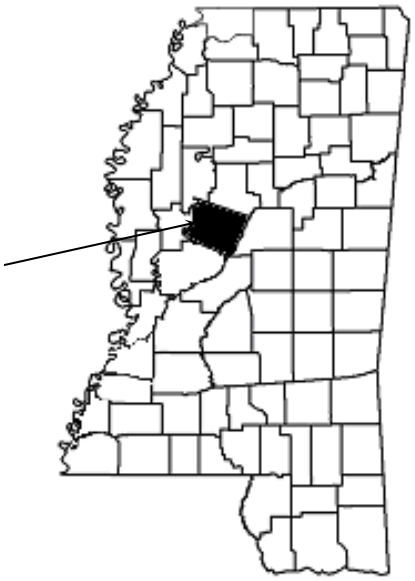
FLOOD INSURANCE STUDY

HOLMES COUNTY, MISSISSIPPI
AND INCORPORATED AREAS



COMMUNITY NAME	COMMUNITY NUMBER
CRUGER, TOWN OF	280313
DURANT, CITY OF	280074
GOODMAN, TOWN OF	280075
HOLMES COUNTY (UNINCORPORATED AREAS)	280211
LEXINGTON, CITY OF	280076
PICKENS, TOWN OF	280077
TCHULA, TOWN OF	280078
WEST, TOWN OF	280079

EFFECTIVE:

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
28051CV000A

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program (NFIP) have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) report may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

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 the Letter of Map Revision process, which does not involve republication or redistribution of the FIS. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current FIS report components.

Selected Flood Insurance Rate Map panels for this community contain information that was previously shown separately on the corresponding Flood Boundary and Floodway Map panels (e.g., floodways, cross-sections). In addition, former flood hazard zone designations have been changed as follows:

Old Zone	New Zone
C	X

Initial Countywide FIS Report Effective Date:

Revised Countywide FIS Report Dates:

TABLE OF CONTENTS

TABLE OF CONTENTS - continued

FLOOD INSURANCE STUDY
HOLMES COUNTY, MISSISSIPPI AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and supersedes the FIS reports and/or Flood Insurance Rate Maps (FIRMs) in the geographic area of Holmes County, Mississippi, including the Towns of Cruger, Goodman, Pickens, Tchula, and West, the Cities of Durant and Lexington, and unincorporated areas of Holmes County (hereinafter referred to collectively as Holmes County).

This FIS aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood risk data for various areas of the community that will be used to establish actuarial flood insurance rates. This information will also be used by Holmes County to update existing floodplain regulations as part of the Regular Phase of the National Flood Insurance Program (NFIP), and by local and regional planners to further promote sound land use and floodplain development. Minimum floodplain management requirements for participation in the NFIP are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

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

1.2 Authority and Acknowledgments

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

September 22, 1999, Holmes County (Unincorporated Areas) FIS

For the original FIS, dated September 15, 1989, the hydrologic and hydraulic analyses were prepared by the U.S. Geological Survey (USGS) for the Federal Emergency Management Agency (FEMA), under Inter-Agency Agreement No. EMW-85-E-1823. That work was completed in April 1987.

For the September 22, 1999, revision, the hydrologic and hydraulic analyses for Black Creek were prepared by Braswell Engineering, Inc., for FEMA, under Contract No. EMW-93-C-4147. That work was completed on May 1, 1997.

This Countywide FIS

The hydrologic and hydraulic analyses for this countywide FIS were performed by the State of Mississippi for the Federal Emergency Management Agency (FEMA), under Contract No EMA-2008-CA-5883. This study was completed in May 2010.

The digital base map information files were provided by the State of Mississippi. The digital orthophotography was acquired in March 2006, with the imagery processed to a 2-foot pixel resolution.

The digital FIRM was produced using the Mississippi State Plane Coordinate System, West Zone, FIPS ZONE 2302. The horizontal datum was the North American Datum of 1983, GRS 1980 spheroid. Distance units were measured in U.S. feet.

1.3 Coordination

An initial Consultation Coordination Officer's (CCO) meeting is held with representatives from FEMA, the community, and the study contractor to explain the nature and purpose of a FIS, and to identify the streams to be studied by detailed methods. A final CCO meeting is held with representatives from FEMA, the community, and the study contractor to review the results of the study.

September 22, 1999, Holmes County (Unincorporated Areas) FIS

For the 1989 FIS, an initial CCO meeting was held on February 13, 1985, and was attended by representatives of the USGS, the U.S. Soil and Conservation Service, the county, and FEMA. A final CCO meeting was held on November 3, 1988, and was attended by representatives of the USGS, the county, and FEMA.

For the September 22, 1999, revision, the county was notified by letter on February 27, 1998, that its FIS would be revised using the analyses prepared by the USGS.

This Countywide FIS

For this countywide FIS, the Project Scoping Meeting was held on September 9, 2008 in Holmes City, MS. Attendees for these meetings included representatives from the Mississippi Department of Environmental Quality, Mississippi Emergency Management Agency, FEMA National Service Provider, Holmes County, the Town of Satartia, the City of Holmes City, and the Study Contractor. Coordination with county officials and Federal, State, and regional agencies produced a variety of information pertaining to floodplain regulations, available community maps, flood history, and other hydrologic data. All problems raised in the meetings have been addressed.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Holmes County, Mississippi, and its incorporated communities listed in Section 1.1 Several flooding sources within the county were studied by approximate methods. Approximate analyses are used to study those areas having a low development potential or minimal flood hazards. The scope and methods of study were proposed to, and agreed upon, by FEMA and the State of Mississippi.

September 22, 1999, Holmes County (Unincorporated Areas) FIS

For the 1989 FIS, Black Creek was studied by detailed methods, near the City of Lexington.

For the September 22, 1999, revision, Black Creek was restudied by detailed methods from approximately 1,300 feet downstream of the corporate limits of the City of Lexington, Mississippi, to State Route 12, located slightly upstream of the confluence of Tarry Creek.

Portions of the Yazoo River were studied by approximate methods based on a USACE Yazoo River basin, Yazoo Headwater Project report (USACE, 1975). Approximate analyses were used to study those areas having a low development potential or minimal flood hazards.

This Countywide FIS

For this countywide FIS, several flooding sources within the county were studied by approximate methods. Approximate analyses are used to study those areas having a low developmental potential or minimal flood hazards. The scope and methods of study were proposed to, and agreed upon, by FEMA and the State of Mississippi.

Floodplain boundaries of Black Creek that has been previously studied by detailed methods were redelineated based on best available topographic information.

The Yazoo River has been previously studied by detailed methods in the May 1979, Leflore County Flood Insurance Study. The portion of this study that affects Holmes County has been included in this countywide FIS.

2.2 Community Description

Holmes County is located in west central Mississippi and is bordered on the west by Humphries County, Mississippi; on the south by Yazoo County, Mississippi; on the north by Carroll and Leflore Counties, Mississippi; and on the east by Attala County, Mississippi. Holmes County is served by U.S. U.S. Intersate 55, Highway 49 East and 51; State Highways 12, 14, 17, 19, and 433; and the Canadian National Railroad. The 2009 population was reported to be 20,290 (U.S. Census Bureau, 2010).

The climate of Holmes County is influenced mainly by its subtropical latitude, the huge landmass to the north, its proximity to the warm waters of the Gulf of Mexico, and the prevailing southerly winds. The minimum mean temperature is 43.4 ^{o}F in January, and the maximum mean temperature is 79.8 ^{o}F in July. Moisture is ample throughout the year, often with prolonged rainfall in the winter and spring due to warm air from the Gulf of Mexico overriding cooler air masses near the ground surface. The mean annual precipitation is 56.2 inches (NOAA, 2010).

2.3 Principal Flood Problems

Flood problems in Holmes County result form overflow of the Big Black River in the eastern region of the county, of the Yazoo River and Tchula Lake in the western region, and of Black Creek near the center of the county.

2.4 Flood Protection Measures

A flood protection project for the entire Yazoo River headwater basin is presented in the Yazoo River Basin report (USACE, 1975). The project plan includes extensive enlargement of the channel, and construction of levees and new drainage structures. Construction of some of the east bank Yazoo River levees, construction of the Upper Tchula Lake drainage structure, and the Abica Creek Levee Project have been deferred indefinitely. Without these structures, Holmes County will be subject to the 1-percent annual-chance outflows of the Yazoo River.

In October 1995, the Black Creek Watershed Industrial Park Levee was constructed within the City of Lexington and the unincorporated areas of Holmes County.

FEMA specifies that all levees must have a minimum of 3-foot freeboard against the 1-pecent annual-chance flooding to be considered a safe flood protection structure.

Other levees, including Black Creek Watershed Industrial Park Levee, exist in the study area that provides the community with some degree of protection against flooding. However, it has been ascertained that none of these levees protect the community from rare events such as the 1.0-percent annual chance flood. The criteria used to evaluate protection against the 1.0-percent annual chance flood are 10 adequate design, including freeboard, 2) structural stability, and 3) proper operation and maintenance. Levees that do not protect against the 1.0-percent annual chance flood are not considered in the hydraulic analysis of the 1.0-percent annual chance floodplain.

3.0 ENGINEERING METHODS

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

3.1 Hydrologic Analyses

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

September 22, 1999, Holmes County (Unincorporated Areas) FIS Analyses

For the 1989 FIS, the 1.0-percent annual chance discharge for Black Creek was estimated using regional methods presented in the USGS report titled, "Floods in Mississippi, Magnitude and Frequency" (U.S. Dept. of the Interior, 1961).

For the September, 22, 1999, revision, peak discharges for Black Creek were determined using updated regional regression equations published by the USGS (U.S. Dept. of the Interior, 1991). No adjustments for urbanization were made since the majority of the basin is rural.

This Countywide FIS Analysis

Peak discharges were calculated based on USGS regional regression equations (U.S. Dept. of the Interior, 1991). For the discharges calculated based on regional regression equations, the rural regression values were modified to reflect stream gage weighting and/or urbanization as necessary.

For the Yazoo River, the data used for the study is from the Leflore County (unincorporated areas) Flood Insurance Study dated May 1979. The peak discharge for the 1-percent annual-chance flood was developed by frequency rainfall analysis using U.S. Weather Service Technical Papers Numbers 40 and 49 and Snyder's Unit Hydrograph Method (USACE, 1959).

A summary of the drainage area-peak discharge relationships for all the streams is shown in Table 1, "Summary of Discharges."

TABLE 1. SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. mi.)	PEAK DISCHARGES (cfs) 10-percent	2-percent	1-percent	0.2-percent
BLACK CREEK					
Upstream of Owens Branch	89.68	13,700	19,430	22,950	28,590
At State Route 12	56.00	*	*	22,000	*
YAZOO RIVER					
At Belzoni	7,830	*	*	46,000	*

*Data not available

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the

Flood Profiles or in the Floodway Data table in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS report in conjunction with the data shown on the FIRM.

September 22, 1999, Holmes County (Unincorporated Areas) FIS Analyses

Cross sections for the flooding source studied by detailed methods were obtained from field surveys. All bridges, dams, and culverts were field surveyed to obtain elevation data and structural geometry.

Water-surface elevations of floods of the selected recurrence intervals were computed using the USACE HEC-2 step-backwater computer program (USACE, 1991). Starting water-surface elevations were calculated using the slope/area method. Flood profiles were drawn showing computed water-surface elevations for floods of the selected recurrence intervals.

Roughness factors (manning's "n") used in the hydraulic computations were chosen by engineering judgment based on field observations. The channel "n" value was 0.035 and the overbank "n" values ranged from 0.05 to 0.08.

This Countywide FIS Analysis

Cross section geometries were obtained from a combination of terrain data and field surveys. Bridges and culverts located within the enhanced approximate study limits were field surveyed to obtain elevation data and structural geometry.

Downstream boundary conditions for the hydraulic models were set to normal depth using a starting slope calculated from values taken from topographic data, or where applicable, derived from the water-surface elevations. Water-surface profiles were computed through the use of the USACE HEC-RAS version 4.0.0 computer program (USACE, 2008). The model was run for the 1-percent-annual-chance storm for the limited detail and approximate studies.

For the Yazoo River, the data used is from the Leflore County (unincorporated areas) Flood Insurance Study dated May 1979. Using the HEC-2 "Water Surface Profiles" computer program (USACE, 1973), the 1973 high water profile was reproduced for the Yazoo-Tallahatchie River. Once the 1973 high water profile was satisfactorily reproduced, the water-surface profiles for each of the selected recurrence intervals were computed. The computed water-surface elevations were checked by rating curves and stage-frequency curves at Swan Lake, Greenwood, and Belzoni, Mississippi gages. Roughness coefficients in the channel ranged from 0.024 to 0.038 while overbank values ranged from 0.010 to 0.016.

Cross sections for the Yazoo River were located at close intervals at bridges and culverts to compute the significant backwater effects of these structures in the developed areas. All bridges and culverts were surveyed to obtain elevation data and structural geometry.

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

Qualifying bench marks within a given jurisdiction that are cataloged by the National Geodetic Survey (NGS) and entered into the National Spatial Reference System (NSRS) as First or Second Order Vertical and have a vertical stability classification of A, B, or C are shown and labeled on the FIRM with their 6-character NSRS Permanent Identifier.

Benchmarks cataloged by the NGS and entered into the NSRS vary widely in vertical stability classification. NSRS vertical stability classifications are as follows:

> Stability A: Monuments of the most reliable nature, expected to hold position/elevation well (e.g., mounted in bedrock)
>
> Stability B: Monuments which generally hold their position/elevation well (e.g., concrete bridge abutment)
>
> Stability C: Monuments which may be affected by surface ground movements (e.g., concrete monuments below frost line)
>
> Stability D: Mark of questionable or unknown vertical stability (e.g., concrete monument above frost line, or steel witness post)

In addition to NSRS benchmarks, the FIRM may also show vertical control monument established by a local jurisdiction; these monuments will be shown on the FIRM with the appropriate designations. Local monuments will only be placed on the FIRM if the community has requested that they be included, and if the monuments meet the aforementioned NSRS inclusion criteria.

To obtain current elevation, description, and/or location information for benchmarks shown on the FIRM for this jurisdiction, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov.

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

3.3 Vertical Datum

All FIS reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum in use for newly created or revised FIS reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD29). With the finalization of the North American Vertical Datum of 1988 (NAVD88), many FIS reports and FIRMs are being prepared using NAVD88 as the referenced vertical datum.

All flood elevations shown in this FIS report and on the FIRM are referenced to NAVD88. Structure and ground elevations in the community must, therefore, be referenced to NAVD88. It is important to note that adjacent communities may be

referenced to NGVD29. This may result in differences in Base Flood Elevations (BFEs) across the corporate limits between the communities.

Ground, structure, and flood elevations may be compared and/or referenced to NGVD29 by applying a conversion factor. To convert elevations from NAVD88 to NGVD29, add 0.17 feet to the NAVD88 elevation. The 0.17 feet value is an average for the entire county. The adjustment value was determined using the USACE Corpscon 6.0.1 computer program (USACE, 2004) and topographic maps (U.S. Department of the Interior, 1964). The BFE's shown on the FIRM represent whole-foot rounded values. For example, a BFE of 12.4 feet will appear as 12 feet on the FIRM, and 12.6 feet as 13 feet. Users who wish to convert the elevations in this FIS report to NGVD29 should apply the stated conversion factor to elevations shown on the Flood Profiles and supporting data tables in the FIS report, which are shown at a minimum to the nearest 0.1-foot.

For more information regarding conversion between the NGVD and the NAVD, see the FEMA publication entitled *Converting the National Flood Insurance Program to the North American Vertical Datum of 1988* or contact the Vertical Network Branch, National Geodetic Survey, Coast and Geodetic Survey, National Oceanic and Atmospheric Administration, Rockville, Maryland 20910 (Internet address http://www.ngs.noaa.gov).

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

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

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to indicate additional areas of flood risk in the community. For each stream studied by detailed methods, the 1- and 0.2-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using 5-foot contours developed from the March 2006 digital orthophotography provided by the State of Mississippi.

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

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

For the streams studied by approximate methods, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM (Exhibit 2). Floodplain boundaries for these streams, as well as those streams that have been previously studied by detailed methods, were generated using 5-foot contours developed from the March 2006 digital orthophotography provided by the State of Mississippi.

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1-percent-annual-chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodway presented in this FIS report and on the FIRM was computed for certain stream segments on the basis of equal-conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations have been tabulated for selected cross sections of detailed study streams (Table 2). For detailed study streams, in cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

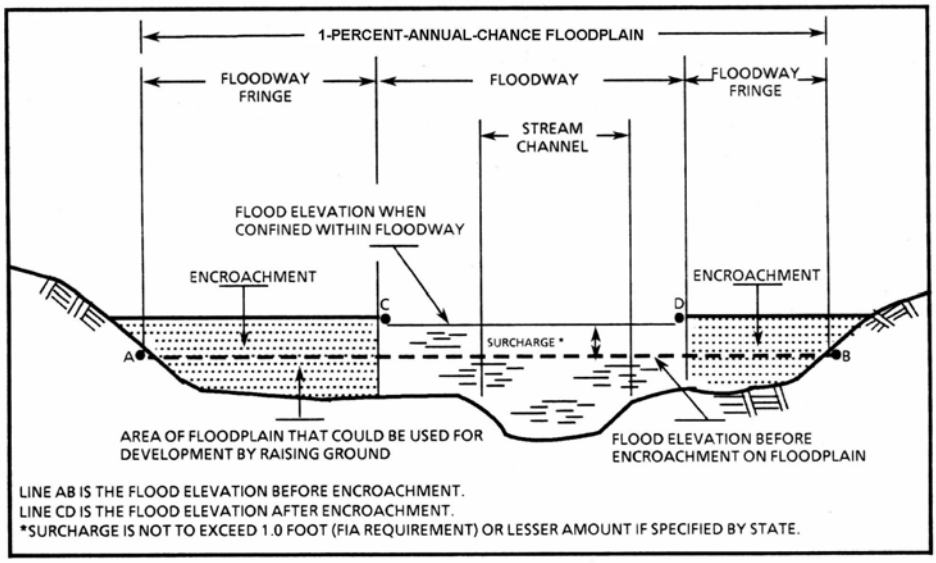
Near the mouths of streams studied in detail, floodway computations are made without regard to flood elevations on the receiving water body. Therefore, “Without Floodway” elevations presented in Table 2, “Floodway Data,” for certain downstream cross sections are lower than the regulatory flood elevations in that area, which must take into account the 1-percent-annual-chance flooding due to backwater from other sources.

Encroachment into areas subject to inundation by floodwaters having hazardous velocities aggravates the risk of flood damage, and heightens potential flood hazards by further increasing velocities. For detailed study streams, a listing of stream velocities at selected cross sections is provided in Table 2. In order to reduce the risk of property damage in areas where the stream velocities are high, the county may wish to restrict development in areas outside the floodway.

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the

floodplain that could be completely obstructed without increasing the water-surface elevation of the 1-percent-annual-chance flood more than 1.0 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 1.

Floodways were calculated for Black Creek.



FLOODWAY SCHEMATIC Figure 1

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD 88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BLACK CREEK (Before Overtopping)								
A	2,000	1,012	3,109	7.4	189.7	189.7	189.9	0.2
B	6,700	758	8,337	2.8	194.6	194.6	195.4	0.8
C	8,250	700	5,657	4.1	195.2	195.2	196.0	0.8
D	10,650	339	4,021	5.7	197.9	197.9	198.5	0.6
E	13,450	276	3,432	6.7	200.7	200.7	201.5	0.8
F	16,500	215	2,384	9.6	204.4	204.4	205.3	0.9
G-I[2]								
BLACK CREEK (After Overtopping)								
F	16,500	535	4,183	5.5	204.6	204.6	205.5	0.9

[1] FEET ABOVE MOUTH
[2] FLOODWAY DATA NOT COMPUTED

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

HOLMES COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

BLACK CREEK

5.0 INSURANCE APPLICATION

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

Zone A

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

Zone AE

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

Zone AH

Zone AH is the flood insurance rate zone that corresponds to the areas of 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within the zone.

Zone AO

Zone AO is the flood insurance rate zone that corresponds to the areas of 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where the average depths are between 1 and 3 feet. Average whole-foot depths derived from the detailed hydraulic analyses are shown within the zone.

Zone A99

Zone A99 is the flood insurance rate zone that corresponds to areas of the 1-percent floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or depths are shown within this zone.

Zone V

Zone V is the flood insurance rate zone that corresponds to the 1-percent coastal floodplains that have additional hazards associated with storm waves. Because approximate hydraulic analyses are performed for such areas, no base flood elevations are shown within this zone.

Zone VE

Zone VE is the flood insurance rate zone that corresponds to the 1-percent coastal floodplains that have additional hazards associated with storm waves. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

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

Zone D

Zone D is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.

6.0 FLOOD INSURANCE RATE MAP

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

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

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

The countywide FIRM presents flooding information for the entire geographic area of Holmes County. Previously, FIRMs were prepared for each incorporated community and the unincorporated areas of the County identified as flood-prone. This countywide FIRM also includes flood-hazard information that was presented separately on Flood Boundary and Floodway Maps (FBFMs), where applicable. Historical data relating to the maps prepared for each community, up to and including this countywide FIS are presented in Table 3, “Community Map History.”

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
Town of Cruger	October 27, 1978	--	April 2, 1986	--
City of Durant	February 8, 1974	February 6, 1976	August 19, 1986	--
Town of Goodman	June 7, 1974	January 16, 1976	June 3, 1986	--
Holmes County (Unicorporate Areas)	November 4, 1977	July 21, 1978	September 15, 1989	September 22, 1999
City of Lexington	January 4, 1974	January 16, 1976	September 30, 1988	May 2, 1999
Town of Pickens	June 14, 1974	January 16, 1976	August 5, 1985	--
Town of Tchula	January 23, 1974	November 28, 1975	June 17, 1986	--
Town of West	September 6, 1974	February 20, 1976	August 5, 1985	--

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

HOLMES COUNTY, MS
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

Information pertaining to revised and unrevised flood hazards for each jurisdiction within Holmes County has been compiled into this FIS. Therefore, this FIS supersedes all previously printed FIS reports, FIRMs, and/or FBFMs for all of the incorporated and unincorporated jurisdictions within Holmes County and should be considered authoritative for purposes of the NFIP.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting Federal Insurance and Mitigation Division, FEMA Region IV, Koger-Center — Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, GA 30341.

9.0 BIBLIOGRAPHY AND REFERENCES

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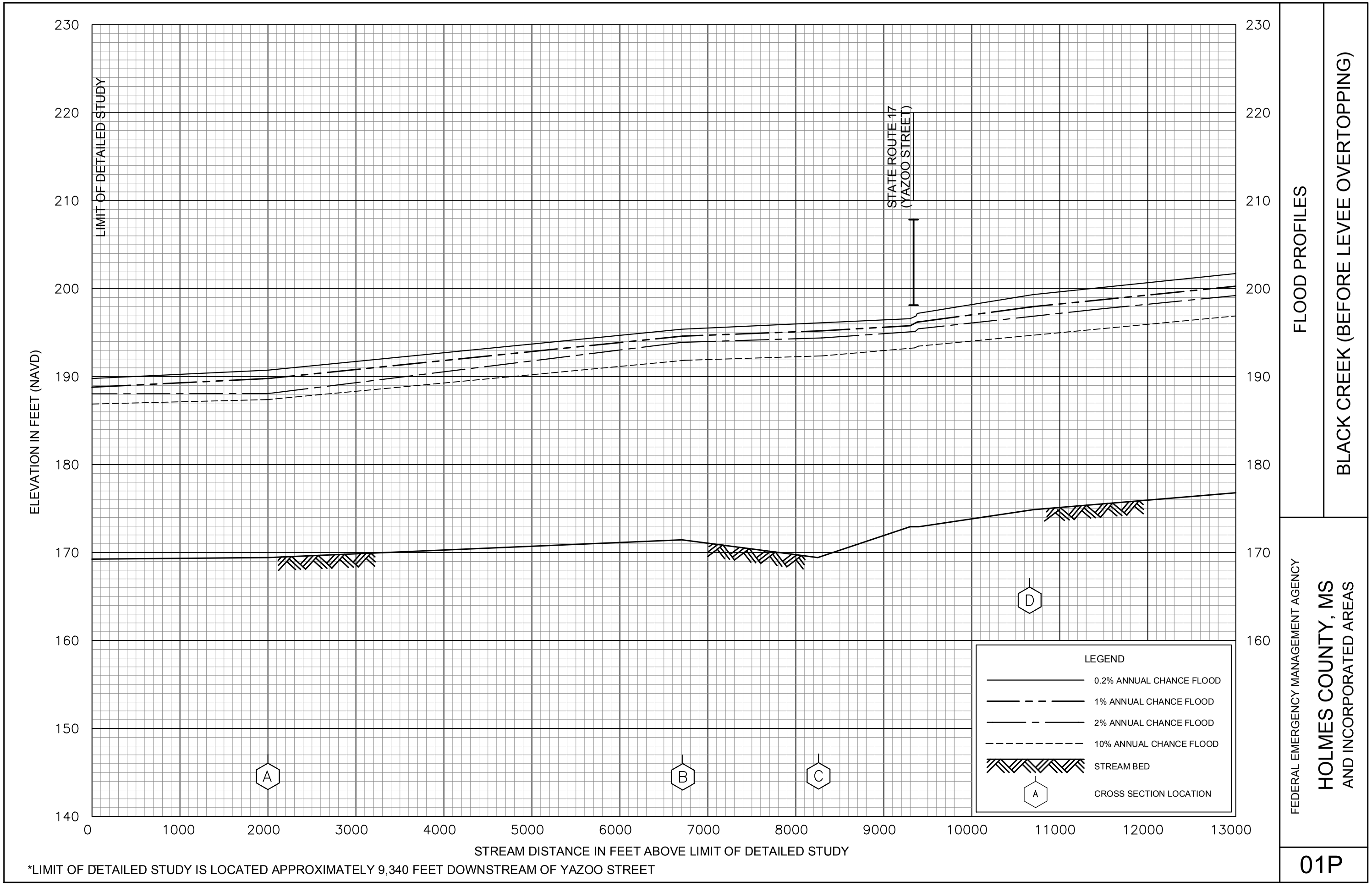


*LIMIT OF DETAILED STUDY IS LOCATED APPROXIMATELY 9,340 FEET DOWNSTREAM OF YAZOO STREET

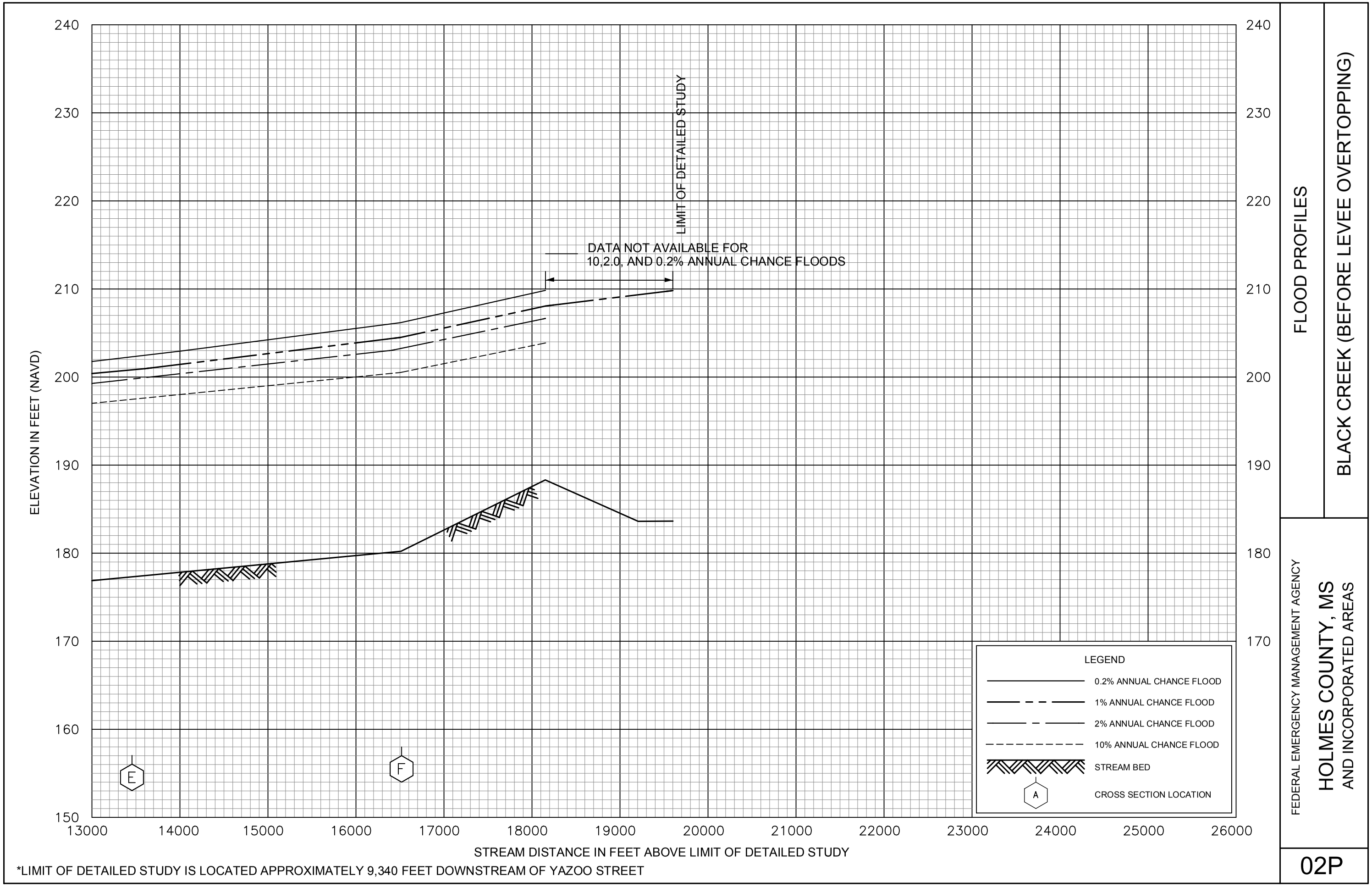
FLOOD PROFILES

BLACK CREEK (BEFORE LEVEE OVERTOPPING)

FEDERAL EMERGENCY MANAGEMENT AGENCY

HOLMES COUNTY, MS
AND INCORPORATED AREAS

01P



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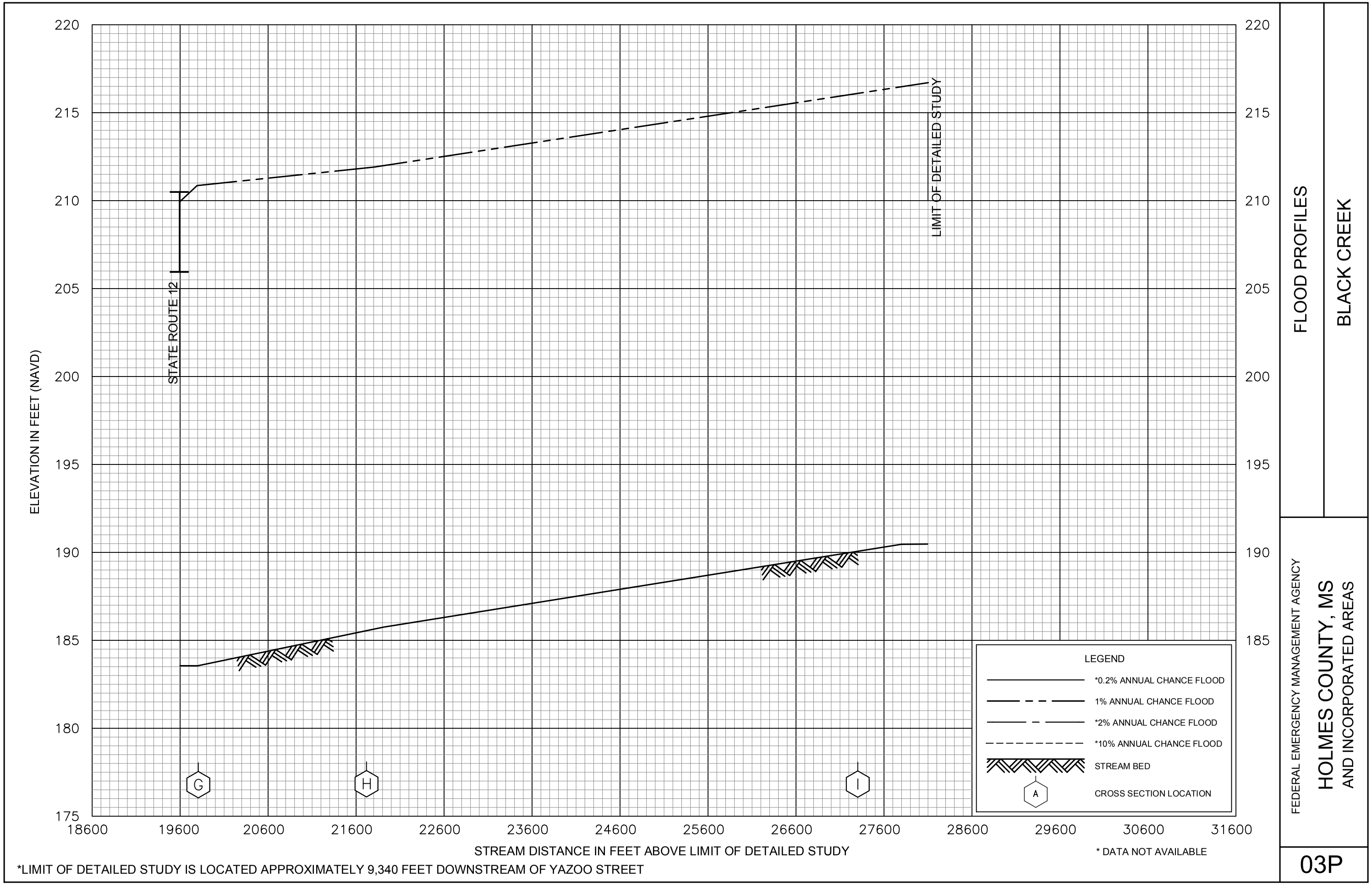
FLOOD PROFILES

BLACK CREEK (BEFORE LEVEE OVERTOPPING)

FEDERAL EMERGENCY MANAGEMENT AGENCY

HOLMES COUNTY, MS
AND INCORPORATED AREAS

02P



* DATA NOT AVAILABLE

*LIMIT OF DETAILED STUDY IS LOCATED APPROXIMATELY 9,340 FEET DOWNSTREAM OF YAZOO STREET

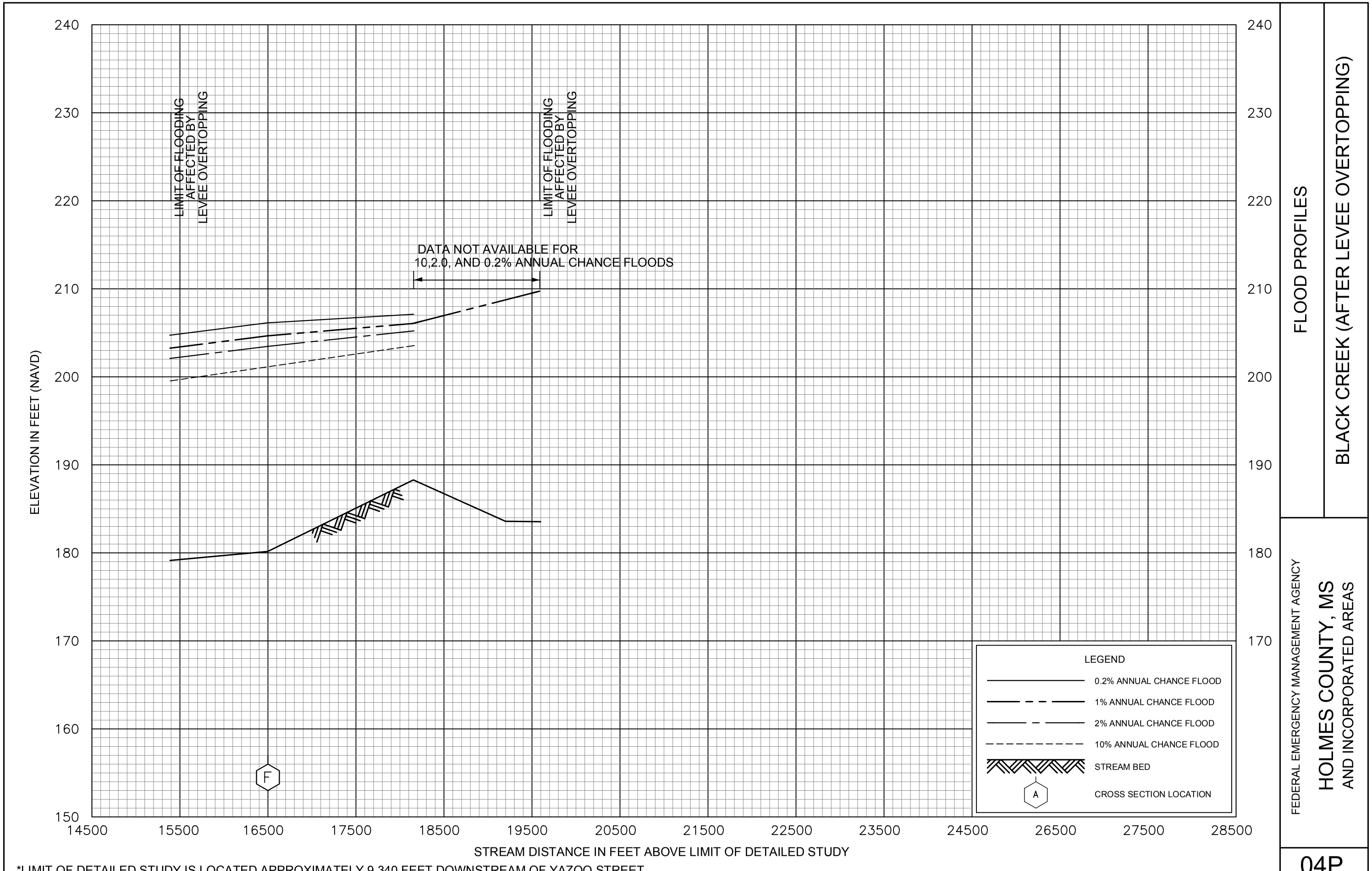
FLOOD PROFILES

BLACK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

HOLMES COUNTY, MS
AND INCORPORATED AREAS

03P



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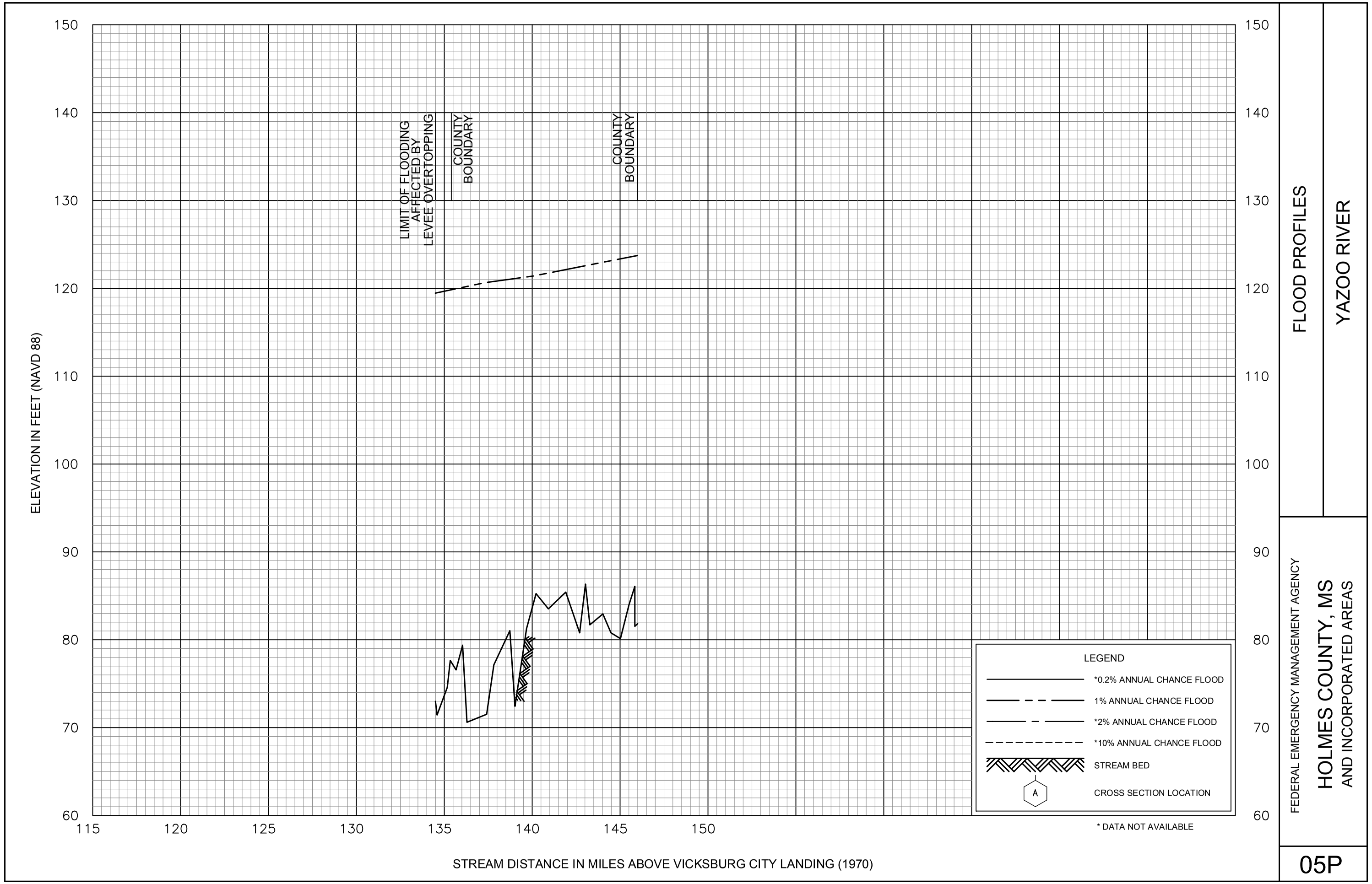
FLOOD PROFILES

BLACK CREEK (AFTER LEVEE OVERTOPPING)

FEDERAL EMERGENCY MANAGEMENT AGENCY

HOLMES COUNTY, MS
AND INCORPORATED AREAS

04P



FLOOD PROFILES

YAZOO RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

HOLMES COUNTY, MS
AND INCORPORATED AREAS

05P