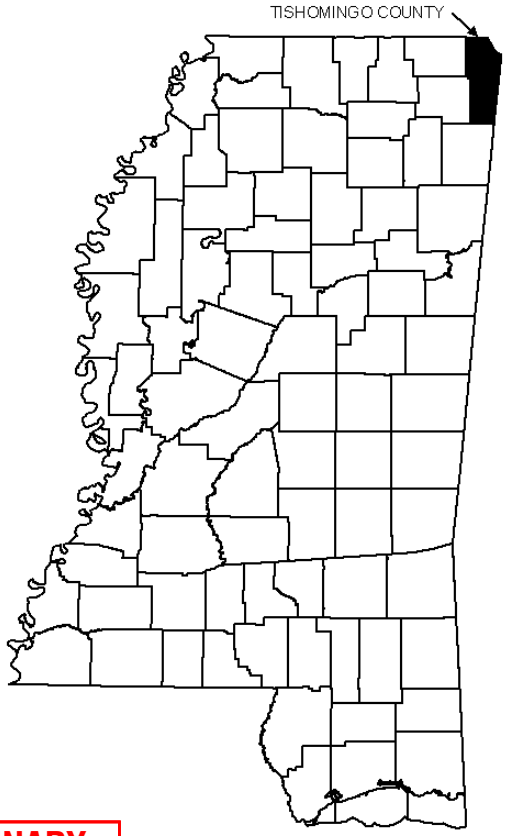
FLOOD INSURANCE STUDY

TISHOMINGO COUNTY, MISSISSIPPI
AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
BELMONT, TOWN OF	280287
BURNSVILLE, CITY OF	280264
GOLDEN, VILLAGE OF*	280353
IUKA, CITY OF	280266
PADEN, VILLAGE OF*	280354
TISHOMINGO, TOWN OF*	280364
TISHOMINGO COUNTY (UNINCORPORATED AREAS)	280283

*Non-participating community



PRELIMINARY

DEC 23 2009

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
28141CV000A

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
TISHOMINGO 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 Tishomingo County, Mississippi, including the Cities of Burnsville and Iuka; the Towns of Belmont and Tishomingo; the Villages of Golden and Paden; and the unincorporated areas of Tishomingo County (referred to collectively herein as Tishomingo County), and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. Please note that the Village of Paden is non-floodprone. 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, Tishomingo 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.

Burnsville, City of:	The hydrologic and hydraulic analyses for this study were performed by the Tennessee Valley Authority (the Study Contractor) for FEMA, under Inter-Agency Agreement No. EMW-86-E-2223, Project Order No. 2. This study was completed in May 1987 (FEMA, 1991).
Iuka, City of:	The hydrologic and hydraulic analyses for this study were performed by the Tennesee Valley Authority (TVA) (the Study Contractor) for FEMA, under Interagency Agreement EMW-86-E-2223, Project Order No. 2. This study was completed in May 1986 (FEMA, 1989).
Tishomingo County: (Unincorporated Areas)	The hydrologic and hydraulic analyses for this study were performed by the Tennessee Valley Authority (TVA) (the Study Contractor) for the Federal Emergency Management Agency (FEMA), under Interagency Agreement No. EMW-88-E-2737, Project Order No. 1. This study was completed in March 1989 (FEMA, 1993).

The authority and acknowledgments for the Towns of Belmont and Tishomingo, and the Villages of Golden and Paden are not available because no FIS reports were published for those communities.

For this countywide FIS, new hydrologic and hydraulic analyses were prepared by AECOM, for FEMA, under Contract No. EMA-2006-CA-5617. This study was completed in April 2009.

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 digital FIRM was produced using the Mississippi State Plane Coordinate system, East Zone, FIPS ZONE 2301. The horizontal datum was the North American Datum of 1983, GRS80 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.

For this countywide FIS, the project Scoping Meeting was held on January 9, 2007 in Iuka, MS. Attendees for these meetings included representatives from the Mississippi Department of Environmental Quality, Mississippi Emergency Management Agency, FEMA National Service Provider, Tishomingo County, 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, food history, and other hydrologic data. All problems raised in the meetings have been addressed.

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

Table 1. CCO Meeting Dates

Community Name	Initial CCO Date	Final CCO Date
Burnsville, City of	*	Febraury 20, 1990
Iuka, City of	January 1987	July 21, 1988
Tishomingo County (Unincorporated Areas)	September 1987	April 6, 1992
Tishomingo County (County-wide)	January 9, 2007	*

*Data not available

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Tishomingo County, Mississippi, including the incorporated communities listed in Section 1.1.

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

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 Indian Creek, Tennessee-Tombigbee Waterway, Tennessee River, and Tributary A.

For this FIS, Table 2 lists the streams which were studied by detailed study methods.

Table 2. Scope of Study

Stream	Limits of Detailed Study
Indian Creek	The confluence with Tennessee River to Quitman Street
Tennessee-Tombigbee Waterway	The confluence with Tennessee River to approximately 1,790 feet downstream of State Highway 4
Tennessee River	Approximately 5.0 miles downstream of the confluence of Indian Creek to approximately 5.4 miles upstream of the confluence of Indian Creek
Tributary A	The confluence with Indian Creek to approximately 1,050 feet upstream of Graham Road

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, Tishomingo County, and the Study Contractor.

2.2 Community Description

Tishomingo County is located in the northeastern corner of the state. The county is bounded on the west by Alcorn and Prentiss Counties, Mississippi; on the east by Colbert, Lauderdale, and Franklin Counties, Alabama; on the north by Hardin County, Tennessee; and on the south by Itawamba County, Mississippi. State Highways 4, 25, 30, 350, 364, 365, and 366; U.S. Highway 72; along with the Illinois Central Railroad, Norfolk Southern Railway, and the Corinth and Counce Railroad are the primary transportation routes serving the county (FEMA, 1993). The land area of Tishomingo County covers approximately 424 square miles (U.S. Census Bureau, 2009).

The population of Tishomingo County is 19,112 based on the 2006 estimate of the U.S. Census Bureau (U.S. Census Bureau, 2009).

The climate in Tishomingo County is characterized by long, hot and humid summers, and short mild winters. Temperatures vary from a mean low of 39 degrees Fahrenheit (°F) to a mean high of 80°F in summer. Annual precipitation over the study area averages 52 inches (FEMA, 1993).

2.3 Principal Flood Problems

The principal flood problems in Tishomingo County are primarily due to the flooding of Indian Creek, Tennessee River, and Tennessee-Tombigbee Waterway (FEMA, 1993).

2.4 Flood Protection Measures

Levees exist in the study area that provide the community with some degree of protection against flooding. However, it has been ascertained that some of these levees may not protect the community from rare events such as the 1-percent annual chance flood. The criteria used to evaluate protection against the 1-percent annual chance flood are 1) adequate design, including freeboard, 2) structural stability, and 3) proper operation and maintenance. Levees that do not protect against the 1-percent annual chance flood are not considered in the hydraulic analysis of the 1-percent annual chance floodplain.

There are no other flood protection structures on the study streams in Tishomingo County. Nonstructural measures of flood protection, in the form of land-use regulations which control building within areas that have a high risk of flooding, are being used to aid in the prevention of future flood damage (FEMA, 1993).

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.

Due to the absence of stream gage records on Indian Creek, regional relationships were used to estimate pea discharge-frequencies. The adopted relationships were determined from gage records on watershed with hydrometeorlogic characteristics similar to those of the watershed of the study streams. Flood-frequency curves for these streams were computer using Bulletin 17B, including the skew map of Plate 1 and adjustments for historic flood information where available (U.S. Dept. of Interior, 1982). The results of these analyses were combined to develop the regional relationships applicable to Tishomingo County.

Peak discharge-frequency estimates in the upper study reach of Indian Creek were adjusted to account for the effects of floodwater storage behind the Norfolk Southern Railway fill at mile 10.44 and the East Port Street fill at mile 10.37. These storage areas are located in the City of Iuka.

Flow estimates based on the adopted regional relationships were compared to estimates based on relationships developed by the U.S. Geological Survey (USGS) for the region (USGS, 1976). For the range of drainage areas, channel slopes, and channel lengths of the study streams, the discharges from the adopted regional relationships are from 35 to 60 percent higher than the estimates from the USGS-developed relationships for Mississippi.

The differences between the adopted regional relationships and those of the USGS result mainly from the different gaged watersheds used in each analysis and from additional gage records now available. The adopted relationships were determined from gaged watersheds in the Tishomingo County region with areas less than about 200 square miles, while the USGS relationships are based on gaged watersheds up to 6,000 square miles in size throughout the State of Mississippi and portions of adjoining states.

The Tennessee-Tombigbee Waterway begins at the Tennessee River. The Tennessee River, at that point, is regulated by the Pickwick Dam located in Hardin County, Tennessee. The Tennessee-Tombigbee Waterway within Tishomingo County is also controlled by backwater from the Pickwick Dam to Bay Springs Lake Dam.

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 Tishomingo County were determined using the Rural-East Region USGS regression equations for Mississippi as described in the USGS Water-Resources Investigations report 94-4002 (USGS, 1993).

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
INDIAN CREEK					
Approximately 2,000 feet downstream of County Road	23.8	3,390	5,690	6,830	9,840
Just downstream of confluence of Pickens Branch	15.8	2,480	4,230	5,100	7,420
Just upstream of confluence of Pickens Branch	9.33	1,660	2,890	3,510	5,160
Approximately 1.0 mile upstream of Mount Evergreen Road	5.07	1,050	1,650	1,900	2,500
Just downstream of confluence of Tributary A	3.13	730	1,300	1,600	2,450
Just upstream of confluence of Tributary A	1.71	460	850	1,050	1,600
At Lee Highway	0.86	270	510	640	1,000
TENNESEE RIVER					
At downstream state boundary	32,580	391,080	462,070	493,970	566,270
At upstream state boundary	31,560	389,930	460,350	492,250	564,550
TRIBUTARY A					
At mouth	1.42	400	740	920	1,400
Approximately 1,100 feet upstream of Graham Road	1.02	310	580	730	1,150

Elevations for the 1- and 0.2-percent-annual-chance floods on the Tennessee-Tombigbee Waterway and Bay Springs Lake are shown in Table 4.

Table 4. Summary of Elevations

FLOODING SOURCE AND LOCATION	PEAK ELEVATION (FEET NGVD) 1-Percent Chance	0.2-Percent Chance
TENNESEE-TOMBIGBEE WATERWAY (BAY SPRINGS LAKE)		
Within community	420.1	421.4

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 March 15, 1993 Tishomingo County Mississippi Unincorporated Areas FIS (FEMA, 1993), 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") used in the hydraulic computations were determined on the basis of field inspections of the channels and floodplain areas. Roughness values ranged from 0.035 to 0.045 for the Indian Creek channel and from 0.09 to 0.15 in overbank areas.

Starting water-surface elevations for Indian Creek were calculated by the slope-area method. Water-surface elevations of floods of the selected recurrence intervals were computed using the HEC-2 step-backwater computer program (USACE, 1980).

Flood profiles were drawn showing the computer water-surface elevations for floods of the selected recurrence intervals. In cases where the 2- and 1-percent-chance-annual flood elevations are close together, due to limitations of the profile scale, only the 1-percent annual-chance profile has been shown.

Areas of the community protected by levees are subject to potential risk due to possible failure or overtopping of the levee. These areas were delineated by applying the 1-percent-annual-chance elevation determined from the "levee in place" analysis.

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 (USACE, 2004). 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) (Watershed Concepts, 2008) 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.

Some flood hazard information presented in prior FIRMs and in prior FIS reports for Tishomingo County and its incorporated communities was based on flood protection provided by levees. Based on the information available and the mapping standards of the NFIP at the time that the prior FISs and FIRMs were prepared, FEMA accredited the levees as providing protection from the flood that has a 1-percent annual chance of being equaled or exceeded in any given year. For FEMA to continue to accredit the identified levees with providing protection from the base flood, the levees must meet the criteria of the Code of Federal Regulations, Title 44, Chapter I, Section 65.10 (44 CFR 65.10), titled "Mapping of Areas Protected by Levee Systems."

FEMA contacted the communities within Tishomingo County to obtain data required under 44 CFR 65.10 to continue to show the levees as providing protection from the flood that has a 1-percent annual chance of being equaled or exceeded in any given year.

FEMA coordinated with the local communities, USACE, and other organizations to identify the levee system along the Tennessee-Tombigbee Waterway that exists within Tishomingo County. FEMA determined that the features identified in previous FISs as levees along the Tennessee-Tombigbee Waterway are either not levees or are not certifiable as levees under 44 CFR 65.10. For this countywide study, these features have been removed from the map and were not considered when delineating flood boundaries.

All qualifying bench marks within a given jurisdiction that are catalogued 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.

Bench marks 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 monument 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 bench marks, the FIRM may also show vertical control monuments established by a local jurisdiction; these monuments will be shown on the FIRM with the approximate 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 bench marks shown on the FIRM for this jurisdiction, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their Web site at www.ngs.noaa.gov.

It is important to note that 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 this FIS 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 (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.

Elevations shown in this FIS report and on the FIRM for Tishomingo County are referenced to NAVD88. Ground, structure, and flood elevations may be compared and/or referenced to NGVD29, add 0.04 feet to the NAVD88 elevation. The 0.04 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 more information on NAVD 88, see Converting the National Flood Insurance Program to the North American Vertical Datum of 1988, FEMA Publication FIA-20/June1992, 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. 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 (USGS, 1984).

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
INDIAN CREEK								
A	400	600	1810	3.8	420.4	416.6[2]	417.1	0.5
B	2430	1050	3601	1.9	422.8	422.8	423.3	0.5
C	5940	1040	3304	2.0	432.8	432.8	433.8	1.0
D	9220	950	3161	1.8	441.0	441.0	441.8	0.8
E	13,220	450	1101	4.6	452.6	452.6	453.0	0.4
F	17,425	355	931	3.5	469.6	469.6	469.6	0.0
G	21,090	250	934	3.2	482.4	482.4	483.3	0.9
H	24,590	180	739	3.6	495.9	495.9	496.0	0.1
I	28,260	180	538	3.9	506.7	506.7	506.9	0.2
J	29,670	200	560	3.4	510.4	510.4	510.8	0.4
K	30,580	250	464	3.9	513.6	513.6	514.4	0.8

[1]Feet above confluence of Morgan Branch

[2]Elevations without considering effective joint probability determination

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

TISHOMINGO COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

INDIAN CREEK

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
INDIAN CREEK (CONTINUED)								
L	52,747	160	457	3.6	520.1	520.1	521.1	1.0
M	53,750	150	448	3.5	525.1	525.1	525.7	0.6
N	54,014	100	474	3.3	525.5	525.5	526.5	1.0
O	54,754	100	775	1.9	529.8	529.8	530.5	0.7
P	55,123	23[2]	230	6.3	530.0	530.0	530.8	0.8
Q	55,704	550[2]	502	3.3	532.4	532.4	533.4	1.0
R	55,968	427[2]	2163	0.8	532.8	532.8	533.7	0.9
S	56,338	276	1180	1.4	532.9	532.9	533.9	1.0
T	57,816	60	224	4.4	535.8	535.8	536.3	0.5
U	58,186	100	394	2.4	537.1	537.1	537.8	0.7
V	60,086	40	136	5.6	543.2	543.2	543.4	0.2
W	61,301	40	139	4.6	547.9	547.9	548.2	0.3

[1]Feet above confluence of Morgan Branch

[2]Floodway width based upon flood storage routing

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
TRIBUTARY A								
A	0.06	33	235	3.8	534.1	533.0[2]	533.8	0.8
B	0.23	60	355	2.3	537.1	537.1	537.7	0.6
C	0.43	37	224	3.3	538.4	538.4	539.1	0.7

[1]Miles above mouth

[2]Elevation computed without consideration of backwater effects from Indian Creek

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

TISHOMINGO COUNTY, MS AND INCORPORATED AREAS

FLOODWAY DATA

TRIBUTARY A

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.

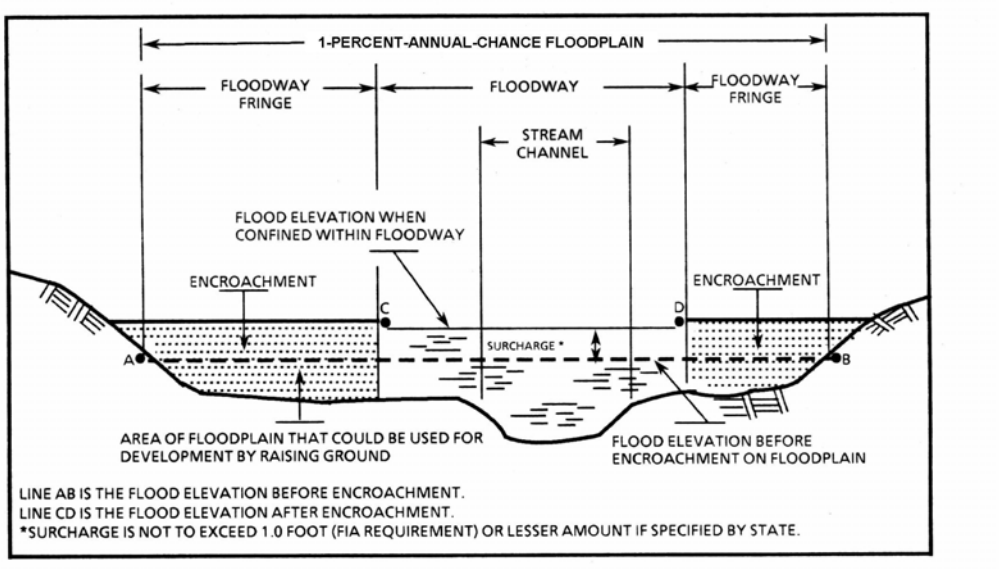

Figure 1. Floodway Schematic

5.0 INSURANCE APPLICATIONS

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

Zone A

Zone A is the flood insurance 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 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 Tishomingo 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
Belmont, Town of	July 9, 1976	-	-	-
Burnsville, City of	March 22, 1974	February 11, 1977	January 17, 1991	-
Golden, Town of	-	-	-	-
Iuka, City of	March 8, 1974	August 13, 1976	June 19, 1989	-
Paden, Village of	-	-	-	-
Tishomingo County (Unincorporated Areas)	May 12, 1978	-	March 15, 1993	-
Tishomingo, Town of	-	-	-	-

TABLE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

TISHOMINGO COUNTY, MS

AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

The Flood Insurance Studies published for Lauderdale, Colbert, and Franklin Counties, Alabama; Hardin County, Tennessee; Alcorn and Itawamba Counties, Mississippi, agree with this study.

Information pertaining to revised and unrevised flood hazards for each jurisdiction within Tishomingo 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 Tishomingo 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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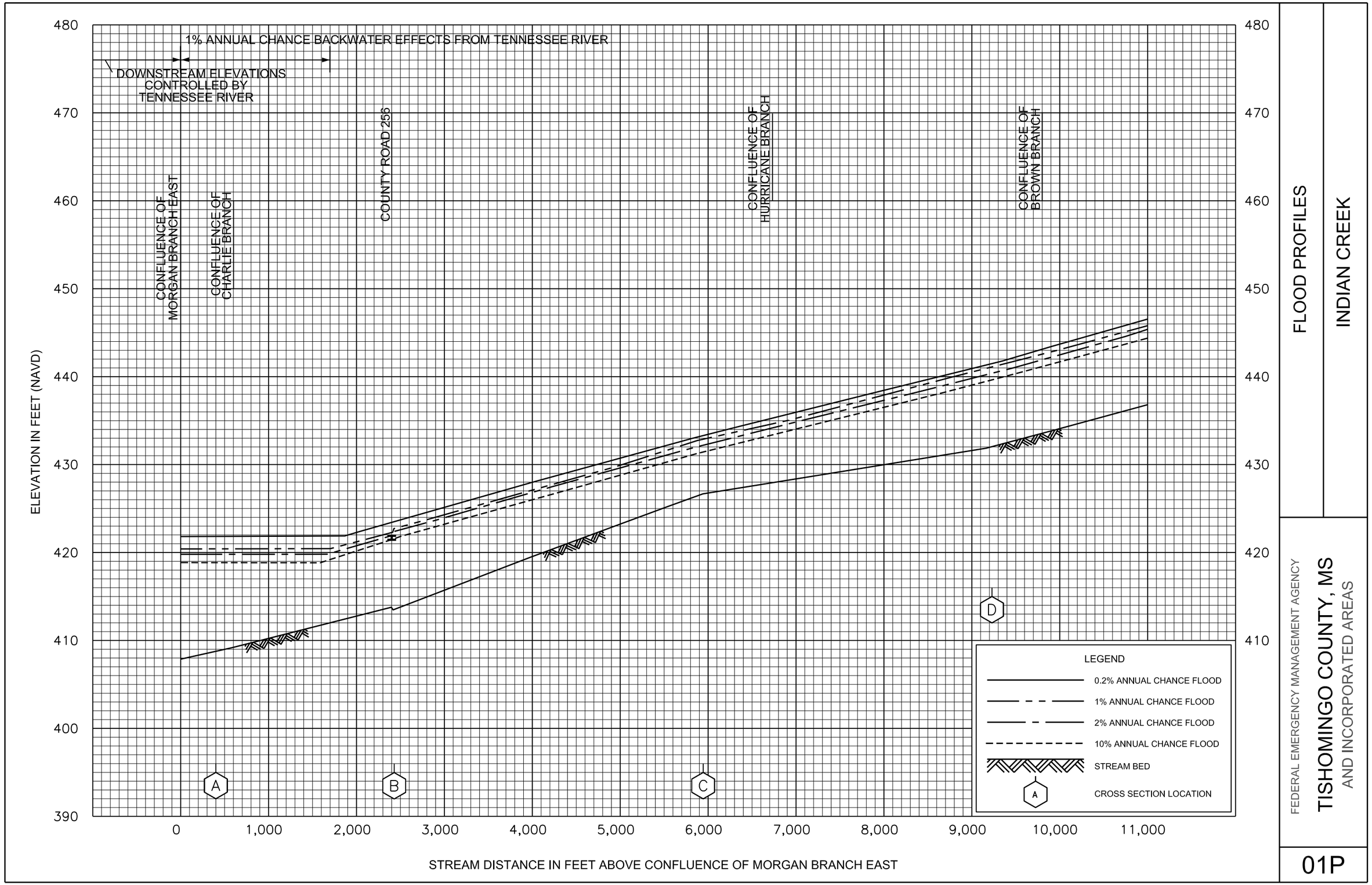

FLOOD PROFILES

INDIAN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TISHOMINGO COUNTY, MS
AND INCORPORATED AREAS

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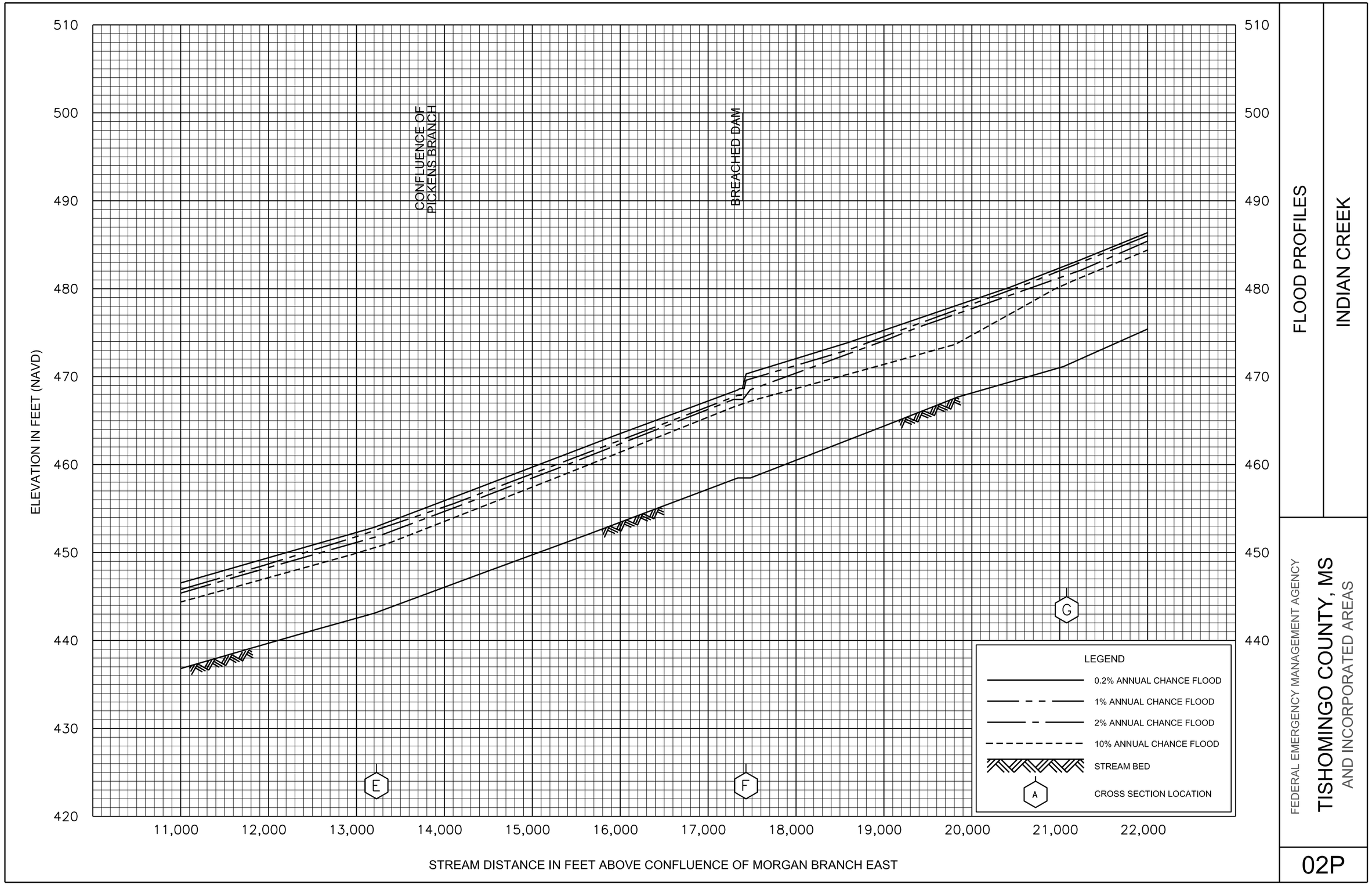

FLOOD PROFILES

INDIAN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TISHOMINGO COUNTY, MS
AND INCORPORATED AREAS

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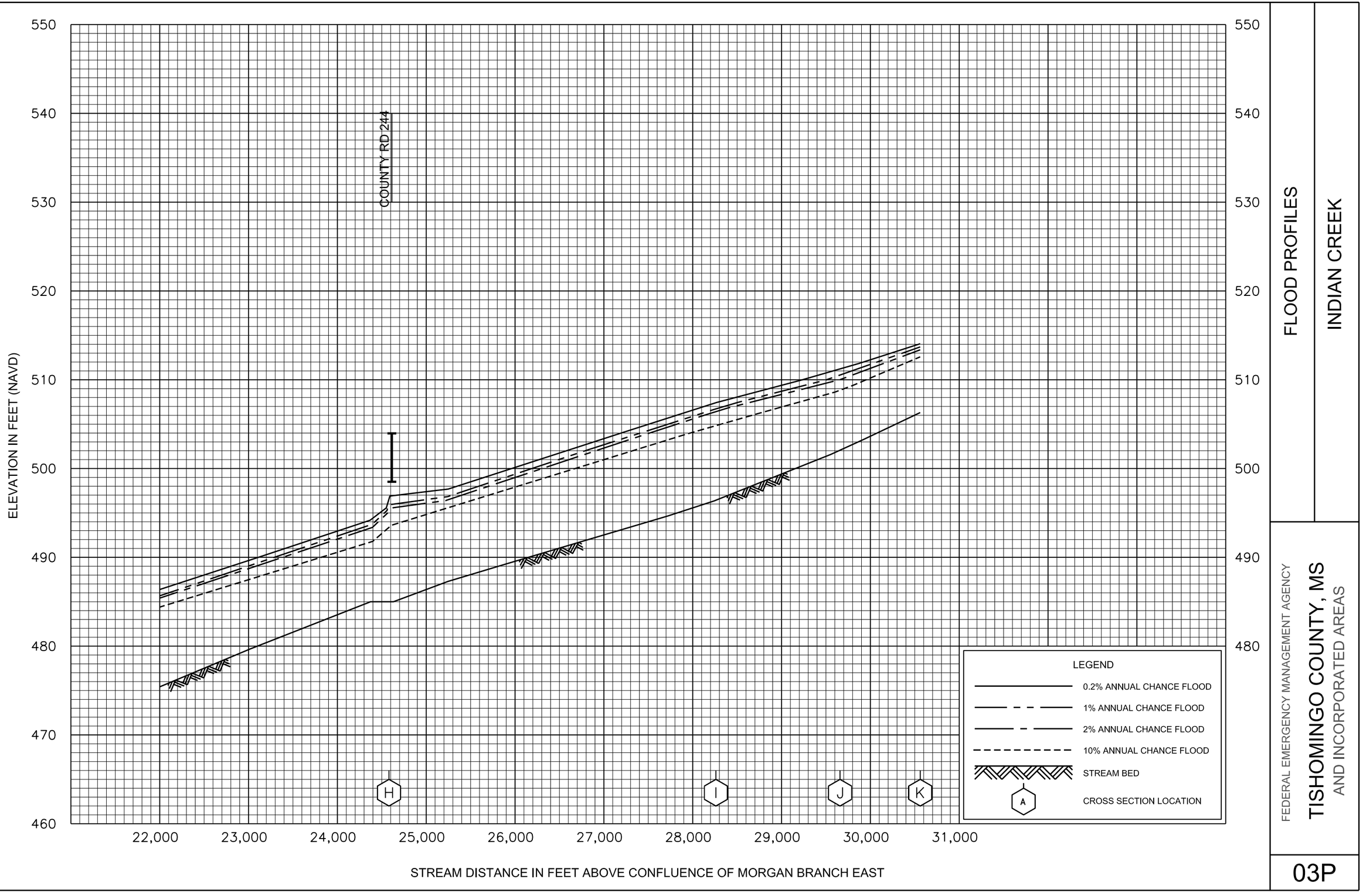

FLOOD PROFILES

INDIAN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TISHOMINGO COUNTY, MS

AND INCORPORATED AREAS

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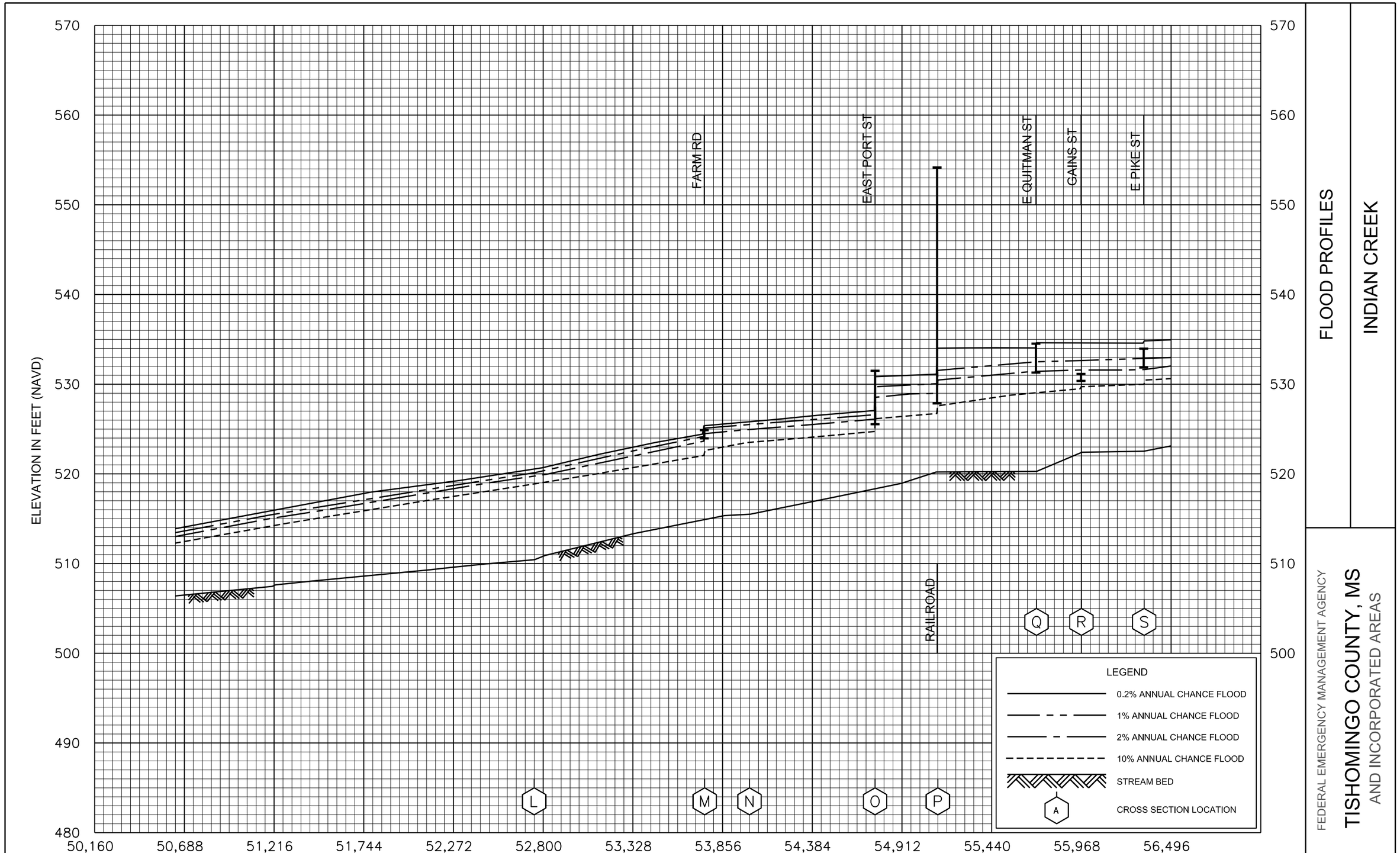

FLOOD PROFILES

INDIAN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TISHOMINGO COUNTY, MS

AND INCORPORATED AREAS

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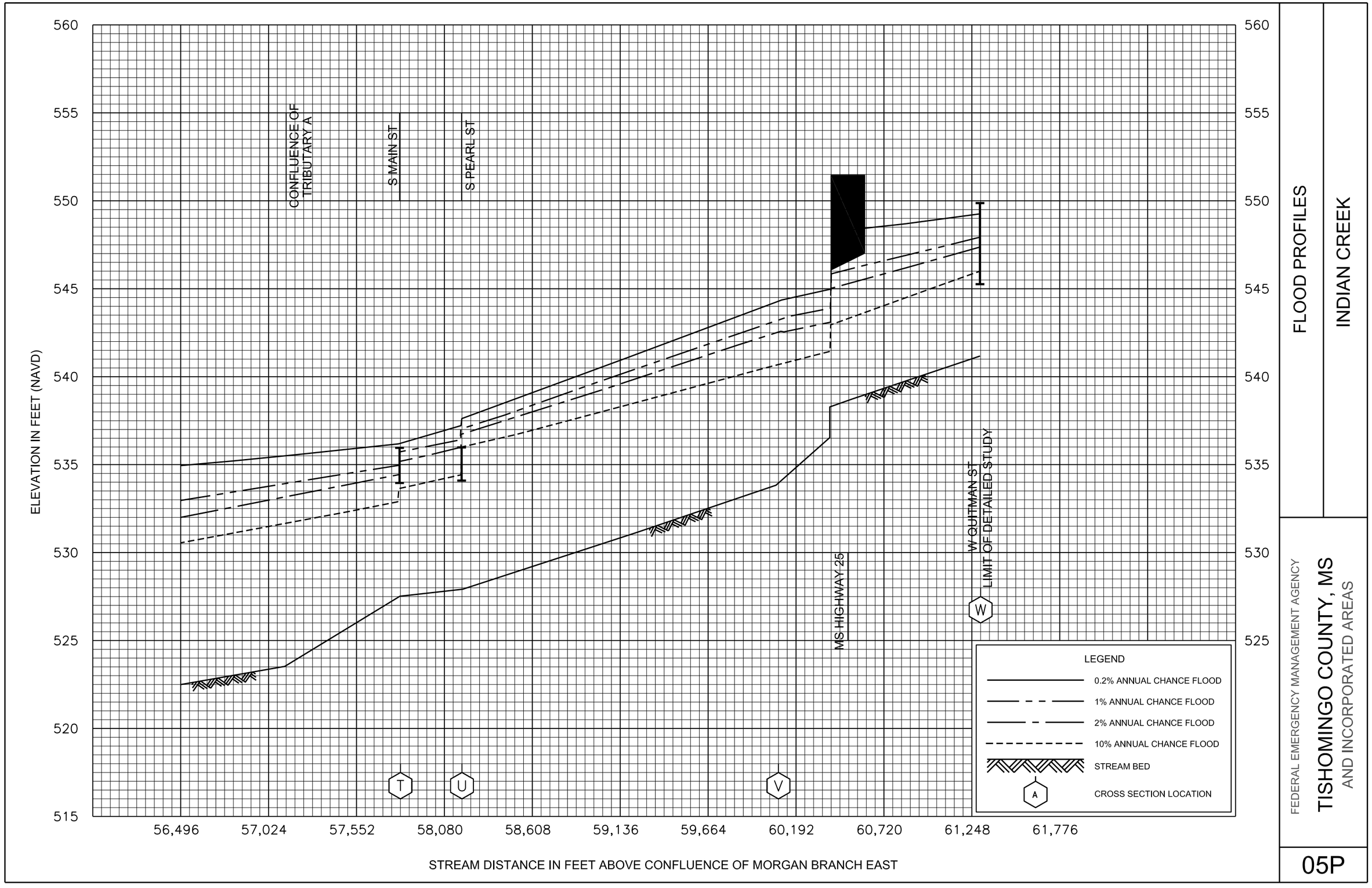

FLOOD PROFILES

INDIAN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TISHOMINGO COUNTY, MS

AND INCORPORATED AREAS

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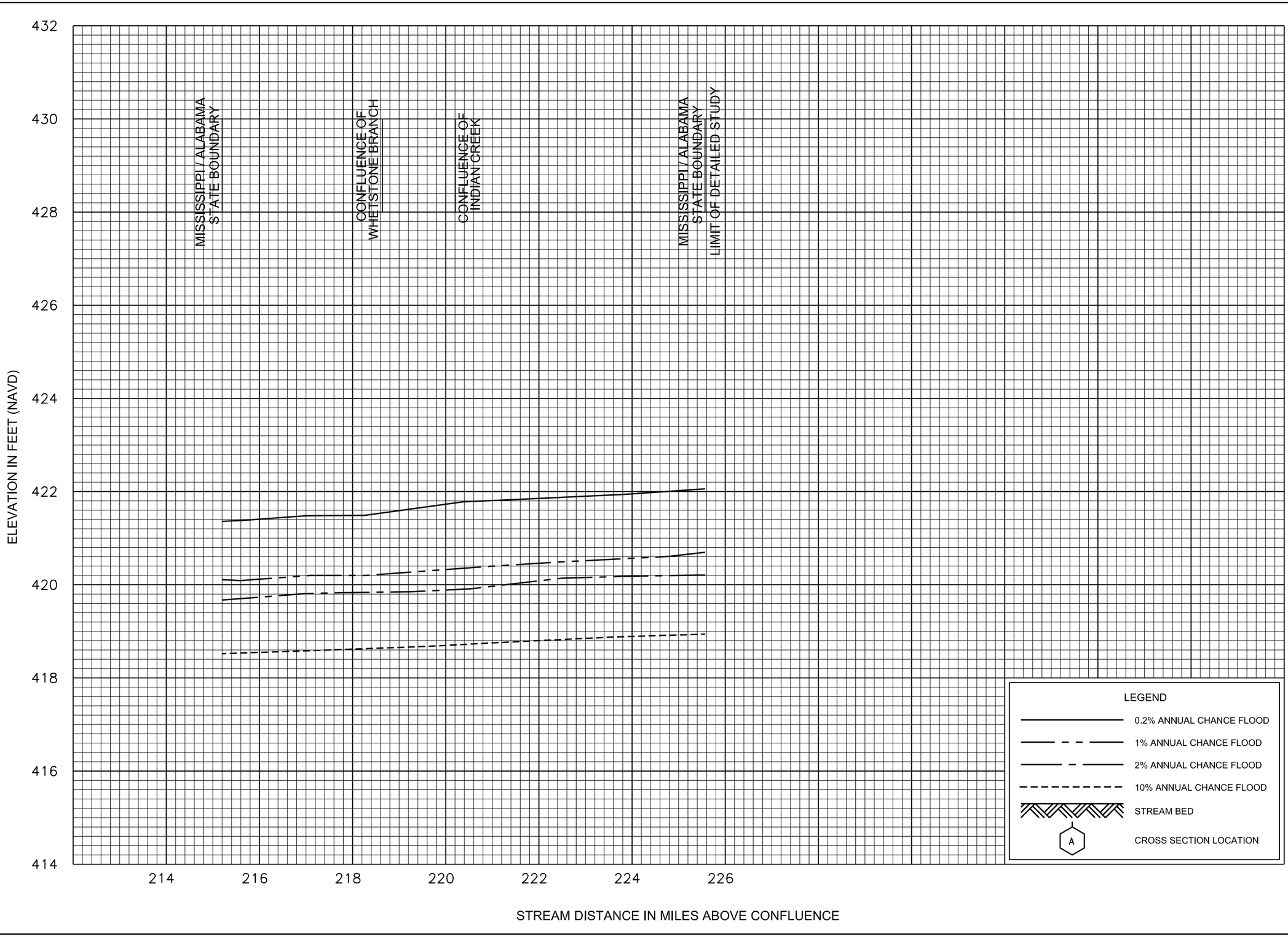


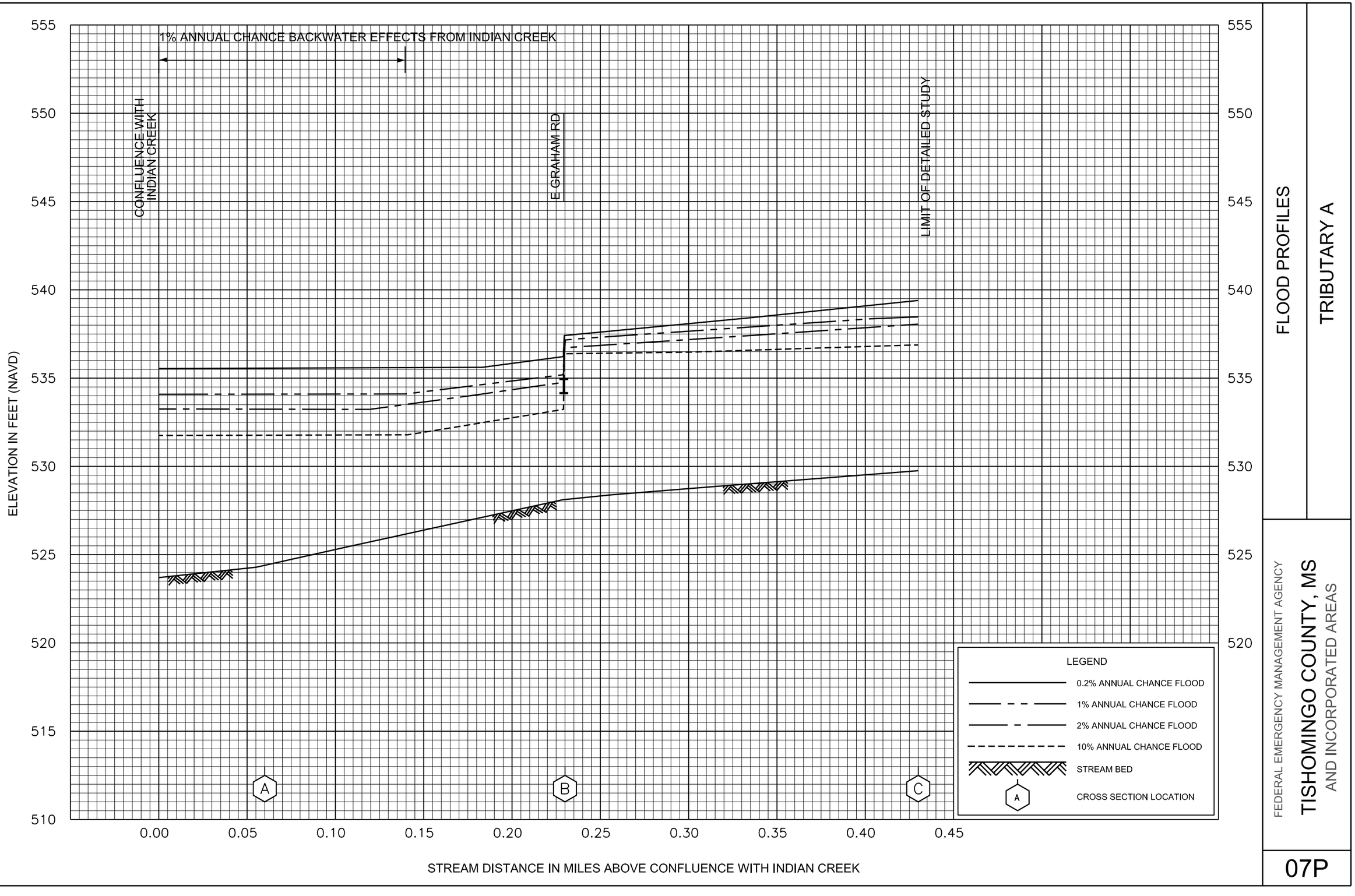
FLOOD PROFILES

TENNESSEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TISHOMINGO COUNTY, MS
AND INCORPORATED AREAS

06P



FLOOD PROFILES

TRIBUTARY A

FEDERAL EMERGENCY MANAGEMENT AGENCY

TISHOMINGO COUNTY, MS
AND INCORPORATED AREAS

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