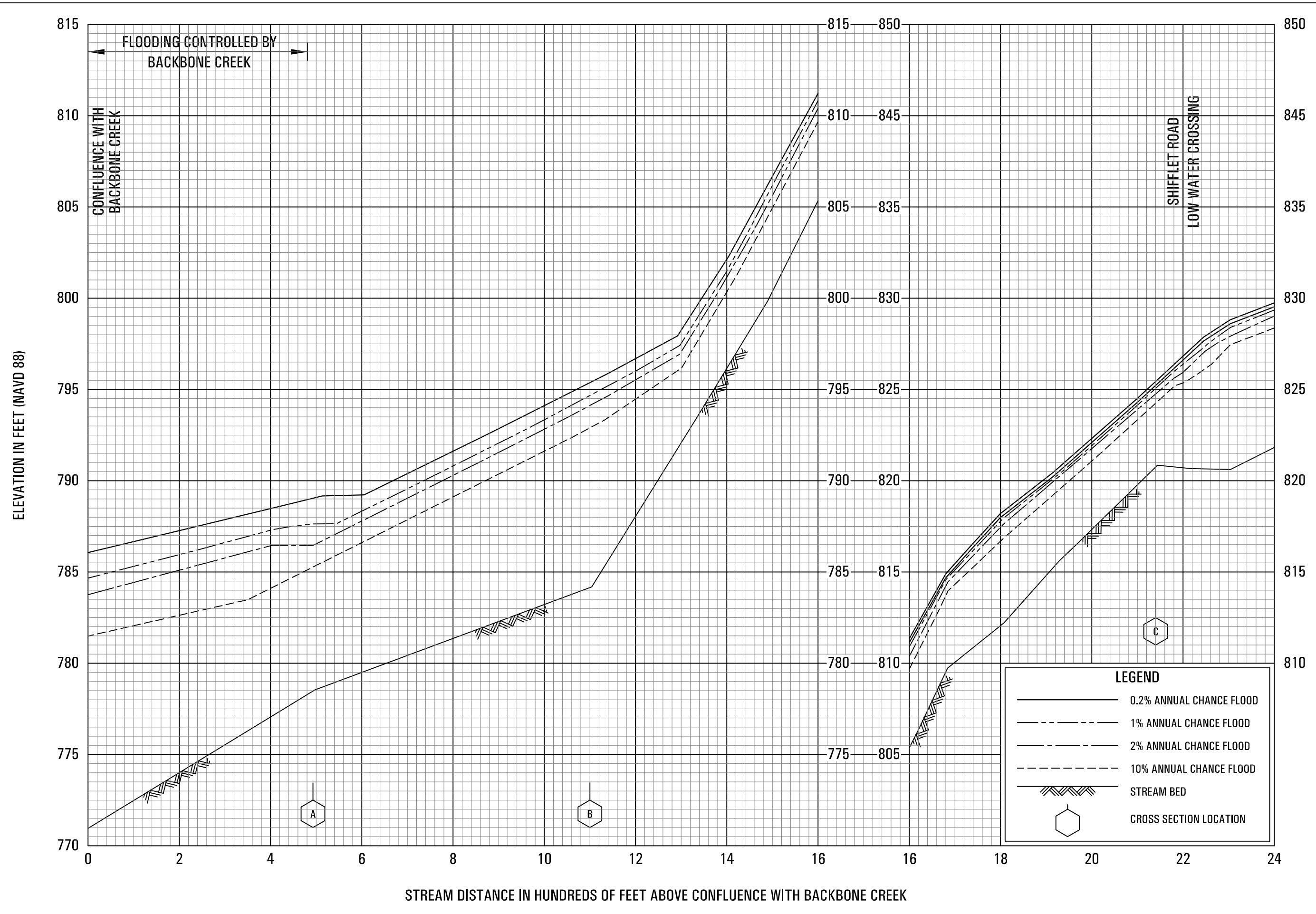
FEDERAL EMERGENCY MANAGEMENT AGENCY

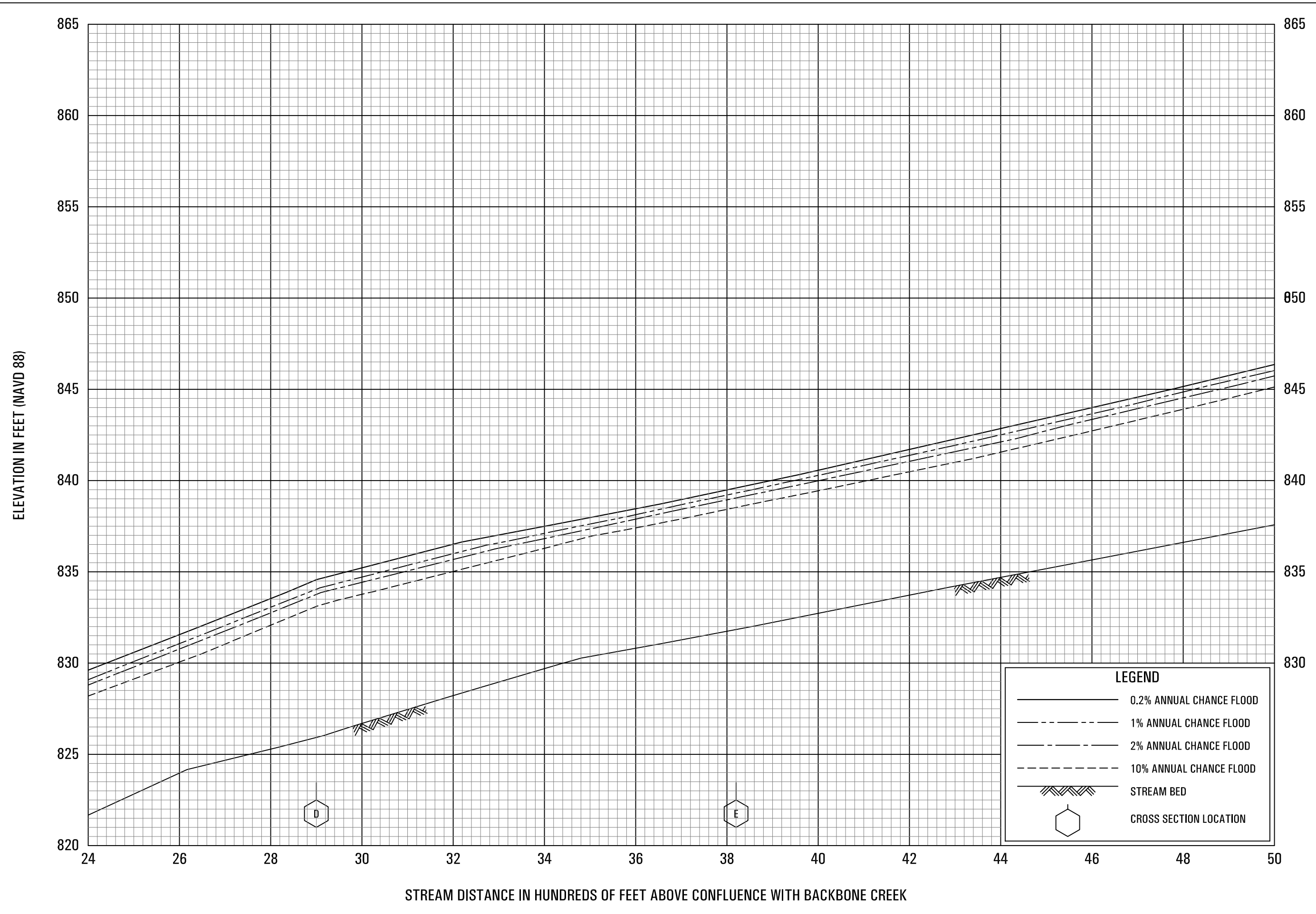
BURNET COUNTY, TX

AND INCORPORATED AREAS



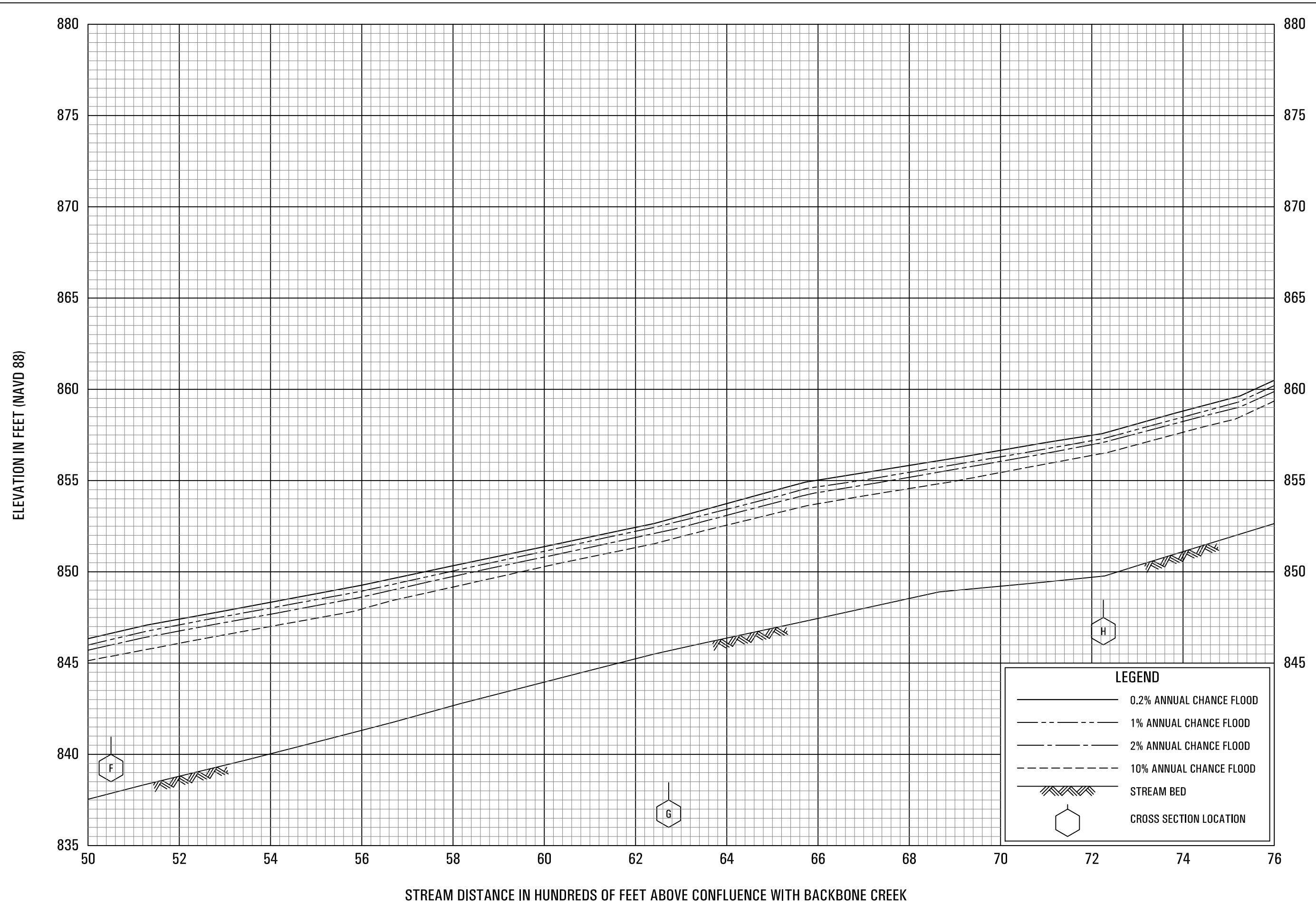


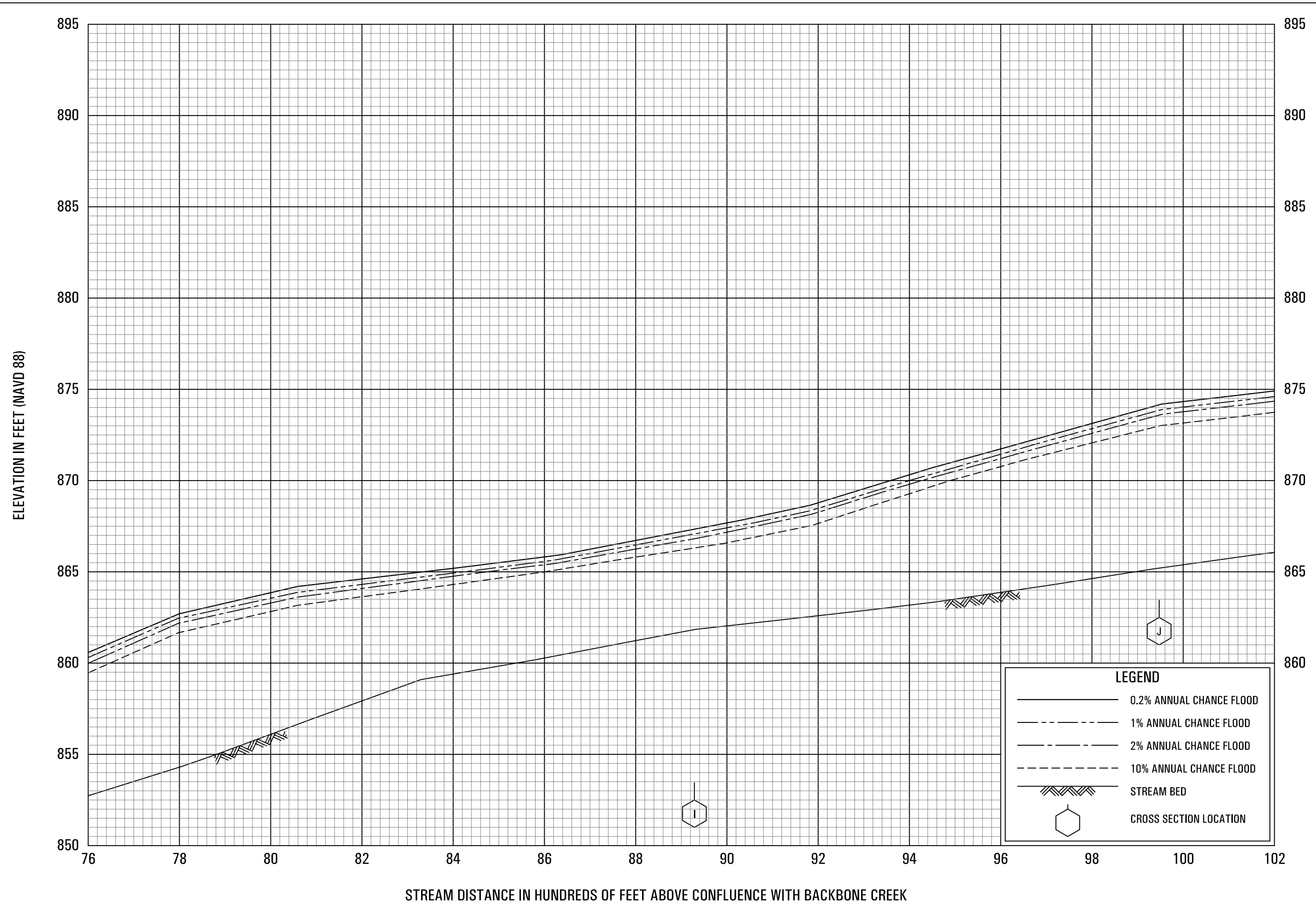




FLOOD PROFILES
COLDSRING CREEK

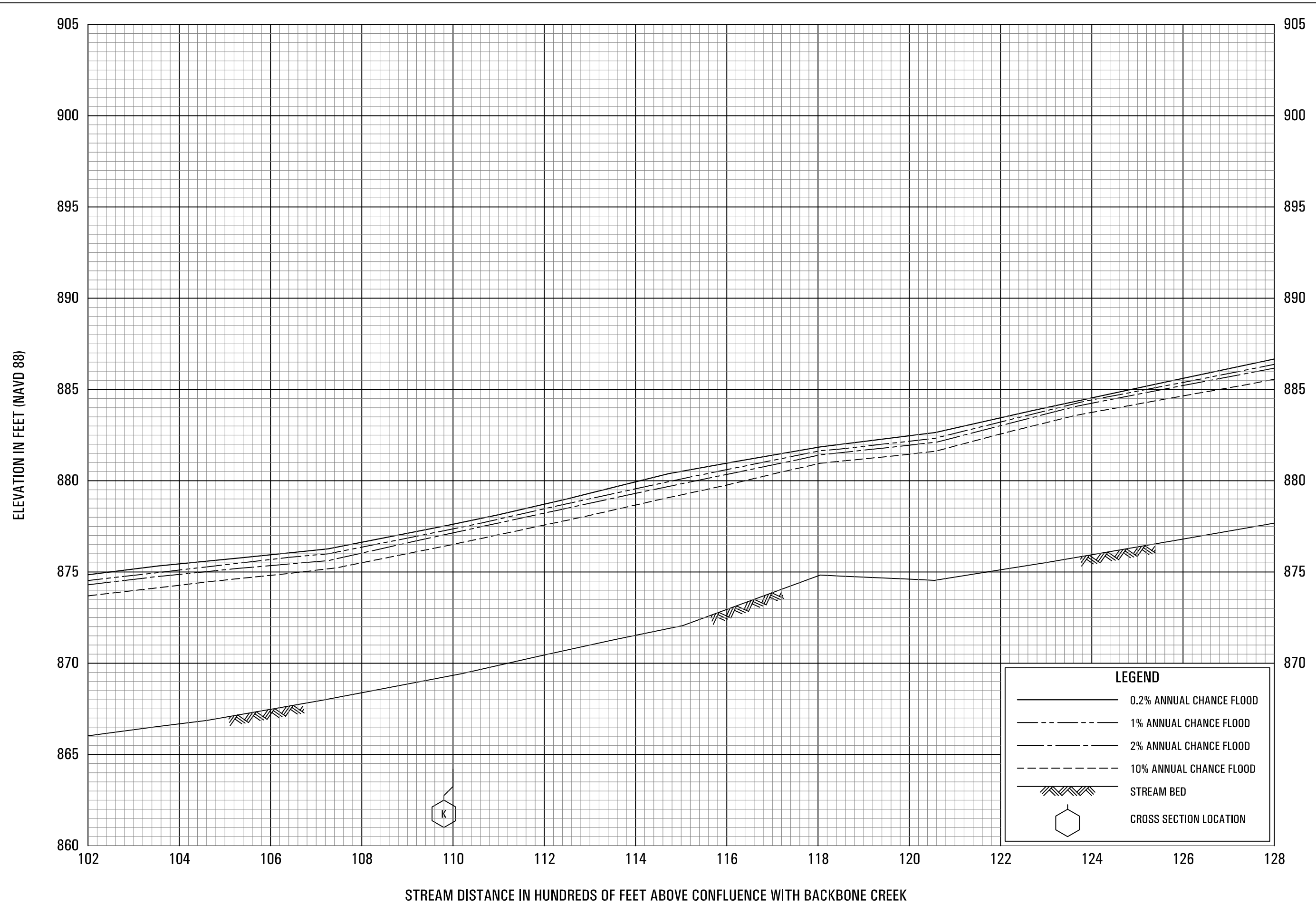
FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS





FLOOD PROFILES
COLDSRING CREEK

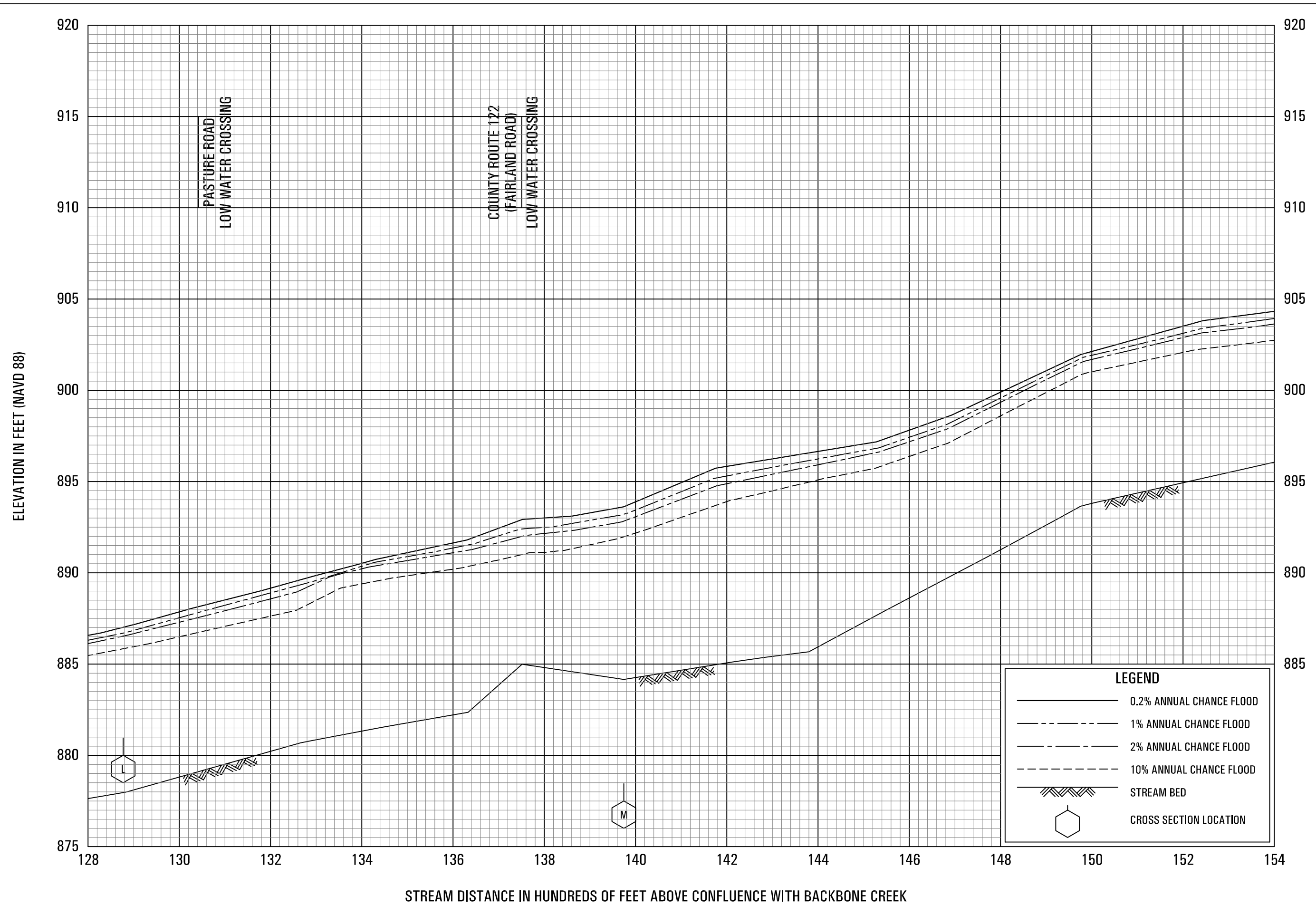
FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS



FLOOD PROFILES
COLDSPRING CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS

17P

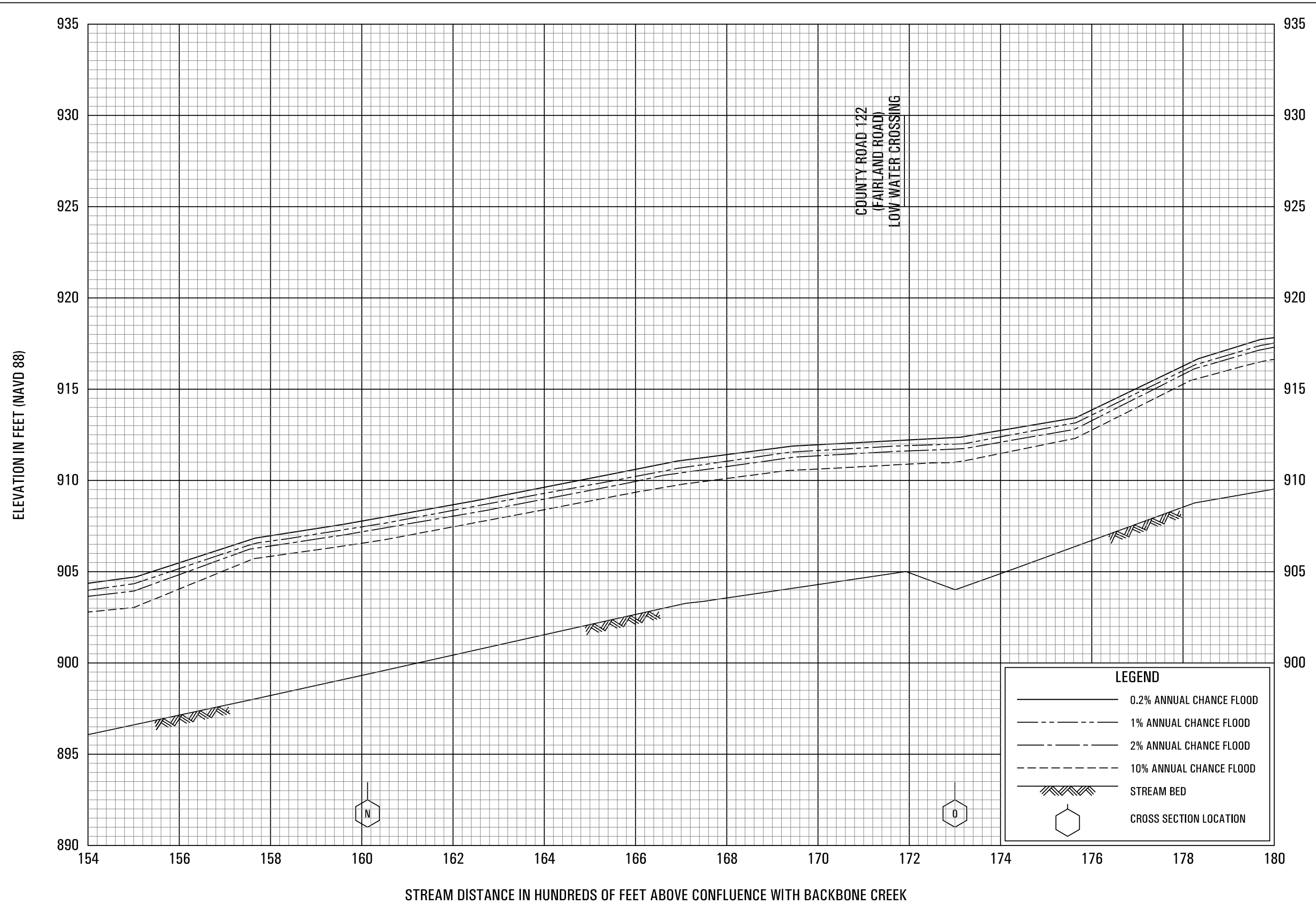


FLOOD PROFILES

COLDSPRING CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

BURNET COUNTY, TX
AND INCORPORATED AREAS

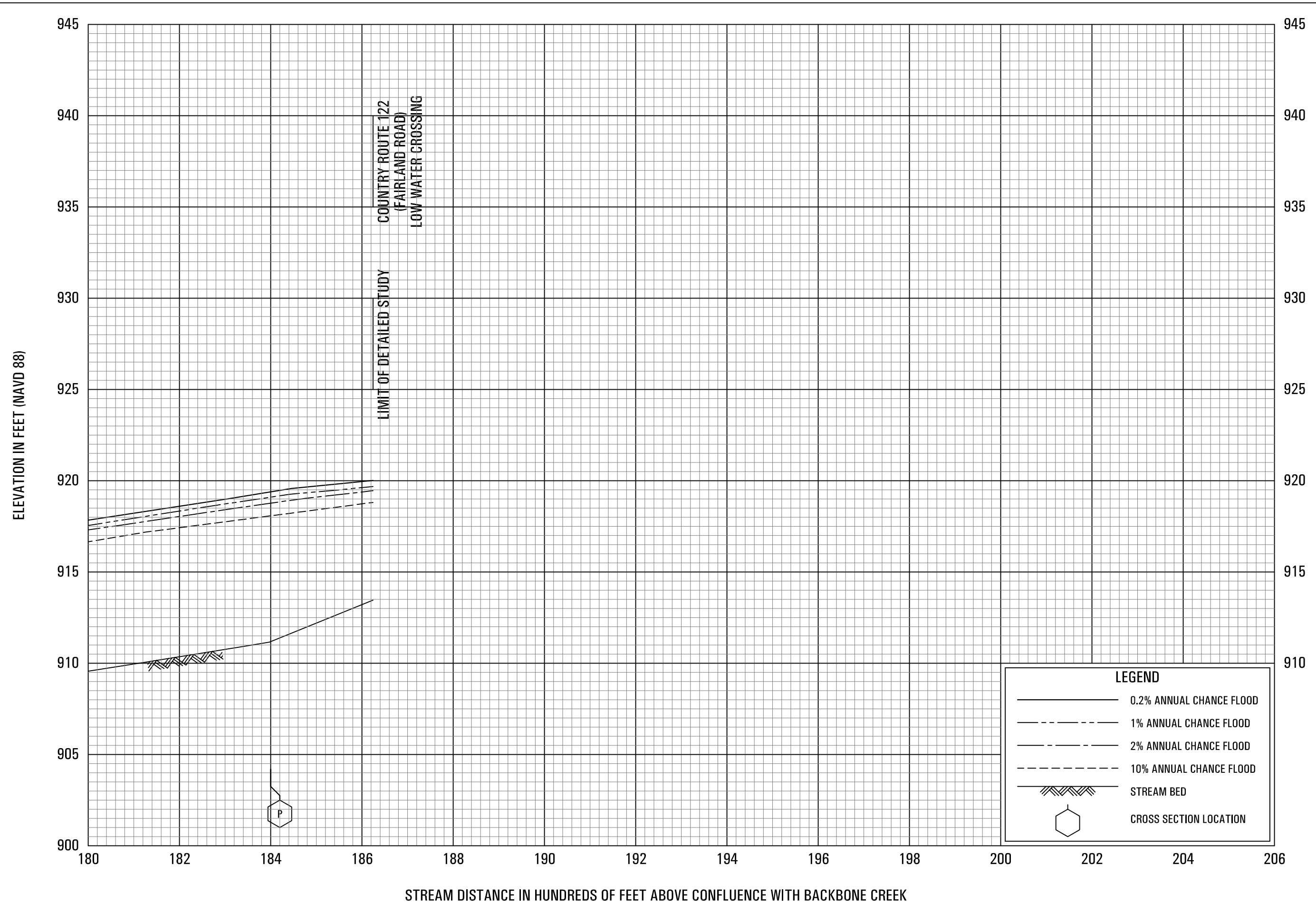


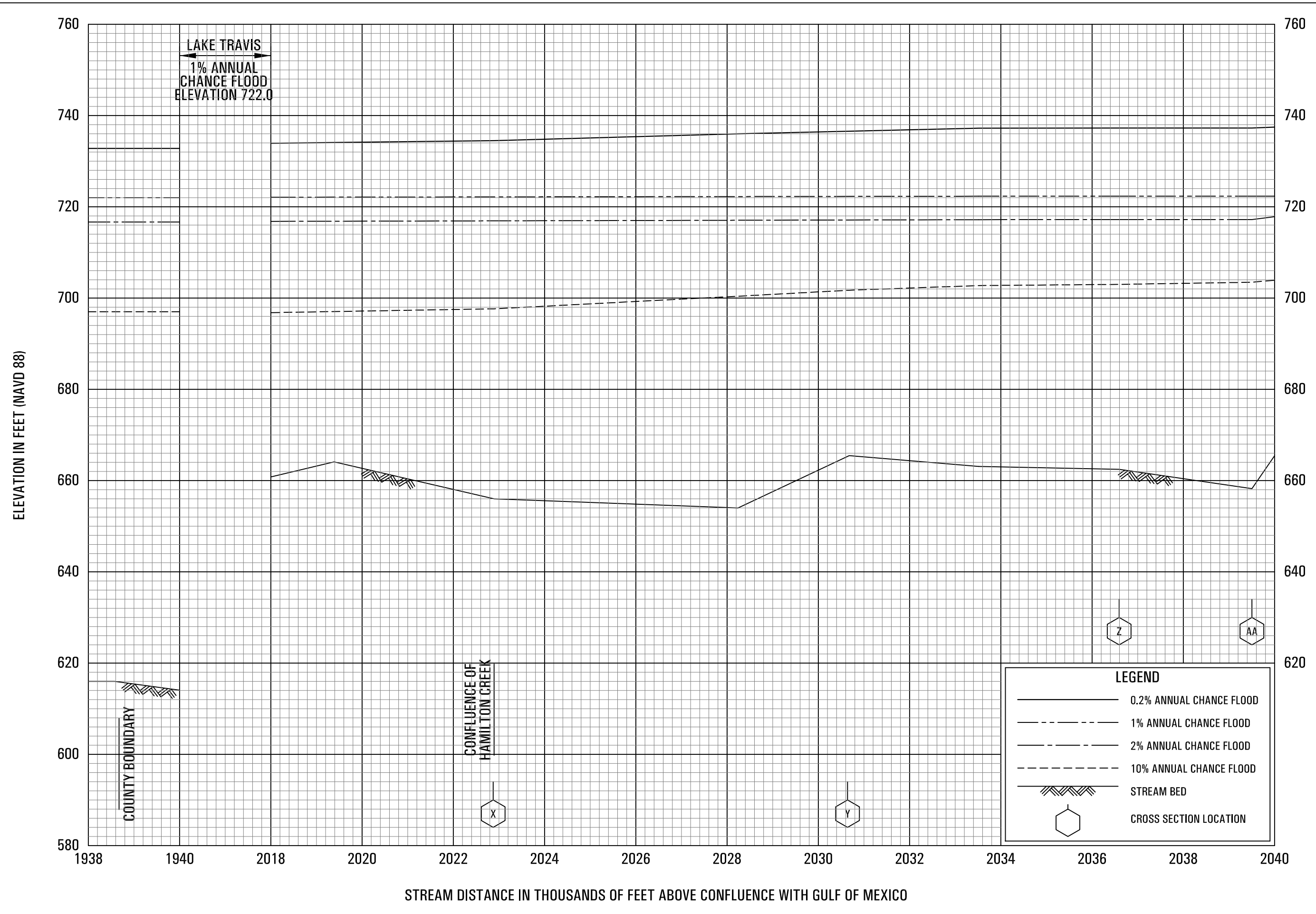
FLOOD PROFILES

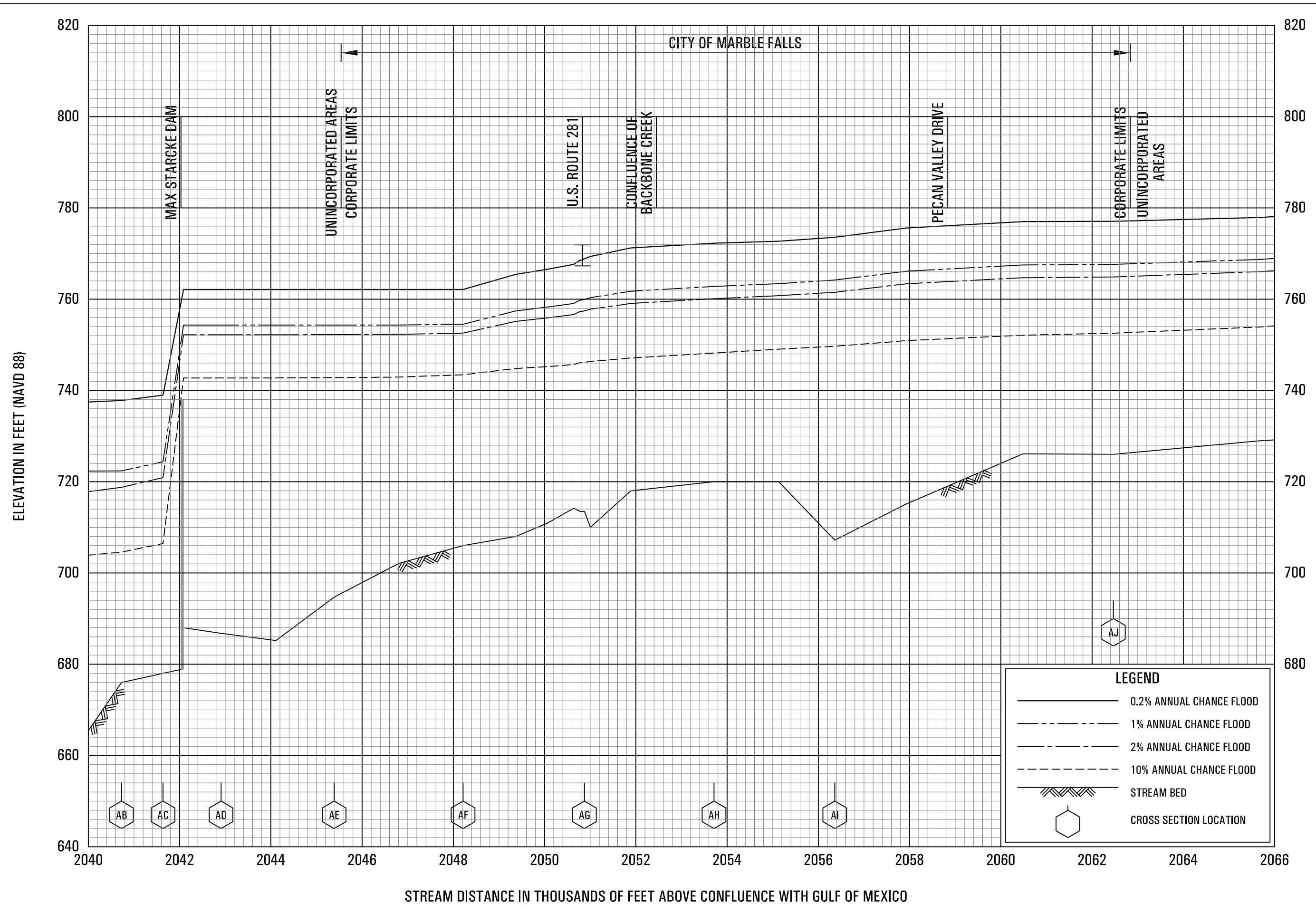
COLDSPRING CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

BURNET COUNTY, TX
AND INCORPORATED AREAS



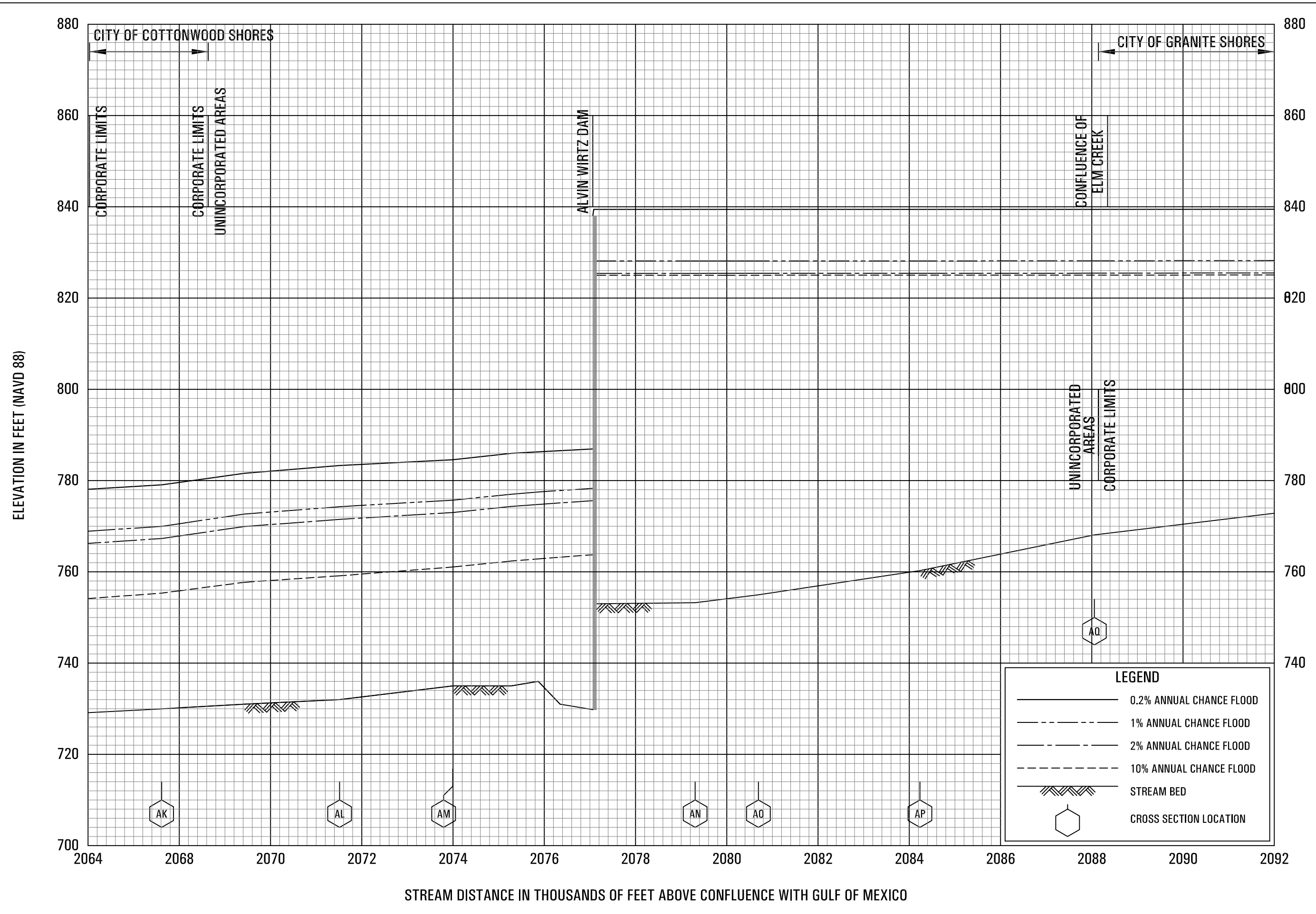


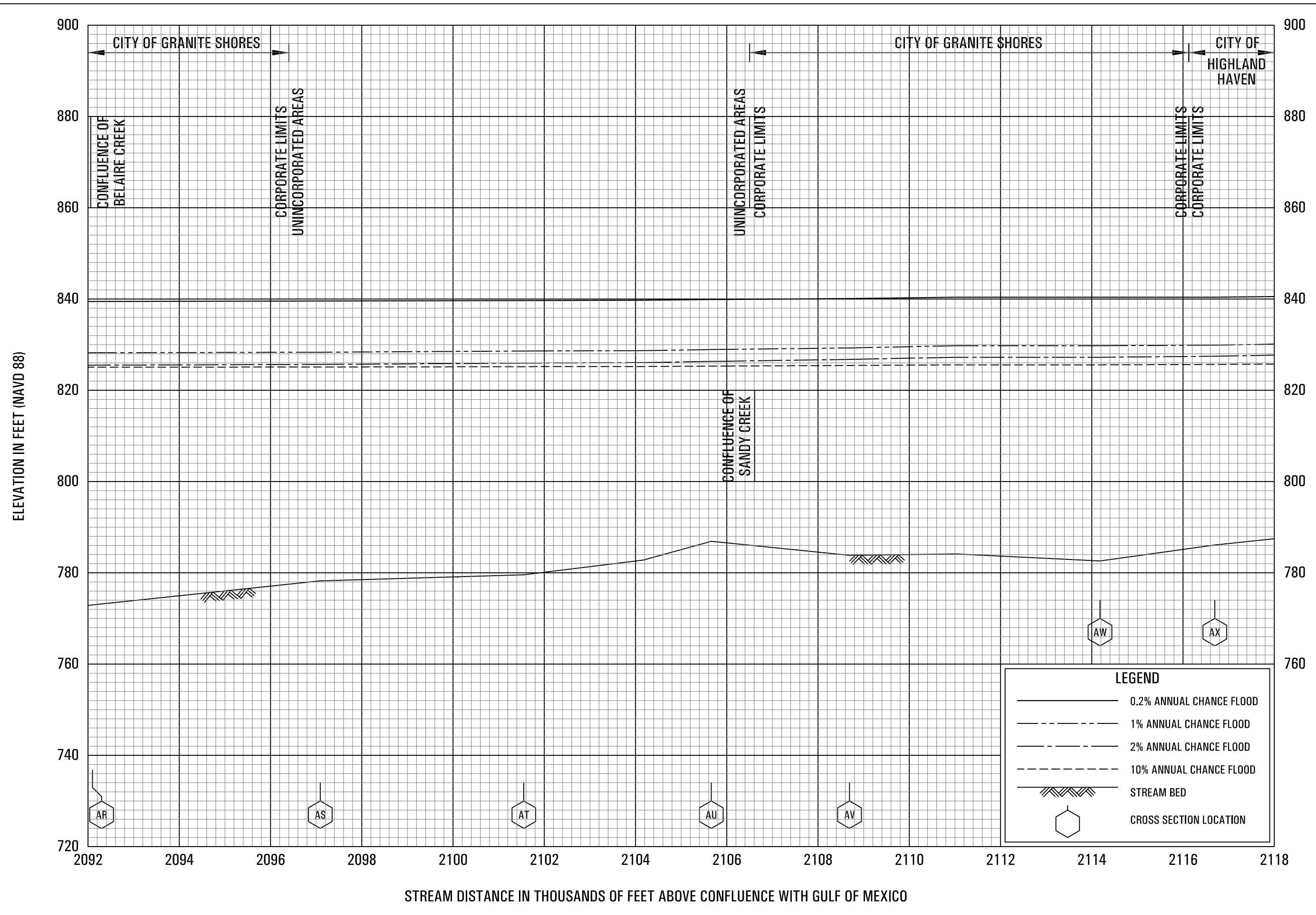


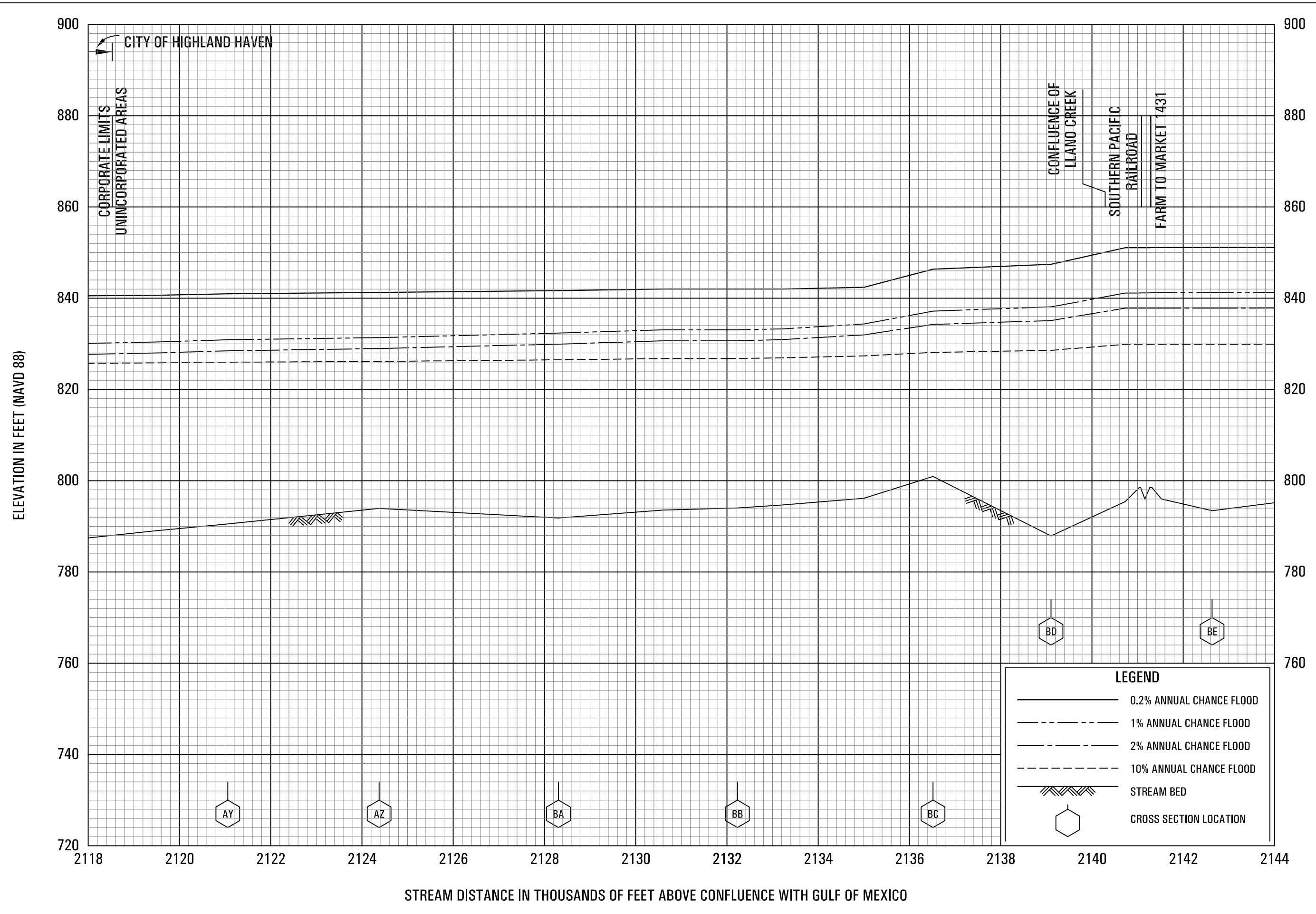
FLOOD PROFILES

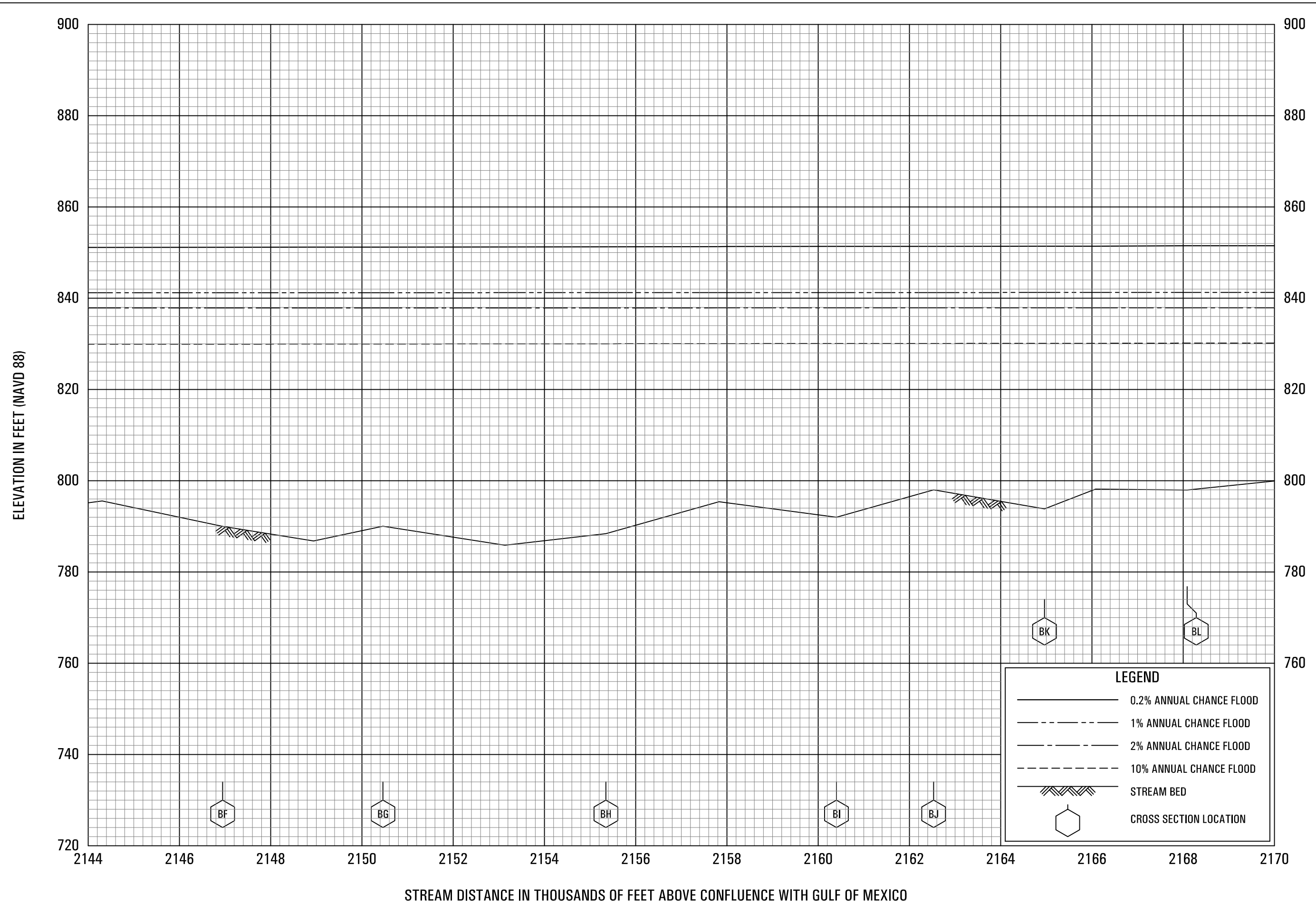
COLORADO RIVER

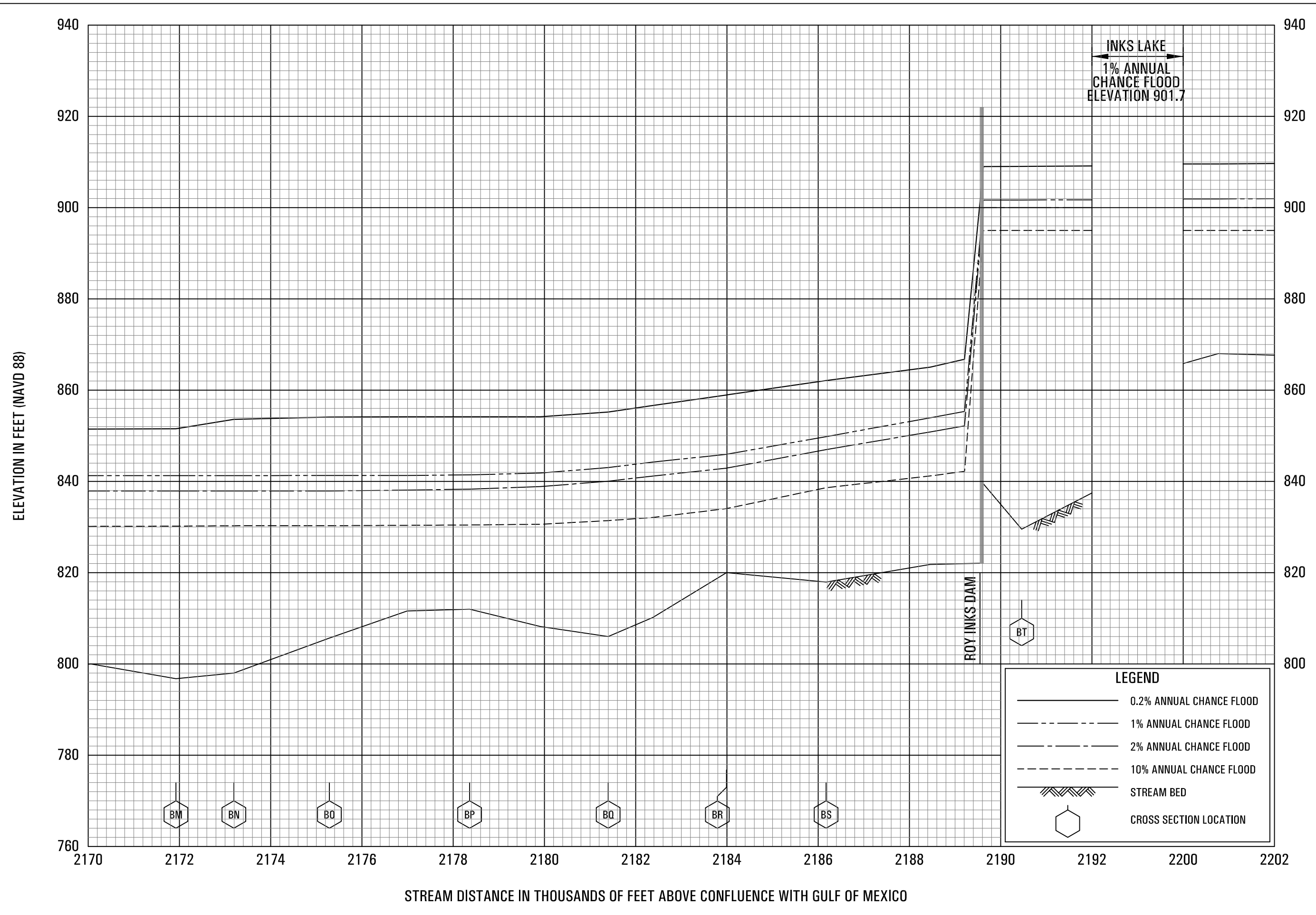
FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS

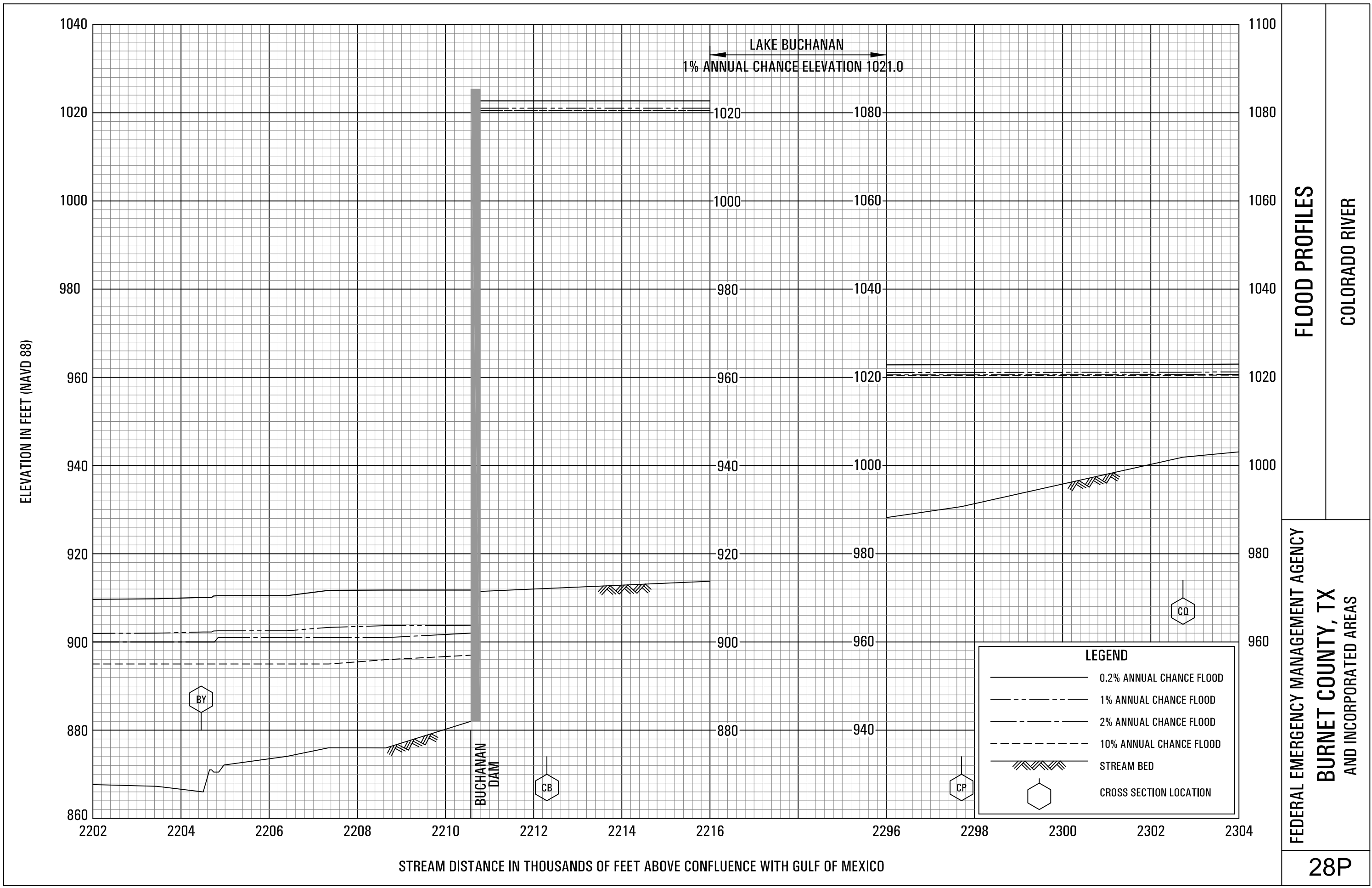


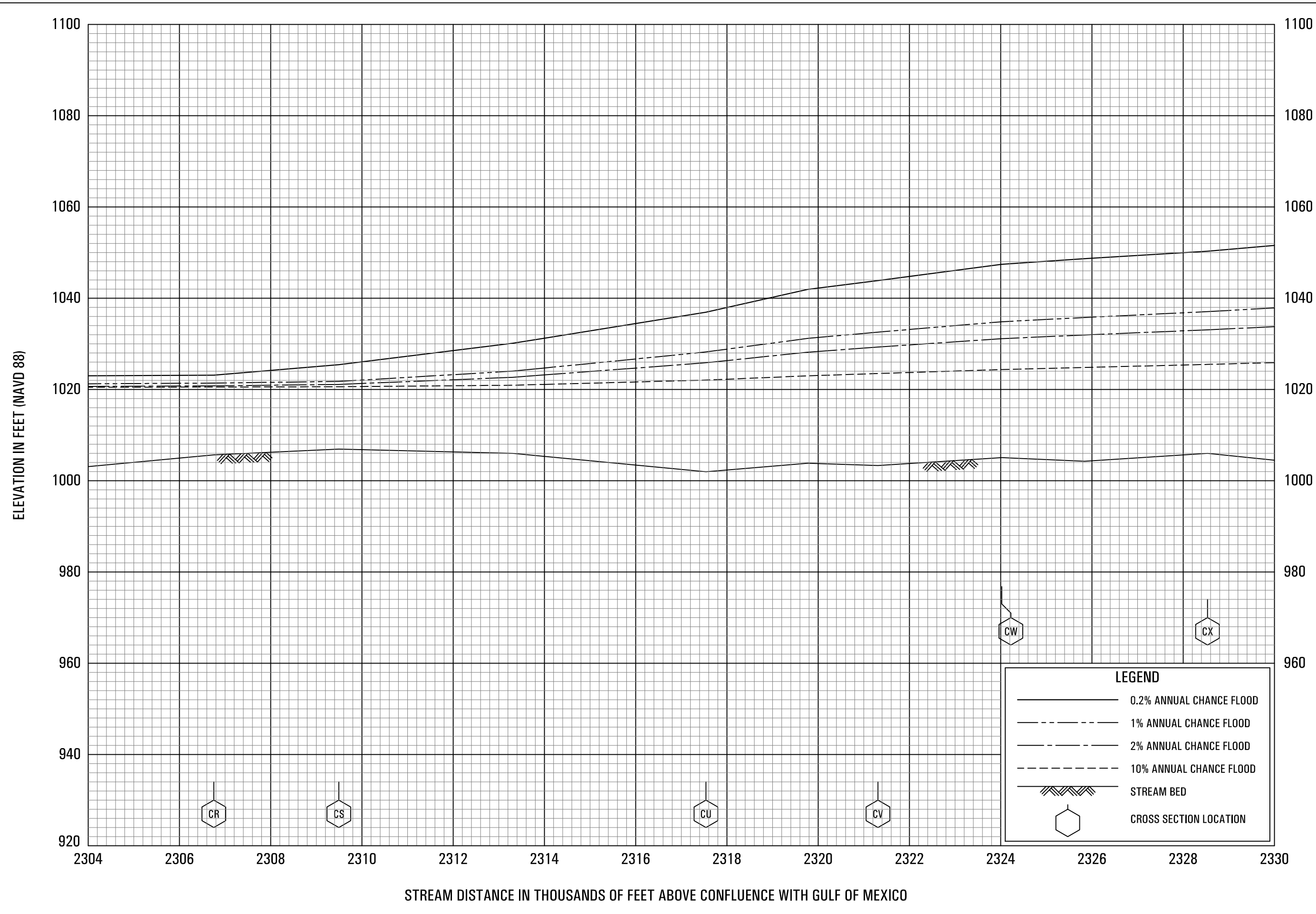






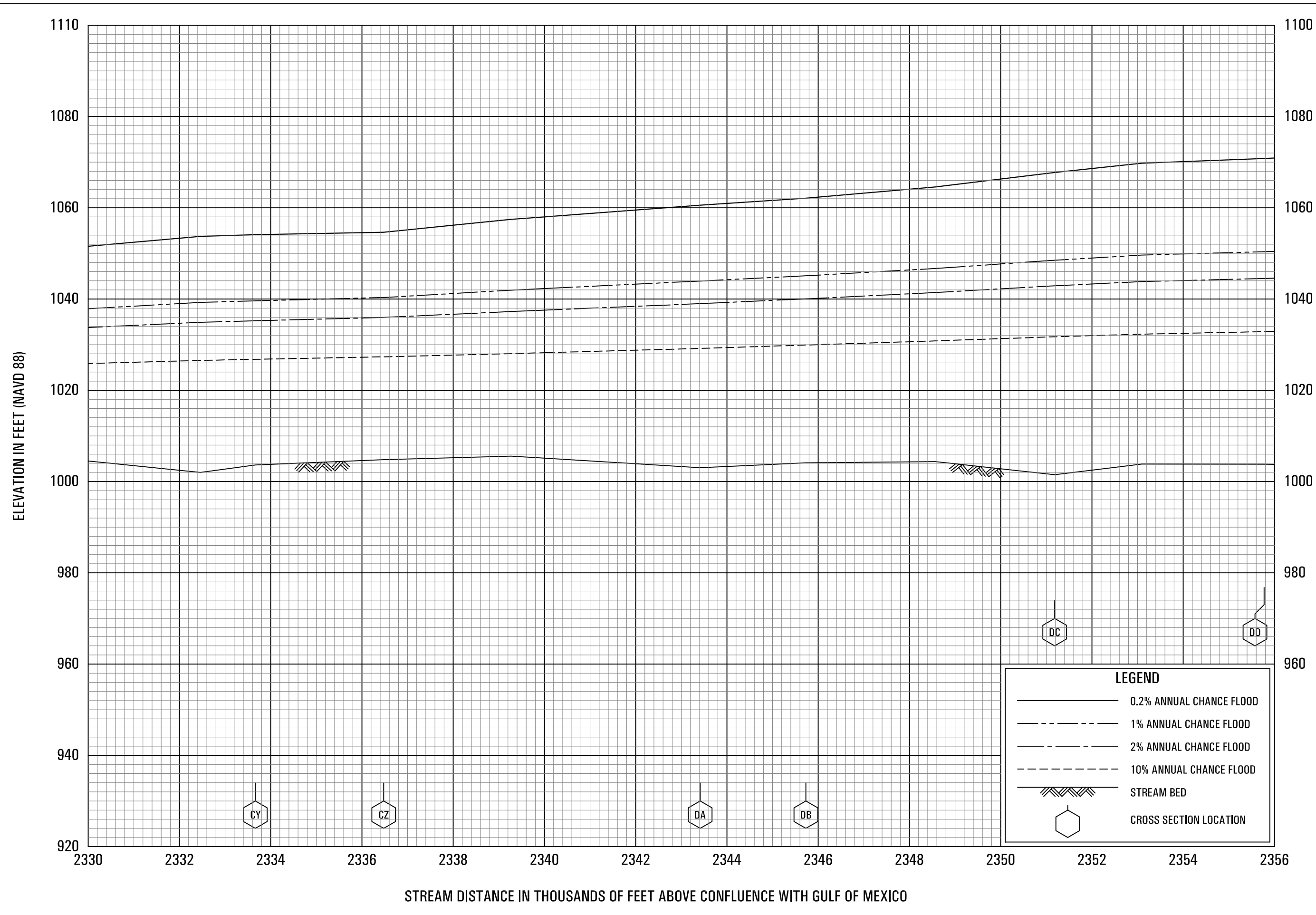


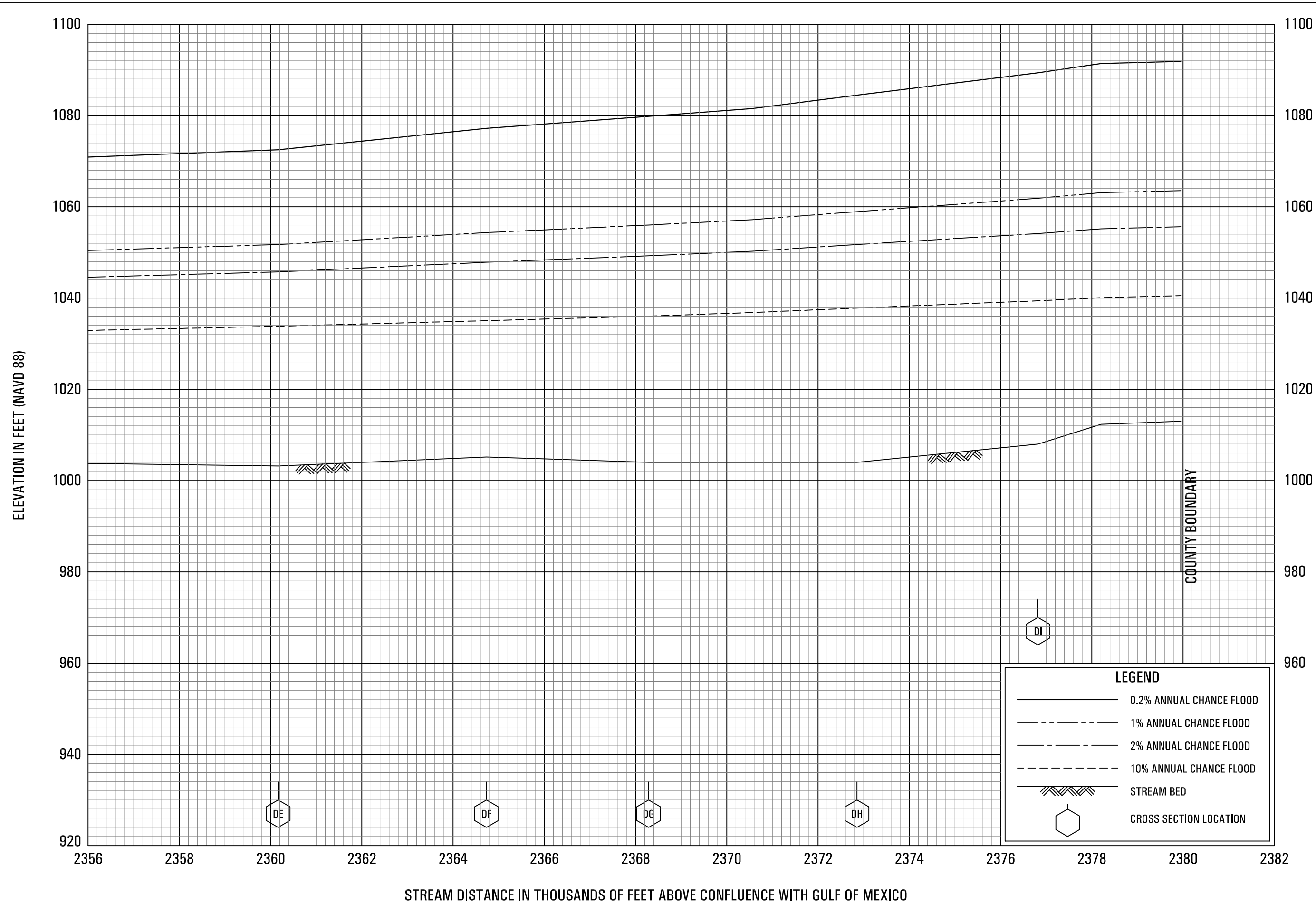


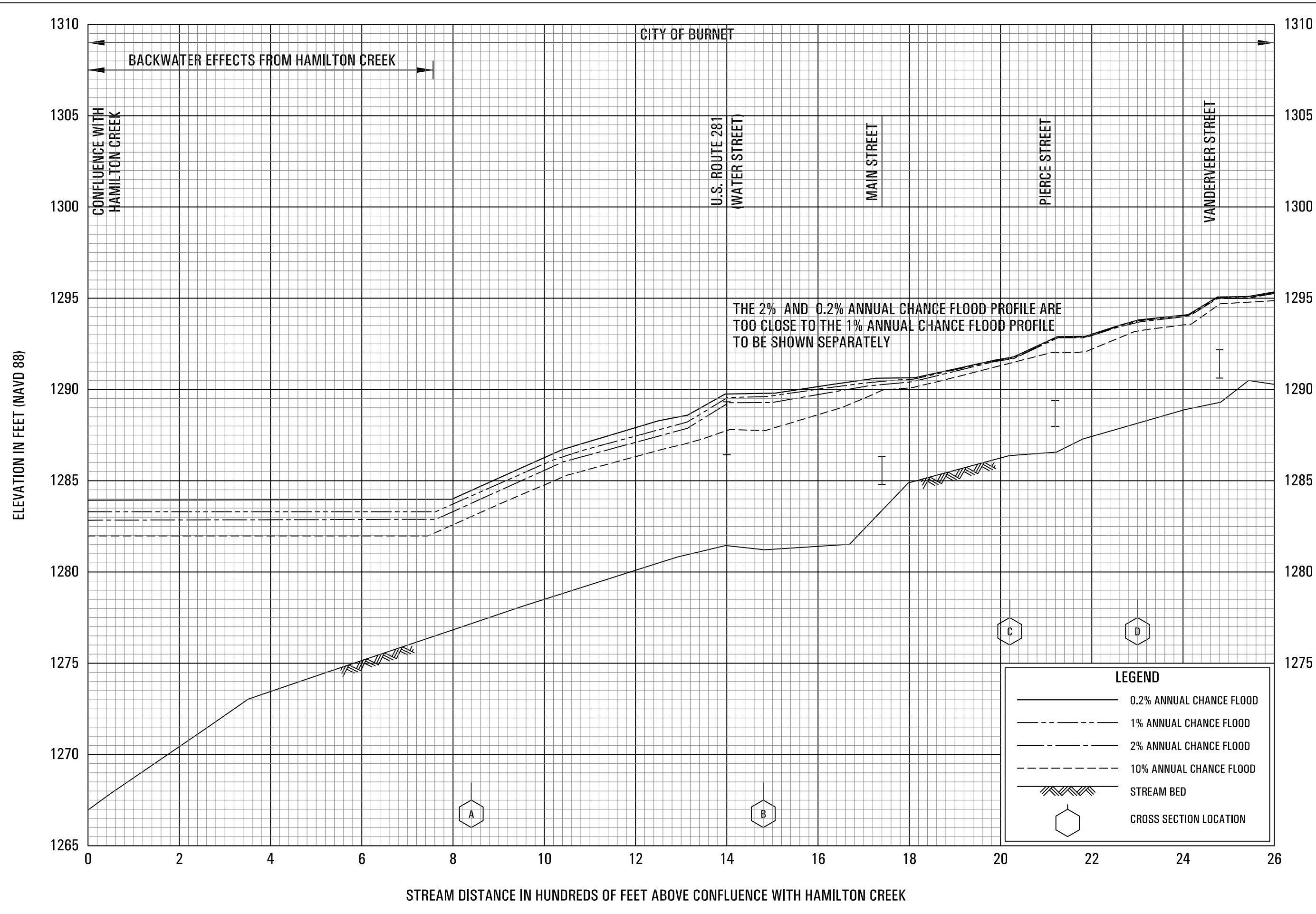


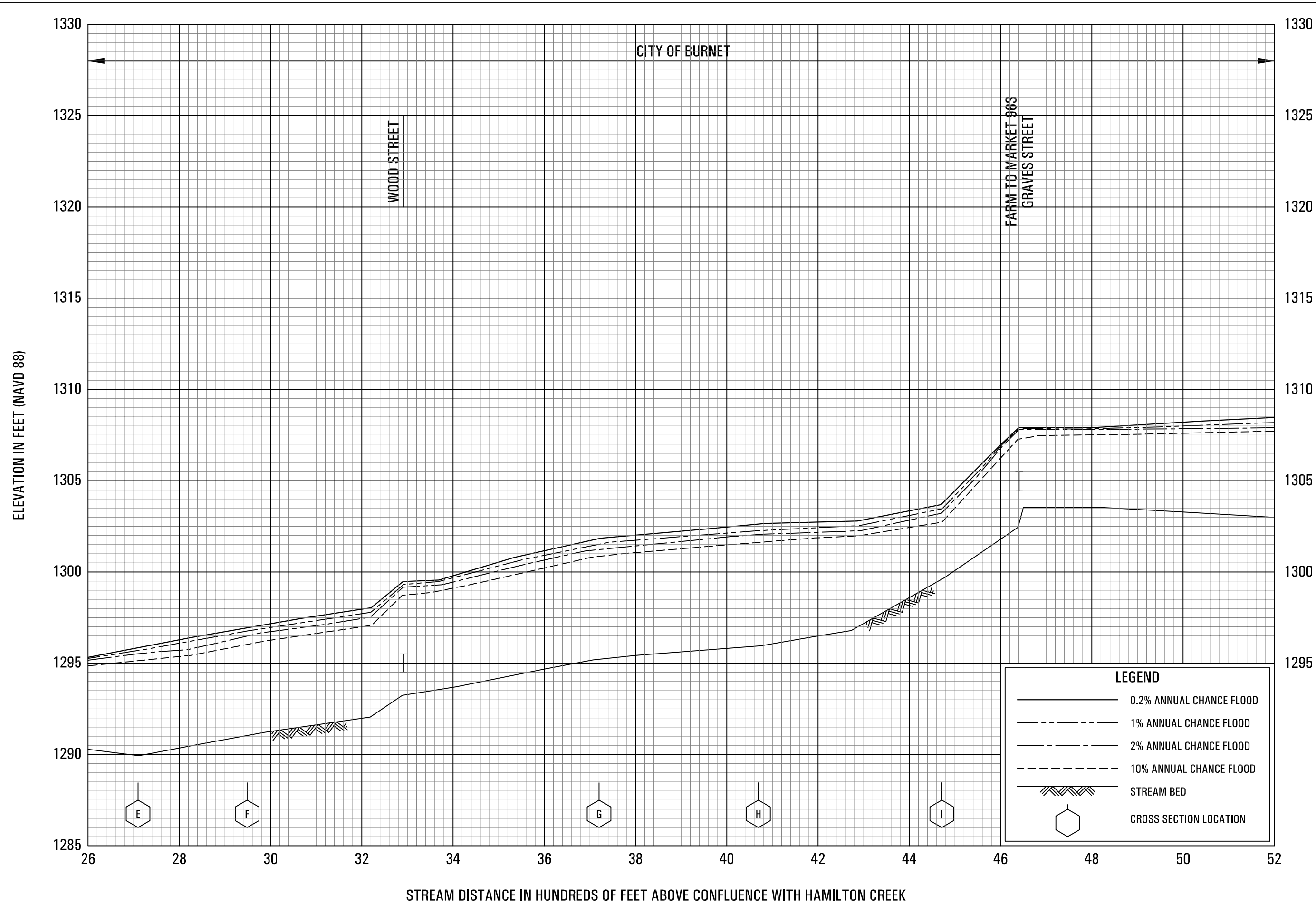
FLOOD PROFILES
COLORADO RIVER

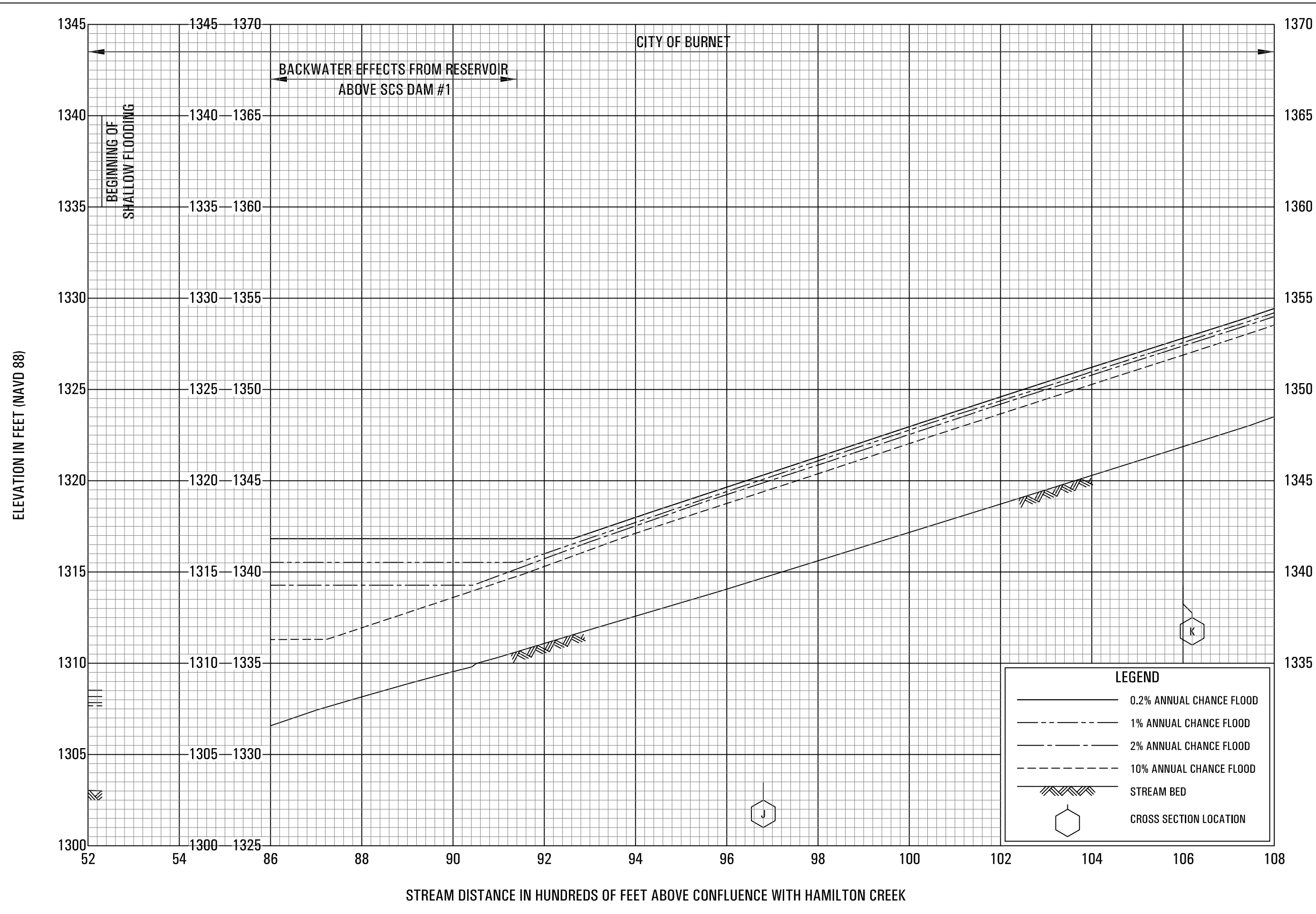
FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS

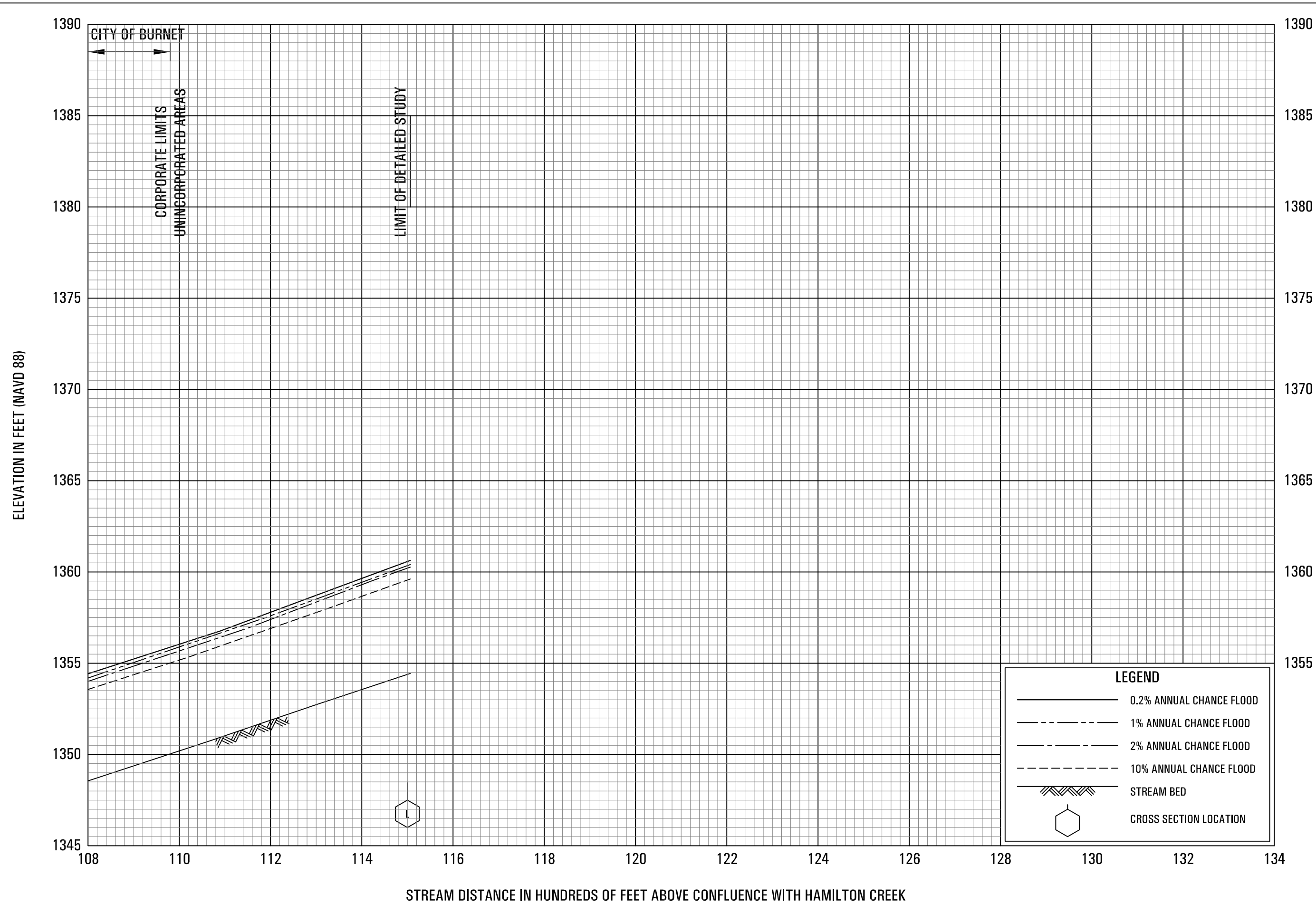


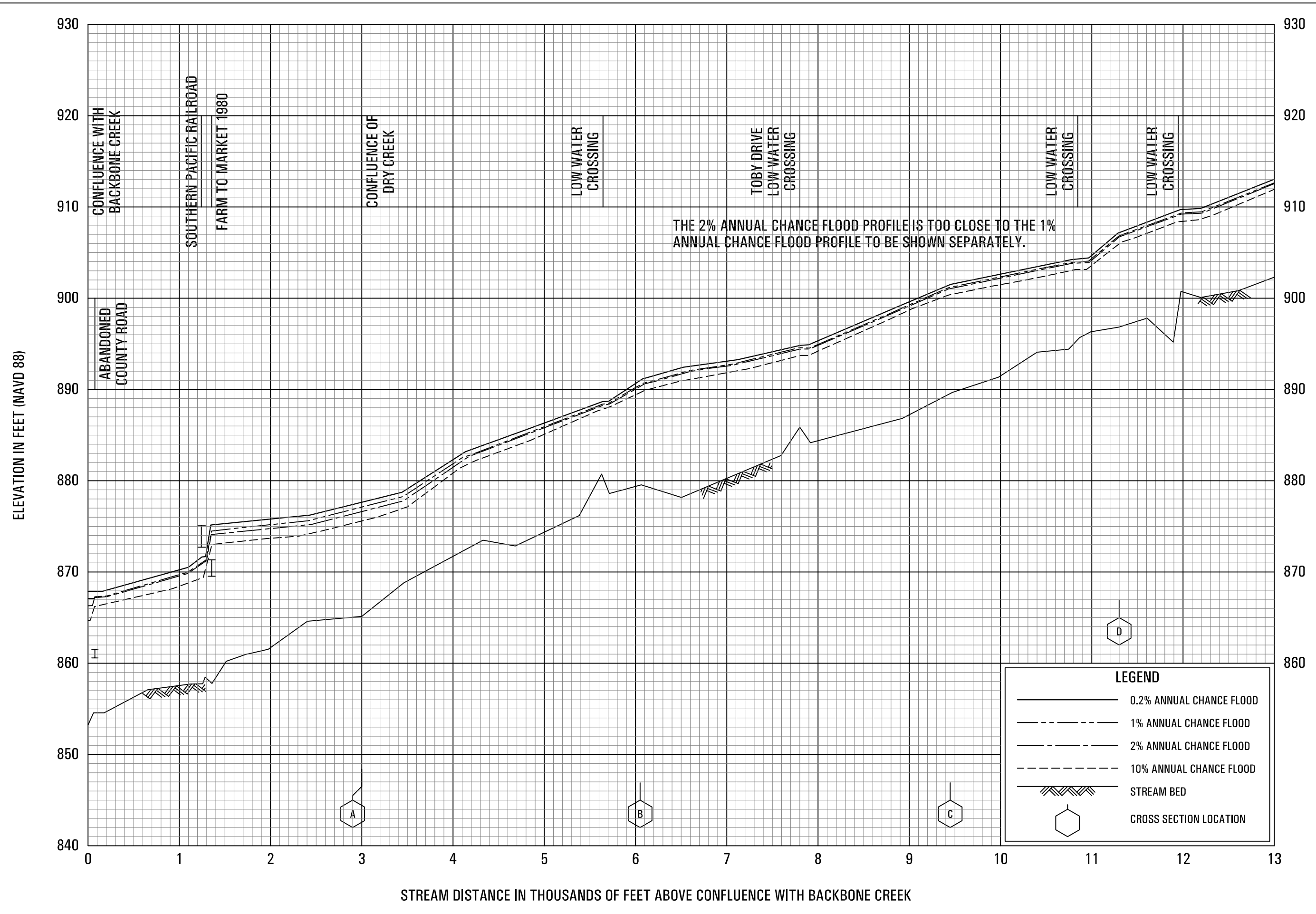


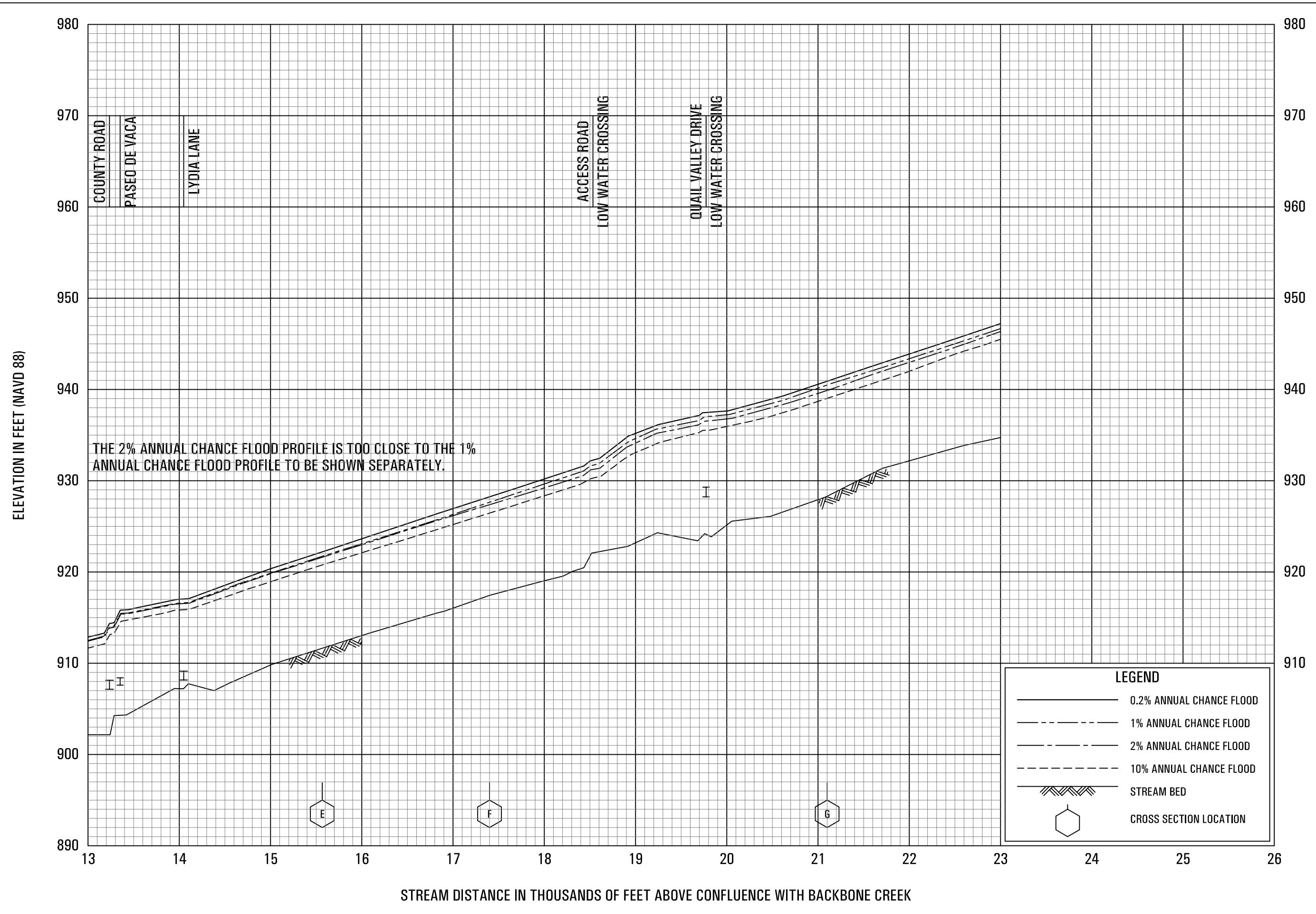








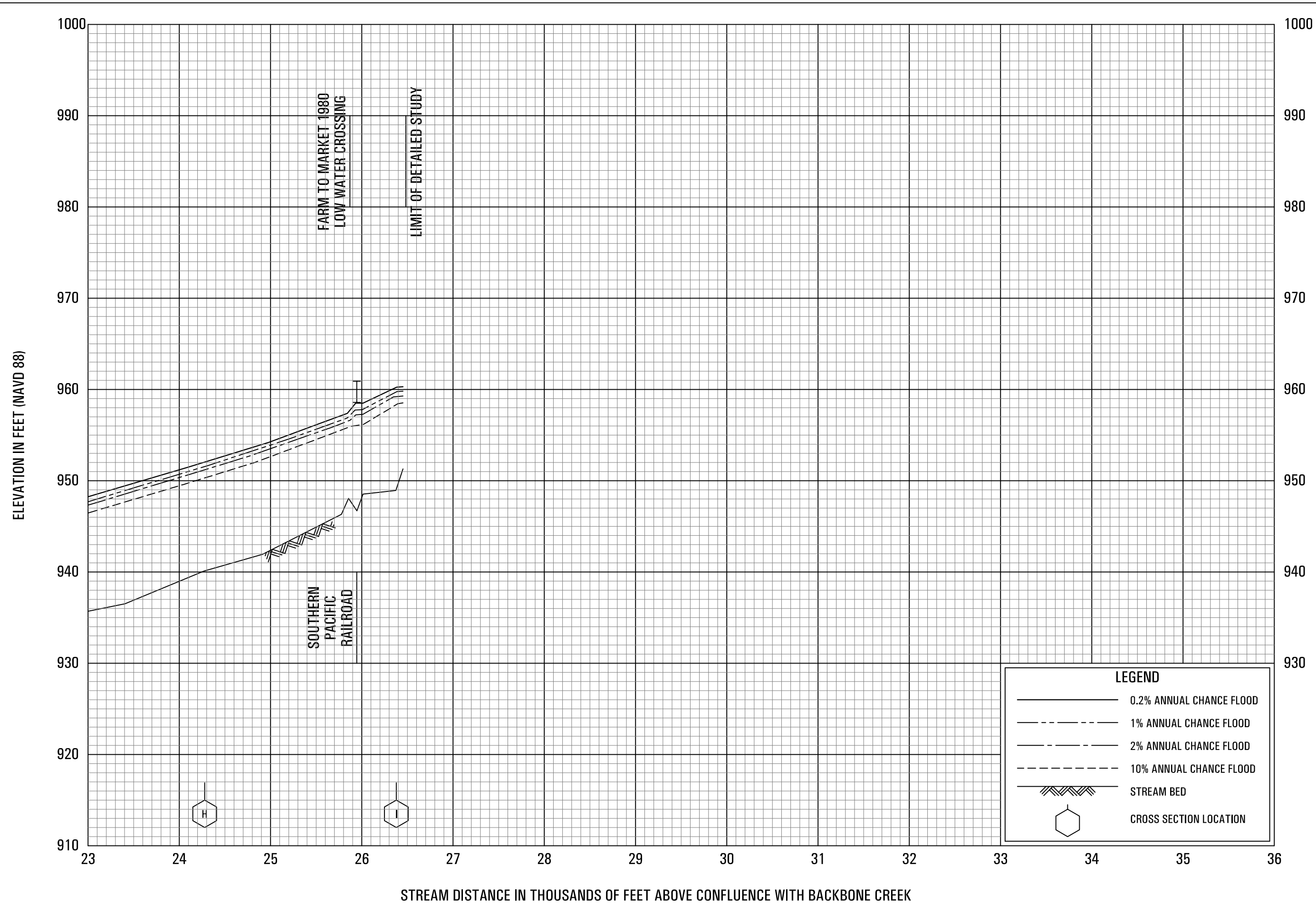




FLOOD PROFILES

DRY BRANCH

**FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
AND INCORPORATED AREAS**



FLOOD PROFILES

DRY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY
BURNET COUNTY, TX
 AND INCORPORATED AREAS