FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 1

FORREST COUNTY, MISSISSIPPI

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
FORREST COUNTY, UNINCORPORATED AREAS	280052
HATTIESBURG, CITY OF	280053
PETAL, CITY OF	280260

FEMA

PRELIMINARY 6/28/2019

EFFECTIVE:

TBD

FLOOD INSURANCE STUDY NUMBER
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Version Number 2.5.3.6

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FLOOD INSURANCE STUDY REPORT
FORREST COUNTY, MISSISSIPPI

SECTION 1.0 – INTRODUCTION

1.1 The National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a voluntary Federal program that enables property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.

For decades, the national response to flood disasters was generally limited to constructing flood-control works such as dams, levees, sea-walls, and the like, and providing disaster relief to flood victims. This approach did not reduce losses nor did it discourage unwise development. In some instances, it may have actually encouraged additional development. To compound the problem, the public generally could not buy flood coverage from insurance companies, and building techniques to reduce flood damage were often overlooked.

In the face of mounting flood losses and escalating costs of disaster relief to the general taxpayers, the U.S. Congress created the NFIP. The intent was to reduce future flood damage through community floodplain management ordinances, and provide protection for property owners against potential losses through an insurance mechanism that requires a premium to be paid for the protection.

The U.S. Congress established the NFIP on August 1, 1968, with the passage of the National Flood Insurance Act of 1968. The NFIP was broadened and modified with the passage of the Flood Disaster Protection Act of 1973 and other legislative measures. It was further modified by the National Flood Insurance Reform Act of 1994 and the Flood Insurance Reform Act of 2004. The NFIP is administered by the Federal Emergency Management Agency (FEMA), which is a component of the Department of Homeland Security (DHS).

Participation in the NFIP is based on an agreement between local communities and the Federal Government. If a community adopts and enforces floodplain management regulations to reduce future flood risks to new construction and substantially improved structures in Special Flood Hazard Areas (SFHAs), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. The community's floodplain management regulations must meet or exceed criteria established in accordance with Title 44 Code of Federal Regulations (CFR) Part 60, *Criteria for Land Management and Use*.

SFHAs are delineated on the community's Flood Insurance Rate Maps (FIRMs). Under the NFIP, buildings that were built before the flood hazard was identified on the community's FIRMs are generally referred to as "Pre-FIRM" buildings. When the NFIP was created, the U.S. Congress recognized that insurance for Pre-FIRM buildings would be prohibitively expensive if the premiums were not subsidized by the Federal Government. Congress also recognized that most of these floodprone buildings were built

by individuals who did not have sufficient knowledge of the flood hazard to make informed decisions. The NFIP requires that full actuarial rates reflecting the complete flood risk be charged on all buildings constructed or substantially improved on or after the effective date of the initial FIRM for the community or after December 31, 1974, whichever is later. These buildings are generally referred to as “Post-FIRM” buildings.

1.2 Purpose of this Flood Insurance Study Report

This Flood Insurance Study (FIS) Report revises and updates information on the existence and severity of flood hazards for the study area. The studies described in this report developed flood hazard data that will be used to establish actuarial flood insurance rates and to assist communities in efforts to implement sound floodplain management.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive than the minimum Federal requirements. Contact your State NFIP Coordinator to ensure that any higher State standards are included in the community’s regulations.

1.3 Jurisdictions Included in the Flood Insurance Study Project

This FIS Report covers the entire geographic area of Forrest County, Mississippi.

The jurisdictions that are included in this project area, along with the Community Identification Number (CID) for each community and the United States Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC-8) sub-basins affecting each, are shown in Table 1. The FIRM panel numbers that affect each community are listed. If the flood hazard data for the community is not included in this FIS Report, the location of that data is identified.

Jurisdictions that have no identified SFHAs as of the effective date of this study are indicated in the table. Changed conditions in these communities (such as urbanization or annexation) or the availability of new scientific or technical data about flood hazards could make it necessary to determine SFHAs in these jurisdictions in the future.

Table 1: Listing of NFIP Jurisdictions

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Forrest County, Unincorporated Areas	280052	03170004, 03170005, 03170007	28035C0015D, 28035C0020D, 28035C0040D, 28035C0041D, 28035C0042D, 28035C0043D, 28035C0044D, 28035C0061D[1], 28035C0062D, 28035C0063D, 28035C0064D, 28035C0070D, 28035C0080D, 28035C0085D, 28035C0095D[1], 28035C0101D, 28035C0102D, 28035C0103D, 28035C0106D, 28035C0107E, 28035C0109F, 28035C0111D, 28035C0113D[1], 28035C0114E, 28035C0117F, 28035C0118E, 28035C0126D, 28035C0127D, 28035C0128D, 28035C0129D, 28035C0135D, 28035C0140E, 28035C0145E, 28035C0155D, 28035C0160D, 28035C0165D, 28035C0170D, 28035C0180E, 28035C0185E, 28035C0190D, 28035C0195D, 28035C0205D, 28035C0210D, 28035C0215D, 28035C0220D, 28035C0230D, 28035C0235D, 28035C0240D, 28035C0245D,	

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
			28035C0275D, 2803C50300D	
Hattiesburg, City of	280053	03170004, 03170005, 03170007	28035C0020D, 28035C0040D, 28035C0085D, 28035C0101D, 28035C0102D, 28035C0103D, 28035C0104E, 28035C0106D, 28035C0107E, 28035C0108D, 28035C0109F, 28035C0111D, 28035C0112D, 28035C0113D[1], 28035C0114E, 28035C0116E, 28035C0117F, 28035C0118E, 28035C0119E, 28035C0140E, 28035C0155D, 28035C0160D, 28035C0170D, 28035C0180E	
Petal, City of	280260	03170004, 03170005	28035C0044D, 28035C0063D, 28035C0106D, 28035C0107E, 28035C0109F, 28035C0126D, 28035C0127D, 28035C0128D, 28035C0129D, 28035C0135D, 2803C50140E	

[1] Panel Not Printed

1.4 Considerations for using this Flood Insurance Study Report

The NFIP encourages State and local governments to implement sound floodplain management programs. To assist in this endeavor, each FIS Report provides floodplain data, which may include a combination of the following: 10-, 4-, 2-, 1-, and 0.2-percent annual chance flood elevations (the 1-percent-annual-chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1-percent-annual-chance and 0.2-percent-annual-chance floodplains; and 1-percent-annual-chance floodway. This information is presented on the FIRM and/or in many components of the FIS Report, including Flood Profiles, Floodway Data tables, Summary of Non-Coastal Stillwater

Elevations tables, and Coastal Transect Parameters tables (not all components may be provided for a specific FIS).

This section presents important considerations for using the information contained in this FIS Report and the FIRM, including changes in format and content. Figures 1, 2, and 3 present information that applies to using the FIRM with the FIS Report.

- Part or all of this FIS Report may be revised and republished at any time. In addition, part of this FIS Report may be revised by a Letter of Map Revision (LOMR), which does not involve republication or redistribution of the FIS Report. Refer to Section 6.5 of this FIS Report for information about the process to revise the FIS Report and/or FIRM.

  It is, therefore, the responsibility of the user to consult with community officials by contacting the community repository to obtain the most current FIS Report components. Communities participating in the NFIP have established repositories of flood hazard data for floodplain management and flood insurance purposes. Community map repository addresses are provided in Table 30, "Map Repositories," within this FIS Report.

- New FIS Reports are frequently developed for multiple communities, such as entire counties. A countywide FIS Report incorporates previous FIS Reports for individual communities and the unincorporated area of the county (if not jurisdictional) into a single document and supersedes those documents for the purposes of the NFIP.

  The initial Countywide FIS Report for Forrest County became effective on April 2, 1990**.** Refer to Table 27 for information about subsequent revisions to the FIRMs.

- Previous FIS Reports and FIRMs may have included levees that were accredited as reducing the risk associated with the 1-percent-annual-chance flood based on the information available and the mapping standards of the NFIP at that time. For FEMA to continue to accredit the identified levees, the levees must meet the criteria of the Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10), titled "Mapping of Areas Protected by Levee Systems."

  Since the status of levees is subject to change at any time, the user should contact the appropriate agency for the latest information regarding levees presented in Table 8 of this FIS Report. For levees owned or operated by the U.S. Army Corps of Engineers (USACE), information may be obtained from the USACE National Levee Database (nld.usace.army.mil). For all other levees, the user is encouraged to contact the appropriate local community.

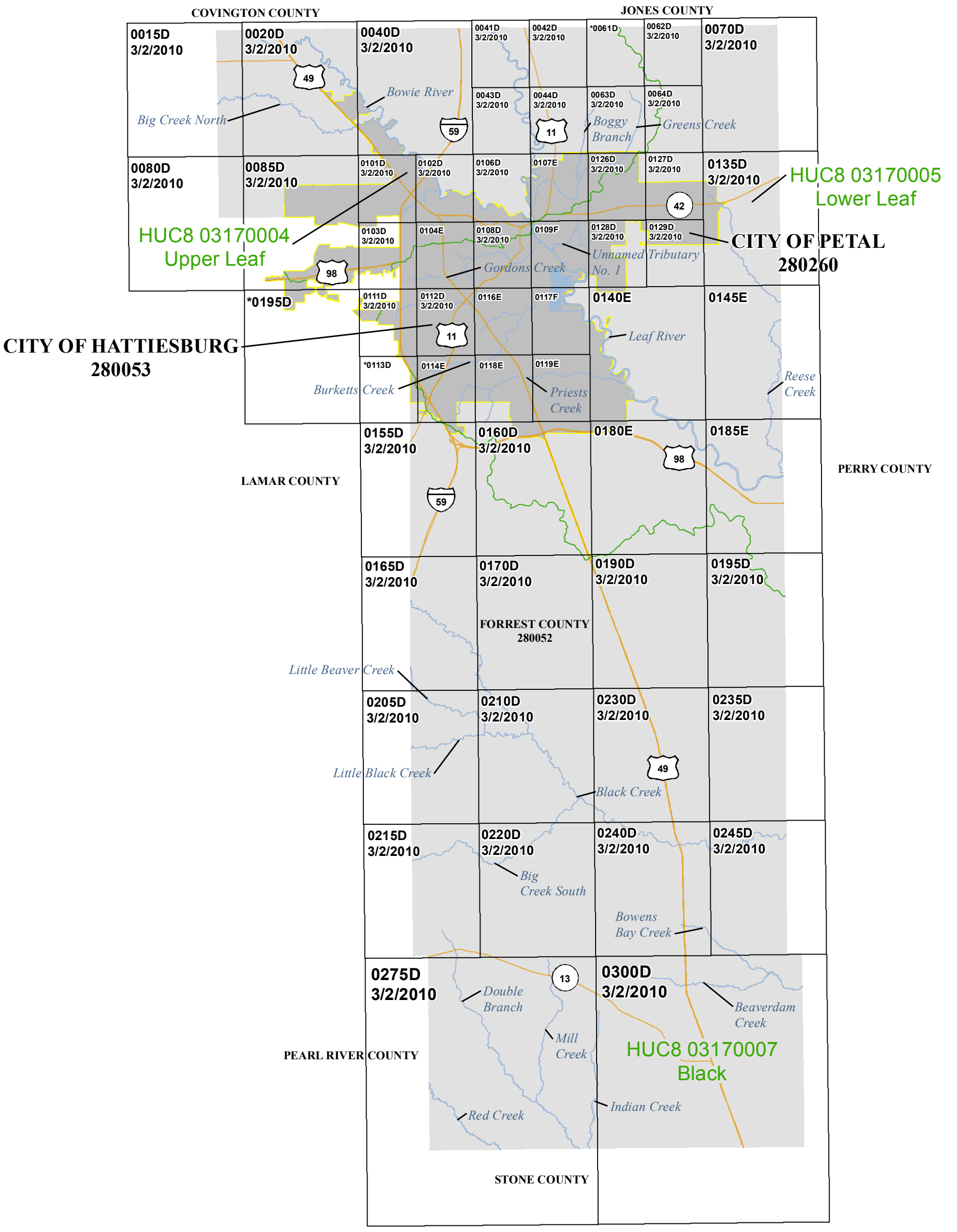
  Please also note that FEMA has identified one or more levees in this jurisdiction that have not been demonstrated by the community or levee owner to meet the requirements of 44 CFR 65.10, of the NFIP regulations as it relates to the levee's capacity to provide 1-percent-annual-chance flood protection. As such, temporary actions are being taken until such time as FEMA is able to initiate a new flood risk project to apply new levee analysis and mapping procedures to leveed areas. These temporary actions involve using the flood hazard data shown on the previous effective FIRM exactly as shown on that prior FIRM and identifying the area with bounding lines and special map notes. If a vertical datum conversion was executed for the county, then the Base Flood Elevations shown on the FIRM will

now reflect elevations referenced to the North American Vertical Datum of 1988 (NAVD88). These levees are on FIRM panel(s) 28035C0109F and 28035C0117F, on the Leaf River, and are identified on FIRM panels as potential areas of flood hazard data changes based on further review. Please refer to Section 4.4 of this FIS Report for more information.

- FEMA has developed a *Guide to Flood Maps* (FEMA 258) and online tutorials to assist users in accessing the information contained on the FIRM. These include how to read panels and step-by-step instructions to obtain specific information. To obtain this guide and other assistance in using the FIRM, visit the FEMA Web site at www.fema.gov/online-tutorials.

The FIRM Index in Figure 1 shows the overall FIRM panel layout within Forrest County, and also displays the panel number and effective date for each FIRM panel in the county. Other information shown on the FIRM Index includes community boundaries, flooding sources, watershed boundaries, and USGS HUC-8 codes.

Figure 1: FIRM Index



ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before MONTH DAY, YEAR.

PRELIMINARY
6/28/2019

N

1 inch = 16,667 feet 1:200,000

Feet
0 4,600 9,200 18,400 27,600 36,800

Map Projection:
State Plane Coordinate System
Mississippi East, FIPS Zone 2301

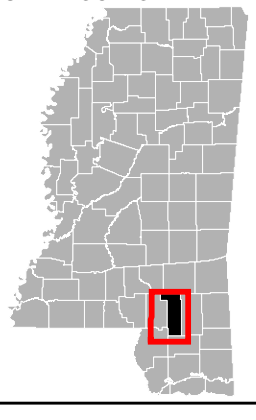
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTP://MSC.FEMA.GOV

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

*PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

FORREST COUNTY, MISSISSIPPI and Incorporated Areas

PANELS PRINTED:

0015, 0020, 0040, 0041, 0042, 0043, 0044, 0062, 0063, 0064, 0070, 0080, 0085, 0101, 0102, 0103, 0104, 0106, 0107, 0108, 0109, 0111, 0112, 0114, 0116, 0117, 0118, 0119, 0126, 0127, 0128, 0129, 0135, 0140, 0145, 0155, 0160, 0165, 0170, 0180, 0185, 0190, 0195, 0205, 0210, 0215, 0220, 0230, 0235, 0240, 0245, 0275, 0300

FEMA

MAP NUMBER
28035CIND0C

MAP REVISED

Each FIRM panel may contain specific notes to the user that provide additional information regarding the flood hazard data shown on that map. However, the FIRM panel does not contain enough space to show all the notes that may be relevant in helping to better understand the information on the panel. Figure 2 contains the full list of these notes.

Figure 2: FIRM Notes to Users

NOTES TO USERS

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Flood Map Service Center website or by calling the FEMA Map Information eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to Table 27 in this FIS Report.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

PRELIMINARY FIS REPORT: FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.

The map is for use in administering the NFIP. It may not identify all areas subject to flooding, particularly from local drainage sources of small size. Consult the community map repository to find updated or additional flood hazard information.

BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of Non-Coastal Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.

FLOODWAY INFORMATION: Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the FIS Report for this jurisdiction.

FLOOD CONTROL STRUCTURE INFORMATION: Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 4.3 "Non-Levee Flood Protection Measures" of this FIS Report for information on flood control structures for this jurisdiction.

Figure 2. FIRM Notes to Users

PROJECTION INFORMATION: The projection used in the preparation of the map was State Plane Transverse Mercator, Mississippi East FIPS Zone 2301**.** The horizontal datum was the North American Datum of 1983, GRS 1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

ELEVATION DATUM: Flood elevations on the FIRM are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov.

Local vertical monuments may have been used to create the map. To obtain current monument information, please contact the appropriate local community listed in Table 30 of this FIS Report.

BASE MAP INFORMATION: Base map information shown on the FIRM was provided in digital format by the Federal Geographic Data Committee, Mississippi Automated Resource Information System, Mississippi Department of Transportation, National Resources Conservation Service State Offices, State of Mississippi, U.S Census Bureau, USDA Forest Service, U.S Environmental Protection Agency, and the U.S Geological Survey. Ortho Imagery was produced by the National Agriculture Imagery Program in 2016 and has a 1 - foot ground sample distance, for the following panels: 0104, 0107, 0109, 0114, 0116, 0117, 0118, 0119, 0140, 0145, 0180, and 0185. For information about base maps, refer to Section 6.2 “Base Maps” in this FIS Report.

The map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map.

Corporate limits shown on the map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after the map was published, map users should contact appropriate community officials to verify current corporate limit locations.

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Forrest County, Mississippi, corresponding revisions to the FIRM Index will be incorporated within the FIS Report to reflect the effective dates of those panels. Please refer to Table 27 of this FIS Report to determine the most recent FIRM revision date for each community. The most recent FIRM panel effective date will correspond to the most recent index date.

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Forrest County, Mississippi, effective **TBD**.

Figure 2. FIRM Notes to Users

FLOOD RISK REPORT: A Flood Risk Report (FRR) may be available for many of the flooding sources and communities referenced in this FIS Report. The FRR is provided to increase public awareness of flood risk by helping communities identify the areas within their jurisdictions that have the greatest risks. Although non-regulatory, the information provided within the FRR can assist communities in assessing and evaluating mitigation opportunities to reduce these risks. It can also be used by communities developing or updating flood risk mitigation plans. These plans allow communities to identify and evaluate opportunities to reduce potential loss of life and property. However, the FRR is not intended to be the final authoritative source of all flood risk data for a project area; rather, it should be used with other data sources to paint a comprehensive picture of flood risk.

Each FIRM panel contains an abbreviated legend for the features shown on the maps. However, the FIRM panel does not contain enough space to show the legend for all map features. Figure 3 shows the full legend of all map features. Note that not all of these features may appear on the FIRM panels in Forrest County.

Figure 3: Map Legend for FIRM

SPECIAL FLOOD HAZARD AREAS: The 1% annual chance flood, also known as the base flood or 100-year flood, has a 1% chance of happening or being exceeded each year. Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. See note for specific types. If the floodway is too narrow to be shown, a note is shown.

	Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE)
Zone A	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations (BFEs) or depths are shown within this zone.
Zone AE	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone.
Zone AH	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the hydraulic analyses are shown at selected intervals within this zone.
Zone AO	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the hydraulic analyses are shown within this zone.
Zone AR	The flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
Zone A99	The flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone.
Zone V	The flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations are not shown within this zone.
Zone VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.
	Regulatory Floodway determined in Zone AE.

Figure 3: Map Legend for FIRM

OTHER AREAS OF FLOOD HAZARD

Shaded Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.

Future Conditions 1% Annual Chance Flood Hazard – Zone X: The flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined based on future-conditions hydrology. No base flood elevations or flood depths are shown within this zone.

Area with Reduced Flood Risk due to Levee: Areas where an accredited levee, dike, or other flood control structure has reduced the flood risk from the 1% annual chance flood.

Area with Flood Risk due to Levee: Areas where a non-accredited levee, dike, or other flood control structure is shown as providing protection to less than the 1% annual chance flood.

OTHER AREAS

Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

Unshaded Zone X: Areas of minimal flood hazard.

FLOOD HAZARD AND OTHER BOUNDARY LINES

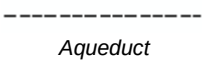
Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)

Limit of Study

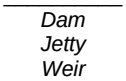
Jurisdiction Boundary

Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet

GENERAL STRUCTURES



Channel, Culvert, Aqueduct, or Storm Sewer



Dam, Jetty, Weir

Levee, Dike, or Floodwall

Bridge

Figure 3: Map Legend for FIRM

REFERENCE MARKERS	
22.0	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
B 20.2	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
5280 21.1	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
17.5	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
8	Coastal Transect
	Profile Baseline: Indicates the modeled flow path of a stream and is shown on FIRM panels for all valid studies with profiles or otherwise established base flood elevation.
	Coastal Transect Baseline: Used in the coastal flood hazard model to represent the 0.0-foot elevation contour and the starting point for the transect and the measuring point for the coastal mapping.
513	Base Flood Elevation Line
ZONE AE (EL 16)	Static Base Flood Elevation value (shown under zone label)
ZONE AO (DEPTH 2)	Zone designation with Depth
ZONE AO (DEPTH 2) (VEL 15 FPS)	Zone designation with Depth and Velocity
BASE MAP FEATURES	
Missouri Creek	River, Stream or Other Hydrographic Feature
234	Interstate Highway
234	U.S. Highway
234	State Highway
234	County Highway
MAPLE LANE	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
RAILROAD	Railroad

Figure 3: Map Legend for FIRM

_____	Horizontal Reference Grid Line
___	Horizontal Reference Grid Ticks
+	Secondary Grid Crosshairs
Land Grant	Name of Land Grant
7	Section Number
R. 43 W. T. 22 N.	Range, Township Number
^{42}**76**^{000m}**E**	Horizontal Reference Grid Coordinates (UTM)
365000 FT	Horizontal Reference Grid Coordinates (State Plane)
80° 16’ 52.5”	Corner Coordinates (Latitude, Longitude)

SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS

2.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance (500-year) flood is employed to indicate additional areas of flood hazard in the community.

Each flooding source included in the project scope has been studied and mapped using professional engineering and mapping methodologies that were agreed upon by FEMA and Forrest County as appropriate to the risk level. Flood risk is evaluated based on factors such as known flood hazards and projected impact on the built environment. Engineering analyses were performed for each studied flooding source to calculate its 1-percent-annual-chance flood elevations; elevations corresponding to other floods (e.g. 10-, 4-, 2-, 0.2-percent annual chance, etc.) may have also been computed for certain flooding sources. Engineering models and methods are described in detail in Section 5.0 of this FIS Report. The modeled elevations at cross sections were used to delineate the floodplain boundaries on the FIRM; between cross sections, the boundaries were interpolated using elevation data from various sources. More information on specific mapping methods is provided in Section 6.0 of this FIS Report.

Depending on the accuracy of available topographic data (Table 22), study methodologies employed (Section 5.0), and flood risk, certain flooding sources may be mapped to show both the 1-percent and 0.2-percent-annual-chance floodplain boundaries, regulatory water surface elevations (BFEs), and/or a regulatory floodway. Similarly, other flooding sources may be mapped to show only the 1-percent-annual-chance floodplain boundary on the FIRM, without published water surface elevations. In cases where the 1-percent and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM. Figure 3, “Map Legend for FIRM”, describes the flood zones that are used on the FIRMs to account for the varying levels of flood risk that exist along flooding sources within the project area. Table 2 and Table 3 indicate the flood zone designations for each flooding source and each community within Forrest County, respectively.

Table 2, “Flooding Sources Included in this FIS Report,” lists each flooding source, including its study limits, affected communities, mapped zone on the FIRM, and the completion date of its engineering analysis from which the flood elevations on the FIRM and in the FIS Report were derived. Descriptions and dates for the latest hydrologic and hydraulic analyses of the flooding sources are shown in Table 12. Floodplain boundaries for these flooding sources are shown on the FIRM (published separately) using the symbology described in Figure 3. On the map, the 1-percent-annual-chance floodplain corresponds to the SFHAs. The 0.2-percent-annual-chance floodplain shows areas that, although out of the regulatory floodplain, are still subject to flood hazards.

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 procedures to remove these areas from the SFHA are described in Section 6.5 of this FIS Report.

Within this jurisdiction, there are one or more levees that have not been demonstrated by the communities or levee owners to meet the requirements of the Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10) as it relates to the levee's capacity to provide 1-percent-annual-chance flood protection. As such, the floodplain boundaries in this area are subject to change. Please refer to Section 4.4 of this FIS Report for more information on how this may affect the floodplain boundaries shown on this FIRM.

Table 2: Flooding Sources Included in this FIS Report

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
All A Zones from 1990 Countywide FIS Report	Forrest County, Unincorporated Areas; Hattiesburg, City of; Petal, City of	Various	Various	03170004, 03170005, 03170007		N	A	1987
Black Creek	Forrest County, Unincorporated Areas	County Boundary	County Boundary	03170007	22.2	N	AE	2008
Boggy Branch	Forrest County, Unincorporated Areas; Petal, City of	Confluence with Greens Creek	Approximately 0.5 mile upstream of Otis Lee Road	03170004	3.9	N	AE	2008
Bowie River	Forrest County, Unincorporated Areas; Hattiesburg, City of	Confluence with Leaf River	Approximately 14 miles upstream of the confluence with Leaf River	03170004	14.0	Y	AE	2008
Burketts Creek	Hattiesburg, City of	Confluence with Leaf River	Approximately 0.8 miles upstream of U.S. Highway 11	03170005	8.4	N	AE	2019
Burketts Creek Tributary 1	Hattiesburg, City of	Confluence with Burketts Creek	Approximately 0.3 miles upstream of U.S. Highway 49	03170005	2.0	N	AE	2019
Gordons Creek	Hattiesburg, City of	Confluence with Leaf River	Approximately 2,000 feet upstream of Interstate 59	03170005	7.8	Y	AE	2008
Gordons Creek Tributary	Hattiesburg, City of	Confluence with Gordons Creek	Approximately 0.2 miles upstream of S. 34th Avenue	03170005	1.8	N	AE	2019

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Greens Creek	Petal, City of	Approxmately 1.0 mile upstream of confluence with Leaf River	Chappell Hill Road	03170004	3.1	Y	AE	2008
Greens Creek	Petal, City of	Chappell Hill Road	Approximately 4,000 feet upstream of Robertson Road	03170004	5.3	N	AE	2008
Leaf River	Forrest County, Unincorporated Areas; Hattiesburg, City of; Petal, City of	Forrest/Perry County boundary	Approximately 3 miles upstream of Old Highway 24	03170005	8.1	Y	AE	2019
Leaf River	Forrest County, Unincorporated Areas; Hattiesburg, City of; Petal, City of	Approximately 3 miles upstream of Old Highway 24	Forrest/Jones County boundary	03170004, 03170005	9.8	Y	AE	2008
Little Beaver Creek	Forrest County, Unincorporated Areas	Confluence with Little Black Creek	Forrest/Lamary county boundary	03170007	4.7	N	AE	2008
Mixons Creek	Hattiesburg, City of	Approximately 0.4 miles upstream of the confluence with Bowie River	Gravel Pit Road	03170004	2.0	Y	AE	2008
Mixons Creek Tributary 1	Forrest County, Unincorporated Areas	Confluence with Mixons Creek	Oak Grove Road	03170004	3.3	Y	AE	2008
Mixons Creek Tributary 2	Forrest County, Unincorporated Areas	Approximately 900 feet upstream of Pecan Grove Road	Approximately 1,300 feet north of Highway 98	03170004	1.0	N	AE	2008

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Mixons Creek Tributary 3	Forrest County, Unincorporated Areas	Mouth	County boundary	03170004	1.5	N	AE	2008
Priests Creek	Forrest County, Unincorporated Areas; Hattiesburg, City of	Confluence with Leaf River	Approximately 1.4 miles upstream of Bonhomie Road	03170005	7.6	N	AE	2019
Priests Creek Tributary 1	Forrest County, Unincorporated Areas; Hattiesburg, City of	Confluence with Priests Creek	Approximately 0.5 miles upstream of Dover Trace	03170005	1.4	N	AE	2019
Unnamed Tributary No. 1	Petal, City of	Confluence with Leaf River	Approximately 0.2 miles upstream of E. 5th Avenue	03170005	1.8	Y	AE	2019
Unnamed Tributary No. 2	Petal, City of	Confluence with Unnamed Tributary No. 1	Approximately 400 feet upstream of Chandler Lane	03170005	1.1	N	AE	2008

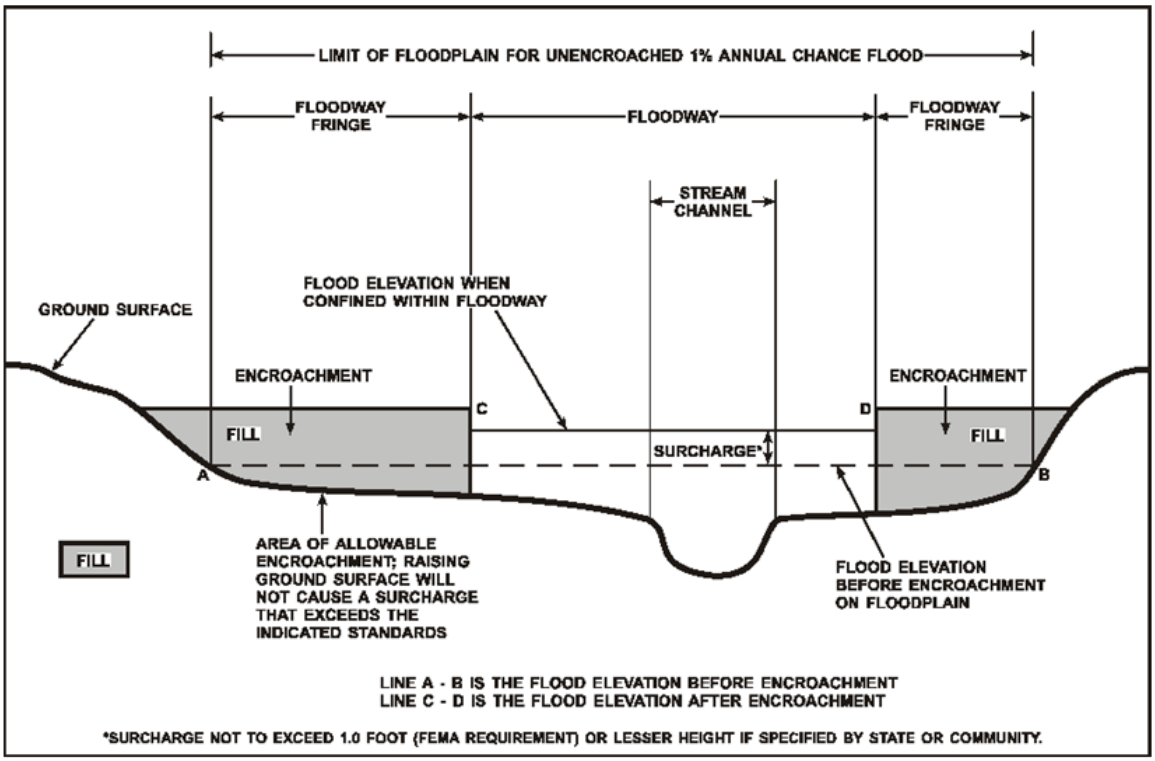
2.2 Floodways

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 balancing floodplain development against increasing flood hazard. With this approach, the area of the 1-percent-annual-chance floodplain on a river is divided into a floodway and a floodway fringe based on hydraulic modeling. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment in order to carry the 1-percent-annual-chance flood. The floodway fringe is the area between the floodway and the 1-percent-annual-chance floodplain boundaries where encroachment is permitted. The floodway must be wide enough so that the floodway fringe could be completely obstructed without increasing the water surface elevation 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 4.

To participate in the NFIP, Federal regulations require communities to limit increases caused by encroachment to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this project are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway projects.

Figure 4: Floodway Schematic



Floodway widths presented in this FIS Report and on the FIRM were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. For certain stream segments, floodways were adjusted so that the amount of floodwaters conveyed on each side of the floodplain would be reduced equally. The results of the floodway computations have been tabulated for selected cross sections and are shown in Table 23, "Floodway Data."

All floodways that were developed for this Flood Risk Project are shown on the FIRM using the symbology described in Figure 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 on the FIRM. For information about the delineation of floodways on the FIRM, refer to Section 6.3.

2.3 Base Flood Elevations

The hydraulic characteristics of flooding sources were analyzed to provide estimates of the elevations of floods of the selected recurrence intervals. The BFE is the elevation of the 1-percent-annual-chance flood. These BFEs are most commonly rounded to the whole foot, as shown on the FIRM, but in certain circumstances or locations they may be rounded to 0.1 foot. Cross section lines shown on the FIRM may also be labeled with the BFE rounded to 0.1 foot. Whole-foot BFEs derived from engineering analyses that apply to coastal areas, areas of ponding, or other static areas with little elevation change may also be shown at selected intervals on the FIRM.

BFEs are primarily intended for flood insurance rating purposes. Cross sections with BFEs shown on the FIRM correspond to the cross sections shown in the Floodway Data table and Flood Profiles in this FIS Report. 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. For example, the user may use the FIRM to determine the stream station of a location of interest and then use the profile to determine the 1-percent annual chance elevation at that location. Because only selected cross sections may be shown on the FIRM for riverine areas, the profile should be used to obtain the flood elevation between mapped cross sections. Additionally, for riverine areas, whole-foot elevations shown on the FIRM may not exactly reflect the elevations derived from the hydraulic analyses; therefore, elevations obtained from the profile may more accurately reflect the results of the hydraulic analysis.

2.4 Non-Encroachment Zones

This section is not applicable to this Flood Risk Project.

2.5 Coastal Flood Hazard Areas

This section is not applicable to this Flood Risk Project.

Figure 5: Wave Runup Transect Schematic

[Not Applicable to this Flood Risk Project]

2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

This section is not applicable to this Flood Risk Project.

2.5.3 Coastal High Hazard Areas

This section is not applicable to this Flood Risk Project.

Figure 6: Coastal Transect Schematic

[Not Applicable to this Flood Risk Project]

2.5.4 Limit of Moderate Wave Action

This section is not applicable to this Flood Risk Project.

SECTION 3.0 – INSURANCE APPLICATIONS

3.1 National Flood Insurance Program Insurance Zones

For flood insurance applications, the FIRM designates flood insurance rate zones as described in Figure 3, "Map Legend for FIRM." Flood insurance zone designations are assigned to flooding sources based on the results of the hydraulic or coastal analyses. Insurance agents use the zones shown on the FIRM and depths and base flood elevations in this FIS Report in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

The 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (e.g. Zones A, AE, V, VE, etc.), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of additional flood hazards.

Table 3 lists the flood insurance zones in Forrest County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Forrest County, Unincorporated Areas	AE, A, X
Hattiesburg, City of	AE, A, X
Petal, City of	AE, A, X

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

Table 4 contains a description of the characteristics of the HUC-8 sub-basins within which

each community falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its drainage area.

Table 4: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (square miles)
Upper Leaf	03170004	Leaf River	Located in the north and northwestern portion of the county, the Upper Leaf watershed is the smallest in Forrest County.	1,753
Lower Leaf	03170005	Leaf River	Covers the northeastern corner and a majority of the top half of the county.	1,824
Black	03170007	Black Creek	The largest watershed in Forrest County, located in the southern half and encompasses approximately 50% of the entire county.	1,267

4.2 Principal Flood Problems

Table 5 contains a description of the principal flood problems that have been noted for Forrest County by flooding source.

Table 5: Principal Flood Problems

Flooding Source	Description of Flood Problems
Leaf and Bowie Rivers	The most severe flood problems in Forrest County generally results from overflow of the Leaf and Bowie Rivers into low-lying areas and have been increasing due to growth and development throughout the county. The severest flood on the Leaf and Bowie Rivers generally occurs in early spring as a result of rainfall from large frontal systems. The latest floods to occur in the Leaf River floodplain were in 1960, 1974, and 1980. In 1980, two separate floods occurred – one in March and one in April. The April flood was the most damaging and the communities affected were declared disaster areas. In Hattiesburg, other factors contributing to flood problems are bridges and culverts that have inadequate capacity and easily become constricted from debris at the structures.

Table 6 contains information about historic flood elevations in the communities within Forrest County.

Table 6: Historic Flooding Elevations

[Not Applicable to this Flood Risk Project]

4.3 Non-Levee Flood Protection Measures

Table 7 contains information about non-levee flood protection measures within Forrest County such as dams, jetties, and or dikes. Levees are addressed in Section 4.4 of this FIS Report.

Table 7: Non-Levee Flood Protection Measures

[Not Applicable to this Flood Risk Project]

4.4 Levees

For purposes of the NFIP, FEMA only recognizes levee systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with comprehensive floodplain management criteria. The Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10) describes the information needed for FEMA to determine if a levee system reduces the risk from the 1-percent-annual-chance flood. This information must be supplied to FEMA by the community or other party when a flood risk study or restudy is conducted, when FIRMs are revised, or upon FEMA request. FEMA reviews the information for the purpose of establishing the appropriate FIRM flood zone.

Levee systems that are determined to reduce the risk from the 1-percent-annual-chance flood are accredited by FEMA. FEMA can also grant provisional accreditation to a levee system that was previously accredited on an effective FIRM and for which FEMA is awaiting data and/or documentation to demonstrate compliance with Section 65.10. These levee systems are referred to as Provisionally Accredited Levees, or PALs. Provisional accreditation provides communities and levee owners with a specified timeframe to obtain the necessary data to confirm the levee's certification status. Accredited levee systems and PALs are shown on the FIRM using the symbology shown in Figure 3 and in Table 8. If the required information for a PAL is not submitted within the required timeframe, or if information indicates that a levee system no longer meets Section 65.10, FEMA will de-accredit the levee system and issue an effective FIRM showing the levee-impacted area as a SFHA.

FEMA coordinates its programs with USACE, who may inspect, maintain, and repair levee systems. The USACE has authority under Public Law 84-99 to supplement local efforts to repair flood control projects that are damaged by floods. Like FEMA, the USACE provides a program to allow public sponsors or operators to address levee system maintenance deficiencies. Failure to do so within the required timeframe results in the levee system being placed in an inactive status in the USACE Rehabilitation and Inspection Program. Levee systems in an inactive status are ineligible for rehabilitation assistance under Public Law 84-99.

FEMA coordinated with the USACE, the local communities, and other organizations to compile a list of levees that exist within Forrest County. Table 8, "Levees," lists all accredited levees, PALs, and de-accredited levees shown on the FIRM for this FIS Report. Other categories of levees may also be included in the table. The Levee ID shown in this table may not match numbers based on other identification systems that were listed in previous FIS Reports. Levees identified as PALs in the table are labeled on the FIRM to indicate their provisional status.

Please note that the information presented in Table 8 is subject to change at any time. For that reason, the latest information regarding any USACE structure presented in the table should be obtained by contacting USACE and accessing the USACE National Levee Database. For levees owned and/or operated by someone other than the USACE, contact the local community shown in Table 30.

Please note that FEMA has identified levees in this jurisdiction that have not been demonstrated by the community or levee owner to meet the requirements of 44 CFR 65.10 of the NFIP regulations as it relates to the levee's capacity to provide 1-percent-annual-chance flood protection. As such, the existing flood hazard analysis in the affected areas has been carried forward from the previously-printed effective FIRM panel(s) and the area has been clearly identified on the FIRM panel with notes and bounding lines. This has been done to inform users that a temporary mapping action has been put in place until such time as FEMA is able to initiate a new flood risk project to apply new flood hazard mapping procedures for leveed areas. These levees occur on FIRM panel(s) 28035C0109F and 28035C0117F, on the Leaf River, and are identified on the FIRM panel(s) as potential areas of flood hazard data changes based on further review. Levees and their accreditation status are listed in Table 8 of this FIS Report.

Table 8: Levees

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Hattiesburg, City of	Leaf River	NP	City of Hattiesburg	No	1405000048	Unknown	28035C0109F, 28035C0117F
Petal, City of	Greens Creek	Left and Right Bank	Unknown	No	NP	Unknown	28035C0107E

SECTION 5.0 – ENGINEERING METHODS

For the flooding sources 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 at least once on the average during any 10-, 25-, 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-, 25-, 50-, 100-, and 500-year floods, have a 10-, 4-, 2-, 1-, and 0.2-percent-annual-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 100-year flood (1-percent chance of annual exceedance) during the term of a 30-year mortgage is approximately 26 percent (about 3 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 future changes.

In addition to these flood events, the “1-percent-plus”, or “1%+”, annual chance flood elevation has been modeled and included on the flood profile for certain flooding sources in this FIS Report. While not used for regulatory or insurance purposes, this flood event has been calculated to help illustrate the variability range that exists between the regulatory 1-percent-annual-chance flood elevation and a 1-percent-annual-chance elevation that has taken into account an additional amount of uncertainty in the flood discharges (thus, the 1% “plus”). For flooding sources whose discharges were estimated using regression equations, the 1%+ flood elevations are derived by taking the 1-percent-annual-chance flood discharges and increasing the modeled discharges by a percentage equal to the average predictive error for the regression equation. For flooding sources with gage- or rainfall-runoff-based discharge estimates, the upper 84-percent confidence limit of the discharges is used to compute the 1%+ flood elevations.

The engineering analyses described here incorporate the results of previously issued Letters of Map Change (LOMCs) listed in Table 26, “Incorporated Letters of Map Change”, which include Letters of Map Revision (LOMRs). For more information about LOMRs, refer to Section 6.5, “FIRM Revisions.”

5.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak elevation-frequency relationships for floods of the selected recurrence intervals for each flooding source studied. Hydrologic analyses are typically performed at the watershed level. Depending on factors such as watershed size and shape, land use and urbanization, and natural or man-made storage, various models or methodologies may be applied. A summary of the hydrologic methods applied to develop the discharges used in the hydraulic analyses for each stream is provided in Table 12. Greater detail (including assumptions, analysis, and

results) is available in the archived project documentation.

A summary of the discharges is provided in Table 9. Stream gage information is provided in Table 11.

Table 9: Summary of Discharges

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	0.2% Annual Chance
Black Creek	At the County Boundary	427.52	*	*	*	41,250	*
Black Creek	Approximately 2,400 feet downstream of Ashe Nursery Road	359.12	*	*	*	37,126	*
Black Creek	Approximately 0.6 mile downstream of the confluence of Big Creek	340.01	*	*	*	35,929	*
Black Creek	Approximately 30 feet downstream of Churchwell Road	205.41	*	*	*	29,862	*
Black Creek	Approximately 1.0 mile upstream of the confluence of Bufkins Branch	187.02	*	*	*	29,035	*
Boggy Branch	At Mouth	2.52	*	*	*	1,852	*
Boggy Branch	Approximately 1,500 feet upstream of Robison Drive	2.04	*	*	*	1,229	*
Boggy Branch	Approximately 0.5 mile upstream of Otis Lee Road	1.44	*	*	*	1,060	*
Bowie River	At Mouth	600	27,000	*	51,000	65,000	111,000

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	0.2% Annual Chance
Burketts Creek	Approximately 3,190 feet downstream of James Street	6.58	2,499	3,131	3,733	4,315	5,385
Burketts Creek	Confluence with Burketts Creek	3.71	1,465	1,840	2,213	2,546	3,183
Burketts Creek	Approximately 2,600 feet upstream of US Highway 49	3.17	1,275	1,604	1,935	2,223	2,778
Burketts Creek	Approximately 350 feet downstream of US Highway 49	2.80	1,136	1,430	1,730	1,986	2,481
Burketts Creek	Approximately 260 feet upstream of Bonhomie Road	2.38	1,073	1,352	1,642	1,881	2,350
Burketts Creek	Approximately 825 feet downstream of US Highway 11	1.72	890	1,129	1,382	1,578	1,979
Burketts Creek Tributary 1	Confluence with Burketts Creek	2.41	1,284	1,583	1,887	2,154	2,673
Burketts Creek Tributary 1	Approximately 850 feet downstream of Helveston Road	1.55	916	1,124	1,342	1,526	1,890
Gordons Creek	At Mouth	10.24	5,229	*	6,685	7,887	10,318
Gordons Creek	Approximately 530 feet downstream of Broad Street	8.80	4,586	*	5,908	7,025	9,253

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	0.2% Annual Chance
Gordons Creek	Approximately 1,230 feet downstream of Park Avenue	8.19	4,254	*	5,481	6,526	8,589
Gordons Creek	Approximately 920 feet upstream of Adeline Street	4.72	2,687	*	3,498	4,192	5,524
Gordons Creek	Approximately 200 feet downstream of Highway 11	2.87	1,837	*	2,356	2,838	3,969
Gordons Creek Tributary	Approximately 400 feet upstream of South 19th Avenue	2.34	1,615	1,969	2,333	2,661	3,273
Gordons Creek Tributary	Approximately 400 feet upstream of 26th Avenue	1.89	1,413	1,719	2,044	2,325	2,860
Gordons Creek Tributary	Approximately 1,240 feet downstream of South 28th Avenue	1.26	1,048	1,278	1,530	1,734	2,142
Greens Creek	At Mouth	10.6	2,540	*	4,040	4,730	6,500
Greens Creek	At Chappell Hill Road	9.87	*	*	*	4,849	*
Greens Creek	Approximately 1,200 feet upstream of Chappell Hill Road	6.42	*	*	*	3,397	*
Greens Creek	Approximately 0.6 mile upstream of Kelly Rose Lane	4.76	*	*	*	2,797	*

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	0.2% Annual Chance
Greens Creek	Approximately 1.0 mile upstream of Kelly Rose Lane	3.94	*	*	*	2,059	*
Greens Creek	Approximately 1,100 feet upstream of Robertson Road	2.04	*	*	*	1,392	*
Leaf River	Approximately 2,600 feet upstream of Railroad	2,545	64,382	84,908	102,130	120,153	167,213
Leaf River	Approximately 1.4 miles upstream of Railroad	1,893	54,697	72,714	87,864	104,710	148,716
Leaf River	Approximately 9.1 miles upstream of Railroad	1,858	54,013	71,838	86,888	103,431	147,145
Leaf River	Approximately 3.5 miles downstream of Sims Road	1,842	53,712	71,449	86,445	102,863	146,422
Leaf River	Approximately 62 miles above mouth	1,824	58,000	*	101,000	125,000	195,000
Leaf River	Approximately 940 feet downstream of Old Highway 24	1,816	53,239	70,833	85,734	101,964	145,242
Leaf River	Approximately 12,325 feet upstream of Old Highway 24	1,799	52,920	70,416	85,248	101,358	144,435
Leaf River	At U.S. Highway 11	1,760	51,000	*	89,000	110,000	172,000

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	0.2% Annual Chance
Leaf River	Just above confluence of the Bowie River	1,100	36,000	*	65,000	82,000	135,000
Little Beaver Creek	At Mouth	13.13	*	*	*	4,553	*
Little Beaver Creek	Approximately 200 feet upstream of Churchwell Road	12.35	*	*	*	4,321	*
Little Beaver Creek	Approximately 1.3 miles downstream of Browns Bridge Road	10.66	*	*	*	4,255	*
Little Beaver Creek	Approximately 0.4 mile downstream of Browns Bridge Road	9.25	*	*	*	3,998	*
Mixons Creek	At Mouth	12.08	4,917	*	6,398	7,669	9,954
Mixons Creek	Approximately 0.6 mile downstream of Campbell Scenic Drive	11.07	4,511	*	5,851	7,042	9,196
Mixons Creek	Approximately 733 feet upstream of Campbell Scenic Drive	6.58	4,164	*	5,378	6,455	8,396
Mixons Creek Tributary 1	At Mouth	3.52	1,648	*	2,120	2,553	3,353
Mixons Creek Tributary 1	Approximately 0.4 mile downstream of Westover Drive	3.14	1,508	*	1,945	2,330	3,034

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	0.2% Annual Chance
Mixons Creek Tributary 1	Approximately 626 feet upstream of Westover Drive	2.25	1,368	*	1,764	2,111	2,738
Mixons Creek Tributary 1	Approximately 472 feet downstream of the County boundary	2.14	1,230	*	1,577	1,184	2,434
Mixons Creek Tributary 1	At mouth	*	*	*	*	4,338	*
Mixons Creek Tributary 2	At mouth	0.33	*	*	*	405	*
Mixons Creek Tributary 3	At mouth	0.57	*	*	*	580	*
Priests Creek	Confluence with Leaf River	10.82	2,905	3,745	4,142	5,252	6,643
Priests Creek	Approximately 700 feet upstream of James Street	8.07	2,279	2,943	3,256	4,133	5,236
Priests Creek	Approximately 620 feet downstream of Acadamey Drive	7.72	2,230	2,887	3,194	4,061	5,152
Priests Creek	Approximately 1,630 feet downstream of JM Industrial Drive	7.49	2,212	2,865	3,168	4,031	5,114
Priests Creek	Approximately 1,205 feet upstream of Carter Pitt Road	6.50	1,926	2,513	2,778	3,553	4,524

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	0.2% Annual Chance
Priests Creek	Approximately 2,230 feet downstream of US Highway 49	5.56	1,743	2,276	2,517	3,223	4,106
Priests Creek	Approximately 1,520 feet upstream of Elks Road	3.68	1,279	1,685	1,862	2,397	3,068
Priests Creek	Approximately 1,920 feet downstream of Bonhomie Road	1.62	665	849	1,003	1,201	1,521
Priests Creek	Approximately 350 feet downstream of Bonhomie Road	1.52	659	840	992	1,172	1,484
Priests Creek	Approximately 6,255 feet upstream of Bonhomie Road	0.89	532	672	793	881	1,135
Priests Creek Tributary 1	Confluence with Priests Creek	1.57	742	942	1,113	1,242	1,609
Priests Creek Tributary 1	Approximately 1,055 feet downstream of Dover Trace	0.75	455	575	678	754	972
Unnamed Tributary No. 1	Approximately 2,240 feet downstream of George Avenue	1.60	985	1,216	1,458	1,656	2,052
Unnamed Tributary No. 1	Approximately 280 feet upstream of Main Street	1.29	924	1,140	1,370	1,552	1,923

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	0.2% Annual Chance
Unnamed Tributary No. 1	Approximately 185 feet upstream of East 5th Avenue	0.68	695	859	1,043	1,175	1,469
Unnamed Tributary No. 2	At Mouth	0.31	*	*	*	522	*

Figure 7: Frequency Discharge-Drainage Area Curves

[Not Applicable to this Flood Risk Project]

Table 10: Summary of Non-Coastal Stillwater Elevations

[Not Applicable to this Flood Risk Project]

Table 11: Stream Gage Information used to Determine Discharges

Flooding Source	Gage Identifier	Agency that Maintains Gage	Site Name	Drainage Area (Square Miles)	Period of Record	
					From	To
Leaf River	02473000	USGS	Leaf River at Hattiesburg, MS	1,748	4/1/1900	6/24/2017

5.2 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. Base flood elevations on the FIRM represent the 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. These whole-foot elevations may not exactly reflect the elevations derived from the hydraulic analyses. 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. The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the profiles

are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For streams for which hydraulic analyses were based on cross sections, locations of selected cross sections are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 6.3), selected cross sections are also listed in Table 23, “Floodway Data.”

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 12. Roughness coefficients are provided in Table 13. Roughness coefficients are values representing the frictional resistance water experiences when passing overland or through a channel. They are used in the calculations to determine water surface elevations. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

Table 12: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
All A Zones from 1990 Countywide FIS Report	Various	Various	log-Pearson Type III	HEC-2	10/1987	A	
Black Creek	County Boundary	County Boundary	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE	
Boggy Branch	Confluence with Greens Creek	Approximately 0.5 mile upstream of Otis Lee Road	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE	
Bowie River	Confluence with Leaf River	Approximately 14 miles upstream of the confluence with Leaf River	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE w/ Floodway	
Burketts Creek	Confluence with Leaf River	Approximately 0.8 miles upstream of U.S. Highway 11	1991 MS Regression Equations	HEC-RAS 5.0.3	01/2019	AE	
Burketts Creek Tributary 1	Confluence with Burketts Creek	Approximately 0.3 miles upstream of U.S. Highway 49	1991 MS Regression Equations	HEC-RAS 5.0.3	01/2019	AE	
Gordons Creek	Confluence with Leaf River	Approximately 2,000 feet upstream of Interstate 59	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE w/ Floodway	
Gordons Creek Tributary	Confluence with Gordons Creek	Approximately 0.2 miles upstream of S. 34th Avenue	1991 MS Regression Equations	HEC-RAS 5.0.3	01/2019	AE	
Greens Creek	Approxmately 1.0 mile upstream of confluence with Leaf River	Chappell Hill Road	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE w/ Floodway	

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Greens Creek	Chappell Hill Road	Approximately 4,000 feet upstream of Robertson Road	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE	
Leaf River	Forrest County boundary	Approximately 3 miles upstream of Old Highway 24	1991 MS Regression Equations	HEC-RAS 5.0.3	01/2019	AE w/ Floodway	
Leaf River	Approximately 3 miles upstream of Old Highway 24	Forrest County boundary	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE w/ Floodway	
Little Beaver Creek	Confluence with Little Black Creek	Forrest/Lamar county boundary	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE	
Mixons Creek	Approximately 0.4 miles upstream of the confluence with Bowie River	Gravel Pit Road	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE w/ Floodway	
Mixons Creek Tributary 1	Confluence with Mixons Creek	Oak Grove Road	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE w/ Floodway	
Mixons Creek Tributary 2	Approximately 900 feet upstream of Pecan Grove Road	Approximately 1,300 feet north of Highway 98	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE	
Mixons Creek Tributary 3	Mouth	County boundary	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE	
Priests Creek	Confluence with Leaf River	Approximately 1.4 miles upstream of Bonhomie Road	1991 MS Regression Equations	HEC-RAS 5.0.3	01/2019	AE	
Priests Creek Tributary 1	Confluence with Priests Creek	Approximately 0.5 miles upstream of Dover Trace	1991 MS Regression Equations	HEC-RAS 5.0.3	01/2019	AE	

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Unnamed Tributary No. 1	Confluence with Leaf River	Approximately 0.2 miles upstream of E. 5th Avenue	1991 MS Regression Equations	HEC-RAS 5.0.3	01/2019	AE w/ Floodway	
Unnamed Tributary No. 2	Confluence with Unnamed Tributary No. 1	Approximately 400 feet upstream of Chandler Lane	1991 MS Regression Equations	HEC-RAS 3.1.2	06/2008	AE	

Table 13: Roughness Coefficients

Flooding Source	Channel “n”	Overbank “n”
Black Creek	0.038	0.035-0.12
Boggy Branch	0.04	0.04-0.14
Bowie River	0.035-0.07	0.10-0.25
Burketts Creek	0.1-0.03	0.12-0.061
Burketts Creek Tributary 1	0.07-0.028	0.12-0.013
Gordons Creek	0.012-0.042	0.02-0.15
Gordons Creek Tributary	0.03-0.013	0.12-0.013
Greens Creek	0.049-0.055	0.06-0.12
Leaf River (HEC-RAS 3.1.2)	0.035-0.04	0.14-0.25
Leaf River (HEC-RAS 5.0.3)	0.12-0.013	0.12-0.013
Little Beaver Creek	0.05	0.06-0.14
Mixons Creek	0.04-0.045	0.015-0.15
Mixons Creek Tributary 1	0.045	0.015-0.15
Mixons Creek Tributary 2	0.045-0.048	0.060-0.15
Mixons Creek Tributary 3	0.035-0.05	0.06-0.15
Priests Creek	0.05	0.12-0.029
Priests Creek Tributary 1	0.05	0.12-0.027
Unnamed Tributary No. 1	0.035-0.03	0.12-0.029
Unnamed Tributary No. 2	0.038-0.042	0.05-0.13

5.3 Coastal Analyses

This section is not applicable to this Flood Risk Project.

Table 14: Summary of Coastal Analyses

[Not Applicable to this Flood Risk Project]

5.3.1 Total Stillwater Elevations

This section is not applicable to this Flood Risk Project.

Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas

[Not Applicable to this Flood Risk Project]

Table 15: Tide Gage Analysis Specifics

[Not Applicable to this Flood Risk Project]

5.3.2 Waves

This section is not applicable to this Flood Risk Project.

5.3.3 Coastal Erosion

This section is not applicable to this Flood Risk Project.

5.3.4 Wave Hazard Analyses

This section is not applicable to this Flood Risk Project.

Table 16: Coastal Transect Parameters

[Not Applicable to this Flood Risk Project]

Figure 9: Transect Location Map

[Not Applicable to this Flood Risk Project]

5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

Table 17: Summary of Alluvial Fan Analyses

[Not Applicable to this Flood Risk Project]

Table 18: Results of Alluvial Fan Analyses
[Not Applicable to this Flood Risk Project]

SECTION 6.0 – MAPPING METHODS

6.1 Vertical and Horizontal Control

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 used for newly created or revised FIS Reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD29). With the completion of the North American Vertical Datum of 1988 (NAVD88), many FIS Reports and FIRMs are now prepared using NAVD88 as the referenced vertical datum.

Flood elevations shown in this FIS Report and on the FIRMs are referenced to NAVD88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between NGVD29 and NAVD88 or other datum conversion, visit the National Geodetic Survey website at 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 archived project

documentation associated with the FIS Report and the FIRMs for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks in the area, please visit the NGS website at www.ngs.noaa.gov.

The datum conversion locations and values that were calculated for Forrest County are provided in Table 19.

Table 19: Countywide Vertical Datum Conversion

Quadrangle Name	Quadrangle Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
Average Conversion from NGVD29 to NAVD88 = -0.05 feet				

Table 20: Stream-Based Vertical Datum Conversion

[Not Applicable to this Flood Risk Project]

6.2 Base Map

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA's FIRM Database specifications and geographic information standards. This information is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features. For example, the information contained in the Floodway Data table and Flood Profiles can be linked to the cross sections that are shown on the FIRMs. Additional information about the FIRM Database and its contents can be found in FEMA's *Guidelines and Standards for Flood Risk Analysis and Mapping*, www.fema.gov/media-library/resources-documents/collections/361.

Base map information shown on the FIRM was derived from the sources described in Table 21.

Table 21: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
Digital Orthophoto	U.S. Department of Agriculture, Farm Service Agency, Aerial Photography Field Office	2016	12 inch Resolution	National Agricutlure Imagery Program Imagery

Data Type	Data Provider	Data Date	Data Scale	Data Description
Political Boundaries	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	2015	1:5,000	County boundary
Political Boundaries	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	2010	N/A	Municipal boundaries
Public Land Survey System (PLSS)	Federal Geographic Data Committee, Subcommittee for Cadastral Data	2014	1:5,000	Data digitized from USGS 7.5 minute topo maps.
Subbasin Boundaries	U.S. Geological Survey and National Resources Conservation Service State Offices	2017	1:24,000	USGS Watersheds delineated to a HUC 8 level.
Surface Water Features	U.S. Geological Survey, U.S. Environmental Protection Agency, USDA Forest Service, MARIS, and other Federal, State and local Partners	2008	1:24,000	Waterbodies
Surface Water Features	Mississippi Automated Resource Information System	2005	N/A	Streams
Transportation	Mississippi Department of Transportation	2018	1:5,000	Local Roads were collected by digitizing the linework from the MDEM 2006 Imagery. State maintained routes were aligned and modified using the MDEM 2006 Imagery.

Data Type	Data Provider	Data Date	Data Scale	Data Description
Transportation	U.S. Census Bureau	2017	1:5,000	Created using 1990 TIGER files. In 2012 MARIS updated using 2006 MDEM 2 foot imagery, 2010 1 meter USDA NAIP Imagery, MDOT 2009 Official Railroad Map of Mississippi, and 1 foot BING imagery. 2017 MARIS updated using MDOT 2015 Official Railroad Map.

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 22.

In cases where the 1-percent 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.

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 23, “Floodway Data.”

Table 22: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Forrest County, Unincorporated Areas; Hattiesburg, City of; Petal, City of	Burketts Creek, Burketts Creek Tributary 1, Gordons Creek Tributary, Leaf River (HEC-RAS 5.0.3), Priests Creek, Priests Creek Tributary 1, Unnamed Tributary No. 1	Light Detection and Ranging (LiDAR) data	0.15 Meter	0.7 Meter	QUANTUM 2016
Forrest County, Unincorporated Areas; Hattiesburg, City of; Petal, City of	All Effective A Zones, Black Creek, Boggy Branch, Bowie River, Gordons Creek, Greens Creek, Leaf River (HEC-RAS 3.1.2), Little Beaver Creek, Mixons Creek, Mixons Creek Tributary 1, Mixons Creek Tributary 2, Mixons Creek Tributary 3, Unnamed Tributary No. 2	Light Detection and Ranging (LiDAR) data	0.096 Meter RMSE	3.0 Meters	EARTHDATA 2007

BFEs shown at cross sections on the FIRM represent the 1-percent-annual-chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report.

Table 23: 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	0.10	3,174[2]	24,417	3.4	149.8	149.4[3]	150.4	1.0
B	0.70	2,249	25,761	2.5	150.2	149.8[3]	150.7	0.9
C	1.41	1,293	9,962	6.5	150.8	150.8	151.7	0.9
D	1.81	1,952	17,224	3.8	155.0	155.0	155.9	0.9
E	3.19	2,900	29,950	2.2	159.3	159.3	160.2	0.9
F	4.23	2,614	22,928	2.1	162.0	162.0	162.9	0.9
G	7.38	2,968	30,898	2.1	171.2	171.2	172.2	1.0
H	9.57	1,229	16,444	4.0	177.4	177.4	177.7	0.3
I	10.42	3,106	37,982	1.7	179.3	179.3	179.8	0.5
J	12.01	3,253	43,344	1.5	181.4	181.4	182.4	1.0
K	14.04	1,583	20,795	3.1	185.4	185.4	186.4	1.0

[1]Miles above confluence with Leaf River.
[2]Combined floodway width of Bowie River and Leaf River.
[3]Elevation computed without consideration of floding controlled by Leaf River.

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	6,878	185	1,706	4.4	152.3	152.3	152.9	0.6
B	9,228	270	1,948	3.8	156.5	156.5	157.5	1.0
C	11,949	186	1,768	4.0	160.6	160.6	161.1	0.5
D	14,890	139	1,410	5.0	164.7	164.7	165.0	0.3
E	17,818	118	828	7.9	169.6	169.6	169.6	0.0
F	19,815	205	1,330	4.3	177.5	177.5	178.5	1.0
G	21,888	127	1,028	5.6	180.5	180.5	181.4	0.9
H	24,760	143	1,132	3.7	188.9	188.9	189.2	0.3
I	27,000	250	1,572	2.7	195.8	195.8	196.8	1.0
J	29,508	117	397	7.2	201.5	201.5	201.8	0.3
K	32,417	304	714	4.0	213.5	213.5	213.5	0.0
L	35,050	69	443	4.2	220.7	220.7	221.2	0.5
M	37,829	178	988	1.9	236.1	236.1	236.4	0.3
N	40,232	155	1,247	1.5	251.6	251.6	252.5	0.9

[1] Feet above confluence with Leaf River.

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MISSISSIPPI

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: GORDONS 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	1.38	261	2,306	2.1	155.3	155.3	155.3	0.0
B	2.05	250	2,260	2.1	160.8	160.8	161.4	0.6
C	2.25	200	838	5.7	163.1	163.1	163.4	0.3
D	2.59	249	1,239	3.8	168.2	168.2	169.2	1.0
E	2.82	425	2,621	1.8	171.3	171.3	172.3	1.0

[1] Miles above confluence with Leaf River.

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MISSISSIPPI

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: GREENS 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	54.9	3,431	55,882	1.4	118.6	118.6	119.6	1.0
A1	57.1	3,100	49,196	1.5	123.4	123.4	124.4	1.0
A2	59.4	3,950	64,105	1.6	126.1	126.1	126.8	0.7
A3	62.7	3,455	50,043	2.0	131.3	131.3	131.9	0.6
B	65.1	4,822	67,663	1.5	134.5	134.5	135.3	0.8
C	67.8	6,345	70,000	1.8	139.1	139.1	140.1	1.0
D	69.0	3,037	33,971	3.7	140.8	140.8	141.8	1.0
E	69.9	1,872	19,527	6.4	143.5	143.5	144.5	1.0
F	70.5	1,756	18,906	6.6	144.3	144.3	145.3	1.0
G	70.7	2,187	23,392	5.3	144.7	144.7	145.7	1.0
H	70.9	2,985	25,103	5.0	145.2	145.2	146.2	1.0
I	71.2	2,455	22,382	5.6	145.4	145.4	146.3	0.9
J	71.7	2,517	29,703	4.0	147.1	147.1	148.0	0.9
K	72.1	1,769	23,975	4.9	147.8	147.8	148.5	0.7
L	72.4	3,174[2]	24,417	3.4	149.8	149.8	150.7	0.9
M	74.6	3,480	44,661	1.8	153.8	153.8	154.7	0.9
N	76.9	4,453	43,207	1.9	156.5	156.5	157.5	1.0
O	78.3	3,593	43,743	1.9	159.7	159.7	160.7	1.0
P	80.7	2,520	36,813	2.2	164.9	164.9	165.9	1.0
Q	82.5	3,622	40,882	2.0	168.4	168.4	169.4	1.0

[1] Feet above confluence with Chickasawhay River.
[2] Combined floodway wideth of Leaf River and Bowie River.

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MISSISSIPPI

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: LEAF RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	5,649[5]	422	2,974	2.6	163.0	157.7[2]	158.5	0.8
B	8,012[5]	88	1,058	7.2	162.9	162.9	163.1	0.2
C	11,092[5]	66	726	9.7	167.7	167.7	168.1	0.4
D[3]	28,100[6]	200	625	2.9	216.8	216.8	217.1	0.3
E[3]	30,900[6]	200	923	2.0	236.7	236.7	237.6	0.9

[1]Feet above confluence with Bowie River.

[2]Elevation computed without consideration of backwater effects from Bowie River.

[3]Located within Lamar County, City of Hattiesburg, Mississippi.

[4]New Detailed Study, distance measured in feet along Stream Line.

[5]Redlineated Study, distance measured in feet along Profile Base Line.

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MISSISSIPPI

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MIXONS 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	10,050[2]	46	437	4.8	197.6	197.6	197.9	0.3
B	12,867[2]	222	1,106	1.7	203.5	203.5	204.2	0.7

[1] Feet above confluence with Mixons Creek.

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MISSISSIPPI

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MIXONS 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	2,717	71	328	5.1	146.0	141.0	141.0	0.0
B	3,488	25	156	10.6	146.0	144.1	144.7	0.6
C	4,056	43	233	7.1	147.4	147.4	148.4	1.0
D	4,362	80	368	4.5	148.8	148.8	149.6	0.8
E	5,656	80	532	2.9	151.1	151.1	152.0	0.9
F	6,225	130	833	1.9	151.2	151.2	152.2	1.0
G	7,039	180	972	1.6	151.6	151.6	152.5	0.9
H	8,103	470	2,117	0.7	151.7	151.7	152.7	1.0
I	8,978	295	1,170	1.0	152.2	152.2	153.0	0.8

[1]Feet above confluence with Leaf River.

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MISSISSIPPI

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: UNNAMED TRIBUTARY NO. 1

Table 24: 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 25: 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 30, "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/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/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/media-library/assets/documents/1343 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 Forrest County FIRM are listed in Table 26. Please note that this table only includes LOMCs that have been issued on the FIRM panels updated by this map revision. For all other areas within this county, users should be aware that revisions to the FIS Report made by prior LOMRs may not be reflected herein and users will need to continue to use the previously issued LOMRs to obtain the most current data.

Table 26: 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 Forrest County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBMs) and/or Flood Boundary and Floodway Maps (FBFMs) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 27, "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 27 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 Forrest County FIRMs in countywide format was 04/02/1990.

Table 27: Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Forrest County, Unincorporated Areas	09/06/1974	09/06/1974	N/A	04/02/1990	TBD 03/16/2015 03/02/2010
Hattiesburg, City of	04/03/1970	04/03/1970	N/A	04/03/1970	TBD 03/16/2015 03/02/2010 04/02/1990
Petal, City of	02/01/1974	02/01/1974	03/26/1976	04/15/1980	TBD 03/16/2015 03/02/2010 04/02/1990

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

Table 28 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

Table 28: Summary of Contracted Studies Included in this FIS Report

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
All A Zones from 1990 Countywide FIS Report	04/02/1990	Neel-Schaffer, Inc.	EMW-86-C-2246	October 1987	Forrest County, Unincorporated Areas; Hattiesburg, City of; Petal, City of
Black Creek	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Forrest County, Unincorporated Areas
Boggy Branch	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Forrest County, Unincorporated Areas; Petal, City of
Bowie River	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Forrest County, Unincorporated Areas; Hattiesburg, City of
Burketts Creek	TBD	State of Mississippi	EMA-2016-CA-00010-S01	January 2019	Hattiesburg, City of
Burketts Creek Tributary 1	TBD	State of Mississippi	EMA-2016-CA-00010-S01	January 2019	Hattiesburg, City of

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Gordons Creek	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Hattiesburg, City of
Gordons Creek Tributary	TBD	State of Mississippi	EMA-2016-CA-00010-S01	January 2019	Forrest County, Unincorporated Areas
Greens Creek (Zone AE w/ Floodway)	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Petal, City of
Greens Creek (Zone AE)	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Petal, City of
Leaf River	TBD	State of Mississippi	EMA-2016-CA-00010-S01	January 2019	Forrest County, Unincorporated Areas; Hattiesburg, City of; Petal, City of
Leaf River	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Forrest County, Unincorporated Areas; Hattiesburg, City of; Petal, City of
Little Beaver Creek	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Forrest County, Unincorporated Areas
Mixons Creek	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Hattiesburg, City of
Mixons Creek Tributary 1	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Forrest County, Unincorporated Areas
Mixons Creek Tributary 2	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Forrest County, Unincorporated Areas
Mixons Creek Tributary 3	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Forrest County, Unincorporated Areas
Priests Creek	TBD	State of Mississippi	EMA-2016-CA-00010-S01	January 2019	Forrest County, Unincorporated Areas; Hattiesburg, City of
Priests Creek Tributary 1	TBD	State of Mississippi	EMA-2016-CA-00010-S01	January 2019	Forrest County, Unincorporated Areas; Hattiesburg, City of
Unnamed Tributary No. 1	TBD	State of Mississippi	EMA-2016-CA-00010-S01	January 2019	Petal, City of
Unnamed Tributary No. 2	03/16/2015	State of Mississippi	EMA-2005-CA-5215	June 2008	Petal, 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 29. 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 29: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Forrest County Unincorporated Areas	TBD	11/05/2015	Discovery	MDEQ, MEMA, MGI, LLC, and Forrest County
		3/20/2019	Flood Risk Review	MDEQ, MEMA, MGI, LLC, and Forrest County
Hattiesburg, City of	TBD	11/05/2015	Discovery	MDEQ, MEMA, and MGI, LLC
		3/21/2019	Flood Risk Review	MDEQ, MEMA, MGI, LLC, and City of Hattiesburg
Petal, City of	TBD	11/05/2015	Discovery	MDEQ, MEMA, and MGI, LLC
		3/21/2019	Flood Risk Review	MDEQ, MEMA, MGI, LLC, and City of Petal

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.

The additional data that was used for this project includes the FIS Report and FIRM that were previously prepared for Forrest County, Mississippi and Incorporated Areas (FEMA 2015).

Table 30 is a list of the locations where FIRMs for Forrest 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 30: Map Repositories

Community	Address	City	State	Zip Code
Forrest County, Unincorporated Areas	Chancery Building 641 Main Street	Hattiesburg	MS	39403
Hattiesburg, City of	City Hall 200 Forrest Street	Hattiesburg	MS	39401
Petal, City of	Building Department 101 West 8th Avenue	Petal	MS	39465

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 31.

Table 31 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 31: 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 IV	Federal Emergency Management Agency 3003 Chamblee Tucker Road Atlanta, GA 30341 (770) 220-5200
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Stacy D. Ricks, CFM Mississippi Emergency Management Agency P.O. Box 5644 Pearl, MS 39208 Phone: (601) 933-6605 Fax: (601) 933-6805 sricks@mema.ms.gov
State GIS Coordinator	Position currently vacant MFMMI Program Director Administrator of the MS Coordinating Council for Remote Sensing and Geographic Information Systems P.O. Box 20307 Jackson, MS 39289-1307
Statewide Regulatory Coordinator	Stephen D. Champlin, R.P.G. Geospatial Resources Division/Flood Mapping Office of Geology Mississippi Department of Environmental Quality P.O. Box 2279 Jackson, Mississippi 39225 Phone: (601) 961-5506 Stephen_Champlin@deq.state.ms.us

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

Table 32 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 32: 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
CENSUS 2000	U.S. Department of Commerce, Bureau of the Census	*2000 Census of Population, Number of Inhabitants, Mississippi*		Washington, D.C.	April 1, 2000	
EARTHDATA 2007	EarthData International, Inc.	*Elevation Mapping - Camp Shelby, MS Lidar*		Frederick, MD	January 27, 2007	
ESRI 2016	Environmental Systems Research Institute	*ArcMap 10.5*		Redlands, CA	2016	
FEMA 1980	Federal Emergency Management Agency	*Flood Insurance Study, City of Petal, Forrest County, Mississippi*			April 1980	
FEMA 1982	Federal Emergency Management Agency	*Flood Insurance Study, City of Hattiesburg,* *Forrest County, Mississippi*			August 1982	
FEMA 2015	Federal Emergency Management Agency	*Flood Insurance Study, Forrest County, Mississippi and Incorporated Areas*		Washington D.C.	March 16, 2015	FEMA Map Service Center https://msc.fema.gov/
FEMA 2018	Federal Emergency Management Agency	*Flood Insurance Study, Forrest County, Mississippi and Incorporated Areas*	State of Mississippi	Washington D.C.	TBD	
FGDC 2014	Federal Geographic Data Committee, Subcommittee for Cadastral Data	*PLSS First Division*			September 24, 2014	

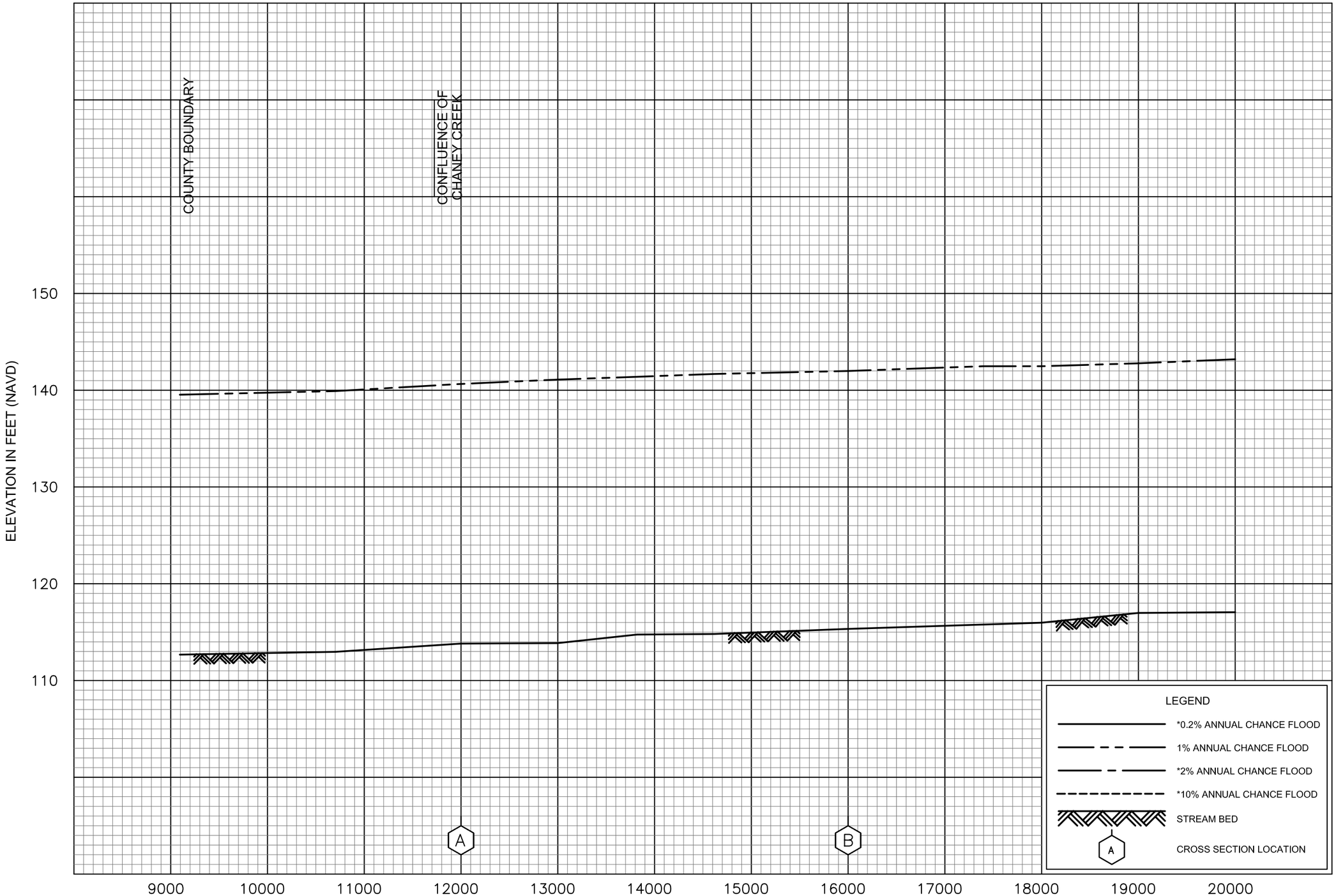
Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
HUD 1977	U.S. Department of Housing and Urban Development, Federal Insurance Administration	*Flood Hazard Boundary Map, Forrest County, Unincorporated Areas, Mississippi*			September 1977	
MARIS 2005	Mississippi Automated Resource Information System	*Hydrology*			2005	
MARIS 2015	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	*County Boundaries for Mississippi*	Mississippi Automated Resource Information System	Jackson, MS	May 20, 2015	MARIS www.maris.state.ms.us
MDOT 2018	Mississippi Department of Transportation	*MDOT_CO_LRM*		Jackson, MS	July 2018	
QUANTUM 2016	Quantum Spatial, Inc.	*LiDAR*		Lexington, KY	November 14, 2016	
USACE 1981	U.S. Army Corps of Engineers	*Detailed Project Report on Gordons Creek, Hattiesburg, Mississippi*			December 1981	
USACE 1983	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*Flood Frequency Analysis, Computer Program 723-X6-L7550*		Davis, CA	December 1983	

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USACE 1983-2	U.S. Army Corps of Engineers, Mobile District	*Leaf and Bowie Rivers, Hattiesburg and Petal, Mississippi, Detailed Project Report and Environmental Impact Statement*			August 1983	
USACE 1984	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*HEC-2 Water Surface Profiles, Computer Program 723-X8-L202A*		Davis, CA	April 1984	
USACE 1985	U.S. Army Corps of Engineers, Mobile District	*Leaf and Bowie Rivers, HEC-2 Computer Model for Improved Conditions*			April 1985	
USACE 2002	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*HEC-RAS River Analysis System, UserΓÇÖs Manual, Version 3.1*		Davis, CA		
USACE 2016	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*HEC-RAS River Analysis System, User's Manual, Version 5.0.3*		Davis, CA	September 2016	
USACE 2019	U.S. Army Corps of Engineers	*National Levee Database*			February 6, 2019	https://levees.sec.usace.army.mil/
USCB 2017	U.S. Census Bureau	*MS Active Railroads*	Mississippi Automated Resource Information System	Jackson, MS	January 12, 2017	MARIS www.maris.state.ms.us

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USDA 2016	U.S. Department of Agriculture, Farm Service Agency, Aerial Photography Field Office	*2016 NAIP Imagery - Forrest County, Mississippi*		Salt Lake City, UT	November 3, 2016	
USDC 2010	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	*MS Census Designated Places 2010*		Washington, D.C.	July 2010	http://www.census.gov/geo/www/tiger
USDI 1976	U.S. Department of the Interior, Geological Survey	*Flood Frequency of Mississippi Streams*	Colson and J.W. Hudson		1976	
USDI 1976-2	U.S. Department of the Interior, Geological Survey	*Open File Report 76-499, Computer Program E431, UserΓÇÖs Manual, Computer Application for Step-Backwater and Floodway Analyses*	J.O. Shearman	Washington D.C.	1976	

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USDI 1981	U.S. Department of the Interior, Geological Survey, Interagency Advisory Committee on the Water Data, Office of Water Data Coordination, Hydrology Subcommittee on Water Data, Office of Water Data Coordination, Hydrology Subcommittee	*Bulletin No. 17B, Guidelines for Determining Flood Flow Frequency*			September 1981	
USDI 1991	U.S. Department of the Interior, Geological Survey	*Flood Characteristics of Mississippi Streams, Water-Resources Investigations Report 91-4037*		Jackson, MS	1991	
USGS 2008	U.S. Geological Survey, U.S. Environmental Protection Agency, USDA Forest Service, MARIS, and other Federal, State and local Partners	*National Hydrography Dataset*		Reston, VA	2008	

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS 2017	U.S. Geological Survey and National Resources Conservation Service State Offices	*Watershed Boundary Dataset - Hydrologic Unit*			September 21, 2017	ftp://ftp.ftw.nrcs.usda.gov/wbd
USGS 2018	U.S. Department of the Interior, U.S. Geological Survey	*NWIS Site Information for USA: Site Inventory*			January 17, 2019	https://maps.waterdata.usgs.gov/mapper



FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

01P

ASHE NURSERY ROAD

ELEVATION IN FEET (NAVD)

160
150
140
130
120
110

20000 21000 22000 23000 24000 25000 26000 27000 28000 29000 30000 31000

STREAM DISTANCE IN FEET ABOVE MOUTH

C

D

LEGEND

*0.2% ANNUAL CHANCE FLOOD

1% ANNUAL CHANCE FLOOD

*2% ANNUAL CHANCE FLOOD

*10% ANNUAL CHANCE FLOOD

STREAM BED

A CROSS SECTION LOCATION

* DATA NOT AVAILABLE

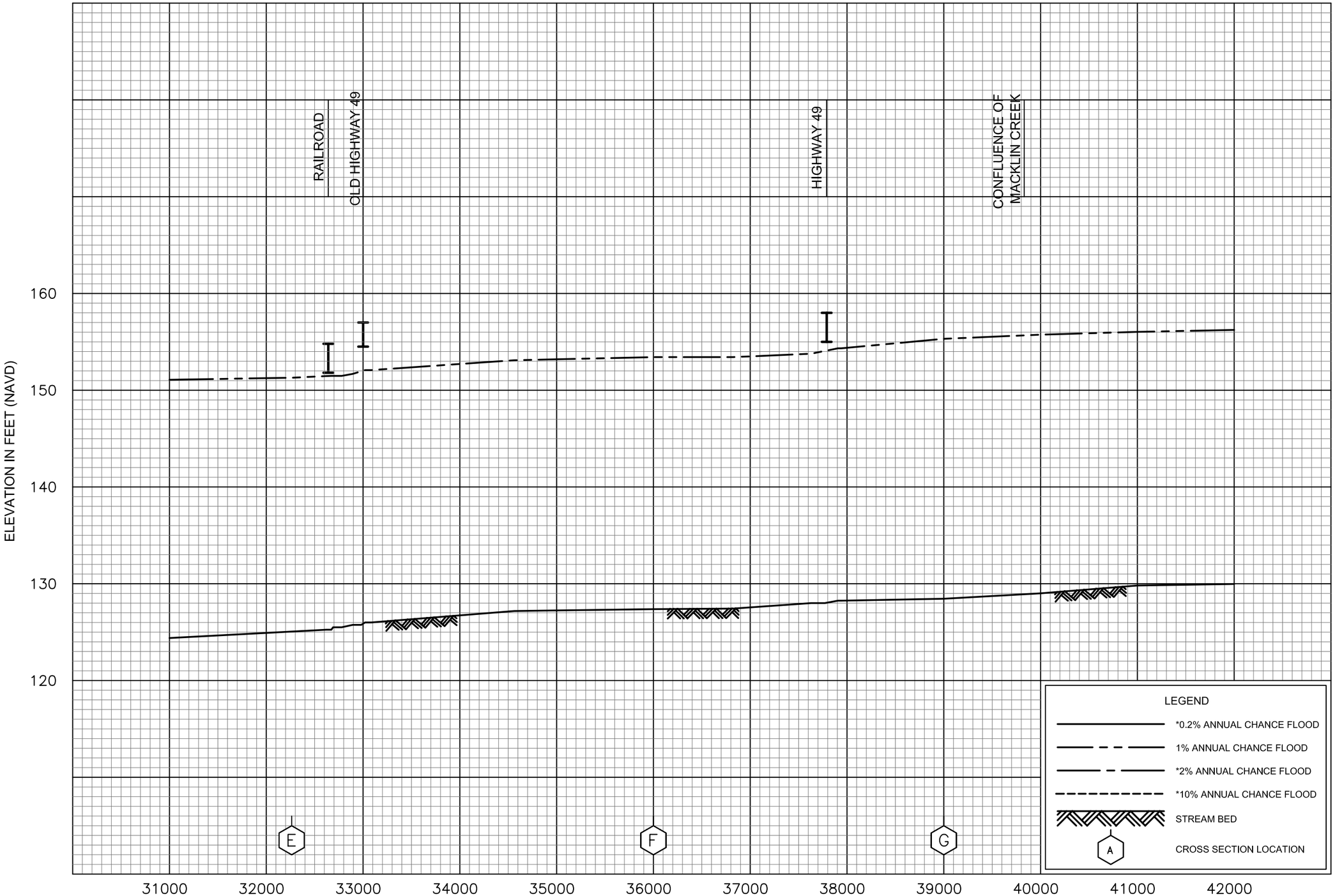
FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

02P



* DATA NOT AVAILABLE

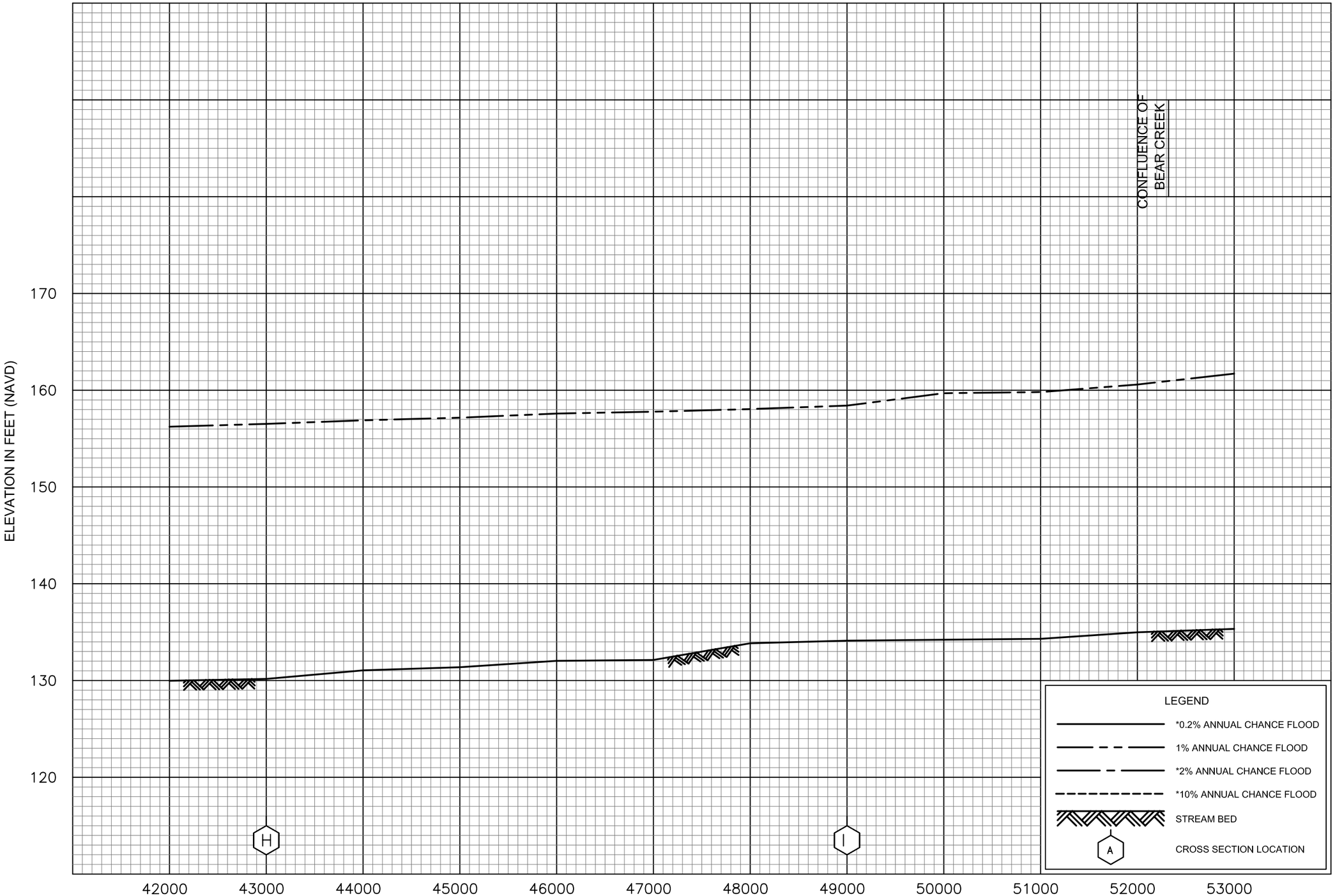
FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

03P



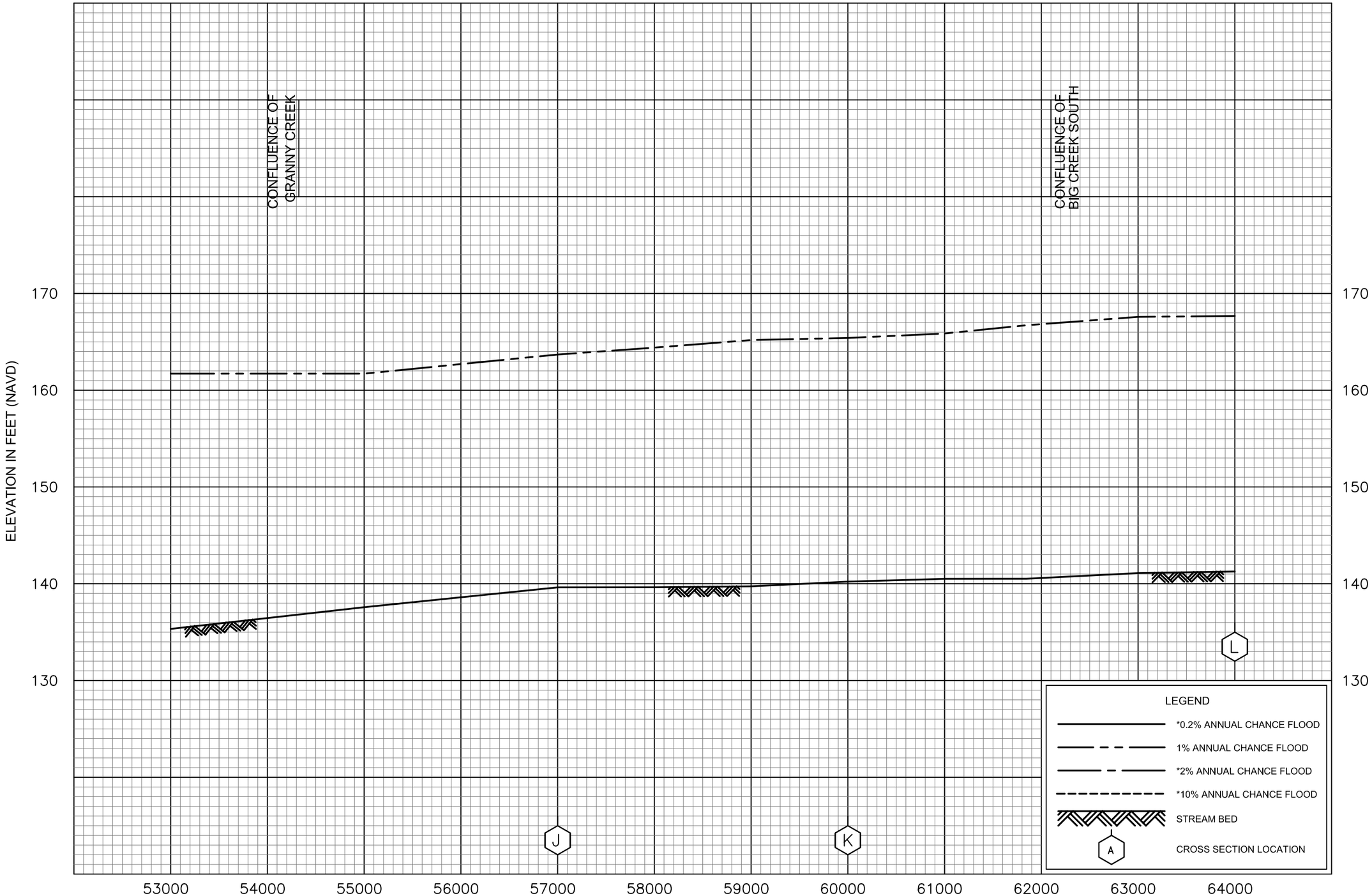
FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

04P



* DATA NOT AVAILABLE

FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

05P

ELEVATION IN FEET (NAVD)

180
170
160
150
140
130

L
M
N

64000 65000 66000 67000 68000 69000 70000 71000 72000 73000 74000 75000

STREAM DISTANCE IN FEET ABOVE MOUTH

LEGEND

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

* DATA NOT AVAILABLE

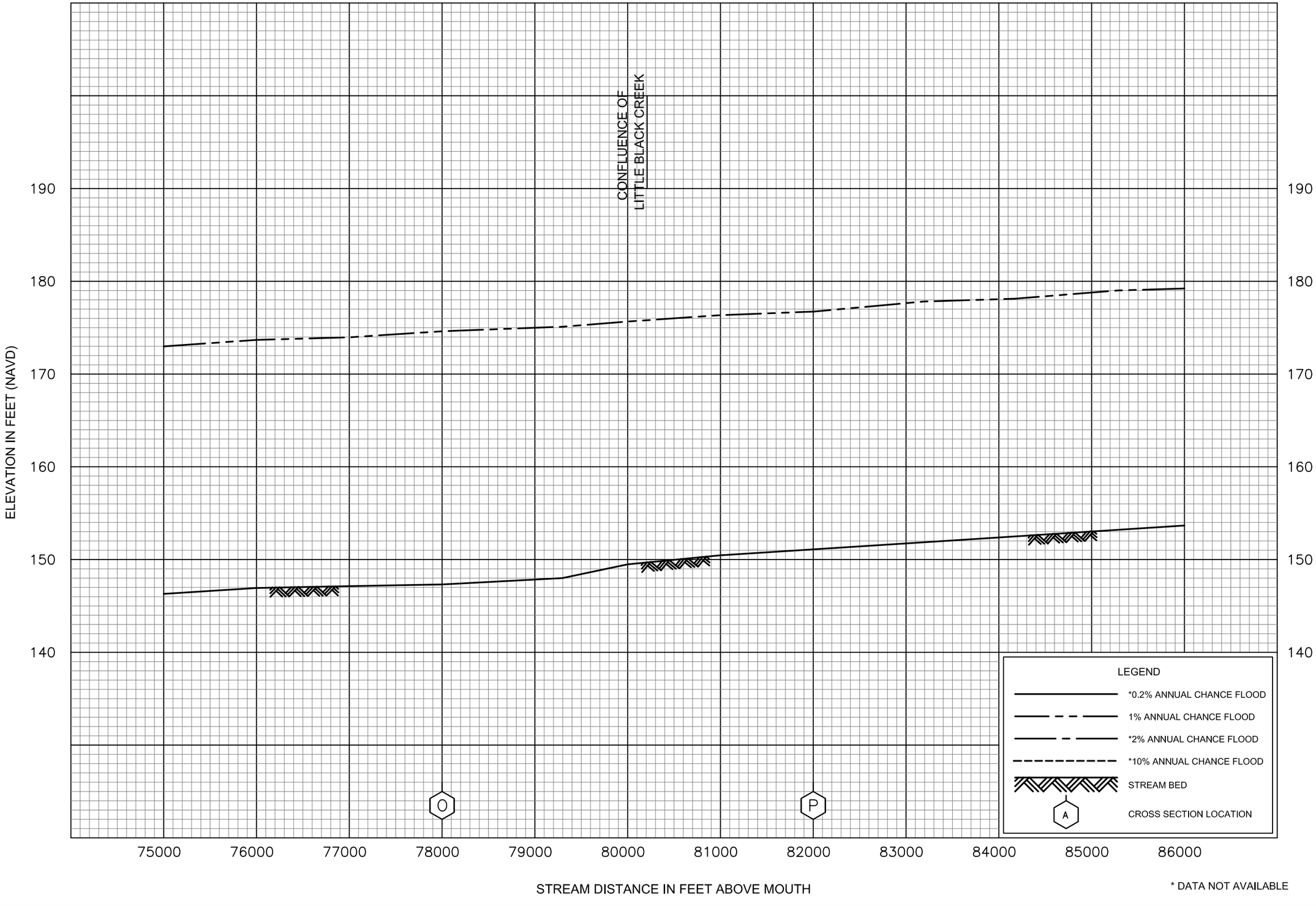
FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

06P



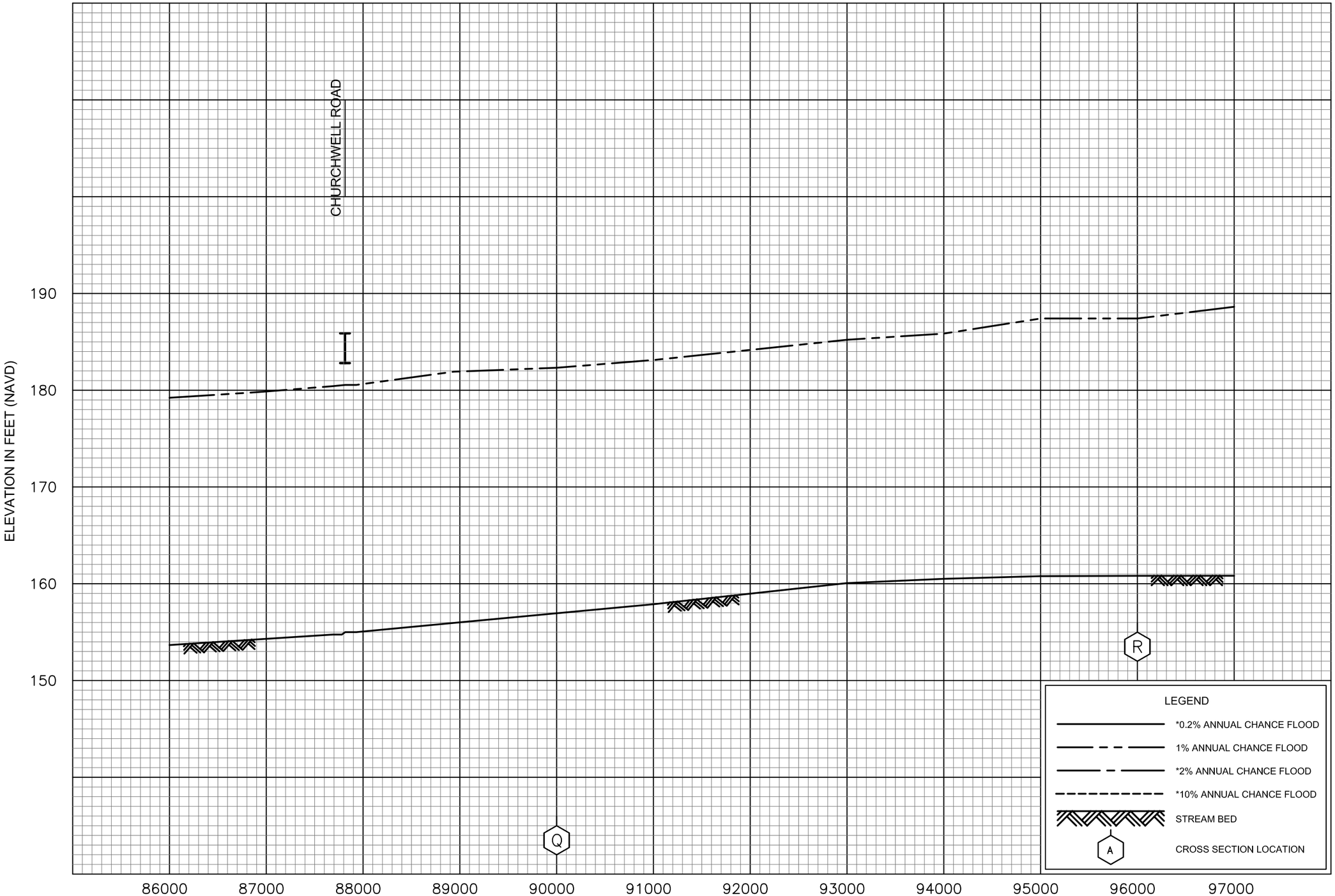
FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

07P



* DATA NOT AVAILABLE

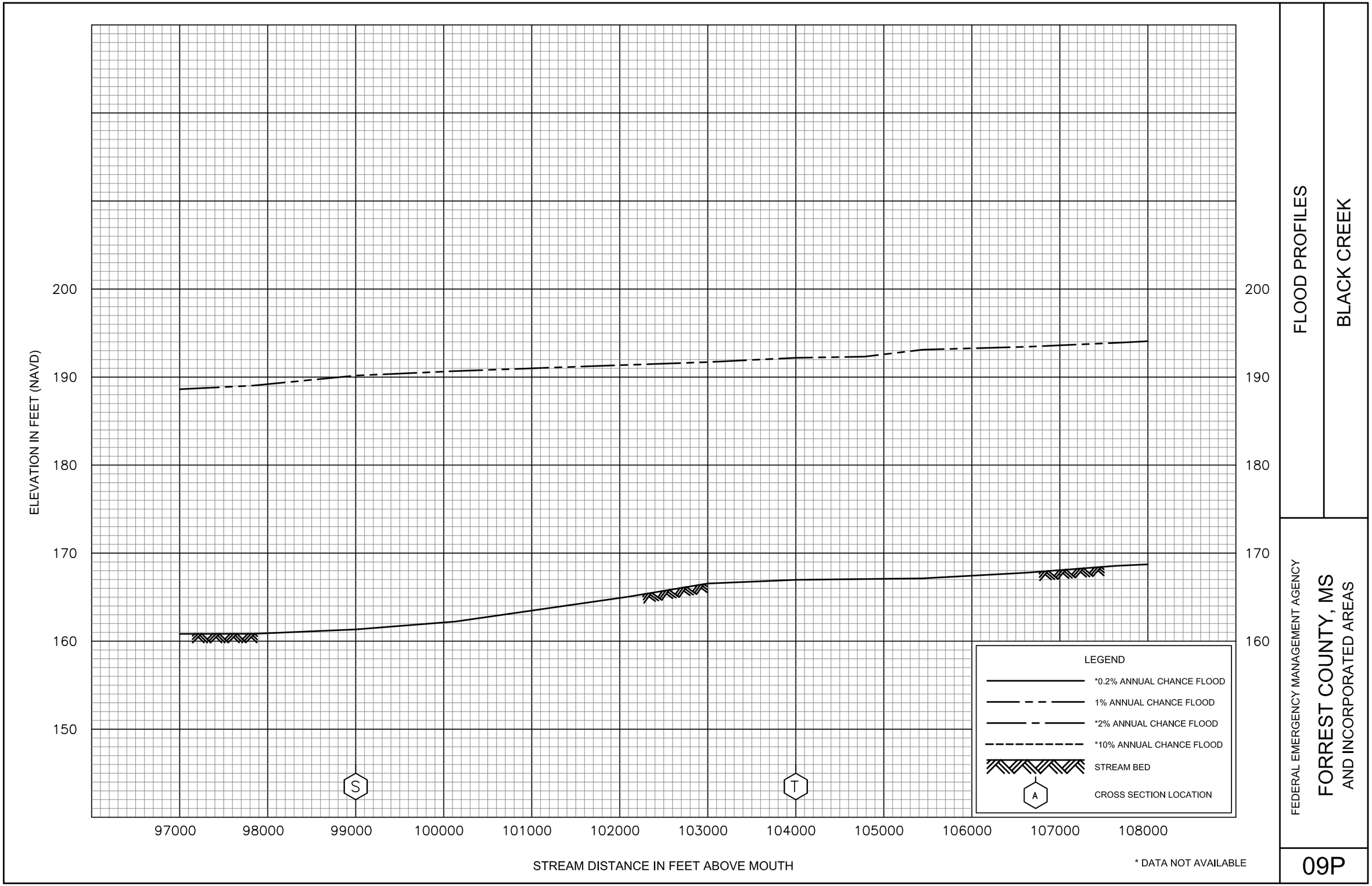
FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

08P



STREAM DISTANCE IN FEET ABOVE MOUTH

* DATA NOT AVAILABLE

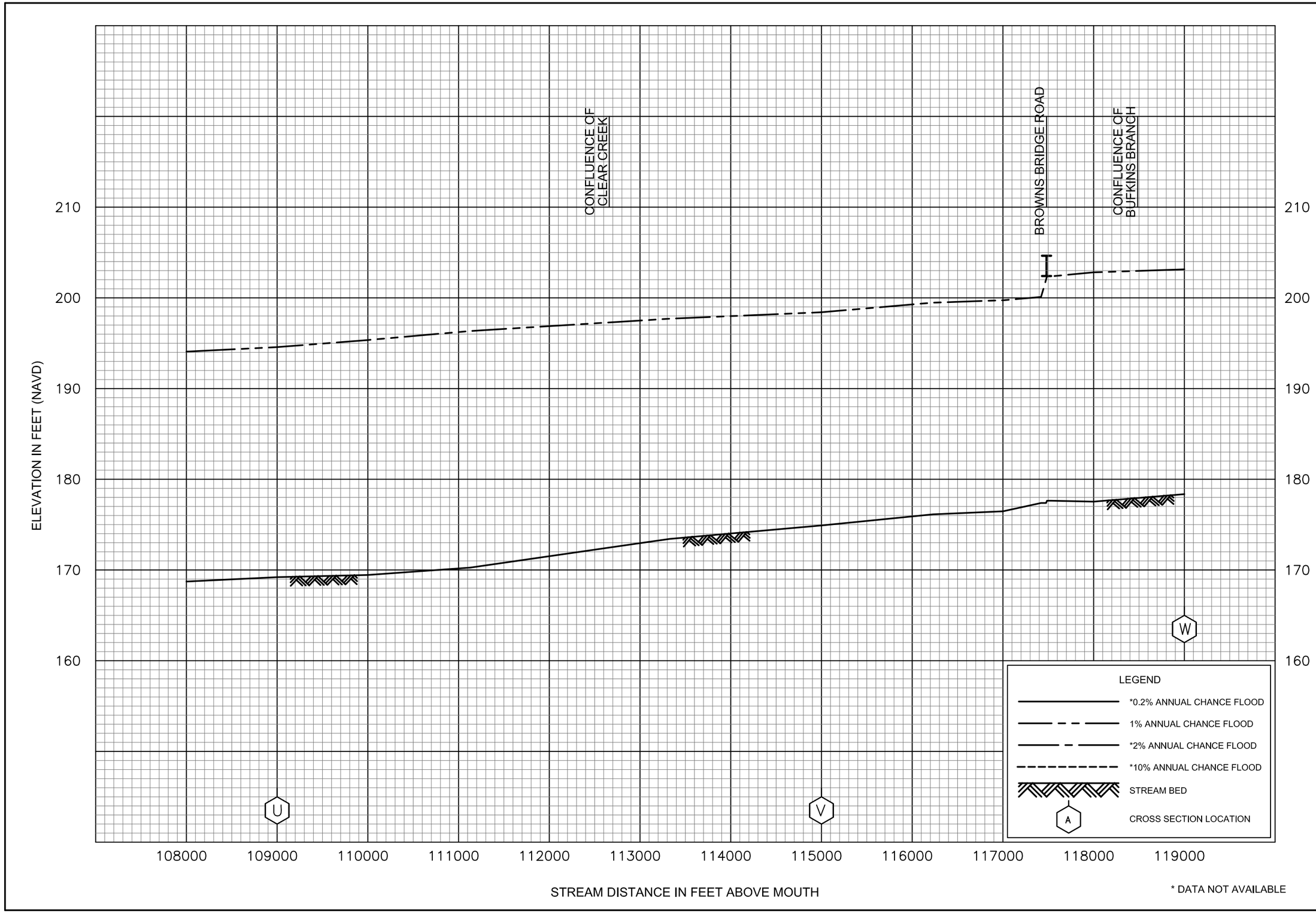
FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

09P



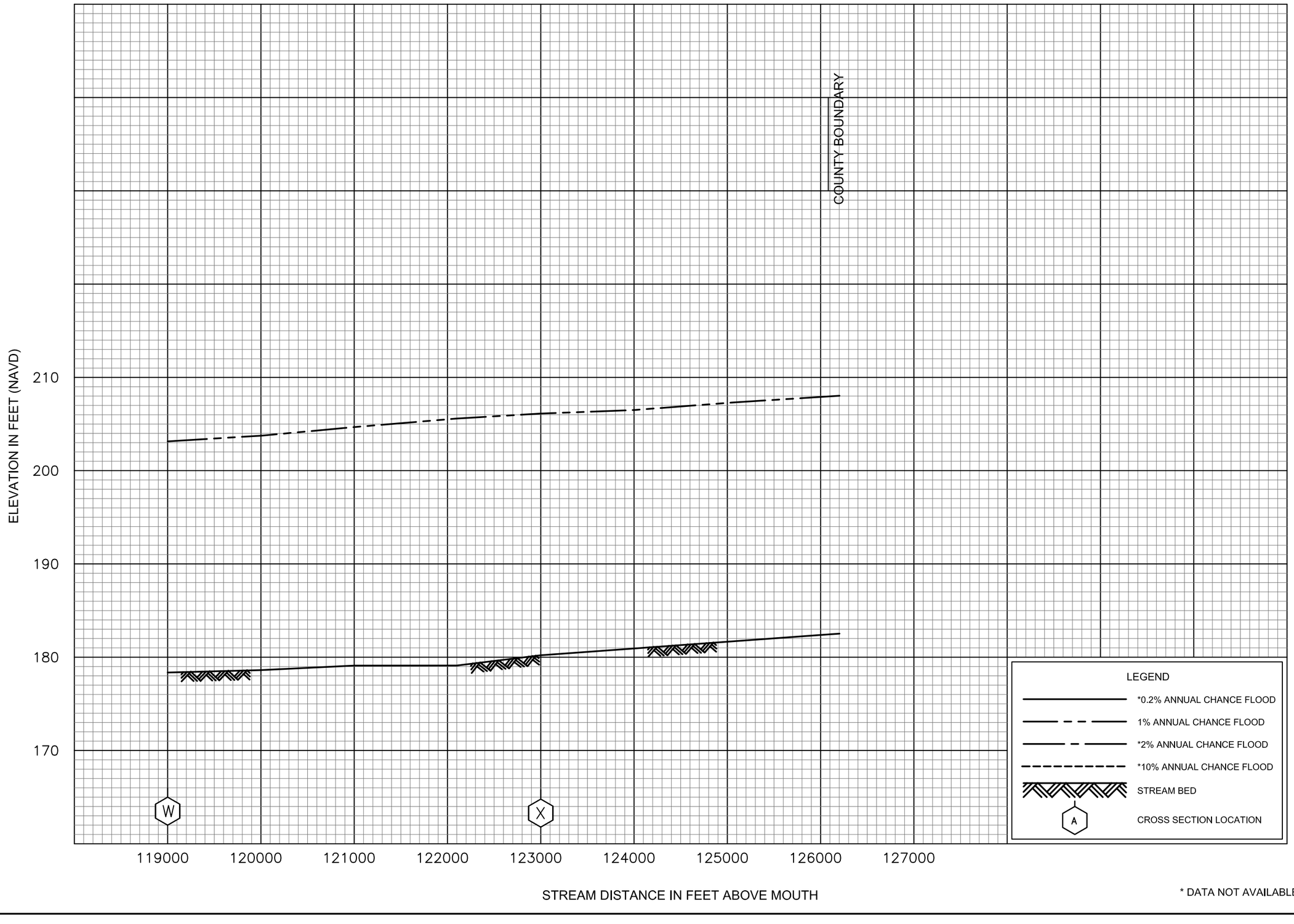
* DATA NOT AVAILABLE

FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

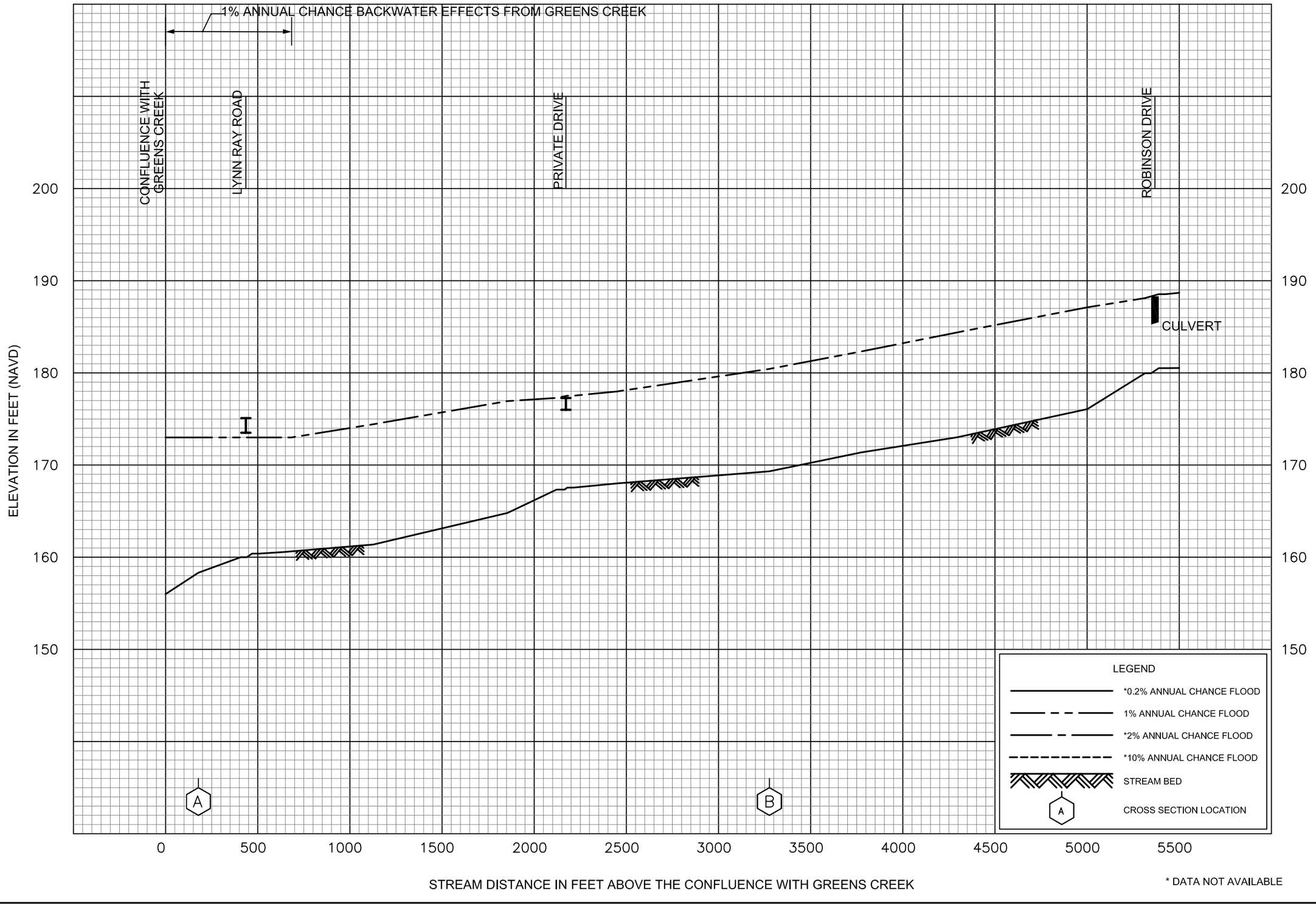


FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS



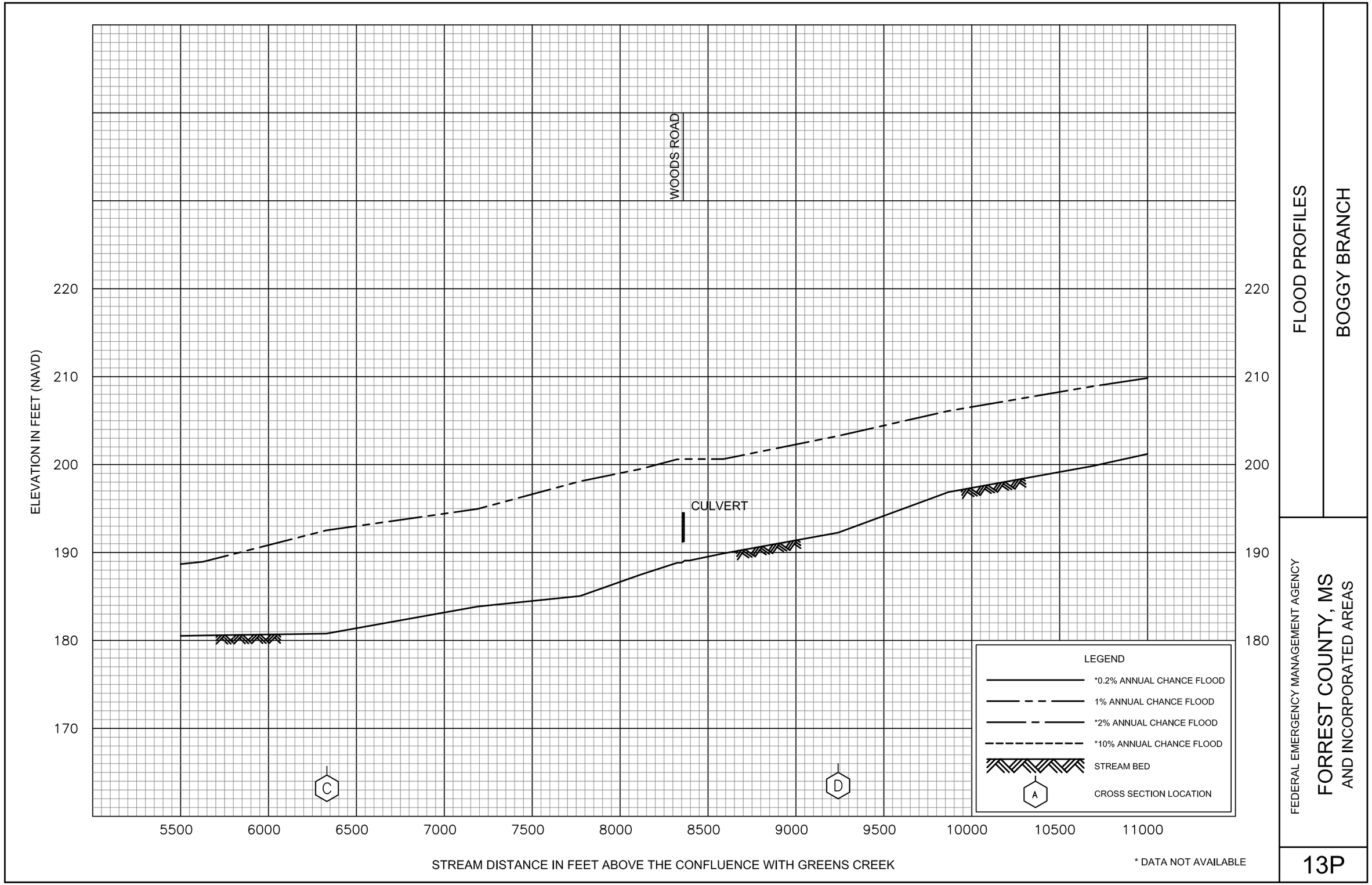
FLOOD PROFILES

BOGGY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

12P



FLOOD PROFILES

BOGGY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)

230
220
210
200
190

OTIS LEE ROAD

E
F

LEGEND

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

11000 11500 12000 12500 13000 13500 14000 14500 15000 15500 16000 16500

STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH GREENS CREEK

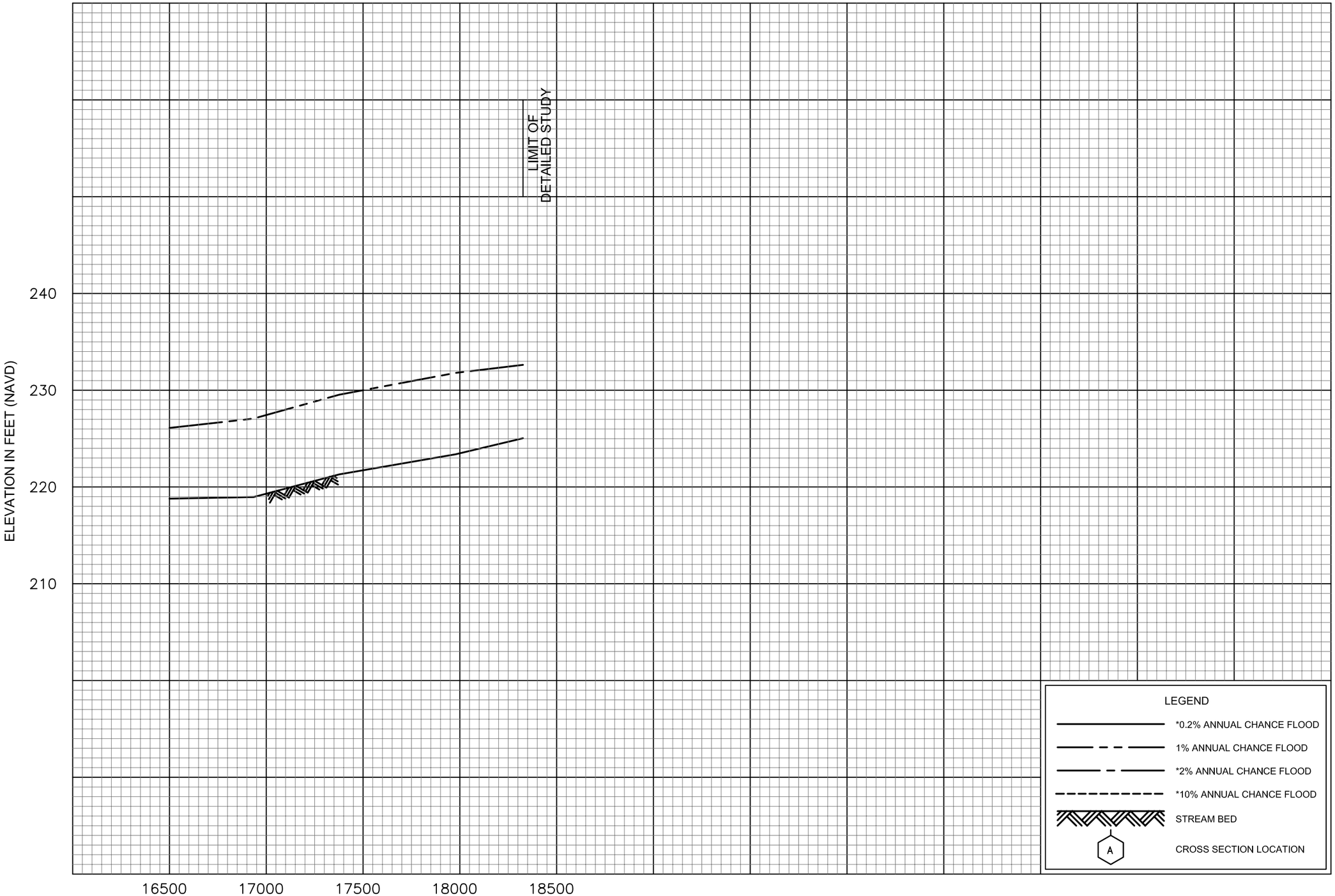
* DATA NOT AVAILABLE

FLOOD PROFILES

BOGGY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS



STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH GREENS CREEK

* DATA NOT AVAILABLE

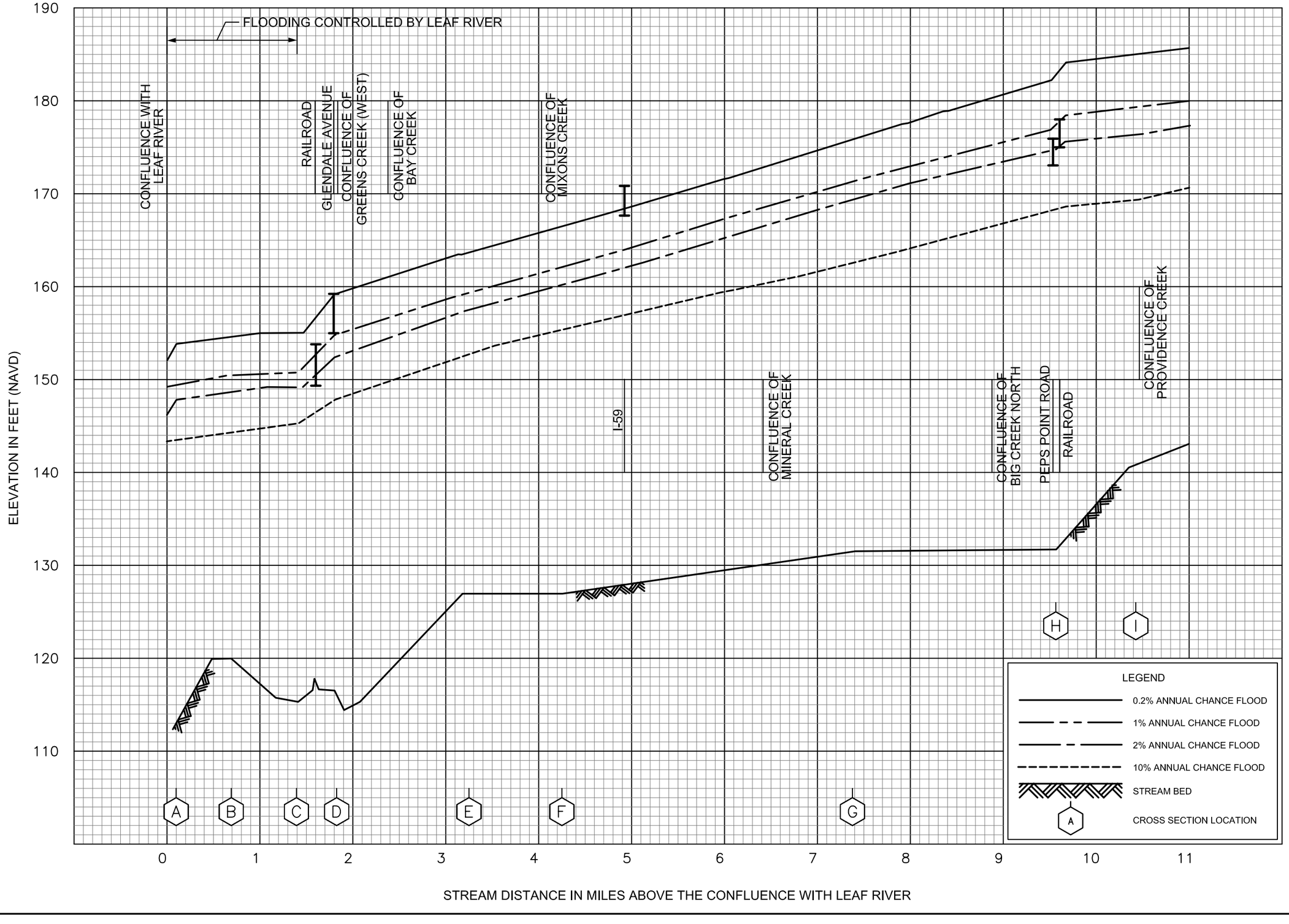
FLOOD PROFILES

BOGGY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

15P



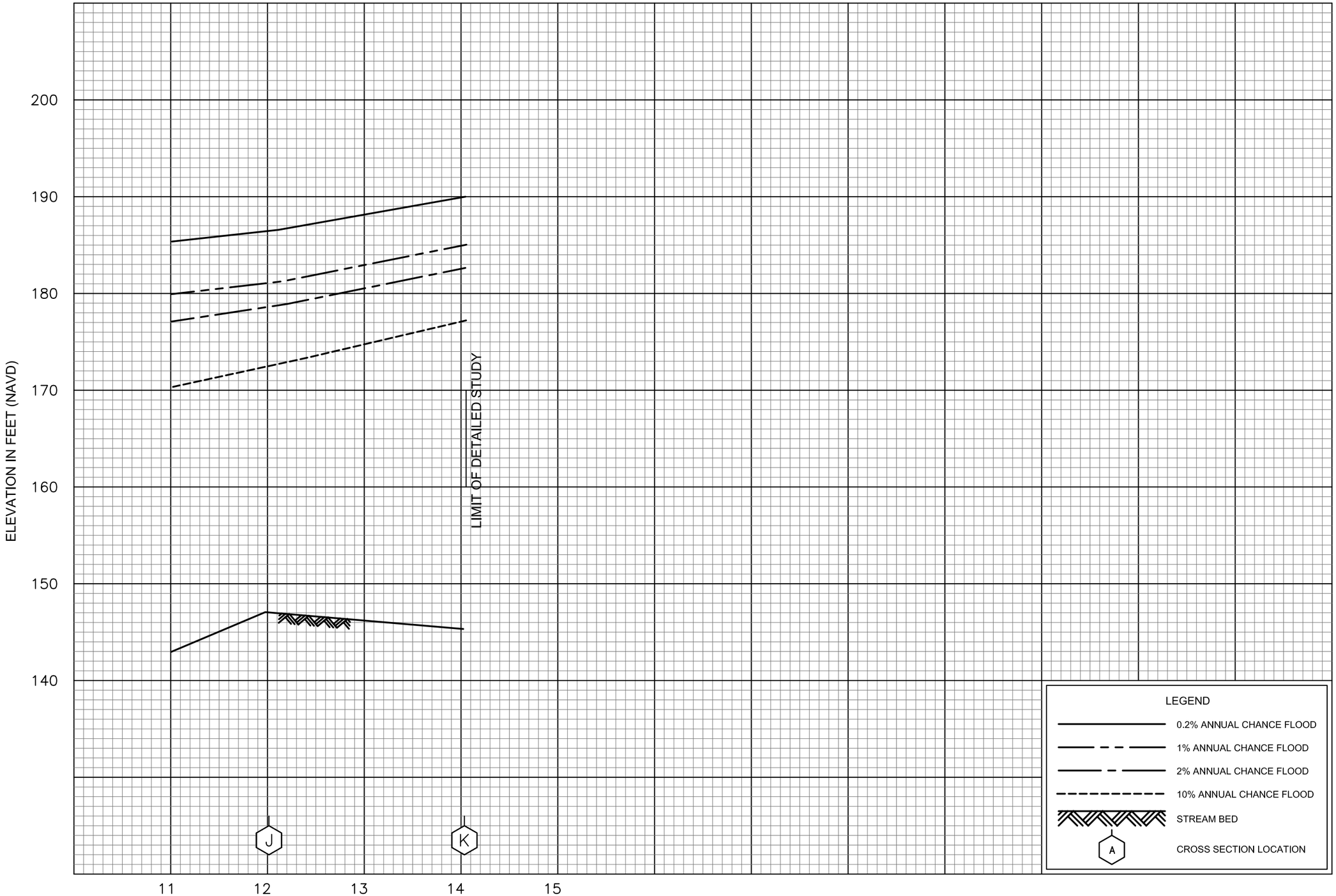
FLOOD PROFILES

BOWIE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

16P



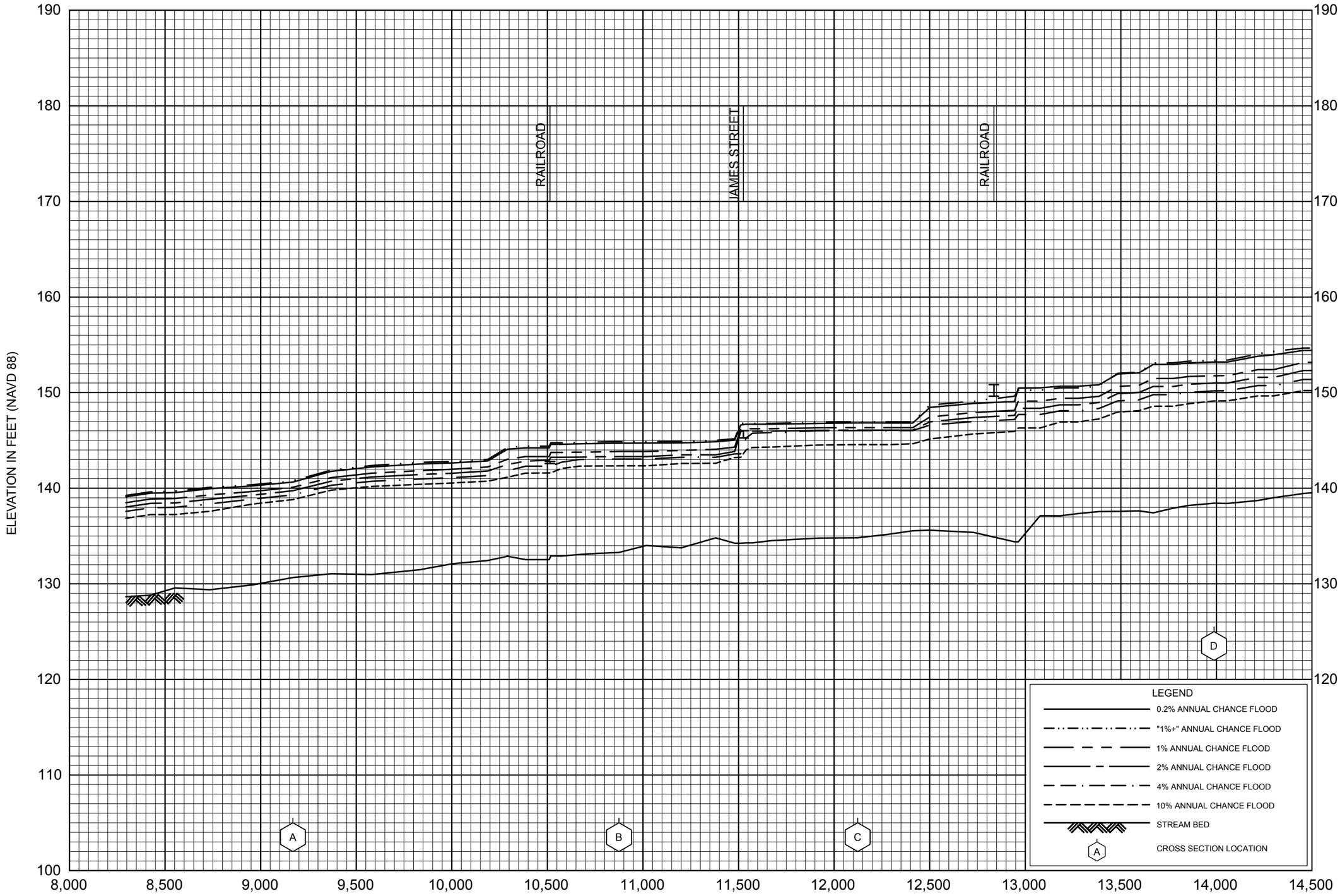
FLOOD PROFILES

BOWIE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

17P



FLOOD PROFILES

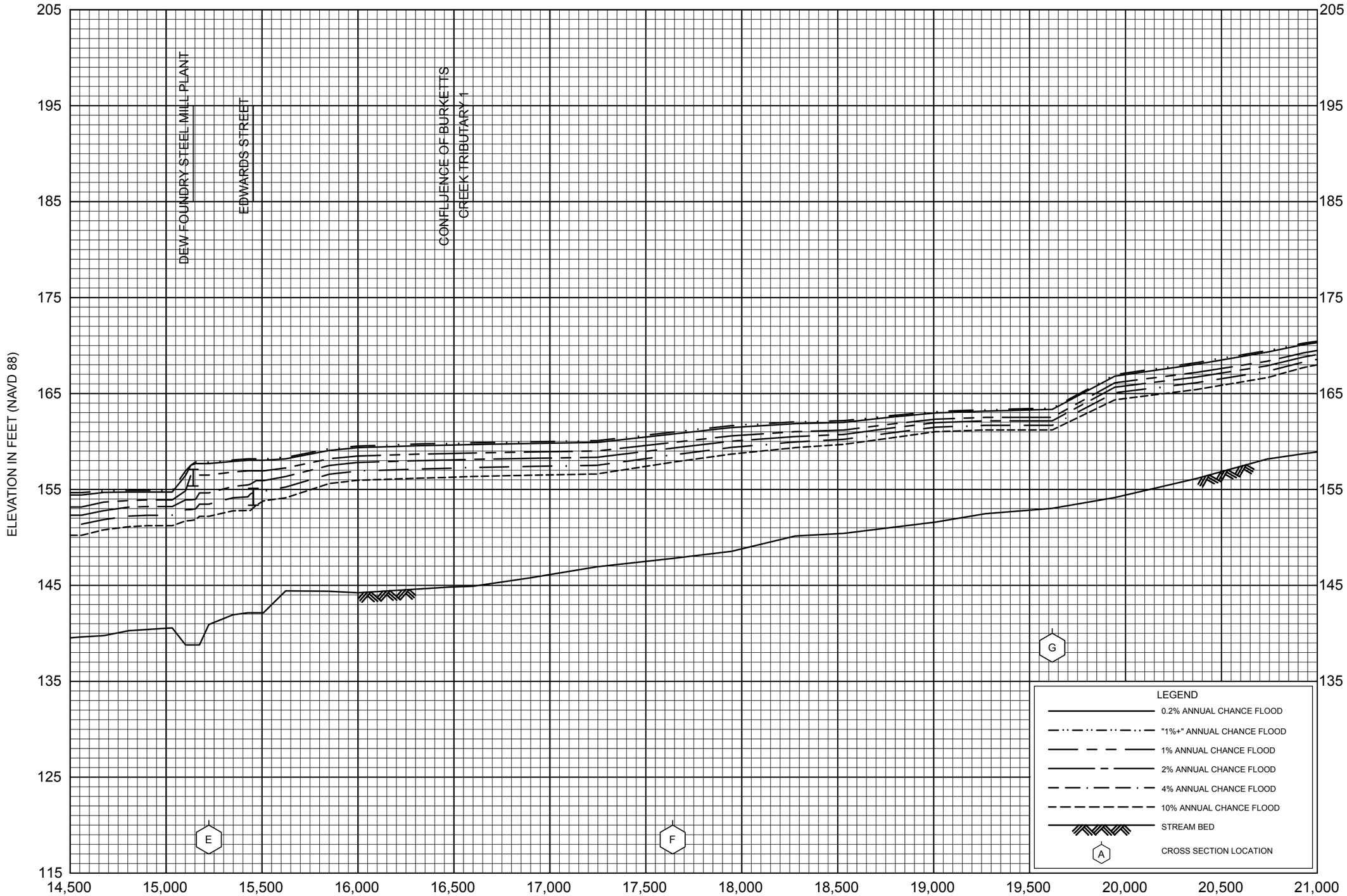
BURKETTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

18P



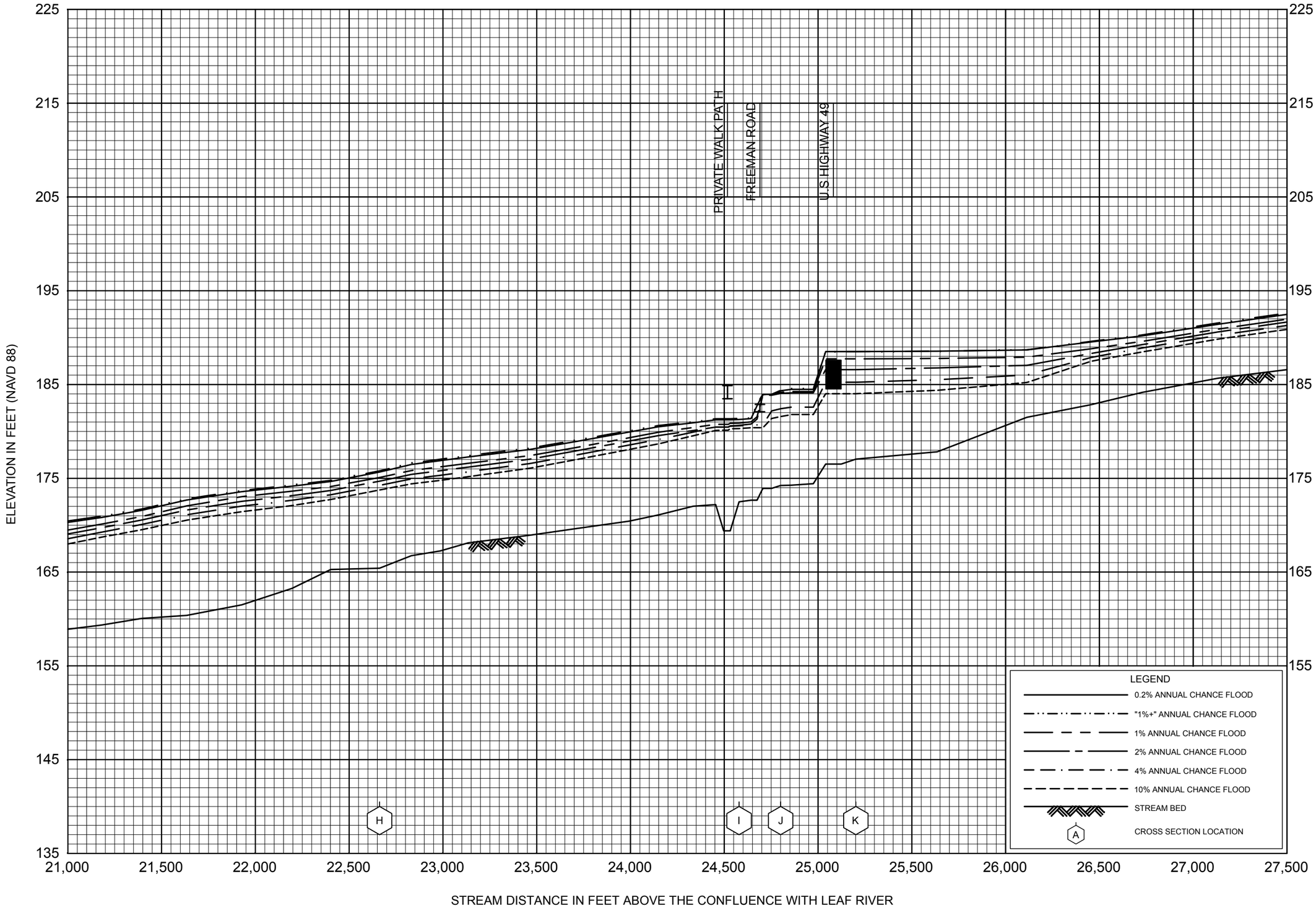
FLOOD PROFILES

BURKETTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS



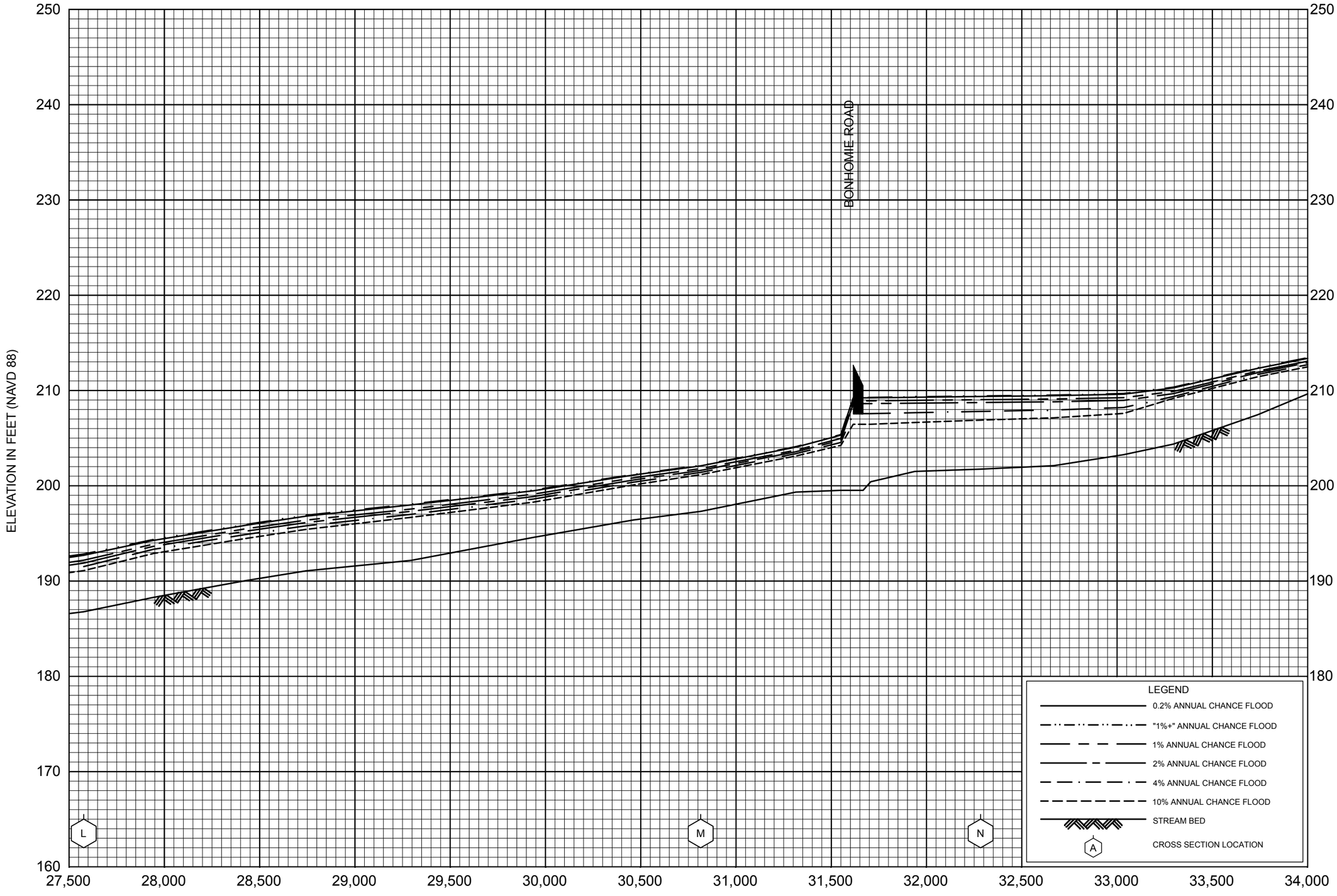
FLOOD PROFILES

BURKETTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS



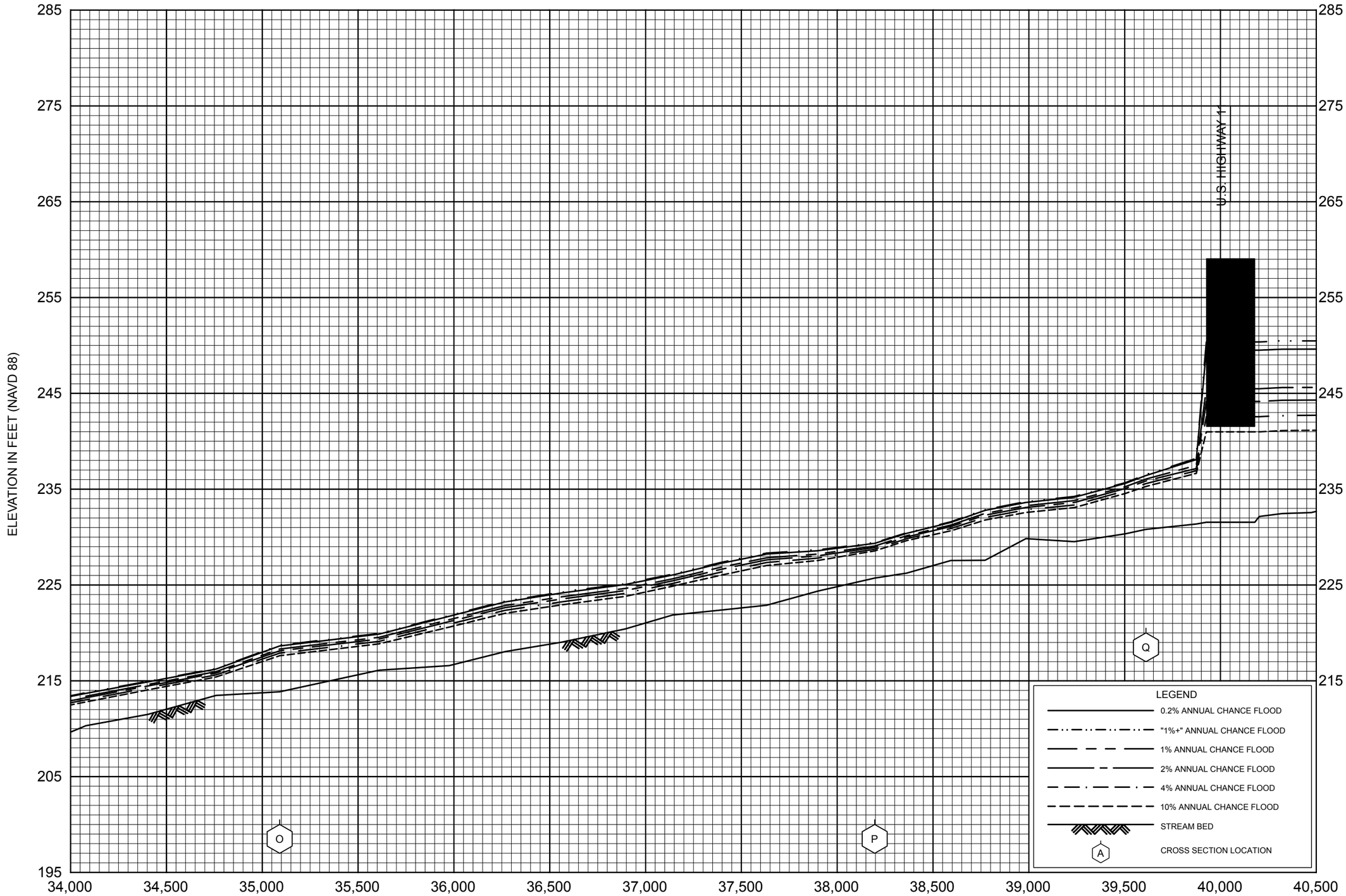
FLOOD PROFILES

BURKETTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS



FLOOD PROFILES

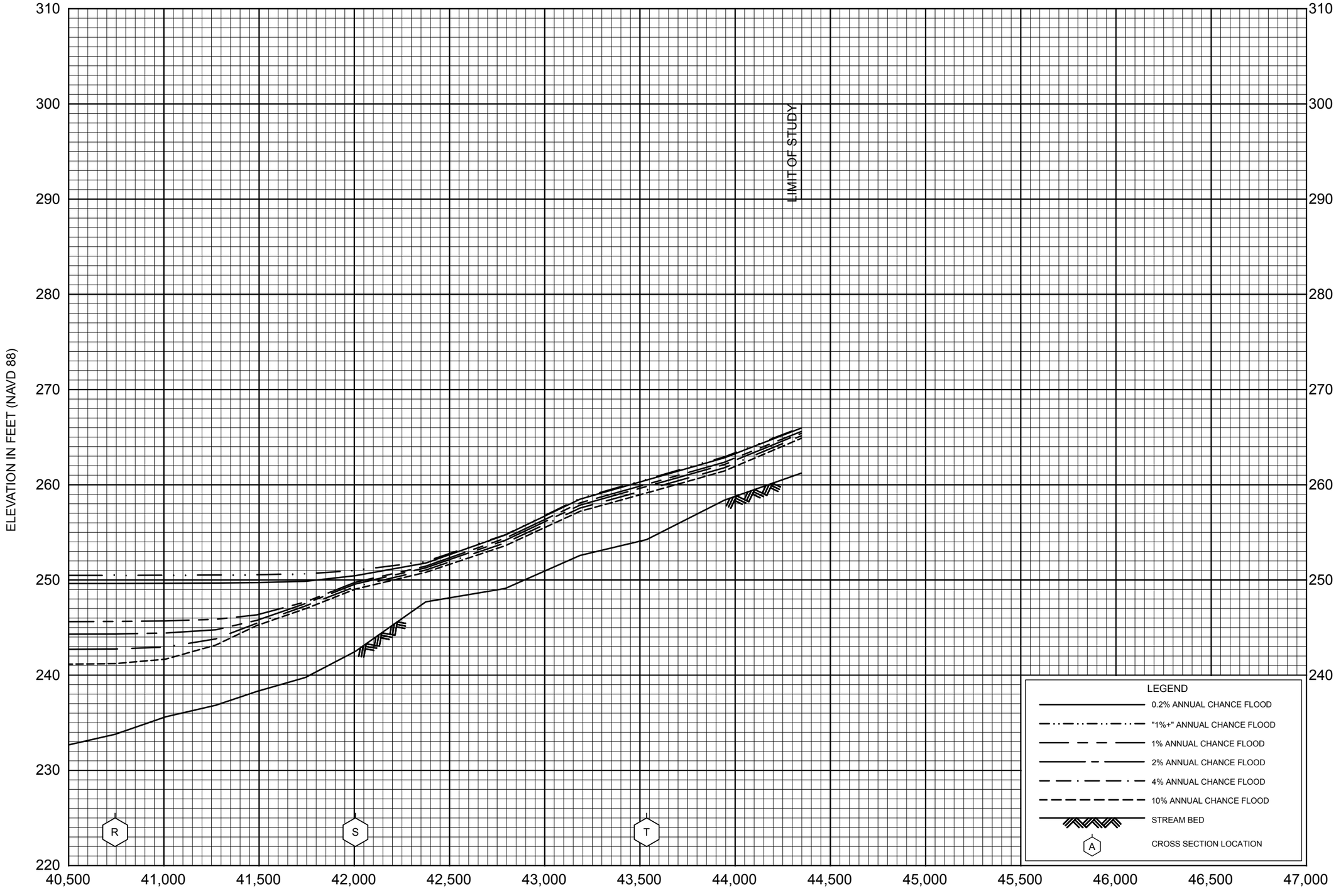
BURKETTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

22P



FLOOD PROFILES

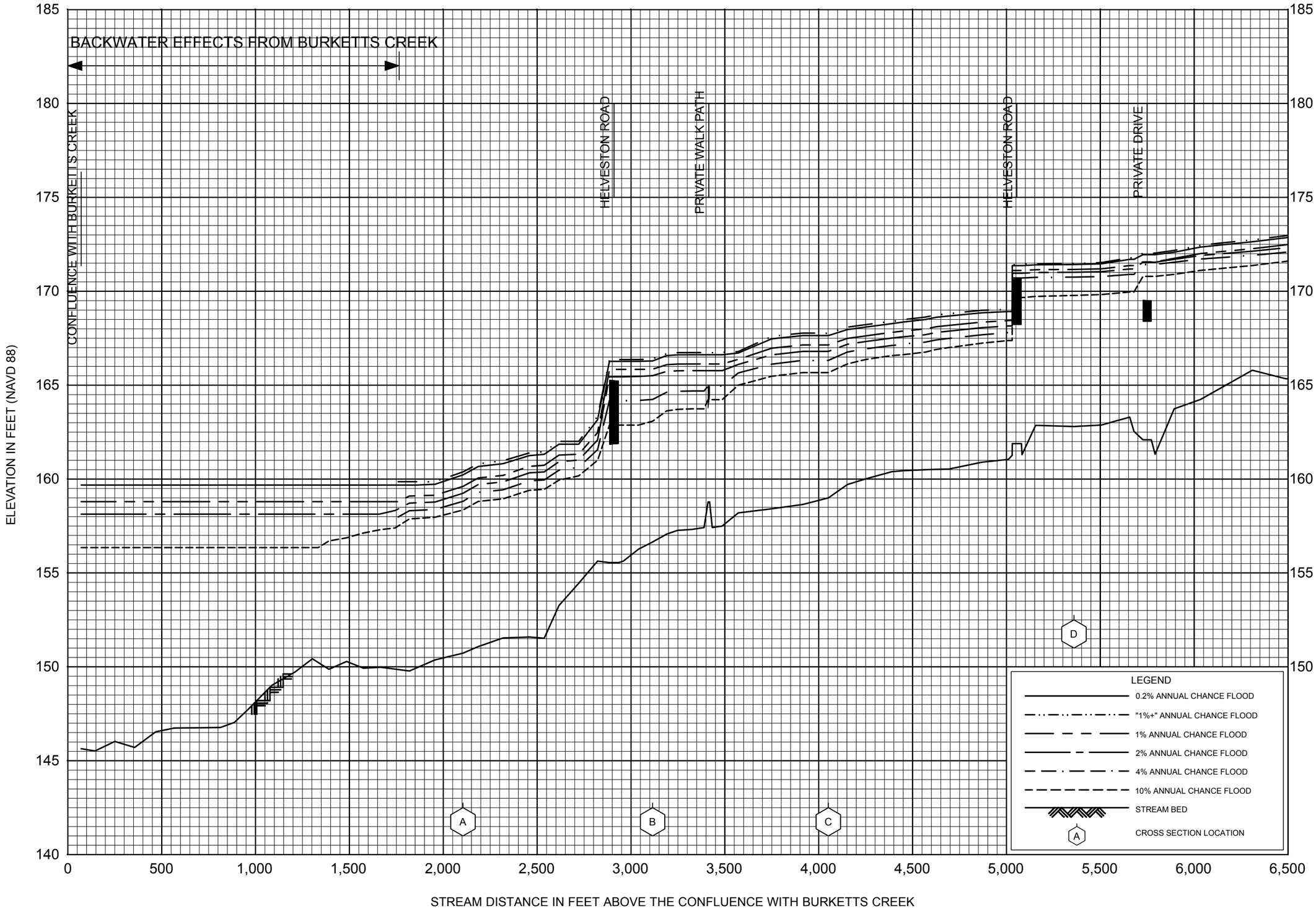
BURKETTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

23P



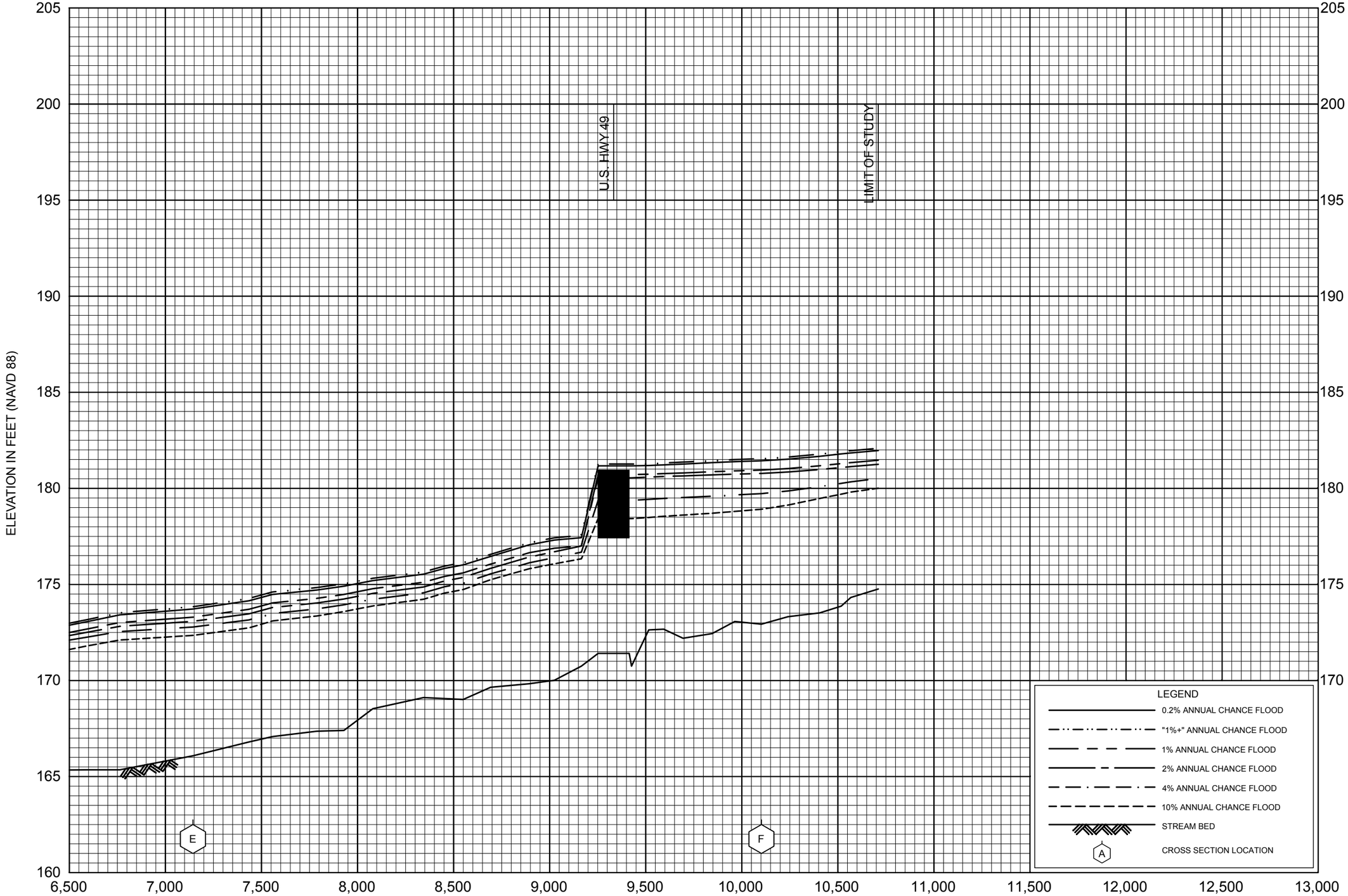
FLOOD PROFILES

BURKETTS CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS



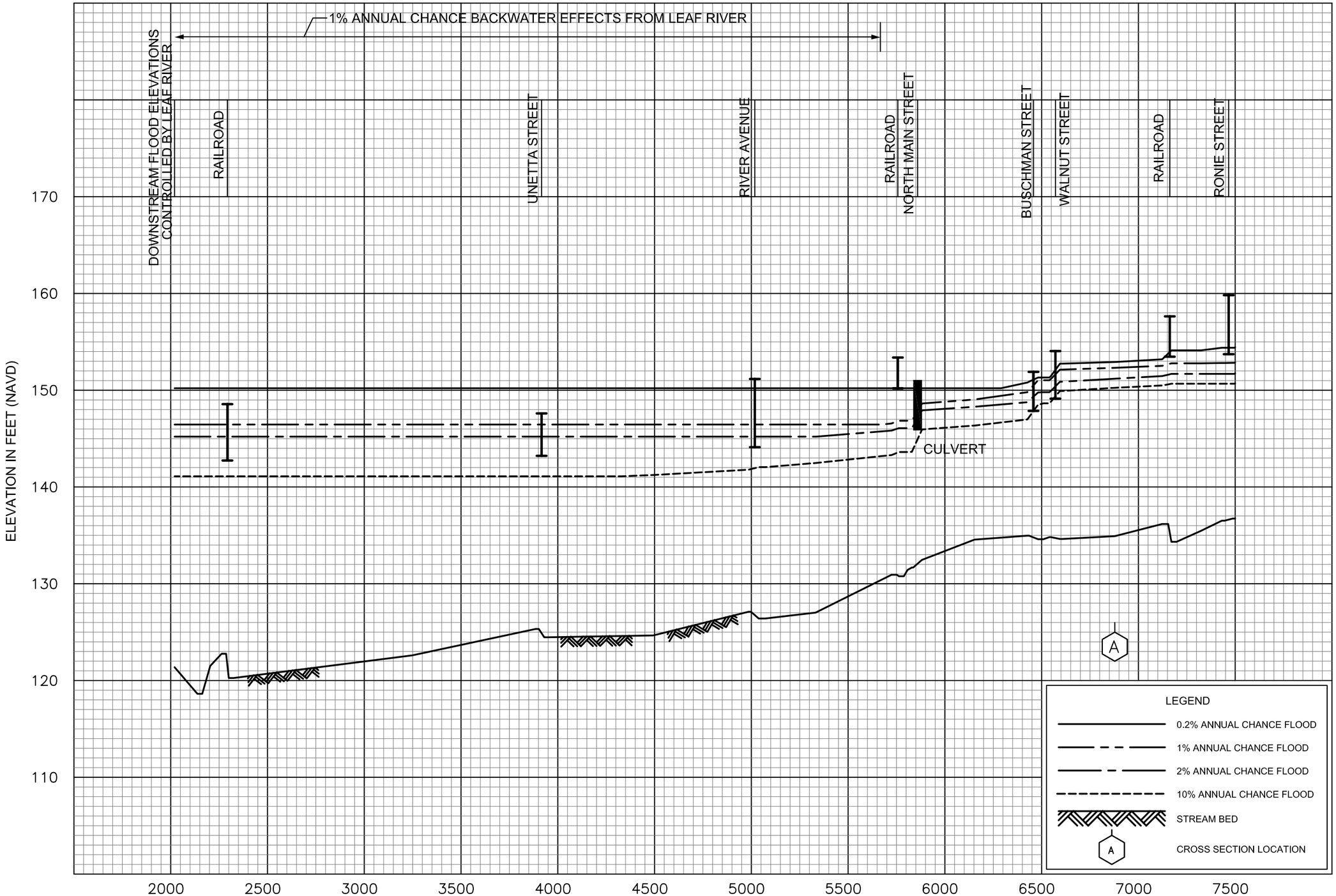
FLOOD PROFILES

BURKETTS CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS



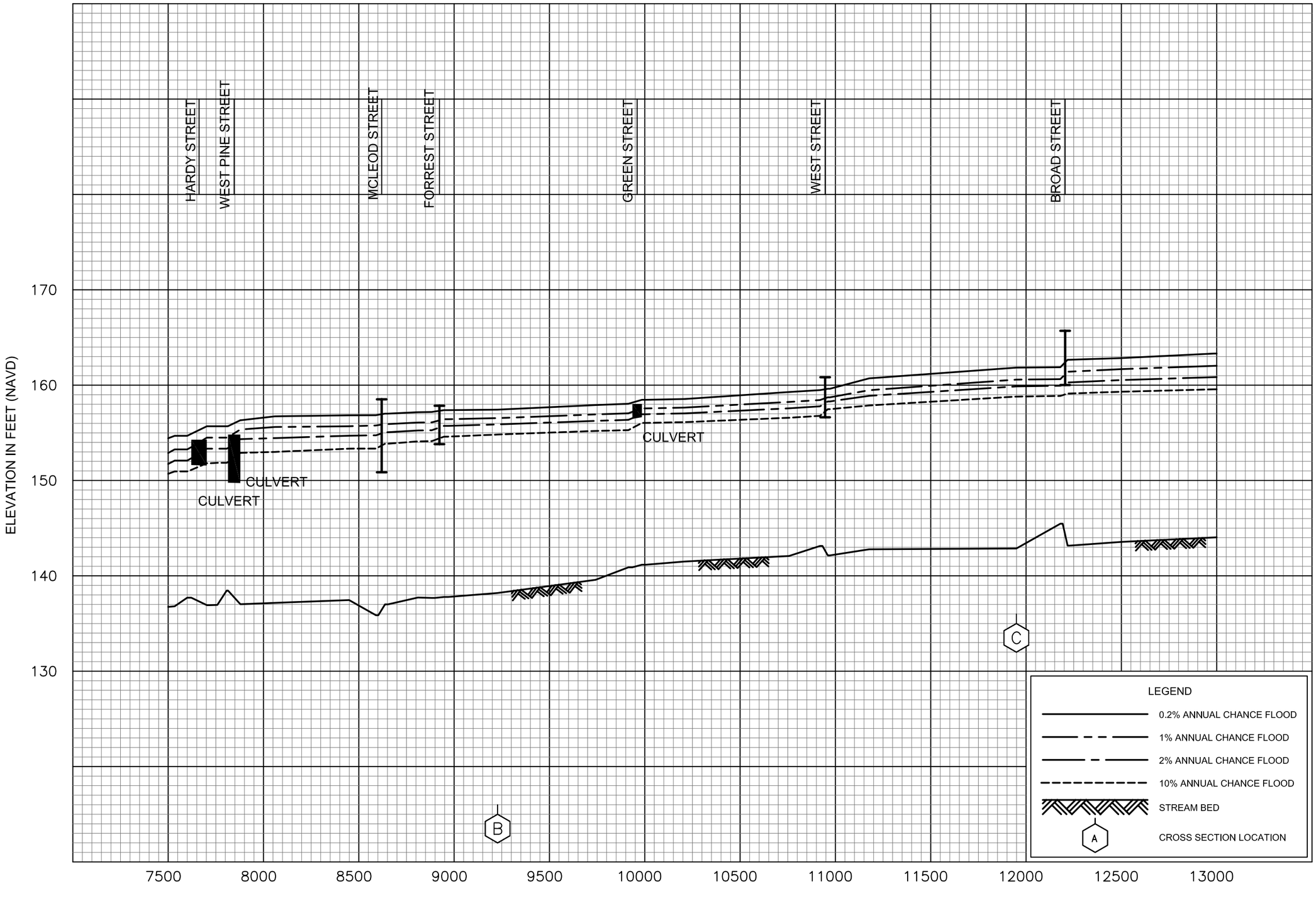
FLOOD PROFILES

GORDONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

26P



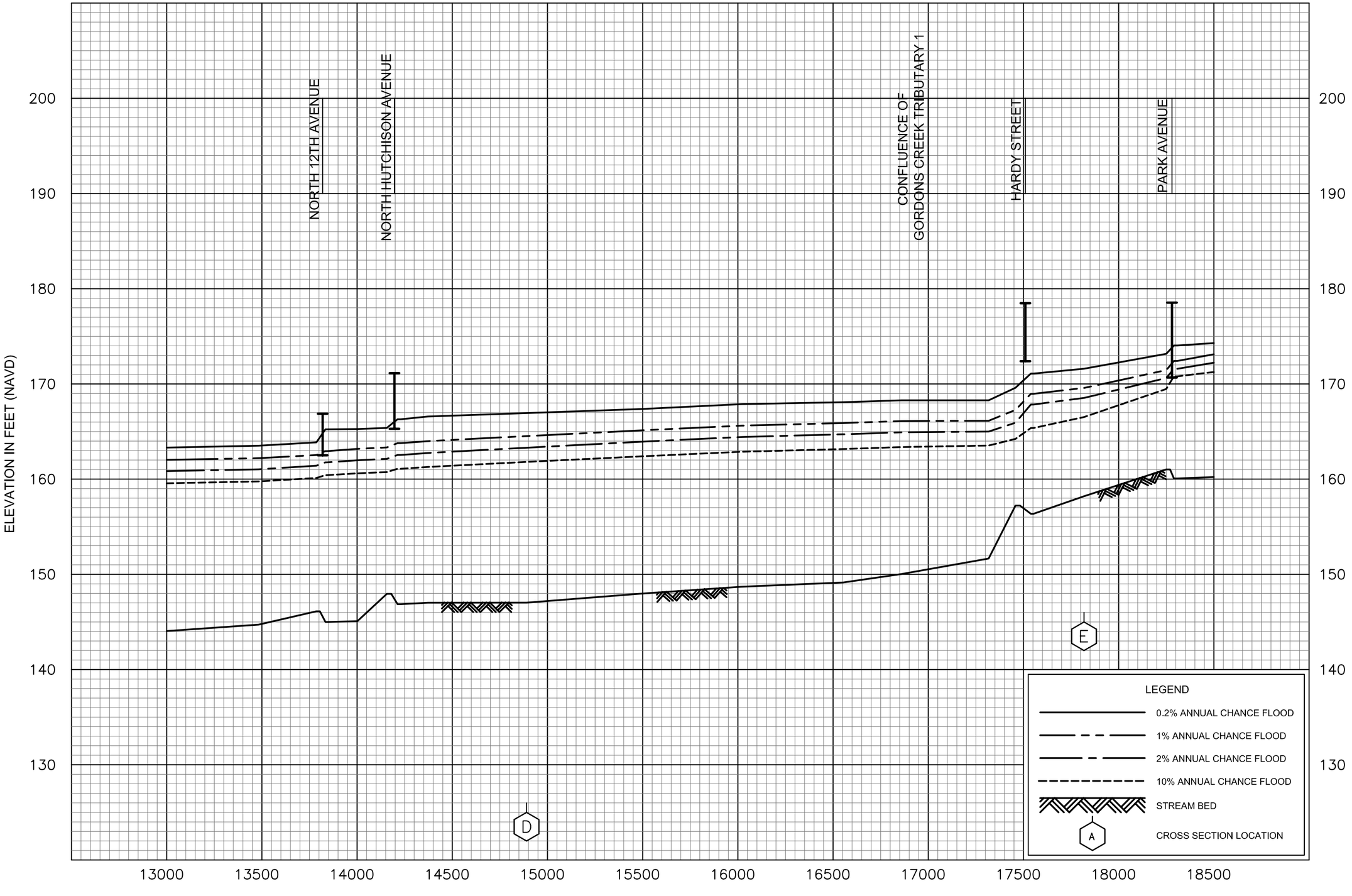
FLOOD PROFILES

GORDONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

27P



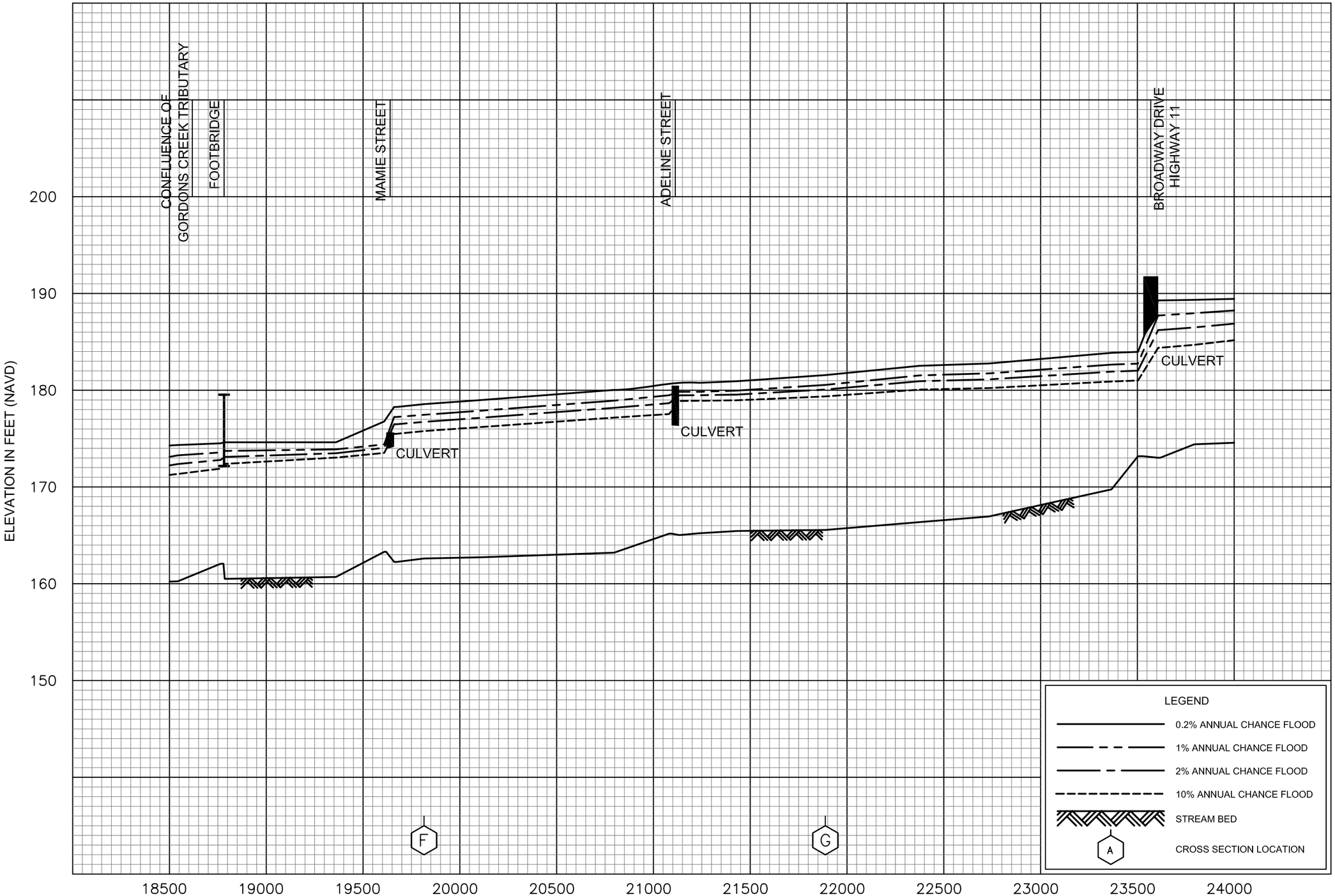
FLOOD PROFILES

GORDONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

28P



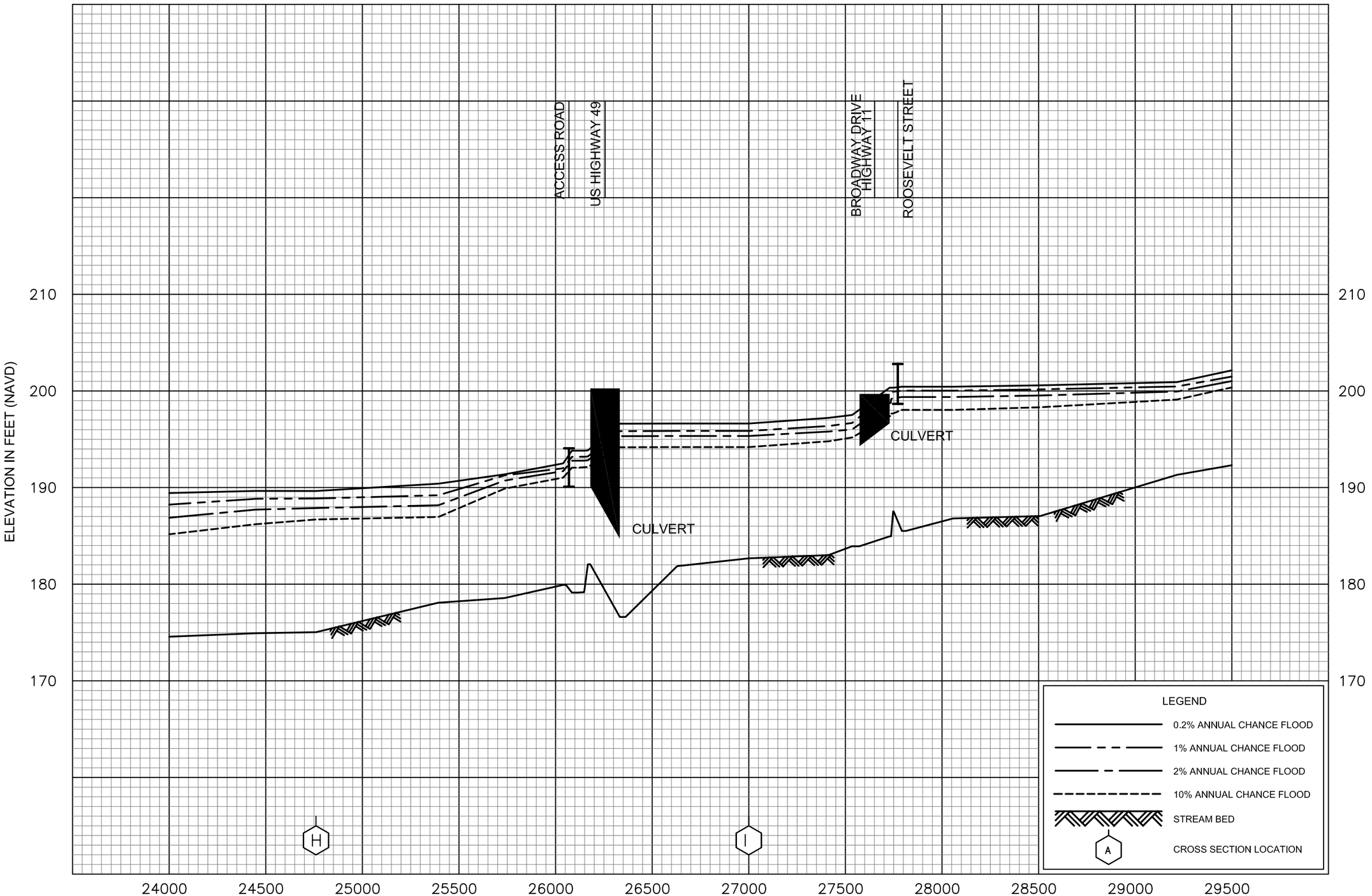
FLOOD PROFILES

GORDONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

29P

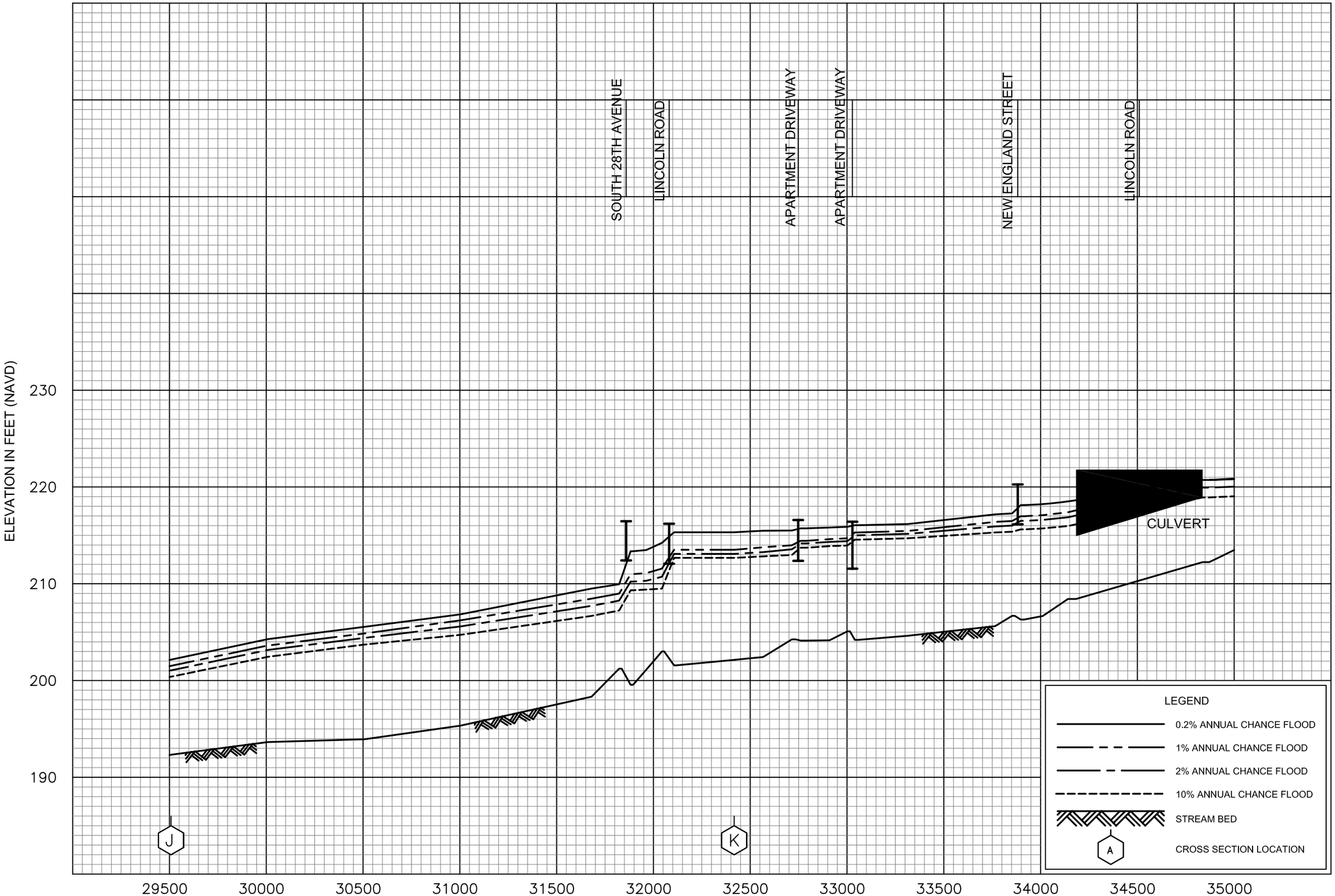


FLOOD PROFILES

GORDONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS



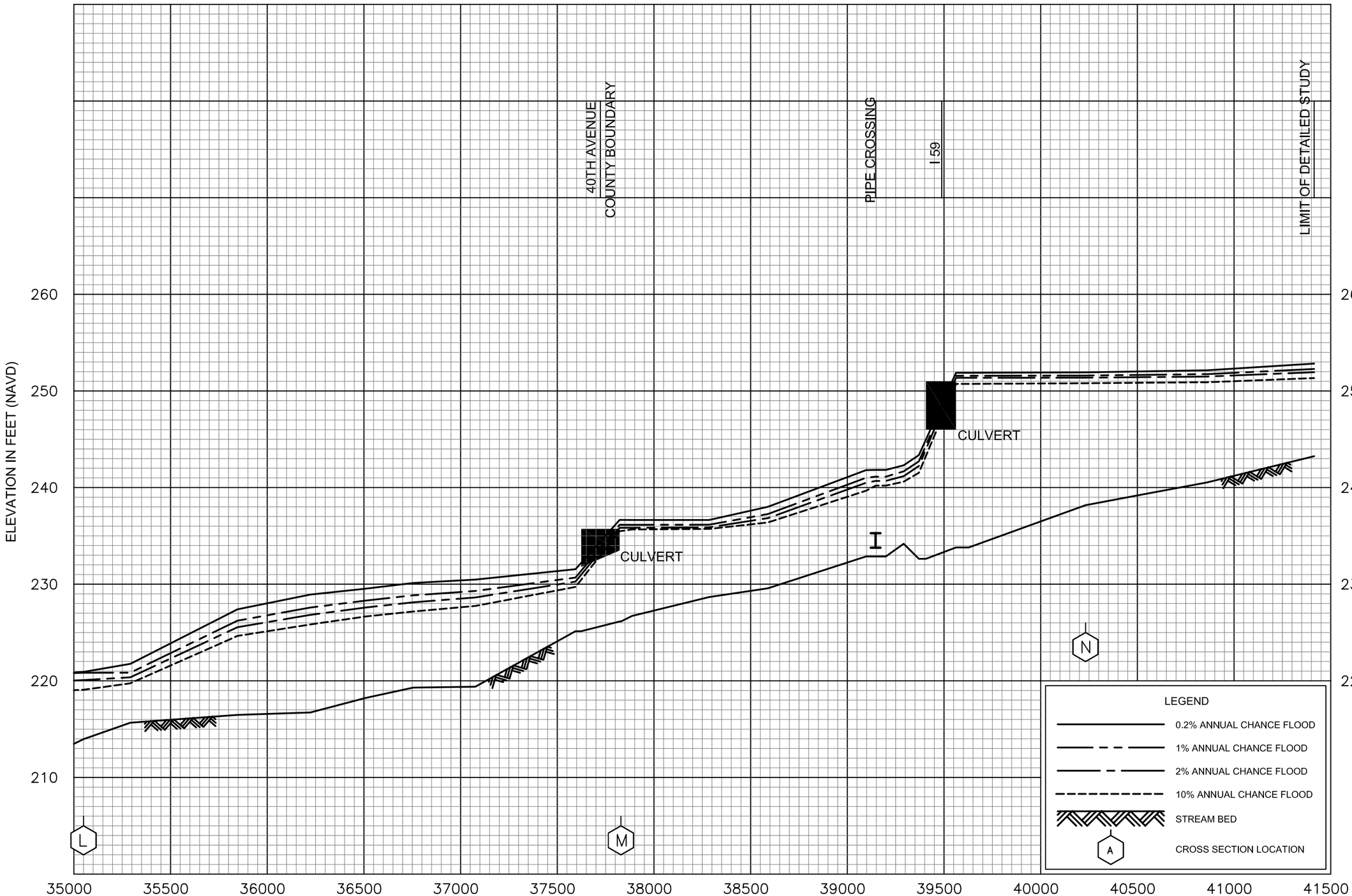
FLOOD PROFILES

GORDONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

31P



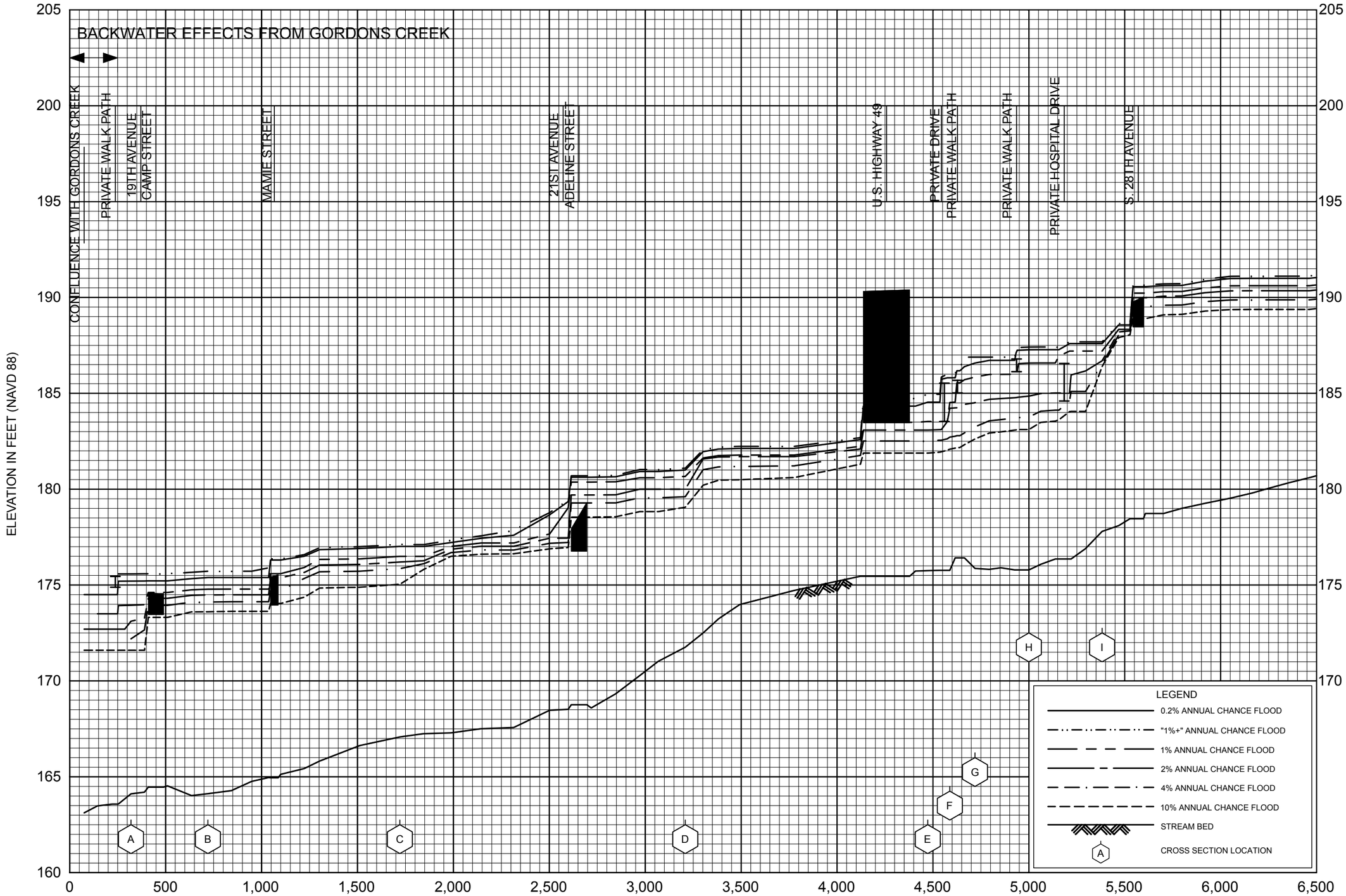
FLOOD PROFILES

GORDONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

32P



FLOOD PROFILES

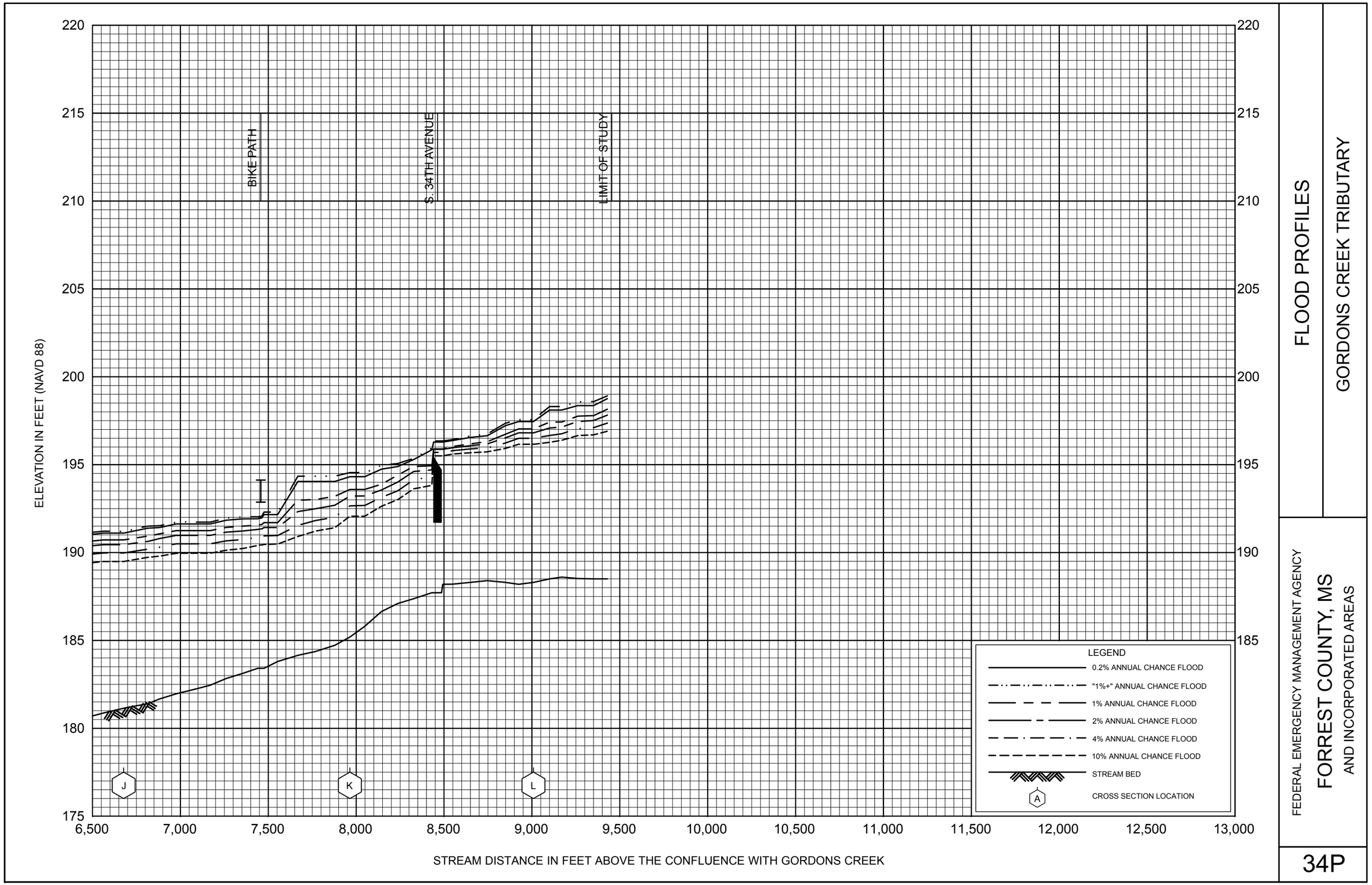
GORDONS CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

33P



FLOOD PROFILES

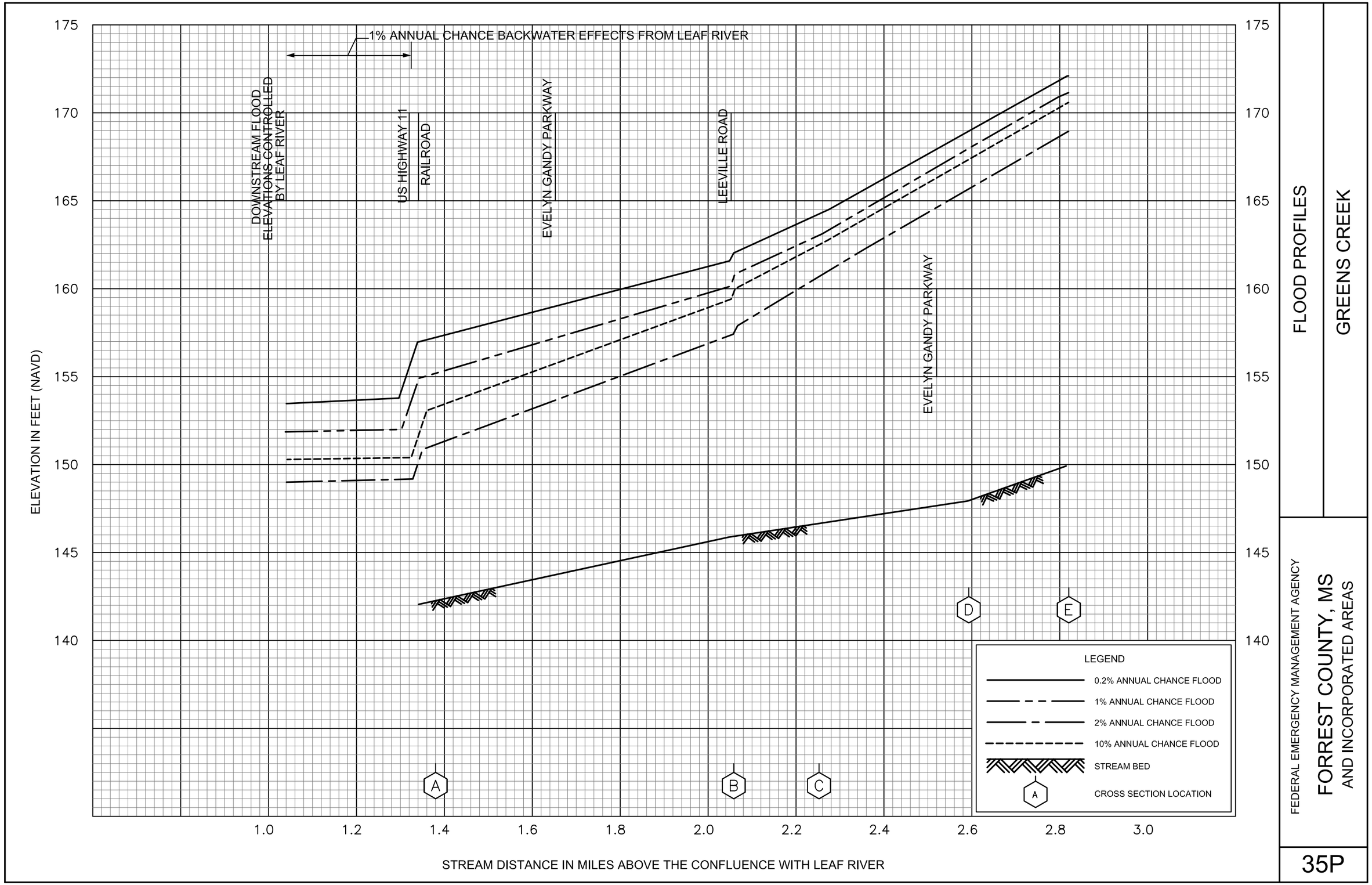
GORDONS CREEK TRIBUTARY

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

34P



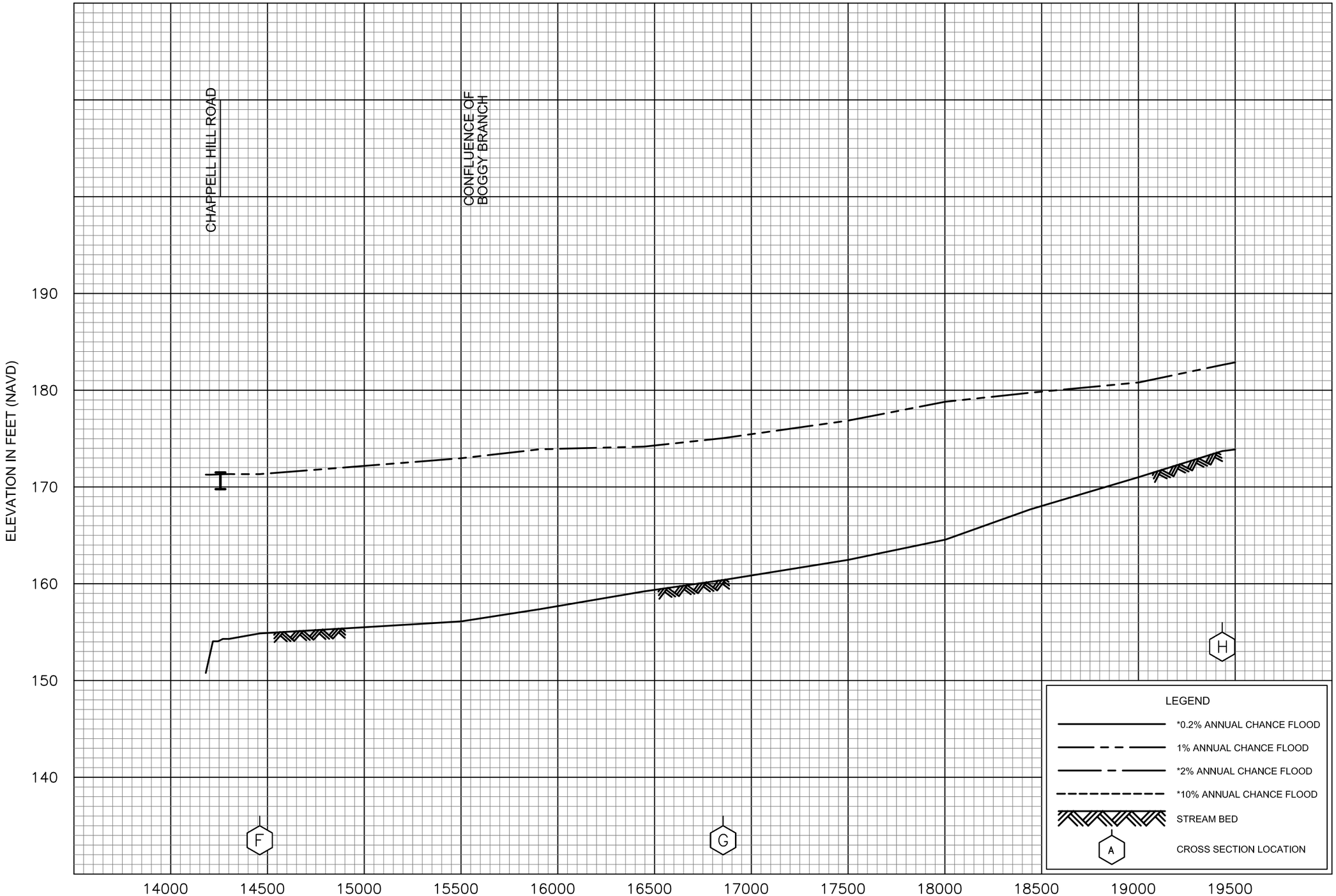
FLOOD PROFILES

GREENS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

35P



FLOOD PROFILES

GREENS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

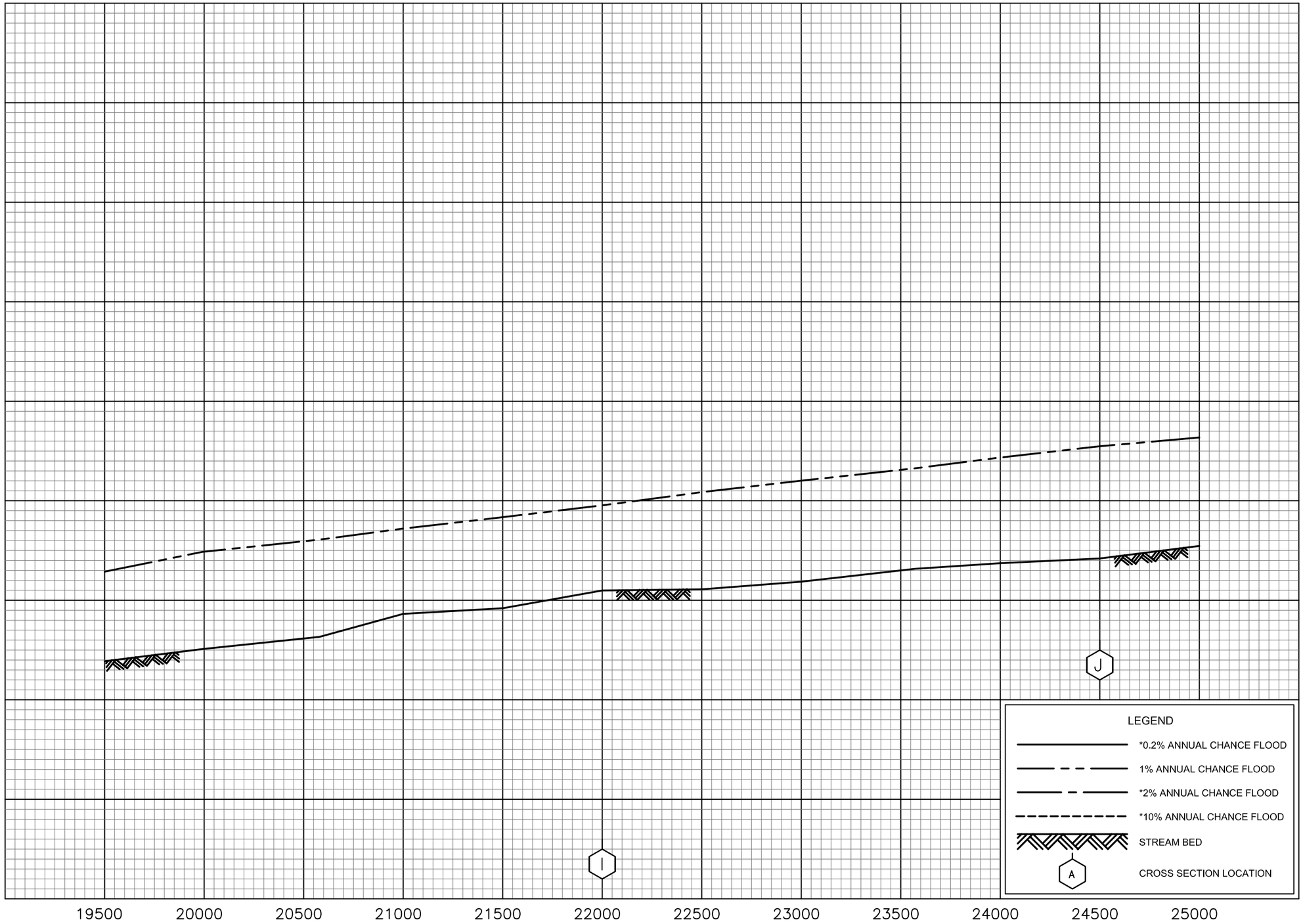
FORREST COUNTY, MS
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)

200
190
180
170
160

19500 20000 20500 21000 21500 22000 22500 23000 23500 24000 24500 25000

STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH LEAF RIVER



* DATA NOT AVAILABLE

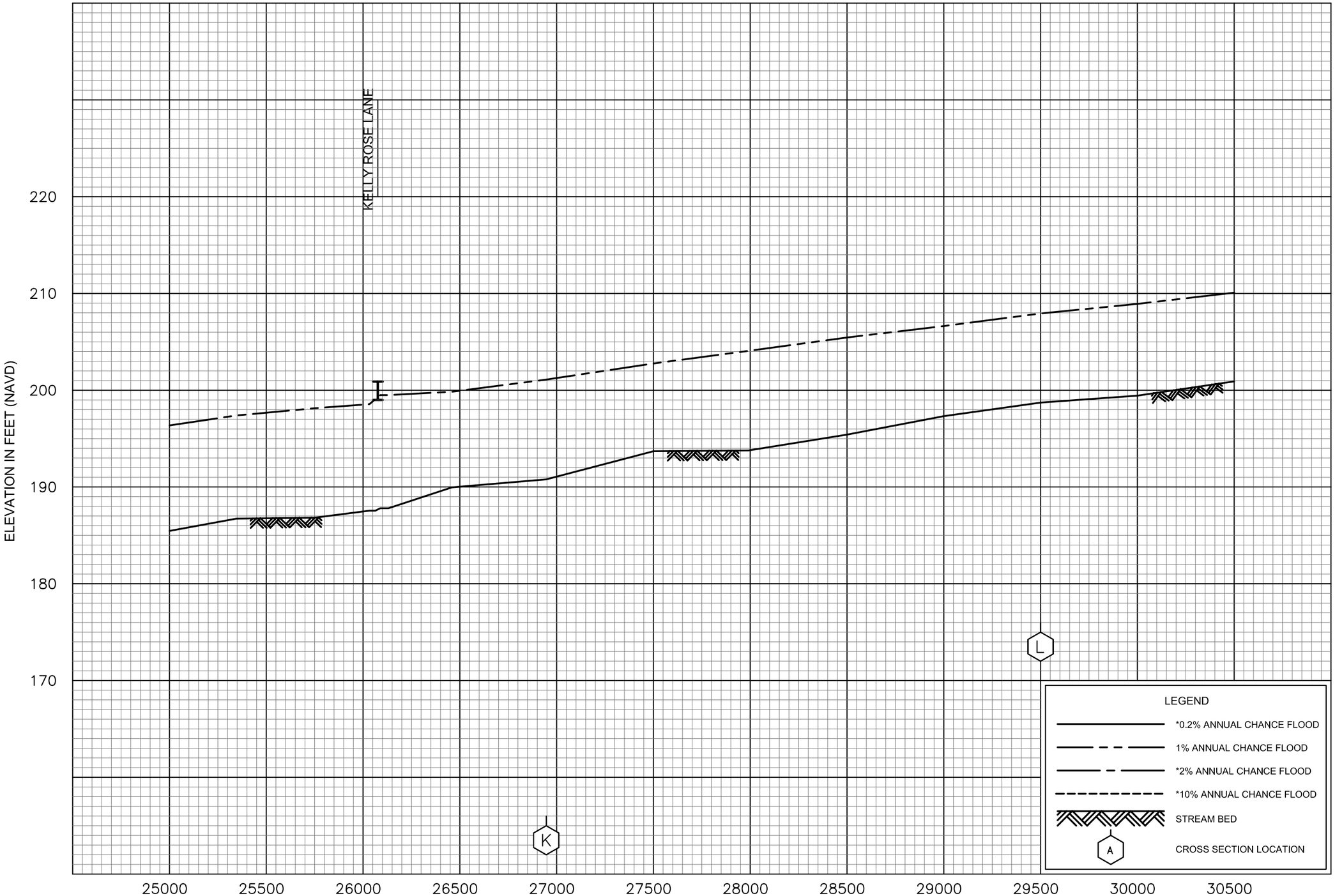
FLOOD PROFILES

GREENS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

37P



FLOOD PROFILES

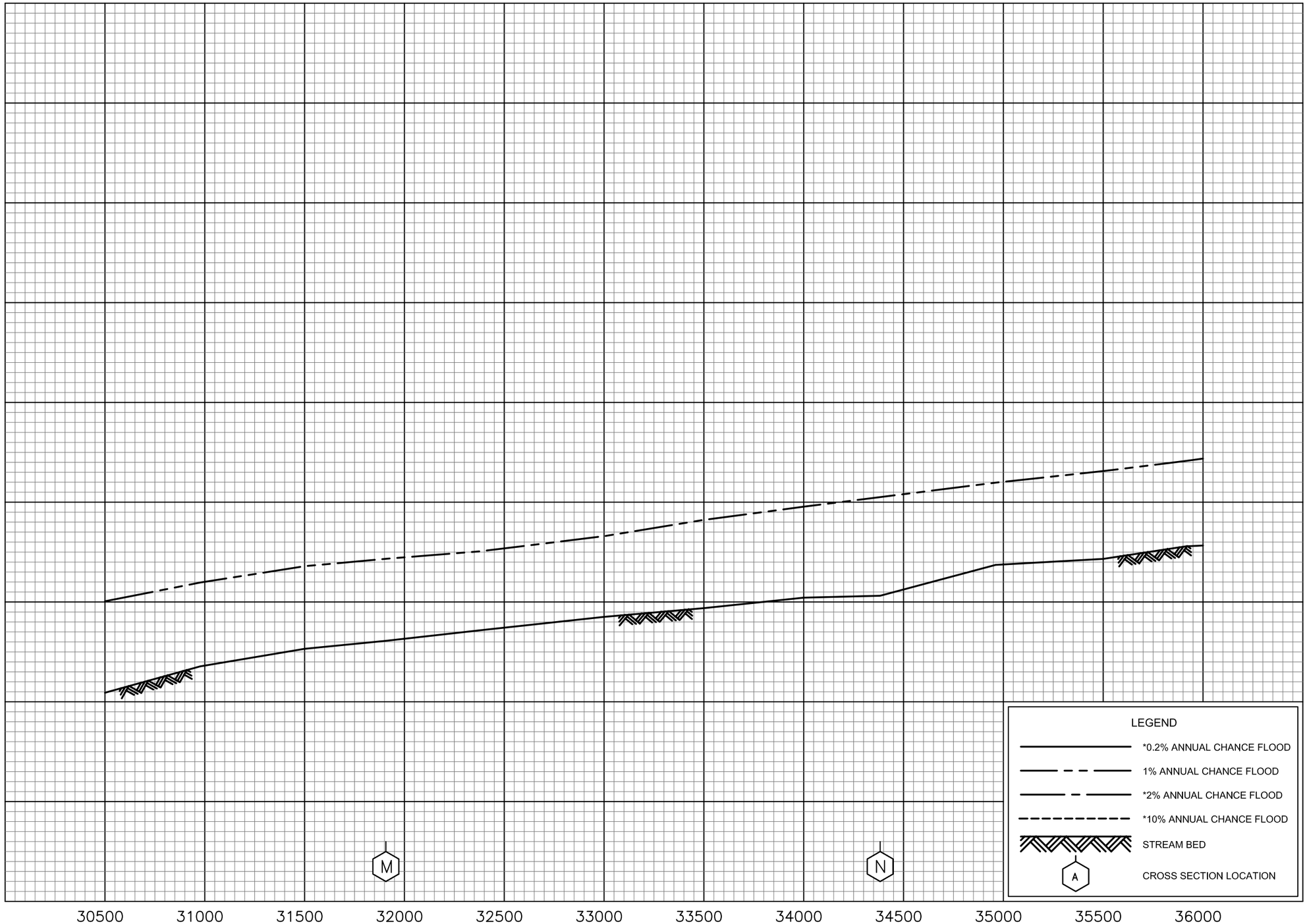
GREENS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD)

230
220
210
200
190



30500 31000 31500 32000 32500 33000 33500 34000 34500 35000 35500 36000

STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH LEAF RIVER

* DATA NOT AVAILABLE

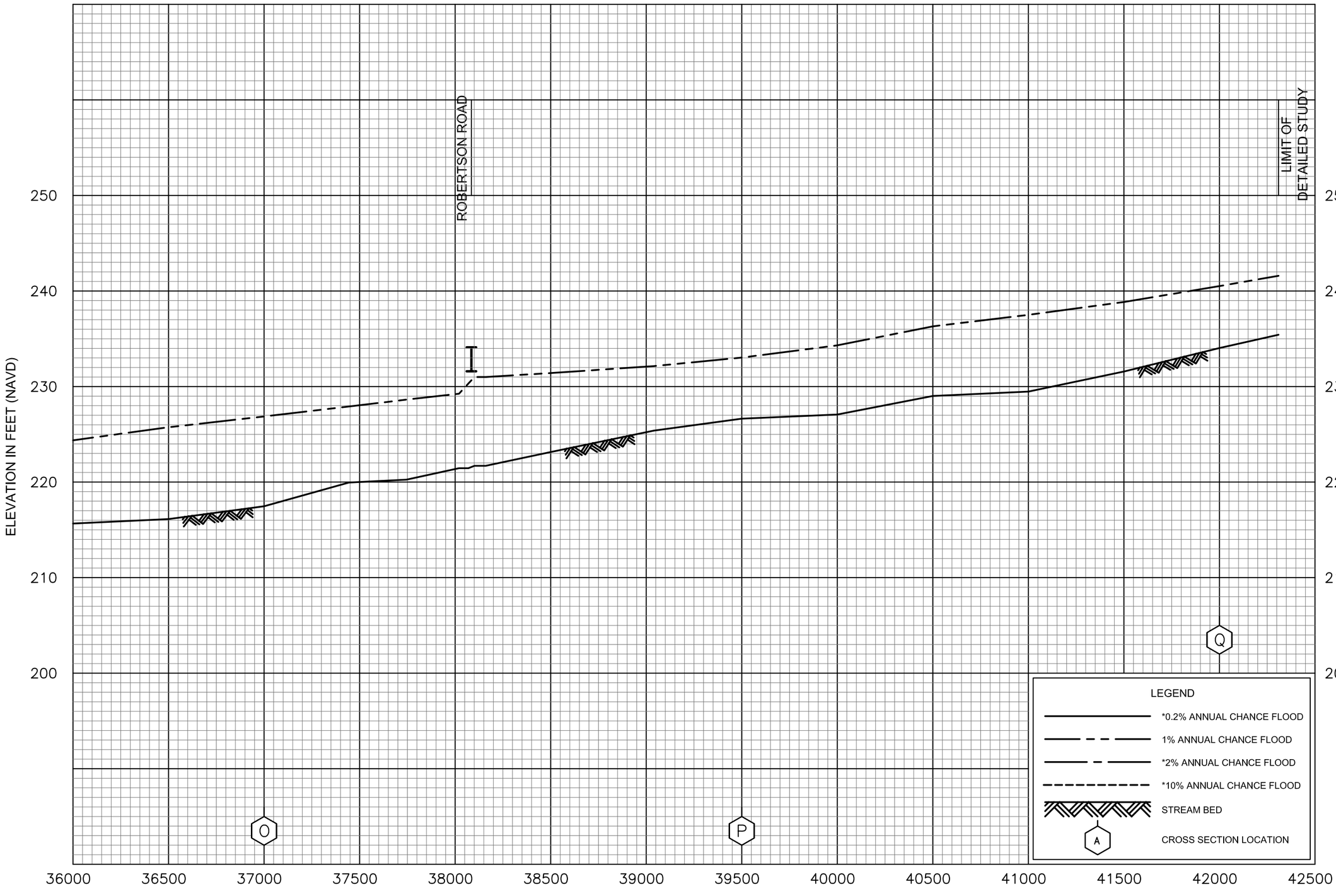
FLOOD PROFILES

GREENS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

39P



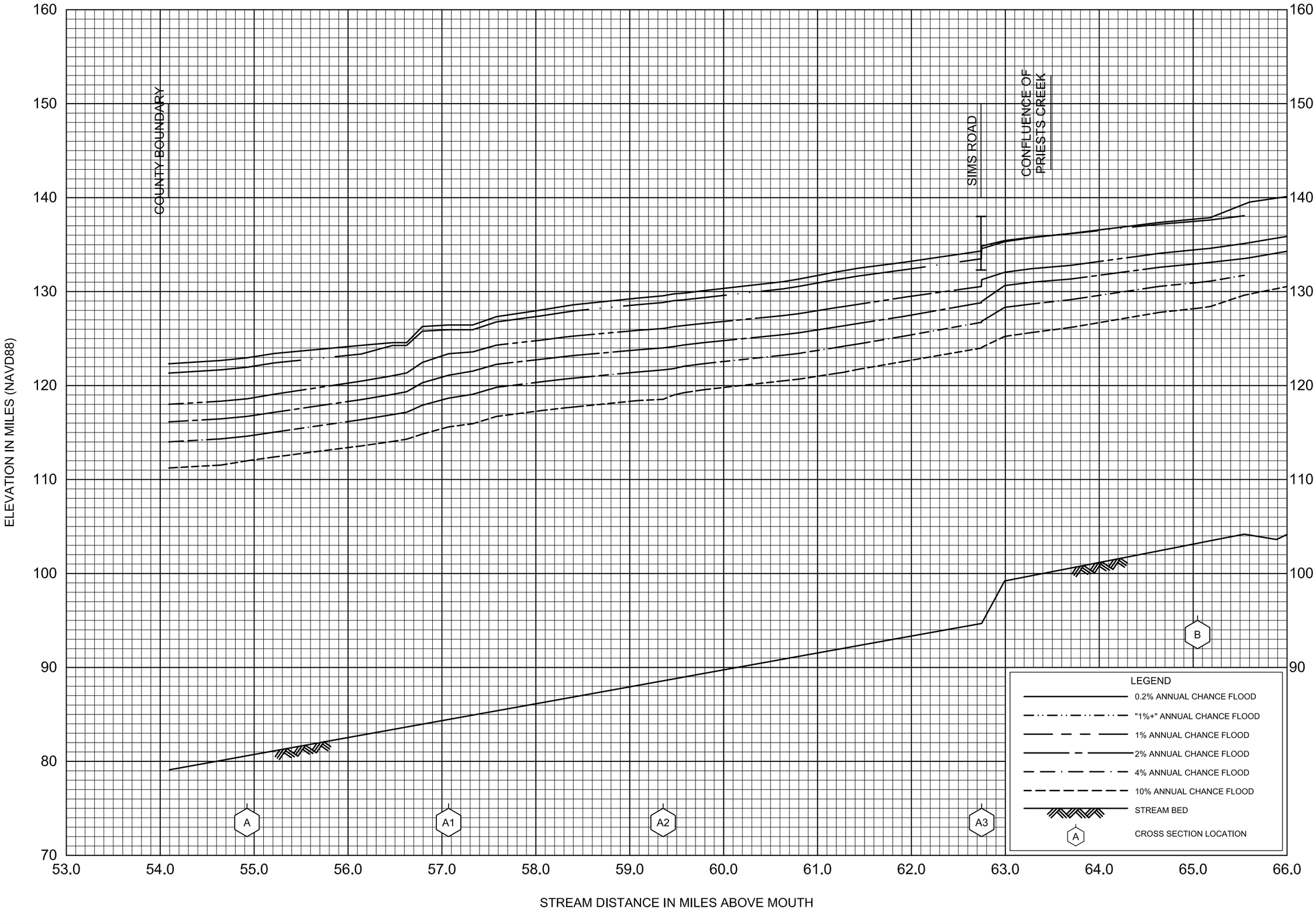
FLOOD PROFILES

GREENS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

40P



FLOOD PROFILES

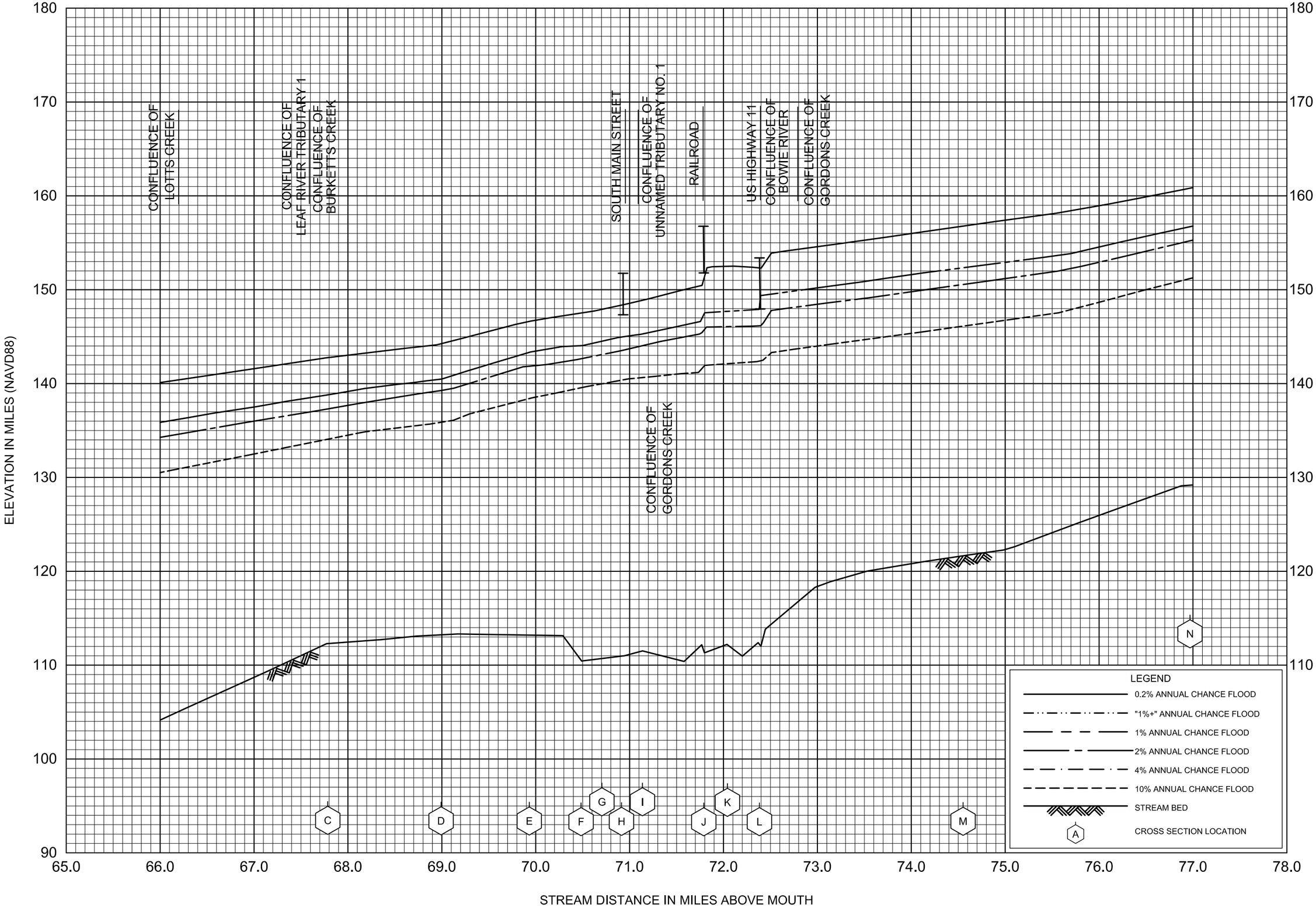
LEAF RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

41P



FLOOD PROFILES

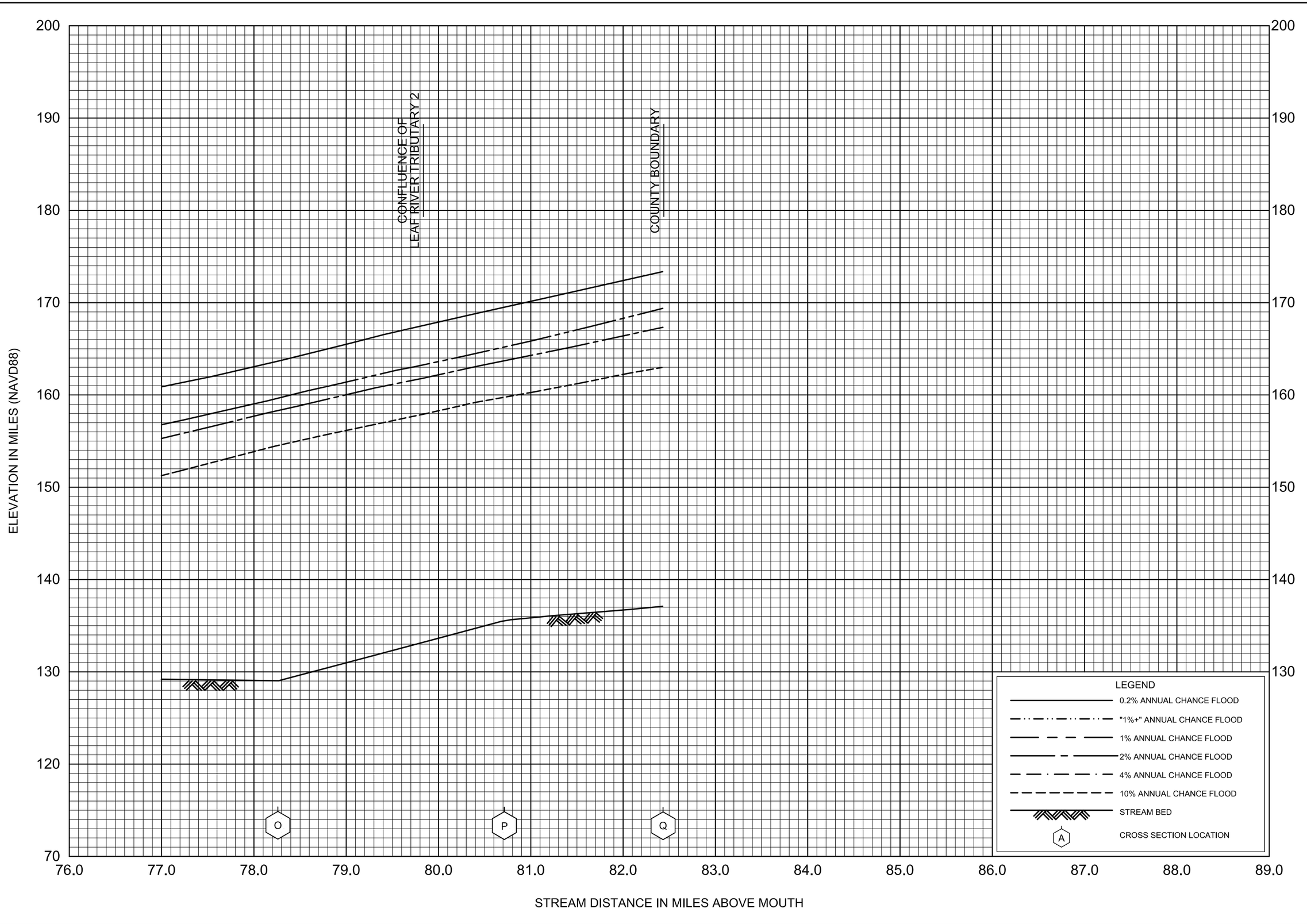
LEAF RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

42P



FLOOD PROFILES

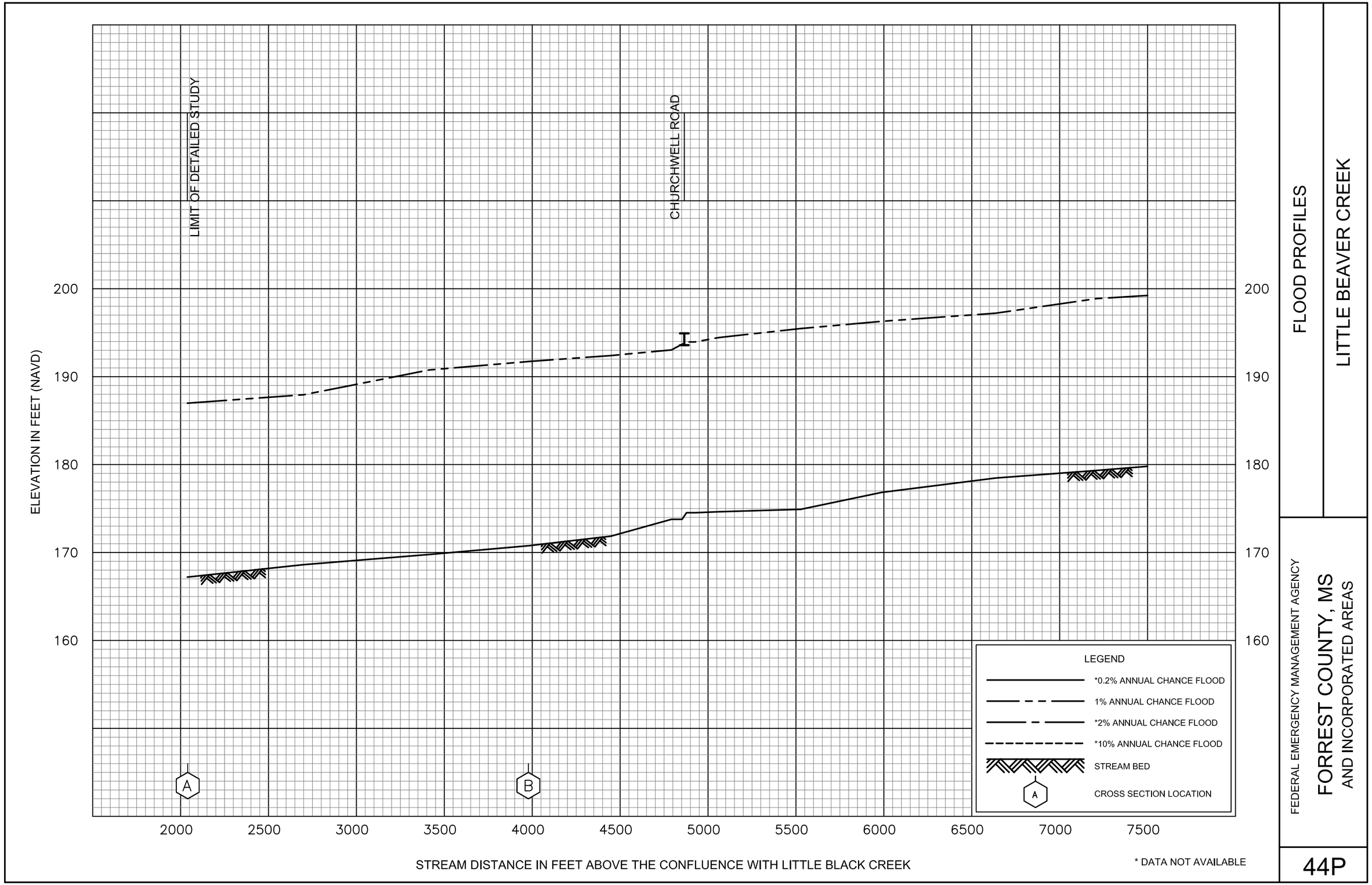
LEAF RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

43P

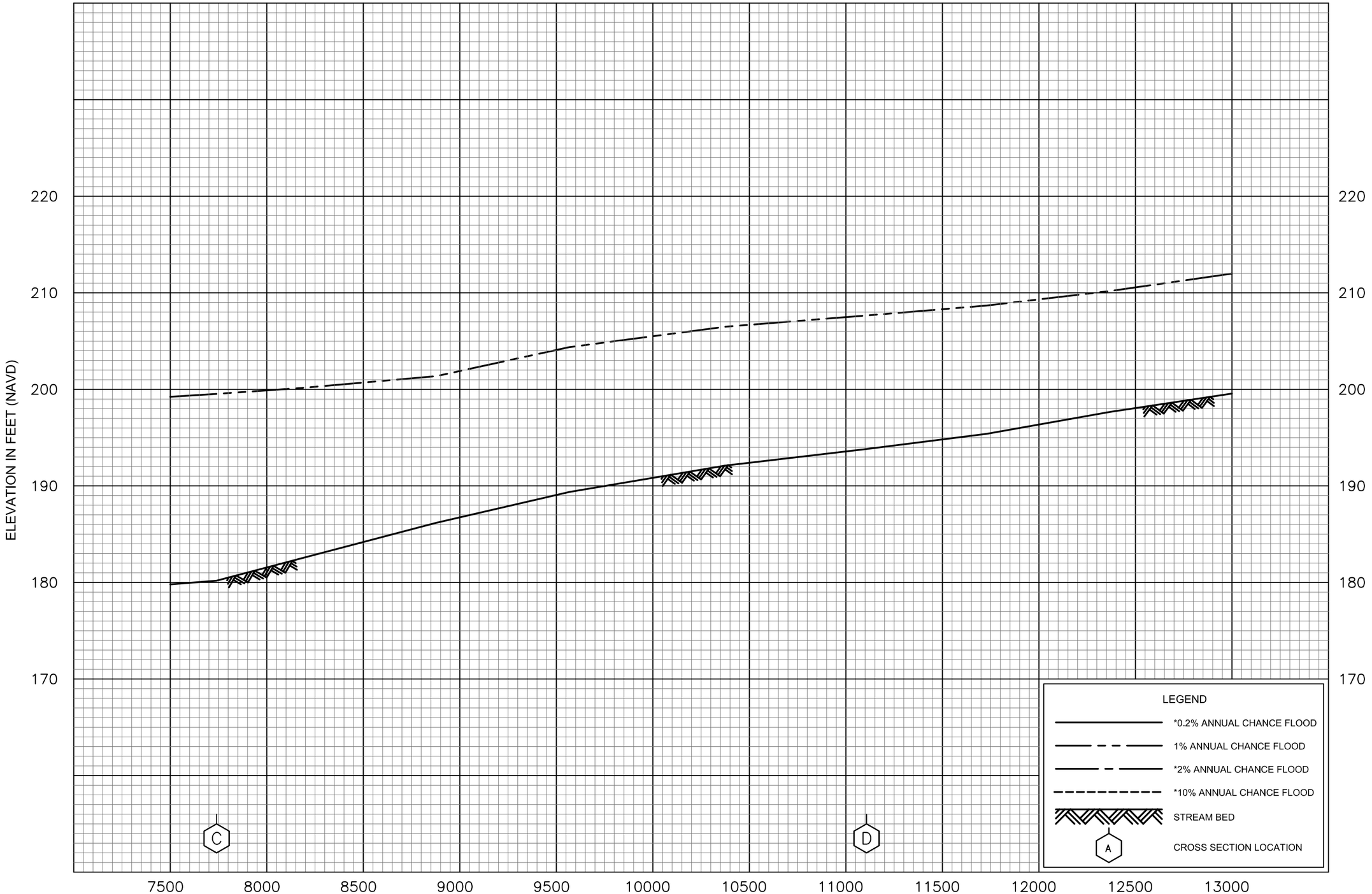


FLOOD PROFILES

LITTLE BEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS



STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH LITTLE BLACK CREEK

* DATA NOT AVAILABLE

FLOOD PROFILES

LITTLE BEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

45P

ELEVATION IN FEET (NAVD)

230
220
210
200
190

13000 13500 14000 14500 15000 15500 16000 16500 17000 17500 18000 18500

STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH LITTLE BLACK CREEK

E

LEGEND

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

* DATA NOT AVAILABLE

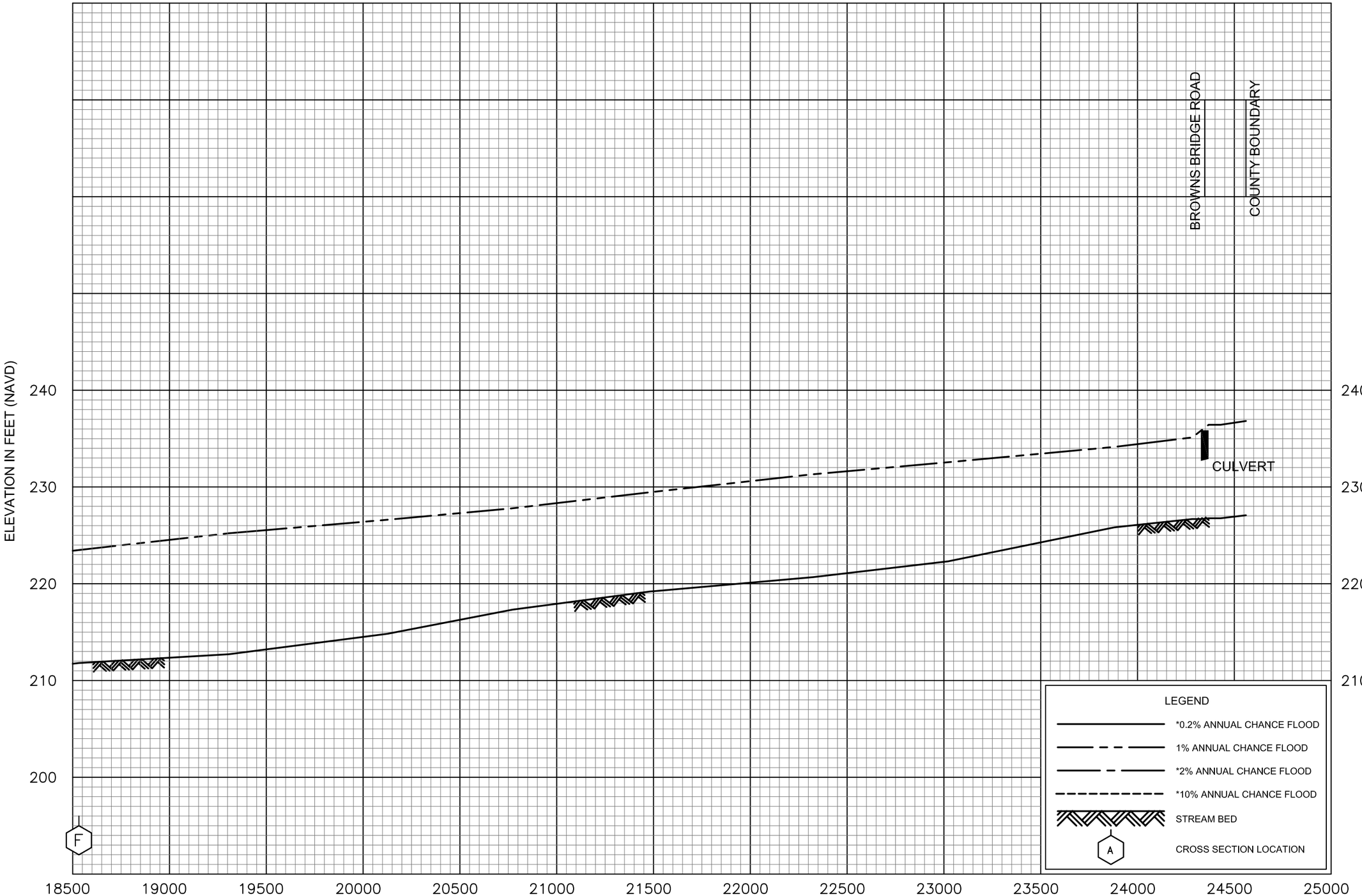
FLOOD PROFILES

LITTLE BEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

46P



* DATA NOT AVAILABLE

FLOOD PROFILES

LITTLE BEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

47P

FLOODING CONTROLLED BY BOWIE RIVER

1% ANNUAL CHANCE BACKWATER EFFECTS FROM BOWIE RIVER

DOWNSTREAM FLOOD ELEVATIONS CONTROLLED BY BOWIE RIVER

RAILROAD

LAKEVIEW ROAD

FOOTBRIDGE

FOOTBRIDGE

HIGHWAY 49

CAMPBELL SCENIC DRIVE

ELEVATION IN FEET (NAVD)

180
170
160
150
140
130
120

2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500

STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH BOWIE RIVER

A

LEGEND

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

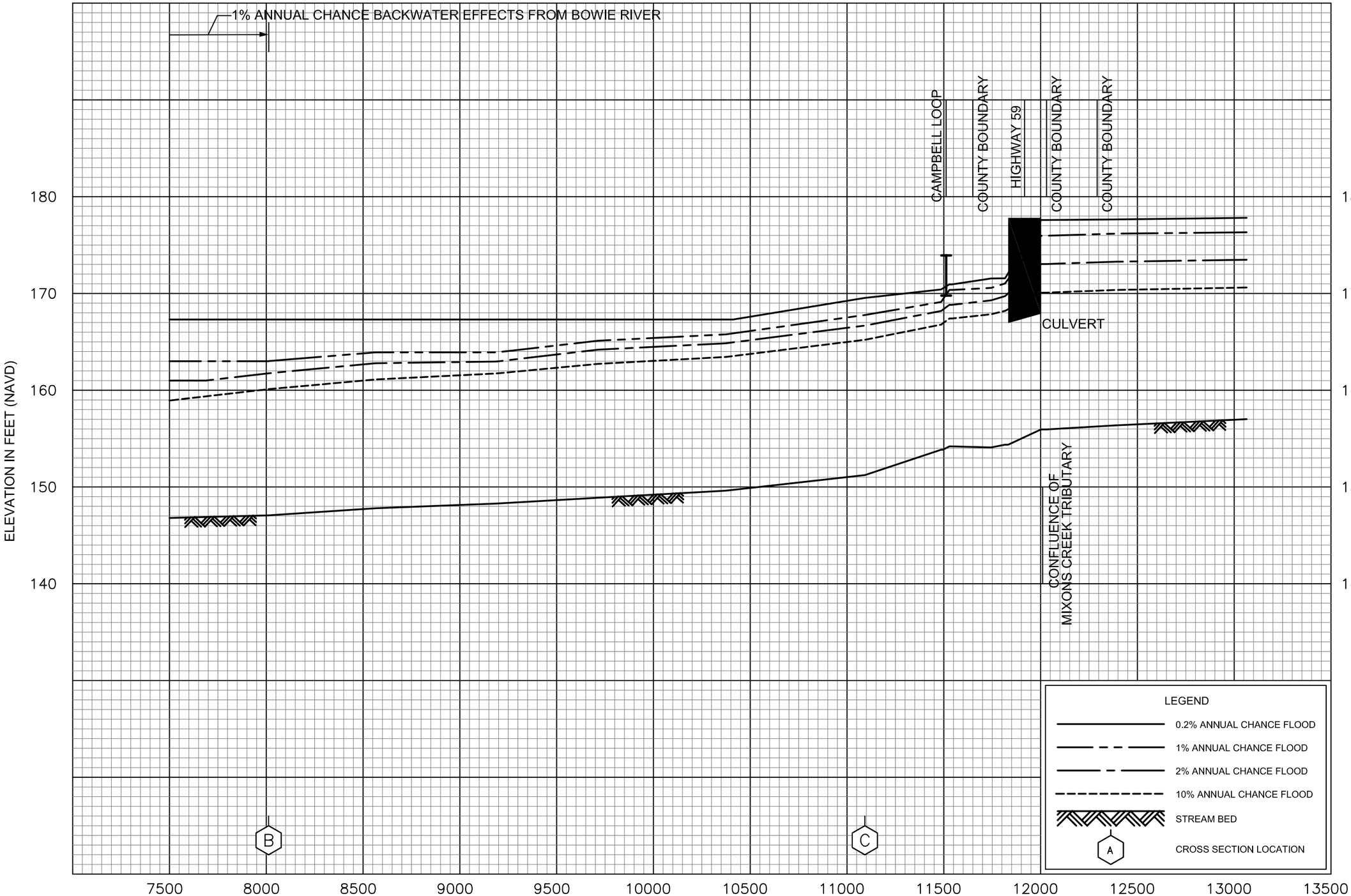
FLOOD PROFILES

MIXONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

48P

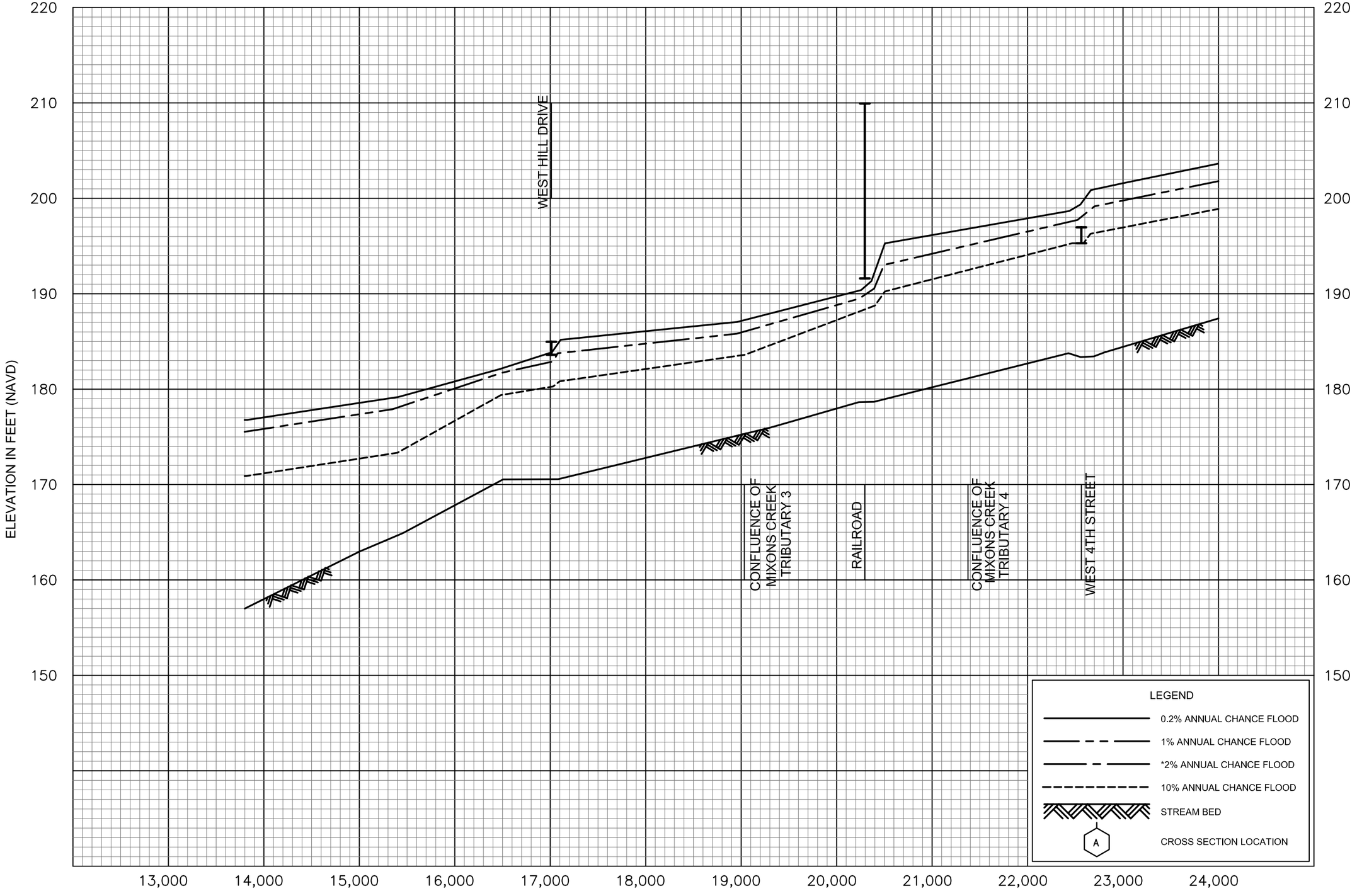


FLOOD PROFILES

MIXONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS



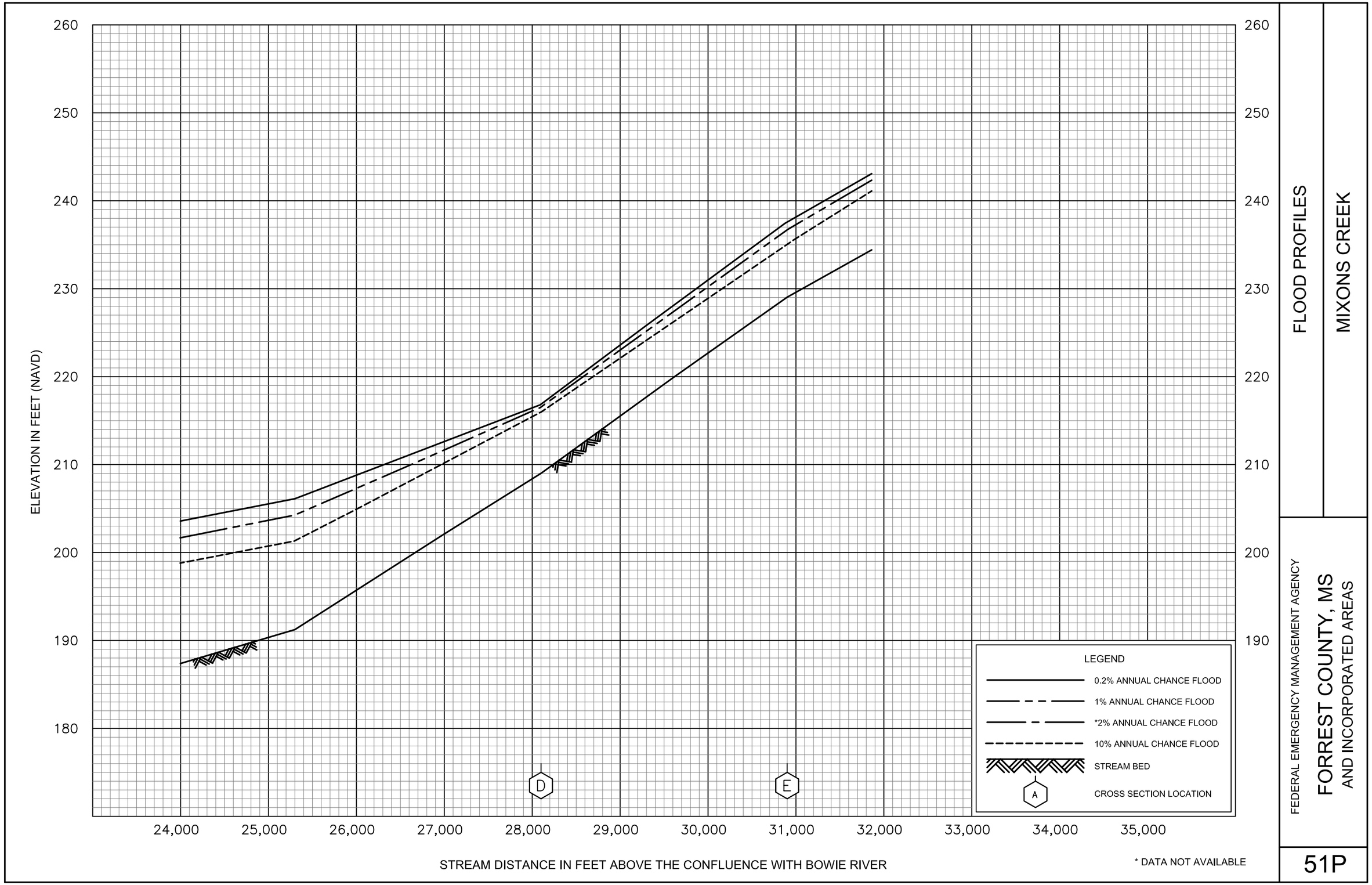
FLOOD PROFILES

MIXONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

50P



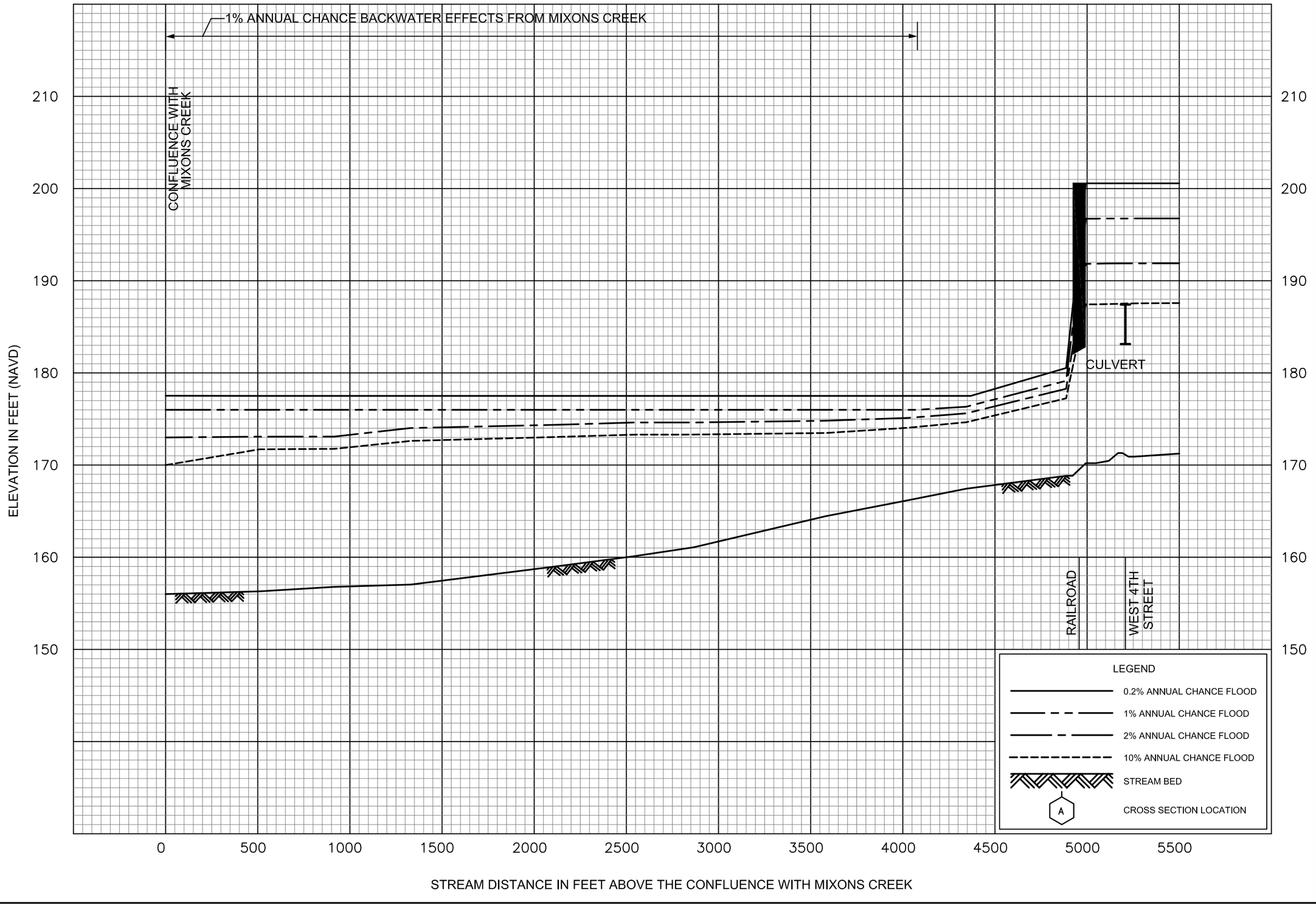
FLOOD PROFILES

MIXONS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

51P

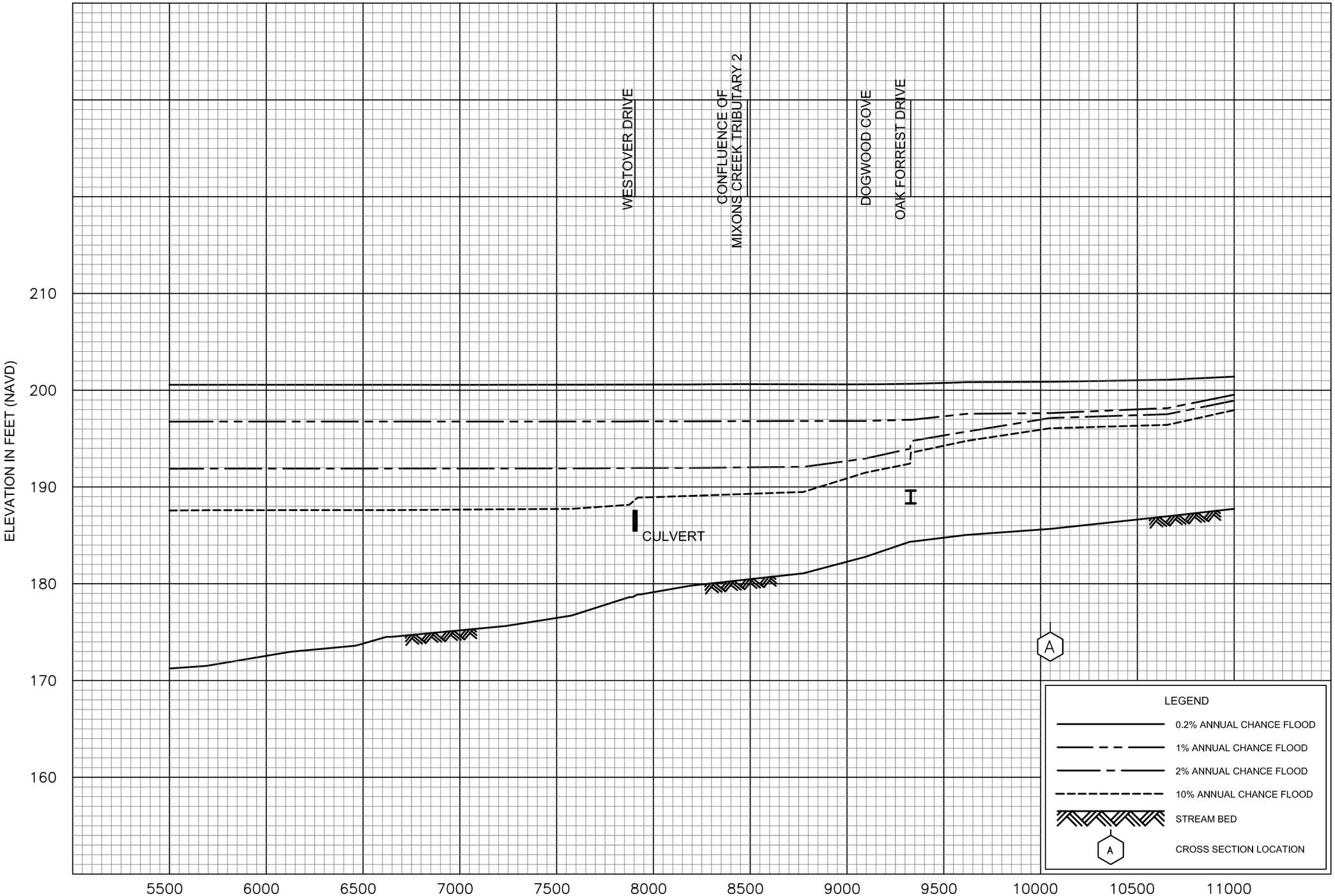


FLOOD PROFILES

MIXONS CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS



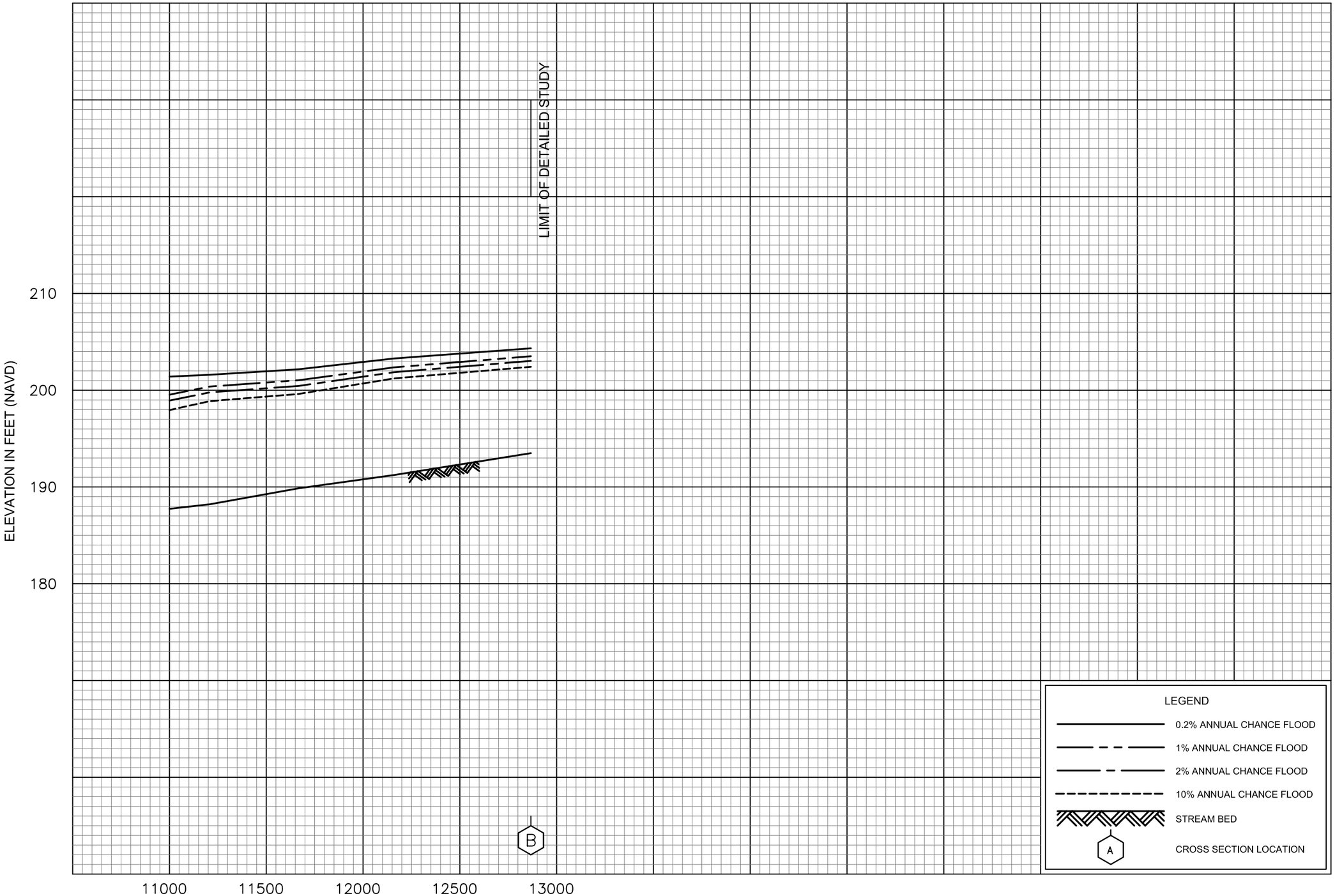
FLOOD PROFILES

MIXONS CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

53P



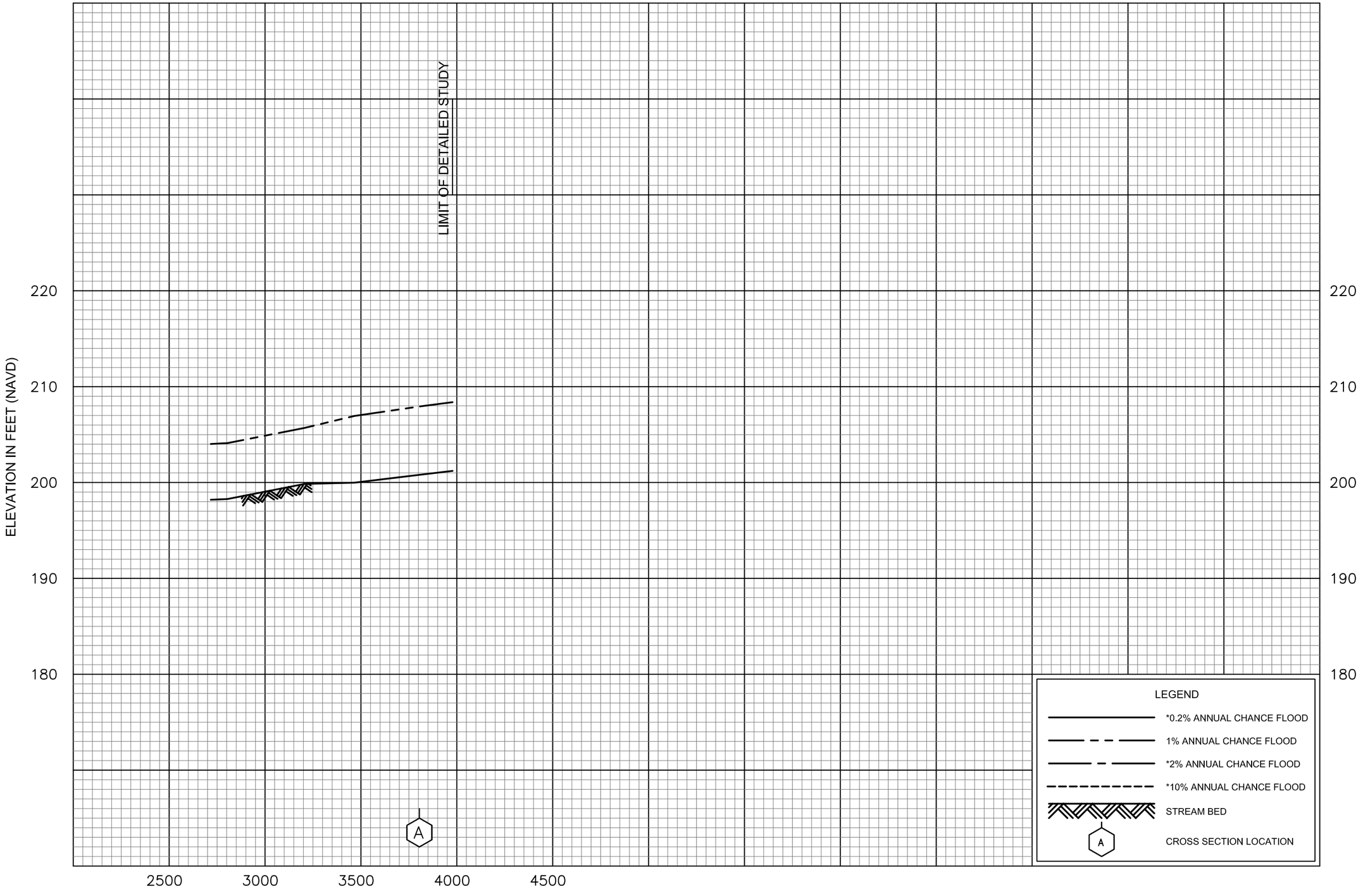
FLOOD PROFILES

MIXONS CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

54P



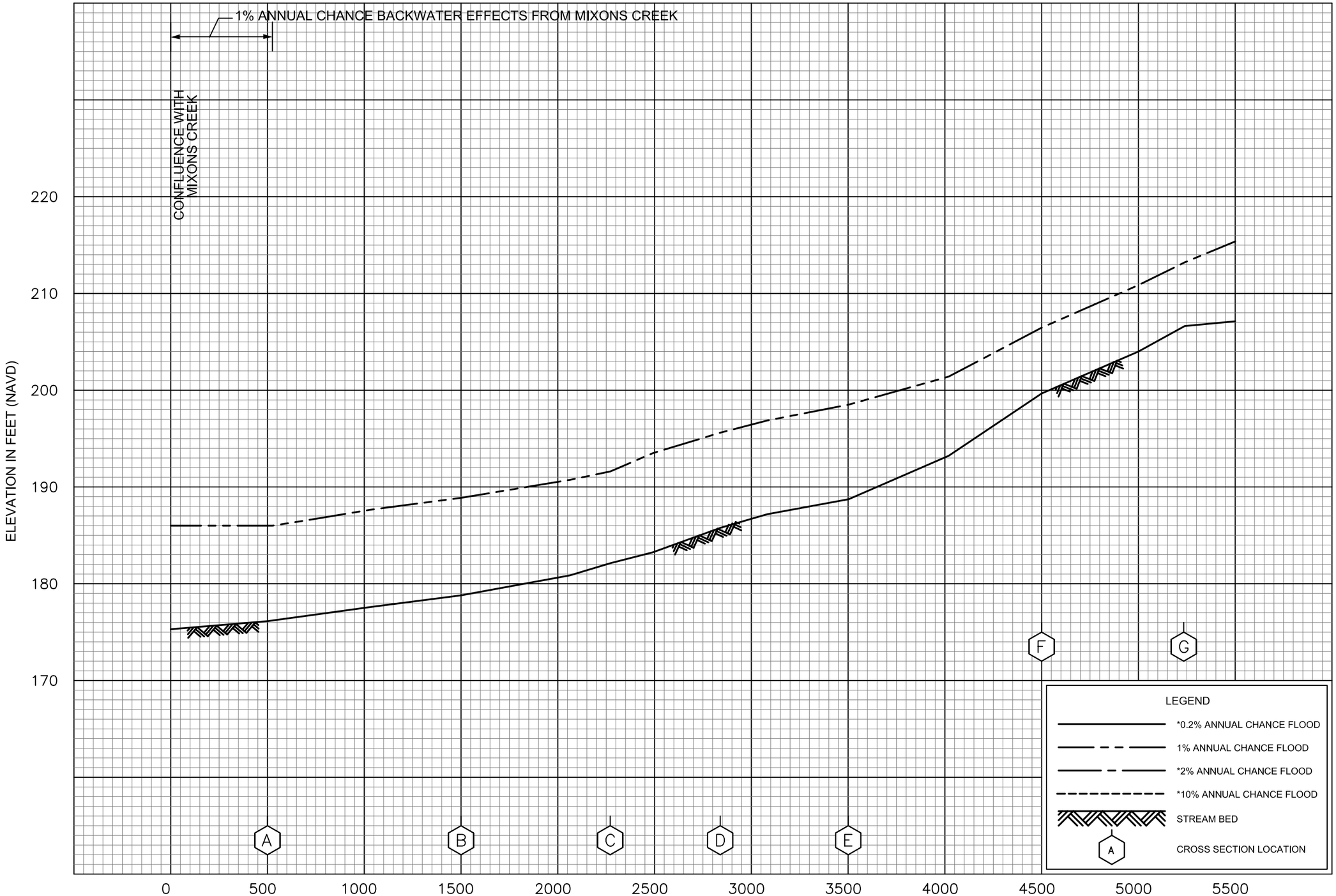
* DATA NOT AVAILABLE

FLOOD PROFILES

MIXONS CREEK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

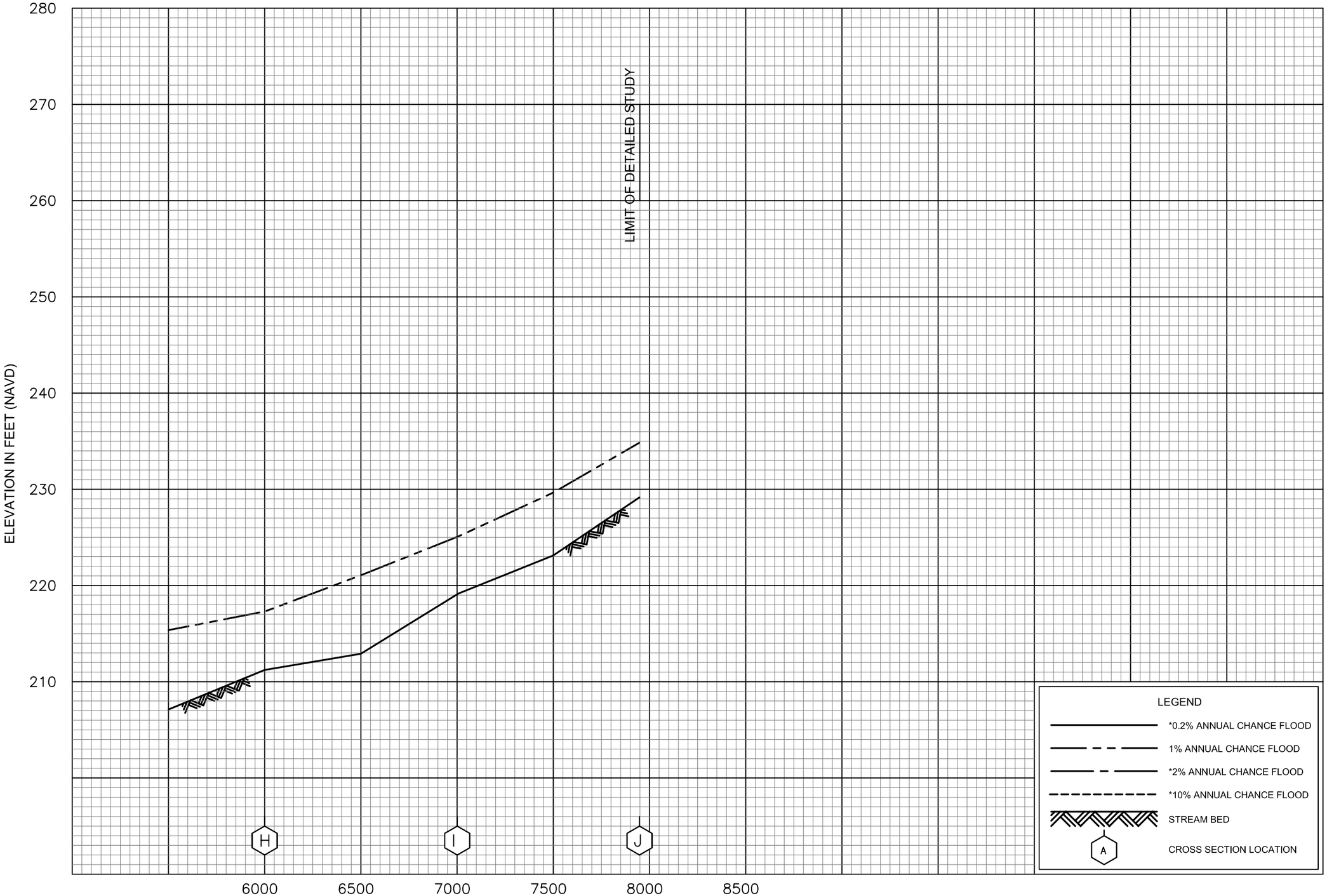


FLOOD PROFILES

MIXONS CREEK TRIBUTARY 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS



STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH MIXONS CREEK

* DATA NOT AVAILABLE

FLOOD PROFILES

MIXONS CREEK TRIBUTARY 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS

57P

BACKWATER EFFECTS FROM LEAF RIVER

JAMES STREET

RAILROAD

ELEVATION IN FEET (NAVD 88)

185
175
165
155
145
135
125
115
105
95

3,000 3,500 4,000 4,500 5,000 5,500 6,000 6,500 7,000 7,500 8,000 8,500 9,000 9,500

STREAM DISTANCE IN FEET ABOVE THE CONFLUENCE WITH LEAF RIVER

A B C D E

LEGEND

- 0.2% ANNUAL CHANCE FLOOD
- "1%+" ANNUAL CHANCE FLOOD
- 1% ANNUAL CHANCE FLOOD
- 2% ANNUAL CHANCE FLOOD
- 4% ANNUAL CHANCE FLOOD
- 10% ANNUAL CHANCE FLOOD
- STREAM BED
- A CROSS SECTION LOCATION

FLOOD PROFILES

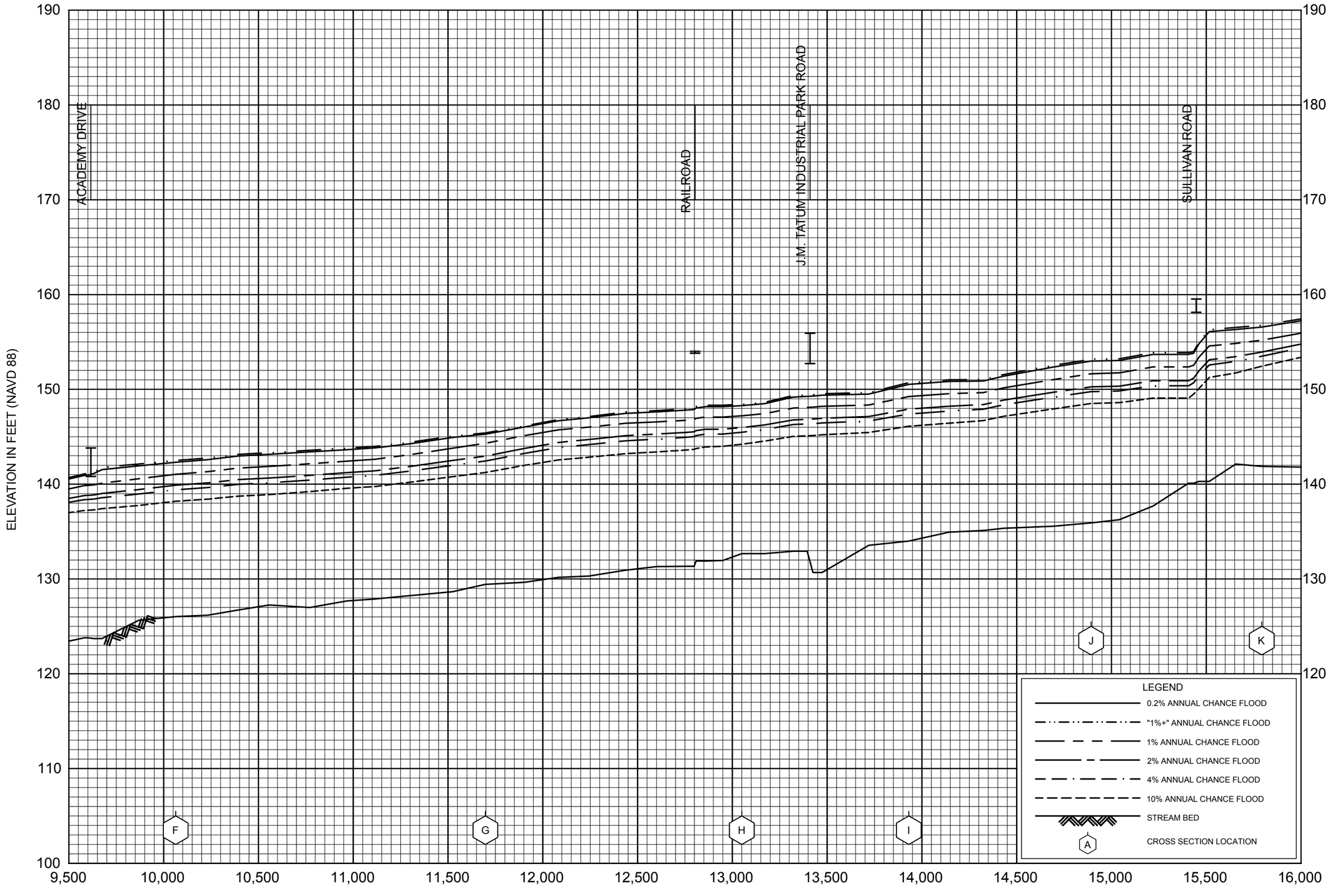
PRIESTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

58P



FLOOD PROFILES

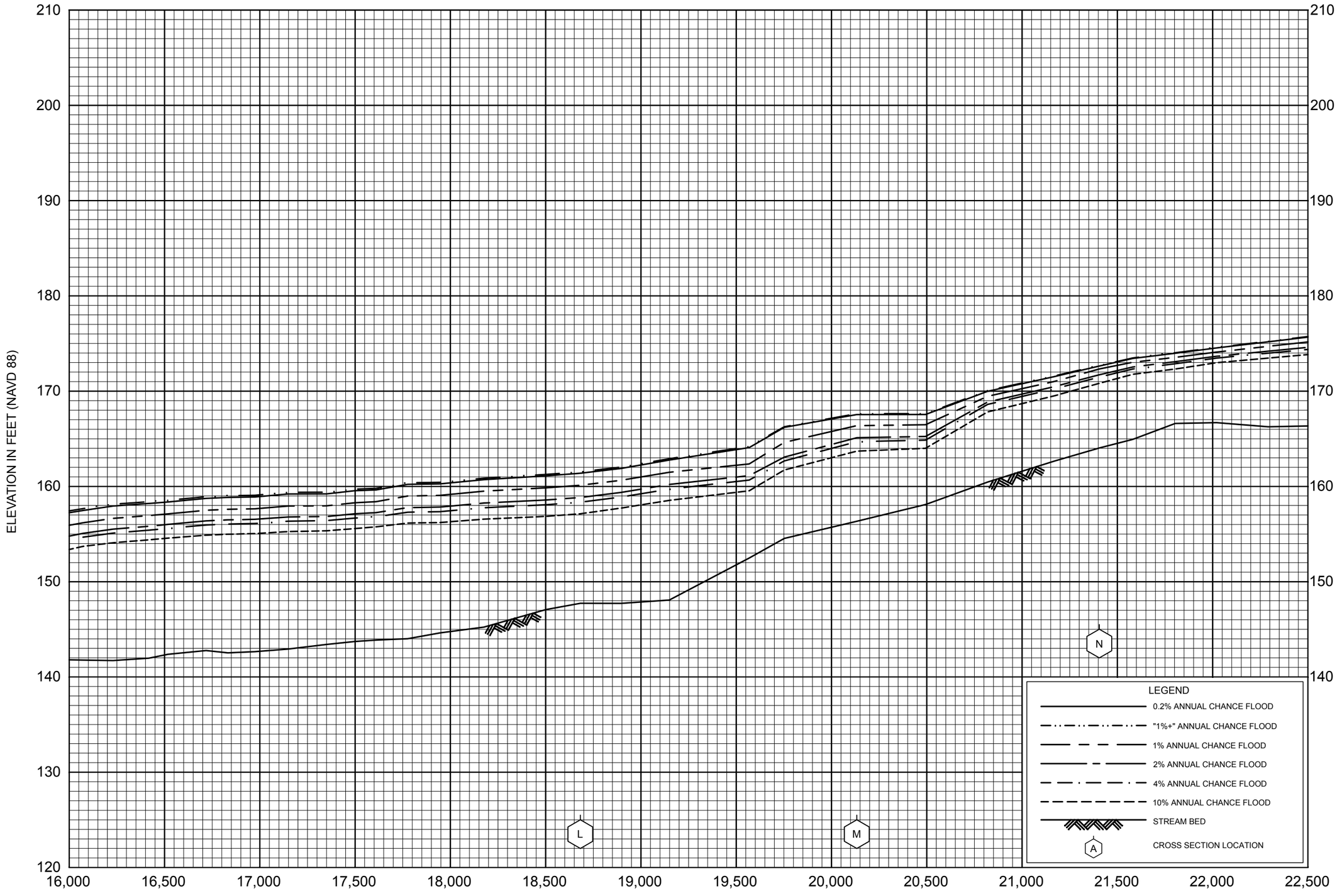
PRIESTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

59P



FLOOD PROFILES

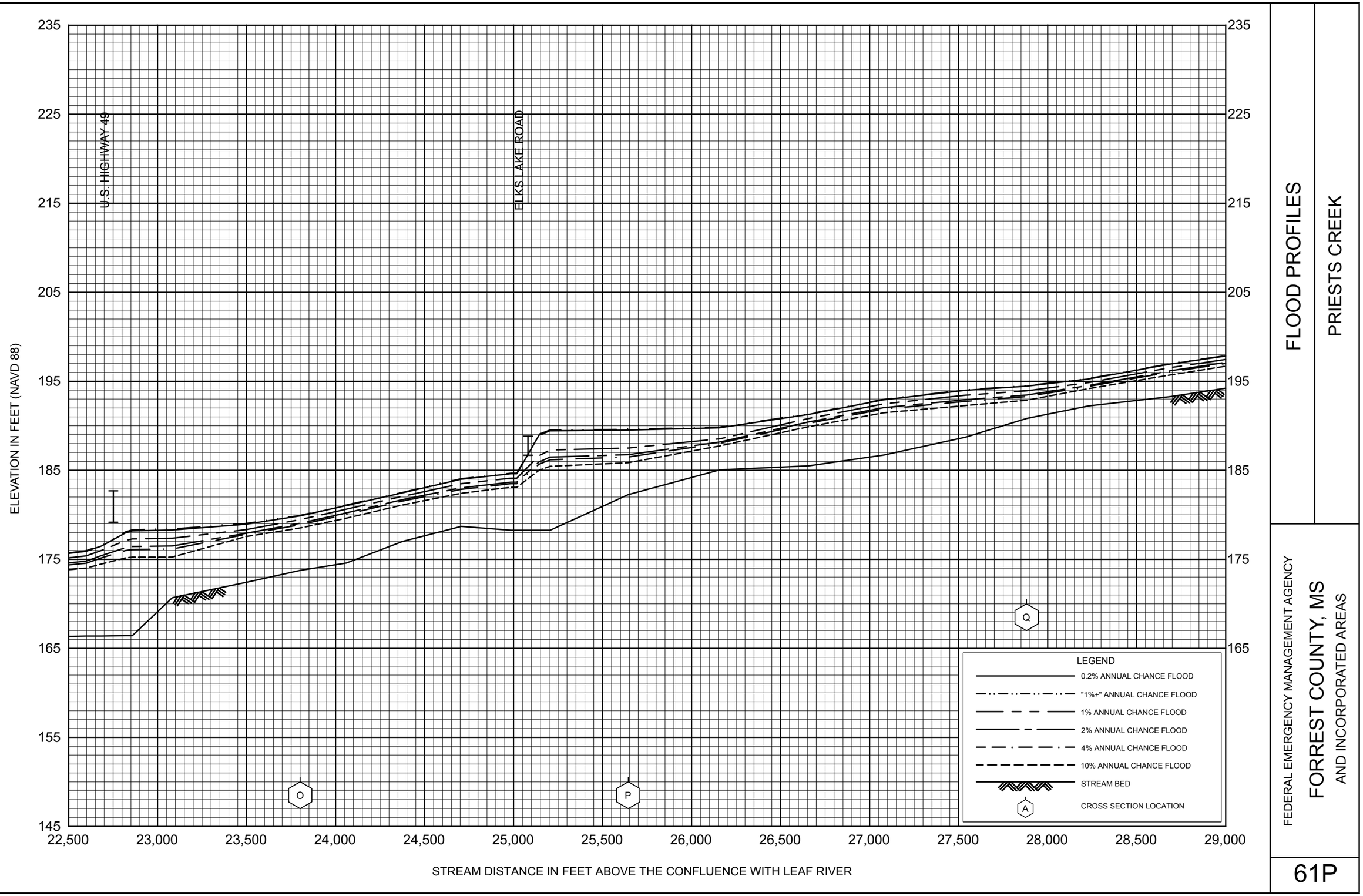
PRIESTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

60P



FLOOD PROFILES

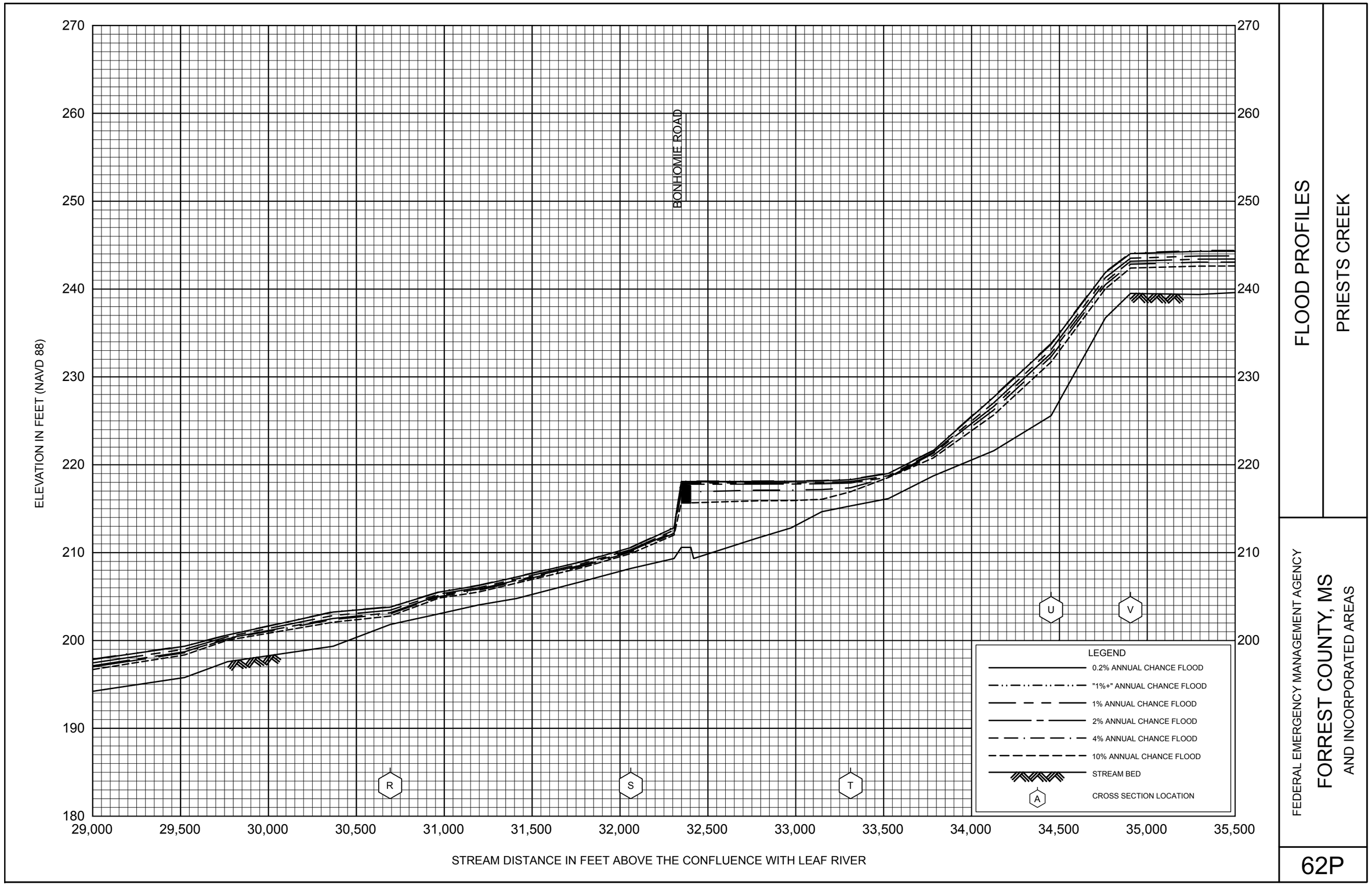
PRIESTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

61P



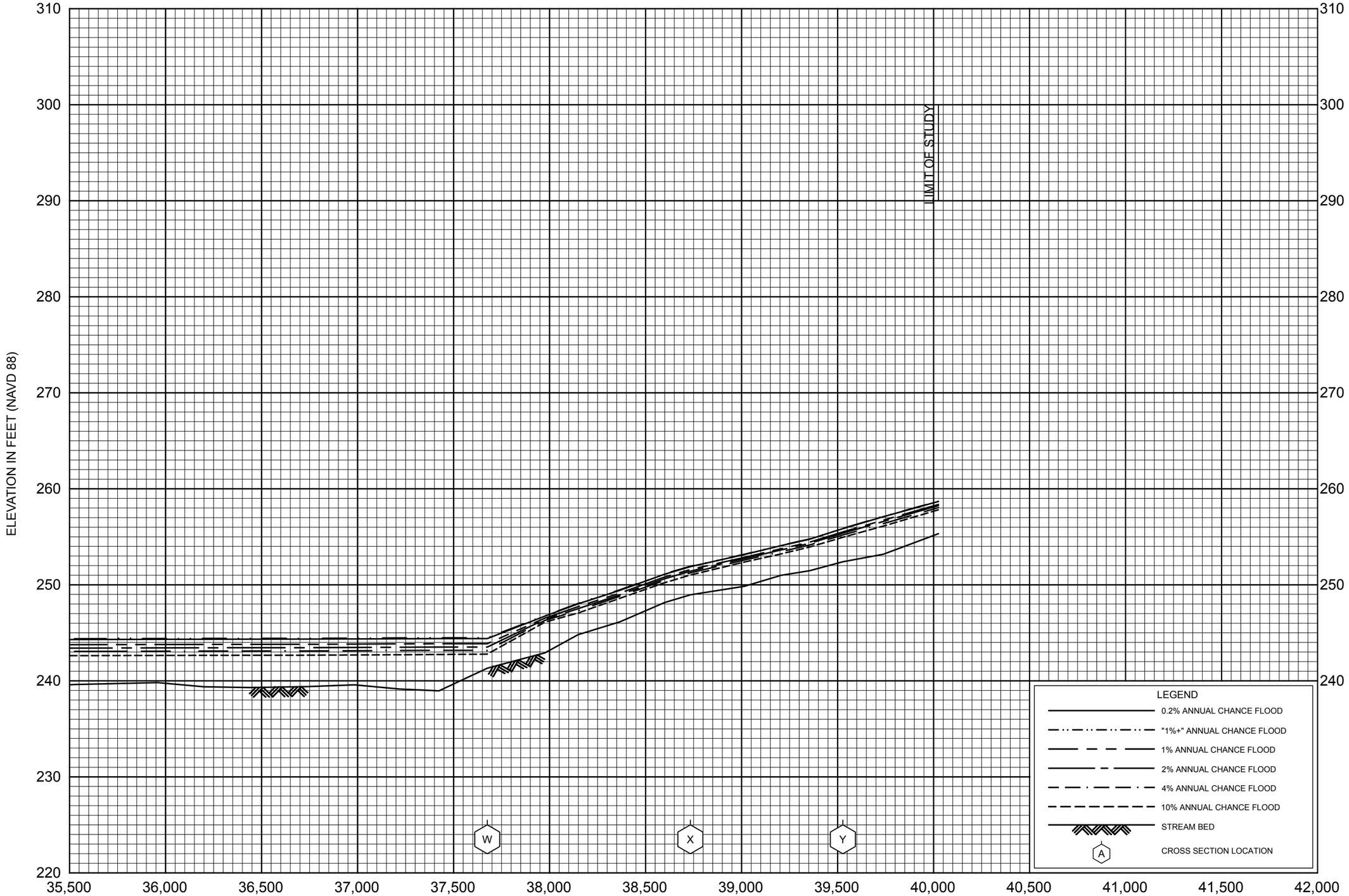
FLOOD PROFILES

PRIESTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS



FLOOD PROFILES

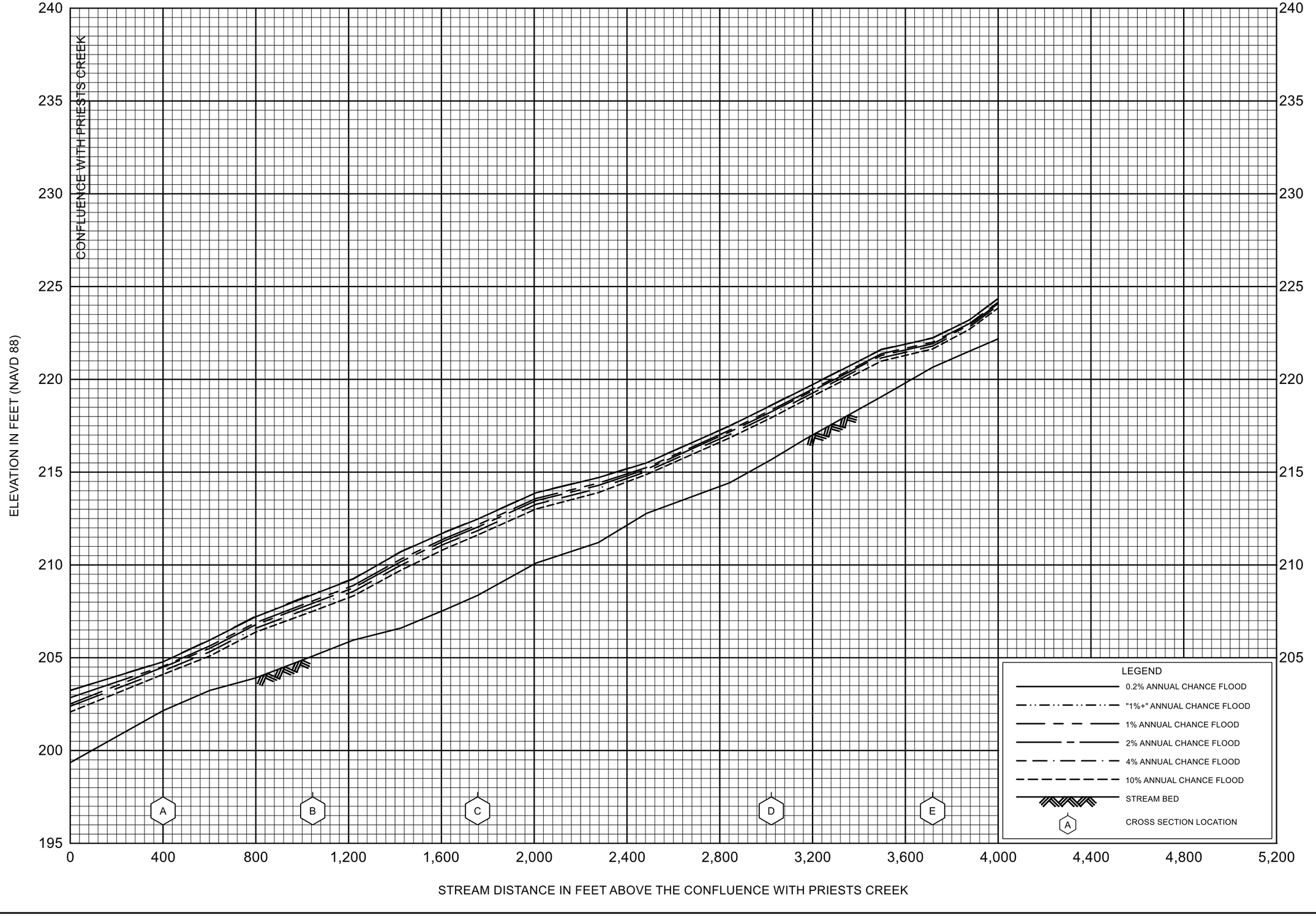
PRIESTS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

63P



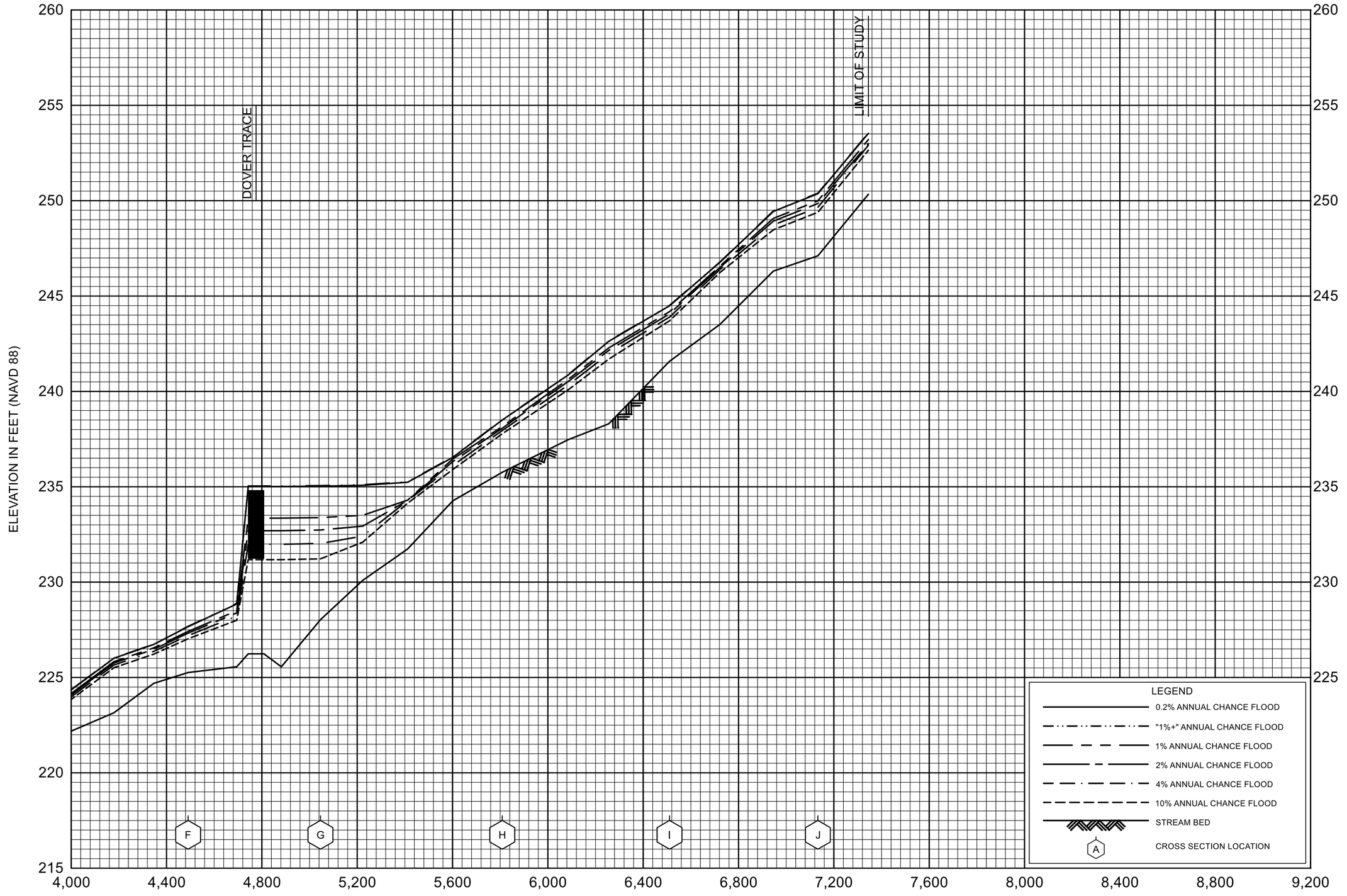
FLOOD PROFILES

PRIESTS CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS



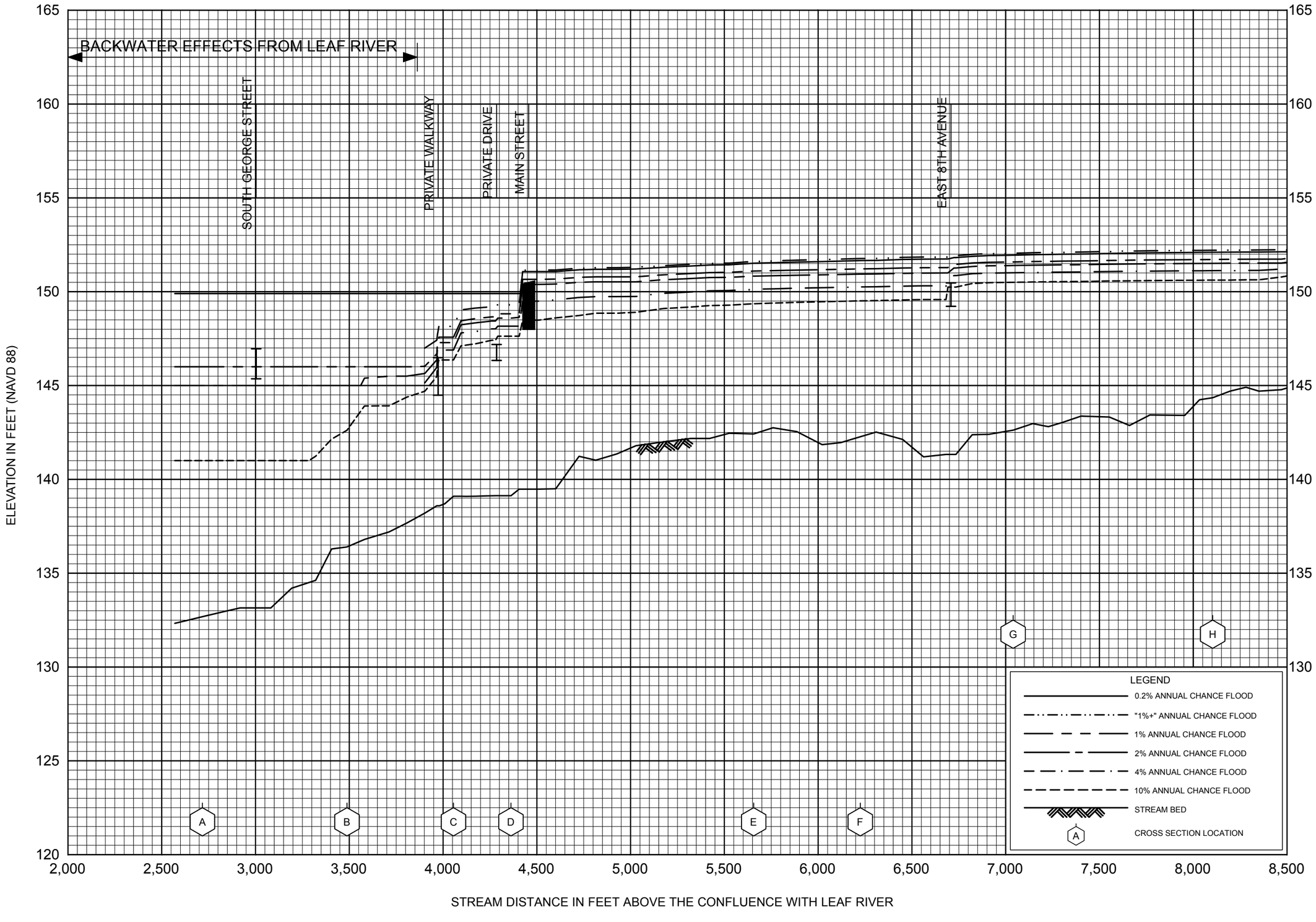
FLOOD PROFILES

PRIESTS CREEK TRIBUTARY 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS



FLOOD PROFILES

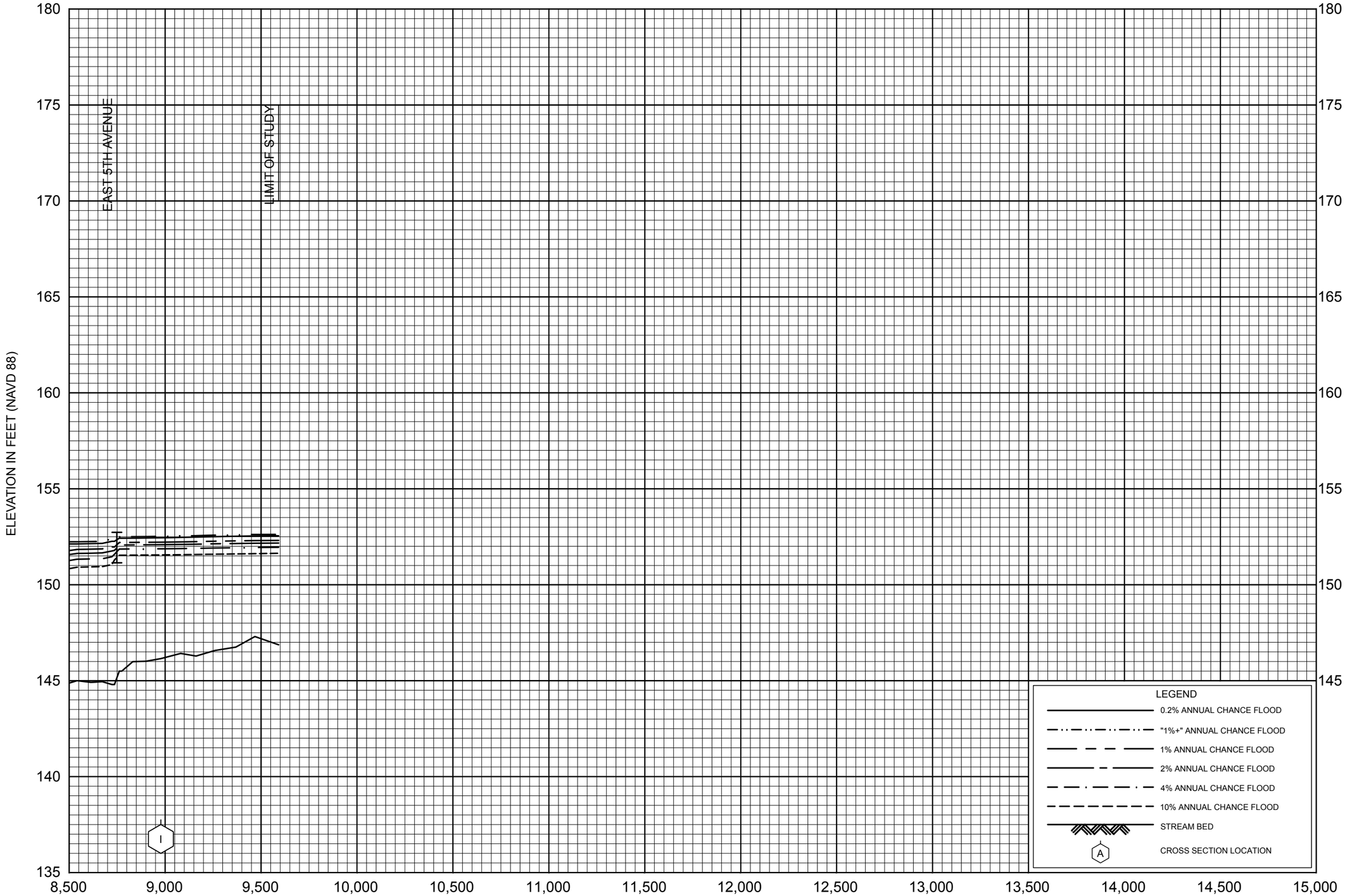
UNNAMED TRIBUTARY NO. 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

66P



FLOOD PROFILES

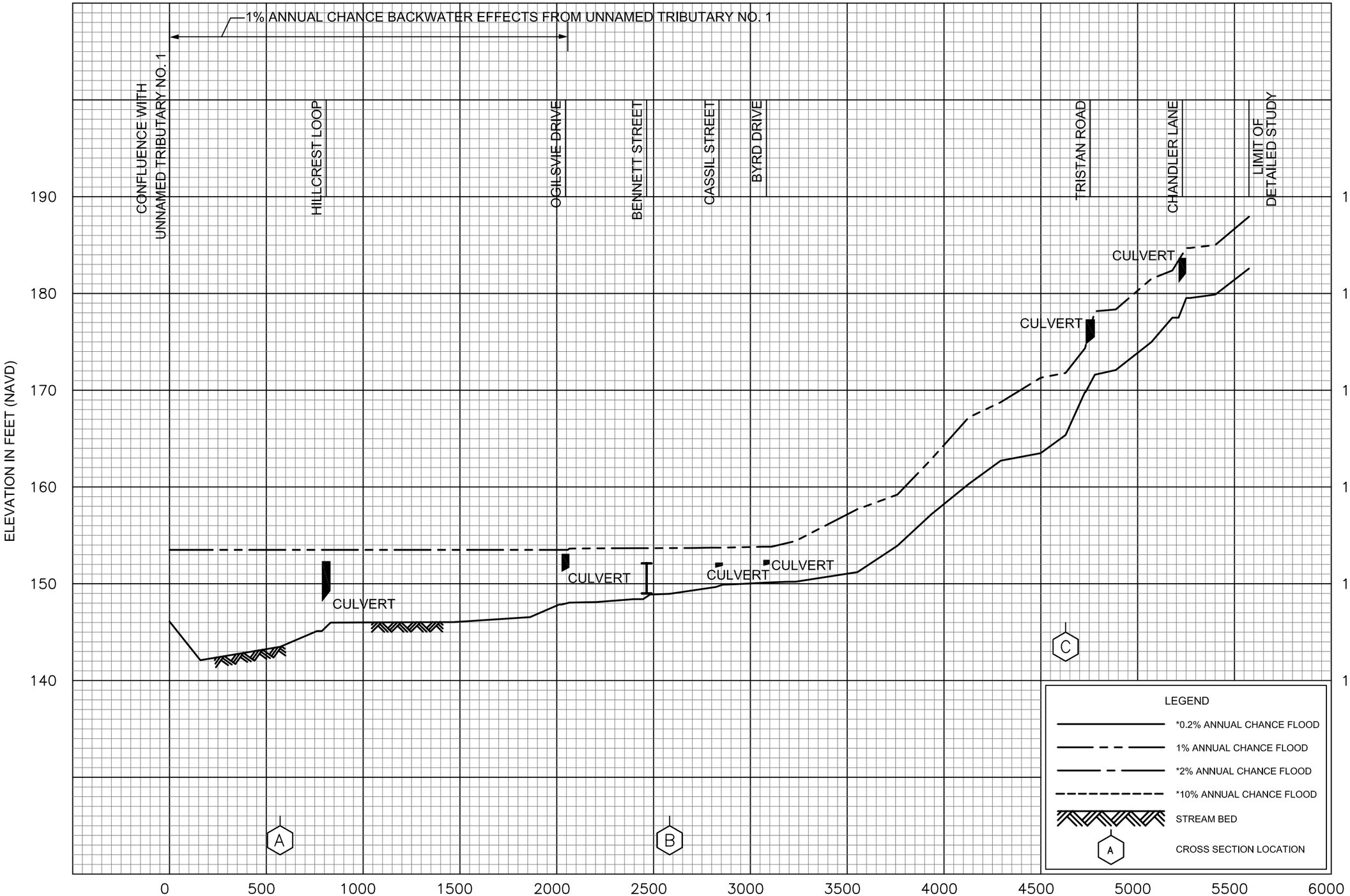
UNNAMED TRIBUTARY NO. 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS

AND INCORPORATED AREAS

67P



FLOOD PROFILES

UNNAMED TRIBUTARY NO. 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

FORREST COUNTY, MS
AND INCORPORATED AREAS