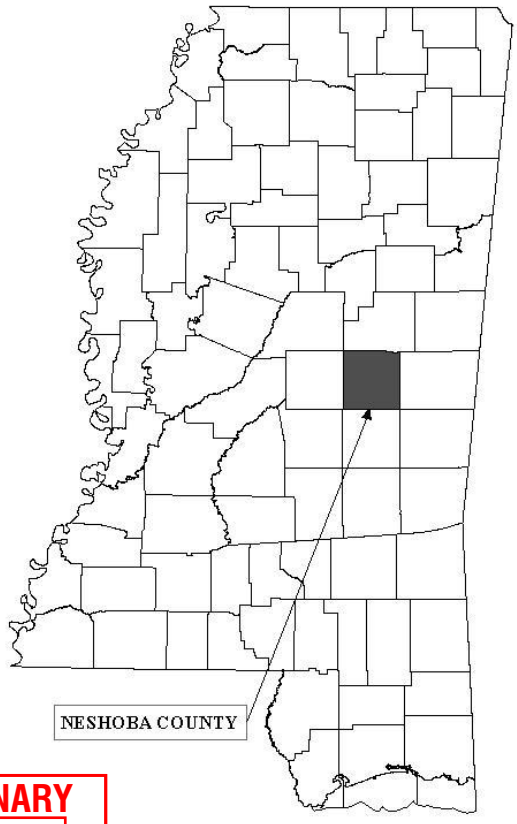
FLOOD INSURANCE STUDY

NESHOBA COUNTY, MISSISSIPPI
AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
BOGUE CHITTO, CITY OF	280403
NESHOBA COUNTY (UNINCORPORATED AREAS)	280276
PHILADELPHIA, CITY OF	280120



PRELIMINARY

FEB 27 2009

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
28099CV001

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) 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 may be revised and republished at any time. In addition, part of this FIS 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 components.

Initial Countywide FIS Effective

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FLOOD INSURANCE STUDY
NESHOBA COUNTY, MISSISSIPPI AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study revises and updates information on the existence and severity of flood hazards in the geographic area of Neshoba County, Mississippi, including the City of Philadelphia, the City of Bogue Chitto, and the unincorporated areas of Neshoba County (referred to collectively herein as Neshoba County), and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. The Town of Union is not included in the Neshoba County study and is shown on the FIRM panels as Area Not Included. The Town of Union is included in its entirety in the Newton County FIS. This study has developed flood-risk data for various areas of the community that will be used to establish actuarial flood insurance rates and to assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program (NFIP) are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

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 Flood Insurance Study are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

This FIS was prepared to include the unincorporated areas of, and incorporated communities within, Neshoba County in a countywide format. Information on the authority and acknowledgements for each jurisdiction included in this countywide FIS, as compiled from their previously printed FIS reports, is shown below.

Neshoba County: (Unincorporated Areas)	The hydrologic and hydraulic analyses for this study were performed by Allen and Hoshall, Ltd. (the Study Contractor) for the Federal Emergency Management Agency (FEMA), under Contract No. EMA-86-C-0108. This study was complete in September 1987 (Reference 1).
Philadelphia, City of:	The hydrologic and hydraulic analyses were prepared by Neel-Schaffer, Inc. for FEMA, under Contract No. EMW-90-C-3129 (Reference 2).

For this countywide FIS, new hydrologic and hydraulic analyses were prepared by Watershed Concepts, a division of AECOM, for FEMA, under Contract No. EMA-2006-CA-5617. This study was completed in November, 2008.

Base map information shown on the FIRM was provided in digital format by the State of Mississippi. The digital orthoimagery was photogrammetrically compiled at a scale of 1:400 from aerial photography dated March 2006.

The coordinate system used for the production of this FIRM is Mississippi State Plane East FIPS 2301. Corner coordinates shown on the FIRM are in latitude and longitude referenced to the UTM projection, North American Datum of 1983 (NAD 83) and the GRS80. Differences in the datum and spheroid used in the production of the FIRMs for adjacent counties may result in slight positional differences in map features at the county boundaries. These differences do not affect the accuracy of information shown on the FIRM.

1.3 Coordination

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

The dates of the initial and final CCO meetings held for the communities within the boundaries of Neshoba County are shown in Table 1, "CCO Meeting Dates."

Table 1. CCO Meeting Dates

Community Name	Initial CCO Date	Final CCO Date
Neshoba County (Countywide)	January 30, 1986	October 19, 1998
City of Philadelphia	-	August 10, 1994
City of Bogue Chitto	-	-

For this countywide FIS, an initial CCO meeting was held with the representatives from FEMA, the impacted communities, and the study contractor on December 12, 2006. A final meeting, the Preliminary DFIRM Community Coordination (PDCC) was held on Month DD, YEAR to review the results of this study.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the geographic area of Neshoba County, Mississippi, including the incorporated communities listed in Section 1.1.

No new detail studies have been performed for this countywide study.

An enhanced approximate study was performed along Kentawka Canal Tributary 10.

Floodplain Boundaries of streams that have been previously studied by detailed methods were redelineated based on more detailed and up-to-date topographic mapping. Streams that were redelineated include Kentawka Canal, Stream No. 1, Stream No. 2, and Stream No. 3.

For this countywide study, limits of detailed and limited detailed study streams are shown in Table 2. "Scope of Study."

Table 2. Scope of Study

Stream	Limits of Detailed Study
Kentawka Canal	From approximately 1.2 miles downstream of Illinois Central Railroad to approximately 1.1 miles upstream of Illinois Central Railroad
Stream No. 1	From approximately 790 feet downstream of State Highway 19 to approximately 1,700 feet upstream of State Highway 16
Stream No. 2	From approximately 250 feet downstream of State Highway 19 to approximately 1,230 feet upstream of State Highway 19
Stream No. 3	From approximately 200 feet downstream of State Highway 19 to approximately 300 feet upstream of State Air Park Drive

Stream	Limits of Revised or New Enhanced Approximate Study
Kentawka Canal Tributary 10	From the confluence with Kentawka Canal Tributary 9 to approximately 1,440 feet upstream of Border Street

Approximate analyses were 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, Neshoba County, and the Study Contractor.

2.2 Community Description

Neshoba County, and its county seat, the City of Philadelphia, are located in east-central Mississippi. The county is bounded on the north by Winston County, on the east by Kemper County, on the south by Newton County, and on the west by Leake County. State Highways 15, 16, 19 and 21 along with the Illinois Central Railroad are the primary transportation routes serving the county (Reference 1).

The terrain in Neshoba County is gentle rolling to hilly. The Pearl River and its tributaries drain most of Neshoba County, including the City of Philadelphia (Reference 2)

The population of Neshoba County is 30,125 based on the 2006 estimate of the U.S. Census Bureau. The land area of Neshoba County covers approximately 570 square miles (Reference 3).

The climate of Neshoba County is characterized by long, hot and humid summers, and short mild winters. Temperatures average 35 degrees Fahrenheit (^{O}F) in January and 83°F in July. Annual precipitation over the study area averages 51 inches (Reference 1).

2.3 Principal Flood Problems

The principal flood problems in Neshoba County result from the overflow of Pearl River and its tributaries, including Kentawka Canal, onto the relatively flat overbanks. Flooding periodically occurs during intense seasonal rains and occasional tropical storms or hurricanes (Reference 1).

2.4 Flood Protection Measures

There are no natural or manmade flood protection measures in Neshoba County. There is a small dam located on Stream No. 2 in the City of Philadelphia, but it does not provide significant flood protection (Reference 2).

3.0 ENGINEERING METHODS

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

Pre-countywide Analyses

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

For the September 15, 1989 Neshoba County Mississippi Unincorporated Areas FIS (Reference 1), the 1-percent-annual-chance peak discharges on Kentawka Canal were estimated using regional methods described in the USGS report titled “Flood Frequency of Mississippi Streams” (Reference 4), applicable to nonurban basins in the State of

Mississippi. The regression analysis considers the slope, drainage area, and length of the stream. The computations were compared to the flood frequency curve developed by the USGS (Reference 5) for State Highway 15, which is approximately 1 mile downstream of the study limits.

For the October 18, 1995, City of Philadelphia FIS (Reference 2), peak discharge-frequency data for the 10-, 2-, 1- and 0.2-percent-annual-chance floods for all streams studied by detailed methods were computed using regional relationships relating basin characteristics to stream flow characteristics developed by the USGS (Reference 6). The USGS method estimates the peak discharges developed for rural stream adjustments are made using gage data. Adjustments in peak discharges for this revision were performed using the equations outlined in the USGS flood report Flood Characteristics of Urban Watershed in the United States (Reference 7).

Countywide Analyses

For this countywide study, hydrologic analyses were carried out to establish peak discharge-frequency relationships for each flooding source studied by detail, enhanced approximate and approximate methods affecting the community.

Discharges for the 1-percent-annual-chance recurrence interval for all new enhanced approximate and approximate study streams in Neshoba County were determined using the Rural-East Region USGS regression equations for Mississippi as described in the USGS Water-Resources Investigations report 94-4002 (Reference 8).

Drainage areas along streams were determined using a flow accumulation grid developed from the USGS 10 meter digital elevation models and corrected National Hydrologic Data (NHD) stream coverage. Flow points along stream centerlines were calculated using the regression equations in conjunction with accumulated area for every 10 percent increase in flow along a particular stream.

A summary of the drainage area-peak discharge relationships for the streams studied by detailed methods is shown in Table 3, "Summary of Discharges."

Table 3. Summary of Discharges

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. mi.)	PEAK DISCHARGES (cfs) 10-Percent Chance	2-Percent Chance	1-Percent Chance	0.2-Percent Chance
KENTAWKA CANAL					
Approximately 1 mile upstream of State Highway 15	135	13,000	17,500	20,000	25,000

Table 3. Summary of Discharges (continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. mi.)	PEAK DISCHARGES (cfs) 10-Percent Chance	2-Percent Chance	1-Percent Chance	0.2-Percent Chance
STREAM NO. 1					
Approximately 825 feet downstream of Holland Avenue	2.41	1,150	1,750	1,990	2,460
Upstream of Cross Section C	2.00	1,060	1,580	1,800	2,200
Downstream of Cross Section E	1.55	880	1,310	1,490	1,820
At State Highway 16	1.36	700	1,050	1,200	1,480
STREAM NO. 2					
At State Highway 19	2.66	1,420	2,170	2,470	3,062
Downstream of Cross Section D	0.28	260	380	430	530
At Cross Section F	0.21	220	330	360	450
STREAM NO. 3					
At State Highway 19	0.06	100	150	160	200

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 tables 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 in conjunction with the data shown on the FIRM.

Pre-Countywide Analyses

For the September 15, 1989 Neshoba County Mississippi Unincorporated Areas FIS (Reference 1), the cross sections and structural geometry of the bridges and culverts were obtained by field surveys.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles and on the Flood Insurance Rate Map.

Roughness coefficients (Manning's “n”) for this study were chosen by engineering judgment and based on field observation of the channel and floodplain areas. Table 4. “Manning’s “n” Values for Detailed Study Streams,” contains the channel and overbank "n" values for the streams studied by detailed methods.

With stream characteristics determined by field observation, flood profiles were computed using the HEC-2 computer step-backwater model developed by the US Army Corps of Engineers (USACE) (Reference 9). Starting water-surface elevations for all streams were developed by the slope area method.

Profiles were determined and plotted for the 2-, 10-, 1-, and 0.2 percent-annual-chance floods to an accuracy of 0.5 foot for each stream studied in detail. For approximate study areas, calculated peak discharges, stream characteristics based on field observations, and flood plain cross sections as determined from available contour mapping (Reference 10), were used in Manning's equation to determine approximate flood elevations.

Table 4. Manning's "n" Values for Detailed Study Streams

Flooding Source	Channel "n"	Overbank "n"
Kentawka Canal	0.040 – 0.060	0.040 – 0.060
Stream No. 1	0.035 – 0.040	0.065 – 0.080
Stream No. 2	0.035 – 0.040	0.065 – 0.080
Stream No. 3	0.035 – 0.040	0.065 – 0.080

The hydraulic analyses for this study are based only on the effect on unobstructed flow. The flood elevations as shown on the profiles are thus considered valid only if hydraulic structures in general remain unobstructed and do not fail.

Countywide Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied by enhanced approximate and approximate methods were carried out to provide estimates of the elevations of floods of the selected recurrence intervals.

Water-surface profiles were computed for enhanced approximate and approximate study streams through the use of the U.S. Army Corps of Engineers HEC-RAS version 3.1.2 computer program (Reference 11). Water surface profiles were produced for the 1-percent-annual-chance storms for enhanced approximate and approximate studies.

The enhanced approximate and approximate study methodology used Watershed Information SystEm (WISE) (Reference 12) as a preprocessor to HEC-RAS. Tools within WISE allowed the engineer to verify that the cross-section data was acceptable. The WISE program was used to generate the input data file for HEC-RAS. Then HEC-RAS was used to determine the flood elevation at each cross section of the modeled stream. No floodway was calculated for streams studied by approximate methods.

The hydraulic analyses for this study are based only on the effect on unobstructed flow. The flood elevations as shown on the profiles are thus considered valid only if hydraulic structures in general remain unobstructed and do not fail.

Floodplains were mapped to include backwater effects that govern each flooding source near its downstream extent. Floodplains were reviewed for accuracy and adjusted as necessary.

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 (NGVD 29). With the finalization of the North American Vertical Datum of 1988 (NAVD 88), many FIS reports and FIRMs are being prepared using NAVD 88 as the referenced vertical datum. Flood elevations shown in this FIS report and on the FIRM are referenced to NAVD 88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. It is important to note that adjacent counties may be referenced to NGVD 29. This may result in differences in base flood elevations across county lines.

The elevations shown in the FIS report and on the FIRM for Neshobaa County are referenced to NAVD88. Ground, structure, and flood elevations may be compared and/or referenced to NGVD29, add 0.01 feet to the NAVD88 elevation. The 0.01 feet value is an average for the entire county. The BFEs 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 information regarding conversion between the NGVD and NAVD, visit the National Geodetic Survey website at www.ngs.noaa.gov, or contact the National Geodetic Survey at the following address:

Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. To assist in this endeavor, each FIS report provides 1-percent-annual-chance floodplain data, which may include a combination of the following: 10-, 2-, 1-, and 0.2-percent-annual-chance flood elevations; delineations of the 1- and 0.2-percent-annual-chance floodplains; and a 1-percent-annual-chance floodway. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles, Floodway Data tables, and Summary of Stillwater Elevation tables. Users should reference the data presented in the FIS report as well as additional information that may be available at the local community 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-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps at a scale of 1" = 400' with a contour interval of 5 feet.

For each stream studied by approximate methods, the 1-percent-annual-chance floodplain boundaries have been delineated using interpolation of 5-foot interval topographic mapping developed from USGS 10 meter digital elevation models (DEM).

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, AE, and X) and 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 Flood Insurance Rate Map (Exhibit 2).

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1-percent-annual-chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1.0 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 floodways presented in this study were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections in Table 5, “Floodway Data.” The computed floodways are shown on the FIRM (Exhibit 2). In cases where the floodway and 100-year floodplain boundaries are either close together or collinear, only the floodway boundary is shown.

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
STREAM NO. 1								
A	0	40	320	6.2	416.9	416.9	417.9	1.0
B	930	204	990	2.0	420.3	420.3	421.2	0.9
C	1,360	500	2,202	0.9	420.6	420.6	421.6	1.0
D	3,080	56	290	6.2	420.8	420.8	421.8	1.0
E	4,000	139	572	2.6	426.0	426.0	426.6	0.6
F	5,040	49	338	4.4	426.3	426.3	427.3	1.0
G	5,930	39	152	9.8	428.4	428.4	428.6	0.2
H	6,650	30	110	10.9	431.9	431.9	431.9	0.0
I	7,145	74	391	3.1	437.7	437.7	437.8	0.1
J	8,095	90	439	2.7	437.9	437.9	438.9	1.0

[1]Feet above limit of detailed study approximately 1,650 feet above County Road 505

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

NESHOBA COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

STREAM NO. 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
STREAM NO. 2								
A	3,230	311	1,447	1.7	418.1	418.1	418.6	0.5
B	4,710	152	404	1.1	418.3	418.3	419.2	0.9
C	5,885	60	263	1.6	424.5	424.5	425.3	0.8
D	6,970	100	540	0.7	433.8	433.8	433.8	0.0
E	8,085	126	155	2.3	439.6	439.6	439.6	0.0

[1]Feet above confluence with Stream No. 3

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

NESHOBA COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

STREAM NO. 2

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
STREAM NO. 3								
A	2,130	17	38	4.3	424.7	424.7	424.7	0.0
B	3,110	19	32	5.0	431.7	431.7	431.7	0.0

[1]Feet above mouth

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

NESHOBA COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

STREAM NO. 3

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. To reduce the risk of property damage in areas where the stream velocities are high, the community may wish to restrict development in areas outside the floodway.

Near the mouths of streams studied in detail, floodway computations are made without regard to flood elevations on the receiving water body.

Along streams where floodways have not been computed, the community must ensure that the cumulative effect of development in the floodplain will not cause more than a 1.0-foot increase in the BFEs at any point within the community.

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, "Floodway Schematic."

No floodways were computed streams studied by approximate methods because of limitations in the approximate study methodology.

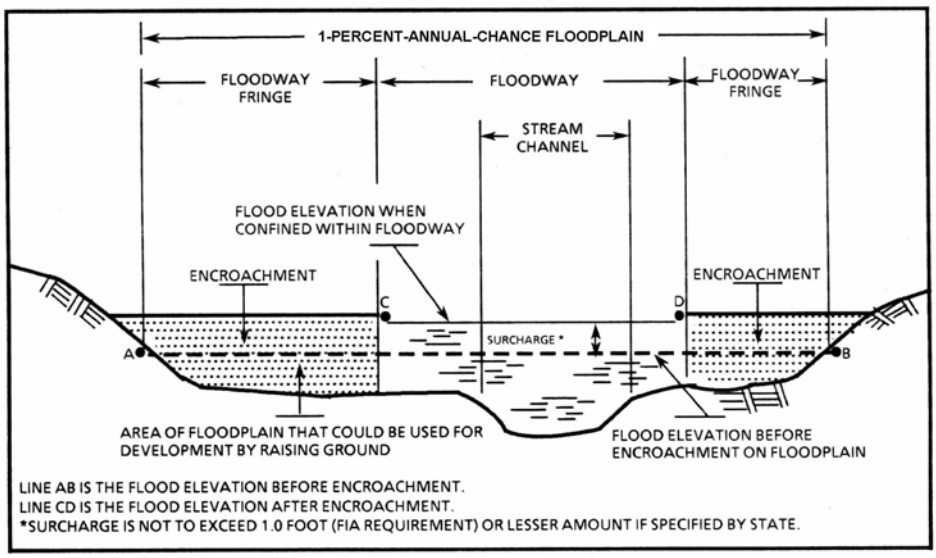

Figure 1. Floodway Schematic

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

Zone AE

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

Zone X

Zone X is the flood insurance rate 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 (sq. mi.), and areas protected from the 1-percent-annual-chance flood by levees. No BFEs or depths are shown within this zone.

6.0 FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map (FIRM) is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0. 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 computation. The countywide Flood Insurance Rate Map presents flooding information for the entire geographic area of Neshoba County. Previously, Flood Insurance Rate Maps were prepared for each incorporated community and the unincorporated areas of the County identified as flood-prone. This countywide Flood Insurance Rate Map also includes flood-hazard information that was presented separately on Flood Boundary and Floodway Maps, where applicable. Historical data relating to the maps prepared for each community are presented in Table 6, “Community Map History.”

COMMUNTIY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISIONS DATE	FIRM EFFECTIVE DATE	FIRM REVISIONS DATE
Bogue Chitto, City of	-	-	-	-
Neshoba County (Unincorporated Areas)	November 4, 1977	-	September 15, 1989	-
Philadelphia, City of	August 23, 1974	August 13, 1976	September 29, 1986	October 18,1995

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

NESHOBA COUNTY, MS

AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

The FIS published for Neshoba County, Unincorporated Areas (Reference 1), and the FIS published for the City of Philadelphia (Reference 2), and Flood Insurance Rate Maps for Winston, Kemper, Newton and Leake Counties (References 13-16) are in agreement with this study.

Information pertaining to revised and unrevised flood hazards for each jurisdiction within Neshoba County has been compiled into this FIS. Therefore, this FIS report supersedes or is compatible with all previously printed FIS reports, FIRMs, and Flood Hazard Boundary Maps (FBFMs) for all jurisdictions within Neshoba County, and should be considered authoritative for the purposes of the NFIP.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this FIS can be obtained by contacting FEMA, Federal Insurance and Mitigation Administration, Koger Center - Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, Georgia 30341.

Future revisions may be made that do not result in the republishing of the Flood Insurance Study report. To ensure that any user is aware of all revisions, it is advisable to contact the map repository of flood hazard data located in the community.

9.0 BIBLIOGRAPHY AND REFERENCES

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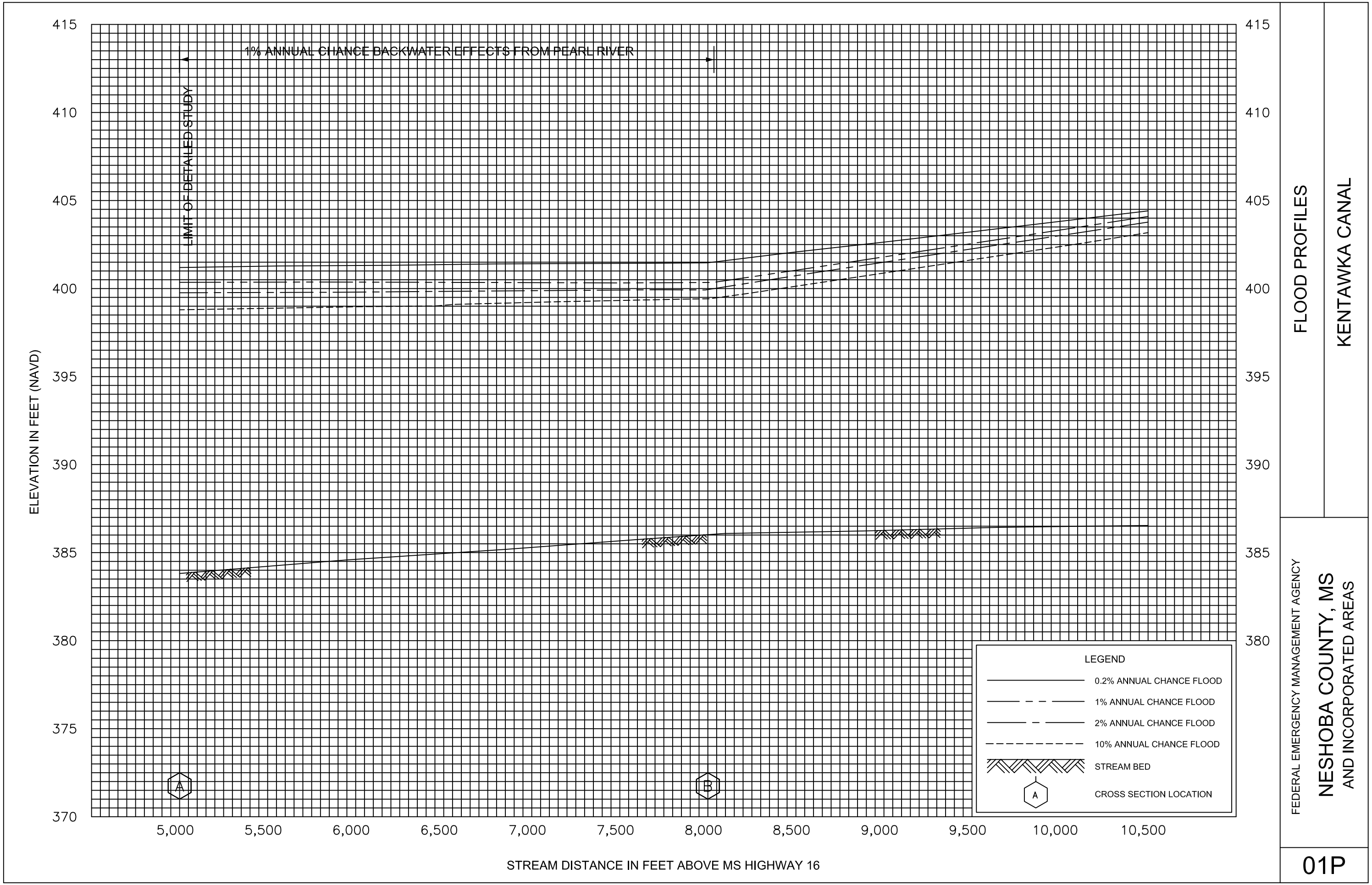
15. Federal Emergency Management Agency, Flood Insurance Rate Map, Newton County, Unincorporated Areas, Mississippi, April 15, 1980.

16. Federal Emergency Management Agency, Flood Insurance Rate Map, Leake County, Unincorporated Areas, Mississippi, September 15, 1989.



FLOOD PROFILES

KENTAWKA CANAL

FEDERAL EMERGENCY MANAGEMENT AGENCY

NESHOBA COUNTY, MS
AND INCORPORATED AREAS

01P

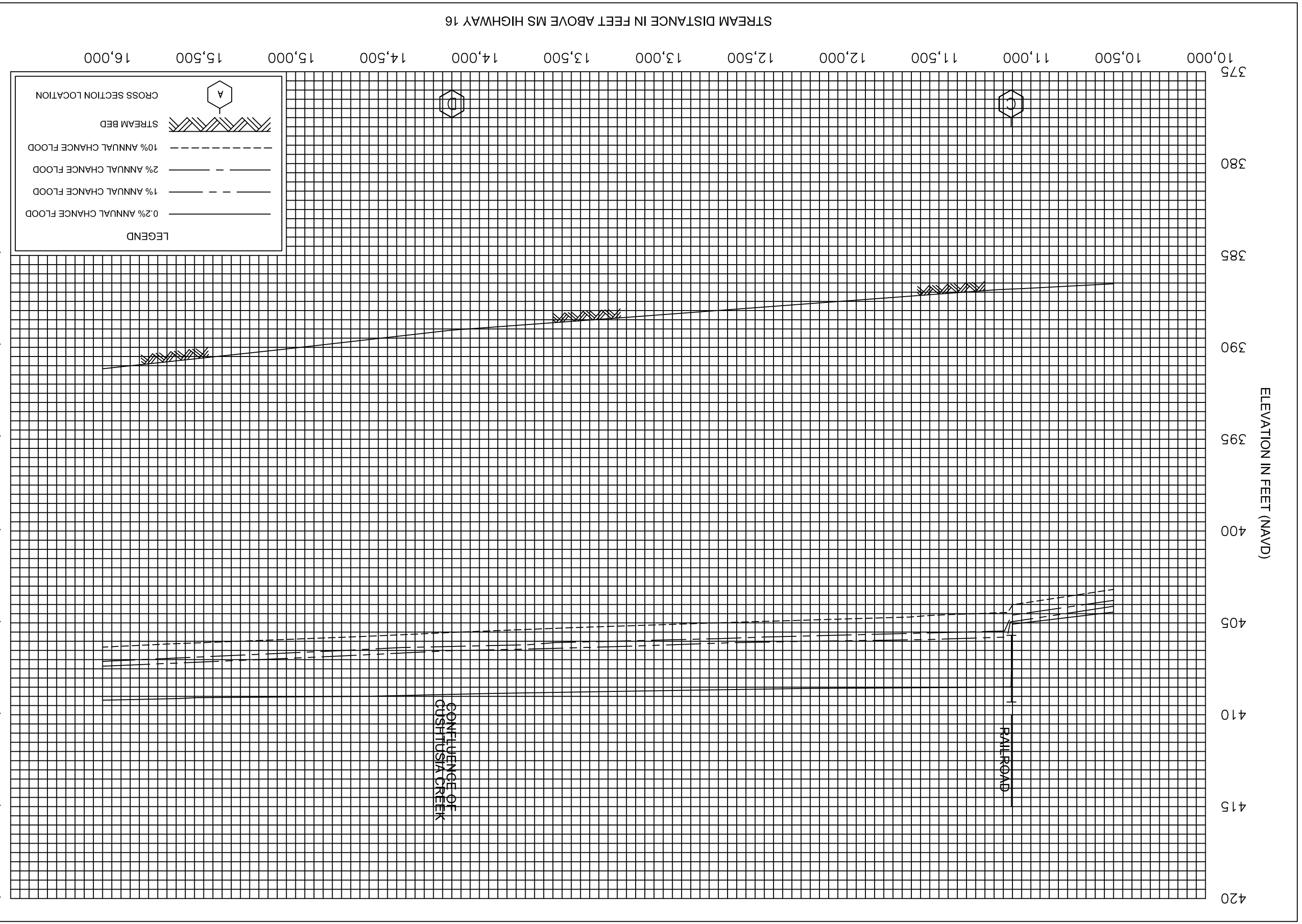
FEDERAL EMERGENCY MANAGEMENT AGENCY

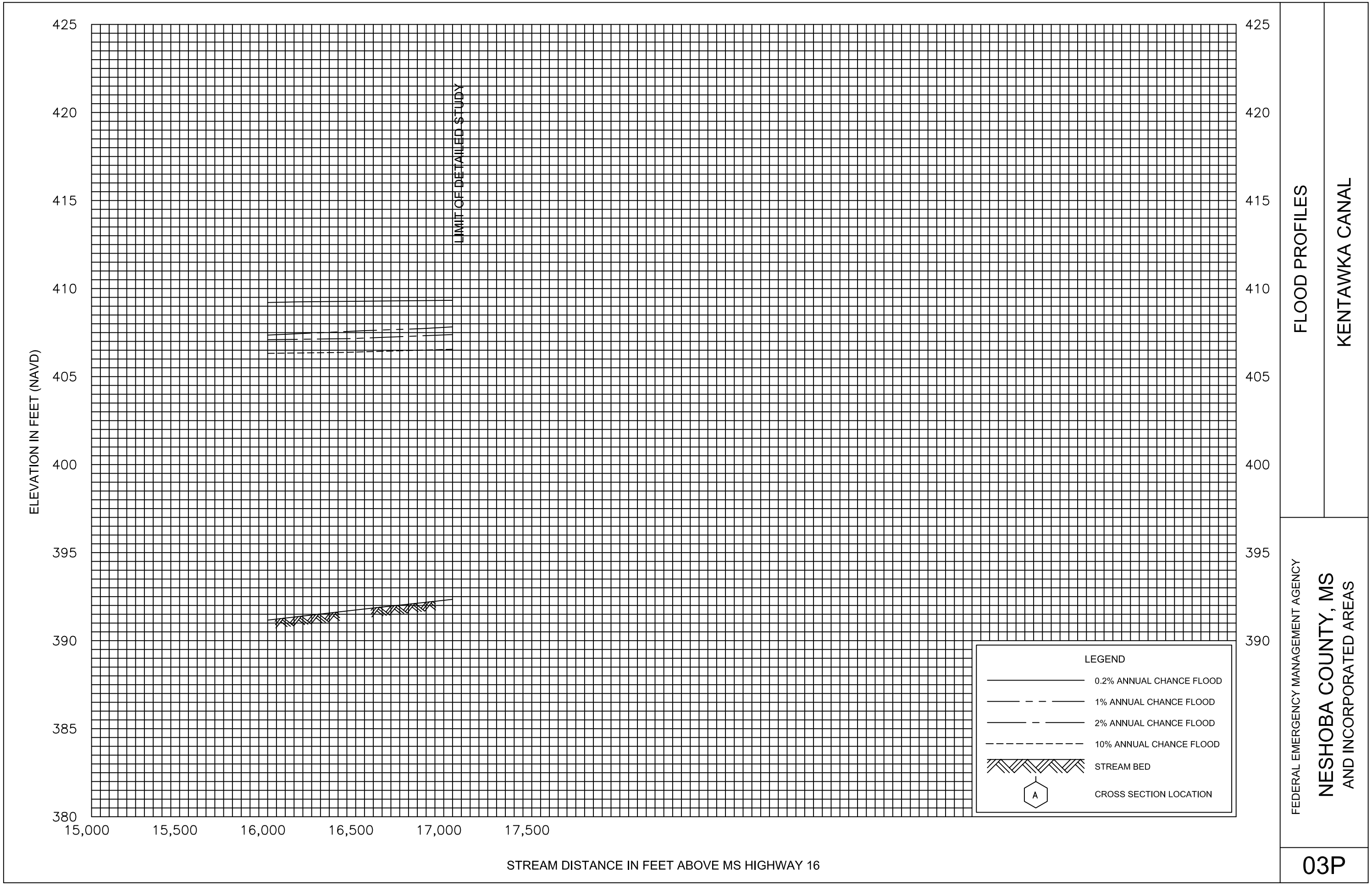
NESHOBA COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

KENTAWKA CANAL

02P





FLOOD PROFILES

KENTAWKA CANAL

FEDERAL EMERGENCY MANAGEMENT AGENCY

NESHOBA COUNTY, MS
AND INCORPORATED AREAS

03P

FLOOD PROFILES

STREAM NO. 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

NESHOBA COUNTY, MS
AND INCORPORATED AREAS

04P

*LIMIT OF DETAILED STUDY IS APPROXIMATELY 1,650 FEET ABOVE COUNTY RD 505

FLOOD PROFILES

STREAM NO. 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

NESHOBA COUNTY, MS
AND INCORPORATED AREAS

05P

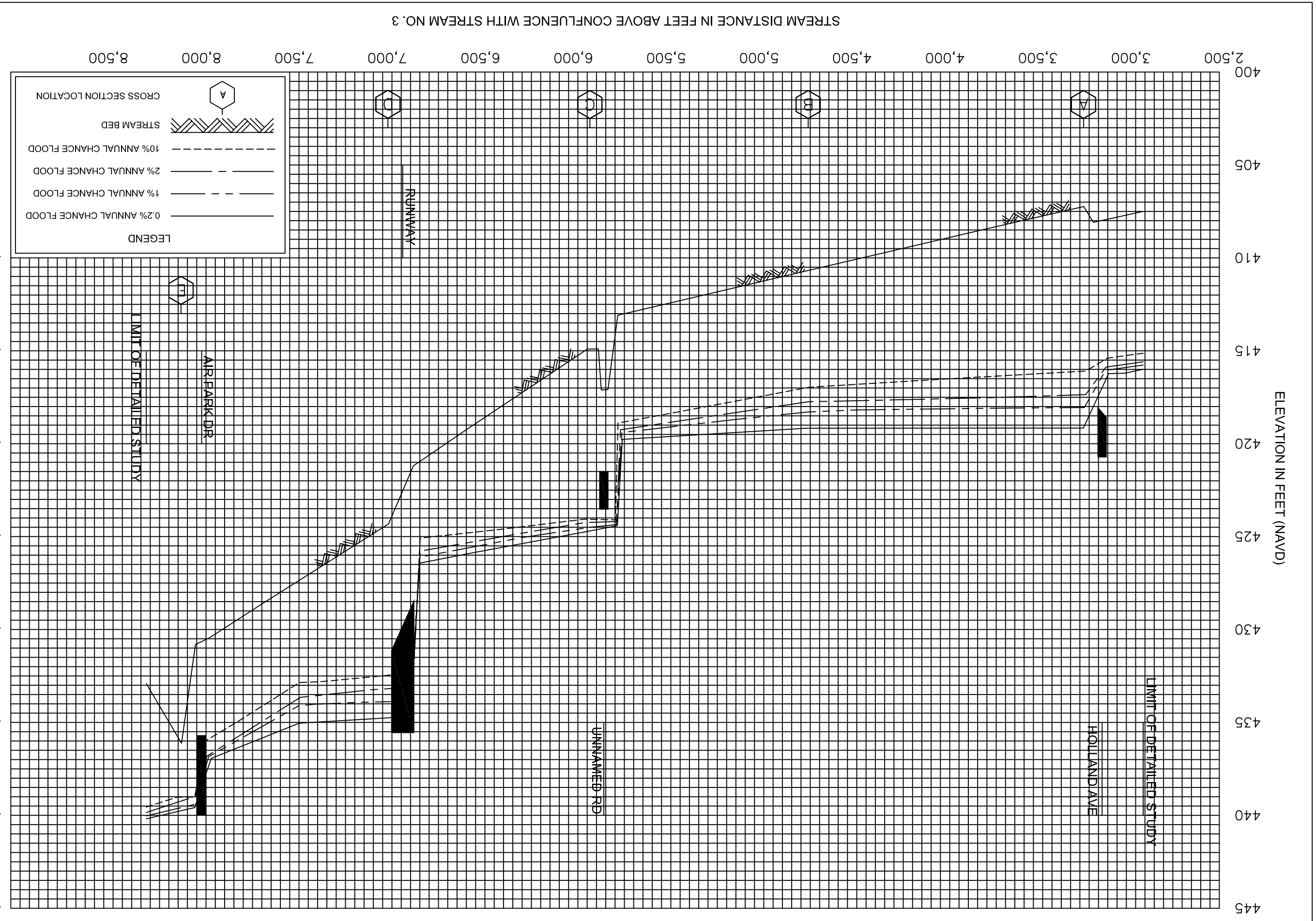
06P

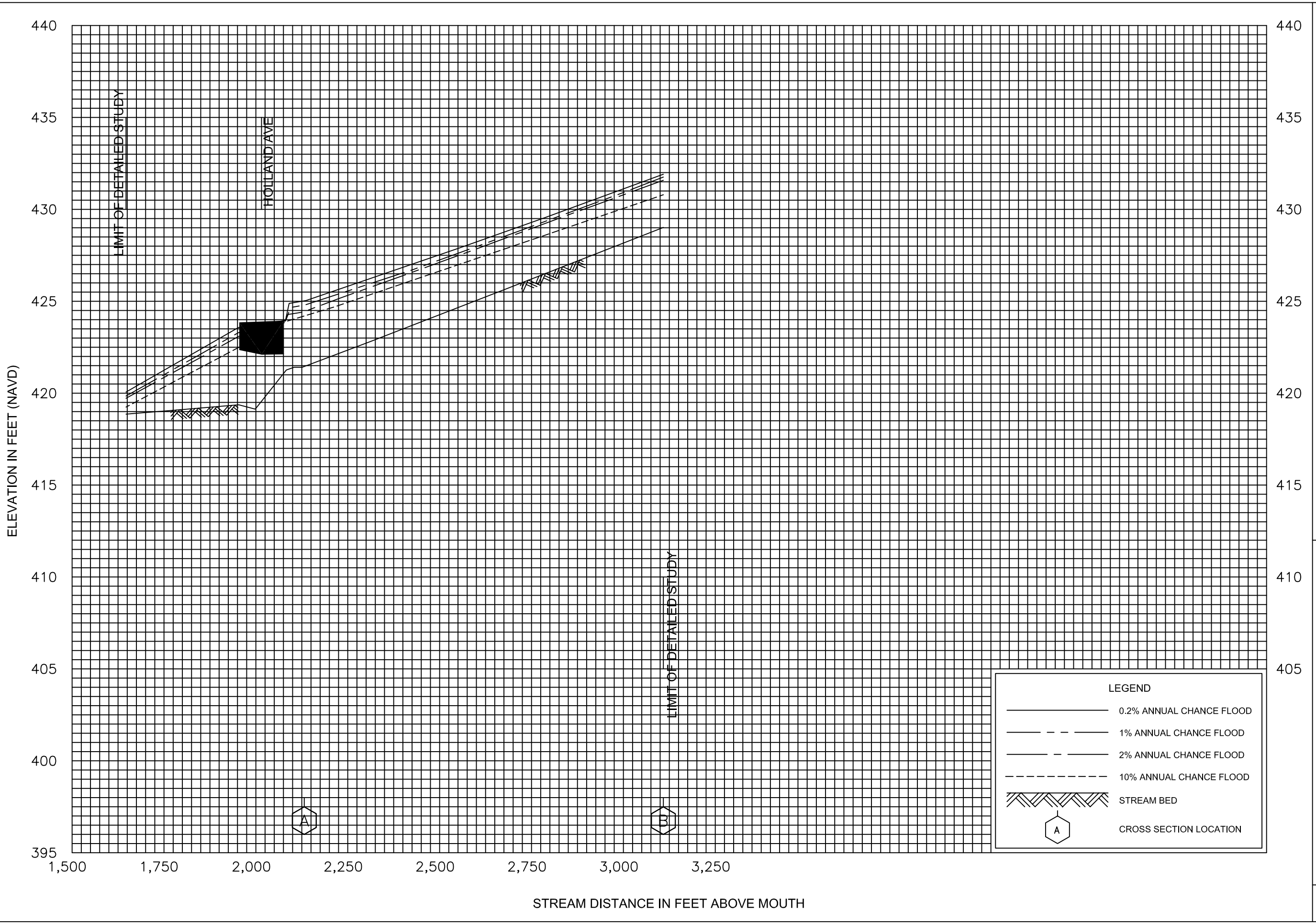
FEDERAL EMERGENCY MANAGEMENT AGENCY

NESHOBA COUNTY, MS
AND INCORPORATED AREAS

FLOOD PROFILES

STREAM NO. 2





FLOOD PROFILES

STREAM NO. 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

NESHOBA COUNTY, MS
AND INCORPORATED AREAS

07P