

# FLOOD INSURANCE STUDY



## NEWTON COUNTY, GEORGIA AND INCORPORATED AREAS

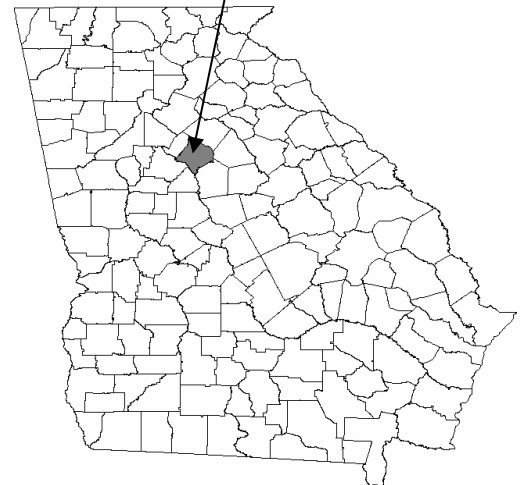
**Community  
Name**

**Community  
Number**

COVINGTON, CITY OF	130144
*MANSFIELD, TOWN OF	130630
*NEWBORN, TOWN OF	130631
NEWTON COUNTY (UNINCORPORATED AREAS)	130143
OXFORD, TOWN OF	130367
PORTERDALE, CITY OF	130145

\* No Flood Hazard Areas Identified

Newton County



Effective: September 5, 2007



Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER  
13217CV000A

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FLOOD INSURANCE STUDY USERS**

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) report may not contain all data available within the Community Map Repository. Please contact the Community Map Repository for any additional data.

The Federal Emergency Management Agency (FEMA) may revise and republish part or all of this FIS report at any time. In addition, FEMA may revise part of this FIS report by the Letter of Map Revision process, which does not involve republication or redistribution of the FIS report. Therefore, users should consult with community officials and check the Community Map Repository to obtain the most current FIS report components.

Initial Countywide FIS Effective Date: September 5, 2007

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Turkey Creek	Panels 22P-23P
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**FLOOD INSURANCE STUDY  
NEWTON COUNTY, GEORGIA AND INCORPORATED AREAS**

**1.0 INTRODUCTION**

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and updates information on the existence and severity of flood hazards in the geographic area of Newton County, including the Cities of Covington and Porterdales; the Towns of Mansfield, Newborn, and Oxford; and the unincorporated areas of Newton County (referred to collectively herein as Newton County), and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood-risk data for various areas of the community that will be used to establish actuarial flood insurance rates and to assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program (NFIP) are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

The City of Social Circle is geographically located in Newton and Walton Counties, and is not included in this FIS. The FIS report and Flood Insurance Rate Map (FIRM) for the city of Social Circle is separately published.

Please note that the Towns of Mansfield and Newborn have no mapped flood hazard areas.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the State (or other jurisdictional agency) will be able to explain them.

The Digital Flood Insurance Rate Map (DFIRM) and FIS report for this countywide study have been produced in digital format. Flood hazard information was converted to meet the FEMA DFIRM database specifications and Geographic Information System (GIS) format requirements. The flood hazard information was created and is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community.

1.2 Authority and Acknowledgments

The sources of authority for this FIS are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

For the January 5, 1983, FIS for the unincorporated areas of Newton County, the September 2, 1982, FIS for the City of Covington, and the July 19, 1982, FIS for the City of Porterdale, the hydrologic and hydraulic analyses were performed by Mayes, Sudderth and Etheredge, Inc., for the Federal Emergency Management Agency (FEMA), under Contract No. H-6828. The study was completed in December 1982 (References 1, 2, and 3).

For this countywide study, redelineation of streams studied by detailed methods were performed by PBS&J, for the Georgia Department of Natural Resources, under Contract No. EMA-2005-CA5211 with FEMA. The work was completed in October 2005.

### 1.3 Coordination

For the January 5, 1983 FIS for the Unincorporated Areas of Newton County, the September 2, 1982, FIS for the City of Covington, and the July 19, 1982, FIS for the City of Porterdale, streams requiring detailed study were identified at a meeting in the Newton County Courthouse on June 12, 1979 attended by representatives of the study contractor, FEMA and Newton County.

Throughout the study a series of meetings and telephone conversations were held with Mr. Roy Varner, Chairman of the Board of Commissioners, and with the Government Technical Monitor for the purposes of establishing background information, analyzing existing flood plain zoning, coordinating engineering efforts and informing the county and the FEMA of study progress.

A search for basic data was made at all levels of government. The U. S. Geological Survey (USGS) and the Georgia Department of Transportation provided the planimetric maps which served as the base map for the study (Reference 4). The U. S. Soil Conservation Service, although contacted, provided no new information for this report.

Preliminary flood elevations, flood boundaries and floodway determinations were reviewed with county officials and FEMA on December 2, 1981; March 5, 1982; and March 30, 1982. On August 24, 1982, the results of the study were reviewed at the final meeting attended by representatives of the study contractor, FEMA and community officials. The study was acceptable to Newton County.

For this countywide revision, the initial Consultation Coordination Officer (CCO) meeting was held on October 29, 2004, and attended by representatives of FEMA, Newton County, the City of Covington, the City of Porterdale, and Michael Baker Jr., Inc. A final CCO meeting was held on May 9, 2006. Attending the meeting were representatives of Newton County, the Georgia Department of Natural Resources, and PBS&J. All issues raised at the meeting have been addressed.

## **2.0 AREA STUDIED**

### **2.1 Scope of Study**

This FIS covers the geographic area of Newton County, Georgia, including the incorporated communities listed in Section 1.1. The areas studied by detailed methods were selected with priority given to all known flood hazards and areas of projected development or proposed construction.

Approximate analyses were used to study those areas having low development potential or minimal flood hazards. The scope and methods of study were proposed to and agreed upon by FEMA and Newton County.

The following streams are studied by detailed methods: Big Haynes Creek, Dried Indian Creek, East Dried Indian Creek, Little Haynes Creek, South River, Town Branch (Rogers Branch), Turkey Creek, and Yellow River. The limits of detailed study are indicated on the Flood Profiles (Exhibit 1) and on the FIRM (Exhibit 2).

For this revision, the FIS report and FIRM were converted to countywide format, and the flooding information for the entire county, including both incorporated and unincorporated area, is shown. Also, the vertical datum was converted from the National Geodetic Vertical Datum of 1929 (NGVD29) to the North American Vertical Datum of 1988 (NAVD 1988). For this countywide study, the following streams were redelineated within the limits of detailed study: Dried Indian Creek, South River, Turkey Creek, and Yellow River. A portion of the Alcovy River was revised by a Letter of Map Revision (03-04-007P), dated December 18, 2002.

### **2.2 Community Description**

Newton County is located entirely within the Piedmont physiographic province of the northeastern section of Georgia. The county is located approximately 22 miles southeast of the City of Atlanta and is bounded on the north by Walton County, on the east by Morgan and Jasper Counties, on the south by Butts and Henry Counties and on the west by Rockdale County. The area of the county is approximately 273 square miles.

The land area of Newton County was once a part of the Creek Indian Nation. The Creek Indians roamed the land from 1733, when the first English settlers landed on the coast of Georgia, until 1813 when Georgia Governor Thorp negotiated a treaty with the Creeks whereby they would give up their claim to the land. Newton County, was created by Act of the General Assembly of Georgia on December 24, 1821. The county was formed from parts of Jasper, Henry and Walton Counties and was named in honor of Sergeant John Newton, one of the American soldiers whose courageous action in a daring rescue of prisoners during the Revolutionary War marked him as a hero (Reference 5).

The population of Newton County increased by approximately 25 percent from 1960 to 1970 and by 31 percent from 1970 to 1980, with a 2000 population of 62,001 (Reference 6). Most of the recent increase in population has occurred in the unincorporated areas of the county, and this trend is expected to continue.

Newton County has a temperate climate, typical of the southeast region of the country. It consists of warm, humid summers, mild winters, and abundant rainfall. Summer temperatures average 78 degrees Fahrenheit (°F) and winter temperatures average 44°F, with an annual mean temperature of approximately 61°F. The average annual precipitation in Newton County is 49 inches, most of which falls in the form of rain. Although rare, snowfall is not uncommon to the region. The wettest month is March with an average of 5.25 inches of precipitation while October is the driest with an average of 3.05 inches (Reference 7).

Several tornadoes may be expected in Georgia each year, with resulting property damage in the thousands and sometimes millions of dollars. These storms move very rapidly and produce intense rainfall. Because of their short duration they do not normally represent a flood threat to extremely large drainage basins, but could result in flash floods on watersheds similar to those in Newton County. These storms have occurred during every month of the year, but have the highest frequency in spring. Approximately 50 percent of Georgia's tornadoes have occurred in March and April. During the 15-year period from 1953 to 1967, Georgia had an average of 18 reported tornadoes per year.

The county is drained by three major streams all flowing in a southerly direction. The southwestern county limit is formed by the South River. The Yellow and Alcovy Rivers flow in a southerly direction and divide the county into thirds. All three streams and their tributaries drain to Jackson Lake located at the extreme south corner of Newton County. The Ocmulgee River begins at the Jackson Lake dam.

Dried Indian Creek, Turkey Creek and Big Haynes Creek are tributaries to Yellow River. Dried Indian Creek flows southwesterly and joins Yellow River approximately three miles above Rocky Plain Road. Turkey Creek flows southwesterly and joins Yellow River above Brown Bridge Road. Big Haynes Creek flows southerly and forms a portion of the northwest county limits with Rockdale County until its confluence with Yellow River below Bald Rock Road. Little Haynes Creek, a tributary of Big Haynes Creek, forms a portion of the northwest county limits with Rockdale County until its confluence with Big Haynes Creek above Bald Rock Road.

### 2.3 Principal Flood Problems

Flood producing storms may occur at any time during the year but are more numerous in winter and spring. Winter storms are usually of the frontal type lasting several days and covering large areas. Summer storms are generally of a



thunderstorm nature with high rainfall intensities scattered over small areas. Flood problems in the county are isolated at present and are due to residential development occurring within floodplain areas.

The most serious flooding problem in the City of Porterdale has been caused by the overflow of the Yellow River. There have been a number of major floods on the Yellow River that have caused extensive damage to buildings, transportation routes and utility lines.

#### 2.4 Flood Protection Measures

Newton County has recognized the need for proper floodplain management and has adopted ordinances restricting the construction of residential structures within the floodplain. For communities within Newton County that are participating in the NFIP, local ordinances and zoning laws have been adopted that regulate development in the floodplain.

### 3.0 **ENGINEERING METHODS**

For the flooding sources studied by detailed methods in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 1-percent-annual-chance (100-year) flood in any 50-year period is approximately 40 percent (4 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect current changes.

#### 3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish peak discharge-frequency relationships for each flooding source studied by detailed methods affecting the community.

Hydrologic analyses were based upon utilization of the USGS regional regression equations (Reference 8) relating discharge to drainage area for rural streams in

various physiographic provinces in the State of Georgia. These equations were determined by synthesizing 75 years of flood record from short- and long-term streamflow and rainfall data, applying the log-Pearson Type III distribution with regional skew coefficients as recommended by the Water Resources Council and regionalizing by multiple regression techniques. Since the watersheds of the streams studied are developed to varying extents, these equations were adjusted to account for urbanization as recommended by the USGS.

The rural equation adjustment involves determining an urbanization factor, RL, which defines urbanization as a function of percentage of impervious watershed area and percentage of watershed area served by storm sewers. The RL factors determined for Dried Indian Creek, East Dried Indian Creek, Town Branch (Rogers Branch) and Turkey Creek, range between 1.0 to 2.5. The appropriate regional relationships were then used applying the RL factor to estimate the magnitude of the 10-, 2-, 1-, and 0.2-percent-annual-chance floods.

A summary of drainage area - peak discharge relationships for each stream studied in detail is shown in Table 1.

Table 1 - Summary of Discharges

<u>Flooding Source and Location</u>	<u>Drainage Area (square miles)</u>	<u>Peak Discharges (cubic feet per second)</u>			
		<u>10-Percent- Annual-Chance</u>	<u>2-Percent- Annual-Chance</u>	<u>1-Percent- Annual-Chance</u>	<u>0.2-Percent- Annual-Chance</u>
BIG HAYNES CREEK At Bald Rock Road	79.9	*	*	14,420	*
DRIED INDIAN CREEK At confluence with Yellow River	15.0	2,560	3,915	4,480	5,985
Just upstream of Flat Shoals Road	13.9	2,405	3,680	4,215	5,635
Approximately 5,550 feet upstream of Flat Shoals Road	12.1	2,215	3,395	3,890	5,215
Approximately 14,000 feet upstream of Flat Shoals Road	9.2	1,936	2,970	3,415	4,580
Approximately 16,000 feet upstream of Flat Shoals Road	8.8	1,855	2,850	3,275	4,400
Just upstream of confluence of Town Branch (Rogers Branch)	7.1	1,515	2,375	2,745	3,735
Just upstream of Broad Street/ State Highway 81	6.5	1,350	2,145	2,490	3,420
Just upstream of U.S. Highway 278/ State Highway 12	5.8	1,205	1,930	2,250	3,110
Just upstream of confluence of East Dried Indian Creek	2.3	740	1,180	1,385	1,910

\* Data not available

Table 1 - Summary of Discharges (*Continued*)

<u>Flooding Source and Location</u>	<u>Drainage Area (square miles)</u>	<u>Peak Discharges (cubic feet per second)</u>			
		<u>10-Percent- Annual-Chance</u>	<u>2-Percent- Annual-Chance</u>	<u>1-Percent- Annual-Chance</u>	<u>0.2-Percent- Annual-Chance</u>
EAST DRIED INDIAN CREEK At confluence with Dried Indian Creek	2.6	780	1,260	1,480	2,055
LITTLE HAYNES CREEK At confluence with Big Haynes Creek	17.3	3,010	4,750	5,450	7,410
Just upstream of confluence of Sandy Creek	26.9	2,370	3,760	4,330	5,910
SOUTH RIVER At State Highway 81/ Broad Street	464.0	*	*	53,000	*
At Bethany Road	456.0	*	*	49,300	*
At State Highway 20/ Smith Store Road	244.0	*	*	33,600	*
TOWN BRANCH (ROGERS BRANCH) At confluence with Dried Indian Creek	0.8	565	825	945	1,240
At upstream crossing of Brookwood Circle Southeast	0.4	340	500	570	745
TURKEY CREEK At confluence with Yellow River	3.4	975	1,525	1,775	2,425
Approximately 5,550 feet upstream of the confluence with Yellow River	1.8	675	1,060	1,240	1,705
YELLOW RIVER Just upstream of Pickett Bridge Road	438.0	*	*	46,200	*
Approximately 11,525 feet downstream of Porterdale Dam	398.5	15,250	23,410	26,140	34,560
Just upstream of confluence of Beaverdam Creek	387.7	15,010	23,050	25,750	34,050
Approximately 1,610 feet downstream of Brown Bridge Road	387.1	14,990	23,020	25,715	34,010
Just downstream of confluence of Turkey Creek	385.9	14,965	22,980	25,675	33,960
Just upstream of confluence of Turkey Creek	381.6	14,850	22,810	25,485	33,710
Approximately 970 feet downstream of U.S. Highway 278/ Interstate Highway 20/ State Highway 402/12/ Purple Heart Highway	374.9	14,715	22,600	25,260	33,415

\* Data not available

Table 1 - Summary of Discharges (*Continued*)

<u>Flooding Source and Location</u>	<u>Drainage Area (square miles)</u>	<u>Peak Discharges (cubic feet per second)</u>			
		<u>10-Percent- Annual-Chance</u>	<u>2-Percent- Annual-Chance</u>	<u>1-Percent- Annual-Chance</u>	<u>0.2-Percent- Annual-Chance</u>
YELLOW RIVER (CONTINUED)					
Just upstream of confluence of Gum Creek	343.1	13,965	21,470	24,015	31,800
Approximately 7,610 feet downstream of confluence of Big Haynes Creek	342.5	13,920	21,410	23,950	31,710

\* Data not available

### 3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data Table in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS report in conjunction with the data shown on the FIRM.

Analyses of the hydraulic characteristics of the flooding source studied in detail in Newton County were carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Cross section data for the backwater analyses of the streams studied in detail were obtained from combining photogrammetrically prepared overbank floodplains with field surveyed channels. Culverts and bridges were surveyed to obtain elevation data and structural geometry.

Cross sections were located at close intervals upstream and downstream of bridges and culverts in order to compute significant backwater effects of these structures. In addition, cross sections were taken between hydraulic controls wherever warranted by topographic changes.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1).

The U.S. Army Corps of Engineers HEC-2 step-backwater computer program (Reference 9) was used to compute water surface elevations (WSELs) of floods for the selected recurrence intervals. Flood profiles were drawn showing

computed WSELs for floods of the selected recurrence intervals. The starting WSELs for all streams were calculated using the slope-area method.

Channel roughness factors (Mannings “n”) used in the hydraulic computations, were chosen by engineering judgment and based on field observations of the stream channels and over- bank flood plain areas. The Manning’s “n” values for all detailed studied streams are listed in Table 2.

Table 2 - Manning's "n" Values

<u>Stream</u>	<u>Channel “n”</u>	<u>Overbank “n”</u>
Big Haynes Creek	0.020-0.055	0.085-0.110
Dried Indian Creek	0.020-0.055	0.085-0.110
East Dried Indian Creek	0.035-0.055	0.085-0.110
Little Haynes Creek	0.020-0.055	0.085-0.110
South River	0.020-0.055	0.085-0.110
Town Branch (Rogers Branch)	0.020-0.055	0.085-0.110
Turkey Creek	0.020-0.055	0.085-0.110
Yellow River	0.020-0.055	0.085-0.110

The hydraulic analyses for this study were based on unobstructed flow. The flood elevations shown on the Flood Profiles (Exhibit 1) are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

### 3.3 Vertical Datum

All FIS reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum in use for newly created or revised FIS reports and FIRMs was NGVD29. With the finalization of NAVD88, many FIS reports and FIRMs are being prepared using NAVD88 as the referenced vertical datum.

All flood elevations shown in this FIS report and on the FIRM are referenced to NAVD88. Structure and ground elevations in the community must, therefore, be referenced to NAVD88. It is important to note that adjacent communities may be referenced to NGVD29. This may result in differences in Base Flood Elevations (BFEs) across the corporate limits between the communities. The average conversion factor that was used to convert the data in this FIS report to NAVD88 was calculated using the National Geodetic Survey’s VERTCON online utility (Reference 10). The data points used to determine the conversion are listed in Table 3.

Table 3 - Vertical Datum Conversion

<u>Quad Name</u>	<u>Corner</u>	<u>Longitude</u>	<u>Latitude</u>	<u>Conversion from NGVD29 to NAVD88</u>
Milstead	NE	83.875	33.750	0.003
Milstead	SW	84.000	33.625	0.062
Milstead	SE	83.875	33.625	-0.026
Jersey	SE	83.751	33.625	-0.066
Porterdal	SW	84.000	33.500	-0.007
Porterdal	SE	83.875	33.500	-0.066
Covington	SE	83.751	33.500	-0.115
Worthville	SE	83.875	33.376	-0.128
Average:				-0.04

For more information on NAVD88, see the FEMA publication entitled *Converting the National Flood Insurance Program to the North American Vertical Datum of 1988* (FEMA, June 1992), or contact the Vertical Network Branch, National Geodetic Survey, Coast and Geodetic Survey, National Oceanic and Atmospheric Administration, Silver Spring, Maryland 20910 (Internet address <http://www.ngs.noaa.gov>).

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the Technical Support Data Notebook associated with the FIS report and FIRM for this community. Interested individuals may contact FEMA to access these data.

#### **4.0 FLOODPLAIN MANAGEMENT APPLICATIONS**

The NFIP encourages State and local governments to adopt sound floodplain management programs. Therefore, each FIS provides 1-percent-annual-chance (100-year) flood elevations and delineations of the 1- and 0.2-percent-annual-chance (500-year) floodplain boundaries and 1-percent-annual-chance floodway to assist communities in developing floodplain management measures. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles, Floodway Data Table, and Summary of Stillwater Elevations Table. Users should reference the data presented in the FIS report as well as additional information that may be available at the local map repository before making flood elevation and/or floodplain boundary determinations.

#### 4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to indicate additional areas of flood risk in the community. For Big Haynes Creek, East Dried Indian Creek, Little Haynes Creek, and Town Branch (Rogers Branch), the 1- and 0.2-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps at a scale of 1:1,560, with a contour interval of 5 feet (Reference 1).

For this countywide study, the following streams were redelineated between cross sections within the limits of detailed study: Dried Indian Creek, South River, Turkey Creek, and Yellow River (Reference 11).

The 1- and 0.2-percent-annual-chance floodplain boundaries are shown on the FIRM (Exhibit 2). On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A, and AE,), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-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.

For the streams studied by approximate methods, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM (Exhibit 2).

#### 4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1-percent-annual-chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1 foot, provided that hazardous velocities are not produced. The floodways in this

study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodways 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. The results of the floodway computations have been tabulated for selected cross sections (Table 3). In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary has been shown.

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the WSEL of the 1-percent-annual-chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 1.

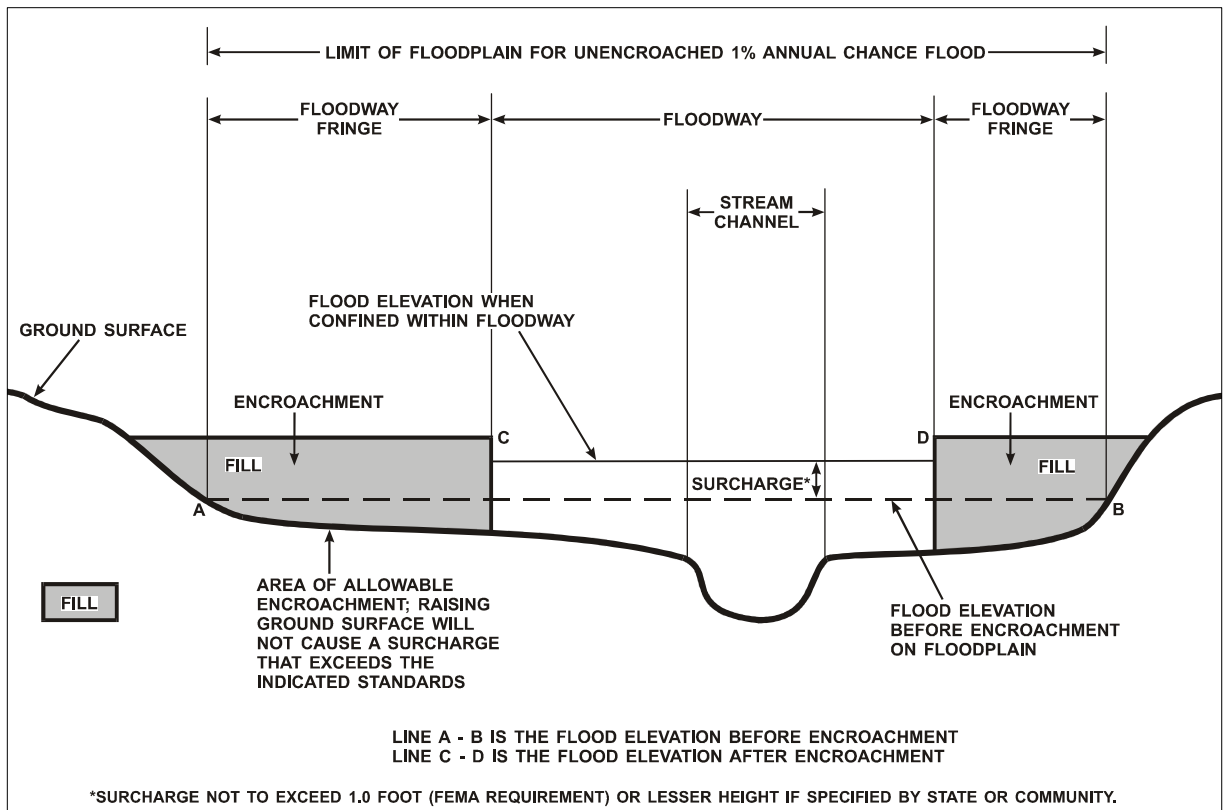


Figure 1 - Floodway Schematic



FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANGE-FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
DRIED INDIAN CREEK								
A	906	263	1,591	2.8	566.9	556.5 <sup>2</sup>	557.5	1.0
B	2,881	314	2,019	2.2	566.9	560.5 <sup>2</sup>	561.3	0.8
C	3,672	124	583	7.7	566.9	562.7 <sup>2</sup>	563.3	0.6
D	4,400	119	857	5.2	568.9	568.9	569.8	0.9
E	5,561	101	803	5.6	574.2	574.2	574.9	0.7
F	6,511	254	2,099	2.1	576.6	576.6	577.4	0.8
G	7,603	749	4,710	1.0	577.4	577.4	578.2	0.8
H	8,400	98	619	7.2	577.5	577.5	578.1	0.6
I	8,583	60	510	8.8	579.0	579.0	579.7	0.7
J	9,078	289	2,242	2.0	584.0	584.0	584.2	0.2
K	10,692	532	3,629	1.2	584.9	584.9	585.3	0.4
L	12,000	224	1,077	3.9	586.0	586.0	586.6	0.6
M	12,794	374	1,977	2.1	589.0	589.0	590.0	1.0
N	13,515	276	1,042	4.0	591.3	591.3	592.1	0.8
O	14,540	321	2,019	1.9	594.2	594.2	595.2	1.0
P	16,138	144	857	4.5	597.8	597.8	598.6	0.8
Q	19,052	263	1,956	2.0	605.1	605.1	606.1	1.0
R	20,225	234	1,070	3.6	607.5	607.5	608.4	0.9

<sup>1</sup> Feet above confluence with Yellow River

<sup>2</sup> Elevation computed without consideration of backwater effects from Yellow River

**TABLE 4**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**

**FLOODWAY DATA**

**DRIED INDIAN CREEK**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANGE-FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
DRIED INDIAN CREEK (CONTINUED)								
S	21,802	448	2,339	1.7	611.0	611.0	611.8	0.8
T	23,292	137	554	6.2	614.0	614.0	614.4	0.4
U	24,398	409	1,826	1.9	618.5	618.5	619.2	0.7
V	25,193	290	1,008	3.4	620.5	620.5	621.1	0.6
W	26,333	301	1,556	2.1	623.3	623.3	624.0	0.7
X	27,184	74	471	7.0	624.9	624.9	625.5	0.6
Y	28,822	100	697	4.7	632.8	632.8	633.5	0.7
Z	30,674	85	613	5.3	639.7	639.7	640.2	0.5
AA	32,684	40	330	9.9	651.7	651.7	652.2	0.5
AB	34,397	213	1,053	3.1	660.8	660.8	661.3	0.5
AC	35,179	252	1,493	1.8	662.4	662.4	662.9	0.5
AD	36,711	47	239	11.5	665.8	665.8	666.0	0.2
AE	38,247	47	438	6.3	678.4	678.4	679.2	0.8
AF	38,651	41	434	6.3	680.0	680.0	680.8	0.8
AG	39,368	188	414	6.6	696.9	696.9	696.9	0.0
AH	39,505	131	339	7.4	698.2	698.2	698.2	0.0
AI	39,969	120	773	3.2	701.3	701.3	701.3	0.0
AJ	40,250	99	712	3.5	701.5	701.5	701.6	0.1

<sup>1</sup> Feet above confluence with Yellow River

**TABLE 4**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**

**FLOODWAY DATA**

**DRIED INDIAN CREEK**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANGE-FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
DRIED INDIAN CREEK (CONTINUED)								
AK	41,013	105	694	3.6	703.3	703.3	703.7	0.4
AL	41,127	130	1,086	2.3	703.4	703.4	703.9	0.5
AM	41,561	78	568	4.4	704.1	704.1	704.6	0.5
AN	41,895	181	981	2.5	704.6	704.6	705.2	0.6
AO	42,100	270	1,679	1.5	704.8	704.8	705.5	0.7
AP	42,488	56	377	6.6	704.8	704.8	705.7	0.9
AQ	43,129	386	3,147	0.8	709.2	709.2	709.3	0.1
AR	43,405	445	2,590	1.0	709.2	709.2	709.3	0.1
AS	43,875	113	776	3.2	710.6	710.6	710.8	0.2
AT	44,061	50	488	4.6	710.8	710.8	710.9	0.1
AU	44,539	55	497	4.5	710.9	710.9	711.7	0.8
AV	44,990	638	6,444	0.3	716.1	716.1	716.4	0.3
AW	45,809	353	2,795	0.8	716.2	716.2	716.5	0.3
AX	46,425	281	1,222	1.8	716.3	716.3	716.7	0.4
AY	47,382	129	590	2.3	717.0	717.0	717.7	0.7
AZ	48,542	265	2,552	0.5	727.3	727.3	727.3	0.0
BA	48,882	246	2,244	0.6	727.3	727.3	727.3	0.0
BB	49,410	182	967	1.4	727.4	727.4	727.4	0.0

<sup>1</sup> Feet above confluence with Yellow River

**TABLE  
4**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**

**FLOODWAY DATA**

**DRIED INDIAN CREEK**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANGE-FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
EAST DRIED INDIAN CREEK								
A	300	219	693	2.1	716.4	714.6 <sup>2</sup>	715.6	1.0
B	1,160	91	259	5.7	718.8	718.8	718.8	0.0
C	2,188	94	622	2.4	723.1	723.1	723.6	0.5

<sup>1</sup> Feet above confluence with Dried Indian Creek

<sup>2</sup> Elevation computed without consideration of flooding controlled by Dried Indian Creek

**TABLE 4**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**

**FLOODWAY DATA**

**EAST DRIED INDIAN CREEK**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANGE-FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
LITTLE HAYNES CREEK								
A	580	480	2,041	2.7	660.7	643.2 <sup>3</sup>	644.2	1.0
B	1,570	480/321 <sup>2</sup>	2,067	2.6	660.7	647.5 <sup>3</sup>	648.0	0.5
C	2,355	485/0 <sup>2</sup>	1,508	3.6	660.7	651.8 <sup>3</sup>	652.4	0.6
D	3,829	83/80 <sup>2</sup>	879	6.2	660.7	659.2 <sup>3</sup>	660.0	0.8
E	4,048	103/60 <sup>2</sup>	738	7.4	660.7	659.8 <sup>3</sup>	660.8	1.0
F	4,468	116	454	12.0	666.7	666.7	666.7	0.0
G	4,700	208	973	5.6	677.0	677.0	677.0	0.0
H	5,139	96/20 <sup>2</sup>	546	10.0	678.4	678.4	678.6	0.2
I	7,410	282/230 <sup>2</sup>	2,800	1.0	684.9	684.9	685.9	1.0
J	9,310	226/52 <sup>2</sup>	1,788	3.0	686.6	686.6	687.4	0.8
K	11,110	358/284 <sup>2</sup>	2,579	2.1	689.0	689.0	690.0	1.0
L	13,074	711/197 <sup>2</sup>	5,034	1.1	690.3	690.3	691.3	1.0
M	14,507	678/329 <sup>2</sup>	4,451	1.2	691.0	691.0	692.0	1.0
N	17,196	176/92 <sup>2</sup>	1,318	3.3	693.6	693.6	694.5	0.9

<sup>1</sup> Feet above confluence with Big Haynes Creek

<sup>2</sup> Total width/width within Newton County

<sup>3</sup> Elevation computed without consideration of backwater effects from Big Haynes Creek

**TABLE 4**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**

**FLOODWAY DATA**

**LITTLE HAYNES CREEK**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
TOWN BRANCH (ROGERS BRANCH)								
A	388	17	112	8.4	661.6	658.5 <sup>2</sup>	659.5	1.0
B	729	35	166	5.7	662.2	662.2	663.2	1.0
C	1,487	128	860	1.1	673.6	673.6	673.7	0.1
D	1,650	70	422	2.2	673.6	673.6	673.7	0.1
E	1,800	60	288	3.3	673.7	673.7	673.7	0.0
F	1,950	30	157	6.0	673.9	673.9	674.1	0.2
G	2,089	34	180	5.2	674.5	674.5	675.2	0.7
H	2,705	100	535	1.8	682.2	682.2	682.7	0.5
I	2,924	106	678	1.4	682.3	682.3	682.9	0.6
J	3,340	95	321	2.9	684.7	684.7	684.7	0.0
K	3,714	84	270	3.5	687.2	687.2	687.2	0.0
L	4,038	65	305	3.1	690.3	690.3	690.4	0.1
M	4,352	30	189	3.0	693.3	693.3	693.4	0.1
N	4,808	24	126	4.5	694.0	694.0	694.3	0.3
O	5,515	85	165	3.5	718.3	718.3	718.3	0.0
P	5,639	119	206	2.8	718.9	718.9	718.9	0.0
Q	5,950	95	309	1.8	723.0	723.0	723.0	0.0
R	6,528	168	404	1.4	731.6	731.6	731.6	0.0
S	6,810	165	1,319	0.4	740.4	740.4	740.4	0.0

<sup>1</sup> Feet above confluence with Dried Indian Creek

<sup>2</sup> Elevation computed without consideration of backwater effects from Dried Indian Creek

**TABLE 4**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**

**FLOODWAY DATA**

**TOWN BRANCH (ROGERS BRANCH)**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
TURKEY CREEK								
A	1,418	145	590	3.0	637.9	625.3 <sup>2</sup>	626.2	0.9
B	3,171	84	535	3.3	637.9	630.1 <sup>2</sup>	630.8	0.7
C	4,140	43	292	6.1	637.9	632.6 <sup>2</sup>	633.3	0.7
D	5,879	47	321	5.5	640.7	640.7	641.7	1.0
E	8,074	43	304	4.1	648.8	648.8	649.8	1.0
F	8,908	26	165	7.5	652.2	652.2	653.1	0.9
G	10,278	220	1,751	0.7	665.9	665.9	665.9	0.0

<sup>1</sup> Feet above confluence with Yellow River

<sup>2</sup> Elevation computed without consideration of backwater effects from Yellow River

**TABLE  
4**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**

**FLOODWAY DATA**

**TURKEY CREEK**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
YELLOW RIVER								
A	85,395	353	5,084	5.1	574.0	574.0	574.7	0.7
B	85,668	387	4,457	5.9	574.3	574.3	575.0	0.7
C	86,050	260	2,323	11.3	574.9	574.9	575.5	0.6
D	87,670	680	3,757	7.0	590.4	590.4	590.4	0.0
E	88,782	451	3,822	6.8	622.1	622.1	622.1	0.0
F	89,892	876	7,591	3.4	625.8	625.8	626.2	0.4
G	90,810	798	7,872	3.3	627.1	627.1	627.7	0.6
H	91,955	515	6,584	4.0	628.4	628.4	629.1	0.7
I	93,445	1,274	16,038	1.6	629.6	629.6	630.5	0.9
J	95,618	307	4,742	5.4	630.7	630.7	631.6	0.9
K	97,674	546	7,295	3.5	633.8	633.8	634.8	1.0
L	100,800	739	9,922	2.6	636.6	636.6	637.6	1.0
M	102,495	1,376	21,368	1.2	637.6	637.6	638.5	0.9
N	104,108	1,463	20,871	1.2	637.9	637.9	638.8	0.9
O	108,382	1,587	22,620	1.1	638.3	638.3	639.2	0.9
P	110,742	2,378	31,649	0.8	638.6	638.6	639.5	0.9
Q	112,738	2,282	22,931	1.1	638.8	638.8	639.7	0.9
R	114,482	686	8,087	3.2	639.4	639.4	640.3	0.9
S	115,098	677	7,775	3.3	640.1	640.1	641.0	0.9
T	116,755	961	10,157	2.5	641.7	641.7	642.7	1.0

<sup>1</sup>Feet above confluence with South River

**TABLE  
4**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**

**FLOODWAY DATA**

**YELLOW RIVER**



FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANGE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
YELLOW RIVER (CONTINUED)								
U	117,950	263	5,061	5.0	642.9	642.9	643.8	0.9
V	118,531	299	6,759	3.7	643.8	643.8	644.8	1.0
W	120,028	290	4,815	5.2	644.7	644.7	645.6	0.9
X	121,903	886	10,824	2.3	646.7	646.7	647.7	1.0
Y	124,447	429	7,559	3.2	648.2	648.2	649.2	1.0
Z	127,243	762	13,041	1.8	649.5	649.5	650.5	1.0
AA	128,716	789	13,067	1.8	649.9	649.9	650.9	1.0
AB	131,396	320	6,328	3.8	650.8	650.8	651.8	1.0
AC	133,458	873	17,928	1.3	651.7	651.7	652.7	1.0
AD	135,525	1,144	23,594	1.0	651.9	651.9	652.9	1.0

<sup>1</sup>Feet above confluence with South River

**TABLE 4**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**

**FLOODWAY DATA**

**YELLOW RIVER**

## **5.0 INSURANCE APPLICATIONS**

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

### Zone A

Zone A is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no BFEs or base flood depths are shown within this zone.

### Zone AE

Zone AE is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by detailed methods. In most instances, whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

### Zone X

Zone X is the flood insurance risk zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by levees. No BFEs or base flood depths are shown within this zone.

## **6.0 FLOOD INSURANCE RATE MAP**

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance risk zones as described in Section 5.0 and, in the 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole-foot BFEs or average depths. Insurance agents use the zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols, the 1- and 0.2-percent-annual-chance floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The countywide FIRM presents flooding information for the entire geographic area of Newton County. Previously, FIRMs were prepared for each incorporated community and the unincorporated areas of the County identified as flood-prone. This countywide FIRM also includes flood-hazard information that was presented separately on Flood Boundary and Floodway Maps, where applicable. Historical data relating to the maps prepared for each community are presented in Table 5.

## **7.0 OTHER STUDIES**

This report either supersedes or is compatible with all previous studies on streams studied in this report and should be considered authoritative for purposes of the NFIP.

## **8.0 LOCATION OF DATA**

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting FEMA, Federal Insurance and Mitigation Division, 3003 Chamblee-Tucker Road, Atlanta, Georgia 30341.

## **9.0 BIBLIOGRAPHY AND REFERENCES**

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3. Federal Emergency Management Agency, Flood Insurance Study, City of Porterdale, Newton County, Georgia, Flood Insurance Study Report, July 19, 1982; Flood Insurance Rate Map, January 19, 1983.
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5. McIntosh Trail Area Planning and Development Commission, McIntosh Trail Areawide Future Land Use Plan, Report No. MTAPDC-RE-1-76, 1976.
6. U.S. Census Bureau, American Fact Finder, Newton County, Georgia, 2000. Retrieved on December 16, 2005, from <http://factfinder.census.gov>.

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE	FIRM EFFECTIVE DATE	FIRM REVISION DATE
Covington, City of	June 28, 1974	April 25, 1975	March 2, 1983	September 5, 2007
*Mansfield, Town of	September 5, 2007	None	September 5, 2007	None
*Newborn, Town of	September 5, 2007	None	September 5, 2007	None
Newton County (Unincorporated Areas)	April 23, 1976	None	July 5, 1983	September 5, 2007
Oxford, Town of	April 11, 1975	None	September 5, 2007	None
Porterdale, City of	April 12, 1974	February 6, 1976	January 19, 1983	September 5, 2007

\*No Flood Hazard Areas Identified

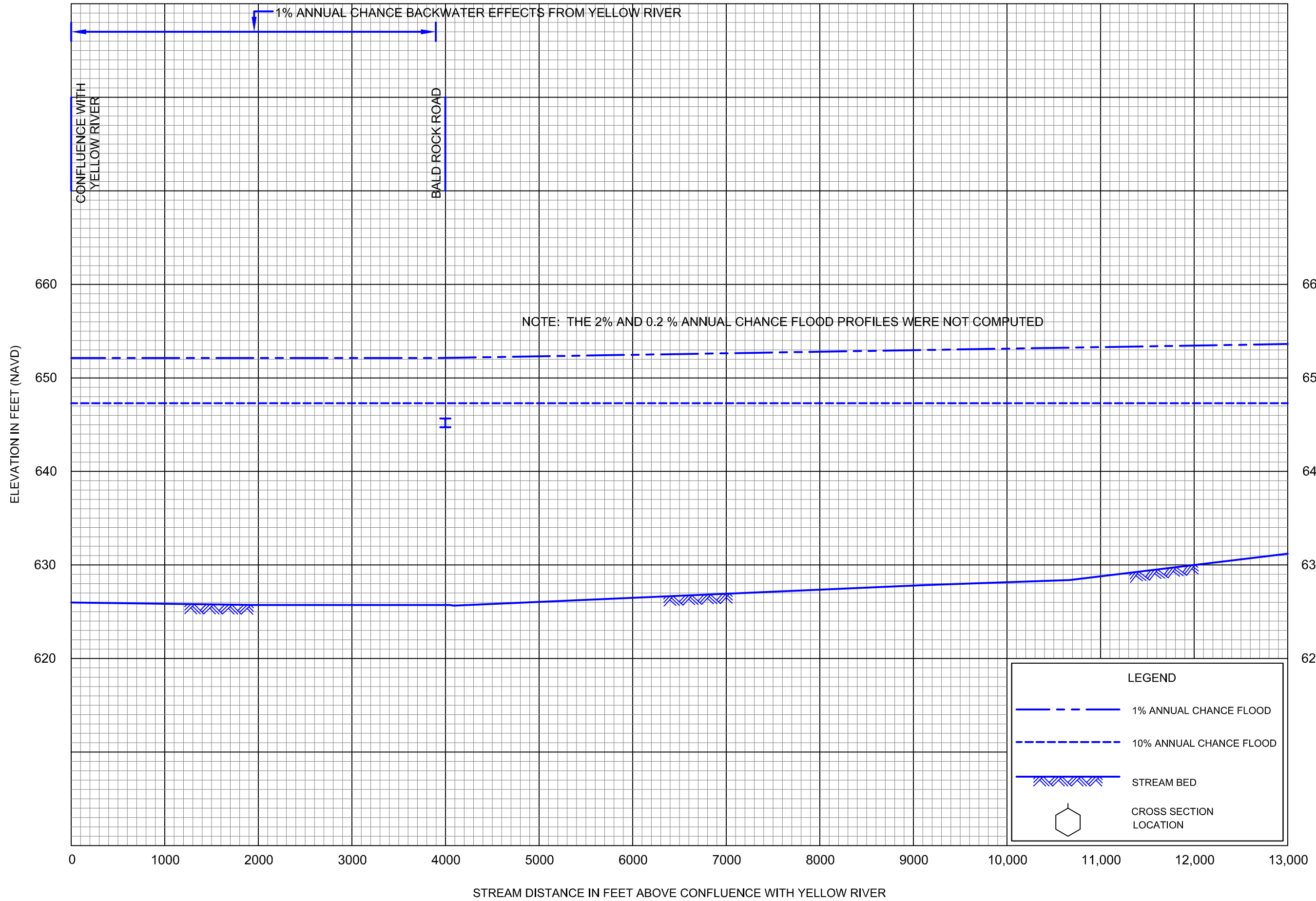
**TABLE 5**

**FEDERAL EMERGENCY MANAGEMENT AGENCY**

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**

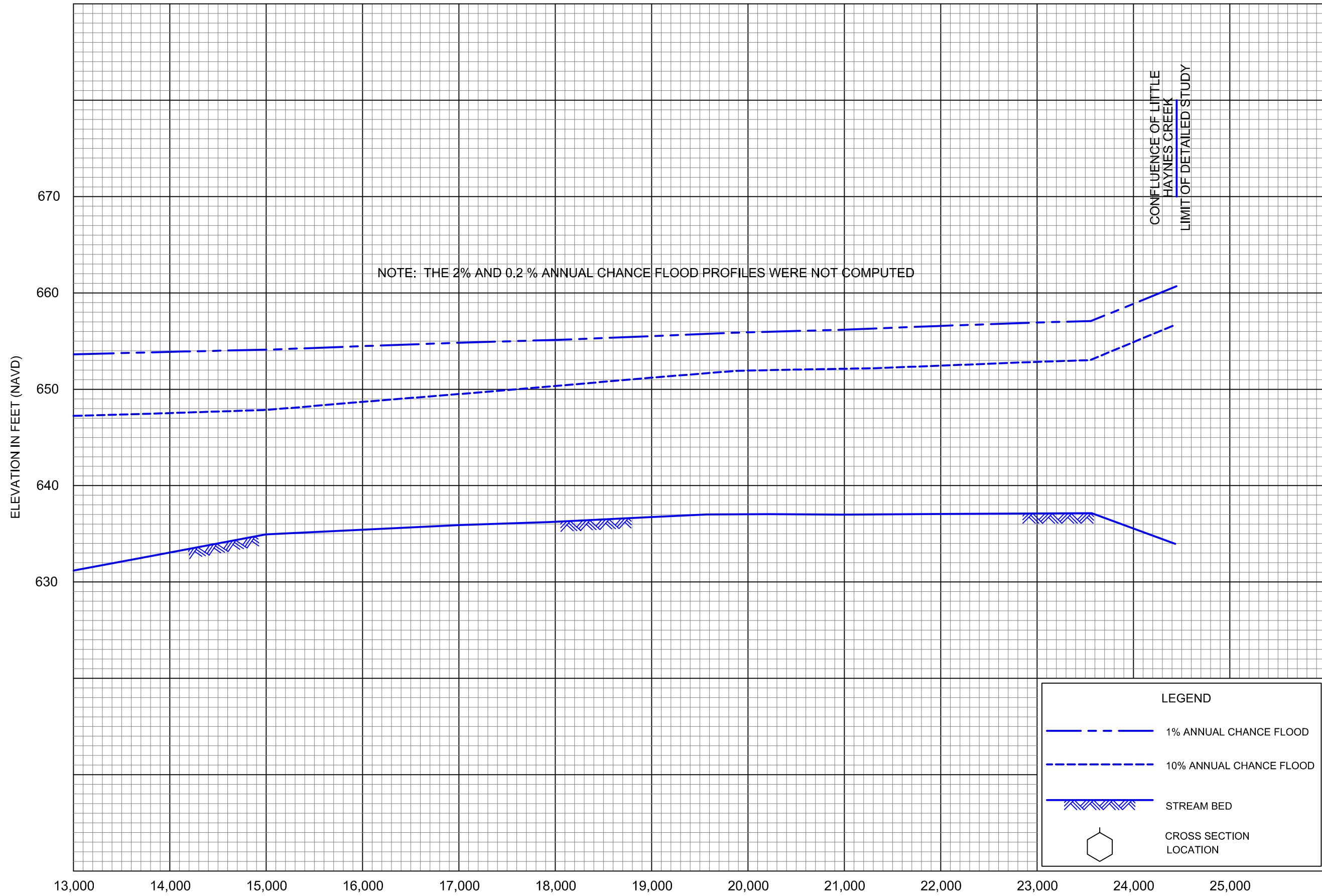
**COMMUNITY MAP HISTORY**

7. The Weather Channel, Monthly Averages for Covington, Georgia. Retrieved November 14, 2006, from <http://www.weather.com>.
8. U.S. Geological Survey, Floods in Georgia, Magnitude and Frequency, U.S. Department of Interior, 1979.
9. Hydraulic Engineering Center, HEC-2 Water Surface Profiles, U.S. Army Corps of Engineers, Davis, California, August 1979.
10. National Geodetic Survey, VERTCON-North American Vertical Datum Conversion Utility. Retrieved on September 20, 2005, from [http://www.ngs.noaa.gov/cgi-bin/VERTCON/vert\\_con.prl](http://www.ngs.noaa.gov/cgi-bin/VERTCON/vert_con.prl)
11. Newton County, Georgia, Digital Topography, Contour Interval of 2-feet, 2003.



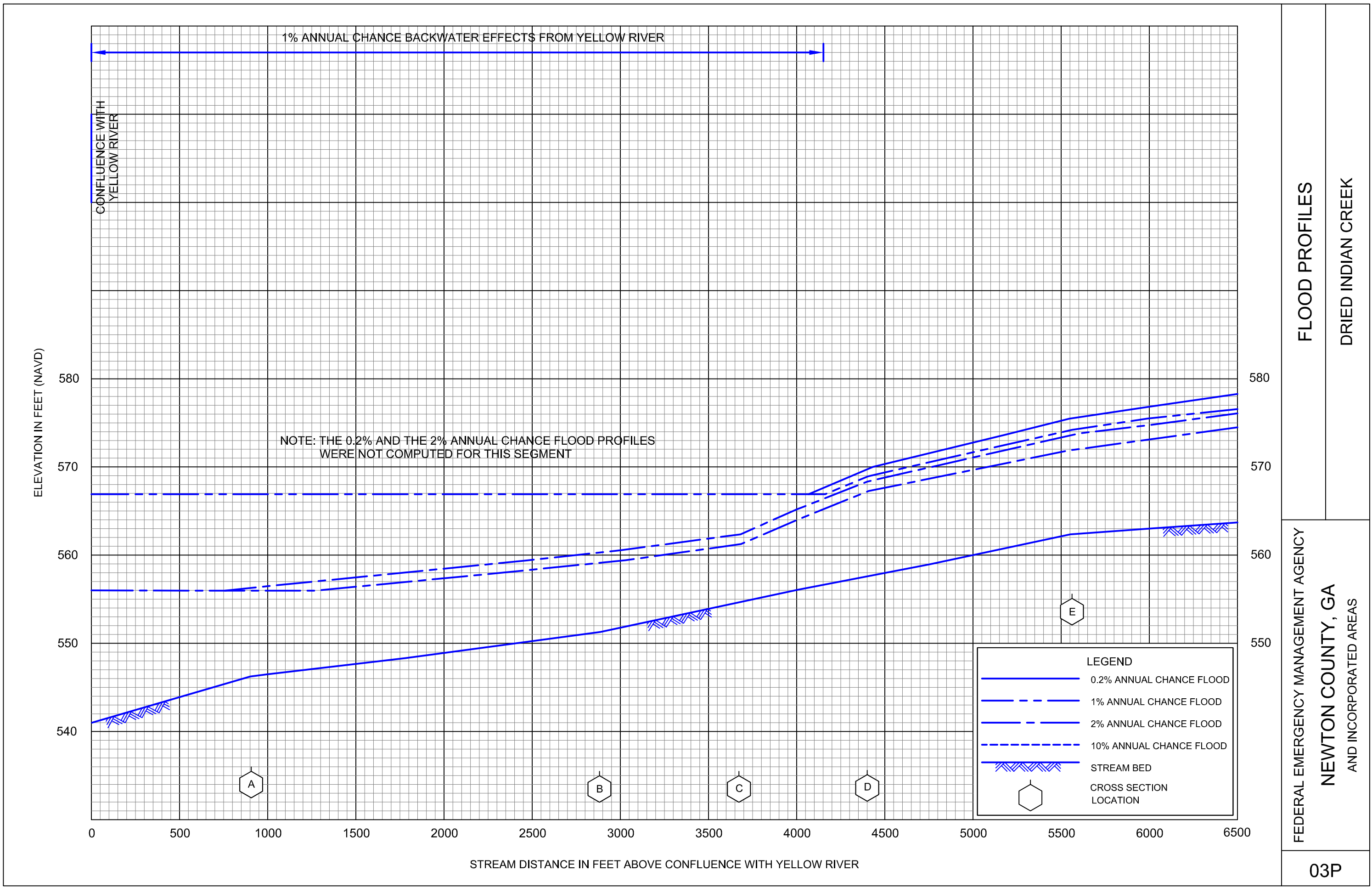
**FLOOD PROFILES**  
**BIG HAYNES CREEK**

FEDERAL EMERGENCY MANAGEMENT AGENCY  
**NEWTON COUNTY, GA**  
 AND INCORPORATED AREAS

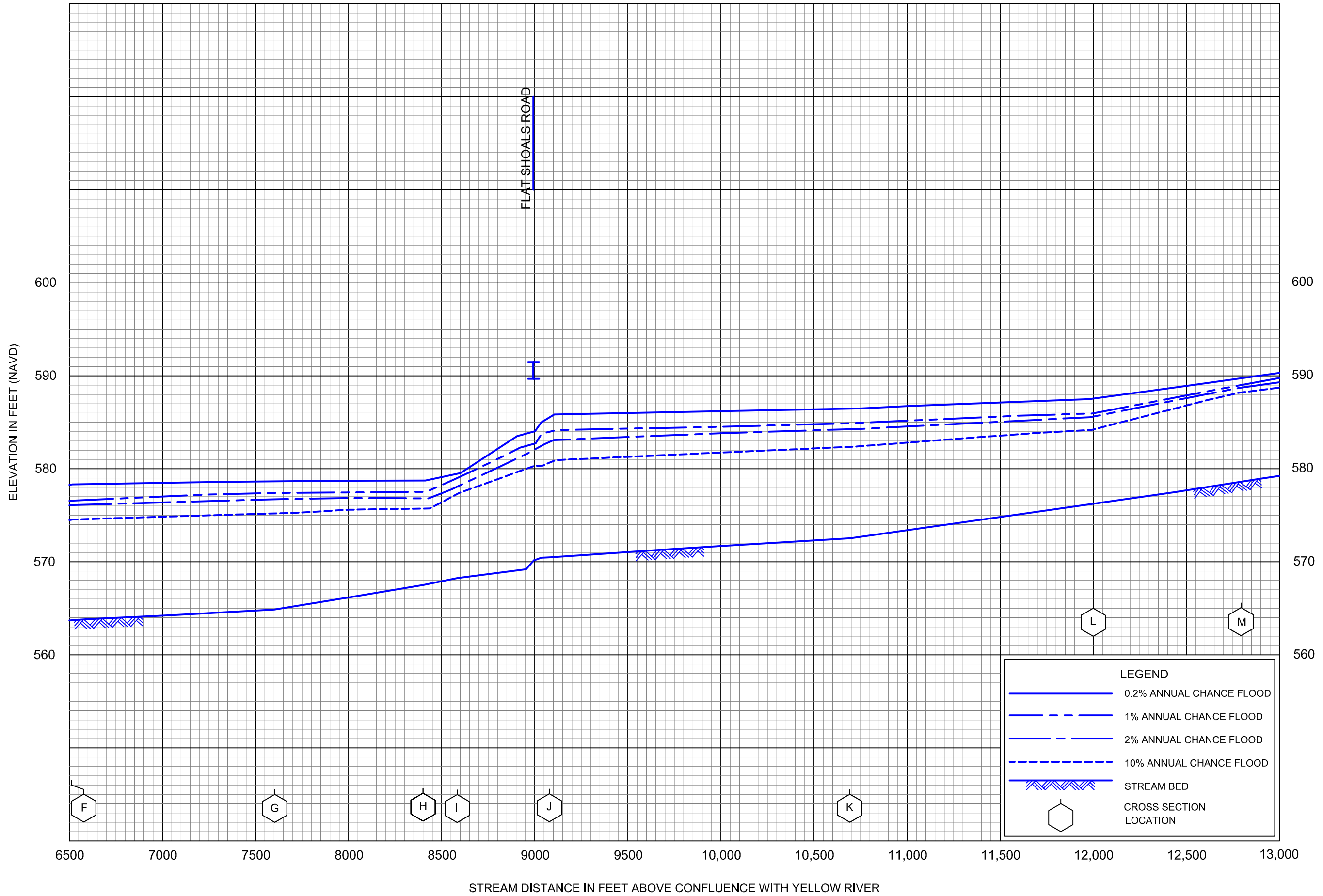


FLOOD PROFILES  
BIG HAYNES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY  
NEWTON COUNTY, GA  
AND INCORPORATED AREAS











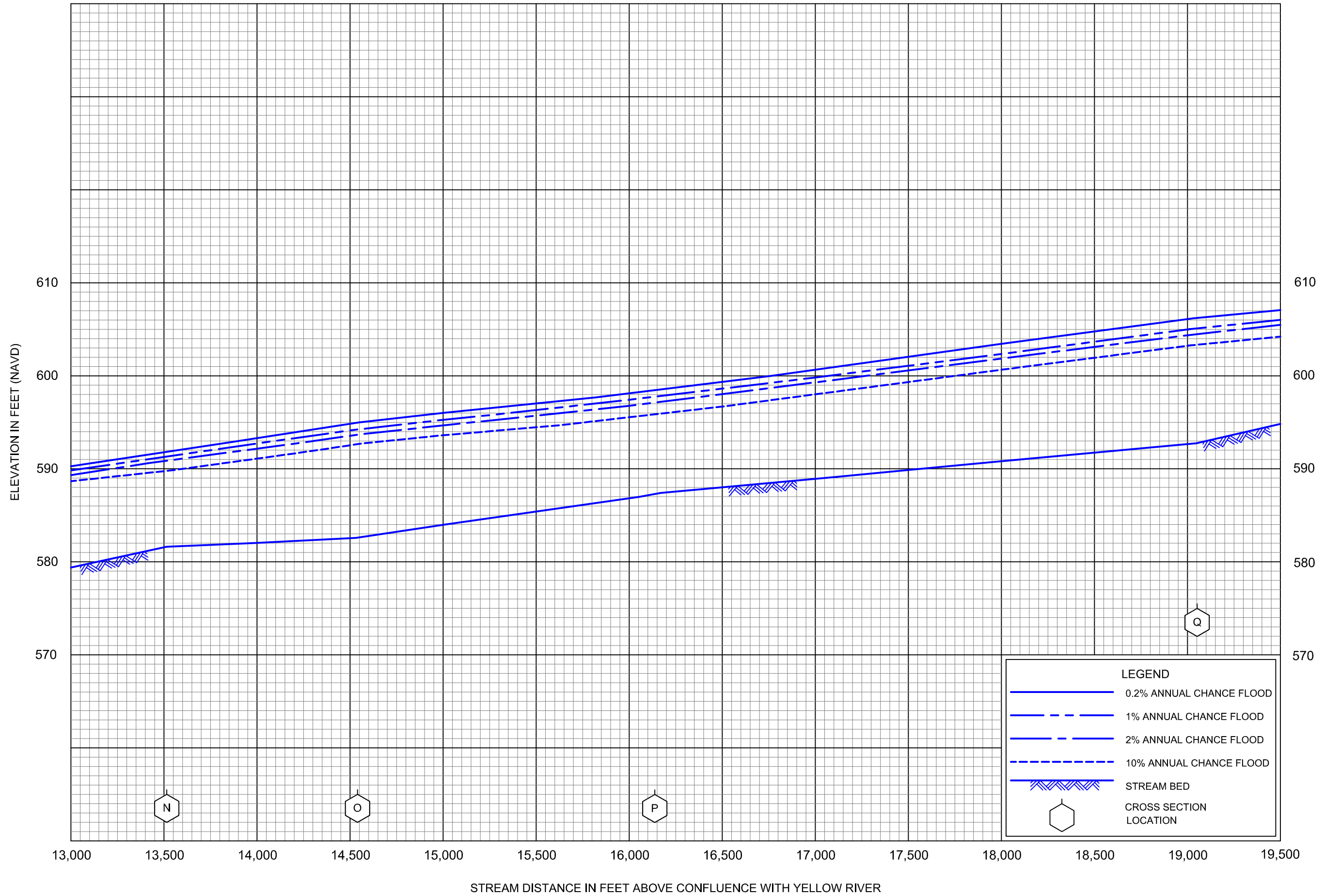


FLOOD PROFILES  
DRIED INDIAN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY  
NEWTON COUNTY, GA  
AND INCORPORATED AREAS

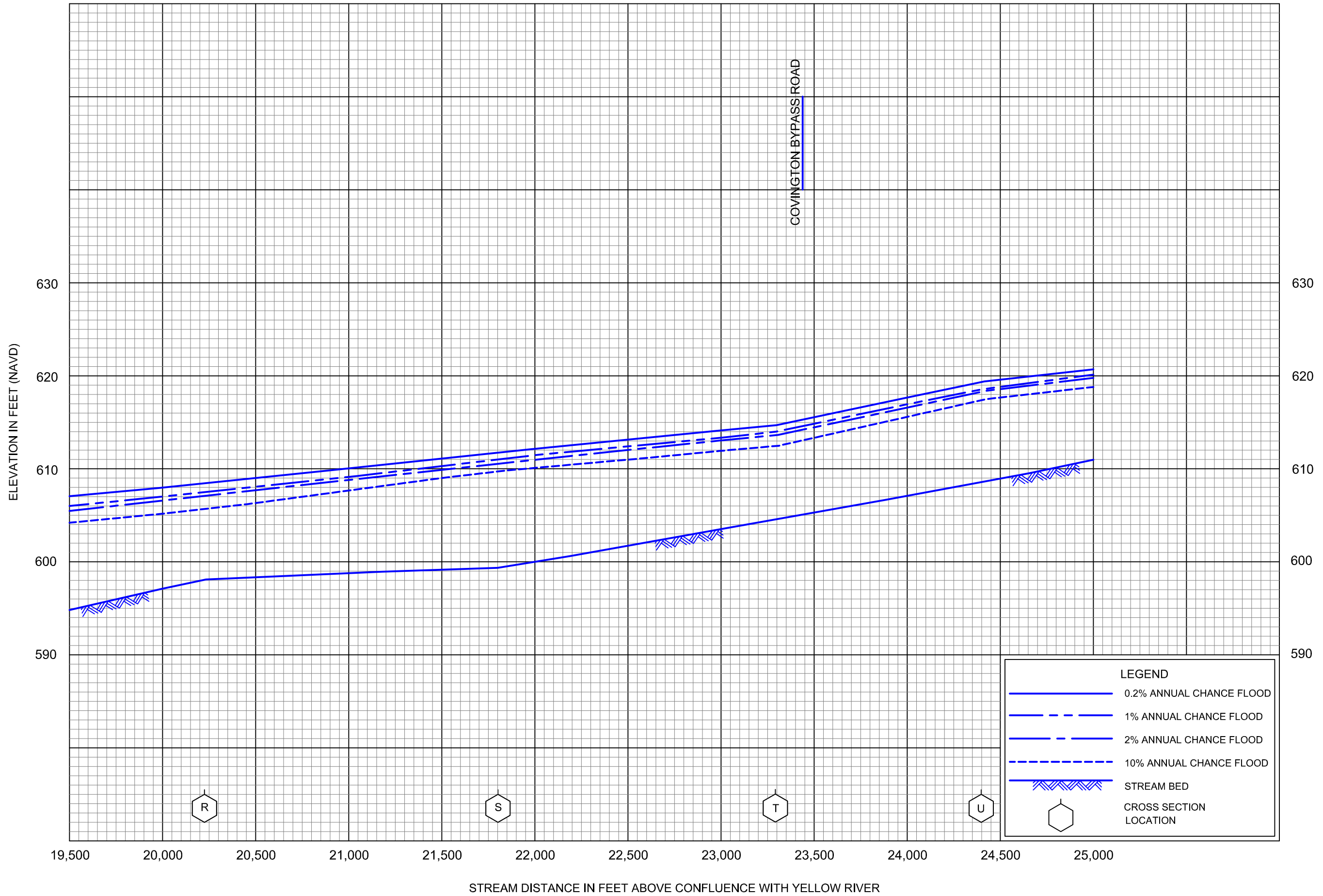
**LEGEND**

-  0.2% ANNUAL CHANCE FLOOD
-  1% ANNUAL CHANCE FLOOD
-  2% ANNUAL CHANCE FLOOD
-  10% ANNUAL CHANCE FLOOD
-  STREAM BED
-  CROSS SECTION LOCATION



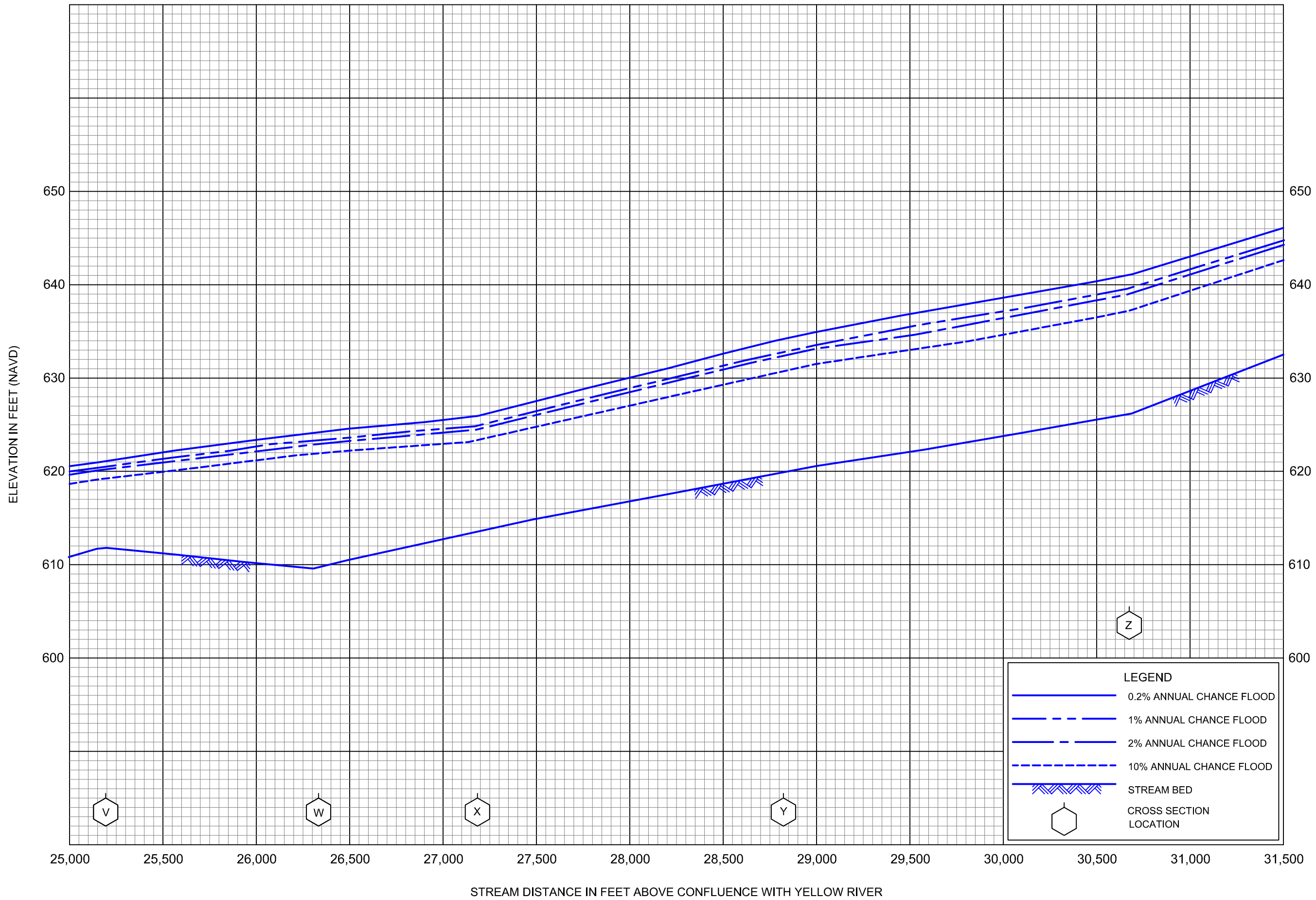
**FLOOD PROFILES**  
**DRIED INDIAN CREEK**

FEDERAL EMERGENCY MANAGEMENT AGENCY  
**NEWTON COUNTY, GA**  
AND INCORPORATED AREAS



FLOOD PROFILES  
DRIED INDIAN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY  
NEWTON COUNTY, GA  
AND INCORPORATED AREAS

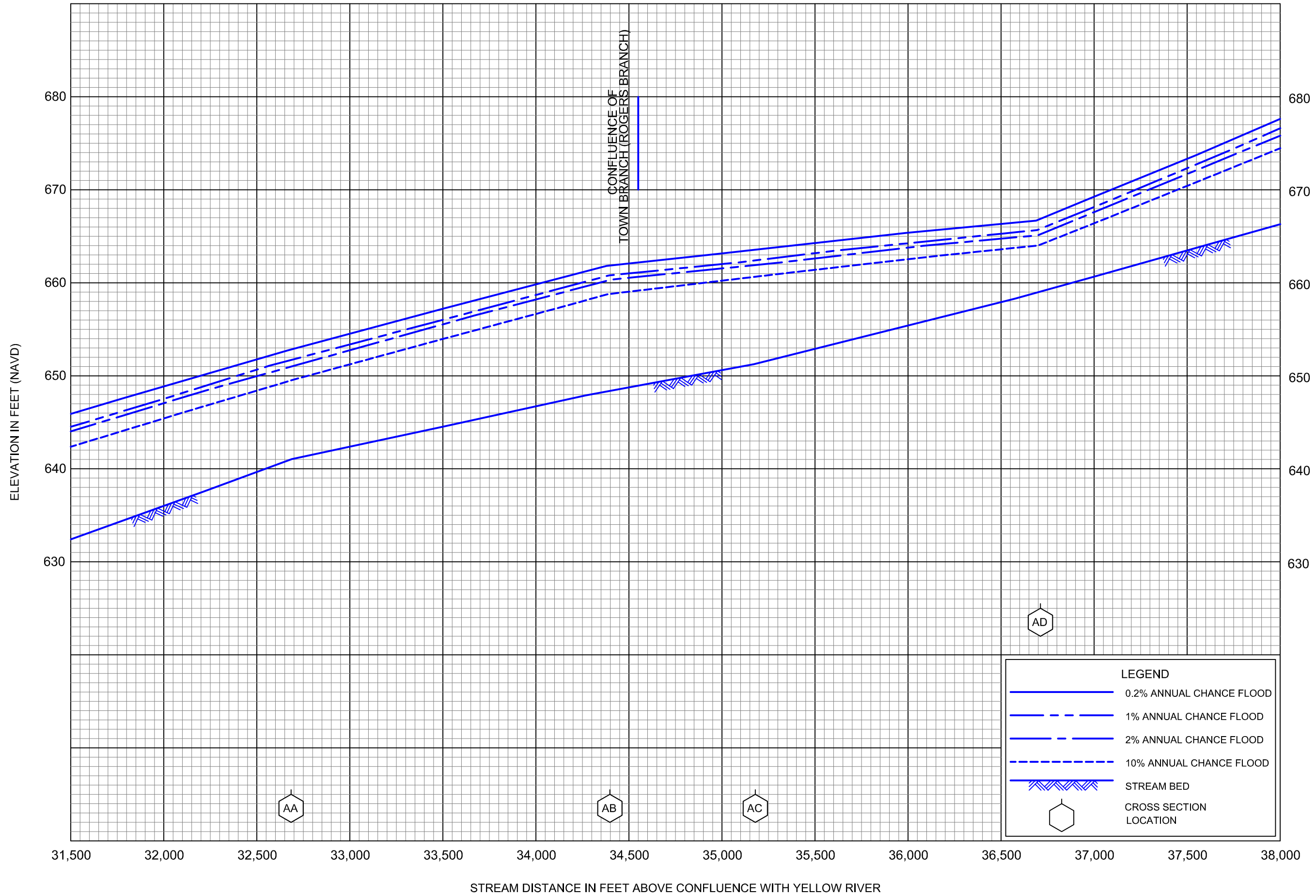


FLOOD PROFILES

DRIED INDIAN CREEK

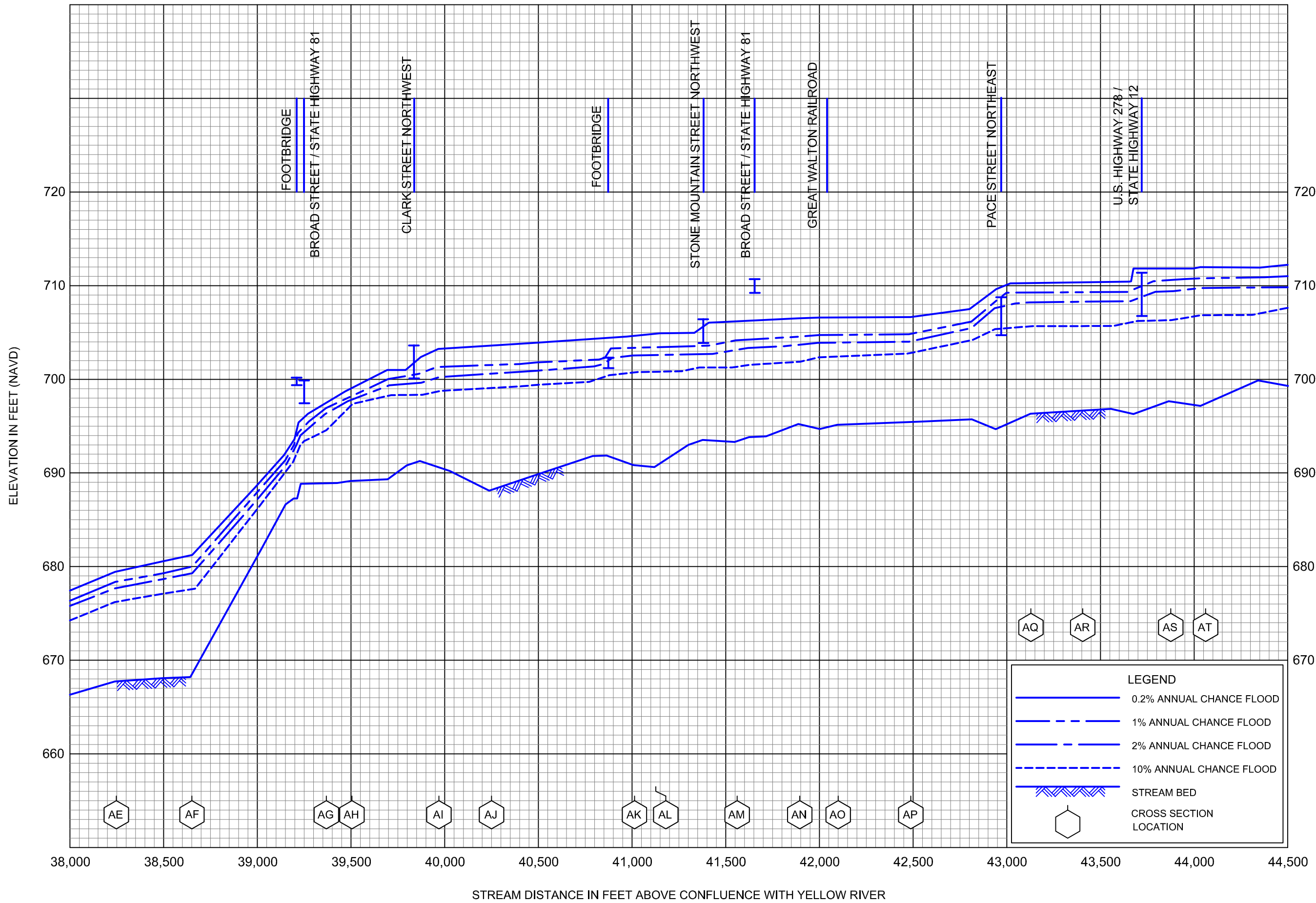
FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS



FLOOD PROFILES  
DRIED INDIAN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY  
NEWTON COUNTY, GA  
AND INCORPORATED AREAS

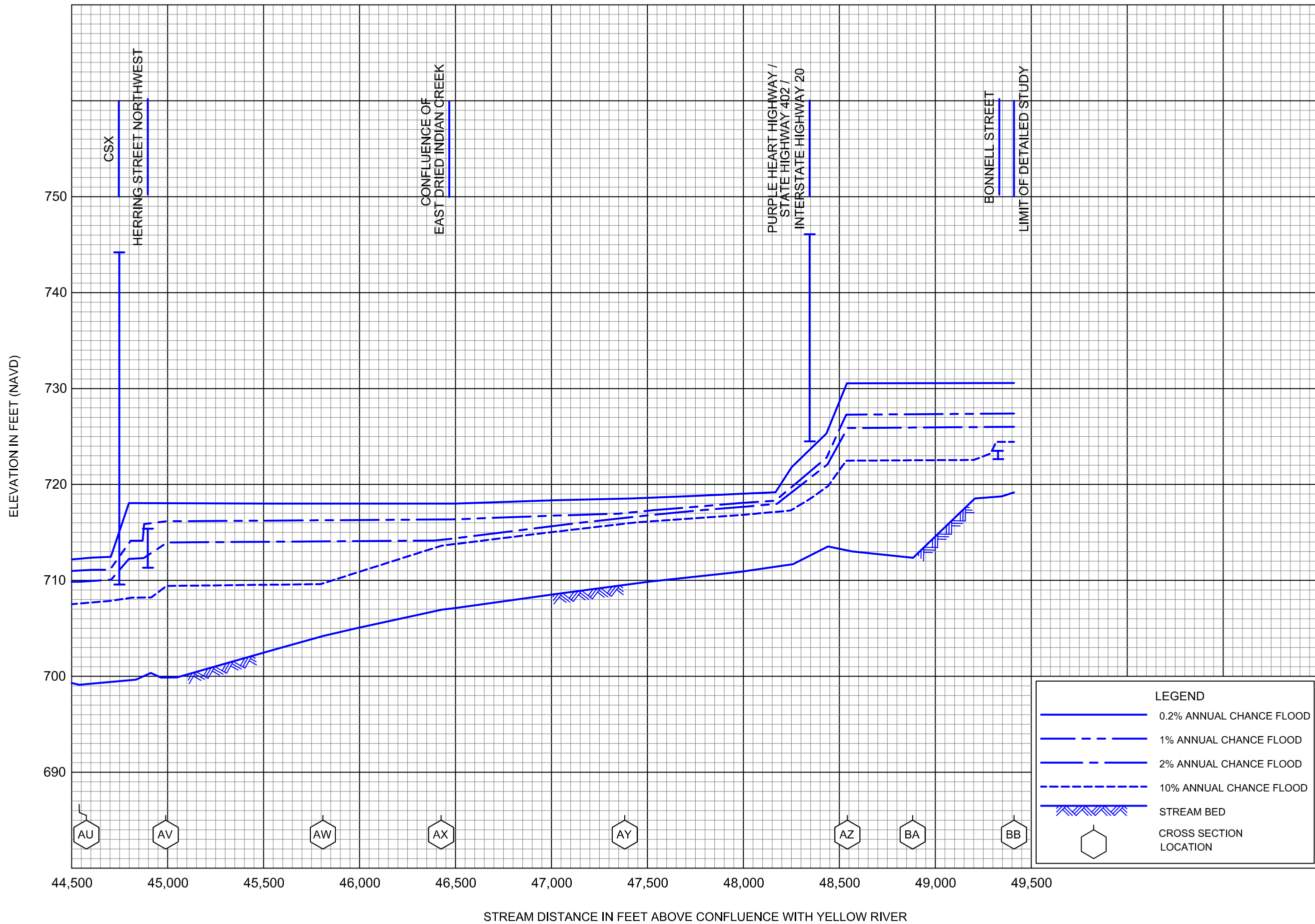


**FLOOD PROFILES**

**DRIED INDIAN CREEK**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA**  
AND INCORPORATED AREAS

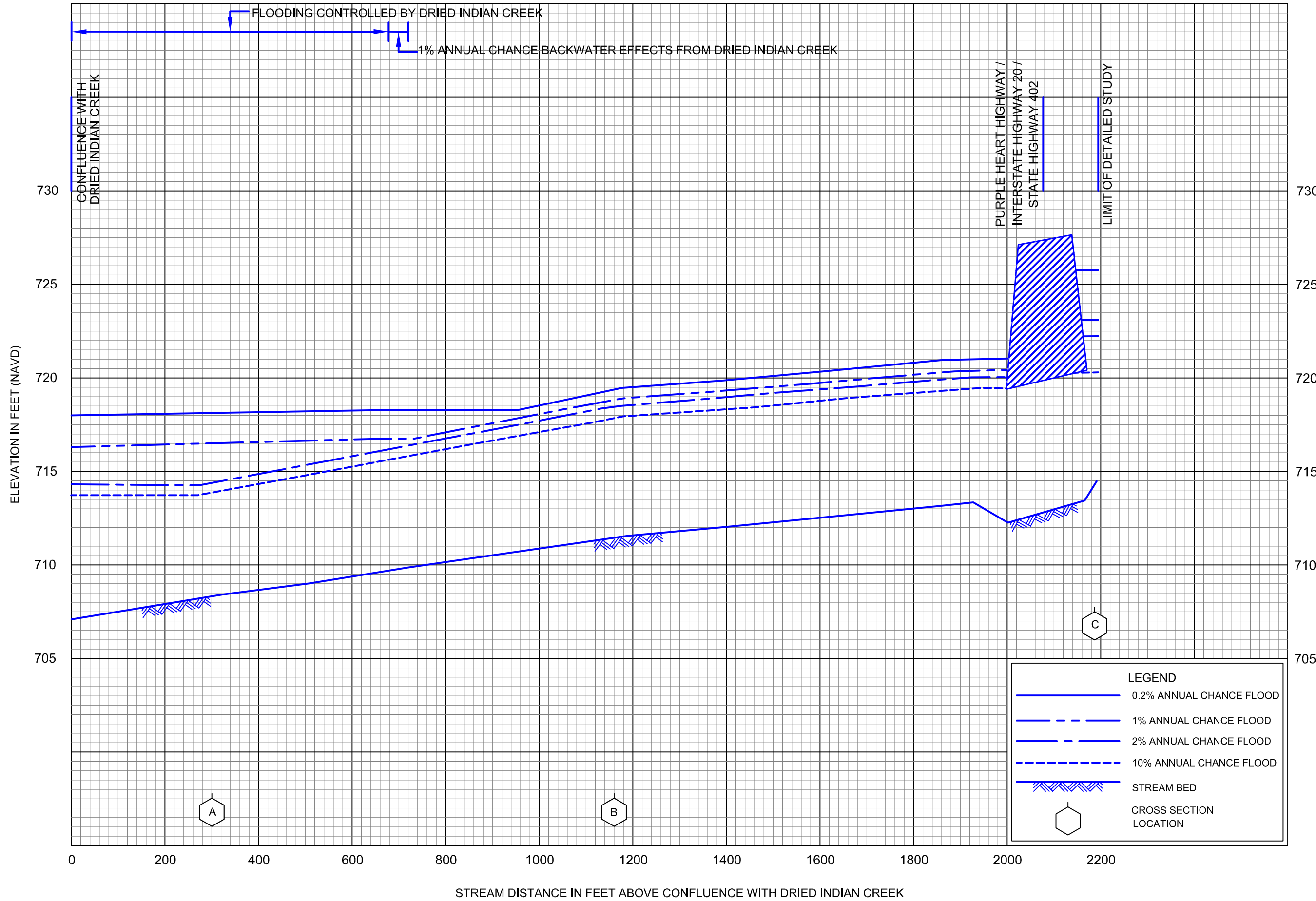


FLOOD PROFILES

DRIED INDIAN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS



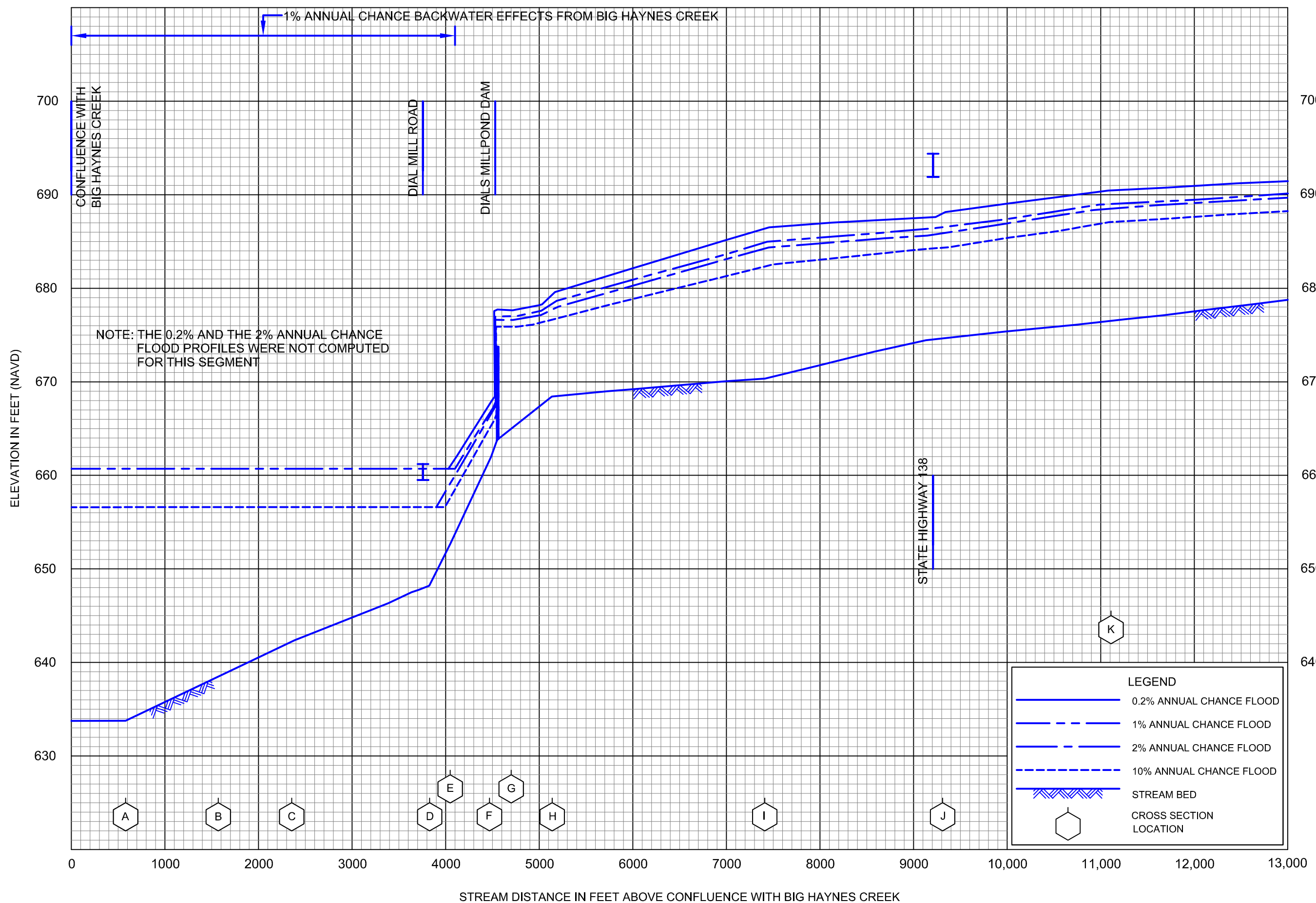
FLOOD PROFILES

EAST DRIED INDIAN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

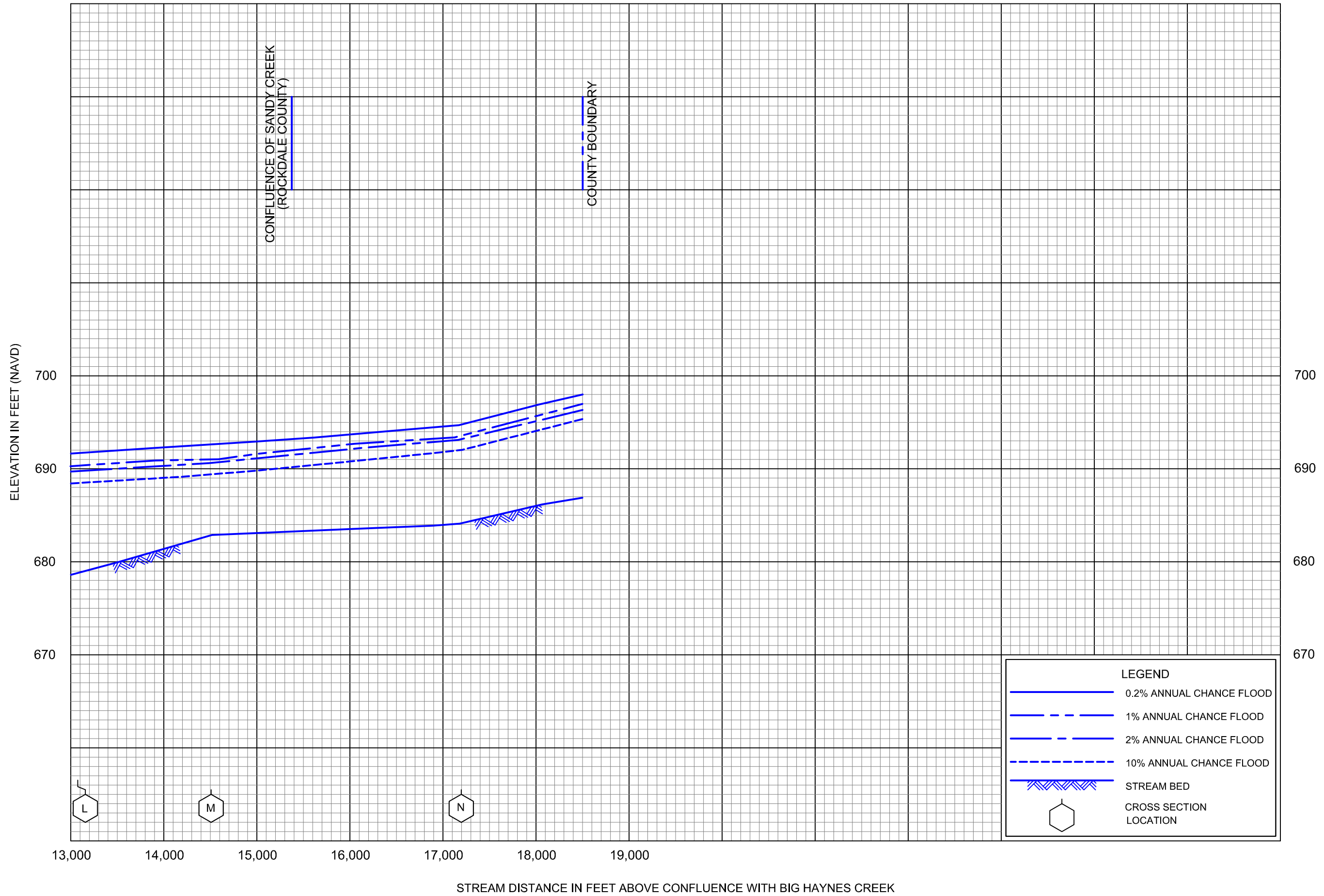
NEWTON COUNTY, GA  
AND INCORPORATED AREAS





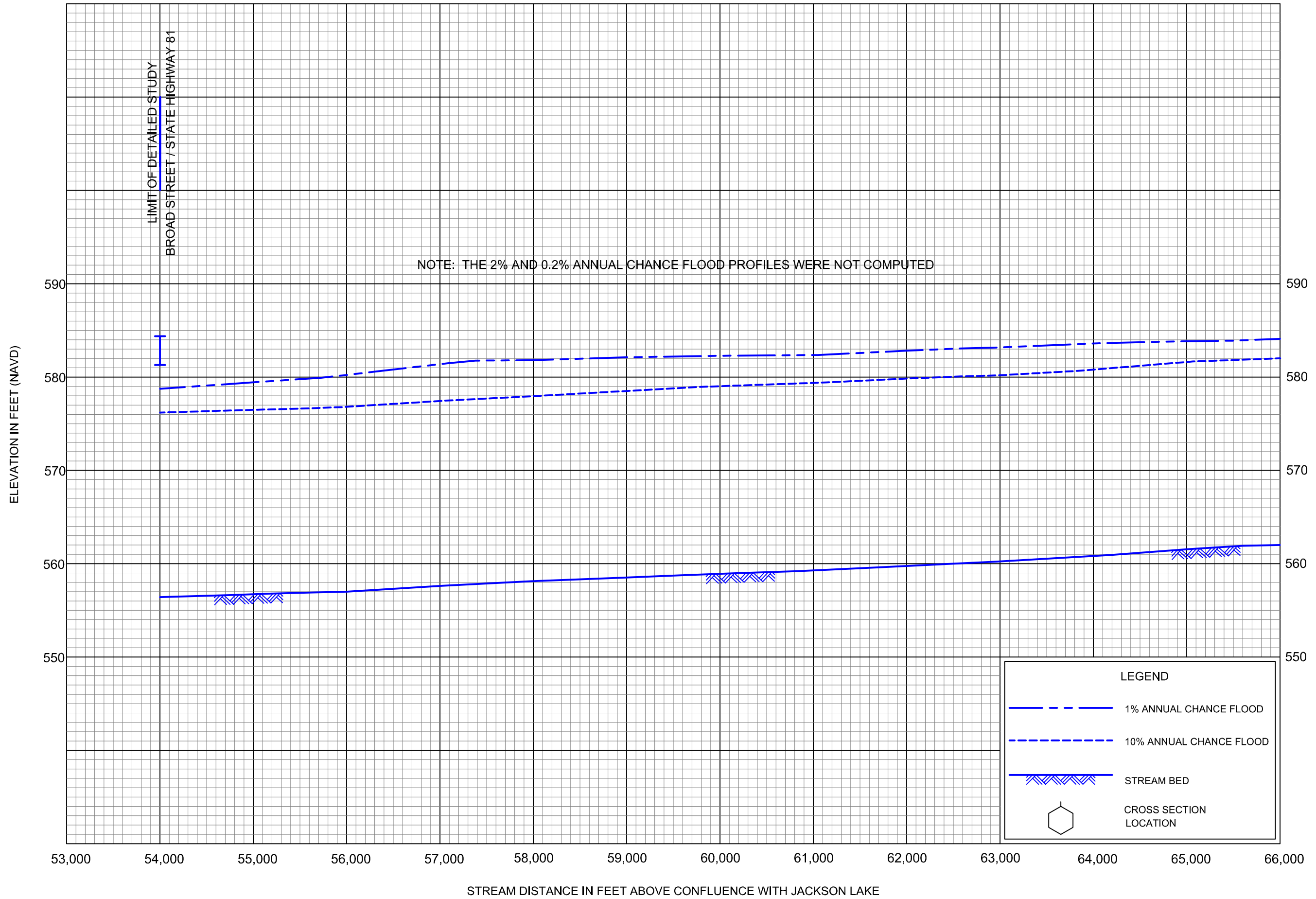
FLOOD PROFILES  
LITTLE HAYNES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY  
NEWTON COUNTY, GA  
AND INCORPORATED AREAS



**FLOOD PROFILES**  
LITTLE HAYNES CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY  
**NEWTON COUNTY, GA**  
AND INCORPORATED AREAS

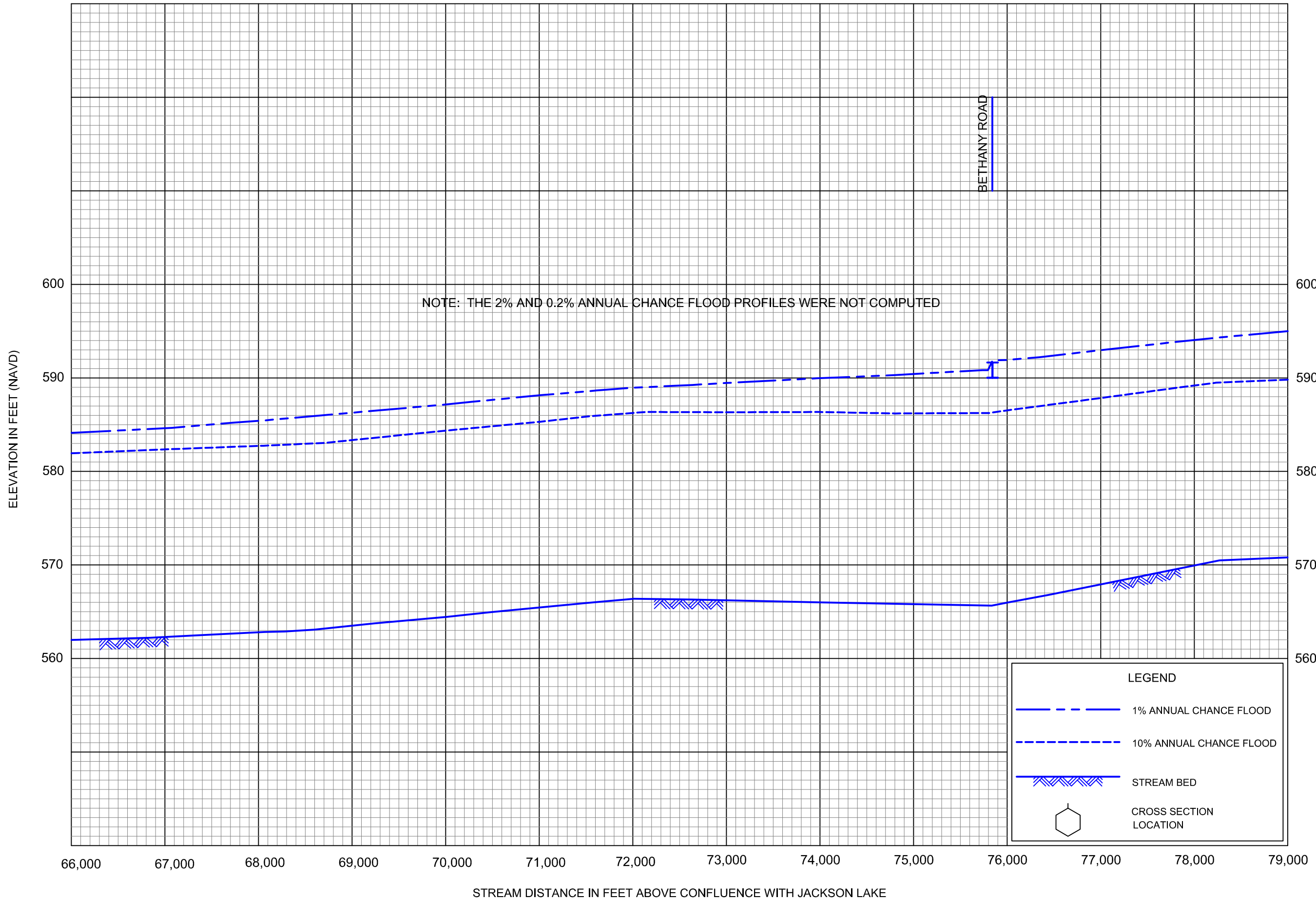


**FLOOD PROFILES**

**SOUTH RIVER**

FEDERAL EMERGENCY MANAGEMENT AGENCY

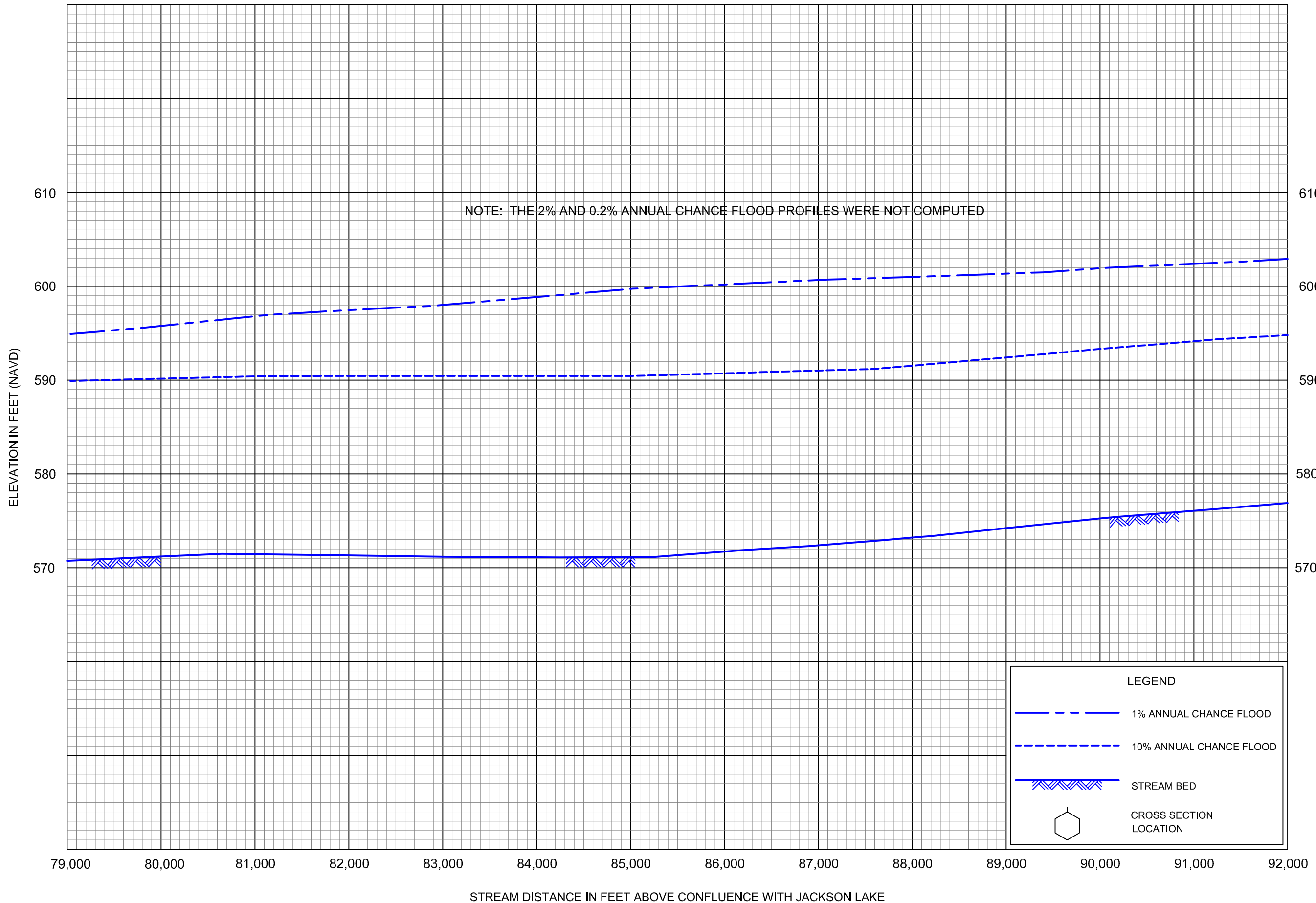
**NEWTON COUNTY, GA**  
AND INCORPORATED AREAS



BETHANY ROAD

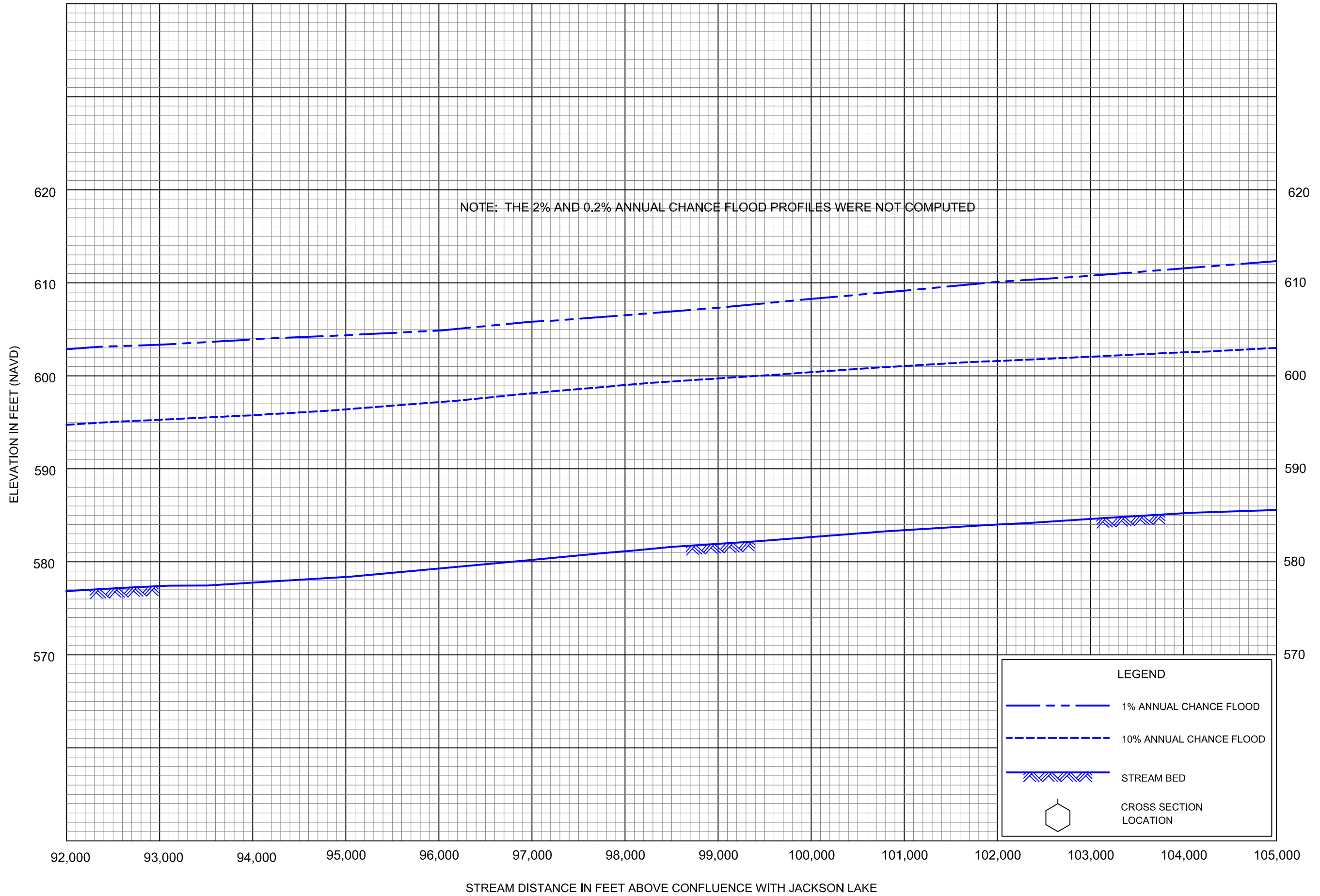
FLOOD PROFILES  
SOUTH RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY  
NEWTON COUNTY, GA  
AND INCORPORATED AREAS



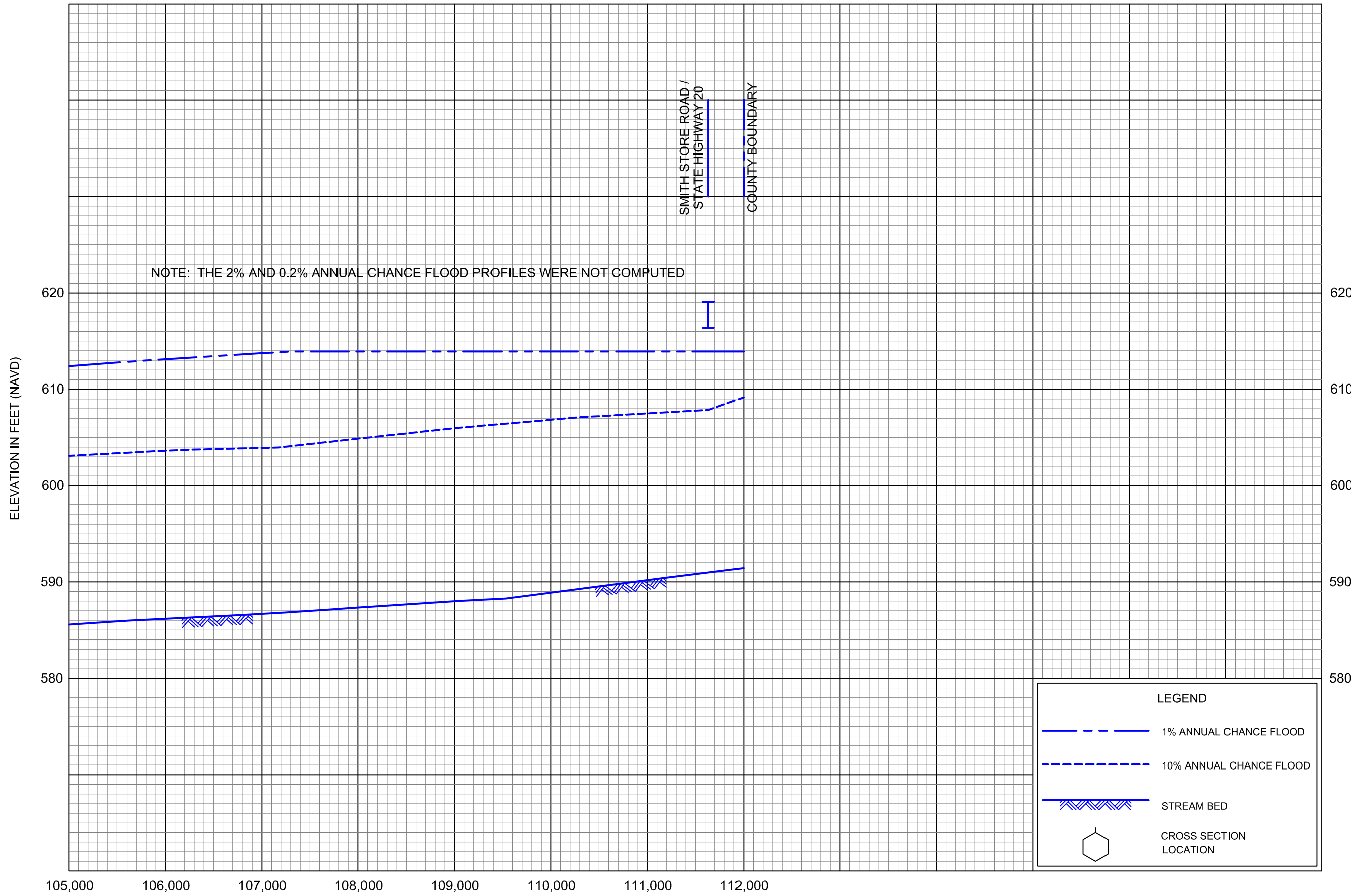
**FLOOD PROFILES  
SOUTH RIVER**

FEDERAL EMERGENCY MANAGEMENT AGENCY  
**NEWTON COUNTY, GA**  
AND INCORPORATED AREAS



FLOOD PROFILES  
SOUTH RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY  
NEWTON COUNTY, GA  
AND INCORPORATED AREAS

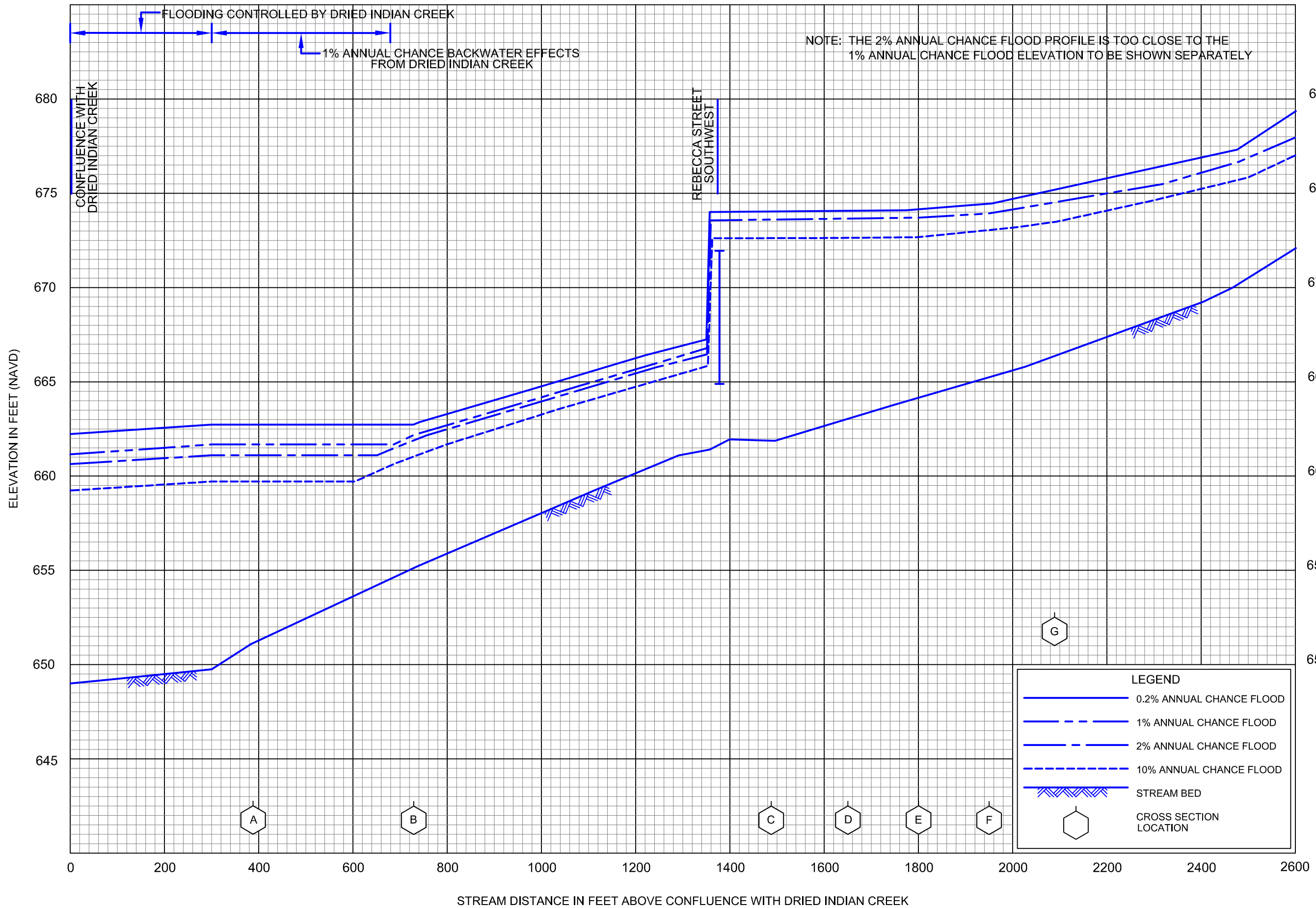


FLOOD PROFILES

SOUTH RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS



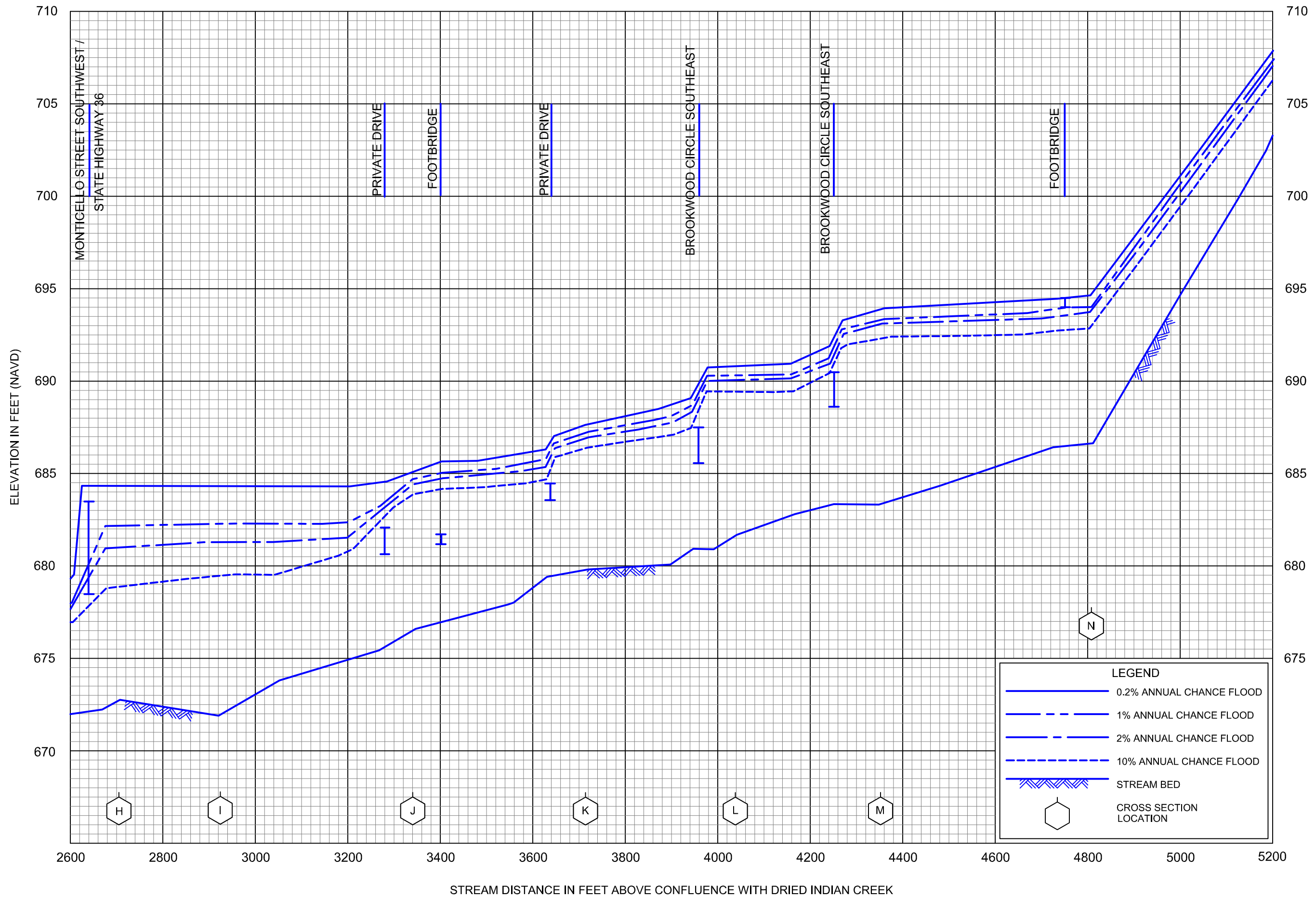
**FLOOD PROFILES**

**TOWN BRANCH (ROGERS BRANCH)**

**FEDERAL EMERGENCY MANAGEMENT AGENCY**

**NEWTON COUNTY, GA  
AND INCORPORATED AREAS**



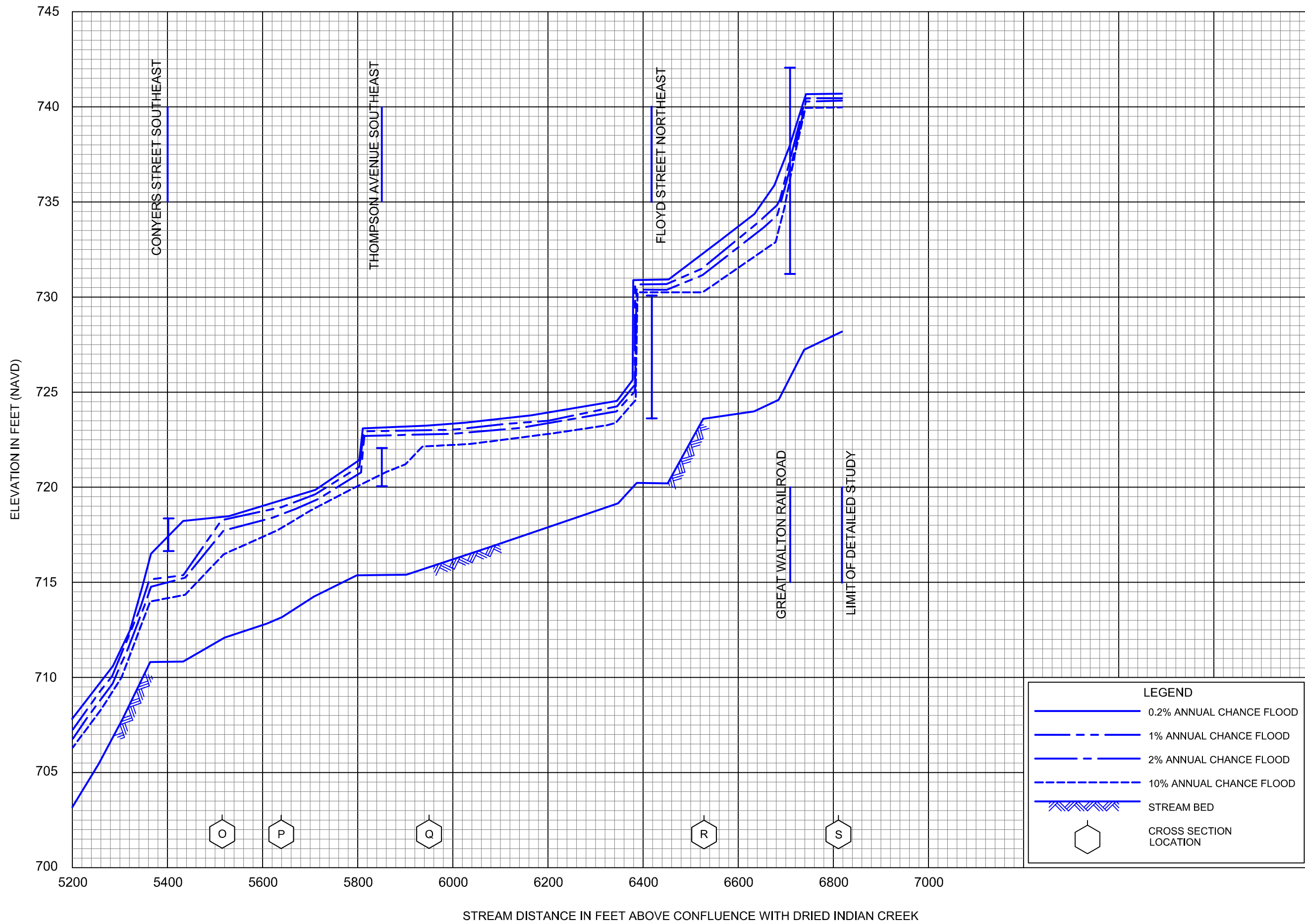


**FLOOD PROFILES**

TOWN BRANCH (ROGERS BRANCH)

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS



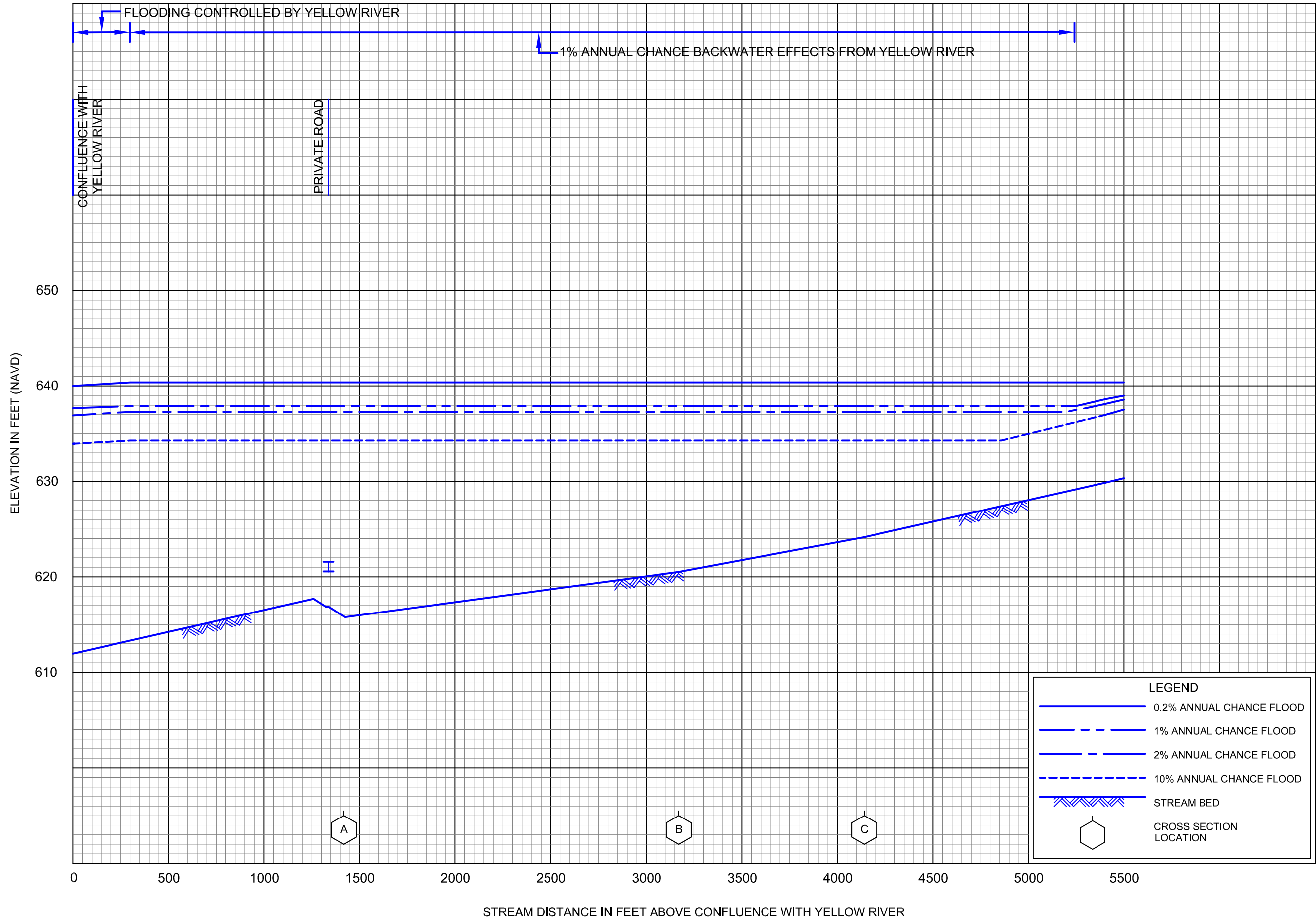
**LEGEND**

- 0.2% ANNUAL CHANCE FLOOD
- - - 1% ANNUAL CHANCE FLOOD
- . - . 2% ANNUAL CHANCE FLOOD
- . . . . 10% ANNUAL CHANCE FLOOD
- / / / / STREAM BED
- CROSS SECTION LOCATION

FLOOD PROFILES  
TOWN BRANCH (ROGERS BRANCH)

FEDERAL EMERGENCY MANAGEMENT AGENCY  
NEWTON COUNTY, GA  
AND INCORPORATED AREAS

21P

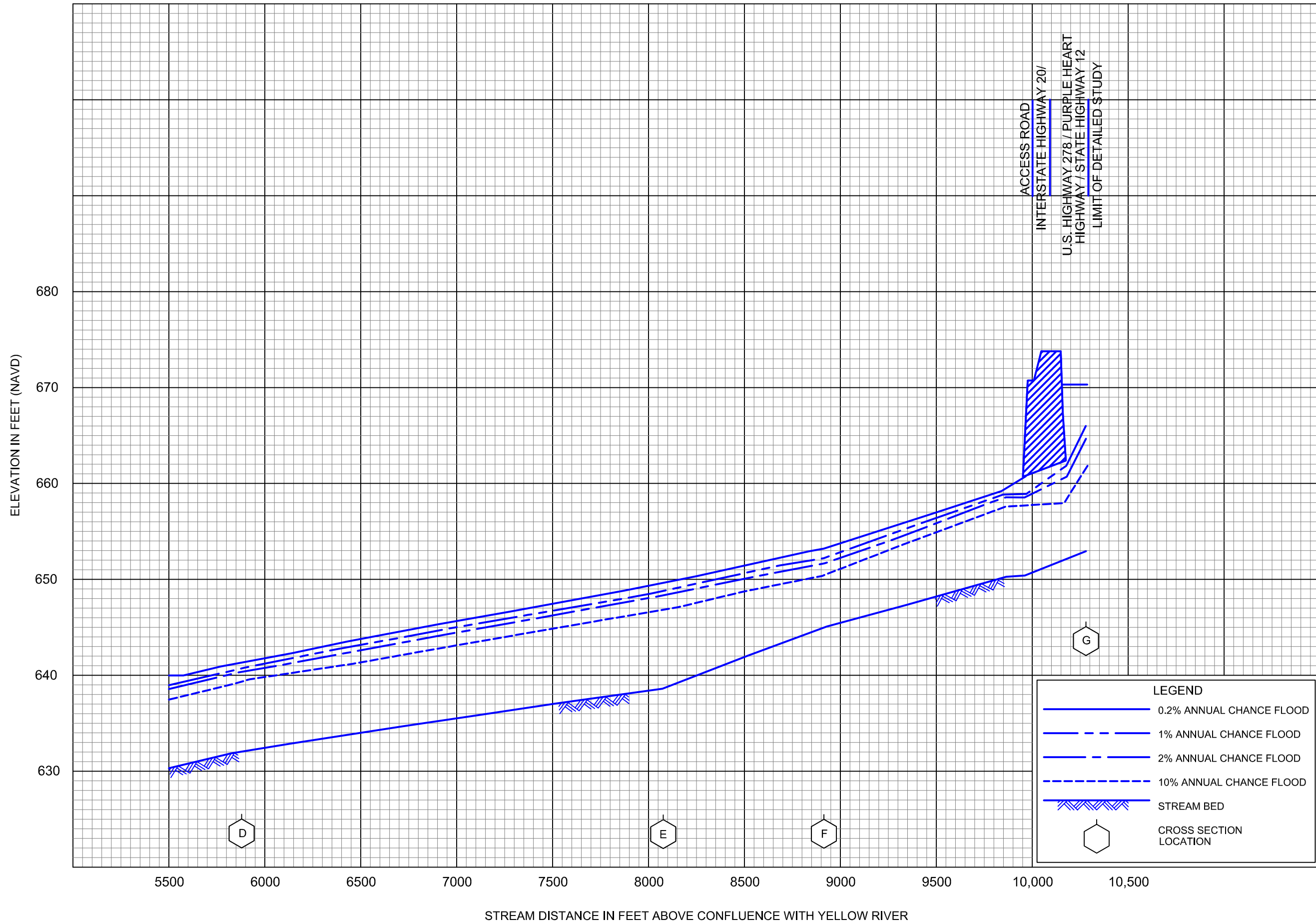


FLOOD PROFILES

TURKEY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS

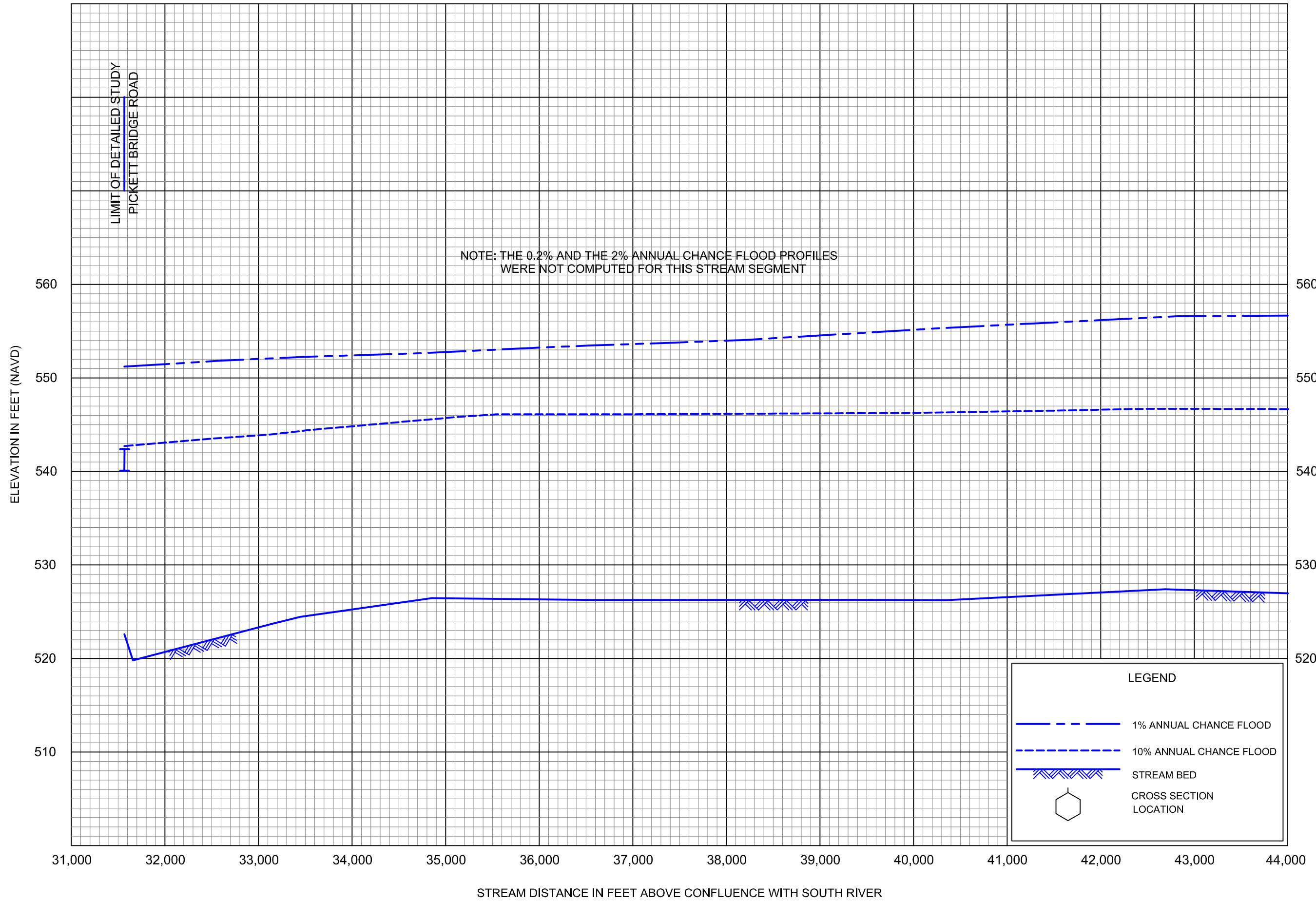


FLOOD PROFILES

TURKEY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS

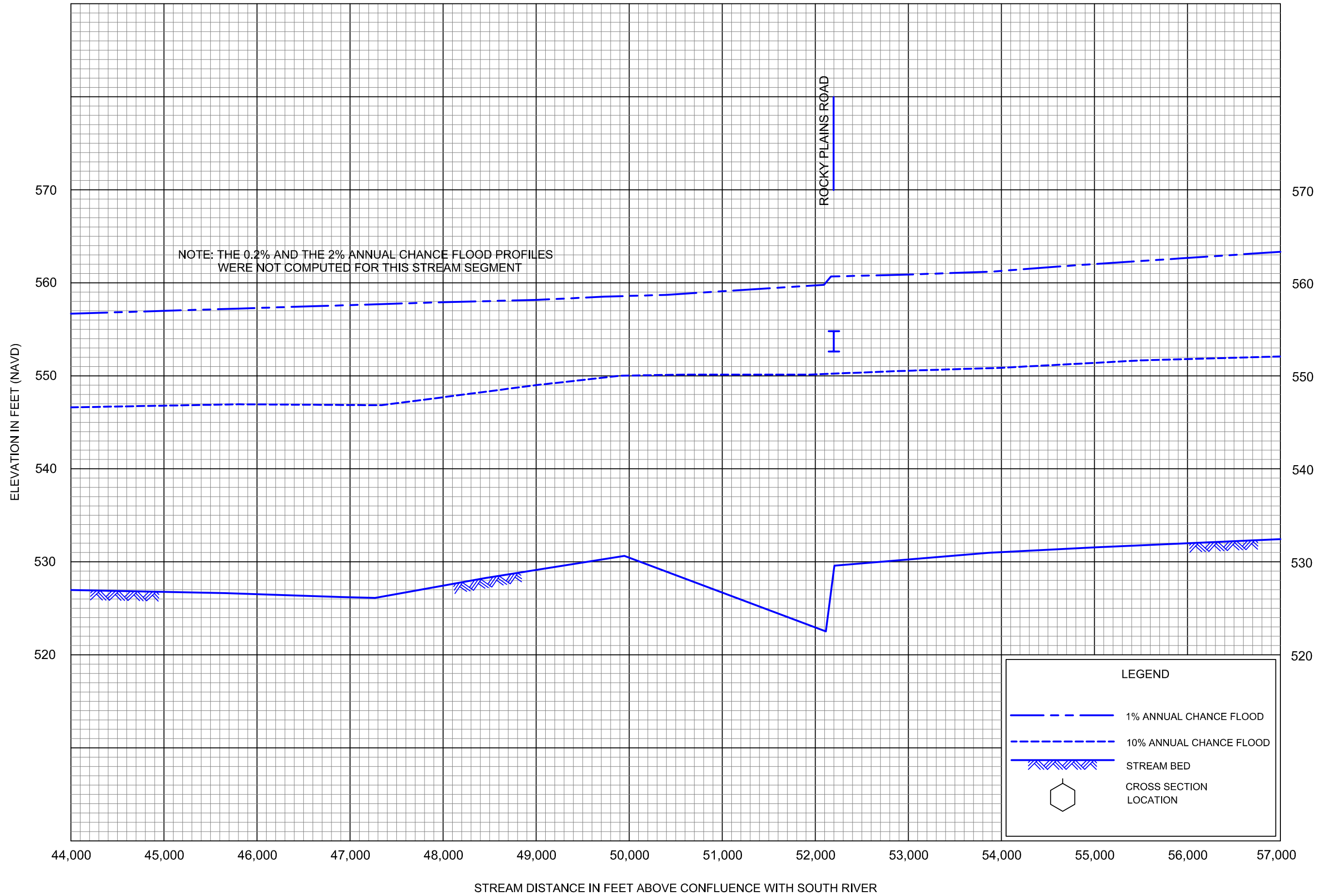


FLOOD PROFILES

YELLOW RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS

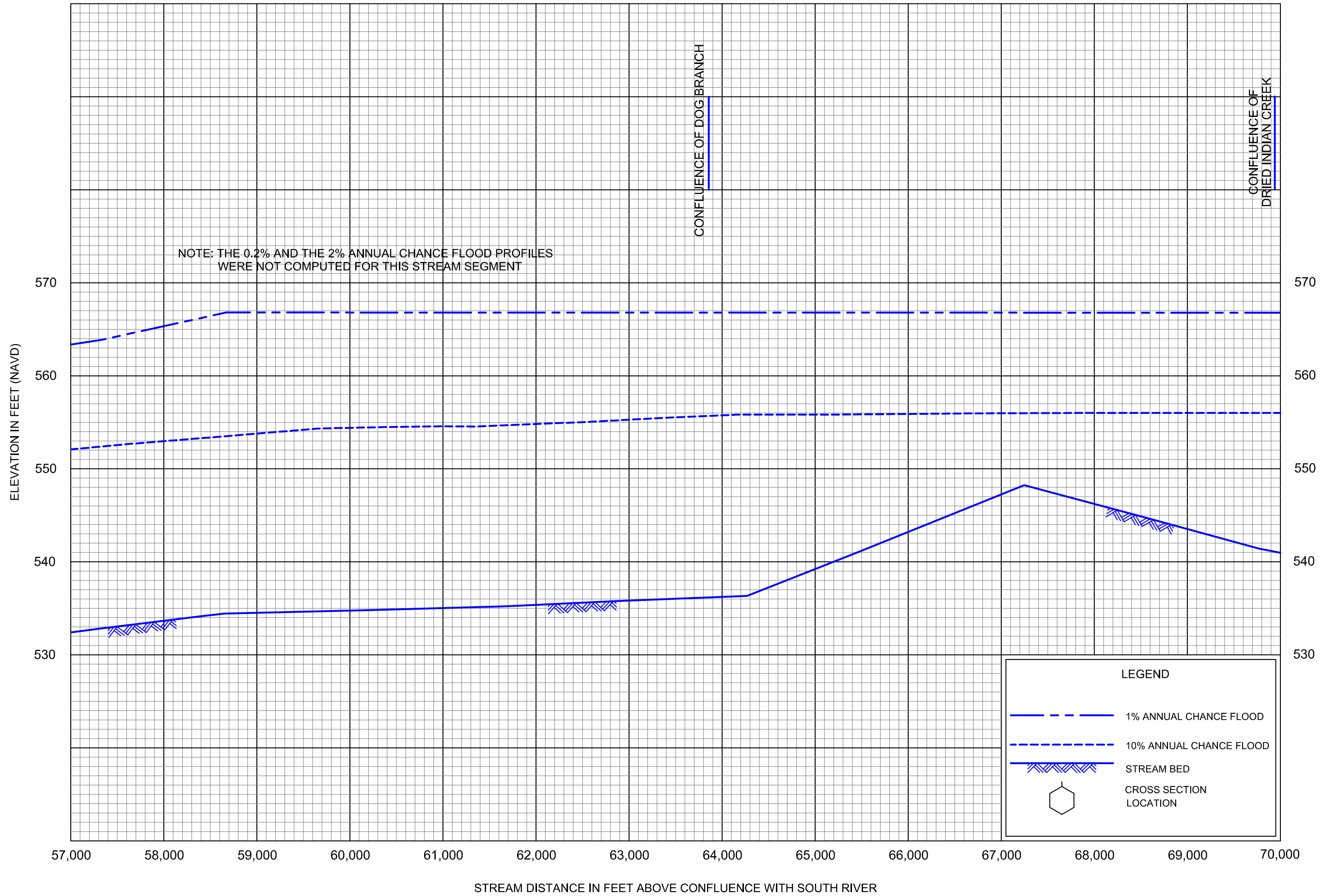


FLOOD PROFILES

YELLOW RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS

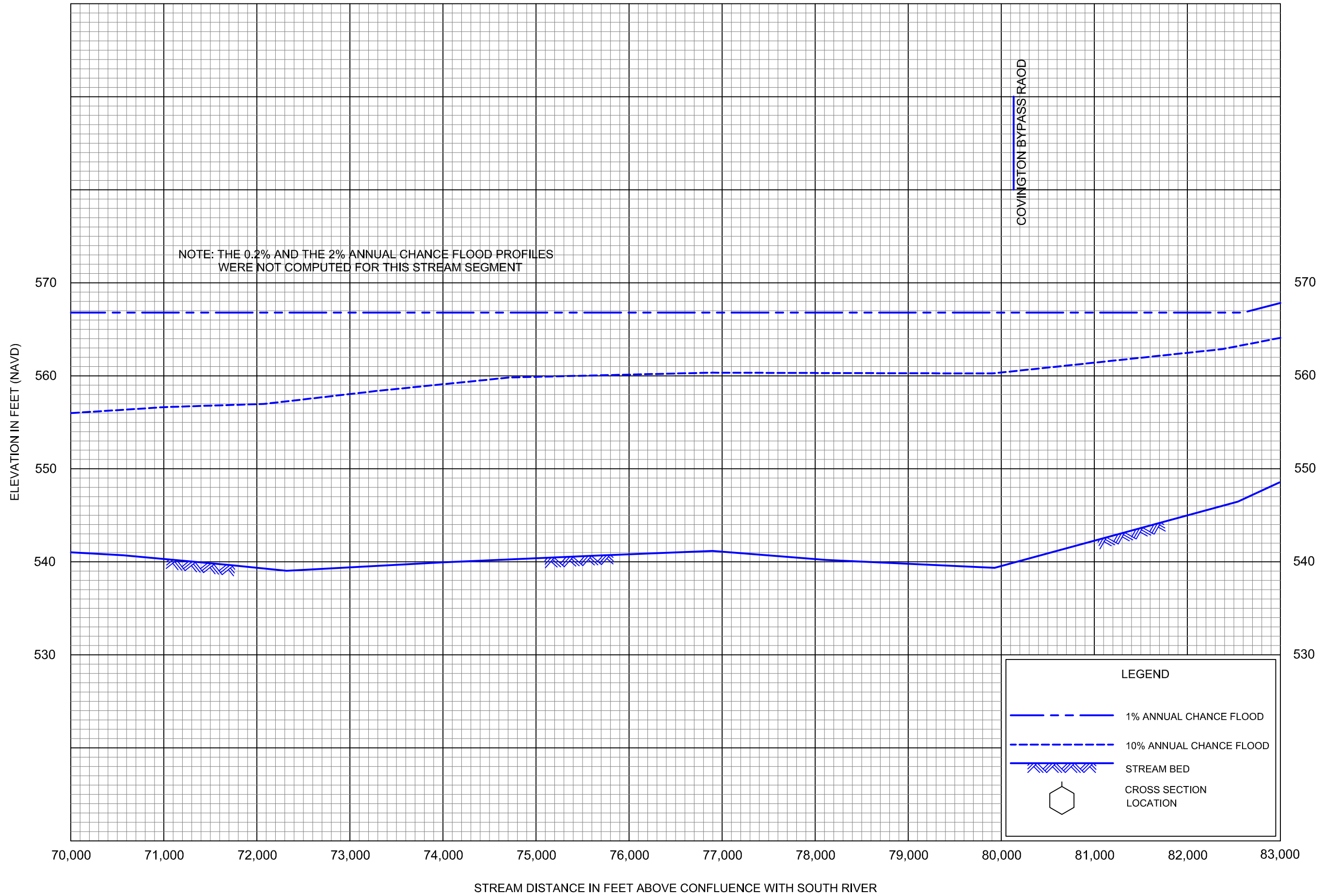


FLOOD PROFILES

YELLOW RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS



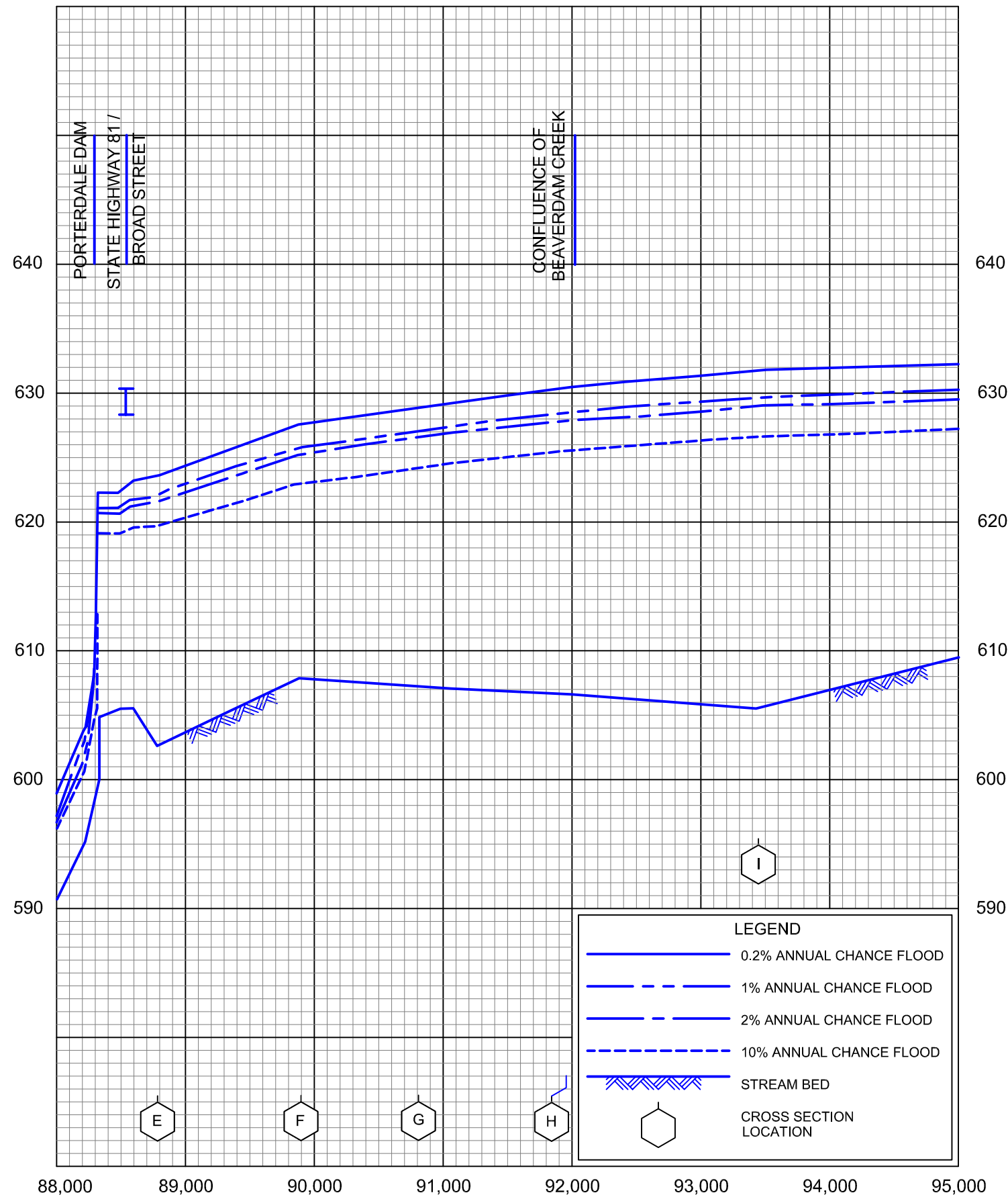
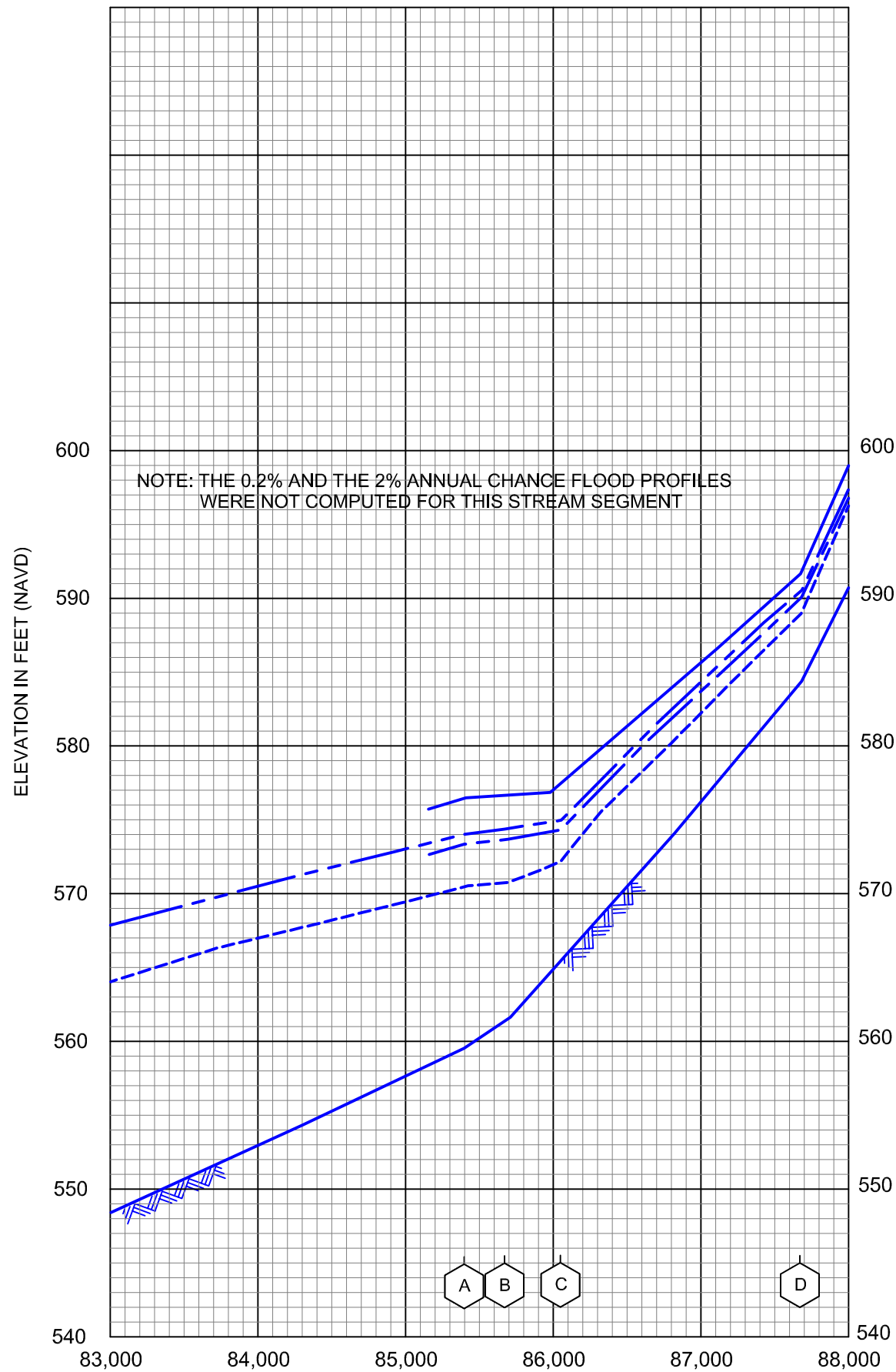
FLOOD PROFILES

YELLOW RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS



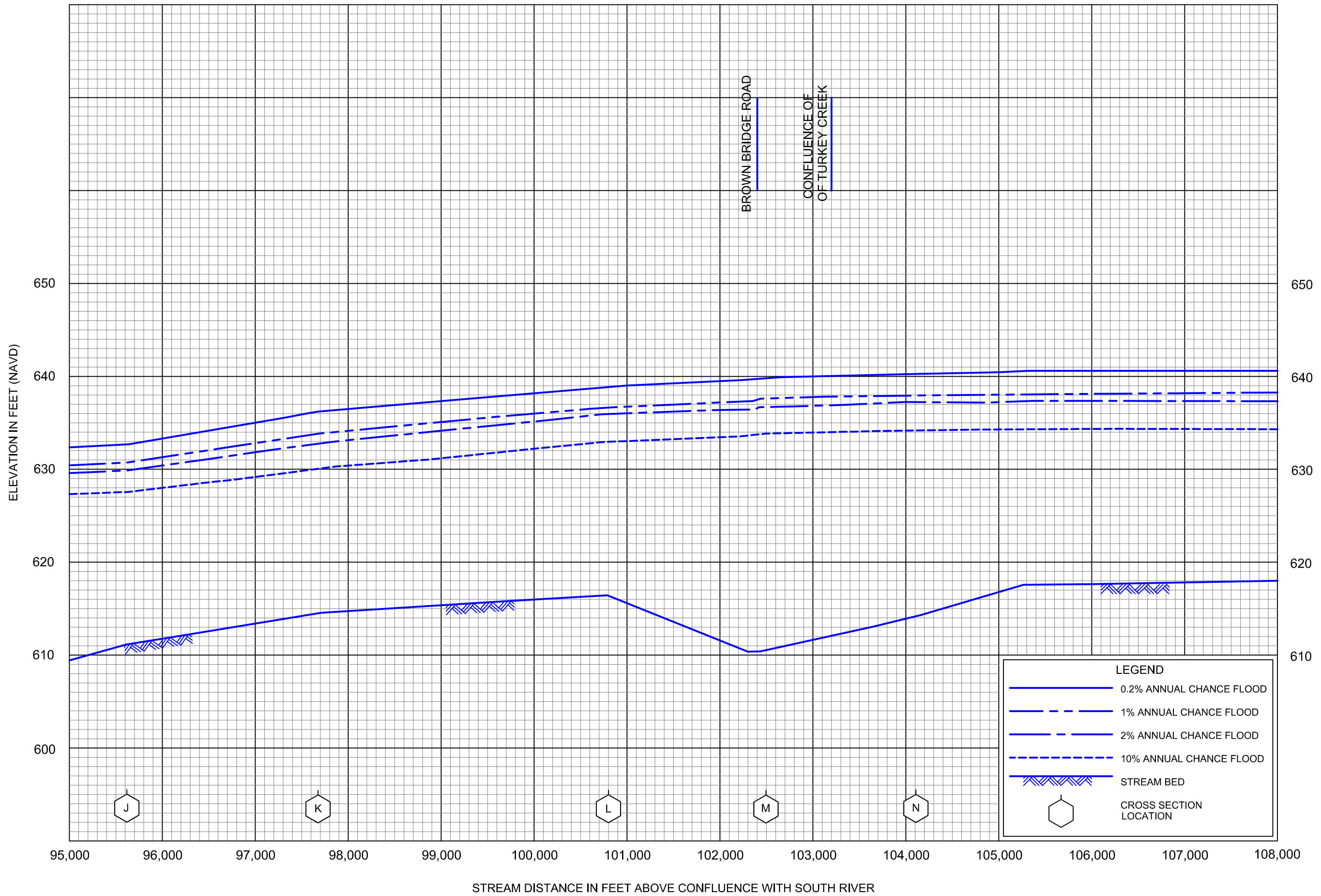


FLOOD PROFILES

YELLOW RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS

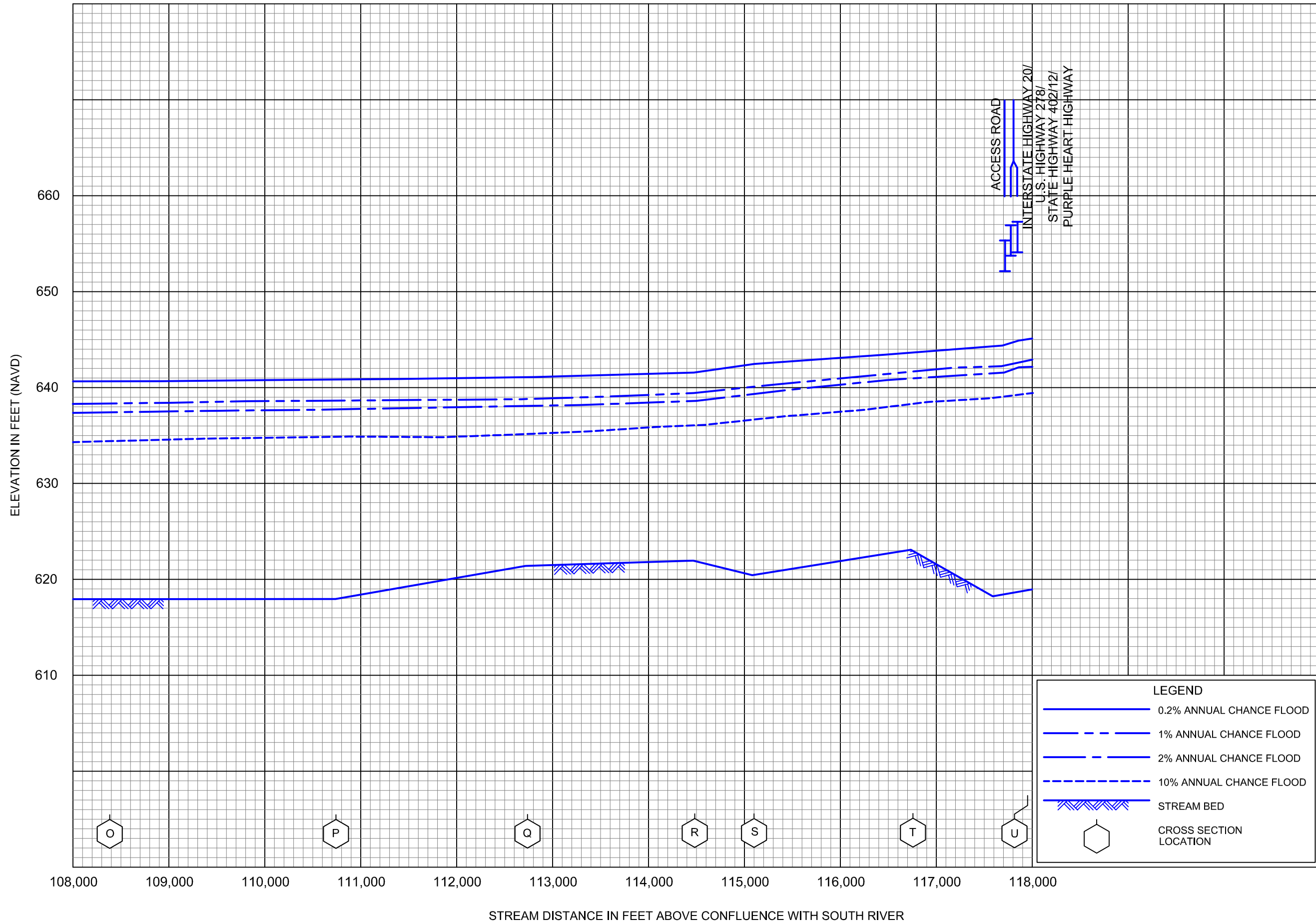


**FLOOD PROFILES**

**YELLOW RIVER**

FEDERAL EMERGENCY MANAGEMENT AGENCY

**NEWTON COUNTY, GA**  
AND INCORPORATED AREAS

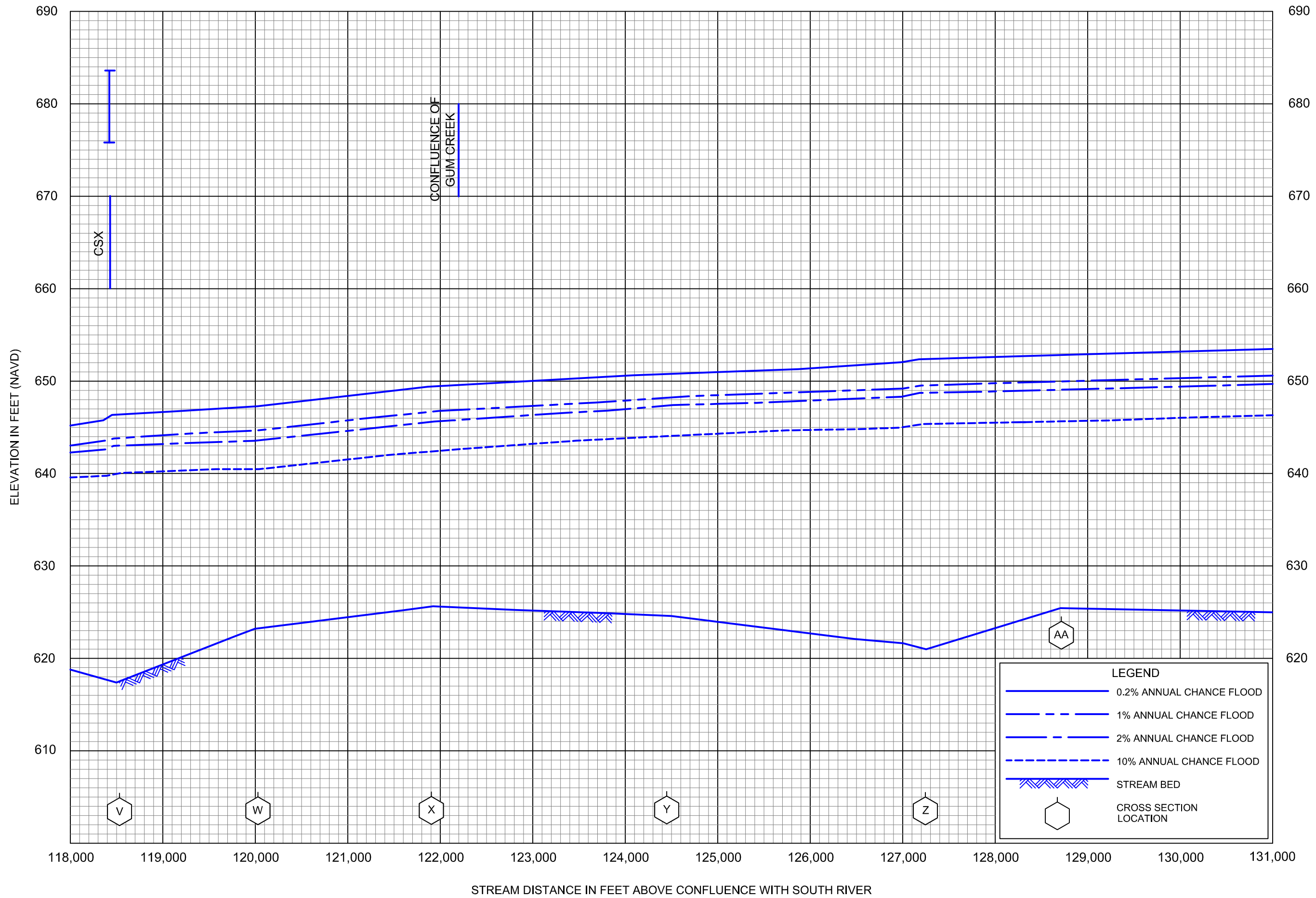


FLOOD PROFILES

YELLOW RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS

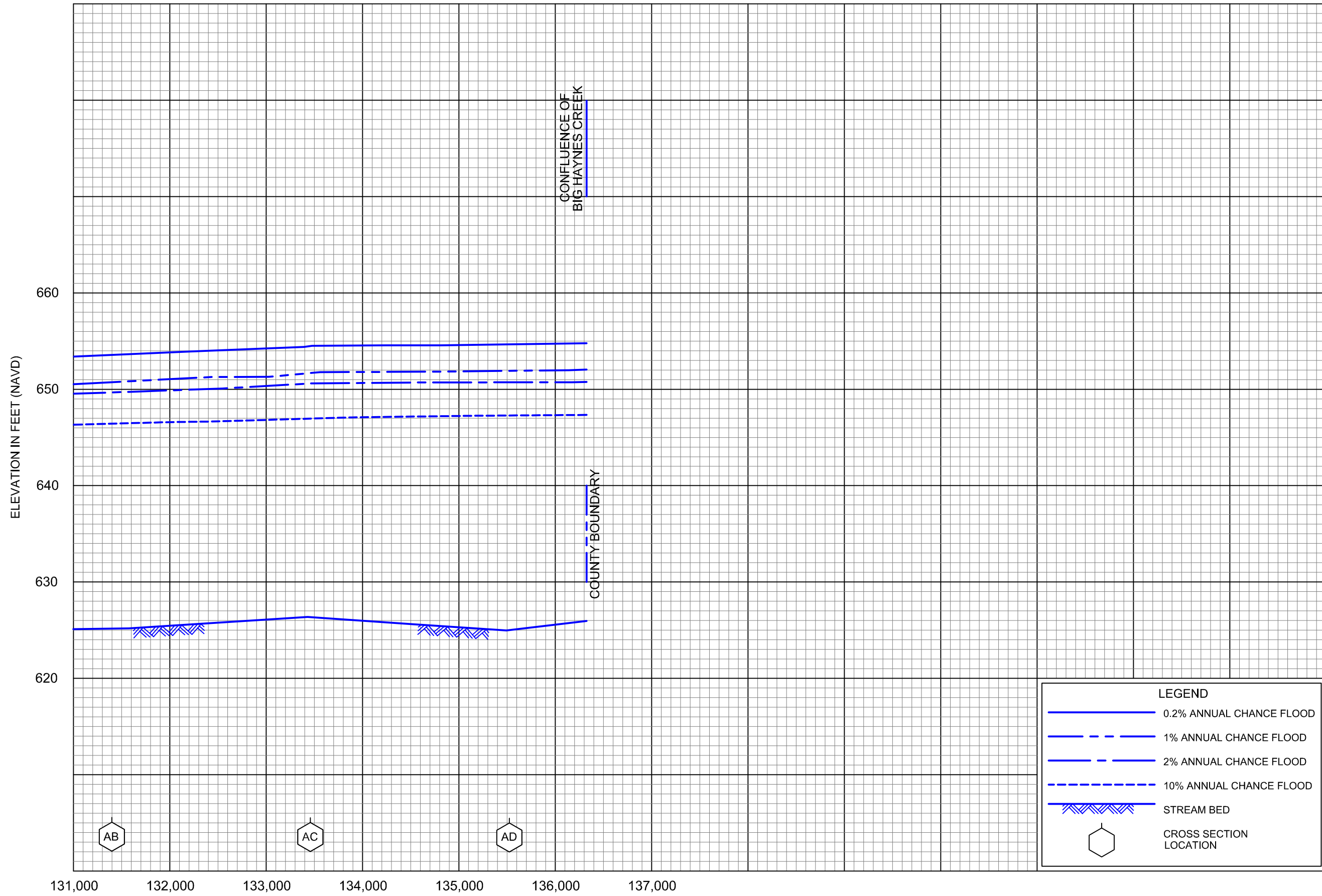


FLOOD PROFILES







YELLOW RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

NEWTON COUNTY, GA  
AND INCORPORATED AREAS



**LEGEND**

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